TSG-RAN Meeting #12
Stockholm, Sweden, 12 - 15 June 2001

RP-010350

Title: **Agreed CRs (Release '99 and Rel-4 category A) to TS 25.105**

Source: **TSG-RAN WG4**

Agenda item: 8.4.3

WG4 doc	Status WG4	Spec	CR	Phase	Title	Cat	V old	V new
R4-010504	agreed	25.105	54	R99	inclusion of environmental requirements	F	3.6.0	3.7.0
R4-010506	agreed	25.105	55	Rel-4	inclusion of environmental requirements	A	4.0.0	4.1.0
R4-010516	agreed	25.105	56	R99	Application of blocking requirement	F	3.6.0	3.7.0
R4-010798	agreed	25.105	57	Rel-4	Application of blocking requirement	A	4.0.0	4.1.0
R4-010570	agreed	25.105	58	R99	CR for BS Performance Requirements	F	3.6.0	3.7.0
R4-010739	agreed	25.105	59	Rel-4	CR for BS Performance Requirements	A	4.0.0	4.1.0
R4-010546	agreed	25.105	62	R99	Correction to upper frequency of transmitter Spurious emission limits	F	3.6.0	3.7.0
R4-010793	agreed	25.105	63	Rel-4	Correction to upper frequency of transmitter spurious emission limits	A	4.0.0	4.1.0

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CHANGE REQUEST

| ⌘ | **25.105 CR 54** | ⌘ | ev | **-** | ⌘ | Current version: | **3.6.0** | ⌘ |

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: ⌘   (U)SIM ☐   ME/UE ☐   Radio Access Network **X**   Core Network ☐

Title: ⌘	Inclusion of environmental requirements	
Source: ⌘	RAN WG4	
Work item code: ⌘	TEI	***Date:*** ⌘ 21 May 2001
Category: ⌘ **F**		***Release:*** ⌘ R99

Use <u>one</u> 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 <u>TR 21.900</u>.

Use <u>one</u> of the following releases:
2   (GSM Phase 2)
R96   (Release 1996)
R97   (Release 1997)
R98   (Release 1998)
R99   (Release 1999)
REL-4 (Release 4)
REL-5 (Release 5)

Reason for change: ⌘	The current version of TS. 25.105 Rel. 99 does not state under what environmental conditions the specified requirements apply.
Summary of change: ⌘	Insertion of a new subclause 4.4 referencing the relevant IEC specifications for environmental conditions. The IEC specifications are added to clause 2 "References".
Consequences if not approved: ⌘	The environmental conditions under which the specified requirements apply would remain unclear and could be interpreted differently.

Clauses affected: ⌘	2, 4.4 (new)
Other specs affected: ⌘	☐ Other core specifications ⌘ ☐ Test specifications ☐ O&M Specifications
Other comments: ⌘	

How to create CRs using this form:

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

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://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.

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.

- For a specific reference, subsequent revisions do not apply.

- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1]   ITU-R Recommendation SM.329-8 "Spurious emissions".

[2]   ETSI ETR 273-1-2: "Electromagnetic compatibility and Radio spectrum Matters (ERM); Improvement of radiated methods of measurement (using test sites) and evaluation of the corresponding measurement uncertainties; Part 1: Uncertainties in the measurement of mobile radio equipment characteristics; Sub-part 2: Examples and annexes".

[3]   IEC 60721-3-3 (1994): "Classification of environmental conditions - Part 3: Classification of groups of environmental parameters and their severities - Section 3: Stationary use at weather protected locations".

[4]   IEC 60721-3-4 (1995): "Classification of environmental conditions - Part 3: Classification of groups of environmental parameters and their severities - Section 4: Stationary use at non-weather protected locations".

[5]   3GPP TS 25.142: "Base station conformance testing (TDD)".

4.4 Environmental requirements for the BS equipment

The BS equipment shall fulfil all the requirements in the full range of environmental conditions for the relevant environmental class from the relevant IEC specifications listed below:

IEC 60 721-3-3 "Stationary use at weather protected locations" [3]

IEC 60 721-3-4 "Stationary use at non weather protected locations" [4]

Normally it should be sufficient for all tests to be conducted using normal test conditions except where otherwise stated. For guidance on the use of test conditions to be used in order to show compliance refer to TS 25.142 [5].

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CHANGE REQUEST

| ✂ | **25.105** CR **55** | ✂ | rev | **-** | ✂ | Current version: | **4.0.0** | ✂ |

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Proposed change affects: ✂   (U)SIM ☐   ME/UE ☐   Radio Access Network **X**   Core Network ☐

Title: ✂	Inclusion of environmental requirements	
Source: ✂	RAN WG4	
Work item code: ✂	TEI	***Date:*** ✂ 21 May 2001
Category: ✂	**A**	***Release:*** ✂ REL-4

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)*

Reason for change: ✂	The current version of TS. 25.105 Rel. 4 does not state under what environmental conditions the specified requirements apply.
Summary of change: ✂	Insertion of a new subclause 4.4 referencing the relevant IEC specifications for environmental conditions. The IEC specifications are added to clause 2 "References".
Consequences if not approved: ✂	The environmental conditions under which the specified requirements apply would remain unclear and could be interpreted differently.

Clauses affected: ✂	2, 4.4 (new)

Other specs affected: ✂	☐ Other core specifications ✂	
	☐ Test specifications	
	☐ O&M Specifications	

| **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.

1 Scope

This document establishes the minimum RF characteristics of boths options of the TDD mode of UTRA. The two options are the 3.84Mcps and 1.28Mcps options respectively. The requirements are listed in different subsections only if the parameters deviate.

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.

- For a specific reference, subsequent revisions do not apply.

- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document in the same Release as the present document.

- A non-specific reference to an ETS shall also be taken to refer to later versions published as an EN with the same number.

[1]   ITU-R Recommendation SM.329-8 "Spurious emissions".

[2]   ETSI ETR 273-1-2: "Electromagnetic compatibility and Radio spectrum Matters (ERM); Improvement of radiated methods of measurement (using test sites) and evaluation of the corresponding measurement uncertainties; Part 1: Uncertainties in the measurement of mobile radio equipment characteristics; Sub-part 2: Examples and annexes".

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4.4 Environmental requirements for the BS equipment

The BS equipment shall fulfil all the requirements in the full range of environmental conditions for the relevant environmental class from the relevant IEC specifications listed below:

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IEC 60 721-3-4 "Stationary use at non weather protected locations" [4]

Normally it should be sufficient for all tests to be conducted using normal test conditions except where otherwise stated. For guidance on the use of test conditions to be used in order to show compliance refer to TS 25.142 [5].

