RP-030049

TSG RAN Meeting #19 Birmingham, United Kingdom, 11 - 14 March, 2003

TitleCRs (Rel-6) for WI "FDD BS Classification"SourceTSG RAN WG4Agenda Item9.8

RAN4 Tdoc	Spec	CR	R	Cat	Rel	Curr Ver	Title	Work Item
R4-020088	25.104	175		В	Rel-6	6.0.0	Co-siting requirements for different FDD BS classes	RInImp- BSClass- FDD
R4-020358	25.104	177	4	В	Rel-6	6.0.0	Maximum output power for different BS class	RInImp- BSClass- FDD
R4-020297	25.104	184		F	Rel-6	6.0.0	The definition of UTRA-FDD BS classes	RInImp- BSClass- FDD
R4-020089	25.141	276		В	Rel-6	6.0.0	Co-siting requirements for different FDD BS classes	RInImp- BSClass- FDD
R4-020350	25.141	278	3	В	Rel-6	6.0.0	Maximum output power for different BS class	RInImp- BSClass- FDD
R4-020299	25.141	290		F	Rel-6	6.0.0	The definition of UTRA-FDD BS classes	RInImp- BSClass- FDD

3GPP TSG RAN WG4 (Radio) Meeting #26

R4-030088

Madrid, Spain 17 - 22 February, 2003

	CHANGE REQUEST									
ж	25.10	<mark>4</mark> CR <mark>1</mark>	75	жrev	G	₩ Cu	rrent vers	ion:	6.0.0	ж
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					_					
Title: ೫	Co-siti	ng requirem	ents for diffe	erent FDD	BS cl	asses				
Source: ೫	RAN W	/G4								
Work item code: %	Rinimp	-BSClass-F	DD				Date: ೫	05/0	<mark>3/2003</mark>	
Category: ₩	B Use <u>one</u> F (c A (B (c C (c D (c Detailed be found	of the followi correction) corresponds addition of fea functional mod editorial mod explanations in 3GPP <u>TR</u>	ng categories to a correction ature), dification of fu- fication) of the above <u>21.900</u> .	s: n in an ear eature) categories	rlier rele s can	Re L	elease: # Jse <u>one</u> of 2 R96 R97 R98 R99 Rel-4 Rel-5 Rel-6	Rel-6 the follo (GSM) (Relea (Relea (Relea (Relea (Relea (Relea	6 owing rele Phase 2) se 1996) se 1997) se 1998) se 1999) se 4) se 5) se 6)	ases:
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Summary of chang	ne: ૠ <mark>Th</mark> in	ne new co-s troduced in	iting require the relevant	ments for clauses.	the di	fferent	FDD BS	classes	s will be	
Consequences if not approved:	ж С	o-existence	requiremen	ts for the	new F	DD BS	classes a	are mis	sing.	
Clauses affected:	ж <u>6</u> .	<mark>6.3.3, 6.6.3.</mark>	<mark>4, 6.6.3.7, 6</mark>	6. <u>6.3.10,</u> 6	6.3.1 [°]	1				
Other specs affected:	¥ ₩ X	N X Other co Test spo X O&M Sp	ore specifica ecifications pecifications	ations	ж Т	⁻ S 25.1	41			
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How to create CRs using this form:

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- 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 <u>ftp://ftp.3gpp.org/specs/</u> 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.

6.6.3.3 Co-existence with GSM 900

6.6.3.3.1 Operation in the same geographic area

This requirement may be applied for the protection of GSM 900 MS and GSM 900 BTS receivers in geographic areas in which both GSM 900 and UTRA are deployed.

6.6.3.3.1.1 Minimum Requirement

The power of any spurious emission shall not exceed:

Table 6.11: BS Spurious emissions limits for BS in geographic coverage area of GSM 900 MS and GSM 900 BTS receivers

Band	Maximum Level	Measurement Bandwidth	Note
876 – 915 MHz	-61 dBm	100 kHz	
921 - 960 MHz	-57 dBm	100 kHz	

6.6.3.3.2 Co-located base stations

This requirement may be applied for the protection of GSM 900 BTS receivers when GSM 900 BTS and UTRA BS are co-located.

6.6.3.3.2.1 Minimum Requirement

The power of any spurious emission shall not exceed:

Table 6.12: BS Spurious emissions limits for protection of the GSM 900 BTS receiver

BS class	Band	Maximum Level	Measurement Bandwidth	Note
Wide Area BS	876-915 MHz	-98 dBm	100 kHz	
Medium Range BS	<u>876-915 MHz</u>	<u>-91 dBm</u>	<u>100 kHz</u>	
Local Area BS	<u>876-915 MHz</u>	<u>-70 dBm</u>	<u>100 kHz</u>	

These values assume a 30 dB coupling loss between transmitter and receiver. If BSs of different classes are co-sited, the coupling loss must be increased by the difference between the corresponding values from the table above.

6.6.3.4 Co-existence with DCS 1800

6.6.3.4.1 Operation in the same geographic area

This requirement may be applied for the protection of DCS 1800 MS and DCS 1800 BTS receivers in geographic areas in which both DCS 1800 and UTRA are deployed.

6.6.3.4.1.1 Minimum Requirement

The power of any spurious emission shall not exceed:

Table 6.13: BS Spurious emissions limits for BS in geographic coverage area of DCS 1800 MS andDCS 1800 BTS receivers

Operating Band	Band	Maximum Level	Measurement Bandwidth	Note
I	1805 - 1880 MHz	-47 dBm	100 kHz	
I	1710 – 1785 MHz	-61 dBm	100 kHz	
III	1710 – 1785 MHz	-61 dBm	100 kHz	

6.6.3.4.2 Co-located base stations

This requirement may be applied for the protection of DCS 1800 BTS receivers when DCS 1800 BTS and UTRA BS are co-located.

6.6.3.4.2.1 Minimum Requirement

The power of any spurious emission shall not exceed:

Table 6.14: BS Spurious emissions limits for BS co-located with DCS 1800 BTS

BS class	Operating Band	Band	Maximum Level	Measurement Bandwidth	Note
Wide Area BS	I	1710 - 1785 MHz	-98 dBm	100 kHz	
Medium Range BS	l	<u> 1710 - 1785 MHz</u>	<u>-96 dBm</u>	<u>100 kHz</u>	
Local Area BS	l	<u> 1710 - 1785 MHz</u>	<u>-80 dBm</u>	<u>100 kHz</u>	
Wide Area BS		1710 – 1785 MHz	-98 dBm	100 kHz	
Medium Range BS	<u>III</u>	<u> 1710 – 1785 MHz</u>	<u>-96 dBm</u>	<u>100 kHz</u>	
Local Area BS	<u> </u>	<u>1710 – 1785 MHz</u>	-80 dBm	100 kHz	

These values assume a 30 dB coupling loss between transmitter and receiver. If BSs of different classes are co-sited, the coupling loss must be increased by the difference between the corresponding values from the table above.

