3GPP TSG RAN Meeting #26 **RP-040406**
Vouliagmeni Athens, Greece, 8 - 10 December, 2004

Title **CRs (Rel-5 and Rel-6 Category A) to TS25.101 on Omissions in sec. 7.6 (Blocking)**
Source **3GPP TSG RAN WG4 (Radio)**
Agenda Item **7.5.5**

WG Tdoc	Spec	CR	R	Cat	Rel	Curr Ver	Title	Work Item
R4-040777	25.101	384	1	F	Rel-5	5.12.0	Omissions in 7.6 (Blocking)	TEI5
R4-040778	25.101	385	1	A	Rel-6	6.5.0	Omissions in 7.6 (Blocking)	TEI5

3GPP TSG RAN WG4 (Radio) Meeting #33 **R4-040777**

Yokohama, Japan 15 - 19 November 2004

CR-Form-v7.1

CHANGE REQUEST

⌘ 25.101	CR 384	⌘rev 1 ⌘	Current version: 5.12.0 ⌘

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Proposed change affects: UICC apps⌘ ☐ ME ☒ Radio Access Network ☐ Core Network ☐

Title:	⌘	Omissions of minimum requirements for 7.6 Blocking Characteristics
Source:	⌘	3GPP TSG RAN WG4 (Radio)
Work item code:	⌘	TEI5
Date:	⌘	01/12/2004
Category:	⌘	F
Release:	⌘	Rel-5

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

Ph2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*
Rel-7	*(Release 7)*

Reason for change:	⌘	Careless usage of the < character excludes some frequencies from minimum requirements
Summary of change:	⌘	< replaced by ≤ where appropriate
Consequences if not approved:	⌘	Excludes some frequencies from being tested.

Clauses affected:	⌘	7.6			
Other specs affected:	⌘	Y / N		⌘	
		N / X	Other core specifications		
		Y / N	Test specifications		34.121
		N / X	O&M Specifications		
Other comments:	⌘	Isolated impact analysis: No impact on UE implementation. Equivalent CRs in other Releases: CR385r1 cat. A to 25.101 Rel-6			

7.6 Blocking characteristics

The blocking characteristic is a measure of the receiver's ability to receive a wanted signal at its assigned channel frequency in the presence of an unwanted interferer on frequencies other than those of the spurious response or the adjacent channels, without this unwanted input signal causing a degradation of the performance of the receiver

beyond a specified limit. The blocking performance shall apply at all frequencies except those at which a spurious response occur.

7.6.1 Minimum requirement (In-band blocking)

The BER shall not exceed 0.001 for the parameters specified in Table 7.6. In-band blocking is defined for an unwanted interfering signal falling into the UE receive band or into the first 15 MHz below or above the UE receive band.

Table 7.6: In-band blocking

Parameter	Unit	Level	
DPCH_Ec	dBm/3.84 MHz	<REFSENS>+3 dB	
$\hat{I}_{or}$	dBm/3.84 MHz	<REF$\hat{I}_{or}$> + 3 dB	
$I_{blocking}$ mean power (modulated)	dBm	-56	-44
F_{uw} offset		=±10 MHz	≤-15 MHz & ≥15 MHz
F_{uw} (Band I operation)	MHz	2102.4≤ f ≤2177.6 (Note 2)	2095≤ f ≤2185
F_{uw} (Band II operation)	MHz	1922.4≤ f ≤1997.6 (Note 2)	1915≤ f ≤2005
F_{uw} (Band III operation)	MHz	1797.4≤ f ≤1887.6 (Note 2)	1790≤ f ≤1895
F_{uw} (Band IV operation)	MHz	2102.4≤ f ≤2162.6 (Note 2)	2095≤ f ≤2170
F_{uw} (Band V operation)	MHz	861.4≤ f ≤901.6 (Note 2)	854≤ f ≤909
F_{uw} (Band VI operation)	MHz	867.4≤ f ≤892.6 (Note 2 and 3)	860≤ f ≤900 (Note 3)
UE transmitted mean power	dBm	20 (for Power class 3) 18 (for Power class 4)	

Note 1: $I_{blocking}$ (modulated) consists of the common channels needed for tests as specified in Table C.7 and 16 dedicated data channels as specified in Table C.6.

Note 2: For each carrier frequency the requirement is valid for two frequencies, the carrier frequency +/- 10 MHz.

Note 3: For Band VI, the unwanted interfering signal does not fall inside the UE receive band, but within the first 15 MHz below or above the UE receive band.

7.6.2 Minimum requirement (Out of-band blocking)

The BER shall not exceed 0.001 for the parameters specified in Table 7.7. Out-of-band band blocking is defined for an unwanted interfering signal falling more than 15 MHz below or above the UE receive band. For Table 7.7 up to 24 exceptions are allowed for spurious response frequencies in each assigned frequency channel when measured using a 1 MHz step size. For these exceptions the requirements of clause 7.7 Spurious response are applicable.

