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# **MAXIMUM OUTPUT POWER**

0.5 Antenna gain (dBi) CAT-M1 Band 2\_Uplink frequency band: 1850 to 1910 MHz Conducted EIRP EIRP Margin BW UL Frequency Modulation RB allocation **RB Start** Index Average Average Limit (MHz) Channel (MHz) (dB) (dBm) (dBm) (dBm) -11.56 0 0 1 20.94 21.44 33 1850.7 **OPSK** 18607 -13.58 6 0 0 18.92 19.42 33 1 0 0 20.91 21.41 33 -11.59 18900 1880 **QPSK** 6 0 0 18.87 19.37 33 -13.63 1 5 0 20.84 21.34 33 -11.66 19193 1909.3 **QPSK** 6 0 0 18.89 19.39 33 -13.61 1.4 1 0 0 19.96 20.46 33 -12.54 18607 1850.7 16QAM 5 0 0 18.93 19.43 33 -13.57 0 0 19.99 33 -12.51 20.49 18900 1880 16QAM 5 0 0 18.91 19.41 33 -13.59 0 33 5 19.93 20.43 -12.57 19193 1909.3 16QAM 33 5 0 0 18.84 19.34 -13.66

| Antenna gain (dBi) | 0. |
|--------------------|----|
|--------------------|----|

| , , , , , , , , , , , , , , , , , , , | CAT-M1 Band 2_Uplink frequency band : 1850 to 1910 MHz |                    |            |               |          |       |                               |                          |                        |                |  |
|---------------------------------------|--|--------------------|------------|---------------|----------|-------|-------------------------------|--------------------------|------------------------|----------------|--|
| BW<br>(MHz)                           | UL<br>Channel  | Frequency<br>(MHz) | Modulation | RB allocation | RB Start | Index | Conducted<br>Average<br>(dBm) | EIRP<br>Average<br>(dBm) | EIRP<br>Limit<br>(dBm) | Margin<br>(dB) |  |
|                                       | 18615  | 1851.5             | QPSK       | 1             | 0        | 0     | 20.83                         | 21.33                    | 33                     | -11.67         |  |
|                                       | 10013  | 1001.0             | QF3N       | 6             | 0        | 0     | 18.92                         | 19.42                    | 33                     | -13.58         |  |
|                                       | 18900  | 1880               | QPSK       | 1             | 0        | 0     | 20.95                         | 21.45                    | 33                     | -11.55         |  |
|                                       |  |                    | QF3N       | 6             | 0        | 0     | 18.84                         | 19.34                    | 33                     | -13.66         |  |
|                                       | 19185  | 1908.5             | 908.5 QPSK | 1             | 5        | 1     | 20.86                         | 21.36                    | 33                     | -11.64         |  |
| 3                                     |  |                    |            | 6             | 0        | 1     | 18.95                         | 19.45                    | 33                     | -13.55         |  |
| 3                                     | 18615  | 1851.5             | 16QAM      | 1             | 0        | 0     | 19.93                         | 20.43                    | 33                     | -12.57         |  |
|                                       | 10013  | 1001.0             |            | 5             | 0        | 0     | 18.99                         | 19.49                    | 33                     | -13.51         |  |
|                                       | 18900  | 1880               | 16QAM      | 1             | 0        | 0     | 19.95                         | 20.45                    | 33                     | -12.55         |  |
|                                       | 10900  | 1000               | TOQAW      | 5             | 0        | 0     | 18.96                         | 19.46                    | 33                     | -13.54         |  |
|                                       | 40405  | 1908.5             | 16QAM      | 1             | 5        | 1     | 19.91                         | 20.41                    | 33                     | -12.59         |  |
|                                       | 19185  | 1300.3             | TOQAM      | 5             | 0        | 1     | 18.86                         | 19.36                    | 33                     | -13.64         |  |

| Antenna o | ain (dRi) | 0.5 |
|-----------|-----------|-----|

|             | CAT-M1 Band 2_Uplink frequency band : 1850 to 1910 MHz |                    |            |               |          |       |                               |                          |                        |                |        |
|-------------|--|--------------------|------------|---------------|----------|-------|-------------------------------|--------------------------|------------------------|----------------|--------|
| BW<br>(MHz) | UL<br>Channel  | Frequency<br>(MHz) | Modulation | RB allocation | RB Start | Index | Conducted<br>Average<br>(dBm) | EIRP<br>Average<br>(dBm) | EIRP<br>Limit<br>(dBm) | Margin<br>(dB) |        |
|             | 18625 1852.5   | 1852.5             | QPSK       | 1             | 0        | 0     | 21.56                         | 22.06                    | 33                     | -10.94         |        |
|             | 10025  | 1002.0             | QFSN       | 6             | 0        | 0     | 19.82                         | 20.32                    | 33                     | -12.68         |        |
|             | 18900  | 19000              | 1880       | QPSK          | 1        | 0     | 0                             | 21.45                    | 21.95                  | 33             | -11.05 |
|             |  | 1000               | QFSN       | 6             | 0        | 0     | 19.95                         | 20.45                    | 33                     | -12.55         |        |
|             | 19175  | 1907.5             | QPSK       | 1             | 5        | 3     | 21.55                         | 22.05                    | 33                     | -10.95         |        |
| 5           |  |                    | QFSN       | 6             | 0        | 3     | 19.95                         | 20.45                    | 33                     | -12.55         |        |
| 3           | 18625  | 1852.5             | 16QAM      | 1             | 0        | 0     | 21.53                         | 22.03                    | 33                     | -10.97         |        |
|             | 10025  | 1002.0             |            | 5             | 0        | 0     | 18.87                         | 19.37                    | 33                     | -13.63         |        |
|             | 18900  | 1880               | 16QAM      | 1             | 0        | 0     | 21.39                         | 21.89                    | 33                     | -11.11         |        |
|             | 10900  | 1000               | TOQAW      | 5             | 0        | 0     | 18.90                         | 19.40                    | 33                     | -13.60         |        |
|             | 19175  | 1907.5             | 10044      | 1             | 5        | 3     | 21.47                         | 21.97                    | 33                     | -11.03         |        |
|             | 19175  | 1907.5             | 16QAM      | 5             | 0        | 3     | 18.95                         | 19.45                    | 33                     | -13.55         |        |

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| Antenna gain (dBi) | - | 0.5 |
|--------------------|---|-----|
|                    |   |     |

|             | CAT-M1 Band 2_Uplink frequency band : 1850 to 1910 MHz |                    |            |               |          |       |                               |                          |                        |                |
|-------------|--|--------------------|------------|---------------|----------|-------|-------------------------------|--------------------------|------------------------|----------------|
| BW<br>(MHz) | UL<br>Channel  | Frequency<br>(MHz) | Modulation | RB allocation | RB Start | Index | Conducted<br>Average<br>(dBm) | EIRP<br>Average<br>(dBm) | EIRP<br>Limit<br>(dBm) | Margin<br>(dB) |
|             | 18650  | 1855               | QPSK       | 1             | 0        | 0     | 21.56                         | 22.06                    | 33                     | -10.94         |
|             | 10000  | 1000               | QPSN       | 6             | 0        | 0     | 19.86                         | 20.36                    | 33                     | -12.64         |
|             | 18900  | 1880               | QPSK       | 1             | 0        | 0     | 21.45                         | 21.95                    | 33                     | -11.05         |
|             |  |                    | QFSN       | 6             | 0        | 0     | 19.92                         | 20.42                    | 33                     | -12.58         |
|             | 19150  | 1905               | QPSK       | 1             | 5        | 7     | 21.49                         | 21.99                    | 33                     | -11.01         |
| 10          |  |                    | QFSN       | 6             | 0        | 7     | 19.91                         | 20.41                    | 33                     | -12.59         |
| 10          | 18650  | 1855               | 16QAM      | 1             | 0        | 0     | 21.45                         | 21.95                    | 33                     | -11.05         |
|             | 10000  | 1000               | 16QAW      | 5             | 0        | 0     | 20.00                         | 20.50                    | 33                     | -12.50         |
|             | 18900  | 1880               | 16QAM      | 1             | 0        | 0     | 21.52                         | 22.02                    | 33                     | -10.98         |
|             | 10900  | 1000               | TOQAM      | 5             | 0        | 0     | 19.81                         | 20.31                    | 33                     | -12.69         |
|             | 19150  | 1905               | 16QAM      | 1             | 5        | 7     | 21.42                         | 21.92                    | 33                     | -11.08         |
|             |  | 1900               | TOQAM      | 5             | 0        | 7     | 19.97                         | 20.47                    | 33                     | -12.53         |

