

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

RP-030029

Title CRs (R'99 and Rel-4/Rel-5/Rel-6 Category A) to TS 25.104 & TS 25.141 on
"Protection of FDD BS receiver"
Source TSG RAN WG4
Agenda Item 8.4.3

RAN4 Tdoc	Spec	CR	R	Cat	Rel	Curr Ver	Title	Work Item
R4-020293	25.104	169	1	F	R99	3.11.0	Protection of the FDD BS receiver	TEI
R4-020294	25.104	170	1	A	Rel-4	4.6.0	Protection of the FDD BS receiver	TEI
R4-020295	25.104	171	1	A	Rel-5	5.5.0	Protection of the FDD BS receiver	TEI
R4-020296	25.104	172	1	A	Rel-6	6.0.0	Protection of the FDD BS receiver	TEI
R4-020314	25.141	270	1	F	R99	3.12.0	Protection of the FDD BS receiver	TEI
R4-020315	25.141	271	1	A	Rel-4	4.7.0	Protection of the FDD BS receiver	TEI
R4-020316	25.141	272	1	A	Rel-5	5.5.0	Protection of the FDD BS receiver	TEI
R4-020317	25.141	273	1	A	Rel-6	6.0.0	Protection of the FDD BS receiver	TEI

Madrid, Spain 17 - 22 February, 2003

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CHANGE REQUEST⌘ **25.104 CR 169** ⌘ rev **1** ⌘ Current version: **3.11.0** ⌘For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ Protection of the FDD BS receiver		
Source:	⌘ RAN WG4		
Work item code:	⌘ TEI	Date:	⌘ 05/03/2003
Category:	⌘ F	Release:	⌘ R99
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	F (correction)		2 (GSM Phase 2)
	A (corresponds to a correction in an earlier release)		R96 (Release 1996)
	B (addition of feature),		R97 (Release 1997)
	C (functional modification of feature)		R98 (Release 1998)
	D (editorial modification)		R99 (Release 1999)
	Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Rel-4 (Release 4)
			Rel-5 (Release 5)
			Rel-6 (Release 6)

Reason for change:	⌘ Requirements to protect FDD BS receiver (UL band) in case where several FDD networks are deployed are missing. Up to now there is only one sufficient but optional requirement which may be applied in order to prevent the receiver of the BS being desensitised by emissions from its own BS transmitter. It is possible and allowed to build a FDD BS with spurious emissions up to -30dBm in 1MHz inside parts of the UL band. This kind of BS could disturb all other FDD networks.
Summary of change:	⌘ Requirements for FDD to protect FDD BS receiver in case of Co-located BSs are introduced as mandatory requirement. This requirement cover also the case of deployment in the Same Geographic Area. Requirements of -96dBm /100kHz for colocation between different BSs are derived from the already existing requirement of -96dBm/100kHz, for protection of the own BS receiver. This requirement and the new co-location requirement between different BSs are based on 30dB MCL between FDD transmitter and FDD receiver.
Consequences if not approved:	⌘ Co-existence of different FDD can not be guaranteed based on the requirements in 3GPP specifications. Isolated Impact Analysis: UTRA FDD network performance could be affected by to high FDD Spurious Emission if this CR is not approved. Approval of this CR would not affect FDD implementation behaving like indicated in the CR.

Clauses affected: ⌘ 6.6.3.2

Other specs affected:	⌘	<table border="1"><tr><td>Y</td><td>N</td></tr><tr><td></td><td>X</td></tr><tr><td>X</td><td></td></tr><tr><td></td><td>X</td></tr></table>	Y	N		X	X			X	Other core specifications	⌘	TS 25.141
	Y	N											
		X											
X													
	X												
		Test specifications											
		O&M Specifications											
Other comments:	⌘	Equivalent CRs in other Releases: CR170r1 cat. A to 25.104 v4.6.0, CR171r1 cat. A to 25.104 v5.5.0, CR172r1 cat. A to 25.104 v6.0.0											

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.
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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.

