| CHANNEL | TX Channel 19 | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
|---|---|---|---|
| FREQUENCY RANGE | 1GHz ~ 25GHz | | |

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

| Freq MHz | Reading level dBuV | Antenna factor dB/m | Cable loss dB | Preamp factor dB | level dBuV/m | Limit level dBuV/m | Over limit dB | Remark |
|---|---|---|---|---|---|---|---|---|
| 4880.000 | 29.69 | 31.03 | 7.01 | 34.03 | 33.70 | 54.00 | -20.30 | Average |
| 4880.000 | 39.50 | 31.03 | 7.01 | 34.03 | 43.51 | 74.00 | -30.49 | Peak |
| 7320.000 | 28.11 | 35.67 | 8.97 | 34.49 | 38.26 | 54.00 | -15.74 | Average |
| 7320.000 | 38.26 | 35.67 | 8.97 | 34.49 | 48.41 | 74.00 | -25.59 | Peak |
| 9760.000 | 28.98 | 38.51 | 11.16 | 34.20 | 44.45 | 54.00 | -9.55 | Average |
| 9760.000 | 38.41 | 38.51 | 11.16 | 34.20 | 53.88 | 74.00 | -20.12 | Peak |
| 2440.000 | 94.70 | 27.67 | 4.18 | 36.00 | 90.55 | 74.00 | 16.55 | Peak |

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

| Freq MHz | Reading level dBuV | Antenna factor dB/m | Cable loss dB | Preamp factor dB | level dBuV/m | Limit level dBuV/m | Over limit dB | Remark |
|---|---|---|---|---|---|---|---|---|
| 4880.000 | 29.36 | 31.03 | 7.01 | 34.03 | 33.37 | 54.00 | -20.63 | Average |
| 4880.000 | 39.19 | 31.03 | 7.01 | 34.03 | 43.20 | 74.00 | -30.80 | Peak |
| 7320.000 | 28.01 | 35.67 | 8.97 | 34.49 | 38.16 | 54.00 | -15.84 | Average |
| 7320.000 | 37.75 | 35.67 | 8.97 | 34.49 | 47.90 | 74.00 | -26.10 | Peak |
| 9760.000 | 28.86 | 38.51 | 11.16 | 34.20 | 44.33 | 54.00 | -9.67 | Average |
| 9760.000 | 38.69 | 38.51 | 11.16 | 34.20 | 54.16 | 74.00 | -19.84 | Peak |
| 2440.000 | 94.49 | 27.67 | 4.18 | 36.00 | 90.34 | 74.00 | 16.34 | Peak |

**REMARKS:**

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 2440MHz: Fundamental frequency.

| CHANNEL | TX Channel 39 | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
|---|---|---|---|
| FREQUENCY RANGE | 1GHz ~ 25GHz | | |

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

| Freq MHz | Reading level dBuV | Antenna factor dB/m | Cable loss dB | Preamp factor dB | level dBuV/m | Limit level dBuV/m | Over limit dB | Remark |
|---|---|---|---|---|---|---|---|---|
| 2480.234 | 92.26 | 27.76 | 4.19 | 36.10 | 88.11 | 74.00 | 14.11 | Peak |
| 2483.500 | 43.13 | 27.76 | 4.19 | 36.11 | 38.97 | 74.00 | -35.03 | Peak |
| 2484.524 | 45.37 | 27.77 | 4.19 | 36.11 | 41.22 | 74.00 | -32.78 | Peak |
| 2500.000 | 41.37 | 27.80 | 4.19 | 36.15 | 37.21 | 74.00 | -36.79 | Peak |
| 2479.937 | 92.26 | 27.76 | 4.19 | 36.10 | 88.11 | 54.00 | 34.11 | Average |
| 2483.500 | 31.37 | 27.76 | 4.19 | 36.11 | 27.21 | 54.00 | -26.79 | Average |
| 2500.000 | 29.98 | 27.80 | 4.19 | 36.15 | 25.82 | 54.00 | -28.18 | Average |

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

| Freq MHz | Reading level dBuV | Antenna factor dB/m | Cable loss dB | Preamp factor dB | level dBuV/m | Limit level dBuV/m | Over limit dB | Remark |
|---|---|---|---|---|---|---|---|---|
| 2480.267 | 91.55 | 27.76 | 4.19 | 36.10 | 87.40 | 74.00 | 13.40 | Peak |
| 2483.500 | 42.13 | 27.76 | 4.19 | 36.11 | 37.97 | 74.00 | -36.03 | Peak |
| 2483.897 | 44.15 | 27.76 | 4.19 | 36.11 | 39.99 | 74.00 | -34.01 | Peak |
| 2500.000 | 42.00 | 27.80 | 4.19 | 36.15 | 37.84 | 74.00 | -36.16 | Peak |
| 2480.003 | 90.94 | 27.76 | 4.19 | 36.10 | 86.79 | 54.00 | 32.79 | Average |
| 2483.500 | 31.06 | 27.76 | 4.19 | 36.11 | 26.90 | 54.00 | -27.10 | Average |
| 2500.000 | 29.95 | 27.80 | 4.19 | 36.15 | 25.79 | 54.00 | -28.21 | Average |

**REMARKS:**

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 2480MHz: Fundamental frequency.

**BT-LE _2M**

| | | | |
|---|---|---|---|
| **CHANNEL** | TX Channel 0 | **DETECTOR FUNCTION** | Peak (PK)<br>Average (AV) |
| **FREQUENCY RANGE** | 1GHz ~ 25GHz | | |

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

| Freq MHz | Reading level dBuV | Antenna factor dB/m | Cable loss dB | Preamp factor dB | level dBuV/m | Limit level dBuV/m | Over limit dB | Remark |
|---|---|---|---|---|---|---|---|---|
| 2310.000 | 42.44 | 27.38 | 4.08 | 35.68 | 38.22 | 74.00 | -35.78 | Peak |
| 2310.920 | 44.74 | 27.38 | 4.08 | 35.68 | 40.52 | 74.00 | -33.48 | Peak |
| 2390.000 | 42.23 | 27.56 | 4.16 | 35.88 | 38.07 | 74.00 | -35.93 | Peak |
| 2402.585 | 96.85 | 27.59 | 4.17 | 35.91 | 92.70 | 74.00 | 18.70 | Peak |
| 2310.000 | 30.47 | 27.38 | 4.08 | 35.68 | 26.25 | 54.00 | -27.75 | Average |
| 2390.000 | 30.86 | 27.56 | 4.16 | 35.88 | 26.70 | 54.00 | -27.30 | Average |
| 2402.060 | 95.00 | 27.58 | 4.17 | 35.91 | 90.84 | 54.00 | 36.84 | Average |

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

| Freq MHz | Reading level dBuV | Antenna factor dB/m | Cable loss dB | Preamp factor dB | level dBuV/m | Limit level dBuV/m | Over limit dB | Remark |
|---|---|---|---|---|---|---|---|---|
| 2310.000 | 43.11 | 27.38 | 4.08 | 35.68 | 38.89 | 74.00 | -35.11 | Peak |
| 2389.250 | 45.80 | 27.56 | 4.16 | 35.87 | 41.65 | 74.00 | -32.35 | Peak |
| 2390.000 | 43.35 | 27.56 | 4.16 | 35.88 | 39.19 | 74.00 | -34.81 | Peak |
| 2401.535 | 96.36 | 27.58 | 4.17 | 35.90 | 92.21 | 74.00 | 18.21 | Peak |
| 2310.000 | 30.27 | 27.38 | 4.08 | 35.68 | 26.05 | 54.00 | -27.95 | Average |
| 2390.000 | 30.91 | 27.56 | 4.16 | 35.88 | 26.75 | 54.00 | -27.25 | Average |
| 2402.060 | 94.40 | 27.58 | 4.17 | 35.91 | 90.24 | 54.00 | 36.24 | Average |

**REMARKS:**

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 2402MHz: Fundamental frequency.

| CHANNEL | TX Channel 19 | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
|---|---|---|---|
| FREQUENCY RANGE | 1GHz ~ 25GHz | | |

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

| Freq MHz | Reading level dBuV | Antenna factor dB/m | Cable loss dB | Preamp factor dB | level dBuV/m | Limit level dBuV/m | Over limit dB | Remark |
|---|---|---|---|---|---|---|---|---|
| 4880.000 | 30.69 | 31.03 | 7.01 | 34.03 | 34.70 | 54.00 | -19.30 | Average |
| 4880.000 | 40.50 | 31.03 | 7.01 | 34.03 | 44.51 | 74.00 | -29.49 | Peak |
| 7320.000 | 29.11 | 35.67 | 8.97 | 34.49 | 39.26 | 54.00 | -14.74 | Average |
| 7320.000 | 39.26 | 35.67 | 8.97 | 34.49 | 49.41 | 74.00 | -24.59 | Peak |
| 9760.000 | 29.98 | 38.51 | 11.16 | 34.20 | 45.45 | 54.00 | -8.55 | Average |
| 9760.000 | 39.41 | 38.51 | 11.16 | 34.20 | 54.88 | 74.00 | -19.12 | Peak |
| 2440.000 | 95.17 | 27.67 | 4.18 | 36.00 | 91.02 | 74.00 | 17.02 | Peak |