6.6.3.5 Co-existence with PHS

This requirement may be applied for the protection of PHS in geographic areas in which both PHS and UTRA are deployed.

6.6.3.5.1 Minimum Requirement

The power of any spurious emission shall not exceed:

Table 6.15: BS Spurious emissions limits for BS in geographic coverage area of PHS

Band	Maximum Level	Measurement Bandwidth	Note
1893.5 - 1919.6 MHz	-41 dBm	300 kHz	

6.6.3.6 Co-existence with services in adjacent frequency bands

This requirement may be applied for the protection in bands adjacent to bands I, II or III, as defined in clause 5.2 in geographic areas in which both an adjacent band service and UTRA are deployed.

6.6.3.6.1 Minimum requirement

The power of any spurious emission shall not exceed:

Table 6.16: BS spurious emissions limits for protection of adjacent band services

Operating Band	Band	Maximum Level	Measurement Bandwidth	Note
I	2100-2105 MHz	-30 + 3.4 · (f - 2100 MHz) dBm	1 MHz	
	2175-2180 MHz	-30 + 3.4 · (2180 MHz - f) dBm	1 MHz	
II	1920-1925 MHz	-30 + 3.4 · (f - 1920 MHz) dBm	1 MHz	
	1995-2000 MHz	-30 +3.4 · (2000 MHz - f) dBm	1 MHz	
	1795-1800 MHz	-30 + 3.4 · (f - 1795 MHz) dBm	1MHz	
	1885-1890 MHz	-30 +3.4 (1890 MHz - f) dBm	1MHz	

6.6.3.7 Co-existence with UTRA-TDD

6.6.3.7.1 Operation in the same geographic area

This requirement may be applied to geographic areas in which both UTRA-TDD and UTRA-FDD are deployed.

6.6.3.7.1.1 Minimum Requirement

The power of any spurious emission shall not exceed:

Table 6.17: BS Spurious emissions limits for BS in geographic coverage area of UTRA-TDD

Band	Maximum Level	Measurement Bandwidth	Note
1900 - 1920 MHz	-52 dBm	1 MHz	
2010 - 2025 MHz	-52 dBm	1 MHz	

6.6.3.7.2 Co-located base stations

This requirement may be applied for the protection of UTRA-TDD BS receivers when UTRA-TDD BS and UTRA FDD BS are co-located.

6.6.3.7.2.1 Minimum Requirement

The power of any spurious emission shall not exceed:

Table 6.18: BS Spurious emissions limits for BS co-located with UTRA-TDD

BS class	Band	Maximum Level	Measurement Bandwidth	Note
Wide Area BS	1900 - 1920 MHz	-86 dBm	1 MHz	
Local Area BS	<u> 1900 - 1920 MHz</u>	<u>-55 dBm</u>	<u>1 MHz</u>	
Wide Area BS	2010 - 2025 MHz	-86 dBm	1 MHz	
Local Area BS	<u>2010 - 2025 MHz</u>	<u>-55 dBm</u>	<u>1 MHz</u>	

These values assume a 30 dB coupling loss between transmitter and receiver. If BSs of different classes are co-sited, the coupling loss must be increased by the difference between the corresponding values from the table above.

6.6.3.8 Co-existence with UTRA in frequency band I

6.6.3.8.1 Operation in the same geographic area

This requirement may be applied for the protection of UTRA UE operating in frequency band I in geographic areas in which both UTRA in frequency band I and III are deployed.

6.6.3.8.1.1 Minimum Requirement

The power of any spurious emission shall not exceed:

Table 6.19: BS Spurious emissions limits for BS in geographic coverage area of UTRA UE receiver operating in frequency band I

Operating Band	Band	Maximum Level	Measurement Bandwidth	Note
	2110 – 2170 MHz	-52 dBm	1 MHz	

6.6.3.8.2 Co-located base stations

This requirement may be applied for the protection of UTRA BS receivers operating in frequency band I when UTRA BS operating in frequency band I and III are co-located.

6.6.3.8.2.1 Minimum Requirement

The power of any spurious emission shall not exceed:

Table 6.20: BS Spurious emissions limits for BS co-located with UTRA BS operating in frequency band I

Operating Band	Band	Maximum Level	Measurement Bandwidth	Note
III	1920 - 1980 MHz	-96 dBm	100 kHz	

6.6.3.9 Co-existence with UTRA in frequency band III

6.6.3.9.1 Operation in the same geographic area

This requirement may be applied for the protection of UTRA UE operating in frequency band III in geographic areas in which both UTRA in frequency band III and I are deployed.

6.6.3.9.1.1 Minimum Requirement

The power of any spurious emission shall not exceed:

Table 6.21: BS Spurious emissions limits for BS in geographic coverage area of UTRA UE receiver operating in frequency band III

Operating Band	Band	Maximum Level	Measurement Bandwidth	Note
I	1805 – 1880 MHz	-62 dBm	100 kHz	

6.6.3.9.2 Co-located base stations

This requirement may be applied for the protection of UTRA BS receivers operating in frequency band III when UTRA BS operating in frequency band III and I are co-located.

The power of any spurious emission shall not exceed:

Table 6.22: BS Spurious emissions limits for BS co-located with UTRA BS operating in frequency band III

Operating Band	Band	Maximum Level	Measurement Bandwidth	Note
l	1710 – 1785 MHz	-96 dBm	100 kHz	

6.6.3.10 Co-existence with PCS1900

6.6.3.10.1 Operation in the same geographic area

This requirement may be applied for the protection of PCS 1900 BS receiver in geographic areas in which both PCS 1900 and UTRA BS operating in the frequency band II are deployed.

6.6.3.10.1.1 Minimum Requirement

The power of any spurious emission shall not exceed:

Table 6.22A: BS Spurious emissions limits for BS in geographic coverage area of PCS 1900 BS

Operating Band	Band	Maximum Level	Measurement Bandwidth	Note
II	1850 - 1910 MHz	-61 dBm	100 kHz	

6.6.3.10.2 Co-located base stations

This requirement may be applied for the protection of PCS1900 BS receivers when UTRA BS operating in frequency band II and PCS1900 BS are co-located.