6.6.3.2 Protection of the BS receiver of own or different BS

This requirement ~~may shall~~ be applied in order to prevent the receiver_s of the BS_s being desensitised by emissions from ~~the a~~ BS transmitter, ~~which are coupled between the antennas of the BS. This is measured at the transmit antenna port.~~

6.6.3.2.1 Minimum Requirement

The power of any spurious emission shall not exceed:

Table 6.10: BS Spurious emissions limits for protection of the BS receiver

Band	Maximum Level	Measurement Bandwidth	Note
1920 - 1980MHz For operation in Frequency Bands defined in sub-clause 5.2(a)	-96 dBm	100-kHz	
1850-1910 MHz For operation in Frequency Bands defined in sub-clause 5.2(b)	-96 dBm	100kHz	

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CHANGE REQUEST⌘ **25.104 CR 170** ⌘ rev **1** ⌘ Current version: **4.6.0** ⌘For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ Protection of the FDD BS receiver		
Source:	⌘ RAN WG4		
Work item code:	⌘ TEI	Date:	⌘ 05/03/2003
Category:	⌘ A	Release:	⌘ Rel-4
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	F (correction)		2 (GSM Phase 2)
	A (corresponds to a correction in an earlier release)		R96 (Release 1996)
	B (addition of feature),		R97 (Release 1997)
	C (functional modification of feature)		R98 (Release 1998)
	D (editorial modification)		R99 (Release 1999)
	Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Rel-4 (Release 4)
			Rel-5 (Release 5)
			Rel-6 (Release 6)

Reason for change:	⌘ Requirements to protect FDD BS receiver (UL band) in case where several FDD networks are deployed are missing. Up to now there is only one sufficient but optional requirement which may be applied in order to prevent the receiver of the BS being desensitised by emissions from its own BS transmitter. It is possible and allowed to build a FDD BS with spurious emissions up to -30dBm in 1MHz inside parts of the UL band. This kind of BS could disturb all other FDD networks.
Summary of change:	⌘ Requirements for FDD to protect FDD BS receiver in case of Co-located BSs are introduced as mandatory requirement. This requirement cover also the case of deployment in the Same Geographic Area. Requirements of -96dBm /100kHz for colocation between different BSs are derived from the already existing requirement of -96dBm/100kHz, for protection of the own BS receiver. This requirement and the new co-location requirement between different BSs are based on 30dB MCL between FDD transmitter and FDD receiver.
Consequences if not approved:	⌘ Co-existence of different FDD can not be guaranteed based on the requirements in 3GPP specifications. Isolated Impact Analysis: UTRA FDD network performance could be affected by to high FDD Spurious Emission if this CR is not approved. Approval of this CR would not affect FDD implementation behaving like indicated in the CR.

Clauses affected: ⌘ 6.6.3.2

Other specs affected:	⌘	<table border="1"><tr><td>Y</td><td>N</td></tr><tr><td></td><td>X</td></tr><tr><td>X</td><td></td></tr><tr><td></td><td>X</td></tr></table>	Y	N		X	X			X	Other core specifications	⌘	TS 25.141
	Y	N											
		X											
X													
	X												
		Test specifications											
		O&M Specifications											
Other comments:	⌘	Equivalent CRs in other Releases: CR169r1 cat. F to 25.104 v3.11.0, CR171r1 cat. A to 25.104 v5.5.0, CR172r1 cat. A to 25.104 v6.0.0											

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6.6.3.2 Protection of the BS receiver of own or different BS

This requirement ~~may shall~~ be applied in order to prevent the receiver_s of the BS_s being desensitised by emissions from ~~the a~~ BS transmitter, ~~which are coupled between the antennas of the BS. This is measured at the transmit antenna port.~~

6.6.3.2.1 Minimum Requirement

The power of any spurious emission shall not exceed:

Table 6.10: BS Spurious emissions limits for protection of the BS receiver

Band	Maximum Level	Measurement Bandwidth	Note
1920 - 1980MHz For operation in Frequency Bands defined in sub-clause 5.2(a)	-96 dBm	100-kHz	
1850-1910 MHz For operation in Frequency Bands defined in sub-clause 5.2(b)	-96 dBm	100kHz	

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CHANGE REQUEST⌘ **25.104 CR 171** ⌘ rev **1** ⌘ Current version: **5.5.0** ⌘For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ Protection of the FDD BS receiver		
Source:	⌘ RAN WG4		
Work item code:	⌘ TEI	Date:	⌘ 05/03/2003
Category:	⌘ A	Release:	⌘ Rel-5
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	F (correction)		2 (GSM Phase 2)
	A (corresponds to a correction in an earlier release)		R96 (Release 1996)
	B (addition of feature),		R97 (Release 1997)
	C (functional modification of feature)		R98 (Release 1998)
	D (editorial modification)		R99 (Release 1999)
	Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Rel-4 (Release 4)
			Rel-5 (Release 5)
			Rel-6 (Release 6)

