Source: T1

Title: CR's to TS 34.122 v3.7.0 and v4.3.0 for approval

Agenda item: 5.1.3

Document for: Approval

This document contains 8 CRs to TS 34.122 v3.7.0 and 10 CRs to TS 34.122 v4.3.0. These CRs have been agreed by T1 and are put forward to TSG T for approval.

CRs related to maintenance of R99:

Spec	CR	Rev	Release	Subject	Cat	Version		Doc-2nd-	Work
						Current	-New	Level	item
34.122	086		R99	Cell Re-selection in CELL_PCH test case Rel99	F	3.7.0	3.8.0	T1-020229	
34.122	087		R99	Cell Re-selection in URA_PCH test case Rel99	F	3.7.0	3.8.0	T1-020230	
34.122	088		R99	TDD/TDD Intra-frequency Handover R99	F	3.7.0	3.8.0	T1-020255	
34.122	089		R99	TDD/TDD Inter-frequency Handover R99	F	3.7.0	3.8.0	T1-020257	
34.122	090		R99	TDD/FDD Handover R99	F	3.7.0	3.8.0	T1-020259	
34.122	091		R99	PCCPCH Measurement Performance R99	F	3.7.0	3.8.0	T1-020261	
34.122	092		R99	Corrections to TDD/TDD Cell Re-selection in CELL_FACH state R99	F	3.7.0	3.8.0	T1-020263	
34.122	093		R99	Power Control in the Downlink for HCR Rel99	F	3.7.0	3.8.0	T1-020424	

CRs related to maintenance of Rel-4:

Spec	CR	Rev	Release	Subject	Cat	Version	Version	Doc-2nd-	Work
						Current	-New	Level	item
34.122	094		Rel-4	Cell Re-selection in CELL_PCH test case Rel4	Α	4.3.0	4.4.0	T1-020233	TEI
34.122	095		Rel-4	Cell Re-selection in URA_PCH test case Rel99	Α	4.3.0	4.4.0	T1-020234	TEI
34.122	096		Rel-4	TDD/TDD Intra-frequency Handover R4	Α	4.3.0	4.4.0	T1-020256	TEI
34.122	097		Rel-4	TDD/TDD Inter-frequency Handover R4	Α	4.3.0	4.4.0	T1-020258	TEI
34.122	098		Rel-4	TDD/FDD Handover R4	Α	4.3.0	4.4.0	T1-020260	TEI
34.122	099		Rel-4	PCCPCH Measurement Performance R4	Α	4.3.0	4.4.0	T1-020262	TEI
34.122	100		Rel-4	Corrections to TDD/TDD Cell Re-selection in CELL_FACH state R4	А	4.3.0	4.4.0	T1-020264	TEI
34.122	101		Rel-4	Power Control in the Downlink for HCR Rel4	Α	4.3.0	4.4.0	T1-020425	TEI

CRs related to Low Chip Rate TDD (Rel-4)

Spec	CR	Rev	Release	Subject		Version Current	Version -New	Doc-2nd- Level	Work item
34.122	102		Rel-4	Inclusion and completion of re-selection test cases for LCRTDD	F	4.3.0	4.4.0	T1-020231	LCRT DD
34.122	103		Rel-4	Power Control in the Downlink for LCRTDD	F	4.3.0	4.4.0	T1-020254	LCRT DD

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How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at: http://www.3gpp.org/3G_Specs/CRs.htm. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked \$\mathbb{X}\$ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

8.3.5 Cell Re-selection in CELL_PCH

8.3.5.1 Scenario 1: TDD/TDD cell re-selection single carrier case

8.3.5.1.1 Definition and applicability

The cell re-selection delay is defined as the time from a change of cell levels to the moment when this change causes the UE to camp on a new cell, and starts to send the CELL UPDATE message with cause value "cell reselection" in the new cell.

The requirements and this test apply to the TDD UE.

8.3.5.1.2 Minimum requirement

The cell re-selection delay shall be less than 8 s.

NOTE:

The cell re-selection delay can be expressed as: T_{evaluateTDD} + T_{SI}, where:

<u>T_{evaluateTDD}</u> A DRX cycle length of 1280ms is assumed for this test case, this leads to a T_{evaluate TDD} of 6.4s according to TS 25.123 [2] Table 4.1 in section 4.2.2.7.

<u>T_{SI}</u> <u>Maximum repetition period of relevant system info blocks that needs to be received by the UE to</u>

camp on a cell. 1280 ms is assumed in this test case.

This gives a total of 7.68 s, allow 8s in the test case.

The normative reference for this requirement is TS 25.123 [2] clauses 5.5 and A.5.5.1.

8.3.5.1.3 Test purpose

This test verifies that the UE meets the minimum requirement for the cell re-selection delay in CELL_PCH for the single carrier case

8.3.5.1.4 Method of test

8.3.5.1.4.1 Initial conditions

This scenario contains 6 cells operating on the same carrier frequency. The test parameters are given in Tables 8.3.5.1.1, and 8.3.5.1.2.

Table 8.3.5.1.1: General test parameters for Cell Re-selection single carrier multi-cell case

	Parameter Parameter	Unit	<u>Value</u>	Comment				
<u>Initial</u>	Active cell		Cell1					
condition	Neighbour cells		Cell2, Cell3,Cell4, Cell5, Cell6					
Final condition	Active cell		<u>Cell2</u>					
	<u>HCS</u>		Not used					
UE_TX	PWR MAX RACH	<u>dBm</u>	<u>21</u>	The value shall be used for all cells in the test.				
	<u>Qrxlevmin</u>	<u>dBm</u>	<u>-102</u>	The value shall be used for all cells in the test.				
	ervice Class (ASC#0) ersistence value		<u>1</u>	Selected so that no additional delay is caused by the random access procedure. The value shall be used for all cells in the test.				
	<u>T_{SI}</u>		T _{SI}		Tsı		<u>1.28</u>	The value shall be used for all cells in the test.
DR	X cycle length	<u>s</u>	<u>1.28</u>	The value shall be used for all cells in the test.				
	<u>T1</u>	<u>s</u>	<u>15</u>					
	<u>T2</u>	<u>s</u>	<u>15</u>					

Cell 1 Cell 3 Unit Cell 2 **Parameter** Timeslot Number 0 8 T2 T1 **T2** T1 **T2** T1 T1 T1 T1 **T2** UTRA RF Channel Channel 1 Channel 1 Channel 1 Number PCCPCH_Ec/lor dB -9 -9 -9 SCH_Ec/lor dB -9 -9 -9 -9 -9 -9 -9 10 $\underline{\text{SCH}}\underline{\text{t}}_{\text{offset}}$ 0 0 0 5 5 5 10 10 10 n PICH Ec/lor dB -3 -3 -3 -3 -3 -3 -4.28 -4.28 -4,28 OCNS Ec/lor dB -4.28 -4.28 -4.28 -4.28 -4.28 -4.28 -4.28 -4.28 -4.28 I_{or}/I_{oc} dΒ 9 7 9 7 7 9 7 9 -1 -1 -1 <u>-1</u> PCCPCH RSCP dBm -64 -66 -66 -64 -74 -74 0; C1, C3:0; C1,C4:0 C1: 0; C2, C3:0; C2,C4:0 C3, C1: 0; C3, C2:0; C3,C4:0 <u>C1</u>, C2, dB Qoffset1_{s.n} C1, C5:0; C1, C6:0 C2, C5: 0; C2, C6:0 C3, C5: 0; C3, C6:0 dB Qhyst1s **Treselection** 0 0 0 \$intrasearch dB not sent not sent not sent Cell 4 Cell 5 Cell 6 **Timeslot** T1 **T2** T1 T2 T1 **T2** T1 **T2** T1 T2 T2 UTRA RF Channel Channel 1 Channel 1 Channel 1 Number PCCPCH_Ec/lor dB -3 -3 -3 -3 -3 -3 SCH_Ec/lor dB 20 <u>25</u> SCH_toffset 15 15 15 15 <u> 20</u> 20 PICH_Ec/lor dB OCNS_Ec/lor -4,28 -4,28 -4,28 -4,28 -4,28 **-**4,28 -4,28 -4,28 -4,28 <u>dB</u> -4,28-4,28-4,28 I_{or}/I_{oc} dB -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 PCCPCH RSCP dBm -74 -74 -74 -74 -74 -74 C4, C1: 0; C4, C2:0; C5, C1: 0; C5, C2:0; C5,C3:0 C6, C1: 0; C6, C2:0; C6, C3:0 Qoffset1_{s.n} dB C5, C4:0; C5, C6:0 C4,C3:0C4, C5:0; C4, C6:0 C6, C4:0; C6, C5:0 Qhyst1s dB Treselection 0 0 0 <u>dB</u> not sent \$intrasearch not sent not sent dBm/3 I_{oc} <u>-70</u> 84 MHz

Table 8.3.5.1.2: Cell re-selection single carrier multi-cell case

8.3.5.1.4.2 Procedure

Propagation

Condition

- a) The SS activates cell 1-6 with T1 defined parameters.
- b) The UE is switched on.
- c) A call is set up according to the test procedure specified in TS 34.108 [3] subclause 7.4.2.7.1.
- d) After 15 s, the parameters are changed as described for T2.
- e) The SS waits for CELL UPDATE message with cause value "cell reselection" from the UE.
- f) The SS sends the UE CELL UPDATE CONFIRM message with "RRC State Indicater" = "CELL PCH".

<u>AWGN</u>

- g) After another 15 s, the parameters are changed as described for T1.
- h) The SS waits for CELL UPDATE message with cause value "cell reselection" from the UE.
- i) Repeat steps d) to g) [TBD] times.

8.3.5.1.5 Test Requirements

1) In step d), after the UE has responded on cell 1, it shall not respond on any other cell (cell selection).

- 2) In step e), the UE shall respond on cell 2 within 8 s.
- 3) In step h), the UE shall respond on cell 1 within 8 s.

For the test to pass, the total number of fulfilled test requirements 2) and 3) shall be more than [FFS]% of the cases.

NOTE: If the above Test Requirement differs from the Minimum Requirement then the Test Tolerance applied for this test is non-zero. The Test Tolerance for this test is defined in clause F.2 and the explanation of how the Minimum Requirement has been relaxed by the Test Tolerance is given in clause F.4.

Void.

8.3.5.2 Scenario 2: TDD/TDD cell re-selection multi carrier case

8.3.5.2.1 <u>Definition and applicability</u>

The cell re-selection delay is defined as the time from a change of cell levels to the moment when this change causes the UE to camp on a new cell, and starts to send the CELL UPDATE message with cause value "cell reselection" in the new cell.

The requirements and this test apply to the TDD UE.

8.3.5.2.2 Minimum requirement

The cell re-selection delay shall be less than 8 s.

NOTE:

The cell re-selection delay can be expressed as: T_{evaluateTDD} + T_{SI}, where:

 $\Gamma_{\text{evaluateTDD}}$ A DRX cycle length of 1280ms is assumed for this test case, this leads to a $\Gamma_{\text{evaluate TDD}}$ of 6.4s according to TS 25.123 [2] Table 4.1 in section 4.2.2.7.

<u>Maximum repetition period of relevant system info blocks that needs to be received by the UE to camp on a cell. 1280 ms is assumed in this test case.</u>

This gives a total of 7.68 s, allow 8s in the test case.

The normative reference for this requirement is TS 25.123 [2] clauses 5.5 and A.5.5.2.

8.3.5.2.3 Test purpose

This test verifies that the UE meets the requirement for the cell re-selection delay in CELL PCH for the multi carrier case.

8.3.5.2.4 Method of test

8.3.5.2.4.1 Initial conditions

This scenario contains 6 cells and 2 carrier frequencies. The test parameters are given in Tables 8.3.5.2.1 and 8.3.5.2.2.

Table 8.3.5.2.1: General test parameters for Cell Re-selection in Multi carrier case

	<u>Parameter</u>	<u>Unit</u>	<u>Value</u>	Comment
<u>Initial</u>	Active cell		Cell1	
condition	<u>Neighbour cells</u>		Cell2, Cell3,Cell4, Cell5, Cell6	
Final condition			<u>Cell2</u>	
	<u>HCS</u>		Not used	
UE TX	PWR MAX RACH	<u>dBm</u>	<u>21</u>	The value shall be used for all cells in the test.
	<u>Qrxlevmin</u>	<u>dBm</u>	<u>-102</u>	The value shall be used for all cells in the test.
	Service Class (ASC#0) ersistence value		1	Selected so that no additional delay is caused by the random access procedure. The value shall be used for all cells in the test.
	<u>T_{SI}</u>		<u>1.28</u>	The value shall be used for all cells in the test.
DI	RX cycle length	S	<u>1.28</u>	The value shall be used for all cells in the test.
	<u>T1</u>	<u>s</u>	<u>30</u>	
	<u>T2</u>	<u>s</u>	15	

<u>Table 8.3.5.2.2: Cell re-selection multi carrier multi cell case</u>

Parameter	Unit		<u>Cell 1</u>				Cell 2				Cell 3			
Timeslot Number		C		8)		3		0		8	
		<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	
UTRA RF Channel Number			Char	nel 1			Char	nnel 2			Char	nel 1	ļ	
PCCPCH_Ec/lor	<u>dB</u>	<u>-3</u>	<u>-3</u>			<u>-3</u>	<u>-3</u>			<u>-3</u>	<u>-3</u>			
SCH_Ec/lor	<u>dB</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	
SCH_t _{offset}		<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>5</u>	<u>5</u>	<u>5</u>	<u>5</u>	<u>10</u>	<u>10</u>	<u>10</u>	<u>10</u>	
PICH_Ec/lor	<u>dB</u>			<u>-3</u>	<u>-3</u>			<u>-3</u>	<u>-3</u>			<u>-3</u>	<u>-3</u>	
OCNS_Ec/lor	<u>dB</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	
\hat{I}_{or}/I_{oc}	<u>dB</u>	<u>6</u>	<u>0</u>	<u>6</u>	<u>0</u>	<u>0</u>	<u>6</u>	<u>0</u>	<u>6</u>	<u>-3</u>	<u>-3</u>	<u>-3</u>	<u>-3</u>	
PCCPCH RSCP	<u>dBm</u>	<u>-67</u>	<u>-73</u>			<u>-73</u>	<u>-67</u>			<u>-76</u>	<u>-76</u>			
Qoffset1 _{s,n}	<u>dB</u>			C1, C3:05:0; C1,				C2, C3:05:0; C2,			1: 0; C3, C3, C5:0;			
Qhyst1 _s	<u>dB</u>		_	<u>)</u>			_	<u>0</u>				<u>)</u>		
<u>Treselection</u>	<u>s</u>		<u>(</u>	<u>)</u>			<u>(</u>	<u>0</u>			<u>(</u>	<u>)</u>		
\$intrasearch	<u>dB</u>			<u>sent</u>			<u>not</u>	<u>sent</u>				<u>sent</u>		
\$intersearch	<u>dB</u>			<u>sent</u>			<u>not</u>	<u>sent</u>		<u>not sent</u>				
				<u>II 4</u>				<u>II 5</u>				<u>II 6</u>		
<u>Timeslot</u>		<u> </u>		8			<u>) </u>		3		<u>0</u>		8	
		<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	
UTRA RF Channel Number			<u>Char</u>	<u>nel 1</u>		Channel 2					<u>Char</u>	nel 2		
PCCPCH_Ec/lor	<u>dB</u>	<u>-3</u>	<u>-3</u>			<u>-3</u>	<u>-3</u>			<u>-3</u>	<u>-3</u>			
SCH Ec/lor	<u>dB</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	-9	<u>-9</u>	-9	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	
SCH_t _{offset}		<u>15</u>	<u>15</u>	<u>15</u>	<u>15</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>25</u>	<u>25</u>	<u>25</u>	<u>25</u>	
PICH_Ec/lor	<u>dB</u>			<u>-3</u>	<u>-3</u>			<u>-3</u>	<u>-3</u>			<u>-3</u>	<u>-3</u>	
OCNS_Ec/lor	<u>dB</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	
\hat{I}_{or}/I_{oc}	<u>dB</u>	<u>-3</u>	<u>-3</u>	<u>-3</u>	<u>-3</u>	<u>-3</u>	<u>-3</u>	<u>-3</u>	<u>-3</u>	<u>-3</u>	<u>-3</u>	<u>-3</u>	<u>-3</u>	
PCCPCH RSCP	<u>dBm</u>	-76	<u>-76</u>			<u>-76</u>	<u>-76</u>			<u>-76</u>	<u>-76</u>			
Qoffset1 _{s,n}	<u>dB</u>			C2:0; C4 C4, C6:				C2:0; C5; C5; C6:			1: 0; C6, C6, C4:0;			
Qhyst1 _s	dB	_)				0	•	_)	_	
Treselection	<u>s</u>		_)			_	0			()		
\$intrasearch	dB		not	sent		not sent				not sent				
\$intersearch	<u>dB</u>			sent		not sent not sent								
I_{oc}	dBm/3, 84 MHz						<u></u>	<u>70</u>						
Propagation Condition							AW	<u>'GN</u>						

8.3.5.2.4.2 Procedure

- a) The SS activates cell 1-6 with T1 defined parameters.
- b) The UE is switched on.
- c) A call is set up according to the test procedure specified in TS 34.108 [3] subclause 7.4.2.7.1.
- d) After 15 s, the parameters are changed as described for T2.
- e) The SS waits for CELL UPDATE message with cause value "cell reselection" from the UE.
- f) The SS sends the UE CELL UPDATE CONFIRM message with "RRC State Indicater" = "CELL PCH".
- g) After another 15 s, the parameters are changed as described for T1.
- h) The SS waits for CELL UPDATE message with cause value "cell reselection" from the UE.
- i) Repeat steps d) to g) [TBD] times.
- NOTE: T1 is initially 30 s to allow enough time for the UE to search for cells as it has no prior knowledge of these.

8.3.5.2.5 Test Requirements

- 1) In step d), after the UE has responded on cell 1, it shall not respond on any other cell (cell selection).
- 2) In step e), the UE shall respond on cell 1 within 8 s.
- 3) In step h), the UE shall respond on cell 2 within 8 s.

For the test to pass, the total number of fulfilled test requirements 2) and 3) shall be more than [FFS]% of the cases.

NOTE: If the above Test Requirement differs from the Minimum Requirement then the Test Tolerance applied for this test is non-zero. The Test Tolerance for this test is defined in clause F.2 and the explanation of how the Minimum Requirement has been relaxed by the Test Tolerance is given in clause F.4.

Void.

3GPP TSG-T1 Meeting #15 Lund, Sweden, 23rd - 24th May 2002

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How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at: http://www.3gpp.org/3G_Specs/CRs.htm. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked \$\mathbb{X}\$ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

8.3.6 Cell Re-selection in URA PCH

8.3.6.1 Scenario 1: TDD/TDD cell re-selection single carrier case

8.3.6.1.1 Definition and applicability

The cell re-selection delay is defined as the time from a change of cell levels to the moment when this change causes the UE to camp on a new cell , and starts to send the URA UPDATE message with cause value "change of URA" in the new cell.

The requirements and this test apply to the TDD UE.

8.3.6.1.2 Minimum requirement

The cell re-selection delay shall be less than 8 s.

NOTE:

The cell re-selection delay can be expressed as: T_{evaluateTDD} + T_{SI}, where:

<u>T_{evaluateTDD}</u> A DRX cycle length of 1280ms is assumed for this test case, this leads to a T_{evaluate TDD} of 6.4s according to TS25.123 [2] Table 4.1 in section 4.2.2.7.

 T_{SI} Maximum repetition period of relevant system info blocks that needs to be received by the UE to

camp on a cell. 1280 ms is assumed in this test case.

This gives a total of 7.68 s, allow 8s in the test case.

The normative reference for this requirement is TS 25.123 [2] clauses 5.6 and A.5.6.1.

8.3.6.1.3 Test purpose

This test verifies that the UE meets the minimum requirement for the cell re-selection delay in URA_PCH for the single carrier case

8.3.6.1.4 Method of test

8.3.6.1.4.1 Initial conditions

This scenario contains 6 cells operating on the same carrier frequency. The test parameters are given in Tables 8.3.6.1.1, and 8.3.6.1.2.

Table 8.3.6.1.1: General test parameters for Cell Re-selection single carrier multi-cell case

	Parameter Parameter	Unit	<u>Value</u>	Comment				
<u>Initial</u>	Active cell		Cell1					
condition	Neighbour cells		Cell2, Cell3,Cell4, Cell5, Cell6					
Final condition	Active cell		<u>Cell2</u>					
	<u>HCS</u>		Not used					
UE_TX	PWR MAX RACH	<u>dBm</u>	<u>21</u>	The value shall be used for all cells in the test.				
	<u>Qrxlevmin</u>	<u>dBm</u>	<u>-102</u>	The value shall be used for all cells in the test.				
	ervice Class (ASC#0) ersistence value		<u>1</u>	Selected so that no additional delay is caused by the random access procedure. The value shall be used for all cells in the test.				
	<u>T_{SI}</u>		T _{SI}		Tsı		<u>1.28</u>	The value shall be used for all cells in the test.
DR	X cycle length	<u>s</u>	<u>1.28</u>	The value shall be used for all cells in the test.				
	<u>T1</u>	<u>s</u>	<u>15</u>					
	<u>T2</u>	<u>s</u>	<u>15</u>					

Cell 3 Unit Cell 1 Cell 2 **Parameter** Timeslot Number 0 8 T2 T1 **T2** T1 **T2** T1 T1 T1 T1 **T2** UTRA RF Channel Channel 1 Channel 1 Channel 1 Number PCCPCH_Ec/lor dB -9 -9 -9 SCH_Ec/lor dB -9 -9 -9 -9 -9 -9 -9 $\underline{\text{SCH}}\underline{\text{t}}_{\text{offset}}$ 0 0 0 5 5 5 10 10 10 10 n PICH Ec/lor dB -3 -3 -3 -3 -3 -3 OCNS Ec/lor dB -3.12 -3.12 -3.12 -3.12 -3.12 -3.12 3,12 -3.12 -3.12 -3.12 -3.12 -3,12 I_{or}/I_{oc} dΒ 9 7 9 7 7 9 7 9 -1 -1 <u>-1</u> <u>-1</u> PCCPCH RSCP dBm -64 -66 -66 -64 -74 -74 0; C1, C3:0; C1,C4:0 C1: 0; C2, C3:0; C2,C4:0 C3, C1: 0; C3, C2:0; C3,C4:0 <u>C1</u>, C2, dB Qoffset1_{s.n} C1, C5:0; C1,C6:0 C2, C5: 0; C2, C6:0 C3, C5: 0; C3, C6:0 dB Qhyst1s **Treselection** 0 0 0 \$intrasearch dB not sent not sent not sent Cell 4 Cell 5 Cell 6 **Timeslot** <u>T1</u> T1 **T2** T1 T2 **T2** T1 **T2** T1 T2 T2 UTRA RF Channel Channel 1 Channel 1 Channel 1 Number PCCPCH_Ec/lor dB -3 -3 -3 -3 -3 -3 <u>-9</u> 20 <u>-9</u> 20 <u>-9</u> 25 SCH_Ec/lor dB <u>25</u> SCH_toffset 15 15 15 15 <u> 20</u> 20 25 PICH_Ec/lor dB OCNS_Ec/lor -3,12 -3,12-3,12 -3,12 -3,12 <u>dB</u> -3,12-3,12-3,12-3,12-3,12-3,12-3,12 I_{or}/I_{oc} dB -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 PCCPCH RSCP dBm -74 -74 -74 -74 -74 -74 C4, C1: 0; C4, C2:0; C5, C1: 0; C5, C2:0; C5,C3:0 C6, C1: 0; C6, C2:0; C6, C3:0 Qoffset1_{s.n} dB C5, C4:0; C5, C6:0 C4,C3:0C4, C5:0; C4, C6:0 C6, C4:0; C6, C5:0 dB Qhyst1s Treselection 0 0 0 <u>dB</u> not sent \$intrasearch not sent not sent dBm/3 I_{oc} <u>-70</u> 84 MHz

Table 8.3.6.1.2: Cell re-selection single carrier multi-cell case

8.3.6.1.4.2 Procedure

Propagation

Condition

- a) The SS activates cell 1-6 with T1 defined parameters.
- b) The UE is switched on.
- c) A call is set up according to the test procedure specified in TS 34.108 [3] subclause 7.4.2.7.2.
- d) After 15 s, the parameters are changed as described for T2.
- e) The SS waits for URA UPDATE message with cause value "change of URA" from the UE.
- f) The SS sends the UE CELL UPDATE CONFIRM message with "RRC State Indicater" = "URA PCH".

<u>AWGN</u>

- g) After another 15 s, the parameters are changed as described for T1.
- h) The SS waits for URA UPDATE message with cause value "change of URA" from the UE.
- i) Repeat steps d) to g) [TBD] times.

8.3.6.1.5 Test Requirements

1) In step d), after the UE has responded on cell 1, it shall not respond on any other cell (cell selection).

- 2) In step e), the UE shall respond on cell 2 within 8 s.
- 3) In step h), the UE shall respond on cell 1 within 8 s.

For the test to pass, the total number of fulfilled test requirements 2) and 3) shall be more than [FFS]% of the cases.

NOTE: If the above Test Requirement differs from the Minimum Requirement then the Test Tolerance applied for this test is non-zero. The Test Tolerance for this test is defined in clause F.2 and the explanation of how the Minimum Requirement has been relaxed by the Test Tolerance is given in clause F.4.

Void.

8.3.58.3.6.2 Scenario 2: TDD/TDD cell re-selection multi carrier case

8.3.6.2.1 Definition and applicability

The cell re-selection delay is defined as the time from a change of cell levels to the moment when this change causes the UE to camp on a new cell, and starts to send the URA UPDATE message with cause value "change of URA" in the new cell.

The requirements and this test apply to the TDD UE.

8.3.6.2.2 Minimum requirement

The cell re-selection delay shall be less than 8 s.

NOTE:

The cell re-selection delay can be expressed as: T_{evaluateTDD} + T_{SI}, where:

 $\Gamma_{\text{evaluateTDD}}$ A DRX cycle length of 1280ms is assumed for this test case, this leads to a $\Gamma_{\text{evaluate TDD}}$ of 6.4s according to TS 25.123 [2] Table 4.1 in section 4.2.2.7.

<u>T_{SI}</u> <u>Maximum repetition period of relevant system info blocks that needs to be received by the UE to camp on a cell. 1280 ms is assumed in this test case.</u>

This gives a total of 7.68 s, allow 8s in the test case.

The normative reference for this requirement is TS 25.123 [2] clauses 5.6 and A.5.6.2.

8.3.6.2.3 Test purpose

This test verifies that the UE meets the requirement for the cell re-selection delay in URA PCH for the multi carrier case.

8.3.6.2.4 Method of test

8.3.6.2.4.1 Initial conditions

This scenario contains 6 cells and 2 carrier frequencies. The test parameters are given in Tables 8.3.6.2.1 and 8.3.6.2.2.

Table 8.3.6.2.1: General test parameters for Cell Re-selection in Multi carrier case

	<u>Parameter</u>	<u>Unit</u>	<u>Value</u>	Comment
Initial	Active cell		Cell1	
condition	Neighbour cells		Cell2, Cell3,Cell4,	
	-		Cell5, Cell6	
<u>Final</u>	Final Active cell		Cell2	
<u>condition</u>				
	<u>HCS</u>		Not used	
UE_T	KPWR MAX RACH	<u>dBm</u>	<u>21</u>	The value shall be used for all cells in the test.
	<u>Qrxlevmin</u>	<u>dBm</u>	<u>-102</u>	The value shall be used for all cells in the test.
Access S	Service Class (ASC#0)			Selected so that no additional delay is caused
<u>- P</u>	<u>ersistence value</u>		<u>1</u>	by the random access procedure. The value
				shall be used for all cells in the test.
	T _{SI}	<u>s</u>	<u>1.28</u>	The value shall be used for all cells in the test.
DI	RX cycle length	<u>s</u>	<u>1.28</u>	The value shall be used for all cells in the test.
	<u>T1</u>	<u>s</u>	<u>30</u>	
	T2	S	<u>15</u>	

<u>Table 8.3.6.2.2: Cell re-selection multi carrier multi cell case</u>

Parameter	Unit		<u>Cell 1</u>				Cell 2				Cell 3			
Timeslot Number		0		8)		3		0		<u>8</u>	
		<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	
UTRA RF Channel Number			Char	nel 1			Char	nnel 2			Char	nel 1		
PCCPCH_Ec/lor	dB	<u>-3</u>	<u>-3</u>			<u>-3</u>	<u>-3</u>			<u>-3</u>	<u>-3</u>			
SCH_Ec/lor	dB	-9	-9	<u>-9</u>	-9	-9	<u>-9</u>	<u>-9</u>	<u>-9</u>	-9	-9	<u>-9</u>	<u>-9</u>	
SCH_t _{offset}		<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>5</u>	<u>5</u>	<u>5</u>	<u>5</u>	<u>10</u>	<u>10</u>	<u>10</u>	<u>10</u>	
PICH_Ec/lor	<u>dB</u>			<u>-3</u>	<u>-3</u>			<u>-3</u>	<u>-3</u>			<u>-3</u>	<u>-3</u>	
OCNS_Ec/lor	<u>dB</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	
\hat{I}_{or}/I_{oc}	<u>dB</u>	<u>6</u>	<u>0</u>	<u>6</u>	<u>0</u>	<u>0</u>	<u>6</u>	<u>0</u>	<u>6</u>	<u>-3</u>	<u>-3</u>	<u>-3</u>	<u>-3</u>	
PCCPCH RSCP	<u>dBm</u>	<u>-67</u>	<u>-73</u>			-67	<u>-70</u>			<u>-76</u>	<u>-76</u>			
Qoffset1 _{s,n}	<u>dB</u>			C1, C3:05:0; C1,				C2, C3:05:0; C2,			1: 0; C3, C3, C5:0:			
Qhyst1 _s	<u>dB</u>		<u>(</u>	<u>)</u>			<u>(</u>	<u>0</u>			(<u>)</u>		
<u>Treselection</u>	<u>s</u>		<u>(</u>	<u>)</u>			<u>(</u>	<u>0</u>			<u>(</u>	<u>)</u>		
\$intrasearch	<u>dB</u>			<u>sent</u>			<u>not</u>	<u>sent</u>				<u>sent</u>		
\$intersearch	<u>dB</u>			<u>sent</u>				<u>sent</u>		not sent				
				<u>II 4</u>				<u>II 5</u>				<u>II 6</u>		
<u>Timeslot</u>				<u> </u>			<u> </u>		3		0		<u>8</u>	
LITTA DE OL		<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	
UTRA RF Channel Number			Char	<u>nnel 1</u>		Channel 2					Channel 2			
PCCPCH_Ec/lor	<u>dB</u>	<u>-3</u>	<u>-3</u>			<u>-3</u>	<u>-3</u>			<u>-3</u>	<u>-3</u>			
SCH_Ec/lor	<u>dB</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	
SCH_t _{offset}		<u>15</u>	<u>15</u>	<u>15</u>	<u>15</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>25</u>	<u>25</u>	<u>25</u>	<u>25</u>	
PICH_Ec/lor	<u>dB</u>			<u>-3</u>	<u>-3</u>			<u>-3</u>	<u>-3</u>			<u>-3</u>	<u>-3</u>	
OCNS_Ec/lor	<u>dB</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	
\hat{I}_{or}/I_{oc}	<u>dB</u>	<u>-3</u>	<u>-3</u>	<u>-3</u>	<u>-3</u>	<u>-3</u>	<u>-3</u>	<u>-3</u>	<u>-3</u>	<u>-3</u>	<u>-3</u>	<u>-3</u>	<u>-3</u>	
PCCPCH RSCP	<u>dBm</u>	<u>-76</u>	<u>-76</u>			<u>-76</u>	<u>-76</u>			<u>-76</u>	<u>-76</u>			
Qoffset1 _{s,n}	<u>dB</u>			C2:0; C4 C4, C6:				C2:0; C5; C5; C6:			1: 0; C6, C6, C4:0;			
Qhyst1 _s	<u>dB</u>		<u>(</u>	<u>)</u>			(0		-	(<u>)</u>		
Treselection	<u>s</u>			<u>)</u>				<u>0</u>				<u> </u>		
\$intrasearch	<u>dB</u>		not	<u>sent</u>		not sent				not sent				
\$intersearch	<u>dB</u>		not	<u>sent</u>		<u>not sent</u> <u>not sent</u>					- <u>-</u> -			
I_{oc}	<u>dBm/3,</u> 84 MHz						<u>-7</u>	<u>70</u>						
Propagation Condition							AW	<u>'GN</u>						

8.3.6.2.4.2 Procedure

- a) The SS activates cell 1-6 with T1 defined parameters.
- b) The UE is switched on.
- c) A call is set up according to the test procedure specified in TS 34.108 [3] subclause 7.4.2.7.2.
- d) After 15 s, the parameters are changed as described for T2.
- e) The SS waits for URA UPDATE message with cause value "change of URA" from the UE.
- f) The SS sends the UE CELL UPDATE CONFIRM message with "RRC State Indicater" = "URA PCH".
- g) After another 15 s, the parameters are changed as described for T1.
- h) The SS waits for URA UPDATE message with cause value "change of URA" from the UE.
- i) Repeat steps d) to g) [TBD] times.
- NOTE: T1 is initially 30 s to allow enough time for the UE to search for cells as it has no prior knowledge of these.

8.3.6.2.5 Test Requirements

- 1) In step d), after the UE has responded on cell 1, it shall not respond on any other cell (cell selection).
- 2) In step e), the UE shall respond on cell 1 within 8 s.
- 3) In step h), the UE shall respond on cell 2 within 8 s.

For the test to pass, the total number of fulfilled test requirements 2) and 3) shall be more than [FFS]% of the cases.

NOTE: If the above Test Requirement differs from the Minimum Requirement then the Test Tolerance applied for this test is non-zero. The Test Tolerance for this test is defined in clause F.2 and the explanation of how the Minimum Requirement has been relaxed by the Test Tolerance is given in clause F.4.

Void.

