**3GPP TSG-RAN WG4 Meeting # 114 *R4-250xxxx***

**Athens, Greece, 17th – 21st February, 2025**

|  |
| --- |
| *CR-Form-v12.3* |
| **CHANGE REQUEST** |
|  |
|  | **38.101-3** | **CR** | **DraftCR** | **rev** | **-** | **Current version:** | **19.0.0** |  |
|  |
| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* |
|  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME | **X** | Radio Access Network |  | Core Network |  |

|  |
| --- |
|  |
| ***Title:***  | Draft CR for TS 38.101-3 to introduce DC\_28C\_n77A and DC\_28C\_n77(2A) |
|  |  |
| ***Source to WG:*** | Huawei, HiSilicon, Xiaomi |
| ***Source to TSG:*** | R4 |
|  |  |
| ***Work item code:*** | DC\_R19\_xBLTE\_yBNR-Core |  | ***Date:*** | 2025-01-24 |
|  |  |  |  |  |
| ***Category:*** | **B** |  | ***Release:*** | Rel-19 |
|  | *Use one of the following categories:****F*** *(correction)****A*** *(mirror corresponding to a change in an earlier release)****B*** *(addition of feature),* ***C*** *(functional modification of feature)****D*** *(editorial modification)*Detailed explanations of the above categories canbe found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | *Use one of the following releases:Rel-8 (Release 8)Rel-9 (Release 9)Rel-10 (Release 10)Rel-11 (Release 11)…Rel-17 (Release 17)Rel-18 (Release 18)Rel-19 (Release 19) Rel-20 (Release 20)* |
|  |  |
| ***Reason for change:*** | To introduce DC\_28C\_n77A and DC\_28C\_n77(2A). |
|  |  |
| ***Summary of change:*** | To introduce DC\_28C\_n77A and DC\_28C\_n77(2A). |
|  |  |
| ***Consequences if not approved:*** | Spec can’t support DC\_28C\_n77A and DC\_28C\_n77(2A). |
|  |  |
| ***Clauses affected:*** | 5.5B.4.1, 7.3B.2.3.5.1 |
|  |  |
|  | **Y** | **N** |  |  |
| ***Other specs*** |  | **X** |  Other core specifications  | TS/TR ... CR ...  |
| ***affected:*** | **X** |  |  Test specifications | TS 38.521-3 |
| ***(show related CRs)*** |  | **X** |  O&M Specifications | TS/TR ... CR ...  |
|  |  |
| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

## **<<Start of Change for TS 38.101-3>>**

#### 5.5B.4.1 Inter-band EN-DC configurations within FR1 (two bands)

Table 5.5B.4.1-1: Inter-band EN-DC configurations within FR1 (two bands)

| **EN-DC****configuration** | **Uplink EN-DC configuration****(note 1)** | **Single UL allowed** | **DL interruption allowed****(Note 14)** |
| --- | --- | --- | --- |
| DC\_1A\_n3ADC\_1C\_n3A | DC\_1A\_n3ADC\_1C\_n3A | DC\_1\_n3 |  |
| DC\_1A\_n5A | DC\_1A\_n5A | No |  |
| DC\_1A\_n7ADC\_1A\_n7B | DC\_1A\_n7ADC\_1A\_n7B | No |  |
| DC\_1A-1A\_n7ADC\_1A-1A\_n7B | DC\_1A\_n7A | No |  |
| DC\_1A\_n8A | DC\_1A\_n8A | No |  |
| DC\_1A\_n20A | DC\_1A\_n20A | No |  |
| DC\_1A\_n28A | DC\_1A\_n28A | No |  |
| DC\_1A\_n26A | DC\_1A\_n26A | No |  |
| DC\_1A-1A\_n28A | DC\_1A\_n28A | No |  |
| DC\_1A\_n38ADC\_1C\_n38A | DC\_1A\_n38A | No |  |
| DC\_1A\_n40ADC\_1A\_n40B | DC\_1A\_n40A | No |  |
| DC\_1A\_n41A7 | DC\_1A\_n41A | No |  |
| DC\_1A\_n50A | DC\_1A\_n50A | No |  |
| DC\_1A\_n51A | DC\_1A\_n51A | No |  |
| DC\_1A\_n71ADC\_1A\_n71B | DC\_1A\_n71A | No |  |
| DC\_1A\_n77A7DC\_1A\_n77C7 | DC\_1A\_n77A | DC\_1\_n77 | No |
| DC\_1A\_n77(2A)7,21DC\_1A\_n77(3A)7 | DC\_1A\_n77A21 | DC\_1\_n77 | No |
| DC\_1A\_n78A7, 23DC\_1A\_n78C7, 21 | DC\_1A\_n78A21, 23 | No | No |
| DC\_1A\_n78(2A)7,21DC\_1A\_n78(A-C)7 | DC\_1A\_n78A21 | No | No |
| DC\_1A-1A\_n78A | DC\_1A\_n78A | No | No |
| DC\_1A\_n79A7DC\_1A\_n79C7 | DC\_1A\_n79A | No | No |
| DC\_1A\_n105A | DC\_1A\_n105A | No |  |
| DC\_2A\_n5A | DC\_2A\_n5A | No |  |
| DC\_2A-2A\_n5A | DC\_2A\_n5A | No |  |
| DC\_2A\_n7ADC\_2C\_n7A | DC\_2A\_n7A | No |  |
| DC\_2A\_n7(2A) | DC\_2A\_n7A | No |  |
| DC\_2A-2A\_n7A | DC\_2A\_n7A | No |  |
| DC\_2A\_n12A | DC\_2A\_n12A | No |  |
| DC\_2A-2A\_n12A | DC\_2A\_n12A | No |  |
| DC\_2A\_n25A11, 13, 20 | N/A | N/A |  |
| DC\_2A\_n28ADC\_2C\_n28A | DC\_2A\_n28A | No |  |
| DC\_2A\_n30A | DC\_2A\_n30A | No |  |
| DC\_2A-2A\_n30A | DC\_2A\_n30A | No |  |
| DC\_2A\_n38A | DC\_2A\_n38A | No |  |
| DC\_2A-2A\_n38A | DC\_2A\_n38A | No |  |
| DC\_2A\_n41ADC\_2A\_n41CDC\_2C\_n41A | DC\_2A\_n41ADC\_2C\_n41A | No |  |
| DC\_2A\_n41(2A) | DC\_2A\_n41A | No |  |
| DC\_2A-2A\_n41A | DC\_2A\_n41A | No |  |
| DC\_2A\_n46A | DC\_2A\_n46A | No |  |
| DC\_2A\_n48ADC\_2A\_n48B | DC\_2A\_n48A | No |  |
| DC\_2A\_n66A | DC\_2A\_n66A | DC\_2\_n66 |  |
| DC\_2A\_n66(2A) | DC\_2A\_n66A | DC\_2\_n66 |  |
| DC\_2A-2A\_n66A | DC\_2A\_n66A | DC\_2\_n66 |  |
| DC\_2A\_n71ADC\_2A\_n71BDC\_2C\_n71A | DC\_2A\_n71A | No |  |
| DC\_2A-2A\_n71A | DC\_2A\_n71A | No |  |
| DC\_2A\_n77ADC\_2A\_n77C21 | DC\_2A\_n77A21 | DC\_2\_n77 |  |
| DC\_2A\_n77(2A)21 | DC\_2A\_n77A21 | DC\_2\_n77 |  |
| DC\_2A-2A\_n77A21DC\_2A-2A\_n77C21 | DC\_2A\_n77A21 | DC\_2\_n77 |  |
| DC\_2A-2A\_n77(2A)21 | DC\_2A\_n77A21 | DC\_2\_n77 |  |
| DC\_2A\_n78A | DC\_2A\_n78A | DC\_2\_n78 |  |
| DC\_2A-2A\_n78(2A) | DC\_2A\_n78A | DC\_2\_n78 |  |
| DC\_2A\_n78(2A)21 | DC\_2A\_n78A21 | DC\_2\_n78 |  |
| DC\_2A-2A\_n78A | DC\_2A\_n78A | DC\_2\_n78 |  |
| DC\_3A\_n1ADC\_3C\_n1A | DC\_3A\_n1ADC\_3C\_n1A | DC\_3\_n1 |  |
| DC\_3A-3A\_n1A | DC\_3A\_n1A | DC\_3\_n1 |  |
| DC\_3A\_n5ADC\_3C\_n5A | DC\_3A\_n5A | DC\_3\_n5 |  |
| DC\_3A\_n7ADC\_3A\_n7BDC\_3C\_n7ADC\_3C\_n7B | DC\_3A\_n7ADC\_3A\_n7BDC\_3C\_n7A | No |  |
| DC\_3A-3A\_n7ADC\_3A-3A\_n7B | DC\_3A\_n7A | No |  |
| DC\_3A\_n8A | DC\_3A\_n8A | No |  |
| DC\_3A-3A\_n8A | DC\_3A\_n8A | No |  |
| DC\_3A\_n20ADC\_3C\_n20A | DC\_3A\_n20A | No |  |
| DC\_3A\_n26ADC\_3C\_n26A | DC\_3A\_n26ADC\_3C\_n26A | Yes |  |
| DC\_3A\_n28ADC\_3C\_n28A | DC\_3A\_n28ADC\_3C\_n28A | No |  |
| DC\_3A\_n34A | DC\_3A\_n34A | No |  |
| DC\_3A\_n38ADC\_3C\_n38A | DC\_3A\_n38A | No |  |
| DC\_3A\_n40ADC\_3A\_n40BDC\_3C\_n40A | DC\_3A\_n40A | No |  |
| DC\_3A\_n41A7DC\_3A\_n41CDC\_3C\_n41A7 | DC\_3A\_n41ADC\_3C\_n41A | DC\_3\_n41 | No |
| DC\_3A-3A\_n41A | DC\_3A\_n41A | DC\_3\_n41 | No |
| DC\_3A\_n50A | DC\_3A\_n50A | No |  |
| DC\_3A\_n51A | DC\_3A\_n51A | No |  |
| DC\_3A\_n71ADC\_3A\_n71B | DC\_3A\_n71A | No |  |
| DC\_3A\_n77A7DC\_3A\_n77C7DC\_3C\_n77A7,21 | DC\_3A\_n77A21DC\_3C\_n77A | DC\_3\_n77 | No |
| DC\_3A\_n77(2A)7,21DC\_3A\_n77(3A)7DC\_3C\_n77(2A)7,21 | DC\_3A\_n77A,21DC\_3C\_n77A | DC\_3\_n77 | No |
| DC\_3A-3A\_n77A7 | DC\_3A\_n77A | DC\_3\_n77 | No |
| DC\_3A\_n78A7,23DC\_3A\_n78C7DC\_3C\_n78A7,21 | DC\_3A\_n78A,21,23DC\_3C\_n78A | DC\_3\_n78 | No |
| DC\_3A\_n78(2A)7,21DC\_3A\_n78(A-C)7DC\_3C\_n78(2A)7,21 | DC\_3A\_n78A,21DC\_3C\_n78A | DC\_3\_n78 | No |
