

**Table 9.1: Configuration of special subframe (lengths of DwPTS/GP/UpPTS)**

| Special subframe configuration | Normal cyclic prefix in downlink |                                |                                  | Extended cyclic prefix in downlink |                                |                                  |
|--------------------------------|----------------------------------|--------------------------------|----------------------------------|------------------------------------|--------------------------------|----------------------------------|
|                                | DwPTS                            | UpPTS                          |                                  | DwPTS                              | UpPTS                          |                                  |
|                                |                                  | Normal cyclic prefix in uplink | Extended cyclic prefix in uplink |                                    | Normal cyclic prefix in uplink | Extended cyclic prefix in uplink |
| 0                              | $6592 \cdot T_s$                 | $2192 \cdot T_s$               | $2560 \cdot T_s$                 | $7680 \cdot T_s$                   | $2192 \cdot T_s$               | $2560 \cdot T_s$                 |
| 1                              | $19760 \cdot T_s$                |                                |                                  | $20480 \cdot T_s$                  |                                |                                  |
| 2                              | $21952 \cdot T_s$                |                                |                                  | $23040 \cdot T_s$                  |                                |                                  |
| 3                              | $24144 \cdot T_s$                |                                |                                  | $25600 \cdot T_s$                  |                                |                                  |
| 4                              | $26336 \cdot T_s$                |                                |                                  | $7680 \cdot T_s$                   |                                |                                  |
| 5                              | $6592 \cdot T_s$                 | $4384 \cdot T_s$               | $5120 \cdot T_s$                 | $20480 \cdot T_s$                  | $4384 \cdot T_s$               | $5120 \cdot T_s$                 |
| 6                              | $19760 \cdot T_s$                |                                |                                  | $23040 \cdot T_s$                  |                                |                                  |
| 7                              | $21952 \cdot T_s$                |                                |                                  | $12800 \cdot T_s$                  |                                |                                  |
| 8                              | $24144 \cdot T_s$                |                                |                                  | -                                  | -                              | -                                |
| 9                              | $13168 \cdot T_s$                |                                |                                  | -                                  | -                              | -                                |

**Table 9.2: Uplink-downlink configurations**

| Uplink-downlink configuration | Downlink-to-Uplink Switch-point periodicity | Subframe number |   |   |   |   |   |   |   |   |   |
|-------------------------------|---------------------------------------------|-----------------|---|---|---|---|---|---|---|---|---|
|                               |                                             | 0               | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 0                             | 5 ms                                        | D               | S | U | U | U | D | S | U | U | U |
| 1                             | 5 ms                                        | D               | S | U | U | D | D | S | U | U | D |
| 2                             | 5 ms                                        | D               | S | U | D | D | D | S | U | D | D |
| 3                             | 10 ms                                       | D               | S | U | U | U | D | D | D | D | D |
| 4                             | 10 ms                                       | D               | S | U | U | D | D | D | D | D | D |
| 5                             | 10 ms                                       | D               | S | U | D | D | D | D | D | D | D |
| 6                             | 5 ms                                        | D               | S | U | U | U | D | S | U | U | D |

Duty factor is calculated by:

Duty factor = uplink frame\*6+UpPTS\*2/one frame length

$$= (30720 \cdot T_s * 6 + 5120 \cdot T_s * 2) / 307200 \cdot T_s$$

$$= 0.633$$

According to the KDB 447498 D01, SAR should be evaluated at more than 3 frequencies for devices supporting transmit bands wider than 100MHz. Oct.2014 FCC-TCB conference notes (Dec. 2014 rev.) specifies the 5 test channels to use for 3GPP band 41 SAR evaluation.

## **9.5 Bluetooth & Wi-Fi Measurement Procedures for SAR**

Normal network operating configurations are not suitable for measuring the SAR of 802.11 transmitters in general. Unpredictable fluctuations in network traffic and antenna diversity conditions can introduce undesirable variations in SAR results. The SAR for these devices should be measured using chipset based test mode software to ensure that the results are consistent and reliable.

Chipset based test mode software is hardware dependent and generally varies among manufacturers. The device operating parameters established in a test mode for SAR measurements must be identical to those programmed in production units, including output power levels, amplifier gain settings and other RF performance tuning parameters. The test frequencies should correspond to actual channel frequencies defined for domestic use. SAR for devices with switched diversity should be measured with only one antenna transmitting at a time during each SAR measurement, according to a fixed modulation and data rate. The same data pattern should be used for all measurements.

## **9.6 Power Drift**

To control the output power stability during the SAR test, DASY4 system calculates the power drift by measuring the E-field at the same location at the beginning and at the end of the measurement for each test position. These drift values can be found in section14 labeled as: (Power Drift [dB]). This ensures that the power drift during one measurement is within 5%.

## 10 Area Scan Based 1-g SAR

### 10.1 Requirement of KDB

According to the KDB447498 D01 v05, when the implementation is based the specific polynomial fit algorithm as presented at the 29th Bioelectromagnetics Society meeting (2007) and the estimated 1-gSAR is  $\leq 1.2$  W/kg, a zoom scan measurement is not required provided it is also not needed for any other purpose; for example, if the peak SAR location required for simultaneous transmission SAR test exclusion can be determined accurately by the SAR system or manually to discriminate between distinctive peaks and scattered noisy SAR distributions from area scans.

There must not be any warning or alert messages due to various measurement concerns identified by the SAR system; for example, noise in measurements, peaks too close to scan boundary, peaks are too sharp, spatial resolution and uncertainty issues etc. The SAR system verification must also demonstrate that the area scan estimated 1-g SAR is within 3% of the zoom scan 1-g SAR (See Annex B). When all the SAR results for each exposure condition in a frequency band and wireless mode are based on estimated 1-g SAR, the 1-g SAR for the highest SAR configuration must be determined by a zoom scan.

### 10.2 Fast SAR Algorithms

The approach is based on the area scan measurement applying a frequency dependent attenuation parameter. This attenuation parameter was empirically determined by analyzing a large number of phones. The MOTOROLA FAST SAR was developed and validated by the MOTOROLA Research Group in Ft. Lauderdale.

In the initial study, an approximation algorithm based on Linear fit was developed. The accuracy of the algorithm has been demonstrated across a broad frequency range (136-2450 MHz) and for both 1- and 10-g averaged SAR using a sample of 264 SAR measurements from 55 wireless handsets. For the sample size studied, the root-mean-squared errors of the algorithm are 1.2% and 5.8% for 1- and 10-g averaged SAR, respectively. The paper describing the algorithm in detail is expected to be published in August 2004 within the Special Issue of Transactions on MTT.

In the second step, the same research group optimized the fitting algorithm to an Polynomial fit whereby the frequency validity was extended to cover the range 30-6000MHz. Details of this study can be found in the BEMS 2007 Proceedings.

Both algorithms are implemented in DASY software.

## 11 Conducted Output Power

This device uses a proximity sensor for SAR compliance. The proximity sensor is activated when the device is used in close proximity to the user's body. The proximity sensors trigger power reduction for all bands except BT. There is no power reduction mechanism for BT modes for SAR purposes.

### 11.1 GSM Measurement result

During the process of testing, the EUT was controlled via Agilent Digital Radio Communication tester (E5515C) to ensure the maximum power transmission and proper modulation. This result contains conducted output power for the EUT. In all cases, the measured peak output power should be greater and within 5% than EMI measurement.

#### Normal Power – Proximity sensor not active

**Table 11.1-1: The conducted power measurement results for GSM, GPRS and EGPRS**

| GSM 850<br>Speech (GMSK) | Measured Power (dBm) |       |       | Tune up | calculation | Averaged Power (dBm) |       |       |
|--------------------------|----------------------|-------|-------|---------|-------------|----------------------|-------|-------|
|                          | 251                  | 190   | 128   |         |             | 251                  | 190   | 128   |
| 1 Txslot                 | 32.70                | 32.67 | 32.57 | 33.5    | /           | /                    | /     | /     |
| GSM 850<br>GPRS (GMSK)   | Measured Power (dBm) |       |       |         | calculation | Averaged Power (dBm) |       |       |
|                          | 251                  | 190   | 128   |         |             | 251                  | 190   | 128   |
| 1 Txslot                 | 32.71                | 32.69 | 32.57 | 33.5    | -9.03       | 23.68                | 23.66 | 23.54 |
| 2 Txslots                | 31.50                | 31.46 | 31.36 | 32      | -6.02       | 25.48                | 25.44 | 25.34 |
| 3Txslots                 | 29.35                | 29.30 | 29.16 | 30      | -4.26       | 25.09                | 25.04 | 24.90 |
| 4 Txslots                | 28.62                | 28.58 | 28.47 | 29      | -3.01       | 25.61                | 25.57 | 25.46 |
| GSM 850<br>EGPRS (GMSK)  | Measured Power (dBm) |       |       |         | calculation | Averaged Power (dBm) |       |       |
|                          | 251                  | 190   | 128   |         |             | 251                  | 190   | 128   |
| 1 Txslot                 | 32.70                | 32.68 | 32.58 | 33.5    | -9.03       | 23.67                | 23.65 | 23.55 |
| 2 Txslots                | 31.49                | 31.45 | 31.36 | 32      | -6.02       | 25.47                | 25.43 | 25.34 |
| 3Txslots                 | 29.34                | 29.28 | 29.15 | 30      | -4.26       | 25.08                | 25.02 | 24.89 |
| 4 Txslots                | 28.60                | 28.57 | 28.45 | 29      | -3.01       | 25.59                | 25.56 | 25.44 |
| GSM 850<br>EGPRS (8PSK)  | Measured Power (dBm) |       |       |         | calculation | Averaged Power (dBm) |       |       |
|                          | 251                  | 190   | 128   |         |             | 251                  | 190   | 128   |
| 1 Txslot                 | 27.02                | 26.94 | 26.95 | 27.5    | -9.03       | 17.99                | 17.91 | 17.92 |
| 2 Txslots                | 26.06                | 26.02 | 25.99 | 26.5    | -6.02       | 20.04                | 20.00 | 19.97 |
| 3Txslots                 | 24.00                | 23.94 | 23.99 | 24.5    | -4.26       | 19.74                | 19.68 | 19.73 |
| 4 Txslots                | 23.04                | 22.96 | 23.05 | 23.5    | -3.01       | 20.03                | 19.95 | 20.04 |
| PCS1900<br>Speech (GMSK) | Measured Power (dBm) |       |       | Tune up | calculation | Averaged Power (dBm) |       |       |
|                          | 810                  | 661   | 512   |         |             | 810                  | 661   | 512   |
| 1 Txslot                 | 29.93                | 29.93 | 29.93 | 30.5    | /           | /                    | /     | /     |
| PCS1900<br>GPRS (GMSK)   | Measured Power (dBm) |       |       |         | calculation | Averaged Power (dBm) |       |       |
|                          | 810                  | 661   | 512   |         |             | 810                  | 661   | 512   |
| 1 Txslot                 | 29.90                | 29.89 | 29.90 | 30.5    | -9.03       | 20.87                | 20.86 | 20.87 |

|                         |                      |       |       |      |             |                      |              |              |
|-------------------------|----------------------|-------|-------|------|-------------|----------------------|--------------|--------------|
| 2 Txslots               | 28.64                | 28.58 | 28.50 | 29   | -6.02       | 22.62                | 22.56        | 22.48        |
| 3Txslots                | 26.51                | 26.36 | 26.30 | 27   | -4.26       | 22.25                | 22.10        | 22.04        |
| <b>4 Txslots</b>        | 25.69                | 25.58 | 25.51 | 26   | -3.01       | <b>22.68</b>         | <b>22.57</b> | <b>22.50</b> |
| PCS1900<br>EGPRS (GMSK) | Measured Power (dBm) |       |       |      | calculation | Averaged Power (dBm) |              |              |
|                         | 810                  | 661   | 512   |      |             | 810                  | 661          | 512          |
| 1 Txslot                | 29.94                | 29.92 | 29.94 | 30.5 | -9.03       | 20.91                | 20.89        | 20.91        |
| 2 Txslots               | 28.68                | 28.59 | 28.52 | 29   | -6.02       | 22.66                | 22.57        | 22.50        |
| 3Txslots                | 26.54                | 26.41 | 26.34 | 27   | -4.26       | 22.28                | 22.15        | 22.08        |
| <b>4 Txslots</b>        | 25.73                | 25.61 | 25.52 | 26   | -3.01       | <b>22.72</b>         | <b>22.60</b> | <b>22.51</b> |
| PCS1900<br>EGPRS (8PSK) | Measured Power (dBm) |       |       |      | calculation | Averaged Power (dBm) |              |              |
|                         | 810                  | 661   | 512   |      |             | 810                  | 661          | 512          |
| 1 Txslot                | 25.31                | 25.37 | 25.50 | 26   | -9.03       | 16.28                | 16.34        | 16.47        |
| 2 Txslots               | 24.43                | 24.48 | 24.57 | 25   | -6.02       | 18.41                | 18.46        | 18.55        |
| 3Txslots                | 22.44                | 22.53 | 22.64 | 23   | -4.26       | 18.18                | 18.27        | 18.38        |
| 4 Txslots               | 21.31                | 21.38 | 21.54 | 22   | -3.01       | 18.30                | 18.37        | 18.53        |