Consequences if not approved:

	CHANGE REQUEST
[₩] TS 3 ⁴	1.122 CR 102
For <u>HELP</u> on using	this form, see bottom of this page or look at the pop-up text over the ℜ symbols.
Proposed change affect	cts: # (U)SIM ME/UE X Radio Access Network Core Network
Title: 第 Ind	clusion and completion of re-selection test cases for LCRTDD
Source: # Si	emens AG
Work item code: ₩ LC	CRTDD Date: # 30/03/2002
Category:	Release: REL-4
Det	e one of the following categories: F (essential correction) A (corresponds to a correction in an earlier release) B (Addition of feature), C (Functional modification of feature) D (Editorial modification) ailed explanations of the above categories can ound in 3GPP TR 21.900. Use one of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)
Reason for change: #	Cell re-selection tests for 1.28 Mcps TDD option are included
Summary of change: #	8.2.2.1 Scenario 1: TDD/TDD cell re-selection single carrier case The prose for LCRTDD is included.
	References to TS 25.123 are included in 3.84 Mcps option
	8.2.2.2 Scenario 2: TDD/TDD cell re-selection multi carrier case
	The prose for LCRTDD is included. References to TS 25.123 are included in 3.84 Mcps option
	8.2.2.2A is included as new subsection to follow the order in core specifications for Release 4. Scenario 2A: 3.84 Mcps TDD cell reselection for 1.28 Mcps TDD [FFS]
	8.2.2.3 Scenario 3: TDD/FDD Cell re-selection
	The test case for 1.28 Mcps did reference to single carrier multi-cell case. There was a mistake in some meeting when the section was restructured. Now the test case for TDD/FDD Cell re-selection for 1.28 Mcps is covered.
	8.2.2.4 Scenario 4: inter RAT cell re-selection
	The prose for LCRTDD is included. References to TS 25.123 are included in 3.84 Mcps option

Clauses affected:	8.2
Other specs affected:	# Other core specifications # Test specifications O&M Specifications
Other comments:	₩ Based in TS 25.123 v4.4.0

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Comprehensive information and tips about how to create CRs can be found at: http://www.3gpp.org/3G Specs/CRs.htm. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked # contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://www.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

8 Requirements for Support of RRM

8.1 General

Void.

8.2 Idle Mode Tasks

8.2.1 RF Cell Selection Scenario

8.2.1.1 Introduction

After a UE has switched on and a PLMN has been selected, the Cell selection process takes place, as described in TS 25.304. This process allows the UE to select a suitable cell where to camp on in order to access available services. In this process the UE can use stored information (*Stored information cell selection*) or not (*Initial cell selection*).

8.2.2 Cell Re-Selection

8.2.2.1 Scenario 1: TDD/TDD cell re-selection single carrier case

8.2.2.1.1 Definition and applicability

8.2.2.1.1.1 3,84 Mcps TDD Option

The cell re-selection delay is defined as the time from a change of cell levels to the moment when this change causes the UE to camp on a new cell , and starts to send the RRC CONNECTION REQUEST message to perform a Location Registration on the new cell.

The requirements and this test apply to the <u>3.84 Mcps TDD UE</u>.

8.2.2.1.1.2 1,28 Mcps TDD Option

Void.

The cell re-selection delay is defined as the time from the beginning of time period T2, to the moment when the UE camps on Cell 2, and starts to send SYNCH-UL sequence in the UpPTS for sending the RRC CONNECTION REQUEST to perform a Location Registration on cell 2.

This test is applicable to 1.28 Mcps TDD UE.

8.2.2.1.2 Minimum requirement

8.2.2.1.2.1 3,84 Mcps TDD Option

The cell re-selection delay shall be less than 8 s when the DRX cycle length is 1,28 s.

The rate of correct cell reselections observed during repeated tests shall be at least 90% with a confidence level of [FFS]%.

NOTE:

The cell re-selection delay can be expressed as: $T_{evaluateTDD} + T_{SI}$, where:

 $T_{evaluateTDD}$ A DRX cycle length of 1280ms is assumed for this test case, this leads to a $T_{evaluate\ TDD}$ of 6.4s according to Table 4.1 in section 4.2.2.7 in [2].

T_{SI} Maximum repetition rate of relevant system info blocks that needs to be received by the UE to camp on a cell. 1280 ms is assumed in this test case.

This gives a total of 7.68 s, allow 8s in the test case.

The normative reference for this requirement is TS 25.123 [2] clauses 4.2.2 and A.4.2.1.

8.2.2.1.2.2 1,28 Mcps TDD Option

Void.

The cell re-selection delay shall be less than 8 s when the DRX cycle length is 1,28 s.

The rate of correct cell reselections observed during repeated tests shall be at least 90%.

NOTE:

The cell re-selection delay can be expressed as: $T_{evaluateNTDD} + T_{SI}$, where:

<u>T_{evaluateNTDD}</u>: A DRX cycle length of 1280ms is assumed for this test case, this leads to a T_{evaluate NTDD} of 6.4s according to Table 4.1A in section 4.2 in [2].

Time required for receiving all the relevant system information data according to the reception procedure and the RRC procedure delay of system information blocks defined in 25.331 for a UTRAN cell (ms). 1280 ms is assumed in this test case.

This gives a total of 7.68 s, allow 8s in the test case.

The normative reference for this requirement is TS 25.123 [2] clauses 4.2.2 and A.4.2.1.

8.2.2.1.3 Test purpose

This test is to verify the requirement for the cell re-selection delay in the single carrier case

8.2.2.1.4 Method of test

8.2.2.1.4.1 3,84 Mcps TDD Option

8.2.2.1.4.1.1 Initial conditions

This scenario implies the presence of 1 carrier and 6 cells as given in Table 8.2.2.1.1 and Table 8.2.2.1.2. Cell 1 and cell 2 shall belong to different Location Areas.

Table 8.2.2.1.1: General test parameters for Cell Re-selection single carrier multi-cell case

	Parameter	Unit	Value	Comment
Initial	Active cell		Cell1	
condition	Neighbour cells		Cell2, Cell3,Cell4, Cell5, Cell6	
Final condition	Active cell		Cell2	
	HCS		Not used	
UE_TX	PWR_MAX_RACH	dBm	21	The value shall be used for all cells in the test.
	Qrxlevmin	dBm	-102	The value shall be used for all cells in the test.
	ervice Class (ASC#0) ersistence value		1	Selected so that no additional delay is caused by the random access procedure. The value shall be used for all cells in the test.
	T _{SI}	S	1.28	The value shall be used for all cells in the test.
DRX cycle length		S	1.28	The value shall be used for all cells in the test.
T1		S	15	
	T2	S	15	

Table 8.2.2.1.2: Cell re-selection single carrier multi-cell case

Parameter	Unit		Ce	II 1		Cell 2				Cell 3				
Timeslot Number		()	8	3	()	8			0		3	
		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	
UTRA RF Channel			Chan	nel 1		Channel 1				Channel 1				
Number														
PCCPCH_Ec/lor	dB	-3	-3			-3	-3			-3	-3			
SCH_Ec/lor	dB	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	
SCH_t _{offset}		0	0	0	0	5	5	5	5	10	10	10	10	
PICH_Ec/lor	dB			-3	-3			-3	-3			-3	-3	
OCNS_Ec/lor	dB	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	
\hat{I}_{or}/I_{oc}	dB	9	7	9	7	7	9	7	9	-1	-1	-1	-1	
PCCPCH RSCP	dBm	-64	-66			-66	-64			-74	-74			
Qoffset1 _{s,n}	dB			C3:0; C'				C3:0; C2; C2, C6:			1: 0; C3, 23, C5: 0			
Qhyst1 _s	dB)))	<u> </u>	
Treselection	S		(()			()		
Sintrasearch	dB		not	sent			not	sent			not	sent		
				II 4		Cell 5					Ce			
Timeslot		()	3	3	()		3	(0		3	
		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	
UTRA RF Channel			Chan	nel 1			Char	nel 1			Char	nel 1		
Number														
PCCPCH_Ec/lor	dB	-3	-3			-3	-3			-3	-3			
SCH_Ec/lor	dB	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	
SCH_t _{offset}		15	15	15	15	20	20	20	20	25	25	25	25	
PICH_Ec/lor	dB			-3	-3			-3	-3			-3	-3	
OCNS_Ec/lor	dB	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	
\hat{I}_{or}/I_{oc}	dB	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	
PCCPCH RSCP	dBm	-74	-74			-74	-74			-74	-74			
Qoffset1 _{s,n}	dB			C4, C2: 5:0; C4,				C2:0; C5 C5, C6:			1: 0; C6, C6, C4:0;			
Qhyst1 _s	dB	0 .,0)	00.0	`)		ì)		
Treselection	S		()			()			()		
Sintrasearch	dB			sent				sent				sent		
I_{oc}	dBm/3, 84 MHz		-70											
Propagation Condition							AW	'GN						

8.2.2.1.4.1.2 Procedure

- a) The SS activates cell 1-6 with T1 defined parameters and monitors cell 1 and 2 for RRC CONNECTION REQUEST messages from the UE.
- b) The UE is switched on.
- c) The SS waits until the UE camps on Cell 1 and sends the RRC CONNECTION REQUEST message.
- d) After 15 s, the parameters are changed as described for T2.
- e) The SS waits for RRC CONNECTION REQUEST messages from the UE.
- f) After another 15 s, the parameters are changed as described for T1.
- g) The SS waits for RRC CONNECTION REQUEST messages from the UE.
- h) Repeat steps d) to g) [TBD] times.

8.2.2.1.4.2 1,28 Mcps TDD Option

Void.

8.2.2.1.4.2.1 Initial conditions

This scenario implies the presence of 1 carrier and 6 cells as given in Table 8.2.2.1.1A and 8.2.2.1.2A.

Table 8.2.2.1.1A: General test parameters for Cell Re-selection single carrier multi-cell case

Pai	rameter	<u>Unit</u>	<u>Value</u>	Comment
Initial condition	Active cell		Cell1	
	Neighbour cells		Cell2, Cell3,Cell4, Cell5,	
			<u>Cell6</u>	
Final condition	Active cell		<u>Cell2</u>	
	<u>HCS</u>		Not used	
<u>UE_TXPW</u>	<u>R MAX RACH</u>	<u>dBm</u>	<u>21</u>	The value shall be used for all cells in the test.
Qr	<u>xlevmin</u>	<u>dBm</u>	<u>-103</u>	The value shall be used for all cells in the test.
	<u>ce Class (ASC#0)</u> <u>stence value</u>	01	1	Selected so that no additional delay is caused by the random access procedure. The value shall be used for all cells in the test.
	<u>T_{SI}</u>	<u>s</u>	<u>1.28</u>	The value shall be used for all cells in the test.
DRX o	cycle length	<u>s</u>	1.28	The value shall be used for all cells in the test.
	<u>T1</u>	<u>s</u>	<u>15</u>	
	<u>T2</u>	<u>s</u>	<u>15</u>	

Cell 1 Cell 3 Unit Cell 2 **Parameter** Timeslot Number **DWPTS DWPTS DWPTS** 0 T1 T2 T1 **T2** T1 **T1 T1** <u>T1</u> T2 UTRA RF Channel Channel 1 Channel 1 Channel 1 Number PCCPCH_Ec/lor dB DwPCH_Ec/lor 0 0 0 0 dB 0 0 I_{or}/I_{oc} <u>dB</u> 9 7 9 7 7 9 7 9 <u>-1</u> <u>-1</u> <u>-1</u> <u>-1</u> PCCPCH RSCP <u>-66</u> <u>-66</u> -64 dBm -64 -74 -74 C2, C1: 0; C2, C3:0; C2,C4:0 C1, C2: 0; C1, C3:0; C1, C4:0 C3, C1: 0; C3, C2:0; C3,C4:0 Qoffset1_{s,n} dB C1, C5:0; C1, C6:0 C2, C5: 0; C2, C6:0 C3, C5: 0; C3, C6:0 dB Qhyst1s 0 0 0 0 Treselection 0 0 s \$intrasearch dB not sent not sent not sent Cell 4 Cell 5 Cell 6 Timeslot **DWPTS DWPTS DWPTS** T1 T1 **T2** T1 **T2** UTRA RF Channel Channel 1 Channel 1 Channel 1 Number PCCPCH_Ec/lor dB -3 -3 -3 -3 -3 DwPCH_Ec/lor dB 0 0 0 0 0 0 I_{or}/I_{oc} dΒ <u>-1</u> <u>-74</u> <u>-74</u> PCCPCH RSCP dBm -74 -74 <u>-74</u> -74 C4, C1: 0; C4, C2:0; C4, C3:0 C5, C1: 0; C5, C2:0; C5, C3:0 C6, C1: 0; C6, C2:0; C6, C3:0 Qoffset1_{s.n} dB C4, C5:0; C4, C6:0 C5, C4:0; C5, C6:0 C6, C4:0; C6, C5:0 Qhyst1s <u>dB</u> 0 0 0 0 **Treselection** <u>s</u> 0 0 \$intrasearch dB not sent not sent not sent dBm/1. I_{oc} -70 28 MHz <u>Propagation</u> **AWGN** Condition

Table 8.2.2.1.2A: Cell re-selection single carrier multi-cell case

8.2.2.1.4.2.2 Procedure

- a) The SS activates cell 1-6 with T1 defined parameters and monitors cell 1 and 2 for RRC CONNECTION REQUEST messages from the UE.
- b) The UE is switched on.
- c) The SS waits until the UE camps on Cell 1 and sends the RRC CONNECTION REQUEST message.
- d) After 15 s, the parameters are changed as described for T2.
- e) The SS waits for RRC CONNECTION REQUEST messages from the UE.
- f) After another 15 s, the parameters are changed as described for T1.
- g) The SS waits for RRC CONNECTION REQUEST messages from the UE.
- h) Repeat steps d) to g) [TBD] times.

8.2.2.1.5 Test Requirements

8.2.2.1.5.1 3,84 Mcps TDD Option

- 1) In step c), after the UE has responded on cell 1, it shall not respond on any other cell (cell selection).
- 2) In step e), the UE shall respond on cell 2 within 8 s.

3) In step g), the UE shall respond on cell 1 within 8 s.

For the test to pass, the total number of fulfilled test requirements 2) and 3) shall be more than [FFS]% of the cases.

NOTE: If the above Test Requirement differs from the Minimum Requirement then the Test Tolerance applied for this test is non-zero. The Test Tolerance for this test is defined in clause F.2 and the explanation of how the Minimum Requirement has been relaxed by the Test Tolerance is given in clause F.4.

8.2.2.1.5.2 1,28 Mcps TDD Option

Void.

- 1) In step c), after the UE has responded on cell 1, it shall not respond on any other cell (cell selection).
- 2) In step e), the UE shall respond on cell 2 within 8 s.
- 3) In step g), the UE shall respond on cell 1 within 8 s.

NOTE: If the above Test Requirement differs from the Minimum Requirement then the Test Tolerance applied for this test is non-zero. The Test Tolerance for this test is defined in clause F.2 and the explanation of how the Minimum Requirement has been relaxed by the Test Tolerance is given in clause F.4.

8.2.2.2 Scenario 2: TDD/TDD cell re-selection multi carrier case

8.2.2.2.1 Definition and applicability

8.2.2.2.1.1 3,84 Mcps Option

The cell re-selection delay is defined as the time from a change of cell levels to the moment when this change causes the UE to camp on a new cell , and starts to send the RRC CONNECTION REQUEST message to perform a Location Registration on the new cell.

The requirements and this test apply to the 3.84 Mcps TDD UE.

8.2.2.2.1.2 1,28 Mcps Option

Void.

The cell re-selection delay is defined as the time from the beginning of time period T2, to the moment when the UE camps on Cell 2, and starts to send the SYNCH-UL sequence in the UpPTS for sending the RRC CONNECTION REQUEST to perform a Location Registration on cell 2.

This test is applicable to 1.28 Mcps TDD UE.

8.2.2.2.2 Minimum requirement

8.2.2.2.1 3,84 Mcps Option

The cell re-selection delay shall be less than 8 s.

The rate of correct cell reselections observed during repeated tests shall be at least 90% with a confidence level of [FFS]%.

The rate of correct cell reselections observed during repeated tests shall be at least 90%.NOTE:

The cell re-selection delay can be expressed as: $T_{evaluateTDD} + T_{SI}$, where:

 $T_{evaluateTDD}$ A DRX cycle length of 1280ms is assumed for this test case, this leads to a $T_{evaluate\ TDD}$ of 6.4s according to Table 4.1 in section 4.2.2.7 in [2].

T_{SI} Maximum repetition rate of relevant system info blocks that needs to be received by the UE to camp on a cell. 1280 ms is assumed in this test case.

This gives a total of 7.68 s, allow 8s in the test case.

The normative reference for this requirement is TS 25.123 [2] clauses 4.2.2 and A.4.2.2.

8.2.2.2.2 1,28 Mcps Option

Void.

The cell re-selection delay shall be less than 8 s.

The rate of correct cell reselections observed during repeated tests shall be at least 90%.

NOTE:

The cell re-selection delay can be expressed as: $T_{evaluateNTDD} + T_{SI}$, where:

T_{evaluateNTDD} A DRX cycle length of 1280ms is assumed for this test case, this leads to a T_{evaluate NTDD} of 6.4s according to Table 4.1A in section 4.2 in [2].

Time required for receiving all the relevant system information data according to the reception procedure and the RRC procedure delay of system information blocks defined in 25.331 for a UTRAN cell (ms). 1280 ms is assumed in this test case.

This gives a total of 7.68 s, allow 8s in the test case.

The normative reference for this requirement is TS 25.123 [2] clauses 4.2.2 and A.4.2.2.

8.2.2.2.3 Test purpose

This test is to verify the requirement for the cell re-selection delay in the multi carrier case.

8.2.2.2.4 Method of test

8.2.2.2.4.1 3,84 Mcps Option

8.2.2.2.4.1.1 Initial conditions

This scenario implies the presence of 2 carriers and 6 cells as given in Table 8.2.2.2.1 and Table 8.2.2.2.2. Cell 1 and cell 2 shall belong to different Location Areas.

Table 8.2.2.2.1: General test parameters for Cell Re-selection in Multi carrier case

	Parameter	Unit	Value	Comment
Initial	Active cell		Cell1	
condition	Neighbour cells Cell2, Cell3,Cell4 Cell5, Cell6			
Final condition	Active cell		Cell2	
	HCS		Not used	
UE_TX	(PWR_MAX_RACH	dBm	21	The value shall be used for all cells in the test.
	Qrxlevmin	dBm	-102	The value shall be used for all cells in the test.
	Access Service Class (ASC#0) - Persistence value		1	Selected so that no additional delay is caused by the random access procedure. The value shall be used for all cells in the test.
	T _{SI}	S	1.28	The value shall be used for all cells in the test.
DI	RX cycle length	S	1.28	The value shall be used for all cells in the test.
	T1	S	30	
	T2	S	15	

Table 8.2.2.2: Cell re-selection multi carrier multi cell case

Parameter	Unit		Ce	II 1		Cell 2				Cell 3			
Timeslot Number		0		8	3	()		3	()		8
		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2
UTRA RF Channel Number		Channel 1			Channel 2				Channel 1				
PCCPCH_Ec/lor	dB	-3	-3			-3	-3			-3	-3		
SCH_Ec/lor	dB	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9
SCH_t _{offset}		0	0	0	0	5	5	5	5	10	10	10	10
PICH_Ec/lor	dB			-3	-3			-3	-3			-3	-3
OCNS_Ec/lor	dB	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12
\hat{I}_{or}/I_{oc}	dB	6	0	6	0	0	6	0	6	-3	-3	-3	-3
PCCPCH RSCP	dBm	-67	-73			-73	-67			-76	-76		
Qoffset1 _{s,n}	dB			C1, C3: 5:0; C1,				; C2, C3: 5:0; C2,			1: 0; C3, C3, C5:0;		
Qhyst1 _s	dB	,)				0)	
Treselection	S		()			()			()	
Sintrasearch	dB		not	sent			not	sent			not	sent	
Sintersearch	dB		not	sent			not	sent			not	sent	
			Ce	II 4			Ce	II 5			Ce	II 6	
Timeslot		0)	3	3	()	3	3	()		8
		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2
UTRA RF Channel			Char	nal 1			Char	nnel 2			Char	nnel 2	
Number			Citai	11161 1				11161 2				11161 2	
PCCPCH_Ec/lor	dB	-3	-3			-3	-3			-3	-3		
SCH_Ec/lor	dB	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9
SCH_t _{offset}		15	15	15	15	20	20	20	20	25	25	25	25
PICH_Ec/lor	dB			-3	-3			-3	-3			-3	-3
OCNS_Ec/lor	dB	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12
\hat{I}_{or}/I_{oc}	dB	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3
PCCPCH RSCP	dBm	-76	-76			-76	-76			-76	-76		
Qoffset1 _{s,n}	dB			C2:0; C4 C4, C6:				C2:0; C5; C6:			1: 0; C6, C6, C4:0;		
Qhyst1 _s	dB		()			(0			()	
Treselection	S		()			()			()	
Sintrasearch	dB		not	sent		not sent				not sent			
Sintersearch	dB		not sent not sent								not	sent	
I_{oc}	dBm/3, 84 MHz		-70										
Propagation Condition							AW	/GN					

8.2.2.4.1.2 Procedure

- a) The SS activates cell 1-6 with T1 defined parameters and monitors cell 1 and 2 for RRC CONNECTION REQUEST messages from the UE.
- b) The UE is switched on.
- c) The SS waits until the UE camps on Cell 1 and sends the RRC CONNECTION REQUEST message.
- d) After 15 s, the parameters are changed as described for T2.
- e) The SS waits for RRC CONNECTION REQUEST messages from the UE.
- f) After another 15 s, the parameters are changed as described for T1.
- g) The SS waits for RRC CONNECTION REQUEST messages from the UE.
- h) Repeat steps d) to g) [TBD] times.

NOTE: T1 is initially 30 s to allow enough time for the UE to search for cells as it has no prior knowledge of these.

8.2.2.2.4.2 1,28 Mcps Option

Void.

8.2.2.2.4.2.1 Initial conditions

This scenario implies the presence of 2 carriers and 6 cells as given in Table 8.2.2.2.1A and Table 8.2.2.2.A. For this test purpose the broadcast repetition period of the target cell shall be [TBD] s. Cell 1 and cell 2 shall belong to different Location Areas.

Table 8.2.2.2.1A: General test parameters for Cell Re-selection in Multi carrier case

Pa	<u>rameter</u>	<u>Unit</u>	<u>Value</u>	Comment
Initial condition	Active cell		Cell1	
	Neighbour cells		Cell2, Cell3, Cell4, Cell5,	
			<u>Cell6</u>	
Final condition	Active cell		<u>Cell2</u>	
	<u>HCS</u>		Not used	
<u>UE_TXPW</u>	<u>R MAX RACH</u>	<u>dBm</u>	<u>21</u>	The value shall be used for all cells in the test.
Qr	<u>xlevmin</u>	<u>dBm</u>	<u>-103</u>	The value shall be used for all cells in the test.
	ice Class (ASC#0) stence value		1	Selected so that no additional delay is caused by the random access procedure. The value shall be used for all cells in the test.
	<u>T_{SI}</u>	<u>s</u>	<u>1.28</u>	The value shall be used for all cells in the test.
DRX	cycle length	<u>s</u>	<u>1.28</u>	The value shall be used for all cells in the test.
	<u>T1</u>	<u>s</u>	<u>30</u>	
	<u>T2</u>	<u>s</u>	<u>15</u>	

Table 8.2.2.2.2A: Cell re-selection multi carrier multi cell case

<u>Parameter</u>	Unit		Ce	<u>ll 1</u>		Cell 2					Cell 3			
Timeslot Number		9	0	DW	PTS_		0	DW	PTS		0	DW	'PTS	
		<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	
UTRA RF Channel			Char	nnel 1			Char	nel 2			<u>Char</u>	nel 1		
<u>Number</u>														
PCCPCH_Ec/lor	<u>dB</u>	<u>-3</u>	<u>-3</u>			<u>-3</u>	<u>-3</u>			<u>-3</u>	<u>-3</u>			
DwPCH_Ec/lor	<u>dB</u>			<u>0</u>	<u>0</u>			<u>0</u>	<u>0</u>			<u>0</u>	<u>0</u>	
$\frac{\hat{I}_{or}/I_{oc}}{}$	<u>dB</u>	<u>9</u>	<u>7</u>	<u>9</u>	<u>7</u>	<u>7</u>	<u>9</u>	<u>7</u>	<u>9</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	
PCCPCH RSCP	dBm	<u>-64</u>	-66			-66	<u>-64</u>			-74	<u>-74</u>			
Ooffoot1	dB	C1, C	2: 0; C1,	C3:0; C	1,C4:0	C	2, C1: 0;	C2, C3:	0;	C3, C	1: 0; C3,	C2:0; C	3,C4:0	
Qoffset1 _{s,n}	<u>ub</u>	(C1, C5:0	; C1, C6:	0	<u>C2,C</u>	4:0C2, C	25:0; C2,	C6:0	(C3, C5:0;	C3, C6:	0	
<u>Qhyst1</u> _s	<u>dB</u>			<u>0</u>			<u>(</u>	<u>)</u>			<u>(</u>	<u>)</u>		
<u>Treselection</u>	<u>s</u>			<u>0</u>			(<u>)</u>			<u>(</u>	<u>)</u>		
<u>\$intrasearch</u>	<u>dB</u>		<u>not</u>	<u>sent</u>			not	<u>sent</u>			<u>not</u>	<u>sent</u>		
<u>\$intersearch</u>	<u>dB</u>			<u>sent</u>				<u>sent</u>				<u>sent</u>		
				<u>ll 4</u>				<u>II 5</u>				<u>II 6</u>		
<u>Timeslot</u>)		PTS	0 DWPTS				0		PTS		
		<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	
UTRA RF Channel Number			<u>Cha</u>	<u>innel</u>			<u>Char</u>	nnel 2			<u>Cha</u>	<u>nnel</u>		
PCCPCH_Ec/lor	dB	<u>-3</u>	<u>-3</u>			<u>-3</u>	<u>-3</u>			<u>-3</u>	<u>-3</u>			
DwPCH_Ec/lor	<u>dB</u>			<u>0</u>	<u>0</u>			<u>0</u>	<u>0</u>			<u>0</u>	<u>0</u>	
\hat{I}_{or}/I_{oc}	<u>dB</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	
PCCPCH RSCP	<u>dBm</u>	<u>-74</u>	<u>-74</u>			<u>-74</u>	<u>-74</u>			<u>-74</u>	<u>-74</u>			
Qoffset1 _{s,n}	dB	C4, C	1: 0; C4,	C2:0; C4	4,C3:0	C5, C	1: 0; C5,	C2:0; C	5,C3:0	C6, C	1: 0; C6,	C2:0; C	6,C3:0	
<u>Qollset I_{s,n}</u>	<u>ub</u>	(C4, C5:0	; C4, C6:	0	(C5, C4:0;	C5, C6:	0	(C6, C4:0;	C6, C5:	0	
Qhyst1 _s	<u>dB</u>			<u>0</u>			(<u>)</u>			<u>(</u>	<u>)</u>		
<u>Treselection</u>	<u>s</u>			<u>0</u>			<u>(</u>	<u>)</u>			<u>(</u>	<u>)</u>		
\$intrasearch	<u>dB</u>	not sent				not sent				not sent				
<u>\$intersearch</u>	<u>dB</u>		<u>not</u>	<u>sent</u>			not	<u>sent</u>			<u>not</u>	<u>sent</u>		
I_{oc}	<u>dBm/3,</u> 84 MHz		<u>-70</u>											
Propagation Condition							AW	/GN						

8.2.2.4.2.2 Procedure

- a) The SS activates cell 1-6 with T1 defined parameters and monitors cell 1 and 2 for RRC CONNECTION REQUEST messages from the UE.
- b) The UE is switched on.
- c) The SS waits until the UE camps on Cell 1 and sends the RRC CONNECTION REQUEST message.
- d) After 15 s, the parameters are changed as described for T2.
- e) The SS waits for RRC CONNECTION REQUEST messages from the UE.
- f) After another 15 s, the parameters are changed as described for T1.
- g) The SS waits for RRC CONNECTION REQUEST messages from the UE.
- h) Repeat steps d) to g) [TBD] times.
- NOTE: T1 is initially 30 s to allow enough time for the UE to search for cells as it has no prior knowledge of these.

8.2.2.2.5 Test Requirements

8.2.2.5.1 3,84 Mcps Option

- 1) In step c), after the UE has responded on cell 1, it shall not respond on any other cell (cell selection).
- 2) In step e), the UE shall respond on cell 1 within 8 s.
- 3) In step g), the UE shall respond on cell 2 within 8 s.

For the test to pass, the total number of fulfilled test requirements 2) and 3) shall be more than [FFS]% of the cases.

NOTE: If the above Test Requirement differs from the Minimum Requirement then the Test Tolerance applied for this test is non-zero. The Test Tolerance for this test is defined in clause F.2 and the explanation of how the Minimum Requirement has been relaxed by the Test Tolerance is given in clause F.4.

8.2.2.2.5.2 1,28 Mcps Option

Void.

- 1) In step c), after the UE has responded on cell 1, it shall not respond on any other cell (cell selection).
- 2) In step e), the UE shall respond on cell 1 within 8 s.
- 3) In step g), the UE shall respond on cell 2 within 8 s.

NOTE: If the above Test Requirement differs from the Minimum Requirement then the Test Tolerance applied for this test is non-zero. The Test Tolerance for this test is defined in clause F.2 and the explanation of how the Minimum Requirement has been relaxed by the Test Tolerance is given in clause F.4.

8.2.2.2A Scenario 2A: 3.84 Mcps TDD cell re-selection for 1.28 Mcps TDD UE

[FFS]

8.2.2.3 Scenario 3: TDD/FDD Cell re-selection

8.2.2.3.1 Definition and applicability

8.2.2.3.1.1 3,84 Mcps Option

The cell re-selection delay is defined as the time from when the cell quality levels change to the moment when this change makes the UE reselect a better ranked cell, and starts to send preambles on the PRACH for sending the RRC CONNECTION REQUEST message to perform a Location Registration on the new cell.

This test is for the case where the UE camps on a 3.84 Mcps TDD cell and reselects to an FDD cell.

The requirements and this test apply to UEs supporting both 3.84 Mcps TDD and FDD.

8.2.2.3.1.2 1,28 Mcps Option

The cell reselection procedure allows the UE to select a more suitable cell and eamp on it, if the UE has evaluated in N_{serv} successive measurements that the serving cell does not fulfill the cell selection criterion S_{rxlex} , defined in TS 25.304.

The cell re-selection delay is defined as the time from which the actual cell quality level in the current serving Cell 1 deteriorates to the moment when the UE camps on a better ranked Cell 2, and starts to send the SYNCH UL sequence in the UwPTS for sending the RRC CONNECTION REQUEST to perform a Location Registration on cell 2.

If the UE has evaluated in N_{serv} (see table F2.4.1.2) successive measurements that the serving cell does not fulfill the cell selection criterion S_{rxlex} , defined in TS 25.304, the UE shall initiate the measurements of all neighbor cells indicated in the measurement control system information, regardless of the measurement rules currently limiting UE measurement activities.

The cell re-selection delay is defined as the time from the beginning of time period T2, to the moment when the UE camps on Cell 2, and starts to send preambles on the PRACH for sending the RRC CONNECTION REQUEST message to perform a Location Registration on cell 2.

This test is for the case where the UE camps on a 1.28 Mcps TDD cell and reselects to an FDD cell.

The requirements and this test apply to UEs supporting both 1.28 Mcps TDD and FDD.

The requirements of this test apply to all types of UTRA UE.

8.2.2.3.2 Minimum requirements

8.2.2.3.2.1 3,84 Mcps TDD Option

The cell re-selection delay shall be less than 8 s when the DRX cycle length is 1,28 s.

The rate of correct cell reselections observed during repeated tests shall be at least 90% with a confidence level of [FFS]%.

NOTE:

The cell re-selection delay can be expressed as: $T_{\text{evaluateFDD}} + T_{\text{SI}},$ where:

T_{evaluateFDD} See TS 25.123 [2] Table 4.1 in section 4.2.2.

T_{SI} Maximum repetition rate of relevant system info blocks that needs to be received by the UE to

camp on a cell. 1280 ms is assumed in this test case.

This gives a total of 7.68 s, allow 8s in the test case.

The normative reference for this requirement is TS 25.123 [2] clauses 4.2.2 and A.4.2.3.

8.2.2.3.2.2 1,28 Mcps TDD Option

The minimum requirement for the cell re-selection delay is less than 8 s with a DRX cycle length of 1280ms.

This shall be verified in more than [FFS]% of the cases with a confidence level of [FFS].

The normative reference for this requirement is TS 25.123 [2] clauses 4.2.2.7.2 and A4.2.31.2.2.

NOTE: The cell re-selection delay can be expressed as: $T_{evaluateTDD} + T_{SI}$, where:

 $T_{evaluateTDD}$ A DRX cycle length of 1280ms is assumed for this test case, this leads to a $T_{evaluateTDD}$ of 6.4s according to table F2.4.1.A in Annex F clause F.2.4.

T_{SI} Maximum repetition rate of relevant system info blocks that needs to be received by the UE to camp on a cell. 1280 ms is assumed in this test case.

This gives a total of 7,68 s, allow 8 s in the test case.

8.2.2.3.3 Test purpose

The test purpose is to verify the requirement for the cell re-selection.

8.2.2.3.4 Method of test

8.2.2.3.4.1 3,84 Mcps Option

8.2.2.3.4.1.1 Initial conditions

This scenario implies the presence of 1 TDD and 1 FDD cell as given in Table 8.2.2.3.4.1 and Table 8.2.2.3.4.2. Cell 1 and cell 2 shall belong to different Location Areas.

Table 8.2.2.3.4.1: General test parameters for the TDD/FDD cell re-selection

	Parameter	Unit	Value	Comment
Initial	Active cell		Cell1	TDD cell
condition	Neighbour cells		Cell2	FDD cell
Final condition	Active cell		Cell2	
	HCS		Not used	
UE_	TXPWR_MAX_RACH	dBm	21	The value shall be used for all cells in the test.
	Access Service Class (ASC#0) - Persistence value		1	Selected so that no additional delay is caused by the random access procedure. The value shall be used for all cells in the test.
	T _{SI}	S	1.28	The value shall be used for all cells in the test.
I	DRX cycle length	S	1.28	The value shall be used for all cells in the test.
	T1	S	30	
	T2	S	15	

Table 8.2.2.3.4.2: TDD/FDD cell re-selection

Parameter	Unit		Ce	II 1		Cell 2			
Timeslot Number		()		8	n.a	n.a.		
		T1 T2 T1 T2				T 1	T 2		
UTRA RF Channel Number			Char	nel 1		Channel 2			
CPICH_Ec/lor	dB	n.a. n.a.				-10 -10			
PCCPCH_Ec/lor	dB	-3	-3			-12	-12		
SCH_Ec/lor	dB	-9	-9	-9	-9	-12	-12		
SCH_t _{offset}		0	0	0	0	n.a.	n.a.		
PICH_Ec/lor	dB			-3	-3	-15	-15		
OCNS_Ec/lor	dB	-3,12	-3,12	-3,12	-3,12	-0,941	-0,941		
\hat{I}_{or}/I_{oc}	dB	3 -2 3 -2				-2 3			
I_{oc}	dBm/3.8 4 MHz				-7	70			
CPICH_RSCP	dBm	n.	a.	n.	a.	-82	-77		
PCCPCH_RSCP	dBm	-70	-75			n.a. n.a.			
Cell_selection and reselectionquality _measure			CPICH	_RSCP		CPICH	_RSCP		
Qrxlevmin	dBm		-1	02		-1	15		
Qoffset1 _{s,n}	dB		C1, C	2: -12		C2, C	1: +12		
Qhyst1 _s	dB		()		()		
Treselection	S		()		()		
Sintersearch	dB		not	sent		not	sent		
Propagation Condition			AW	'GN		AW	GN		

8.2.2.3.4.1.2 Procedure

- a) The SS activates cell 1 and cell 2 with T1 defined parameters and monitors them for RRC CONNECTION REQUEST messages from the UE.
- b) The UE is switched on.
- c) The SS waits until the UE camps on Cell 1 and sends the RRC CONNECTION REQUEST message.
- d) After 30 s, the parameters are changed as described for T2.
- e) The SS waits for RRC CONNECTION REQUEST messages from the UE.
- f) After another 15 s, the parameters are changed as described for T1.
- g) The SS waits for RRC CONNECTION REQUEST messages from the UE.

h) Repeat steps d) to g) [TBD] times.