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

| Freq MHz | Reading level dBuV | Antenna factor dB/m | Cable loss dB | Preamp factor dB | level dBuV/m | Limit level dBuV/m | Over limit dB | Remark |
|---|---|---|---|---|---|---|---|---|
| 4880.000 | 30.36 | 31.03 | 7.01 | 34.03 | 34.37 | 54.00 | -19.63 | Average |
| 4880.000 | 40.19 | 31.03 | 7.01 | 34.03 | 44.20 | 74.00 | -29.80 | Peak |
| 7320.000 | 29.01 | 35.67 | 8.97 | 34.49 | 39.16 | 54.00 | -14.84 | Average |
| 7320.000 | 38.75 | 35.67 | 8.97 | 34.49 | 48.90 | 74.00 | -25.10 | Peak |
| 9760.000 | 29.86 | 38.51 | 11.16 | 34.20 | 45.33 | 54.00 | -8.67 | Average |
| 9760.000 | 39.69 | 38.51 | 11.16 | 34.20 | 55.16 | 74.00 | -18.84 | Peak |
| 2440.000 | 95.44 | 27.67 | 4.18 | 36.00 | 91.29 | 74.00 | 17.29 | Peak |

**REMARKS:**

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 2440MHz: Fundamental frequency.

| CHANNEL | TX Channel 39 | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
|---|---|---|---|
| FREQUENCY RANGE | 1GHz ~ 25GHz | | |

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

| Freq MHz | Reading level dBuV | Antenna factor dB/m | Cable loss dB | Preamp factor dB | level dBuV/m | Limit level dBuV/m | Over limit dB | Remark |
|---|---|---|---|---|---|---|---|---|
| 2480.498 | 93.03 | 27.76 | 4.19 | 36.10 | 88.88 | 74.00 | 14.88 | Peak |
| 2483.500 | 52.45 | 27.76 | 4.19 | 36.11 | 48.29 | 74.00 | -25.71 | Peak |
| 2483.732 | 54.98 | 27.76 | 4.19 | 36.11 | 50.82 | 74.00 | -23.18 | Peak |
| 2500.000 | 43.12 | 27.80 | 4.19 | 36.15 | 38.96 | 74.00 | -35.04 | Peak |
| 2479.970 | 90.91 | 27.76 | 4.19 | 36.10 | 86.76 | 54.00 | 32.76 | Average |
| 2483.500 | 32.02 | 27.76 | 4.19 | 36.11 | 27.86 | 54.00 | -26.14 | Average |
| 2500.000 | 29.89 | 27.80 | 4.19 | 36.15 | 25.73 | 54.00 | -28.27 | Average |

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

| Freq MHz | Reading level dBuV | Antenna factor dB/m | Cable loss dB | Preamp factor dB | level dBuV/m | Limit level dBuV/m | Over limit dB | Remark |
|---|---|---|---|---|---|---|---|---|
| 2480.465 | 91.38 | 27.76 | 4.19 | 36.10 | 87.23 | 74.00 | 13.23 | Peak |
| 2483.500 | 54.10 | 27.76 | 4.19 | 36.11 | 49.94 | 74.00 | -24.06 | Peak |
| 2483.600 | 56.50 | 27.76 | 4.19 | 36.11 | 52.34 | 74.00 | -21.66 | Peak |
| 2500.000 | 42.92 | 27.80 | 4.19 | 36.15 | 38.76 | 74.00 | -35.24 | Peak |
| 2480.003 | 89.27 | 27.76 | 4.19 | 36.10 | 85.12 | 54.00 | 31.12 | Average |
| 2483.500 | 31.20 | 27.76 | 4.19 | 36.11 | 27.04 | 54.00 | -26.96 | Average |
| 2500.000 | 30.12 | 27.80 | 4.19 | 36.15 | 25.96 | 54.00 | -28.04 | Average |

**REMARKS:**

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 2480MHz: Fundamental frequency.

**BT-LE _S2**

| | | | |
|---|---|---|---|
| **CHANNEL** | TX Channel 0 | **DETECTOR FUNCTION** | Peak (PK)<br>Average (AV) |
| **FREQUENCY RANGE** | 1GHz ~ 25GHz | | |

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

| Freq MHz | Reading level dBuV | Antenna factor dB/m | Cable loss dB | Preamp factor dB | level dBuV/m | Limit level dBuV/m | Over limit dB | Remark |
|---|---|---|---|---|---|---|---|---|
| 2310.000 | 42.21 | 27.38 | 4.08 | 35.68 | 37.99 | 74.00 | -36.01 | Peak |
| 2322.050 | 46.32 | 27.41 | 4.09 | 35.71 | 42.11 | 74.00 | -31.89 | Peak |
| 2390.000 | 43.22 | 27.56 | 4.16 | 35.88 | 39.06 | 74.00 | -34.94 | Peak |
| 2402.270 | 95.65 | 27.58 | 4.17 | 35.91 | 91.49 | 74.00 | 17.49 | Peak |
| 2310.000 | 29.94 | 27.38 | 4.08 | 35.68 | 25.72 | 54.00 | -28.28 | Average |
| 2390.000 | 30.39 | 27.56 | 4.16 | 35.88 | 26.23 | 54.00 | -27.77 | Average |
| 2402.060 | 95.46 | 27.58 | 4.17 | 35.91 | 91.30 | 54.00 | 37.30 | Average |

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

| Freq MHz | Reading level dBuV | Antenna factor dB/m | Cable loss dB | Preamp factor dB | level dBuV/m | Limit level dBuV/m | Over limit dB | Remark |
|---|---|---|---|---|---|---|---|---|
| 2310.000 | 42.39 | 27.38 | 4.08 | 35.68 | 38.17 | 74.00 | -35.83 | Peak |
| 2385.260 | 44.42 | 27.55 | 4.16 | 35.86 | 40.27 | 74.00 | -33.73 | Peak |
| 2390.000 | 42.59 | 27.56 | 4.16 | 35.88 | 38.43 | 74.00 | -35.57 | Peak |
| 2402.270 | 95.08 | 27.58 | 4.17 | 35.91 | 90.92 | 74.00 | 16.92 | Peak |
| 2310.000 | 29.91 | 27.38 | 4.08 | 35.68 | 25.69 | 54.00 | -28.31 | Average |
| 2390.000 | 30.39 | 27.56 | 4.16 | 35.88 | 26.23 | 54.00 | -27.77 | Average |
| 2402.060 | 94.55 | 27.58 | 4.17 | 35.91 | 90.39 | 54.00 | 36.39 | Average |

**REMARKS:**

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 2402MHz: Fundamental frequency.

| CHANNEL | TX Channel 19 | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
|---|---|---|---|
| FREQUENCY RANGE | 1GHz ~ 25GHz | | |

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

| Freq MHz | Reading level dBuV | Antenna factor dB/m | Cable loss dB | Preamp factor dB | level dBuV/m | Limit level dBuV/m | Over limit dB | Remark |
|---|---|---|---|---|---|---|---|---|
| 4880.000 | 31.69 | 31.03 | 7.01 | 34.03 | 35.70 | 54.00 | -18.30 | Average |
| 4880.000 | 41.50 | 31.03 | 7.01 | 34.03 | 45.51 | 74.00 | -28.49 | Peak |
| 7320.000 | 28.11 | 35.67 | 8.97 | 34.49 | 38.26 | 54.00 | -15.74 | Average |
| 7320.000 | 38.26 | 35.67 | 8.97 | 34.49 | 48.41 | 74.00 | -25.59 | Peak |
| 9760.000 | 30.98 | 38.51 | 11.16 | 34.20 | 46.45 | 54.00 | -7.55 | Average |
| 9760.000 | 38.41 | 38.51 | 11.16 | 34.20 | 53.88 | 74.00 | -20.12 | Peak |
| 2440.000 | 94.52 | 27.67 | 4.18 | 36.00 | 90.37 | 74.00 | 16.37 | Peak |

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

| Freq MHz | Reading level dBuV | Antenna factor dB/m | Cable loss dB | Preamp factor dB | level dBuV/m | Limit level dBuV/m | Over limit dB | Remark |
|---|---|---|---|---|---|---|---|---|
| 4880.000 | 31.36 | 31.03 | 7.01 | 34.03 | 35.37 | 54.00 | -18.63 | Average |
| 4880.000 | 41.19 | 31.03 | 7.01 | 34.03 | 45.20 | 74.00 | -28.80 | Peak |
| 7320.000 | 30.01 | 35.67 | 8.97 | 34.49 | 40.16 | 54.00 | -13.84 | Average |
| 7320.000 | 37.75 | 35.67 | 8.97 | 34.49 | 47.90 | 74.00 | -26.10 | Peak |
| 9760.000 | 28.86 | 38.51 | 11.16 | 34.20 | 44.33 | 54.00 | -9.67 | Average |
| 9760.000 | 38.69 | 38.51 | 11.16 | 34.20 | 54.16 | 74.00 | -19.84 | Peak |
| 2440.000 | 92.55 | 27.67 | 4.18 | 36.00 | 88.40 | 74.00 | 14.40 | Peak |

**REMARKS:**

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 2440MHz: Fundamental frequency.

| CHANNEL | TX Channel 39 | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
|---|---|---|---|
| FREQUENCY RANGE | 1GHz ~ 25GHz | | |