Antenna gain (dBi)

| Antenna y   | Juin (abi)    | 0.0                |             |               |                 |                 |                               |                          |                        |                |    |        |
|-------------|---------------|--------------------|-------------|---------------|-----------------|-----------------|-------------------------------|--------------------------|------------------------|----------------|----|--------|
|             |               |                    |             | CAT-M1 Band 2 | _Uplink frequer | ncy band : 1850 | to 1910 MHz                   |                          |                        |                |    |        |
| BW<br>(MHz) | UL<br>Channel | Frequency<br>(MHz) | Modulation  | RB allocation | RB Start        | Index           | Conducted<br>Average<br>(dBm) | EIRP<br>Average<br>(dBm) | EIRP<br>Limit<br>(dBm) | Margin<br>(dB) |    |        |
|             | 18675         | 1857.5             | OBek        | 1             | 0               | 0               | 21.48                         | 21.98                    | 33                     | -11.02         |    |        |
|             |               | 1007.0             | QPSK        | 6             | 0               | 0               | 21.50                         | 22.00                    | 33                     | -11.00         |    |        |
|             | 18900         | 19000              | 1000        | 1880          | QPSK            | 1               | 0                             | 0                        | 21.53                  | 22.03          | 33 | -10.97 |
|             |               | 1000               | QF3N        | 6             | 0               | 0               | 21.50                         | 22.00                    | 33                     | -11.00         |    |        |
|             | 19125         | 1902.5             | 1902.5 QPSK | 1             | 5               | 11              | 21.49                         | 21.99                    | 33                     | -11.01         |    |        |
| 15          |               |                    |             | 6             | 0               | 11              | 21.48                         | 21.98                    | 33                     | -11.02         |    |        |
| 15          | 18675         | 1857.5             | 16QAM       | 1             | 0               | 0               | 21.47                         | 21.97                    | 33                     | -11.03         |    |        |
|             | 10075         | 1007.0             |             | 5             | 0               | 0               | 21.48                         | 21.98                    | 33                     | -11.02         |    |        |
|             | 18900         | 1880               | 160AM       | 1             | 0               | 0               | 21.50                         | 22.00                    | 33                     | -11.00         |    |        |
|             | 10900         | 1000               | 16QAM       | 5             | 0               | 0               | 21.38                         | 21.88                    | 33                     | -11.12         |    |        |
|             | 19125         | 1902.5             | 16QAM       | 1             | 5               | 11              | 21.40                         | 21.90                    | 33                     | -11.10         |    |        |
|             | 19120         | 1902.5             | TOQAM       | 5             | 0               | 11              | 21.42                         | 21.92                    | 33                     | -11.08         |    |        |

Antenna gain (dBi) 0.5

| Antenna g   | Jain (abi)    | 0.5                |            |               |                 |                 |                               |                          |                        |                |
|-------------|---------------|--------------------|------------|---------------|-----------------|-----------------|-------------------------------|--------------------------|------------------------|----------------|
|             |               |                    |            | CAT-M1 Band 2 | _Uplink frequer | ncy band : 1850 | to 1910 MHz                   |                          |                        |                |
| BW<br>(MHz) | UL<br>Channel | Frequency<br>(MHz) | Modulation | RB allocation | RB Start        | Index           | Conducted<br>Average<br>(dBm) | EIRP<br>Average<br>(dBm) | EIRP<br>Limit<br>(dBm) | Margin<br>(dB) |
|             | 19700         | 1960               | QPSK       | 1             | 0               | 0               | 21.59                         | 22.09                    | 33                     | -10.91         |
|             | 18700 1860 C  | QF3N               | 6          | 0             | 0               | 21.42           | 21.92                         | 33                       | -11.08                 |                |
|             | 18900         | 1880               | QPSK       | 1             | 0               | 0               | 21.83                         | 22.33                    | 33                     | -10.67         |
|             |               |                    | QFSN       | 6             | 0               | 0               | 21.57                         | 22.07                    | 33                     | -10.93         |
|             | 19100         | 1900               | QPSK       | 1             | 5               | 15              | 21.40                         | 21.90                    | 33                     | -11.10         |
| 20          |               |                    |            | 6             | 0               | 15              | 21.54                         | 22.04                    | 33                     | -10.96         |
| 20          | 18700         | 1860               | 16QAM      | 1             | 0               | 0               | 21.49                         | 21.99                    | 33                     | -11.01         |
|             | 10700         |                    |            | 5             | 0               | 0               | 21.47                         | 21.97                    | 33                     | -11.03         |
|             | 18900         | 1880               | 16QAM      | 1             | 0               | 0               | 21.44                         | 21.94                    | 33                     | -11.06         |
|             | 10900         | 1000               | TOQAM      | 5             | 0               | 0               | 21.37                         | 21.87                    | 33                     | -11.13         |
|             | 19100         | 1900               | 16QAM      | 1             | 5               | 15              | 21.52                         | 22.02                    | 33                     | -10.98         |
|             |               | 1900               |            | 5             | 0               | 15              | 21.45                         | 21.95                    | 33                     | -11.05         |

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30

30

30

-10.55

-9.66

-10.55

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| Antonno     | acin (dDi)    | 0.5                |              |               |                |                 |                               |                          |                        |                |
|-------------|---------------|--------------------|--------------|---------------|----------------|-----------------|-------------------------------|--------------------------|------------------------|----------------|
| Antenna     | gain (ubi)    | 0.5                |              | 04T M4 D 1    | 4 11 11 1 6    | 1 1 474         | 0 ( 4755 8811                 |                          |                        |                |
|             | _             |                    |              | CAI-M1 Band   | 4_Uplink frequ | ency band : 171 | 0 to 1755 MHz                 |                          |                        |                |
| BW<br>(MHz) | UL<br>Channel | Frequency<br>(MHz) | Modulation   | RB allocation | RB Start       | Index           | Conducted<br>Average<br>(dBm) | EIRP<br>Average<br>(dBm) | EIRP<br>Limit<br>(dBm) | Margin<br>(dB) |
|             | 19957         | 1710.7             | QPSK         | 1             | 0              | 0               | 20.94                         | 21.44                    | 30                     | -8.56          |
|             | 19957         | 17 10.7            | 1710.7 QF3K  | 6             | 0              | 0               | 18.84                         | 19.34                    | 30                     | -10.66         |
|             | 20175         | 0175 1732.5 QPSK   | OBSK         | 1             | 0              | 0               | 20.93                         | 21.43                    | 30                     | -8.57          |
|             | 20175         |                    | QF3N         | 6             | 0              | 0               | 18.83                         | 19.33                    | 30                     | -10.67         |
|             | 20393         | 47540              | 1754.3 QPSK  | 1             | 5              | 0               | 20.92                         | 21.42                    | 30                     | -8.58          |
| 1.1         | 20393         | 1754.3             |              | 6             | 0              | 0               | 18.95                         | 19.45                    | 30                     | -10.55         |
| 1.4         | 19957         | 4740.7             | 1710.7 16QAM | 1             | 0              | 0               | 19.96                         | 20.46                    | 30                     | -9.54          |
|             | 19957         | 17 10.7            |              | 5             | 0              | 0               | 18.94                         | 19.44                    | 30                     | -10.56         |
|             | 00475         | 4700 5             | 400 114      | 1             | 0              | 0               | 19.84                         | 20.34                    | 30                     | -9.66          |

0

0

0

18.95

19.84

18.95

19.45

20.34

19.45

0

5

0

Antenna gain (dRi)

20175

20393

1732.5

1754.3

16QAM

16QAM

5

1

5

| Antenna g   | jain (ubi)   | 0.5                |             |               |          |       |                               |                          |                        |                |  |  |
|-------------|--|--------------------|-------------|---------------|----------|-------|-------------------------------|--------------------------|------------------------|----------------|--|--|
|             | CAT-M1 Band 4_Uplink frequency band : 1710 to 1755 MHz |                    |             |               |          |       |                               |                          |                        |                |  |  |
| BW<br>(MHz) | UL<br>Channel  | Frequency<br>(MHz) | Modulation  | RB allocation | RB Start | Index | Conducted<br>Average<br>(dBm) | EIRP<br>Average<br>(dBm) | EIRP<br>Limit<br>(dBm) | Margin<br>(dB) |  |  |
|             | 19965  | 1711.5             | QPSK        | 1             | 0        | 0     | 20.88                         | 21.38                    | 30                     | -8.62          |  |  |
|             |  | 1/11.5             | QP5K        | 6             | 0        | 0     | 18.87                         | 19.37                    | 30                     | -10.63         |  |  |
|             | 20175  | 1732.5             | QPSK        | 1             | 0        | 0     | 20.86                         | 21.36                    | 30                     | -8.64          |  |  |
|             |  |                    | QF3N        | 6             | 0        | 0     | 18.95                         | 19.45                    | 30                     | -10.55         |  |  |
|             | 20385  | 1753.5             | 1753.5 QPSK | 1             | 5        | 1     | 20.87                         | 21.37                    | 30                     | -8.63          |  |  |
| 3           |  |                    |             | 6             | 0        | 1     | 18.84                         | 19.34                    | 30                     | -10.66         |  |  |
| 3           | 19965  | 1711.5             | 16QAM       | 1             | 0        | 0     | 19.97                         | 20.47                    | 30                     | -9.53          |  |  |
|             | 19900  | 1711.5             |             | 5             | 0        | 0     | 18.86                         | 19.36                    | 30                     | -10.64         |  |  |
|             | 20175  | 1720 5             | 160 414     | 1             | 0        | 0     | 19.83                         | 20.33                    | 30                     | -9.67          |  |  |
|             | 20175  | 1732.5             | 16QAM       | 5             | 0        | 0     | 18.97                         | 19.47                    | 30                     | -10.53         |  |  |
|             | 20385  | 1753.5             | 400 414     | 1             | 5        | 1     | 19.97                         | 20.47                    | 30                     | -9.53          |  |  |
|             |  | 1700.0             | 16QAM       | 5             | 0        | 1     | 18.91                         | 19.41                    | 30                     | -10.59         |  |  |

| Antenna gain | (dBi) | 0.5 |
|--------------|-------|-----|
|--------------|-------|-----|