| DC\_3A-3A\_n78A7, 21 | DC\_3A\_n78A21 | DC\_3\_n78 | No |
| DC\_3A\_n79A7DC\_3A\_n79C7DC\_3C\_n79A7 | DC\_3A\_n79ADC\_3C\_n79A | No | No |
| DC\_3A-3A\_n79A7 | DC\_3A\_n79A | No |  |
| DC\_3A\_n105A | DC\_3A\_n105A | No |  |
| DC\_4A\_n2A | DC\_4A\_n2A | No |  |
| DC\_4A\_n5A | DC\_4A\_n5A | DC\_4\_n5 |  |
| DC\_4A\_n7A | DC\_4A\_n7A | No |  |
| DC\_4A\_n28A | DC\_4A\_n28A | No |  |
| DC\_4A\_n38A | DC\_4A\_n38A | No |  |
| DC\_4A\_n41A | DC\_4A\_n41A | No |  |
| DC\_4A\_n78A | DC\_4A\_n78A | No |  |
| DC\_4A\_n78(2A) | DC\_4A\_n78A | No |  |
| DC\_5A\_n1A | DC\_5A\_n1A | No |  |
| DC\_5A\_n2ADC\_5B\_n2A | DC\_5A\_n2A | No |  |
| DC\_5A\_n2(2A) | DC\_5A\_n2A | No |  |
| DC\_5A-5A\_n2A | DC\_5A\_n2A | No |  |
| DC\_5A\_n3A | DC\_5A\_n3A | DC\_5\_n3 |  |
| DC\_5A\_n7A | DC\_5A\_n7A | DC\_5\_n7 |  |
| DC\_5A\_n7(2A) | DC\_5A\_n7A | DC\_5\_n7 |  |
| DC\_5A\_n12A | DC\_5A\_n12A | No |  |
| DC\_5A\_n25A | DC\_5A\_n25A | No |  |
| DC\_5A\_n28A | DC\_5A\_n28A | No |  |
| DC\_5A\_n30A | DC\_5A\_n30A | No |  |
| DC\_5A\_n38A | DC\_5A\_n38A | DC\_5\_n38 |  |
| DC\_5A\_n40A | DC\_5A\_n40A | No |  |
| DC\_5A\_n41A | DC\_5A\_n41A | No |  |
| DC\_5A\_n48ADC\_5A\_n48B | DC\_5A\_n48A | No |  |
| DC\_5A\_n66ADC\_5B\_n66A | DC\_5A\_n66A | DC\_5\_n66 |  |
| DC\_5A-5A\_n66A | DC\_5A\_n66A | DC\_5\_n66 |  |
| DC\_5A\_n77ADC\_5A\_n77C21 | DC\_5A\_n77A21 | No |  |
| DC\_5A\_n77(2A)21DC\_5A\_n77(3A) | DC\_5A\_n77A21 | No |  |
| DC\_5A\_n71A | DC\_5A\_n71A | No |  |
| DC\_5A\_n78A7, 23DC\_5A\_n78C7 | DC\_5A\_n78A23 | No | No |
| DC\_5A\_n78(2A)7,21DC\_5A\_n78(A-C)7 | DC\_5A\_n78A21 | No | No |
| DC\_5A\_n79A | DC\_5A\_n79A | No | No |
| DC\_7A\_n1ADC\_7C\_n1A | DC\_7A\_n1ADC\_7C\_n1A | No |  |
| DC\_7A-7A\_n1A | DC\_7A\_n1A | No |  |
| DC\_7A\_n2ADC\_7C\_n2A | DC\_7A\_n2A | No |  |
| DC\_7A\_n2(2A) | DC\_7A\_n2A | No |  |
| DC\_7A\_n3ADC\_7C\_n3A | DC\_7A\_n3ADC\_7C\_n3A | No |  |
| DC\_7A\_n5ADC\_7C\_n5A | DC\_7A\_n5ADC\_7C\_n5A | DC\_7\_n5 |  |
| DC\_7A-7A\_n5A | DC\_7A\_n5A | DC\_7\_n5 |  |
| DC\_7A\_n8A | DC\_7A\_n8A | No |  |
| DC\_7A-7A\_n8A | DC\_7A\_n8A | No |  |
| DC\_7A\_n12A | DC\_7A\_n12A | No |  |
| DC\_7A-7A\_n78(2A)7,21 | DC\_7A\_n78A21 | No |  |
| DC\_7A\_n20A | DC\_7A\_n20A | No |  |
| DC\_7A\_n25ADC\_7C\_n25A | DC\_7A\_n25A | No |  |
| DC\_7A\_n26ADC\_7C\_n26A | DC\_7A\_n26ADC\_7C\_n26A | Yes |  |
| DC\_7A-7A\_n25A | DC\_7A\_n25A | No |  |
| DC\_7A\_n28ADC\_7C\_n28A | DC\_7A\_n28ADC\_7C\_n28A | No |  |
| DC\_7A\_n40A | DC\_7A\_n40A | Yes |  |
| DC\_7A-7A\_n40A | DC\_7A\_n40A | Yes |  |
| DC\_7A-7A\_n28A | DC\_7A\_n28A | No |  |
| DC\_7A\_n51A | DC\_7A\_n51A | No |  |
| DC\_7A\_n66ADC\_7C\_n66A | DC\_7A\_n66A | No |  |
| DC\_7A-7A\_n66A | DC\_7A\_n66A | No |  |
| DC\_7A\_n71A | DC\_7A\_n71A | No |  |
| DC\_7A\_n77A7DC\_7C\_n77A | DC\_7A\_n77A | No |  |
| DC\_7A\_n77(2A)DC\_7A\_n77(3A)DC\_7C\_n77(2A) | DC\_7A\_n77A | No |  |
| DC\_7A-7A\_n77A7 | DC\_7A\_n77A | No |  |
| DC\_7A-7A\_n77(2A)DC\_7A-7A\_n77(3A) | DC\_7A\_n77A | No |  |
| DC\_7A\_n78A7,23DC\_7C\_n78A7,21DC\_7A\_n78C7 | DC\_7A\_n78A21,23DC\_7C\_n78A | No |  |
| DC\_7A\_n78(2A)7,21DC\_7A\_n78(A-C)7DC\_7C\_n78(2A)7, 21 | DC\_7A\_n78A21DC\_7C\_n78A | No |  |
| DC\_7A-7A\_n78A7, 21DC\_7A-7A\_n78C7 | DC\_7A\_n78A21 | No |  |
| DC\_7A-7A\_n78(A-C)7 | DC\_7A\_n78A | No |  |
| DC\_7A\_n79ADC\_7A\_n79C | DC\_7A\_n79A | No |  |
| DC\_7A-7A\_n79A | DC\_7A\_n79A | No |  |
| DC\_7A\_n105A | DC\_7A\_n105A | No |  |
| DC\_8A\_n1ADC\_8B\_n1A | DC\_8A\_n1A DC\_8B\_n1A | No |  |
| DC\_8A\_n2A | DC\_8A\_n2A | DC\_8\_n2 |  |
| DC\_8A\_n3ADC\_8B\_n3A | DC\_8A\_n3A | No |  |
| DC\_8A\_n7A | DC\_8A\_n7A | No |  |
| DC\_8A\_n20A | DC\_8A\_n20A | Yes |  |
| DC\_8A\_n28A | DC\_8A\_n28A | No |  |
| DC\_8A\_n34A | DC\_8A\_n34A | No |  |
| DC\_8A\_n38A | DC\_8A\_n38A | No |  |
| DC\_8A\_n39A | DC\_8A\_n39A | No |  |
| DC\_8A\_n40A7 | DC\_8A\_n40A | No |  |
| DC\_8A\_n41A7DC\_8A\_n41C | DC\_8A\_n41A | No | No |
| DC\_8A\_n41(2A) | DC\_8A\_n41A | No | No |
| DC\_8A\_n77A7DC\_8B\_n77A7 | DC\_8A\_n77A | No | No |
| DC\_8A\_n77(2A)7,21DC\_8B\_n77(2A)7DC\_8A\_n77(3A)7 | DC\_8A\_n77A21 | No | No |
| DC\_8A\_n78A7,23DC\_8B\_n78A7, 21 | DC\_8A\_n78A21,23DC\_8B\_n78A | No | No |
| DC\_8A\_n78(2A)7, 21 | DC\_8A\_n78A21 | No | No |
| DC\_8A\_n79A7DC\_8A\_n79C | DC\_8A\_n79ADC\_8A\_n79C | No | No |
| DC\_8A\_n93A | DC\_8A\_n93A\_ULSUP-TDM | N/A |  |
| DC\_8A\_n94A | DC\_8A\_n94A\_ULSUP-TDM | N/A |  |
| DC\_11A\_n1A | DC\_11A\_n1A | No |  |
| DC\_11A\_n3A | DC\_11A\_n3A | No |  |
| DC\_11A\_n28A | DC\_11A\_n28A | No |  |
| DC\_11A\_n41A7 | DC\_11A\_n41A | No |  |
| DC\_11A\_n77A7 | DC\_11A\_n77A | No | No |
| DC\_11A\_n77(2A)7DC\_11A\_n77(3A)7 | DC\_11A\_n77A | No | No |
| DC\_11A\_n78A7 | DC\_11A\_n78A | No | No |
| DC\_11A\_n78(2A) | DC\_11A\_n78A | No | No |
| DC\_11A\_n79A7 | DC\_11A\_n79A | No |  |
| DC\_12A\_n2A | DC\_12A\_n2A | No |  |
| DC\_12A\_n2(2A) | DC\_12A\_n2A | No |  |
| DC\_12A\_n5A | DC\_12A\_n5A | No |  |
| DC\_12A\_n7A | DC\_12A\_n7A | No |  |
| DC\_12A\_n7(2A) | DC\_12A\_n7A | No |  |
| DC\_12A\_n25A | DC\_12A\_n25A | No |  |
| DC\_12A\_n30A | DC\_12A\_n30A | No |  |
| DC\_12A\_n38A | DC\_12A\_n38A | No |  |
| DC\_12A\_n41A | DC\_12A\_n41A | No |  |
| DC\_12A\_n66A | DC\_12A\_n66A | No |  |
| DC\_12A\_n66(2A) | DC\_12A\_n66A | No |  |
| DC\_12A\_n71A | DC\_12A\_n71A18,19 | DC\_12\_n71 |  |
| DC\_12A\_n77A | DC\_12A\_n77A | DC\_12\_n77 |  |
| DC\_12A\_n77(2A)21 | DC\_12A\_n77A21 | DC\_12\_n77 |  |
| DC\_12A\_n78A | DC\_12A\_n78A | DC\_12\_n78 |  |
| DC\_12A\_n78(2A) | DC\_12A\_n78A | DC\_12\_n78 |  |
| DC\_13A\_n2A | DC\_13A\_n2A | No |  |
| DC\_13A\_n5A | DC\_13A\_n5A | DC\_13\_n5 |  |
| DC\_13A\_n7A | DC\_13A\_n7A | No |  |
| DC\_13A\_n7(2A) | DC\_13A\_n7A | No |  |
| DC\_13A\_n25A | DC\_13A\_n25A | No |  |
| DC\_13A\_n48ADC\_13A\_n48B | DC\_13A\_n48A | No |  |
| DC\_13A\_n66A | DC\_13A\_n66A | No |  |
| DC\_13A\_n71A | DC\_13A\_n71A | No |  |
| DC\_13A\_n77ADC\_13A\_n77C21 | DC\_13A\_n77A21 | No |  |
| DC\_13A\_n78A | DC\_13A\_n78A | No |  |
| DC\_13A\_n78(2A)21 | DC\_13A\_n78A21 | No |  |
| DC\_14A\_n2A | DC\_14A\_n2A | No |  |
| DC\_14A\_n5A | DC\_14A\_n5A | DC\_14\_n5 |  |
| DC\_14A\_n30A | DC\_14A\_n30A | No |  |
| DC\_14A\_n41A | DC\_14A\_n41A | No |  |
| DC\_14A\_n66A | DC\_14A\_n66A | No |  |
| DC\_14A\_n77A | DC\_14A\_n77A | No |  |
| DC\_14A\_n77(2A)21 | DC\_14A\_n77A21 | No |  |
| DC\_18A\_n3A | DC\_18A\_n3A | No |  |
| DC\_18A\_n28A | DC\_18A\_n28A | No |  |
| DC\_18A\_n41A16 | DC\_18A\_n41A | No |  |
