**3GPP TSG-RAN WG4 Meeting # 102-e R4-2203955**

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

Title: TP for 38.108: clause 7.1&7.2 on Rx REFSENS

Source: CATT

Agenda item: 10.13.3.4

Document for: Approval

# Introduction

This contribution provides a text proposal for 38.108: clause 7.1&7.2 on Rx REFSENS [1].

# Reference

[1] TR 38.108, 0.0.1

# Text proposal

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## 7.1 General

Conducted receiver characteristics are specified at the *TAB connector* for *SAN type 1-H*, with full complement of transceivers for the configuration in normal operating condition.

Unless otherwise stated, the following arrangements apply for conducted receiver characteristics requirements in clause 7:

- Requirements shall be met for any transmitter setting.

- The requirements shall be met with the transmitter unit(s) ON.

- Throughput requirements do not assume HARQ retransmissions.

- When SAN is configured to receive multiple carriers, all the throughput requirements are applicable for each received carrier.

- For ACS, blocking and intermodulation characteristics, the negative offsets of the interfering signal apply relative to the lower *SAN RF Bandwidth* edge or *sub-block* edge inside a *sub-block gap*, and the positive offsets of the interfering signal apply relative to the upper *SAN RF Bandwidth* edge or *sub-block* edge inside a *sub-block gap*.

NOTE 1: In normal operating condition the SAN is configured to transmit and receive at the same time.

## 7.2 Reference sensitivity level

### 7.2.1 General

The reference sensitivity power level PREFSENS is the minimum mean power received at the TAB connector for SAN type 1-H at which a throughput requirement shall be met for a specified reference measurement channel.

### 7.2.2 Minimum requirements

The throughput shall be ≥ 95% of the maximum throughput of the reference measurement channel as specified in annex A.1 with parameters specified in table 7.2.2-1 and 7.2.2-2 for SAN type 1-H in all operating band in FR1.

Table 7.2.2-1: SAN reference sensitivity levels (GEO payload)

|  |  |  |  |
| --- | --- | --- | --- |
| *SAN channel bandwidth (MHz)* | *Sub-carrier spacing (kHz)* | *Reference measurement channel* | *Reference sensitivity power level, PREFSENS* *(dBm)* |
| 5, 10, 15  | 15 | G-FR1-A1-1 (Note 1) |  -99.3  |
| 10, 15  | 30 | G-FR1-A1-2 (Note 1) |  -99.4  |
| 10, 15 | 60 | G-FR1-A1-3 (Note 1) |  -96.5  |
| 20  | 15 | G-FR1-A1-4 (Note 1) |  -92.9  |
| 20  | 30 | G-FR1-A1-5 (Note 1) |  -93.2  |
| 20  | 60 | G-FR1-A1-6 (Note 1) |  -93.3  |
| NOTE 1: PREFSENS is the power level of a single instance of the reference measurement channel. This requirement shall be met for each consecutive application of a single instance of the reference measurement channel mapped to disjoint frequency ranges with a width corresponding to the number of resource blocks of the reference measurement channel each, except for one instance that might overlap one other instance to cover the full *SAN channel bandwidth*. |

* Table 7.2.2-2: SAN reference sensitivity levels (LEO payload)

|  |  |  |  |
| --- | --- | --- | --- |
| *SAN channel bandwidth (MHz)* | *Sub-carrier spacing (kHz)* | *Reference measurement channel* | *Reference sensitivity power level, PREFSENS* *(dBm)* |
| 5, 10, 15  | 15 | G-FR1-A1-1 (Note 1) |  -102.4  |
| 10, 15  | 30 | G-FR1-A1-2 (Note 1) |  -102.5  |
| 10, 15 | 60 | G-FR1-A1-3 (Note 1) |  -99.6 |
| 20  | 15 | G-FR1-A1-4 (Note 1) |  -96.0 |
| 20  | 30 | G-FR1-A1-5 (Note 1) |  -96.3  |
| 20  | 60 | G-FR1-A1-6 (Note 1) |  -96.4  |
| NOTE 1: PREFSENS is the power level of a single instance of the reference measurement channel. This requirement shall be met for each consecutive application of a single instance of the reference measurement channel mapped to disjoint frequency ranges with a width corresponding to the number of resource blocks of the reference measurement channel each, except for one instance that might overlap one other instance to cover the full *SAN channel bandwidth*. |

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