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

| Freq MHz | Reading level dBuV | Antenna factor dB/m | Cable loss dB | Preamp factor dB | level dBuV/m | Limit level dBuV/m | Over limit dB | Remark |
|---|---|---|---|---|---|---|---|---|
| 2479.739 | 90.80 | 27.76 | 4.19 | 36.10 | 86.65 | 74.00 | 12.65 | Peak |
| 2483.500 | 43.28 | 27.76 | 4.19 | 36.11 | 39.12 | 74.00 | -34.88 | Peak |
| 2487.758 | 43.89 | 27.77 | 4.19 | 36.12 | 39.73 | 74.00 | -34.27 | Peak |
| 2500.000 | 41.62 | 27.80 | 4.19 | 36.15 | 37.46 | 74.00 | -36.54 | Peak |
| 2480.003 | 91.21 | 27.76 | 4.19 | 36.10 | 87.06 | 54.00 | 33.06 | Average |
| 2483.500 | 30.97 | 27.76 | 4.19 | 36.11 | 26.81 | 54.00 | -27.19 | Average |
| 2500.000 | 29.91 | 27.80 | 4.19 | 36.15 | 25.75 | 54.00 | -28.25 | Average |

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

| Freq MHz | Reading level dBuV | Antenna factor dB/m | Cable loss dB | Preamp factor dB | level dBuV/m | Limit level dBuV/m | Over limit dB | Remark |
|---|---|---|---|---|---|---|---|---|
| 2480.267 | 90.06 | 27.76 | 4.19 | 36.10 | 85.91 | 74.00 | 11.91 | Peak |
| 2483.500 | 42.64 | 27.76 | 4.19 | 36.11 | 38.48 | 74.00 | -35.52 | Peak |
| 2485.514 | 44.14 | 27.77 | 4.19 | 36.11 | 39.99 | 74.00 | -34.01 | Peak |
| 2500.000 | 42.50 | 27.80 | 4.19 | 36.15 | 38.34 | 74.00 | -35.66 | Peak |
| 2480.003 | 89.37 | 27.76 | 4.19 | 36.10 | 85.22 | 54.00 | 31.22 | Average |
| 2483.500 | 30.69 | 27.76 | 4.19 | 36.11 | 26.53 | 54.00 | -27.47 | Average |
| 2500.000 | 29.99 | 27.80 | 4.19 | 36.15 | 25.83 | 54.00 | -28.17 | Average |

**REMARKS:**

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 2480MHz: Fundamental frequency.

**BT-LE _S8**

| | | | |
|---|---|---|---|
| **CHANNEL** | TX Channel 0 | **DETECTOR FUNCTION** | Peak (PK)<br>Average (AV) |
| **FREQUENCY RANGE** | 1GHz ~ 25GHz | | |

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

| Freq MHz | Reading level dBuV | Antenna factor dB/m | Cable loss dB | Preamp factor dB | level dBuV/m | Limit level dBuV/m | Over limit dB | Remark |
|---|---|---|---|---|---|---|---|---|
| 2310.000 | 42.21 | 27.38 | 4.08 | 35.68 | 37.99 | 74.00 | -36.01 | Peak |
| 2382.530 | 44.94 | 27.54 | 4.15 | 35.86 | 40.77 | 74.00 | -33.23 | Peak |
| 2390.000 | 43.02 | 27.56 | 4.16 | 35.88 | 38.86 | 74.00 | -35.14 | Peak |
| 2402.270 | 95.98 | 27.58 | 4.17 | 35.91 | 91.82 | 74.00 | 17.82 | Peak |
| 2310.000 | 29.46 | 27.38 | 4.08 | 35.68 | 25.24 | 54.00 | -28.76 | Average |
| 2390.000 | 29.85 | 27.56 | 4.16 | 35.88 | 25.69 | 54.00 | -28.31 | Average |
| 2402.060 | 92.76 | 27.58 | 4.17 | 35.91 | 88.60 | 54.00 | 34.60 | Average |

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

| Freq MHz | Reading level dBuV | Antenna factor dB/m | Cable loss dB | Preamp factor dB | level dBuV/m | Limit level dBuV/m | Over limit dB | Remark |
|---|---|---|---|---|---|---|---|---|
| 2310.000 | 42.31 | 27.38 | 4.08 | 35.68 | 38.09 | 74.00 | -35.91 | Peak |
| 2356.385 | 44.26 | 27.48 | 4.13 | 35.79 | 40.08 | 74.00 | -33.92 | Peak |
| 2390.000 | 42.35 | 27.56 | 4.16 | 35.88 | 38.19 | 74.00 | -35.81 | Peak |
| 2402.270 | 94.22 | 27.58 | 4.17 | 35.91 | 90.06 | 74.00 | 16.06 | Peak |
| 2310.000 | 29.43 | 27.38 | 4.08 | 35.68 | 25.21 | 54.00 | -28.79 | Average |
| 2390.000 | 29.82 | 27.56 | 4.16 | 35.88 | 25.66 | 54.00 | -28.34 | Average |
| 2402.060 | 90.72 | 27.58 | 4.17 | 35.91 | 86.56 | 54.00 | 32.56 | Average |

**REMARKS:**

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 2402MHz: Fundamental frequency.

| CHANNEL | TX Channel 19 | DETECTOR FUNCTION | Peak (PK)<br>Average (AV) |
|---|---|---|---|
| FREQUENCY RANGE | 1GHz ~ 25GHz | | |

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

| Freq MHz | Reading level dBuV | Antenna factor dB/m | Cable loss dB | Preamp factor dB | level dBuV/m | Limit level dBuV/m | Over limit dB | Remark |
|---|---|---|---|---|---|---|---|---|
| 4880.000 | 31.94 | 31.03 | 7.01 | 34.03 | 35.95 | 54.00 | -18.05 | Average |
| 4880.000 | 41.99 | 31.03 | 7.01 | 34.03 | 46.00 | 74.00 | -28.00 | Peak |
| 7320.000 | 29.43 | 35.67 | 8.97 | 34.49 | 39.58 | 54.00 | -14.42 | Average |
| 7320.000 | 39.57 | 35.67 | 8.97 | 34.49 | 49.72 | 74.00 | -24.28 | Peak |
| 9760.000 | 27.87 | 38.51 | 11.16 | 34.20 | 43.34 | 54.00 | -10.66 | Average |
| 9760.000 | 38.12 | 38.51 | 11.16 | 34.20 | 53.59 | 74.00 | -20.41 | Peak |
| 2440.000 | 94.95 | 27.67 | 4.18 | 36.00 | 90.80 | 74.00 | 16.80 | Peak |

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

| Freq MHz | Reading level dBuV | Antenna factor dB/m | Cable loss dB | Preamp factor dB | level dBuV/m | Limit level dBuV/m | Over limit dB | Remark |
|---|---|---|---|---|---|---|---|---|
| 4880.000 | 31.96 | 31.03 | 7.01 | 34.03 | 35.97 | 54.00 | -18.03 | Average |
| 4880.000 | 42.50 | 31.03 | 7.01 | 34.03 | 46.51 | 74.00 | -27.49 | Peak |
| 7320.000 | 29.29 | 35.67 | 8.97 | 34.49 | 39.44 | 54.00 | -14.56 | Average |
| 7320.000 | 39.66 | 35.67 | 8.97 | 34.49 | 49.81 | 74.00 | -24.19 | Peak |
| 9760.000 | 27.36 | 38.51 | 11.16 | 34.20 | 42.83 | 54.00 | -11.17 | Average |
| 9760.000 | 38.16 | 38.51 | 11.16 | 34.20 | 53.63 | 74.00 | -20.37 | Peak |
| 2440.000 | 92.03 | 27.67 | 4.18 | 36.00 | 87.88 | 74.00 | 13.88 | Peak |

**REMARKS:**

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 2440MHz: Fundamental frequency.

| | | | |
|---|---|---|---|
| **CHANNEL** | TX Channel 39 | **DETECTOR FUNCTION** | Peak (PK)<br>Average (AV) |
| **FREQUENCY RANGE** | 1GHz ~ 25GHz | | |

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

| Freq MHz | Reading level dBuV | Antenna factor dB/m | Cable loss dB | Preamp factor dB | level dBuV/m | Limit level dBuV/m | Over limit dB | Remark |
|---|---|---|---|---|---|---|---|---|
| 2480.234 | 91.20 | 27.76 | 4.19 | 36.10 | 87.05 | 74.00 | 13.05 | Peak |
| 2483.500 | 43.09 | 27.76 | 4.19 | 36.11 | 38.93 | 74.00 | -35.07 | Peak |
| 2485.679 | 44.06 | 27.77 | 4.19 | 36.11 | 39.91 | 74.00 | -34.09 | Peak |
| 2500.000 | 41.04 | 27.80 | 4.19 | 36.15 | 36.88 | 74.00 | -37.12 | Peak |
| 2480.003 | 89.64 | 27.76 | 4.19 | 36.10 | 85.49 | 54.00 | 31.49 | Average |
| 2483.500 | 30.55 | 27.76 | 4.19 | 36.11 | 26.39 | 54.00 | -27.61 | Average |
| 2500.000 | 29.26 | 27.80 | 4.19 | 36.15 | 25.10 | 54.00 | -28.90 | Average |

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

| Freq MHz | Reading level dBuV | Antenna factor dB/m | Cable loss dB | Preamp factor dB | level dBuV/m | Limit level dBuV/m | Over limit dB | Remark |
|---|---|---|---|---|---|---|---|---|
| 2480.234 | 91.95 | 27.76 | 4.19 | 36.10 | 87.80 | 74.00 | 13.80 | Peak |
| 2483.500 | 43.02 | 27.76 | 4.19 | 36.11 | 38.86 | 74.00 | -35.14 | Peak |
| 2484.161 | 44.07 | 27.77 | 4.19 | 36.11 | 39.92 | 74.00 | -34.08 | Peak |
| 2500.001 | 41.16 | 27.80 | 4.20 | 36.15 | 37.01 | 74.00 | -36.99 | Peak |
| 2480.003 | 89.86 | 27.76 | 4.19 | 36.10 | 85.71 | 54.00 | 31.71 | Average |
| 2483.500 | 30.55 | 27.76 | 4.19 | 36.11 | 26.39 | 54.00 | -27.61 | Average |
| 2500.000 | 29.22 | 27.80 | 4.19 | 36.15 | 25.06 | 54.00 | -28.94 | Average |

**REMARKS:**

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
   Margin value = Emission level – Limit value.
2. 2480MHz: Fundamental frequency.