| DC\_18A\_n77A7DC\_18A\_n77(2A)7 | DC\_18A\_n77A | No | No |
| DC\_18A\_n78A7 | DC\_18A\_n78A | No | No |
| DC\_18A\_n78(2A)7 | DC\_18A\_n78A | No | No |
| DC\_20A\_n91A | DC\_20A\_n91A\_ULSUP-TDM | N/A |  |
| DC\_20A\_n92A | DC\_20A\_n92A\_ULSUP-TDM | N/A |  |
| DC\_18A\_n79A7 | DC\_18A\_n79A | No |  |
| DC\_19A\_n1A | DC\_19A\_n1A | No |  |
| DC\_19A\_n77A7DC\_19A\_n77C7 | DC\_19A\_n77A | No |  |
| DC\_19A\_n77(2A)7, 21 | DC\_19A\_n77A21 | No |  |
| DC\_19A\_n78A7DC\_19A\_n78C7 | DC\_19A\_n78A | No | No |
| DC\_19A\_n78(2A)7, 21 | DC\_19A\_n78A21 | No | No |
| DC\_19A\_n79A7DC\_19A\_n79C7 | DC\_19A\_n79A | No | No |
| DC\_20A\_n1A | DC\_20A\_n1A | No |  |
| DC\_20A\_n3A | DC\_20A\_n3A | No |  |
| DC\_20A\_n7A | DC\_20A\_n7A | DC\_20\_n7 |  |
| DC\_20A\_n8A | DC\_20A\_n8A | DC\_20\_n8 |  |
| DC\_20A\_n28A8,11,13 | DC\_20A\_n28A | No |  |
| DC\_20A\_n38A | DC\_20A\_n38A | No |  |
| DC\_20A\_n40A | DC\_20A\_n40A | No |  |
| DC\_20A\_n41A | DC\_20A\_n41A | DC\_20\_n41 |  |
| DC\_20A\_n50A | DC\_20A\_n50A | No |  |
| DC\_20A\_n51A | DC\_20A\_n51A | No |  |
| DC\_20A\_n77A7 | DC\_20A\_n77A | No |  |
| DC\_20A\_n78A7,23DC\_20A\_n78C7 | DC\_20A\_n78A23 | No |  |
| DC\_20A\_n78(2A)7 | DC\_20A\_n78A | No |  |
| DC\_21A\_n1A | DC\_21A\_n1A | No |  |
| DC\_21A\_n28A17 | DC\_21A\_n28A | DC\_21\_n28 |  |
| DC\_21A\_n77A7DC\_21A\_n77C7 | DC\_21A\_n77A | No |  |
| DC\_21A\_n77(2A)7,21 | DC\_21A\_n77A21 | No |  |
| DC\_21A\_n78A7DC\_21A\_n78C7 | DC\_21A\_n78A | No | No |
| DC\_21A\_n78(2A)7,21 | DC\_21A\_n78A21 | No | No |
| DC\_21A\_n79A7DC\_21A\_n79C7 | DC\_21A\_n79A | No | No |
| DC\_25A\_n41A | DC\_25A\_n41A | No |  |
| DC\_25A-25A\_n41A | DC\_25A\_n41A | No |  |
| DC\_25A\_n77A | DC\_25A\_n77A | DC\_25\_n77 |  |
| DC\_25A-25A\_n77A | DC\_25A\_n77A | DC\_25\_n77 |  |
| DC\_25A\_n78A | DC\_25A\_n78A | DC\_25\_n78 |  |
| DC\_25A-25A\_n78A | DC\_25A\_n78A | DC\_25\_n78 |  |
| DC\_26A\_n25A | DC\_26A\_n25A | No |  |
| DC\_26A\_n41A | DC\_26A\_n41A | No |  |
| DC\_26A\_n77A7 | DC\_26A\_n77A | No |  |
| DC\_26A\_n78A7 | DC\_26A\_n78A | No |  |
| DC\_26A\_n78(2A) | DC\_26A\_n78A | No |  |
| DC\_26A\_n79A7 | DC\_26A\_n79A | No |  |
| DC\_28A\_n1A | DC\_28A\_n1A | No |  |
| DC\_28A\_n2A | DC\_28A\_n2A | No |  |
| DC\_28A\_n3A | DC\_28A\_n3A | No |  |
| DC\_28A\_n5A | DC\_28A\_n5A | No |  |
| DC\_28A\_n7ADC\_28A\_n7B | DC\_28A\_n7ADC\_28A\_n7B | No |  |
| DC\_28A\_n51A | DC\_28A\_n51A | No |  |
| DC\_28A\_n8A | DC\_28A\_n8A | No |  |
| DC\_28A\_n20A8,11,13 | DC\_28A\_n20A | No |  |
| DC\_28A\_n38A | DC\_28A\_n38A | No |  |
| DC\_28A\_n40ADC\_28C\_n40A | DC\_28A\_n40A | No |  |
| DC\_28A\_n41A7 | DC\_28A\_n41A | No |  |
| DC\_28A\_n50A | DC\_28A\_n50A | No |  |
| DC\_28A\_n66A | DC\_28A\_n66A | No |  |
| DC\_28A\_n77A7DC\_28A\_n77C7DC\_28C\_n77A7 | DC\_28A\_n77A | No | No |
| DC\_28A\_n77(2A)7DC\_28C\_n77(2A)7 | DC\_28A\_n77A | No | No |
| DC\_28A\_n78A7,23DC\_28A\_n78C7 | DC\_28A\_n78A23 | No | No |
| DC\_28A\_n78(2A)7 | DC\_28A\_n78A | No | No |
| DC\_28A\_n79A7DC\_28A\_n79C7 | DC\_28A\_n79A | No |  |
| DC\_28A\_n105A | DC\_28A\_n105A18 | DC\_28\_n105 |  |
| DC\_30A\_n2A | DC\_30A\_n2A | No |  |
| DC\_30A\_n5A | DC\_30A\_n5A | No |  |
| DC\_30A\_n66A | DC\_30A\_n66A | No |  |
| DC\_30A\_n77A | DC\_30A\_n77A | No |  |
| DC\_30A\_n77(2A)21 | DC\_30A\_n77A21 | No |  |
| DC\_38A\_n1A | DC\_38A\_n1A | No |  |
| DC\_38A\_n3A | DC\_38A\_n3A | No |  |
| DC\_38A\_n8A | DC\_38A\_n8A | No |  |
| DC\_38A\_n28A | DC\_38A\_n28A | No |  |
| DC\_38A\_n78A7 | DC\_38A\_n78A | No |  |
| DC\_38A\_n79ADC\_38A\_n79C | DC\_38A\_n79A | No |  |
| DC\_39A\_n40A3 | DC\_39A\_n40A | No |  |
| DC\_39A\_n41ADC\_39C\_n41ADC\_39A\_n41C | DC\_39A\_n41ADC\_39C\_n41A | No | No |
| DC\_39A\_n78A5,7 | DC\_39A\_n78A | No |  |
| DC\_39A\_n79A7DC\_39A\_n79C7 | DC\_39A\_n79A | No | No |
| DC\_40A\_n1ADC\_40C\_n1A | DC\_40A\_n1A | No |  |
| DC\_40A\_n3A | DC\_40A\_n3A | No |  |
| DC\_40A\_n7A | DC\_40A\_n7A | No |  |
| DC\_40A\_n41ADC\_40A\_n41CDC\_40C\_n41A | DC\_40A\_n41A | No |  |
| DC\_40A\_n41(2A) | DC\_40A\_n41A | No |  |
| DC\_40A\_n77ADC\_40A\_n77CDC\_40C\_n77A21DC\_40C\_n77CDC\_40D\_n77A21 | DC\_40A\_n77A21 | No |  |
| DC\_40A\_n78ADC\_40A\_n78CDC\_40C\_n78A21DC\_40C\_n78CDC\_40D\_n78A21 | DC\_40A\_n78A21, 23DC\_40C\_n78A | No |  |
| DC\_40A\_n78(2A)DC\_40C\_n78(2A) | DC\_40A\_n78ADC\_40C\_n78A | No |  |
| DC\_40A\_n79A7,12DC\_40A\_n79C7,12DC\_40C\_n79A7,12 | DC\_40A\_n79A | No | No |
| DC\_41A\_n1ADC\_41C\_n1A | DC\_41A\_n1ADC\_41C\_n1A | No | DC\_41A\_n1ADC\_41C\_n1A |
| DC\_41A\_n3A7DC\_41C\_n3A7 | DC\_41A\_n3ADC\_41C\_n3A | No |  |
| DC\_41A\_n28A7DC\_41C\_n28A7 | DC\_41A\_n28ADC\_41C\_n28A | No |  |
| DC\_41A\_n77ADC\_41C\_n77A21 | DC\_41A\_n77A21DC\_41C\_n77A | No |  |
| DC\_41A\_n77(2A)DC\_41C\_n77(2A) | DC\_41A\_n77ADC\_41C\_n77A | No |  |
| DC\_41A\_n78A23DC\_41C\_n78ADC\_41D\_n78A | DC\_41A\_n78A23DC\_41C\_n78A | No |  |
| DC\_41A\_n78(2A)DC\_41C\_n78(2A) | DC\_41A\_n78ADC\_41C\_n78A | No |  |
| DC\_41A\_n79A6,7DC\_41A\_n79C6,7DC\_41C\_n79A6,7 | DC\_41A\_n79ADC\_41A\_n79CDC\_41C\_n79A | No | No |
| DC\_42A\_n1A7DC\_42C\_n1A7 | DC\_42A\_n1ADC\_42C\_n1A | No |  |
| DC\_42A\_n3A**7**DC\_42C\_n3A7 | DC\_42A\_n3ADC\_42C\_n3A | DC\_42\_n3 |  |
| DC\_42A\_n28A7DC\_42C\_n28A7 | DC\_42A\_n28ADC\_42C\_n28A | No |  |
| DC\_42A\_n51A | DC\_42A\_n51A | No |  |
| DC\_42A\_n77A3,4,9,11,13 DC\_42A\_n77C3,4,9DC\_42C\_n77A3,4,9,11DC\_42C\_n77C3,4,9DC\_42D\_n77A3,4,9,11DC\_42D\_n77CDC\_42E\_n77A3,4,9,11DC\_42E\_n77C | N/A | N/A |  |
| DC\_42A\_n77(2A)3,4,9DC\_42C\_n77(2A)3,4,9 | N/A | N/A |  |
| DC\_42A\_n78A3,4,9,11,13DC\_42A\_n78C3,4,9DC\_42C\_n78A3,4,9,11DC\_42C\_n78C3,4,9DC\_42D\_n78A3,4,9,11DC\_42D\_n78C3,4,9DC\_42E\_n78A3,4,9,11DC\_42E\_n78C3,4,9 | N/A | N/A |  |
| DC\_42A\_n79A9,15DC\_42A\_n79C9,15DC\_42C\_n79A9,15DC\_42C\_n79C9,15DC\_42D\_n79A9,15DC\_42D\_n79C9,15DC\_42E\_n79A9,15DC\_42E\_n79C9,15 | N/A | N/A |  |
| DC\_46A\_n77A2 | N/A | N/A |  |
| DC\_46A\_n78A2DC\_46C\_n78A2DC\_46D\_n78A2DC\_46E\_n78A2 | N/A | N/A |  |
| DC\_48A\_n2ADC\_48C\_n2ADC\_48D\_n2ADC\_48E\_n2A | DC\_48A\_n2A | No |  |
| DC\_48A\_n5ADC\_48B\_n5ADC\_48C\_n5ADC\_48D\_n5ADC\_48E\_n5A | DC\_48A\_n5A | No |  |
| DC\_48A\_n12A | DC\_48A\_n12A | No |  |
| DC\_48A\_n25ADC\_48C\_n25ADC\_48D\_n25A | DC\_48A\_n25A | No |  |
| DC\_48A\_n46ADC\_48B\_n46ADC\_48C\_n46ADC\_48D\_n46ADC\_48E\_n46ADC\_48A\_n46BDC\_48B\_n46BDC\_48C\_n46BDC\_48D\_n46BDC\_48E\_n46BDC\_48A\_n46CDC\_48B\_n46CDC\_48C\_n46CDC\_48D\_n46CDC\_48E\_n46CDC\_48A\_n46DDC\_48B\_n46DDC\_48C\_n46DDC\_48D\_n46DDC\_48E\_n46D | DC\_48A\_n46ADC\_48B\_n46A | No |  |