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CHANGE REQUEST

| ⌘ | **25.105** CR **56** | ⌘ | ev | **-** | ⌘ | Current version: | **3.6.0** | ⌘ |

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Proposed change affects: ⌘   (U)SIM ☐   ME/UE ☐   Radio Access Network **X**   Core Network ☐

Title: ⌘	Application of blocking requirement	
Source: ⌘	RAN WG4	
Work item code: ⌘	TEI	***Date:*** ⌘ 21.05.2001
Category: ⌘ **F**		***Release:*** ⌘ R99

Use <u>one</u> 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 <u>one</u> of the following releases:
  2   *(GSM Phase 2)*
  R96   *(Release 1996)*
  R97   *(Release 1997)*
  R98   *(Release 1998)*
  R99   *(Release 1999)*
  REL-4 *(Release 4)*
  REL-5 *(Release 5)*

Reason for change: ⌘	It is not clear in the spec which part of the blocking requirement is mandatory and which one is an optional (regional) requirement.
Summary of change: ⌘	The general part of the blocking requirement is made mandatory ("shall") while the introduction of the section is neutral. Correction of the GSM900 band to include R-GSM.
Consequences if not approved: ⌘	The specification may be incorrectly applied.

Clauses affected: ⌘	7.5, 7.5.1

Other specs affected: ⌘	☐ Other core specifications ⌘	
	X Test specifications	TS 25.142, CR in Tdoc R4-010 518
	☐ O&M Specifications	

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

7.5 Blocking characteristics

The blocking characteristics is a measure of the receiver ability to receive a wanted signal at its assigned channel frequency in the presence of an unwanted interferer on frequencies other than those of the adjacent channels. The blocking performance requirement applies to interfering signals with center frequency within the ranges shall apply at all frequencies as specified in the tables below, using a 1MHz step size.

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

Table 7.4 (a): Blocking requirements for operating bands defined in 5.2(a)

Centre Frequency of Interfering Signal	Interfering Signal Level	Wanted Signal Level	Minimum Offset of Interfering Signal	Type of Interfering Signal
1900 – 1920 MHz, 2010 – 2025 MHz	-40 dBm	<REFSENS> + 6 dB	10 MHz	WCDMA signal with one code
1880 – 1900 MHz, 1990 – 2010 MHz, 2025 – 2045 MHz	-40 dBm	<REFSENS> + 6 dB	10 MHz	WCDMA signal with one code
1920 – 1980 MHz	-40 dBm	<REFSENS> + 6 dB	10 MHz	WCDMA signal with one code
1 – 1880 MHz, 1980 – 1990 MHz, 2045 – 12750 MHz	-15 dBm	<REFSENS> + 6 dB	—	CW carrier

Table 7.4(b) : Blocking requirements for operating bands defined in 5.2(b)

Centre Frequency of Interfering Signal	Interfering Signal Level	Wanted Signal Level	Minimum Offset of Interfering Signal	Type of Interfering Signal
1850 – 1990 MHz	-40 dBm	<REFSENS> + 6 dB	10 MHz	WCDMA signal with one code
1830 – 1850 MHz, 1990 – 2010 MHz	-40 dBm	<REFSENS> + 6 dB	10 MHz	WCDMA signal with one code
1 – 1830 MHz, 2010 – 12750 MHz	-15 dBm	<REFSENS> + 6 dB	—	CW carrier

Table 7.4(c) : Blocking requirements for operating bands defined in 5.2(c)

Centre Frequency of Interfering Signal	Interfering Signal Level	Wanted Signal Level	Minimum Offset of Interfering Signal	Type of Interfering Signal
1910 – 1930 MHz	-40 dBm	<REFSENS> + 6 dB	10 MHz	WCDMA signal with one code
1890 – 1910 MHz, 1930 – 1950 MHz	-40 dBm	<REFSENS> + 6 dB	10 MHz	WCDMA signal with one code
1 – 1890 MHz, 1950 – 12750 MHz	-15 dBm	<REFSENS> + 6 dB	—	CW carrier

7.5.1 Co-location with GSM900 and/or DCS 1800

This additional blocking requirement may be applied for the protection of TDD BS receivers when GSM900 and/or DCS1800 BTS are co-located with UTRA TDD BS.

The blocking performance shall apply requirement applies to interfering signals with center frequency within the ranges at all frequencies as specified in the tables below, using a 1MHz step size.

In case this additional blocking requirement is applied, Tthe static reference performance as specified in clause 7.2.1 shall should be met with a wanted and an interfering signal coupled to BS antenna input using the following parameters.

Table 7.4 (d): Additional Bblocking requirements for operating bands defined in 5.2(a) when co-located with GSM900

Centre Frequency of Interfering Signal	Interfering Signal Level	Wanted Signal Level	Minimum Offset of Interfering Signal	Type of Interfering Signal
1900 – 1920 MHz, 2010 – 2025 MHz	-40 dBm	<REFSENS> + 6 dB	10 MHz	WCDMA signal with one code
1880 – 1900 MHz, 1990 – 2010 MHz, 2025 – 2045 MHz	-40 dBm	<REFSENS> + 6 dB	10 MHz	WCDMA signal with one code
1920 – 1980 MHz	-40 dBm	<REFSENS> + 6 dB	10 MHz	WCDMA signal with one code
1 – 925 MHz, 960 - 1880 MHz, 1980 – 1990 MHz, 2045 – 12750 MHz	-15 dBm	<REFSENS> + 6 dB	—	CW carrier
9215 – 960 MHz	+16 dBm	<REFSENS> + 6 dB	—	CW carrier

Table 7.4 (e): Additional Bblocking requirements for operating bands defined in 5.2(a) when co-located with DCS1800

Center Frequency of Interfering Signal	Interfering Signal Level	Wanted Signal Level	Minimum Offset of Interfering Signal	Type of Interfering Signal
1900 – 1920 MHz, 2010 – 2025 MHz	-40 dBm	<REFSENS> + 6 dB	10 MHz	WCDMA signal with one code
1880 – 1900 MHz, 1990 – 2010 MHz, 2025 – 2045 MHz	-40 dBm	<REFSENS> + 6 dB	10 MHz	WCDMA signal with one code
1920 – 1980 MHz	-40 dBm	<REFSENS> + 6 dB	10 MHz	WCDMA signal with one code
1 – 1805 MHz, 1980 – 1990 MHz, 2045 – 12750 MHz	-15 dBm	<REFSENS> + 6 dB	—	CW carrier
1805 - 1880	+16 dBm	<REFSENS> + 6 dB	—	CW carrier

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CHANGE REQUEST

⌘　　　　**25.105 CR 57**　　　⌘ ev **-** ⌘ Current version: **4.0.0** ⌘

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Proposed change affects: ⌘　(U)SIM ☐　ME/UE ☐　Radio Access Network **X**　Core Network ☐

Title: ⌘	Application of blocking requirement	
Source: ⌘	RAN WG4	
Work item code: ⌘	TEI	**Date:** ⌘ 21.05.2001
Category: ⌘	**A**	**Release:** ⌘ REL-4

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)

Reason for change: ⌘	Present section status is incomplete and can lead to confusion.
Summary of change: ⌘	1- Section introduction is made neutral and general blocking requirements are made mandatory. 2- The co-location band with GSM900 is also modified to include R-GSM band.
Consequences if not approved: ⌘	Specification may be incorrectly applied.

