

3GPP TSG RAN Meeting #28
Quebec, Canada, 1 - 3 June 2005

RP-050204

Title CRs (Rel-5 & Rel-6 CatA) to 25.133 on UE transmitted power measurement report mapping
Source 3GPP TSG RAN WG4 (Radio)
Agenda Item 7.5.5

WG Tdoc	Spec	CR	R	Cat	Rel	Curr Ver	Title	Work Item
R4-050607	25.133	757	3	F	Rel-5	5.14.0	UE transmitted power measurement report mapping.	TEI5
R4-050602	25.133	758	2	A	Rel-6	6.9.0	UE transmitted power measurement report mapping.	TEI5

Athens, Greece 9 - 13 May 2005

CR-Form-v7

CHANGE REQUEST⌘ **25.133 CR 757** ⌘ rev **3** ⌘ Current version: **5.14.0** ⌘For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ UE transmitted power measurement report mapping.		
Source:	⌘ 3GPP TSG RAN WG4 (Radio)		
Work item code:	⌘ TEI5	Date:	⌘ 16/05/2005
Category:	⌘ F	Release:	⌘ Rel-5
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	F (correction)		2 (GSM Phase 2)
	A (corresponds to a correction in an earlier release)		R96 (Release 1996)
	B (addition of feature),		R97 (Release 1997)
	C (functional modification of feature)		R98 (Release 1998)
	D (editorial modification)		R99 (Release 1999)
	Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Rel-4 (Release 4)
			Rel-5 (Release 5)
			Rel-6 (Release 6)

Reason for change: ⌘ As the current requirements link the measurement reported to PUEMAX there is an inconsistency in the UE reported power between TS25.101 and TS25.133 in particular when HS-DPCCH is transmitted. In addition a number of inconsistencies in the specification relating to Tx measurement reporting have been addressed

Summary of change: ⌘

- Clarify the definition of the measured quantity when HS-DPCCH is transmitted
- Remove the inconsistency due to PUEMAX related to reduction in maximum transmit power for certain gain factors when HS-DPCCH is transmitted
- Specify a single measurement reporting range to cover Power 3 and Power Class 4
- Remove the inconsistency of not being able to report a value larger than PUEMAX greater than the maximum output power without tolerances
- One range of measured reported and measured quality value for both power classes
- A tighter accuracy ranging for Power class 3 at lower power values.
- For Power class 3 tolerances is specified as a symmetrical range in line with power class 4 and is now better aligned with symmetrical requirement for low power as specified in TS 25.101 section 6.4.1.

Isolated Impact Analyses

As this change improves the overall accuracy of the measured value the change should have an isolated impact

Consequences if ⌘ Different measurement behaviour may be allowed and different value may be

not approved: reported, even if actual transmitted power is the same.

Clauses affected:	⌘	9.1.6.1, 9.1.6.2										
Other specs affected:	⌘	<table border="1"><tr><td>Y</td><td>N</td></tr><tr><td><input type="checkbox"/></td><td><input checked="" type="checkbox"/></td></tr><tr><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td><input type="checkbox"/></td><td><input checked="" type="checkbox"/></td></tr></table>	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Other core specifications	⌘ TS34.121
		Y	N									
		<input type="checkbox"/>	<input checked="" type="checkbox"/>									
<input checked="" type="checkbox"/>	<input type="checkbox"/>											
<input type="checkbox"/>	<input checked="" type="checkbox"/>											
	Test specifications											
	O&M Specifications											
Other comments:	⌘											

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.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.
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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.