## 3.3 6 dB BANDWIDTH MEASUREMENT

### 3.3.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

### 3.3.2 TEST INSTRUMENTS

| Equipment | Manufacturer | Model No. | Serial No. | Last Cal. | Next Cal. |
|---|---|---|---|---|---|
| Power Meter | ANRITSU | ML2495A | 1506002 | Feb. 25,21 | Feb. 24,22 |
| Power Meter | ANRITSU | ML2495A | 1506002 | Feb. 24,22 | Feb. 23,23 |
| EXA Signal Analyzer | KEYSIGHT | N9010A-526 | MY54510322 | Feb. 25,21 | Feb. 24,22 |
| EXA Signal Analyzer | KEYSIGHT | N9010A-526 | MY54510322 | Feb. 24,22 | Feb. 23,23 |
| EXA Signal Analyzer | KEYSIGHT | N9010A-544 | MY54510355 | Apr. 26,21 | Apr. 25,22 |
| EXA Signal Analyzer | KEYSIGHT | N9010A-544 | MY54510355 | Apr. 25,22 | Apr. 24,23 |
| Power Sensor | ANRITSU | MA2411B | 1339352 | Feb. 25,21 | Feb. 24,22 |
| Power Sensor | ANRITSU | MA2411B | 1339352 | Feb. 24,22 | Feb. 23,23 |

**NOTE:**

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.
2. The test was performed in RF Oven room.

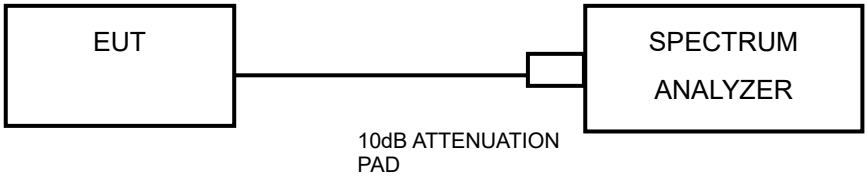
### 3.3.3 TEST PROCEDURE

1. Set RBW = 100 kHz.
2. Set the video bandwidth (VBW) ≥ 3 RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

### 3.3.4 DEVIATION FROM TEST STANDARD

No deviation.

### 3.3.5 TEST SETUP




### 3.3.6 EUT OPERATING CONDITIONS

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

### 3.3.7 TEST RESULTS

Please Refer to Appendix1/2 Of this test report.

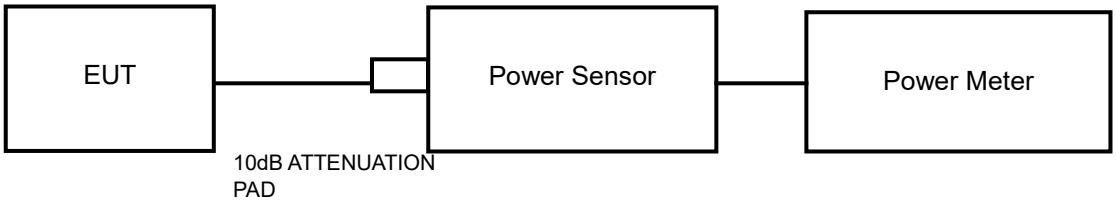
## 3.4 CONDUCTED OUTPUT POWER

### 3.4.1 LIMITS OF CONDUCTED OUTPUT POWER MEASUREMENT

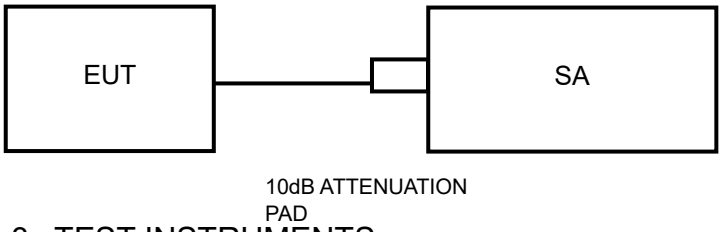
For systems using digital modulation in the 2400–2483.5 MHz band: 1 Watt (30dBm)

### 3.4.2 TEST SETUP

BT:




2.4G wifi:




### 3.4.3 TEST INSTRUMENTS

Refer to section 3.2.2 to get information of above instrument.

### 3.4.4 TEST PROCEDURES

A peak power sensor was used on the output port of the EUT. A power meter was used to read the response of the peak power sensor. Record the power level.

### 3.4.5 DEVIATION FROM TEST STANDARD

No deviation.

### 3.4.6 EUT OPERATING CONDITIONS

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

## 3.4.7 TEST RESULTS

### 3.4.7.1 MAXIMUM PEAK OUTPUT POWER

Please Refer to Appendix1/2 Of this test report.

### 3.4.7.2 AVERAGE OUTPUT POWER (FOR REFERENCE)

The average power sensor was used on the output port of the EUT. A power meter was used to read the response of the power sensor. Record the power level.

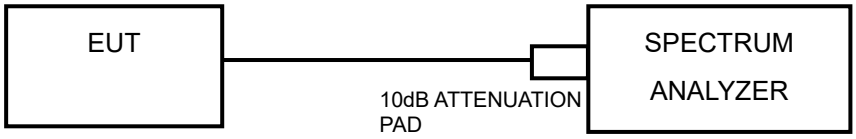
Please Refer to Appendix1/2 Of this test report.

## 3.5 POWER SPECTRAL DENSITY MEASUREMENT

### 3.5.1 LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT

The Maximum of Power Spectral Density Measurement is 8dBm/3KHz.

### 3.5.2 TEST SETUP




### 3.5.3 TEST INSTRUMENTS

Refer to section 3.3.2 to get information of above instrument.

### 3.5.4 TEST PROCEDURE

1. Set the span to 1.5 times the DTS bandwidth
2. Set the RBW = 3 kHz, VBW ≥ 3 x RBW, Detector = peak.
3. Sweep time = auto couple, Trace mode = max hold, allow trace to fully stabilize.
4. Use the peak marker function to determine the maximum amplitude level.

### 3.5.5 DEVIATION FROM TEST STANDARD

No deviation.

### 3.5.6 EUT OPERATING CONDITION

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

### 3.5.7 TEST RESULTS

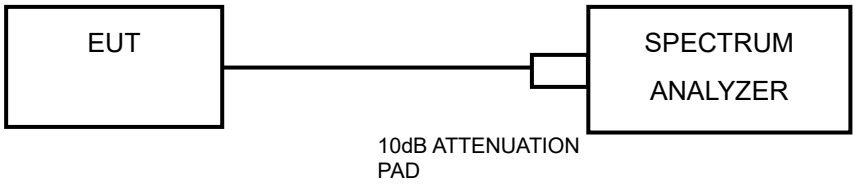
Please Refer to Appendix1/2 Of this test report.

## 3.6 OUT OF BAND EMISSION MEASUREMENT

### 3.6.1 LIMITS OF OUT OF BAND EMISSION MEASUREMENT

Below –20dB of the highest emission level of operating band (in 100kHz Resolution Bandwidth).

### 3.6.2 TEST SETUP




### 3.6.3 TEST INSTRUMENTS

Refer to section 3.3.2 to get information of above instrument.

### 3.6.4 TEST PROCEDURE

**MEASUREMENT PROCEDURE REF**

1. Set the RBW = 100 kHz.
2. Set the VBW ≥ 300 kHz.
3. Detector = peak.
4. Sweep time = auto couple.
5. Trace mode = max hold.
6. Allow trace to fully stabilize.
7. Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.

**MEASUREMENT PROCEDURE OOBE**

1. Set RBW = 100 kHz.
2. Set VBW ≥ 300 kHz.
3. Set span to encompass the spectrum to be examined
4. Detector = peak.
5. Trace Mode = max hold.
6. Sweep = auto couple.

### 3.6.5 DEVIATION FROM TEST STANDARD

No deviation.

### 3.6.6 EUT OPERATING CONDITION

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

### 3.6.7 TEST RESULTS

The spectrum plots are attached on the following images. D1 line indicates the highest level. D2 line indicates the 20dB offset below D1. It shows compliance to the requirement.

Please Refer to Appendix 1/2 Of this test report.

# 4 PHOTOGRAPHS OF THE TEST CONFIGURATION

Please refer to the attached file (Test Setup Photo).

# 5 MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No any modifications are made to the EUT by the lab during the test.

