



## **Appendix A**

# Transmitter Output Power

According to FCC Part 2.1046 & Part24.232 & RSS-133



## Conducted Power of Transmitter

Table 1 Measurement Results BAND 2

|                     |       | RF Output Power (Conducted) |       |                |       |                |       |
|---------------------|-------|-----------------------------|-------|----------------|-------|----------------|-------|
| TEST CONDITIONS     |       | Channel9262(B)              |       | Channel9400(M) |       | Channel9538(T) |       |
|                     |       | 1852.4MHz                   |       | 1880.0MHz      |       | 1907.6MHz      |       |
|                     |       | dBm                         |       | dBm            |       | dBm            |       |
| $T_{nom} / V_{nom}$ |       | Measured                    | Limit | Measured       | Limit | Measured       | Limit |
| TM1                 |       | 22.74                       | 33    | 22.87          | 33    | 22.66          | 33    |
| TM2                 | Case1 | 21.46                       | 33    | 21.59          | 33    | 21.44          | 33    |
|                     | Case2 | 21.55                       | 33    | 21.56          | 33    | 21.67          | 33    |
|                     | Case3 | 20.95                       | 33    | 20.96          | 33    | 21.12          | 33    |
|                     | Case4 | 20.85                       | 33    | 20.85          | 33    | 21.08          | 33    |
| TM3                 | Case1 | 20.73                       | 33    | 21.53          | 33    | 21.48          | 33    |
|                     | Case2 | 18.11                       | 33    | 18.43          | 33    | 18.16          | 33    |
|                     | Case3 | 20.37                       | 33    | 20.01          | 33    | 19.91          | 33    |
|                     | Case4 | 20.98                       | 33    | 20.42          | 33    | 20.27          | 33    |
|                     | Case5 | 21.32                       | 33    | 21.46          | 33    | 21.25          | 33    |

Note: RBW > emission bandwidth, VBW > 3 x RBW.



Table 2 Measurement Results (LTE) BAND 2

| TM4 & TM5 RF Output Power(Conducted) BAND 2 |            |         |                |              |
|---------------------------------------------|------------|---------|----------------|--------------|
| Test Mode                                   | TN/VN      |         |                |              |
|                                             | Modulation | RB      | Measured (dBm) | Limit (dBm ) |
| Channel (B)<br>1.4MHz(BW)                   | QPSK       | 1RB#0   | 22.53          | 33           |
|                                             |            | 1RB#max | 22.66          | 33           |
|                                             |            | 3RB#2   | 22.60          | 33           |
|                                             |            | Full    | 21.64          | 33           |
|                                             | 16QAM      | 1RB#0   | 21.73          | 33           |
|                                             |            | 1RB#max | 21.74          | 33           |
|                                             |            | 3RB#2   | 21.60          | 33           |
|                                             |            | Full    | 20.11          | 33           |
| Channel (B)<br>3MHz(BW)                     | QPSK       | 1RB#0   | 22.46          | 33           |
|                                             |            | 1RB#max | 22.53          | 33           |
|                                             |            | 8RB#4   | 21.62          | 33           |
|                                             |            | Full    | 21.65          | 33           |
|                                             | 16QAM      | 1RB#0   | 21.76          | 33           |
|                                             |            | 1RB#max | 21.75          | 33           |
|                                             |            | 8RB#4   | 20.60          | 33           |
|                                             |            | Full    | 20.75          | 33           |
| Channel (B)<br>5MHz(BW)                     | QPSK       | 1RB#0   | 22.52          | 33           |
|                                             |            | 1RB#max | 22.68          | 33           |
|                                             |            | 12RB#6  | 21.75          | 33           |
|                                             |            | Full    | 21.44          | 33           |
|                                             | 16QAM      | 1RB#0   | 21.64          | 33           |
|                                             |            | 1RB#max | 21.81          | 33           |
|                                             |            | 12RB#6  | 20.85          | 33           |
|                                             |            | Full    | 20.48          | 33           |
| Channel (B)<br>10MHz(BW)                    | QPSK       | 1RB#0   | 22.58          | 33           |
|                                             |            | 1RB#max | 22.52          | 33           |
|                                             |            | 25RB#13 | 21.54          | 33           |
|                                             |            | Full    | 21.49          | 33           |
|                                             | 16QAM      | 1RB#0   | 21.83          | 33           |
|                                             |            | 1RB#max | 21.74          | 33           |
|                                             |            | 25RB#13 | 20.58          | 33           |
|                                             |            |         |                |              |



|                           |       |         |       |    |
|---------------------------|-------|---------|-------|----|
|                           |       | Full    | 20.42 | 33 |
| Channel (B)<br>15MHz(BW)  | QPSK  | 1RB#0   | 22.64 | 33 |
|                           |       | 1RB#max | 22.42 | 33 |
|                           |       | 36RB#18 | 21.40 | 33 |
|                           |       | Full    | 21.33 | 33 |
|                           | 16QAM | 1RB#0   | 21.76 | 33 |
|                           |       | 1RB#max | 21.51 | 33 |
|                           |       | 36RB#18 | 20.50 | 33 |
|                           |       | Full    | 20.44 | 33 |
| Channel (B)<br>20MHz(BW)  | QPSK  | 1RB#0   | 22.72 | 33 |
|                           |       | 1RB#max | 22.46 | 33 |
|                           |       | 50RB#25 | 21.42 | 33 |
|                           |       | Full    | 21.42 | 33 |
|                           | 16QAM | 1RB#0   | 21.82 | 33 |
|                           |       | 1RB#max | 21.56 | 33 |
|                           |       | 50RB#25 | 20.46 | 33 |
|                           |       | Full    | 20.60 | 33 |
| Channel (M)<br>1.4MHz(BW) | QPSK  | 1RB#0   | 22.57 | 33 |
|                           |       | 1RB#max | 22.56 | 33 |
|                           |       | 3RB#2   | 22.59 | 33 |
|                           |       | Full    | 21.57 | 33 |
|                           | 16QAM | 1RB#0   | 21.82 | 33 |
|                           |       | 1RB#max | 21.69 | 33 |
|                           |       | 3RB#2   | 21.50 | 33 |
|                           |       | Full    | 20.39 | 33 |
| Channel (M)<br>3MHz(BW)   | QPSK  | 1RB#0   | 22.49 | 33 |
|                           |       | 1RB#max | 22.54 | 33 |
|                           |       | 8RB#4   | 21.56 | 33 |
|                           |       | Full    | 21.56 | 33 |
|                           | 16QAM | 1RB#0   | 21.64 | 33 |
|                           |       | 1RB#max | 21.74 | 33 |
|                           |       | 8RB#4   | 20.49 | 33 |
|                           |       | Full    | 20.59 | 33 |
| Channel (M)<br>5MHz(BW)   | QPSK  | 1RB#0   | 22.54 | 33 |
|                           |       | 1RB#max | 22.66 | 33 |
|                           |       | 12RB#6  | 21.61 | 33 |
|                           |       | Full    | 21.60 | 33 |