| Antenna y   | nterna gain (dbi) 0.5                                  |                    |            |               |          |       |                               |                          |                        |                |  |  |  |
|-------------|--|--------------------|------------|---------------|----------|-------|-------------------------------|--------------------------|------------------------|----------------|--|--|--|
|             | CAT-M1 Band 4_Uplink frequency band : 1710 to 1755 MHz |                    |            |               |          |       |                               |                          |                        |                |  |  |  |
| BW<br>(MHz) | UL<br>Channel  | Frequency<br>(MHz) | Modulation | RB allocation | RB Start | Index | Conducted<br>Average<br>(dBm) | EIRP<br>Average<br>(dBm) | EIRP<br>Limit<br>(dBm) | Margin<br>(dB) |  |  |  |
|             | 19975  | 1712.5             | QPSK       | 1             | 0        | 0     | 21.35                         | 21.85                    | 30                     | -8.15          |  |  |  |
|             | 19973  | 17 12.3            | QF3N       | 6             | 0        | 0     | 19.00                         | 19.50                    | 30                     | -10.50         |  |  |  |
|             | 20175  | 1732.5             | QPSK       | 1             | 0        | 0     | 21.36                         | 21.86                    | 30                     | -8.14          |  |  |  |
|             | 20175 1732.5   | QPSN               | 6          | 0             | 0        | 19.84 | 20.34                         | 30                       | -9.66                  |                |  |  |  |
|             | 20375  | 1752.5             | QPSK       | 1             | 5        | 3     | 21.45                         | 21.95                    | 30                     | -8.05          |  |  |  |
| 5           | 20373  | 1732.3             |            | 6             | 0        | 3     | 19.97                         | 20.47                    | 30                     | -9.53          |  |  |  |
| 5           | 19975  | 1712.5             | 16QAM      | 1             | 0        | 0     | 21.39                         | 21.89                    | 30                     | -8.11          |  |  |  |
|             | 19975  | 17 12.3            | TOQAW      | 5             | 0        | 0     | 18.88                         | 19.38                    | 30                     | -10.62         |  |  |  |
|             | 20175  | 1722.5             | 16QAM      | 1             | 0        | 0     | 21.51                         | 22.01                    | 30                     | -7.99          |  |  |  |
|             | 20175  | 1732.5             | IOQAW      | 5             | 0        | 0     | 18.81                         | 19.31                    | 30                     | -10.69         |  |  |  |
|             | 20375  | 1752.5             | 52.5 16QAM | 1             | 5        | 3     | 21.46                         | 21.96                    | 30                     | -8.04          |  |  |  |
|             | 20375  | 1732.3             | TOQAW      | 5             | 0        | 3     | 18.94                         | 19.44                    | 30                     | -10.56         |  |  |  |

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| Antenna ç   | Jaiii (ubi)   | 0.5                |             |               |                |                |                               |                          |                        |                |        |          |        |       |   |   |   |       |       |    |       |
|-------------|---------------|--------------------|-------------|---------------|----------------|----------------|-------------------------------|--------------------------|------------------------|----------------|--------|----------|--------|-------|---|---|---|-------|-------|----|-------|
|             |               |                    |             | CAT-M1 Band   | 4_Uplink frequ | ency band: 171 | 0 to 1755 MHz                 |                          |                        |                |        |          |        |       |   |   |   |       |       |    |       |
| BW<br>(MHz) | UL<br>Channel | Frequency<br>(MHz) | Modulation  | RB allocation | RB Start       | Index          | Conducted<br>Average<br>(dBm) | EIRP<br>Average<br>(dBm) | EIRP<br>Limit<br>(dBm) | Margin<br>(dB) |        |          |        |       |   |   |   |       |       |    |       |
|             | 20000         | 1715               | QPSK        | 1             | 0              | 0              | 21.37                         | 21.87                    | 30                     | -8.13          |        |          |        |       |   |   |   |       |       |    |       |
|             | 20000         | 1715               | QFSN        | 6             | 0              | 0              | 19.92                         | 20.42                    | 30                     | -9.58          |        |          |        |       |   |   |   |       |       |    |       |
|             | 20175         | 1732.5             | QPSK        | 1             | 0              | 0              | 21.48                         | 21.98                    | 30                     | -8.02          |        |          |        |       |   |   |   |       |       |    |       |
|             | 20175 1       | 1732.3             | QP5K        | 6             | 0              | 0              | 19.99                         | 20.49                    | 30                     | -9.51          |        |          |        |       |   |   |   |       |       |    |       |
|             | 20350         | 1750               | QPSK        | 1             | 5              | 7              | 21.40                         | 21.90                    | 30                     | -8.10          |        |          |        |       |   |   |   |       |       |    |       |
| 10          | 20330         | 1750               | QF3N        | 6             | 0              | 7              | 19.96                         | 20.46                    | 30                     | -9.54          |        |          |        |       |   |   |   |       |       |    |       |
| 10          | 20000         | 1715               | 16QAM       | 1             | 0              | 0              | 21.36                         | 21.86                    | 30                     | -8.14          |        |          |        |       |   |   |   |       |       |    |       |
|             | 20000         | 1715               | TOQAW       | 5             | 0              | 0              | 19.85                         | 20.35                    | 30                     | -9.65          |        |          |        |       |   |   |   |       |       |    |       |
|             | 20175         | 1732.5             | 1722.5      | 1722.5        | 1720 5         | 1720 5         | 1722.5                        | 1722.5                   | 1722.5                 | 1722.5         | 4720 F | F 4720 F | 1720 F | 160AM | 1 | 0 | 0 | 21.52 | 22.02 | 30 | -7.98 |
|             | 20175         |                    | 732.5 16QAM | 5             | 0              | 0              | 19.96                         | 20.46                    | 30                     | -9.54          |        |          |        |       |   |   |   |       |       |    |       |
|             | 20350         | 1750 1             | 16QAM       | 1             | 5              | 7              | 21.39                         | 21.89                    | 30                     | -8.11          |        |          |        |       |   |   |   |       |       |    |       |
|             | 20330         | 1750               | IUQAW       | 5             | 0              | 7              | 19.85                         | 20.35                    | 30                     | -9.65          |        |          |        |       |   |   |   |       |       |    |       |

Antenna gain (dBi)

|             | CAT-M1 Band 4_Uplink frequency band : 1710 to 1755 MHz |                    |            |               |          |       |                         |                          |                        |                |    |       |
|-------------|--|--------------------|------------|---------------|----------|-------|-------------------------|--------------------------|------------------------|----------------|----|-------|
| BW<br>(MHz) | UL<br>Channel  | Frequency<br>(MHz) | Modulation | RB allocation | RB Start | Index | Conducted Average (dBm) | EIRP<br>Average<br>(dBm) | EIRP<br>Limit<br>(dBm) | Margin<br>(dB) |    |       |
|             | 20025  | 4747 E             | QPSK       | 1             | 0        | 0     | 21.52                   | 22.02                    | 30                     | -7.98          |    |       |
|             | 20025  | 1717.5             | QPSK       | 6             | 0        | 0     | 21.46                   | 21.96                    | 30                     | -8.04          |    |       |
|             | 20175  | 1720 5             | QPSK       | 1             | 0        | 0     | 21.52                   | 22.02                    | 30                     | -7.98          |    |       |
|             | 20175 1732.5   | 1732.5             | QFSN       | 6             | 0        | 0     | 21.54                   | 22.04                    | 30                     | -7.96          |    |       |
|             | 20325  | 1747.5             | QPSK       | 1             | 5        | 11    | 21.52                   | 22.02                    | 30                     | -7.98          |    |       |
| 15          | 20323  | 1747.5             | QF3N       | 6             | 0        | 11    | 21.49                   | 21.99                    | 30                     | -8.01          |    |       |
| 15          | 20025  | 1717.5             | 16QAM      | 1             | 0        | 0     | 21.38                   | 21.88                    | 30                     | -8.12          |    |       |
|             | 20025  | 1717.5             | IOQAW      | 5             | 0        | 0     | 21.44                   | 21.94                    | 30                     | -8.06          |    |       |
|             | 20175  | 1720 5             | 160 AM     | 1             | 0        | 0     | 21.50                   | 22.00                    | 30                     | -8.00          |    |       |
|             | 20175  | 1732.5             | 16QAM      | 5             | 0        | 0     | 21.41                   | 21.91                    | 30                     | -8.09          |    |       |
|             | 20225  | 20325 1747.5       | 16O AM     | 1             | 5        | 11    | 21.36                   | 21.86                    | 30                     | -8.14          |    |       |
|             | 20323  |                    | 1747.5     | 1747.5        | 16QAM    | 5     | 0                       | 11                       | 21.37                  | 21.87          | 30 | -8.13 |