6.6.3.10.2.1 Minimum Requirement

The power of any spurious emission shall not exceed:

Table 6.23: BS Spurious emissions limits for BS co-located with PCS1900 BS

BS class	Operating Band	Band	Maximum Level	Measurement Bandwidth	Note
Wide Area BS	II	1850 – 1910 MHz	-98 dBm	100 kHz	
Medium Range BS	<u> </u>	<u> 1850 – 1910 MHz</u>	<u>-96 dBm</u>	<u>100 kHz</u>	
Local Area BS	<u> </u>	<u> 1850 – 1910 MHz</u>	<u>-80 dBm</u>	<u>100 kHz</u>	

These values assume a 30 dB coupling loss between transmitter and receiver. If BSs of different classes are co-sited, the coupling loss must be increased by the difference between the corresponding values from the table above.

6.6.3.11 Co-existence with GSM850

6.6.3.11.1 Operation in the same geographic area

This requirement may be applied for the protection of GSM 850 MS and GSM 850 BS receiver in geographic areas in which both GSM 850 and UTRA BS operating in the frequency band II are deployed.

6.6.3.11.1.1 Minimum Requirement

The power of any spurious emission shall not exceed:

Table 6.23A: BS Spurious emissions limits for BS in geographic coverage area of GSM 850

Operating Band	Band	Maximum Level	Measurement Bandwidth	Note
II	824 - 849 MHz	-61 dBm	100 kHz	
	869 – 894 MHz	-57 dBm	100 kHz	

6.6.3.11.2 Co-located base stations

This requirement may be applied for the protection of GSM850 BS receivers when UTRA BS operating in frequency band II and GSM850 BS are co-located.

6.6.3.11.2.1 Minimum Requirement

The power of any spurious emission shall not exceed:

Table 6.24: BS Spurious emissions limits for BS co-located with GSM850 BS

BS class	Operating Band	Band	Maximum Level	Measurement Bandwidth	Note
Wide Area BS	II	824 - 849 MHz	-98 dBm	100 kHz	
Medium Range BS	<u> </u>	<u>824 - 849 MHz</u>	<u>-91 dBm</u>	<u>100 kHz</u>	
Local Area BS	<u> </u>	<u>824 - 849 MHz</u>	<u>-70 dBm</u>	<u>100 kHz</u>	

These values assume a 30 dB coupling loss between transmitter and receiver. If BSs of different classes are co-sited, the coupling loss must be increased by the difference between the corresponding values from the table above.

3GPP TSG RAN WG4 (Radio) Meeting #26

R4-030358

Madrid, Spain 17 - 22 February, 2003

	CHANGE REQUEST						
ж	25.104 CR 177	Current version: 6.0.0 [#]					
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 X Core Network							
Title: ೫	Maximum output power for different BS classes						
Source: ೫	RAN WG4						
Work item code: %	RInImp-BSClass-FDD	Date:					
Category: # B Release: # Rel-6 Use one of the following categories: Use one of the following releases: Image: Control 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-5 (Release 5) Rel-6 (Release 6) Rel-6 (Release 6)							
Reason for change Summary of chang	 Based on the investigations for the work item Tx output power requirements for different BS requirements need to be introduced in TS 25. The new requirements for the different FDD B relevant clauses. 	RInImp-BSClass-FDD maximum classes have been derived. This 104. S classes will be introduced in the					
Consequences if not approved:	Classes are missing.	output power for the new FDD BS					
Clauses affected: Other specs affected: Other comments:	# 6.2 and 6.3 Y N % X Other core specifications % X Test specifications X O&M Specifications % X X O&M Specifications	5.141					

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6.2.1 Base station maximum output power

Maximum output power, Pmax, of the base station is the mean power level per carrier measured at the antenna connector in specified reference condition.

6.2.1.1 Minimum requirement

The rated output power, PRAT, of the BS shall be as specified in Table 6.0A.

BS class	PRAT
Wide Area BS	-*
Medium Range BS	< +38dBm
Local Area BS	< + 24dBm

Table 6.0A: Base Station rated output power

Note *: There is no upper limit required for the rated output power of the Wide Area Base Station like for the base station for General Purpose application in Release 99, 4, and 5.

In normal conditions, the Base station maximum output power shall remain within +2 dB and -2dB of the manufacturer's rated output power.

In extreme conditions, the Base station maximum output power shall remain within +2.5 dB and -2.5 dB of the manufacturer's rated output power.

In certain regions, the minimum requirement for normal conditions may apply also for some conditions outside the range of conditions defined as normal.

6.3 Frequency error

The same source shall be used for RF frequency and data clock generation.

6.3.1 Minimum requirement

The modulated carrier frequency of the BS shall be accurate to within the accuracy range given in Table 6.0.

Table 6.0^B: Frequency error minimum requirement

BS class	Accuracy
Wide Area BS	±0.05 ppm
Medium Range BS	±0.1 ppm
Local Area BS	±0.1 ppm

3GPP TSG RAN WG4 (Radio) Meeting #26

R4-030297

Madrid, Spain 17 - 22 February, 2003

CHANGE REQUEST							
^೫ 2	25.104	CR 184 жr	ev	Ħ	Current version	on: 6.0.0	ж
For <u>HELP</u> o	n using t	this form, see bottom of this pag	e or looi	k at th	e pop-up text c	over the X syr	nbols.
Proposed chang	ge affect	ts: UICC apps೫ M	E Ra	adio A	ccess Network	KX Core Ne	twork
	-						
Title:	<mark>ង The</mark>	e definition of UTRA-FDD BS cla	ISSES				
Source:	ដ <mark>RAN</mark>	IWG4					
Work item code	:: <mark>₩ Rln</mark>	Imp-BSClass-FDD			Date: #	05/03/2003	
						D -	
Category:	策 F	one of the following estagorize:			Release: %	Rel-6	20000:
	Use <u>(</u>	<u>one</u> of the following categories: F (correction)			0se <u>one</u> or tr 2 (GSM Phase 2)	eases?
A (corresponds to a correction in an earlier release) R96 (Release 1996)							
B (addition of feature), R97 (Release 1997)							
		C (functional modification of feature	e)		R98 ((Release 1998)	
	Data	D (editorial modification)			R99 ((Release 1999)	
	Detai	iled explanations of the above cate	gories ca	n	Rel-4 ((Release 4)	
	beio	unu in 3GPP <u>TR 21.900</u> .			Rel-6 ((Release 6)	
					1010		
Reason for char	nge: Ж	The names of BS classes: Wid	de Area.	Medi	um Range, Loo	cal Area, were	not
	U	defined in TR21.905. The purp	bose of t	he ch	ange is to estal	blish the links	between
		the BS class names and the c	BS class names and the cell types defined in TR21.905				
		The election shares ellow	to optob	الم الم ال			
Summary of cha	ange: ж	I ne clarification change allow	to estab	inod i		the BS class	names
		and the terminologies of cell ty	pes del	ineu ii	11621.905		
Consequences	if X	The BS class names are not d	efined in	n TR2	1.905, there is	no link betwe	en the
not approved:		BS class names and the cell ty	/pes def	ined i	n TR21.905.		
			-				
		The proposed clarification cha	ngo hao	no in		P. porformance	
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Clauses affected	d: Ж	4.2					
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Other comments:

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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.

