TSG RAN Meeting #20 **RP-030214**
Hämeenlinna, Finland, 3 - 6 June, 2003

Title **CRs (Rel-5 and Rel-6 Category A) to TS 25.104**
Source **TSG RAN WG4**
Agenda Item **7.4.5**

RAN4 Tdoc	Spec	CR	R	Cat	Rel	Curr Ver	Title	Work Item
R4-020641	25.104	191	1	F	Rel-5	5.6.0	General corrections on co-existence and co-location requirements for UTRA-FDD BS	TEI5
R4-020642	25.104	192	1	A	Rel-6	6.1.0	General corrections on co-existence and co-location requirements for UTRA-FDD BS	TEI5

3GPP TSG RAN WG4 (Radio) Meeting #27 **R4-030641**

Paris, France 19 - 23 May, 2003

CR-Form-v7

CHANGE REQUEST

⌘ **25.104** **CR** **191** ⌘ **rev** **1** ⌘ Current version: **5.6.0** ⌘

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

Title:	⌘	General corrections on co-existence and co-location requirements for UTRA-FDD BS
Source:	⌘	RAN WG4
Work item code:	⌘	TEI5
Date:	⌘	27/05/2003
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:
2 *(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)*

Reason for change: ⌘

1) For the co-existence and co-location requirements, some are specified with the indication of operating bands, some not, an alignement is needed.
2) The requirement for the protection of UTRA-FDD BS receiver operating in band I (III) in co-existence with UTRA-FDD BS operating in other bands was missing.
3) There are several editorial type errors.

Summary of change: ⌘

- Several editorial type corrections
- Deletion of operating bands in the requirements for co-existence and co-location, except co-existence with services in adjacent bands
- Addition of requirements for the protection of UTRA-FDD BS receiver operating in band I (III) in co-existence with UTRA-FDD BS operating in other bands, the requirement of -49 dBm/1 MHz is derived from the already existing co-location requirement of –96dBm/100kHz, whereas co-location is based on 30dB MCL. For co-excistence in the Same Geographic Area the approved scenario of TR 25.942 with an MCL of 67dB is used (-96dBm/100kHz + 37dB (=67dB – 30dB) = -59 dBm/100kHz = -49 dBm/1 MHz).
- Alignment of the blocking requirements for co-colation

Consequences if not approved: ⌘

There will be existing differences and dis-alignment in the requirements for co-existence and co-location concerning the operating bands.
The requirements for protection of UTRA-FDD BS receiver operating in band I and III will be missing

Isolated Impact Analysis:
Approval of this CR should not affect FDD BS implementation and performance.

Clauses affected:	⌘	4.3; 6.6.3.3; 6.6.3.4; 6.6.3.5; 6.6.3.6; 6.6.3.7; 6.6.3.8; 6.6.3.9; 6.6.3.10; 6.6.3.11; 7.5.2			
Other specs affected:	⌘	**Y** / **N** **N** **Y** **N**	Other core specifications Test specifications O&M Specifications	⌘	TS 25.141
Other comments:	⌘	Equivalent CRs in other Releases: CR192r1 cat. A to 25.104 v6.1.0			

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.
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.

4.3 Regional requirements

Some requirements in TS 25.104 may only apply in certain regions. Table 4.1 lists all requirements that may be applied differently in different regions.