# 6 Appendix 1 BLE

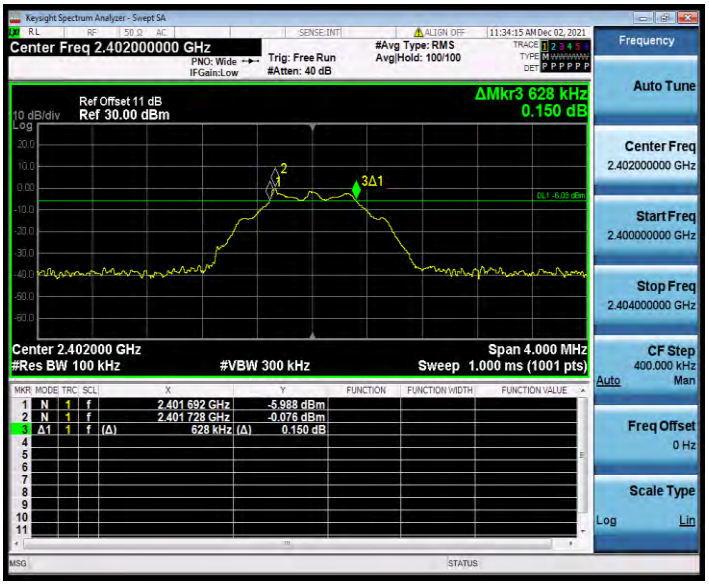
## DTS BANDWIDTH

## TEST RESULT

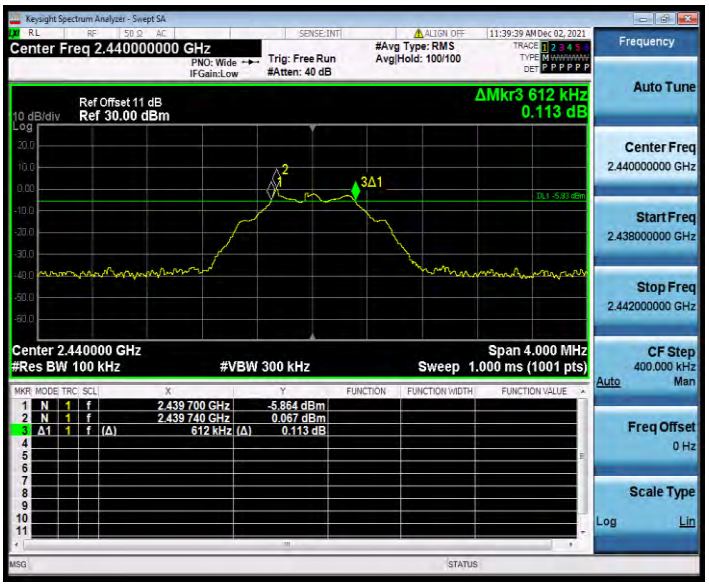
| TestMode | Antenna | Channel | DTS BW [MHz] | FL[MHz] | FH[MHz] | Limit[MHz] | Verdict |
|---|---|---|---|---|---|---|---|
| BLE_125K | Ant1 | 2402 | 0.628 | 2401.692 | 2402.320 | 0.5 | PASS |
| | | 2440 | 0.612 | 2439.700 | 2440.312 | 0.5 | PASS |
| | | 2480 | 0.684 | 2479.664 | 2480.348 | 0.5 | PASS |
| BLE_1M | Ant1 | 2402 | 0.668 | 2401.668 | 2402.336 | 0.5 | PASS |
| | | 2440 | 0.672 | 2439.672 | 2440.344 | 0.5 | PASS |
| | | 2480 | 0.652 | 2479.684 | 2480.336 | 0.5 | PASS |
| BLE_2M | Ant1 | 2402 | 1.144 | 2401.432 | 2402.576 | 0.5 | PASS |
| | | 2440 | 1.172 | 2439.420 | 2440.592 | 0.5 | PASS |
| | | 2480 | 1.236 | 2479.356 | 2480.592 | 0.5 | PASS |
| BLE_500K | Ant1 | 2402 | 0.672 | 2401.676 | 2402.348 | 0.5 | PASS |
| | | 2440 | 0.656 | 2439.684 | 2440.340 | 0.5 | PASS |
| | | 2480 | 0.660 | 2479.684 | 2480.344 | 0.5 | PASS |

