3GPP TSG-RAN WG4 Meeting # 100-e R4-2112676

Electronic Meeting, 16th – 27th August 2021

Source: Verizon, Samsung

Title: TP for TR 37.827 for DC\_5\_n2-n77

Agenda item: 8.38.2

Document for: Approval

# **Introduction**

This contribution is a text proposal for TR 37.827 to include DC\_5A\_n2A-n77A 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\_5\_n2-n77

### 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\_5A\_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. | | |

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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\_5A\_n2A-n77A | DC\_5A\_n77A |

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

According to coexistence studies performed in the PC3 DC\_5A\_n2A-n77A configuration, the Rx impacts are identified as below

* For UL DC\_5A\_n77A, IMD3 of 2UL may fall into own Rx of band n2.

Thus additional MSD should be considered to mitigate the impact of the interference for DC\_5A\_n2A-n77A combination.

### 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 SCell due to dual uplink operation for PC2 EN-DC in NR FR1**

| NR or E-UTRA Band / Channel bandwidth / NRB / MSD | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| EN-DC Configuration | EUTRA / NR band | UL Fc  (MHz) | UL/DL BW  (MHz) | UL  LCRB | DL Fc (MHz) | MSD  (dB) | IMD order |
| DC\_5A\_n2A-n77A11 | n2 | 1907 | 5 | 25 | 1987 | 25.5 | IMD3 |
| 5 | 846.5 | 5 | 25 | 891.5 | N/A | N/A |
| n77 | 3680 | 5 | 25 | 3680 | N/A | N/A |
| NOTE 11: The MSD test points cannot be verified for the band combination in US due to the Band n77 frequency range restriction. | | | | | | | |

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

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

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