Reason for change:	⌘ Requirements to protect FDD BS receiver (UL band) in case where several FDD networks are deployed are missing. Up to now there is only one sufficient but optional requirement which may be applied in order to prevent the receiver of the BS being desensitised by emissions from its own BS transmitter. It is possible and allowed to build a FDD BS with spurious emissions up to -30dBm in 1MHz inside parts of the UL band. This kind of BS could disturb all other FDD networks.
Summary of change:	⌘ Requirements for FDD to protect FDD BS receiver in case of Co-located BSs are introduced as mandatory requirement. This requirement cover also the case of deployment in the Same Geographic Area. Requirements of -96dBm /100kHz for colocation between different BSs are derived from the already existing requirement of -96dBm/100kHz, for protection of the own BS receiver. This requirement and the new co-location requirement between different BSs are based on 30dB MCL between FDD transmitter and FDD receiver.
Consequences if not approved:	⌘ Co-existence of different FDD can not be guaranteed based on the requirements in 3GPP specifications. Isolated Impact Analysis: UTRA FDD network performance could be affected by to high FDD Spurious Emission if this CR is not approved. Approval of this CR would not affect FDD implementation behaving like indicated in the CR.

Clauses affected: ⌘ 6.6.3.2

Other specs affected:	⌘	<table border="1"><tr><td>Y</td><td>N</td></tr><tr><td></td><td>X</td></tr><tr><td>X</td><td></td></tr><tr><td></td><td>X</td></tr></table>	Y	N		X	X			X	Other core specifications	⌘	TS 25.141
	Y	N											
		X											
X													
	X												
		Test specifications											
		O&M Specifications											
Other comments:	⌘	Equivalent CRs in other Releases: CR169r1 cat. F to 25.104 v3.11.0, CR170r1 cat. A to 25.104 v4.6.0, CR172r1 cat. A to 25.104 v6.0.0											

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6.6.3.2 Protection of the BS receiver [of own or different BS](#)

This requirement ~~may shall~~ be applied in order to prevent the receiver_s of the BS_s being desensitised by emissions from ~~the a~~ BS transmitter, ~~which are coupled between the antennas of the BS. This is measured at the transmit antenna port.~~

6.6.3.2.1 Minimum Requirement

The power of any spurious emission shall not exceed:

Table 6.10: BS Spurious emissions limits for protection of the BS receiver

Operating Band	Band	Maximum Level	Measurement Bandwidth	Note
I	1920 - 1980MHz	-96 dBm	100-kHz	
II	1850 -1910 MHz	-96 dBm	100kHz	
III	1710 -1785 MHz	-96 dBm	100kHz	

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CHANGE REQUEST⌘ **25.104 CR 172** ⌘ rev **1** ⌘ Current version: **6.0.0** ⌘For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ Protection of the FDD BS receiver		
Source:	⌘ RAN WG4		
Work item code:	⌘ TEI	Date:	⌘ 05/03/2003
Category:	⌘ A	Release:	⌘ Rel-6
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	F (correction)		2 (GSM Phase 2)
	A (corresponds to a correction in an earlier release)		R96 (Release 1996)
	B (addition of feature),		R97 (Release 1997)
	C (functional modification of feature)		R98 (Release 1998)
	D (editorial modification)		R99 (Release 1999)
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			Rel-5 (Release 5)
			Rel-6 (Release 6)

Reason for change:	⌘ Requirements to protect FDD BS receiver (UL band) in case where several FDD networks are deployed are missing. Up to now there is only one sufficient but optional requirement which may be applied in order to prevent the receiver of the BS being desensitised by emissions from its own BS transmitter. It is possible and allowed to build a FDD BS with spurious emissions up to -30dBm in 1MHz inside parts of the UL band. This kind of BS could disturb all other FDD networks.
Summary of change:	⌘ Requirements for FDD to protect FDD BS receiver in case of Co-located BSs are introduced as mandatory requirement. This requirement cover also the case of deployment in the Same Geographic Area. Requirements of -96dBm /100kHz for colocation between different BSs are derived from the already existing requirement of -96dBm/100kHz, for protection of the own BS receiver. This requirement and the new co-location requirement between different BSs are based on 30dB MCL between FDD transmitter and FDD receiver.
Consequences if not approved:	⌘ Co-existence of different FDD can not be guaranteed based on the requirements in 3GPP specifications. Isolated Impact Analysis: UTRA FDD network performance could be affected by to high FDD Spurious Emission if this CR is not approved. Approval of this CR would not affect FDD implementation behaving like indicated in the CR.