Clauses affected: ⌘	7.5, 7.5.0, 7.5.1, 7.5.1.1

Other specs affected: ⌘	☐ Other core specifications ⌘	
	X Test specifications	25.142
	☐ O&M Specifications	

Other comments: ⌘	Rel99 CR in R4-010516

7.5 Blocking characteristic

The blocking characteristics is a measure of the receiver ability to receive a wanted signal at its assigned channel frequency in the presence of an unwanted interferer on frequencies other than those of the adjacent channels. The blocking performance requirement ~~shall apply at all frequencies as~~ applies to interfering signals with center frequency within the ranges specified in the tables below, using a 1MHz step size.

7.5.0 Minimum requirement

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

7.5.0.1 3,84 Mcps TDD Option

Table 7.4 (a): Blocking requirements for operating bands defined in 5.2(a)

Centre Frequency of Interfering Signal	Interfering Signal Level	Wanted Signal Level	Minimum Offset of Interfering Signal	Type of Interfering Signal
1900 – 1920 MHz, 2010 – 2025 MHz	-40 dBm	<REFSENS> + 6 dB	10 MHz	WCDMA signal with one code
1880 – 1900 MHz, 1990 – 2010 MHz, 2025 – 2045 MHz	-40 dBm	<REFSENS> + 6 dB	10 MHz	WCDMA signal with one code
1920 – 1980 MHz	-40 dBm	<REFSENS> + 6 dB	10 MHz	WCDMA signal with one code
1 – 1880 MHz, 1980 – 1990 MHz, 2045 – 12750 MHz	-15 dBm	<REFSENS> + 6 dB	—	CW carrier

Table 7.4(b) : Blocking requirements for operating bands defined in 5.2(b)

Centre Frequency of Interfering Signal	Interfering Signal Level	Wanted Signal Level	Minimum Offset of Interfering Signal	Type of Interfering Signal
1850 – 1990 MHz	-40 dBm	<REFSENS> + 6 dB	10 MHz	WCDMA signal with one code
1830 – 1850 MHz, 1990 – 2010 MHz	-40 dBm	<REFSENS> + 6 dB	10 MHz	WCDMA signal with one code
1 – 1830 MHz, 2010 – 12750 MHz	-15 dBm	<REFSENS> + 6 dB	—	CW carrier

Table 7.4(c) : Blocking requirements for operating bands defined in 5.2(c)

Centre Frequency of Interfering Signal	Interfering Signal Level	Wanted Signal Level	Minimum Offset of Interfering Signal	Type of Interfering Signal
1910 – 1930 MHz	-40 dBm	<REFSENS> + 6 dB	10 MHz	WCDMA signal with one code
1890 – 1910 MHz, 1930 – 1950 MHz	-40 dBm	<REFSENS> + 6 dB	10 MHz	WCDMA signal with one code
1 – 1890 MHz, 1950 – 12750 MHz	-15 dBm	<REFSENS> + 6 dB	—	CW carrier

7.5.0.2 1,28 Mcps TDD Option

Table 7.4A(a): Blocking requirements for operating bands defined in 5.2(a)

Center Frequency of Interfering Signal	Interfering Signal Level	Wanted Signal Level	Minimum Offset of Interfering Signal	Type of Interfering Signal
1900 – 1920 MHz, 2010 – 2025 MHz	-40 dBm	<REFSENS> + 6 dB	3.2MHz	Narrow band CDMA signal with one code
1880 – 1900 MHz, 1990 – 2010 MHz, 2025 – 2045 MHz	-40dBm	<REFSENS> + 6 dB	3.2MHz	Narrow band CDMA signal with one code
1920 – 1980 MHz	-40dBm	<REFSENS> + 6 dB	3.2MHz	Narrow band CDMA signal with one code
1 – 1880 MHz, 1980 – 1990 MHz, 2045 – 12750 MHz	-15dBm	<REFSENS> + 6 dB	—	CW carrier

Table 7.4A(b): Blocking requirements for operating bands defined in 5.2(b)

Center Frequency of Interfering Signal	Interfering Signal Level	Wanted Signal Level	Minimum Offset of Interfering Signal	Type of Interfering Signal
1850 – 1990 MHz	-40dBm	<REFSENS> + 6 dB	3.2MHz	Narrow band CDMA signal with one code
1830 – 1850 MHz, 1990 – 2010 MHz	-40 dBm	<REFSENS> + 6 dB	3.2MHz	Narrow band CDMA signal with one code
1 – 1830 MHz, 2010 – 12750 MHz	-40 dBm	<REFSENS> + 6 dB	—	CW carrier

Table 7.4A(c): Blocking requirements for operating bands defined in 5.2(c)

Center Frequency of Interfering Signal	Interfering Signal Level	Wanted Signal Level	Minimum Offset of Interfering Signal	Type of Interfering Signal
1910 – 1930 MHz	-40dBm	<REFSENS> + 6 dB	3.2MHz	Narrow band CDMA signal with one code
1890 – 1910 MHz, 1930 – 1950 MHz	-40dBm	<REFSENS> + 6 dB	3.2 MHz	Narrow band CDMA signal with one code
1 – 1890 MHz, 1950 – 12750 MHz	-40 dBm	<REFSENS> + 6 dB	—	CW carrier

7.5.1 Co-location with GSM900 and/or DCS 1800

This additional blocking requirement may be applied for the protection of TDD BS receivers when GSM900 and/or DCS1800 BTS are co-located with UTRA TDD BS.
The blocking performance requirement applies to interfering signals with center frequency within the ranges specified in the tables below, using a 1MHz step size.
In case this additional blocking requirement is applied, 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.

7.5.1.1 3,84 Mcps TDD Option

This requirement may be applied for the protection of TDD BS receivers when GSM900 and/or DCS1800 BTS are co located with UTRA TDD BS.
The blocking performance shall apply at all frequencies as specified in the tables below, using a 1MHz step size.
The static reference performance as specified in clause 7.2.1 should be met with a wanted and an interfering signal coupled to BS antenna input using the following parameters.