Antenna gain (dBi)

|             |               |                    |            | CAT-M1 Band   | 4_Uplink frequ | ency band : 171 | 0 to 1755 MHz                 |                          |                        |                |
|-------------|---------------|--------------------|------------|---------------|----------------|-----------------|-------------------------------|--------------------------|------------------------|----------------|
| BW<br>(MHz) | UL<br>Channel | Frequency<br>(MHz) | Modulation | RB allocation | RB Start       | Index           | Conducted<br>Average<br>(dBm) | EIRP<br>Average<br>(dBm) | EIRP<br>Limit<br>(dBm) | Margin<br>(dB) |
|             | 20050         | 1720               | QPSK       | 1             | 0              | 0               | 21.61                         | 22.11                    | 30                     | -7.89          |
|             | 20030         | 1720               | QF3N       | 6             | 0              | 0               | 21.53                         | 22.03                    | 30                     | -7.97          |
|             | 20175         | 1732.5             | QPSK       | 1             | 0              | 0               | 21.77                         | 22.27                    | 30                     | -7.73          |
|             | 20173         | 1732.5             | QF3N       | 6             | 0              | 0               | 21.43                         | 21.93                    | 30                     | -8.07          |
|             | 20300         | 300 1745           | 745 QPSK   | 1             | 5              | 15              | 21.47                         | 21.97                    | 30                     | -8.03          |
| 20          | 20300         | 1745               |            | 6             | 0              | 15              | 21.47                         | 21.97                    | 30                     | -8.03          |
| 20          | 20050         | 1720               | 16QAM      | 1             | 0              | 0               | 21.51                         | 22.01                    | 30                     | -7.99          |
|             | 20030         | 1720               | IOQAW      | 5             | 0              | 0               | 21.40                         | 21.90                    | 30                     | -8.10          |
|             | 20175         | 1722.5             | 16QAM      | 1             | 0              | 0               | 21.47                         | 21.97                    | 30                     | -8.03          |
|             | 20175 1732.5  | IOQAW              | 5          | 0             | 0              | 21.41           | 21.91                         | 30                       | -8.09                  |                |
|             | 20200 4745    | 16QAM              | 1          | 5             | 15             | 21.37           | 21.87                         | 30                       | -8.13                  |                |
|             | 20300 1745    |                    | IUQAW      | 5             | 0              | 15              | 21.51                         | 22.01                    | 30                     | -7.99          |

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-17.57

-16.47

-17.51

34.77

34.77

34.77

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Antenna gain (dBi)

| 3           | CAT-M1 Band 12 Uplink frequency band : 699 to 716 MHz |                    |             |               |          |              |                         |                         |                          |                       |                |       |       |       |       |        |
|-------------|---|--------------------|-------------|---------------|----------|--------------|-------------------------|-------------------------|--------------------------|-----------------------|----------------|-------|-------|-------|-------|--------|
| BW<br>(MHz) | UL<br>Channel   | Frequency<br>(MHz) | Modulation  | RB allocation | RB Start | Index        | Conducted Average (dBm) | ERP<br>Average<br>(dBm) | EIRP<br>Average<br>(dBm) | ERP<br>Limit<br>(dBm) | Margin<br>(dB) |       |       |       |       |        |
|             | 02047   | COO 7              | ODCK        | 1             | 0        | 0            | 21.34                   | 19.69                   | 21.84                    | 34.77                 | -15.08         |       |       |       |       |        |
|             | 23017   | 699.7              | QPSK        | 6             | 0        | 0            | 18.86                   | 17.21                   | 19.36                    | 34.77                 | -17.56         |       |       |       |       |        |
|             | 22005   | 707 F              | ODCK        | 1             | 0        | 0            | 21.43                   | 19.78                   | 21.93                    | 34.77                 | -14.99         |       |       |       |       |        |
|             | 23095 707.5   | QPSK               | 6           | 0             | 0        | 18.98        | 17.33                   | 19.48                   | 34.77                    | -17.44                |                |       |       |       |       |        |
|             | 23173   | 715.5              | 15.5 QPSK   | 1             | 5        | 0            | 21.45                   | 19.80                   | 21.95                    | 34.77                 | -14.97         |       |       |       |       |        |
| 1 1 1       | 23173   | 715.5              | QP3N        | 6             | 0        | 0            | 18.89                   | 17.24                   | 19.39                    | 34.77                 | -17.53         |       |       |       |       |        |
| 1.4         | 23017   | 699.7              | 16QAM       | 1             | 0        | 0            | 19.89                   | 18.24                   | 20.39                    | 34.77                 | -16.53         |       |       |       |       |        |
|             | 23017   | 099.7              | IOQAW       | 5             | 0        | 0            | 18.95                   | 17.30                   | 19.45                    | 34.77                 | -17.47         |       |       |       |       |        |
|             | 23095   | 5 707.5 16         | 707.5       | 02005 707.5   | 707.5    | 707 F 400 AM | 707.5                   | 100414                  | 1                        | 0                     | 0              | 19.85 | 18.20 | 20.35 | 34.77 | -16.57 |
|             | 23095   |                    | 16QAM       | 5             | 0        | 0            | 18.98                   | 17.33                   | 19.48                    | 34.77                 | -17.44         |       |       |       |       |        |
|             | 23173 715.5   | 715.5              | 745 F 400AM | 1             | 5        | 0            | 19.88                   | 18.23                   | 20.38                    | 34.77                 | -16.54         |       |       |       |       |        |
|             |   | 715.5 16QAM        | 5           | 0             | 0        | 18.83        | 17.18                   | 19.33                   | 34.77                    | -17.59                |                |       |       |       |       |        |

Antenna gain (dBi) 0.5

CAT-M1 Band 12\_Uplink frequency band: 699 to 716 MHz Conducted **ERP EIRP ERP** BW UL Frequency Margin RB allocation **RB Start** Modulation Index Average Average Average Limit (MHz) Channel (MHz) (dB) (dBm) (dBm) (dBm) (dBm) 0 0 21.31 19.66 21.81 34.77 -15.11 23025 700.5 QPSK 0 18.93 17.28 19.43 34.77 -17.49 6 0 0 0 21.39 19.74 21.89 34.77 -15.03 1 23095 707.5 QPSK 0 18.86 17.21 19.36 -17.56 6 0 34.77 -15.11 21.31 19.66 21.81 34.77 5 1 1 23165 QPSK 714.5 6 0 18.85 17.20 34.77 -17.57 19.35 3 0 0 18.19 20.34 34.77 -16.58 1 19.84 23025 700.5 16QAM -17.51 34.77 5 0 0 18.91 17.26 19.41 18.26 20.41 34.77 -16.51 1 0 0 19.91

0

1

1

18.85

19.95

18.91

17.20

18.30

17.26

19.35

20.45

19.41

23165 Antenna gain (dBi) 0.5

23095

707.5

714.5

16QAM

16QAM

5

1

5

0

5

0

| Antenna g   | Jain (abi)    | 0.5                |               |               |               |                |                               |                         |                          |                       |                |       |          |             |             |   |   |   |       |       |       |       |        |
|-------------|---------------|--------------------|---------------|---------------|---------------|----------------|-------------------------------|-------------------------|--------------------------|-----------------------|----------------|-------|----------|-------------|-------------|---|---|---|-------|-------|-------|-------|--------|
|             |               |                    |               | CAT-M1 B      | and 12_Uplink | frequency band | : 699 to 716 MH               | z                       |                          |                       |                |       |          |             |             |   |   |   |       |       |       |       |        |
| BW<br>(MHz) | UL<br>Channel | Frequency<br>(MHz) | Modulation    | RB allocation | RB Start      | Index          | Conducted<br>Average<br>(dBm) | ERP<br>Average<br>(dBm) | EIRP<br>Average<br>(dBm) | ERP<br>Limit<br>(dBm) | Margin<br>(dB) |       |          |             |             |   |   |   |       |       |       |       |        |
|             | 23035         | 701.5              | QPSK          | 1             | 0             | 0              | 21.44                         | 19.79                   | 21.94                    | 34.77                 | -14.98         |       |          |             |             |   |   |   |       |       |       |       |        |
|             | 23033         | 701.5              | QFSN          | 6             | 0             | 0              | 18.91                         | 17.26                   | 19.41                    | 34.77                 | -17.51         |       |          |             |             |   |   |   |       |       |       |       |        |
|             | 23095         | 707.5              | QPSK          | 1             | 0             | 0              | 21.34                         | 19.69                   | 21.84                    | 34.77                 | -15.08         |       |          |             |             |   |   |   |       |       |       |       |        |
|             | 23095 /07.5   | QPSK               | 6             | 0             | 0             | 18.91          | 17.26                         | 19.41                   | 34.77                    | -17.51                |                |       |          |             |             |   |   |   |       |       |       |       |        |
|             | 23155         | 713.5              | QPSK          | 1             | 5             | 3              | 21.38                         | 19.73                   | 21.88                    | 34.77                 | -15.04         |       |          |             |             |   |   |   |       |       |       |       |        |
| 5           | 23100         | 713.3              | QF3N          | 6             | 0             | 3              | 18.86                         | 17.21                   | 19.36                    | 34.77                 | -17.56         |       |          |             |             |   |   |   |       |       |       |       |        |
| 3           | 23035         | 701.5              | 16QAM         | 1             | 0             | 0              | 19.95                         | 18.30                   | 20.45                    | 34.77                 | -16.47         |       |          |             |             |   |   |   |       |       |       |       |        |
|             | 23033         | 701.5              | TOQAW         | 5             | 0             | 0              | 18.89                         | 17.24                   | 19.39                    | 34.77                 | -17.53         |       |          |             |             |   |   |   |       |       |       |       |        |
|             | 23095         | 707.5              | 707 F         | 707.5         | 707.5         | 707 F          | 707 F                         | 707.5                   | 707.5                    | 707.5                 | 707.5          | 707.5 | 05 707 5 | 707.5 16OAN | 707.5 16OAM | 1 | 0 | 0 | 19.89 | 18.24 | 20.39 | 34.77 | -16.53 |
|             | 23093         | 707.5              | 707.5 16QAM   | 5             | 0             | 0              | 18.81                         | 17.16                   | 19.31                    | 34.77                 | -17.61         |       |          |             |             |   |   |   |       |       |       |       |        |
|             | 23155 713.5   | 712.5              | 713.5 16QAM — | 1             | 5             | 3              | 19.91                         | 18.26                   | 20.41                    | 34.77                 | -16.51         |       |          |             |             |   |   |   |       |       |       |       |        |
|             |               | 113.5              |               | 5             | 0             | 3              | 18.94                         | 17.29                   | 19.44                    | 34.77                 | -17.48         |       |          |             |             |   |   |   |       |       |       |       |        |