Table 4.1: List of regional requirements

Clause number	Requirement	Comments
5.2	Frequency bands	Some bands may be applied regionally.
5.3	Tx-Rx Frequency Separation	The requirement is applied according to what frequency bands in Clause 5.2 that are supported by the BS.
5.4	Channel arrangement	The requirement is applied according to what frequency bands in Clause 5.2 that are supported by the BS.
6.2.1	Base station maximum 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.
6.6.2.1	Spectrum emission mask	The mask specified may be mandatory in certain regions. In other regions this mask may not be applied.
6.6.3.1.1	Spurious emissions (Category A)	These requirements shall be met in cases where Category A limits for spurious emissions, as defined in ITU-R Recommendation SM.329-9 [1], are applied.
6.6.3.1.2	Spurious emissions (Category B)	These requirements shall be met in cases where Category B limits for spurious emissions, as defined in ITU-R Recommendation SM.329-9 [1], are applied.
6.6.3.3.1	Co-existence with GSM900 -Operation in the same geographic area	This requirement may be applied for the protection of GSM 900 MS and GSM 900 BTS in geographic areas in which both GSM 900 and UTRA-FDD are deployed.
6.6.3.3.2	Co-existence with GSM900 - Co-located base stations	This requirement may be applied for the protection of GSM 900 BTS receivers when GSM 900 BTS and UTRA-FDD BS are co-located.
6.6.3.4.1	Co-existence with DCS1800 -Operation in the same geographic area	This requirement may be applied for the protection of DCS 1800 MS and DCS 1800 BTS in geographic areas in which both DCS 1800 and UTRA-FDD are deployed.
6.6.3.4.2	Co-existence with DCS1800 - Co-located base stations	This requirement may be applied for the protection of DCS 1800 BTS receivers when DCS 1800 BTS and UTRA-FDD BS are co-located.
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-FDD are deployed.
6.6.3.6	Co-.existence with services in adjacent frequency bands	This requirement may be applied for the protection in bands adjacent to the downlink bands as defined in clause 5.2 in geographic areas in which both an adjacent band service and UTRA-FDD are deployed.
6.6.3.7.1	Co-existence with UTRA TDD - Operation in the same geographic area	This requirement may be applied to geographic areas in which both UTRA-TDD and UTRA-FDD are deployed.
6.6.3.7.2	Co-existence with UTRA TDD - 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.
6.6.3.8.1	Co-existence with UTRA-FDD in frequency band I -Operation in the same geographic area	This requirement may be applied for the protection of UTRA-FDD UE in frequency band I in geographic areas in which both UTRA-FDD in frequency band I and III are deployed.

6.6.3.8.2	Co-existence with UTRA-FDD in frequency band I - Co-located base stations	This requirement may be applied for the protection of UTRA-FDD BTS receivers in frequency band I when UTRA-FDD BS in frequency band I and III are co-located.
6.6.3.9.1	Co-existence with UTRA-FDD in frequency band III -Operation in the same geographic area	This requirement may be applied for the protection of UTRA-FDD UE in frequency band I in geographic areas in which both UTRA-FDD in frequency band I and III are deployed.
6.6.3.9.2	Co-existence with UTRA-FDD in frequency band III - Co-located base stations	This requirement may be applied for the protection of UTRA-FDD BTS receivers in frequency band I when UTRA-FDD BS in frequency band I and III are co-located.
6.6.3.10.1	Co-existence with PCS1900 -Operation in the same geographic area	This requirement may be applied for the protection of PCS 1900 BTS receivers in geographic areas in which both PCS 1900 and UTRA-FDD are deployed.
6.6.3.10.2	Co-existence with PCS1900 - Co-located base stations	This requirement may be applied for the protection of PCS 1900 BTS receivers when PCS 1900 BTS and UTRA-FDD BS are co-located.
6.6.3.11.1	Co-existence with GSM850 -Operation in the same geographic area	This requirement may be applied for the protection of GSM 850 MS and GSM 850 BTS receivers in geographic areas in which both GSM 850 and UTRA-FDD are deployed.
6.6.3.11.2	Co-existence with GSM850 - Co-located base stations	This requirement may be applied for the protection of GSM 850 BTS receivers when GSM 850 BTS and UTRA-FDD BS are co-located.
7.4.2	Adjacent Channel Selectivity Co-location with UTRA-TDD	This requirement may be applied for the protection of UTRA-FDD BS receivers when UTRA-FDD BS and UTRA-TDD BS are co-located.
7.5	Blocking characteristic	The requirement is applied according to what frequency bands in Clause 5.2 that are supported by the BS.
7.5.2	Blocking characteristics Co-location with GSM900, DCS 1800, PCS1900 and/or UTRA	This requirement may be applied for the protection of UTRA-FDD BS receivers when UTRA-FDD BS and GSM 900, DCS1800, PCS1900, GSM850 and/or UTRA BS (operating in different frequency bands) are co-located.
7.5.3	Blocking characteristics Co-location with UTRA TDD	This requirement may be applied for the protection of UTRA FDD BS receivers when UTRA FDD BS and UTRA TDD BS are co-located.
7.6	Intermodulation characteristics	The requirement is applied according to what frequency bands in Clause 5.2 that are supported by the BS.
7.7	Spurious emissions	The requirement is applied according to what frequency bands in Clause 5.2 that are supported by the BS.
	HSDPA*	The portion of HSDPA(High Speed Downlink Packet Access) is not applicable to ARIB standards by the time when ARIB is prepared to transpose.

Note *: HSDPA: This regional requirement should be reviewed to check its necessity every TSG RAN meeting.