Table 7.4 (d): Additional ~~B~~blocking requirements for operating bands defined in 5.2(a) when co-located with GSM900

Centre Frequency of Interfering Signal	Interfering Signal Level	Wanted Signal Level	Minimum Offset of Interfering Signal	Type of Interfering Signal
~~1900 – 1920 MHz, 2010 – 2025 MHz~~	~~-40 dBm~~	~~<REFSENS> + 6 dB~~	~~10 MHz~~	~~WCDMA signal with one code~~
~~1880 – 1900 MHz, 1990 – 2010 MHz, 2025 – 2045 MHz~~	~~-40 dBm~~	~~<REFSENS> + 6 dB~~	~~10 MHz~~	~~WCDMA signal with one code~~
~~1920 – 1980 MHz~~	~~-40 dBm~~	~~<REFSENS> + 6 dB~~	~~10 MHz~~	~~WCDMA signal with one code~~
~~1 – 925 MHz, 960 - 1880 MHz, 1980 – 1990 MHz, 2045 – 12750 MHz~~	~~-15 dBm~~	~~<REFSENS> + 6 dB~~	~~—~~	~~CW carrier~~
92~~1~~5 – 960 MHz	+16 dBm	<REFSENS> + 6 dB	—	CW carrier

Table 7.4 (e): Additional ~~B~~blocking requirements for operating bands defined in 5.2(a) when co-located with DCS1800

Center Frequency of Interfering Signal	Interfering Signal Level	Wanted Signal Level	Minimum Offset of Interfering Signal	Type of Interfering Signal
~~1900 – 1920 MHz, 2010 – 2025 MHz~~	~~-40 dBm~~	~~<REFSENS> + 6 dB~~	~~10 MHz~~	~~WCDMA signal with one code~~
~~1880 – 1900 MHz, 1990 – 2010 MHz, 2025 – 2045 MHz~~	~~-40 dBm~~	~~<REFSENS> + 6 dB~~	~~10 MHz~~	~~WCDMA signal with one code~~
~~1920 – 1980 MHz~~	~~-40 dBm~~	~~<REFSENS> + 6 dB~~	~~10 MHz~~	~~WCDMA signal with one code~~
~~1 – 1805 MHz, 1980 – 1990 MHz, 2045 – 12750 MHz~~	~~-15 dBm~~	~~<REFSENS> + 6 dB~~	~~—~~	~~CW carrier~~
1805 - 1880	+16 dBm	<REFSENS> + 6 dB	—	CW carrier

7.5.1.2 1,28 Mcps TDD Option

(void)

3GPP TSG RAN WG4 Meeting #17 **R4-010570**

Gothenburg, Sweden 21st - 25th May 2001

8.2 Demodulation in static propagation conditions

8.2.1 Demodulation of DCH

The performance requirement of DCH in static propagation conditions is determined by the maximum Block Error Rate (BLER) allowed when the receiver input signal is at a specified $\hat{I}_{or}/I_{oc}$ limit. The BLER is calculated for each of the measurement channels supported by the base station.

8.2.1.1 Minimum requirement

For the parameters specified in Table 8.2 the BLER should not exceed the piece-wise linear BLER curve specified in Table 8.3. These requirements are applicable for TFCS size 16.

Table 8.2: Parameters in static propagation conditions

Parameters	Unit	Test 1	Test 2	Test 3	Test 4
Number of DPCH$_o$		6	4	0	0
$\dfrac{DPCH_o\_E_c}{I_{or}}$	dB	-9	-9.5	0	0
I_{oc}	dBm/3.84 MHz		-89		
Cell Parameter*			0,1		
DPCH Channelization Codes*	C(k,Q)	C(1,8)	C(1,4) C(5,16)	C(1,2) C(9,16)	C(1,2)
DPCH$_o$ Channelization Codes*	C(k,Q)	C(i,16) 3≤ i ≤8	C(i,16) 6≤ i ≤9	-	-
Information Data Rate	kbps	12.2	64	144	384

*Note: Refer to TS 25.223 for definition of channelization codes and cell parameter.

Table 8.3: Performance requirements in AWGN channel.

Test Number	$\dfrac{\hat{I}_{or}}{I_{oc}}$ [dB]	BLER Required E_b/N_0
1	~~-1.9~~-1.8	10^{-2}
2	~~-0.3~~-0.35	10^{-1}
	~~0.0~~-0.05	10^{-2}
3	~~0.0~~-0.2	10^{-1}
	~~0.2~~0.1	10^{-2}
4	~~-0.5~~-0.7	10^{-1}
	~~-0.3~~-0.5	10^{-2}

8.3 Demodulation of DCH in multipath fading conditions

8.3.1 Multipath fading Case 1

The performance requirement of DCH in multipath fading Case 1 is determined by the maximum Block Error Rate (BLER) allowed when the receiver input signal is at a specified $\hat{I}_{or}/I_{oc}$ limit. The BLER is calculated for each of the measurement channels supported by the base station.

8.3.1.1 Minimum requirement

For the parameters specified in Table 8.4 the BLER should not exceed the piece-wise linear BLER curve specified in Table 8.5. These requirements are applicable for TFCS size 16.

Table 8.4: Parameters in multipath Case 1 channel

Parameters	Unit	Test 1	Test 2	Test 3	Test 4
Number of DPCH$_o$		6	4	0	0
$\dfrac{DPCH_o\_E_c}{I_{or}}$	dB	-9	-9.5	0	0
I$_{oc}$	dBm/3.84 MHz		-89		
Cell Parameter*			0,1		
DPCH Channelization Codes*	C(k,Q)	C(1,8)	C(1,4) C(5,16)	C(1,2) C(9,16)	C(1,2)
DPCH$_o$ Channelization Codes*	C(k,Q)	C(i,16) 3≤ i ≤8	C(i,16) 6≤ i ≤9	-	-
Information Data Rate	kbps	12.2	64	144	384

Table 8.5: Performance requirements in multipath Case 1 channel.

Test Number	$\dfrac{\hat{I}_{or}}{I_{oc}}$ [dB]	BLER
1	~~6.3~~6.7	10^{-2}
2	~~5.5~~5.3	10^{-1}
	~~9.4~~9.7	10^{-2}
3	~~5.6~~5.5	10^{-1}
	~~9.4~~9.8	10^{-2}
4	~~5.5~~4.8	10^{-1}
	~~8.7~~9.2	10^{-2}

8.3.2   Multipath fading Case 2

The performance requirement of DCH in multipath fading Case 2 is determined by the maximum Block Error Rate (BLER) allowed when the receiver input signal is at a specified Î$_{or}$/I$_{oc}$ limit. The BLER is calculated for each of the measurement channels supported by the base station.

8.3.2.1   Minimum requirement

For the parameters specified in Table 8.6 the BLER should not exceed the piece-wise linear BLER curve specified in Table 8.7. These requirements are applicable for TFCS size 16.

Table 8.6: Parameters in multipath Case 2 channel

Parameters	Unit	Test 1	Test 2	Test 3	Test 4
Number of DPCH$_o$		2	0	0	0
$\dfrac{DPCH_o\_E_c}{I_{or}}$	dB	-6	0	0	0
I$_{oc}$	dBm/3.84 MHz		-89		
Cell Parameter*			0,1		
DPCH Channelization Codes*	C(k,Q)	C(1,8)	C(1,4) C(5,16)	C(1,2) C(9,16)	C(1,2)
DPCH$_o$ Channelization Codes*	C(k,Q)	C(i,16) 3≤ i ≤4	-	-	-
Information Data Rate	kbps	12.2	64	144	384

*Note: Refer to TS 25.223 for definition of channelization codes and cell parameter.

Table 8.7: Performance requirements in multipath Case 2 channel.