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Antenna gain (dBi)

|             | CAT-M1 Band 12_Uplink frequency band : 699 to 716 MHz |                    |            |               |          |       |                               |                         |                          |                       |                |  |
|-------------|---|--------------------|------------|---------------|----------|-------|-------------------------------|-------------------------|--------------------------|-----------------------|----------------|--|
| BW<br>(MHz) | UL<br>Channel   | Frequency<br>(MHz) | Modulation | RB allocation | RB Start | Index | Conducted<br>Average<br>(dBm) | ERP<br>Average<br>(dBm) | EIRP<br>Average<br>(dBm) | ERP<br>Limit<br>(dBm) | Margin<br>(dB) |  |
|             | 23060   | 704                | QPSK       | 1             | 0        | 0     | 21.49                         | 19.84                   | 21.99                    | 34.77                 | -14.93         |  |
|             | 23000   | 704                | QF3N       | 6             | 0        | 0     | 18.93                         | 17.28                   | 19.43                    | 34.77                 | -17.49         |  |
|             | 22005   | 707 E              | QPSK       | 1             | 0        | 0     | 21.66                         | 20.01                   | 22.16                    | 34.77                 | -14.76         |  |
|             | 23095 707.5   | QP3N               | 6          | 0             | 0        | 18.92 | 17.27                         | 19.42                   | 34.77                    | -17.50                |                |  |
|             | 23130   | 711                | QPSK       | 1             | 5        | 7     | 21.43                         | 19.78                   | 21.93                    | 34.77                 | -14.99         |  |
| 10          | 23130   | /11                |            | 6             | 0        | 7     | 18.86                         | 17.21                   | 19.36                    | 34.77                 | -17.56         |  |
| 10          | 23060   | 704                | 16QAM      | 1             | 0        | 0     | 19.89                         | 18.24                   | 20.39                    | 34.77                 | -16.53         |  |
|             | 23000   | 704                | TOWAN      | 5             | 0        | 0     | 18.83                         | 17.18                   | 19.33                    | 34.77                 | -17.59         |  |
|             | 22005   | 707.5              | 16QAM      | 1             | 0        | 0     | 19.89                         | 18.24                   | 20.39                    | 34.77                 | -16.53         |  |
|             | 23095 707.5   | TOQAM              | 5          | 0             | 0        | 19.00 | 17.35                         | 19.50                   | 34.77                    | -17.42                |                |  |
|             | 23130 711   | 711                | 1 1600M    | 1             | 5        | 7     | 19.99                         | 18.34                   | 20.49                    | 34.77                 | -16.43         |  |
|             |   | 711 16QAM          | 5          | 0             | 7        | 18.98 | 17.33                         | 19.48                   | 34.77                    | -17.44                |                |  |

Antenna gain (dBi)

| 7 ti ito i ii io | United Guilli (MDI)                                   |                    |            |               |          |       |                               |                         |                          |                       |                |  |
|------------------|---|--------------------|------------|---------------|----------|-------|-------------------------------|-------------------------|--------------------------|-----------------------|----------------|--|
|                  | CAT-M1 Band 13_Uplink frequency band : 777 to 787 MHz |                    |            |               |          |       |                               |                         |                          |                       |                |  |
| BW<br>(MHz)      | UL<br>Channel   | Frequency<br>(MHz) | Modulation | RB allocation | RB Start | Index | Conducted<br>Average<br>(dBm) | ERP<br>Average<br>(dBm) | EIRP<br>Average<br>(dBm) | ERP<br>Limit<br>(dBm) | Margin<br>(dB) |  |
|                  | 23205   | 779.5              | QPSK       | 1             | 0        | 0     | 21.38                         | 19.73                   | 21.88                    | 34.77                 | -15.04         |  |
|                  | 23203   | 119.5              | QF3N       | 6             | 0        | 0     | 18.93                         | 17.28                   | 19.43                    | 34.77                 | -17.49         |  |
|                  | 23230   | 782                | QPSK       | 1             | 0        | 0     | 21.25                         | 19.60                   | 21.75                    | 34.77                 | -15.17         |  |
|                  | 23230   | 102                | UPSK       | 6             | 0        | 0     | 18.97                         | 17.32                   | 19.47                    | 34.77                 | -17.45         |  |
|                  | 23255   | 784.5              | QPSK       | 1             | 5        | 3     | 21.30                         | 19.65                   | 21.80                    | 34.77                 | -15.12         |  |
| 5                | 23233   | 704.3              |            | 6             | 0        | 3     | 18.90                         | 17.25                   | 19.40                    | 34.77                 | -17.52         |  |
| 3                | 23205   | 779.5              | 16QAM      | 1             | 0        | 0     | 19.83                         | 18.18                   | 20.33                    | 34.77                 | -16.59         |  |
|                  | 23203   | 118.5              | IOQAW      | 5             | 0        | 0     | 18.85                         | 17.20                   | 19.35                    | 34.77                 | -17.57         |  |
|                  | 22220   | 700                | 16QAM      | 1             | 0        | 0     | 19.92                         | 18.27                   | 20.42                    | 34.77                 | -16.50         |  |
|                  | 23230 782   | IOQAW              | 5          | 0             | 0        | 18.90 | 17.25                         | 19.40                   | 34.77                    | -17.52                |                |  |
|                  | 23255   | 784.5              | 16QAM -    | 1             | 5        | 3     | 19.87                         | 18.22                   | 20.37                    | 34.77                 | -16.55         |  |
|                  |   | 104.3              |            | 5             | 0        | 3     | 18.97                         | 17.32                   | 19.47                    | 34.77                 | -17.45         |  |

Antenna gain (dBi) 0.5

| 7 tintornia | gaiii (abi)   | 0.5                |            |               |                |                 |                               |                         |                          |                       |                |
|-------------|---------------|--------------------|------------|---------------|----------------|-----------------|-------------------------------|-------------------------|--------------------------|-----------------------|----------------|
|             |               |                    |            | CAT-M1 E      | Band 13_Uplinl | k frequency ban | d: 777 to 787 M               | Hz                      |                          |                       |                |
| BW<br>(MHz) | UL<br>Channel | Frequency<br>(MHz) | Modulation | RB allocation | RB Start       | Index           | Conducted<br>Average<br>(dBm) | ERP<br>Average<br>(dBm) | EIRP<br>Average<br>(dBm) | ERP<br>Limit<br>(dBm) | Margin<br>(dB) |
|             | 23230         | 782                | QPSK       | 1             | 0              | 0               | 21.44                         | 19.79                   | 21.94                    | 34.77                 | -14.98         |
|             | 23230         | 102                | Uron       | 6             | 0              | 0               | 18.89                         | 17.24                   | 19.39                    | 34.77                 | -17.53         |
| 10          | 23230         | 782                | 16QAM      | 1             | 0              | 0               | 19.82                         | 18.17                   | 20.32                    | 34.77                 | -16.60         |
| 10          | 23230         | 102                | IOQAW      | 5             | 0              | 0               | 18.96                         | 17.31                   | 19.46                    | 34.77                 | -17.46         |
|             | ,             | 1                  | , ,        | 1             | 1              | 1               | 1                             | 1                       | 1                        | 1                     | 1              |
|             |               |                    | 1          | 1             | 1              | 1               | 1                             | 1                       | 1                        | 1                     |                |

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# OCCUPIED BANDWIDTH MEASUREMENT

| C                                      | CAT-M1 BAND 2 Channel bandwidth: 1.4MHz              |              |        |                |       |  |  |  |  |  |
|--|--|--------------|--------|----------------|-------|--|--|--|--|--|
| Freq.                                  | СН   | 99% BW (MHz) |        | 26 dB BW (MHz) |       |  |  |  |  |  |
| (MHz)                                  | СП   | QPSK         | 16QAM  | QPSK           | 16QAM |  |  |  |  |  |
| 1850.7                                 | 18607  | 1.0842       | 0.9160 | 1.272          | 1.097 |  |  |  |  |  |
| 1880.0                                 | 1880.0 18900 1.0837 <b>0.9185</b> 1.260 <b>1.107</b> |              |        |                |       |  |  |  |  |  |
| 1909.3 19193 1.0821 0.9168 1.266 1.099 |  |              |        |                |       |  |  |  |  |  |

| CAT-M1 BAND 2 Channel bandwidth: 5MHz                   |       |        |         |         |         |  |  |  |  |
|---|-------|--------|---------|---------|---------|--|--|--|--|
| Freq.   | СН    | 99% BV | V (MHz) | 26 dB B | W (MHz) |  |  |  |  |
| (MHz)   | СП    | QPSK   | 16QAM   | QPSK    | 16QAM   |  |  |  |  |
| 1852.5  | 18625 | 1.1511 | 0.9902  | 1.370   | 1.216   |  |  |  |  |
| 1880.0 18900 1.1395 <b>0.9905 1.387</b> 1               |       |        |         |         |         |  |  |  |  |
| 1907.5   19175   1.1383   0.9892   1.384   <b>1.221</b> |       |        |         |         |         |  |  |  |  |