9.1.6 UE transmitted power

9.1.6.1 Accuracy requirement

~~This requirement is applicable in CELL_DCH state. The measurement period in CELL_DCH state is 1 slot. The measured quantity is the transmitted power averaged over the longest period (excluding a 25µs period either side of any expected composite power change) during which the nominal composite symbol power reaches the maximum during 1 DPCH slot interval. The UE measured quantity absolute accuracy is defined in Table 9.15.~~

Table 9.14: UE transmitted power absolute accuracy ~~Void~~

Parameter	Unit	Accuracy [dB]	
		PUEMAX 24dBm	PUEMAX 21dBm
UE transmitted power=PUEMAX	dBm	+1/-3	±2
UE transmitted power=PUEMAX-1	dBm	+1.5/-3.5	±2.5
UE transmitted power=PUEMAX-2	dBm	+2/-4	±3
UE transmitted power=PUEMAX-3	dBm	+2.5/-4.5	±3.5
PUEMAX-10≤UE transmitted power<PUEMAX-3	dBm	+3/-5	±4

~~NOTE 1: User equipment maximum output power, PUEMAX, is the maximum output power level without tolerance defined for the power class of the UE in TS 25.101 [3] section 6.2.1.~~

~~NOTE 2: UE transmitted power is the reported value.~~

~~For each empty slot created by compressed mode, no value shall be reported by the UE L1 for those slots.~~

9.1.6.2 UE transmitted power measurement report mapping

The reporting range for UE transmitted power is from -50 ...+33 dBm.

In table 9.15 the mapping of the measured quantity specified in Section 9.1.6.1 and the accuracy range is defined. The range in the signalling may be larger than the guaranteed accuracy range. ~~For each empty slot created by compressed mode, no value shall be reported by the UE L1 for these slots.~~

Table 9.15

Reported value	Measured quantity value	Unit
UE_TX_POWER_021	-50 ≤ UE transmitted power < -49	dBm
UE_TX_POWER_022	-49 ≤ UE transmitted power < -48	dBm
UE_TX_POWER_023	-48 ≤ UE transmitted power < -47	dBm
...
UE_TX_POWER_102	31 ≤ UE transmitted power < 32	dBm
UE_TX_POWER_103	32 ≤ UE transmitted power < 33	dBm
UE_TX_POWER_104	33 ≤ UE transmitted power < 34	dBm

Reported value	Measured quantity value (dBm)	Accuracy (dB)
UE_TX_POWER_104	33<= to <34	note 1
UE_TX_POWER_103	32<= to <33	note 2
UE_TX_POWER_102	31<= to <32	note 2
...
UE_TX_POWER_096	25<= to <26	note 2
UE_TX_POWER_095	24<= to <25	2.0 -2.0
UE_TX_POWER_094	23<= to <24	2.0 -2.0

UE TX POWER_093	22<= to <23	2.0	-2.0
UE TX POWER_092	21<= to <22	2.0	-2.0
UE TX POWER_091	20<= to <21	2.5	-2.5
UE TX POWER_090	19<= to <20	3.0	-3.0
UE TX POWER_089	18<= to <19	3.5	-3.5
UE TX POWER_088	17<= to <18	4.0	-4.0
UE TX POWER_087	16<= to <17	4.0	-4.0
UE TX POWER_086	15<= to <16	4.0	-4.0
UE TX POWER_085	14<= to <15	4.0	-4.0
UE TX POWER_084	13<= to <14	4.0*	-4.0*
UE TX POWER_083	12<= to <13	4.0*	-4.0*
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UE TX POWER_081	10<= to <11	note 2	
---	---		
UE TX POWER_023	-48<= to <-47	note 2	
UE TX POWER_022	-49<= to <-48	note 2	
UE TX POWER_021	-50<= to <-49	note 2	
<p>Note 1 The tolerance is specified for the maximum and minimum measured quantity value (dBm), i.e. MIN(Measured quantity value) + MIN(Accuracy) \leq UE transmitted Power \leq Max (Measured quantity value) + MAX(Accuracy)</p>			
<p>Note 2 No tolerance is specified.</p>			
<p>* Applicable to power class 4</p>			

Athens, Greece 9 - 13 May 2005

CR-Form-v7

CHANGE REQUEST⌘ **25.133 CR 758** ⌘ rev **2** ⌘ Current version: **6.9.0** ⌘For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.Proposed change affects: UICC apps ME Radio Access Network Core Network

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