Clauses affected: ⌘ 6.6.3.2

Other specs affected:	⌘	<table border="1"><tr><td>Y</td><td>N</td></tr><tr><td></td><td>X</td></tr><tr><td>X</td><td></td></tr><tr><td></td><td>X</td></tr></table>	Y	N		X	X			X	Other core specifications	⌘ TS 25.141
	Y	N										
		X										
X												
	X											
		Test specifications										
		O&M Specifications										
Other comments:	⌘	Equivalent CRs in other Releases: CR169r1 cat. F to 25.104 v3.11.0, CR170r1 cat. A to 25.104 v4.6.0, CR171r1 cat. A to 25.104 v5.5.0										

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6.6.3.2 Protection of the BS receiver of own or different BS

This requirement ~~may shall~~ be applied in order to prevent the receiver_s of the BS_s being desensitised by emissions from ~~the a~~ BS transmitter, ~~which are coupled between the antennas of the BS. This is measured at the transmit antenna port.~~

6.6.3.2.1 Minimum Requirement

The power of any spurious emission shall not exceed:

Table 6.10: BS Spurious emissions limits for protection of the BS receiver

Operating Band	Band	Maximum Level	Measurement Bandwidth	Note
I	1920 - 1980MHz	-96 dBm	100-kHz	
II	1850 -1910 MHz	-96 dBm	100kHz	
III	1710 -1785 MHz	-96 dBm	100kHz	

CHANGE REQUEST

⌘ **25.141** CR **270** ⌘ rev **1** ⌘ Current version: **3.12.0** ⌘

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

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ UTRA-FDD BS Receiver protection		
Source:	⌘ RAN WG4		
Work item code:	⌘ TEI	Date:	⌘ 05/03/2003
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) Rel-6 (Release 6)

Reason for change:	⌘ Requirements to protect FDD BS receiver (UL band) in case where several FDD networks are deployed are missing. Up to now there is only one sufficient but optional requirement which may be applied in order to prevent the receiver of the BS being desensitised by emissions from the same BS transmitter. It is possible and allowed to build a FDD BS with spurious emissions up to -30dBm in 1MHz inside parts of the UL band. This kind of BS could disturb all other FDD networks.
Summary of change:	⌘ The spurious emissions of the BS transmitters for any type of BS are changed to -96 dBm/100 kHz as as mandatory requirement, this change allow to cover the protection of FDD BS receiver for three cases : a) The BS receivers of the same BS; b) The BS receivers of co-located BS of other FDD operator; c) The BS receivers of other FDD networks in co-existence.
Consequences if not approved:	⌘ The protection BS receiver desensitisation due to the emissions from the same BS or co-existed BS can not be guaranteed by the actual specification.
	Isolated Impact Analysis: Changing this requirement as mandatory may have some impact on BS testing.

Clauses affected:	⌘ 6.5.3.4.3, 6.5.3.7.3										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;">X</td> <td style="text-align: center;"></td> </tr> <tr> <td style="text-align: center;"></td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"></td> <td style="text-align: center;">X</td> </tr> </table> Other core specifications	Y	N	X			X		X	⌘ TS25.104	
Y	N										
X											
	X										
	X										

Other comments: ☹

Equivalent CRs in other Releases: CR271r1 cat. A to 25.141 v4.7.0, CR272r1 cat. A to 25.141 v5.5.0, CR273r1 cat. A to 25.141 v6.0.0

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6.5.3.4.3 Protection of the BS receiver [of own or different BS](#)

This requirement ~~shall~~ may be applied in order to prevent the receivers of the BSs being desensitised by emissions from ~~the a~~ BS transmitter, ~~which are coupled between the antennas of the BS.~~ This is measured at the transmit antenna port for any type of BS which has common or separate Tx/Rx antenna ports.

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

~~This requirement is not applicable to antenna ports which are used for both transmission and reception (e.g. which have an internal duplexer).~~

~~NOTE:—In this case, the measurement of Reference Sensitivity will directly show any desensitization of the receiver.~~

6.5.3.4.3.1 Minimum Requirement

The power of any spurious emission shall not exceed.