| CAT-M1 BAND 2 Channel bandwidth: 15MHz |       |        |        |       |       |  |  |  |  |
|--|-------|--------|--------|-------|-------|--|--|--|--|
| Freq. 99% BW (MHz) 26 dB BW (MHz)      |       |        |        |       |       |  |  |  |  |
| (MHz)                                  | CH    | QPSK   | 16QAM  | QPSK  | 16QAM |  |  |  |  |
| 1857.5                                 | 18675 | 1.3947 | 1.2322 | 2.677 | 1.566 |  |  |  |  |
| 1880.0                                 | 18900 | 1.4320 | 1.2367 | 2.789 | 1.666 |  |  |  |  |
| 1902.5 19125 1.4048 1.2110 2.744 1.599 |       |        |        |       |       |  |  |  |  |

| CAT-M1 BAND 4 Channel bandwidth: 1.4MHz |       |        |         |         |         |  |  |
|---|-------|--------|---------|---------|---------|--|--|
| Freq.                                   | СН    | 99% BV | V (MHz) | 26 dB B | W (MHz) |  |  |
| (MHz)                                   | CIT   | QPSK   | 16QAM   | QPSK    | 16QAM   |  |  |
| 1710.7                                  | 19957 | 1.0849 | 0.9172  | 1.258   | 1.101   |  |  |
| 1732.5                                  | 20175 | 1.0830 | 0.9182  | 1.259   | 1.101   |  |  |
| 1754.3                                  | 20393 | 1.0830 | 0.9157  | 1.267   | 1.104   |  |  |

| CAT-M1 BAND 4 Channel bandwidth: 5MHz |       |        |         |         |         |  |  |
|---------------------------------------|-------|--------|---------|---------|---------|--|--|
| Freq.                                 | СН    | 99% BV | V (MHz) | 26 dB B | W (MHz) |  |  |
| (MHz)                                 | CIT   | QPSK   | 16QAM   | QPSK    | 16QAM   |  |  |
| 1712.5                                | 19975 | 1.1398 | 0.9916  | 1.435   | 1.209   |  |  |
| 1732.5                                | 20175 | 1.1410 | 0.9886  | 1.362   | 1.197   |  |  |
| 1752.5                                | 20375 | 1.1479 | 0.9830  | 1.391   | 1.195   |  |  |

| CAT-M1 BAND 4 Channel bandwidth: 15MHz |       |        |         |         |         |  |  |
|--|-------|--------|---------|---------|---------|--|--|
| Freq.                                  | СН    | 99% BV | V (MHz) | 26 dB B | W (MHz) |  |  |
| (MHz)                                  | 5     | QPSK   | 16QAM   | QPSK    | 16QAM   |  |  |
| 1717.5                                 | 20025 | 1.4033 | 1.2350  | 2.590   | 1.541   |  |  |
| 1732.5                                 | 20175 | 1.4037 | 1.2252  | 2.856   | 1.645   |  |  |
| 1747.5                                 | 20325 | 1.4264 | 1.2355  | 3.385   | 1.751   |  |  |

| CAT-M1 BAND 2 Channel bandwidth: 3MHz |       |        |         |         |         |  |  |  |
|---------------------------------------|-------|--------|---------|---------|---------|--|--|--|
| Freq.                                 | СН    | 99% BV | V (MHz) | 26 dB B | W (MHz) |  |  |  |
| (MHz)                                 | G     | QPSK   | 16QAM   | QPSK    | 16QAM   |  |  |  |
| 1851.5                                | 18615 | 1.1133 | 0.9457  | 1.306   | 1.182   |  |  |  |
| 1880.0                                | 18900 | 1.1122 | 0.9523  | 1.305   | 1.143   |  |  |  |
| 1908.5                                | 19185 | 1.1113 | 0.9453  | 1.321   | 1.146   |  |  |  |

| CAT-M1 BAND 2 Channel bandwidth: 10MHz |       |        |         |         |         |  |  |
|--|-------|--------|---------|---------|---------|--|--|
| Freq.                                  | СН    | 99% BV | V (MHz) | 26 dB B | W (MHz) |  |  |
| (MHz)                                  | СП    | QPSK   | 16QAM   | QPSK    | 16QAM   |  |  |
| 1855.0                                 | 18650 | 1.2744 | 1.1099  | 1.681   | 1.370   |  |  |
| 1880.0                                 | 18900 | 1.2857 | 1.1221  | 1.927   | 1.434   |  |  |
| 1905.0                                 | 19150 | 1.2784 | 1.1149  | 1.948   | 1.367   |  |  |

| CAT-M1 BAND 2 Channel bandwidth: 20MHz |       |        |         |         |         |  |  |
|--|-------|--------|---------|---------|---------|--|--|
| Freq.                                  | СН    | 99% BV | V (MHz) | 26 dB B | W (MHz) |  |  |
| (MHz)                                  | G     | QPSK   | 16QAM   | QPSK    | 16QAM   |  |  |
| 1860.0                                 | 18700 | 1.5563 | 1.3867  | 3.374   | 2.227   |  |  |
| 1880.0                                 | 18900 | 1.5761 | 1.4025  | 3.782   | 2.408   |  |  |
| 1900.0                                 | 19100 | 1.5549 | 1.3799  | 3.742   | 2.325   |  |  |

| CAT-M1 BAND 4 Channel bandwidth: 3MHz |       |        |         |         |         |  |  |  |
|---------------------------------------|-------|--------|---------|---------|---------|--|--|--|
| Freq.                                 | СН    | 99% BV | V (MHz) | 26 dB B | W (MHz) |  |  |  |
| (MHz)                                 | 5     | QPSK   | 16QAM   | QPSK    | 16QAM   |  |  |  |
| 1711.5                                | 19965 | 1.1070 | 0.9488  | 1.347   | 1.156   |  |  |  |
| 1732.5                                | 20175 | 1.1094 | 0.9531  | 1.306   | 1.138   |  |  |  |
| 1753.5                                | 20385 | 1.1192 | 0.9502  | 1.320   | 1.144   |  |  |  |

| CAT-M1 BAND 4 Channel bandwidth: 10MHz |       |        |         |         |         |  |  |  |
|--|-------|--------|---------|---------|---------|--|--|--|
| Freq.                                  | СН    | 99% BV | V (MHz) | 26 dB B | W (MHz) |  |  |  |
| (MHz)                                  | СП    | QPSK   | 16QAM   | QPSK    | 16QAM   |  |  |  |
| 1715.0                                 | 20000 | 1.2755 | 1.1219  | 1.997   | 1.459   |  |  |  |
| 1732.5                                 | 20175 | 1.2744 | 1.1230  | 1.797   | 1.434   |  |  |  |
| 1750.0                                 | 20350 | 1.2892 | 1.1030  | 1.905   | 1.378   |  |  |  |

| CAT-M1 BAND 4 Channel bandwidth: 20MHz |                       |        |         |         |       |  |  |
|--|-----------------------|--------|---------|---------|-------|--|--|
| Freq.                                  | Freq. CH 99% BW (MHz) |        | 26 dB B | W (MHz) |       |  |  |
| (MHz)                                  | СП                    | QPSK   | 16QAM   | QPSK    | 16QAM |  |  |
| 1720.0                                 | 20050                 | 1.5851 | 1.3947  | 2.898   | 2.590 |  |  |
| 1732.5                                 | 20175                 | 1.5572 | 1.3801  | 3.474   | 1.948 |  |  |
| 1745.0                                 | 20300                 | 1.5272 | 1.3913  | 2.808   | 1.998 |  |  |

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| CAT-M1 BAND 12 Channel bandwidth: 1.4MHz |       |        |         |         |         |  |  |  |
|--|-------|--------|---------|---------|---------|--|--|--|
| Freq.                                    | СН    | 99% BV | V (MHz) | 26 dB B | W (MHz) |  |  |  |
| (MHz)                                    | CIT   | QPSK   | 16QAM   | QPSK    | 16QAM   |  |  |  |
| 699.7                                    | 23017 | 1.0811 | 0.9145  | 1.260   | 1.096   |  |  |  |
| 707.5                                    | 23095 | 1.0838 | 0.9167  | 1.273   | 1.091   |  |  |  |
| 715.3                                    | 23173 | 1.0841 | 0.9183  | 1.259   | 1.093   |  |  |  |

| CAT-M1 BAND 12 Channel bandwidth: 5MHz |       |        |         |         |         |  |  |
|--|-------|--------|---------|---------|---------|--|--|
| Freq.                                  | СН    | 99% BV | V (MHz) | 26 dB B | W (MHz) |  |  |
| (MHz)                                  | OH    | QPSK   | 16QAM   | QPSK    | 16QAM   |  |  |
| 701.5                                  | 23035 | 1.1510 | 0.9867  | 1.468   | 1.210   |  |  |
| 707.5                                  | 23095 | 1.1445 | 0.9880  | 1.425   | 1.209   |  |  |
| 713.5                                  | 23155 | 1.1439 | 0.9965  | 1.420   | 1.221   |  |  |

| CAT-M1 BAND 13 Channel bandwidth: 5MHz |       |        |         |         |         |  |  |
|--|-------|--------|---------|---------|---------|--|--|
| Freq.                                  | СН    | 99% BV | V (MHz) | 26 dB B | W (MHz) |  |  |
| (MHz)                                  | 5     | QPSK   | 16QAM   | QPSK    | 16QAM   |  |  |
| 779.5                                  | 23205 | 1.1485 | 0.9881  | 1.470   | 1.210   |  |  |
| 782.0                                  | 23230 | 1.1444 | 0.9918  | 1.516   | 1.201   |  |  |
| 784.5                                  | 23255 | 1.1452 | 0.9887  | 1.462   | 1.220   |  |  |