#### NOTES:

##### 1) Division Factors

To average the power, the division factor is as follows:

1TX-slot = 1 transmit time slot out of 8 time slots=> conducted power divided by (8/1) => -9.03dB

2TX-slots = 2 transmit time slots out of 8 time slots=> conducted power divided by (8/2) => -6.02dB

3TX-slots = 3 transmit time slots out of 8 time slots=> conducted power divided by (8/3) => -4.26dB

4TX-slots = 4 transmit time slots out of 8 time slots=> conducted power divided by (8/4) => -3.01dB

**According to the conducted power as above, the body measurements are performed with 4Txslots for GPRS and EGPRS.**

#### Low Power – Proximity sensor active

**Table 11.1-2: The conducted power measurement results for GSM, GPRS and EGPRS**

|                          |                      |       |       |         |             |                      |              |              |
|--------------------------|----------------------|-------|-------|---------|-------------|----------------------|--------------|--------------|
| GSM 850<br>Speech (GMSK) | Measured Power (dBm) |       |       | Tune up | calculation | Averaged Power (dBm) |              |              |
|                          | 251                  | 190   | 128   |         |             | 251                  | 190          | 128          |
| 1 Txslot                 | 29.46                | 29.40 | 29.27 | 30      | /           | /                    | /            | /            |
| GSM 850<br>GPRS (GMSK)   | Measured Power (dBm) |       |       |         | calculation | Averaged Power (dBm) |              |              |
|                          | 251                  | 190   | 128   |         |             | 251                  | 190          | 128          |
| 1 Txslot                 | 29.46                | 29.41 | 29.28 | 30      | -9.03       | 20.43                | 20.38        | 20.25        |
| 2 Txslots                | 26.66                | 26.60 | 26.46 | 27      | -6.02       | 20.64                | 20.58        | 20.44        |
| 3Txslots                 | 24.93                | 24.87 | 24.71 | 25.5    | -4.26       | 20.67                | 20.61        | 20.45        |
| <b>4 Txslots</b>         | 23.89                | 23.79 | 23.55 | 24      | -3.01       | <b>20.88</b>         | <b>20.78</b> | <b>20.54</b> |
| GSM 850<br>EGPRS (GMSK)  | Measured Power (dBm) |       |       |         | calculation | Averaged Power (dBm) |              |              |
|                          | 251                  | 190   | 128   |         |             | 251                  | 190          | 128          |
| 1 Txslot                 | 29.47                | 29.42 | 29.30 | 30      | -9.03       | 20.44                | 20.39        | 20.27        |
| 2 Txslots                | 26.67                | 26.61 | 26.47 | 27      | -6.02       | 20.65                | 20.59        | 20.45        |
| 3Txslots                 | 24.94                | 24.88 | 24.72 | 25.5    | -4.26       | 20.68                | 20.62        | 20.46        |
| <b>4 Txslots</b>         | 23.89                | 23.74 | 23.56 | 24      | -3.01       | <b>20.88</b>         | <b>20.73</b> | <b>20.55</b> |

| GSM 850<br>EGPRS (8PSK)  | Measured Power (dBm) |       |       |             | calculation | Averaged Power (dBm) |              |              |
|--------------------------|----------------------|-------|-------|-------------|-------------|----------------------|--------------|--------------|
|                          | 251                  | 190   | 128   |             |             | 251                  | 190          | 128          |
| 1 Txslot                 | 24.95                | 24.87 | 24.86 | <b>25</b>   | -9.03       | 15.92                | 15.84        | 15.83        |
| 2 Txslots                | 21.51                | 21.47 | 21.45 | <b>22</b>   | -6.02       | 15.49                | 15.45        | 15.43        |
| 3Txslots                 | 19.44                | 19.36 | 19.41 | <b>20</b>   | -4.26       | 15.18                | 15.10        | 15.15        |
| 4 Txslots                | 18.03                | 18.01 | 17.94 | <b>18.5</b> | -3.01       | 15.02                | 15.00        | 14.93        |
| PCS1900<br>Speech (GMSK) | Measured Power (dBm) |       |       | Tune up     | calculation | Averaged Power (dBm) |              |              |
|                          | 810                  | 661   | 512   |             |             | 810                  | 661          | 512          |
| 1 Txslot                 | 21.43                | 21.30 | 21.24 | <b>22</b>   | /           | /                    | /            | /            |
| PCS1900<br>GPRS (GMSK)   | Measured Power (dBm) |       |       |             | calculation | Averaged Power (dBm) |              |              |
|                          | 810                  | 661   | 512   |             |             | 810                  | 661          | 512          |
| 1 Txslot                 | 21.68                | 21.56 | 21.48 | <b>22</b>   | -9.03       | 12.65                | 12.53        | 12.45        |
| 2 Txslots                | 18.72                | 18.66 | 18.58 | <b>19</b>   | -6.02       | 12.70                | 12.64        | 12.56        |
| <b>3Txslots</b>          | 16.98                | 16.91 | 16.84 | <b>17</b>   | -4.26       | <b>12.72</b>         | <b>12.65</b> | <b>12.58</b> |
| 4 Txslots                | 15.71                | 15.55 | 15.35 | <b>16</b>   | -3.01       | 12.70                | 12.54        | 12.34        |
| PCS1900<br>EGPRS (GMSK)  | Measured Power (dBm) |       |       |             | calculation | Averaged Power (dBm) |              |              |
|                          | 810                  | 661   | 512   |             |             | 810                  | 661          | 512          |
| 1 Txslot                 | 21.59                | 21.47 | 21.41 | <b>22</b>   | -9.03       | 12.56                | 12.44        | 12.38        |
| 2 Txslots                | 18.67                | 18.54 | 18.48 | <b>19</b>   | -6.02       | 12.65                | 12.52        | 12.46        |
| <b>3Txslots</b>          | 16.93                | 16.79 | 16.75 | <b>17</b>   | -4.26       | <b>12.67</b>         | <b>12.53</b> | <b>12.49</b> |
| 4 Txslots                | 15.62                | 15.43 | 15.27 | <b>16</b>   | -3.01       | 12.61                | 12.42        | 12.26        |
| PCS1900<br>EGPRS (8PSK)  | Measured Power (dBm) |       |       |             | calculation | Averaged Power (dBm) |              |              |
|                          | 810                  | 661   | 512   |             |             | 810                  | 661          | 512          |
| 1 Txslot                 | 17.83                | 17.89 | 17.98 | <b>18.5</b> | -9.03       | 8.80                 | 8.86         | 8.95         |
| 2 Txslots                | 14.77                | 14.86 | 15.02 | <b>15.5</b> | -6.02       | 8.75                 | 8.84         | 9.00         |
| 3Txslots                 | 12.84                | 12.87 | 13.04 | <b>13.5</b> | -4.26       | 8.58                 | 8.61         | 8.78         |
| 4 Txslots                | 11.23                | 11.33 | 11.49 | <b>12</b>   | -3.01       | 8.22                 | 8.32         | 8.48         |

#### NOTES:

##### 1) Division Factors

To average the power, the division factor is as follows:

1TX-slot = 1 transmit time slot out of 8 time slots=> conducted power divided by (8/1) => -9.03dB

2TX-slots = 2 transmit time slots out of 8 time slots=> conducted power divided by (8/2) => -6.02dB

3TX-slots = 3 transmit time slots out of 8 time slots=> conducted power divided by (8/3) => -4.26dB

4TX-slots = 4 transmit time slots out of 8 time slots=> conducted power divided by (8/4) => -3.01dB

**According to the conducted power as above, the body measurements are performed with 4Txslots for GSM850 and 3Txslots for PCS1900.**

## 11.2 WCDMA Measurement result

Normal Power – Proximity sensor not active

Table 11.2-1: The conducted Power for WCDMA

| Item     | band  | FDDV result      |                 |                  |         |
|----------|-------|------------------|-----------------|------------------|---------|
|          | ARFCN | 4132 (826.4MHz)  | 4182 (836.4MHz) | 4233 (846.6MHz)  | Tune up |
| WCDMA    | 1     | 23.41            | 23.55           | 23.34            | 24      |
| HSUPA    | 1     | 19.02            | 19.04           | 18.98            | 19.5    |
|          | 2     | 18.98            | 19.01           | 18.97            | 19.5    |
|          | 3     | 19.99            | 20.03           | 19.97            | 20.5    |
|          | 4     | 18.44            | 18.49           | 18.44            | 19      |
|          | 5     | 21.01            | 21.02           | 20.96            | 21.5    |
| HSPA+    | 1     | 20.77            | 20.88           | 20.92            | 21      |
| DC-HSDPA | 1     | 21.62            | 21.69           | 21.75            | 22      |
|          | 2     | 21.61            | 21.65           | 21.76            | 22      |
|          | 3     | 21.61            | 21.74           | 21.74            | 22      |
|          | 4     | 21.60            | 21.72           | 21.76            | 22      |
| Item     | band  | FDDII result     |                 |                  |         |
|          | ARFCN | 9262 (1852.4MHz) | 9400 (1880MHz)  | 9538 (1907.6MHz) |         |
| WCDMA    | 1     | 22.64            | 22.47           | 22.23            | 23      |
| HSUPA    | 1     | 19.91            | 19.72           | 20.07            | 20.5    |
|          | 2     | 19.76            | 19.59           | 19.44            | 20      |
|          | 3     | 20.78            | 20.67           | 20.38            | 21      |
|          | 4     | 19.32            | 19.16           | 18.99            | 19.5    |
|          | 5     | 21.73            | 21.73           | 21.54            | 22      |
| HSPA+    | 1     | 20.43            | 20.28           | 20.13            | 21      |
| DC-HSDPA | 1     | 20.91            | 20.78           | 20.62            | 21      |
|          | 2     | 20.90            | 20.77           | 20.58            | 21      |
|          | 3     | 20.88            | 20.78           | 20.59            | 21      |
|          | 4     | 20.89            | 20.75           | 20.58            | 21      |

## Low Power – Proximity sensor active

Table 11.2-2: The conducted Power for WCDMA

| Item     | band  | FDDV result      |                 |                  |             |
|----------|-------|------------------|-----------------|------------------|-------------|
|          | ARFCN | 4132 (826.4MHz)  | 4182 (836.4MHz) | 4233 (846.6MHz)  | Tune up     |
| WCDMA    | \     | 20.57            | 20.47           | 20.46            | <b>21</b>   |
| HSUPA    | 1     | 15.95            | 16.06           | 16.54            | <b>17</b>   |
|          | 2     | 15.96            | 15.98           | 15.93            | <b>16</b>   |
|          | 3     | 16.94            | 16.96           | 16.94            | <b>17</b>   |
|          | 4     | 15.39            | 15.44           | 15.49            | <b>16</b>   |
|          | 5     | 17.96            | 17.98           | 18.12            | <b>18.5</b> |
| HSPA+    | 1     | 18.78            | 18.86           | 18.92            | <b>19</b>   |
| DC-HSDPA | 1     | 19.62            | 19.72           | 19.73            | <b>20</b>   |
|          | 2     | 19.61            | 19.71           | 19.75            | <b>20</b>   |
|          | 3     | 19.61            | 19.74           | 19.73            | <b>20</b>   |
|          | 4     | 19.60            | 19.73           | 19.76            | <b>20</b>   |
| Item     | band  | FDDII result     |                 |                  |             |
|          | ARFCN | 9262 (1852.4MHz) | 9400 (1880MHz)  | 9538 (1907.6MHz) |             |
| WCDMA    | \     | 14.42            | 14.33           | 14.26            | <b>14.5</b> |
| HSUPA    | 1     | 12.86            | 12.74           | 12.97            | <b>13</b>   |
|          | 2     | 12.81            | 12.66           | 12.38            | <b>13</b>   |
|          | 3     | 13.85            | 13.70           | 13.44            | <b>14</b>   |
|          | 4     | 12.31            | 12.17           | 11.91            | <b>12.5</b> |
|          | 5     | 14.80            | 14.64           | 14.36            | <b>15</b>   |
| HSPA+    | 1     | 13.52            | 13.41           | 13.22            | <b>14</b>   |
| DC-HSDPA | 1     | 14.04            | 13.88           | 13.74            | <b>14.5</b> |
|          | 2     | 14.00            | 13.92           | 13.68            | <b>14.5</b> |
|          | 3     | 13.99            | 13.91           | 13.69            | <b>14.5</b> |
|          | 4     | 13.99            | 13.91           | 13.69            | <b>14.5</b> |

