3GPP TSG-RAN WG4 Meeting #109 Revised R4-2318720

Chicago, US, 13– 17 Nov, 2023

Source: Huawei, HiSilicon

 Title: TP for TR 38.880 DC\_8A\_n78A

Agenda Item: 7.29.2

Document for: Approval

# **Introduction**

This contribution provides a text proposal on DC band combination of LTE bands B8 (1Tx) with NR band n78 (2Tx) for TR 38.880.

# Text Proposal

**----- Start of TP -----**

6.2 DC\_8\_n78

6.2.1 Operating bands for EN-DC

**Table 6.2.1-1: EN-DC band combination of band 8+n78**

|  |  |
| --- | --- |
| **EN-DC Band combination** | **Bands** |
| DC\_8A\_n78A | 8, n78 |

6.2.2 Maximum output power for inter-band EN-DC

**Table 6.2.2-1: UE Power Class for 3Tx inter-band EN-DC**

| **EN-DC configuration** | **Power class 2****(dBm)** | **Tolerance****(dB)** | **Power class 3****(dBm)** | **Tolerance****(dB)** |
| --- | --- | --- | --- | --- |
| DC\_8A\_n78A5,6 | 26 | +2/-3 | 23 | +2/-3 |
| NOTE 1: (Void in this TR)NOTE 2: (Void in this TR)NOTE 3: (Void in this TR)NOTE 4: (Void in this TR)NOTE 5: The UE supports PC3 in E-UTRA band, and supports PC2 with UL MIMO in NR bandNOTE 6: The UE supports PC3 in E-UTRA band, and supports PC3 with UL MIMO in NR band |

6.2.3 MSD scenario studies

Table 6.2.3-1 summarizes frequency ranges where MSD could occur for DC\_8\_n78

 **Table 6.2.3-1: MSD scenarios for DC\_8\_n78 with total power class 2**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Aggressor Tx band** | **Victim Rx band** | **Whether 2Tx requirements exists** |
| **Harmonic mixing** | Fundamental of n78 | 4th harmonic of band 8 DL | No, but it can be taken from CA\_n8-n78 for PC2 |
| **IMD** | IMD4 (3rd order of band 8 UL - fundamental of n78 UL ) | Band 8 Rx | yes |

6.2.4 REFSENS requirements

**Table 6.2.4-1: Reference sensitivity exceptions (MSD) due to receiver harmonic mixing for PC2 EN-DC in NR FR1**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **UL band** | **DL band** | **UL BW** | **SCS of UL band** | **UL RB Allocation** | **DL BW** | **MSD** | **UL/DL fc condition** | **UL/DL harmonic order** |
| **(MHz)** | **(kHz)** | **LCRB** | **(MHz)** | **(dB)** |
| n78 | 8 | 10 | 15 | 25 (RBstart=0) | 5 | 8.1 | NOTE 5 | UL1/DL4 |
| n78 | 8 | 20 | 15 | 20 (RBstart=0) | 20 | 4.3 | NOTE 5 | UL1/DL4 |
| NOTE 5: The requirements should be verified for UL NR-ARFCN of the aggressor (higher) band (superscript HB) such that  in MHz and  with  the carrier frequency in the victim (lower) band and  the channel bandwidth configured in the higher band |

For IMD4, Reuse the existing 2Tx MSD requirements.

**----- End of TP -----**