{Separate Section }

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-FDD 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 receiver

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-FDD 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

Band	**Maximum Level**	**Measurement Bandwidth**	**Note**
876-915 MHz	-98 dBm	100 kHz	

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-FDD 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 and DCS 1800 BTS receiver

Band	Maximum Level	Measurement Bandwidth	Note
1805 - 1880 MHz	-47 dBm	100 kHz	This requirement does not apply to UTRA-FDD BS operating in band III
1710 – 1785 MHz	-61 dBm	100 kHz	This requirement does not apply to UTRA-FDD BS operating in band III, since it is already covered by the requirement in sub-clause 6.6.3.2.

~~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-FDD 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

Band	Maximum Level	Measurement Bandwidth	Note
1710 - 1785 MHz	-98 dBm	100 kHz	

~~Operating Band~~	~~Band~~	~~Maximum Level~~	~~Measurement Bandwidth~~	~~Note~~
~~I~~	~~1710 – 1785 MHz~~	~~-98 dBm~~	~~100 kHz~~	
~~III~~	~~1710 – 1785 MHz~~	~~-98 dBm~~	~~100 kHz~~	

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-FDD 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-FDD 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	
III	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

Band	Maximum Level	Measurement Bandwidth	Note
1900 - 1920 MHz	-86 dBm	1 MHz	
2010 - 2025 MHz	-86 dBm	1 MHz	

6.6.3.8 Co-existence with UTRA-FDD 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-FDD UE and BS operating in frequency band I in geographic areas in which both UTRA-FDD in frequency band I and UTRA-FDD in other bands ~~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-FDD UE receiver and BS receiver operating in frequency band I

Band	Maximum Level	Measurement Bandwidth	Note
2110 – 2170 MHz	-52 dBm	1 MHz	This requirement does not apply to UTRA-FDD BS operating in band I
1920 – 1980 MHz	-49 dBm	1 MHz	This requirement does not apply to UTRA-FDD BS operating in band I, since it is already covered by the requirement in sub-clause 6.6.3.2.

~~Operating Band~~	~~Band~~	~~Maximum Level~~	~~Measurement Bandwidth~~	~~Note~~
~~III~~	~~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-FDD BS receivers operating in frequency band I when UTRA-FDD BS operating in frequency band I and UTRA-FDD BS operating in other frequency bands~~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-FDD BS operating in frequency band I

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

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

6.6.3.9 Co-existence with UTRA-FDD 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-FDD UE and BS operating in frequency band III in geographic areas in which both UTRA-FDD in frequency band III and UTRA-FDD in other frequency bands ~~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-FDD UE receiver and BS receiver operating in frequency band III

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

Band	Maximum Level	Measurement Bandwidth	Note
1805 – 1880 MHz	-52 dBm	1 MHz	This requirement does not apply to UTRA-FDD BS operating in band III
1710 – 1785 MHz	-49 dBm	1 MHz	This requirement does not apply to UTRA-FDD BS operating in band III, since it is already covered by the requirement in sub-clause 6.6.3.2.

6.6.3.9.2 Co-located base stations

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

6.6.3.9.2.1 Minimum Requirement

The power of any spurious emission shall not exceed:

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

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

Band	Maximum Level	Measurement Bandwidth	Note
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 and UE receiver in geographic areas in which both PCS 1900 and UTRA-FDD 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~~	

Band	Maximum Level	Measurement Bandwidth	Note
1850 - 1910 MHz	-61 dBm	100 kHz	This requirement does not apply to UTRA-FDD BS operating in frequency band II, since it is already covered by the requirement in sub-clause 6.6.3.2.
1930 - 1990 MHz	-47 dBm	100 kHz	This requirement does not apply to UTRA-FDD BS operating in frequency band II

6.6.3.10.2 Co-located base stations

This requirement may be applied for the protection of PCS1900 BS receivers when UTRA-FDD 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

~~Operating Band~~	~~Band~~	~~Maximum Level~~	~~Measurement Bandwidth~~	~~Note~~
~~II~~	~~1850 - 1910 MHz~~	~~-98 dBm~~	~~100 kHz~~	

Band	Maximum Level	Measurement Bandwidth	Note
1850 – 1910 MHz	-98 dBm	100 kHz	

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-FDD 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~~	
~~II~~	~~869 – 894 MHz~~	~~-57 dBm~~	~~100 kHz~~	

Band	Maximum Level	Measurement Bandwidth	Note
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-FDD 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