8.2.2.3.4.2 1,28 Mcps Option

8.2.2.3.4.2.1 Initial Conditions

Initially, the UE is in *Normally Camped* state on a TDD cell, e.g. the UE shall attempt to detect, synchronize and monitor intra-frequency cells indicated in the measurement control system information of the serving cell.

The UE shall measure PCCPCH RSCP at least every $T_{\text{measureNTDD}}$ (see table F2.4.1A) for intra frequency cells that are detected and measured according to the measurement rules. $T_{\text{measureNTDD}}$ is defined in table F2.4.1A. The UE shall filter PCCPCH RSCP measurements of each measured intra frequency cell using at least 2 measurements, which are taken so that the time difference between the measurements is at least $T_{\text{measureNTDD}}/2$.

The filtering shall be such that the UE shall be capable of evaluating that an intra frequency cell has become better than the serving cell within T_{evaluateNTDD} (see table F2.4.1A), from the moment the intra frequency cell became at least [2] dB better ranked than the current serving cell, provided that Treselection timer is set to zero and PCCPCH RSCP is used as measurement quantity for cell reselection.

If the Treselection timer has a non zero value and the intra frequency cell is better ranked than the serving cell, the UE shall evaluate this intra frequency cell for the Treselection time. If this cell remains better ranked within this duration, then the UE shall reselect that cell.

The Initial conditions for the test case are described in table 8.2.2.3.4.1a. The scenario implies the presence of 1 carrier and 6 cells. Cell 1 and Cell 2 shall belong to different Location Areas. The UE is requested to monitor neighbouring cells on a single carrier which is the current carrier of the serving cell.

Table 8.2.2.3.4.1a: General test parameters for Cell Re-selection single carrier multi-cell case (1,28 Mcps TDD Option)

	Parameter	Unit	Value	Comment
Initial	Active cell		Cell1	
condition	Neighbour cells		Cell2, Cell3,Cell4, Cell5, Cell6	
Final condition	Active cell		Cell2	
	HCS		Not used	
UE_	TXPWR_MAX_RACH	dBm	21	The value shall be used for all cells in the test.
	Qrxlevmin	dBm	-102	The value shall be used for all cells in the test.
	Service Class (ASC#0) Persistence value		4	Selected so that no additional delay is caused by the random access procedure. The value shall be used for all cells in the test.
	∓ _{SI}	S	1,28	The value shall be used for all cells in the test.
	DRX cycle length	S	1,28	The value shall be used for all cells in the test.
	T1	S	15	
	T2	S	15	

Table 8.2.2.3.4.2b: Cell re-selection single carrier multi-cell case (1,28 Mcps TDD Option)

Parameter	Unit		Ce	II 1			Ce	II 2			Ce	II 3		
Timeslot Number		- (.	DW	PTS	- ()	DW	PTS)	DW	PTS	
		T1				T1	T2	T1	T2	T1	T2	T1	T2	
UTRA RF Channel			Char	nel 1		Channel 1					Channel 1			
Number														
PCCPCH_Ec/lor	d₿	-3	-3			-3	ှ			-3	-3			
DwPCH_Ec/lor	d₿			0	0			0	0			0	0	
$\frac{\hat{I}_{or}/I_{oc}}{\hat{I}_{oc}}$	d₿	[9]	[7]	[9]	[7]	[7]	[9]	[7]	[9]	[-1]	[-1]	[-1]	[-1]	
PCCPCH RSCP	dBm	[-64]	[-66]			[-66]	[-64]			[-74]	[-74]			
Qoffset1 _{s.n}	dB			C3:0; C			1: 0; C2,				1: 0; C3,			
QONSCI TS,A		_	C1, C5:0	; C1,C6:	0	(C2, C5: 0	; C2:C6:	0	(C3, C5: 0	; C3:C6:	0	
Qhyst1 _s	d₿)			()			(9		
Treselection	S		()			()			(9		
\$intrasearch	d₿			sent		not sent					not sent Cell 6			
				II 4			Ce							
Timeslet			•		PTS	(PTS		0 DWPTS			
		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	
UTRA RF Channel Number			Char	nel 1			Chan	nel 1			Char	nel 1		
PCCPCH Ec/lor	dB	-3	-3			-3	-3			-3	-3			
DwPCH_Ec/lor	ub dB	-3	-9	0	0	-9	-3	0	0	-3	-9	0	0	
$\frac{\hat{I}_{or}/I_{oc}}{I_{oc}}$	d₿	[-1]	[-1]	[-1]	[-1]	[-1]	[-1]	[-1]	[-1]	[-1]	[-1]	[-1]	[-1]	
PCCPCH RSCP	dBm	[-74]	[-74]			[-74]	[-74]			[-74]	[-74]			
Qoffset1 _{s,n}	dB	C	4, C1: 0;	C4, C2:	0;	C5, C	1: 0; C5,	C2:0; C	5 ,C3:0	C6, C	1: 0; C6,	C2:0; C	6 ,C3:0	
QUIISULI_{S,R}	ub	C4,C	3:0C4, (C5:0; C4:	C6:0		C5, C4:0	; C5:C6:)		C6, C4:0	; C6:C5:()	
Qhyst1 _s	d₿		()			()			()		
Treselection	S		()			()			()		
\$intrasearch	d₿		not	sent			not	sent			not	sent		
$\frac{I_{oc}}{I_{oc}}$	dBm/1, 28 MHz		-70											
Propagation Condition							AW	'GN						

This test is to verify the requirement for the 1.28 Mcps TDD OPTION/FDD cell re-selection delay reported in section 4.2. in [2]

This scenario implies the presence of 1 low chip rate TDD and 1 FDD cell as given in Table 8.2.2.3.4.1A and Table 8.2.2.3.4.2A.

The ranking of the cells shall be made according to the cell reselection criteria specified in TS25.304.

Cell 1 and cell 2 shall belong to different Location Areas.

Table 8.2.2.3.4.1A: General test parameters for the TDD/FDD cell re-selection

<u>Parameter</u>		<u>Unit</u>	<u>Value</u>	Comment			
Initial condition	Active cell		<u>Cell1</u>	1.28 Mcps TDD OPTION cell			
	Neighbour cells		<u>Cell2</u>	FDD cell			
Final condition	Active cell		<u>Cell2</u>				
<u>HCS</u>			Not used				
UE_TXPWR_MAX_RACH		<u>dBm</u>	<u>21</u>	The value shall be used for all cells in the test.			
Access Service Class (ASC#0) - Persistence value			1	Selected so that no additional delay is caused by the random access procedure. The value shall be used for all cells in the test.			
<u>T_{SI}</u>		<u>s</u>	<u>1.28</u>	The value shall be used for all cells in the test.			
DRX cycle length		<u>s</u>	<u>1.28</u>	The value shall be used for all cells in the test.			
	<u>T1</u>	<u>s</u>	<u>30</u>				
	<u>T2</u>	<u>s</u>	<u>15</u>				

Table 8.2.2.3.4.2A: Test parameters for the 1.28 Mcps TDD OPTION/FDD cell re-selection

<u>Parameter</u>	<u>Unit</u>		Cell 1	Cell 2					
Timeslot Number			<u>0</u>	Dw	Pts	n.a.			
		<u>T1</u>	<u>T2</u>	<u>T 1</u>	T 2	<u>T1</u>	<u>T2</u>		
<u>UTRA RF Channel</u> <u>Number</u>			Channel	Channel 2					
PCCPCH_Ec/lor	<u>dB</u>	<u>-3</u>	<u>-3</u>			<u>-12</u>	<u>-12</u>		
DwPCH Ec/lor	<u>dB</u>			<u>0</u>	<u>0</u>	<u>n.a.</u>			
CPICH_Ec/lor	<u>dB</u>	<u>n</u>	.a.	<u>n.a.</u>		<u>-10</u>	<u>-10</u>		
SCH_Ec/lor	<u>dB</u>	<u>n.a.</u>		<u>n.a.</u>		<u>-12</u>	<u>-12</u>		
PICH_Ec/lor	<u>dB</u>					<u>-15</u>	<u>-15</u>		
OCNS_Ec/Ior	<u>dB</u>	n.a.		n.a.		<u>-0,941</u>	<u>-0,941</u>		
\hat{I}_{or}/I_{oc}	<u>dB</u>	[TBD]	[TBD]			[TBD]	[TBD]		
I_{oc}	dBm/1. 28 MHz	<u>-70</u>							
PCCPCH_RSCP	dBm	[TBD]	[TBD]			n.a.	n.a.		
<u>CPICH_RSCP</u>			<u>n.a.</u>	[TBD]	[TBD]				
Cell selection and r eselection quality measure			CPICH_R	CPICH_RSCP					
<u>Qrxlevmin</u>	<u>dBm</u>		<u>-103</u>	<u>-115</u>					
Qoffset1 _{s,n}	<u>dB</u>		C1, C2: -	C2, C1: +12					
Qhyst1 _s	<u>dB</u>		<u>0</u>	<u>0</u>					
<u>Treselection</u>	S	<u>0</u>							
<u>Sintersearch</u>	<u>dB</u>	not sent							
Propagation Condition		<u>AWGN</u>							

8.2.2.3.4.2.2 Procedure

- a) The test scenario of 6 cells with the parameter setting given in tables 8.2.2.3.2.2a and 8.2.2.3.2.2b is to be realized by the SS.
- b) UE is switched on.
- c) UE is in Normally Camped state on a TDD cell.
- d) SS waits to the end of for the time interval T_{+} (15s) as described in Table 8.2.2.3.2.2a.

- e) At the end of time interval T_1 , time interval T_2 begins, SS changes parameters yielding cell 2 better ranked than serving cell 1.
- f) SS waits for the SYNCH UL sequence in the UwPTS from the UE.
- g) Cell reselection delay is measured.
- h) At the end of time interval T_2 , conditions of time interval T_1 are repeated by SS yielding cell 1 better ranked than serving cell 2.
- i) SS waits for the SYNCH UL sequence in the UwPTS from the UE.
- j) Cell reselection delay is measured.
- k) Repeat step e) to h) until confidence level of [FFS] is reached.
- a) The SS activates cell 1 and cell 2 with T1 defined parameters and monitors them for RRC CONNECTION REQUEST messages from the UE.
- b) The UE is switched on.
- c) The SS waits until the UE camps on Cell 1 and sends the RRC CONNECTION REQUEST message.
- d) After 30 s, the parameters are changed as described for T2.
- e) The SS waits for RRC CONNECTION REQUEST messages from the UE.
- f) After another 15 s, the parameters are changed as described for T1.
- g) The SS waits for RRC CONNECTION REQUEST messages from the UE.
- h) Repeat steps d) to g) [TBD] times.

8.2.2.3.5 Test requirements

8.2.2.3.5.1 3,84 Mcps TDD Option

- 1) In step c), after the UE has responded on cell 1, it shall not respond on any other cell (cell selection).
- 2) In step e), the UE shall respond on cell 2 within 8 s.
- 3) In step g), the UE shall respond on cell 1 within 8 s.

For the test to pass, the total number of fulfilled test requirements 2) and 3) shall be more than [FFS]% of the cases.

NOTE: If the above Test Requirement differs from the Minimum Requirement then the Test Tolerance applied for this test is non-zero. The Test Tolerance for this test is defined in clause F.2 and the explanation of how the Minimum Requirement has been relaxed by the Test Tolerance is given in clause F.4.

8.2.2.3.5.2 1,28 Mcps TDD Option

The requirement for the cell re selection delay is 8 s in the single carrier case reported in clause 8.2.2.3.1.

This shall be verified in more than [FFS]% of the cases with a confidence level of [FFS].

NOTE: The cell re selection delay can be expressed as: T_{evaluateTDD} + T_{SI}, where:

T_{evaluateTDD} A DRX cycle length of 1280ms is assumed for this test case, this leads to a T_{evaluateTDD} of 6.4s according to table F2.4.1.A in annex F clause F2.4.

T_{SI} Maximum repetition rate of relevant system info blocks that needs to be received by the UE to camp on a cell. 1280 ms is assumed in this test case.

This gives a total of 7.68 s, allow 8s in the test case.

Test parameters are to be set according to table 8.2.2.3.5.1 where the test tolerances shall not exceed the limits prescribed in annex F clause F.2.4.1.2.

Table 8.2.2.3.5.1: Cell re-selection single carrier multi-cell case (1,28 Mcps TDD Option)

Parameter	Unit	it Cell 1			Cell 2				Cell 3				
Timeslot Numbe	r ·	0 DWPTS		0 DWPTS			PTS	0 D		DW	PTS		
		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2
UTRA RF Chann	əl	Channel 1			Channel 1				Chanr	nel 1			
Number													
PCCPCH_Ec/lo	: dB	-3	-3			-3	-3			-3	-3		
DwPCH_Ec/lor	d₿			0	0			0	0			0	0
$\frac{\hat{I}_{or}/I_{oc}}{I_{oc}}$	dB	[9+TT1]	[7-TT1]	[9+TT1]	[7-TT1]	[7-TT1]	[9+TT1]	[7-TT1]	[9+TT1]	[-1-TT2]	[-1-TT2]	[-1-TT2]	[-1-TT2]
PCCPCH RSCF	dBm	[- 64+TT1]	[-66-TT1]			[-66-TT1]	[-64+TT1]			[-74-TT2]	[-74-TT2]		
Qoffset1 _{s,n}	dB	C1, C2: 0; C1, C3:0; C1,C4:0 -C1, C5:0; C1,C6:0			C2, C1: 0; C2, C3:0; C2,C4:0 C2, C5: 0; C2:C6:0				C3, C1: 0; C3, C2:0; C3,C4:0 C3, C5: 0; C3:C6:0				
Qhyst1 _s	d₿	0				0				θ			
Treselection 4 1	s	0				0				0			
Sintrasearch	d₿	not sent					not se	ent		not sent			
		Cell 4				Cell 5				Cell 6			
Timeslot			0	DWPTS		(0 DWPTS		PTS	0		DWPTS	
		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2
UTRA RF Chann Number	əl	Channel 1		Channel 1			Channel 1						
PCCPCH_Ec/lo	: dB	-3	-3			-3	-3			-3	-3		
DwPCH_Ec/lor	d₿			0	0			0	0			0	0
$\frac{\hat{I}_{or}/I_{oc}}{I_{oc}}$	d₿	[-1-TT2]	[-1-TT2]	[-1-TT2]	[-1-TT2]	[-1-TT2]	[-1-TT2]	[-1-TT2]	[-1-TT2]	[-1-TT2]	[-1-TT2]	[-1-TT2]	[-1-TT2]
PCCPCH RSCF	dBm	[-74- TT2]	[-74-TT2]			[-74-TT2]	[-74-TT2]			[-74-TT2]	[-74-TT2]		
Qoffset1 _{s,n}	dB	C4, C1: 0; C4, C2:0; C4,C3:0C4, C5:0; C4:C6:0			C5, C1: 0; C5, C2:0; C5,C3:0 C5, C4:0; C5:C6:0				C6, C1: 0; C6, C2:0; C6,C3:0 C6, C4:0; C6:C5:0				
Qhyst1₅	d₽	0			0			0					
Treselection 1	S	0			0			0					
Sintrasearch	d₿	not sent			not sent				not sent				
	dBm/		· · · · · · · · · · · · · · · · · · ·										
$\frac{I_{oc}}{}$	1,28 MHz	-70											
Propagation Condition		AWGN											

NOTE: If the above Test Requirement differs from the Minimum Requirement then the Test Tolerance applied for this test is non-zero. The Test Tolerance for this test is defined in annex F clause F.2 and the explanation of how the Minimum Requirement has been relaxed by the Test Tolerance is given in annex F.

- 1) In step c), after the UE has responded on cell 1, it shall not respond on any other cell (cell selection).
- 2) In step e), the UE shall respond on cell 2 within 8 s.
- 3) In step g), the UE shall respond on cell 1 within 8 s.

For the test to pass, the total number of fulfilled test requirements 2) and 3) shall be more than [FFS]% of the cases.

NOTE: If the above Test Requirement differs from the Minimum Requirement then the Test Tolerance applied for this test is non-zero. The Test Tolerance for this test is defined in clause F.2 and the explanation of how the Minimum Requirement has been relaxed by the Test Tolerance is given in clause F.4.

8.2.2.4 Scenario 4: inter RAT cell re-selection

8.2.2.4.1 Definition and applicability

8.2.2.4.1.1 3,84 Mcps Option

The cell re-selection delay is defined as the time from when the cell quality levels change to the moment when this change makes the UE reselect a better ranked cell, and starts to send LOCATION UPDATING REQUEST message to perform a Location update to the new cell.

This test is for the case where the UE camps on a 3.84 Mcps TDD cell and reselects to a GSM cell.

The requirements and this test apply to UEs supporting both 3.84 Mcps TDD and GSM.

8.2.2.4.1.2 1,28 Mcps Option

Void.

The cell re-selection delay is defined as the time from the beginning of time period T2, to the moment when the UE camps on Cell 2, and starts to send LOCATION UPDATING REQUEST message to perform a Location update.

This test is for the case where the UE camps on a 1.28 Mcps TDD cell and reselects to a GSM cell.

The requirements and this test apply to UEs supporting both 1. 28 Mcps TDD and GSM.

8.2.2.4.2 Minimum requirement

8.2.2.4.2.1 3,84 Mcps Option

The cell re-selection delay shall be less than 8 s when the DRX cycle length is 1,28 s. The cell selection parameters in the BCCH of the GSM cell in system info 3 and 4 are transmitted at least every second.

The rate of correct cell reselections observed during repeated tests shall be at least 90% with a confidence level of [FFS]%.

The normative reference for this requirement is TS 25.123 [2] clauses 4.2.23.2.1 and A.4.2.4

8.2.2.4.2.2 1,28 Mcps Option

Void.

The cell re-selection delay shall be less than $4 \text{ s} + T_{\text{BCCH}}$ where T_{BCCH} is the maximum time allowed to read BCCH data from GSM cell.

The rate of correct cell reselections observed during repeated tests shall be at least 90%.

NOTE: The cell re-selection delay can be expressed as: 3*T_{measureTDD} + T_{BCCH}, where:

T_{measureTDD} Specified in 4.2.2.7.2 Table 4.1A in [2].

<u>T_{BCCH}</u> <u>Maximum time allowed to read BCCH data from GSM cell in TS 45.005.</u>

This gives a total of $3.84s + T_{BCCH}$, thus allow $4s + T_{BCCH}$.

The normative reference for this requirement is TS 25.123 [2] clauses 4.2.2 and A.4.2.4

8.2.2.4.3 Test purpose

This test verifies the UE meets the minimum requirement for the case where the UE camps on a TDD cell and reselects to a GSM cell.

8.2.2.4.4 Method of Test

8.2.2.4.4.1 3,84 Mcps Option

8.2.2.4.4.1.1 Initial conditions

This scenario implies the presence of 1 <u>3.84 Mcps</u> TDD and 1 GSM cell as given in Table 8.2.2.4.1, 8.2.2.4.2, and 8.2.2.4.3. Cell 1 and cell 2 shall belong to different Location Areas.

Table 8.2.2.4.1: General test parameters for UTRAN to GSM Cell Re-selection

F	Parameter	Unit	Value	Comment
Initial	Active cell		Cell1	TDD Cell
condition	Neighbour cell		Cell2	GSM Cell
Final condition	Active cell		Cell2	
DR	DRX cycle length		1,28	UTRAN cell
BCCH rep	petition period (GSM cell)	S	1,87	In GSM the system information is scheduled according to an 8 x (51 x 8) cycle (i.e. a system information message is transmitted every 235 ms). The cell selection parameters in system info 3 and 4 are transmitted at least every second. (GSM 05.02)
T1		S	15	
	T2	S	15	

Table 8.2.2.4.2: Cell re-selection UTRAN to GSM cell case (cell 1)

Parameter	Unit		Cell 1	(UTRA)		
Timeslot Number		()	3	3	
		T1	T2	T1	T2	
UTRA RF Channel Number		Chan	nel 1	Channel 1		
PCCPCH_Ec/lor	dB	-3	-3			
SCH_Ec/lor	dB	-9	-9	-9	-9	
SCH_t _{offset}		0	0	0	0	
PICH_Ec/lor	dB			-3	-3	
OCNS_Ec/lor	dB	-3,12	-3,12	-3,12	-3,12	
\hat{I}_{or}/I_{oc}	dB	3	-2	3	-2	
I_{oc}	dBm/3, 84 MHz	-7	70	-70		
PCCPCH RSCP	dBm	-70	-75			
Propagation Condition		AW	'GN	AWGN		
Treselection	S		()		
Ssearch _{RAT}	dB		not	sent	·	

Table 8.2.2.4.3: Cell re-selection UTRAN to GSM cell case (cell 2)

Parameter	Unit	Cell 2 (GSM)				
Parameter	Onit	T1	T2			
Absolute RF Channel Number		ARF	CN 1			
RXLEV	dBm	-80	-70			
RXLEV_ACCESS_MIN	dBm	-100				
MS_TXPWR_MAX_CCH	dBm	3	30			

8.2.2.4.4.1.2 Procedure

- a) The SS activates cell 1 and 2 with T1 defined parameters and monitors cell 1 and 2 for RRC CONNECTION REQUEST and LOCATION UPDATING REQUEST messages from the UE.
- b) The UE is switched on.

- c) The SS waits until the UE camps on Cell 1 and sends the RRC CONNECTION REQUEST message.
- d) After 15 s, the parameters are changed as described for T2.
- e) The SS waits for LOCATION UPDATING REQUEST messages from the UE.
- f) After 15 s, the parameters are changed as described for T1.
- g) The SS waits for RRC CONNECTION REQUEST messages from the UE.
- h) Repeat steps d) to g) [TBD] times.

8.2.2.4.4.2 1,28 Mcps Option

Void.

8.2.2.4.4.2.1 Initial conditions

This scenario implies the presence of 1 1.28 Mcps TDD serving cell, and 1 GSM cell to be re-selected. Test parameters are given in Table 8.2.2.4.1A, 8.2.2.4.2A, and 8.2.2.4.3A.

The ranking of the cells shall be made according to the cell reselection criteria specified in TS25.304. Cell 1 and cell 2 shall belong to different location areas.

<u>Table 8.2.2.4.1A: General test parameters for UTRAN (1.28 Mcps TDD OPTION) to GSM Cell Reselection</u>

Pai	rameter	<u>Unit</u>	<u>Value</u>	Comment
Initial condition	Active cell		<u>Cell1</u>	
	Neighbour cell		Cell2	
Final condition	Active cell		Cell2	
DRX	cycle length	<u>s</u>	<u>1,28</u>	
	<u>T1</u>	<u>s</u>	<u>15</u>	
	<u>T2</u>	<u>s</u>	<u>15</u>	

Table 8.2.2.4.2A: Cell re-selection UTRAN to GSM cell case (cell 1)

<u>Parameter</u>	<u>Unit</u>		Cell 1 ((UTRA)				
Timeslot Number		(<u>)</u>	Dwl	PTS			
		<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>			
UTRA RF Channel Number		<u>Chan</u>	<u>nel 1</u>	Channel 1				
PCCPCH Ec/lor	<u>dB</u>	<u> </u>	<u>-3</u>					
DwPCH_Ec/lor	<u>dB</u>			0	<u>0</u>			
\hat{I}_{or}/I_{oc}	<u>dB</u>	<u>13</u>	<u>-1</u>	<u>13</u>	<u>-1</u>			
I_{oc}	dBm/1. 28 MHz		<u>-80</u>					
PCCPCH RSCP	<u>dBm</u>	<u>-70</u>	<u>-84</u>					
Propagation Condition		<u>AW</u>	<u>'GN</u>	_AW	<u>/GN</u>			
<u>Treselection</u>	<u>s</u>			<u>0</u>				
<u>Ssearch_{RAT}</u>	<u>dB</u>		Not	<u>sent</u>				
<u>Qrxlevmin</u>	<u>dBm</u>		<u>-1</u>	<u>03</u>				
Qoffset1 _{s,n}	<u>dB</u>							
Qhyst1 _s	<u>dB</u>		()				

Table 8.2.2.4.3A: Cell re-selection UTRAN to GSM cell case (cell 2)

<u>Parameter</u>	Unit	Cell 2	(GSM)
	Oille	<u>T1</u>	<u>T2</u>
Absolute RF Channel Number		ARF	CN 1
RXLEV	dBm	<u>-75</u>	-70
RXLEV_ACCESS_MIN	dBm	<u>-1</u>	04
MS_TXPWR_MAX_CCH	dBm	3	3

8.2.2.4.4.2.2 Procedure

- a) The SS activates cell 1 and 2 with T1 defined parameters and monitors cell 1 and 2 for RRC CONNECTION REQUEST and LOCATION UPDATING REQUEST messages from the UE.
- b) The UE is switched on.
- c) The SS waits until the UE camps on Cell 1 and sends the RRC CONNECTION REQUEST message.
- d) After 15 s, the parameters are changed as described for T2.
- e) The SS waits for LOCATION UPDATING REQUEST messages from the UE.
- f) After 15 s, the parameters are changed as described for T1.
- g) The SS waits for RRC CONNECTION REQUEST messages from the UE.
- h) Repeat steps d) to g) [TBD] times.

8.2.2.4.5 Test Requirements

8.2.2.4.5.1 3,84 Mcps Option

- 1) In step c), after the UE has responded on cell 1, it shall not respond on any other cell (cell selection).
- 2) In step e), the UE shall respond on cell 2 within 8 s.
- 3) In step g), the UE shall respond on cell 1.

For the test to pass, the total number of fulfilled test requirements in step 2) shall be at least 90% of the cases.

NOTE: If the above Test Requirement differs from the Minimum Requirement then the Test Tolerance applied for this test is non-zero. The Test Tolerance for this test is defined in clause F.2 and the explanation of how the Minimum Requirement has been relaxed by the Test Tolerance is given in clause F.4.

8.2.2.4.5.2 1,28 Mcps Option

Void.

- 1) In step c), after the UE has responded on cell 1, it shall not respond on any other cell (cell selection).
- 2) In step e), the UE shall respond on cell 2 within 8 s.
- 3) In step g), the UE shall respond on cell 1.

NOTE: If the above Test Requirement differs from the Minimum Requirement then the Test Tolerance applied for this test is non-zero. The Test Tolerance for this test is defined in clause F.2 and the explanation of how the Minimum Requirement has been relaxed by the Test Tolerance is given in clause F.4.

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Comprehensive information and tips about how to create CRs can be found at: http://www.3gpp.org/3G_Specs/CRs.htm. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked \$\mathbb{X}\$ contain pop-up help information about the field that they are closest to.
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- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

8.3.5 Cell Re-selection in CELL PCH

8.3.5.1 Scenario 1: TDD/TDD cell re-selection single carrier case

8.3.5.1.1 Definition and applicability

8.3.5.1.1.1 3,84 Mcps TDD option

The cell re-selection delay is defined as the time from a change of cell levels to the moment when this change causes the UE to camp on a new cell , and starts to send the CELL UPDATE message with cause value "cell reselection" in the new cell.

The requirements and this test apply to the 3,84 Mcps TDD UE.

8.3.5.1.1.2 1,28 Mcps TDD option

Void.

8.3.5.1.2 Minimum requirement

8.3.5.1.2.1 3,84 Mcps TDD option

The cell re-selection delay shall be less than 8 s.

NOTE:

The cell re-selection delay can be expressed as: $T_{evaluateTDD} + T_{SI}$, where:

<u>TevaluateTDD</u> A DRX cycle length of 1280ms is assumed for this test case, this leads to a Tevaluate TDD of 6.4s according to TS 25.123 [2] Table 4.1 in section 4.2.2.7.

T_{SI} Maximum repetition period of relevant system info blocks that needs to be received by the UE to camp on a cell. 1280 ms is assumed in this test case.

This gives a total of 7.68 s, allow 8s in the test case.

The normative reference for this requirement is TS 25.123 [2] clauses 5.5 and A.5.5.1.

8.3.5.1.2.2 1,28 Mcps TDD option

Void.

8.3.5.1.3 Test purpose

This test verifies that the UE meets the minimum requirement for the cell re-selection delay in CELL_PCH for the single carrier case

8.3.5.1.4 Method of test

8.3.5.1.4.1 3,84 Mcps TDD option

8.3.5.1.4.1.1 Initial conditions

This scenario contains 6 cells operating on the same carrier frequency. The test parameters are given in Tables 8.3.5.1.1.1, and 8.3.5.1.1.2.

Table 8.3.5.1.1.1: General test parameters for Cell Re-selection single carrier multi-cell case

	<u>Parameter</u>	<u>Unit</u>	<u>Value</u>	<u>Comment</u>
<u>Initial</u>	Active cell		Cell1	
<u>condition</u>	Neighbour cells		Cell2, Cell3,Cell4,	
			Cell5, Cell6	
<u>Final</u>	Active cell		Cell2	
condition				
	<u>HCS</u>		Not used	
UE_TX	PWR_MAX_RACH	<u>dBm</u>	<u>21</u>	The value shall be used for all cells in the test.
	<u>Qrxlevmin</u>	<u>dBm</u>	<u>-102</u>	The value shall be used for all cells in the test.
Access Se	ervice Class (ASC#0)			Selected so that no additional delay is caused by
<u>- Pe</u>	ersistence value		<u>1</u>	the random access procedure. The value shall be
				used for all cells in the test.
	<u>T_{SI}</u>	<u>s</u>	<u>1.28</u>	The value shall be used for all cells in the test.
DR	X cycle length	<u>s</u>	<u>1.28</u>	The value shall be used for all cells in the test.
	<u>T1</u>	<u>s</u>	<u>15</u>	
	<u>T2</u>	<u>s</u>	<u>15</u>	

Table 8.3.5.1.1.2: Cell re-selection single carrier multi-cell case

<u>Parameter</u>	Unit		Ce	<u>II 1</u>			Ce	II 2		Cell 3			
Timeslot Number		9)	3	3	()	3	3	(<u> </u>		3
		<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>
UTRA RF Channel			Chan	nal 1		Channel 1				Channel 1			
<u>Number</u>				11101 1			-	<u> </u>				<u> </u>	
PCCPCH Ec/lor	<u>dB</u>	<u>-3</u>	<u>-3</u>			<u>-3</u>	<u>-3</u>			<u>-3</u>	<u>-3</u>		
SCH_Ec/lor	<u>dB</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>
SCH toffset	-ID	<u>0</u>	<u>0</u>	0	0	<u>5</u>	<u>5</u>	<u>5</u>	<u>5</u>	<u>10</u>	<u>10</u>	<u>10</u>	<u>10</u>
PICH_Ec/lor	<u>dB</u>	4.00	4.00	<u>-3</u>	<u>-3</u>	4.00	4.00	<u>-3</u>	<u>-3</u>	4.00	4.00	<u>-3</u>	<u>-3</u>
OCNS_Ec/lor	<u>dB</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>
\hat{I}_{or}/I_{oc}	<u>dB</u>	<u>9</u>	<u>7</u>	<u>9</u>	<u>7</u>	<u>7</u>	<u>9</u>	<u>7</u>	<u>9</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>
PCCPCH RSCP	<u>dBm</u>	<u>-64</u>	<u>-66</u>			<u>-66</u>	<u>-64</u>			<u>-74</u>	<u>-74</u>		
Qoffset1 _{s,n}	dB			C3:0; C				C3:0; C2			1: 0; C3,		
_		<u>C</u>		C1, C6:	<u>0</u>	<u>C</u>		; C2, C6:	<u>0</u>	<u>C</u>	3, C5: 0		<u>0</u>
Qhyst1 _s	<u>dB</u>			<u>)</u>			_	<u>)</u>				2	
Treselection	<u>s</u>			<u>)</u>				<u>)</u>		<u>0</u>			
\$intrasearch	<u>dB</u>			sent				sent				sent	
Timeslet				<u>II 4</u>	,			II <u>5</u>	,			<u>II 6</u>	,
Timeslot		<u>(</u> 	<u>)</u> T2	T1	3 T2	T1) T2	T1	T2	T1	T2	T1	3 T2
UTRA RF Channel		<u> </u>		_	12	<u> </u>		_	12	<u> </u>			12
Number			Chan	nel 1			<u>Char</u>	nel 1			<u>Char</u>	nel 1	
PCCPCH_Ec/lor	dB	<u>-3</u>	<u>-3</u>			<u>-3</u> <u>-3</u>				<u>-3</u>	<u>-3</u>		
SCH_Ec/lor	<u>dB</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>
SCH_t _{offset}		<u>15</u>	<u>15</u>	<u>15</u>	<u>15</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>25</u>	<u>25</u>	<u>25</u>	<u>25</u>
PICH_Ec/lor	<u>dB</u>			<u>-3</u>	<u>-3</u>			<u>-3</u>	<u>-3</u>			<u>-3</u>	<u>-3</u>
OCNS_Ec/lor	<u>dB</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>
\hat{I}_{or}/I_{oc}	<u>dB</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>
PCCPCH RSCP	dBm	-74	-74			-74	-74			-74	<u>-74</u>		
Ooffoot1	dB	С	4, C1: 0;	C4, C2:	<u>0;</u>	C5, C	1: 0; C5,	C2:0; C5	5,C3:0	C6, C	1: 0; C6,	C2:0; C6	6,C3:0
Qoffset1 _{s,n}		<u>C4,C</u>	3:0C4, C	5:0; C4,	C6:0	(C5, C4:0;	C5, C6:	<u>0</u>	(C6, C4:0;	C6, C5:	<u>0</u>
<u>Qhyst1</u> _s	<u>dB</u>		_	<u>)</u>		<u>0</u>					<u>(</u>	<u>)</u>	
<u>Treselection</u>	<u>s</u>		<u>0</u>						<u>0</u>				
\$intrasearch	<u>dB</u>		<u>not</u> :	<u>sent</u>			not	<u>sent</u>			not	<u>sent</u>	
I_{oc}	<u>dBm/3,</u> 84 MHz		<u>-70</u>										
Propagation							۸۱۸	CN					
Condition							AVV	<u>'GN</u>					

8.3.5.1.4.1.2 Procedure

a) The SS activates cell 1-6 with T1 defined parameters.

- b) The UE is switched on.
- c) A call is set up according to the test procedure specified in TS 34.108 [3] subclause 7.4.2.7.1.
- d) After 15 s, the parameters are changed as described for T2.
- e) The SS waits for CELL UPDATE message with cause value "cell reselection" from the UE.
- f) The SS sends the UE CELL UPDATE CONFIRM message with "RRC State Indicater" = "CELL PCH".
- g) After another 15 s, the parameters are changed as described for T1.
- h) The SS waits for CELL UPDATE message with cause value "cell reselection" from the UE.
- i) Repeat steps d) to g) [TBD] times.

