

## Appendix A

### RF Test Data for BT V4.2(BDR/EDR) (Conducted Measurement)

Product Name: BT Mesh Floodlight

Trade Mark: N/A

Test Model: ZJ-MHFA1-RGBWW

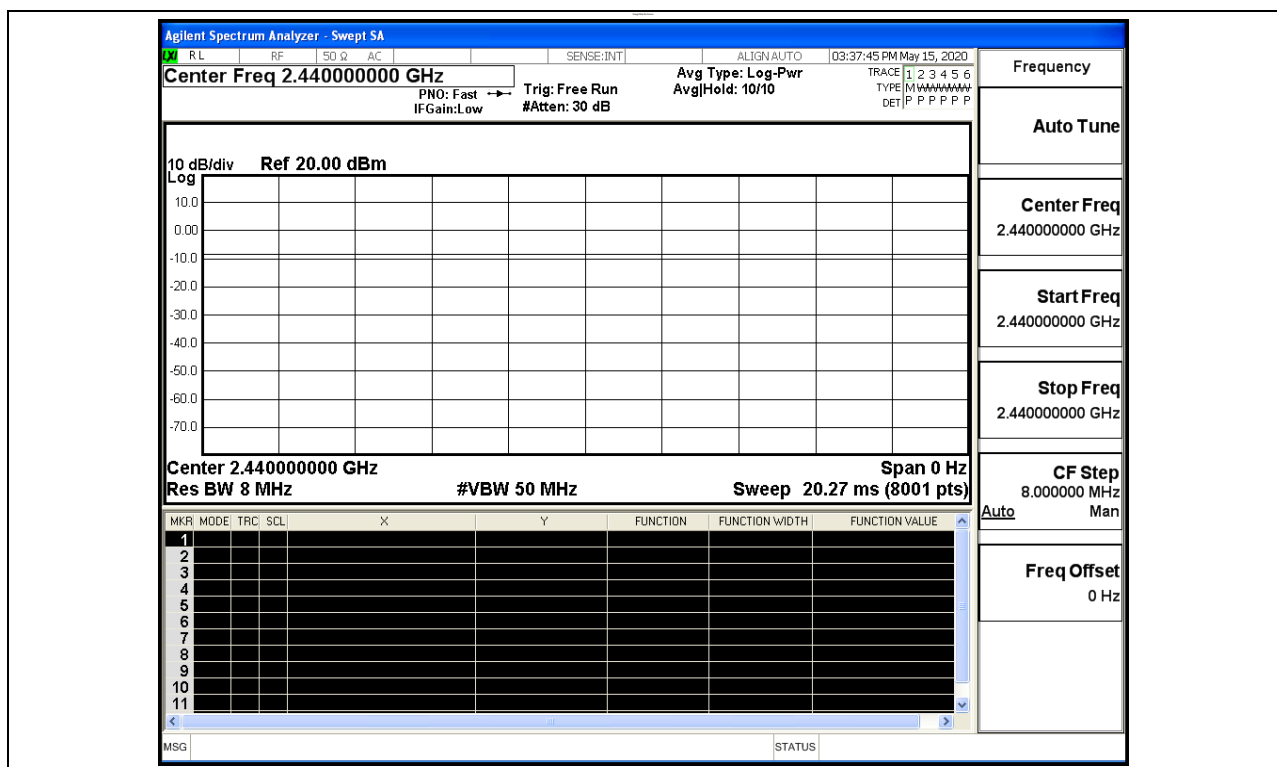
#### Environmental Conditions

|                    |            |
|--------------------|------------|
| Temperature:       | 24.5° C    |
| Relative Humidity: | 52.3%      |
| ATM Pressure:      | 100.0 kPa  |
| Test Engineer:     | Diamond Lu |
| Supervised by:     | Li Huan    |

#### A.1 Duty Cycle

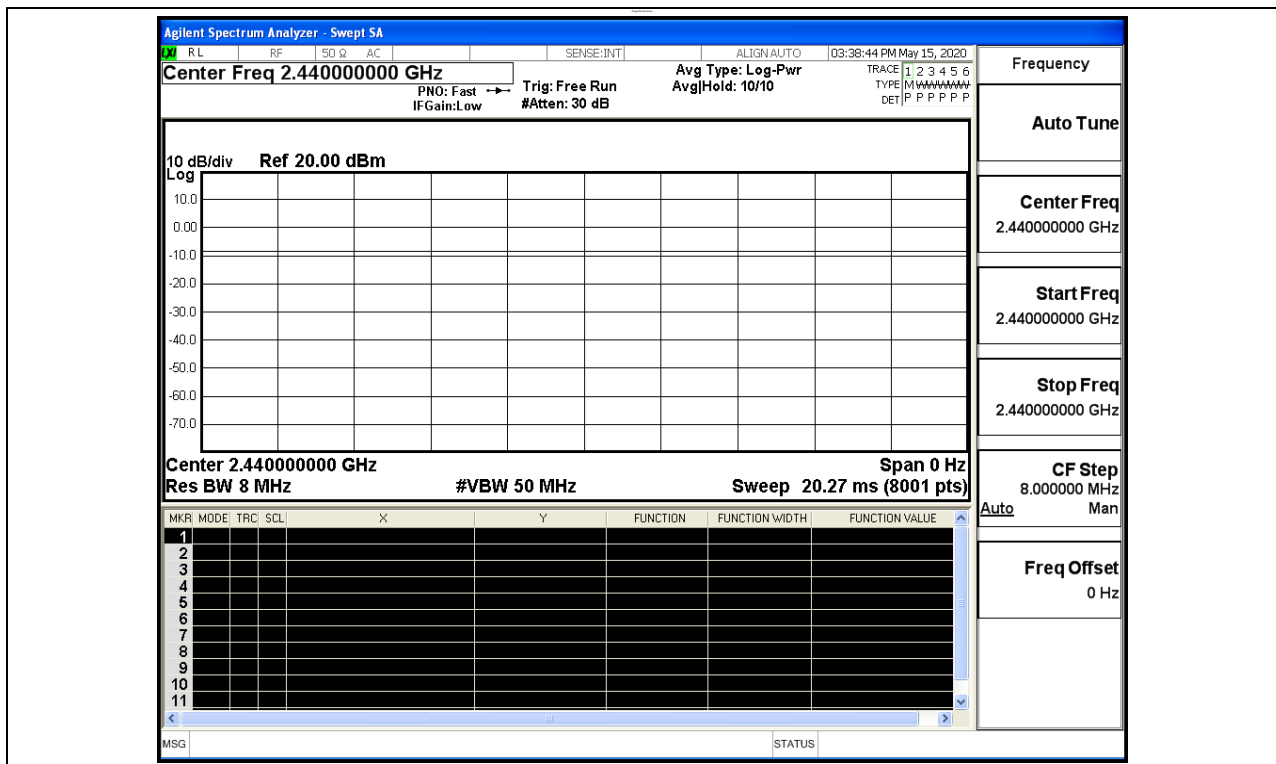
BT LE

| Test Mode | Test Channel | Ant  | Duty Cycle[%] | Verdict |
|-----------|--------------|------|---------------|---------|
| BT LE     | 2440         | Ant1 | 100           | PASS    |



BT 2LE

| Test Mode | Test Channel | Ant  | Duty Cycle[%] | Verdict |
|-----------|--------------|------|---------------|---------|
| BT LE     | 2440         | Ant1 | 100           | PASS    |



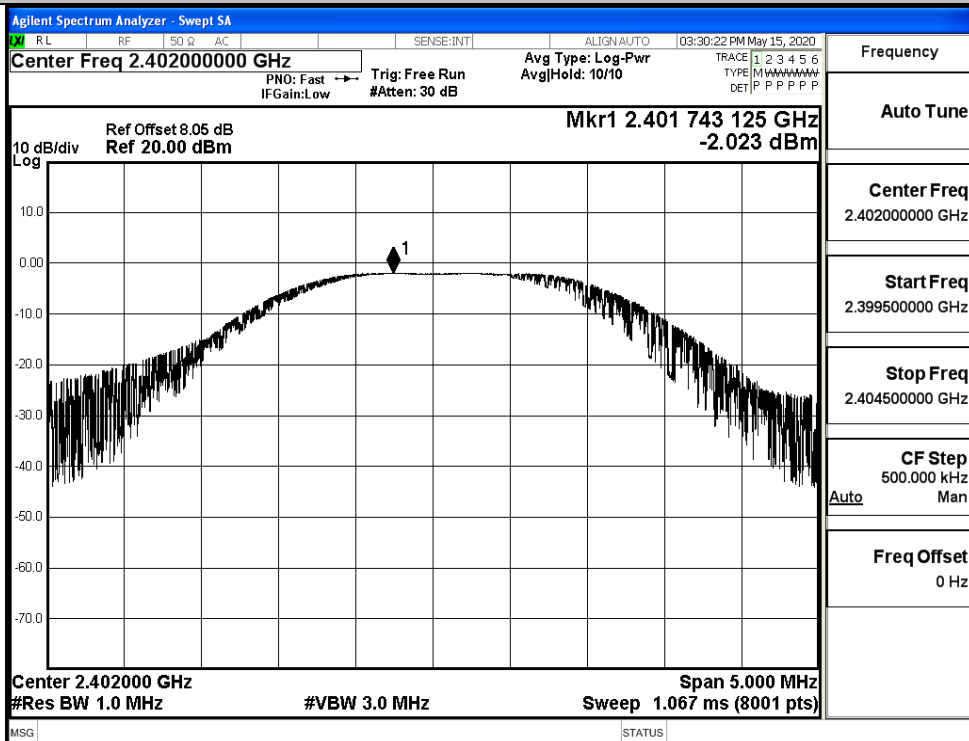
## A.2 Maximum Conducted Peak Output Power

## BT LE

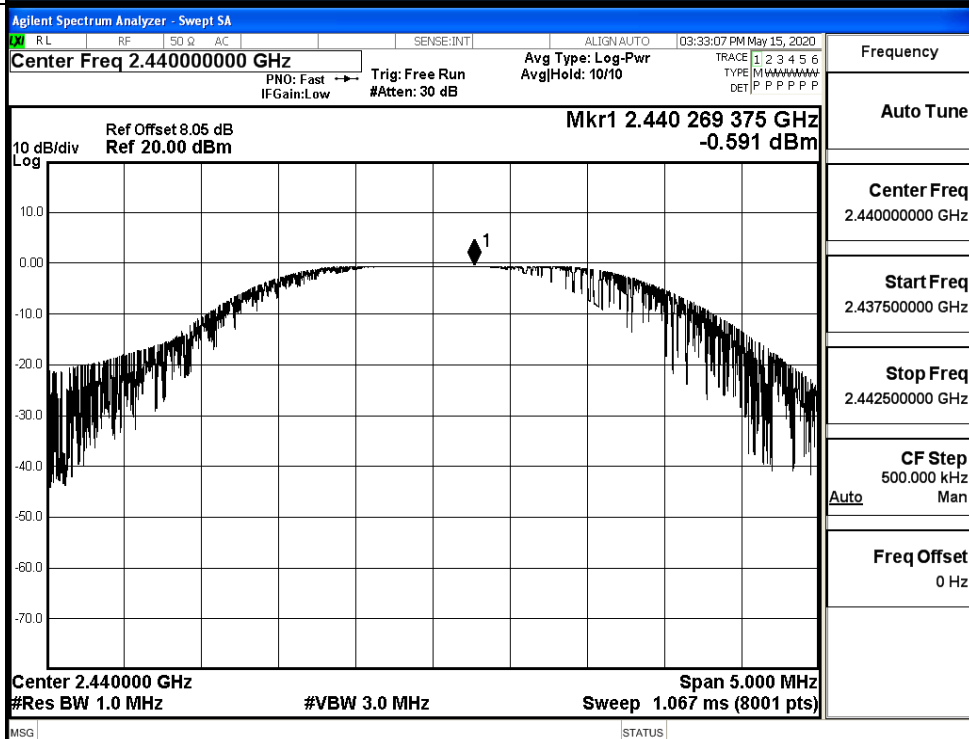
| Mode  | Channel | Conduct Peak Power[dBm] | Limit [dBm] | Verdict |
|-------|---------|-------------------------|-------------|---------|
| BT LE | LCH     | -2.023                  | 30          | PASS    |
| BT LE | MCH     | -0.591                  | 30          | PASS    |
| BT LE | HCH     | 0.339                   | 30          | PASS    |

