**3GPP TSG-RAN WG4 Meeting # 102-e R4-2207284**

**Electronic Meeting, February 21 – March 3, 2022**

Source: CMCC

Title: WF on FR1 OOB gain and ACRR

Agenda Item: 10.5.2

Document for: Approval

# Introduction

This WF capture the agreements on FR1 OOB gain and ACRR requirements.

# OOB gain

## WA / MR repeater class for both DL and UL

* + 1. For below 2496MHz frequencies

Follow same OOB gain as E-UTRA:

**Table 1: out of band gain limits 1**

|  |  |
| --- | --- |
| **Frequency offset, f\_offset\_CW** | **Maximum gain** |
| 0,2 ≤ f\_offset\_CW < 1,0 MHz | 60 dB |
| 1,0 ≤ f\_offset\_CW < 5,0 MHz | 45 dB |
| 5,0 ≤ f\_offset\_CW < 10,0 MHz | 45 dB |
| 10,0 MHz ≤ f\_offset\_CW | 35 dB |

For 10,0 MHz ≤ f\_offset\_CW the out of band gain shall not exceed the maximum gain of table 1 or the maximum gain stated in table 2 whichever is lower.

**Table 2: Out of band gain limits 2**

|  |  |
| --- | --- |
| **Frequency offset, f\_offset\_CW** | **Maximum gain** |
| 10 MHz ≤ f\_offset\_CW | Out of band gain ≤ minimum donor coupling loss |

* + 1. For above 2496MHz frequencies

Follow following limits:

|  |  |
| --- | --- |
| Frequency offset, f\_offset\_CW | Maximum gain |
| 0,2< f\_offset\_CW < 4,0 MHz | 60 dB |
| 4,0< f\_offset\_CW < 15,0 MHz | 45 dB |
| 15,0 MHz <f\_offset\_CW | 35 dB |

## LA repeater class for both DL and UL

Two sets of requirements. Repeater declare which limit is supported based on the real deployment case.

* The first one: in which the operator owns the whole band or collaborates with operators in the whole band and so the repeater passband covers the whole 3GPP band
  + No OOB gain requirement

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* The second one: in which there are other un-coordinated operators in the band and so the repeater passband covers a portion of the 3GPP band.
  + Same OOB gain requirement as WA in this case

# ACRR

ACRR is differentiated between UL and DL. For ACRR, consider the co-existence scenario with NR, LTE and UTRAN system. Adjacent channel frequency offset for ACRR requirements: minimum {100MHz, passband BW}.

## UL

* For WA, 33dBc ACRR.
* For LA,
  + Whole passband: no ACRR
  + Part of band:
    - <2496MHz: 33dBc
    - >2496MHz: 20dBc in 10MHz BW, 33dBc with minimum {100 MHz, passband BW} (2 tests)

## DL

* For below 2496MHz:
  + WA/MR class: 45dBc
  + LA: NA for whole band case and 33dBc for part of band case
* For above 2496MHz:
  + WA/MR class: 33dBc
  + LA: NA for whole band case and 33dBc for part of band case