### 11.3 LTE Measurement result

Normal Power – Proximity sensor not active

**Table 11.3-1: The conducted Power for LTE**

| Band 2             |                            |                    |                                  |                                    |     |                                    |     |
|--------------------|----------------------------|--------------------|----------------------------------|------------------------------------|-----|------------------------------------|-----|
| Bandwidth<br>(MHz) | RB<br>allocation           | Frequency<br>(MHz) | Max.<br>Target<br>Power<br>(dBm) | QPSK                               |     | 16QAM                              |     |
|                    | RB offset<br>(Start<br>RB) |                    |                                  | Actual<br>output<br>power<br>(dBm) | MPR | Actual<br>output<br>power<br>(dBm) | MPR |
| 1.4 MHz            | 1RB<br>High (5)            | 1909.3             | 24                               | 22.61                              | 0   | 21.31                              | 1   |
|                    |                            | 1880               | 24                               | 22.58                              | 0   | 21.55                              | 1   |
|                    |                            | 1850.7             | 24                               | 22.66                              | 0   | 21.58                              | 1   |
|                    | 1RB<br>Middle<br>(3)       | 1909.3             | 24                               | 22.53                              | 0   | 21.29                              | 1   |
|                    |                            | 1880               | 24                               | 22.61                              | 0   | 21.55                              | 1   |
|                    |                            | 1850.7             | 24                               | 22.68                              | 0   | 21.60                              | 1   |
|                    | 1RB<br>Low (0)             | 1909.3             | 24                               | 22.49                              | 0   | 21.46                              | 1   |
|                    |                            | 1880               | 24                               | 22.58                              | 0   | 21.61                              | 1   |
|                    |                            | 1850.7             | 24                               | 22.68                              | 0   | 21.59                              | 1   |
|                    | 3RB<br>High (3)            | 1909.3             | 24                               | 22.62                              | 0   | 21.56                              | 1   |
|                    |                            | 1880               | 24                               | 22.65                              | 0   | 21.65                              | 1   |
|                    |                            | 1850.7             | 24                               | 22.65                              | 0   | 21.62                              | 1   |
|                    | 3RB<br>Middle<br>(1)       | 1909.3             | 24                               | 22.53                              | 0   | 21.48                              | 1   |
|                    |                            | 1880               | 24                               | 22.55                              | 0   | 21.56                              | 1   |
|                    |                            | 1850.7             | 24                               | 22.60                              | 0   | 21.56                              | 1   |
|                    | 3RB<br>Low (0)             | 1909.3             | 24                               | 22.58                              | 0   | 21.54                              | 1   |
|                    |                            | 1880               | 24                               | 22.67                              | 0   | 21.66                              | 1   |
|                    |                            | 1850.7             | 24                               | 22.67                              | 0   | 21.63                              | 1   |
|                    | 6RB<br>(0)                 | 1909.3             | 24                               | 21.50                              | 1   | 20.61                              | 2   |
|                    |                            | 1880               | 24                               | 21.49                              | 1   | 20.67                              | 2   |
|                    |                            | 1850.7             | 24                               | 21.57                              | 1   | 20.66                              | 2   |
| 3 MHz              | 1RB<br>High (14)           | 1908.5             | 24                               | 22.54                              | 0   | 21.89                              | 1   |
|                    |                            | 1880               | 24                               | 22.52                              | 0   | 22.01                              | 1   |
|                    |                            | 1851.5             | 24                               | 22.54                              | 0   | 21.94                              | 1   |
|                    | 1RB<br>Middle<br>(7)       | 1908.5             | 24                               | 22.57                              | 0   | 21.97                              | 1   |
|                    |                            | 1880               | 24                               | 22.57                              | 0   | 22.08                              | 1   |
|                    |                            | 1851.5             | 24                               | 22.61                              | 0   | 22.03                              | 1   |
|                    | 1RB<br>Low (0)             | 1908.5             | 24                               | 22.53                              | 0   | 21.97                              | 1   |
|                    |                            | 1880               | 24                               | 22.55                              | 0   | 22.04                              | 1   |
|                    |                            | 1851.5             | 24                               | 22.59                              | 0   | 22.00                              | 1   |
|                    | 8RB<br>High (7)            | 1908.5             | 24                               | 21.59                              | 1   | 20.68                              | 2   |
|                    |                            | 1880               | 24                               | 21.58                              | 1   | 20.70                              | 2   |
|                    |                            | 1851.5             | 24                               | 21.62                              | 1   | 20.64                              | 2   |
|                    | 8RB<br>Middle<br>(4)       | 1908.5             | 24                               | 21.60                              | 1   | 20.68                              | 2   |
|                    |                            | 1880               | 24                               | 21.59                              | 1   | 20.73                              | 2   |
|                    |                            | 1851.5             | 24                               | 21.61                              | 1   | 20.66                              | 2   |

|        |                        |        |    |       |   |       |   |
|--------|------------------------|--------|----|-------|---|-------|---|
|        | 8RB<br>Low (0)         | 1908.5 | 24 | 21.57 | 1 | 20.68 | 2 |
|        |                        | 1880   | 24 | 21.59 | 1 | 20.73 | 2 |
|        |                        | 1851.5 | 24 | 21.64 | 1 | 20.65 | 2 |
|        | 15RB<br>(0)            | 1908.5 | 24 | 21.54 | 1 | 20.58 | 2 |
|        |                        | 1880   | 24 | 21.56 | 1 | 20.63 | 2 |
|        |                        | 1851.5 | 24 | 21.59 | 1 | 20.56 | 2 |
| 5 MHz  | 1RB<br>High (24)       | 1907.5 | 24 | 22.56 | 0 | 21.37 | 1 |
|        |                        | 1880   | 24 | 22.55 | 0 | 21.42 | 1 |
|        |                        | 1852.5 | 24 | 22.58 | 0 | 21.40 | 1 |
|        | 1RB<br>Middle<br>(12)  | 1907.5 | 24 | 22.61 | 0 | 21.44 | 1 |
|        |                        | 1880   | 24 | 22.62 | 0 | 21.47 | 1 |
|        |                        | 1852.5 | 24 | 22.66 | 0 | 21.48 | 1 |
|        | 1RB<br>Low (0)         | 1907.5 | 24 | 22.60 | 0 | 21.44 | 1 |
|        |                        | 1880   | 24 | 22.65 | 0 | 21.49 | 1 |
|        |                        | 1852.5 | 24 | 22.67 | 0 | 21.48 | 1 |
|        | 12RB<br>High (13)      | 1907.5 | 24 | 21.58 | 1 | 20.68 | 2 |
|        |                        | 1880   | 24 | 21.60 | 1 | 20.72 | 2 |
|        |                        | 1852.5 | 24 | 21.60 | 1 | 20.68 | 2 |
|        | 12RB<br>Middle<br>(6)  | 1907.5 | 24 | 21.58 | 1 | 20.67 | 2 |
|        |                        | 1880   | 24 | 21.60 | 1 | 20.72 | 2 |
|        |                        | 1852.5 | 24 | 21.64 | 1 | 20.70 | 2 |
|        | 12RB<br>Low (0)        | 1907.5 | 24 | 21.58 | 1 | 20.70 | 2 |
|        |                        | 1880   | 24 | 21.63 | 1 | 20.74 | 2 |
|        |                        | 1852.5 | 24 | 21.65 | 1 | 20.72 | 2 |
|        | 25RB<br>(0)            | 1907.5 | 24 | 21.54 | 1 | 20.59 | 2 |
|        |                        | 1880   | 24 | 21.57 | 1 | 20.64 | 2 |
|        |                        | 1852.5 | 24 | 21.56 | 1 | 20.53 | 2 |
| 10 MHz | 1RB<br>High (49)       | 1905   | 24 | 22.63 | 0 | 21.98 | 1 |
|        |                        | 1880   | 24 | 22.58 | 0 | 22.06 | 1 |
|        |                        | 1855   | 24 | 22.58 | 0 | 22.00 | 1 |
|        | 1RB<br>Middle<br>(24)  | 1905   | 24 | 22.60 | 0 | 22.04 | 1 |
|        |                        | 1880   | 24 | 22.60 | 0 | 22.10 | 1 |
|        |                        | 1855   | 24 | 22.65 | 0 | 22.05 | 1 |
|        | 1RB<br>Low (0)         | 1905   | 24 | 22.58 | 0 | 22.06 | 1 |
|        |                        | 1880   | 24 | 22.66 | 0 | 22.09 | 1 |
|        |                        | 1855   | 24 | 22.66 | 0 | 22.08 | 1 |
|        | 25RB<br>High (25)      | 1905   | 24 | 21.51 | 1 | 20.57 | 2 |
|        |                        | 1880   | 24 | 21.57 | 1 | 20.63 | 2 |
|        |                        | 1855   | 24 | 21.53 | 1 | 20.61 | 2 |
|        | 25RB<br>Middle<br>(12) | 1905   | 24 | 21.53 | 1 | 20.60 | 2 |
|        |                        | 1880   | 24 | 21.56 | 1 | 20.65 | 2 |
|        |                        | 1855   | 24 | 21.57 | 1 | 20.62 | 2 |
|        | 25RB<br>Low (0)        | 1905   | 24 | 21.50 | 1 | 20.57 | 2 |
|        |                        | 1880   | 24 | 21.58 | 1 | 20.67 | 2 |
|        |                        | 1855   | 24 | 21.57 | 1 | 20.62 | 2 |
|        | 50RB<br>(0)            | 1905   | 24 | 21.56 | 1 | 20.58 | 2 |
|        |                        | 1880   | 24 | 21.59 | 1 | 20.64 | 2 |
|        |                        | 1855   | 24 | 21.56 | 1 | 20.58 | 2 |