~~Operating Band~~	~~Band~~	~~Maximum Level~~	~~Measurement Bandwidth~~	~~Note~~
~~II~~	~~824 – 849 MHz~~	~~-98 dBm~~	~~100 kHz~~	

Band	Maximum Level	Measurement Bandwidth	Note
824 - 849 MHz	-98 dBm	100 kHz	

{Separate Section }

7.5.2 Minimum Requirement – Co-location with GSM900, DCS 1800, PCS1900, GSM850 and/or UTRA-FDD

This additional blocking requirement may be applied for the protection of UTRA-FDD BS receivers when GSM900, PCS1900, GSM850 and/or BS operating in DCS1800 band (UTRA or GSM) are co-located with UTRA-FDD BS.

The static reference performance as specified in clause 7.2.1 shall be met with a wanted and an interfering signal coupled to BS antenna input using the following parameters.

Table 7.5A: Blocking performance requirement when co-located with GSM900

Center Frequency of Interfering Signal	Interfering Signal mean power	Wanted Signal mean power	Minimum Offset of Interfering Signal	Type of Interfering Signal
921 – 960 MHz	+16 dBm	-115 dBm	—	CW carrier

~~Operating band~~	~~Center Frequency of Interfering Signal~~	~~Interfering Signal mean power~~	~~Wanted Signal mean power~~	~~Minimum Offset of Interfering Signal~~	~~Type of Interfering Signal~~
~~I, III~~	~~921 – 960 MHz~~	~~+16 dBm~~	~~-115 dBm~~	—	~~CW carrier~~

Table 7.5B: Blocking performance requirement when co-located with BTS operating in DCS1800 band (GSM or UTRA-FDD)

Center Frequency of Interfering Signal	Interfering Signal mean power	Wanted Signal mean power	Minimum Offset of Interfering Signal	Type of Interfering Signal
1805 – 1880 MHz	+16 dBm	-115 dBm	—	CW carrier

~~Operating band~~	~~Center Frequency of Interfering Signal~~	~~Interfering Signal mean power~~	~~Wanted Signal mean power~~	~~Minimum Offset of Interfering Signal~~	~~Type of Interfering Signal~~
~~I, III~~	~~1805 – 1880 MHz~~	~~+16 dBm~~	~~-115 dBm~~	—	~~CW carrier~~

Table 7.5C: Blocking performance requirement for operation when co-located with UTRA BS operating in Frequency band I

Center Frequency of Interfering Signal	Interfering Signal mean power	Wanted Signal mean power	Minimum Offset of Interfering Signal	Type of Interfering Signal
2110 – 2170 MHz	+16 dBm	-115 dBm	—	CW carrier

~~Operating band~~	~~Center Frequency of Interfering Signal~~	~~Interfering Signal mean power~~	~~Wanted Signal mean power~~	~~Minimum Offset of Interfering Signal~~	~~Type of Interfering Signal~~
~~III~~	~~2110 – 2170 MHz~~	~~+16 dBm~~	~~-115 dBm~~	—	~~CW carrier~~

Table 7.5D: Blocking performance requirement for operation when co-located with PCS1900 BTS

Center Frequency of Interfering Signal	Interfering Signal mean power	Wanted Signal mean power	Minimum Offset of Interfering Signal	Type of Interfering Signal
1930 – 1990 MHz	+16 dBm	-115 dBm	—	CW carrier

~~Operating band~~	~~Center Frequency of Interfering Signal~~	~~Interfering Signal mean power~~	~~Wanted Signal mean power~~	~~Minimum Offset of Interfering Signal~~	~~Type of Interfering Signal~~
~~II~~	~~1930 – 1990 MHz~~	~~+16 dBm~~	~~-115 dBm~~	—	~~CW carrier~~

Table 7.5E: Blocking performance requirement for operation when co-located with GSM850 BTS

Center Frequency of Interfering Signal	Interfering Signal mean power	Wanted Signal mean power	Minimum Offset of Interfering Signal	Type of Interfering Signal
869 – 894 MHz	+16 dBm	-115 dBm	—	CW carrier

~~Operating band~~	~~Center Frequency of Interfering Signal~~	~~Interfering Signal mean power~~	~~Wanted Signal mean power~~	~~Minimum Offset of Interfering Signal~~	~~Type of Interfering Signal~~
~~II~~	~~869 – 894 MHz~~	~~+16 dBm~~	~~-115 dBm~~	—	~~CW carrier~~

3GPP TSG RAN WG4 (Radio) Meeting #27 **R4-030642**

Paris, France 19 - 23 May, 2003

CR-Form-v7

CHANGE REQUEST

⌘ **25.104** **CR** **192** ⌘ **rev** **1** ⌘ Current version: **6.1.0** ⌘

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

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Reason for change: ⌘

1) For the co-existence and co-location requirements, some are specified with the indication of operating bands, some not, an alignement is needed.
2) The requirement for the protection of UTRA-FDD BS receiver operating in band I (III) in co-existence with UTRA-FDD BS operating in other bands was missing.
3) There are several editorial type errors.