8.3.5.1.4.2 1,28 Mcps TDD option

Void.

8.3.5.1.5 Test Requirements

8.3.5.1.5.1 3,84 Mcps TDD option

- 1) In step d), after the UE has responded on cell 1, it shall not respond on any other cell (cell selection).
- 2) In step e), the UE shall respond on cell 2 within 8 s.
- 3) In step h), the UE shall respond on cell 1 within 8 s.

For the test to pass, the total number of fulfilled test requirements 2) and 3) shall be more than [FFS]% of the cases.

NOTE: If the above Test Requirement differs from the Minimum Requirement then the Test Tolerance applied for this test is non-zero. The Test Tolerance for this test is defined in clause F.2 and the explanation of how the Minimum Requirement has been relaxed by the Test Tolerance is given in clause F.4.

Void.

8.3.5.1.5.2 1,28 Mcps TDD option

Void.

8.3.5.2 Scenario 2: TDD/TDD cell re-selection multi carrier case

8.3.5.2.1 Definition and applicability

8.3.5.2.1.1 3,84 Mcps TDD option

The cell re-selection delay is defined as the time from a change of cell levels to the moment when this change causes the UE to camp on a new cell , and starts to send the CELL UPDATE message with cause value "cell reselection" in the new cell.

The requirements and this test apply to the 3,84 Mcps option TDD UE.

8.3.5.2.1.2 1,28 Mcps TDD option

Void.

8.3.5.2.2 Minimum requirement

8.3.5.2.2.1 3,84 Mcps TDD option

The cell re-selection delay shall be less than 8 s.

NOTE:

The cell re-selection delay can be expressed as: T_{evaluateTDD} + T_{SI}, where:

 $\Gamma_{\text{evaluateTDD}}$ A DRX cycle length of 1280ms is assumed for this test case, this leads to a $T_{\text{evaluate TDD}}$ of 6.4s

according to TS 25.123 [2] Table 4.1 in section 4.2.2.7.

<u>Maximum repetition period of relevant system info blocks that needs to be received by the UE to camp on a cell. 1280 ms is assumed in this test case.</u>

This gives a total of 7.68 s, allow 8s in the test case.

The normative reference for this requirement is TS 25.123 [2] clauses 5.5 and A.5.5.2.

8.3.5.2.2.2 3,84 Mcps TDD option

Void.

8.3.5.2.3 Test purpose

This test verifies that the UE meets the requirement for the cell re-selection delay in CELL PCH for the multi carrier case.

8.3.5.2.4 Method of test

8.3.5.2.4.1 3,84 Mcps TDD option

8.3.5.2.4.1.1 Initial conditions

This scenario contains 6 cells and 2 carrier frequencies. The test parameters are given in Tables 8.3.5.2.1.1 and 8.3.5.2.1.2.

Table 8.3.5.2.1.1: General test parameters for Cell Re-selection in Multi carrier case

	<u>Parameter</u>	<u>Unit</u>	<u>Value</u>	Comment
<u>Initial</u>	Active cell		Cell1	
condition	Neighbour cells		Cell2, Cell3,Cell4,	
			Cell5, Cell6	
<u>Final</u>	Active cell		Cell2	
<u>condition</u>				
	<u>HCS</u>		Not used	
UE_TX	PWR_MAX_RACH	<u>dBm</u>	<u>21</u>	The value shall be used for all cells in the test.
	<u>Qrxlevmin</u>	<u>dBm</u>	<u>-102</u>	The value shall be used for all cells in the test.
	Service Class (ASC#0) ersistence value		<u>1</u>	Selected so that no additional delay is caused by the random access procedure. The value shall be used for all cells in the test.
	<u>T_{SI}</u>	<u>s</u>	<u>1.28</u>	The value shall be used for all cells in the test.
DI	RX cycle length	<u>s</u>	<u>1.28</u>	The value shall be used for all cells in the test.
	<u>T1</u>	<u>s</u>	<u>30</u>	
	<u>T2</u>	<u>s</u>	<u>15</u>	

Table 8.3.5.2.1.2: Cell re-selection multi carrier multi cell case

Parameter	Unit		Ce	<u>II 1</u>			Ce	<u>II 2</u>		Cell 3				
Timeslot Numbe	r	C		8	3	9)	8	3	9	0	3	3	
		<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	
UTRA RF Channe Number	_		<u>Char</u>	nel 1			Char	nnel 2			Char	nel 1		
PCCPCH_Ec/lor	<u>dB</u>	<u>-3</u>	<u>-3</u>			<u>-3</u>	<u>-3</u>			<u>-3</u>	<u>-3</u>			
SCH_Ec/lor	<u>dB</u>	9	<u>-9</u>	<u>-9</u>	<u>-9</u>	9	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	
SCH_t _{offset}		0	0	0	0	5	5	<u>5</u>	5	<u>10</u>	<u>10</u>	<u>10</u>	<u>10</u>	
PICH_Ec/lor	<u>dB</u>			<u>-3</u>	<u>-3</u>			<u>-3</u>	<u>-3</u>			<u>-3</u>	<u>-3</u>	
OCNS_Ec/lor	<u>dB</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	
\hat{I}_{or}/I_{oc}	<u>dB</u>	<u>6</u>	<u>0</u>	<u>6</u>	<u>0</u>	<u>0</u>	<u>6</u>	<u>0</u>	<u>6</u>	<u>-3</u>	<u>-3</u>	<u>-3</u>	<u>-3</u>	
PCCPCH RSCP	<u>dBm</u>	<u>-67</u>	<u>-73</u>			<u>-73</u>	<u>-67</u>			<u>-76</u>	<u>-76</u>			
Qoffset1 _{s,n}	<u>dB</u>			C1, C3:05:0; C1,				C2, C3:05:0; C2,			1: 0; C3, C3, C5:0;			
Qhyst1 _s	<u>dB</u>		<u>(</u>	<u>)</u>			<u>(</u>	<u>0</u>			<u>(</u>	<u>)</u>		
<u>Treselection</u>	<u>s</u>		<u>(</u>	<u>)</u>			<u>(</u>	<u>0</u>			<u>(</u>	<u>)</u>		
\$intrasearch	<u>dB</u>		<u>not</u>	<u>sent</u>			<u>not</u>	<u>sent</u>			<u>not</u>	<u>sent</u>		
<u>\$intersearch</u>	<u>dB</u>		<u>not</u>	<u>sent</u>			<u>not</u>	<u>sent</u>		not sent				
			<u>Ce</u>	<u>II 4</u>				<u>II 5</u>				<u>II 6</u>		
<u>Timeslot</u>		<u>C</u>			3		<u>)</u>		3		<u>0</u>		<u>3</u>	
		<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	
UTRA RF Channe Number	<u>el</u>		Char	nel 1			<u>Char</u>	nnel 2			Char	nel 2		
PCCPCH_Ec/lor	dB	-3	-3			-3	-3			<u>-3</u>	-3			
SCH_Ec/lor	dB	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	
SCH_toffset		15	15	15	15	20	20	20	20	25	25	25	25	
PICH_Ec/lor	<u>dB</u>			<u>-3</u>	-3			<u>-3</u>	-3			<u>-3</u>	<u>-3</u>	
OCNS_Ec/lor	<u>dB</u>	-4,28	<u>-4,28</u>	<u>-4,28</u>	-4,28	<u>-4,28</u>	-4,28	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	
\hat{I}_{or}/I_{oc}	<u>dB</u>	<u>-3</u>	<u>-3</u>	<u>-3</u>	<u>-3</u>	<u>-3</u>	<u>-3</u>	<u>-3</u>	<u>-3</u>	<u>-3</u>	<u>-3</u>	<u>-3</u>	<u>-3</u>	
PCCPCH RSCP	<u>dBm</u>	<u>-76</u>	-76			<u>-76</u>	<u>-76</u>			<u>-76</u>	<u>-76</u>			
Qoffset1 _{s,n}	<u>dB</u>			C2:0; C4 C4, C6:				C2:0; C5; C5; C6:			1: 0; C6, C6, C4:0;			
Qhyst1 _s	dB	0 0 0												
Treselection	<u>s</u>			<u>)</u>				0			<u>(</u>	<u> </u>		
\$intrasearch	<u>dB</u>		not	sent			not	sent			not	sent		
<u>Sintersearch</u>	dB		not	sent			not	sent			not	sent		
<u>I_{oc}</u>	dBm/3, 84 MHz						<u>-7</u>	70						
Propagation Condition							AW	<u>'GN</u>						

8.3.5.2.4.1.2 Procedure

- a) The SS activates cell 1-6 with T1 defined parameters.
- b) The UE is switched on.
- c) A call is set up according to the test procedure specified in TS 34.108 [3] subclause 7.4.2.7.1.
- d) After 15 s, the parameters are changed as described for T2.
- e) The SS waits for CELL UPDATE message with cause value "cell reselection" from the UE.
- f) The SS sends the UE CELL UPDATE CONFIRM message with "RRC State Indicater" = "CELL PCH".
- g) After another 15 s, the parameters are changed as described for T1.
- h) The SS waits for CELL UPDATE message with cause value "cell reselection" from the UE.
- i) Repeat steps d) to g) [TBD] times.
- NOTE: T1 is initially 30 s to allow enough time for the UE to search for cells as it has no prior knowledge of these.

8.3.5.2.5.2 1,28 Mcps TDD option

Void.

8.3.5.2.5 Test Requirements

8.3.5.2.5.1 3,84 Mcps TDD option

- 1) In step d), after the UE has responded on cell 1, it shall not respond on any other cell (cell selection).
- 2) In step e), the UE shall respond on cell 1 within 8 s.
- 3) In step h), the UE shall respond on cell 2 within 8 s.

For the test to pass, the total number of fulfilled test requirements 2) and 3) shall be more than [FFS]% of the cases.

NOTE: If the above Test Requirement differs from the Minimum Requirement then the Test Tolerance applied for this test is non-zero. The Test Tolerance for this test is defined in clause F.2 and the explanation of how the Minimum Requirement has been relaxed by the Test Tolerance is given in clause F.4.

Void.

8.3.5.2.5.2 1,28 Mcps TDD option

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8.3.6 Cell Re-selection in URA PCH

8.3.6.1 Scenario 1: TDD/TDD cell re-selection single carrier case

8.3.6.1.1 Definition and applicability

8.3.6.1.1.1 3,84 Mcps TDD option

The cell re-selection delay is defined as the time from a change of cell levels to the moment when this change causes the UE to camp on a new cell , and starts to send the URA UPDATE message with cause value "change of URA" in the new cell.

The requirements and this test apply to the 3,84 Mcps TDD UE.

8.3.6.1.1.2 1,28 Mcps TDD option

Void.

8.3.6.1.2 Minimum requirement

8.3.6.1.2.1 3,84 Mcps TDD option

The cell re-selection delay shall be less than 8 s.

NOTE:

The cell re-selection delay can be expressed as: $T_{evaluateTDD} + T_{SI}$, where:

<u>TevaluateTDD</u> A DRX cycle length of 1280ms is assumed for this test case, this leads to a Tevaluate TDD of 6.4s according to TS25.123 [2] Table 4.1 in section 4.2.2.7.

T_{SI} Maximum repetition period of relevant system info blocks that needs to be received by the UE to camp on a cell. 1280 ms is assumed in this test case.

This gives a total of 7.68 s, allow 8s in the test case.

The normative reference for this requirement is TS 25.123 [2] clauses 5.6 and A.5.6.1.

8.3.6.1.2.2 1,28 Mcps TDD option

Void.

8.3.6.1.3 Test purpose

This test verifies that the UE meets the minimum requirement for the cell re-selection delay in URA_PCH for the single carrier case

8.3.6.1.4 Method of test

8.3.6.1.4.1 3,84 Mcps TDD option

8.3.6.1.4.1.1 Initial conditions

This scenario contains 6 cells operating on the same carrier frequency. The test parameters are given in Tables 8.3.6.1.1.1, and 8.3.6.1.1.2.

Table 8.3.6.1.1.1: General test parameters for Cell Re-selection single carrier multi-cell case

Į.	Parameter Parameter	<u>Unit</u>	<u>Value</u>	<u>Comment</u>
<u>Initial</u>	Initial Active cell		<u>Cell1</u>	
<u>condition</u>	Neighbour cells		Cell2, Cell3,Cell4,	
			Cell5, Cell6	
<u>Final</u>	Active cell		Cell2	
condition				
	<u>HCS</u>		Not used	
UE_TX	PWR_MAX_RACH	<u>dBm</u>	<u>21</u>	The value shall be used for all cells in the test.
	<u>Qrxlevmin</u>	<u>dBm</u>	<u>-102</u>	The value shall be used for all cells in the test.
Access Se	ervice Class (ASC#0)			Selected so that no additional delay is caused by
<u>- Pe</u>	rsistence value		<u>1</u>	the random access procedure. The value shall be
				used for all cells in the test.
	<u>T_{SI}</u>	<u>s</u>	<u>1.28</u>	The value shall be used for all cells in the test.
DRX cycle length		<u>s</u>	<u>1.28</u>	The value shall be used for all cells in the test.
<u>T1</u>		<u>s</u>	<u>15</u>	
	<u>T2</u>	<u>s</u>	<u>15</u>	

Table 8.3.6.1.1.2: Cell re-selection single carrier multi-cell case

Parameter	Unit		Ce	<u>II 1</u>			Ce	II 2			Ce	II 3	
Timeslot Number		9)	3	3	()	3	3	(<u> </u>		3
		<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>
UTRA RF Channel			Char	nal 1			Char	nel 1			Char	nal 1	
<u>Number</u>				11101 1				<u> </u>				<u> </u>	
PCCPCH Ec/lor	<u>dB</u>	<u>-3</u>	<u>-3</u>			<u>-3</u>	<u>-3</u>			<u>-3</u>	<u>-3</u>		
SCH_Ec/lor	<u>dB</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>
SCH toffset	-ID	<u>0</u>	<u>0</u>	0	0	<u>5</u>	<u>5</u>	<u>5</u>	<u>5</u>	<u>10</u>	<u>10</u>	<u>10</u>	<u>10</u>
PICH Ec/lor	<u>dB</u>	2.42	2.40	<u>-3</u>	<u>-3</u>	2.42	2.40	<u>-3</u>	<u>-3</u>	0.40	2.42	<u>-3</u>	<u>-3</u>
OCNS_Ec/lor	<u>dB</u>	<u>-3,12</u>	<u>-3,12</u>	<u>-3,12</u>	<u>-3,12</u>	<u>-3,12</u>	<u>-3,12</u>	<u>-3,12</u>	<u>-3,12</u>	<u>-3,12</u>	<u>-3,12</u>	<u>-3,12</u>	<u>-3,12</u>
\hat{I}_{or}/I_{oc}	<u>dB</u>	<u>9</u>	<u>7</u>	<u>9</u>	<u>7</u>	<u>7</u>	<u>9</u>	<u>7</u>	<u>9</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>
PCCPCH RSCP	<u>dBm</u>	<u>-64</u>	<u>-66</u>			<u>-66</u>	<u>-64</u>			<u>-74</u>	<u>-74</u>		
Qoffset1 _{s,n}	dB			C3:0; C				C3:0; C2			1: 0; C3,		
		<u> </u>		; C1,C6:0	<u>)</u>	<u>C</u>		; C2, C6:	<u>0</u>	<u>C</u>	3, C5: 0		<u>0</u>
Qhyst1 _s	<u>dB</u>			<u>)</u>				<u>)</u>				2	
Treselection	<u>S</u>		-	<u>)</u>				<u>)</u>				<u>)</u>	
\$intrasearch	<u>dB</u>			sent				sent .				sent	
Timeslot		(<u> 4</u>		(<u>II 5</u>	•			<u>II 6</u>	3
Timesiot		T1	<u>у</u> Т2	T1	<u>7</u> T2	T1	<u>7</u> T2	T1	7 T2	T1	<u>J</u> T2	T1	<u>2</u> T2
UTRA RF Channel		<u> </u>		_	12	<u> </u>			12	<u> </u>			12
Number			<u>Char</u>	nel 1			<u>Char</u>	nel 1			<u>Char</u>	<u>inel 1</u>	
PCCPCH_Ec/lor	<u>dB</u>	<u>-3</u>	<u>-3</u>			<u>-3</u>	<u>-3</u>			<u>-3</u>	<u>-3</u>		
SCH_Ec/lor	<u>dB</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>
SCH_t _{offset}		<u>15</u>	<u>15</u>	<u>15</u>	<u>15</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>25</u>	<u>25</u>	<u>25</u>	<u>25</u>
PICH_Ec/lor	<u>dB</u>			<u>-3</u>	<u>-3</u>			<u>-3</u>	<u>-3</u>			<u>-3</u>	<u>-3</u>
OCNS_Ec/lor	<u>dB</u>	<u>-3,12</u>	<u>-3,12</u>	<u>-3,12</u>	<u>-3,12</u>	<u>-3,12</u>	<u>-3,12</u>	<u>-3,12</u>	<u>-3,12</u>	<u>-3,12</u>	<u>-3,12</u>	<u>-3,12</u>	<u>-3,12</u>
\hat{I}_{or}/I_{oc}	<u>dB</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>
PCCPCH RSCP	dBm	-74	-74			-74	-74			-74	<u>-74</u>		
Qoffset1 _{s,n}	dB	С	4, C1: 0;	C4, C2:	<u>0;</u>	C5, C	1: 0; C5,	C2:0; C	5,C3:0	C6, C	1: 0; C6,	C2:0; C6	5,C3:0
		<u>C4,C</u>	3:0C4, C	5:0; C4,	C6:0	<u>C</u>	C5, C4:0;	C5, C6:	<u>0</u>	(C6, C4:0;	C6, C5:	<u>0</u>
<u>Qhyst1</u> _s	<u>dB</u>			<u>)</u>			_	<u>)</u>			<u>(</u>	<u>)</u>	
Treselection	<u>s</u>		-	<u>)</u>				<u>)</u>				<u>)</u>	
\$intrasearch	<u>\$intrasearch</u> <u>dB</u>			<u>sent</u>			not	<u>sent</u>			not	<u>sent</u>	
I_{oc}	<u>dBm/3,</u> 84 MHz						<u>-7</u>	<u>70</u>					
Propagation	<u> </u>						A14	ON					
Condition							AVV	<u>'GN</u>					

8.3.6.1.4.1.2 Procedure

a) The SS activates cell 1-6 with T1 defined parameters.

- b) The UE is switched on.
- c) A call is set up according to the test procedure specified in TS 34.108 [3] subclause 7.4.2.7.2.
- d) After 15 s, the parameters are changed as described for T2.
- e) The SS waits for URA UPDATE message with cause value "change of URA" from the UE.
- f) The SS sends the UE CELL UPDATE CONFIRM message with "RRC State Indicater" = "URA PCH".
- g) After another 15 s, the parameters are changed as described for T1.
- h) The SS waits for URA UPDATE message with cause value "change of URA" from the UE.
- i) Repeat steps d) to g) [TBD] times.

8.3.6.1.4.2 1,28 Mcps TDD option

Void.

8.3.6.1.5 Test Requirements

8.3.6.1.5.1 3,84 Mcps TDD option

- 1) In step d), after the UE has responded on cell 1, it shall not respond on any other cell (cell selection).
- 2) In step e), the UE shall respond on cell 2 within 8 s.
- 3) In step h), the UE shall respond on cell 1 within 8 s.

For the test to pass, the total number of fulfilled test requirements 2) and 3) shall be more than [FFS]% of the cases.

NOTE: If the above Test Requirement differs from the Minimum Requirement then the Test Tolerance applied for this test is non-zero. The Test Tolerance for this test is defined in clause F.2 and the explanation of how the Minimum Requirement has been relaxed by the Test Tolerance is given in clause F.4.

Void.

8.3.6.1.5.2 1,28 Mcps TDD option

Void.

8.3.6.2 Scenario 2: TDD/TDD cell re-selection multi carrier case

8.3.6.2.1 Definition and applicability

8.3.6.2.1.1 3,84 Mcps TDD option

The cell re-selection delay is defined as the time from a change of cell levels to the moment when this change causes the UE to camp on a new cell , and starts to send the URA UPDATE message with cause value "change of URA" in the new cell.

The requirements and this test apply to the 3,84 Mcps TDD UE.

8.3.6.2.1.2 1,28 Mcps TDD option

Void.

8.3.6.2.2 Minimum requirement

8.3.6.2.2.1 3,84 Mcps TDD option

The cell re-selection delay shall be less than 8 s.

NOTE:

The cell re-selection delay can be expressed as: T_{evaluateTDD} + T_{SI}, where:

 $T_{evaluateTDD}$ A DRX cycle length of 1280ms is assumed for this test case, this leads to a $T_{evaluateTDD}$ of 6.4s

according to TS 25.123 [2] Table 4.1 in section 4.2.2.7.

<u>Maximum repetition period of relevant system info blocks that needs to be received by the UE to camp on a cell. 1280 ms is assumed in this test case.</u>

This gives a total of 7.68 s, allow 8s in the test case.

The normative reference for this requirement is TS 25.123 [2] clauses 5.6 and A.5.6.2.

8.3.6.2.2.2 1,28 Mcps TDD option

Void.

8.3.6.2.3 Test purpose

This test verifies that the UE meets the requirement for the cell re-selection delay in URA PCH for the multi carrier case.

8.3.6.2.4 Method of test

8.3.6.2.4.1 3,84 Mcps TDD option

8.3.6.2.4.1.1 Initial conditions

This scenario contains 6 cells and 2 carrier frequencies. The test parameters are given in Tables 8.3.6.2.1.1 and 8.3.6.2.1.2.

Table 8.3.6.2.1.1: General test parameters for Cell Re-selection in Multi carrier case

	<u>Parameter</u>	<u>Unit</u>	<u>Value</u>	Comment
<u>Initial</u>	Active cell		<u>Cell1</u>	
condition Neighbour cells			Cell2, Cell3,Cell4,	
			Cell5, Cell6	
<u>Final</u>	Active cell		<u>Cell2</u>	
<u>condition</u>				
	<u>HCS</u>		Not used	
UE_T>	<u> KPWR MAX RACH</u>	<u>dBm</u>	<u>21</u>	The value shall be used for all cells in the test.
	<u>Qrxlevmin</u>	<u>dBm</u>	<u>-102</u>	The value shall be used for all cells in the test.
Access S	Service Class (ASC#0)			Selected so that no additional delay is caused
<u>- P</u>	<u>ersistence value</u>		<u>1</u>	by the random access procedure. The value
				shall be used for all cells in the test.
	<u>T</u> _{SI}		<u>1.28</u>	The value shall be used for all cells in the test.
DRX cycle length		<u>s</u>	<u>1.28</u>	The value shall be used for all cells in the test.
<u>T1</u>		<u>s</u>	<u>30</u>	
	<u>T2</u>	<u>s</u>	<u>15</u>	

Table 8.3.6.2.1.2: Cell re-selection multi carrier multi cell case

Parameter	<u>Unit</u>		Ce	<u>II 1</u>			Ce	<u>II 2</u>			Ce	II 3	
Timeslot Numb	<u>oer</u>	()		3	9	2	3	3	9	0	3	8
		<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>
UTRA RF Chan Number			Char	nnel 1			Char	nnel 2			Char	nel 1	
PCCPCH_Ec/l	<u>or dB</u>	<u>-3</u>	<u>-3</u>			<u>-3</u>	<u>-3</u>			<u>-3</u>	<u>-3</u>		
SCH_Ec/lor	<u>dB</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>
SCH_t _{offset}		<u>0</u>	<u>0</u>	<u>0</u>	0	<u>5</u>	<u>5</u>	<u>5</u>	<u>5</u>	<u>10</u>	<u>10</u>	<u>10</u>	<u>10</u>
PICH_Ec/lor				<u>-3</u>	<u>-3</u>			<u>-3</u>	<u>-3</u>			<u>-3</u>	<u>-3</u>
QCNS_Ec/loi	<u>dB</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	-4,28	<u>-4,28</u>	-4,28	<u>-4,28</u>	<u>-4,28</u>	-4,28	<u>-4,28</u>
\hat{I}_{or}/I_{oc}	<u>dB</u>	<u>6</u>	<u>0</u>	<u>6</u>	<u>0</u>	<u>0</u>	<u>6</u>	<u>0</u>	<u>6</u>	<u>-3</u>	<u>-3</u>	<u>-3</u>	<u>-3</u>
PCCPCH RSC	<u>dBm</u>	<u>-67</u>	<u>-73</u>			<u>-67</u>	<u>-70</u>			<u>-76</u>	<u>-76</u>		
Qoffset1 _{s,n}	<u>dB</u>			C1, C3: C5:0; C1,				C2, C3: C5:0; C2,			1: 0; C3, C3, C5:0;		
<u>Qhyst1_s</u>	<u>dB</u>		<u>(</u>	<u>0</u>				<u>0</u>			<u>(</u>	<u>)</u>	
Treselection	<u>s</u>		<u>(</u>	<u>0</u>			<u>(</u>	<u>0</u>			(<u>)</u>	
\$intrasearch	<u>dB</u>		<u>not</u>	<u>sent</u>			<u>not</u>	<u>sent</u>			<u>not</u>	<u>sent</u>	
\$intersearch	<u>dB</u>		<u>not</u>	<u>sent</u>		<u>not sent</u>			<u>not sent</u>				
			<u>Ce</u>	<u>II 4</u>			<u>Ce</u>	<u>II 5</u>			<u>Ce</u>	<u>II 6</u>	
<u>Timeslot</u>			<u>) </u>		<u>3</u>		2		<u>3</u>		<u>0</u>		<u>8</u>
		<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>
UTRA RF Chan Number	<u>nel</u>		Char	nnel 1			Char	nnel 2			Char	nel 2	
PCCPCH_Ec/l	or <u>dB</u>	<u>-3</u>	-3			<u>-3</u>	-3			<u>-3</u>	-3		
SCH_Ec/lor	dB	-9	-9	-9	<u>-9</u>	-9	-9	-9	-9	-9	-9	<u>-9</u>	<u>-9</u>
SCH_t _{offset}		15	15	15	15	20	20	20	20	25	25	25	25
PICH_Ec/lor	<u>dB</u>			<u>-3</u>	<u>-3</u>			<u>-3</u>	<u>-3</u>			<u>-3</u>	<u>-3</u>
OCNS Ec/loi	r <u>dB</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>
\hat{I}_{or}/I_{oc}	<u>dB</u>	<u>-3</u>	<u>-3</u>	<u>-3</u>	<u>-3</u>	<u>-3</u>	<u>-3</u>	<u>-3</u>	<u>-3</u>	<u>-3</u>	<u>-3</u>	<u>-3</u>	<u>-3</u>
PCCPCH RSC	<u>dBm</u>	<u>-76</u>	<u>-76</u>			<u>-76</u>	<u>-76</u>			-76	<u>-76</u>		
Qoffset1 _{s,n}	<u>dB</u>			C2:0; C4; C6:				C2:0; C5; C6:			1: 0; C6, C6, C4:0;		
Qhyst1 _s	dB	_		0		_		0		_)	
Treselection	<u>s</u>			0				0			()	
\$intrasearch	<u>dB</u>		not	sent			not	sent			not	sent	
\$intersearch	dB		not	sent			not	sent			not	sent	
<u>I_{oc}</u>	<u>dBm/3,</u> 84 MHz						<u>-7</u>	70					
Propagation Condition							AW	<u>'GN</u>					

8.3.6.2.4.1.2 Procedure

- a) The SS activates cell 1-6 with T1 defined parameters.
- b) The UE is switched on.
- c) A call is set up according to the test procedure specified in TS 34.108 [3] subclause 7.4.2.7.2.
- d) After 15 s, the parameters are changed as described for T2.
- e) The SS waits for URA UPDATE message with cause value "change of URA" from the UE.
- f) The SS sends the UE CELL UPDATE CONFIRM message with "RRC State Indicater" = "URA PCH".
- g) After another 15 s, the parameters are changed as described for T1.
- h) The SS waits for URA UPDATE message with cause value "change of URA" from the UE.
- i) Repeat steps d) to g) [TBD] times.
- NOTE: T1 is initially 30 s to allow enough time for the UE to search for cells as it has no prior knowledge of these.

8.3.6.2.4.2 1,28 Mcps TDD option

Void.

8.3.6.2.5 Test Requirements

8.3.6.2.5.1 3,84 Mcps TDD option

- 1) In step d), after the UE has responded on cell 1, it shall not respond on any other cell (cell selection).
- 2) In step e), the UE shall respond on cell 1 within 8 s.
- 3) In step h), the UE shall respond on cell 2 within 8 s.

For the test to pass, the total number of fulfilled test requirements 2) and 3) shall be more than [FFS]% of the cases.

NOTE: If the above Test Requirement differs from the Minimum Requirement then the Test Tolerance applied for this test is non-zero. The Test Tolerance for this test is defined in clause F.2 and the explanation of how the Minimum Requirement has been relaxed by the Test Tolerance is given in clause F.4.

Void.

8.3.6.2.5.2 1,28 Mcps TDD option

Void.

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CR page 1

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CR page 2

<Start of modified section>

7.5 Power control in downlink for 3,84 Mcps TDD Option

Power control in the downlink is the ability of the UE receiver to converge to the required link quality set by the network while using minimum downlink power.

7.5.1 Power control in downlink for 3.84 Mcps TDD option, constant BLER Target

7.5.1.1 Minimum requirements

For the parameters specified in table 7.5.1.1.a the average downlink \hat{I}_{or}/I_{oc} power shall be below the specified value in Table 7.5.1.2a more than 90% of the time. BLER shall be as shown in Table 7.5.1.2b more than 90% of the time. Downlink power control is ON during the test.

Table 7.5.1.1a: Test parameters for downlink power control - constant BLER Target

Parameter	Unit	Test 1		
$\frac{DPCH _E_c}{I_{or}}$	dB	0		
I_{oc}	dBm/3,84 MHz	-6	60	
Information Data Rate	kbps	12,2		
Target quality value on DTCH	BLER	0,01		
Propagation condition		Cas	se 1	
DL Power Control step	dB	1		
size, Δ_{TPC}	4 D			
Maximum_DL_power *	dB	0		
Minimum_DL_power *	dB	-27		

Note: DL power is relative to P-CCPCH power.

Table 7.5.1.2b: Requirements for downlink power control - constant BLER Target

Parameter	Unit	Test 1	
\hat{I}_{or}/I_{oc}	dB	8,0	
Measured quality on DTCH	BLER	0,01±30%	

The reference for this requirement is TS 25.102 [1] clause 8.5.1.

7.5.1.2 Test purpose

To verify that the UE receiver is capable of converging to the required link quality set by the network while using as low power as possible.

7.5.1.3 Method of test

7.5.1.3.1 Initial conditions

Test environment: normal; see clauses G.2.1 and G.2.2.

Frequencies to be tested: mid range; see clause G.2.4.

- 1) Connect SS, multipath fading simulator and an AWGN source to the UE antenna connector as shown in figure A.10.
- 2) Set up a call according to the Generic call setup procedure.
- 3) RF parameters are set up according to table 7.5.1.1.a.
- 4) Enter the UE into loopback test mode and start the loopback test.
- 5) SS signals to UE target quality value on DTCH as specified in table 7.5.1.1.a. SS will vary the physical channel power in downlink according to the TPC commands from UE, and at the same time measure BLER. This is continued until the target quality value on DTCH is met, within the minimum accuracy requirement.

See TS 34.108 [3] and TS 34.109 [4] for details regarding generic call setup procedure and loopback test.

7.5.<u>1.</u>3.2 Procedure

- 1) After the target quality on DTCH is met, BLER is measured. Simultaneously the downlink \hat{I}_{or}/I_{oc} power ratio averaged over one slot is measured. This is repeated until adequate amount of measurements is done to reach the required confidence level.
- 2) The measured quality on DTCH (BLER) and the measured downlink \hat{I}_{or}/I_{oc} power ratio values averaged over one slot are compared to the limits in table 7.5.1.2b.

7.5.1.4 Test Requirements

- a) The measured quality on DTCH does not exceed the values in table 7.5.1.2b.
- b) The downlink \hat{I}_{or}/I_{oc} power ratio values, which are averaged over one slot, shall be below the values in table 7.5.1.2b more than 90 % of the time.

7.5.2 Power control in downlink for 1,28 Mcps TDD option, constant BLER Target

7.5.2.1 Definition and applicability

Power control in the downlink is the ability of the UE receiver to converge to required link quality set by the network while using as low power as possible in downlink. If a BLER target has been assigned to a DCCH (See clause C.3), then it has to be such that outer loop is based on DTCH and not on DCCH. The requirements and this test apply to all types of UTRA for the 1.28 Mcps TDD UE.

7.5.2.2 Minimum requirements

For the parameters specified in table 7.5.2.1 the average downlink \hat{I}_{or}/I_{oc} averaged over one timeslot power shall be below the specified value in Table 7.5.2.2 more than 90% of the time. BLER shall be as shown in Table 7.5.2.2 more than 90% of the time. Downlink power control is ON during the test.

Table 7.5.2.1: Test parameters for downlink power control – constant BLER Target

<u>Parameter</u>	<u>Unit</u>	Test 1	
$\frac{DPCH _E_c}{I_{or}}$	<u>dB</u>	<u>0</u>	
I_{oc}	<u>dBm/1.28 MHz</u>	<u>-6</u>	<u>00</u>
Information Data Rate	<u>kbps</u>	<u>12</u>	<u>,2</u>
Target quality value on DTCH	BLER	<u>0,</u>	<u>01</u>
Propagation condition		Cas	<u>se 1</u>
DL Power Control step size, Δ_{TPC}	<u>dB</u>		<u>1</u>
Maximum DL power *	<u>dB</u>		<u>0</u>
Minimum DL power *	<u>dB</u>	<u>-2</u>	<u>27</u>

Note: DL power is compared to P-CCPCH power.

Table 7.5.2.2: Requirements for downlink power control – constant BLER Target

<u>Parameter</u>	<u>Unit</u>	Test 1	
\hat{I}_{or}/I_{oc}	<u>dB</u>	<u>7.5</u>	
Measured quality on DTCH	BLER	0,01±30%	

The reference for this requirement is TS 25.102 [1] clause 8.5.1.

7.5.2.3 Test purpose

To verify that the UE receiver is capable of converging to the required link quality set by the network while using as low power as possible.

7.5.2.4 Method of test

7.5.2.4.1 Initial conditions

Test environment: normal; see clauses G.2.1 and G.2.2.

Frequencies to be tested: mid range; see clause G.2.4.

- 1) Connect SS, multipath fading simulator and an AWGN source to the UE antenna connector as shown in figure A.10.
- 2) Set up a call according to the Generic call setup procedure.
- 3) RF parameters are set up according to table 7.5.2.1
- 4) Enter the UE into loopback test mode and start the loopback test.
- 5) SS signals to UE target quality value on DTCH as specified in table 7.5.2.1 SS will vary the physical channel power in downlink according to the TPC commands from UE, and at the same time measure BLER. This is continued until the target quality value on DTCH is met, within the minimum accuracy requirement.