Table 7.7: Out of band blocking

Parameter	Unit	Frequency range 1	Frequency range 2	Frequency range 3
DPCH_Ec	dBm/3.84 MHz	<REFSENS>+3 dB	<REFSENS>+3 dB	<REFSENS>+3 dB
$\hat{I}_{or}$	dBm/3.84 MHz	<REF$\hat{I}_{or}$> + 3 dB	<REF$\hat{I}_{or}$> + 3 dB	<REF$\hat{I}_{or}$> + 3 dB
$I_{blocking}$ (CW)	dBm	-44	-30	-15
F_{uw} (Band I operation)	MHz	2050<f <2095 2185<f <2230	2025 <f ≤<2050 2230 ≤<f <2255	1< f ≤<2025 2255≤<f<12750
F_{uw} (Band II operation)	MHz	1870<f <1915 2005<f <2050	1845 <f <≤1870 2050 <≤f <2075	1< f <≤1845 2075<≤f<12750
F_{uw} (Band III operation)	MHz	1745 <f <1790 1895<f <1940	1720 <f <≤ 1745 1940<≤f < 1965	1< f <≤1720 1965<≤f<12750
F_{uw} (Band IV operation)	MHz	2050< f <2095 2170< f <2215	2025< f <≤2050 2215<≤ f < 2240	1< f <≤2025 2240<≤f<12750
F_{uw} (Band V operation)	MHz	809< f <854 909< f <954	784< f <≤809 954<≤ f < 979	1< f <≤784 979<≤f<12750
F_{uw} (Band VI operation)	MHz	815 < f < 860 900 < f < 945	790 < f <≤ 815 945 <≤ f < 970	1 < f <≤ 790 970 <≤ f < 12750
UE transmitted mean power	dBm	20 (for Power class 3) 18 (for Power class 4)		
Band I operation	For 2095<≤f~~<2110 MHz and 2170<f<~~≤2185 MHz, the appropriate in-band blocking or adjacent channel selectivity in subclause 7.5.1 and subclause 7.6.1 shall be applied.			
Band II operation	For 1915<≤f ~~<1930 MHz and 1990<f<~~≤2005 MHz, the appropriate in-band blocking or adjacent channel selectivity in subclause 7.5.1 and subclause 7.6.1 shall be applied			
Band III operation	For 1790<≤f ~~<1805 MHz and 1880<f<~~≤1895 MHz, the appropriate in-band blocking or adjacent channel selectivity in subclause 7.5.1 and subclause 7.6.1 shall be applied.			
Band IV operation	For 2095<≤f ~~<2110 MHz and 2155<f<~~≤2170 MHz, the appropriate in-band blocking or adjacent channel selectivity in subclause 7.5.1 and subclause 7.6.1 shall be applied.			
Band V operation	For 854<≤f ~~<869 MHz and 894<f<~~≤909 MHz, the appropriate in-band blocking or adjacent channel selectivity in subclause 7.5.1 and subclause 7.6.1 shall be applied.			
Band VI operation	For 860<≤f ~~<875 MHz and 885<f<~~≤900 MHz, the appropriate in-band blocking or adjacent channel selectivity in subclause 7.5.1 and subclause 7.6.1 shall be applied.			

7.6.3 Minimum requirement (Narrow band blocking)

The BER shall not exceed 0.001 for the parameters specified in Table 7.7A. This requirement is measure of a receiver's ability to receive a W-CDMA signal at its assigned channel frequency in the presence of an unwanted narrow band interferer at a frequency, which is less than the nominal channel spacing

Table 7.7A: Narrow band blocking characteristics

Parameter	Unit	Band II, Band IV and Band V	Band III
DPCH_Ec	dBm/3.84 MHz	<REFSENS> + 10 dB	<REFSENS> + 10 dB
$\hat{I}_{or}$	dBm/3.84 MHz	<REF$\hat{I}_{or}$> + 10 dB	<REF$\hat{I}_{or}$> + 10 dB
$I_{blocking}$ (GMSK)	dBm	-57	-56
F_{uw} (offset)	MHz	2.7	2.8
UE transmitted mean power	dBm	20 (for Power class 3) 18 (for Power class 4)	

NOTE: $I_{blocking}$ (GMSK) is an interfering signal as defined in TS 45.004 [6]

3GPP TSG RAN WG4 (Radio) Meeting #33 **R4-040778**

Yokohama, Japan 15 - 19 November 2004

CR-Form-v7.1

CHANGE REQUEST

⌘	25.101	CR	385	⌘rev	1	⌘	Current version:	6.5.0	⌘

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Proposed change affects: UICC apps⌘ ☐ ME ☒ Radio Access Network ☐ Core Network ☐

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Source:	⌘	3GPP TSG RAN WG4 (Radio)
Work item code:	⌘	TEI5
Date:	⌘	01/12/2004
Category:	⌘	**A**
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