|        |                        |        |    |       |   |       |   |
|--------|------------------------|--------|----|-------|---|-------|---|
| 15 MHz | 1RB<br>High (74)       | 1902.5 | 24 | 22.60 | 0 | 21.96 | 1 |
|        |                        | 1880   | 24 | 22.61 | 0 | 22.05 | 1 |
|        |                        | 1857.5 | 24 | 22.63 | 0 | 22.01 | 1 |
|        | 1RB<br>Middle<br>(37)  | 1902.5 | 24 | 22.58 | 0 | 22.05 | 1 |
|        |                        | 1880   | 24 | 22.61 | 0 | 22.11 | 1 |
|        |                        | 1857.5 | 24 | 22.66 | 0 | 22.06 | 1 |
|        | 1RB<br>Low (0)         | 1902.5 | 24 | 22.62 | 0 | 22.05 | 1 |
|        |                        | 1880   | 24 | 22.70 | 0 | 22.09 | 1 |
|        |                        | 1857.5 | 24 | 22.73 | 0 | 22.11 | 1 |
|        | 36RB<br>High (38)      | 1902.5 | 24 | 21.63 | 1 | 20.60 | 2 |
|        |                        | 1880   | 24 | 21.65 | 1 | 20.65 | 2 |
|        |                        | 1857.5 | 24 | 21.69 | 1 | 20.63 | 2 |
|        | 36RB<br>Middle<br>(19) | 1902.5 | 24 | 21.60 | 1 | 20.59 | 2 |
|        |                        | 1880   | 24 | 21.66 | 1 | 20.64 | 2 |
|        |                        | 1857.5 | 24 | 21.74 | 1 | 20.69 | 2 |
|        | 36RB<br>Low (0)        | 1902.5 | 24 | 21.63 | 1 | 20.60 | 2 |
|        |                        | 1880   | 24 | 21.71 | 1 | 20.68 | 2 |
|        |                        | 1857.5 | 24 | 21.75 | 1 | 20.70 | 2 |
|        | 75RB<br>(0)            | 1902.5 | 24 | 21.66 | 1 | 20.63 | 2 |
|        |                        | 1880   | 24 | 21.70 | 1 | 20.68 | 2 |
|        |                        | 1857.5 | 24 | 21.75 | 1 | 20.71 | 2 |
| 20 MHz | 1RB<br>High (99)       | 1900   | 24 | 22.66 | 0 | 21.76 | 1 |
|        |                        | 1880   | 24 | 22.69 | 0 | 21.86 | 1 |
|        |                        | 1860   | 24 | 22.69 | 0 | 21.84 | 1 |
|        | 1RB<br>Middle<br>(50)  | 1900   | 24 | 22.61 | 0 | 21.81 | 1 |
|        |                        | 1880   | 24 | 22.67 | 0 | 21.91 | 1 |
|        |                        | 1860   | 24 | 22.69 | 0 | 21.86 | 1 |
|        | 1RB<br>Low (0)         | 1900   | 24 | 22.68 | 0 | 21.85 | 1 |
|        |                        | 1880   | 24 | 22.74 | 0 | 21.89 | 1 |
|        |                        | 1860   | 24 | 22.78 | 0 | 21.91 | 1 |
|        | 50RB<br>High (50)      | 1900   | 24 | 21.51 | 1 | 20.57 | 2 |
|        |                        | 1880   | 24 | 21.60 | 1 | 20.65 | 2 |
|        |                        | 1860   | 24 | 21.58 | 1 | 20.63 | 2 |
|        | 50RB<br>Middle<br>(25) | 1900   | 24 | 21.49 | 1 | 20.58 | 2 |
|        |                        | 1880   | 24 | 21.60 | 1 | 20.68 | 2 |
|        |                        | 1860   | 24 | 21.59 | 1 | 20.63 | 2 |
|        | 50RB<br>Low (0)        | 1900   | 24 | 21.56 | 1 | 20.63 | 2 |
|        |                        | 1880   | 24 | 21.64 | 1 | 20.71 | 2 |
|        |                        | 1860   | 24 | 21.63 | 1 | 20.69 | 2 |
|        | 100RB<br>(0)           | 1900   | 24 | 21.52 | 1 | 20.59 | 2 |
|        |                        | 1880   | 24 | 21.60 | 1 | 20.67 | 2 |
|        |                        | 1860   | 24 | 21.59 | 1 | 20.66 | 2 |

| Band 7             |                            |                    |                                  |                                    |     |                                    |     |
|--------------------|----------------------------|--------------------|----------------------------------|------------------------------------|-----|------------------------------------|-----|
| Bandwidth<br>(MHz) | RB<br>allocation           | Frequency<br>(MHz) | Max.<br>Target<br>Power<br>(dBm) | QPSK                               |     | 16QAM                              |     |
|                    | RB offset<br>(Start<br>RB) |                    |                                  | Actual<br>output<br>power<br>(dBm) | MPR | Actual<br>output<br>power<br>(dBm) | MPR |
| 5 MHz              | 1RB<br>High (24)           | 2567.5             | 23.5                             | 22.83                              | 0   | 21.73                              | 1   |
|                    |                            | 2535               | 23.5                             | 22.84                              | 0   | 21.92                              | 1   |
|                    |                            | 2502.5             | 23.5                             | 22.98                              | 0   | 21.82                              | 1   |
|                    | 1RB<br>Middle<br>(12)      | 2567.5             | 23.5                             | 23.03                              | 0   | 21.86                              | 1   |
|                    |                            | 2535               | 23.5                             | 22.91                              | 0   | 21.99                              | 1   |
|                    |                            | 2502.5             | 23.5                             | 23.11                              | 0   | 21.94                              | 1   |
|                    | 1RB<br>Low (0)             | 2567.5             | 23.5                             | 23.19                              | 0   | 21.97                              | 1   |
|                    |                            | 2535               | 23.5                             | 22.93                              | 0   | 22.00                              | 1   |
|                    |                            | 2502.5             | 23.5                             | 23.16                              | 0   | 21.96                              | 1   |
|                    | 12RB<br>High (13)          | 2567.5             | 23.5                             | 22.01                              | 1   | 21.08                              | 2   |
|                    |                            | 2535               | 23.5                             | 21.99                              | 1   | 21.06                              | 2   |
|                    |                            | 2502.5             | 23.5                             | 22.08                              | 1   | 21.12                              | 2   |
|                    | 12RB<br>Middle<br>(6)      | 2567.5             | 23.5                             | 22.07                              | 1   | 21.14                              | 2   |
|                    |                            | 2535               | 23.5                             | 22.01                              | 1   | 21.08                              | 2   |
|                    |                            | 2502.5             | 23.5                             | 22.10                              | 1   | 21.16                              | 2   |
|                    | 12RB<br>Low (0)            | 2567.5             | 23.5                             | 22.11                              | 1   | 21.18                              | 2   |
|                    |                            | 2535               | 23.5                             | 21.99                              | 1   | 21.07                              | 2   |
|                    |                            | 2502.5             | 23.5                             | 22.12                              | 1   | 21.17                              | 2   |
|                    | 25RB<br>(0)                | 2567.5             | 23.5                             | 22.00                              | 1   | 20.97                              | 2   |
|                    |                            | 2535               | 23.5                             | 21.92                              | 1   | 20.91                              | 2   |
|                    |                            | 2502.5             | 23.5                             | 22.05                              | 1   | 21.00                              | 2   |
| 10 MHz             | 1RB<br>High (49)           | 2565               | 23.5                             | 22.88                              | 0   | 22.38                              | 1   |
|                    |                            | 2535               | 23.5                             | 22.80                              | 0   | 21.86                              | 1   |
|                    |                            | 2505               | 23.5                             | 22.77                              | 0   | 22.32                              | 1   |
|                    | 1RB<br>Middle<br>(24)      | 2565               | 23.5                             | 23.18                              | 0   | 22.41                              | 1   |
|                    |                            | 2535               | 23.5                             | 22.92                              | 0   | 21.99                              | 1   |
|                    |                            | 2505               | 23.5                             | 23.03                              | 0   | 22.43                              | 1   |
|                    | 1RB<br>Low (0)             | 2565               | 23.5                             | 23.26                              | 0   | 22.47                              | 1   |
|                    |                            | 2535               | 23.5                             | 22.90                              | 0   | 21.94                              | 1   |
|                    |                            | 2505               | 23.5                             | 22.92                              | 0   | 22.40                              | 1   |
|                    | 25RB<br>High (25)          | 2565               | 23.5                             | 22.01                              | 1   | 21.12                              | 2   |
|                    |                            | 2535               | 23.5                             | 21.89                              | 1   | 21.01                              | 2   |
|                    |                            | 2505               | 23.5                             | 21.91                              | 1   | 21.01                              | 2   |
|                    | 25RB<br>Middle<br>(12)     | 2565               | 23.5                             | 22.12                              | 1   | 21.24                              | 2   |
|                    |                            | 2535               | 23.5                             | 21.93                              | 1   | 21.04                              | 2   |
|                    |                            | 2505               | 23.5                             | 21.96                              | 1   | 21.07                              | 2   |
|                    | 25RB<br>Low (0)            | 2565               | 23.5                             | 22.18                              | 1   | 21.30                              | 2   |
|                    |                            | 2535               | 23.5                             | 21.92                              | 1   | 21.04                              | 2   |
|                    |                            | 2505               | 23.5                             | 22.04                              | 1   | 21.13                              | 2   |
|                    | 50RB<br>(0)                | 2565               | 23.5                             | 22.09                              | 1   | 21.15                              | 2   |
|                    |                            | 2535               | 23.5                             | 21.92                              | 1   | 20.98                              | 2   |
|                    |                            | 2505               | 23.5                             | 21.97                              | 1   | 21.01                              | 2   |

|        |                        |        |      |       |   |       |   |
|--------|------------------------|--------|------|-------|---|-------|---|
| 15 MHz | 1RB<br>High (74)       | 2562.5 | 23.5 | 22.54 | 0 | 22.09 | 1 |
|        |                        | 2535   | 23.5 | 22.76 | 0 | 22.19 | 1 |
|        |                        | 2507.5 | 23.5 | 23.05 | 0 | 22.49 | 1 |
|        | 1RB<br>Middle<br>(37)  | 2562.5 | 23.5 | 22.85 | 0 | 22.40 | 1 |
|        |                        | 2535   | 23.5 | 22.93 | 0 | 22.31 | 1 |
|        |                        | 2507.5 | 23.5 | 23.19 | 0 | 22.42 | 1 |
|        | 1RB<br>Low (0)         | 2562.5 | 23.5 | 22.73 | 0 | 22.34 | 1 |
|        |                        | 2535   | 23.5 | 22.92 | 0 | 22.31 | 1 |
|        |                        | 2507.5 | 23.5 | 23.37 | 0 | 22.49 | 1 |
|        | 36RB<br>High (38)      | 2562.5 | 23.5 | 21.85 | 1 | 20.80 | 2 |
|        |                        | 2535   | 23.5 | 21.96 | 1 | 20.94 | 2 |
|        |                        | 2507.5 | 23.5 | 22.16 | 1 | 21.11 | 2 |
|        | 36RB<br>Middle<br>(19) | 2562.5 | 23.5 | 21.95 | 1 | 20.90 | 2 |
|        |                        | 2535   | 23.5 | 22.00 | 1 | 20.98 | 2 |
|        |                        | 2507.5 | 23.5 | 22.27 | 1 | 21.21 | 2 |
|        | 36RB<br>Low (0)        | 2562.5 | 23.5 | 21.91 | 1 | 20.86 | 2 |
|        |                        | 2535   | 23.5 | 21.98 | 1 | 20.95 | 2 |
|        |                        | 2507.5 | 23.5 | 22.37 | 1 | 21.30 | 2 |
|        | 75RB<br>(0)            | 2562.5 | 23.5 | 21.90 | 1 | 20.87 | 2 |
|        |                        | 2535   | 23.5 | 22.02 | 1 | 20.99 | 2 |
|        |                        | 2507.5 | 23.5 | 22.27 | 1 | 21.24 | 2 |
| 20 MHz | 1RB<br>High (99)       | 2560   | 23.5 | 22.59 | 0 | 22.15 | 1 |
|        |                        | 2535   | 23.5 | 22.69 | 0 | 22.31 | 1 |
|        |                        | 2510   | 23.5 | 23.22 | 0 | 22.47 | 1 |
|        | 1RB<br>Middle<br>(50)  | 2560   | 23.5 | 22.83 | 0 | 22.42 | 1 |
|        |                        | 2535   | 23.5 | 22.93 | 0 | 22.42 | 1 |
|        |                        | 2510   | 23.5 | 23.12 | 0 | 22.49 | 1 |
|        | 1RB<br>Low (0)         | 2560   | 23.5 | 23.26 | 0 | 22.28 | 1 |
|        |                        | 2535   | 23.5 | 23.27 | 0 | 22.36 | 1 |
|        |                        | 2510   | 23.5 | 23.43 | 0 | 22.48 | 1 |
|        | 50RB<br>High (50)      | 2560   | 23.5 | 21.80 | 1 | 20.81 | 2 |
|        |                        | 2535   | 23.5 | 21.84 | 1 | 20.85 | 2 |
|        |                        | 2510   | 23.5 | 22.00 | 1 | 21.01 | 2 |
|        | 50RB<br>Middle<br>(25) | 2560   | 23.5 | 21.84 | 1 | 20.85 | 2 |
|        |                        | 2535   | 23.5 | 21.92 | 1 | 20.93 | 2 |
|        |                        | 2510   | 23.5 | 22.06 | 1 | 21.04 | 2 |
|        | 50RB<br>Low (0)        | 2560   | 23.5 | 21.86 | 1 | 20.82 | 2 |
|        |                        | 2535   | 23.5 | 21.95 | 1 | 20.91 | 2 |
|        |                        | 2510   | 23.5 | 22.21 | 1 | 21.18 | 2 |
|        | 100RB<br>(0)           | 2560   | 23.5 | 21.78 | 1 | 20.84 | 2 |
|        |                        | 2535   | 23.5 | 21.91 | 1 | 20.94 | 2 |
|        |                        | 2510   | 23.5 | 22.10 | 1 | 21.12 | 2 |