4.2 Base station classes

The requirements in this specification apply to Wide Area Base Stations, Medium Range Base Stations and Local Area Base Stations unless otherwise stated.

Wide Area Base Stations are characterised by requirements derived from <u>Macro Cell</u> scenarios with a BS to UE minimum coupling loss equals to 70 dB. The Wide Area Base Station class has the same requirements as the base station for General Purpose application in Release 99, 4 and 5.

Medium Range Base Stations are characterised by requirements derived from <u>Micro Cell</u> scenarios with a BS to UE minimum coupling loss equals to 53 dB.

Local Area Base Stations are characterised by requirements derived from <u>Pico Cell</u> scenarios with a BS to UE minimum coupling loss equals to 45 dB.

3

3GPP TSG RAN WG4 (Radio) Meeting #26

R4-030089

Madrid, Spain 17 - 22 February, 2003

CHANGE REQUEST							
æ	<mark>25.141</mark>	CR 276	жrev	ж	Current vers	^{sion:} 6.0.0	ж
For <u>HELP</u> on us	ing this fo	orm, see bottom o	of this page or	look at th	e pop-up text	over the X syr	nbols.
Proposed change affects: UICC apps₩ ME Radio Access Network X Core Network							
Title: ដ	Co-siting	requirements fo	r different FDD	BS class	ses		
Source: ೫	RAN WO	64					
Work item code: ℜ	Rinimp-i	BSClass-FDD			<i>Date:</i> ೫	05/03/2003	
Category: ⊮	B Use <u>one</u> or F (co A (co B (ac C (fu D (co Detailed ex be found in	f the following cate rrection) rresponds to a cor Idition of feature), nctional modification itorial modification splanations of the a 3 GPP <u>TR 21.900</u>	gories: rection in an ear on of feature)) above categories	rlier releas s can	Release: # Use <u>one</u> of 2 e) R96 R97 R98 R99 Rel-4 Rel-5 Rel-6	Rel-6 the following rele (GSM Phase 2) (Release 1996) (Release 1997) (Release 1998) (Release 1999) (Release 4) (Release 5) (Release 6)	eases:
Reason for change:	: ೫ Bas sitin requ	ed on the investi g requirements f uirements need to	gations for the or different BS o be introduce	work iter classes d in TS 2	n RInImp-BS0 have been de 5.104.	Class-FDD new rived. This	/ CO-
Summary of change	e: # The intro	new co-siting re oduced in the rele	quirements for evant clauses.	the differ	rent FDD BS o	classes will be	
Consequences if not approved:	ж Со-	existence require	ements for the	new FDD	BS classes a	are missing.	
Clauses affected:	ж <mark>6.5.</mark>	3.4, 6.6.3.7					
Other specs affected:	¥ N 米 X ス ス ス	Other core spe Test specificat O&M Specifica	ecifications ions ations	ж TS:	25.104		
Other comments:	ж						

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6.5.3.4.4 Co-existence with GSM 900

6.5.3.4.4.1 Operation in the same geographic area

This requirement may be applied for the protection of GSM 900 MS and GSM 900 BTS receivers in geographic areas in which both GSM 900 and UTRA are deployed.

This requirement assumes the scenario described in [2]. For different scenarios, the manufacturer may declare a different requirement.

6.5.3.4.4.1.1 Minimum Requirement

The power of any spurious emission shall not exceed.

Table 6.27: BS Spurious emissions limits for BS in geographic coverage area of GSM 900

Band	Maximum Measurement Level Bandwidth		Note
876 MHz to 915 MHz	-61 dBm	100 kHz	
921 MHz to 960 MHz	-57 dBm	100 kHz	

6.5.3.4.4.2 Co-located base stations

This requirement may be applied for the protection of GSM 900 BTS receivers when GSM 900 BTS and UTRA BS are co-located.

6.5.3.4.4.2.1 Minimum Requirement

The power of any spurious emission shall not exceed.

Table 6.28: BS Spurious emissions limits for protection of the BTS receiver

BS class	Band	Maximum Level	Measurement Bandwidth	Note
Wide Area BS	876-915 MHz	-98 dBm	100 kHz	
Medium Range BS	<u>876-915 MHz</u>	<u>-91 dBm</u>	<u>100 kHz</u>	
Local Area BS	<u>876-915 MHz</u>	<u>-70 dBm</u>	<u>100 kHz</u>	

6.5.3.4.5 Co-existence with DCS 1800

6.5.3.4.5.1 Operation in the same geographic area

This requirement may be applied for the protection of DCS 1800 MS and DCS 1800 BTS receivers in geographic areas in which both DCS 1800 and UTRA are deployed.

This requirement assumes the scenario described in [2]. For different scenarios, the manufacturer may declare a different requirement.

6.5.3.4.5.1.1 Minimum Requirement

The power of any spurious emission shall not exceed:

Operating	Band	Maximum	Measurement	Note
Band		Level	Bandwidth	
I	1 805 MHz to 1 880 MHz	-47 dBm	100 kHz	
I	1 710 MHz to 1 785 MHz	-61 dBm	100 kHz	
III	1 710 MHz to 1 785 MHz	-61 dBm	100 kHz	

Table 6.29: BS Spurious emissions limits for BS in geographic coverage area of DCS 1800

6.5.3.4.5.2 Co-located basestations

This requirement may be applied for the protection of DCS 1800 BTS receivers when DCS 1800 BTS and UTRA BS are co-located.

6.5.3.4.5.2.1 Minimum Requirement

The power of any spurious emission shall not exceed.

