

Agenda Item: 8.3
Source: Nokia
Title: BS Receiver blocking characteristics
Document for: Approval

1. Introduction

This document proposes requirements and definitions for BS Receiver blocking characteristics. Blocking characteristics is a measure of the receiver ability to receive a wanted signal in the presence of relatively high interfering signal without this unacceptable a degradation of the receiving performance. Wanted signal 3 dB above the static reference level causes very high requirement for measurement equipment ACP in in-band measurement. This requirement can be released by increasing wanted signal power level. Because of that Nokia propose wanted signal level to be 13 dB above static reference level when measured in-band measurements.

Out-of-band blocking level of -15dBm is proposed based on analysis presented in Tdoc R4-99038 in Turin.

2. Text proposal for '7.6 Blocking characteristics'

7.6 *Blocking characteristics*

The blocking characteristics is a measure of the receiver ability to receive a wanted signal at is assigned channel frequency in the presence of an unwanted interferer on frequencies other than those of the spurious response or the adjacent channels; without this unwanted input signal causing a degradation of the performance of the receiver beyond a specified limit. The blocking performance shall apply at all frequencies except those at which a spurious response occur.

The static reference performance as specified in clause 7.3.1 should be met when the following signals are applied to the receiver;

- ~~A wanted signal at the assigned channel frequency, 3 dB above the static reference level.~~
- ~~An interfering signal at [frequency(s)] offset from the nominal assigned channel below a level of [---] dBm.~~
- Wanted and interfering signal is coupled to BS antenna input
- Not valid for the adjacent channel where the requirements for the adjacent channel selectivity is effective.

<u>Center Frequency of Interfering Signal</u>	<u>Interfering Signal Level</u>	<u>Wanted Signal Level</u>	<u>Minimum Offset</u>	<u>Type of Interfering Signal</u>	<u>Note</u>
1920 MHz-1980 MHz	- 42 dBm	<REFSENS> + 13 dBm	10 MHz	WCDMA Signal with one	In-ban

				<u>code</u>	
<u>< 1920 MHz,</u> <u>1980 MHz ></u>	<u>- 15 dBm</u>	<u><REFSENS> + 3 dBm</u>	<u>10 MHz</u>	<u>CW signal</u>	<u>Out-ba</u>

< Editor: The frequency range (in band/out of band) and level of the interfering signal is an item for further study >

<The definition of the exemptions needs to be reconsidered, since it is unclear.>

3. Conclusion

Requirements and definitions for BS Receiver blocking characterise has been proposed to be used in TS 25.104.

4. Reference

R4-99038 Analysis of 3GPP FDD UE RF Parameters, Nokia