See TS 34.108 [3] and TS 34.109 [4] for details regarding generic call setup procedure and loopback test.

7.5.2.4.2 Procedure

1) After the target quality on DTCH is met, BLER is measured. Simultaneously the downlink \hat{I}_{or}/I_{oc} power ratio averaged over one slot is measured. This is repeated until adequate amount of measurements is done to reach the required confidence level.

2) The measured quality on DTCH (BLER) and the measured downlink \hat{I}_{or}/I_{oc} power ratio values averaged over one slot are compared to the limits in table 7.5.2.2.

7.5.2.5 Test Requirements

- a) The measured quality on DTCH does not exceed the values in table 7.5.2.2.
- b) The downlink \hat{I}_{or}/I_{oc} power ratio values, which are averaged over one slot, shall be below the values in table 7.5.2.2 more than 90 % of the time.

<End of modified section>

<Start of modified section>

G.2 Environmental requirements

The requirements in this clause apply to all types of UE(s)

G.2.1 Temperature

The UE shall fulfil all the requirements in the full temperature range of:

+15°C to +35°C	for normal conditions (with relative humidity of 25 % to 75 %)
-10°C to +55°C	for extreme conditions (see IEC publications 68-2-1 and 68-2-2)

Outside this temperature range the UE, if powered on, shall not make ineffective use of the radio frequency spectrum. In no case shall the UE exceed the transmitted levels as defined in TS 25.1024 [1] for extreme operation.

Some tests in the present document are performed also in extreme temperature conditions. These test conditions are denoted as TL (temperature low, -10° C) and TH (temperature high, $+55^{\circ}$ C).

G.2.2 Voltage

The UE shall fulfil all the requirements in the full voltage range, i.e. the voltage range between the extreme voltages.

The manufacturer shall declare the lower and higher extreme voltages and the approximate shutdown voltage. For the equipment that can be operated from one or more of the power sources listed below, the lower extreme voltage shall not be higher, and the higher extreme voltage shall not be lower than that specified below.

Power source	Lower extreme voltage	Higher extreme voltage	Normal conditions voltage
AC mains	0,9 * nominal	1,1 * nominal	nominal
Regulated lead acid battery	0,9 * nominal	1,3 * nominal	1,1 * nominal
Non regulated batteries: Leclanché / lithium Mercury/nickel & cadmium	0,85 * nominal 0,90 * nominal	Nominal Nominal	Nominal Nominal

Outside this voltage range the UE if powered on, shall not make ineffective use of the radio frequency spectrum. In no case shall the UE exceed the transmitted levels as defined in [1] TS 25.1024 for extreme operation. In particular, the UE shall inhibit all RF transmissions when the power supply voltage is below the manufacturer declared shutdown voltage.

Some tests in the present document are performed also in extreme voltage conditions. These test conditions are denoted as VL (lower extreme voltage) and VH (higher extreme voltage).

G.2.3 Vibration

The UE shall fulfil all the requirements when vibrated at the following frequency/amplitudes:

Frequency	ASD (Acceleration Spectral Density) random vibration
5 Hz to 20 Hz	$0.96 \text{ m}^2/\text{s}^3$
20 Hz to 500 Hz	0,96 m ² /s ³ at 20 Hz, thereafter –3 dB/Octave

Outside the specified frequency range the UE, if powered on, shall not make ineffective use of the radio frequency spectrum. In no case shall the UE exceed the transmitted levels as defined in TS 25.1024 [1] for extreme operation.

G.2.4 Specified frequency range

The manufacturer shall declare, which of the frequency bands defined in clause 4.2 is supported by the UE.

Some tests in the present document are performed also in low, mid and high range of the operating frequency band of the UE. The UARFCN's to be used for low, mid and high range are defined in TS 34.108 [3] clause 5.1.24.

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How to create CRs using this form:

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- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

8.3 UTRAN Connected Mode Mobility

8.3.1 TDD/TDD Handover

Void.

8.3.1.1 Handover to intra-frequency cell

8.3.1.1.1 Definition and applicability

Handover delay of the UE is defined as the time from the end of the last TTI containing an RRC message implying hard handover to the transmission of the new uplink DPCH, excluding the RRC procedure delay as defined in [9].

The requirements and this test apply to the UTRA TDD UE.

8.3.1.1.2 Minimum requirement

The hard handover delay shall be less than 40 ms in the single carrier case when the cell is known by the UE and the SFN of the target cell does not need to be decoded. The rate of correct handovers observed during repeated tests shall be at least 90% with a confidence level of [FFS]%.

The normative reference for this requirement is TS 25.123 [2] clauses 5.1.2 and A.5.1.1.

8.3.1.1.3 Test purpose

The purpose of this test is to verify the requirement for the intra-frequency handover delay in CELL DCH state in the single carrier case.

8.3.1.1.4 Method of test

8.3.1.1.4.1 Initial conditions

Test environment: normal; see clauses G.2.1 and G.2.2.

Frequencies to be tested: mid range; see clause G.2.4.

The test parameters are given in Table 8.3.1.1.1 and 8.3.1.1.2. In the measurement control information it is indicated to the UE that event-triggered reporting with Event 1G shall be used, and that P-CCPCH RSCP and SFN-CFN observed timed difference shall be reported together with Event 1G. The test consists of three successive time periods, with a time duration of T1, T2 and T3 respectively. At the start of time duration T1, the UE may not have any timing information of cell 2.

UTRAN shall send a Physical Channel reconfiguration message with activation time at the beginning of T3 with a new active cell, cell 2. The Physical Channel reconfiguration message shall be sent to the UE such that the delay between the end of the last received TTI containing the message and the beginning of T3 is at least equal to the RRC procedure delay as defined in [16].

The second Beacon timeslot shall be provided in timeslot 8 for both cell 1 and cell 2. The UL DPCH shall be transmitted in timeslot 12.

Table 8.3.1.1.1: General test parameters for Handover to intra-frequency cell

Para	ameter	<u>Unit</u>	<u>Value</u>	Comment
DCH parame	ters		DL Reference Measurement Channel 12.2 kbps	As specified in TS 25.102 section A.2.2
Power Control			<u>On</u>	
Target quality value on DTCH		BLER	<u>0.01</u>	
<u>Initial</u>	Active cell		<u>Cell 1</u>	
conditions	Neighbour cell		<u>Cell 2</u>	
Final condition	Active cell		Cell 2	
<u>HCS</u>			Not used	
<u>O</u>		<u>dB</u>	<u>O</u>	Cell individual offset. This value shall be used for all cells in the test.
<u>Hysteresis</u>		<u>dB</u>	<u>0</u>	
Time to Trigg	<u>er</u>	<u>ms</u>	<u>O</u>	
	Filter coefficient		<u>0</u>	
Monitored ce	Monitored cell list size		6 TDD neighbours on Channel 1	
<u>T1</u>		<u>s</u>	<u>10</u>	
<u>T2</u>		<u>s</u>	<u>10</u>	
<u>T3</u>		<u>s</u>	<u>10</u>	

Table 8.3.1.1.2: Cell specific test parameters for Handover to intra-frequency cell

<u>Parameter</u>	<u>Unit</u>	Co	Cell 1 Cell 2								
DL timeslot number		<u>0</u>	4			<u>0</u>	5				
		<u>T1 T2 T3</u>	<u>T1</u> <u>T2</u>	<u>T3</u>	<u>T1</u>	<u>T2</u> <u>T3</u>	<u>T1</u> <u>T2</u>	<u>T3</u>			
UTRA RF Channel Number		<u>Cha</u>	nnel 1			<u>Cha</u>	nnel 1				
PCCPCH Ec/lor	<u>dB</u>	<u>-3</u>	<u>n.a.</u>			<u>-3</u> <u>n.a.</u>					
SCH_Ec/lor	<u>dB</u>	<u>-9</u>	<u>n.a.</u>		<u>-9</u> <u>n.a.</u>						
SCH_t _{offset}	<u>dB</u>	<u>0</u>	<u>0</u> <u>n.a.</u> <u>5</u>					<u>l.</u>			
DPCH Ec/lor	<u>dB</u>	<u>n.a.</u>	Note 1	<u>n.a.</u>		<u>n.a.</u>	<u>n.a.</u>	Note 1			
OCNS Ec/lor	<u>dB</u>	<u>-3,12</u>	Note 2	<u>n.a.</u>	<u>n.a.</u>	<u>-3,12</u>	<u>n.a.</u>	Note 2			
$\frac{\hat{I}_{or}/I_{oc}}{}$	<u>dB</u>		<u>1</u>		<u>-Inf.</u>	<u>3</u>	<u>-Inf.</u>	<u>3</u>			
PCCPCH RSCP	<u>dBm</u>	<u>-72</u>	<u>n.a.</u>		<u>-Inf.</u>	<u>-70</u>	n.a	<u>l.</u>			
I_{oc}	dBm/ 3,84 MHz		<u>-70</u>								
Propagation Condition				AW	′GN						
Note 1: The DPCH level i	c controllo	d by the newer centre	al loop								

Note 1: The DPCH level is controlled by the power control loop

Note 2: The power of the OCNS channel that is added shall make the total power from the cell to be equal to lor .

8.3.1.1.4.2 Procedure

- 1) The RF parameters are set up according to T1.
- 2) The UE is switched on.
- 3) A call is set up according to the test procedure specified in TS 34.108 [3] subclause 7.3.4.

[Editor's note: subclause 7.3.4 in TS 34.108 (Message sequence chart for Handover Test procedure) is not yet specified]

- 4) SS shall transmit a MEASUREMENT CONTROL message.
- 5) After 10 seconds, the SS shall switch the power settings from T1 to T2.
- 6) UE shall transmit a MEASUREMENT REPORT message triggered by event 1G.
- 7) SS shall transmit a PHYSICAL CHANNEL RECONFIGURATION message with activation time at T3.

- 8) After 10 seconds, the SS shall switch the power settings from T2 to T3
- 9) UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the UL DCCH of cell 2. If the UE transmits the UL DPCH to cell 2 less than 40 ms from the beginning of time period T3 then the number of successful tests is increased by one.
- 10) After 10 seconds, the UE is switched off. Any timing information of cell 2 is deleted in the UE.
- 11)Repeat step 1-10 [TBD] times

8.3.1.1.5 Test requirements

For the test to pass, the total number of successful tests shall be more than [FFS] of the cases.

Note: If the above Test Requirement differs from the Minimum Requirement then the Test Tolerance applied for this test is non-zero. The Test Tolerance for this test is defined in clause F.2 and the explanation of how the Minimum Requirement has been relaxed by the Test Tolerance is given in clause F.4.

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- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

8.3 UTRAN Connected Mode Mobility

8.3.1 TDD/TDD Handover for 3,84 Mcps Option

Void.

8.3.1.1 Handover to intra-frequency cell

8.3.1.1.1 Definition and applicability

Handover delay of the UE is defined as the time from the end of the last TTI containing an RRC message implying hard handover to the transmission of the new uplink DPCH, excluding the RRC procedure delay as defined in [9].

The requirements and this test apply to the UTRA TDD UE.

8.3.1.1.2 Minimum requirement

The hard handover delay shall be less than 40 ms in the single carrier case when the cell is known by the UE and the SFN of the target cell does not need to be decoded. The rate of correct handovers observed during repeated tests shall be at least 90% with a confidence level of [FFS]%.

The normative reference for this requirement is TS 25.123 [2] clauses 5.1.2 and A.5.1.1.

8.3.1.1.3 Test purpose

The purpose of this test is to verify the requirement for the intra-frequency handover delay in CELL DCH state in the single carrier case.

8.3.1.1.4 Method of test

8.3.1.1.4.1 Initial conditions

Test environment: normal; see clauses G.2.1 and G.2.2.

Frequencies to be tested: mid range; see clause G.2.4.

The test parameters are given in Table 8.3.1.1.1 and 8.3.1.1.2. In the measurement control information it is indicated to the UE that event-triggered reporting with Event 1G shall be used, and that P-CCPCH RSCP and SFN-CFN observed timed difference shall be reported together with Event 1G. The test consists of three successive time periods, with a time duration of T1, T2 and T3 respectively. At the start of time duration T1, the UE may not have any timing information of cell 2.

UTRAN shall send a Physical Channel reconfiguration message with activation time at the beginning of T3 with a new active cell, cell 2. The Physical Channel reconfiguration message shall be sent to the UE such that the delay between the end of the last received TTI containing the message and the beginning of T3 is at least equal to the RRC procedure delay as defined in [16].

The second Beacon timeslot shall be provided in timeslot 8 for both cell 1 and cell 2. The UL DPCH shall be transmitted in timeslot 12.

Table 8.3.1.1.1: General test parameters for Handover to intra-frequency cell

Para	meter	<u>Unit</u>	<u>Value</u>	<u>Comment</u>
DCH paramete	<u>ers</u>		DL Reference Measurement	As specified in TS 25.102 section A.2.2
			Channel 12.2 kbps	
Power Control	Power Control		<u>On</u>	
	Target quality value on		<u>0.01</u>	
<u>DTCH</u>	1			
<u>Initial</u>	Active cell		<u>Cell 1</u>	
conditions	<u>Neighbour</u>		Cell 2	
	<u>cell</u>			
<u>Final</u>	Active cell		<u>Cell 2</u>	
<u>condition</u>				
<u>HCS</u>			Not used	
<u>O</u>		<u>dB</u>	<u>0</u>	Cell individual offset. This value shall be
				used for all cells in the test.
<u>Hysteresis</u>		<u>dB</u>	<u>0</u>	
Time to Trigge	<u>er</u>	<u>ms</u>	<u>O</u>	
Filter coefficie	<u>nt</u>		<u>0</u>	
Monitored cell	Monitored cell list size		6 TDD neighbours on Channel 1	
<u>T1</u>		<u>s</u>	<u>10</u>	
<u>T2</u> <u>T3</u>		<u>s</u>	<u>10</u>	
<u>T3</u>		<u>s</u>	<u>10</u>	

Table 8.3.1.1.2: Cell specific test parameters for Handover to intra-frequency cell

<u>Parameter</u>	<u>Unit</u>		Cell 1 Cell 2										
DL timeslot number			0	·		4			<u>0</u>			<u>5</u>	
		<u>T1</u>	<u>T2</u>	<u>T3</u>	<u>T1</u>	<u>T2</u>	<u>T3</u>	<u>T1</u>	<u>T2</u>	<u>T3</u>	<u>T1</u>	<u>T2</u>	<u>T3</u>
UTRA RF Channel Number		Channel 1 Channel 1											
PCCPCH Ec/lor	<u>dB</u>		<u>-3</u>			<u>n.a.</u>			<u>-3</u> <u>n.a.</u>				<u>ı.</u>
SCH_Ec/lor	<u>dB</u>		<u>-9</u>			<u>n.a.</u>		<u>-9</u> <u>n.a.</u>				l <u>.</u>	
SCH_t _{offset}	<u>dB</u>	<u>0</u> <u>n.a.</u> <u>5</u>						<u>l.</u>					
DPCH Ec/lor	<u>dB</u>		<u>n.a.</u>		Not	<u>e 1</u>	n.a.	<u>n.a.</u>			<u>n.a</u>	<u>a.</u>	Note 1
OCNS Ec/lor	<u>dB</u>		-3,12		Not	<u>e 2</u>	<u>n.a.</u>	<u>n.a.</u>	<u>-3,12</u>		<u>n.a.</u>		Note 2
\hat{I}_{or}/I_{oc}	<u>dB</u>				<u>1</u>			<u>-Inf.</u>	<u>3</u>	<u> </u>	<u>-Ir</u>	<u>ıf.</u>	<u>3</u>
PCCPCH RSCP	<u>dBm</u>		<u>-72</u>			n.a.		<u>-Inf.</u>	<u>-7</u>	0		n.a	<u>.</u>
I_{oc}	dBm/ 3,84 MHz		<u>-70</u>										
Propagation Condition							AW	/GN					
Note 1: The DDCH level i	c controllo	d by the	2 2014/0	r contr	alloon			•					

Note 1: The DPCH level is controlled by the power control loop

Note 2: The power of the OCNS channel that is added shall make the total power from the cell to be equal to lor .

8.3.1.1.4.2 Procedure

- 1) The RF parameters are set up according to T1.
- 2) The UE is switched on.
- 3) A call is set up according to the test procedure specified in TS 34.108 [3] subclause 7.3.4.

[Editor's note: subclause 7.3.4 in TS 34.108 (Message sequence chart for Handover Test procedure) is not yet specified]

- 4) SS shall transmit a MEASUREMENT CONTROL message.
- 5) After 10 seconds, the SS shall switch the power settings from T1 to T2.
- 6) UE shall transmit a MEASUREMENT REPORT message triggered by event 1G.
- 7) SS shall transmit a PHYSICAL CHANNEL RECONFIGURATION message with activation time at T3.

- 8) After 10 seconds, the SS shall switch the power settings from T2 to T3
- 9) UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the UL DCCH of cell 2. If the UE transmits the UL DPCH to cell 2 less than 40 ms from the beginning of time period T3 then the number of successful tests is increased by one.
- 10) After 10 seconds, the UE is switched off. Any timing information of cell 2 is deleted in the UE.
- 11)Repeat step 1-10 [TBD] times

8.3.1.1.5 Test requirements

For the test to pass, the total number of successful tests shall be more than [FFS] of the cases.

Note: If the above Test Requirement differs from the Minimum Requirement then the Test Tolerance applied for this test is non-zero. The Test Tolerance for this test is defined in clause F.2 and the explanation of how the Minimum Requirement has been relaxed by the Test Tolerance is given in clause F.4.

3GPP TSG-T1 Meeting #15 Lund, Sweden, 21st – 24th May 2002

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- 1) Fill out the above form. The symbols above marked \(\mathcal{H} \) contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

8.3 UTRAN Connected Mode Mobility

8.3.1 TDD/TDD Handover

8.3.1.1 Handover to intra-frequency cell

Void.

8.3.1.2 Handover to inter-frequency cell

8.3.1.2.1 Definition and applicability

Handover delay of the UE is defined as the time from the end of the last TTI containing an RRC message implying hard handover to the transmission of the new uplink DPCH, excluding the RRC procedure delay as defined in [9].

The requirements and this test apply to the UTRA TDD UE.

8.3.1.2.2 Minimum requirement

The hard handover delay shall be less than 40 ms in the dual carrier case when the cell is known by the UE and the SFN of the target cell needs to be decoded. The rate of correct handovers observed during repeated tests shall be at least 90% with a confidence level of [FFS]%.

The normative reference for this requirement is TS 25.123 [2] clauses 5.1.2 and A.5.1.2.

8.3.1.2.3 Test purpose

The purpose of this test is to verify the requirement for the inter-frequency handover delay in CELL DCH state in the dual carrier case.

8.3.1.2.4 Method of test

8.3.1.2.4.1 Initial conditions

Test environment: normal; see clauses G.2.1 and G.2.2.

Frequencies to be tested: mid range; see clause G.2.4.

The test parameters are given in Table 8.3.1.2.1 and 8.3.1.2.2. In the measurement control information it is indicated to the UE that event-triggered reporting with Event 2C shall be used. The PCCPCH RSCP and SFN-CFN observed time difference of the best cell on the unused frequency shall be reported together with Event 2C reporting. At the start of time duration T1, the UE may not have any timing information of cell 2.

UTRAN shall send a Physical Channel reconfiguration message with activation time at beginning of T3 with one active cell, cell 2. The Physical Channel reconfiguration message shall be sent to the UE such that the delay between the end of the last received TTI containing the message and the beginning of T3 is at least equal to the RRC procedure delay as defined in [16].

The second Beacon timeslot shall be provided in timeslot 8 for cell 1 and in timeslot 10 for cell 2. The UL DPCH shall be transmitted in timeslot 12.

Table 8.3.1.2.1: General test parameters for Handover to inter-frequency cell

Parai	<u>neter</u>	<u>Unit</u>	<u>Value</u>	<u>Comment</u>
DCH paramete	<u>ers</u>		DL Reference Measurement Channel 12.2 kbps	As specified in TS 25.102 section A.2.2
Power Control			<u>On</u>	
Target quality DTCH	value on	BLER	<u>0.01</u>	
<u>Initial</u>	Active cell		<u>Cell 1</u>	
conditions	Neighbour cell		Cell 2	
Final condition	Active cell		Cell 2	
HCS			Not used	
<u>O</u>		<u>dB</u>	<u>0</u>	Cell individual offset. This value shall be used for all cells in the test.
<u>Hysteresis</u>		<u>dB</u>	<u>0</u>	Hysteresis parameter for event 2C
Time to Trigge	<u>r</u>	<u>ms</u>	<u>0</u>	
Threshold non frequency	<u>-used</u>	<u>dBm</u>	<u>-80</u>	Applicable for Event 2C
Filter coefficier	<u>nt</u>		<u>0</u>	
Monitored cell	list size		6 TDD neighbours on Channel 1 6 TDD neighbours on Channel 2	
<u>T_{SI}</u>		<u>s</u>	<u>1,28</u>	The value shall be used for all cells in the test.
<u>T1</u>		<u>s</u>	<u>10</u>	
<u>T2</u>		<u>s</u>	<u>10</u>	
<u>T3</u>		<u>s</u>	<u>10</u>	

Table 8.3.1.2.2: Cell Specific parameters for Handover to inter-frequency cell

Parameter	<u>Unit</u>	Co	Cell 1 Cell 2									
DL timeslot number		0	4			2	5					
		<u>T1 T2 T3</u>	<u>T1</u> <u>T2</u>	<u>T3</u>	<u>T1</u>	<u>T2</u> <u>T3</u>	<u>T1</u> <u>T2</u>	<u>T3</u>				
UTRA RF Channel Number		Channel 1 Channel 2										
PCCPCH_Ec/lor	<u>dB</u>	<u>-3</u>	<u>n.a.</u>			<u>-3</u>	n.a	<u>ı.</u>				
SCH_Ec/lor	dB	<u>-9</u>	<u>n.a.</u>			<u>-9</u>	n.a	l <u>.</u>				
SCH toffset	<u>dB</u>	<u>0</u>	<u>n.a.</u>			<u>5</u>	<u>n.a</u>	<u>ı.</u>				
DPCH_Ec/lor	dB	<u>n.a.</u>	Note 1	n.a.		<u>n.a.</u>	<u>n.a.</u>	Note 1				
OCNS_Ec/lor	<u>dB</u>	<u>-3,12</u>	Note 2	<u>n.a.</u>	<u>n.a.</u>	<u>-3,12</u>	<u>n.a.</u>	Note 2				
\hat{I}_{or}/I_{oc}	<u>dB</u>		<u>1</u>		<u>-Inf.</u>	<u>7</u>	<u>-Inf</u>	<u>7</u>				
PCCPCH RSCP	<u>dBm</u>	<u>-72</u>	<u>n.a.</u>		<u>-Inf.</u>	<u>-66</u>	n.a	<u>i.</u>				
I_{oc}	dBm/ 3,84 MHz			<u>-7</u>	<u> </u>							
Propagation Condition				<u>AW</u>	<u>GN</u>							
Note 1: The DPCH level is controlled by the power control loop												
Note 2: The power of the C	OCNS cha	annel that is added sh	all make the tot	al powe	er from t	he cell to be e	equal to lor .					

8.3.1.2.4.2 Procedure

- 1) The RF parameters are set up according to T1.
- 2) The UE is switched on.
- 3) A call is set up according to the test procedure specified in TS 34.108 [3] subclause 7.3.4.

[Editor's note: subclause 7.3.4 in TS 34.108 (Message sequence chart for Handover Test procedure) is not yet specified]

4) SS shall transmit a MEASUREMENT CONTROL message.

- 5) After 10 seconds, the SS shall switch the power settings from T1 to T2.
- 6) UE shall transmit a MEASUREMENT REPORT message triggered by event 2C.
- 7) SS shall transmit a PHYSICAL CHANNEL RECONFIGURATION message with activation time at T3.
- 8) After 10 seconds, the SS shall switch the power settings from T2 to T3
- 9) UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the UL DCCH of cell 2. If the UE transmits the UL DPCH to cell 2 less than 40 ms from the beginning of time period T3 then the number of successful tests is increased by one.
- 10) After 10 seconds, the UE is switched off. Any timing information of cell 2 is deleted in the UE.
- 11)Repeat step 1-10 [TBD] times

8.3.1.2.5 Test requirements

For the test to pass, the total number of successful tests shall be more than [FFS] of the cases.

Note: If the above Test Requirement differs from the Minimum Requirement then the Test Tolerance applied for this test is non-zero. The Test Tolerance for this test is defined in clause F.2 and the explanation of how the Minimum Requirement has been relaxed by the Test Tolerance is given in clause F.4.

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How to create CRs using this form:

- 1) Fill out the above form. The symbols above marked \$\mathbb{X}\$ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

8.3 UTRAN Connected Mode Mobility

8.3.1 TDD/TDD Handover for 3,84 Mcps Option

8.3.1.1 Handover to intra-frequency cell

Void.

8.3.1.2 Handover to inter-frequency cell

8.3.1.2.1 Definition and applicability

Handover delay of the UE is defined as the time from the end of the last TTI containing an RRC message implying hard handover to the transmission of the new uplink DPCH, excluding the RRC procedure delay as defined in [9].

The requirements and this test apply to the UTRA TDD UE.

8.3.1.2.2 Minimum requirement

The hard handover delay shall be less than 40 ms in the dual carrier case when the cell is known by the UE and the SFN of the target cell needs to be decoded. The rate of correct handovers observed during repeated tests shall be at least 90% with a confidence level of [FFS]%.

The normative reference for this requirement is TS 25.123 [2] clauses 5.1.2 and A.5.1.2.

8.3.1.2.3 Test purpose

The purpose of this test is to verify the requirement for the inter-frequency handover delay in CELL DCH state in the dual carrier case.

8.3.1.2.4 Method of test

8.3.1.2.4.1 Initial conditions

Test environment: normal; see clauses G.2.1 and G.2.2.

Frequencies to be tested: mid range; see clause G.2.4.

The test parameters are given in Table 8.3.1.2.1 and 8.3.1.2.2. In the measurement control information it is indicated to the UE that event-triggered reporting with Event 2C shall be used. The PCCPCH RSCP and SFN-CFN observed time difference of the best cell on the unused frequency shall be reported together with Event 2C reporting. At the start of time duration T1, the UE may not have any timing information of cell 2.

UTRAN shall send a Physical Channel reconfiguration message with activation time at beginning of T3 with one active cell, cell 2. The Physical Channel reconfiguration message shall be sent to the UE such that the delay between the end of the last received TTI containing the message and the beginning of T3 is at least equal to the RRC procedure delay as defined in [16].

The second Beacon timeslot shall be provided in timeslot 8 for cell 1 and in timeslot 10 for cell 2. The UL DPCH shall be transmitted in timeslot 12.

Table 8.3.1.2.1: General test parameters for Handover to inter-frequency cell

Parai	<u>neter</u>	<u>Unit</u>	<u>Value</u>	<u>Comment</u>
DCH paramete	<u>ers</u>		DL Reference Measurement Channel 12.2 kbps	As specified in TS 25.102 section A.2.2
Power Control			<u>On</u>	
Target quality DTCH	value on	BLER	<u>0.01</u>	
<u>Initial</u>	Active cell		<u>Cell 1</u>	
conditions			Cell 2	
Final condition	Active cell		Cell 2	
HCS			Not used	
<u>O</u>		<u>dB</u>	<u>0</u>	Cell individual offset. This value shall be used for all cells in the test.
<u>Hysteresis</u>		<u>dB</u>	<u>0</u>	Hysteresis parameter for event 2C
Time to Trigge	<u>r</u>	<u>ms</u>	<u>0</u>	
Threshold non frequency	<u>-used</u>	<u>dBm</u>	<u>-80</u>	Applicable for Event 2C
Filter coefficier	<u>nt</u>		<u>0</u>	
Monitored cell	list size		6 TDD neighbours on Channel 1 6 TDD neighbours on Channel 2	
<u>T_{SI}</u>		<u>s</u>	<u>1,28</u>	The value shall be used for all cells in the test.
<u>T1</u>		<u>s</u>	<u>10</u>	
<u>T2</u>		<u>s</u>	<u>10</u>	
<u>T3</u>		<u>s</u>	<u>10</u>	

Table 8.3.1.2.2: Cell Specific parameters for Handover to inter-frequency cell

Parameter	Unit	Co	ell 1		Се	ell 2				
DL timeslot number		0	4			2	5			
		<u>T1 T2 T3</u>	<u>T1</u> <u>T2</u>	<u>T3</u>	<u>T1</u>	<u>T2</u> <u>T3</u>	<u>T1</u> <u>T2</u>	<u>T3</u>		
UTRA RF Channel Number		<u>Cha</u>	nnel 1			<u>Char</u>	nnel 2			
PCCPCH_Ec/lor	<u>dB</u>	<u>-3</u>	<u>n.a.</u>			<u>-3</u>	n.a			
SCH_Ec/lor	dB	<u>-9</u>	<u>n.a.</u>			<u>-9</u>	n.a			
SCH toffset	<u>dB</u>	<u>0</u>	<u>n.a.</u>			<u>5</u>	n.a	<u>.</u>		
DPCH_Ec/lor	dB	<u>n.a.</u>	Note 1	n.a.	n.a.		<u>n.a.</u>	Note 1		
OCNS_Ec/lor	<u>dB</u>	<u>-3,12</u>	Note 2	<u>n.a.</u>		<u>-3,12</u>	<u>n.a.</u>	Note 2		
$\frac{\hat{I}_{or}/I_{oc}}{}$	<u>dB</u>		<u>1</u>		<u>-Inf.</u>	<u>7</u>	<u>-Inf</u>	<u>7</u>		
PCCPCH RSCP	<u>dBm</u>	<u>-72</u>	<u>n.a.</u>		<u>-Inf.</u>	<u>-66</u>	n.a	<u>.</u>		
I_{oc}	dBm/ 3,84 MHz			<u>-7</u>	<u>0</u>					
Propagation Condition		AWGN								
Note 1: The DPCH level is controlled by the power control loop										
Note 2: The power of the OCNS channel that is added shall make the total power from the cell to be equal to lor.										

8.3.1.2.4.2 Procedure

- 1) The RF parameters are set up according to T1.
- 2) The UE is switched on.
- 3) A call is set up according to the test procedure specified in TS 34.108 [3] subclause 7.3.4.

[Editor's note: subclause 7.3.4 in TS 34.108 (Message sequence chart for Handover Test procedure) is not yet specified]

4) SS shall transmit a MEASUREMENT CONTROL message.

- 5) After 10 seconds, the SS shall switch the power settings from T1 to T2.
- 6) UE shall transmit a MEASUREMENT REPORT message triggered by event 2C.
- 7) SS shall transmit a PHYSICAL CHANNEL RECONFIGURATION message with activation time at T3.
- 8) After 10 seconds, the SS shall switch the power settings from T2 to T3
- 9) UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the UL DCCH of cell 2. If the UE transmits the UL DPCH to cell 2 less than 40 ms from the beginning of time period T3 then the number of successful tests is increased by one.
- 10) After 10 seconds, the UE is switched off. Any timing information of cell 2 is deleted in the UE.
- 11)Repeat step 1-10 [TBD] times

8.3.1.2.5 Test requirements

For the test to pass, the total number of successful tests shall be more than [FFS] of the cases.

Note: If the above Test Requirement differs from the Minimum Requirement then the Test Tolerance applied for this test is non-zero. The Test Tolerance for this test is defined in clause F.2 and the explanation of how the Minimum Requirement has been relaxed by the Test Tolerance is given in clause F.4.

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- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

8.3 UTRAN Connected Mode Mobility

8.3.1 TDD/TDD Handover

Void.

8.3.2 TDD/FDD Handover

Void.

8.3.2.1 Definition and applicability

Handover delay of the UE is defined as the time from the end of the last TTI containing an RRC message implying hard handover to the transmission of the new uplink DPCCH, excluding the RRC procedure delay as defined in [9].

The requirements and this test apply to the UTRA TDD / FDD UE.

8.3.2.2 Minimum requirement

The hard handover delay shall be less than 100 ms in the single carrier case when the cell is known by the UE and the SFN of the target cell does not need to be decoded. The rate of correct handovers observed during repeated tests shall be at least 90% with a confidence level of [FFS]%.

The normative reference for this requirement is TS 25.123 [2] clauses 5.2 and A.5.2.

8.3.2.3 Test purpose

The purpose of this test is to verify the requirement for the TDD/FDD handover delay in CELL_DCH state.

8.3.2.4 Method of test

8.3.2.4.1 Initial conditions

Test environment: normal; see clauses G.2.1 and G.2.2.

Frequencies to be tested: mid range; see clause G.2.4.

The test parameters are given in Table 8.3.2.1, 8.3.2.2 and 8.3.2.3 below. In the measurement control information it is indicated to the UE that event-triggered reporting with Event 1G and 2B shall be used. The CPICH_RSCP of the best cell on the unused frequency shall be reported together with Event 2B reporting. The test consists of three successive time periods, with a time duration of T1, T2 and T3 respectively. At the start of time duration T1, the UE may not have any timing information of cell 2.

UTRAN shall send a Physical Channel reconfiguration message with activation time at the beginning of T3 with a new active cell, cell 2. The Physical Channel reconfiguration message shall be sent to the UE such that the delay between the end of the last received TTI containing the message and the beginning of T3 is at least equal to the RRC procedure delay as defined in [16].