Summary of change: ⌘

- Several editorial type corrections
- Deletion of operating bands in the requirements for co-existence and co-location, except co-existence with services in adjacent bands
- Addition of requirements for the protection of UTRA-FDD BS receiver operating in band I (III) in co-existence with UTRA-FDD BS operating in other bands, the requirement of -49 dBm/1 MHz is derived from the already existing co-location requirement of –96dBm/100kHz, whereas co-location is based on 30dB MCL. For co-excistence in the Same Geographic Area the approved scenario of TR 25.942 with an MCL of 67dB is used (-96dBm/100kHz + 37dB (=67dB – 30dB) = -59 dBm/100kHz = -49 dBm/1 MHz).
- Alignment of the blocking requirements for co-location

Consequences if not approved: ⌘

There will be existing differences and dis-alignment in the requirements for co-existence and co-location concerning the operating bands.
The requirements for protection of UTRA-FDD BS receiver operating in band I and III will be missing

Isolated Impact Analysis:
Approval of this CR should not affect FDD BS implementation and performance.

Clauses affected:	⌘	4.3; 6.6.3.3; 6.6.3.4; 6.6.3.5; 6.6.3.6; 6.6.3.7; 6.6.3.8; 6.6.3.9; 6.6.3.10; 6.6.3.11; 7.5.2			
Other specs affected:	⌘	**Y** / **N** **N** **Y** **N**	Other core specifications Test specifications O&M Specifications	⌘	TS 25.141
Other comments:	⌘	Equivalent CRs in other Releases: CR191r1 cat. F to 25.104 v5.6.0			

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.
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.

4.3 Regional requirements

Some requirements in TS 25.104 may only apply in certain regions. Table 4.1 lists all requirements that may be applied differently in different regions.

Table 4.1: List of regional requirements

Clause number	Requirement	Comments
5.2	Frequency bands	Some bands may be applied regionally.
5.3	Tx-Rx Frequency Separation	The requirement is applied according to what frequency bands in Clause 5.2 that are supported by the BS.
5.4	Channel arrangement	The requirement is applied according to what frequency bands in Clause 5.2 that are supported by the BS.
6.2.1	Base station maximum 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.
6.6.2.1	Spectrum emission mask	The mask specified may be mandatory in certain regions. In other regions this mask may not be applied.
6.6.3.1.1	Spurious emissions (Category A)	These requirements shall be met in cases where Category A limits for spurious emissions, as defined in ITU-R Recommendation SM.329-9 [1], are applied.
6.6.3.1.2	Spurious emissions (Category B)	These requirements shall be met in cases where Category B limits for spurious emissions, as defined in ITU-R Recommendation SM.329-9 [1], are applied.
6.6.3.3.1	Co-existence with GSM900 -Operation in the same geographic area	This requirement may be applied for the protection of GSM 900 MS and GSM 900 BTS in geographic areas in which both GSM 900 and UTRA-FDD are deployed.
6.6.3.3.2	Co-existence with GSM900 - Co-located base stations	This requirement may be applied for the protection of GSM 900 BTS receivers when GSM 900 BTS and UTRA-FDD BS are co-located.
6.6.3.4.1	Co-existence with DCS1800 -Operation in the same geographic area	This requirement may be applied for the protection of DCS 1800 MS and DCS 1800 BTS in geographic areas in which both DCS 1800 and UTRA-FDD are deployed.
6.6.3.4.2	Co-existence with DCS1800 - Co-located base stations	This requirement may be applied for the protection of DCS 1800 BTS receivers when DCS 1800 BTS and UTRA-FDD BS are co-located.
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-FDD are deployed.
6.6.3.6	Co-.existence with services in adjacent frequency bands	This requirement may be applied for the protection in bands adjacent to the downlink bands as defined in clause 5.2 in geographic areas in which both an adjacent band service and UTRA-FDD are deployed.
6.6.3.7.1	Co-existence with UTRA TDD - Operation in the same geographic area	This requirement may be applied to geographic areas in which both UTRA-TDD and UTRA-FDD are deployed.
6.6.3.7.2	Co-existence with UTRA TDD - 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.
6.6.3.8.1	Co-existence with UTRA-FDD in frequency band I -Operation in the same geographic area	This requirement may be applied for the protection of UTRA-FDD UE in frequency band I in geographic areas in which both UTRA-FDD in frequency band I and III are deployed.