| DC\_48A\_n66ADC\_48C\_n66ADC\_48D\_n66ADC\_48E\_n66A | DC\_48A\_n66A | No |  |
| DC\_48A\_n71ADC\_48B\_n71ADC\_48C\_n71ADC\_48D\_n71A | DC\_48A\_n71A | No |  |
| DC\_48A-48A\_n71ADC\_48A-48A-48A\_n71A | DC\_48A\_n71A | No |  |
| DC\_48A\_n77A3. 4. 9, 11DC\_48C\_n77A3. 4. 9, 11DC\_48A\_n77C3. 4. 9, 11DC\_48C\_n77C3. 4. 9, 11DC\_48D\_n77A3. 4. 9, 11DC\_48D\_n77C3. 4. 9, 11DC\_48E\_n77A3. 4. 9, 11 | N/A | N/A |  |
| DC\_48A-48A\_n77A | N/A | N/A |  |
| DC\_48A-48A-48A\_n77A | N/A | N/A |  |
| DC\_66A\_n2ADC\_66B\_n2ADC\_66C\_n2A | DC\_66A\_n2A | DC\_66\_n2 |  |
| DC\_66A\_n2(2A) | DC\_66A\_n2A | DC\_66\_n2 |  |
| DC\_66A-66A\_n2A | DC\_66A\_n2A | DC\_66\_n2 |  |
| DC\_66A-66A-66A\_n2A | DC\_66A\_n2A | DC\_66\_n2 |  |
| DC\_66A\_n5ADC\_66B\_n5ADC\_66C\_n5A | DC\_66A\_n5A | DC\_66\_n5 |  |
| DC\_66A-66A\_n5A | DC\_66A\_n5A | DC\_66\_n5 |  |
| DC\_66A-66A-66A\_n5A | DC\_66A\_n5A | DC\_66\_n5 |  |
| DC\_66A\_n7A | DC\_66A\_n7A | No |  |
| DC\_66A\_n7(2A) | DC\_66A\_n7A | No |  |
| DC\_66A-66A\_n7A | DC\_66A\_n7A | No |  |
| DC\_66A-66A\_n7(2A) | DC\_66A\_n7A | No |  |
| DC\_66A\_n12A | DC\_66A\_n12A | No |  |
| DC\_66A\_n25A | DC\_66A\_n25A | DC\_66\_n25 |  |
| DC\_66A\_n28A | DC\_66A\_n28A | No |  |
| DC\_66A\_n30A | DC\_66A\_n30A | No |  |
| DC\_66A-66A\_n30A | DC\_66A\_n30A | No |  |
| DC\_66A\_n38A | DC\_66A\_n38A | No |  |
| DC\_66A-66A\_n38A | DC\_66A\_n38A | No |  |
| DC\_66A\_n41ADC\_66A\_n41C | DC\_66A\_n41A | No |  |
| DC\_66A\_n41(2A) | DC\_66A\_n41A | No |  |
| DC\_66A\_n46A | DC\_66A\_n46A | No |  |
| DC\_66A\_n48ADC\_66A\_n48B | DC\_66A\_n48A | No |  |
| DC\_66A-66A\_n48ADC\_66A-66A\_n48B | DC\_66A\_n48A | No |  |
| DC\_66A\_n71ADC\_66C\_n71ADC\_66A\_n71B | DC\_66A\_n71A | No |  |
| DC\_66A-66A\_n71A | DC\_66A\_n71A | No |  |
| DC\_66A\_n77ADC\_66A\_n77C21 | DC\_66A\_n77A21 | DC\_66\_n77 |  |
| DC\_66A\_n77(2A)21 | DC\_66A\_n77A21 | DC\_66\_n77 |  |
| DC\_66A-66A\_n77A21DC\_66A-66A\_n77C21 | DC\_66A\_n77A21 | DC\_66\_n77 |  |
| DC\_66A-66A\_n77(2A)21 | DC\_66A\_n77A21 | DC\_66\_n77 |  |
| DC\_66A-66A-66A\_n77A21DC\_66A-66A-66A\_n77C21 | DC\_66A\_n77A21 | DC\_66\_n77 |  |
| DC\_66A-66A-66A\_n77(2A)21 | DC\_66A\_n77A21 | DC\_66\_n77 |  |
| DC\_66A\_n78A | DC\_66A\_n78A | No |  |
| DC\_66A\_n78(2A) 21 | DC\_66A\_n78A21 | No |  |
| DC\_66A-66A\_n78A21 | DC\_66A\_n78A21 | No |  |
| DC\_66A-66A\_n78(2A)21 | DC\_66A\_n78A21 | No |  |
| DC\_68A\_n1A | DC\_68A\_n1A | No |  |
| DC\_68A\_n3A | DC\_68A\_n3A | No |  |
| DC\_68A\_n7A | DC\_68A\_n7A | No |  |
| DC\_68A\_n8A | DC\_68A\_n8A | No |  |
| DC\_68A\_n20A | DC\_68A\_n20A | No |  |
| DC\_68A\_n38A | DC\_68A\_n38A | No |  |
| DC\_68A\_n40A | DC\_68A\_n40A | No |  |
| DC\_68A\_n41A | DC\_68A\_n41A | No |  |
| DC\_68A\_n77A | DC\_68A\_n77A | No |  |
| DC\_68A\_n78A | DC\_68A\_n78A | No |  |
| DC\_68A\_n79A | DC\_68A\_n79A | No |  |
| DC\_71A\_n2A | DC\_71A\_n2A | No |  |
| DC\_71A\_n2(2A) | DC\_71A\_n2A | No |  |
| DC\_71A\_n5A | DC\_71A\_n5A | No |  |
| DC\_71A\_n12A | DC\_71A\_n12A18,19 | Yes |  |
| DC\_71A\_n38A | DC\_71A\_n38A | No |  |
| DC\_71A\_n7A | DC\_71A\_n7A | No |  |
| DC\_71A\_n25A | DC\_71A\_n7A | No |  |
| DC\_71A\_n41A | DC\_71A\_n41A | No |  |
| DC\_71A\_n48A | DC\_71A\_n48A | No |  |
| DC\_71A\_n66A | DC\_71A\_n66A | No |  |
| DC\_71A\_n77ADC\_71A\_n77C | DC\_71A\_n77A | No |  |
| DC\_71A\_n77(2A) | DC\_71A\_n77A | No |  |
| DC\_71A\_n78A | DC\_71A\_n78A | No |  |
| DC\_71A\_n78(2A)21 | DC\_71A\_n78A21 | No |  |
| NOTE 1: Uplink EN-DC configurations are the configurations supported by the present release of specifications.NOTE 2: Restricted to E-UTRA operation when inter-band carrier aggregation is configured. The downlink operating band for Band 46 is paired with the uplink operating band (external E-UTRA band) of the carrier aggregation configuration that is supporting the configured Pcell.NOTE 3: The minimum requirements apply only when there is non-simultaneous Rx/Tx operation between E-UTRA and NR carriers. This restriction applies also for these carriers when applicable EN-DC configuration is part of a higher order EN-DC configuration.NOTE 4: If a UE does not indicate *interBandMRDC-WithOverlapDL-Bands-r16* or a UE indicates both *interBandMRDC-WithOverlapDL-Bands-r16* and *requirementTypeIndication-r18* and IE *nonCollocatedTypeMRDC-r18* is provided, the minimum requirements for intra-band non-contiguous EN-DC apply for the Band 42/48 and Band n77/n78 combination. If a UE does not indicate *interBandMRDC-WithOverlapDL-Bands-r16* or a UE indicates both *interBandMRDC-WithOverlapDL-Bands-r16* and *requirementTypeIndication-r18* and IE *nonCollocatedTypeMRDC-r18* is provided and UE indicates *interBandContiguousMRDC*, the minimum requirements for intra-band contiguous EN-DC also apply in addtion to intra-band non-contiguous EN-DC*.* The intra-band requirements also apply for these carriers when applicable EN-DC configuration is a subset of a higher order EN-DC configuration.NOTE 5: The frequency range above 3600 MHz for Band n78 is not used in this combination.NOTE 6: The frequency range below 2506 MHz for Band 41 is not used in this combination.NOTE 7: Applicable for UE supporting inter-band EN-DC with mandatory simultaneous Rx/Tx capability.NOTE 8: The frequency range in band n28 /28 is restricted for this band combination to 703 - 733 MHz for the UL and 758-788 MHz for the DL. This restriction also applies for any band combinations when DC\_20\_n28/DC\_28\_n20/CA\_20-28/CA\_n20-n28 is a subset of a higher order band combination.NOTE 9: The combination is not used alone as fall-back mode of other band combinations in which UL in Band 42 or Band 48 is not used.NOTE 10: Void.NOTE 11: If a UE does not indicate *interBandMRDC-WithOverlapDL-Bands-r16*, the minimum requirements apply when the maximum power spectral density imbalance between downlink carriers is within 6 dB. If the UE indicates *interBandMRDC-WithOverlapDL-Bands-r16* but does not indicate *requirementTypeIndication-r18* or a UE indicates both *interBandMRDC-WithOverlapDL-Bands-r16* and *requirementTypeIndication-r18* and IE *nonCollocatedTypeMRDC-r18* is not provided when *maxMIMO-Layers* with value less than or equal to 2, the power imbalance requirement defined in clause 7.10B.3 apply. If a UE indicates both *interBandMRDC-WithOverlapDL-Bands-r16* and *requirementTypeIndication-r18* and IE *nonCollocatedTypeMRDC-r18* is provided, the minimum