|                           |       |         |       |    |
|---------------------------|-------|---------|-------|----|
|                           | 16QAM | 1RB#0   | 21.67 | 33 |
|                           |       | 1RB#max | 21.73 | 33 |
|                           |       | 12RB#6  | 20.69 | 33 |
|                           |       | Full    | 20.55 | 33 |
| Channel (M)<br>10MHz(BW)  | QPSK  | 1RB#0   | 22.53 | 33 |
|                           |       | 1RB#max | 22.66 | 33 |
|                           |       | 25RB#13 | 21.51 | 33 |
|                           |       | Full    | 21.46 | 33 |
|                           | 16QAM | 1RB#0   | 21.70 | 33 |
|                           |       | 1RB#max | 21.83 | 33 |
|                           |       | 25RB#13 | 20.52 | 33 |
|                           |       | Full    | 20.34 | 33 |
| Channel (M)<br>15MHz(BW)  | QPSK  | 1RB#0   | 22.52 | 33 |
|                           |       | 1RB#max | 22.59 | 33 |
|                           |       | 36RB#18 | 21.42 | 33 |
|                           |       | Full    | 21.28 | 33 |
|                           | 16QAM | 1RB#0   | 21.74 | 33 |
|                           |       | 1RB#max | 21.69 | 33 |
|                           |       | 36RB#18 | 20.46 | 33 |
|                           |       | Full    | 20.29 | 33 |
| Channel (M)<br>20MHz(BW)  | QPSK  | 1RB#0   | 22.52 | 33 |
|                           |       | 1RB#max | 22.61 | 33 |
|                           |       | 50RB#25 | 21.58 | 33 |
|                           |       | Full    | 21.47 | 33 |
|                           | 16QAM | 1RB#0   | 21.11 | 33 |
|                           |       | 1RB#max | 21.25 | 33 |
|                           |       | 50RB#25 | 20.60 | 33 |
|                           |       | Full    | 20.47 | 33 |
| Channel (T)<br>1.4MHz(BW) | QPSK  | 1RB#0   | 21.83 | 33 |
|                           |       | 1RB#max | 21.56 | 33 |
|                           |       | 3RB#2   | 21.72 | 33 |
|                           |       | Full    | 20.79 | 33 |
|                           | 16QAM | 1RB#0   | 20.48 | 33 |
|                           |       | 1RB#max | 20.17 | 33 |
|                           |       | 3RB#2   | 21.09 | 33 |
|                           |       | Full    | 19.95 | 33 |
| Channel (T)               | QPSK  | 1RB#0   | 22.52 | 33 |



|                          |       |         |       |    |
|--------------------------|-------|---------|-------|----|
| 3MHz(BW)                 |       | 1RB#max | 21.60 | 33 |
|                          |       | 8RB#4   | 20.94 | 33 |
|                          |       | Full    | 20.97 | 33 |
|                          | 16QAM | 1RB#0   | 21.66 | 33 |
|                          |       | 1RB#max | 20.71 | 33 |
|                          |       | 8RB#4   | 19.99 | 33 |
|                          |       | Full    | 20.09 | 33 |
| Channel (T)<br>5MHz(BW)  | QPSK  | 1RB#0   | 22.82 | 33 |
|                          |       | 1RB#max | 21.64 | 33 |
|                          |       | 12RB#6  | 21.45 | 33 |
|                          |       | Full    | 21.27 | 33 |
|                          | 16QAM | 1RB#0   | 21.95 | 33 |
|                          |       | 1RB#max | 20.77 | 33 |
|                          |       | 12RB#6  | 20.61 | 33 |
|                          |       | Full    | 20.44 | 33 |
| Channel (T)<br>10MHz(BW) | QPSK  | 1RB#0   | 22.60 | 33 |
|                          |       | 1RB#max | 21.66 | 33 |
|                          |       | 25RB#13 | 21.53 | 33 |
|                          |       | Full    | 21.45 | 33 |
|                          | 16QAM | 1RB#0   | 21.79 | 33 |
|                          |       | 1RB#max | 20.87 | 33 |
|                          |       | 25RB#13 | 20.67 | 33 |
|                          |       | Full    | 20.40 | 33 |
| Channel (T)<br>15MHz(BW) | QPSK  | 1RB#0   | 22.57 | 33 |
|                          |       | 1RB#max | 21.74 | 33 |
|                          |       | 36RB#18 | 21.46 | 33 |
|                          |       | Full    | 21.36 | 33 |
|                          | 16QAM | 1RB#0   | 21.82 | 33 |
|                          |       | 1RB#max | 20.92 | 33 |
|                          |       | 36RB#18 | 20.51 | 33 |
|                          |       | Full    | 20.39 | 33 |
| Channel (T)<br>20MHz(BW) | QPSK  | 1RB#0   | 22.89 | 33 |
|                          |       | 1RB#max | 21.98 | 33 |
|                          |       | 50RB#25 | 21.60 | 33 |
|                          |       | Full    | 21.56 | 33 |
|                          | 16QAM | 1RB#0   | 22.03 | 33 |
|                          |       | 1RB#max | 21.20 | 33 |



|  |  |         |       |    |
|--|--|---------|-------|----|
|  |  | 50RB#25 | 20.59 | 33 |
|  |  | Full    | 20.57 | 33 |

Note: RBW > emission bandwidth, VBW > 3 x RBW.