## Test Graphs

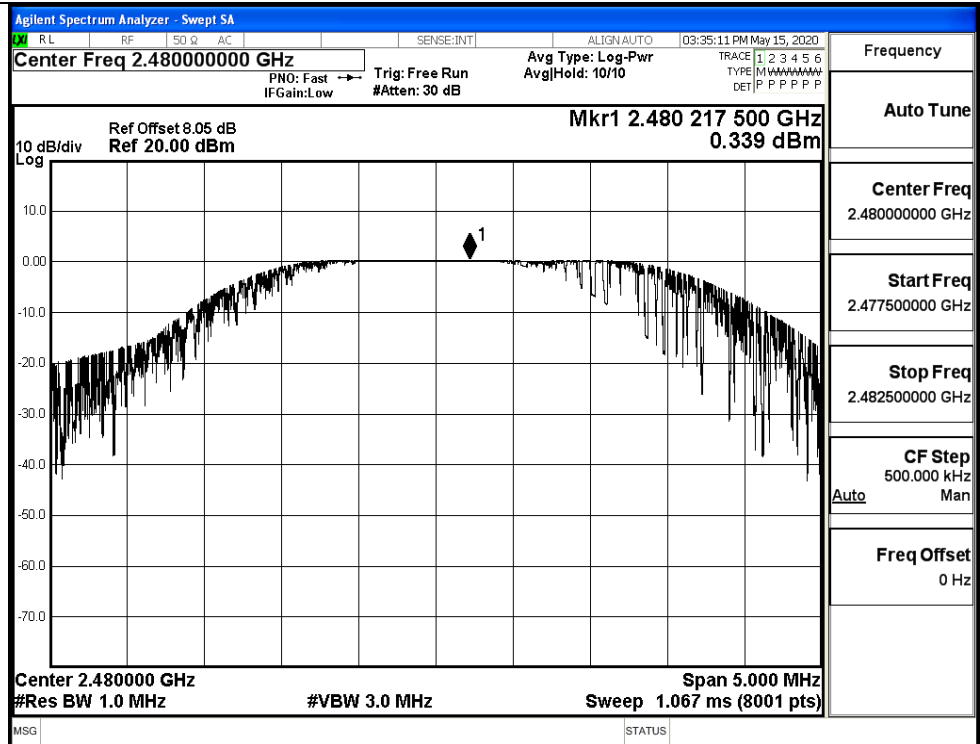
LCH



MCH



HCH

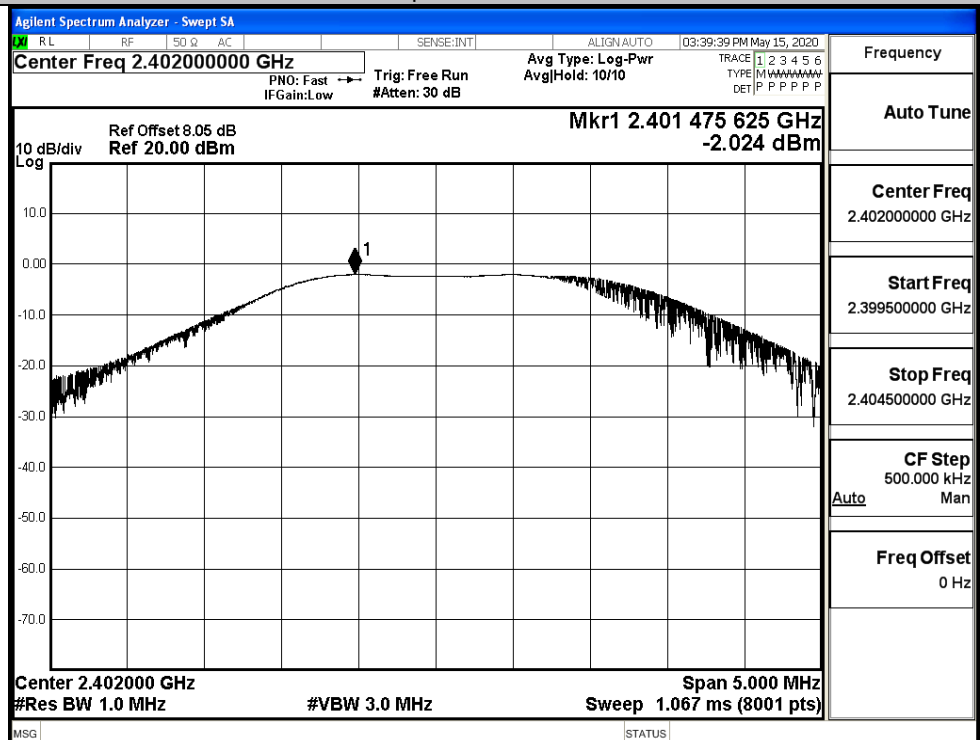


BT 2LE

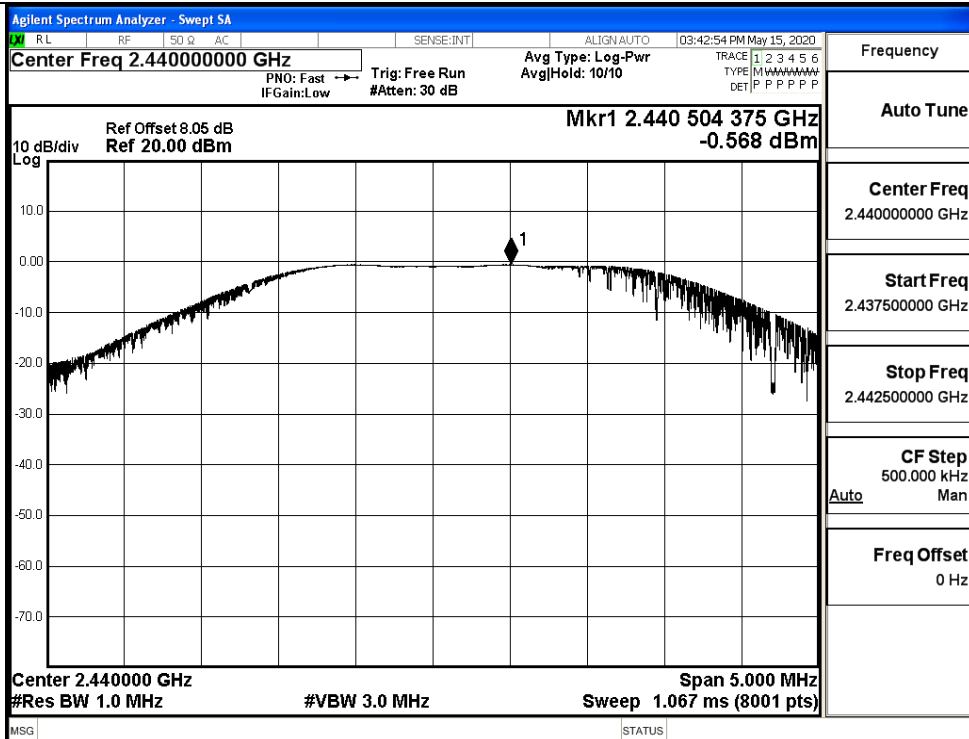
| Mode  | Channel | Conduct Peak Power[dBm] | Limit [dBm] | Verdict |
|-------|---------|-------------------------|-------------|---------|
| BT LE | LCH     | -2.024                  | 30          | PASS    |
| BT LE | MCH     | -0.568                  | 30          | PASS    |
| BT LE | HCH     | 0.376                   | 30          | PASS    |

## Test Graphs

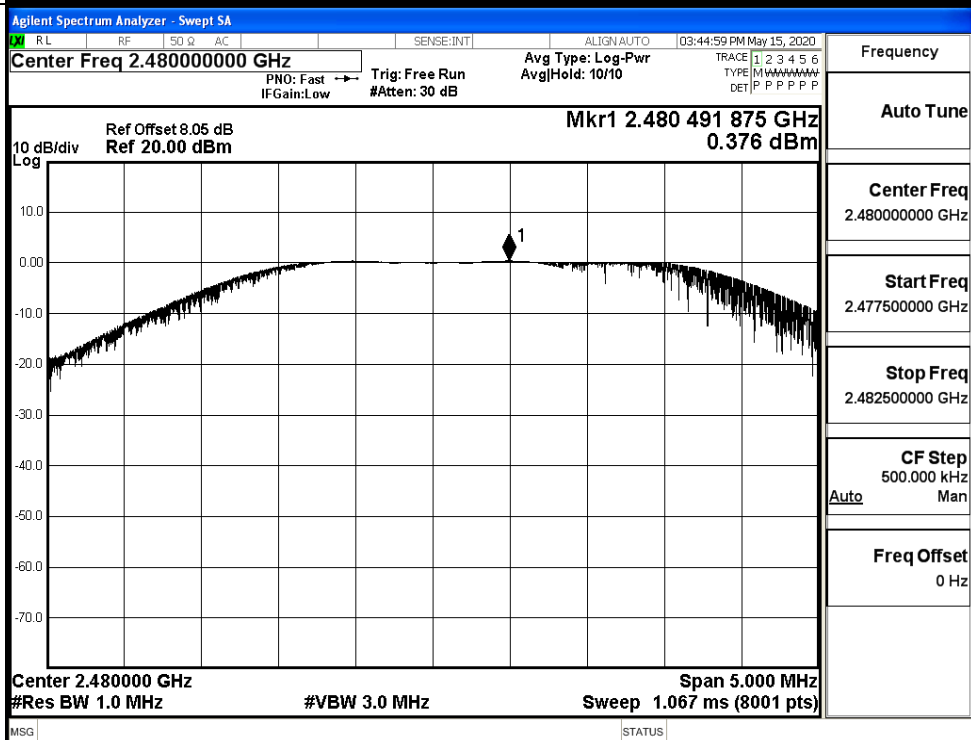
LCH



MCH



HCH



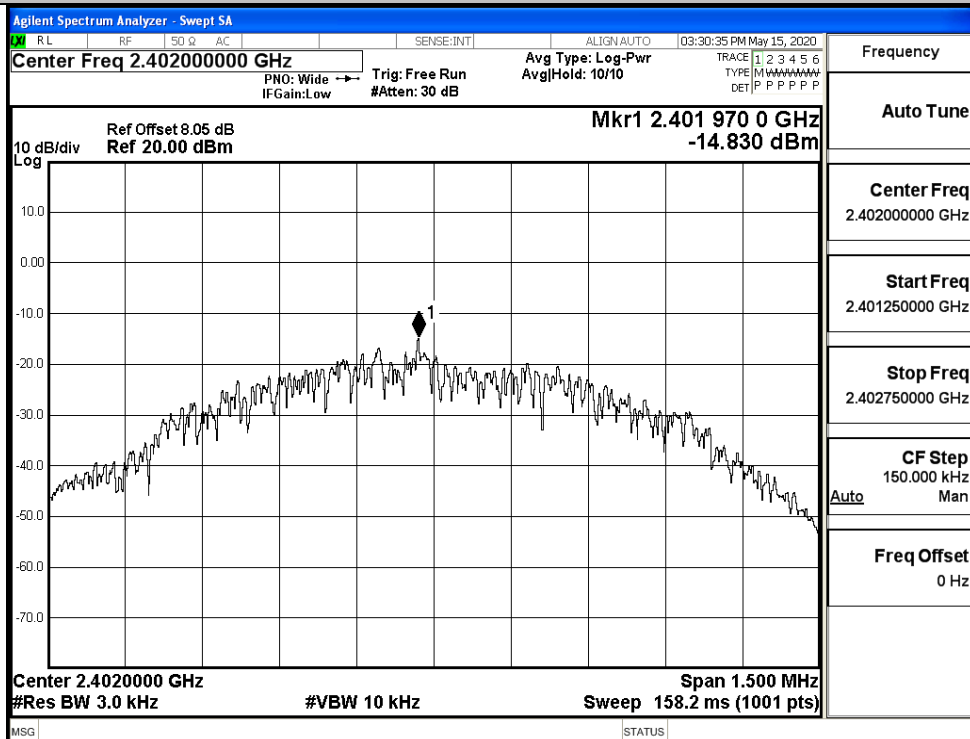
### A.3 Maximum Power Spectral Density

BT LE

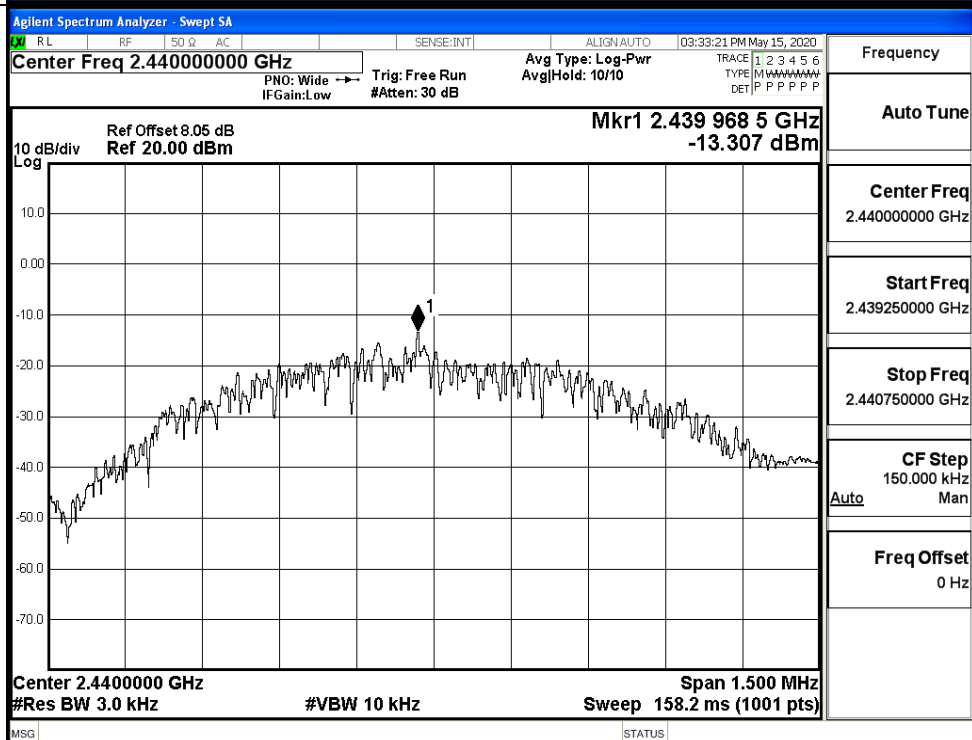
| Mode  | Channel | PSD [dBm/3KHz] | Limit [dBm/3KHz] | Verdict |
|-------|---------|----------------|------------------|---------|
| BT LE | LCH     | -14.830        | 8                | PASS    |
| BT LE | MCH     | -13.307        | 8                | PASS    |
| BT LE | HCH     | -12.201        | 8                | PASS    |

