**3GPP TSG-RAN WG4 Meeting #102-e R4-2205728**

**Electronic Meeting, 21 February – 03 March 2022**

**Source:** Ericsson, Telstra

**Title:** TP for TR 38.842 to add CA\_n5-n7-n78

**Agenda item:** 9.32.2

**Document for:** Approval

# 1. Introduction

A text proposal for TR 38.842 to add CA\_n5A-n7A-n78A, CA\_n5A-n7B-n78A.

# 2. Text Proposal

---Start of changes---

## 6.x CA\_n5-n7-n78

### 6.x.1 Configurations

Table 6.x.1-1: NR CA configurations and bandwidth combinations sets for supporting power class 2

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| NR CA configuration | Uplink CA configuration | NR Band | 5 MHz | 10 MHz | 15 MHz | 20 MHz | 25 MHz | 30 MHz | 40MHz | 50MHz | 60MHz | 70MHz | 80 MHz | 90 MHz | 100 MHz | Bandwidth combination set |
| CA\_n5A-n7A-n78A | CA\_n5A-n78ACA\_n7A-n78A | n5 | 5 | 10 | 15 | 20 | 25 |  |  |  |  |  |  |  |  | 0 |
| n7 | 5 | 10 | 15 | 20 | 25 | 30 | 40 | 50 |  |  |  |  |  |
| n78 |  | 10 | 15 | 20 | 25 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |
| CA\_n5A-n7B-n78A | CA\_n5A-n78ACA\_n7A-n78A | n5 | 5 | 10 | 15 | 20 | 25 |  |  |  |  |  |  |  |  | 0 |
| n7 | See CA\_n7B Bandwidth Combination Set 0 in Table 5.5A.1-1 |
| n78 |  | 10 | 15 | 20 | 25 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |

### 6.x.2 Maximum output power

Table 6.x.2-1 UE Power Class 2 for uplink inter-band CA (two bands)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Uplink CA configuration | Power class 2 cases for CA\_n5-n78 | CA power class | Carrier n5 power class | Carrier n78 power class |
| CA\_n5A-n78A | Case a | 26dBm | 23dBm | 23dBm |
| Case b | 26dBm | 23dBm | 26dBm |

The tolerance +2/-3 dB is applied.

Table 6.x.2-2 UE Power Class 2 for uplink inter-band CA (two bands)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Uplink CA configuration | Power class 2 cases for CA\_n7-n78 | CA power class | Carrier n7 power class | Carrier n78 power class |
| CA\_n7A-n78A | Case a | 26dBm | 23dBm | 23dBm |
| Case b | 26dBm | 23dBm | 26dBm |

The tolerance +2/-3 dB is applied.

### 6.x.3 REFSENS requirements

- IMD2 products are produced by Band n5 and n78 that might fall in Rx of band n7.

- IMD2 and IMD5 products are produced by Band n7 and n78 that might fall in Rx of band n5.

- IMD2 and IMD4 products are produced by Band n5 and n7 that might fall in Rx of band n78.

For the IMD products produced by Band n5 and n7 UL, the MSD values of the corresponding PC3 CA case can be applied since this uplink configuration does not support PC2.

#### 6.x.3.1 Power class 2 Case A

The additional MSD due to intermodulation for PC2 CA\_n5A-n7A-n78A are defined in Table 6.x.3.1-1.

Table 6.x.3.1-1: 3DL/2UL interband Reference sensitivity QPSK PREFSENS and uplink/downlink configurations for PC2 CA

| NR CA Configuration | NR band | UL Fc (MHz) | UL/DL BW (MHz) | ULLCRB | DL Fc (MHz) | MSD (dB) | Duplex mode | IMD order |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CA\_n5-n7-n78 | n5 | 834 | 5 | 25 | 879 | 35.2 | FDD | IMD2 y |
| n7 | 2550 | 5 | 25 | 2670 | N/A | FDD | N/A |
| n78 | 3429 | 10 | 50 | 3429 | N/A | TDD | N/A |
| n5 | 844 | 5 | 25 | 889 | N/A | FDD | N/A |
| n7 | 2525 | 5 | 25 | 2645 | 35.1 | FDD | IMD2 |
| n78 | 3489 | 10 | 50 | 3489 | N/A | TDD | N/A |
| NOTE y: This band is subject to IMD5 also which MSD is not specified. |

#### 6.x.3.2 Power class 2 Case B

The additional MSD due to intermodulation for PC2 Case B CA\_n5A-n7A-n78A are same as the Case A defined in Table 6.x.3.1-1.

---End of changes---