Table 6.26: BS Spurious emissions limits for protection of the BS receiver

Band	Maximum Level	Measurement Bandwidth	Note
1 920 MHz to 1 980 MHz For operation in Frequency Bands defined in subclause 3.4.1(a)	-96 dBm	100 kHz	
1 850 MHz to 1 910 MHz For operation in Frequency Bands defined in subclause 3.4.1(b)	-96 dBm	100_kHz	

6.5.3.7.3 Protection of the BS receiver [of own or different BS](#)

Table 6.37: BS Spurious emissions limits for protection of the BS receiver

Band	Maximum Level	Measurement Bandwidth	Note
1 920 MHz to 1 980 MHz For operation in Frequency Bands defined in subclause 3.4.1(a)	-96 dBm	100 kHz	
1 850 MHz to 1 910 MHz For operation in Frequency Bands defined in subclause 3.4.1(b)	-96 dBm	100_kHz	

CHANGE REQUEST

⌘ **25.141** CR **271** ⌘ rev **1** ⌘ Current version: **4.7.0** ⌘

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

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ UTRA-FDD BS Receiver protection		
Source:	⌘ RAN WG4		
Work item code:	⌘ TEI	Date:	⌘ 05/03/2003
Category:	⌘ A	Release:	⌘ Rel-4
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	F (correction)		2 (GSM Phase 2)
	A (corresponds to a correction in an earlier release)		R96 (Release 1996)
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	Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Rel-4 (Release 4)
			Rel-5 (Release 5)
			Rel-6 (Release 6)

Reason for change:	⌘ Requirements to protect FDD BS receiver (UL band) in case where several FDD networks are deployed are missing. Up to now there is only one sufficient but optional requirement which may be applied in order to prevent the receiver of the BS being desensitised by emissions from the same BS transmitter. It is possible and allowed to build a FDD BS with spurious emissions up to -30dBm in 1MHz inside parts of the UL band. This kind of BS could disturb all other FDD networks.
Summary of change:	⌘ The spurious emissions of the BS transmitters for any type of BS are changed to -96 dBm/100 kHz as as mandatory requirement, this change allow to cover the protection of FDD BS receiver for three cases : a) The BS receivers of the same BS; b) The BS receivers of co-located BS of other FDD operator; c) The BS receivers of other FDD networks in co-existence.
Consequences if not approved:	⌘ The protection BS receiver desensitisation due to the emissions from the same BS or co-existed BS can not be guaranteed by the actual specification.
	Isolated Impact Analysis: Changing this requirement as mandatory may have some impact on BS testing.

Clauses affected:	⌘ 6.5.3.4.3, 6.5.3.7.3										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;">X</td> <td style="text-align: center;"></td> </tr> <tr> <td style="text-align: center;"></td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"></td> <td style="text-align: center;">X</td> </tr> </table>	Y	N	X			X		X	Other core specifications	⌘ TS25.104
Y	N										
X											
	X										
	X										
		Test specifications									
		O&M Specifications									

Other comments: ☞

Equivalent CRs in other Releases: CR270r1 cat. F to 25.141 v3.12.0, CR272r1 cat. A to 25.141 v5.5.0, CR273r1 cat. A to 25.141 v6.0.0

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.

6.5.3.4.3 Protection of the BS receiver [of own or different BS](#)

This requirement ~~shall~~ may be applied in order to prevent the receivers of the BSs being desensitised by emissions from ~~the a~~ BS transmitter, ~~which are coupled between the antennas of the BS.~~ This is measured at the transmit antenna port for any type of BS which has common or separate Tx/Rx antenna ports.

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

~~This requirement is not applicable to antenna ports which are used for both transmission and reception (e.g. which have an internal duplexer).~~

~~NOTE:—In this case, the measurement of Reference Sensitivity will directly show any desensitization of the receiver.~~

6.5.3.4.3.1 Minimum Requirement

The power of any spurious emission shall not exceed.

