

Agenda Item: 7.2
Source: Ericsson
Title: UE Receiver Blocking Frequency Bands
Document for: Approval

1. Introduction

This document suggests a change in S4.01A v0.0.3 UTRA (UE) FDD Radio Transmission and Reception [1], Ch. 7 Receiver Characteristics, Ch.7.6 Blocking Characteristics, 7.6.1 minimum requirements.

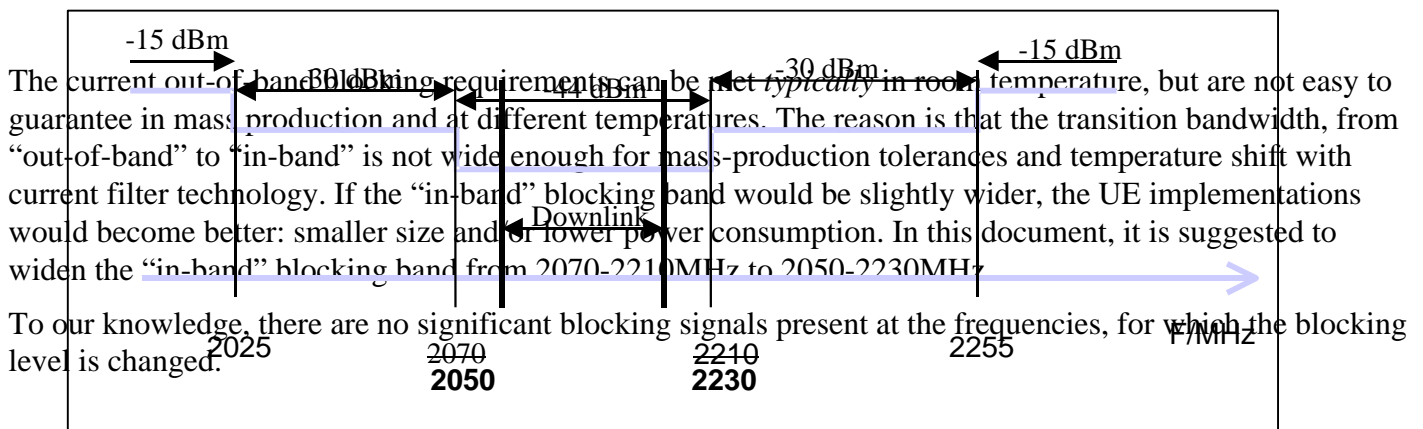
The scope of this document is to suggest a change, which eases the implementation requirements of the UE receiver.

2. Discussion

In the UE receiver:

It is common to have a filter prior to down conversion, which in principle reduces the level of the out-of-band blocking signals to the level of the in-band blocking signals. The advantage with this principle is that after filtering, the receiver selectivity and dynamic range is dimensioned of the in-band blocking level only. Hence, the out-of-band blocking requirements should only affect the LNA linearity requirements.

Currently, the level of the in-band blocking signal is -44dBm . Next to the “in-band” blocking band are the “band 1” out-of-band blocking bands, 2025-2070MHz and 2210-2255MHz. The blocking level in the band 1-bands is -30dBm .



3. Proposed modification

The proposal is a change in ch. 7.6.1 of S4.01A v0.0.3 UTRA (UE) FDD Radio Transmission and Reception, Table 11:

From: Blocking offset, band 1, 2025<f<2070, 2210<f<2255

To: Blocking offset, band 1, 2025<f<2050, 2230<f<2255

4. Conclusions

A change is proposed to the Receiver Blocking frequency bands to ease the UE-implementation. There is no relevant performance penalty for the UE or the system.

References:

- [1] S4.01A v0.0.3, UTRA (UE) FDD; Radio transmission and reception, 3GPP TSG RAN WG4.