| Band 38            |                            |                    |                                  |                                    |     |                                    |     |
|--------------------|----------------------------|--------------------|----------------------------------|------------------------------------|-----|------------------------------------|-----|
| Bandwidth<br>(MHz) | RB<br>allocation           | Frequency<br>(MHz) | Max.<br>Target<br>Power<br>(dBm) | QPSK                               |     | 16QAM                              |     |
|                    | RB offset<br>(Start<br>RB) |                    |                                  | Actual<br>output<br>power<br>(dBm) | MPR | Actual<br>output<br>power<br>(dBm) | MPR |
| 5 MHz              | 1RB<br>High (24)           | 2617.5             | 24                               | 23.22                              | 0   | 22.15                              | 1   |
|                    |                            | 2595               | 24                               | 23.25                              | 0   | 22.16                              | 1   |
|                    |                            | 2572.5             | 24                               | 23.26                              | 0   | 22.17                              | 1   |
|                    | 1RB<br>Middle<br>(12)      | 2617.5             | 24                               | 23.30                              | 0   | 22.22                              | 1   |
|                    |                            | 2595               | 24                               | 23.36                              | 0   | 22.26                              | 1   |
|                    |                            | 2572.5             | 24                               | 23.32                              | 0   | 22.26                              | 1   |
|                    | 1RB<br>Low (0)             | 2617.5             | 24                               | 23.29                              | 0   | 22.21                              | 1   |
|                    |                            | 2595               | 24                               | 23.29                              | 0   | 22.22                              | 1   |
|                    |                            | 2572.5             | 24                               | 23.33                              | 0   | 22.27                              | 1   |
|                    | 12RB<br>High (13)          | 2617.5             | 24                               | 22.25                              | 1   | 21.34                              | 2   |
|                    |                            | 2595               | 24                               | 22.29                              | 1   | 21.40                              | 2   |
|                    |                            | 2572.5             | 24                               | 22.24                              | 1   | 21.36                              | 2   |
|                    | 12RB<br>Middle<br>(6)      | 2617.5             | 24                               | 22.22                              | 1   | 21.36                              | 2   |
|                    |                            | 2595               | 24                               | 22.29                              | 1   | 21.37                              | 2   |
|                    |                            | 2572.5             | 24                               | 22.27                              | 1   | 21.38                              | 2   |
|                    | 12RB<br>Low (0)            | 2617.5             | 24                               | 22.24                              | 1   | 21.34                              | 2   |
|                    |                            | 2595               | 24                               | 22.27                              | 1   | 21.37                              | 2   |
|                    |                            | 2572.5             | 24                               | 22.27                              | 1   | 21.41                              | 2   |
|                    | 25RB<br>(0)                | 2617.5             | 24                               | 22.19                              | 1   | 21.21                              | 2   |
|                    |                            | 2595               | 24                               | 22.21                              | 1   | 21.22                              | 2   |
|                    |                            | 2572.5             | 24                               | 22.23                              | 1   | 21.25                              | 2   |
| 10 MHz             | 1RB<br>High (49)           | 2615               | 24                               | 23.26                              | 0   | 22.36                              | 1   |
|                    |                            | 2595               | 24                               | 23.33                              | 0   | 22.37                              | 1   |
|                    |                            | 2575               | 24                               | 23.27                              | 0   | 22.40                              | 1   |
|                    | 1RB<br>Middle<br>(24)      | 2615               | 24                               | 23.29                              | 0   | 22.42                              | 1   |
|                    |                            | 2595               | 24                               | 23.37                              | 0   | 22.40                              | 1   |
|                    |                            | 2575               | 24                               | 23.29                              | 0   | 22.44                              | 1   |
|                    | 1RB<br>Low (0)             | 2615               | 24                               | 23.28                              | 0   | 22.38                              | 1   |
|                    |                            | 2595               | 24                               | 23.39                              | 0   | 22.42                              | 1   |
|                    |                            | 2575               | 24                               | 23.28                              | 0   | 22.42                              | 1   |
|                    | 25RB<br>High (25)          | 2615               | 24                               | 22.18                              | 1   | 21.19                              | 2   |
|                    |                            | 2595               | 24                               | 22.19                              | 1   | 21.22                              | 2   |
|                    |                            | 2575               | 24                               | 22.20                              | 1   | 21.22                              | 2   |
|                    | 25RB<br>Middle<br>(12)     | 2615               | 24                               | 22.20                              | 1   | 21.22                              | 2   |
|                    |                            | 2595               | 24                               | 22.21                              | 1   | 21.23                              | 2   |
|                    |                            | 2575               | 24                               | 22.23                              | 1   | 21.20                              | 2   |
|                    | 25RB<br>Low (0)            | 2615               | 24                               | 22.18                              | 1   | 21.14                              | 2   |
|                    |                            | 2595               | 24                               | 22.21                              | 1   | 21.22                              | 2   |
|                    |                            | 2575               | 24                               | 22.21                              | 1   | 21.23                              | 2   |
|                    | 50RB<br>(0)                | 2615               | 24                               | 22.18                              | 1   | 21.21                              | 2   |
|                    |                            | 2595               | 24                               | 22.19                              | 1   | 21.22                              | 2   |
|                    |                            | 2575               | 24                               | 22.19                              | 1   | 21.22                              | 2   |

|        |                        |        |    |       |   |       |   |
|--------|------------------------|--------|----|-------|---|-------|---|
| 15 MHz | 1RB<br>High (74)       | 2612.5 | 24 | 23.24 | 0 | 22.38 | 1 |
|        |                        | 2595   | 24 | 23.31 | 0 | 22.45 | 1 |
|        |                        | 2577.5 | 24 | 23.31 | 0 | 22.44 | 1 |
|        | 1RB<br>Middle<br>(37)  | 2612.5 | 24 | 23.27 | 0 | 22.42 | 1 |
|        |                        | 2595   | 24 | 23.35 | 0 | 22.46 | 1 |
|        |                        | 2577.5 | 24 | 23.30 | 0 | 22.45 | 1 |
|        | 1RB<br>Low (0)         | 2612.5 | 24 | 23.31 | 0 | 22.42 | 1 |
|        |                        | 2595   | 24 | 23.41 | 0 | 22.54 | 1 |
|        |                        | 2577.5 | 24 | 23.30 | 0 | 22.48 | 1 |
|        | 36RB<br>High (38)      | 2612.5 | 24 | 22.24 | 1 | 21.21 | 2 |
|        |                        | 2595   | 24 | 22.24 | 1 | 21.27 | 2 |
|        |                        | 2577.5 | 24 | 22.26 | 1 | 21.30 | 2 |
|        | 36RB<br>Middle<br>(19) | 2612.5 | 24 | 22.22 | 1 | 21.32 | 2 |
|        |                        | 2595   | 24 | 22.23 | 1 | 21.25 | 2 |
|        |                        | 2577.5 | 24 | 22.27 | 1 | 21.27 | 2 |
|        | 36RB<br>Low (0)        | 2612.5 | 24 | 22.24 | 1 | 21.34 | 2 |
|        |                        | 2595   | 24 | 22.24 | 1 | 21.29 | 2 |
|        |                        | 2577.5 | 24 | 22.24 | 1 | 21.27 | 2 |
|        | 75RB<br>(0)            | 2612.5 | 24 | 22.25 | 1 | 21.30 | 2 |
|        |                        | 2595   | 24 | 22.28 | 1 | 21.23 | 2 |
|        |                        | 2577.5 | 24 | 22.28 | 1 | 21.25 | 2 |
| 20 MHz | 1RB<br>High (99)       | 2610   | 24 | 23.33 | 0 | 22.32 | 1 |
|        |                        | 2595   | 24 | 23.50 | 0 | 22.59 | 1 |
|        |                        | 2580   | 24 | 23.39 | 0 | 22.40 | 1 |
|        | 1RB<br>Middle<br>(50)  | 2610   | 24 | 23.31 | 0 | 22.32 | 1 |
|        |                        | 2595   | 24 | 23.43 | 0 | 22.57 | 1 |
|        |                        | 2580   | 24 | 23.39 | 0 | 22.37 | 1 |
|        | 1RB<br>Low (0)         | 2610   | 24 | 23.27 | 0 | 22.34 | 1 |
|        |                        | 2595   | 24 | 23.48 | 0 | 22.60 | 1 |
|        |                        | 2580   | 24 | 23.38 | 0 | 22.35 | 1 |
|        | 50RB<br>High (50)      | 2610   | 24 | 22.16 | 1 | 21.20 | 2 |
|        |                        | 2595   | 24 | 22.19 | 1 | 21.23 | 2 |
|        |                        | 2580   | 24 | 22.22 | 1 | 21.26 | 2 |
|        | 50RB<br>Middle<br>(25) | 2610   | 24 | 22.16 | 1 | 21.29 | 2 |
|        |                        | 2595   | 24 | 22.21 | 1 | 21.22 | 2 |
|        |                        | 2580   | 24 | 22.19 | 1 | 21.23 | 2 |
|        | 50RB<br>Low (0)        | 2610   | 24 | 22.19 | 1 | 21.22 | 2 |
|        |                        | 2595   | 24 | 22.23 | 1 | 21.27 | 2 |
|        |                        | 2580   | 24 | 22.24 | 1 | 21.28 | 2 |
|        | 100RB<br>(0)           | 2610   | 24 | 22.20 | 1 | 21.14 | 2 |
|        |                        | 2595   | 24 | 22.20 | 1 | 21.19 | 2 |
|        |                        | 2580   | 24 | 22.21 | 1 | 21.24 | 2 |

# Low Power – Proximity sensor active

**Table 11.3-2: The conducted Power for LTE**

| Band 2             |                            |                    |                                  |                                    |     |                                    |     |
|--------------------|----------------------------|--------------------|----------------------------------|------------------------------------|-----|------------------------------------|-----|
| Bandwidth<br>(MHz) | RB<br>allocation           | Frequency<br>(MHz) | Max.<br>Target<br>Power<br>(dBm) | QPSK                               |     | 16QAM                              |     |
|                    | RB offset<br>(Start<br>RB) |                    |                                  | Actual<br>output<br>power<br>(dBm) | MPR | Actual<br>output<br>power<br>(dBm) | MPR |
| 1.4 MHz            | 1RB<br>High (5)            | 1909.3             | 14.5                             | 13.33                              | 0   | 13.43                              | 1   |
|                    |                            | 1880               | 14.5                             | 13.37                              | 0   | 13.45                              | 1   |
|                    |                            | 1850.7             | 14.5                             | 13.41                              | 0   | 13.47                              | 1   |
|                    | 1RB<br>Middle<br>(3)       | 1909.3             | 14.5                             | 13.41                              | 0   | 13.37                              | 1   |
|                    |                            | 1880               | 14.5                             | 13.50                              | 0   | 13.46                              | 1   |
|                    |                            | 1850.7             | 14.5                             | 13.45                              | 0   | 13.50                              | 1   |
|                    | 1RB<br>Low (0)             | 1909.3             | 14.5                             | 13.31                              | 0   | 13.36                              | 1   |
|                    |                            | 1880               | 14.5                             | 13.48                              | 0   | 13.28                              | 1   |
|                    |                            | 1850.7             | 14.5                             | 13.45                              | 0   | 13.50                              | 1   |
|                    | 3RB<br>High (3)            | 1909.3             | 14.5                             | 13.51                              | 0   | 13.68                              | 1   |
|                    |                            | 1880               | 14.5                             | 13.57                              | 0   | 13.68                              | 1   |
|                    |                            | 1850.7             | 14.5                             | 13.62                              | 0   | 13.70                              | 1   |
|                    | 3RB<br>Middle<br>(1)       | 1909.3             | 14.5                             | 13.42                              | 0   | 13.63                              | 1   |
|                    |                            | 1880               | 14.5                             | 13.47                              | 0   | 13.58                              | 1   |
|                    |                            | 1850.7             | 14.5                             | 13.52                              | 0   | 13.61                              | 1   |
|                    | 3RB<br>Low (0)             | 1909.3             | 14.5                             | 13.48                              | 0   | 13.68                              | 1   |
|                    |                            | 1880               | 14.5                             | 13.56                              | 0   | 13.68                              | 1   |
|                    |                            | 1850.7             | 14.5                             | 13.61                              | 0   | 13.69                              | 1   |
|                    | 6RB<br>(0)                 | 1909.3             | 14.5                             | 13.26                              | 1   | 13.48                              | 2   |
|                    |                            | 1880               | 14.5                             | 13.33                              | 1   | 13.54                              | 2   |
|                    |                            | 1850.7             | 14.5                             | 13.44                              | 1   | 13.60                              | 2   |
| 3 MHz              | 1RB<br>High (14)           | 1908.5             | 14.5                             | 13.47                              | 0   | 13.89                              | 1   |
|                    |                            | 1880               | 14.5                             | 13.57                              | 0   | 14.05                              | 1   |
|                    |                            | 1851.5             | 14.5                             | 13.59                              | 0   | 14.01                              | 1   |
|                    | 1RB<br>Middle<br>(7)       | 1908.5             | 14.5                             | 13.50                              | 0   | 13.96                              | 1   |
|                    |                            | 1880               | 14.5                             | 13.61                              | 0   | 14.02                              | 1   |
|                    |                            | 1851.5             | 14.5                             | 13.64                              | 0   | 14.09                              | 1   |
|                    | 1RB<br>Low (0)             | 1908.5             | 14.5                             | 13.47                              | 0   | 13.84                              | 1   |
|                    |                            | 1880               | 14.5                             | 13.61                              | 0   | 13.99                              | 1   |
|                    |                            | 1851.5             | 14.5                             | 13.62                              | 0   | 13.96                              | 1   |
|                    | 8RB<br>High (7)            | 1908.5             | 14.5                             | 13.40                              | 1   | 13.46                              | 2   |
|                    |                            | 1880               | 14.5                             | 13.49                              | 1   | 13.65                              | 2   |
|                    |                            | 1851.5             | 14.5                             | 13.55                              | 1   | 13.60                              | 2   |
|                    | 8RB<br>Middle<br>(4)       | 1908.5             | 14.5                             | 13.40                              | 1   | 13.48                              | 2   |
|                    |                            | 1880               | 14.5                             | 13.51                              | 1   | 13.66                              | 2   |
|                    |                            | 1851.5             | 14.5                             | 13.55                              | 1   | 13.62                              | 2   |
|                    | 8RB<br>Low (0)             | 1908.5             | 14.5                             | 13.40                              | 1   | 13.47                              | 2   |
|                    |                            | 1880               | 14.5                             | 13.51                              | 1   | 13.67                              | 2   |
|                    |                            | 1851.5             | 14.5                             | 13.54                              | 1   | 13.61                              | 2   |