requirements apply when the maximum power spectral density imbalance between downlink carriers is within 6 dB. For these UEs, the power spectral density imbalance condition also applies for these carriers when applicable EN-DC configuration is a subset of a higher order EN-DC configuration.NOTE 12: Applicable for frequency range above 4800 MHz for Band n79 in this combination.NOTE 13: If a UE does not indicated *interBandMRDC-WithOverlapDL-Bands-r16* or a UE indicates both *interBandMRDC-WithOverlapDL-Bands-r16* and *requirementTypeIndication-r18* and IE *nonCollocatedTypeMRDC-r18* is provided, the minimum requirements apply for synchronized DL carriers with a maximum receive time difference ≤ 3 usec. The requirements also apply for these carriers when applicable EN-DC configuration is a subset of a higher order EN-DC configuration.NOTE 14: Applicable when dynamic switching between two uplink carriers is conducted. The DL interruption requirements for NR DL carrier(s) and E-UTRA DL carrier(s) are specified in clause 8.2.1.2.14 of 38.133 [15] and clause 7.32.2.12 of 36.133 [16] respectively.NOTE 15: Simultaneous Rx/Tx capability does not apply for UEs supporting band 42 with a n77 implementation only. Same restrictions are applied to related higher order configurations.NOTE 16: The frequency range in band n41 is restricted for this band combination to 2595 – 2645 MHz.NOTE 17: The frequency range in band n28 is restricted for this band combination to 728 - 738 MHz for the UL and 783 - 793 MHz for the DL. This restriction applies also for these band combinations when applicable EN-DC configuration is part of a higher order EN-DC configuration.NOTE 18: Only single switched UL is supported.NOTE 19: The implementation with 4 antennas is targeted for FWA form factor for this band combination.NOTE 20: The combination is not used alone as fallback mode of other band combinations in which UL in Band 2 is not used.NOTE 21: Minimum requirements for PC2 are applicable for this uplink EN-DC configuration in this downlink/uplink EN-DC configuration with 1Tx antenna connector in each band.NOTE 22: The PC2 Uplink EN-DC configuration supported in Table 6.2B.1.3-1 is applicable to the same EN-DC configuration without additional indication of NOTE 21.NOTE 23: Minimum requirements for Power Class 2 are applicable for this EN-DC configuration with 1Tx antenna connector in one band and 2Tx antenna connectors in the other band. |

## **<<Next of Change>>**

###### 7.3B.2.3.5.1 MSD test points for intermodulation interference due to dual uplink operation for PC3 EN-DC in NR FR1 involving two bands

Table 7.3B.2.3.5.1-1: MSD test points for PCell due to dual uplink operation for PC3 EN-DC in NR FR1 (two bands)

| NR or E-UTRA Band / Channel bandwidth / NRB / MSD |
| --- |
| EN-DCConfiguration | EUTRA or NR band | UL Fc (MHz) | UL/DL BW (MHz) | UL LCRB | DL Fc (MHz) | MSD (dB) | IMD order |
| DC\_1\_n3 | 1 | 1950 | 5 | 25 | 2140 | 23 | IMD3 |
|  | n3 | 1760 | 5 | 25 | 1855 | N/A | N/A |
| DC\_1C\_n3 | 1C | 19501970 | 2020 | 1 (RBstart=0)1 (RBstart=67) | 21402160 | N/A | N/A |
|  | n3 | N/A | 5 | N/A | 1877.5 | 36 | IMD5 |
| DC\_1A\_n8A | 1 | 1965 | 5 | 25 | 2155 | 6.0 | IMD4 |
|  | n8 | 887.5 | 5 | 25 | 932.5 | N/A | N/A |
| DC\_1A\_n71ADC\_1A\_n71B | 1 | 1958 | 5 | 25 | 2148 | N/A | N/A |
|  | n71 | 668 | 5 | 25 | 622 | 15.1 | IMD3 |
| DC\_1A\_n77A,DC\_1A\_SUL\_n77A-n84A,DC\_1A\_n77(2A), | 1 | 1950 | 5 | 25 | 2140 | 29.8 | IMD23 |
|  |  |  |  |  |  |  |  |
|  | n77 | 4090 | 10 | 50 | 4090 | N/A | N/A |
| DC\_1A\_n77A,DC\_1A\_SUL\_n77A-n84A,DC\_1A\_n77(2A),DC\_1A\_n77(3A),DC\_1A\_n78A,DC\_1A\_SUL\_n78A-n84A,DC\_1A\_n78(2A)DC\_1A\_n78(A-C) | 1 | 1950 | 5 | 25 | 2140 | 8.0 | IMD43 |
|  |  |  |  |  |  |  |  |
|  | n77, n78 | 3710 | 10 | 50 | 3710 | N/A | N/A |
| DC\_2A\_n46A | 2 | 1880 | 5 | 25 | 1960 | 12.0 | IMD3 |
|  | n46 | 5720 | 20 | 100 | 5720 | N/A | N/A |
| DC\_2A\_n48A | 2 | 1852.5 | 5 | 25 | 1932.5 | 12 | IMD4 |
|  | n48 | 3625 | 20 | 100 | 3625 | N/A | N/A |
| DC\_2A\_n66A, DC\_2A-2A\_n66ADC\_2A\_n66(2A) | 2 | 1855 | 5 | 25 | 1935 | 20 | IMD3 |
|  | n66 | 1775 | 5 | 25 | 2175 | N/A | N/A |
| DC\_2A\_n66A, DC\_2A-2A\_n66ADC\_2A\_n66(2A) | 2 | 1883.3 | 5 | 25 | 1963.3 | N/A | N/A |
|  | n66 | 1750 | 5 | 25 | 2150 | 4 | IMD5 |
| DC\_2A\_n77ADC\_2A\_n77(2A)DC\_2A-2A\_n77ADC\_2A\_n77(2A)DC\_2A-2A\_n77(2A) | 2 | 1855 | 5 | 25 | 1935 | 26 | IMD2 |
|  |  |  |  |  |  |  |  |
|  | n77 | 3790 | 10 | 50 | 3790 | N/A | N/A |
|  | 2 | 1900 | 5 | 25 | 1980 | 8.0 | IMD4 |
|  |  |  |  |  |  |  |  |
|  | n77 | 3720 | 10 | 50 | 3720 | N/A | N/A |
|  | 2 | 1885 | 5 | 25 | 1965 | 5 | IMD5 |
|  |  |  |  |  |  |  |  |
|  | n77 | 3810 | 10 | 50 | 3810 | N/A | N/A |
| DC\_2A\_n78ADC\_2A\_n78(2A)DC\_2A-2A\_n78(2A) | 2 | 1855 | 5 | 25 | 1935 | 26 | IMD23 |
|  |  |  |  |  |  |  |  |
|  | n78 | 3790 | 10 | 50 | 3790 | N/A | N/A |
|  | 2 | 1885 | 5 | 25 | 1965 | 8.0 | IMD43 |
|  |  |  |  |  |  |  |  |
|  | n78 | 3690 | 10 | 50 | 3690 | N/A | N/A |
| DC\_3\_n1 | 3 | 1760 | 5 | 25 | 1855 | N/A | N/A |
|  | n1 | 1950 | 5 | 25 | 2140 | 23 | IMD3 |
| DC\_3\_n5 | 3 | 1771 | 10 | 50 | 1866 | 4 | IMD4 |
|  | n5 | 838 | 5 | 25 | 883 | N/A | N/A |
|  | 3 | 1721 | 10 | 50 | 1816 | N/A | N/A |
|  | n5 | 838 | 5 | 25 | 883 | 24 | IMD23 |
| DC\_3A\_n7ADC\_3C\_n7A | 3 | 1730 | 5 | 25 | 1825 | N/A | N/A |
|  | n7 | 2535 | 10 | 50 | 2655 | 10.2 | IMD4 |
| DC\_3\_n8 | n8 | 900 | 5 | 25 | 945 | 8 | IMD43 |
|  | 3 | 1755 | 10 | 50 | 1850 | N/A | N/A |
|  | n8 | 897.5 | 5 | 25 | 942.5 | N/A | N/A |
|  | 3 | 1747.5 | 10 | 50 | 1842.5 | 6.4 | IMD5 |
| DC\_3A\_n20ADC\_3C\_n20A | 3 | 1775 | 5 | 25 | 1870 | 4 | IMD4 |
|  | n20 | 840 | 5 | 25 | 799 | N/A | N/A |
|  | 3 | 1735 | 5 | 25 | 1830 | N/A | N/A |
|  | n20 | 847 | 5 | 25 | 806 | 9 | IMD4 |
| DC\_3A\_n26A | 3 | 1771 | 10 | 50 | 1866 | 4 | IMD4 |
|  | n26 | 838 | 5 | 25 | 883 | N/A | N/A |
|  | 3 | 1721 | 10 | 50 | 1816 | N/A | N/A |
|  | n26 | 838 | 5 | 25 | 883 | 24 | IMD23 |
| DC\_3C\_n26A | 3 | 1720 | 20 | 1 (RBSTART=0) | 1815 | N/A | N/A |
|  |  | 1739.8 | 20 | 1 (RBSTART=99) | 1834.8 | N/A |  |
|  | n26 | 841.5 | 15 | 25(RBSTART=54) | 886.5 | 18.9 | IMD3 |
| DC\_3C\_n28A | n28 | 715.5 | 25 | 25(RBSTART=108) | 770.5 | 11 | IMD39 |
|  | 3 | 1720 | 20 | 1 (RBSTART=0) | 1815 | N/A | N/A |
|  |  | 1739.8 | 20 | 1 (RBSTART=99) | 1834.8 |  |  |
| DC\_3A\_n38A | 3 | 1712.8 | 5 | 25 | 1807.8 | 8.2 | IMD4 |
|  | n38 | 2616.7 | 10 | 50 | 2616.7 | N/A | N/A |