# TEST GRAPHS

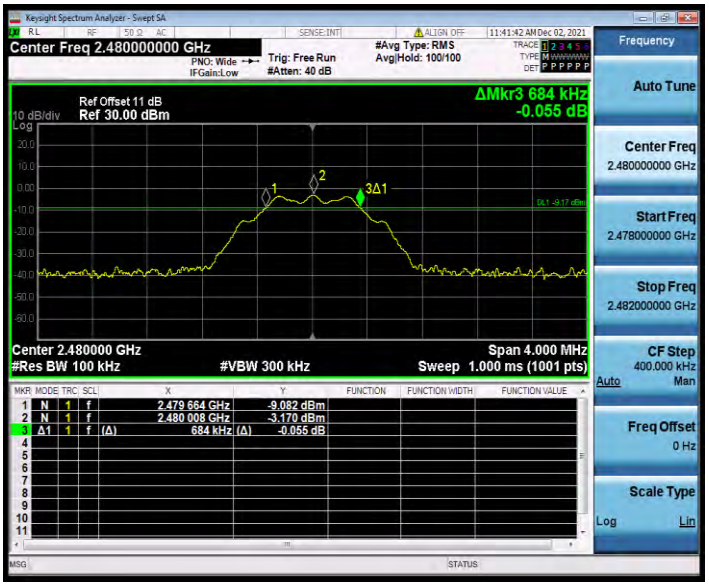
BLE_125K_Ant1_2402



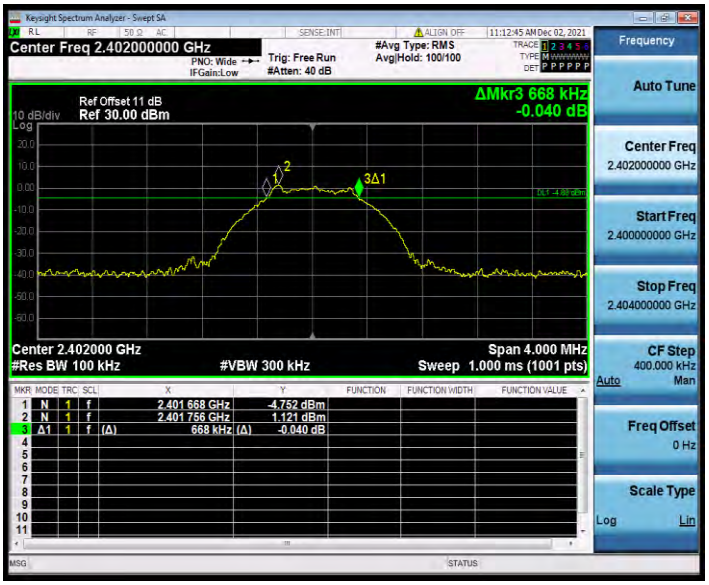

BLE_125K_Ant1_2440



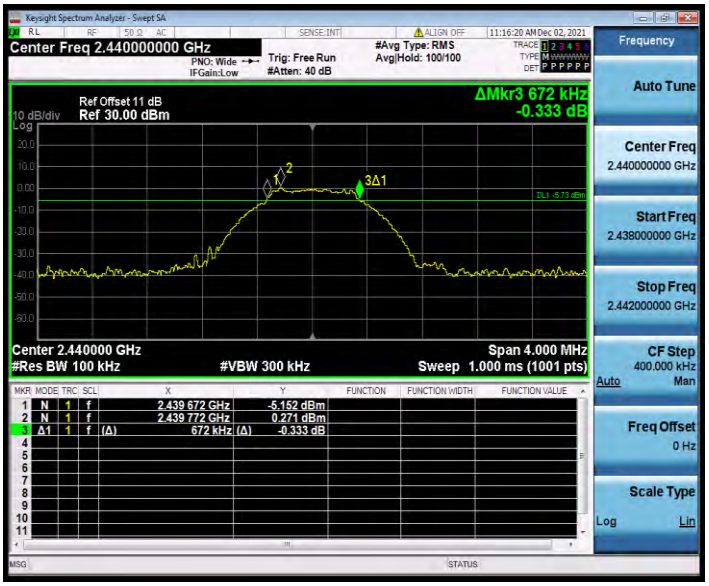

BLE_125K_Ant1_2480



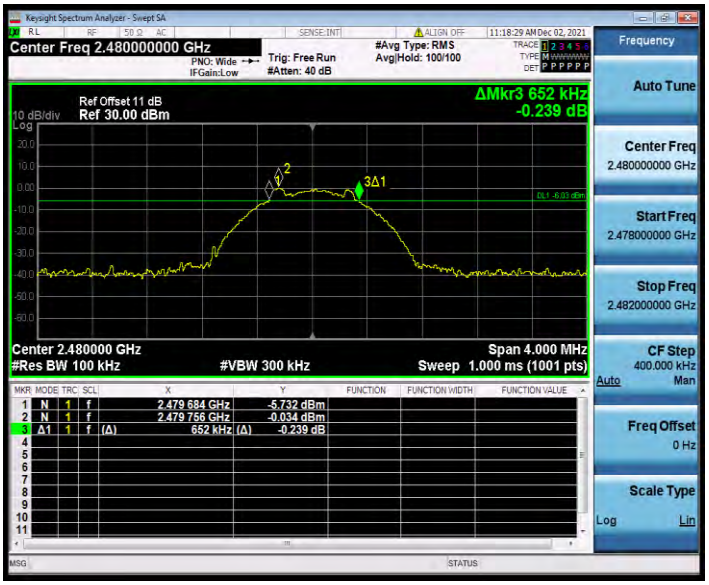

BLE_1M_Ant1_2402



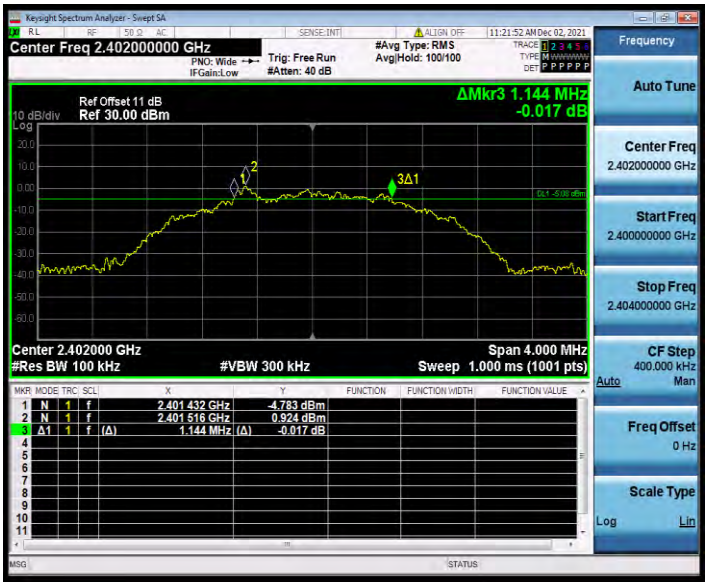

BLE_1M_Ant1_2440



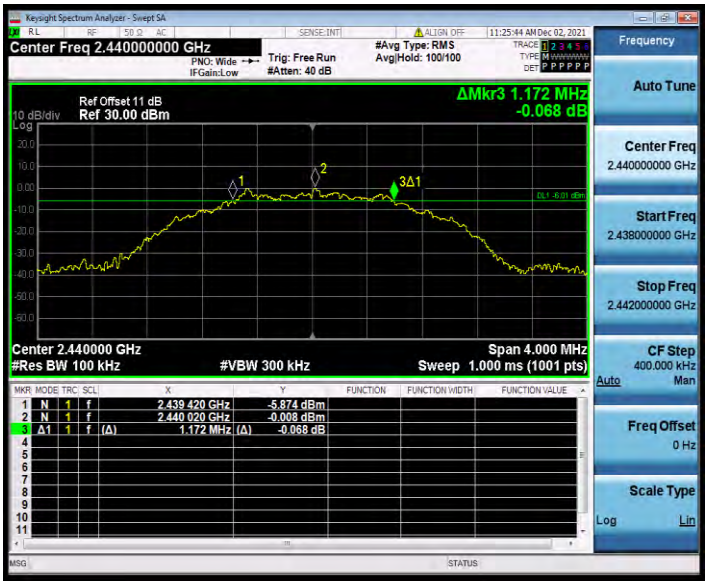

BLE_1M_Ant1_2480



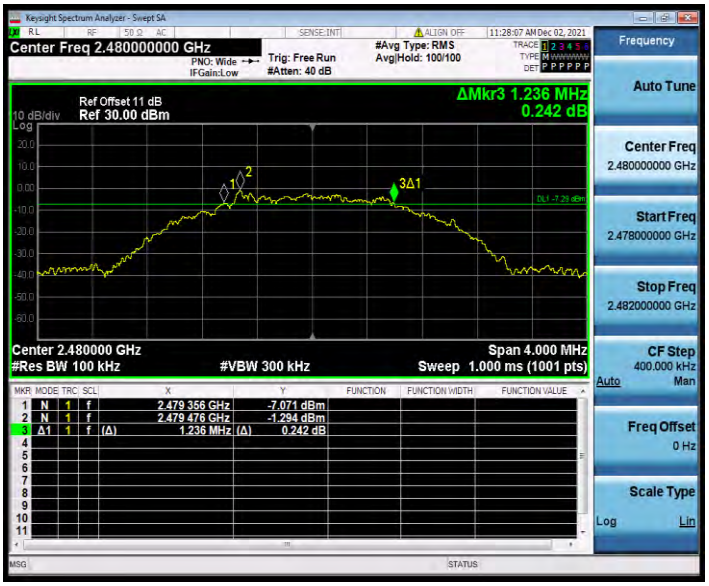

BLE_2M_Ant1_2402



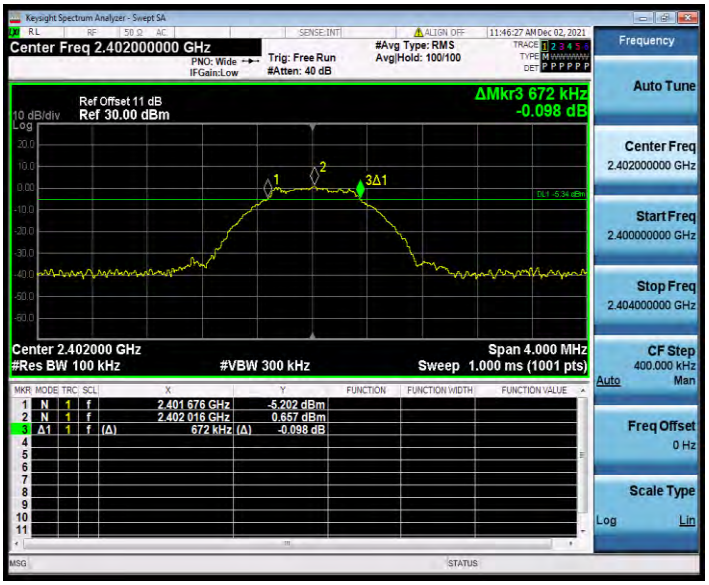

BLE_2M_Ant1_2440



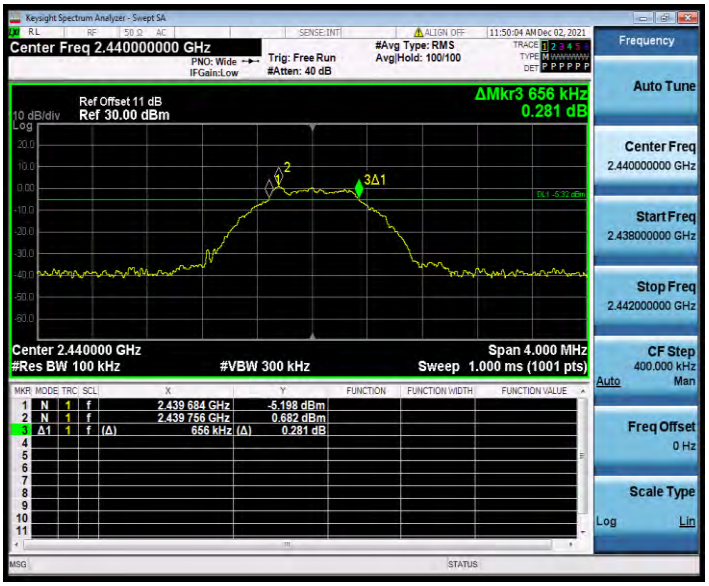

BLE_2M_Ant1_2480



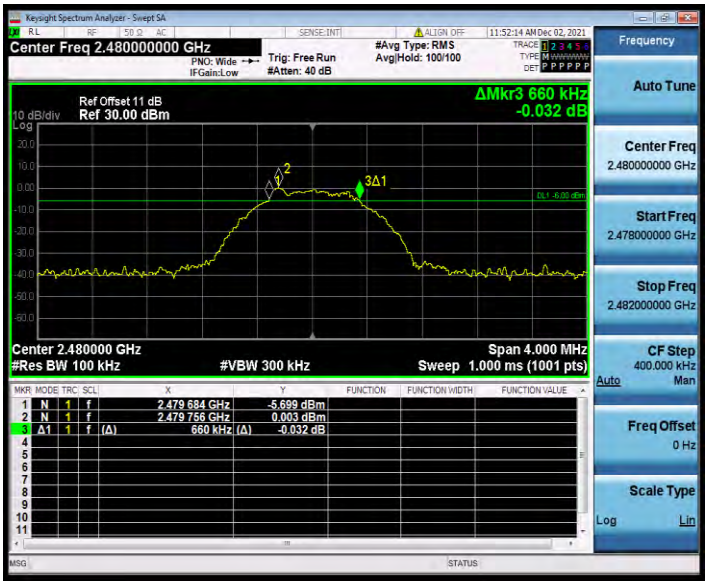

BLE_500K_Ant1_2402




BLE_500K_Ant1_2440




BLE_500K_Ant1_2480



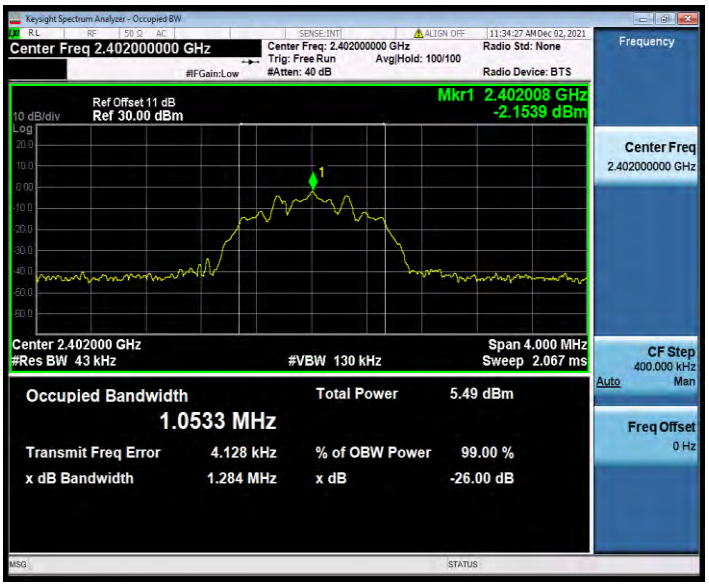
## OCCUPIED CHANNEL BANDWIDTH

## TEST RESULT

| TestMode | Antenna | Channel | OCB [MHz] | FL[MHz] | FH[MHz] | Limit[MHz] | Verdict |
|---|---|---|---|---|---|---|---|
| BLE_125K | Ant1 | 2402 | 1.0533 | 2401.477 | 2402.531 | --- | PASS |
| | | 2440 | 1.0570 | 2439.479 | 2440.536 | --- | PASS |
| | | 2480 | 1.0559 | 2479.477 | 2480.533 | --- | PASS |
| BLE_1M | Ant1 | 2402 | 1.0137 | 2401.502 | 2402.516 | --- | PASS |
| | | 2440 | 1.0187 | 2439.501 | 2440.519 | --- | PASS |
| | | 2480 | 1.0153 | 2479.500 | 2480.515 | --- | PASS |
| BLE_2M | Ant1 | 2402 | 2.0492 | 2401.001 | 2403.050 | --- | PASS |
| | | 2440 | 2.0543 | 2439.001 | 2441.055 | --- | PASS |
| | | 2480 | 2.0411 | 2478.993 | 2481.034 | --- | PASS |
| BLE_500K | Ant1 | 2402 | 1.0038 | 2401.497 | 2402.501 | --- | PASS |
| | | 2440 | 1.0165 | 2439.502 | 2440.518 | --- | PASS |
| | | 2480 | 1.0115 | 2479.501 | 2480.512 | --- | PASS |