|        |                        |        |      |       |   |       |   |
|--------|------------------------|--------|------|-------|---|-------|---|
|        | 15RB<br>(0)            | 1908.5 | 14.5 | 13.39 | 1 | 13.37 | 2 |
|        |                        | 1880   | 14.5 | 13.50 | 1 | 13.58 | 2 |
|        |                        | 1851.5 | 14.5 | 13.54 | 1 | 13.52 | 2 |
| 5 MHz  | 1RB<br>High (24)       | 1907.5 | 14.5 | 13.37 | 0 | 13.29 | 1 |
|        |                        | 1880   | 14.5 | 13.46 | 0 | 13.40 | 1 |
|        |                        | 1852.5 | 14.5 | 13.49 | 0 | 13.41 | 1 |
|        | 1RB<br>Middle<br>(12)  | 1907.5 | 14.5 | 13.42 | 0 | 13.34 | 1 |
|        |                        | 1880   | 14.5 | 13.54 | 0 | 13.46 | 1 |
|        |                        | 1852.5 | 14.5 | 13.55 | 0 | 13.46 | 1 |
|        | 1RB<br>Low (0)         | 1907.5 | 14.5 | 13.40 | 0 | 13.32 | 1 |
|        |                        | 1880   | 14.5 | 13.57 | 0 | 13.49 | 1 |
|        |                        | 1852.5 | 14.5 | 13.58 | 0 | 13.48 | 1 |
|        | 12RB<br>High (13)      | 1907.5 | 14.5 | 13.46 | 1 | 13.54 | 2 |
|        |                        | 1880   | 14.5 | 13.56 | 1 | 13.70 | 2 |
|        |                        | 1852.5 | 14.5 | 13.60 | 1 | 13.68 | 2 |
|        | 12RB<br>Middle<br>(6)  | 1907.5 | 14.5 | 13.45 | 1 | 13.54 | 2 |
|        |                        | 1880   | 14.5 | 13.56 | 1 | 13.70 | 2 |
|        |                        | 1852.5 | 14.5 | 13.63 | 1 | 13.70 | 2 |
|        | 12RB<br>Low (0)        | 1907.5 | 14.5 | 13.44 | 1 | 13.53 | 2 |
|        |                        | 1880   | 14.5 | 13.58 | 1 | 13.71 | 2 |
|        |                        | 1852.5 | 14.5 | 13.63 | 1 | 13.70 | 2 |
|        | 25RB<br>(0)            | 1907.5 | 14.5 | 13.39 | 1 | 13.37 | 2 |
|        |                        | 1880   | 14.5 | 13.51 | 1 | 13.58 | 2 |
|        |                        | 1852.5 | 14.5 | 13.56 | 1 | 13.53 | 2 |
| 10 MHz | 1RB<br>High (49)       | 1905   | 14.5 | 13.72 | 0 | 14.15 | 1 |
|        |                        | 1880   | 14.5 | 13.41 | 0 | 13.89 | 1 |
|        |                        | 1855   | 14.5 | 13.43 | 0 | 13.85 | 1 |
|        | 1RB<br>Middle<br>(24)  | 1905   | 14.5 | 13.74 | 0 | 14.22 | 1 |
|        |                        | 1880   | 14.5 | 13.57 | 0 | 13.96 | 1 |
|        |                        | 1855   | 14.5 | 13.59 | 0 | 13.92 | 1 |
|        | 1RB<br>Low (0)         | 1905   | 14.5 | 13.78 | 0 | 14.23 | 1 |
|        |                        | 1880   | 14.5 | 13.50 | 0 | 13.95 | 1 |
|        |                        | 1855   | 14.5 | 13.50 | 0 | 13.94 | 1 |
|        | 25RB<br>High (25)      | 1905   | 14.5 | 13.79 | 1 | 13.85 | 2 |
|        |                        | 1880   | 14.5 | 13.50 | 1 | 13.57 | 2 |
|        |                        | 1855   | 14.5 | 13.53 | 1 | 13.64 | 2 |
|        | 25RB<br>Middle<br>(12) | 1905   | 14.5 | 13.83 | 1 | 13.89 | 2 |
|        |                        | 1880   | 14.5 | 13.52 | 1 | 13.59 | 2 |
|        |                        | 1855   | 14.5 | 13.54 | 1 | 13.65 | 2 |
|        | 25RB<br>Low (0)        | 1905   | 14.5 | 13.81 | 1 | 13.88 | 2 |
|        |                        | 1880   | 14.5 | 13.55 | 1 | 13.62 | 2 |
|        |                        | 1855   | 14.5 | 13.57 | 1 | 13.68 | 2 |
|        | 50RB<br>(0)            | 1905   | 14.5 | 13.82 | 1 | 13.83 | 2 |
|        |                        | 1880   | 14.5 | 13.53 | 1 | 13.54 | 2 |
|        |                        | 1855   | 14.5 | 13.55 | 1 | 13.59 | 2 |
| 15 MHz | 1RB<br>High (74)       | 1902.5 | 14.5 | 13.57 | 0 | 14.00 | 1 |
|        |                        | 1880   | 14.5 | 13.64 | 0 | 13.91 | 1 |
|        |                        | 1857.5 | 14.5 | 13.65 | 0 | 14.09 | 1 |

|        |                        |        |      |       |   |       |   |
|--------|------------------------|--------|------|-------|---|-------|---|
|        | 1RB<br>Middle<br>(37)  | 1902.5 | 14.5 | 13.58 | 0 | 14.05 | 1 |
|        |                        | 1880   | 14.5 | 13.54 | 0 | 14.00 | 1 |
|        |                        | 1857.5 | 14.5 | 13.60 | 0 | 14.03 | 1 |
|        | 1RB<br>Low (0)         | 1902.5 | 14.5 | 13.53 | 0 | 14.01 | 1 |
|        |                        | 1880   | 14.5 | 13.56 | 0 | 14.01 | 1 |
|        |                        | 1857.5 | 14.5 | 13.56 | 0 | 14.00 | 1 |
|        | 36RB<br>High (38)      | 1902.5 | 14.5 | 13.45 | 1 | 13.47 | 2 |
|        |                        | 1880   | 14.5 | 13.52 | 1 | 13.54 | 2 |
|        |                        | 1857.5 | 14.5 | 13.60 | 1 | 13.61 | 2 |
|        | 36RB<br>Middle<br>(19) | 1902.5 | 14.5 | 13.43 | 1 | 13.45 | 2 |
|        |                        | 1880   | 14.5 | 13.55 | 1 | 13.57 | 2 |
|        |                        | 1857.5 | 14.5 | 13.64 | 1 | 13.64 | 2 |
|        | 36RB<br>Low (0)        | 1902.5 | 14.5 | 13.47 | 1 | 13.49 | 2 |
|        |                        | 1880   | 14.5 | 13.57 | 1 | 13.57 | 2 |
|        |                        | 1857.5 | 14.5 | 13.62 | 1 | 13.62 | 2 |
|        | 75RB<br>(0)            | 1902.5 | 14.5 | 13.50 | 1 | 13.51 | 2 |
|        |                        | 1880   | 14.5 | 13.58 | 1 | 13.59 | 2 |
|        |                        | 1857.5 | 14.5 | 13.65 | 1 | 13.65 | 2 |
| 20 MHz | 1RB<br>High (99)       | 1900   | 14.5 | 13.44 | 0 | 13.76 | 1 |
|        |                        | 1880   | 14.5 | 13.46 | 0 | 13.89 | 1 |
|        |                        | 1860   | 14.5 | 13.56 | 0 | 13.88 | 1 |
|        | 1RB<br>Middle<br>(50)  | 1900   | 14.5 | 13.44 | 0 | 13.78 | 1 |
|        |                        | 1880   | 14.5 | 13.52 | 0 | 13.96 | 1 |
|        |                        | 1860   | 14.5 | 13.58 | 0 | 13.89 | 1 |
|        | 1RB<br>Low (0)         | 1900   | 14.5 | 13.54 | 0 | 13.86 | 1 |
|        |                        | 1880   | 14.5 | 13.56 | 0 | 13.97 | 1 |
|        |                        | 1860   | 14.5 | 13.65 | 0 | 13.97 | 1 |
|        | 50RB<br>High (50)      | 1900   | 14.5 | 13.44 | 1 | 13.50 | 2 |
|        |                        | 1880   | 14.5 | 13.53 | 1 | 13.54 | 2 |
|        |                        | 1860   | 14.5 | 13.59 | 1 | 13.57 | 2 |
|        | 50RB<br>Middle<br>(25) | 1900   | 14.5 | 13.43 | 1 | 13.47 | 2 |
|        |                        | 1880   | 14.5 | 13.51 | 1 | 13.53 | 2 |
|        |                        | 1860   | 14.5 | 13.60 | 1 | 13.58 | 2 |
|        | 50RB<br>Low (0)        | 1900   | 14.5 | 13.47 | 1 | 13.52 | 2 |
|        |                        | 1880   | 14.5 | 13.59 | 1 | 13.58 | 2 |
|        |                        | 1860   | 14.5 | 13.62 | 1 | 13.60 | 2 |
|        | 100RB<br>(0)           | 1900   | 14.5 | 13.46 | 1 | 13.50 | 2 |
|        |                        | 1880   | 14.5 | 13.53 | 1 | 13.54 | 2 |
|        |                        | 1860   | 14.5 | 13.56 | 1 | 13.57 | 2 |