Test Number	$\dfrac{\hat{I}_{or}}{I_{oc}}$ [dB]	BLER
1	~~0.1~~0.2	10^{-2}
2	~~0.4~~0.1	10^{-1}
	~~2.8~~2.5	10^{-2}
3	~~3.6~~3.5	10^{-1}
	~~6.0~~5.8	10^{-2}
4	~~3.0~~2.8	10^{-1}
	~~5.4~~5.1	10^{-2}

8.3.3 Multipath fading Case 3

The performance requirement of DCH in multipath fading Case 3 is determined by the maximum Block Error Rate (BLER) allowed when the receiver input signal is at a specified $\hat{I}_{or}/I_{oc}$ limit. The BLER is calculated for each of the measurement channels supported by the base station.

8.3.3.1 Minimum requirement

For the parameters specified in Table 8.8 the BLER should not exceed the piece-wise linear BLER curve specified in Table 8.9. These requirements are applicable for TFCS size 16.

Table 8.8: Parameters in multipath Case 3 channel

Parameters	Unit	Test 1	Test 2	Test 3	Test 4
Number of DPCH$_o$		2	0	0	0
$\dfrac{DPCH_o\_E_c}{I_{or}}$	dB	-6	0	0	0
I$_{oc}$	dBm/3.84 MHz	-89			
Cell Parameter*		0,1			
DPCH Channelization Codes*	C(k,Q)	C(1,8)	C(1,4) C(5,16)	C(1,2) C(9,16)	C(1,2)
DPCH$_o$ Channelization Codes*	C(k,Q)	C(i,16) 3≤ i ≤4	-	-	-
Information Data Rate	Kbps	12.2	64	144	384

*Note: Refer to TS 25.223 for definition of channelization codes and cell parameter.

Table 8.9: Performance requirements in multipath Case 3 channel.

Test Number	$\dfrac{\hat{I}_{or}}{I_{oc}}$ [dB]	BLER
1	~~-0.6~~-0.1	10^{-2}
2	~~0.7~~0.8	10^{-1}
	~~2.4~~2.7	10^{-2}
	~~3.8~~4.2	10^{-3}
3	~~3.9~~4.5	10^{-1}
	~~5.9~~6.4	10^{-2}
	~~7.3~~8.0	10^{-3}
4	~~2.8~~3.6	10^{-1}
	~~4.2~~5.1	10^{-2}
	~~4.8~~6.5	10^{-3}

3GPP TSG RAN WG4 Meeting #17   **R4-010739**

Gothenburg, Sweden 21st - 25th May 2001

CHANGE REQUESTI

| ⌘ | **25.105** CR **59** | ⌘ | rev | **x** | ⌘ | Current version: | **4.0.0** | ⌘ |

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: ⌘   (U)SIM ☐   ME/UE ☐   Radio Access Network **X**   Core Network ☐

Title: ⌘	BS Performance Requirements for 12.2 kbps, 64 kbps, 144 kbps and 384 kbps
Source: ⌘	RAN WG4
Work item code: ⌘	TEI **Date:** ⌘ May 21, 2001
Category: ⌘ **A**	**Release:** ⌘ REL-4

Use <u>one</u> 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 <u>one</u> of the following releases:
2   (GSM Phase 2)
R96   (Release 1996)
R97   (Release 1997)
R98   (Release 1998)
R99   (Release 1999)
REL-4   (Release 4)
REL-5   (Release 5)

Reason for change: ⌘	Existing performance requirements do not take into account cell parameter cycling which is mandatory.
Summary of change: ⌘	BS Performance Requirements in Section 8 are changed.
Consequences if not approved: ⌘	BS testing would require a special test mode.

Clauses affected: ⌘	8.2.1.1, 8.3.1.1, 8.3.2.1, 8.3.3.1

Other specs Affected:	⌘	☐ Other core specifications ⌘	
		X Test specifications	25.142
		☐ O&M Specifications	

Other comments: ⌘	

8.2 Demodulation in static propagation conditions

8.2.1 Demodulation of DCH

The performance requirement of DCH in static propagation conditions is determined by the maximum Block Error Rate (BLER) allowed when the receiver input signal is at a specified $\hat{I}_{or}/I_{oc}$ limit. The BLER is calculated for each of the measurement channels supported by the base station.

8.2.1.1 Minimum requirement

8.2.1.1.1 3,84 Mcps TDD Option

For the parameters specified in Table 8.2 the BLER should not exceed the piece-wise linear BLER curve specified in Table 8.3. These requirements are applicable for TFCS size 16.

Table 8.2: Parameters in static propagation conditions

Parameters	Unit	Test 1	Test 2	Test 3	Test 4
Number of DPCH$_o$		6	4	0	0
$\dfrac{DPCH_o \_ E_c}{I_{or}}$	dB	-9	-9.5	0	0
I_{oc}	dBm/3.84 MHz	-89			
Cell Parameter*		0,1			
DPCH Channelization Codes*	C(k,Q)	C(1,8)	C(1,4) C(5,16)	C(1,2) C(9,16)	C(1,2)
DPCH$_o$ Channelization Codes*	C(k,Q)	C(i,16) 3≤ i ≤8	C(i,16) 6≤ i ≤9	-	-
Information Data Rate	kbps	12.2	64	144	384

*Note: Refer to TS 25.223 for definition of channelization codes and cell parameter.

Table 8.3: Performance requirements in AWGN channel.

Test Number	$\dfrac{\hat{I}_{or}}{I_{oc}}$ [dB]	BLER Required E_b/N_0
1	-1.8 -1.9	10^{-2}
2	-0.35 -0.3	10^{-1}
	-0.05 0.0	10^{-2}
3	-0.2 0.0	10^{-1}
	0.1 0.2	10^{-2}
4	-0.7 -0.5	10^{-1}
	-0.5 -0.3	10^{-2}

8.2.1.1.2 1,28 Mcps TDD Option

For the parameters specified in Table8.2A the BLER should not exceed the piece-wise linear BLER curve specified in Table8.3A. These requirements are applicable for TFCS size 16.

Table 8.2A: Parameters in static propagation conditions

Parameters	Unit	Test 1	Test 2	Test 3	Test 4
Number of DPCH$_o$		4	1	1	0
Spread factor of DPCH$_o$		8	8	8	-
$\dfrac{DPCH_o\_E_c}{I_{or}}$	dB	-7	-7	-7	0
I$_{oc}$	dBm/1.28MHz	-91			
Information Data Rate	Kbps	12.2	64	144	384

Table 8.3A: Performance requirements in AWGN channel.

Test Number	$\dfrac{\hat{I}_{or}}{I_{oc}}$ [dB]	BLER Required E$_b$/N$_0$
1	0.6	10^{-2}
2	-0.9	10^{-1}
	-0.4	10^{-2}
3	-0.3	10^{-1}
	-0.1	10^{-2}
4	0.5	10^{-1}
	0.6	10^{-2}

8.3 *Demodulation of DCH in multipath fading conditions*

8.3.1 Multipath fading Case 1

The performance requirement of DCH in multipath fading Case 1 is determined by the maximum Block Error Rate (BLER) allowed when the receiver input signal is at a specified Î$_{or}$/I$_{oc}$ limit. The BLER is calculated for each of the measurement channels supported by the base station.

