3GPP TSG-RAN WG4 Meeting # 100-e R4-2112684

Electronic Meeting, 16th – 27th August 2021

Source: Verizon, Samsung

Title: TP for TR 37.827 for DC\_2\_n2-n77

Agenda item: 8.38.2

Document for: Approval

# **Introduction**

This contribution is a text proposal for TR 37.827 to include DC\_2A\_n2-n77 according to the request in [1].

**Reference**

[1] [RP-211172](https://www.3gpp.org/ftp/TSG_RAN/TSG_RAN/TSGR_92e/Docs/RP-211172.zip), Revised WID: Power Class 2 for EN-DC with x LTE band + y NR TDD band

# **Text Proposal**

**<Start of Text Proposal>**

## 5.x DC\_2A\_n2A-n77A

### 5.x.1 Transmitter Characteristics

#### 5.x.1.1 Maximum Output Power

Table 5.x.1.1-1: Maximum output power for inter-band EN-DC (two bands)

| **EN-DC combination** | Power class 2 (dBm) | Tolerance (dB) |
| --- | --- | --- |
| DC\_2A\_n77A | 266 | +2/-3 |
| NOTE 6: The UE supports PC3 within E-UTRA cell group, and supports either PC3 or PC2 within NR cell group. Power class support within each individual cell group is signalled separately by the UE. | | |

#### 

5.x.1.2 Configurations for EN-DC

Table 5.x.1.2-1: Inter-band EN-DC configurations within FR1 (three bands)

| EN-DC  Configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_2A\_n2A-n77A | DC\_2A\_n77A |

#### 5.x.1.3 Co-existence study

According to the PC2 coexistence studies performed in the lower order combinations, the Rx impacts are identified as below,

* For UL DC\_2A\_n77A, IMD2, IMD4 and IMD5 products fall into the band n2 Rx

Thus additional MSD should be considered to mitigate the impact of the interference.

### 5.x.2 Receiver Characteristics

#### 5.x.2.1 MSD test points for intermodulation interference due to dual uplink operation for PC2 EN-DC in NR FR1 involving two bands

#### 5.x.2.1.1 Power class 2 Case A

Based on co-existence study, additional MSD are specified Table 5.x.2.1.1-1 for this dual connectivity configuration.

Table 5.x.2.1.1-1: MSD test points for PCell due to dual uplink operation for PC2 EN-DC in NR FR1

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Band / Channel bandwidth / NRB / Duplex mode** | | | | | | | | |  |  |
| **EN-DC** | **NR band** | **UL Fc** | **UL/DL BW** | **UL** | **DL Fc (MHz)** | **MSD for PC2** | **Duplex mode** | **Source of IMD** |
| **Configuration** | **(MHz)** | **(MHz)** | **CLRB** | **(dB)** |
| DC\_2A\_n2A-n77A | 2 | 1855 | 5 | 25 | 1935 | N/A | FDD | N/A |
| n2 | 1855 | 5 | 25 | 1935 | 32.0 | FDD | IMD2 |
| 34.75 |
| n77 | 3790 | 10 | 50 | 3790 | N/A | TDD | N/A |
| 2 | 1885 | 5 | 25 | 1965 | N/A | FDD | N/A |
| n2 | 1865 | 5 | 25 | 1945 | 20.0 | FDD | IMD44 |
| 22.75 |
| n77 | 3710 | 10 | 50 | 3710 | N/A | TDD | N/A |
| NOTE 4: This band is subject to IMD5 also which MSD is not specified.  NOTE 5: Applicable only if operation with 4 antenna ports is supported in the band with carrier aggregation configured. | | | | | | | | |

#### 5.x.2.1.2 Power class 2 Case B

The additional MSD due to intermodulation for PC2 Case B configuration are same as the Case A defined in table 5.x.2.1.1-1.

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