| Band 7             |                            |                    |                                  |                                    |     |                                    |     |
|--------------------|----------------------------|--------------------|----------------------------------|------------------------------------|-----|------------------------------------|-----|
| Bandwidth<br>(MHz) | RB<br>allocation           | Frequency<br>(MHz) | Max.<br>Target<br>Power<br>(dBm) | QPSK                               |     | 16QAM                              |     |
|                    | RB offset<br>(Start<br>RB) |                    |                                  | Actual<br>output<br>power<br>(dBm) | MPR | Actual<br>output<br>power<br>(dBm) | MPR |
| 5 MHz              | 1RB<br>High (24)           | 2567.5             | 16                               | 14.99                              | 0   | 14.91                              | 1   |
|                    |                            | 2535               | 16                               | 14.98                              | 0   | 14.90                              | 1   |
|                    |                            | 2502.5             | 16                               | 15.07                              | 0   | 14.98                              | 1   |
|                    | 1RB<br>Middle<br>(12)      | 2567.5             | 16                               | 15.17                              | 0   | 15.07                              | 1   |
|                    |                            | 2535               | 16                               | 15.08                              | 0   | 14.98                              | 1   |
|                    |                            | 2502.5             | 16                               | 15.19                              | 0   | 15.09                              | 1   |
|                    | 1RB<br>Low (0)             | 2567.5             | 16                               | 15.28                              | 0   | 15.18                              | 1   |
|                    |                            | 2535               | 16                               | 15.05                              | 0   | 14.97                              | 1   |
|                    |                            | 2502.5             | 16                               | 15.25                              | 0   | 15.14                              | 1   |
|                    | 12RB<br>High (13)          | 2567.5             | 16                               | 15.14                              | 1   | 15.19                              | 2   |
|                    |                            | 2535               | 16                               | 15.06                              | 1   | 15.11                              | 2   |
|                    |                            | 2502.5             | 16                               | 15.13                              | 1   | 15.20                              | 2   |
|                    | 12RB<br>Middle<br>(6)      | 2567.5             | 16                               | 15.17                              | 1   | 15.22                              | 2   |
|                    |                            | 2535               | 16                               | 15.06                              | 1   | 15.13                              | 2   |
|                    |                            | 2502.5             | 16                               | 15.14                              | 1   | 15.19                              | 2   |
|                    | 12RB<br>Low (0)            | 2567.5             | 16                               | 15.24                              | 1   | 15.29                              | 2   |
|                    |                            | 2535               | 16                               | 15.06                              | 1   | 15.12                              | 2   |
|                    |                            | 2502.5             | 16                               | 15.18                              | 1   | 15.23                              | 2   |
|                    | 25RB<br>(0)                | 2567.5             | 16                               | 15.12                              | 1   | 15.07                              | 2   |
|                    |                            | 2535               | 16                               | 15.03                              | 1   | 14.98                              | 2   |
|                    |                            | 2502.5             | 16                               | 15.13                              | 1   | 15.08                              | 2   |
| 10 MHz             | 1RB<br>High (49)           | 2565               | 16                               | 15.00                              | 0   | 15.41                              | 1   |
|                    |                            | 2535               | 16                               | 14.94                              | 0   | 14.97                              | 1   |
|                    |                            | 2505               | 16                               | 14.81                              | 0   | 15.24                              | 1   |
|                    | 1RB<br>Middle<br>(24)      | 2565               | 16                               | 15.25                              | 0   | 15.66                              | 1   |
|                    |                            | 2535               | 16                               | 15.06                              | 0   | 15.10                              | 1   |
|                    |                            | 2505               | 16                               | 15.00                              | 0   | 15.44                              | 1   |
|                    | 1RB<br>Low (0)             | 2565               | 16                               | 15.32                              | 0   | 15.75                              | 1   |
|                    |                            | 2535               | 16                               | 15.01                              | 0   | 15.03                              | 1   |
|                    |                            | 2505               | 16                               | 15.13                              | 0   | 15.55                              | 1   |
|                    | 25RB<br>High (25)          | 2565               | 16                               | 15.13                              | 1   | 15.22                              | 2   |
|                    |                            | 2535               | 16                               | 15.02                              | 1   | 15.12                              | 2   |
|                    |                            | 2505               | 16                               | 15.00                              | 1   | 15.09                              | 2   |
|                    | 25RB<br>Middle<br>(12)     | 2565               | 16                               | 15.26                              | 1   | 15.35                              | 2   |
|                    |                            | 2535               | 16                               | 15.05                              | 1   | 15.14                              | 2   |
|                    |                            | 2505               | 16                               | 15.06                              | 1   | 15.15                              | 2   |
|                    | 25RB<br>Low (0)            | 2565               | 16                               | 15.32                              | 1   | 15.41                              | 2   |
|                    |                            | 2535               | 16                               | 15.05                              | 1   | 15.14                              | 2   |
|                    |                            | 2505               | 16                               | 15.12                              | 1   | 15.22                              | 2   |
|                    | 50RB<br>(0)                | 2565               | 16                               | 15.23                              | 1   | 15.27                              | 2   |
|                    |                            | 2535               | 16                               | 15.05                              | 1   | 15.07                              | 2   |
|                    |                            | 2505               | 16                               | 15.06                              | 1   | 15.10                              | 2   |

|        |                        |        |    |       |   |       |   |
|--------|------------------------|--------|----|-------|---|-------|---|
| 15 MHz | 1RB<br>High (74)       | 2562.5 | 16 | 14.69 | 0 | 15.11 | 1 |
|        |                        | 2535   | 16 | 14.94 | 0 | 15.17 | 1 |
|        |                        | 2507.5 | 16 | 14.98 | 0 | 15.32 | 1 |
|        | 1RB<br>Middle<br>(37)  | 2562.5 | 16 | 15.00 | 0 | 15.43 | 1 |
|        |                        | 2535   | 16 | 15.04 | 0 | 15.38 | 1 |
|        |                        | 2507.5 | 16 | 15.15 | 0 | 15.46 | 1 |
|        | 1RB<br>Low (0)         | 2562.5 | 16 | 14.94 | 0 | 15.39 | 1 |
|        |                        | 2535   | 16 | 15.04 | 0 | 15.27 | 1 |
|        |                        | 2507.5 | 16 | 15.42 | 0 | 15.62 | 1 |
|        | 36RB<br>High (38)      | 2562.5 | 16 | 14.91 | 1 | 14.88 | 2 |
|        |                        | 2535   | 16 | 15.04 | 1 | 15.01 | 2 |
|        |                        | 2507.5 | 16 | 15.18 | 1 | 15.19 | 2 |
|        | 36RB<br>Middle<br>(19) | 2562.5 | 16 | 15.05 | 1 | 15.01 | 2 |
|        |                        | 2535   | 16 | 15.08 | 1 | 15.06 | 2 |
|        |                        | 2507.5 | 16 | 15.31 | 1 | 15.30 | 2 |
|        | 36RB<br>Low (0)        | 2562.5 | 16 | 14.99 | 1 | 14.97 | 2 |
|        |                        | 2535   | 16 | 15.04 | 1 | 15.01 | 2 |
|        |                        | 2507.5 | 16 | 15.37 | 1 | 15.36 | 2 |
|        | 75RB<br>(0)            | 2562.5 | 16 | 14.96 | 1 | 14.94 | 2 |
|        |                        | 2535   | 16 | 15.05 | 1 | 15.04 | 2 |
|        |                        | 2507.5 | 16 | 15.30 | 1 | 15.28 | 2 |
| 20 MHz | 1RB<br>High (99)       | 2560   | 16 | 14.99 | 0 | 15.09 | 1 |
|        |                        | 2535   | 16 | 15.06 | 0 | 15.35 | 1 |
|        |                        | 2510   | 16 | 15.25 | 0 | 15.45 | 1 |
|        | 1RB<br>Middle<br>(50)  | 2560   | 16 | 15.13 | 0 | 15.34 | 1 |
|        |                        | 2535   | 16 | 15.25 | 0 | 15.44 | 1 |
|        |                        | 2510   | 16 | 15.13 | 0 | 15.33 | 1 |
|        | 1RB<br>Low (0)         | 2560   | 16 | 14.89 | 0 | 15.20 | 1 |
|        |                        | 2535   | 16 | 14.92 | 0 | 15.32 | 1 |
|        |                        | 2510   | 16 | 15.42 | 0 | 15.52 | 1 |
|        | 50RB<br>High (50)      | 2560   | 16 | 14.90 | 1 | 14.87 | 2 |
|        |                        | 2535   | 16 | 14.95 | 1 | 14.93 | 2 |
|        |                        | 2510   | 16 | 15.07 | 1 | 15.06 | 2 |
|        | 50RB<br>Middle<br>(25) | 2560   | 16 | 14.95 | 1 | 14.93 | 2 |
|        |                        | 2535   | 16 | 15.05 | 1 | 15.02 | 2 |
|        |                        | 2510   | 16 | 15.12 | 1 | 15.10 | 2 |
|        | 50RB<br>Low (0)        | 2560   | 16 | 14.97 | 1 | 14.92 | 2 |
|        |                        | 2535   | 16 | 15.09 | 1 | 14.98 | 2 |
|        |                        | 2510   | 16 | 15.29 | 1 | 15.27 | 2 |
|        | 100RB<br>(0)           | 2560   | 16 | 14.90 | 1 | 14.90 | 2 |
|        |                        | 2535   | 16 | 14.99 | 1 | 14.98 | 2 |
|        |                        | 2510   | 16 | 15.16 | 1 | 15.15 | 2 |

| Band 38            |                            |                    |                                  |                                    |     |                                    |     |
|--------------------|----------------------------|--------------------|----------------------------------|------------------------------------|-----|------------------------------------|-----|
| Bandwidth<br>(MHz) | RB<br>allocation           | Frequency<br>(MHz) | Max.<br>Target<br>Power<br>(dBm) | QPSK                               |     | 16QAM                              |     |
|                    | RB offset<br>(Start<br>RB) |                    |                                  | Actual<br>output<br>power<br>(dBm) | MPR | Actual<br>output<br>power<br>(dBm) | MPR |
| 5 MHz              | 1RB<br>High (24)           | 2617.5             | 21.5                             | 20.54                              | 0   | 20.50                              | 1   |
|                    |                            | 2595               | 21.5                             | 20.90                              | 0   | 21.10                              | 1   |
|                    |                            | 2572.5             | 21.5                             | 20.98                              | 0   | 20.94                              | 1   |
|                    | 1RB<br>Middle<br>(12)      | 2617.5             | 21.5                             | 20.64                              | 0   | 20.60                              | 1   |
|                    |                            | 2595               | 21.5                             | 20.94                              | 0   | 21.15                              | 1   |
|                    |                            | 2572.5             | 21.5                             | 21.04                              | 0   | 21.01                              | 1   |
|                    | 1RB<br>Low (0)             | 2617.5             | 21.5                             | 20.71                              | 0   | 20.67                              | 1   |
|                    |                            | 2595               | 21.5                             | 20.95                              | 0   | 21.17                              | 1   |
|                    |                            | 2572.5             | 21.5                             | 20.99                              | 0   | 20.95                              | 1   |
|                    | 12RB<br>High (13)          | 2617.5             | 21.5                             | 20.63                              | 1   | 20.70                              | 2   |
|                    |                            | 2595               | 21.5                             | 20.90                              | 1   | 20.97                              | 2   |
|                    |                            | 2572.5             | 21.5                             | 20.99                              | 1   | 21.06                              | 2   |
|                    | 12RB<br>Middle<br>(6)      | 2617.5             | 21.5                             | 20.66                              | 1   | 20.72                              | 2   |
|                    |                            | 2595               | 21.5                             | 20.94                              | 1   | 21.01                              | 2   |
|                    |                            | 2572.5             | 21.5                             | 21.01                              | 1   | 21.08                              | 2   |
|                    | 12RB<br>Low (0)            | 2617.5             | 21.5                             | 20.67                              | 1   | 20.73                              | 2   |
|                    |                            | 2595               | 21.5                             | 20.98                              | 1   | 21.02                              | 2   |
|                    |                            | 2572.5             | 21.5                             | 21.02                              | 1   | 21.06                              | 2   |
|                    | 25RB<br>(0)                | 2617.5             | 21.5                             | 20.57                              | 1   | 20.55                              | 2   |
|                    |                            | 2595               | 21.5                             | 20.85                              | 1   | 20.83                              | 2   |
|                    |                            | 2572.5             | 21.5                             | 20.95                              | 1   | 20.92                              | 2   |
| 10 MHz             | 1RB<br>High (49)           | 2615               | 21.5                             | 20.55                              | 0   | 20.70                              | 1   |
|                    |                            | 2595               | 21.5                             | 20.90                              | 0   | 20.96                              | 1   |
|                    |                            | 2575               | 21.5                             | 20.98                              | 0   | 21.14                              | 1   |
|                    | 1RB<br>Middle<br>(24)      | 2615               | 21.5                             | 20.71                              | 0   | 20.85                              | 1   |
|                    |                            | 2595               | 21.5                             | 20.99                              | 0   | 21.04                              | 1   |
|                    |                            | 2575               | 21.5                             | 21.02                              | 0   | 21.15                              | 1   |
|                    | 1RB<br>Low (0)             | 2615               | 21.5                             | 20.73                              | 0   | 20.92                              | 1   |
|                    |                            | 2595               | 21.5                             | 21.03                              | 0   | 21.07                              | 1   |
|                    |                            | 2575               | 21.5                             | 20.96                              | 0   | 21.09                              | 1   |
|                    | 25RB<br>High (25)          | 2615               | 21.5                             | 20.59                              | 1   | 20.57                              | 2   |
|                    |                            | 2595               | 21.5                             | 20.83                              | 1   | 20.81                              | 2   |
|                    |                            | 2575               | 21.5                             | 20.96                              | 1   | 20.94                              | 2   |
|                    | 25RB<br>Middle<br>(12)     | 2615               | 21.5                             | 20.63                              | 1   | 20.62                              | 2   |
|                    |                            | 2595               | 21.5                             | 20.85                              | 1   | 20.85                              | 2   |
|                    |                            | 2575               | 21.5                             | 20.96                              | 1   | 20.94                              | 2   |
|                    | 25RB<br>Low (0)            | 2615               | 21.5                             | 20.69                              | 1   | 20.67                              | 2   |
|                    |                            | 2595               | 21.5                             | 20.91                              | 1   | 20.89                              | 2   |
|                    |                            | 2575               | 21.5                             | 20.93                              | 1   | 20.91                              | 2   |
|                    | 50RB<br>(0)                | 2615               | 21.5                             | 20.62                              | 1   | 20.62                              | 2   |
|                    |                            | 2595               | 21.5                             | 20.87                              | 1   | 20.87                              | 2   |
|                    |                            | 2575               | 21.5                             | 20.94                              | 1   | 20.94                              | 2   |