## Peak-to-Average Ratio

Table 1 Measurement Results (WCMDA) BAND 2

|                     |       | Peak-to-Average Ratio |       |                |       |                |       |
|---------------------|-------|-----------------------|-------|----------------|-------|----------------|-------|
| TEST CONDITIONS     |       | Channel9262(B)        |       | Channel9400(M) |       | Channel9538(T) |       |
|                     |       | 1852.4MHz             |       | 1880.0MHz      |       | 1907.6MHz      |       |
|                     |       | dB                    |       | dB             |       | dB             |       |
| $T_{nom} / V_{nom}$ |       | Measured              | Limit | Measured       | Limit | Measured       | Limit |
| TM1                 |       | 3.21                  | 13    | 3.30           | 13    | 3.26           | 13    |
| TM2                 | Case1 | 3.22                  | 13    | 3.18           | 13    | 3.24           | 13    |
|                     | Case2 | 3.23                  | 13    | 3.21           | 13    | 3.22           | 13    |
|                     | Case3 | 3.16                  | 13    | 3.29           | 13    | 3.19           | 13    |
|                     | Case4 | 3.23                  | 13    | 3.25           | 13    | 3.20           | 13    |
| TM3                 | Case1 | 3.27                  | 13    | 3.28           | 13    | 3.24           | 13    |
|                     | Case2 | 3.17                  | 13    | 3.26           | 13    | 3.22           | 13    |
|                     | Case3 | 3.28                  | 13    | 3.13           | 13    | 3.18           | 13    |
|                     | Case4 | 3.16                  | 13    | 3.17           | 13    | 3.21           | 13    |
|                     | Case5 | 3.22                  | 13    | 3.17           | 13    | 3.14           | 13    |

Table 2 Measurement Results (LTE) BAND 2

| TM4 & TM5 Peak-to-Average Ratio |            |         |               |            |
|---------------------------------|------------|---------|---------------|------------|
| Test Mode                       | TN/VN      |         |               |            |
|                                 | Modulation | RB      | Measured (dB) | Limit (dB) |
| Channel (B)<br>1.4MHz(BW)       | QPSK       | 1RB#0   | 5.71          | 13         |
|                                 |            | 1RB#max | 5.71          | 13         |
|                                 |            | 3RB#2   | 5.66          | 13         |
|                                 |            | Full    | 5.77          | 13         |
|                                 | 16QAM      | 1RB#0   | 6.60          | 13         |
|                                 |            | 1RB#max | 6.54          | 13         |
|                                 |            | 3RB#2   | 6.51          | 13         |



|                          |       |         |      |    |
|--------------------------|-------|---------|------|----|
|                          |       | Full    | 6.61 | 13 |
| Channel (B)<br>3MHz(BW)  | QPSK  | 1RB#0   | 5.26 | 13 |
|                          |       | 1RB#max | 5.32 | 13 |
|                          |       | 8RB#4   | 5.27 | 13 |
|                          |       | Full    | 5.16 | 13 |
|                          | 16QAM | 1RB#0   | 6.02 | 13 |
|                          |       | 1RB#max | 5.84 | 13 |
|                          |       | 8RB#4   | 5.94 | 13 |
|                          |       | Full    | 6.00 | 13 |
| Channel (B)<br>5MHz(BW)  | QPSK  | 1RB#0   | 5.35 | 13 |
|                          |       | 1RB#max | 5.45 | 13 |
|                          |       | 12RB#6  | 5.31 | 13 |
|                          |       | Full    | 5.36 | 13 |
|                          | 16QAM | 1RB#0   | 6.12 | 13 |
|                          |       | 1RB#max | 6.15 | 13 |
|                          |       | 12RB#6  | 6.05 | 13 |
|                          |       | Full    | 6.09 | 13 |
| Channel (B)<br>10MHz(BW) | QPSK  | 1RB#0   | 5.53 | 13 |
|                          |       | 1RB#max | 5.57 | 13 |
|                          |       | 25RB#13 | 5.60 | 13 |
|                          |       | Full    | 5.62 | 13 |
|                          | 16QAM | 1RB#0   | 6.31 | 13 |
|                          |       | 1RB#max | 6.30 | 13 |
|                          |       | 25RB#13 | 6.34 | 13 |
|                          |       | Full    | 6.43 | 13 |
| Channel (B)<br>15MHz(BW) | QPSK  | 1RB#0   | 5.86 | 13 |
|                          |       | 1RB#max | 5.90 | 13 |
|                          |       | 36RB#18 | 5.91 | 13 |
|                          |       | Full    | 5.92 | 13 |
|                          | 16QAM | 1RB#0   | 6.55 | 13 |
|                          |       | 1RB#max | 6.52 | 13 |
|                          |       | 36RB#18 | 6.53 | 13 |
|                          |       | Full    | 6.57 | 13 |
| Channel (B)<br>20MHz(BW) | QPSK  | 1RB#0   | 5.58 | 13 |
|                          |       | 1RB#max | 5.61 | 13 |
|                          |       | 50RB#25 | 5.51 | 13 |
|                          |       | Full    | 5.62 | 13 |



|                           |       |         |      |    |
|---------------------------|-------|---------|------|----|
|                           | 16QAM | 1RB#0   | 6.36 | 13 |
|                           |       | 1RB#max | 6.35 | 13 |
|                           |       | 50RB#25 | 6.34 | 13 |
|                           |       | Full    | 6.39 | 13 |
| Channel (M)<br>1.4MHz(BW) | QPSK  | 1RB#0   | 5.67 | 13 |
|                           |       | 1RB#max | 5.61 | 13 |
|                           |       | 3RB#2   | 5.84 | 13 |
|                           |       | Full    | 5.49 | 13 |
|                           | 16QAM | 1RB#0   | 6.22 | 13 |
|                           |       | 1RB#max | 6.21 | 13 |
|                           |       | 3RB#2   | 6.19 | 13 |
|                           |       | Full    | 6.29 | 13 |
| Channel (M)<br>3MHz(BW)   | QPSK  | 1RB#0   | 5.54 | 13 |
|                           |       | 1RB#max | 5.52 | 13 |
|                           |       | 8RB#4   | 5.45 | 13 |
|                           |       | Full    | 5.61 | 13 |
|                           | 16QAM | 1RB#0   | 6.12 | 13 |
|                           |       | 1RB#max | 6.11 | 13 |
|                           |       | 8RB#4   | 6.19 | 13 |
|                           |       | Full    | 6.31 | 13 |
| Channel (M)<br>5MHz(BW)   | QPSK  | 1RB#0   | 5.77 | 13 |
|                           |       | 1RB#max | 5.73 | 13 |
|                           |       | 12RB#6  | 5.69 | 13 |
|                           |       | Full    | 5.80 | 13 |
|                           | 16QAM | 1RB#0   | 6.58 | 13 |
|                           |       | 1RB#max | 6.54 | 13 |
|                           |       | 12RB#6  | 6.55 | 13 |
|                           |       | Full    | 6.63 | 13 |
| Channel (M)<br>10MHz(BW)  | QPSK  | 1RB#0   | 5.63 | 13 |
|                           |       | 1RB#max | 5.59 | 13 |
|                           |       | 25RB#13 | 5.61 | 13 |
|                           |       | Full    | 5.64 | 13 |
|                           | 16QAM | 1RB#0   | 6.33 | 13 |
|                           |       | 1RB#max | 6.31 | 13 |
|                           |       | 25RB#13 | 6.38 | 13 |
|                           |       | Full    | 6.44 | 13 |
| Channel (M)               | QPSK  | 1RB#0   | 5.89 | 13 |