6.6.3.8.2	Co-existence with UTRA-FDD in frequency band I - Co-located base stations	This requirement may be applied for the protection of UTRA-FDD BTS receivers in frequency band I when UTRA-FDD BS in frequency band I and III are co-located.
6.6.3.9.1	Co-existence with UTRA-FDD in frequency band III -Operation in the same geographic area	This requirement may be applied for the protection of UTRA-FDD UE in frequency band I in geographic areas in which both UTRA-FDD in frequency band I and III are deployed.
6.6.3.9.2	Co-existence with UTRA-FDD in frequency band III - Co-located base stations	This requirement may be applied for the protection of UTRA-FDD BTS receivers in frequency band I when UTRA-FDD BS in frequency band I and III are co-located.
6.6.3.10.1	Co-existence with PCS1900 -Operation in the same geographic area	This requirement may be applied for the protection of PCS 1900 BTS receivers in geographic areas in which both PCS 1900 and UTRA-FDD are deployed.
6.6.3.10.2	Co-existence with PCS1900 - Co-located base stations	This requirement may be applied for the protection of PCS 1900 BTS receivers when PCS 1900 BTS and UTRA-FDD BS are co-located.
6.6.3.11.1	Co-existence with GSM850 -Operation in the same geographic area	This requirement may be applied for the protection of GSM 850 MS and GSM 850 BTS receivers in geographic areas in which both GSM 850 and UTRA-FDD are deployed.
6.6.3.11.2	Co-existence with GSM850 - Co-located base stations	This requirement may be applied for the protection of GSM 850 BTS receivers when GSM 850 BTS and UTRA-FDD BS are co-located.
7.4.2	Adjacent Channel Selectivity Co-location with UTRA-TDD	This requirement may be applied for the protection of UTRA-FDD BS receivers when UTRA-FDD BS and UTRA-TDD BS are co-located.
7.5	Blocking characteristic	The requirement is applied according to what frequency bands in Clause 5.2 that are supported by the BS.
7.5.2	Blocking characteristics Co-location with GSM900, DCS 1800, PCS1900 and/or UTRA	This requirement may be applied for the protection of UTRA FDD BS receivers when UTRA FDD BS and GSM 900, DCS1800, PCS1900, GSM850 and/or UTRA BS (operating in different frequency bands) are co-located.
7.5.3	Blocking characteristics Co-location with UTRA TDD	This requirement may be applied for the protection of UTRA FDD BS receivers when UTRA FDD BS and UTRA TDD BS are co-located.
7.6	Intermodulation characteristics	The requirement is applied according to what frequency bands in Clause 5.2 that are supported by the BS.
7.7	Spurious emissions	The requirement is applied according to what frequency bands in Clause 5.2 that are supported by the BS.
	Base station classes*	Only requirements for Wide Area (General Purpose) Base Stations shall be applied as regional requirements in Japan.
	HSDPA*	The portion of HSDPA(High Speed Downlink Packet Access) is not applicable to ARIB standards by the time when ARIB is prepared to transpose.

Note *: Base station classes, HSDPA: These regional requirements should be reviewed to check its necessity every TSG RAN meeting.

{Separate Section }

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-FDD 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-FDD 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	876-915 MHz	-91 dBm	100 kHz	
Local Area BS	876-915 MHz	-70 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.

6.6.3.4 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-FDD 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 and DCS 1800 BTS receivers

Band	Maximum Level	Measurement Bandwidth	Note
1805 - 1880 MHz	-47 dBm	100 kHz	This requirement does not apply to UTRA-FDD operating in band III
1710 – 1785 MHz	-61 dBm	100 kHz	This requirement does not apply to UTRA-FDD operating in band III, since it is already covered by the requirement in sub-clause 6.6.3.2.

