**NB-IOT**

 *Release issue of NB-IOT:* Currently Release 14 is used in the TSDSI RIT

**Release 14 and Release 15 issue**

Use the non-full Buffer case with RRC resume and not EDT. As per the discussion, Release 15 results without EDT will be used.

Results provided are in the worksheet of Non-Full Buffer

|  |  |  |
| --- | --- | --- |
| 1732 M | Value | BW |
| Channel Model A | 10,18,000 | 2700 KHz |
| Channel Model B | 10,34,385 | 1980 KHz |

|  |  |  |
| --- | --- | --- |
| 500 M | Value | BW |
| Channel Model A | 12,33,000 | 180 KHz |
| Channel Model B | 12,25,000 | 180 KHz |

*Current Compliance Template*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **5.2.4.3.9**Connection density (devices/km2)*(4.8)* | mMTC | Urban Macro – mMTC | Uplink | 1 000 000  | 35,083,000 / 180 kHz - 35,569,000 / 180 kHz | Yes | For evaluation configuration A (ISD=500m) with full buffer system level simulation followed by link level simulation; Channel model A/B. |
|  |  |  |  |   | 1,267,000 / 180 kHz - 1,530,000 / 180 kHz | Yes | For evaluation configuration B (ISD=1732m) with full buffer system level simulation followed by link level simulation; Channel model A/B. |

**Power Issue**

*LMLC Link budget uses different assumptions than 3GPP/M.2412 e.g., Max UE TX Pwr=26 dBm.*

*New Question: Simulations for Rural and Dense Urban eMBB assume the same*

In the results provided in the worksheets for Rural-eMBB and Dense Urban-eMBB, for the simulations with TDD configuration (with a duty cycle of 50% or less) the UE power was boosted by 3dB in the simulations **only for Pi/2 BPSK MCS** mode. For FDD simulations, there is no change.

Justification of using the 26dBM: Pi/2 BPSK provides 3dB transmit power boost because of its lower PAPR. This implies a transmit power of 26 dBm. However, with a TDD duty cycle of 50% or less, the effective transmit power is 23 dBm.

What is UE power class? Not defined in M.2412 (the reference document for IMT simulations).

As per 3GPP, 38.101-1, the power class definition is provided below:

6.2 Transmitter power
6.2.1 UE maximum output power

The following UE Power Classes define the maximum output power for any transmission bandwidth within the channel bandwidth of NR carrier unless otherwise stated. The period of measurement shall be at least one sub frame (1ms).

The notion of negative MPR (Maximum power reduction) has been introduced in 3GPP for pi/2 BPSK. This provides for an opportunity to transmit at a higher power than the power class based on the duty cycle.

MPR table. The entry for PI/2 BPSK in the below table should be read in conjunction with 6.2.4 provided below.



 