Table 8.3.2.1: General test parameters for TDD/FDD handover

Parai	<u>neter</u>	<u>Unit</u>	<u>Value</u>	Comment				
DCH par	rameters		DL Reference Measurement	As specified in TS 25.102 section A.2.2				
			Channel 12.2 kbps					
Power	<u>Control</u>		<u>On</u>					
Target qual		<u>BLER</u>	<u>0.01</u>					
<u>DT</u>								
<u>Initial</u>	Active cell		<u>Cell 1</u>	TDD cell				
<u>conditions</u>	<u>Neighbour</u>		<u>Cell 2</u>	FDD cell				
<u>Final</u>	cell Active cell		Cell 2	FDD cell				
condition	7101110 0011		<u>0011 2</u>	<u>1 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8</u>				
HO	CS CS		Not used					
()	<u>dB</u>	<u>0</u>	Cell individual offset. This value shall be				
				used for all cells in the test.				
Hyste	<u>eresis</u>	<u>dB</u>	<u>3</u>	Hysteresis parameter for event 2B				
Time to	<u>Trigger</u>	<u>ms</u>	<u>0</u>					
	<u>eshold used</u>	<u>dBm</u>	<u>-71</u>	Applicable for Event 2B				
frequ								
	non-used	<u>dBm</u>	<u>-80</u>	Applicable for Event 2B				
frequ								
	<u>requency</u>		<u>1</u>	Applicable for Event 2B				
	d frequency		<u>1</u>	Applicable for Event 2B				
	<u>efficient</u>		<u>0</u>					
<u>Monitored</u>	cell list size		6 TDD neighbours on Channel 1 6 FDD neighbours on Channel 2					
Т	<u>SI</u>	<u>s</u>	1.28	The value shall be used for all cells in the				
	<u>-</u> -			test.				
_	<u>T1</u>		<u>5</u>					
<u>T</u>	<u>2</u>	<u>s</u>	<u>15</u>					
<u> </u>	<u>T3</u>		<u>5</u>					

Table 8.3.2.2: Cell 1 specific test parameters for TDD/FDD handover

<u>Parameter</u>	Unit			Cel	<u> 1</u>					
DL timeslot number			<u>0</u>			2				
		<u>T1</u>	<u>T2</u>	<u>T3</u>	<u>T1</u>	<u>T2</u>	<u>T3</u>			
UTRA RF Channel Number		Channel 1								
PCCPCH Ec/lor	<u>dB</u>		<u>-3</u>			<u>n.a.</u>				
SCH Ec/lor	<u>dB</u>		<u>-9</u>			<u>n.a.</u>				
SCH_t _{offset}	<u>dB</u>		<u>0</u>			<u>n.a.</u>				
DPCH_Ec/lor	<u>dB</u>		<u>n.a.</u>		Not	<u>e 1</u>	<u>n.a.</u>			
OCNS_Ec/lor	<u>dB</u>		<u>-3,12</u>		<u>Not</u>	<u>e 2</u>	<u>n.a.</u>			
\hat{I}_{or}/I_{oc}	<u>dB</u>	<u>5</u>	<u>-1</u>	<u>1</u>	<u>5</u>	<u>=</u>	<u>1</u>			
PCCPCH RSCP	<u>dBm</u>	<u>-68</u>	<u>-7</u>	<u>'4</u>	<u>n.a.</u>					
I_{oc}	dBm/ 3,84 MHz			<u>-7</u> (<u>0</u>					
Propagation Condition				<u>A</u> W	<u>GN</u>					
Note 1: The DPCH level is controlled by the power control loop Note 2: The power of the OCNS channel that is added shall make the total power from the cell to be equal to lor.										

Table 8.3.2.3: Cell 2 specific test parameters for TDD/FDD handover

<u>Parameter</u>	<u>Unit</u>	Cell 2				
		<u>T1, T2</u>	<u>T3</u>			
CPICH_Ec/lor	<u>dB</u>	<u>-10</u>				
PCCPCH_Ec/lor	<u>dB</u>	<u>-12</u>				
SCH_Ec/lor	<u>dB</u>	<u>-12</u>				
PICH_Ec/lor	<u>dB</u>	-10 -12 -12 -15				
DPCH_Ec/lor	<u>dB</u>	<u>n.a.</u>	Note 1			
OCNS_Ec/lor	<u>dB</u>	<u>-0,941</u>	Note 2			
CPICH_RSCP	<u>dBm</u>	<u>-83</u>	<u>-77</u>			
$\frac{\hat{I}_{or}/I_{oc}}{}$	<u>dB</u>	<u>-3</u>	<u>-77</u> <u>3</u>			
I_{oc}	dBm/3. 84 MHz	<u>-70</u>				
Propagation Condition		<u>AWGN</u>				
Note 1: The DPCH level is c	ontrolled by	the nower control loop				

Note 1: The DPCH level is controlled by the power control loop

Note 2 : The power of the OCNS channel that is added shall make the total

power from the cell to be equal to I

8.3.2.4.2 Procedure

- 1) The RF parameters are set up according to T1.
- 2) The UE is switched on.
- 3) A call is set up according to the test procedure specified in TS 34.108 [3] subclause 7.3.4.

[Editor's note: subclause 7.3.4 in TS 34.108 (Message sequence chart for Handover Test procedure) is not yet specified]

- 4) SS shall transmit a MEASUREMENT CONTROL message.
- 5) After 5 seconds, the SS shall switch the power settings from T1 to T2.
- 6) UE shall transmit a MEASUREMENT REPORT message triggered by event 2B.
- 7) SS shall transmit a PHYSICAL CHANNEL RECONFIGURATION message with activation time at T3.
- 8) After 15 seconds, the SS shall switch the power settings from T2 to T3
- 9) UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the UL DCCH of cell 2. If the UE transmits the UL DPCCH to cell 2 less than 100 ms from the beginning of time period T3 then the number of successful tests is increased by one.

10) After 5 seconds, the UE is switched off. Any timing information of cell 2 is deleted in the UE.

11) Repeat step 1-10 [TBD] times

8.3.2.5 Test requirements

For the test to pass, the total number of successful tests shall be more than [FFS] of the cases.

Note: If the above Test Requirement differs from the Minimum Requirement then the Test Tolerance applied for this test is non-zero. The Test Tolerance for this test is defined in clause F.2 and the explanation of how the Minimum Requirement has been relaxed by the Test Tolerance is given in clause F.4.

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- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

8.3 UTRAN Connected Mode Mobility

8.3.1 TDD/TDD Handover

Void.

8.3.2 TDD/FDD Handover for 3.84 Mcps Option

Void.

8.3.2.1 Definition and applicability

Handover delay of the UE is defined as the time from the end of the last TTI containing an RRC message implying hard handover to the transmission of the new uplink DPCCH, excluding the RRC procedure delay as defined in [9].

The requirements and this test apply to the UTRA TDD / FDD UE.

8.3.2.2 Minimum requirement

The hard handover delay shall be less than 100 ms in the single carrier case when the cell is known by the UE and the SFN of the target cell does not need to be decoded. The rate of correct handovers observed during repeated tests shall be at least 90% with a confidence level of [FFS]%.

The normative reference for this requirement is TS 25.123 [2] clauses 5.2 and A.5.2.

8.3.2.3 Test purpose

The purpose of this test is to verify the requirement for the TDD/FDD handover delay in CELL_DCH state.

8.3.2.4 Method of test

8.3.2.4.1 Initial conditions

Test environment: normal; see clauses G.2.1 and G.2.2.

Frequencies to be tested: mid range; see clause G.2.4.

The test parameters are given in Table 8.3.2.1, 8.3.2.2 and 8.3.2.3 below. In the measurement control information it is indicated to the UE that event-triggered reporting with Event 1G and 2B shall be used. The CPICH_RSCP of the best cell on the unused frequency shall be reported together with Event 2B reporting. The test consists of three successive time periods, with a time duration of T1, T2 and T3 respectively. At the start of time duration T1, the UE may not have any timing information of cell 2.

UTRAN shall send a Physical Channel reconfiguration message with activation time at the beginning of T3 with a new active cell, cell 2. The Physical Channel reconfiguration message shall be sent to the UE such that the delay between the end of the last received TTI containing the message and the beginning of T3 is at least equal to the RRC procedure delay as defined in [16].

Table 8.3.2.1: General test parameters for TDD/FDD handover

Parar	<u>neter</u>	<u>Unit</u>	<u>Value</u>	<u>Comment</u>					
DCH par	ameters		DL Reference Measurement Channel 12.2 kbps	As specified in TS 25.102 section A.2.2					
Power	Control Control		<u>On</u>						
Target qual		BLER	<u>0.01</u>						
Initial	Active cell		Cell 1	TDD cell					
conditions	Neighbour cell		Cell 2	FDD cell					
Final condition	Active cell		Cell 2	FDD cell					
HC	<u>CS</u>		Not used						
<u>C</u>	<u>O</u>		<u>O</u> <u>dl</u>		<u>0</u>	Cell individual offset. This value shall be used for all cells in the test.			
Hyste	eresis	<u>dB</u>	<u>3</u>	Hysteresis parameter for event 2B					
Time to	Trigger	<u>ms</u>	<u>0</u>						
Absolute thr		<u>dBm</u>	<u>-71</u>	Applicable for Event 2B					
Threshold frequ	non-used	<u>dBm</u>	<u>-80</u>	Applicable for Event 2B					
W used f	requency		1	Applicable for Event 2B					
W non-used			<u></u>	Applicable for Event 2B					
Filter co			0						
Monitored of	cell list size		6 TDD neighbours on Channel 1 6 FDD neighbours on Channel 2						
I	<u>T_{SI}</u>		1.28	The value shall be used for all cells in the test.					
I		<u>s</u>	<u>5</u>						
<u>T</u>	2	<u>s</u>	<u>15</u>						
<u>T</u>	3	<u>s</u>	<u>5</u>						

Table 8.3.2.2: Cell 1 specific test parameters for TDD/FDD handover

Parameter	Unit	Cell 1										
DL timeslot number			<u>0</u>			2						
		<u>T1</u>	<u>T2</u>	<u>T3</u>	<u>T1</u>	<u>T2</u>	<u>T3</u>					
UTRA RF Channel Number		<u>Channel 1</u>										
PCCPCH Ec/lor	<u>dB</u>		<u>-3</u>			<u>n.a.</u>						
SCH Ec/lor	<u>dB</u>		<u>-9</u>			<u>n.a.</u>						
SCH_t _{offset}	<u>dB</u>		<u>0</u>			<u>n.a.</u>						
DPCH_Ec/lor	<u>dB</u>		<u>n.a.</u>		Not	te 1	<u>n.a.</u>					
OCNS_Ec/lor	<u>dB</u>		<u>-3,12</u>		<u>Not</u>	te 2	<u>n.a.</u>					
\hat{I}_{or}/I_{oc}	<u>dB</u>	<u>5</u>	:	<u>-1</u>	<u>5</u>	<u>=</u>	<u>1</u>					
PCCPCH RSCP	<u>dBm</u>	<u>-68</u>	_	<u>74</u>		<u>n.a.</u>						
I_{oc}	<u>dBm/</u> 3,84 MHz			<u>-70</u>	<u>0</u>							
Propagation Condition				AW	<u>GN</u>							
Note 1: The DPCH level is controlled by the power control loop Note 2: The power of the OCNS channel that is added shall make the total power from the cell to be equal to lor.												

Table 8.3.2.3: Cell 2 specific test parameters for TDD/FDD handover

<u>Parameter</u>	<u>Unit</u>	Cell 2				
		<u>T1, T2</u>	<u>T3</u>			
CPICH_Ec/lor	<u>dB</u>	<u>-10</u>				
PCCPCH_Ec/lor	<u>dB</u>	<u>-12</u>				
SCH_Ec/lor	<u>dB</u>	<u>-12</u>				
PICH_Ec/lor	<u>dB</u>	-10 -12 -12 -15				
DPCH_Ec/lor	<u>dB</u>	<u>n.a.</u>	Note 1			
OCNS_Ec/lor	<u>dB</u>	<u>-0,941</u>	Note 2			
CPICH_RSCP	<u>dBm</u>	<u>-83</u>	<u>-77</u>			
$\frac{\hat{I}_{or}/I_{oc}}{}$	<u>dB</u>	<u>-3</u>	<u>-77</u> <u>3</u>			
I_{oc}	dBm/3. 84 MHz	<u>-70</u>				
Propagation Condition		<u>AWGN</u>				
Note 1: The DPCH level is c	ontrolled by	the nower control loop				

Note 1: The DPCH level is controlled by the power control loop

Note 2 : The power of the OCNS channel that is added shall make the total

power from the cell to be equal to I

8.3.2.4.2 Procedure

- 1) The RF parameters are set up according to T1.
- 2) The UE is switched on.
- 3) A call is set up according to the test procedure specified in TS 34.108 [3] subclause 7.3.4.

[Editor's note: subclause 7.3.4 in TS 34.108 (Message sequence chart for Handover Test procedure) is not yet specified]

- 4) SS shall transmit a MEASUREMENT CONTROL message.
- 5) After 5 seconds, the SS shall switch the power settings from T1 to T2.
- 6) UE shall transmit a MEASUREMENT REPORT message triggered by event 2B.
- 7) SS shall transmit a PHYSICAL CHANNEL RECONFIGURATION message with activation time at T3.
- 8) After 15 seconds, the SS shall switch the power settings from T2 to T3
- 9) UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the UL DCCH of cell 2. If the UE transmits the UL DPCCH to cell 2 less than 100 ms from the beginning of time period T3 then the number of successful tests is increased by one.

10) After 5 seconds, the UE is switched off. Any timing information of cell 2 is deleted in the UE.

11) Repeat step 1-10 [TBD] times

8.3.2.5 Test requirements

For the test to pass, the total number of successful tests shall be more than [FFS] of the cases.

Note: If the above Test Requirement differs from the Minimum Requirement then the Test Tolerance applied for this test is non-zero. The Test Tolerance for this test is defined in clause F.2 and the explanation of how the Minimum Requirement has been relaxed by the Test Tolerance is given in clause F.4.

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8.7 Measurements Performance Requirements

Unless explicitly stated:

- Measurement channel is 12.2 kbps as defined in TS 25.102 annex A. This measurement channel is used both in active cell and cells to be measured.
- Cell 1 is the active cell.
- Single task reporting.
- Power control is active.

Void.

8.7.1 P-CCPCH RSCP

8.7.1.1 Intra frequency measurement accuracy

8.7.1.1.1 Absolute accuracy requirement

8.7.1.1.1 Definition and applicability

The absolute accuracy of P-CCPCH RSCP is defined as the P-CCPCH RSCP meaasured from one cell compared to the actual P-CCPCH RSCP power from the same cell.

The requirements and this test apply to all types of UTRA TDD UE.

8.7.1.1.1.2 Minimum Requirements

The absolute accuracy requirements in table 8.7.1.1.1 are valid under the following conditions:

P-CCPCH RSCP ≥ -102 dBm.

$$\left(\frac{P - CCPCH _E_c}{I_o}\right)_{lin \ dB} \ge -8dB$$

$$\left(\frac{SCH_{-}E_{c}}{I_{o}} \right)_{in\ dB} \ge -13dB$$

Table 8.7.1.1.1 P-CCPCH_RSCP absolute accuracy

Parameter	l Init	Accura	<u>Conditions</u>	
<u> Farameter</u>	<u>Unit</u>	Normal condition	Extreme condition	lo [dBm]
P-CCPCH RSCP	<u>dBm</u>	<u>± 6</u>	<u>± 9</u>	<u>-9470</u>
P-CCPCH_RSCP	<u>dBm</u>	<u>± 8</u>	<u>± 11</u>	<u>-7050</u>

The rate of correct measurements observed during repeated tests shall be at least 90%.

The normative reference for this requirement is TS 25.123 [2] clauses 9.1.1.1.1 and A.9.1.1.1.1.

8.7.1.1.3 Test Purpose

The purpose of this test is to verify that the absolute P-CCPCH RSCP measurement accuracy is within the specified <u>limits.</u>

8.7.1.1.4 Method of test

8.7.1.1.4.1 Initial conditions

Test environment: normal, TL/VL, TL/VH, TH/VL, TH/VH; see clauses G.2.1 and G.2.2.

Frequencies to be tested: mid range; see clause G.2.4.

In this case all cells are on the same frequency. Cell 1 and cell 2 shall be synchronised, i.e. share the same frame and timeslot timing. The DL DPCH shall be transmitted in timeslot 4 and the UL DPCH shall be transmitted in timeslot 12. The second Beacon timeslot shall be provided in timeslot 8 for both cell 1 and cell 2. P-CCPCH RSCP intra frequency absolute accuracy requirements are tested by using test parameters in Table 8.7.1.1.1.2.

Table 8.7.1.1.1.2: P-CCPCH RSCP Intra frequency test parameters

Doromotor	l lmi4	Te	st 1	Te	st 2	Tes	st 3
<u>Parameter</u>	<u>Unit</u>	Cell 1	Cell 2	Cell 1	Cell 2	Cell 1	Cell 2
DL timeslot number		<u>0</u>	0	<u>0</u>	<u>0</u>	0	<u>0</u>
UTRA RF Channel number		Channel 1		Channel 1		Channel 1	
PCCPCH_Ec/lor	<u>dB</u>	<u>-3</u>		<u>-3</u>		-	3
SCH_Ec/lor	<u>dB</u>	<u>-9</u>		_	9	<u>-9</u>	
SCH_t _{offset}		0	<u>5</u>	0	<u>5</u>	0	<u>5</u>
OCNS Ec/lor	<u>dB</u>	<u>-3</u>	<u>.12</u>	<u>-3,12</u>		<u>-3,12</u>	
loc	dBm / 3.84 MHz	<u>-7</u> :	5.7	-59.8		<u>-98.7</u>	
<u>Îor/loc</u>	dB	<u>5</u>	<u>2</u>	9	<u>2</u>	<u>3</u>	<u>0</u>
PCCPCH RSCP, Note 1	<u>dBm</u>	<u>-73.7</u>	<u>-76.7</u>	<u>-53.8</u>	<u>-60.8</u>	<u>-98.7</u>	-101.7
Io, Note 1	dBm / 3.84 MHz	-69		-{	<u>50</u>	-9	<u>)4</u>
Propagation condition		AWGN		AWGN		AWGN	
NOTE 1: PCCPCH RSCP and	l lo levels have been c	alculated fi	om other p	oarameters	for inform	ation purp	oses.
They are not settable	e parameters themsely	es					

1) A call is set up according to the test procedure specified in TS 34.108 [3] clause 7.3.2.3. The RF parameters for Test 1 are set up according to table 8.7.1.1.1.2.

8.7.1.1.4.2 Procedure

- 1) SS shall transmit MEASUREMENT CONTROL message.
- 2) UE shall transmit periodically MEASUREMENT REPORT messages.
- 3) SS shall check PCCPCH_RSCP value in MEASUREMENT REPORT messages. PCCPCH_RSCP power of Cell 1 reported by UE is compared to actual PCCPCH_RSCP power for each MEASUREMENT REPORT message.
- 4) SS shall count number of MEASUREMENT REPORT messages transmitted by UE. After 1000

 MEASUREMENT REPORT messages have been received from UE, the RF parameters are set up according to table 8.7.1.1.1.2 for Test 2. While RF parameters are being set up, MEASUREMENT REPORT messages from UE are ignored. SS shall wait for additional 1s and ignore the MEASUREMENT REPORT messages during this period. Then, step 3) above is repeated. After further 1000 MEASUREMENT REPORT messages have been received from UE, the RF parameters are set up according to table 8.7.1.1.1.2 for Test 3. While RF parameters are being set up, MEASUREMENT REPORT messages from UE are ignored. SS shall wait for additional 1s and ignore the MEASUREMENT REPORT messages during this period. Then, step 3) above is repeated.
- 5) After further 1000 MEASUREMENT REPORT messages have been received from UE, the SS shall transmit RRC CONNECTION RELEASE message.
- 6) UE shall transmit RRC CONNECTION RELEASE COMPLETE message.

8.7.1.1.5 Test requirements

The PCCPCH RSCP measurement accuracy shall meet the requirements in clause 8.7.1.1.1.2 for at least 900 of the measurement reports at each input level in step 4.

NOTE: If the above Test Requirement differs from the Minimum Requirement then the Test Tolerance applied for this test is non-zero. The Test Tolerance for this test is defined in clause F.2 and the explanation of how the Minimum Requirement has been relaxed by the Test Tolerance is given in clause F.4.

8.7.1.1.2 Relative accuracy requirement

8.7.1.1.2.1 Definition and applicability

The relative accuracy of PCCPCH RSCP is defined as the PCCPCH RSCP measured from one cell compared to the PCCPCH RSCP measured from another cell on the same frequency.

The requirements and this test apply to all types of UTRA TDD UE.

8.7.1.1.2.2 Minimum Requirements

The relative accuracy requirements in table 8.7.1.1.2.1 are valid under the following conditions:

P-CCPCH RSCP ≥ -102 dBm.

$$\left(\frac{P - CCPCH _{E_c}}{I_o}\right)_{in\ dB} \ge -8dB$$

$$\left(\frac{SCH_{-}E_{c}}{I_{o}} \right)_{in\ dB} \ge -13dB$$

Relative Io difference [dB] \le relative RSCP difference [dB]

It is assumed that the measurements of P-CCPCH RSCP1 and P-CCPCH RSCP2 can be performed within 20ms due to slot allocations in the cells concerned.

Table 8.7.1.1.2.1: P-CCPCH_RSCP intra-frequency relative accuracy

	<u>Unit</u>	<u>Accurac</u>	Accuracy [dB]				
<u>Parameter</u>		Normal condition	Extreme condition	lo [dBm]	relative RSCP difference [dbB]		
		<u>±1</u>	<u>±1</u>		<u><2</u>		
P-CCPCH_RSCP	<u>dBm</u>	<u>+2</u>	<u>+2</u>	-9450	<u>214</u>		
		<u>±3</u>	<u>± 3</u>		<u>>14</u>		

The rate of correct measurements observed during repeated tests shall be at least 90%.

The normative reference for this requirement is TS 25.123 [2] clauses 9.1.1.1.2 and A.9.1.1.1.1.

8.7.1.1.2.3 Test Purpose

The purpose of this test is to verify that the relative P-CCPCH RSCP measurement accuracy is within the specified limits.

8.7.1.1.2.4 Method of test

8.7.1.1.2.4.1 Initial conditions

Test environment: normal, TL/VL, TL/VH, TH/VL, TH/VH; see clauses G.2.1 and G.2.2.

Frequencies to be tested: mid range; see clause G.2.4.

In this case all cells are on the same frequency. Cell 1 and cell 2 shall be synchronised, i.e. share the same frame and timeslot timing. The DL DPCH shall be transmitted in timeslot 4 and the UL DPCH shall be transmitted in timeslot 12. The second Beacon timeslot shall be provided in timeslot 8 for both cell 1 and cell 2. P-CCPCH RSCP intra frequency relative accuracy requirements are tested by using test parameters in Table 8.7.1.1.1.2.

1) A call is set up according to the test procedure specified in TS 34.108 [3] clause 7.3.2.3. The RF parameters for Test 1 are set up according to table 8.7.1.1.1.2.

8.7.1.1.2.4.2 Procedure

- 1) SS shall transmit MEASUREMENT CONTROL message.
- 2) UE shall transmit periodically MEASUREMENT REPORT messages.
- 3) SS shall check PCCPCH_RSCP value of Cell 1 and Cell 2 in MEASUREMENT REPORT messages. PCCPCH RSCP power value measured from Cell 1 is compared to PCCPCH RSCP power value measured from Cell 2 for each MEASUREMENT REPORT message.
- 4) The result of step 3) is compared to actual power level difference of PCCPCH RSCP of Cell 1 and Cell 2.
- 5) SS shall count number of MEASUREMENT REPORT messages transmitted by UE. After 1000

 MEASUREMENT REPORT messages have been received from UE, the RF parameters are set up according to table 8.7.1.1.1.2 for Test 2. While RF parameters are being set up, MEASUREMENT REPORT messages from UE are ignored. SS shall wait for additional 1s and ignore the MEASUREMENT REPORT messages during this period. Then, steps 3) and 4) above are repeated. After further 1000 MEASUREMENT REPORT messages have been received from UE, the RF parameters are set up according to table 8.7.1.1.1.2 for Test 3. While RF parameters are being set up, MEASUREMENT REPORT messages from UE are ignored. SS shall wait for additional 1s and ignore the MEASUREMENT REPORT messages during this period. Then, steps 3) and 4) above are repeated.
- 6) After further 1000 MEASUREMENT REPORT messages have been received from UE, the SS shall transmit RRC CONNECTION RELEASE message.
- 7) UE shall transmit RRC CONNECTION RELEASE COMPLETE message.

8.7.1.1.2.5 Test requirements

The PCCPCH RSCP measurement accuracy shall meet the requirements in clause 8.7.1.1.2.2 for at least 900 of the measurement reports at each input level in step 4.

NOTE: If the above Test Requirement differs from the Minimum Requirement then the Test Tolerance applied for this test is non-zero. The Test Tolerance for this test is defined in clause F.2 and the explanation of how the Minimum Requirement has been relaxed by the Test Tolerance is given in clause F.4.

8.7.1.2 Inter frequency measurement accuracy

8.7.1.2.1 Relative accuracy requirement

8.7.1.2.1.1 Definition and applicability

The P-CCPCH RSCP inter-frequency relative accuracy is defined as the P-CCPCH RSCP measured from one cell compared to the P-CCPCH RSCP measured from another cell on a different frequency.

The requirements and this test apply to all types of UTRA TDD UE.

8.7.1.2.1.2 Minimum Requirements

The relative accuracy requirements in table 8.7.1.2.1.1 are valid under the following conditions:

P-CCPCH RSCP ≥ -102 dBm.

$$\left| P - CCPCH RSCP1 \right|_{in dB} - P - CCPCH RSCP2 \right|_{in dB} \le 20 dB$$

$$\left(\frac{P - CCPCH _E_c}{I_o}\right)_{in \ dB} \ge -8dB$$

$$\left(\frac{SCH _{E_c}}{I_o} \right)_{in\ dB} \ge -13dB$$

Table 8.7.1.2.1.1 P-CCPCH_RSCP inter-frequency relative accuracy

<u>Parameter</u>	l Init	Accura	<u>Conditions</u>	
	<u>Unit</u>	Normal condition	Extreme condition	lo [dBm]
P-CCPCH_RSCP	<u>dBm</u>	± 6	± 6	-9450

The rate of correct measurements observed during repeated tests shall be at least 90%.

The normative reference for this requirement is TS 25.123 [2] clauses 9.1.1.1.2 and A.9.1.1.

8.7.1.2.1.3 Test Purpose

The purpose of this test is to verify that the relative P-CCPCH RSCP measurement accuracy is within the specified limits for the inter frequency case.

8.7.1.2.1.4 Method of test

8.7.1.2.1.4.1 Initial conditions

Test environment: normal, TL/VL, TL/VH, TH/VL, TH/VH; see clauses G.2.1 and G.2.2.

Frequencies to be tested: mid range; see clause G.2.4.

In this case both cells are on different frequencies. The second Beacon timeslot shall be provided in timeslot 8 for cell 1 and in timeslot 10 for cell 2. P-CCPCH RSCP inter frequency relative accuracy requirements are tested by using test parameters in Table 8.7.1.2.1.2.

Table 8.7.1.2.1.2: P-CCPCH RSCP Intra frequency test parameters

Doromotor	Hnit	Tes	st 1	Tes	st 2	Te	st 3	
<u>Parameter</u>	<u>Unit</u>	Cell 1	Cell 2	Cell 1	Cell 2	Cell 1	Cell 2	
DL timeslot number		<u>0</u>	<u>2</u>	<u>0</u>	<u>0</u> <u>2</u>		<u>2</u>	
UTRA RF Channel		Channel 1	Channel 2	Channel 1	Channel 2	Channel 1	Channel 2	
<u>number</u>		<u>Charine i</u>	Charmer 2	<u>Charmer 1</u>	Chamber 2	Chamiler	Chamber 2	
PCCPCH_Ec/lor	<u>dB</u>	T	<u>3</u>	'i'l	<u>3</u>	<u>-3</u>		
SCH_Ec/lor	<u>dB</u>	T	9	T	9	_	9	
SCH_t _{offset}		<u>0</u> <u>5</u>		<u>0</u>	<u>5</u>	<u>0</u>	<u>5</u>	
OCNS_Ec/lor	<u>dB</u>	<u>-3,12</u>		<u>-3,</u>	<u>12</u>	<u>-3</u>	<u>,12</u>	
loc	<u>dBm /</u> 3.84 MHz	<u>-75.2</u>	<u>-75.2</u>	<u>-57.8</u>	<u>-54.1</u>	<u>-98.7</u>	<u>-97</u>	
<u>Îor/loc</u>	<u>dB</u>	<u>5</u>	<u>5</u>	<u>7</u> <u>2</u>		<u>3</u>	<u>0</u>	
PCCPCH RSCP,	dDm	72.2	72.2	E 1 0	EE 1	09.7	100	
Note 1	<u>dBm</u>	<u>-73.2</u>	<u>-73.2</u>	<u>-54.8</u>	<u>-55.1</u>	<u>-98.7</u>	<u>-100</u>	
lo, Note 1	<u>dBm /</u> 3.84 MHz	<u>-6</u>	<u>89</u>	<u>-5</u>	<u>50</u>	<u>-94</u>		
Propagation condition		AW		AW other n	'GN	AWGN		

NOTE 1: PCCPCH RSCP and lo levels have been calculated from other parameters for information purposes.

They are not settable parameters themselves.

1) A call is set up according to the test procedure specified in TS 34.108 [3] clause 7.3.2.3. The RF parameters for Test 1 are set up according to table 8.7.1.2.1.2.

8.7.1.2.1.4.2 Procedure

- 1) SS shall transmit PHYSICAL CHANNEL RECONFIGURATION message.
- 2) UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message.
- 3) SS shall transmit MEASUREMENT CONTROL message.
- 4) UE shall transmit periodically MEASUREMENT REPORT messages.
- 5) SS shall check PCCPCH RSCP value of Cell 1 and Cell 2 in MEASUREMENT REPORT messages. PCCPCH RSCP power value measured from Cell 1 is compared to PCCPCH RSCP power value measured from Cell 2 for each MEASUREMENT REPORT message.
- 6) The result of step 5) is compared to actual power level difference of PCCPCH RSCP of Cell 1 and Cell 2.
- 7) SS shall count number of MEASUREMENT REPORT messages transmitted by UE. After 1000

 MEASUREMENT REPORT messages have been received from UE, the RF parameters are set up according to table 8.7.1.2.1.2 for Test 2. While RF parameters are being set up, MEASUREMENT REPORT messages from UE are ignored. SS shall wait for additional 1s and ignore the MEASUREMENT REPORT messages during this period. Then, steps 5) and 6) above are repeated.
- 8) After further 1000 MEASUREMENT REPORT messages have been received from UE, the SS shall transmit RRC CONNECTION RELEASE message.
- 9) UE shall transmit RRC CONNECTION RELEASE COMPLETE message.

8.7.1.2.1.5 Test requirements

The PCCPCH RSCP measurement accuracy shall meet the requirements in clause 8.7.1.2.1.2 for at least 900 of the measurement reports at each input level in step 4.

NOTE: If the above Test Requirement differs from the Minimum Requirement then the Test Tolerance applied for this test is non-zero. The Test Tolerance for this test is defined in clause F.2 and the explanation of how the Minimum Requirement has been relaxed by the Test Tolerance is given in clause F.4.

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How to create CRs using this form:

- 1) Fill out the above form. The symbols above marked \$\mathbb{X}\$ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

8.7 Measurements Performance Requirements

Unless explicitly stated:

- Measurement channel is 12.2 kbps as defined in TS 25.102 annex A. This measurement channel is used both in active cell and cells to be measured.
- Cell 1 is the active cell.
- Single task reporting.
- Power control is active.

Void.

8.7.1 P-CCPCH RSCP

8.7.1.1 Intra frequency measurement accuracy for 3,84 Mcps TDD Option

8.7.1.1.1 Absolute accuracy requirement

8.7.1.1.1 Definition and applicability

The absolute accuracy of P-CCPCH RSCP is defined as the P-CCPCH RSCP meaasured from one cell compared to the actual P-CCPCH RSCP power from the same cell.

The requirements and this test apply to all types of UTRA TDD UE.

8.7.1.1.1.2 Minimum Requirements

The absolute accuracy requirements in table 8.7.1.1.1 are valid under the following conditions:

P-CCPCH RSCP ≥ -102 dBm.

$$\left(\frac{P - CCPCH _E_c}{I_o}\right)_{in \ dB} \ge -8dB$$

$$\left(\frac{SCH _E_c}{I_o} \right)_{in \ dB} \ge -13dB$$

Table 8.7.1.1.1 P-CCPCH_RSCP absolute accuracy

Parameter	l Init	Accura	Accuracy [dB]					
<u>Farameter</u>	<u>Unit</u>	Normal condition	Extreme condition	lo [dBm]				
P-CCPCH RSCP	<u>dBm</u>	<u>± 6</u>	<u>± 9</u>	<u>-9470</u>				
P-CCPCH_RSCP	<u>dBm</u>	<u>± 8</u>	<u>± 11</u>	<u>-7050</u>				

The rate of correct measurements observed during repeated tests shall be at least 90%.

The normative reference for this requirement is TS 25.123 [2] clauses 9.1.1.1.1 and A.9.1.1.1.1.

8.7.1.1.3 Test Purpose

The purpose of this test is to verify that the absolute P-CCPCH RSCP measurement accuracy is within the specified <u>limits.</u>

8.7.1.1.4 Method of test

8.7.1.1.4.1 Initial conditions

Test environment: normal, TL/VL, TL/VH, TH/VL, TH/VH; see clauses G.2.1 and G.2.2.

Frequencies to be tested: mid range; see clause G.2.4.

In this case all cells are on the same frequency. Cell 1 and cell 2 shall be synchronised, i.e. share the same frame and timeslot timing. The DL DPCH shall be transmitted in timeslot 4 and the UL DPCH shall be transmitted in timeslot 12. The second Beacon timeslot shall be provided in timeslot 8 for both cell 1 and cell 2. P-CCPCH RSCP intra frequency absolute accuracy requirements are tested by using test parameters in Table 8.7.1.1.1.2.

Table 8.7.1.1.1.2: P-CCPCH RSCP Intra frequency test parameters

Parameter	Unit	Te	st 1	Te	st 2	Tes	st 3
<u>Parameter</u>	<u>Unit</u>	Cell 1	Cell 2	Cell 1	Cell 2	Cell 1	Cell 2
DL timeslot number		<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
UTRA RF Channel number		Channel 1		Channel 1		Char	nel 1
PCCPCH_Ec/lor	<u>dB</u>	<u>-3</u>			3	-	3
SCH_Ec/lor	<u>dB</u>	<u>-9</u>		-	9	-9	
SCH_t _{offset}		<u>0</u> <u>5</u>		<u>0</u>	<u>5</u>	0	<u>5</u>
OCNS Ec/lor	<u>dB</u>	<u>-3</u>	12	<u>-3,12</u>		<u>-3,12</u>	
loc	dBm / 3.84 MHz	<u>-7</u> :	5.7	-59.8		<u>-98.7</u>	
<u>Îor/loc</u>	<u>dB</u>	<u>5</u>	2	9	2	3	<u>0</u>
PCCPCH RSCP, Note 1	<u>dBm</u>	-73.7	-76.7	-53.8	-60.8	-98.7	-101.7
lo, Note 1	dBm / 3.84 MHz	-69		<u>-{</u>	<u>50</u>	-9	<u>94</u>
Propagation condition		AW	AWGN		AWGN		<u>'GN</u>
NOTE 1: PCCPCH RSCP and	lo levels have been c	alculated fi	om other p	oarameters	for inform	ation purp	oses.
They are not settable	narameters themselv	29					

1) A call is set up according to the test procedure specified in TS 34.108 [3] clause 7.3.2.3. The RF parameters for Test 1 are set up according to table 8.7.1.1.1.2.