Table 6.26: BS Spurious emissions limits for protection of the BS receiver

Band	Maximum Level	Measurement Bandwidth	Note
1 920 MHz to 1 980 MHz For operation in Frequency Bands defined in subclause 3.4.1(a)	-96 dBm	100 kHz	
1 850 MHz to 1 910 MHz For operation in Frequency Bands defined in subclause 3.4.1(b)	-96 dBm	100_kHz	

6.5.3.7.3 Protection of the BS receiver [of own or different BS](#)

Table 6.37: BS Spurious emissions limits for protection of the BS receiver

Band	Maximum Level	Measurement Bandwidth	Note
1 920 MHz to 1 980 MHz For operation in Frequency Bands defined in subclause 3.4.1(a)	-96 dBm	100 kHz	
1 850 MHz to 1 910 MHz For operation in Frequency Bands defined in subclause 3.4.1(b)	-96 dBm	100_kHz	

CHANGE REQUEST

⌘ **25.141** CR **272** ⌘ rev **1** ⌘ Current version: **5.5.0** ⌘

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

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ UTRA-FDD BS Receiver protection		
Source:	⌘ RAN WG4		
Work item code:	⌘ TEI	Date:	⌘ 05/03/2003
Category:	⌘ A	Release:	⌘ Rel-5
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	F (correction)		2 (GSM Phase 2)
	A (corresponds to a correction in an earlier release)		R96 (Release 1996)
	B (addition of feature),		R97 (Release 1997)
	C (functional modification of feature)		R98 (Release 1998)
	D (editorial modification)		R99 (Release 1999)
	Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Rel-4 (Release 4)
			Rel-5 (Release 5)
			Rel-6 (Release 6)

Reason for change:	⌘ Requirements to protect FDD BS receiver (UL band) in case where several FDD networks are deployed are missing. Up to now there is only one sufficient but optional requirement which may be applied in order to prevent the receiver of the BS being desensitised by emissions from the same BS transmitter. It is possible and allowed to build a FDD BS with spurious emissions up to -30dBm in 1MHz inside parts of the UL band. This kind of BS could disturb all other FDD networks.
Summary of change:	⌘ The spurious emissions of the BS transmitters for any type of BS are changed to -96 dBm/100 kHz as as mandatory requirement, this change allow to cover the protection of FDD BS receiver for three cases : a) The BS receivers of the same BS; b) The BS receivers of co-located BS of other FDD operator; c) The BS receivers of other FDD networks in co-existence.
Consequences if not approved:	⌘ The protection BS receiver desensitisation due to the emissions from the same BS or co-existed BS can not be guaranteed by the actual specification.
	Isolated Impact Analysis: Changing this requirement as mandatory may have some impact on BS testing.

Clauses affected:	⌘ 6.5.3.4.3, 6.5.3.7.3										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="text-align: center;">Y</td> <td style="text-align: center;">N</td> </tr> <tr> <td style="text-align: center;">X</td> <td style="text-align: center;"></td> </tr> <tr> <td style="text-align: center;"></td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"></td> <td style="text-align: center;">X</td> </tr> </table>	Y	N	X			X		X	Other core specifications	⌘ TS25.104
Y	N										
X											
	X										
	X										
		Test specifications									
		O&M Specifications									

Other comments: ☞

Equivalent CRs in other Releases: CR270r1 cat. F to 25.141 v3.12.0, CR271r1 cat. A to 25.141 v4.7.0, CR273r1 cat. A to 25.141 v6.0.0

How to create CRs using this form:

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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.

6.5.3.4.3 Protection of the BS receiver [of own or different BS](#)

This requirement ~~shall~~ may be applied in order to prevent the receivers of the BSs being desensitised by emissions from ~~the a~~ BS transmitter, ~~which are coupled between the antennas of the BS.~~ This is measured at the transmit antenna port for any type of BS which has common or separate Tx/Rx antenna ports.

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

~~This requirement is not applicable to antenna ports which are used for both transmission and reception (e.g. which have an internal duplexer).~~

~~NOTE:—In this case, the measurement of Reference Sensitivity will directly show any desensitization of the receiver.~~

6.5.3.4.3.1 Minimum Requirement

The power of any spurious emission shall not exceed.