Test Graphs

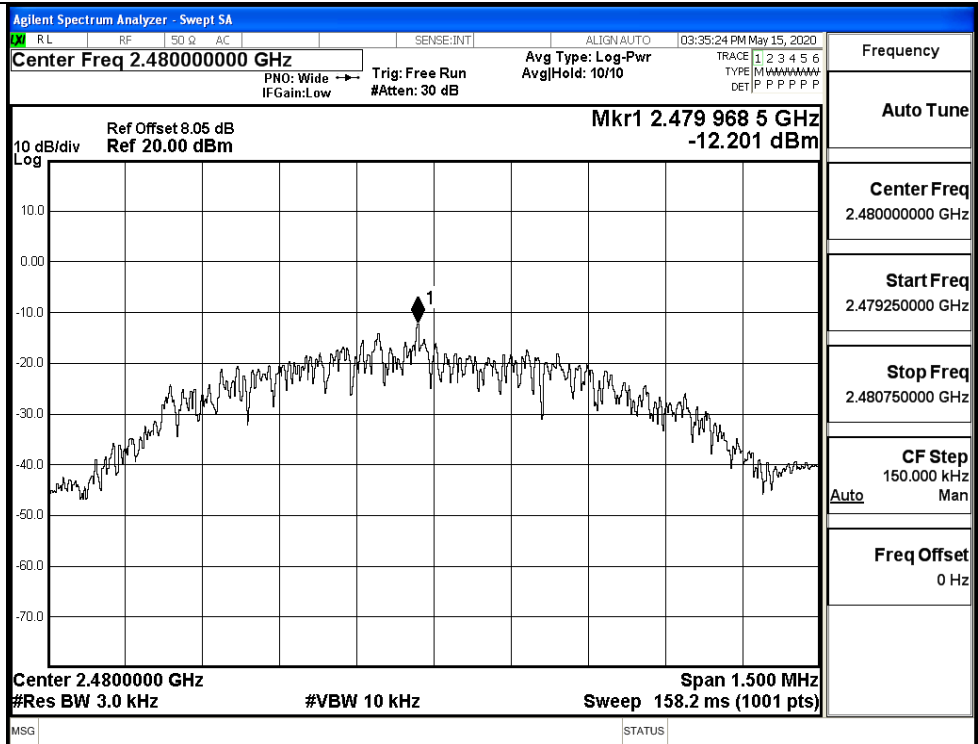
LCH



MCH



HCH

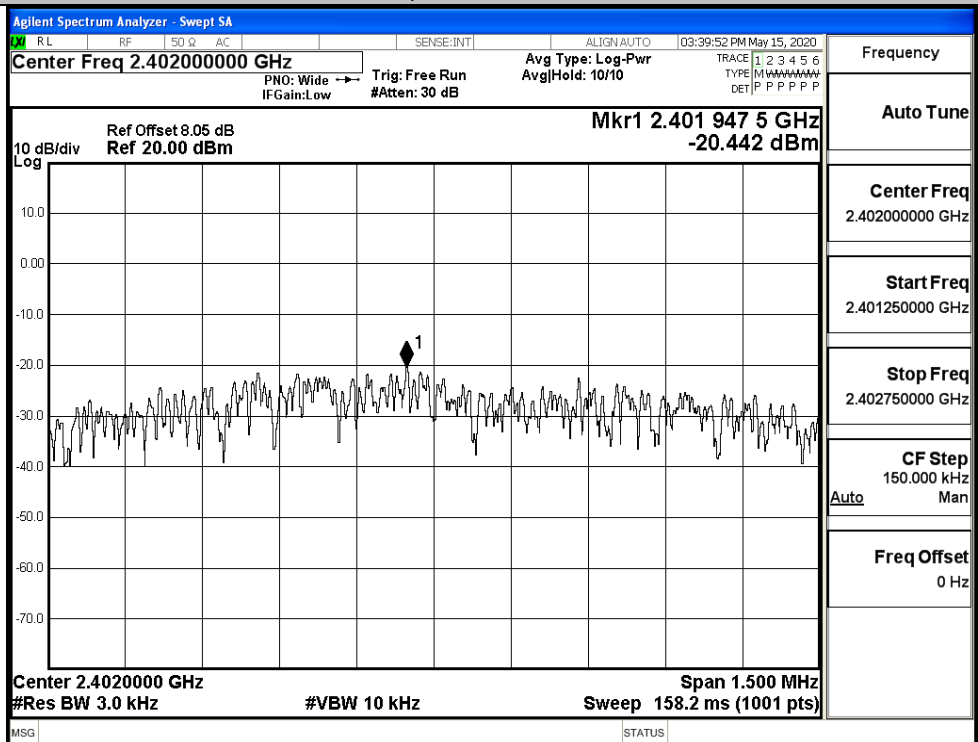


BT 2LE

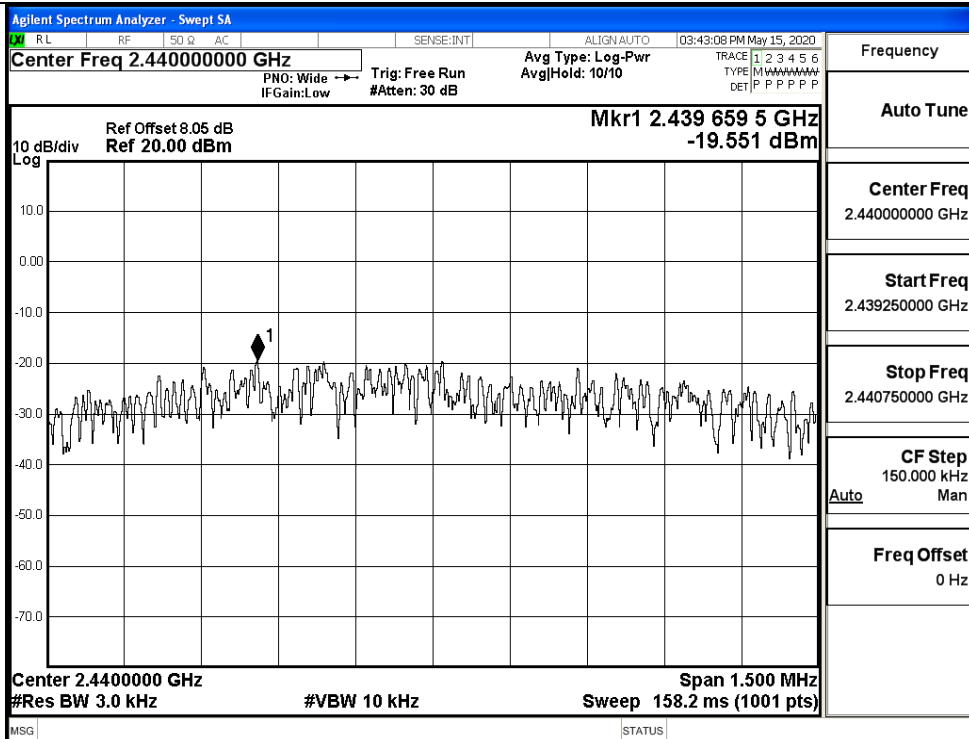
| Mode  | Channel | PSD [dBm/3KHz] | Limit [dBm/3KHz] | Verdict |
|-------|---------|----------------|------------------|---------|
| BT LE | LCH     | -20.442        | 8                | PASS    |
| BT LE | MCH     | -19.551        | 8                | PASS    |
| BT LE | HCH     | -18.420        | 8                | PASS    |

## Test Graphs

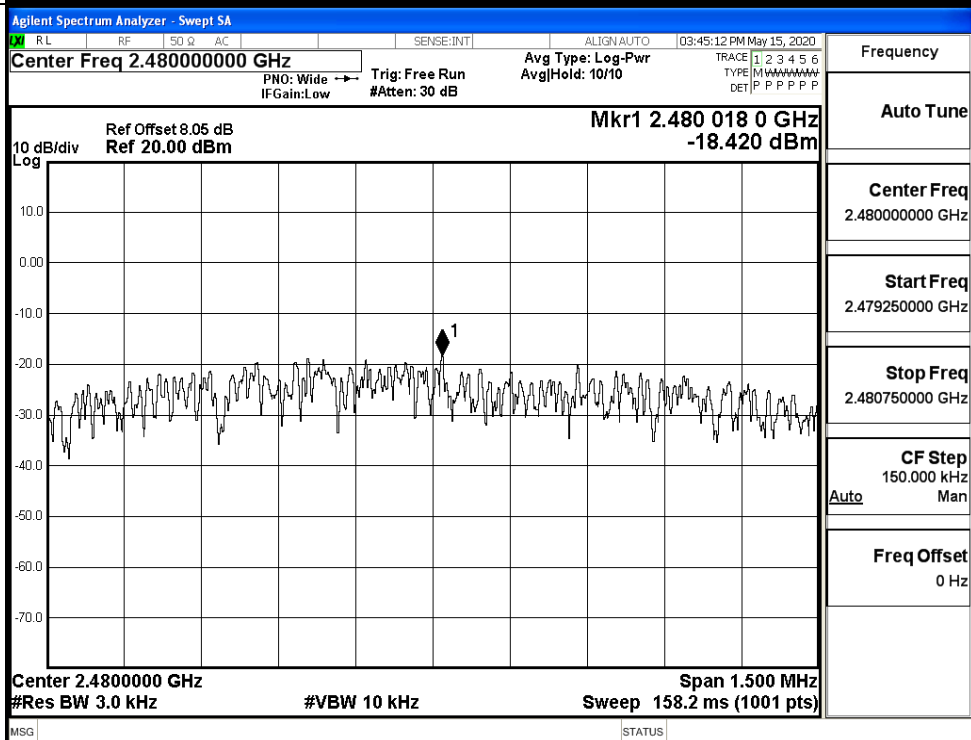
LCH



MCH



HCH





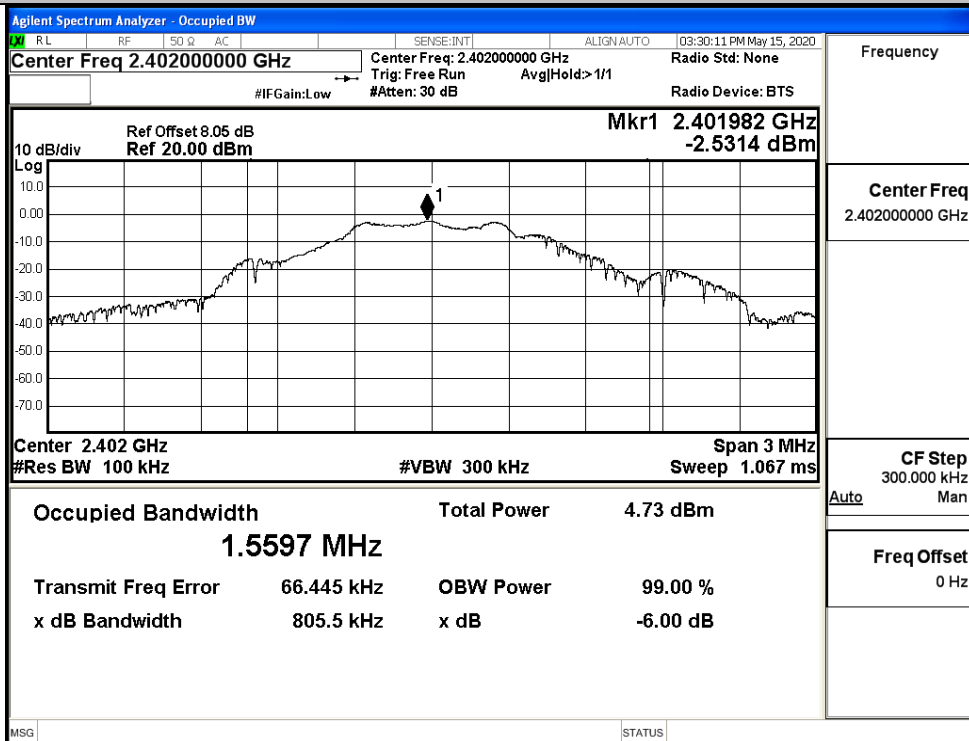
## A.4 6dB Bandwidth

BT LE

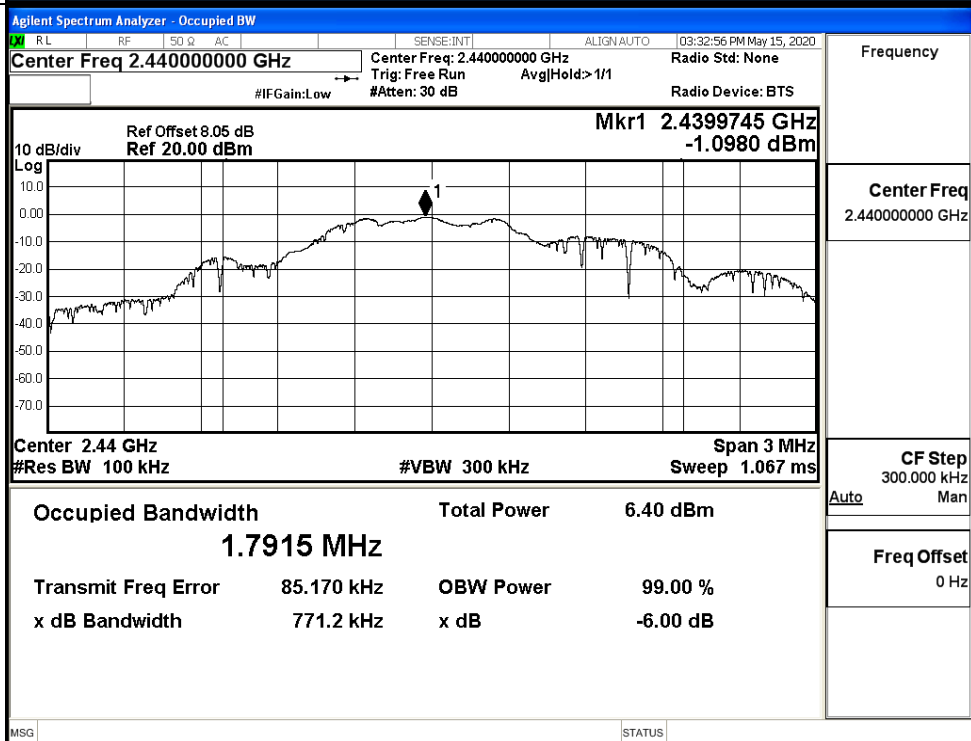
| Mode  | Channel | 6dB Bandwidth [MHz] | Limit [MHz] | Verdict |
|-------|---------|---------------------|-------------|---------|
| BT LE | LCH     | 0.8055              | $\geq 0.5$  | PASS    |
| BT LE | MCH     | 0.7712              | $\geq 0.5$  | PASS    |
| BT LE | HCH     | 0.8773              | $\geq 0.5$  | PASS    |