BS class	Operating Band	Band	Maximum Level	Measurement Bandwidth	Note
Wide Area BS	1	1710 - 1785 MHz	-98 dBm	100 kHz	
Medium Range BS	<u>l</u>	<u> 1710 - 1785 MHz</u>	<u>-96 dBm</u>	<u>100 kHz</u>	
Local Area BS	<u>l</u>	<u> 1710 - 1785 MHz</u>	<u>-80 dBm</u>	<u>100 kHz</u>	
Wide Area BS		1710 – 1785 MHz	-98 dBm	100 kHz	
Medium Range BS	<u>III</u>	<u> 1710 – 1785 MHz</u>	<u>-96 dBm</u>	<u>100 kHz</u>	
Local Area BS		1710 – 1785 MHz	-80 dBm	100 kHz	

Table 6.30: BS Spurious emissions limits for BS co-located with DCS 1800 BTS

6.5.3.4.6 Co-existence with PHS

This requirement may be applied for the protection of PHS in geographic areas in which both PHS and UTRA are deployed.

6.5.3.4.6.1 Minimum Requirement

The power of any spurious emission shall not exceed.

Table 6.31: BS Spurious emissions limits for BS in geographic coverage area of PHS

Band	Maximum Level	Measurement Bandwidth	Note
1 893,5 MHz to 1 919,60 MHz	-41 dBm	300 kHz	

6.5.3.4.7 Co-existence with services in adjacent frequency bands

This requirement may be applied for the protection in bands adjacent to bands I, II or III, as defined in clause 3.4.1 in geographic areas in which both an adjacent band service and UTRA are deployed.

6.5.3.4.7.1 Minimum requirement

The power of any spurious emission shall not exceed.

Operating Band	Band	Maximum Level	Measurement Bandwidth	Note
I	2100-2105 MHz	-30 + 3.4 · (f - 2100 MHz) dBm	1 MHz	
	2175-2180 MHz	-30 + 3.4 · (2180 MHz - f) dBm	1 MHz	
II	1920-1925 MHz	-30 + 3.4 · (f - 1920 MHz) dBm	1 MHz	
	1995-2000 MHz	-30 +3.4 · (2000 MHz - f) dBm	1 MHz	
III	1795-1800 MHz	-30 + 3.4 (f - 1795 MHz) dBm	1MHz	
	1885-1890 MHz	-30 +3.4 · (1890 MHz - f) dBm	1MHz	

Table 6.32: BS spurious emissions limits for protection of adjacent band services

6.5.3.4.8 Co-existence with UTRA-TDD

6.5.3.4.8.1 Operation in the same geographic area

This requirement may be applied to geographic areas in which both UTRA-TDD and UTRA-FDD are deployed.

6.5.3.4.8.1.1 Minimum Requirement

The power of any spurious emission shall not exceed.

Table 6.33: BS Spurious emissions limits for BS in geographic coverage area of UTRA-TDD

Band	Maximum Level	Measurement Bandwidth	Note
1 900 MHz to 1 920 MHz	-52 dBm	1 MHz	
2 010 MHz to 2 025 MHz	-52 dBm	1 MHz	

6.5.3.4.8.2 Co-located base stations

This requirement may be applied for the protection of UTRA-TDD BS receivers when UTRA-TDD BS and UTRA FDD BS are co-located.

6.5.3.4.8.2.1 Minimum Requirement

The power of any spurious emission shall not exceed.

Table 6.34: BS Spurious emissions limits for BS co-located with UTRA-TDD

BS class	Band	Maximum Level	Measurement Bandwidth	Note
Wide Area BS	1900 - 1920 MHz	-86 dBm	1 MHz	
Local Area BS	<u> 1900 - 1920 MHz</u>	<u>-55 dBm</u>	<u>1 MHz</u>	
Wide Area BS	2010 - 2025 MHz	-86 dBm	1 MHz	
Local Area BS	<u>2010 - 2025 MHz</u>	<u>-55 dBm</u>	<u>1 MHz</u>	

6.5.3.4.9 Co-existence with UTRA in frequency band I

6.5.3.4.9.1 Operation in the same geographic area

This requirement may be applied for the protection of UTRA UE operating in frequency band I in geographic areas in which both UTRA in frequency band I and III are deployed.

6.5.3.4.9.1.1 Minimum Requirement

The power of any spurious emission shall not exceed:

Table 6.34A: BS Spurious emissions limits for BS in geographic coverage area of UTRA UE receiver operating in frequency band I

Operating Band	Band	Maximum Level	Measurement Bandwidth	Note
III	2110 – 2170 MHz	-52 dBm	1 MHz	

6.5.3.4.9.2 Co-located base stations

This requirement may be applied for the protection of UTRA BS receivers operating in frequency band I when UTRA BS operating in frequency band I and III are co-located.

6.5.3.4.9.2.1 Minimum Requirement

The power of any spurious emission shall not exceed:

Table 6.34B: BS Spurious emissions limits for BS co-located with UTRA BS operating in frequency band I

Operating Band	Band	Maximum Level	Measurement Bandwidth	Note
	1920 - 1980 MHz	-96 dBm	100 kHz	

6.5.3.4.10 Co-existence with UTRA in frequency band III

6.5.3.4.10.1 Operation in the same geographic area

This requirement may be applied for the protection of UTRA UE operating in frequency band III in geographic areas in which both UTRA in frequency band III and I are deployed.

6.5.3.4.10.1.1 Minimum Requirement

The power of any spurious emission shall not exceed:

Table 6.34C: BS Spurious emissions limits for BS in geographic coverage area of UTRA UE receiver operating in frequency band III

Opera Ba	ating nd	Band	Maximum Level	Measurement Bandwidth	Note
I		1805 – 1880 MHz	-62 dBm	100 kHz	

6.5.3.4.10.2 Co-located base stations

This requirement may be applied for the protection of UTRA BS receivers operating in frequency band III when UTRA BS operating in frequency band III and I are co-located.

6.5.3.4.10.2.1 Minimum Requirement

The power of any spurious emission shall not exceed:

Table 6.34D: BS Spurious emissions limits for BS co-located with UTRA BS operating in frequencyband III

Operating Band	Band	Maximum Level	Measurement Bandwidth	Note
l	1710 – 1785 MHz	-96 dBm	100 kHz	

6.5.3.4.11 Co-existence with PCS1900

6.5.3.4.11.1 Operation in the same geographic area

This requirement may be applied for the protection of PCS 1900 BS receiver in geographic areas in which both PCS 1900 and UTRA BS operating in the frequency band II are deployed.