|                           |       |         |      |    |
|---------------------------|-------|---------|------|----|
| 15MHz(BW)                 |       | 1RB#max | 5.95 | 13 |
|                           |       | 36RB#18 | 5.96 | 13 |
|                           |       | Full    | 5.99 | 13 |
|                           | 16QAM | 1RB#0   | 6.59 | 13 |
|                           |       | 1RB#max | 6.54 | 13 |
|                           |       | 36RB#18 | 6.56 | 13 |
|                           |       | Full    | 6.60 | 13 |
|                           |       |         |      |    |
| Channel (M)<br>20MHz(BW)  | QPSK  | 1RB#0   | 5.65 | 13 |
|                           |       | 1RB#max | 5.61 | 13 |
|                           |       | 50RB#25 | 5.55 | 13 |
|                           |       | Full    | 5.67 | 13 |
|                           | 16QAM | 1RB#0   | 6.38 | 13 |
|                           |       | 1RB#max | 6.33 | 13 |
|                           |       | 50RB#25 | 6.40 | 13 |
|                           |       | Full    | 6.41 | 13 |
| Channel (T)<br>1.4MHz(BW) | QPSK  | 1RB#0   | 5.61 | 13 |
|                           |       | 1RB#max | 5.67 | 13 |
|                           |       | 3RB#2   | 5.61 | 13 |
|                           |       | Full    | 5.66 | 13 |
|                           | 16QAM | 1RB#0   | 6.02 | 13 |
|                           |       | 1RB#max | 6.09 | 13 |
|                           |       | 3RB#2   | 6.05 | 13 |
|                           |       | Full    | 6.10 | 13 |
| Channel (T)<br>3MHz(BW)   | QPSK  | 1RB#0   | 5.56 | 13 |
|                           |       | 1RB#max | 5.53 | 13 |
|                           |       | 8RB#4   | 5.51 | 13 |
|                           |       | Full    | 5.51 | 13 |
|                           | 16QAM | 1RB#0   | 6.11 | 13 |
|                           |       | 1RB#max | 6.15 | 13 |
|                           |       | 8RB#4   | 6.16 | 13 |
|                           |       | Full    | 6.22 | 13 |
| Channel (T)<br>5MHz(BW)   | QPSK  | 1RB#0   | 5.74 | 13 |
|                           |       | 1RB#max | 5.71 | 13 |
|                           |       | 12RB#6  | 5.66 | 13 |
|                           |       | Full    | 5.78 | 13 |
|                           | 16QAM | 1RB#0   | 6.55 | 13 |
|                           |       | 1RB#max | 6.51 | 13 |



|                          |       |         |      |    |
|--------------------------|-------|---------|------|----|
|                          |       | 12RB#6  | 6.53 | 13 |
|                          |       | Full    | 6.61 | 13 |
| Channel (T)<br>10MHz(BW) | QPSK  | 1RB#0   | 5.56 | 13 |
|                          |       | 1RB#max | 5.59 | 13 |
|                          |       | 25RB#13 | 5.60 | 13 |
|                          |       | Full    | 5.61 | 13 |
|                          | 16QAM | 1RB#0   | 6.37 | 13 |
|                          |       | 1RB#max | 6.35 | 13 |
|                          |       | 25RB#13 | 6.38 | 13 |
|                          |       | Full    | 6.42 | 13 |
| Channel (T)<br>15MHz(BW) | QPSK  | 1RB#0   | 5.84 | 13 |
|                          |       | 1RB#max | 5.88 | 13 |
|                          |       | 36RB#18 | 5.90 | 13 |
|                          |       | Full    | 5.94 | 13 |
|                          | 16QAM | 1RB#0   | 6.49 | 13 |
|                          |       | 1RB#max | 6.31 | 13 |
|                          |       | 36RB#18 | 6.34 | 13 |
|                          |       | Full    | 6.39 | 13 |
| Channel (T)<br>20MHz(BW) | QPSK  | 1RB#0   | 5.58 | 13 |
|                          |       | 1RB#max | 5.71 | 13 |
|                          |       | 50RB#25 | 5.46 | 13 |
|                          |       | Full    | 5.61 | 13 |
|                          | 16QAM | 1RB#0   | 6.76 | 13 |
|                          |       | 1RB#max | 6.46 | 13 |
|                          |       | 50RB#25 | 6.76 | 13 |
|                          |       | Full    | 6.66 | 13 |