8.7.1.1.4.2 Procedure

- 1) SS shall transmit MEASUREMENT CONTROL message.
- 2) UE shall transmit periodically MEASUREMENT REPORT messages.
- 3) SS shall check PCCPCH_RSCP value in MEASUREMENT REPORT messages. PCCPCH_RSCP power of Cell 1 reported by UE is compared to actual PCCPCH_RSCP power for each MEASUREMENT REPORT message.
- 4) SS shall count number of MEASUREMENT REPORT messages transmitted by UE. After 1000 MEASUREMENT REPORT messages have been received from UE, the RF parameters are set up according to table 8.7.1.1.1.2 for Test 2. While RF parameters are being set up, MEASUREMENT REPORT messages from UE are ignored. SS shall wait for additional 1s and ignore the MEASUREMENT REPORT messages during this period. Then, step 3) above is repeated. After further 1000 MEASUREMENT REPORT messages have been received from UE, the RF parameters are set up according to table 8.7.1.1.1.2 for Test 3. While RF parameters are being set up, MEASUREMENT REPORT messages from UE are ignored. SS shall wait for additional 1s and ignore the MEASUREMENT REPORT messages during this period. Then, step 3) above is repeated.
- 5) After further 1000 MEASUREMENT REPORT messages have been received from UE, the SS shall transmit RRC CONNECTION RELEASE message.
- 6) UE shall transmit RRC CONNECTION RELEASE COMPLETE message.

8.7.1.1.5 Test requirements

The PCCPCH RSCP measurement accuracy shall meet the requirements in clause 8.7.1.1.1.2 for at least 900 of the measurement reports at each input level in step 4.

NOTE: If the above Test Requirement differs from the Minimum Requirement then the Test Tolerance applied for this test is non-zero. The Test Tolerance for this test is defined in clause F.2 and the explanation of how the Minimum Requirement has been relaxed by the Test Tolerance is given in clause F.4.

8.7.1.1.2 Relative accuracy requirement for 3,84 Mcps TDD Option

8.7.1.1.2.1 Definition and applicability

The relative accuracy of PCCPCH RSCP is defined as the PCCPCH RSCP measured from one cell compared to the PCCPCH RSCP measured from another cell on the same frequency.

The requirements and this test apply to all types of UTRA TDD UE.

8.7.1.1.2.2 Minimum Requirements

The relative accuracy requirements in table 8.7.1.1.2.1 are valid under the following conditions:

P-CCPCH RSCP ≥ -102 dBm.

$$\left(\frac{P - CCPCH _{E_c}}{I_o}\right)_{in\ dB} \ge -8dB$$

$$\left(\frac{SCH _E_c}{I_o} \right)_{in \ dB} \ge -13dB$$

$$\underline{ } \left| P - CCPCH RSCP1 \right|_{in \ dB} - P - CCPCH RSCP2 \Big|_{in \ dB} \right| \le 20 dB$$

Relative Io difference [dB] \le relative RSCP difference [dB]

It is assumed that the measurements of P-CCPCH RSCP1 and P-CCPCH RSCP2 can be performed within 20ms due to slot allocations in the cells concerned.

Table 8.7.1.1.2.1: P-CCPCH_RSCP intra-frequency relative accuracy

		Accura	Accuracy [dB]				
<u>Parameter</u>	<u>Unit</u>	Normal condition	Extreme condition	lo [dBm]	relative RSCP difference [dbB]		
		<u>±1</u>	<u>±1</u>		<u><2</u>		
P-CCPCH_RSCP	<u>dBm</u>	<u>+2</u>	<u>+2</u>	-9450	<u>214</u>		
		<u>±3</u>	± 3		<u>>14</u>		

The rate of correct measurements observed during repeated tests shall be at least 90%.

The normative reference for this requirement is TS 25.123 [2] clauses 9.1.1.1.2 and A.9.1.1.1.1.

8.7.1.1.2.3 Test Purpose

The purpose of this test is to verify that the relative P-CCPCH RSCP measurement accuracy is within the specified <u>limits.</u>

8.7.1.1.2.4 Method of test

8.7.1.1.2.4.1 Initial conditions

Test environment: normal, TL/VL, TL/VH, TH/VL, TH/VH; see clauses G.2.1 and G.2.2.

Frequencies to be tested: mid range; see clause G.2.4.

In this case all cells are on the same frequency. Cell 1 and cell 2 shall be synchronised, i.e. share the same frame and timeslot timing. The DL DPCH shall be transmitted in timeslot 4 and the UL DPCH shall be transmitted in timeslot 12. The second Beacon timeslot shall be provided in timeslot 8 for both cell 1 and cell 2. P-CCPCH RSCP intra frequency relative accuracy requirements are tested by using test parameters in Table 8.7.1.1.1.2.

1) A call is set up according to the test procedure specified in TS 34.108 [3] clause 7.3.2.3. The RF parameters for Test 1 are set up according to table 8.7.1.1.1.2.

8.7.1.1.2.4.2 Procedure

- 1) SS shall transmit MEASUREMENT CONTROL message.
- 2) UE shall transmit periodically MEASUREMENT REPORT messages.
- 3) SS shall check PCCPCH_RSCP value of Cell 1 and Cell 2 in MEASUREMENT REPORT messages. PCCPCH RSCP power value measured from Cell 1 is compared to PCCPCH RSCP power value measured from Cell 2 for each MEASUREMENT REPORT message.
- 4) The result of step 3) is compared to actual power level difference of PCCPCH RSCP of Cell 1 and Cell 2.
- 5) SS shall count number of MEASUREMENT REPORT messages transmitted by UE. After 1000

 MEASUREMENT REPORT messages have been received from UE, the RF parameters are set up according to table 8.7.1.1.1.2 for Test 2. While RF parameters are being set up, MEASUREMENT REPORT messages from UE are ignored. SS shall wait for additional 1s and ignore the MEASUREMENT REPORT messages during this period. Then, steps 3) and 4) above are repeated. After further 1000 MEASUREMENT REPORT messages have been received from UE, the RF parameters are set up according to table 8.7.1.1.1.2 for Test 3. While RF parameters are being set up, MEASUREMENT REPORT messages from UE are ignored. SS shall wait for additional 1s and ignore the MEASUREMENT REPORT messages during this period. Then, steps 3) and 4) above are repeated.
- 6) After further 1000 MEASUREMENT REPORT messages have been received from UE, the SS shall transmit RRC CONNECTION RELEASE message.
- 7) UE shall transmit RRC CONNECTION RELEASE COMPLETE message.

8.7.1.1.2.5 Test requirements

The PCCPCH RSCP measurement accuracy shall meet the requirements in clause 8.7.1.1.2.2 for at least 900 of the measurement reports at each input level in step 4.

NOTE: If the above Test Requirement differs from the Minimum Requirement then the Test Tolerance applied for this test is non-zero. The Test Tolerance for this test is defined in clause F.2 and the explanation of how the Minimum Requirement has been relaxed by the Test Tolerance is given in clause F.4.

8.7.1.2 Inter frequency measurement accuracy for 3,84 Mcps TDD Option

8.7.1.2.1 Relative accuracy requirement

8.7.1.2.1.1 Definition and applicability

The P-CCPCH RSCP inter-frequency relative accuracy is defined as the P-CCPCH RSCP measured from one cell compared to the P-CCPCH RSCP measured from another cell on a different frequency.

The requirements and this test apply to all types of UTRA TDD UE.

8.7.1.2.1.2 Minimum Requirements

The relative accuracy requirements in table 8.7.1.2.1.1 are valid under the following conditions:

P-CCPCH RSCP ≥ -102 dBm.

$$\left| P - CCPCH RSCP1 \right|_{in \ dB} - P - CCPCH RSCP2 \right|_{in \ dB} \le 20 dB$$

$$\left(\frac{P - CCPCH _{E_c}}{I_o}\right)_{in\ dB} \ge -8dB$$

$$\left(\frac{SCH _E_c}{I_o} \right)_{in \ dB} \ge -13dB$$

Table 8.7.1.2.1.1 P-CCPCH_RSCP inter-frequency relative accuracy

Parameter	Unit	Accura	<u>Conditions</u>	
<u>rarameter</u>	<u>Unit</u>	Normal condition	Extreme condition	lo [dBm]
P-CCPCH RSCP	<u>dBm</u>	<u>± 6</u>	<u>± 6</u>	<u>-9450</u>

The rate of correct measurements observed during repeated tests shall be at least 90%.

The normative reference for this requirement is TS 25.123 [2] clauses 9.1.1.1.2 and A.9.1.1.

8.7.1.2.1.3 Test Purpose

The purpose of this test is to verify that the relative P-CCPCH RSCP measurement accuracy is within the specified limits for the inter frequency case.

8.7.1.2.1.4 Method of test

8.7.1.2.1.4.1 Initial conditions

Test environment: normal, TL/VL, TL/VH, TH/VL, TH/VH; see clauses G.2.1 and G.2.2.

Frequencies to be tested: mid range; see clause G.2.4.

In this case both cells are on different frequencies. The second Beacon timeslot shall be provided in timeslot 8 for cell 1 and in timeslot 10 for cell 2. P-CCPCH RSCP inter frequency relative accuracy requirements are tested by using test parameters in Table 8.7.1.2.1.2.

Table 8.7.1.2.1.2: P-CCPCH RSCP Intra frequency test parameters

Doromotor	Hnit	Tes	st 1	Tes	st 2	Te	st 3		
<u>Parameter</u>	<u>Unit</u>	Cell 1	Cell 2	Cell 1	Cell 2	Cell 1	Cell 2		
DL timeslot number		<u>0</u>	<u>2</u>	<u>0</u>	<u>0</u> <u>2</u>		<u>2</u>		
UTRA RF Channel		Channel 1	Channel 2	Channel 1	Channel 2	Channel 1	Channel 2		
<u>number</u>		<u>Charine i</u>	Charmer 2	<u>Charmer 1</u>	Charmer 2	Chamiler	Chamber 2		
PCCPCH_Ec/lor	<u>dB</u>	T	<u>3</u>	'i'l	<u>3</u>	_	<u>-3</u>		
SCH_Ec/lor	<u>dB</u>	T	9	T	9	_	9		
SCH_t _{offset}		<u>0</u> <u>5</u>		<u>0</u>	<u>5</u>	<u>0</u>	<u>5</u>		
OCNS_Ec/lor	<u>dB</u>	<u>-3,12</u>		<u>-3,</u>	<u>12</u>	<u>-3</u>	<u>,12</u>		
loc	<u>dBm /</u> 3.84 MHz	<u>-75.2</u>	<u>-75.2</u>	<u>-57.8</u>	<u>-54.1</u>	<u>-98.7</u>	<u>-97</u>		
<u>Îor/loc</u>	<u>dB</u>	<u>5</u>	<u>5</u>	<u>7</u> <u>2</u>		<u>3</u>	<u>0</u>		
PCCPCH RSCP,	dDm	72.2	72.2	E 1 0	EE 1	09.7	100		
Note 1	<u>dBm</u>	<u>-73.2</u>	<u>-73.2</u>	<u>-54.8</u>	<u>-55.1</u>	<u>-98.7</u>	<u>-100</u>		
lo, Note 1	<u>dBm /</u> 3.84 MHz	<u>-6</u>	<u>89</u>	<u>-5</u>	<u>50</u>	<u>-94</u>			
Propagation condition		AW			'GN	AWGN			

NOTE 1: PCCPCH RSCP and lo levels have been calculated from other parameters for information purposes.

They are not settable parameters themselves.

1) A call is set up according to the test procedure specified in TS 34.108 [3] clause 7.3.2.3. The RF parameters for Test 1 are set up according to table 8.7.1.2.1.2.

8.7.1.2.1.4.2 Procedure

- 1) SS shall transmit PHYSICAL CHANNEL RECONFIGURATION message.
- 2) UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message.
- 3) SS shall transmit MEASUREMENT CONTROL message.
- 4) UE shall transmit periodically MEASUREMENT REPORT messages.
- 5) SS shall check PCCPCH RSCP value of Cell 1 and Cell 2 in MEASUREMENT REPORT messages. PCCPCH RSCP power value measured from Cell 1 is compared to PCCPCH RSCP power value measured from Cell 2 for each MEASUREMENT REPORT message.
- 6) The result of step 5) is compared to actual power level difference of PCCPCH RSCP of Cell 1 and Cell 2.
- 7) SS shall count number of MEASUREMENT REPORT messages transmitted by UE. After 1000

 MEASUREMENT REPORT messages have been received from UE, the RF parameters are set up according to table 8.7.1.2.1.2 for Test 2. While RF parameters are being set up, MEASUREMENT REPORT messages from UE are ignored. SS shall wait for additional 1s and ignore the MEASUREMENT REPORT messages during this period. Then, steps 5) and 6) above are repeated.
- 8) After further 1000 MEASUREMENT REPORT messages have been received from UE, the SS shall transmit RRC CONNECTION RELEASE message.
- 9) UE shall transmit RRC CONNECTION RELEASE COMPLETE message.

8.7.1.2.1.5 Test requirements

The PCCPCH RSCP measurement accuracy shall meet the requirements in clause 8.7.1.2.1.2 for at least 900 of the measurement reports at each input level in step 4.

NOTE: If the above Test Requirement differs from the Minimum Requirement then the Test Tolerance applied for this test is non-zero. The Test Tolerance for this test is defined in clause F.2 and the explanation of how the Minimum Requirement has been relaxed by the Test Tolerance is given in clause F.4.

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- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

8.3.4 Cell Re-selection in CELL_FACH

8.3.4.1 Scenario 1: TDD/TDD cell re-selection single carrier case

8.3.4.1.1 Definition and applicability

The cell re-selection delay is defined as the time from a change of cell levels to the moment when this change causes the UE to camp on a new cell, and starts to send the CELL UPDATE message with cause value "cell reselection" in the new cell.

The requirements and this test apply to the TDD UE.

8.3.4.1.2 Minimum requirement

The cell re-selection delay shall be less than 2,5 s. The rate of correct cell re-selections observed during repeated tests shall be at least 90%.

The normative reference for this requirement is TS 25.123 [2] clauses 5.4.2 and A.5.4.1.

8.3.4.1.3 Test purpose

This test verifies that the UE meets the minimum requirement for the cell re-selection delay in CELL FACH for the single carrier case

8.3.4.1.4 Method of test

8.3.4.1.4.1 Initial conditions

This scenario contains 6 cells operating on the same carrier frequency. The test parameters are given in Tables 8.3.4.1.1, 8.3.4.1.2, 8.3.4.1.3, and 8.3.4.1.4.

Table 8.3.4.1.1: General test parameters for Cell Re-selection in CELL_FACH

	<u>Parameter</u>	<u>Unit</u>	<u>Value</u>	<u>Comment</u>		
<u>Initial</u>	Active cell		Cell1			
<u>condition</u>	Neighbour cells		Cell2, Cell3,Cell4, Cell5, Cell6			
Final condition	Active cell		Cell2			
	<u>HCS</u>		Not used			
UE_TX	PWR_MAX_RACH	<u>dBm</u>	<u>21</u>	The value shall be used for all cells in the test.		
	<u>Qrxlevmin</u>	<u>dBm</u>	<u>-102</u>	The value shall be used for all cells in the test.		
_	ervice Class (ASC#0) ersistence value	=	1	Selected so that no additional delay is caused by the random access procedure. The value shall be used for all cells in the test.		
	<u>T</u> sı		<u>1,28</u>	The value shall be used for all cells in the test.		
	<u>T1</u>	<u>s</u>	<u>15</u>			
	<u>T2</u>	<u>s</u>	<u>15</u>			

Table 8.3.4.1.2: Physical channel parameters for S-CCPCH.

<u>Parameter</u>	<u>Unit</u>	<u>Level</u>
Channel bit rate	<u>Kbps</u>	<u>24,4</u>
Channel symbol rate	<u>Ksps</u>	<u>12,2</u>
Slot Format #	<u>=</u>	<u>0</u>
Frame allocation	=	Continuous frame allocation
Midamble allocation	=	<u>Default Midamble</u>

Table 8.3.4.1.3: Transport channel parameters for S-CCPCH

<u>Parameter</u>	<u>FACH</u>
Transport Channel Number	<u>1</u>
Transport Block Size	240
Transport Block Set Size	240
Transmission Time Interval	<u>20 ms</u>
Type of Error Protection	Convolutional Coding
Coding Rate	1/2
Rate Matching attribute	<u>256</u>
Size of CRC	<u>16</u>

Table 8.3.4.1.4: Cell specific test parameters for Cell Re-selection in CELL FACH

	<u>Parameter</u>	Unit		Се	<u>II 1</u>			Се	<u>II 2</u>			Се	II 3	
	neslot Number		()	8	3	()	8	3	(<u> </u>	8	3
			<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>
UTF	RA RF Channel			Char	nel 1			Char	nel 1			Char	nel 1	
	<u>Number</u>													
<u>PC</u>	CPCH_Ec/lor	<u>dB</u>	<u>-3</u>	<u>-3</u>			<u>-3</u>	<u>-3</u>			<u>-3</u>	<u>-3</u>		
	SCH_Ec/lor	<u>dB</u>	<u>-9</u>	9	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	9	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>
	SCH_t _{offset}		<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>5</u>	<u>5</u>	<u>5</u>	<u>5</u>	<u>10</u>	<u>10</u>	<u>10</u>	<u>10</u>
	CH_Ec/lor	<u>dB</u>			<u>-3</u>	<u>-3</u>			<u>-3</u>	<u>-3</u>			<u>-3</u>	<u>-3</u>
<u>C</u>	CNS Ec/lor	<u>dB</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>
	\hat{I}_{or}/I_{oc}	<u>dB</u>	<u>9</u>	<u>7</u>	<u>9</u>	<u>7</u>	<u>7</u>	<u>9</u>	<u>7</u>	<u>9</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>
PC	CPCH RSCP	<u>dBm</u>	<u>-64</u>	-66			<u>-66</u>	-64			-74	<u>-74</u>		
	0-44	-ID	C1, C2	: 0; C1, C	C3:0; C1	,C4:0	C2, C1	: 0; C2, 0	C3:0; C2	.C4:0	C3, C	1: 0; C3,	C2:0; C3	3,C4:0
	Qoffset1 _{s,n}	<u>dB</u>	(C1, C5:0	; C1,C6:	0			; C2, C6:				; C3, C6:	
	Qhyst1 _s	dB)	_	<u> </u>		<u>)</u>	_	<u> </u>)	
	<u>Freselection</u>)			-	<u>-</u>)			()	
	Sintrasearch	dB		not	sent			not	sent			not	sent	
FAC	H measurement			1										
	ccasion info			not	<u>sent</u>			not	<u>sent</u>			not	<u>sent</u>	
	I_{oc}	dBm/3,							70					
	<u> </u>	84 MHz							<u>70</u>					
	Propagation Propagation							۸۱۸	CN					
	Condition			<u>AWGN</u>										
	Odridition													
					<u>II 4</u>				II <u>5</u>				II <u>6</u>	
	Timeslot		<u> </u>)		<u>3</u>		<u> </u>	8			0	8	<u>3</u>
	Timeslot		<u>T1</u>	<u>T2</u>	<u>T1</u>	3 <u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	3 <u>T2</u>	<u>T1</u>	0 <u>T2</u>	<u>T1</u>	3 <u>T2</u>
UTF	Timeslot RA RF Channel)	<u>T1</u>			<u>T2</u>	8			0	<u>T1</u>	
	Timeslot RA RF Channel Number	JD.	<u>T1</u>	T2 Char	<u>T1</u>		<u>T1</u>	T2 Char	<u>T1</u>		<u>T1</u>	0 T2 Char	<u>T1</u>	
<u>PC</u>	Timeslot RA RF Channel Number CPCH Ec/lor	<u>dB</u>	<u>T1</u>	<u>T2</u> Char	T1 nnel 1	<u>T2</u>	<u>T1</u>	<u>T2</u> Char	T1 nnel 1	<u>T2</u>	<u>T1</u>	<u>T2</u> Char	T1 nnel 1	<u>T2</u>
<u>PC</u>	Timeslot RA RF Channel Number CPCH Ec/lor SCH Ec/lor	dB dB	<u>T1</u> -3 -9	T2 Char -3 -9	T1 nnel 1 -9	<u>T2</u>	<u>T1</u> -3 -9	T2 Char -3 -9	T1 nnel 1 -9	<u>T2</u>	<u>T1</u> -3 -9	0 T2 Char -3 -9	T1 nnel 1 -9	<u>T2</u>
PC	Timeslot RA RF Channel Number CPCH Ec/lor SCH Ec/lor SCH toffset	<u>dB</u>	<u>T1</u>	<u>T2</u> Char	T1 nnel 1 -9 15	<u>T2</u> -9 15	<u>T1</u>	<u>T2</u> Char	T1 nnel 1 -9 20	<u>-9</u> <u>20</u>	<u>T1</u>	<u>T2</u> Char	T1 nnel 1 -9 25	<u>T2</u> -9 25
PC	Timeslot RA RF Channel Number CPCH Ec/lor SCH Ec/lor SCH toffset PICH Ec/lor	<u>dB</u> <u>dB</u>	<u>-3</u> -9 15	T2 Char -3 -9 15		<u>-9</u> <u>15</u> -3	<u>-3</u> <u>-9</u> <u>20</u>	T2 Char -3 -9 20		-9 20 -3	<u>-3</u> -9 25	T2 Char -3 -9 25		<u>-9</u> <u>25</u> -3
PC	Timeslot RA RF Channel Number CPCH Ec/lor SCH Ec/lor SCH toffset PICH Ec/lor DCNS Ec/lor	<u>dB</u>	<u>T1</u> -3 -9	T2 Char -3 -9	T1 nnel 1 -9 15	<u>T2</u> -9 15	<u>T1</u> -3 -9	T2 Char -3 -9	T1 nnel 1 -9 20	<u>-9</u> <u>20</u>	<u>T1</u> -3 -9	0 T2 Char -3 -9	T1 nnel 1 -9 25	<u>T2</u> -9 25
PC	Timeslot RA RF Channel Number CPCH Ec/lor SCH Ec/lor SCH toffset PICH Ec/lor CNS Ec/lor \hat{I}_{or}/I_{oc}	<u>dB</u> <u>dB</u> <u>dB</u> <u>dB</u>	-3 -9 15 -4,28 -1	T2 Char -3 -9 15 -4,28		<u>-9</u> <u>15</u> -3	-3 -9 20 -4,28 -1	T2 Char -3 -9 20 -4,28		-9 20 -3	-3 -9 25 -4,28 -1	2 Char -3 -9 25 -4,28		<u>-9</u> <u>25</u> -3
PC	Timeslot RA RF Channel Number CPCH Ec/lor SCH Ec/lor SCH toffset PICH Ec/lor DCNS Ec/lor	dB dB dB	-3 -9 15 -4,28 -1 -74	T2 Char -3 -9 15 -4,28 -1 -74	-9 15 -3 -4,28	-9 15 -3 -4,28 -1	-3 -9 20 -4,28 -1 -74	T2 Char -3 -9 20 -4,28 -1 -74	-9 20 -3 -4,28	<u>-9</u> <u>20</u> -3 -4,28 -1	-3 -9 25 -4,28 -1 -74	T2 Char -3 -9 25 -4,28 -1 -74	-9 25 -3 -4,28	-9 25 -3 -4,28 -1
PC	Timeslot RA RF Channel Number CPCH Ec/lor SCH Ec/lor SCH toffset PICH Ec/lor CNS Ec/lor \hat{I}_{or}/I_{oc} CPCH RSCP	dB dB dB dB	-3 -9 15 -4,28 -1 -74 C4, C	T2 Char -3 -9 15 -4,28 -1 -74 1: 0; C4,	11	<u>-9</u> <u>15</u> -3 -4,28 <u>-1</u> 4,C3:0	-4,28 -74 -74 -75, C	T2 Char -3 -9 20 -4,28 -1 -74 1: 0; C5,	-9 20 -3 -4,28 -1	-9 20 -3 -4,28 -1	-3 -9 25 -4,28 -1 -74 C6, C1	Char -3 -9 25 -4,28 -1 -74 : 0; C6, 0	-9 25 -3 -4,28 -1	-9 25 -3 -4,28 -1
PC	Timeslot RA RF Channel Number CCPCH Ec/lor SCH Ec/lor SCH toffset PICH Ec/lor DCNS Ec/lor \hat{I}_{or}/I_{oc} CCPCH RSCP Qoffset1 _{s,n}	<u>dB</u> <u>dB</u> <u>dB</u> <u>dB</u>	-3 -9 15 -4,28 -1 -74 C4, C	T2 Char -3 -9 15 -4,28 -1 -74 1: 0; C4,	-9 15 -3 -4,28	<u>-9</u> <u>15</u> -3 -4,28 <u>-1</u> 4,C3:0	-4,28 -74 -74 -75, C	T2 Char -3 -9 20 -4,28 -1 -74 1: 0; C5,	-9 20 -3 -4,28	-9 20 -3 -4,28 -1	-3 -9 25 -4,28 -1 -74 C6, C1	Char -3 -9 25 -4,28 -1 -74 : 0; C6, 0	-9 25 -3 -4,28	-9 25 -3 -4,28 -1
PC	Timeslot RA RF Channel Number CPCH Ec/lor SCH Ec/lor SCH toffset PICH Ec/lor CNS Ec/lor \hat{I}_{or}/I_{oc} CPCH RSCP	dB dB dB dB	-3 -9 15 -4,28 -1 -74 C4, C	T2 Char -3 -9 15 -4,28 -1 -74 1: 0; C4, C4, C5:0;	11 mel 1	<u>-9</u> <u>15</u> -3 -4,28 <u>-1</u> 4,C3:0	-4,28 -74 -74 -75, C	T2 Char -3 -9 20 -4,28 -1 -74 1: 0; C5, C5, C4:0;	-9 -20 -3 -4,28 -1 -20: C5; C6: C5; C6	-9 20 -3 -4,28 -1	-3 -9 25 -4,28 -1 -74 C6, C1	Char -3 -9 25 -4,28 -1 -74 : 0; C6, 0	-9 -25 -3 -4,28 -1 -22:0; C6 C6, C5:0	-9 25 -3 -4,28 -1
PC PC	Timeslot RA RF Channel Number CPCH Ec/lor SCH Ec/lor SCH toffset PICH Ec/lor CNS Ec/lor \hat{I}_{or}/I_{oc} CPCH RSCP Qoffset1 _{s,n} Qhyst1 _s Treselection	dB dB dB dB dB dB dBm dBB	-3 -9 15 -4,28 -1 -74 C4, C	T2 Char -3 -9 15 -4,28 -1 -74 1: 0; C4, C4, C5:0;	11 mel 1	<u>-9</u> <u>15</u> -3 -4,28 <u>-1</u> 4,C3:0	-4,28 -74 -74 -75, C	T2 Char -3 -9 20 -4,28 -1 -74 1: 0; C5, C5, C4:0;	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	-9 20 -3 -4,28 -1	-3 -9 25 -4,28 -1 -74 C6, C1	Char -3 -9 25 -4,28 -1 -74 : 0; C6, 0	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	-9 25 -3 -4,28 -1
PC PC	Timeslot RA RF Channel Number CPCH Ec/lor SCH Ec/lor SCH toffset PICH Ec/lor CNS Ec/lor \hat{I}_{or}/I_{oc} CPCH RSCP Qoffset1s,n Qhyst1s Treselection Sintrasearch	dB dB dB dB dB dB dB dBm	-3 -9 15 -4,28 -1 -74 C4, C	T2 Char -3 -9 15 -4,28 -1 -74 1: 0; C4, C4, C5:0;	11 mel 1	<u>-9</u> <u>15</u> -3 -4,28 <u>-1</u> 4,C3:0	-4,28 -74 -74 -75, C	T2 Char -3 -9 20 -4,28 -1 -74 1: 0; C5, C5, C4:0;	-9 -20 -3 -4,28 -1 -20: C5; C6: C5; C6	-9 20 -3 -4,28 -1	-3 -9 25 -4,28 -1 -74 C6, C1	Char -3 -9 25 -4,28 -1 -74 : 0; C6, 0	-9 -25 -3 -4,28 -1 -22:0; C6 C6, C5:0	-9 25 -3 -4,28 -1
PC PC S S FAC	Timeslot RA RF Channel Number CPCH Ec/lor SCH Ec/lor SCH toffset PICH Ec/lor CNS Ec/lor CPCH RSCP Qoffset1s,n Qhyst1s Treselection Sintrasearch H measurement	dB dB dB dB dB dB dBm dBB	-3 -9 15 -4,28 -1 -74 C4, C	T2 Char -3 -9 15 -4,28 -1 -74 1: 0; C4, C4, C5:0;	T1 nnel 1 -9 15 -3 -4,28 -1 C2:0; C4 C4, C6:	<u>-9</u> <u>15</u> -3 -4,28 <u>-1</u> 4,C3:0	-4,28 -74 -74 -75, C	T2 Char -3 -9 20 -4,28 -1 -74 1: 0; C5, C5, C4:0;	11	-9 20 -3 -4,28 -1	-3 -9 25 -4,28 -1 -74 C6, C1	Char -3 -9 25 -4,28 -1 -74 : 0; C6, G C6, C4:0;	11	-9 25 -3 -4,28 -1
PC PC S S FAC	Timeslot RA RF Channel Number CPCH Ec/lor SCH Ec/lor SCH toffset PICH Ec/lor CNS Ec/lor \hat{I}_{or}/I_{oc} CPCH RSCP Qoffset1s,n Qhyst1s Treselection Sintrasearch	dB	-3 -9 15 -4,28 -1 -74 C4, C	T2 Char -3 -9 15 -4,28 -1 -74 1: 0; C4, C4, C5:0;	T1 nnel 1 -9 15 -3 -4,28 -1 C2:0; C4 C4, C6:	<u>-9</u> <u>15</u> -3 -4,28 <u>-1</u> 4,C3:0	-4,28 -74 -74 -75, C	T2 Char -3 -9 20 -4,28 -1 -74 1: 0; C5, C5, C4:0;	T1 nnel 1 -9 20 -3 -4,28 -1 C2:0; C5, C6:	-9 20 -3 -4,28 -1	-3 -9 25 -4,28 -1 -74 C6, C1	Char -3 -9 25 -4,28 -1 -74 : 0; C6, G C6, C4:0;	11 mnel 1	-9 25 -3 -4,28 -1
PC PC S S FAC	Timeslot RA RF Channel Number CPCH Ec/lor SCH Ec/lor SCH toffset PICH Ec/lor CNS Ec/lor CPCH RSCP Qoffset1s,n Qhyst1s Treselection Sintrasearch H measurement	dB dB dB dB dBm dB dB dB dB dB	-3 -9 15 -4,28 -1 -74 C4, C	T2 Char -3 -9 15 -4,28 -1 -74 1: 0; C4, C4, C5:0;	T1 nnel 1 -9 15 -3 -4,28 -1 C2:0; C4 C4, C6:	<u>-9</u> <u>15</u> -3 -4,28 <u>-1</u> 4,C3:0	-4,28 -74 -74 -75, C	T2 Char -3 -9 20 -4,28 -1 -74 1: 0; C5, C5, C4:0; not not	11	-9 20 -3 -4,28 -1	-3 -9 25 -4,28 -1 -74 C6, C1	Char -3 -9 25 -4,28 -1 -74 : 0; C6, G C6, C4:0;	11	-9 25 -3 -4,28 -1
PC PC S FAC	Timeslot RA RF Channel Number CPCH Ec/lor SCH toffset PICH Ec/lor CNS Ec/lor CRS Ec/lor CPCH RSCP Qoffset1s_n Qhyst1s Treselection Sintrasearch H measurement ccasion info	dB	-3 -9 15 -4,28 -1 -74 C4, C	T2 Char -3 -9 15 -4,28 -1 -74 1: 0; C4, C4, C5:0;	T1 nnel 1 -9 15 -3 -4,28 -1 C2:0; C4 C4, C6:	<u>-9</u> <u>15</u> -3 -4,28 <u>-1</u> 4,C3:0	-4,28 -74 -74 -75, C	T2 Char -3 -9 20 -4,28 -1 -74 1: 0; C5, C5, C4:0; (9 not not	T1 nnel 1 -9 20 -3 -4,28 -1 C2:0; C: C5, C6: 0 0 sent sent	-9 20 -3 -4,28 -1	-3 -9 25 -4,28 -1 -74 C6, C1	Char -3 -9 25 -4,28 -1 -74 : 0; C6, G C6, C4:0;	11	-9 25 -3 -4,28 -1

Note: S-CCPCH shall not be located in TS0.

8.3.4.1.4.2 Procedure

- a) The SS activates cell 1-6 with T1 defined parameters.
- b) The UE is switched on.
- c) A call is set up according to the generic set-up procedure specified in TS 34.108 [3] subclause 7.4.2 to place the UE in CELL FACH.
- d) After 15 s, the parameters are changed as described for T2.
- e) The SS waits for CELL UPDATE message with cause value "cell reselection" from the UE.
- f) After another 15 s, the parameters are changed as described for T1.
- g) The SS waits for CELL UPDATE message with cause value "cell reselection" from the UE.
- h) Repeat steps d) to g) [TBD] times.

8.3.4.1.5 Test Requirements

- 1) In step d), after the UE has responded on cell 1, it shall not respond on any other cell (cell selection).
- 2) In step e), the UE shall respond on cell 2 within 2,5 s.
- 3) In step g), the UE shall respond on cell 1 within 2,5 s.

For the test to pass, the total number of fulfilled test requirements 2) and 3) shall be more than [FFS]% of the cases.

NOTE: If the above Test Requirement differs from the Minimum Requirement then the Test Tolerance applied for this test is non-zero. The Test Tolerance for this test is defined in clause F.2 and the explanation of how the Minimum Requirement has been relaxed by the Test Tolerance is given in clause F.4.

8.3.4.2 Scenario 2: TDD/TDD cell re-selection multi carrier case

8.3.4.2.1 Definition and applicability

The cell re-selection delay is defined as the time from a change of cell levels to the moment when this change causes the UE to camp on a new cell, and starts to send the CELL UPDATE message with cause value "cell reselection" in the new cell.

The requirements and this test apply to the TDD UE.

8.3.4.2.2 Minimum requirement

The cell re-selection delay shall be less than 3 s. The rate of correct cell re-selections observed during repeated tests shall be at least 90%.

The normative reference for this requirement is TS 25.123 [2] clauses 5.4.2 and A.5.4.2.

8.3.4.2.3 Test purpose

This test verifies that the UE meets the requirement for the cell re-selection delay in CELL_FACH for the multi carrier case.

8.3.4.2.4 Method of test

8.3.4.2.4.1 Initial conditions

This scenario contains 6 cells and 2 carrier frequencies. The test parameters are given in Tables 8.3.4.2.1, 8.3.4.2.2, 8.3.4.2.3, and 8.3.4.2.4.

Table 8.3.4.2.1: General test parameters for Cell Re-selection in CELL FACH

	<u>Parameter</u>	<u>Unit</u>	<u>Value</u>	<u>Comment</u>				
<u>Initial</u>	Active cell		Cell1					
<u>condition</u>	Neighbour cells	Cell2, Cell3,Cell4						
			Cell5, Cell6					
Final condition	Active cell		<u>Cell2</u>					
	<u>HCS</u>		Not used					
UE_TX	PWR_MAX_RACH	<u>dBm</u>	<u>21</u>	The value shall be used for all cells in the test.				
	<u>Qrxlevmin</u>	<u>dBm</u>	<u>-102</u>	The value shall be used for all cells in the test.				
	ervice Class (ASC#0) ersistence value	Ξ	1	Selected so that no additional delay is caused by the random access procedure. The value shall be used for all cells in the test.				
	<u>T_{SI}</u>	<u>s</u>	<u>1,28</u>	The value shall be used for all cells in the test.				
	<u>T1</u>	<u>s</u>	<u>15</u>					
	<u>T2</u>	<u>s</u>	<u>15</u>					

Table 8.3.4.2.2: Physical channel parameters for S-CCPCH.