8.3.1.1 Minimum requirement

8.3.1.1.1 3,84 Mcps TDD Option

For the parameters specified in Table 8.4 the BLER should not exceed the piece-wise linear BLER curve specified in Table 8.5. These requirements are applicable for TFCS size 16.

Table 8.4: Parameters in multipath Case 1 channel

Parameters	Unit	Test 1	Test 2	Test 3	Test 4
Number of DPCH$_o$		6	4	0	0
$\dfrac{DPCH_o\_E_c}{I_{or}}$	dB	-9	-9.5	0	0
I$_{oc}$	dBm/3.84 MHz	-89			
Cell Parameter*		0,1			
DPCH Channelization Codes*	C(k,Q)	C(1,8)	C(1,4) C(5,16)	C(1,2) C(9,16)	C(1,2)
DPCH$_o$ Channelization Codes*	C(k,Q)	C(i,16) 3≤ i ≤8	C(i,16) 6≤ i ≤9	-	-
Information Data Rate	kbps	12.2	64	144	384
*Note: Refer to TS 25.223 for definition of channelization codes and cell parameter.					

Table 8.5: Performance requirements in multipath Case 1 channel.

Test Number	$\dfrac{\hat{I}_{or}}{I_{oc}}$ [dB]	BLER
1	6.7~~6.3~~	10^{-2}
2	5.3~~5.5~~	10^{-1}
	9.7~~9.4~~	10^{-2}
3	5.5~~5.6~~	10^{-1}
	9.8~~9.4~~	10^{-2}
4	4.8~~5.5~~	10^{-1}
	9.2~~8.7~~	10^{-2}

8.3.1.1.2   1,28 Mcps TDD Option

For the parameters specified in Table 8.4A the BLER should not exceed the piece-wise linear BLER curve specified in Table 8.5A .These requirements are applicable for TFCS size 16.

Table 8.4A: Parameters in multipath Case 1 channel

Parameters	Unit	Test 1	Test 2	Test 3	Test 4
Number of DPCH$_o$		4	1	1	0
Spread factor of DPCH$_o$		8	8	8	-
$\dfrac{DPCH_o\_E_c}{I_{or}}$	DB	-7	-7	-7	0
I$_{oc}$	dBm/1.28 MHz	-91			
Information Data Rate	Kbps	12.2	64	144	384

Table 8.5A: Performance requirements in multipath Case 1 channel.

Test Number	$\dfrac{\hat{I}_{or}}{I_{oc}}$ [dB]	BLER
1	10.4	10^{-2}
2	5.3	10^{-1}
	9.4	10^{-2}
3	5.7	10^{-1}
	10.1	10^{-2}
4	6.0	10^{-1}
	10.0	10^{-2}

8.3.2   Multipath fading Case 2

The performance requirement of DCH in multipath fading Case 2 is determined by the maximum Block Error Rate (BLER) allowed when the receiver input signal is at a specified $\hat{I}_{or}/I_{oc}$ limit. The BLER is calculated for each of the measurement channels supported by the base station.

8.3.2.1   Minimum requirement

8.3.2.1.1   3,84 Mcps TDD Option

For the parameters specified in Table 8.6 the BLER should not exceed the piece-wise linear BLER curve specified in Table 8.7. These requirements are applicable for TFCS size 16.

Table 8.6: Parameters in multipath Case 2 channel

Parameters	Unit	Test 1	Test 2	Test 3	Test 4
Number of DPCH$_o$		2	0	0	0
$\dfrac{DPCH_o\_E_c}{I_{or}}$	dB	-6	0	0	0
I$_{oc}$	dBm/3.84 MHz	-89			
Cell Parameter*		0,1			
DPCH Channelization Codes*	C(k,Q)	C(1,8)	C(1,4) C(5,16)	C(1,2) C(9,16)	C(1,2)
DPCH$_o$ Channelization Codes*	C(k,Q)	C(i,16) 3≤ i ≤4	-	-	-
Information Data Rate	kbps	12.2	64	144	384

*Note: Refer to TS 25.223 for definition of channelization codes and cell parameter.

Table 8.7: Performance requirements in multipath Case 2 channel.

Test Number	$\dfrac{\hat{I}_{or}}{I_{oc}}$ [dB]	BLER
1	-0.2~~0.1~~	10^{-2}
2	0.1~~0.4~~	10^{-1}
	2.5~~2.8~~	10^{-2}
3	3.5~~3.6~~	10^{-1}
	5.8~~6.0~~	10^{-2}
4	2.8~~3.0~~	10^{-1}
	5.1~~5.4~~	10^{-2}

8.3.2.1.2   1,28 Mcps TDD Option

For the parameters specified in Table 8.6A the BLER should not exceed the piece-wise linear BLER curve specified in Table 8.7A. These requirements are applicable for TFCS size 16.

Table 8.6A: Parameters in multipath Case 2 channel

Parameters	Unit	Test 1	Test 2	Test 3	Test 4
Number of DPCH$_o$		4	1	1	0
Spread factor of DPCH$_o$		8	8	8	-
$\dfrac{DPCH_o\_E_c}{I_{or}}$	DB	-7	-7	-7	0
I$_{oc}$	dBm/1.28 MHz	-91			
Information Data Rate	Kbps	12.2	64	144	384

Table 8.7A: Performance requirements in multipath Case 2 channel.

Test Number	$\dfrac{\hat{I}_{or}}{I_{oc}}$ [dB]	BLER
1	6.7	10^{-2}
2	3.6	10^{-1}
	5.9	10^{-2}
3	4.2	10^{-1}
	6.3	10^{-2}
4	4.6	10^{-1}
	6.0	10^{-2}

8.3.3 Multipath fading Case 3

The performance requirement of DCH in multipath fading Case 3 is determined by the maximum Block Error Rate (BLER) allowed when the receiver input signal is at a specified $\hat{I}_{or}/I_{oc}$ limit. The BLER is calculated for each of the measurement channels supported by the base station.

8.3.3.1 Minimum requirement

8.3.3.1.1 3,84 Mcps TDD Option

For the parameters specified in Table 8.8 the BLER should not exceed the piece-wise linear BLER curve specified in Table 8.9. These requirements are applicable for TFCS size 16.

Table 8.8: Parameters in multipath Case 3 channel

Parameters	Unit	Test 1	Test 2	Test 3	Test 4
Number of DPCH$_o$		2	0	0	0
$\dfrac{DPCH_o\_E_c}{I_{or}}$	dB	-6	0	0	0
I$_{oc}$	dBm/3.84 MHz			-89	
Cell Parameter*				0,1	
DPCH Channelization Codes*	C(k,Q)	C(1,8)	C(1,4) C(5,16)	C(1,2) C(9,16)	C(1,2)
DPCH$_o$ Channelization Codes*	C(k,Q)	C(i,16) 3≤ i ≤4	-	-	-
Information Data Rate	Kbps	12.2	64	144	384

*Note: Refer to TS 25.223 for definition of channelization codes and cell parameter.