## Effective Isotropic Radiated Power of Transmitter (EIRP)

| Test Mode | Freq. [MHz] | Meas. Level [dBm] | Substitution Antenna Type | SGP [dBm] | Substitution Gain [dBi] | Cable Loss [dB] | Substitution Level (EIRP) [dBm] | FCC limit [dBm] | Result |
|-----------|-------------|-------------------|---------------------------|-----------|-------------------------|-----------------|---------------------------------|-----------------|--------|
| TM1       | 1852.4      | 21.74             | Horn Ant.                 | 18.04     | 4.5                     | 1               | 21.54                           | 33              | Pass   |
| TM1       | 1880.0      | 21.87             | Horn Ant.                 | 18.17     | 4.5                     | 1               | 21.67                           | 33              | Pass   |
| TM1       | 1907.6      | 21.66             | Horn Ant.                 | 17.66     | 4.8                     | 1               | 21.46                           | 33              | Pass   |

| Test Mode                 |            |         | Meas. Level [dBm] | Substitution Antenna Type | SGP[dBm] | Substitution Gain [dBi] | Cable Loss [dB] | Substitution Level (EIRP) [dBm] | FCC limit [dBm] | Result |
|---------------------------|------------|---------|-------------------|---------------------------|----------|-------------------------|-----------------|---------------------------------|-----------------|--------|
| Channel                   | Modulation | RB      |                   |                           |          |                         |                 |                                 |                 |        |
| Channel (B)<br>1.4MHz(BW) | QPSK       | 1RB#0   | 21.53             | Horn Ant.                 | 17.88    | 4.5                     | 1               | 21.38                           | 33              | Pass   |
|                           |            | 1RB#max | 21.66             | Horn Ant.                 | 18.01    | 4.5                     | 1               | 21.51                           | 33              | Pass   |
|                           |            | 3RB#2   | 21.60             | Horn Ant.                 | 17.95    | 4.5                     | 1               | 21.45                           | 33              | Pass   |
|                           |            | Full    | 20.64             | Horn Ant.                 | 16.99    | 4.5                     | 1               | 20.49                           | 33              | Pass   |
|                           | 16QAM      | 1RB#0   | 20.73             | Horn Ant.                 | 17.08    | 4.5                     | 1               | 20.58                           | 33              | Pass   |
|                           |            | 1RB#max | 20.74             | Horn Ant.                 | 17.09    | 4.5                     | 1               | 20.59                           | 33              | Pass   |
|                           |            | 3RB#2   | 20.60             | Horn Ant.                 | 16.95    | 4.5                     | 1               | 20.45                           | 33              | Pass   |
|                           |            | Full    | 19.11             | Horn Ant.                 | 15.46    | 4.5                     | 1               | 18.96                           | 33              | Pass   |
| Channel (B)<br>3MHz(BW)   | QPSK       | 1RB#0   | 21.46             | Horn Ant.                 | 17.81    | 4.5                     | 1               | 21.31                           | 33              | Pass   |
|                           |            | 1RB#max | 21.53             | Horn Ant.                 | 17.88    | 4.5                     | 1               | 21.38                           | 33              | Pass   |



|                          |       |           |       |           |       |     |   |       |    |      |
|--------------------------|-------|-----------|-------|-----------|-------|-----|---|-------|----|------|
|                          |       | 8RB#4     | 20.62 | Horn Ant. | 16.97 | 4.5 | 1 | 20.47 | 33 | Pass |
|                          |       | Full      | 20.65 | Horn Ant. | 17.00 | 4.5 | 1 | 20.50 | 33 | Pass |
|                          | 16QAM | 1RB#0     | 20.76 | Horn Ant. | 17.11 | 4.5 | 1 | 20.61 | 33 | Pass |
|                          |       | 1RB#max   | 20.75 | Horn Ant. | 17.10 | 4.5 | 1 | 20.60 | 33 | Pass |
|                          |       | 8RB#4     | 19.60 | Horn Ant. | 15.95 | 4.5 | 1 | 19.45 | 33 | Pass |
|                          |       | Full      | 19.75 | Horn Ant. | 16.10 | 4.5 | 1 | 19.60 | 33 | Pass |
| Channel (B)<br>5MHz(BW)  | QPSK  | 1 RB/#0   | 21.52 | Horn Ant. | 17.87 | 4.5 | 1 | 21.37 | 33 | Pass |
|                          |       | 1 RB/#max | 21.68 | Horn Ant. | 18.03 | 4.5 | 1 | 21.53 | 33 | Pass |
|                          |       | 12 RB/#6  | 20.75 | Horn Ant. | 17.10 | 4.5 | 1 | 20.60 | 33 | Pass |
|                          |       | Full      | 20.44 | Horn Ant. | 16.79 | 4.5 | 1 | 20.29 | 33 | Pass |
|                          | 16QAM | 1 RB/#0   | 20.64 | Horn Ant. | 16.99 | 4.5 | 1 | 20.49 | 33 | Pass |
|                          |       | 1 RB/#max | 20.81 | Horn Ant. | 17.16 | 4.5 | 1 | 20.66 | 33 | Pass |
|                          |       | 12 RB/#6  | 19.85 | Horn Ant. | 16.20 | 4.5 | 1 | 19.70 | 33 | Pass |
|                          |       | Full      | 19.48 | Horn Ant. | 15.83 | 4.5 | 1 | 19.33 | 33 | Pass |
| Channel (B)<br>10MHz(BW) | QPSK  | 1 RB/#0   | 21.58 | Horn Ant. | 17.93 | 4.5 | 1 | 21.43 | 33 | Pass |
|                          |       | 1 RB/#max | 21.52 | Horn Ant. | 17.87 | 4.5 | 1 | 21.37 | 33 | Pass |
|                          |       | 25 RB/#13 | 20.54 | Horn Ant. | 16.89 | 4.5 | 1 | 20.39 | 33 | Pass |
|                          |       | Full      | 20.49 | Horn Ant. | 16.84 | 4.5 | 1 | 20.34 | 33 | Pass |
|                          | 16QAM | 1 RB/#0   | 20.83 | Horn Ant. | 17.18 | 4.5 | 1 | 20.68 | 33 | Pass |