<u>Parameter</u>	<u>Unit</u>	<u>Level</u>
Channel bit rate	Kbps	<u>24,4</u>
Channel symbol rate	Ksps	<u>12,2</u>
Slot Format #	_	<u>0</u>
Frame allocation	Ξ	Continuous frame allocation
Midamble allocation		<u>Default Midamble</u>

Table 8.3.4.2.3: Transport channel parameters for S-CCPCH

<u>Parameter</u>	<u>FACH</u>
Transport Channel Number	<u>1</u>
Transport Block Size	<u>240</u>
Transport Block Set Size	240
Transmission Time Interval	<u>20 ms</u>
Type of Error Protection	Convolutional Coding
Coding Rate	<u>½</u>
Rate Matching attribute	<u>256</u>
Size of CRC	<u>16</u>

Table 8.3.4.2.4: Cell specific test parameters for Cell Re-selection in CELL_FACH

Parameter	Unit		Ce	<u> </u>			Ce	II 2		Cell 3			
Timeslot Number		(2		<u>8</u>	(2		3	(<u></u>		3
		<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>
UTRA RF Channel Number			<u>Char</u>	nnel 1			<u>Char</u>	nnel 2			<u>Char</u>	nnel 1	
PCCPCH_Ec/lor	<u>dB</u>	-3	-3			-3	-3			<u>-3</u>	-3		
SCH_Ec/lor	<u>dB</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>
SCH_t _{offset}		<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>5</u>	<u>5</u>	<u>5</u>	<u>5</u>	<u>10</u>	<u>10</u>	<u>10</u>	<u>10</u>
PCH_Ec/lor	<u>dB</u>			<u>-3</u>	<u>-3</u>			<u>-3</u>	<u>-3</u>			<u>-3</u>	<u>-3</u>
QCNS_Ec/lor	<u>dB</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>
\hat{I}_{or}/I_{oc}	<u>dB</u>	<u>9</u>	<u>3</u>	<u>9</u>	<u>3</u>	<u>3</u>	<u>9</u>	<u>3</u>	<u>9</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>
PCCPCH RSCP	<u>dBm</u>	<u>-64</u>	<u>-70</u>			-70	-64			-74	<u>-74</u>		
Qoffset1 _{s,n}	<u>dB</u>			C3:0; C ²); C1,C6				C3:0; C2; C2; C2, C6:		C3, C1: 0; C3, C2:0; C3,C4:			
Qhyst1 _s	<u>dB</u>		(<u>0</u>				<u>0</u>		0			
Treselection		<u> </u>				<u>0</u>				<u>0</u>			
\$intrasearch	<u>dB</u>		not	<u>sent</u>			not	<u>sent</u>		not sent			
\$intersearch	<u>dB</u>		not	sent			not	sent			not	sent	

EAGIL						l							
FACH measurement occasion info			not	<u>sent</u>		not sent				<u>not sent</u>			
Inter-frequency TDD													
measurement			TD	HE		TDUE				TDLIE			
indicator			TRUE TRUE TRUE										
	dDm/2												
I_{oc}	<u>dBm/3,</u> 84 MHz							<u>70</u>					
Propagation Condition							AW	<u>'GN</u>					
<u>Condition</u>			Ce	II 4			Ce	II 5			Ce	II 6	
Timeslot		()		3				3		0		3
		T1	T2	T1	<u>T2</u>	T1	T2	T1	<u>T2</u>	T1	T2	T1	T2
UTRA RF Channel				nel 1			Char	nnel 2				nel 2	
Number													
PCCPCH_Ec/lor	dB	<u>-3</u>	<u>-3</u>			<u>-3</u>	<u>-3</u>			<u>-3</u>	<u>-3</u>		
SCH_Ec/lor	dB	-9	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	-9	<u>-9</u>	-9	-9	-9	<u>-9</u>	<u>-9</u>
SCH_toffset		15	15	15	15	20	20	20	20	25	25	25	25
PICH_Ec/lor	dB		,	-3	-3			-3	-3			-3	<u>-3</u>
OCNS_Ec/lor	dB	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28
\hat{I}_{or}/I_{oc}	<u>dB</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>
PCCPCH RSCP	dBm	-74	-74			-74	-74			-74	-74		
		C4, C	1: 0: C4,	C2:0; C4	4,C3:0	C5, C1: 0; C5, C2:0; C5,C3:0				C6, C1: 0; C6, C2:0; C6,C3:0			
Qoffset1 _{s,n}	<u>dB</u>			C4, C6:		C5, C4:0; C5, C6:0				<u>C6, C4:0; C6, C5:0</u>			
Qhyst1 _s	dB	_		<u>)</u>	_	0				0			
Treselection	<u> </u>		(<u> </u>		0)	
\$intrasearch	dB		not	sent			not	sent		not sent			
Sintersearch	dB		not	sent			not	sent		not sent			
FACH measurement	<u> </u>												
occasion info			not	<u>sent</u>			not	<u>sent</u>			not	sent	
Inter-frequency TDD													
measurement		TRUE TRUE TRUE								<u>UE</u>			
indicator	<u> </u>												
I_{oc}	dBm/3, 84 MHz						<u>7</u>	<u>70</u>					
Propagation							Λ1Λ	/CNI					
Condition							AVV	<u>'GN</u>					

Note: S-CCPCH shall not be located in TS0.

8.3.4.2.4.2 Procedure

- a) The SS activates cell 1-6 with T1 defined parameters.
- b) The UE is switched on.
- c) A call is set up according to the generic set-up procedure specified in TS 34.108 [3] subclause 7.4.2 to place the UE in CELL_FACH.
- d) After 15 s, the parameters are changed as described for T2.
- e) The SS waits for CELL UPDATE message with cause value "cell reselection" from the UE.
- f) After another 15 s, the parameters are changed as described for T1.
- g) The SS waits for CELL UPDATE message with cause value "cell reselection" from the UE.
- h) Repeat steps d) to g) [TBD] times.

8.3.4.2.5 Test Requirements

- 1) In step d), after the UE has responded on cell 1, it shall not respond on any other cell (cell selection).
- 2) In step e), the UE shall respond on cell 1 within 3 s.
- 3) In step g), the UE shall respond on cell 2 within 3 s.

For the test to pass, the total number of fulfilled test requirements 2) and 3) shall be more than [FFS]% of the cases.

NOTE: If the above Test Requirement differs from the Minimum Requirement then the Test Tolerance applied for this test is non-zero. The Test Tolerance for this test is defined in clause F.2 and the explanation of how the Minimum Requirement has been relaxed by the Test Tolerance is given in clause F.4.

Void

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How to create CRs using this form:

- 1) Fill out the above form. The symbols above marked # contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

8.3.4 Cell Re-selection in CELL FACH

8.3.4.1 Scenario 1: TDD/TDD cell re-selection single carrier case

8.3.4.1.1 Definition and applicability

8.3.4.1.1.1 3,84 Mcps TDD option

The cell re-selection delay is defined as the time from a change of cell levels to the moment when this change causes the UE to camp on a new cell , and starts to send the CELL UPDATE message with cause value "cell reselection" in the new cell.

The requirements and this test apply to the 3,84 Mcps TDD UE.

8.3.4.1.1.2 1,28 Mcps TDD option

Void.

8.3.4.1.2 Minimum requirement

8.3.4.1.2.1 3,84 Mcps TDD option

The cell re-selection delay shall be less than 2.5 s. The rate of correct cell re-selections observed during repeated tests shall be at least 90%.

The normative reference for this requirement is TS 25.123 [2] clauses 5.4.2 and A.5.4.1.

8.3.4.1.2.2 1,28 Mcps TDD option

Void.

8.3.4.1.3 Test purpose

This test verifies that the UE meets the minimum requirement for the cell re-selection delay in CELL_FACH for the single carrier case

8.3.4.1.4 Method of test

8.3.4.1.4.1 3,84 Mcps TDD option

8.3.4.1.4.1.1 Initial conditions

This scenario contains 6 cells operating on the same carrier frequency. The test parameters are given in Tables 8.3.4.1.1.1, 8.3.4.1.1.2, 8.3.4.1.1.3, and 8.3.4.1.1.4.

Table 8.3.4.1.1.1: General test parameters for Cell Re-selection in CELL FACH

	Parameter Parameter	<u>Unit</u>	<u>Value</u>	<u>Comment</u>			
<u>Initial</u>	Active cell		Cell1				
<u>condition</u>	Neighbour cells		Cell2, Cell3,Cell4,				
			Cell5, Cell6				
<u>Final</u>	Active cell		Cell2				
condition							
<u>HCS</u>			Not used				
UE_TX	PWR MAX RACH	<u>dBm</u>	<u>21</u>	The value shall be used for all cells in the test.			
	<u>Qrxlevmin</u>	<u>dBm</u>	<u>-102</u>	The value shall be used for all cells in the test.			
Access Se	ervice Class (ASC#0)			Selected so that no additional delay is caused by			
<u>- Pe</u>	ersistence value	=	<u>1</u>	the random access procedure. The value shall be			
				used for all cells in the test.			
<u>T_{SI}</u>		<u>s</u>	<u>1,28</u>	The value shall be used for all cells in the test.			
<u>T1</u>		<u>s</u>	<u>15</u>				
	<u>T2</u>	<u>s</u>	<u>15</u>				

Table 8.3.4.1.1.2: Physical channel parameters for S-CCPCH.

<u>Parameter</u>	<u>Unit</u>	<u>Level</u>
Channel bit rate	Kbps	<u>24,4</u>
Channel symbol rate	Ksps	<u>12,2</u>
Slot Format #	_	<u>0</u>
Frame allocation	=	Continuous frame allocation
Midamble allocation		<u>Default Midamble</u>

Table 8.3.4.1.1.3: Transport channel parameters for S-CCPCH

<u>Parameter</u>	<u>FACH</u>				
Transport Channel Number	<u>1</u>				
Transport Block Size	<u>240</u>				
Transport Block Set Size	<u>240</u>				
Transmission Time Interval	<u>20 ms</u>				
Type of Error Protection	Convolutional Coding				
Coding Rate	<u>½</u>				
Rate Matching attribute	<u>256</u>				
Size of CRC	<u>16</u>				

Table 8.3.4.1.1.4: Cell specific test parameters for Cell Re-selection in CELL_FACH

<u>Parameter</u>	<u>Unit</u>		<u>Ce</u>	<u>II 1</u>			Cell 2				Cell 3			
Timeslot Number		(<u>)</u>	8	3	(<u>)</u>	8	3	(<u>)</u>	8	3	
		<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	
UTRA RF Channel Number		Channel 1			<u>Channel 1</u>				Channel 1					
PCCPCH_Ec/lor	<u>dB</u>	<u>-3</u>	<u>ფ</u>			<u>ფ</u>	<u>-3</u>			<u>ფ</u>	<u>-3</u>			
SCH Ec/lor	<u>в</u>	<u>-9</u>	9	<u>-9</u>	<u>-9</u>	9	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	9	
SCH toffset		<u>0</u>	0	<u>0</u>	0	5	5	<u>5</u>	5	<u>10</u>	<u>10</u>	<u>10</u>	<u>10</u>	
PCH Ec/lor	d <u>B</u>			<u>-3</u>	<u>-3</u>			<u>-3</u>	<u>-3</u>			<u>-3</u>	<u>-3</u>	
OCNS_Ec/lor	<u>dB</u>	-4,28	<u>-4,28</u>	-4,28	-4,28	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	-4,28	<u>-4,28</u>	<u>-4,28</u>	
$\frac{\hat{I}_{or}/I_{oc}}{}$	<u>dB</u>	<u>9</u>	<u>7</u>	<u>9</u>	<u>7</u>	<u>7</u>	<u>9</u>	<u>7</u>	<u>9</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	
PCCPCH RSCP	<u>dBm</u>	<u>-64</u>	-66			-66	-64			-74	<u>-74</u>			
Qoffset1 _{s,n}	<u>dB</u>			C3:0; C1); C1,C6:			C2, C1: 0; C2, C3:0; C2,C4:0 C2, C5: 0; C2, C6:0			C3, C1: 0; C3, C2:0; C3,C4:0 C3, C5: 0; C3, C6:0				
Qhyst1 _s	<u>в</u>		<u>(</u>	<u>0</u>			(<u>0</u>			<u>(</u>	<u>0</u>		
<u>Treselection</u>		<u>0</u>			<u> </u>			•	<u></u>					
<u>\$intrasearch</u>	<u>dB</u>	not sent			not sent			not sent						
FACH measurement occasion info			not	<u>sent</u>			not	<u>sent</u>		not sent				

<u>I_{oc}</u>	dBm/3, 84 MHz		<u>-70</u>											
Propagation Condition			<u>AWGN</u>											
		Cell 4					Ce	II <u>5</u>		Cell 6				
<u>Timeslot</u>		(<u>)</u>	8	3)	3	3	<u>0</u>		<u>8</u>		
		<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	
UTRA RF Channel			<u>Chan</u>	nel 1			<u>Char</u>	nel 1			<u>Char</u>	nel 1		
<u>Number</u>														
PCCPCH_Ec/lor	<u>dB</u>	<u>-3</u>	<u>-3</u>			-3	<u>-3</u>			-3	<u>-3</u>			
SCH_Ec/lor	<u>dB</u>	<u>-9</u>	<u>-9</u>	-9	-9	-9	<u>-9</u>	<u>-9</u>	<u>-9</u>	-9	<u>-9</u>	<u>-9</u>	<u>-9</u>	
SCH_t _{offset}		<u>15</u>	<u> 15</u>	<u>15</u>	<u>15</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>25</u>	<u>25</u>	<u>25</u>	<u>25</u>	
PICH_Ec/lor	<u>dB</u>			<u>-3</u>	<u>-3</u>			<u>-3</u>	<u>-ვ</u>			<u>-3</u>	<u>-3</u>	
QCNS Ec/lor	<u>dB</u>	<u>-4,28</u>	<u>-4,28</u>	-4,28	-4,28	-4,28	<u>-4,28</u>	-4,28	<u>-4,28</u>	-4,28	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	
\hat{I}_{or}/I_{oc}	<u>dB</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	
PCCPCH RSCP	<u>dBm</u>	<u>-74</u>	<u>-74</u>			<u>-74</u>	<u>-74</u>			<u>-74</u>	<u>-74</u>			
Qoffset1 _{s,n}	<u>dB</u>			C2:0; C4 C4, C6:			C5, C1: 0; C5, C2:0; C5,C3:0 C5, C4:0; C5, C6:0				C6, C1: 0; C6, C2:0; C6,C3:0 C6, C4:0; C6, C5:0			
Qhyst1 _s	<u>dB</u>		<u>(</u>)			()			(<u>)</u>		
Treselection)			()			()		
\$intrasearch	<u>dB</u>		not:	<u>sent</u>			not	<u>sent</u>			not	sent		
FACH measurement occasion info		not sent				not sent				not sent				
<u>I_{oc}</u>	dBm/3, 84 MHz					<u>-70</u>								
Propagation Condition							AW	<u>GN</u>						

Note: S-CCPCH shall not be located in TS0.

8.3.4.1.4.1.2 Procedure

- a) The SS activates cell 1-6 with T1 defined parameters.
- b) The UE is switched on.
- c) A call is set up according to the generic set-up procedure specified in TS 34.108 [3] subclause 7.4.2 to place the UE in CELL FACH.
- d) After 15 s, the parameters are changed as described for T2.
- e) The SS waits for CELL UPDATE message with cause value "cell reselection" from the UE.
- f) After another 15 s, the parameters are changed as described for T1.
- g) The SS waits for CELL UPDATE message with cause value "cell reselection" from the UE.
- h) Repeat steps d) to g) [TBD] times.

8.3.4.1.4.2 1,28 Mcps TDD option

Void.

8.3.4.1.5 Test Requirements

8.3.4.1.5.1 3,84 Mcps TDD option

- 1) In step d), after the UE has responded on cell 1, it shall not respond on any other cell (cell selection).
- 2) In step e), the UE shall respond on cell 2 within 2.5 s.
- 3) In step g), the UE shall respond on cell 1 within 2.5 s.

For the test to pass, the total number of fulfilled test requirements 2) and 3) shall be more than [FFS]% of the cases.

NOTE: If the above Test Requirement differs from the Minimum Requirement then the Test Tolerance applied for this test is non-zero. The Test Tolerance for this test is defined in clause F.2 and the explanation of how the Minimum Requirement has been relaxed by the Test Tolerance is given in clause F.4.

Void.

8.3.4.1.5.2 1,28 Mcps TDD option

Void.

8.3.4.2 Scenario 2: TDD/TDD cell re-selection multi carrier case

8.3.4.2.1 Definition and applicability

8.3.4.2.1.1 3,84 Mcps TDD option

The cell re-selection delay is defined as the time from a change of cell levels to the moment when this change causes the UE to camp on a new cell, and starts to send the CELL UPDATE message with cause value "cell reselection" in the new cell.

The requirements and this test apply to the TDD UE.

8.3.4.2.1.2 1,28 Mcps TDD option

Void.

8.3.4.2.2 Minimum requirement

8.3.4.2.2.1 3,84 Mcps TDD option

The cell re-selection delay shall be less than 3 s. The rate of correct cell re-selections observed during repeated tests shall be at least 90%.

The normative reference for this requirement is TS 25.123 [2] clauses 5.4.2 and A.5.4.2.

8.3.4.2.2.2 1,28 Mcps TDD option

Void.

8.3.4.2.3 Test purpose

This test verifies that the UE meets the requirement for the cell re-selection delay in CELL_FACH for the multi carrier case.

8.3.4.2.4 Method of test

8.3.4.2.4.1 3,84 Mcps TDD option

8.3.4.2.4.1.1 Initial conditions

This scenario contains 6 cells and 2 carrier frequencies. The test parameters are given in Tables 8.3.4.2.1.1, 8.3.4.2.1.2, 8.3.4.2.1.3, and 8.3.4.2.1.4.

Table 8.3.4.2.1.1: General test parameters for Cell Re-selection in CELL FACH

	Parameter Parameter	<u>Unit</u>	<u>Value</u>	Comment			
<u>Initial</u>	Active cell		<u>Cell1</u>				
condition	Neighbour cells		Cell2, Cell3,Cell4,				
			Cell5, Cell6				
Final	Active cell		Cell2				
condition			<u> </u>				
	HCS		Not used				
UE_TX	PWR_MAX_RACH	<u>dBm</u>	<u>21</u>	The value shall be used for all cells in the test.			
	<u>Qrxlevmin</u>	<u>dBm</u>	<u>-102</u>	The value shall be used for all cells in the test.			
Access Se	ervice Class (ASC#0)			Selected so that no additional delay is caused by			
- Pe	ersistence value	<u> </u>	<u>1</u>	the random access procedure. The value shall be			
				used for all cells in the test.			
<u>T_{SI}</u>		<u>s</u> <u>1,28</u>		The value shall be used for all cells in the test.			
	<u>T1</u>	<u>s</u>	<u>15</u>				
	T2	S	15				

Table 8.3.4.2.1.2: Physical channel parameters for S-CCPCH.

<u>Parameter</u>	<u>Unit</u>	<u>Level</u>
Channel bit rate	Kbps	<u>24,4</u>
Channel symbol rate	Ksps	<u>12,2</u>
Slot Format #	_	<u>0</u>
Frame allocation	=	Continuous frame allocation
Midamble allocation		<u>Default Midamble</u>

Table 8.3.4.2.1.3: Transport channel parameters for S-CCPCH

<u>Parameter</u>	<u>FACH</u>				
Transport Channel Number	<u>1</u>				
Transport Block Size	<u>240</u>				
Transport Block Set Size	<u>240</u>				
Transmission Time Interval	<u>20 ms</u>				
Type of Error Protection	Convolutional Coding				
Coding Rate	<u>½</u>				
Rate Matching attribute	<u>256</u>				
Size of CRC	<u>16</u>				

Table 8.3.4.2.1.4: Cell specific test parameters for Cell Re-selection in CELL_FACH

<u>Parameter</u>	<u>Unit</u>		<u>Cell 1</u>				Cell 2				Cell 3			
Timeslot Number		(2	8	<u>8</u>		0 8			<u>0</u>		<u>8</u>		
		<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	<u>T1</u>	<u>T2</u>	
<u>UTRA RF Channel</u> <u>Number</u>		Channel 1			<u>Channel 2</u>				<u>Channel 1</u>					
PCCPCH_Ec/lor	<u>dB</u>	<u>-3</u>	<u>-3</u>			<u>-3</u>	<u>-3</u>			<u>-3</u>	<u>-3</u>			
SCH_Ec/lor	<u>dB</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	<u>-9</u>	9	
SCH_t _{offset}		<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>5</u>	<u>5</u>	<u>5</u>	<u>5</u>	<u>10</u>	<u>10</u>	<u>10</u>	<u>10</u>	
PCH_Ec/lor	<u>dB</u>			<u>-3</u>	<u>-3</u>			<u>-3</u>	<u>-3</u>			<u>-3</u>	<u>-3</u>	
OCNS_Ec/lor	<u>dB</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	<u>-4,28</u>	
\hat{I}_{or}/I_{oc}	<u>dB</u>	<u>9</u>	<u>3</u>	<u>9</u>	<u>3</u>	<u>3</u>	<u>9</u>	<u>3</u>	<u>9</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	
PCCPCH RSCP	<u>dBm</u>	<u>-64</u>	<u>-70</u>			<u>-70</u>	<u>-64</u>			<u>-74</u>	<u>-74</u>			
Qoffset1 _{s,n}	<u>dB</u>		C1, C2: 0; C1, C3:0; C1,C4:0 C1, C5:0; C1,C6:0				C2, C1: 0; C2, C3:0; C2,C4:0 C2, C5: 0; C2, C6:0			C3, C1: 0; C3, C2:0; C3,C4:0 C3, C5: 0; C3, C6:0				
Qhyst1 _s	<u>dB</u>	<u>0</u>				<u>0</u>				<u>0</u>				
<u>Treselection</u>		<u>0</u>				<u>0</u>			•	0				
\$intrasearch	<u>dB</u>		not	<u>sent</u>			not	<u>sent</u>	•	not sent				
\$intersearch	<u>dB</u>		not	sent			not	sent	•	not sent				

EACIL	1					1				1			
FACH measurement occasion info			not	<u>sent</u>			not	<u>sent</u>		<u>not sent</u>			
Inter-frequency TDD			TD	HE			TD	UE			TD		
<u>measurement</u> <u>indicator</u>			<u>1R</u>	<u>UE</u>			115	UE			<u>1R</u>	<u>UE</u>	
	dDm/2												
I_{oc}	<u>dBm/3,</u> 84 MHz		<u>-70</u>										
Propagation Condition							<u>AW</u>	<u>'GN</u>					
<u>Johnston</u>			Ce	II 4			Ce	II 5			Ce	II 6	
Timeslot		()		3)		3		0		3
		T1	T2	T1	<u>T2</u>	T1	T2	T1	<u>T2</u>	T1	T2	T1	T2
UTRA RF Channel				nel 1				nnel 2				nel 2	
Number													
PCCPCH_Ec/lor	dB	<u>-3</u>	<u>-3</u>			<u>-3</u>	<u>-3</u>			<u>-3</u>	<u>-3</u>		
SCH_Ec/lor	dB	-9	<u>-9</u>	<u>-9</u>	<u>-9</u>	-9	-9	<u>-9</u>	-9	-9	-9	<u>-9</u>	<u>-9</u>
SCH_toffset		15	15	15	15	20	20	20	20	25	25	25	<u>25</u>
PICH_Ec/lor	dB		,	-3	-3	,		-3	-3			-3	<u>-3</u>
OCNS Ec/lor	dB	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28
\hat{I}_{or}/I_{oc}	<u>dB</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>	<u>-1</u>
PCCPCH RSCP	dBm	-74	-74			-74	-74			-74	-74		
				C2:0; C4	4.C3:0			C2:0; C	5.C3:0	C6, C1: 0; C6, C2:0; C6,C3:0			
Qoffset1 _{s,n}	<u>dB</u>			C4, C6:			C5, C4:0; C5, C6:0			<u>C6, C4:0; C6, C5:0</u>			
Qhyst1 _s	dB			<u>)</u>		0				0			
Treselection			(<u></u>)	
\$intrasearch	dB		not	sent			not	sent			not	sent	
\$intersearch	dB		not	sent			not	sent		not sent			
FACH measurement													
occasion info			not	<u>sent</u>		<u>not sent</u>					not	sent	
Inter-frequency TDD													
measurement		TRUE TRUE TRUE											
indicator													
I_{oc}	<u>dBm/3,</u> 84 MHz						<u>-7</u>	<u>70</u>					
<u>Propagation</u>							۸۱۸	/CN					
Condition							AVV	<u>'GN</u>					

Note: S-CCPCH shall not be located in TS0.

8.3.4.2.4.1.2 Procedure

- a) The SS activates cell 1-6 with T1 defined parameters.
- b) The UE is switched on.
- c) A call is set up according to the generic set-up procedure specified in TS 34.108 [3] subclause 7.4.2 to place the UE in CELL_FACH.
- d) After 15 s, the parameters are changed as described for T2.
- e) The SS waits for CELL UPDATE message with cause value "cell reselection" from the UE.
- f) After another 15 s, the parameters are changed as described for T1.
- g) The SS waits for CELL UPDATE message with cause value "cell reselection" from the UE.
- h) Repeat steps d) to g) [TBD] times.

8.3.4.2.4.2 1,28 Mcps TDD option

Void.

8.3.4.2.5 Test Requirements

8.3.4.2.5.1 3,84 Mcps TDD option

- 1) In step d), after the UE has responded on cell 1, it shall not respond on any other cell (cell selection).
- 2) In step e), the UE shall respond on cell 1 within 3 s.
- 3) In step g), the UE shall respond on cell 2 within 3 s.

For the test to pass, the total number of fulfilled test requirements 2) and 3) shall be more than [FFS]% of the cases.

NOTE: If the above Test Requirement differs from the Minimum Requirement then the Test Tolerance applied for this test is non-zero. The Test Tolerance for this test is defined in clause F.2 and the explanation of how the Minimum Requirement has been relaxed by the Test Tolerance is given in clause F.4.

Void.

8.3.4.2.5.2 1,28 Mcps TDD option

Void.

3GPP TSG-T1 Meeting #15 Lund, Sweden, 21st - 24th May 2002

	CHANGE REQUEST									
[≆] TS	34.1	22 CR	093	жr	ev	- #	Current vers	3.7.0 [#]		
For HELP on u	ısing this	s form, se	e bottom (of this pag	e or Ic	ook at th	ne pop-up text	over the # symbols		
Proposed change affects: \$\(\mathbb{H}\) (U)SIM ME/UE X Radio Access Network Core Network										
Title: 第	Powe	r Control i	n the Dov	vnlink for H	HCR					
Source: #	T1/RF	-								
Work item code: ₩							Date: ₩	21/05/2002		
Category: Ж	F A B C D	(correction (correspor (addition o (functional (editorial n d explanati	nds to a con if feature), imodification	rection in a on of feature) above categ	e)		2	R99 the following releases: (GSM Phase 2) (Release 1996) (Release 1997) (Release 1998) (Release 1999) (Release 4) (Release 5)		
Reason for change		Requireme s missing.		en change	ed in 2	25.102 a	and definition	and applicability sect	ion	
Summary of chang	E	SLER perf	ormance l		% of tl	ne time	and added no	ved requirement that ote. Reference for th		
Consequences if not approved:	₩ T	est case	would not	be consis	tent w	ith core	specification			
Clauses affected:	₩ 7	'.5								
Other specs affected:	*	Other co	ore specifi ecification pecificatio	S	¥					
Other comments:	ж									

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7.5 Power control in downlink

Power control in the downlink is the ability of the UE receiver to converge to the required link quality set by the network while using minimum downlink power.

7.5.1 Definition and applicability

Power control in the uplink is the ability of the UE to converge to the required link quality set by the network while using minimum uplink power. The requirements of this test shall apply to the UTRA-TDD UE.

7.5.42 Minimum requirements

For the parameters specified in table 7.5.1- α the average downlink \hat{I}_{or}/I_{oc} power shall be below the specified value in Table 7.5.2-1. α more than 90% of the time. BLER shall be as shown in Table 7.5.2-1. α more than 90% of the time. Downlink power control is ON during the test.

Table 7.5.1-a: Test parameters for downlink power control

Parameter	Unit	Test 1			
$\frac{DPCH _E_c}{I_{or}}$	dB	0			
I_{oc}	dBm/3,84 MHz	-60			
Information Data Rate	kbps	12,2			
Target quality value on DTCH	BLER	0,01			
Propagation condition		Case 1			
DL Power Control step size, Δ_{TPC}	dB	1			
Maximum_DL_power *	dB	0			
Minimum_DL_power *	dB	-27			
*Note: Refer to TS 25.22	24 for description and	d definition			

Note: DL power is relative to P-CCPCH power.

Table 7.5.21.b: Requirements for downlink power control

Parameter	Unit	Test 1
\hat{I}_{or}/I_{oc}	dB	8,0
Measured quality on DTCH	BLER	0,01±30%

The reference for this requirement is TS 25.102 [1] clause 8.5.1.

7.5.23 Test purpose

To verify that the UE receiver is capable of converging to the required link quality set by the network while using as low power as possible.

7.5.34 Method of test

7.5.34.1 Initial conditions

Test environment: normal; see clauses G.2.1 and G.2.2.

Frequencies to be tested: mid range; see clause G.2.4.

- 1) Connect SS, multipath fading simulator and an AWGN source to the UE antenna connector as shown in figure A.10.
- 2) Set up a call according to the Generic call setup procedure.
- 3) RF parameters are set up according to table 7.5.1.a.
- 4) Enter the UE into loopback test mode and start the loopback test.
- 5) SS signals to UE target quality value on DTCH as specified in table 7.5.1-a. SS will vary the physical channel power in downlink according to the TPC commands from UE, and at the same time measure BLER. This is continued until the target quality value on DTCH is met, within the minimum accuracy requirement.

See TS 34.108 [3] and TS 34.109 [4] for details regarding generic call setup procedure and loopback test.

7.5.<u>34</u>.2 Procedure

- 1) After the target quality on DTCH is met, BLER is measured. Simultaneously the downlink \hat{I}_{or}/I_{oc} power ratio averaged over one slot is measured. This is repeated until adequate amount of measurements is done to reach the required confidence level.
- 2) The measured quality on DTCH (BLER) and the measured downlink \hat{I}_{or}/I_{oc} power ratio values averaged over one slot are compared to the limits in table 7.5.24.b.

7.5.45 Test Requirements

- a) The measured quality on DTCH does not exceed the values in table 7.5.21.b.
- b) The downlink \hat{I}_{or}/I_{oc} power ratio values, which are averaged over one slot, shall be below the values in table 7.5.21.b more than 90 % of the time.

CHANGE REQUEST						n-v5							
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Title:	Po	wer Co	ntrol in	the Dov	wnlink	for HCF	?						
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Category: # A Use one of the following categories: # (correction) # (corresponds to a correction in an earlier release) # (addition of feature), # (functional modification of feature) # (Release 1997) # (Release 1998) # (Release 1998) # (Release 1998) # (Release 1999) # (Release 1999) # (Release 1999) # Detailed explanations of the above categories can real explanations of the above categories can real explanation and applicability section is missing. # Requirement has been changed in 25.102 and definition and applicability section is missing. # Requirement has been changed in 25.102 and applicability. Removed requirement that BLER performance be met 90% of the time and added note. Reference for this is tdoc R4-0210021, approved at RAN4 Mtg #23.													
Consequences if not approved:	ж				•				specification	۱.			
Clauses affected:	Ж	7.5											
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- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

7.5 Power control in downlink for 3,84 Mcps TDD Option

Power control in the downlink is the ability of the UE receiver to converge to the required link quality set by the network while using minimum downlink power.

7.5.1 Definition and applicability

Power control in the uplink is the ability of the UE to converge to the required link quality set by the network while using minimum uplink power. The requirements of this test shall apply to the UTRA-TDD UE.

7.5.42 Minimum requirements

For the parameters specified in table 7.5.1- α the average downlink \hat{I}_{or}/I_{oc} power shall be below the specified value in Table 7.5.2-1. α more than 90% of the time. BLER shall be as shown in Table 7.5.2-1. α more than 90% of the time. Downlink power control is ON during the test.

Table 7.5.1-a: Test parameters for downlink power control

Parameter	Unit	Test 1			
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Information Data Rate	kbps	12,2			
Target quality value on DTCH	BLER	0,01			
Propagation condition		Case 1			
DL Power Control step size, Δ_{TPC}	dB	1			
Maximum_DL_power *	dB	0			
Minimum_DL_power *	dB	-27			
*Note: Refer to TS 25.224 for description and definition					

Note: DL power is relative to P-CCPCH power.

Table 7.5.21.b: Requirements for downlink power control

Parameter	Unit	Test 1		
\hat{I}_{or}/I_{oc}	dB	8,0		
Measured quality on DTCH	BLER	0,01±30%		

The reference for this requirement is TS 25.102 [1] clause 8.5.1.

7.5.23 Test purpose

To verify that the UE receiver is capable of converging to the required link quality set by the network while using as low power as possible.

7.5.34 Method of test

7.5.34.1 Initial conditions

Test environment: normal; see clauses G.2.1 and G.2.2.

Frequencies to be tested: mid range; see clause G.2.4.

- 1) Connect SS, multipath fading simulator and an AWGN source to the UE antenna connector as shown in figure A.10.
- 2) Set up a call according to the Generic call setup procedure.
- 3) RF parameters are set up according to table 7.5.1.a.
- 4) Enter the UE into loopback test mode and start the loopback test.
- 5) SS signals to UE target quality value on DTCH as specified in table 7.5.1-a. SS will vary the physical channel power in downlink according to the TPC commands from UE, and at the same time measure BLER. This is continued until the target quality value on DTCH is met, within the minimum accuracy requirement.

See TS 34.108 [3] and TS 34.109 [4] for details regarding generic call setup procedure and loopback test.

7.5.<u>34</u>.2 Procedure

- 1) After the target quality on DTCH is met, BLER is measured. Simultaneously the downlink \hat{I}_{or}/I_{oc} power ratio averaged over one slot is measured. This is repeated until adequate amount of measurements is done to reach the required confidence level.
- 2) The measured quality on DTCH (BLER) and the measured downlink \hat{I}_{or}/I_{oc} power ratio values averaged over one slot are compared to the limits in table 7.5.24.b.

7.5.45 Test Requirements

- a) The measured quality on DTCH does not exceed the values in table 7.5.21.b.
- b) The downlink \hat{I}_{or}/I_{oc} power ratio values, which are averaged over one slot, shall be below the values in table 7.5.21.b more than 90 % of the time.