|        |                        |        |      |       |   |       |   |
|--------|------------------------|--------|------|-------|---|-------|---|
| 15 MHz | 1RB<br>High (74)       | 2612.5 | 21.5 | 20.58 | 0 | 20.75 | 1 |
|        |                        | 2595   | 21.5 | 20.97 | 0 | 21.05 | 1 |
|        |                        | 2577.5 | 21.5 | 20.97 | 0 | 21.13 | 1 |
|        | 1RB<br>Middle<br>(37)  | 2612.5 | 21.5 | 20.73 | 0 | 20.87 | 1 |
|        |                        | 2595   | 21.5 | 20.97 | 0 | 21.12 | 1 |
|        |                        | 2577.5 | 21.5 | 21.03 | 0 | 21.17 | 1 |
|        | 1RB<br>Low (0)         | 2612.5 | 21.5 | 20.83 | 0 | 21.02 | 1 |
|        |                        | 2595   | 21.5 | 21.05 | 0 | 21.21 | 1 |
|        |                        | 2577.5 | 21.5 | 20.99 | 0 | 21.13 | 1 |
|        | 36RB<br>High (38)      | 2612.5 | 21.5 | 20.68 | 1 | 20.66 | 2 |
|        |                        | 2595   | 21.5 | 20.85 | 1 | 20.88 | 2 |
|        |                        | 2577.5 | 21.5 | 21.00 | 1 | 20.92 | 2 |
|        | 36RB<br>Middle<br>(19) | 2612.5 | 21.5 | 20.73 | 1 | 20.73 | 2 |
|        |                        | 2595   | 21.5 | 20.88 | 1 | 20.91 | 2 |
|        |                        | 2577.5 | 21.5 | 21.02 | 1 | 21.00 | 2 |
|        | 36RB<br>Low (0)        | 2612.5 | 21.5 | 20.80 | 1 | 20.78 | 2 |
|        |                        | 2595   | 21.5 | 20.98 | 1 | 20.96 | 2 |
|        |                        | 2577.5 | 21.5 | 21.03 | 1 | 21.00 | 2 |
|        | 75RB<br>(0)            | 2612.5 | 21.5 | 20.81 | 1 | 20.71 | 2 |
|        |                        | 2595   | 21.5 | 20.94 | 1 | 20.90 | 2 |
|        |                        | 2577.5 | 21.5 | 21.04 | 1 | 21.00 | 2 |
| 20 MHz | 1RB<br>High (99)       | 2610   | 21.5 | 20.62 | 0 | 20.65 | 1 |
|        |                        | 2595   | 21.5 | 20.95 | 0 | 21.14 | 1 |
|        |                        | 2580   | 21.5 | 21.00 | 0 | 21.03 | 1 |
|        | 1RB<br>Middle<br>(50)  | 2610   | 21.5 | 20.79 | 0 | 20.82 | 1 |
|        |                        | 2595   | 21.5 | 21.05 | 0 | 21.21 | 1 |
|        |                        | 2580   | 21.5 | 21.07 | 0 | 21.08 | 1 |
|        | 1RB<br>Low (0)         | 2610   | 21.5 | 20.88 | 0 | 20.92 | 1 |
|        |                        | 2595   | 21.5 | 21.11 | 0 | 21.27 | 1 |
|        |                        | 2580   | 21.5 | 21.02 | 0 | 21.03 | 1 |
|        | 50RB<br>High (50)      | 2610   | 21.5 | 20.62 | 1 | 20.64 | 2 |
|        |                        | 2595   | 21.5 | 20.81 | 1 | 20.83 | 2 |
|        |                        | 2580   | 21.5 | 20.96 | 1 | 20.94 | 2 |
|        | 50RB<br>Middle<br>(25) | 2610   | 21.5 | 20.69 | 1 | 20.71 | 2 |
|        |                        | 2595   | 21.5 | 20.82 | 1 | 20.84 | 2 |
|        |                        | 2580   | 21.5 | 21.01 | 1 | 20.98 | 2 |
|        | 50RB<br>Low (0)        | 2610   | 21.5 | 20.84 | 1 | 20.85 | 2 |
|        |                        | 2595   | 21.5 | 20.93 | 1 | 20.96 | 2 |
|        |                        | 2580   | 21.5 | 20.95 | 1 | 20.96 | 2 |
|        | 100RB<br>(0)           | 2610   | 21.5 | 20.75 | 1 | 20.71 | 2 |
|        |                        | 2595   | 21.5 | 20.87 | 1 | 20.82 | 2 |
|        |                        | 2580   | 21.5 | 20.93 | 1 | 20.91 | 2 |

## 11.4 Wi-Fi and BT Measurement result

The output power of BT antenna is as following:

| Mode          | Conducted Power (dBm)  |                         |                     | Tune up |
|---------------|------------------------|-------------------------|---------------------|---------|
|               | Channel 0<br>(2402MHz) | Channel 39<br>(2441MHz) | Channel 78(2480MHz) |         |
| GFSK          | 4.64                   | 5.97                    | 5.33                | 6       |
| EDR2M-4_DQPSK | 3.67                   | 5.20                    | 4.22                | 5.5     |
| EDR3M-8DPSK   | 3.76                   | 5.29                    | 4.32                | 5.5     |

The average conducted power for Wi-Fi is as following:

### Normal Power – Proximity sensor not active

802.11b (dBm)

| Channel\data rate | 1Mbps     | 2Mbps     | 5.5Mbps   | 11Mbps    |
|-------------------|-----------|-----------|-----------|-----------|
| 1                 | 16.38     | /         | /         | /         |
| 6                 | 16.72     | 16.67     | 16.62     | 16.71     |
| 11                | 16.61     | /         | /         | /         |
| <b>Tune up</b>    | <b>17</b> | <b>17</b> | <b>17</b> | <b>17</b> |

802.11g (dBm)

| Channel\data rate | 6Mbps     | 9Mbps     | 12Mbps    | 18Mbps    | 24Mbps    | 36Mbps    | 48Mbps    | 54Mbps    |
|-------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 1                 | 15.05     | /         | 15.10     | /         | /         | /         | /         | /         |
| 6                 | 15.68     | 15.65     | 15.69     | 15.60     | 15.24     | 15.07     | 15.19     | 15.12     |
| 11                | 15.25     | /         | 15.37     | /         | /         | /         | /         | /         |
| <b>Tune up</b>    | <b>16</b> | <b>16</b> | <b>16</b> | <b>16</b> | <b>16</b> | <b>16</b> | <b>16</b> | <b>16</b> |

802.11n (dBm) - HT20 (2.4G)

| Channel\data rate | MCS0        | MCS1        | MCS2        | MCS3        | MCS4        | MCS5        | MCS6        | MCS7        |
|-------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 1                 | 14.57       | 15.49       | /           | /           | /           | /           | /           | /           |
| 6                 | 14.99       | 15.06       | 14.99       | 14.69       | 14.55       | 14.65       | 14.37       | 14.32       |
| 11                | 14.83       | 14.70       | /           | /           | /           | /           | /           | /           |
| <b>Tune up</b>    | <b>15.5</b> | <b>15.5</b> | <b>15.5</b> | <b>15.5</b> | <b>15.5</b> | <b>15.5</b> | <b>15.5</b> | <b>15.5</b> |

802.11n (dBm) – HT40 (2.4G)

| Channel\data rate | MCS0      | MCS1      | MCS2      | MCS3      | MCS4      | MCS5      | MCS6      | MCS7      |
|-------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 3                 | 11.53     | /         | /         | /         | /         | /         | /         | /         |
| 6                 | 11.74     | 11.56     | 11.42     | 11.27     | 11.05     | 10.82     | 10.21     | 10.13     |
| 9                 | 11.59     | /         | /         | /         | /         | /         | /         | /         |
| <b>Tune up</b>    | <b>12</b> | <b>12</b> | <b>12</b> | <b>12</b> | <b>12</b> | <b>12</b> | <b>12</b> | <b>12</b> |

**Low Power – Proximity sensor active**

802.11b (dBm)

| Channel\data rate | 1Mbps     | 2Mbps     | 5.5Mbps   | 11Mbps    |
|-------------------|-----------|-----------|-----------|-----------|
| 1                 | 11.39     | 11.46     | /         | /         |
| 6                 | 11.68     | 11.90     | 11.85     | 11.59     |
| 11                | 11.64     | 11.62     | /         | /         |
| <b>Tune up</b>    | <b>12</b> | <b>12</b> | <b>12</b> | <b>12</b> |

802.11g (dBm)

| Channel\data rate | 6Mbps       | 9Mbps       | 12Mbps      | 18Mbps      | 24Mbps      | 36Mbps      | 48Mbps      | 54Mbps      |
|-------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 1                 | 9.51        | /           | /           | /           | /           | /           | /           | /           |
| 6                 | 9.91        | 9.82        | 9.56        | 9.48        | 9.55        | 9.40        | 9.04        | 8.98        |
| 11                | 9.59        | /           | /           | /           | /           | /           | /           | /           |
| <b>Tune up</b>    | <b>10.5</b> | <b>10.5</b> | <b>10.5</b> | <b>10.5</b> | <b>10.5</b> | <b>10.5</b> | <b>10.5</b> | <b>10.5</b> |

802.11n (dBm) - HT20 (2.4G)

| Channel\data rate | MCS0       | MCS1       | MCS2       | MCS3       | MCS4       | MCS5       | MCS6       | MCS7       |
|-------------------|------------|------------|------------|------------|------------|------------|------------|------------|
| 1                 | 8.81       | /          | /          | /          | /          | /          | /          | /          |
| 6                 | 9.24       | 9.14       | 9.06       | 8.96       | 8.82       | 8.47       | 8.41       | 8.36       |
| 11                | 9.07       | /          | /          | /          | /          | /          | /          | /          |
| <b>Tune up</b>    | <b>9.5</b> | <b>9.5</b> | <b>9.5</b> | <b>9.5</b> | <b>9.5</b> | <b>9.5</b> | <b>9.5</b> | <b>9.5</b> |

802.11n (dBm) – HT40 (2.4G)

| Channel\data rate | MCS0     | MCS1     | MCS2     | MCS3     | MCS4     | MCS5     | MCS6     | MCS7     |
|-------------------|----------|----------|----------|----------|----------|----------|----------|----------|
| 3                 | 5.46     | /        | /        | /        | /        | /        | /        | /        |
| 6                 | 5.90     | 5.77     | 5.40     | 5.25     | 5.02     | 4.75     | 4.33     | 4.26     |
| 9                 | 5,73     | /        | /        | /        | /        | /        | /        | /        |
| <b>Tune up</b>    | <b>6</b> | <b>6</b> | <b>6</b> | <b>6</b> | <b>6</b> | <b>6</b> | <b>6</b> | <b>6</b> |