Table 6.26: BS Spurious emissions limits for protection of the BS receiver

Operating Band	Band	Maximum Level	Measurement Bandwidth	Note
I	1920 - 1980MHz	-96 dBm	100 kHz	
II	1850 - 1910 MHz	-96 dBm	100 kHz	
III	1710 - 1785 MHz	-96 dBm	100 kHz	

6.5.3.7.3 Protection of the BS receiver [of own or different BS](#)

Table 6.37: BS Spurious emissions limits for protection of the BS receiver

Operating Band	Band	Maximum Level	Measurement Bandwidth	Note
I	1920- 1980MHz	-96 dBm	100 kHz	
II	1850 -1910 MHz	-96dBm	100 kHz	
III	1710 -1785 MHz	-96 dBm	100 kHz	

CHANGE REQUEST

⌘ **25.141** CR **273** ⌘ rev **1** ⌘ Current version: **6.0.0** ⌘

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

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ UTRA-FDD BS Receiver protection		
Source:	⌘ RAN WG4		
Work item code:	⌘ TEI	Date:	⌘ 05/03/2003
Category:	⌘ A	Release:	⌘ Rel-6
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	F (correction)		2 (GSM Phase 2)
	A (corresponds to a correction in an earlier release)		R96 (Release 1996)
	B (addition of feature),		R97 (Release 1997)
	C (functional modification of feature)		R98 (Release 1998)
	D (editorial modification)		R99 (Release 1999)
	Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Rel-4 (Release 4)
			Rel-5 (Release 5)
			Rel-6 (Release 6)

Reason for change:	⌘ Requirements to protect FDD BS receiver (UL band) in case where several FDD networks are deployed are missing. Up to now there is only one sufficient but optional requirement which may be applied in order to prevent the receiver of the BS being desensitised by emissions from the same BS transmitter. It is possible and allowed to build a FDD BS with spurious emissions up to -30dBm in 1MHz inside parts of the UL band. This kind of BS could disturb all other FDD networks.
Summary of change:	⌘ The spurious emissions of the BS transmitters for any type of BS are changed to -96 dBm/100 kHz as as mandatory requirement, this change allow to cover the protection of FDD BS receiver for three cases : a) The BS receivers of the same BS; b) The BS receivers of co-located BS of other FDD operator; c) The BS receivers of other FDD networks in co-existence.
Consequences if not approved:	⌘ The protection BS receiver desensitisation due to the emissions from the same BS or co-existed BS can not be guaranteed by the actual specification.
	Isolated Impact Analysis: Changing this requirement as mandatory may have some impact on BS testing.

Clauses affected:	⌘ 6.5.3.4.3, 6.5.3.7.3										
Other specs affected:	<table border="1"> <tr> <td>Y</td> <td>N</td> </tr> <tr> <td>X</td> <td></td> </tr> <tr> <td></td> <td>X</td> </tr> <tr> <td></td> <td>X</td> </tr> </table>	Y	N	X			X		X	Other core specifications	⌘ TS25.104
Y	N										
X											
	X										
	X										
		Test specifications									
		O&M Specifications									

Other comments: ☞

Equivalent CRs in other Releases: CR270r1 cat. F to 25.141 v3.12.0, CR271r1 cat. A to 25.141 v4.7.0, CR272r1 cat. A to 25.141 v5.5.0

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6.5.3.4.3 Protection of the BS receiver [of own or different BS](#)

This requirement ~~shall~~ may be applied in order to prevent the receivers of the BSs being desensitised by emissions from ~~the a~~ BS transmitter, ~~which are coupled between the antennas of the BS.~~ This is measured at the transmit antenna port for any type of BS which has common or separate Tx/Rx antenna ports.

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

~~This requirement is not applicable to antenna ports which are used for both transmission and reception (e.g. which have an internal duplexer).~~

~~NOTE:—In this case, the measurement of Reference Sensitivity will directly show any desensitization of the receiver.~~

6.5.3.4.3.1 Minimum Requirement

The power of any spurious emission shall not exceed.

Table 6.26: BS Spurious emissions limits for protection of the BS receiver

Operating Band	Band	Maximum Level	Measurement Bandwidth	Note
I	1920 - 1980MHz	-96 dBm	100 kHz	
II	1850 - 1910 MHz	-96 dBm	100 kHz	
III	1710 - 1785 MHz	-96 dBm	100 kHz	

6.5.3.7.3 Protection of the BS receiver [of own or different BS](#)

Table 6.37: BS Spurious emissions limits for protection of the BS receiver

Operating Band	Band	Maximum Level	Measurement Bandwidth	Note
I	1920 - 1980MHz	-96 dBm	100 kHz	
II	1850 - 1910 MHz	-96 dBm	100 kHz	
III	1710 - 1785 MHz	-96 dBm	100 kHz	