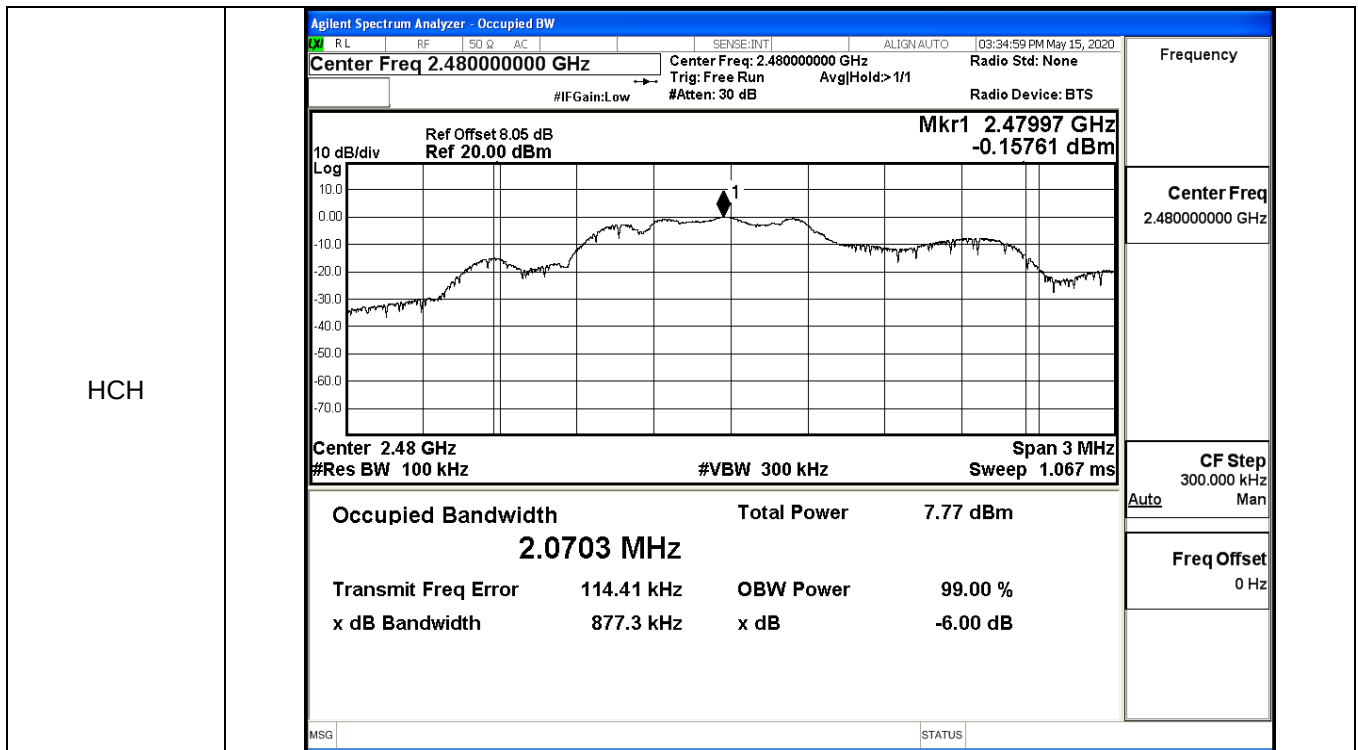
## Test Graphs

LCH



MCH

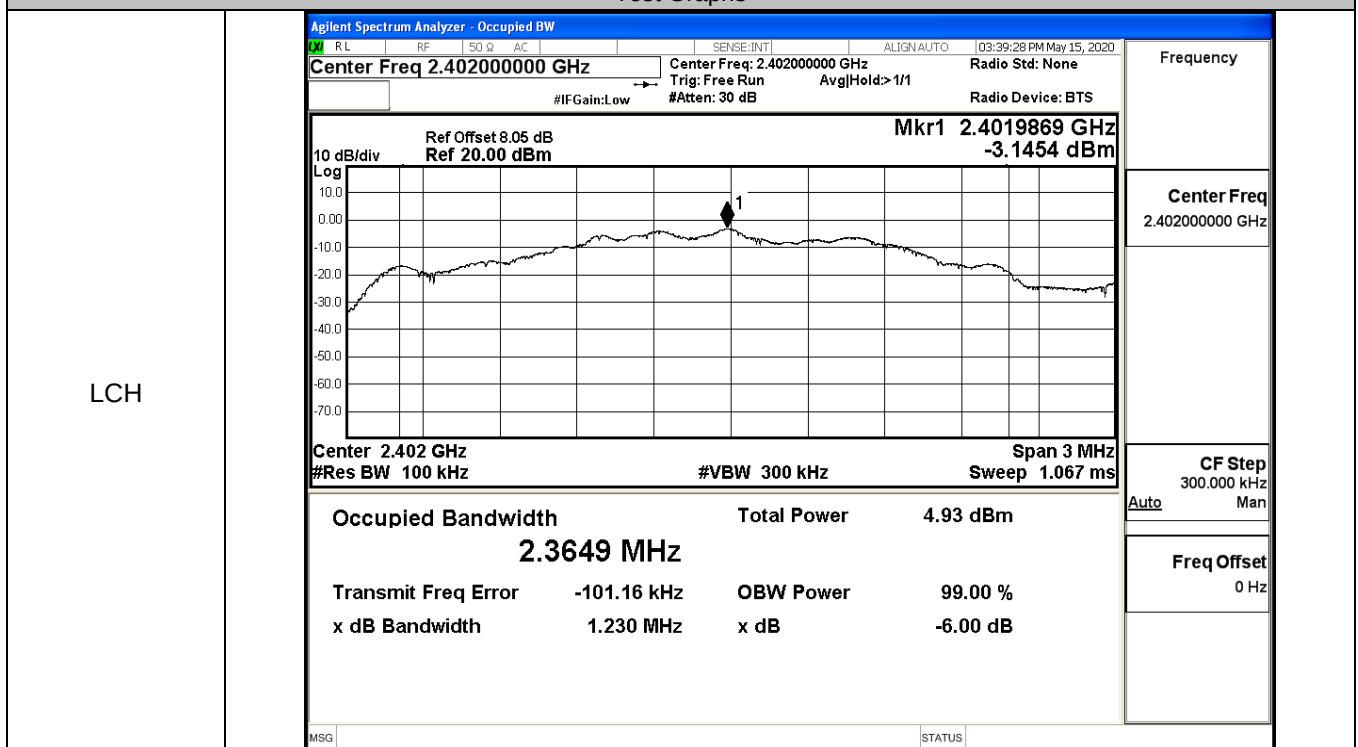




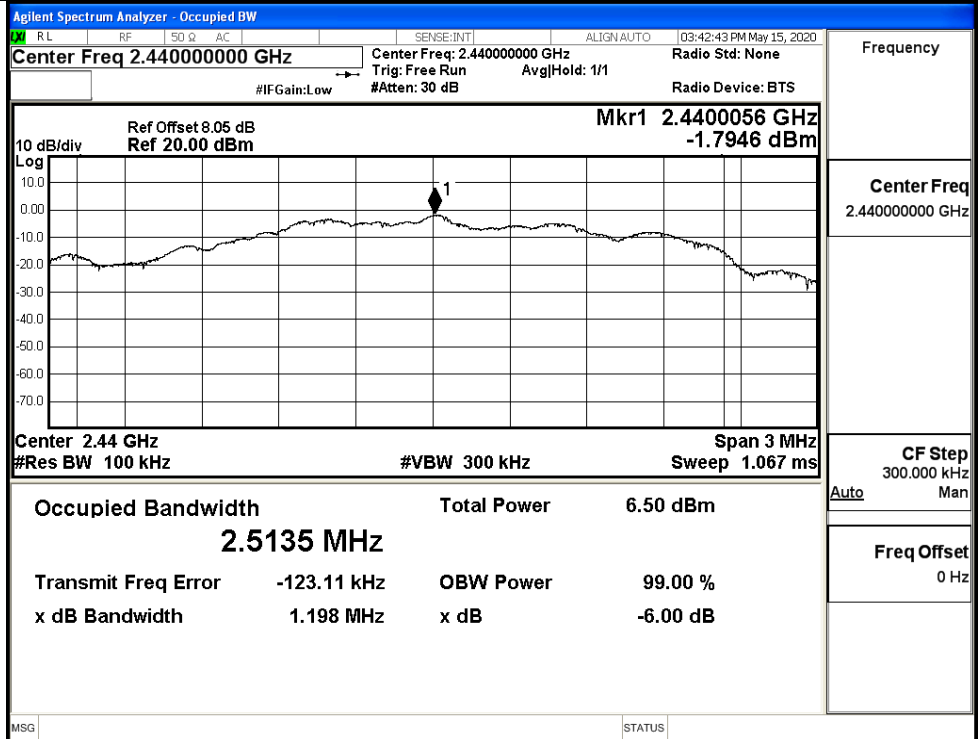
BT 2LE

| Mode  | Channel | 6dB Bandwidth [MHz] | Limit [MHz] | Verdict |
|-------|---------|---------------------|-------------|---------|
| BT LE | LCH     | 1.230               | $\geq 0.5$  | PASS    |
| BT LE | MCH     | 1.198               | $\geq 0.5$  | PASS    |
| BT LE | HCH     | 1.256               | $\geq 0.5$  | PASS    |