| CAT-M1 BAND 12 Channel bandwidth: 3MHz |       |              |        |                |       |  |  |  |
|--|-------|--------------|--------|----------------|-------|--|--|--|
| Freq.                                  | СН    | 99% BW (MHz) |        | 26 dB BW (MHz) |       |  |  |  |
| (MHz)                                  |       | QPSK         | 16QAM  | QPSK           | 16QAM |  |  |  |
| 700.5                                  | 23025 | 1.1001       | 0.9506 | 1.302          | 1.169 |  |  |  |
| 707.5                                  | 23095 | 1.1093       | 0.9497 | 1.304          | 1.165 |  |  |  |
| 714.5                                  | 23165 | 1.1089       | 0.9502 | 1.318          | 1.151 |  |  |  |

| CAT-M1 BAND 12 Channel bandwidth: 10MHz |       |              |        |                |       |  |  |  |
|---|-------|--------------|--------|----------------|-------|--|--|--|
| Freq.                                   | СН    | 99% BW (MHz) |        | 26 dB BW (MHz) |       |  |  |  |
| (MHz)                                   |       | QPSK         | 16QAM  | QPSK           | 16QAM |  |  |  |
| 704.0                                   | 23060 | 1.2803       | 1.1229 | 1.609          | 1.412 |  |  |  |
| 707.5                                   | 23095 | 1.2831       | 1.1144 | 1.796          | 1.438 |  |  |  |
| 711.0                                   | 23130 | 1.2803       | 1.1120 | 1.617          | 1.457 |  |  |  |

| CAT-M1 BAND 13 Channel bandwidth: 10MHz |       |              |        |                |       |  |  |  |
|---|-------|--------------|--------|----------------|-------|--|--|--|
| Freq.                                   | СН    | 99% BW (MHz) |        | 26 dB BW (MHz) |       |  |  |  |
| (MHz)                                   |       | QPSK         | 16QAM  | QPSK           | 16QAM |  |  |  |
| 782.0                                   | 23230 | 1.2750       | 1.0872 | 1.783          | 1.357 |  |  |  |

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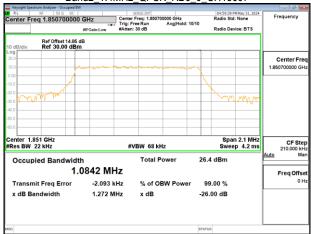
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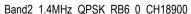
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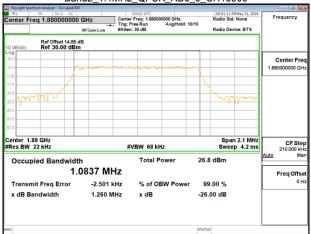


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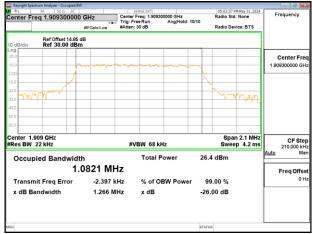
### Band2 1.4MHz QPSK RB6 0 CH18607



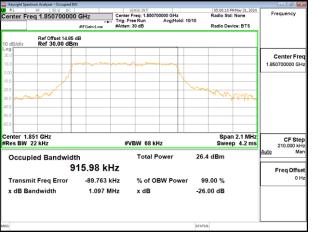




### Band2 1.4MHz QPSK RB6 0 CH19193



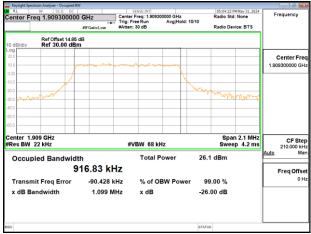
### Band2 1.4MHz 16QAM RB5 0 CH18607



### Band2 1.4MHz 16QAM RB5 0 CH18900



### Band2 1.4MHz 16QAM RB5 0 CH19193



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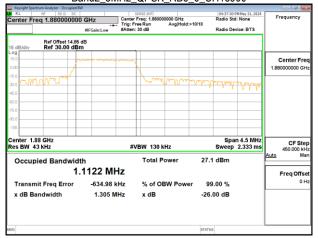


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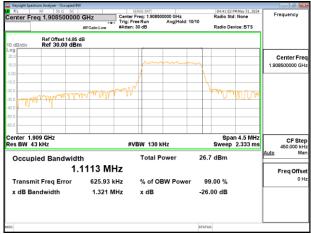
### Band2 3MHz QPSK RB6 0 CH18615



### Band2 3MHz QPSK RB6 0 CH18900



### Band2 3MHz QPSK RB6 0 CH19185



### Band2 3MHz 16QAM RB5 0 CH18615



### Band2 3MHz 16QAM RB5 0 CH18900



# Band2\_3MHz\_16QAM\_RB5\_0\_CH19185



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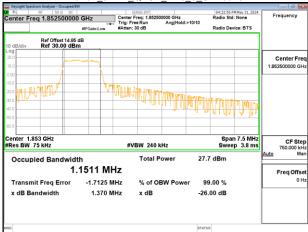
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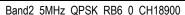
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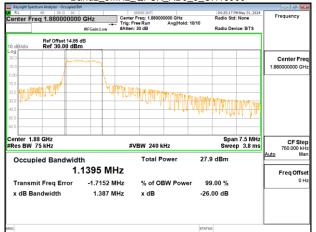


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### Band2 5MHz QPSK RB6 0 CH18625



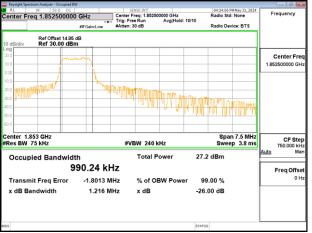




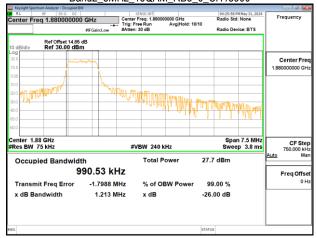
### Band2\_5MHz\_QPSK\_RB6\_0\_CH19175



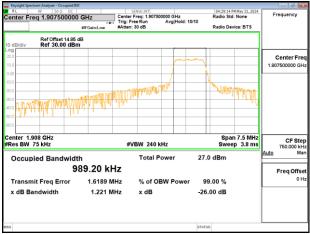
### Band2 5MHz 16QAM RB5 0 CH18625



### Band2 5MHz 16QAM RB5 0 CH18900



### Band2\_5MHz\_16QAM\_RB5\_0\_CH19175



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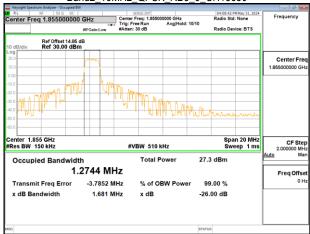
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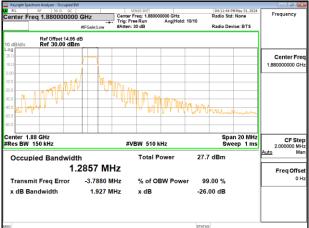


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### Band2\_10MHz\_QPSK\_RB6\_0\_CH18650



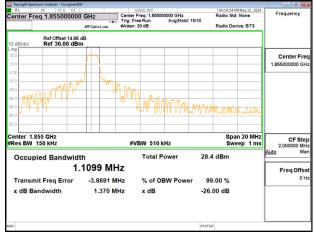




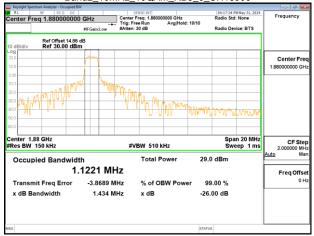
Band2\_10MHz\_QPSK\_RB6\_0\_CH19150



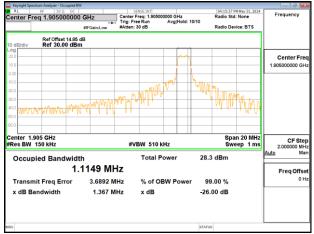
### Band2\_10MHz\_16QAM\_RB5\_0\_CH18650



### Band2 10MHz 16QAM RB5 0 CH18900



### Band2\_10MHz\_16QAM\_RB5\_0\_CH19150



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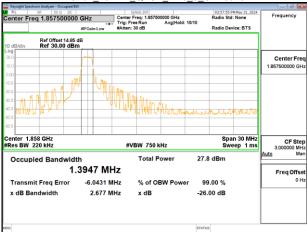
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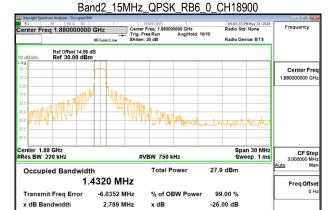
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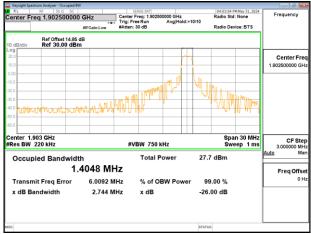
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### Band2\_15MHz\_QPSK\_RB6\_0\_CH18675