## TEST GRAPHS

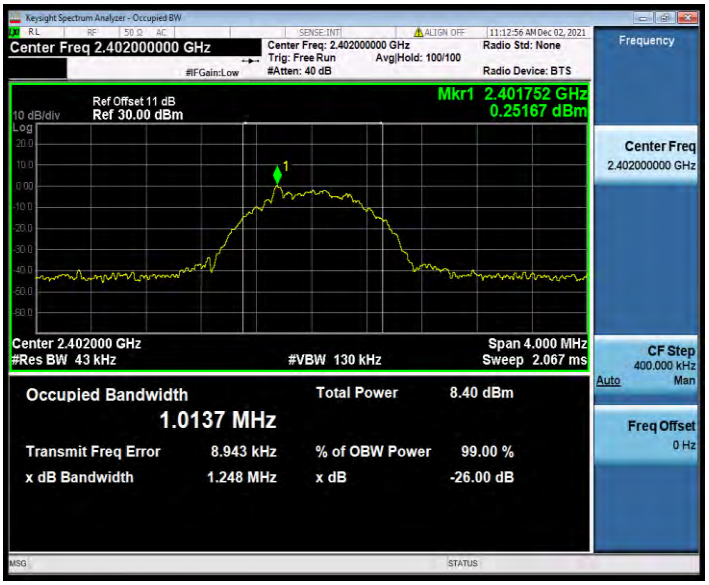
BLE_125K_Ant1_2402



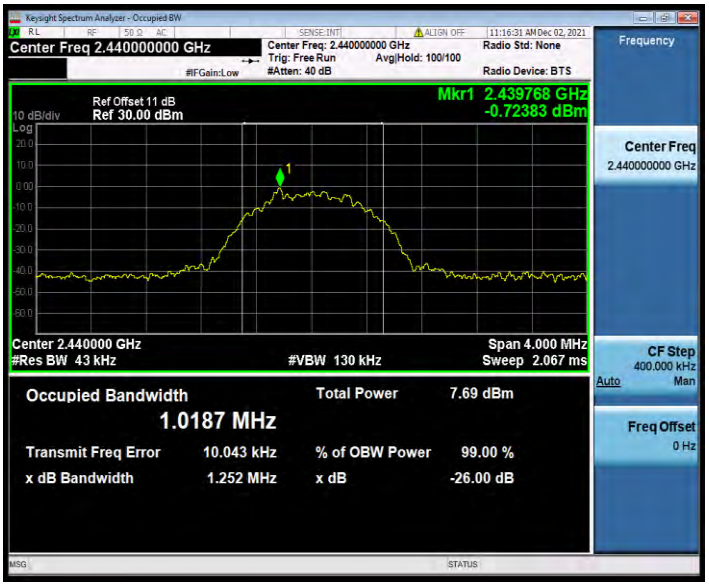

BLE_125K_Ant1_2440

BLE_125K_Ant1_2480

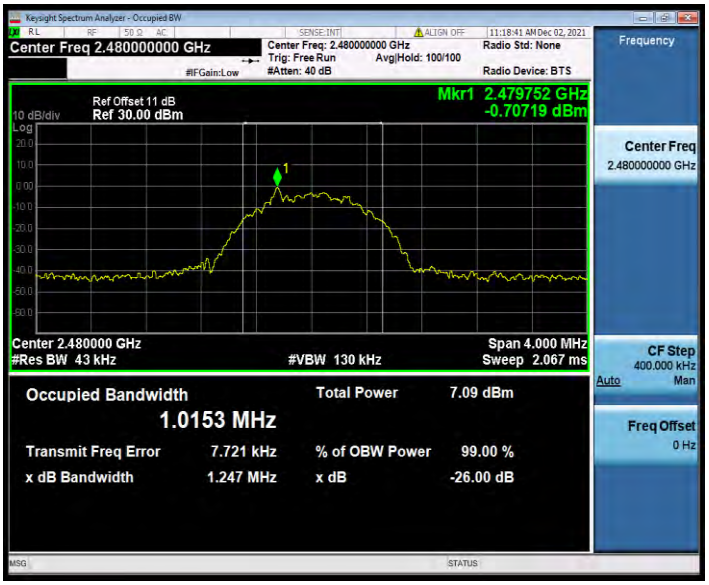
BLE_1M_Ant1_2402




BLE_1M_Ant1_2440




BLE_1M_Ant1_2480

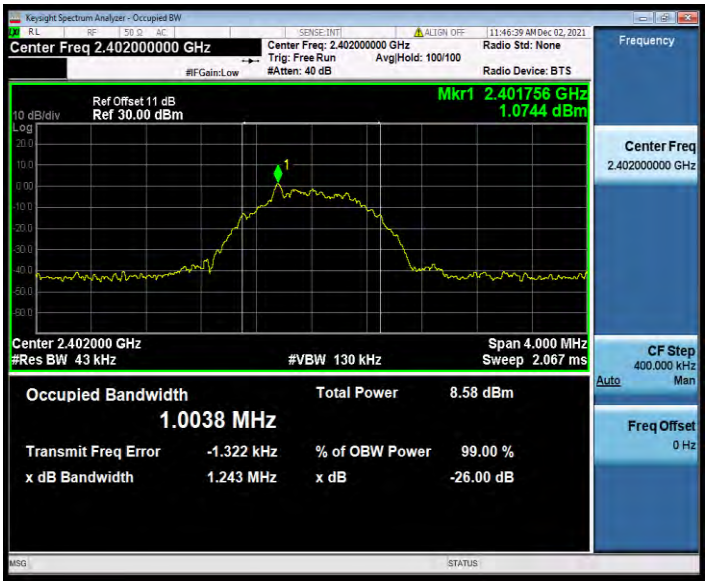



BLE_2M_Ant1_2402

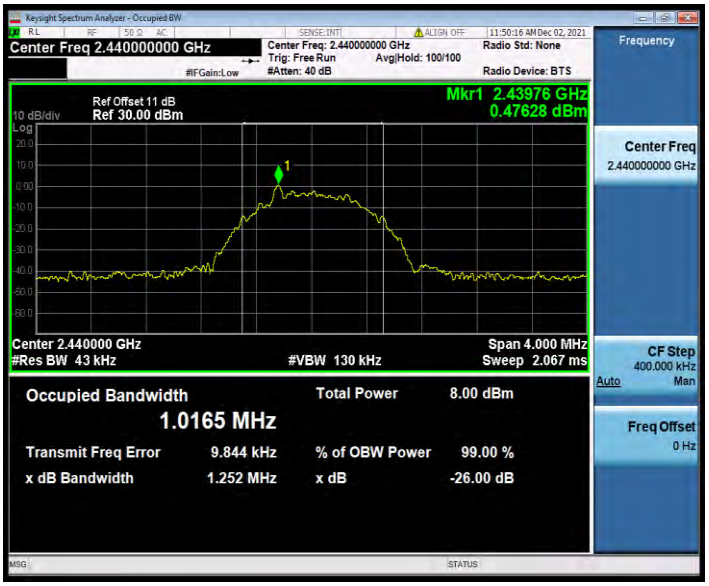
BLE_2M_Ant1_2440

BLE_2M_Ant1_2480

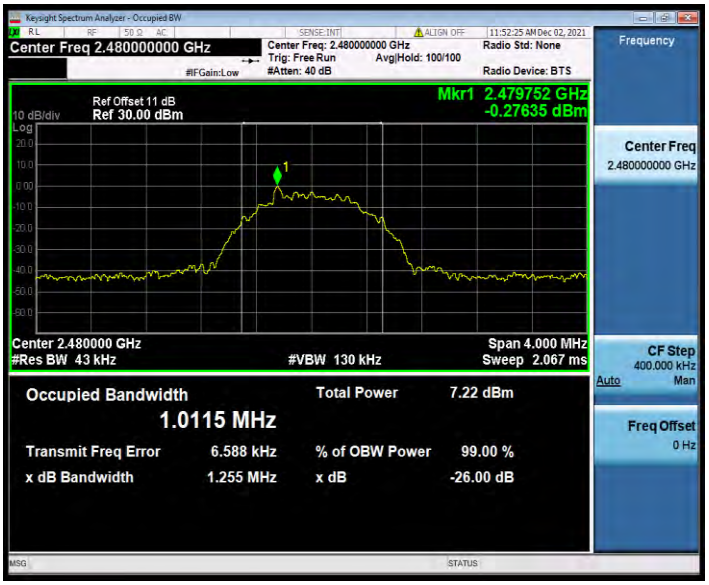
BLE_500K_Ant1_2402




BLE_500K_Ant1_2440




BLE_500K_Ant1_2480



## MAXIMUM CONDUCTED OUTPUT POWER

## PEAK POWERTEST RESULT

| TestMode | Antenna | Channel | Result[dBm] | Result[mW] | Limit[dBm] | Verdict | Power setting |
|---|---|---|---|---|---|---|---|
| 1M | Ant1 | 2402 | 1.68 | 1.47 | ≤30 | PASS | defult |
| | | 2440 | 1.35 | 1.36 | ≤30 | PASS | defult |
| | | 2480 | 0.26 | 1.06 | ≤30 | PASS | defult |
| 2M | Ant1 | 2402 | 1.72 | 1.49 | ≤30 | PASS | defult |
| | | 2440 | 1.28 | 1.34 | ≤30 | PASS | defult |
| | | 2480 | 0.31 | 1.07 | ≤30 | PASS | defult |
| BLE_125K | Ant1 | 2402 | 1.58 | 1.44 | ≤30 | PASS | defult |
| | | 2440 | 1.16 | 1.31 | ≤30 | PASS | defult |
| | | 2480 | 0.25 | 1.06 | ≤30 | PASS | defult |
| BLE_500K | Ant1 | 2402 | 1.70 | 1.48 | ≤30 | PASS | defult |
| | | 2440 | 1.32 | 1.36 | ≤30 | PASS | defult |
| | | 2480 | 0.29 | 1.07 | ≤30 | PASS | defult |

## AVERAGE POWERTEST RESULT

| TestMode | Antenna | Channel | Result[dBm] | Limit[dBm] | Verdict | Power setting |
|---|---|---|---|---|---|---|
| 1M | Ant1 | 2402 | 0.60 | / | PASS | defult |
| | | 2440 | 0.25 | / | PASS | defult |
| | | 2480 | -0.94 | / | PASS | defult |
| 2M | Ant1 | 2402 | -0.85 | / | PASS | defult |
| | | 2440 | -1.22 | / | PASS | defult |
| | | 2480 | -2.16 | / | PASS | defult |
| BLE_125K | Ant1 | 2402 | 1.15 | / | PASS | defult |
| | | 2440 | 0.75 | / | PASS | defult |
| | | 2480 | -0.33 | / | PASS | defult |
| BLE_500K | Ant1 | 2402 | 0.26 | / | PASS | defult |
| | | 2440 | -0.12 | / | PASS | defult |
| | | 2480 | -1.22 | / | PASS | defult |

## MAXIMUM POWER SPECTRAL DENSITY

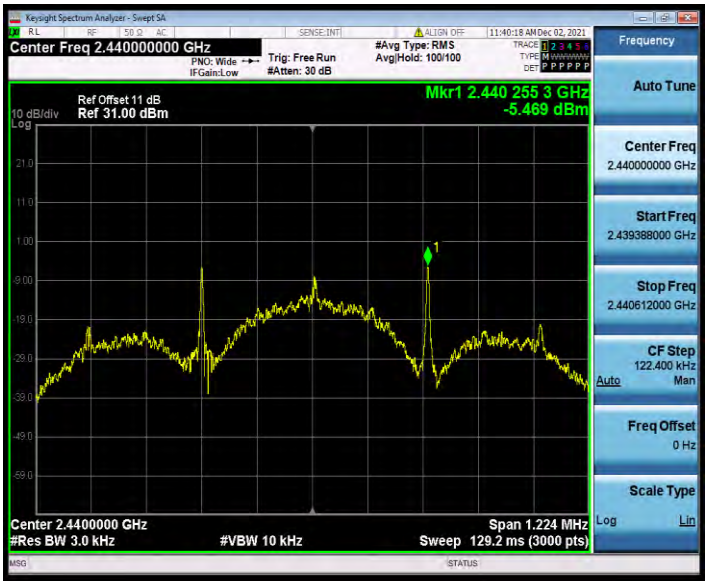
## TEST RESULT

| TestMode | Antenna | Channel | Result[dBm/3-100kHz] | Limit[dBm/3kHz] | Verdict |
|---|---|---|---|---|---|
| BLE_125K | Ant1 | 2402 | -5.04 | ≤8 | PASS |
| | | 2440 | -5.47 | ≤8 | PASS |
| | | 2480 | -6.14 | ≤8 | PASS |
| BLE_1M | Ant1 | 2402 | -14.99 | ≤8 | PASS |
| | | 2440 | -15.54 | ≤8 | PASS |
| | | 2480 | -16.05 | ≤8 | PASS |
| BLE_2M | Ant1 | 2402 | -18.10 | ≤8 | PASS |
| | | 2440 | -18.68 | ≤8 | PASS |
| | | 2480 | -19.41 | ≤8 | PASS |
| BLE_500K | Ant1 | 2402 | -5.01 | ≤8 | PASS |
| | | 2440 | -5.55 | ≤8 | PASS |
| | | 2480 | -6.20 | ≤8 | PASS |

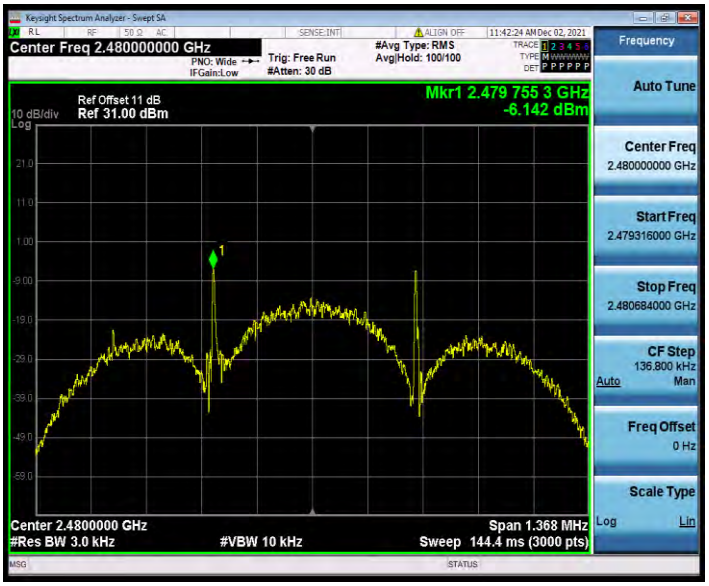
## TEST GRAPHS

BLE_125K_Ant1_2402

BLE_125K_Ant1_2440

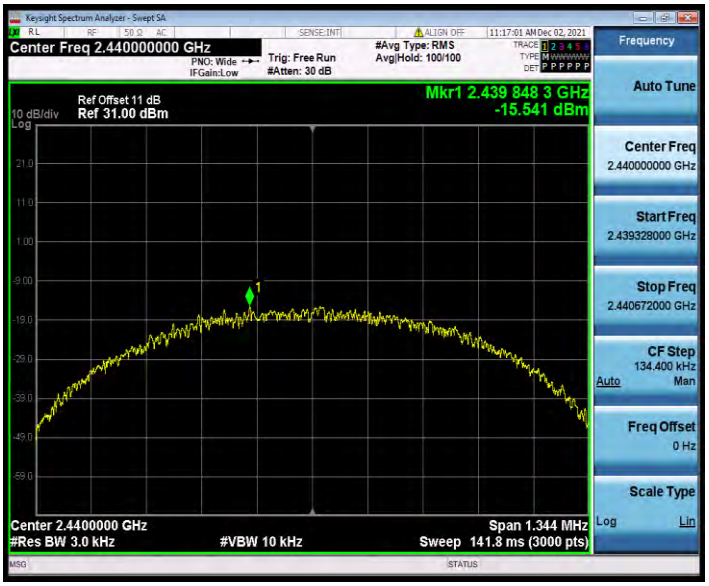



BLE_125K_Ant1_2480




BLE_1M_Ant1_2402

BLE_1M_Ant1_2440




BLE_1M_Ant1_2480

BLE_2M_Ant1_2402

BLE_2M_Ant1_2440

BLE_2M_Ant1_2480