Table 8.9: Performance requirements in multipath Case 3 channel.

Test Number	$\dfrac{\hat{I}_{or}}{I_{oc}}$ [dB]	BLER
1	-0.1 -0.6	10^{-2}
2	0.8 0.7	10^{-1}
	2.7 2.4	10^{-2}
	4.2 3.8	10^{-3}
3	4.5 3.9	10^{-1}
	6.4 5.9	10^{-2}
	8.0 7.3	10^{-3}
4	3.6 2.8	10^{-1}
	5.1 4.2	10^{-2}
	6.5 4.8	10^{-3}

8.3.3.1.2 1,28 Mcps TDD Option

For the parameters specified in Table 8.8A the BLER should not exceed the piece-wise linear BLER curve specified in Table 8.9A. These requirements are applicable for TFCS size 16.

Table 8.8A: Parameters in multipath Case 3 channel

Parameters	Unit	Test 1	Test 2	Test 3	Test 4
Number of DPCH$_o$		4	1	1	0
Spread factor of DPCH$_o$		8	8	8	-
$\dfrac{DPCH_o\_E_c}{I_{or}}$	DB	-7	-7	-7	0
I$_{oc}$	dBm/1.28 MHz	-91			
Information Data Rate	Kbps	12.2	64	144	384

Table 8.9A: Performance requirements in multipath Case 3 channel.

Test Number	$\dfrac{\hat{I}_{or}}{I_{oc}}$ [dB]	BLER
1	5.6	10^{-2}
2	3.2	10^{-1}
	4.6	10^{-2}
	5.9	10^{-3}
3	3.7	10^{-1}
	4.8	10^{-2}
	5.9	10^{-3}
4	4.2	10^{-1}
	5.1	10^{-2}
	5.9	10^{-3}

CR-Form-v3

CHANGE REQUEST

⌘ **TS 25.105**　　　 CR **62**　　 ⌘ rev **-** ⌘ Current version: **3.6.0** ⌘

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Proposed change affects: ⌘　(U)SIM ☐　ME/UE ☐　Radio Access Network **X**　Core Network ☐

Title: ⌘	Correction to upper frequency of transmitter spurious emission limits	
Source: ⌘	RAN WG4	
Work item code: ⌘	TEI	*Date:* ⌘　18. Apr. 2001
Category: ⌘	**F**	*Release:* ⌘　R99

Use <u>one</u> of the following categories:
F (essential correction)
A (corresponds to a correction in an earlier release)
B (Addition of feature),
C (Functional modification of feature)
D (Editorial modification)
Detailed explanations of the above categories can
be found in 3GPP TR 21.900.

Use <u>one</u> of the following releases:
2　　(GSM Phase 2)
R96　(Release 1996)
R97　(Release 1997)
R98　(Release 1998)
R99　(Release 1999)
REL-4　(Release 4)
REL-5　(Release 5)

Reason for change: ⌘	Correction to upper frequency of transmitter spurious emission limits
Summary of change: ⌘	An obvious error (upper frequency should be 12.75 GHz instead of 12.5 GHz) in last row of table 6.11 is corrected
Consequences if not approved: ⌘	Difficulties with regional radio equipment regulation procedures.

Clauses affected: ⌘	6.6.3.1.2.1

Other specs affected: ⌘	☐ Other core specifications ⌘	
	X Test specifications	25.142
	☐ O&M Specifications	

Other comments: ⌘	

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 ftp://www.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 TSG meetings.

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

6.6.3   Spurious emissions

Spurious emissions are emissions which are caused by unwanted transmitter effects such as harmonics emission, parasitic emission, intermodulation products and frequency conversion products, but exclude out of band emissions. This is measured at the base station RF output port.

Unless otherwise stated, all requirements are measured as mean power.

6.6.3.1   Mandatory Requirements

The requirements of either subclause 6.6.3.1.1 or subclause 6.6.3.1.2 shall apply whatever the type of transmitter considered (single carrier or multi-carrier). It applies for all transmission modes foreseen by the manufacturer's.

Either requirement applies at frequencies within the specified frequency ranges which are more than 12.5MHz under the first carrier frequency used or more than 12.5 MHz above the last carrier frequency used.

6.6.3.1.1   Spurious emissions (Category A)

The following requirements shall be met in cases where Category A limits for spurious emissions, as defined in ITU-R Recommendation SM.329-8 [1], are applied.

6.6.3.1.1.1   Minimum Requirement

The power of any spurious emission shall not exceed:

Table 6.10: BS Mandatory spurious emissions limits, Category A

Band	Minimum requirement	Measurement Bandwidth	Note
9kHz – 150kHz	-13 dBm	1 kHz	Bandwidth as in ITU SM.329-8, s4.1
150kHz – 30MHz		10 kHz	Bandwidth as in ITU SM.329-8, s4.1
30MHz – 1GHz		100 kHz	Bandwidth as in ITU SM.329-8, s4.1
1GHz – 12.75 GHz		1 MHz	Upper frequency as in ITU SM.329-8, s2.5 table 1

6.6.3.1.2   Spurious emissions (Category B)

The following requirements shall be met in cases where Category B limits for spurious emissions, as defined in ITU-R Recommendation SM.329-8 [1], are applied.

6.6.3.1.2.1   Minimum Requirement

The power of any spurious emission shall not exceed:

Table 6.11: BS Mandatory spurious emissions limits, Category B

Band	Maximum Level	Measurement Bandwidth	Note
9kHz – 150kHz	-36 dBm	1 kHz	Bandwidth as in ITU SM.329-8, s4.1
150kHz – 30MHz	- 36 dBm	10 kHz	Bandwidth as in ITU SM.329-8, s4.1
30MHz – 1GHz	-36 dBm	100 kHz	Bandwidth as in ITU SM.329-8, s4.1
1GHz ↔ Fc1-60 MHz or Fl -10 MHz *whichever is the higher*	-30 dBm	1 MHz	Bandwidth as in ITU SM.329-8, s4.1
Fc1 - 60 MHz or Fl -10 MHz *whichever is the higher* ↔ Fc1 - 50 MHz or Fl -10 MHz *whichever is the higher*	-25 dBm	1 MHz	Specification in accordance with ITU-R SM.329-8, s4.3 and Annex 7
Fc1 - 50 MHz or Fl -10 MHz *whichever is the higher* ↔ Fc2 + 50 MHz or Fu +10 MHz *whichever is the lower*	-15 dBm	1 MHz	Specification in accordance with ITU-R SM.329-8, s4.3 and Annex 7
Fc2 + 50 MHz or Fu + 10 MHz *whichever is the lower* ↔ Fc2 + 60 MHz or Fu + 10 MHz *whichever is the lower*	-25 dBm	1 MHz	Specification in accordance with ITU-R SM.329-8, s4.3 and Annex 7
Fc2 + 60 MHz or Fu + 10 MHz *whichever is the lower* ↔ 12,75 GHz	-30 dBm	1 MHz	Bandwidth as in ITU-R SM.329-8, s4.3 and Annex 7. Upper frequency as in ITU-R SM.329-8, s2.5 table 1