6.5.3.4.11.1.1 Minimum Requirement

The power of any spurious emission shall not exceed:

Table 6.34Da: BS Spurious emissions limits for BS in geographic coverage area of PCS 1900 BS

Operating Band	Band	Maximum Level	Measurement Bandwidth	Note
II	1850 - 1910 MHz	-61 dBm	100 kHz	

6.5.3.4.11.2 Co-located base stations

This requirement may be applied for the protection of PCS1900 BS receivers when UTRA BS operating in frequency band II and PCS1900 BS are co-located.

6.5.3.4.11.2.1 Minimum Requirement

The power of any spurious emission shall not exceed:

Table 6.34E: BS Spurious emissions limits for BS co-located with PCS1900 BS

BS class	Operating Band	Band	Maximum Level	Measurement Bandwidth	Note
Wide Area BS	II	1850 – 1910 MHz	-98 dBm	100 kHz	
Medium Range BS	<u> </u>	<u> 1850 – 1910 MHz</u>	<u>-96 dBm</u>	<u>100 kHz</u>	
Local Area BS	<u> </u>	<u>1850 – 1910 MHz</u>	<u>-80 dBm</u>	<u>100 kHz</u>	

6.5.3.4.12 Co-existence with GSM850

6.5.3.4.12.1 Operation in the same geographic area

This requirement may be applied for the protection of GSM 850 MS and GSM 850 BS receiver in geographic areas in which both GSM 850 and UTRA BS operating in the frequency band II are deployed.

6.5.3.4.12.1.1 Minimum Requirement

The power of any spurious emission shall not exceed:

Table 6.34Ea: BS Spurious emissions limits for BS in geographic coverage area of GSM 850

Operating Band	Band	Maximum Level	Measurement Bandwidth	Note
II	824 - 849 MHz	-61 dBm	100 kHz	
	869 – 894 MHz	-57 dBm	100 kHz	

6.5.3.4.12.2 Co-located base stations

This requirement may be applied for the protection of GSM850 BS receivers when UTRA BS operating in frequency band II and GSM850 BS are co-located.

6.5.3.4.12.2.1 Minimum Requirement

The power of any spurious emission shall not exceed:

Table 6.34F: BS Spurious emissions limits for BS co-located with GSM850 BS

BS class	Operating Band	Band	Maximum Level	Measurement Bandwidth	Note
Wide Area BS	II	824 - 849 MHz	-98 dBm	100 kHz	
Medium Range BS	<u> </u>	<u>824 - 849 MHz</u>	<u>-91 dBm</u>	<u>100 kHz</u>	
Local Area BS	II	<u>824 - 849 MHz</u>	-70 dBm	100 kHz	

6.5.3.7.4 Co-existence with GSM 900

6.5.3.7.4.1 Operation in the same geographic area

Table 6.38: BS Spurious emissions limits for BS in geographic coverage area of GSM 900

Band	Maximum Level	Measurement Bandwidth	Note
876 MHz to 915 MHz	-61 dBm	100 kHz	
921 MHz to 960 MHz	-57 dBm	100 kHz	

6.5.3.7.4.2 Co-located base stations

Table 6.39: BS Spurious emissions limits for protection of the BTS receiver

BS class	Band	<u>Maximum</u> <u>Level</u>	Measurement Bandwidth	Note
Wide Area BS	<u>876-915 MHz</u>	<u>-98 dBm</u>	<u>100 kHz</u>	
Medium Range BS	<u>876-915 MHz</u>	<u>-91 dBm</u>	<u>100 kHz</u>	
Local Area BS	876-915 MHz	-70 dBm	100 kHz	

6.5.3.7.5 Co-existence with DCS 1800

6.5.3.7.5.1 Operation in the same geographic area

Table 6.40: BS Spurious emissions limits for BS in geographic coverage area of DCS 1800

Operating	Band	Maximum	Measurement	Note
Band		Level	Bandwidth	
I	1 805 MHz to 1 880 MHz	-47 dBm	100 kHz	
I	1 710 MHz to 1 785 MHz	-61 dBm	100 kHz	
	1 710 MHz to 1 785 MHz	-61 dBm	100 kHz	

6.5.3.7.5.2 Co-located base stations

Table 6.41: BS Spurious emissions limits for BS co-located with DCS 1800 BTS

BS class	Operating Band	<u>Band</u>	<u>Maximum</u> Level	Measurement Bandwidth	<u>Note</u>
Wide Area BS	<u>l</u>	<u> 1710 - 1785 MHz</u>	<u>-98 dBm</u>	<u>100 kHz</u>	
Medium Range BS	l	<u> 1710 - 1785 MHz</u>	<u>-96 dBm</u>	<u>100 kHz</u>	
Local Area BS	<u>l</u>	<u> 1710 - 1785 MHz</u>	<u>-80 dBm</u>	<u>100 kHz</u>	
Wide Area BS	<u>III</u>	<u> 1710 – 1785 MHz</u>	<u>-98 dBm</u>	<u>100 kHz</u>	
Medium Range BS	<u>III</u>	<u> 1710 – 1785 MHz</u>	<u>-96 dBm</u>	<u>100 kHz</u>	
Local Area BS	III	1710 – 1785 MHz	-80 dBm	100 kHz	

6.5.3.7.6 Co-existence with PHS

Table 6.42: BS Spurious emissions limits for BS in geographic coverage area of PHS

Band	Maximum Level	Measurement Bandwidth	Note
1 893,5 MHz to 1 919,60 MHz	-41 dBm	300 kHz	

6.5.3.7.7 Co-existence with services in adjacent frequency bands

Table 6.43: BS spurious emissions limits for protection of adjacent band services

Operating Band	Band	Maximum Level	Measurement Bandwidth	Note
I	2100-2105 MHz	-30 + 3.4 · (f - 2100 MHz) dBm	1 MHz	
	2175-2180 MHz	-30 + 3.4 · (2180 MHz - f) dBm	1 MHz	
II	1920-1925 MHz	-30 + 3.4 · (f - 1920 MHz) dBm	1 MHz	
	1995-2000 MHz	-30 +3.4 · (2000 MHz - f) dBm	1 MHz	
III	1795-1800 MHz	-30 + 3.4 · (f - 1795 MHz) dBm	1MHz	
	1885-1890 MHz	-30 +3.4 · (1890 MHz - f) dBm	1MHz	

6.5.3.7.8 Co-existence with UTRA-TDD

6.5.3.7.8.1 Operation in the same geographic area

Table 6.44: BS Spurious emissions limits for BS in geographic coverage area of UTRA-TDD