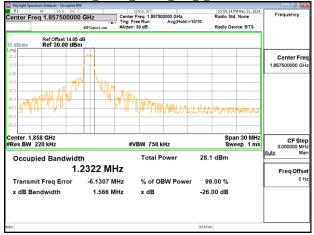




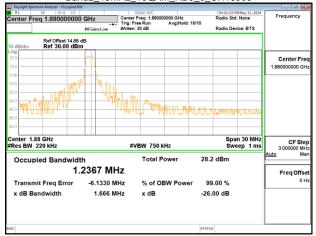
### Band2\_15MHz\_QPSK\_RB6\_0\_CH19125



### Band2\_15MHz\_16QAM\_RB5\_0\_CH18675



### Band2 15MHz 16QAM RB5 0 CH18900



### Band2\_15MHz\_16QAM\_RB5\_0\_CH19125



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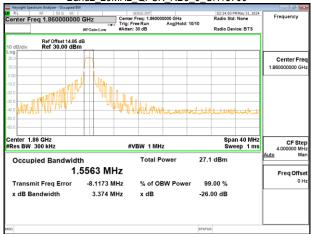
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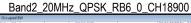
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### Band2 20MHz QPSK RB6 0 CH18700



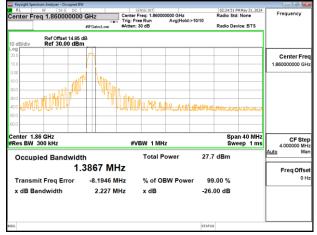




### Band2 20MHz QPSK RB6 0 CH19100



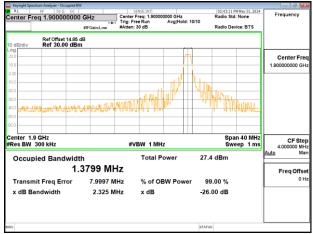
### Band2 20MHz 16QAM RB5 0 CH18700



### Band2 20MHz 16QAM RB5 0 CH18900



### Band2\_20MHz\_16QAM\_RB5\_0\_CH19100



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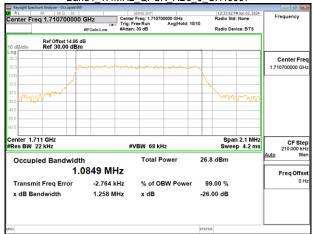
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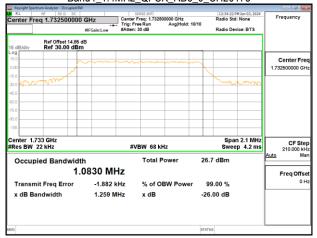


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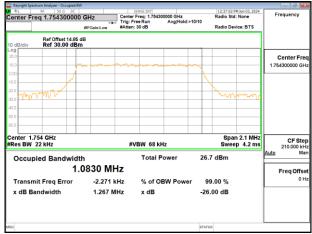
### Band4 1.4MHz QPSK RB6 0 CH19957







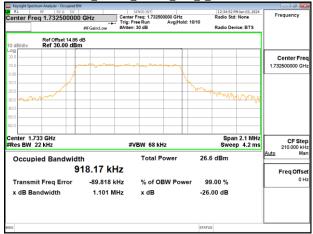
### Band4 1.4MHz QPSK RB6 0 CH20393



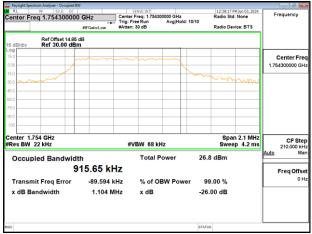
### Band4 1.4MHz 16QAM RB5 0 CH19957



### Band4 1.4MHz 16QAM RB5 0 CH20175



### Band4 1.4MHz 16QAM RB5 0 CH20393



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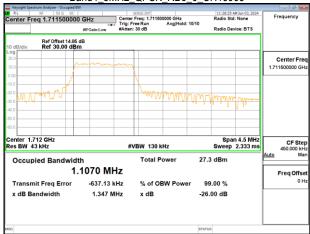
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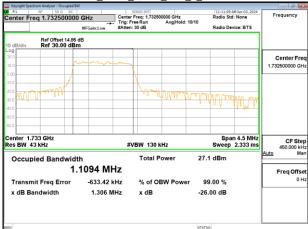


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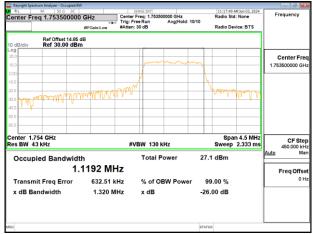
### Band4 3MHz QPSK RB6 0 CH19965



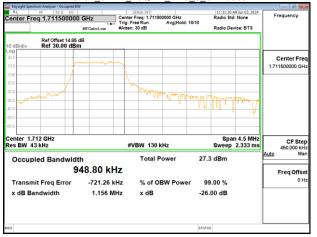
### Band4 3MHz QPSK RB6 0 CH20175



### Band4 3MHz QPSK RB6 0 CH20385



### Band4 3MHz 16QAM RB5 0 CH19965



### Band4 3MHz 16QAM RB5 0 CH20175



### Band4\_3MHz\_16QAM\_RB5\_0\_CH20385



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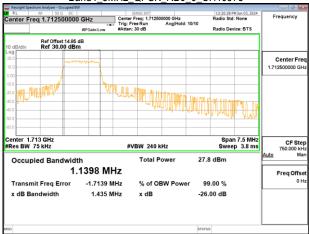
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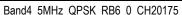
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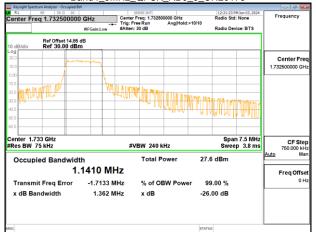


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### Band4 5MHz QPSK RB6 0 CH19975



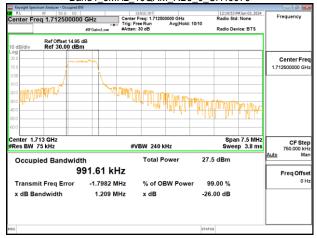




### Band4 5MHz QPSK RB6 0 CH20375



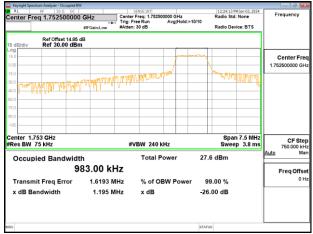
### Band4 5MHz 16QAM RB5 0 CH19975



### Band4 5MHz 16QAM RB5 0 CH20175



### Band4\_5MHz\_16QAM\_RB5\_0\_CH20375



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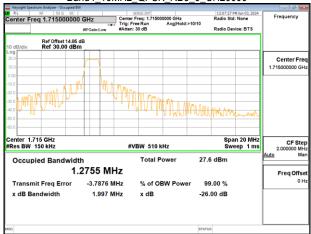
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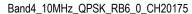
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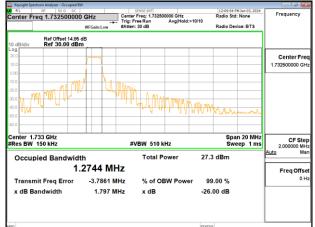


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### Band4\_10MHz\_QPSK\_RB6\_0\_CH20000



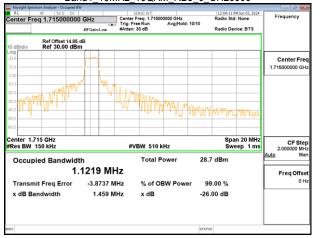




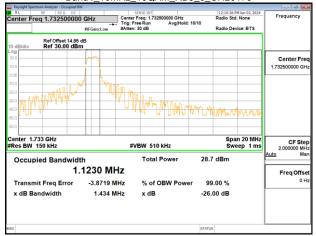
### Band4\_10MHz\_QPSK\_RB6\_0\_CH20350



### Band4\_10MHz\_16QAM\_RB5\_0\_CH20000



### Band4 10MHz 16QAM RB5 0 CH20175



### Band4\_10MHz\_16QAM\_RB5\_0\_CH20350



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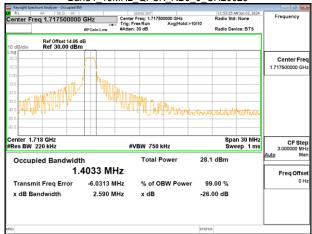
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### Band4\_15MHz\_QPSK\_RB6\_0\_CH20025





Band4 15MHz QPSK RB6 0 CH20175

### Band4\_15MHz\_QPSK\_RB6\_0\_CH20325

% of OBW Po

x dB

99.00 %

-26.00 dB

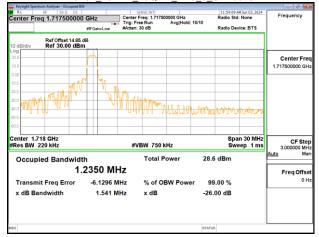
-6.0313 MHz

2.856 MHz

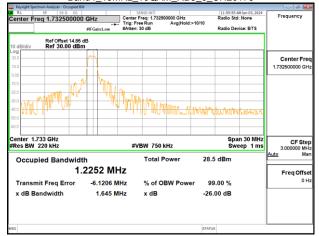
x dB Bandwidth



### Band4 15MHz 16QAM RB5 0 CH20025



### Band4 15MHz 16QAM RB5 0 CH20175



### Band4\_15MHz\_16QAM\_RB5\_0\_CH20325



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