~~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-FDD 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~~	~~I~~	~~1710 - 1785 MHz~~	~~-96 dBm~~	~~100 kHz~~	
~~Local Area BS~~	~~I~~	~~1710 - 1785 MHz~~	~~-80 dBm~~	~~100 kHz~~	
~~Wide Area BS~~	~~III~~	~~1710 – 1785 MHz~~	~~-98 dBm~~	~~100 kHz~~	
~~Medium Range BS~~	~~III~~	~~1710 – 1785 MHz~~	~~-96 dBm~~	~~100 kHz~~	
~~Local Area BS~~	~~III~~	~~1710 – 1785 MHz~~	~~-80 dBm~~	~~100 kHz~~	

BS class	Band	Maximum Level	Measurement Bandwidth	Note
Wide Area BS	1710 - 1785 MHz	-98 dBm	100 kHz	
Medium Range BS	1710 - 1785 MHz	-96 dBm	100 kHz	
Local Area BS	1710 - 1785 MHz	-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-FDD 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-FDD 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	
III	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	1900 – 1920 MHz	-55 dBm	1 MHz	
Wide Area BS	2010 – 2025 MHz	-86 dBm	1 MHz	
Local Area BS	2010 – 2025 MHz	-55 dBm	1 MHz	

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-FDD 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-FDD UE and BS operating in frequency band I in geographic areas in which both UTRA-FDD in frequency band I and UTRA-FDD in other frequency bands ~~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-FDD UE receiver and BS receiver operating in frequency band I

Band	Maximum Level	Measurement Bandwidth	Note
2110 – 2170 MHz	-52 dBm	1 MHz	This requirement does not apply to UTRA-FDD BS operating in band I,
1920 – 1980 MHz	-49 dBm	1 MHz	This requirement does not apply to UTRA-FDD BS operating in band I, since it is already covered by the requirement in sub-clause 6.6.3.2.

~~Operating Band~~	~~Band~~	~~Maximum Level~~	~~Measurement Bandwidth~~	~~Note~~
~~III~~	~~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-FDD BS receivers operating in frequency band I when UTRA-FDD BS operating in frequency band I and UTRA-FDD BS operating in other frequency bands ~~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-FDD BS operating in frequency band I

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

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

6.6.3.9 Co-existence with UTRA-FDD 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-FDD UE and BS operating in frequency band III in geographic areas in which both UTRA-FDD in frequency band III and UTRA-FDD in other frequency bands ~~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-FDD UE receiver and BS receiver operating in frequency band III

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

Band	Maximum Level	Measurement Bandwidth	Note
1805 – 1880 MHz	-52 dBm	1 MHz	This requirement does not apply to UTRA-FDD BS operating in band III
1710 – 1785 MHz	-49 dBm	1 MHz	This requirement does not apply to UTRA-FDD BS operating in band III, since it is already covered by the requirement in sub-clause 6.6.3.2.

6.6.3.9.2 Co-located base stations

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

6.6.3.9.2.1 Minimum Requirement

The power of any spurious emission shall not exceed:

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

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

Band	Maximum Level	Measurement Bandwidth	Note
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-FDD ~~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~~	

Band	Maximum Level	Measurement Bandwidth	Note
1850 - 1910 MHz	-61 dBm	100 kHz	This requirement does not apply to UTRA-FDD BS operating in frequency band II, since it is already covered by the requirement in sub-clause 6.6.3.2.
1930 - 1990 MHz	-47 dBm	100 kHz	This requirement does not apply to UTRA-FDD BS operating in frequency band II

6.6.3.10.2 Co-located base stations

This requirement may be applied for the protection of PCS1900 BS receivers when UTRA-FDD 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~~	~~II~~	~~1850 – 1910 MHz~~	~~-96 dBm~~	~~100 kHz~~	
~~Local Area BS~~	~~II~~	~~1850 – 1910 MHz~~	~~-80 dBm~~	~~100 kHz~~	

BS class	Band	Maximum Level	Measurement Bandwidth	Note
Wide Area BS	1850 – 1910 MHz	-98 dBm	100 kHz	
Medium Range BS	1850 – 1910 MHz	-96 dBm	100 kHz	
Local Area BS	1850 – 1910 MHz	-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.

6.6.3.11 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-FDD 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~~	
~~II~~	~~869 – 894 MHz~~	~~-57 dBm~~	~~100 kHz~~	

Band	Maximum Level	Measurement Bandwidth	Note
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-FDD 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~~	~~II~~	~~824 - 849 MHz~~	~~-91 dBm~~	~~100 kHz~~	
~~Local Area BS~~	~~II~~	~~824 - 849 MHz~~	~~-70 dBm~~	~~100 kHz~~	

BS class	Band	Maximum Level	Measurement Bandwidth	Note
Wide Area BS	824 - 849 MHz	-98 dBm	100 kHz	
Medium Range BS	824 - 849 MHz	-91 dBm	100 kHz	
Local Area BS	824 - 849 MHz	-70 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.