Band	Maximum Level	Measurement Bandwidth	Note
1 900 MHz to 1 920 MHz	-52 dBm	1 MHz	
2 010 MHz to 2 025 MHz	-52 dBm	1 MHz	

6.5.3.7.8.2 Co-located base stations

Table 6.45: BS Spurious emissions limits for BS co-located with UTRA-TDD

BS class	<u>Band</u>	<u>Maximum</u> Level	Measurement Bandwidth	Note
Wide Area BS	<u> 1900 - 1920 MHz</u>	<u>-86 dBm</u>	<u>1 MHz</u>	
Local Area BS	<u> 1900 - 1920 MHz</u>	<u>-55 dBm</u>	<u>1 MHz</u>	
Wide Area BS	<u>2010 - 2025 MHz</u>	<u>-86 dBm</u>	<u>1 MHz</u>	
Local Area BS	<u>2010 - 2025 MHz</u>	<u>-55 dBm</u>	<u>1 MHz</u>	

6.5.3.7.9 Co-existence with UTRA in frequency band I

6.5.3.7.9.1 Operation in the same geographic area

Table 6.46: BS Spurious emissions limits for BS in geographic coverage area of UTRA UE receiver operating in frequency band I

Operating Band	Band	Maximum Level	Measurement Bandwidth	Note
	2110 – 2170 MHz	-52 dBm	1 MHz	

6.5.3.7.9.2 Co-located base stations

Table 6.47: BS Spurious emissions limits for BS co-located with UTRA BS operating in frequency band I

Operating Band	Band	Maximum Level	Measurement Bandwidth	Note
=	1920 - 1980 MHz	-96 dBm	100 kHz	

6.5.3.7.10 Co-existence with UTRA in frequency band III

6.5.3.7.10.1 Operation in the same geographic area

Table 6.48: BS Spurious emissions limits for BS in geographic coverage area of UTRA UE receiver operating in frequency band III

Operating Band	Band	Maximum Level	Measurement Bandwidth	Note
I	1805 – 1880 MHz	-62 dBm	100 kHz	

6.5.3.7.10.2 Co-located base stations

Table 6.49: BS Spurious emissions limits for BS co-located with UTRA BS operating in frequency band III

Operating Band	Band	Maximum Level	Measurement Bandwidth	Note
I	1710 – 1785 MHz	-96 dBm	100 kHz	

6.5.3.7.11 Co-existence with PCS1900

6.5.3.7.11.1 Operation in the same geographic area

Table 6.49A: BS Spurious emissions limits for BS in geographic coverage area of PCS 1900 BS

Operating Band	Band	Maximum Level	Measurement Bandwidth	Note
II	1850 - 1910 MHz	-61 dBm	100 kHz	

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 subclause 4.2 and the explanation of how the Minimum Requirement has been relaxed by the Test Tolerance is given in Annex F.

6.5.3.7.11.2 Co-located base stations

Table 6.50: BS Spurious emissions limits for BS co-located with PCS1900 BS

BS class	<u>Operating</u> <u>Band</u>	<u>Band</u>	<u>Maximum</u> Level	Measurement Bandwidth	<u>Note</u>
Wide Area BS	<u> </u>	<u> 1850 – 1910 MHz</u>	<u>-98 dBm</u>	<u>100 kHz</u>	
Medium Range BS	<u> </u>	<u> 1850 – 1910 MHz</u>	<u>-96 dBm</u>	<u>100 kHz</u>	
Local Area BS	<u> </u>	<u> 1850 – 1910 MHz</u>	<u>-80 dBm</u>	<u>100 kHz</u>	

6.5.3.7.12 Co-existence with GSM850

6.5.3.7.12.1 Operation in the same geographic area

Table 6.50A: BS Spurious emissions limits for BS in geographic coverage area of GSM 850

Operating Band	Band	Maximum Level	Measurement Bandwidth	Note
Π	824 - 849 MHz	-61 dBm	100 kHz	
II	869 – 894 MHz	-57 dBm	100 kHz	

6.5.3.7.12.2 Co-located base stations

Table 6.51: BS Spurious emissions limits for BS co-located with GSM850 BS

BS class	Operating Band	<u>Band</u>	<u>Maximum</u> Level	Measurement Bandwidth	<u>Note</u>
Wide Area BS	<u> </u>	<u>824 - 849 MHz</u>	<u>-98 dBm</u>	<u>100 kHz</u>	
Medium Range BS	<u> </u>	<u>824 - 849 MHz</u>	<u>-91 dBm</u>	<u>100 kHz</u>	
Local Area BS	<u> </u>	<u>824 - 849 MHz</u>	<u>-70 dBm</u>	<u>100 kHz</u>	

3GPP TSG RAN WG4 (Radio) Meeting #26

R4-030350

Madrid, Spain 17 - 22 February, 2003

	CHANGE REQUEST						
ж	25.141 CR 278 # rev 3 ^{# (}	Current version: 6.0.0 [#]					
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 X Core Network X							
Title: ೫	Maximum output power for different BS classes						
Source: ೫	RAN WG4						
Work item code: Ж	RInImp-BSClass-FDD	Date:					
Category: # B Release: # Rel-6 Use one of the following categories: Use one 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 Rel-4 (Release 4) be found in 3GPP TR 21.900. Rel-5 (Release 5) Rel-6 (Release 6) Rel-6 (Release 6)							
Reason for change: # Based on the investigations for the work item RInImp-BSClass-FDD maximum Tx output power requirements for different BS classes have been derived. This requirements need to be introduced in TS 25.141. Summary of change: # The new requirements for the different FDD BS classes will be introduced in the relevant clauses							
Consequences if not approved:	Herequirements for Base Station maximum classes are missing.	output power for the new FDD BS					
Clauses affected: Other specs affected:	# 6.2 and 6.3 # Y N # X Other core specifications # TS 25 X Test specifications # O&M Specifications % X O&M Specifications #	5.104					

How to create CRs using this form:

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

6.2.1 Base station maximum output power

6.2.1.1 Definition and applicability

Maximum output power, Pmax, of the base station is the mean power level per carrier measured at the antenna connector in specified reference condition.

In certain regions, the minimum requirement for normal conditions may apply also for some conditions outside the ranges defined for the Normal test environment in subclause 4.4.1.

6.2.1.1 Minimum requirement

The rated output power, PRAT, of the BS shall be as specified in Table 6.8A.