Fc1: Center frequency of emission of the first carrier transmitted by the BS

Fc2: Center frequency of emission of the last carrier transmitted by the BS

Fl : Lower frequency of the band in which TDD operates

Fu : Upper frequency of the band in which TDD operates

------------------- END of CHANGES---

CR-Form-v4

CHANGE REQUEST

⌘ **25.105**	**CR 63**	⌘ rev **-**	⌘ Current version: **4.0.0** ⌘

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Proposed change affects: ⌘ (U)SIM ☐ ME/UE **X** Radio Access Network **X** Core Network ☐

Title:	⌘	Correction to upper frequency of transmitter spurious emission limits	
Source:	⌘	RAN WG4	
Work item code: ⌘	TEI	***Date:*** ⌘	31.May 2001
Category: ⌘	**A**	***Release:*** ⌘	REL-4

Use <u>one</u> 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 <u>one</u> of the following releases:
2   (GSM Phase 2)
R96   (Release 1996)
R97   (Release 1997)
R98   (Release 1998)
R99   (Release 1999)
REL-4 (Release 4)
REL-5 (Release 5)

Reason for change:	⌘	REL-4 Cat A CR corresponding to R99 CR Tdoc R4-010546
Summary of change: ⌘		An obvious error (upper frequency should be 12.75 GHz instead of 12.5 GHz) in last row of table 6.11 is corrected
Consequences if not approved:	⌘	Inconsistencys between releases.

Clauses affected:	⌘	6.6.3.1.2.1

Other specs affected:	⌘	☐ Other core specifications ⌘	
		X Test specifications	25.142
		☐ O&M Specifications	

Other comments:	⌘	

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

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://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.

6.6.3   Spurious emissions

Spurious emissions are emissions which are caused by unwanted transmitter effects such as harmonics emission, parasitic emission, intermodulation products and frequency conversion products, but exclude out of band emissions. This is measured at the base station RF output port.

Unless otherwise stated, all requirements are measured as mean power.

6.6.3.1   Mandatory Requirements

The requirements of either subclause 6.6.3.1.1 or subclause 6.6.3.1.2 shall apply whatever the type of transmitter considered (single carrier or multi-carrier). It applies for all transmission modes foreseen by the manufacturer's.

6.6.3.1.1   Spurious emissions (Category A)

The following requirements shall be met in cases where Category A limits for spurious emissions, as defined in ITU-R Recommendation SM.329-8 [1], are applied.

6.6.3.1.1.1   Minimum Requirement

6.6.3.1.1.1.1   3,84 Mcps TDD Option

Either requirement applies at frequencies within the specified frequency ranges which are more than 12.5MHz under the first carrier frequency used or more than 12.5 MHz above the last carrier frequency used. The power of any spurious emission shall not exceed:

Table 6.10: BS Mandatory spurious emissions limits, Category A

Band	Minimum requirement	Measurement Bandwidth	Note
9kHz – 150kHz	-13 dBm	1 kHz	Bandwidth as in ITU SM.329-8, s4.1
150kHz – 30MHz		10 kHz	Bandwidth as in ITU SM.329-8, s4.1
30MHz – 1GHz		100 kHz	Bandwidth as in ITU SM.329-8, s4.1
1GHz – 12.75 GHz		1 MHz	Upper frequency as in ITU SM.329-8, s2.5 table 1

6.6.3.1.1.1.2   1,28 Mcps TDD Option

Either requirement applies at frequencies within the specified frequency ranges which are more than 4MHz under the first carrier frequency used or more than 4 MHz above the last carrier frequency used. The power of any spurious emission shall not exceed:

Table 6.10A: BS Mandatory spurious emissions limits, Category A

Band	Minimum requirement	Measurement Bandwidth	Note
9kHz – 150kHz	-13 dBm	1 kHz	Bandwidth as in ITU SM.329-7, s4.1
150kHz – 30MHz		10 kHz	Bandwidth as in ITU SM.329-7, s4.1
30MHz – 1GHz		100 kHz	Bandwidth as in ITU SM.329-7, s4.1
1GHz – 12.75 GHz		1 MHz	Upper frequency as in ITU SM.329-7, s2.6

NOTE: only the measurement bands are different according to the occupied bandwidth.

6.6.3.1.2 Spurious emissions (Category B)

The following requirements shall be met in cases where Category B limits for spurious emissions, as defined in ITU-R Recommendation SM.329-8 [1], are applied.

6.6.3.1.2.1 Minimum Requirement

6.6.3.1.2.1.1 3,84 Mcps TDD Option

Either requirement applies at frequencies within the specified frequency ranges which are more than 12.5MHz under the first carrier frequency used or more than 12.5 MHz above the last carrier frequency used. The power of any spurious emission shall not exceed:

Table 6.11: BS Mandatory spurious emissions limits, Category B

Band	Maximum Level	Measurement Bandwidth	Note
9kHz – 150kHz	-36 dBm	1 kHz	Bandwidth as in ITU SM.329-8, s4.1
150kHz – 30MHz	- 36 dBm	10 kHz	Bandwidth as in ITU SM.329-8, s4.1
30MHz – 1GHz	-36 dBm	100 kHz	Bandwidth as in ITU SM.329-8, s4.1
1GHz ↔ Fc1-60 MHz or Fl -10 MHz *whichever is the higher*	-30 dBm	1 MHz	Bandwidth as in ITU SM.329-8, s4.1
Fc1 - 60 MHz or Fl -10 MHz *whichever is the higher* ↔ Fc1 - 50 MHz or Fl -10 MHz *whichever is the higher*	-25 dBm	1 MHz	Specification in accordance with ITU-R SM.329-8, s4.3 and Annex 7
Fc1 - 50 MHz or Fl -10 MHz *whichever is the higher* ↔ Fc2 + 50 MHz or Fu +10 MHz *whichever is the lower*	-15 dBm	1 MHz	Specification in accordance with ITU-R SM.329-8, s4.3 and Annex 7
Fc2 + 50 MHz or Fu + 10 MHz *whichever is the lower* ↔ Fc2 + 60 MHz or Fu + 10 MHz *whichever is the lower*	-25 dBm	1 MHz	Specification in accordance with ITU-R SM.329-8, s4.3 and Annex 7
Fc2 + 60 MHz or Fu + 10 MHz *whichever is the lower* ↔ 12,75 GHz	-30 dBm	1 MHz	Bandwidth as in ITU-R SM.329-8, s4.3 and Annex 7. Upper frequency as in ITU-R SM.329-8, s2.5 table 1

Fc1: Center frequency of emission of the first carrier transmitted by the BS

Fc2: Center frequency of emission of the last carrier transmitted by the BS

Fl : Lower frequency of the band in which TDD operates

Fu : Upper frequency of the band in which TDD operates

------end of changes-----------------