| DC\_3A\_n41ADC\_3C\_n41ADC\_3A\_SUL\_n41A-n80ADC\_3C\_SUL\_n41A-n80ADC\_3A-3A\_n41A | 3 | 1740 | 5 | 25 | 1835 | 8.2 | IMD4 |
|  | n41 | 2657.5 | 10 | 50 | 2657.5 | N/A | N/A |
| DC\_3A\_n77A,DC\_3A\_n77(2A),DC\_3A\_n77(3A),DC\_3A\_SUL\_n77A-n80A,DC\_3A\_n78A,DC\_3A\_SUL\_n78A-n80A,DC\_3A\_n78(2A),DC\_3A\_n78(A-C)DC\_3C\_n78ADC\_3C\_n78(2A) | 3 | 1740 | 5 | 25 | 1835 | 26 | IMD23 |
|  |  |  |  |  |  |  |  |
|  | n77, n78 | 3575 | 10 | 50 | 3575 | N/A | N/A |
| DC\_3A\_n77A,DC\_3A\_n77(2A),DC\_3C\_n77A,DC\_3C\_n77(2A),DC\_3A\_SUL\_n77A-n80A,DC\_3A\_n78A, DC\_3A\_SUL\_n78A-n80A,DC\_3A\_n78(2A),DC\_3C\_n78ADC\_3C\_n78(2A) | 3 | 1765 | 5 | 25 | 1860 | 8.0 | IMD43 |
|  |  |  |  |  |  |  |  |
|  | n77, n78 | 3435 | 10 | 50 | 3435 | N/A | N/A |
| DC\_4A\_n2A | 2 | 1860 | 20 | 502 | 1940 | 5 | IMD3 |
|  | 4 | 1752.5 | 5 | 25 | 2152.5 | N/A | N/A |
|  | 2 | 1868.3 | 5 | 25 | 1948.3 | N/A | N/A |
|  | 4 | 1735 | 5 | 25 | 2135 | 5 | IMD5 |
| DC\_4A\_n5A | n5 | 838 | 5 | 25 | 883 | 30 | IMD23 |
|  | 4 | 1721 | 5 | 25 | 2121 | N/A | N/A |
| DC\_4A\_n7A | 4 | 1730 | 5 | 25 | 2130 | N/A | N/A |
|  | n7 | 2535 | 10 | 50 | 2655 | 15 | IMD4 |
| DC\_5A\_n3A | 5 | 838 | 5 | 25 | 883 | N/A | N/A |
|  | n3 | 1771 | 10 | 50 | 1866 | 4 | IMD4 |
|  | 5 | 838 | 5 | 25 | 883 | 24 | IMD23 |
|  | n3 | 1721 | 10 | 50 | 1816 | N/A | N/A |
| DC\_5\_n7 | n7 | 2547 | 10 | 50 | 2667 | N/A | N/A |
|  | 5 | 834 | 5 | 25 | 879 | 12 | IMD33 |
| DC\_5\_n38 | 5 | 844 | 5 | 25 | 889 | 12 | IMD33 |
|  | n38 | 2577 | 10 | 50 | 2577 | N/A | N/A |
| DC\_5A\_n41A | 5 | 839 | 5 | 25 | 884 | 15.6 | IMD33 |
|  | n41 | 2562 | 10 | 50 | 2562 | N/A | N/A |
| DC\_5A\_n66A | 5 | 838 | 5 | 25 | 883 | 30 | IMD23 |
|  | n66 | 1721 | 5 | 25 | 2121 | N/A | N/A |
| DC\_5A\_n77A8DC\_5A\_n77(2A)8DC\_5A\_n77(3A)8 | 5 | 844 | 5 | 25 | 889 | 8.3 | IMD4 |
|  | n77 | 3421 | 10 | 50 | 3421 | N/A | N/A |
|  | 5 | 826.5 | 5 | 25 | 871.5 | 5.5 | IMD5 |
|  | n77 | 4177.5 | 10 | 50 | 4177.5 | N/A | N/A |
| DC\_5A\_n78ADC\_5A\_n78(2A)DC\_5A\_n78(A-C)DC\_5A\_n78CDC\_5A\_SUL\_n78A-n89A | 5 | 844 | 5 | 25 | 889 | 8.3 | IMD4 |
|  | n78 | 3421 | 10 | 50 | 3421 | N/A | N/A |
| DC\_7\_n3 | 7 | 2535 | 10 | 50 | 2655 | 13 | IMD4 |
|  | n3 | 1730 | 5 | 25 | 1825 | N/A | N/A |
| DC\_7\_n5 | 7 | 2547 | 10 | 50 | 2667 | N/A | N/A |
|  | n5 | 834 | 5 | 25 | 879 | 12 | IMD33 |
| DC\_7A\_n20A | 7 | 2512 | 10 | 50 | 2632 | N/A | N/A |
|  | n20 | 851 | 5 | 25 | 810 | 12 | IMD33 |
| DC\_7A\_n26ADC\_7C\_n26A | 7 | 2547 | 10 | 50 | 2667 | N/A | N/A |
|  | n26 | 834 | 5 | 25 | 879 | 12 | IMD33 |
|  | 7 | 2567.5 | 5 | 25 | 2687.5 | 2.5 | IMD5 |
|  | n26 | 816.5 | 5 | 25 | 861.5 | N/A | N/A |
| DC\_7A\_n40A DC\_7A-7A\_n40A | 7 | 2510 | 5 | 25 | 2630 | 23 | IMD3 |
|  | n40 | 2390 | 5 | 25 | 2390 | N/A | N/A |
| DC\_7A\_n66ADC\_7A-7A\_n66ADC\_7C\_n66A | 7 | 2535 | 10 | 50 | 2655 | 15 | IMD4 |
|  | n66 | 1730 | 5 | 25 | 2130 | N/A | N/A |
| DC\_7A\_n77ADC\_7A-7A\_n77(2A)DC\_7A-7A\_n77(3A)DC\_7A\_n77(2A)DC\_7A\_n77(3A)DC\_7C\_n77ADC\_7C\_n77(2A) | 7 | 2540 | 5 | 25 | 2660 | 7.1 | IMD4 |
|  | n77 | 3870 | 10 | 50 | 3870 | N/A | N/A |
| DC\_7\_n79DC\_7-7\_n79 | 7 | 2510 | 5 | 25 | 2630 | [8] | IMD4 |
| n79 | 4900 | 40 | 216 | 4900 | N/A | N/A |
| DC\_8A\_n1ADC\_8B\_n1A | 8 | 887.5 | 5 | 25 | 932.5 | N/A | N/A |
|  | n1 | 1965 | 5 | 25 | 2155 | 6 | IMD4 |
| DC\_8A\_n3ADC\_8B\_n3A | 8 | 900 | 5 | 25 | 945 | 8 | IMD43 |
|  | n3 | 1755 | 10 | 50 | 1850 | N/A | N/A |
|  | 8 | 897.5 | 5 | 25 | 942.5 | N/A | N/A |
|  | n3 | 1747.5 | 10 | 50 | 1842.5 | 6.4 | IMD5 |
| DC\_8A\_n20A | n20 | 849.5 | 5 | 25 | 808.5 | 25 | IMD33 |
|  | 8 | 890.5 | 5 | 25 | 935.5 | N/A | N/A |
|  | n20 | 847.5 | 5 | 25 | 806.5 | N/A | N/A |
|  | 8 | 892.5 | 5 | 25 | 937.5 | 25 | IMD33 |
| DC\_8A\_n38A | 8 | 887.5 | 5 | 25 | 932.5 | 8.1 | IMD5 |
|  | n38 | 2617.5 | 5 | 25 | 2617.5 | N/A | N/A |
| DC\_8A\_n41ADC\_8A\_SUL\_n41A-n81A | 8 | 882.5 | 5 | 25 | 927.5 | 12.1 | IMD33 |
|  | n41 | 2685 | 10 | 50 | 2685 | N/A | N/A |
| DC\_8A\_n77A,DC\_8B\_n77A,DC\_8B\_n77(2A),DC\_8A\_n78A,DC\_8B\_n78ADC\_8A\_n78(2A),DC\_8A\_n77(3A),DC\_8A\_SUL\_n78A-n81A | 8 | 897.5 | 5 | 25 | 942.5 | 8.3 | IMD4 |
|  | n77, n78 | 3635 | 10 | 50 | 3635 | N/A | N/A |
| DC\_8A\_n79A,DC\_8A\_n79C,DC\_8A\_SUL\_n79A-n81A | 8 | 897.5 | 5 | 25 | 942.5 | 4.8 | IMD5 |
|  | n79 | 4532.5 | 40 | 216 | 4532.5 | N/A | N/A |
| DC\_11A\_n28A | 11 | 1430.5 | 5 | 25 | 1478.5 | N/A | N/A |
|  | n28 | 743 | 5 | 25 | 798 | 10.4 | IMD4 |
| DC\_12A\_n77ADC\_12A\_n77(2A) | 12 | 702 | 5 | 20 | 732 | 5.5 | IMD5 |
|  | n77 | 3540 | 10 | 50 | 3540 | N/A | N/A |
| DC\_12A\_n78A | 12 | 710 | 5 | 25 | 740 | 5.5 | IMD5 |
|  | n78 | 3580 | 10 | 50 | 3580 | N/A | N/A |
| DC\_13A\_n5A | 13 | 783 | 5 | 25 | 752 | N/A | N/A |
|  | n5 | 828 | 5 | 25 | 873 | 25 | IMD3 |
| DC\_13A\_n7ADC\_13A\_n7(2A) | 13 | 784.5 | 5 | 25 | 753.5 | N/A | N/A |
|  | n7 | 2520 | 40 | 216 | 2640 | 2.5 | IMD5 |
| DC\_13A\_n77A | 13 | 784.5 | 5 | 20 | 753.5 | 5.5 | IMD5 |
|  | n77 | 3891.5 | 10 | 50 | 3891.5 | N/A | N/A |
| DC\_14A\_n5A | 14 | 791 | 5 | 25 | 761 | N/A | N/A |
|  | n5 | 836 | 5 | 25 | 881 | 25 | IMD3 |
|  | 14 | 795.5 | 5 | 25 | 765.5 | 25 | IMD3 |
|  | n5 | 826.5 | 5 | 25 | 871.5 | N/A | N/A |
| DC\_14A\_n77ADC 14A n77(2A) | 14 | 795.5 | 5 | 15 | 765.5 | 5.5 | IMD5 |
|  | n77 | 3947.5 | 10 | 50 | 3947.5 | N/A | N/A |
| DC\_18A\_n3A | 18 | 823 | 5 | 25 | 868 | N/A | N/A |
|  | n3 | 1721 | 5 | 25 | 1816 | 4 | IMD4 |
| DC\_18A\_n77A10 | 18 | 827.5 | 5 | 25 | 872.5 | 8.4 | IMD410 |
|  | n77 | 3355 | 10 | 50 | 3355 | N/A | N/A |
|  | 18 | 817.5 | 5 | 25 | 862.5 | 4.5 | IMD510 |
|  | n77 | 4130 | 10 | 50 | 4130 | N/A | N/A |
| DC\_18A\_n78A | 18 | 827.5 | 5 | 25 | 872.5 | 8.4 | IMD411 |
|  | n78 | 3355 | 10 | 50 | 3355 | N/A | N/A |
| DC\_19A\_n77A | 19 | 836.5 | 5 | 25 | 881.5 | 13.6 | IMD43 |
|  | n77 | 3391 | 10 | 50 | 3391 | N/A | N/A |
| DC\_19A\_n78A | 19 | 836.5 | 5 | 25 | 881.5 | 13.6 | IMD4 |
|  | n78 | 3391 | 10 | 50 | 3391 | N/A | N/A |
| DC\_20A\_n3A | 20 | 840 | 5 | 25 | 799 | N/A | N/A |
|  | n3 | 1775 | 5 | 25 | 1870 | 4 | IMD4 |
|  | 20 | 847 | 5 | 25 | 806 | 9 | IMD4 |
|  | n3 | 1735 | 5 | 25 | 1830 | N/A | N/A |
| DC\_20A\_n38A | 20 | N/A | N/A | N/A | N/A | N/A | IMD5 |
|  | n38 | N/A | N/A | N/A | N/A | N/A | N/A |
| DC\_20\_n7 | 20 | 851 | 5 | 25 | 810 | 12 | IMD33 |
|  | n7 | 2512 | 10 | 50 | 2632 | N/A | N/A |
| DC\_20A\_n8A | 20 | 849.5 | 5 | 25 | 808.5 | 25 | IMD3 |
|  | n8 | 892.5 | 5 | 25 | 937.5 | 25 | IMD3 |
| DC\_20\_n41 | 20 | 851 | 5 | 25 | 810 | 12.1 | IMD3 |