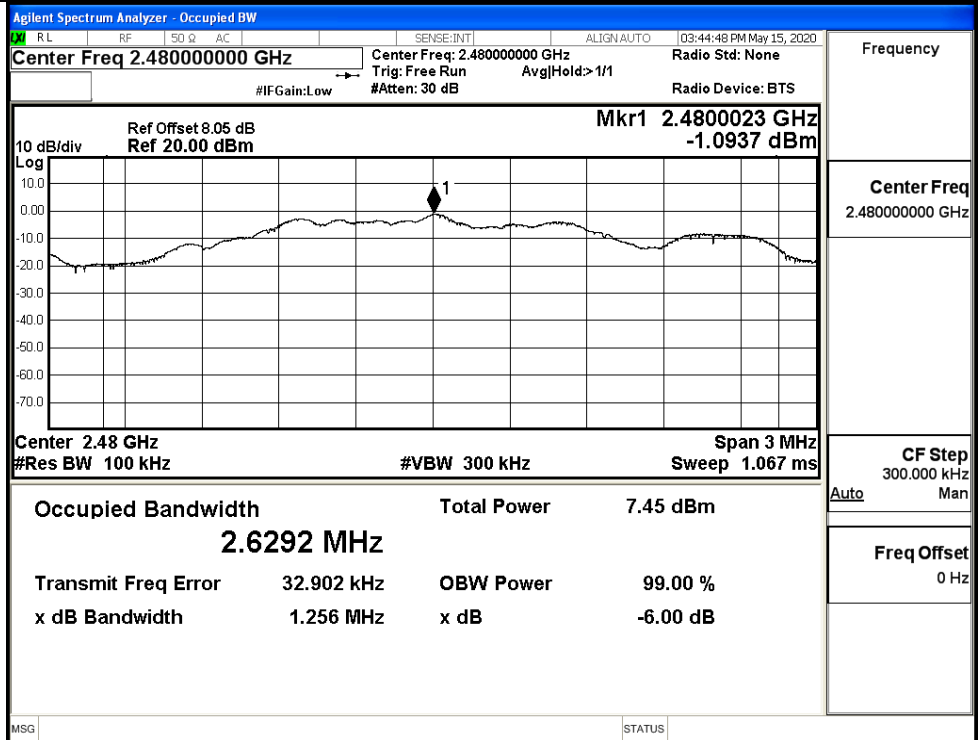
Test Graphs



MCH



HCH



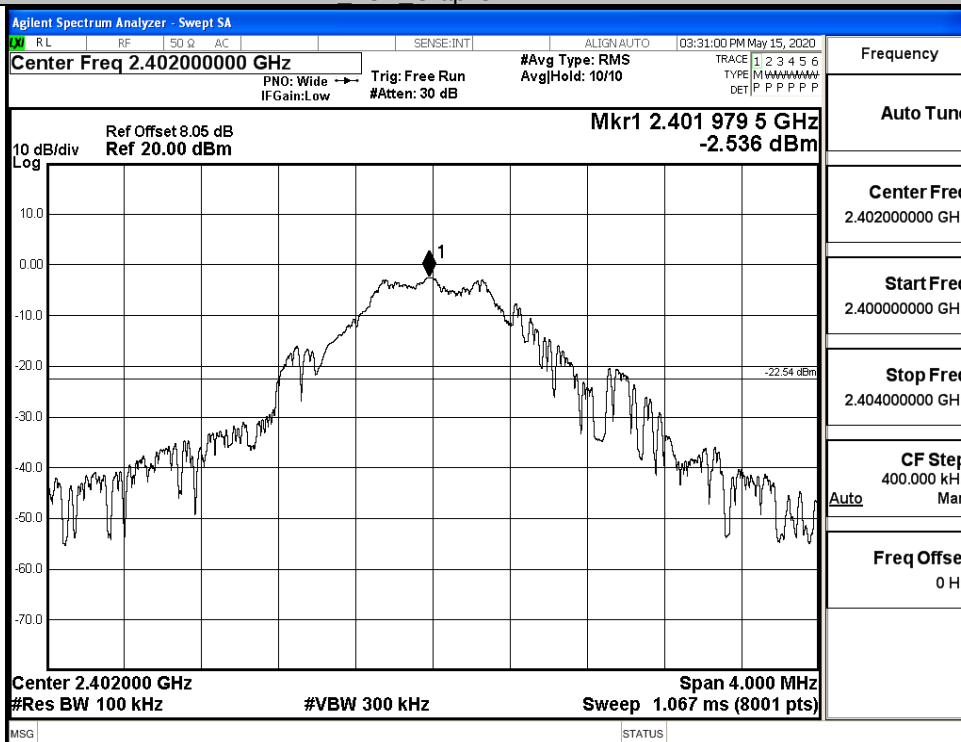
## A.5 RF Conducted Spurious Emissions

BT LE

| Mode  | Channel | Pref [dBm] | Max. Level [dBm] | Limit [dBm] | Verdict |
|-------|---------|------------|------------------|-------------|---------|
| BT LE | LCH     | -2.536     | -37.242          | -22.536     | PASS    |
| BT LE | MCH     | -1.095     | -36.943          | -21.095     | PASS    |
| BT LE | HCH     | -0.129     | -37.235          | -20.129     | PASS    |