|                          |       |           |       |           |       |     |   |       |    |      |
|--------------------------|-------|-----------|-------|-----------|-------|-----|---|-------|----|------|
|                          |       | 1 RB/#max | 20.74 | Horn Ant. | 17.09 | 4.5 | 1 | 20.59 | 33 | Pass |
|                          |       | 25 RB/#13 | 19.58 | Horn Ant. | 15.93 | 4.5 | 1 | 19.43 | 33 | Pass |
|                          |       | Full      | 19.42 | Horn Ant. | 15.77 | 4.5 | 1 | 19.27 | 33 | Pass |
| Channel (B)<br>15MHz(BW) | QPSK  | 1 RB/#0   | 21.64 | Horn Ant. | 17.99 | 4.5 | 1 | 21.49 | 33 | Pass |
|                          |       | 1 RB/#max | 21.42 | Horn Ant. | 17.77 | 4.5 | 1 | 21.27 | 33 | Pass |
|                          |       | 36 RB/#18 | 20.40 | Horn Ant. | 16.75 | 4.5 | 1 | 20.25 | 33 | Pass |
|                          |       | Full      | 20.33 | Horn Ant. | 16.68 | 4.5 | 1 | 20.18 | 33 | Pass |
|                          | 16QAM | 1 RB/#0   | 20.76 | Horn Ant. | 17.11 | 4.5 | 1 | 20.61 | 33 | Pass |
|                          |       | 1 RB/#max | 20.51 | Horn Ant. | 16.86 | 4.5 | 1 | 20.36 | 33 | Pass |
|                          |       | 36 RB/#18 | 19.50 | Horn Ant. | 15.85 | 4.5 | 1 | 19.35 | 33 | Pass |
|                          |       | Full      | 19.44 | Horn Ant. | 15.79 | 4.5 | 1 | 19.29 | 33 | Pass |
| Channel (B)<br>20MHz(BW) | QPSK  | 1 RB/#0   | 21.72 | Horn Ant. | 18.07 | 4.5 | 1 | 21.57 | 33 | Pass |
|                          |       | 1 RB/#max | 21.46 | Horn Ant. | 17.81 | 4.5 | 1 | 21.31 | 33 | Pass |
|                          |       | 50 RB/#25 | 20.42 | Horn Ant. | 16.77 | 4.5 | 1 | 20.27 | 33 | Pass |
|                          |       | Full      | 20.42 | Horn Ant. | 16.77 | 4.5 | 1 | 20.27 | 33 | Pass |
|                          | 16QAM | 1 RB/#0   | 20.82 | Horn Ant. | 17.17 | 4.5 | 1 | 20.67 | 33 | Pass |
|                          |       | 1 RB/#max | 20.56 | Horn Ant. | 16.91 | 4.5 | 1 | 20.41 | 33 | Pass |
|                          |       | 50 RB/#25 | 19.46 | Horn Ant. | 15.81 | 4.5 | 1 | 19.31 | 33 | Pass |
|                          |       | Full      | 19.60 | Horn Ant. | 15.95 | 4.5 | 1 | 19.45 | 33 | Pass |



|                                  |       |           |       |              |       |     |   |       |    |      |
|----------------------------------|-------|-----------|-------|--------------|-------|-----|---|-------|----|------|
| Channel<br>(M)<br>1.4MHz(<br>BW) | QPSK  | 1RB#0     | 21.57 | Horn<br>Ant. | 17.92 | 4.5 | 1 | 21.42 | 33 | Pass |
|                                  |       | 1RB#max   | 21.56 | Horn<br>Ant. | 17.91 | 4.5 | 1 | 21.41 | 33 | Pass |
|                                  |       | 3RB#2     | 21.59 | Horn<br>Ant. | 17.94 | 4.5 | 1 | 21.44 | 33 | Pass |
|                                  |       | Full      | 20.57 | Horn<br>Ant. | 16.92 | 4.5 | 1 | 20.42 | 33 | Pass |
|                                  | 16QAM | 1RB#0     | 20.82 | Horn<br>Ant. | 17.17 | 4.5 | 1 | 20.67 | 33 | Pass |
|                                  |       | 1RB#max   | 20.69 | Horn<br>Ant. | 17.04 | 4.5 | 1 | 20.54 | 33 | Pass |
|                                  |       | 3RB#2     | 20.50 | Horn<br>Ant. | 16.85 | 4.5 | 1 | 20.35 | 33 | Pass |
|                                  |       | Full      | 19.39 | Horn<br>Ant. | 15.74 | 4.5 | 1 | 19.24 | 33 | Pass |
| Channel<br>(M)<br>3MHz(B<br>W)   | QPSK  | 1RB#0     | 21.49 | Horn<br>Ant. | 17.84 | 4.5 | 1 | 21.34 | 33 | Pass |
|                                  |       | 1RB#max   | 21.54 | Horn<br>Ant. | 17.89 | 4.5 | 1 | 21.39 | 33 | Pass |
|                                  |       | 8RB#4     | 20.56 | Horn<br>Ant. | 16.91 | 4.5 | 1 | 20.41 | 33 | Pass |
|                                  |       | Full      | 20.56 | Horn<br>Ant. | 16.91 | 4.5 | 1 | 20.41 | 33 | Pass |
|                                  | 16QAM | 1RB#0     | 20.64 | Horn<br>Ant. | 16.99 | 4.5 | 1 | 20.49 | 33 | Pass |
|                                  |       | 1RB#max   | 20.74 | Horn<br>Ant. | 17.09 | 4.5 | 1 | 20.59 | 33 | Pass |
|                                  |       | 8RB#4     | 19.49 | Horn<br>Ant. | 15.84 | 4.5 | 1 | 19.34 | 33 | Pass |
|                                  |       | Full      | 19.59 | Horn<br>Ant. | 15.94 | 4.5 | 1 | 19.44 | 33 | Pass |
| Channel<br>(M)<br>5MHz(B<br>W)   | QPSK  | 1 RB/#0   | 21.54 | Horn<br>Ant. | 17.89 | 4.5 | 1 | 21.39 | 33 | Pass |
|                                  |       | 1 RB/#max | 21.66 | Horn<br>Ant. | 18.01 | 4.5 | 1 | 21.51 | 33 | Pass |
|                                  |       | 12 RB/#6  | 20.61 | Horn<br>Ant. | 16.96 | 4.5 | 1 | 20.46 | 33 | Pass |



