CR-Form-v3

CHANGE REQUEST

⌘ **25.133** CR **CR-124** ⌘ rev **1** ⌘ Current version: **3.5.0** ⌘

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

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

Title: ⌘	Requirements for TFC selection at the maximum power	
Source: ⌘	Qualcomm Europe	
Work item code: ⌘		***Date:*** ⌘ 13-06-2001
Category: ⌘ **F**		***Release:*** ⌘ R99

Use one of the following categories:	*Use one of the following releases:*
F *(essential correction)*	*2 (GSM Phase 2)*
A *(corresponds to a correction in an earlier release)*	*R96 (Release 1996)*
B *(Addition of feature),*	*R97 (Release 1997)*
C *(Functional modification of feature)*	*R98 (Release 1998)*
D *(Editorial modification)*	*R99 (Release 1999)*
Detailed explanations of the above categories can	*REL-4 (Release 4)*
be found in 3GPP TR 21.900.	*REL-5 (Release 5)*

Reason for change: ⌘	TFC selection requirements at the maximum UE transmit power are incomplete and not aligned with TS25.321.
Summary of change: ⌘	Performance requirements at the maximum UE transmit power are defined.
Consequences if not approved: ⌘	TFC selection requirements in TS25.133 are not aligned with TS25.321.

Clauses affected: ⌘	6.4, 6.4.1 and 6.4.2

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

Other comments: ⌘	

6.4 Transport format combination selection in UE

Editor's note: WG4 has identified an inconsistency in this section and WG2 TS 25.321. This should be resolved

6.4.1 Introduction

When the UE estimatesreaches that a certain TFC would require more power than the maximum transmit power its shall limit the usage of transport format combinations for the assigned transport format set, according to the functionality specified in section 11.4 in TS25.321. This in order to make it possible for the network operator to maximise the coverage. Transport format combination selection is described in section 11.4 of TS 25.321.

6.4.2 Requirements

The UE shall continuously evaluate based on the *Limited TFC Set* and *Recovered TFC Set* criteria defined below, which TFCs of the given TFC set it can support. The evaluation shall be performed using the estimated UE transmit power of a corresponding TFC. The UE transmit power estimation shall be made using the UE transmitted power measured over the measurement period and the gain factors of the corresponding TFC.

The UE shall consider the *Limited TFC Set* criterion for a TFC to be fulfilled if the estimated UE transmit power of a certain TFC has been evaluated as greater than the Maximum UE transmitter power for at least X measurement periods out of Y successive measurement periods. If the *Limited TFC Set* criterion for a TFC is fulfilled, the UE shall consider that the TFC cannot be supported in TFC selection.

MAC shall request RLC to provide data in formats and sizes, which are suitable for the supportable TFC selected by MAC, within 15 ms from the moment the *Limited TFC Set* criterion has been fulfilled. The UE may change TFC step by step according to the TFC selection rules in [19] towards supportable TFC since data provided by RLC may not be in suitable formats in the first TFC selection(s) after the *Limited TFC Set* criterion has been fulfilled. The UE shall take supportable TFC in use as soon as all data provided by RLC is in the correct format for the new TFC.

MAC in the UE shall indicate the available bitrate for each logical channel to upper layers within [15 ms] from the moment the *Limited TFC Set* criterion has been fulfilled.

The Maximum UE transmitter power is defined as follows

Maximum UE transmitter power = MIN(Maximum allowed UL TX Power, UE maximum transmit power), and

Maximum allowed UL TX Power is set by UTRAN and defined in [16], and

UE maximum transmit power is defined by the UE power class, and specified in [3].

The UE shall consider the *Recovered TFC Set* criterion for a TFC to be fulfilled if the UE has evaluated for at least Y successive measurement periods that the estimated UE transmit power for that TFC has not been greater than the Maximum UE transmitter power.

A TFC, which fulfilled the *Limited TFC Set* criterion, shall not be considered in the TFC selection until the *Recovered TFC Set* criterion has been fulfilled.

 In this sub clause, the UE maximum transmit power is defined as the UE maximum output power, which is defined by the UE power class.

For each measurement period of the UE transmitted power measurement the UE shall estimate if it has reached its maximum transmit power or not.

If the UE output power as requested by UTRAN have been larger than the UE maximum transmit power for a period of more than [T1] ms, it shall adapt to the transport format combination corresponding to the next lower bit-rate according to the rules in TS 25.321, at the next of the longest uplink TTIs, following [T1+10] ms from when the UE maximum transmit power was reached.

If the UE has limited the usage of the transport format combination set, according to the above clause, and the UE estimates that it for a period of more than [T2] ms has had sufficient power to support a transport format combination, that has previously been removed, the temporary blocked transport format shall again be considered in the transport format combination selection

CR-Form-v3

CHANGE REQUEST

⌘ **25.133** CR **CR-125** ⌘ rev **1** ⌘ 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 **X**   Radio Access Network ☐   Core Network ☐

Title: ⌘	Requirements for TFC selection at the maximum power	
Source: ⌘	Qualcomm Europe	
Work item code: ⌘		***Date:*** ⌘ 13-06-2001
Category: ⌘ **A**		***Release:*** ⌘ REL-4

Use one of the following categories:	*Use one of the following releases:*
F *(essential 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)*
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	☐ O&M Specifications		

Other comments: ⌘	

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~~If the UE has limited the usage of the transport format combination set, according to the above clause, and the UE estimates that it for a period of more than [T2] ms has had sufficient power to support a transport format combination, that has previously been removed, the temporary blocked transport format shall again be considered in the transport format combination selection.~~