|  | n41 | 2512 | 10 | 50 | 2512 | N/A | N/A |
| DC\_20\_n41 | 20 | 841 | 5 | 25 | 800 | 8.1 | IMD5 |
|  | n41 | 2564 | 10 | 50 | 2564 | N/A | N/A |
| DC\_20A\_n77A,DC\_20A\_n78ADC\_20A\_n78C7,DC\_20A\_n78(2A),DC\_20A\_SUL\_n78A-n82A | 20 | 850 | 5 | 25 | 809 | 11 | IMD4 |
|  | n77, n78 | 3359 | 10 | 50 | 3359 | N/A | N/A |
| DC\_20A\_n77A | 20 | 840 | 5 | 25 | 799 | 6.5 | IMD5 |
|  | n77 | 4159 | 10 | 50 | 4159 | N/A | N/A |
| DC\_21A\_n28A7 | 21 | 1450.4 | 5 | 25 | 1498.4 | 2.5 | IMD5 |
| n28 | 735.5 | 5 | 25 | 790.5 | N/A | N/A |
| DC\_21A\_n79A | 21 | 1457.5 | 5 | 25 | 1505.5 | 18.4 | IMD3 |
|  | n79 | 4420.5 | 40 | 216 | 4420.5 | N/A | N/A |
| DC\_25A\_n77ADC\_25A-25A\_n77A | 25 | 1855 | 5 | 25 | 1935 | 26 | IMD2 |
|  | n77 | 3790 | 10 | 50 | 3790 | N/A | N/A |
|  | 25 | 1900 | 5 | 25 | 1980 | 8 | IMD4 |
|  | n77 | 3720 | 10 | 50 | 3720 | N/A | N/A |
|  | 25 | 1885 | 5 | 25 | 1965 | 5 | IMD5 |
|  | n77 | 3810 | 10 | 50 | 3810 | N/A | N/A |
| DC\_25A\_n78ADC\_25A-25A\_n78A | 25 | 1855 | 5 | 25 | 1935 | 26 | IMD2 |
| n78 | 3790 | 10 | 50 | 3790 | N/A | N/A |
| 25 | 1885 | 5 | 25 | 1965 | 8 | IMD4 |
| n78 | 3690 | 10 | 50 | 3690 | N/A | N/A |
| 25 | 1875 | 5 | 25 | 1955 | 5 | IMD5 |
| n78 | 3790 | 10 | 50 | 3790 | N/A | N/A |
| DC\_26A\_n41A | 26 | 839 | 5 | 25 | 884 | 15.6 | IMD33 |
|  | n41 | 2562 | 10 | 50 | 2562 | N/A | N/A |
| DC\_28\_n50 | 28 | 730 | 10 | 50 | 775 | 15.3 | IMD 2 |
|  | n50 | 1500 | 10 | 50 | 1500 | N/A | N/A |
|  | 28 | 740 | 10 | 50 | 785 | 6 | IMD 4 |
|  | n50 | 1500 | 10 | 50 | 1500 | N/A | N/A |
|  | 28 | 740 | 10 | 50 | 785 | 0.5 | IMD 5 |
|  | n50 | 1500 | 10 | 50 | 1500 | N/A | N/A |
| DC\_28A\_n51A | 28 | 742.3 | 5 | 25 | 797.3 | 5 | IMD4 |
|  | n51 | 1429.5 | 5 | 25 | 1429.5 | N/A | N/A |
| DC\_26A\_n77A,DC\_26A\_n78A,DC\_26A\_n78(2A) | 26 | 836.5 | 5 | 25 | 881.5 | 11.1 | IMD4 |
|  | n77, n78 | 3391 | 10 | 50 | 3391 | N/A | N/A |
| DC\_28A\_n77A,DC\_28C\_n77A,DC\_28C\_n77(2A),DC\_28A\_n78A,DC\_28A\_n78(2A),DC\_28A\_SUL\_n78A-n83A | 28 | 705.5 | 5 | 25 | 760.5 | 5.5 | IMD5 |
|  | n77, n78 | 3582.5 | 10 | 50 | 3582.5 | N/A | N/A |
| DC\_30A\_n77ADC\_30A\_n77(2A) | 30 | 2310 | 5 | 25 | 2355 | 8.0 | IMD4 |
|  | n77 | 3487.5 | 10 | 50 | 3487.5 | N/A | N/A |
| DC\_38A\_n3A | n3 | 1713 | 5 | 25 | 1808 | 8.2 | IMD4 |
|  | 38 | 2617 | 5 | 25 | 2617 | N/A | N/A |
| DC\_38A\_n8A | 38 | 2617.5 | 5 | 25 | 2617.5 | N/A | N/A |
|  | n8 | 887.5 | 5 | 25 | 932.5 | 8.1 | IMD5 |
| DC\_40A\_n7A | n7 | 2510 | 5 | 25 | 2630 | 23 | IMD3 |
|  | 40 | 2390 | 5 | 25 | 2390 | N/A | N/A |
| DC\_41A\_n3ADC\_41C\_n3A | n3 | 1740 | 5 | 25 | 1835 | 8.2 | IMD4 |
|  | 41 | 2657.5 | 5 | 25 | 2657.5 | N/A | N/A |
| DC\_42\_n3 | 42 | 3575 | 10 | 50 | 3575 | N/A | N/A |
|  | n3 | 1740 | 5 | 25 | 1835 | 26 | 2nd3 |
|  |  |  |  |  |  |  |  |
|  | 42 | 3435 | 10 | 50 | 3435 | N/A | N/A |
|  | n3 | 1765 | 5 | 25 | 1860 | 8.0 | IMD4 |
|  |  |  |  |  |  |  |  |
| DC\_42\_n28 | 42 | 3582.5 | 10 | 50 | 3582.5 | N/A | N/A |
|  | n28 | 705.5 | 5 | 25 | 760.5 | 5.5 | IMD5 |
| DC\_48A\_n2ADC\_48C\_n2ADC\_48D\_n2ADC\_48E\_n2A | 48 | 3625 | 20 | 100 | 3625 | N/A | N/A |
|  | n2 | 1852.5 | 5 | 25 | 1932.5 | 12 | IMD4 |
| DC\_48A\_n12A | 48 | 3557.5 | 10 | 50 | 3557.5 | N/A | N/A |
|  | n12 | 705.5 | 5 | 25 | 735.5 | 5.5 | IMD5 |
| DC\_48A\_n25ADC\_48C\_n25ADC\_48D\_n25A | 48 | 3625 | 20 | 100 | 3625 | N/A | N/A |
|  | n25 | 1852.5 | 5 | 25 | 1932.5 | 12 | IMD4 |
| DC\_48A\_n66ADC\_48C\_n66ADC\_48D\_n66A | 48 | 3630 | 20 | 100 | 3630 | N/A | N/A |
|  | n66 | 1715 | 5 | 25 | 2115 | 4 | IMD5 |
| DC\_66A\_n2A,DC\_66A\_n2(2A)DC\_66A-66A\_n2A | 66 | 1775 | 5 | 25 | 2175 | N/A | N/A |
|  | n2 | 1855 | 5 | 25 | 1935 | 20 | IMD3 |
|  | 66 | 1750 | 5 | 25 | 2150 | 4 | IMD5 |
|  | n2 | 1883.3 | 5 | 25 | 1963.3 | N/A | N/A |
| DC\_66A\_n5A | n5 | 838 | 5 | 25 | 883 | 30 | IMD23 |
|  | 66 | 1721 | 5 | 25 | 2121 | N/A | N/A |
| DC\_66A\_n7ADC\_66A-66A\_n7ADC\_66A\_n7(2A)DC\_66A-66A\_n7(2A) | 66 | 1730 | 5 | 25 | 2130 | N/A | N/A |
|  | n7 | 2535 | 10 | 50 | 2655 | 15 | IMD4 |
| DC\_66A\_n25A | 66 | 1775 | 5 | 25 | 2175 | N/A | N/A |
|  | n25 | 1855 | 5 | 25 | 1935 | 20 | IMD3 |
|  | 66 | 1712.5 | 5 | 25 | 2112.5 | 23 | IMD3 |
|  | n25 | 1912.5 | 5 | 25 | 1992.5 | N/A | N/A |
|  | 66 | 1750 | 5 | 25 | 2150 | 4 | IMD5 |
|  | n25 | 1883.3 | 5 | 25 | 1963.3 | N/A | N/A |
| DC\_66A\_n46A | 66 | 1735 | 5 | 25 | 2135 | 12.0 | IMD3 |
|  | n46 | 5605 | 20 | 100 | 5605 | N/A | N/A |
| DC\_66A\_n48A | 66 | 1715 | 5 | 25 | 2115 | 4 | IMD5 |
|  | n48 | 3630 | 20 | 100 | 3630 | N/A | N/A |
| DC\_66A\_n71A | 66 | 1750 | 5 | 25 | 2150 | 5 | IMD4 |
|  | n71 | 675 | 5 | 25 | 629 | N/A | N/A |
| DC\_66A\_n77ADC\_66A\_n77(2A)DC\_66A-66A\_n77ADC\_66A-66A\_n77(2A)DC\_66A-66A-66A\_n77ADC\_66A-66A-66A\_n77(2A) | 66 | 1775 | 5 | 25 | 2175 | 31.0 | IMD2 |
|  | n77 | 3950 | 10 | 50 | 3950 | N/A | N/A |
|  | 66 | 1760 | 5 | 25 | 2160 | 5.0 | IMD5 |
|  | n77 | 3720 | 10 | 50 | 3720 | N/A | N/A |
| DC\_66A\_n78A | 66 | 1730 | 5 | 25 | 2150 | 5.0 | IMD5 |
|  | n78 | 3660 | 10 | 50 | 3660 | N/A | N/A |
| DC\_68A\_n77A | 68 | 705.5 | 5 | 25 | 760.5 | 5.5 | IMD5 |
|  | n77 | 3582.5 | 10 | 50 | 3582.5 | N/A | N/A |
| DC\_68A\_n78A | 68 | 705.5 | 5 | 25 | 760.5 | 5.5 | IMD5 |
|  | n78 | 3582.5 | 10 | 50 | 3582.5 | N/A | N/A |
| DC\_71A\_n38A | 71 | 665 | 5 | 25 | 619 | 11 | IMD4 |
|  | n38 | 2614 | 10 | 50 | 2614 | N/A | N/A |
| DC\_71A\_n41A | 71 | 666 | 5 | 25 | 620 | 11 | IMD4 |
| n41 | 2618 | 5 | 25 | 2618 | N/A | N/A |
| DC\_71A\_n66A | 71 | 675 | 5 | 25 | 629 | N/A | N/A |
|  | n66 | 1750 | 5 | 25 | 2150 | 5 | IMD4 |
| DC\_71A\_n77A8DC\_71A\_n77(2A)8 | 71 | 671 | 5 | 25 | 625 | 5.5 | IMD5 |
|  | n77 | 3309 | 10 | 50 | 3309 | N/A | N/A |
| DC\_71A\_n78A | 71 | 681.5 | 5 | 25 | 635.5 | 5.5 | IMD5 |
| DC\_71A\_n78(2A) | n78 | 3361.5 | 10 | 50 | 3361.5 | N/A | N/A |