{Separate Section }

7.5.2 Minimum Requirement – Co-location with GSM900, DCS 1800, PCS1900, GSM850 and/or UTRA-FDD

This additional blocking requirement may be applied for the protection of FDD BS receivers when GSM900, PCS1900, GSM850 and/or BS operating in DCS1800 band (UTRA-FDD or GSM) are co-located with UTRA-FDD BS.

The static reference performance as specified in clause 7.2.1 shall be met with a wanted and an interfering signal coupled to BS antenna input using the following parameters.

Table 7.5A: Blocking performance requirement when co-located with GSM900

Center Frequency of Interfering Signal	Interfering Signal mean power	Wanted Signal mean power	Minimum Offset of Interfering Signal	Type of Interfering Signal
921 – 960 MHz	+16 dBm	-115 dBm	—	CW carrier

~~Operating band~~	~~Center Frequency of Interfering Signal~~	~~Interfering Signal mean power~~	~~Wanted Signal mean power~~	~~Minimum Offset of Interfering Signal~~	~~Type of Interfering Signal~~
~~I, III~~	~~921 – 960 MHz~~	~~+16 dBm~~	~~-115 dBm~~	—	~~CW carrier~~

Table 7.5B: Blocking performance requirement when co-located with BTS operating in DCS1800 band (GSM or UTRA-FDD)

Center Frequency of Interfering Signal	Interfering Signal mean power	Wanted Signal mean power	Minimum Offset of Interfering Signal	Type of Interfering Signal
1805 – 1880 MHz	+16 dBm	-115 dBm	—	CW carrier

~~Operating band~~	~~Center Frequency of Interfering Signal~~	~~Interfering Signal mean power~~	~~Wanted Signal mean power~~	~~Minimum Offset of Interfering Signal~~	~~Type of Interfering Signal~~
~~I, III~~	~~1805 – 1880 MHz~~	~~+16 dBm~~	~~-115 dBm~~	—	~~CW carrier~~

Table 7.5C: Blocking performance requirement for operation when co-located with UTRA-FDD BS operating in Frequency band I

Center Frequency of Interfering Signal	Interfering Signal mean power	Wanted Signal mean power	Minimum Offset of Interfering Signal	Type of Interfering Signal
2110 – 2170 MHz	+16 dBm	-115 dBm	—	CW carrier

~~Operating band~~	~~Center Frequency of Interfering Signal~~	~~Interfering Signal mean power~~	~~Wanted Signal mean power~~	~~Minimum Offset of Interfering Signal~~	~~Type of Interfering Signal~~
~~III~~	~~2110 – 2170 MHz~~	~~+16 dBm~~	~~-115 dBm~~	—	~~CW carrier~~

Table 7.5D: Blocking performance requirement for operation when co-located with PCS1900 BTS

Center Frequency of Interfering Signal	Interfering Signal mean power	Wanted Signal mean power	Minimum Offset of Interfering Signal	Type of Interfering Signal
1930 – 1990 MHz	+16 dBm	-115 dBm	—	CW carrier

~~Operating band~~	~~Center Frequency of Interfering Signal~~	~~Interfering Signal mean power~~	~~Wanted Signal mean power~~	~~Minimum Offset of Interfering Signal~~	~~Type of Interfering Signal~~
~~II~~	~~1930 – 1990 MHz~~	~~+16 dBm~~	~~-115 dBm~~	—	~~CW carrier~~

Table 7.5E: Blocking performance requirement for operation when co-located with GSM850 BTS

Center Frequency of Interfering Signal	Interfering Signal mean power	Wanted Signal mean power	Minimum Offset of Interfering Signal	Type of Interfering Signal
869 – 894 MHz	+16 dBm	-115 dBm	—	CW carrier

~~Operating band~~	~~Center Frequency of Interfering Signal~~	~~Interfering Signal mean power~~	~~Wanted Signal mean power~~	~~Minimum Offset of Interfering Signal~~	~~Type of Interfering Signal~~
~~II~~	~~869 – 894 MHz~~	~~+16 dBm~~	~~-115 dBm~~	—	~~CW carrier~~