BT LE LCH Graphs

Pref/BT LE/LCH

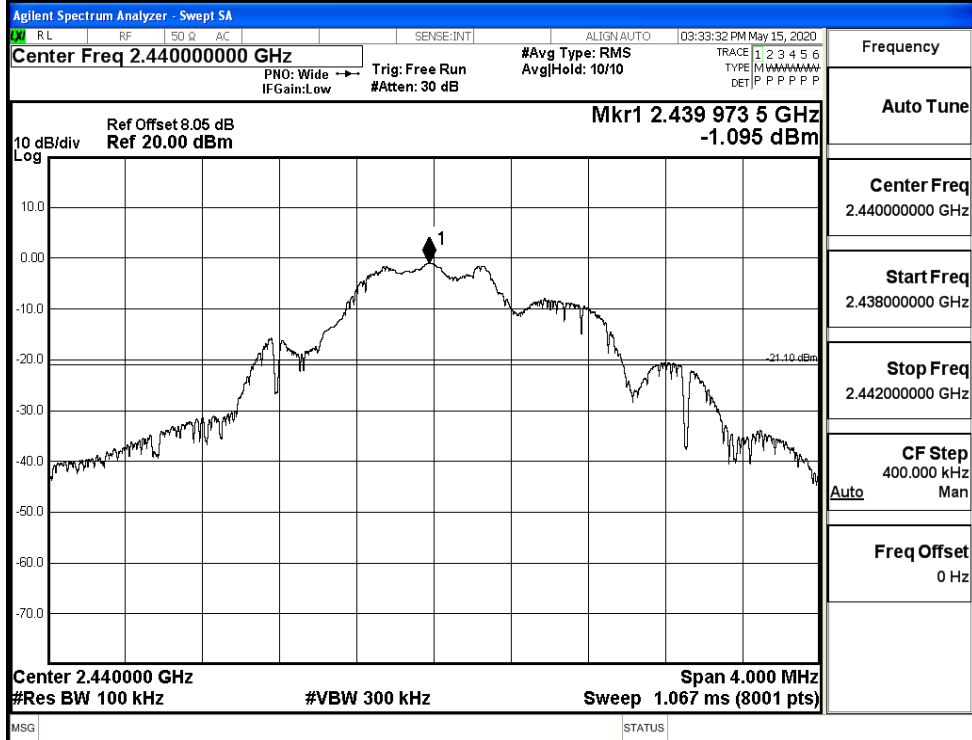


Puw/BT LE/LCH

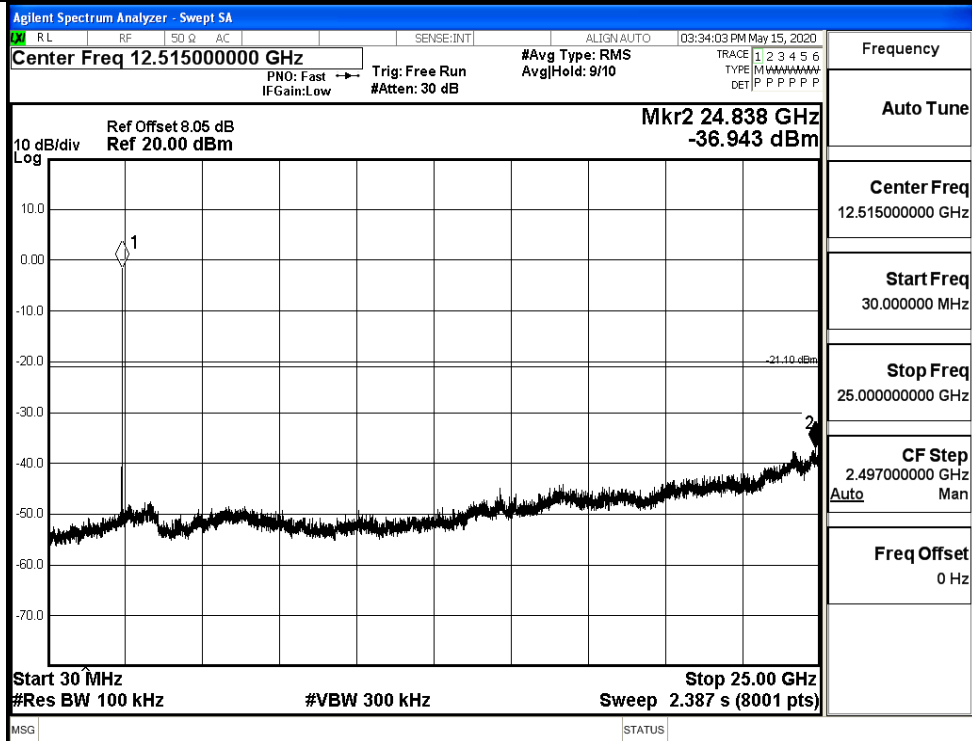


## BT LE MCH Graphs

Pref/BT LE/MCH

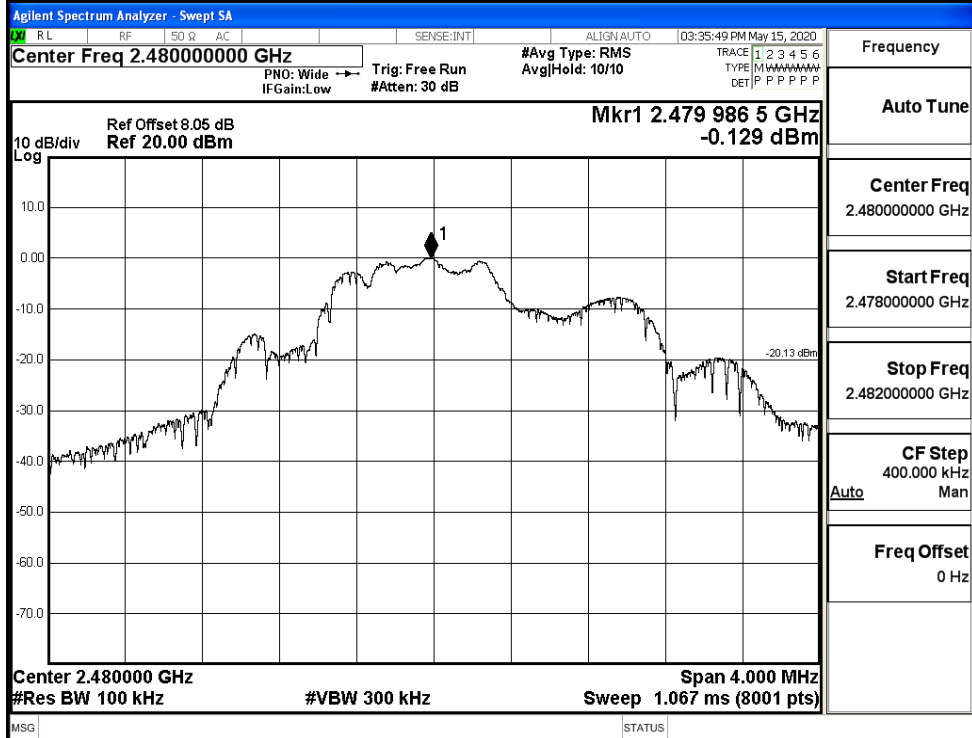


Puw/BT LE/MCH



## BT LE HCH Graphs

Pref/BT LE/HCH



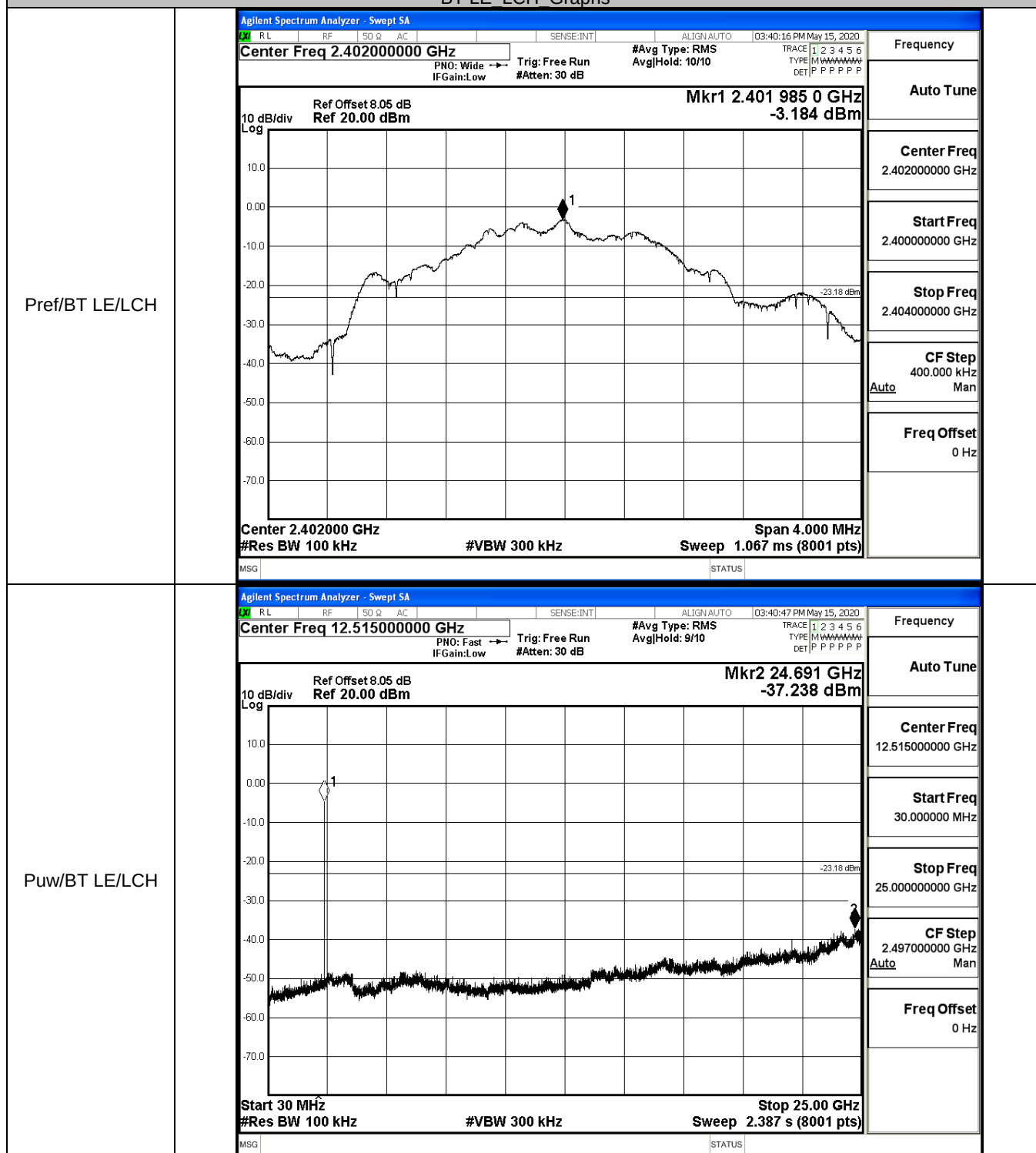
Puw/BT LE/HCH



## BT 2LE

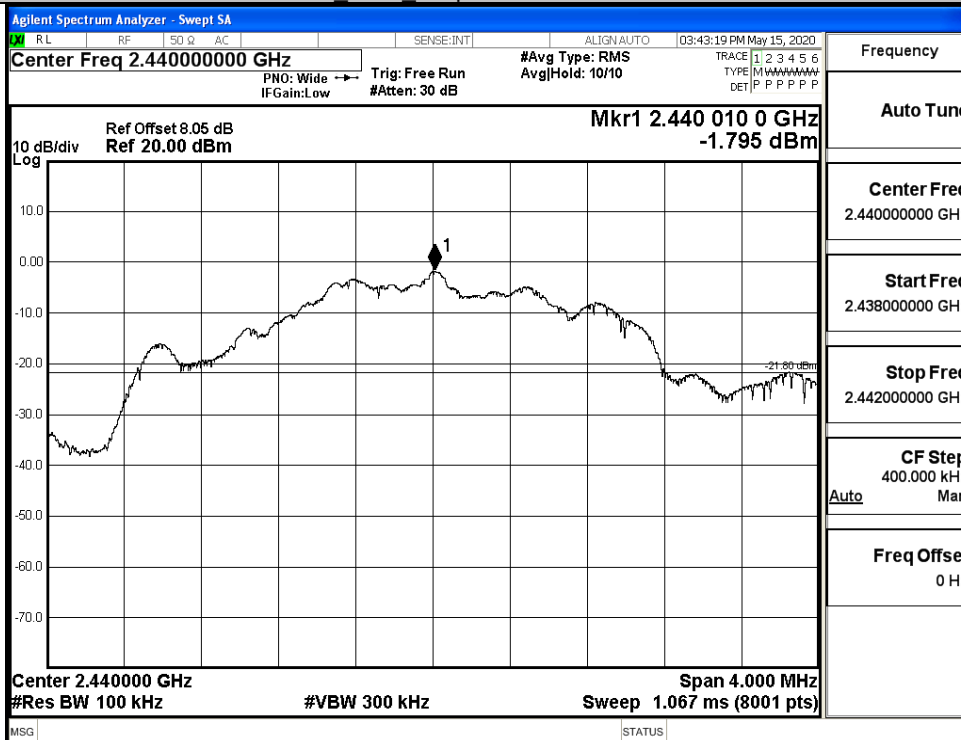
| Mode  | Channel | Pref [dBm] | Max. Level [dBm] | Limit [dBm] | Verdict |
|-------|---------|------------|------------------|-------------|---------|
| BT LE | LCH     | -3.184     | -37.238          | -23.184     | PASS    |
| BT LE | MCH     | -1.795     | -37.190          | -21.795     | PASS    |
| BT LE | HCH     | -1.037     | -37.147          | -21.037     | PASS    |

BT LE LCH Graphs

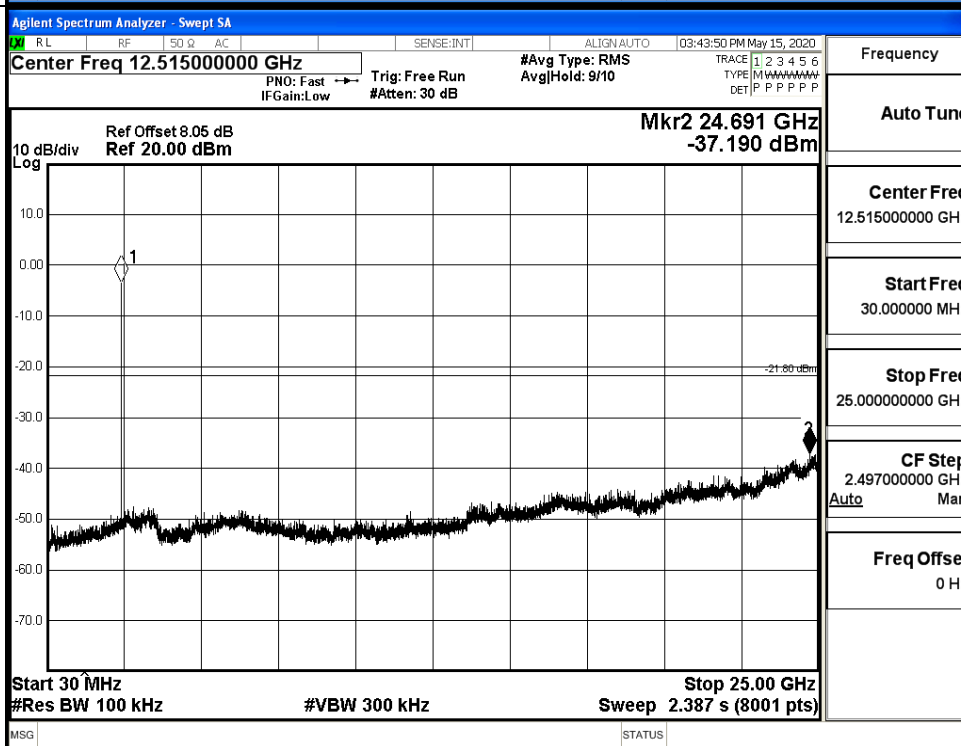


## BT LE MCH Graphs

Pref/BT LE/MCH



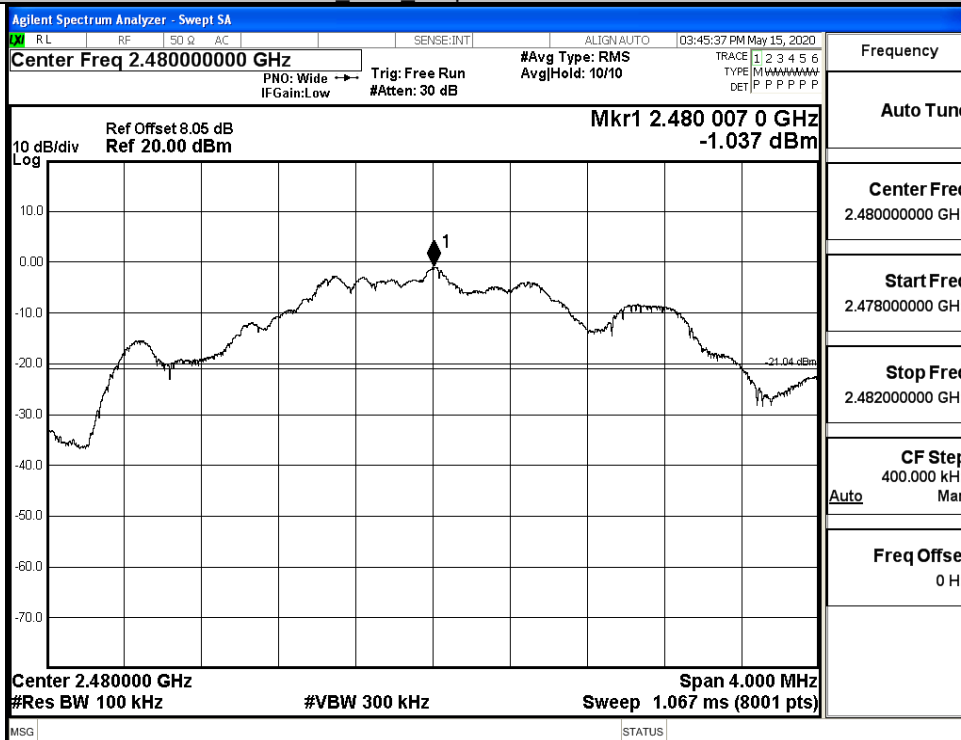
Puw/BT LE/MCH



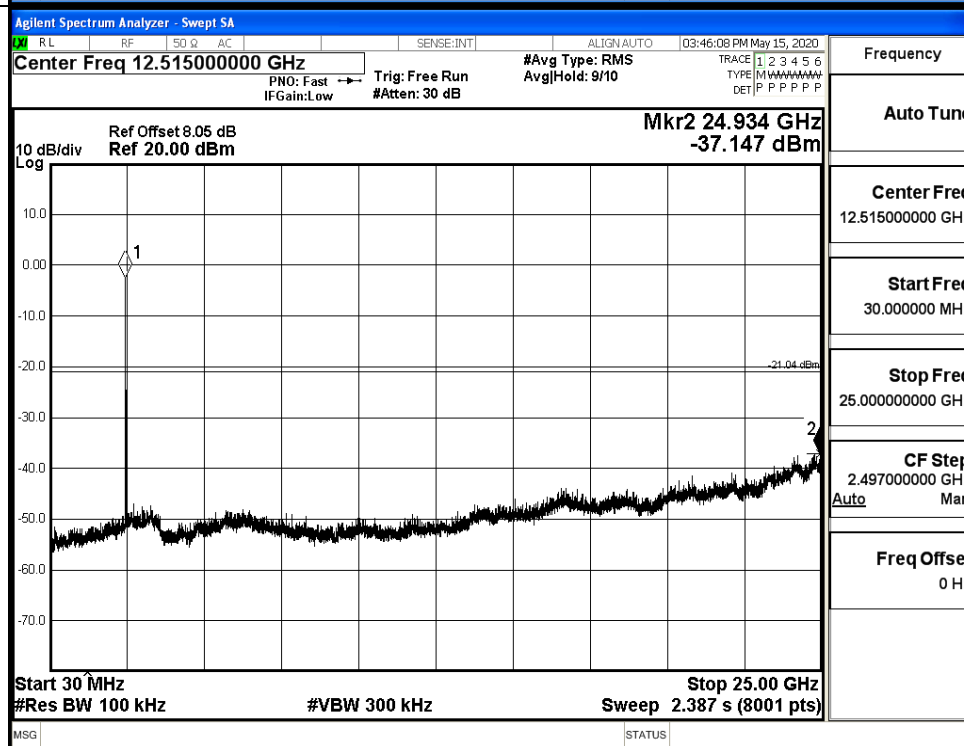


## BT LE HCH Graphs

Pref/BT LE/HCH



Puw/BT LE/HCH



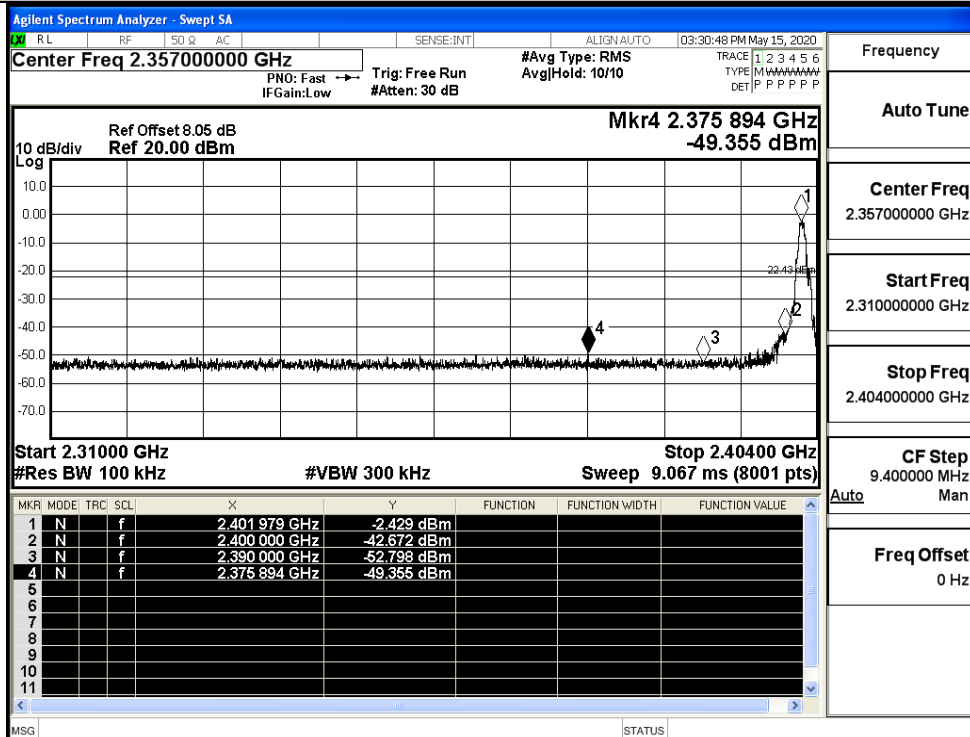
## A.6 Band-edge for RF Conducted Emissions