|                           |       |           |       |           |       |     |   |       |    |      |
|---------------------------|-------|-----------|-------|-----------|-------|-----|---|-------|----|------|
|                           |       | Full      | 20.60 | Horn Ant. | 16.95 | 4.5 | 1 | 20.45 | 33 | Pass |
|                           | 16QAM | 1 RB/#0   | 20.67 | Horn Ant. | 17.02 | 4.5 | 1 | 20.52 | 33 | Pass |
|                           |       | 1 RB/#max | 20.73 | Horn Ant. | 17.08 | 4.5 | 1 | 20.58 | 33 | Pass |
|                           |       | 12 RB/#6  | 19.69 | Horn Ant. | 16.04 | 4.5 | 1 | 19.54 | 33 | Pass |
|                           |       | Full      | 19.55 | Horn Ant. | 15.90 | 4.5 | 1 | 19.40 | 33 | Pass |
| Channel (M)<br>10MHz(B W) | QPSK  | 1 RB/#0   | 21.53 | Horn Ant. | 17.88 | 4.5 | 1 | 21.38 | 33 | Pass |
|                           |       | 1 RB/#max | 21.66 | Horn Ant. | 18.01 | 4.5 | 1 | 21.51 | 33 | Pass |
|                           |       | 25 RB/#13 | 20.51 | Horn Ant. | 16.86 | 4.5 | 1 | 20.36 | 33 | Pass |
|                           |       | Full      | 20.46 | Horn Ant. | 16.81 | 4.5 | 1 | 20.31 | 33 | Pass |
|                           | 16QAM | 1 RB/#0   | 20.70 | Horn Ant. | 17.05 | 4.5 | 1 | 20.55 | 33 | Pass |
|                           |       | 1 RB/#max | 20.83 | Horn Ant. | 17.18 | 4.5 | 1 | 20.68 | 33 | Pass |
|                           |       | 25 RB/#13 | 19.52 | Horn Ant. | 15.87 | 4.5 | 1 | 19.37 | 33 | Pass |
|                           |       | Full      | 19.34 | Horn Ant. | 15.69 | 4.5 | 1 | 19.19 | 33 | Pass |
| Channel (M)<br>15MHz(B W) | QPSK  | 1 RB/#0   | 21.52 | Horn Ant. | 17.87 | 4.5 | 1 | 21.37 | 33 | Pass |
|                           |       | 1 RB/#max | 21.59 | Horn Ant. | 17.94 | 4.5 | 1 | 21.44 | 33 | Pass |
|                           |       | 36 RB/#18 | 20.42 | Horn Ant. | 16.77 | 4.5 | 1 | 20.27 | 33 | Pass |
|                           |       | Full      | 20.28 | Horn Ant. | 16.63 | 4.5 | 1 | 20.13 | 33 | Pass |
|                           | 16QAM | 1 RB/#0   | 20.74 | Horn Ant. | 17.09 | 4.5 | 1 | 20.59 | 33 | Pass |
|                           |       | 1 RB/#max | 20.69 | Horn Ant. | 17.04 | 4.5 | 1 | 20.54 | 33 | Pass |



|                           |       |           |       |           |       |     |   |       |    |      |
|---------------------------|-------|-----------|-------|-----------|-------|-----|---|-------|----|------|
|                           |       | 36 RB/#18 | 19.46 | Horn Ant. | 15.81 | 4.5 | 1 | 19.31 | 33 | Pass |
|                           |       | Full      | 19.29 | Horn Ant. | 15.64 | 4.5 | 1 | 19.14 | 33 | Pass |
| Channel (M)<br>20MHz(BW)  | QPSK  | 1 RB/#0   | 21.52 | Horn Ant. | 17.87 | 4.5 | 1 | 21.37 | 33 | Pass |
|                           |       | 1 RB/#max | 21.61 | Horn Ant. | 17.96 | 4.5 | 1 | 21.46 | 33 | Pass |
|                           |       | 50 RB/#25 | 20.58 | Horn Ant. | 16.93 | 4.5 | 1 | 20.43 | 33 | Pass |
|                           |       | Full      | 20.47 | Horn Ant. | 16.82 | 4.5 | 1 | 20.32 | 33 | Pass |
|                           | 16QAM | 1 RB/#0   | 20.11 | Horn Ant. | 16.46 | 4.5 | 1 | 19.96 | 33 | Pass |
|                           |       | 1 RB/#max | 20.25 | Horn Ant. | 16.60 | 4.5 | 1 | 20.10 | 33 | Pass |
|                           |       | 50 RB/#25 | 19.60 | Horn Ant. | 15.95 | 4.5 | 1 | 19.45 | 33 | Pass |
|                           |       | Full      | 19.47 | Horn Ant. | 15.82 | 4.5 | 1 | 19.32 | 33 | Pass |
| Channel (T)<br>1.4MHz(BW) | QPSK  | 1RB#0     | 20.83 | Horn Ant. | 16.88 | 4.8 | 1 | 20.68 | 33 | Pass |
|                           |       | 1RB#max   | 20.56 | Horn Ant. | 16.61 | 4.8 | 1 | 20.41 | 33 | Pass |
|                           |       | 3RB#2     | 20.72 | Horn Ant. | 16.77 | 4.8 | 1 | 20.57 | 33 | Pass |
|                           |       | Full      | 19.79 | Horn Ant. | 15.84 | 4.8 | 1 | 19.64 | 33 | Pass |
|                           | 16QAM | 1RB#0     | 19.48 | Horn Ant. | 15.53 | 4.8 | 1 | 19.33 | 33 | Pass |
|                           |       | 1RB#max   | 19.17 | Horn Ant. | 15.22 | 4.8 | 1 | 19.02 | 33 | Pass |
|                           |       | 3RB#2     | 20.09 | Horn Ant. | 16.14 | 4.8 | 1 | 19.94 | 33 | Pass |
|                           |       | Full      | 18.95 | Horn Ant. | 15.00 | 4.8 | 1 | 18.80 | 33 | Pass |
| Channel (T)               | QPSK  | 1RB#0     | 21.52 | Horn Ant. | 17.57 | 4.8 | 1 | 21.37 | 33 | Pass |