| NOTE 1: E-UTRA carrier shall be set to min(+20 dBm, PCMAX\_L\_E-UTRA,c) and NR carrier shall be set to min(+20 dBm, PCMAX\_L,f,c,NR) as defined in clause 6.2B.4.1.3.NOTE 2: RBstart = 0NOTE 3: This band is subject to IMD5 also which MSD is not specified.NOTE 4: VoidNOTE 5: VoidNOTE 6: For NR band, UL/DL BW and UL LCRB can be adjusted according to the supported BW and lowest SCS supported by the UE.NOTE 7: The frequency range in band n28 is restricted for this band combination to 728 – 738 MHz for the UL and 783 – 793 MHz for the DL. This band is subject to IMD2, IMD4 and IMD5 fall in n28 also which MSD is not specified. In addition, this band is subject to IMD4 fall in B21 also which MSD is not specified.NOTE 8: For a UE which supports this band combination only when the Band n77 frequency range restriction defined in NOTE 12 of Table 5.2-1 from TS 38.101-1 applies, the MSD test point(s) cannot be verified for the band combination and the test point(s) can be skipped.NOTE 9: This test configuration ensures the B3 self-interference would not interrupt the testing.NOTE 10: For a UE which supports this band combination only when the Band n77 frequency range restriction of 3400 - 4100 MHz in Japan applies, the MSD test point(s) cannot be verified for the band combination and the test point(s) can be skipped.NOTE 11: For a UE which supports this band combination only when the Band n78 frequency range restriction of 3400 - 3800 MHz in Japan applies, the MSD test point(s) cannot be verified for the band combination and the test point(s) can be skipped. |

Table 7.3B.2.3.5.1-1a: MSD test points for PCell due to dual uplink operation for PC2 EN-DC in NR FR1 (two bands)

| NR or E-UTRA Band / Channel bandwidth / NRB / MSD |
| --- |
| EN-DCConfiguration | EUTRA or NR band | UL Fc (MHz) | UL/DL BW (MHz) | UL LCRB | DL Fc (MHz) | MSD (dB) | IMD order |
| DC\_1A\_n77ADC\_1A\_n77(2A) | 1 | 1950 | 5 | 25 | 2140 | 35.8 | IMD21 |
| n77 | 4090 | 10 | 50 | 4090 | N/A | N/A |
| 1 | 1950 | 5 | 25 | 2140 | 17.8 | IMD41 |
| n77 | 3710 | 10 | 50 | 3710 | N/A | N/A |
| DC\_3A\_n41A | 3 | 1740 | 5 | 25 | 1835 | 18.4 | IMD4 |
|  | n41 | 2657.5 | 10 | 50 | 2657.5 | N/A | N/A |
| DC\_3A\_n78A | 3 | 1740 | 5 | 25 | 1835 | 31.9 | IMD2 |
| DC\_3A-3A\_n78A | n78 | 3575 | 10 | 50 | 3575 | N/A | N/A |
| DC\_3A\_n78A | 3 | 1765 | 5 | 25 | 1860 | 18.5 | IMD4 |
| DC\_3A-3A\_n78ADC\_3A\_n78(2A)DC\_3C\_n78ADC\_3C\_n78(2A) | n78 | 3435 | 10 | 50 | 3435 | N/A | N/A |
| DC\_1A\_n78A | 1 | 1950 | 5 | 25 | 2140 | 17.8 | IMD4 |
| n78 | 3710 | 10 | 50 | 3710 | N/A | N/A |
| DC\_2A\_n77ADC\_2A-2A\_n77ADC\_2A\_n77CDC\_2A-2A\_n77CDC\_2A\_n77(2A)DC\_2A-2A\_n77(2A) | 2 | 1855 | 5 | 25 | 1935 | 32.10 | IMD2 |
|  |
| n77 | 3790 | 10 | 50 | 3790 | N/A | N/A |
| 2 | 1900 | 5 | 25 | 1980 | 19.10 | IMD41 |
|  |
| n77 | 3720 | 10 | 50 | 3720 | N/A | N/A |
| DC\_2A\_n78ADC\_2A\_n78(2A) | 2 | 1855 | 5 | 25 | 1935 | 32.10 | IMD2 |
| n78 | 3790 | 10 | 50 | 3790 | N/A | N/A |
| 2 | 1900 | 5 | 25 | 1980 | 19.10 | IMD4 |
| n78 | 3720 | 10 | 50 | 3720 | N/A | N/A |
| DC\_3A\_n77ADC\_3A\_n77(2A) | 3 | 1740 | 5 | 25 | 1835 | 31.9 | IMD21 |
| n77 | 3575 | 10 | 50 | 3575 | N/A | N/A |
| 3 | 1765 | 5 | 25 | 1860 | 18.5 | IMD41 |
| n77 | 3435 | 10 | 50 | 3435 | N/A | N/A |
| DC\_5A\_n77A3DC\_5A\_n77C3DC\_5A\_n77(2A)3 | 5 | 844 | 5 | 25 | 889 | 18.60 | IMD41 |
| n77 | 3421 | 10 | 50 | 3421 | N/A | N/A |
| DC\_5A\_n78A | 5 | 844 | 5 | 25 | 889 | 17.5 | IMD4 |
|  | n78 | 3421 | 10 | 52 | 3421 | N/A | N/A |
| DC\_8A\_n78ADC\_8B\_n78ADC\_8A\_n78(2A) | 8 | 897.5 | 5 | 25 | 942.5 | 15.5 | IMD4 |
|  | n78 | 3635 | 10 | 50 | 3635 | N/A | N/A |
| DC\_8A\_n79A | 8 | 897.5 | 5 | 25 | 942.5 | 21.5 | IMD5 |
|  | n79 | 4532.5 | 40 | 216 | 4532.5 | N/A | N/A |
| DC\_13A\_n77ADC\_13A\_n77C | 13 | 782 | 5 | 20 | 751 | 15.37  | IMD5 |
| n77 | 3879 | 10 | 50 | 3879 | N/A | N/A |
| DC\_66A\_n77ADC\_66A-66A\_n77ADC\_66A-66A-66A\_n77ADC\_66A\_n77CDC\_66A-66A\_n77CDC\_66A-66A-66A\_n77CDC\_66A\_n77(2A)DC\_66A-66A\_n77(2A)DC\_66A-66A-66A\_n77(2A) | 66 | 1775 | 5 | 25 | 2175 | 34.33 | IMD2 |
| n77 | 3950 | 10 | 50 | 3950 | N/A | N/A |
| 66 | 1760 | 5 | 25 | 2160 | 11.27 | IMD5 |
| n77 | 3720 | 10 | 50 | 3720 | N/A | N/A |
| DC\_8A\_n41A | 8 | 882.5 | 5 | 25 | 927.5 | 18.2 | IMD31 |
|  | n41 | 2685 | 10 | 50 | 2685 | N/A | N/A |
| DC\_8A\_n77ADC\_8A\_n77(2A) | 8 | 897.5 | 5 | 25 | 942.5 | 15.5 | IMD4 |
| n77 | 3635 | 10 | 50 | 3635 | N/A | N/A |
| DC\_12A\_n77ADC\_12A\_n77(2A) | 12 | 702 | 5 | 20 | 732 | 11.7 | IMD5 |
|  | n77 | 3540 | 10 | 50 | 3540 | N/A | N/A |
| DC\_14A\_n77ADC\_14A\_n77(2A) | 14 | 795.5 | 5 | 15 | 765.5 | 11.7 | IMD5 |
|  | n77 | 3947.5 | 10 | 50 | 3947.5 | N/A | N/A |
| DC\_18A\_n77A5 | 18 | 827.5 | 5 | 25 | 872.5 | 18.4 | IMD4 |
|  | n77 | 3355 | 10 | 50 | 3355 | N/A | N/A |
|  | 18 | 817.5 | 5 | 25 | 862.5 | 11.7 | IMD5 |
|  | n77 | 4130 | 10 | 50 | 4130 | N/A | N/A |
| DC\_19A\_n77ADC\_19A\_n77(2A) | 19 | 836.5 | 5 | 25 | 881.5 | 25.3 | IMD4 |
| n77 | 3391 | 10 | 50 | 3391 | N/A | N/A |
| 19 | 832.5 | 5 | 25 | 877.5 | 8.1 | IMD5 |
| n77 | 4195 | 10 | 50 | 4195 | N/A | N/A |
| DC\_19A\_n78ADC\_19A\_n78(2A) | 19 | 836.5 | 5 | 25 | 881.5 | 25.3 | IMD4 |
|  | n78 | 3391 | 10 | 50 | 3391 | N/A | N/A |
| DC\_20A\_n41 | 20 | 851 | 5 | 25 | 810 | 19.1 | IMD3 |
|  | n41 | 2512 | 10 | 50 | 2512 | N/A | N/A |
| DC\_20A\_n41 | 20 | 841 | 5 | 25 | 800 | 20.3 | IMD5 |
|  | n41 | 2564 | 10 | 50 | 2564 | N/A | N/A |
| DC\_20A\_n78A | 20 | 850 | 5 | 25 | 809 | 18.8 | IMD4 |
|  | n78 | 3359 | 10 | 50 | 3359 | N/A | N/A |
| DC\_28A\_n77A | 28 | 705.5 | 5 | 25 | 760.5 | 19.2 | IMD5 |
|  | n77 | 3582.5 | 10 | 50 | 3582.5 | N/A | N/A |
| DC\_30A\_n77ADC\_30A\_n77(2A) | 30 | 2310 | 5 | 25 | 2355 | 17.6 | IMD4 |
|  | n77 | 3487.5 | 10 | 50 | 3487.5 | N/A | N/A |
| DC\_28A\_n78A | 28 | 705.5 | 5 | 25 | 760.5 | 11.7 | IMD5 |
|  | n78 | 3582.5 | 10 | 50 | 3582.5 | N/A | N/A |
| DC\_21A\_n79A | 21 | 1457.5 | 5 | 25 | 1505.5 | 33.4 | IMD3 |
|  | n79 | 4420.5 | 10 | 50 | 4420.5 | N/A | N/A |
| DC\_66A\_n78A | 66 | 1760 | 5 | 25 | 2160 | 11.27 | IMD5 |
|  | n77 | 3720 | 10 | 50 | 3720 | N/A | N/A |
| DC\_71A\_n77A3 | 71 | 681.5 | 5 | 25 | 635.5 | 11.4 | IMD5 |
|  | n77 | 3361.5 | 10 | 50 | 3361.5 | N/A | N/A |
| DC\_71A\_n78A  | 71 | 681.5 | 5 | 25 | 635.5 | 11.4 | IMD5 |
| DC\_71A\_n78(2A) | n78 | 3361.5 | 10 | 50 | 3361.5 | N/A | N/A |
| NOTE 1: This band is subject to IMD5 also which MSD is not specified.NOTE 2: VoidNOTE 3: For a UE which supports this band combination only when the Band n77 frequency range restriction defined in NOTE 12 of Table 5.2-1 from TS 38.101-1 applies, the MSD test point(s) cannot be verified for the band combination and the test point(s) can be skipped.NOTE 4: E-UTRA carrier shall be set to min(+23 dBm, PCMAX\_L\_E-UTRA,c) and NR carrier shall be set to min(+23 dBm, PCMAX\_L,f,c,NR) as defined in clause 6.2B.4.1.3.NOTE 5: For a UE which supports this band combination only when the Band n77 frequency range restriction of 3400 - 4100 MHz in Japan applies, the MSD test point(s) cannot be verified for the band combination and the test point(s) can be skipped. |

## **<<End of Change>>**