BT LE

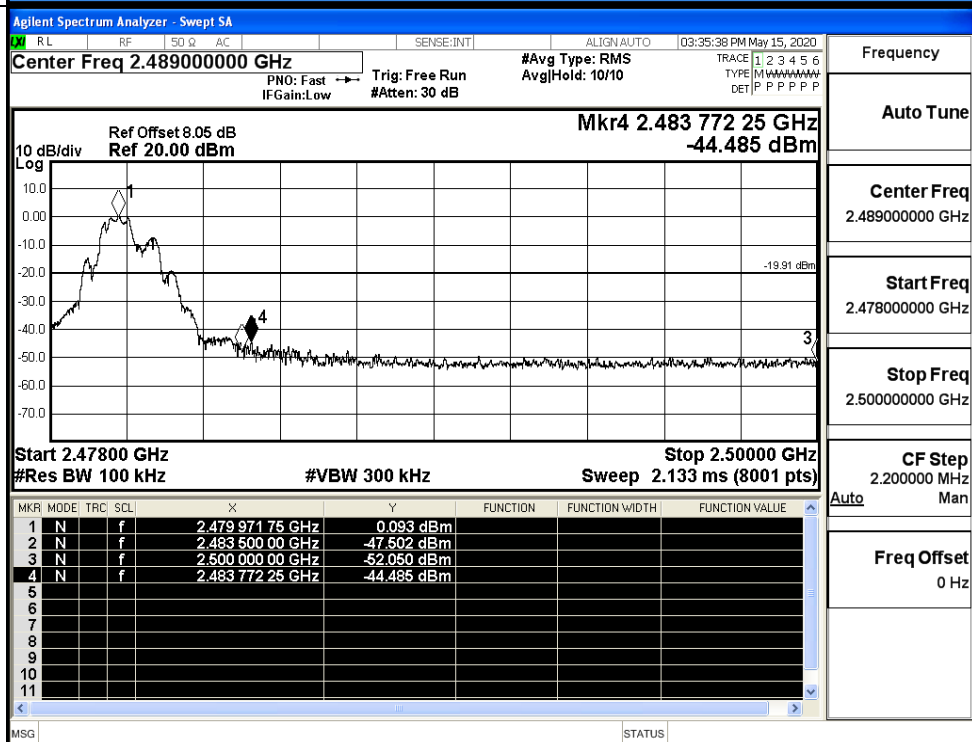
| Mode  | Channel | Carrier Power[dBm] | Max.Spurious Level [dBm] | Limit [dBm] | Verdict |
|-------|---------|--------------------|--------------------------|-------------|---------|
| BT LE | LCH     | -2.429             | -49.355                  | -22.43      | PASS    |
| BT LE | HCH     | 0.093              | -44.485                  | -19.91      | PASS    |

## Test Graphs

LCH



HCH

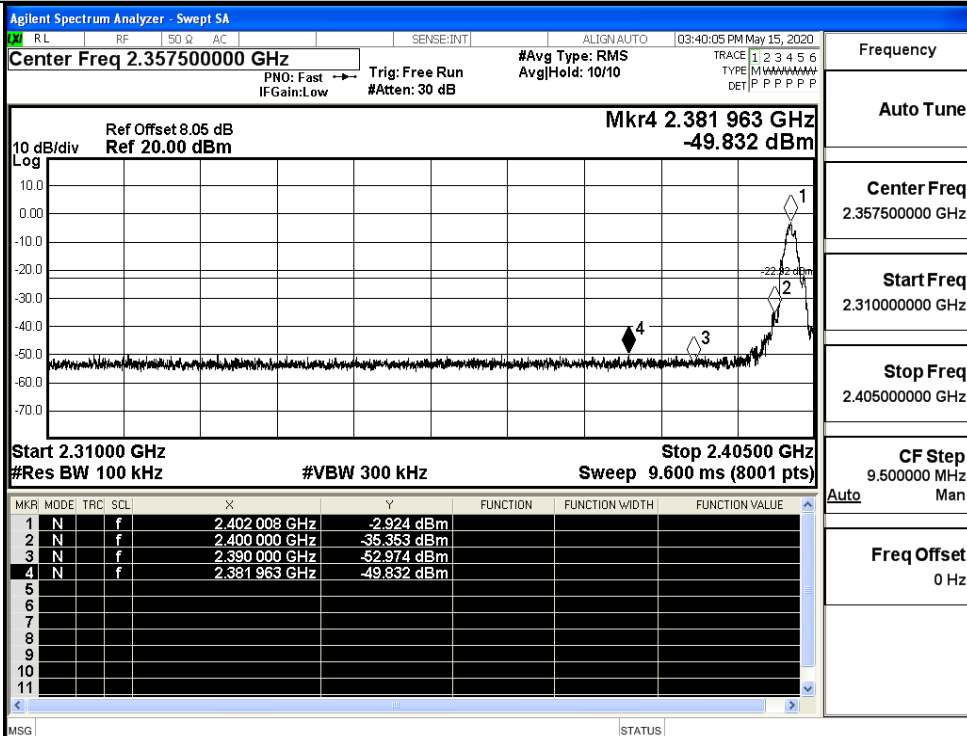


BT 2LE

| Mode  | Channel | Carrier Power[dBm] | Max.Spurious Level [dBm] | Limit [dBm] | Verdict |
|-------|---------|--------------------|--------------------------|-------------|---------|
| BT LE | LCH     | -2.924             | -49.832                  | -22.92      | PASS    |
| BT LE | HCH     | -0.804             | -44.743                  | -20.8       | PASS    |

## Test Graphs

LCH

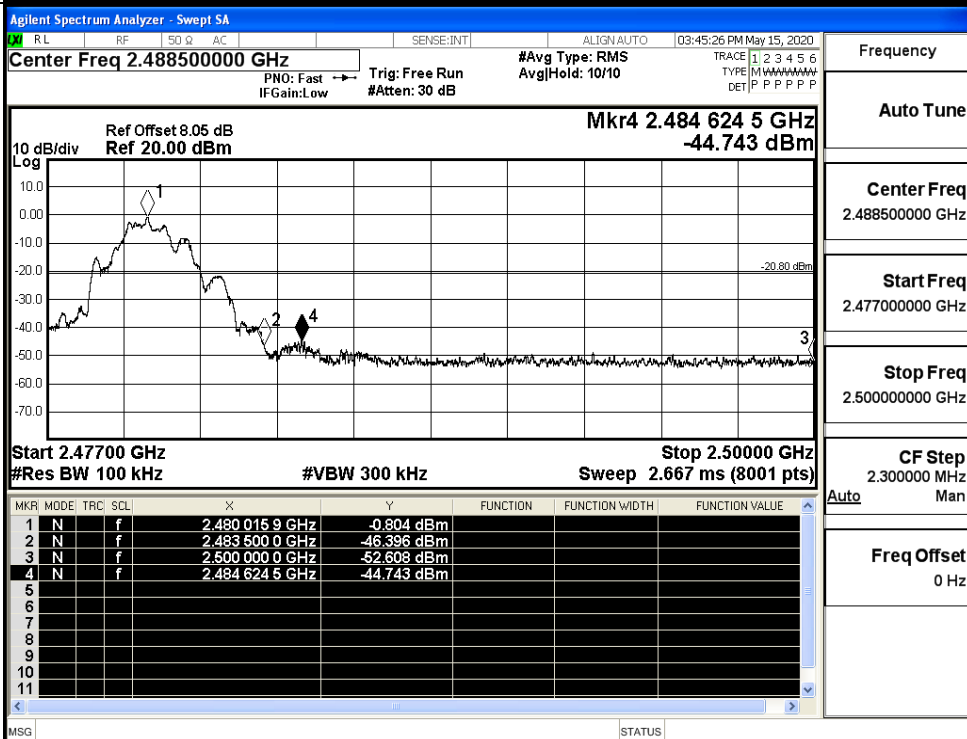


Frequency

Auto Tune

Center Freq  
2.357500000 GHzStart Freq  
2.310000000 GHzStop Freq  
2.405000000 GHzCF Step  
9.500000 MHz  
Auto ManFreq Offset  
0 Hz

HCH



Frequency

Auto Tune

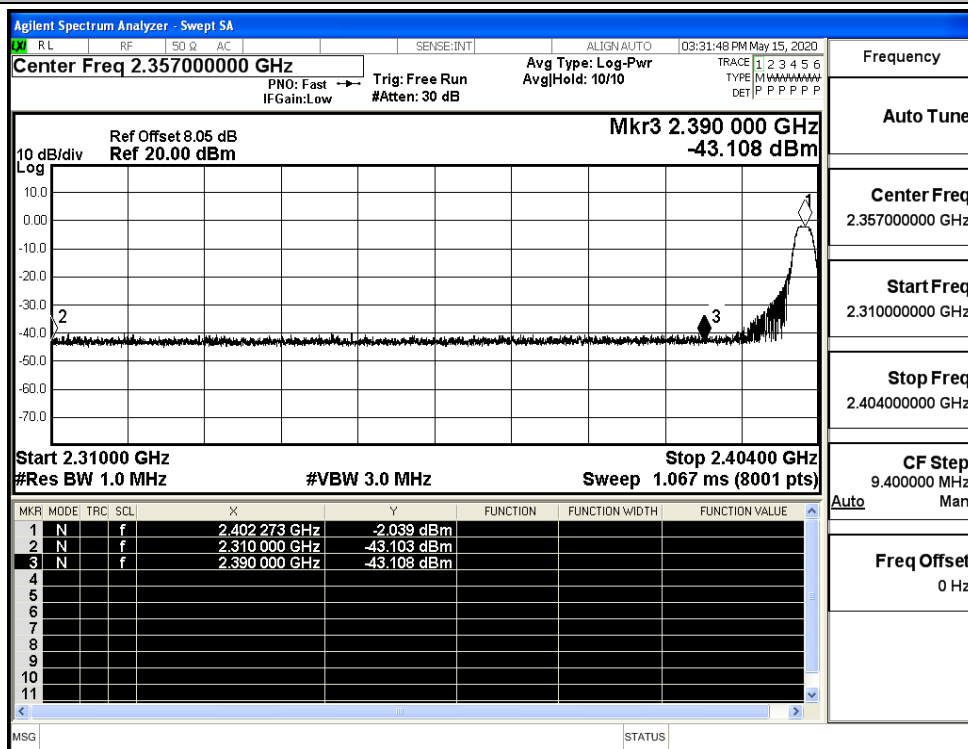
Center Freq  
2.488500000 GHzStart Freq  
2.477000000 GHzStop Freq  
2.500000000 GHzCF Step  
2.300000 MHz  
Auto ManFreq Offset  
0 Hz

## A.7 Restrict-band band-edge measurements

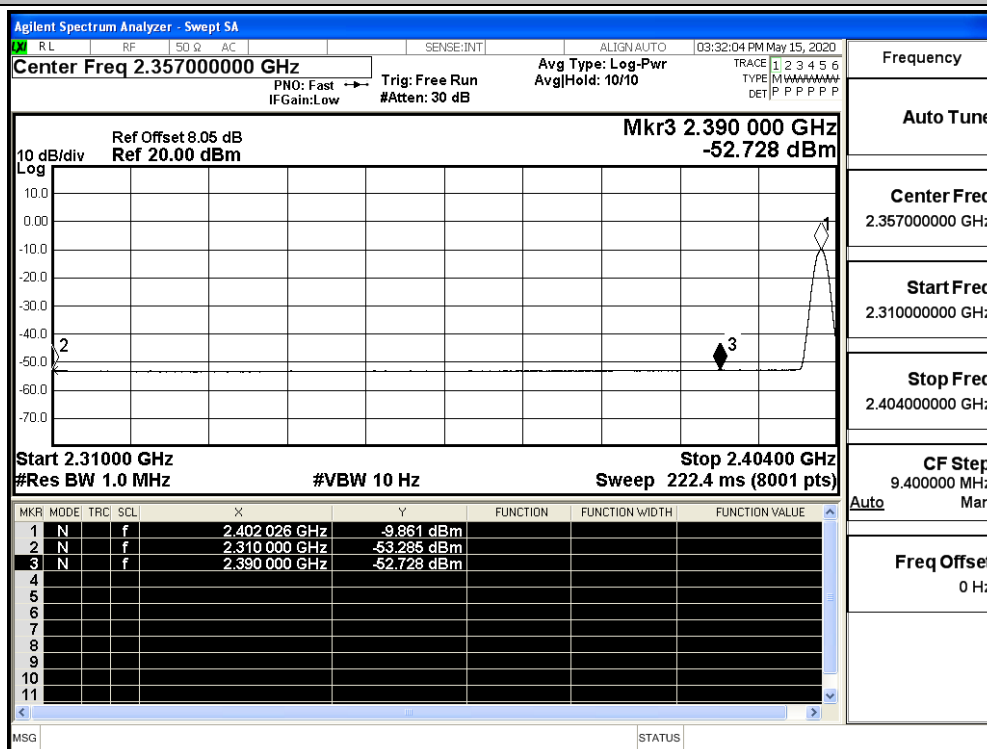
BT LE

| Test Mode | Test Channel | Ant  | Freq.  | Power [dBm] | Gain | Ground Factor | E [dBuV/m] | Detector | Limit [dBuV/m] | Verdi |
|-----------|--------------|------|--------|-------------|------|---------------|------------|----------|----------------|-------|
| BT LE     | 2402         | Ant1 | 2310.0 | -43.10      | 2.0  | 0             | 54.16      | PEAK     | 74             | PASS  |
|           |              | Ant1 | 2310.0 | -53.29      | 2.0  | 0             | 43.97      | AV       | 54             | PASS  |
|           |              | Ant1 | 2390.0 | -43.11      | 2.0  | 0             | 54.15      | PEAK     | 74             | PASS  |
|           |              | Ant1 | 2390.0 | -52.73      | 2.0  | 0             | 44.53      | AV       | 54             | PASS  |
|           | 2480         | Ant1 | 2483.5 | -34.47      | 2.0  | 0             | 62.79      | PEAK     | 74             | PASS  |
|           |              | Ant1 | 2483.5 | -52.42      | 2.0  | 0             | 44.84      | AV       | 54             | PASS  |
|           |              | Ant1 | 2500.0 | -42.46      | 2.0  | 0             | 54.8       | PEAK     | 74             | PASS  |
|           |              | Ant1 | 2500.0 | -52.24      | 2.0  | 0             | 45.02      | AV       | 54             | PASS  |