|                                 |       |           |       |              |       |     |   |       |    |      |
|---------------------------------|-------|-----------|-------|--------------|-------|-----|---|-------|----|------|
| 3MHz(B<br>W)                    |       | 1RB#max   | 20.60 | Horn<br>Ant. | 16.65 | 4.8 | 1 | 20.45 | 33 | Pass |
|                                 |       | 8RB#4     | 19.94 | Horn<br>Ant. | 15.99 | 4.8 | 1 | 19.79 | 33 | Pass |
|                                 |       | Full      | 19.97 | Horn<br>Ant. | 16.02 | 4.8 | 1 | 19.82 | 33 | Pass |
|                                 | 16QAM | 1RB#0     | 20.66 | Horn<br>Ant. | 16.71 | 4.8 | 1 | 20.51 | 33 | Pass |
|                                 |       | 1RB#max   | 19.71 | Horn<br>Ant. | 15.76 | 4.8 | 1 | 19.56 | 33 | Pass |
|                                 |       | 8RB#4     | 18.99 | Horn<br>Ant. | 15.04 | 4.8 | 1 | 18.84 | 33 | Pass |
|                                 |       | Full      | 19.09 | Horn<br>Ant. | 15.14 | 4.8 | 1 | 18.94 | 33 | Pass |
|                                 |       |           |       |              |       |     |   |       |    |      |
| Channel<br>(T)<br>5MHz(B<br>W)  | QPSK  | 1 RB/#0   | 21.82 | Horn<br>Ant. | 17.87 | 4.8 | 1 | 21.67 | 33 | Pass |
|                                 |       | 1 RB/#max | 20.64 | Horn<br>Ant. | 16.69 | 4.8 | 1 | 20.49 | 33 | Pass |
|                                 |       | 12 RB/#6  | 20.45 | Horn<br>Ant. | 16.50 | 4.8 | 1 | 20.30 | 33 | Pass |
|                                 |       | Full      | 20.27 | Horn<br>Ant. | 16.32 | 4.8 | 1 | 20.12 | 33 | Pass |
|                                 | 16QAM | 1 RB/#0   | 20.95 | Horn<br>Ant. | 17.00 | 4.8 | 1 | 20.80 | 33 | Pass |
|                                 |       | 1 RB/#max | 19.77 | Horn<br>Ant. | 15.82 | 4.8 | 1 | 19.62 | 33 | Pass |
|                                 |       | 12 RB/#6  | 19.61 | Horn<br>Ant. | 15.66 | 4.8 | 1 | 19.46 | 33 | Pass |
|                                 |       | Full      | 19.44 | Horn<br>Ant. | 15.49 | 4.8 | 1 | 19.29 | 33 | Pass |
| Channel<br>(T)<br>10MHz(B<br>W) | QPSK  | 1 RB/#0   | 21.60 | Horn<br>Ant. | 17.65 | 4.8 | 1 | 21.45 | 33 | Pass |
|                                 |       | 1 RB/#max | 20.66 | Horn<br>Ant. | 16.71 | 4.8 | 1 | 20.51 | 33 | Pass |
|                                 |       | 25 RB/#13 | 20.53 | Horn<br>Ant. | 16.58 | 4.8 | 1 | 20.38 | 33 | Pass |
|                                 |       | Full      | 20.45 | Horn<br>Ant. | 16.50 | 4.8 | 1 | 20.30 | 33 | Pass |



|                          |       |           |       |           |       |     |   |       |    |      |
|--------------------------|-------|-----------|-------|-----------|-------|-----|---|-------|----|------|
|                          | 16QAM | 1 RB/#0   | 20.79 | Horn Ant. | 16.84 | 4.8 | 1 | 20.64 | 33 | Pass |
|                          |       | 1 RB/#max | 19.87 | Horn Ant. | 15.92 | 4.8 | 1 | 19.72 | 33 | Pass |
|                          |       | 25 RB/#13 | 19.67 | Horn Ant. | 15.72 | 4.8 | 1 | 19.52 | 33 | Pass |
|                          |       | Full      | 19.40 | Horn Ant. | 15.45 | 4.8 | 1 | 19.25 | 33 | Pass |
| Channel (T)<br>15MHz(BW) | QPSK  | 1 RB/#0   | 21.57 | Horn Ant. | 17.62 | 4.8 | 1 | 21.42 | 33 | Pass |
|                          |       | 1 RB/#max | 20.74 | Horn Ant. | 16.79 | 4.8 | 1 | 20.59 | 33 | Pass |
|                          |       | 36 RB/#18 | 20.46 | Horn Ant. | 16.51 | 4.8 | 1 | 20.31 | 33 | Pass |
|                          |       | Full      | 20.36 | Horn Ant. | 16.41 | 4.8 | 1 | 20.21 | 33 | Pass |
|                          | 16QAM | 1 RB/#0   | 20.82 | Horn Ant. | 16.87 | 4.8 | 1 | 20.67 | 33 | Pass |
|                          |       | 1 RB/#max | 19.92 | Horn Ant. | 15.97 | 4.8 | 1 | 19.77 | 33 | Pass |
|                          |       | 36 RB/#18 | 19.51 | Horn Ant. | 15.56 | 4.8 | 1 | 19.36 | 33 | Pass |
|                          |       | Full      | 19.39 | Horn Ant. | 15.44 | 4.8 | 1 | 19.24 | 33 | Pass |
| Channel (T)<br>20MHz(BW) | QPSK  | 1 RB/#0   | 21.89 | Horn Ant. | 17.94 | 4.8 | 1 | 21.74 | 33 | Pass |
|                          |       | 1 RB/#max | 20.98 | Horn Ant. | 17.03 | 4.8 | 1 | 20.83 | 33 | Pass |
|                          |       | 50 RB/#25 | 20.60 | Horn Ant. | 16.65 | 4.8 | 1 | 20.45 | 33 | Pass |
|                          |       | Full      | 20.56 | Horn Ant. | 16.61 | 4.8 | 1 | 20.41 | 33 | Pass |
|                          | 16QAM | 1 RB/#0   | 21.03 | Horn Ant. | 17.08 | 4.8 | 1 | 20.88 | 33 | Pass |
|                          |       | 1 RB/#max | 20.20 | Horn Ant. | 16.25 | 4.8 | 1 | 20.05 | 33 | Pass |
|                          |       | 50 RB/#25 | 19.59 | Horn Ant. | 15.64 | 4.8 | 1 | 19.44 | 33 | Pass |



|  |  |      |       |              |       |     |   |       |    |      |
|--|--|------|-------|--------------|-------|-----|---|-------|----|------|
|  |  | Full | 19.57 | Horn<br>Ant. | 15.62 | 4.8 | 1 | 19.42 | 33 | Pass |
|--|--|------|-------|--------------|-------|-----|---|-------|----|------|

Note1: a, For getting the EIRP (Efficient Isotropic Radiated Power) in substitution method, the following formula should be taken to calculate it,

$$\text{EIRP [dBm]} = \text{SGP [dBm]} - \text{Cable Loss [dB]} + \text{Gain [dBi]}$$

b, SGP=Signal Generator Level

Note2: RBW > emission bandwidth, VBW > 3 x RBW.

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