Table 6.8A: Base Station rated output power

BS class	PRAT
Wide Area BS	-*
Medium Range BS	<u>< +38dBm</u>
Local Area BS	<u>< + 24dBm</u>

Note *: There is no upper limit required for the rated output power of the Wide Area Base Station like for the base station for General Purpose application in Release 99, 4, and 5.

In normal conditions, the Base station maximum output power shall remain within +2.0 dB and -2.0 dB of the manufacturer's rated output power.

In extreme conditions, the Base station maximum output power shall remain within +2.5 dB and -2.5 dB of the manufacturer's rated output power.

The normative reference for this requirement is in TS 25.104 [1] subclause 6.2.1.

6.2.1.3 Test purpose

The test purpose is to verify the accuracy of the maximum output power across the frequency range and under normal and extreme conditions for all transmitters in the BS.

6.2.1.4 Method of test

6.2.1.4.1 Initial conditions

Test environment: normal; see subclause 4.4.1.

RF channels to be tested: B, M and T; see subclause 4.8.

In addition, on one UARFCN only, the test shall be performed under extreme power supply as defined in subclause 4.4.2

NOTE: Tests under extreme power supply also test extreme temperature.

1) Connect the power measuring equipment to the base station RF output port.

6.2.1.4.2 Procedure

- 1) Set the base station to transmit a signal modulated with a combination of PCCPCH, SCCPCH and Dedicated Physical Channels specified as test model1 in subclause 6.1.1.1.
- 2) Measure the mean power at the RF output port.

6.2.1.5 Test Requirements

In normal conditions, the measurement result in step 2 of 6.2.1.4.2 shall remain within +2.7 dB and -2.7 dB of the manufacturer's rated output power.

In extreme conditions, measurement result in step 2 of 6.2.1.4.2 shall remain within +3.2 dB and -3.2 dB of the manufacturer's rated output power.

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 subclause 4.2 and the explanation of how the Minimum Requirement has been relaxed by the Test Tolerance is given in Annex F.

6.2.2 CPICH power accuracy

6.2.2.1 Definition and applicability

CPICH power accuracy is defined as the maximum deviation between the Primary CPICH code domain power indicated on the BCH and the Primary CPICH code domain power measured at the TX antenna interface. The requirement is applicable for all BS types.

6.2.2.2 Minimum Requirement

The measured Primary CPICH code domain power shall be within ± 2.1 dB of the Primary CPICH code domain power indicated on the BCH. The normative reference for this requirement is in TS 25.104 [1] subclause 6.4.4

6.2.2.3 Test purpose

The purpose of the test is to verify, that the BS under test delivers Primary CPICH code domain power within margins, thereby allowing reliable cell planning and operation.

6.2.2.4 Method of test

6.2.2.4.1 Initial conditions

Test environment: normal; see subclause 4.4.1.

RF channels to be tested: B, M and T; see subclause 4.8

- 1) Connect BS to code domain analyser as shown in annex B.
- 2) Disable inner loop power control.
- 3) Set-up BS transmission at maximum total power as specified by the supplier. Channel set-up shall be according to Test Model 2 subclause 6.1.1.2.

6.2.2.4.2 Procedure

- Measure the code domain power of the PCPICH in one timeslot according to annex E.

6.2.2.5 Test Requirement

The measured CPICH power shall be within ± 2.9 dB of the ordered absolute value.

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 subclause 4.2 and the explanation of how the Minimum Requirement has been relaxed by the Test Tolerance is given in Annex F.

6.3 Frequency error

6.3.1 Definition and applicability

Frequency error is the measure of the difference between the actual BS transmit frequency and the assigned frequency. The same source shall be used for RF frequency and data clock generation.

It is not possible to verify by testing that the data clock is derived from the same frequency source as used for RF generation. This may be confirmed by a manufacturers declaration

6.3.2 Minimum Requirement

The Frequency Error shall be within the accuracy range given in Table 6.8A observed over a period of one timeslot.

Table 6.8A8B: Frequency error minimum requirement

BS class	Accuracy
Wide Area BS	±0.05 ppm
Medium Range BS	±0.1 ppm
Local Area BS	±0.1 ppm

The normative reference for this requirement is in TS 25.104 [1] subclause 6.3

6.3.3 Test purpose

To verify that the Frequency Error is within the limit specified in 6.3.2

6.3.4 Method of test

Requirement is tested together with Error Vector Magnitude test, as described in subclause 6.7.1.4.

6.3.5 Test requirement

The Frequency Error shall be between the minimum and maximum value specified in Table 6.8B.

BS class	Minimum frequency error	Maximum frequency error		
Wide Area BS	-0.05 ppm - 12 Hz	+0.05 ppm + 12 Hz		
Medium Range BS	-0.1 ppm - 12 Hz	+0.1 ppm + 12 Hz		
Local Area BS	-0.1 ppm - 12 Hz	+0.1 ppm + 12 Hz		

Table 6.8882: Frequency error test requirement

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 subclause 4.2 and the explanation of how the Minimum Requirement has been relaxed by the Test Tolerance is given in Annex F.

3GPP TSG RAN WG4 (Radio) Meeting #26

R4-030299

Madrid, Spain 17 - 22 February, 2003

			CI	HANG	E REQ	UE	ST				CR-Form-v7
ж	25.	141	CR	290	ж rev		ж	Current vers	sion:	6.0.0	ж
For <mark>HE</mark>	ELP on us	sing th	is form, see b	ottom of th	is page or	look	at the	e pop-up text	t over	the	nbols.
Proposed	Proposed change affects: UICC apps% ME Radio Access Network X Core Network										
Title:	ж	The d	efinition of UT	RA-FDD B	S classes						
Source:	Ħ	RAN	VG4								
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How to create CRs using this form:

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Other comments:

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

4.3A Base station classes

The requirements in the present document apply to Wide Area Base Stations, Medium Range Base Stations and Local Area Base Stations unless otherwise stated.

Wide Area Base Stations are characterised by requirements derived from <u>Macro Cell</u> scenarios with a BS to UE minimum coupling loss equals to 70 dB. The Wide Area Base Station class has the same requirements as the base station for General Purpose application in Release 99, 4 and 5.

Medium Range Base Stations are characterised by requirements derived from <u>Micro Cell</u> scenarios with a BS to UE minimum coupling loss equals to 53 dB.

Local Area Base Stations are characterised by requirements derived from <u>Pico Cell</u> scenarios with a BS to UE minimum coupling loss equals to 45 dB.

The manufacturer shall declare the intended class of the BS under test.