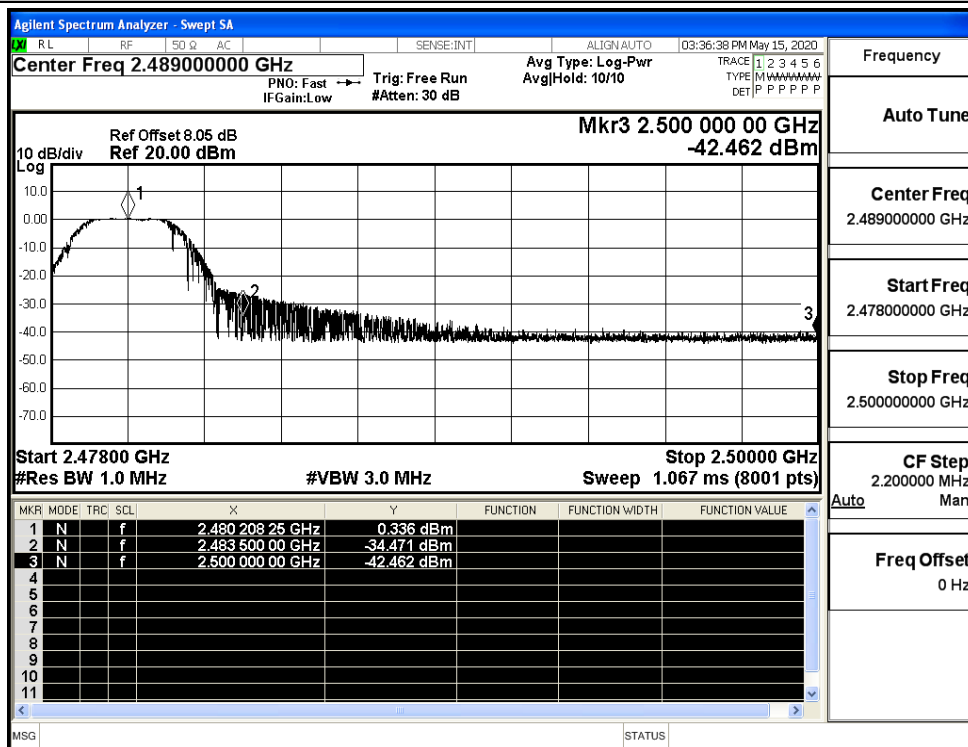
## Restrict-band band-edge measurements\_BT LE\_2402\_Ant1\_PEAK



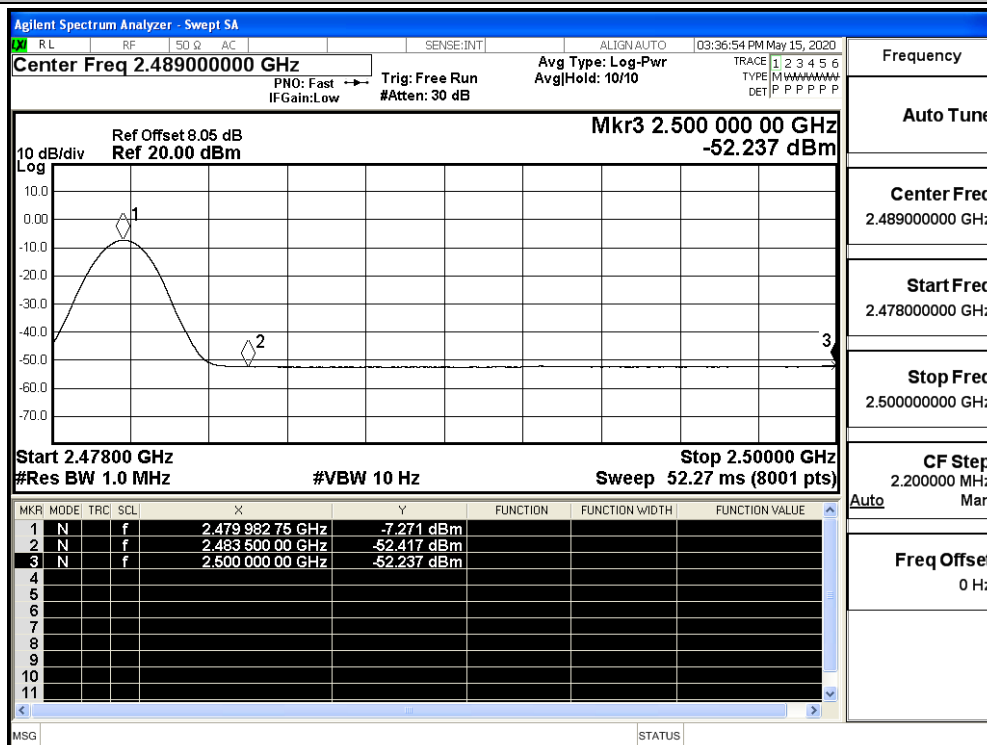
## Restrict-band band-edge measurements\_BT LE\_2402\_Ant1\_AV



## Restrict-band band-edge measurements\_BT LE\_2480\_Ant1\_PEAK



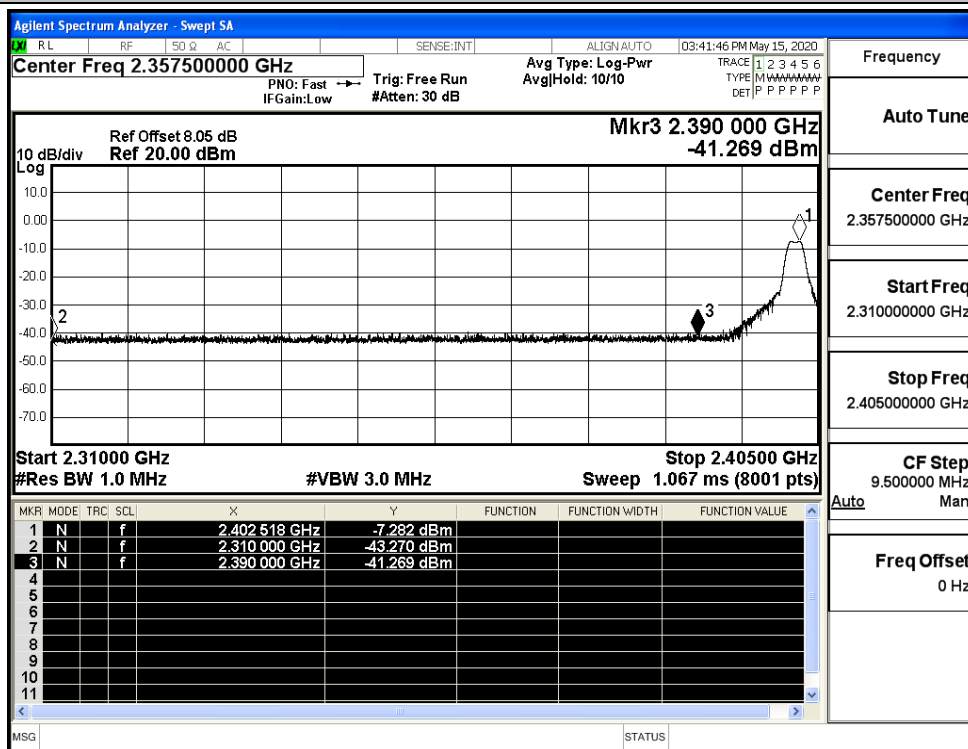
## Restrict-band band-edge measurements\_BT LE\_2480\_Ant1\_AV



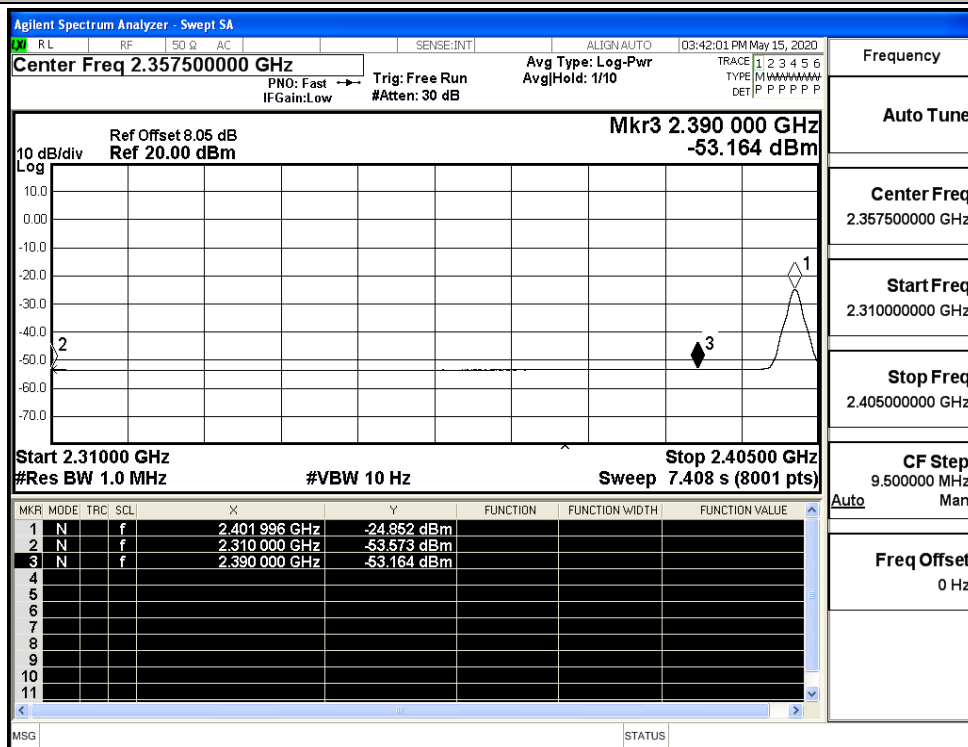
## BT 2LE

| Test Mode | Test Channel | Ant  | Freq.  | Power [dBm] | Gain | Ground Factor | E [dBuV/m] | Detector | Limit [dBuV/m] | Verdi |
|-----------|--------------|------|--------|-------------|------|---------------|------------|----------|----------------|-------|
| BT LE     | 2402         | Ant1 | 2310.0 | -43.27      | 2.0  | 0             | 53.99      | PEAK     | 74             | PASS  |
|           |              | Ant1 | 2310.0 | -53.57      | 2.0  | 0             | 43.69      | AV       | 54             | PASS  |
|           |              | Ant1 | 2390.0 | -41.27      | 2.0  | 0             | 55.99      | PEAK     | 74             | PASS  |
|           |              | Ant1 | 2390.0 | -53.16      | 2.0  | 0             | 44.1       | AV       | 54             | PASS  |
|           | 2480         | Ant1 | 2483.5 | -32.12      | 2.0  | 0             | 65.14      | PEAK     | 74             | PASS  |
|           |              | Ant1 | 2483.5 | -52.09      | 2.0  | 0             | 45.17      | AV       | 54             | PASS  |
|           |              | Ant1 | 2500.0 | -40.20      | 2.0  | 0             | 57.06      | PEAK     | 74             | PASS  |
|           |              | Ant1 | 2500.0 | -52.37      | 2.0  | 0             | 44.89      | AV       | 54             | PASS  |

## Restrict-band band-edge measurements\_BT LE\_2402\_Ant1\_PEAK

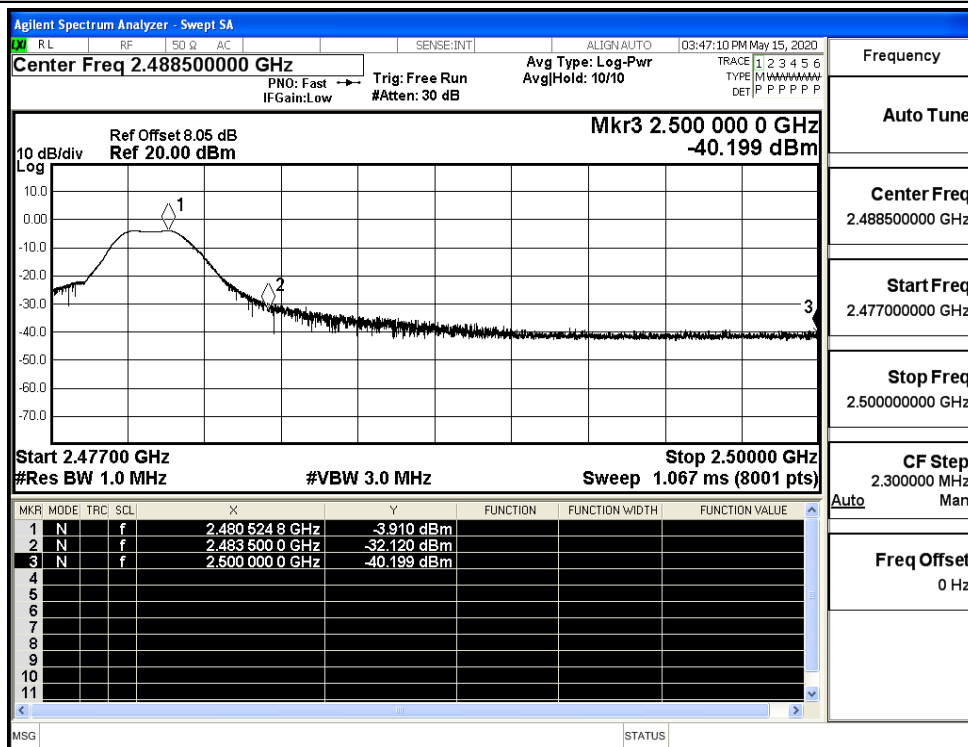


## Restrict-band band-edge measurements\_BT LE\_2402\_Ant1\_AV





## Restrict-band band-edge measurements\_BT LE\_2480\_Ant1\_PEAK



## Restrict-band band-edge measurements\_BT LE\_2480\_Ant1\_AV

