

## Appendix A

### RF Test Data for BT V4.0 (BLE) (Conducted Measurement)

Product Name: Aquarium Luminaire

Trade Mark: **FUJVAL** 

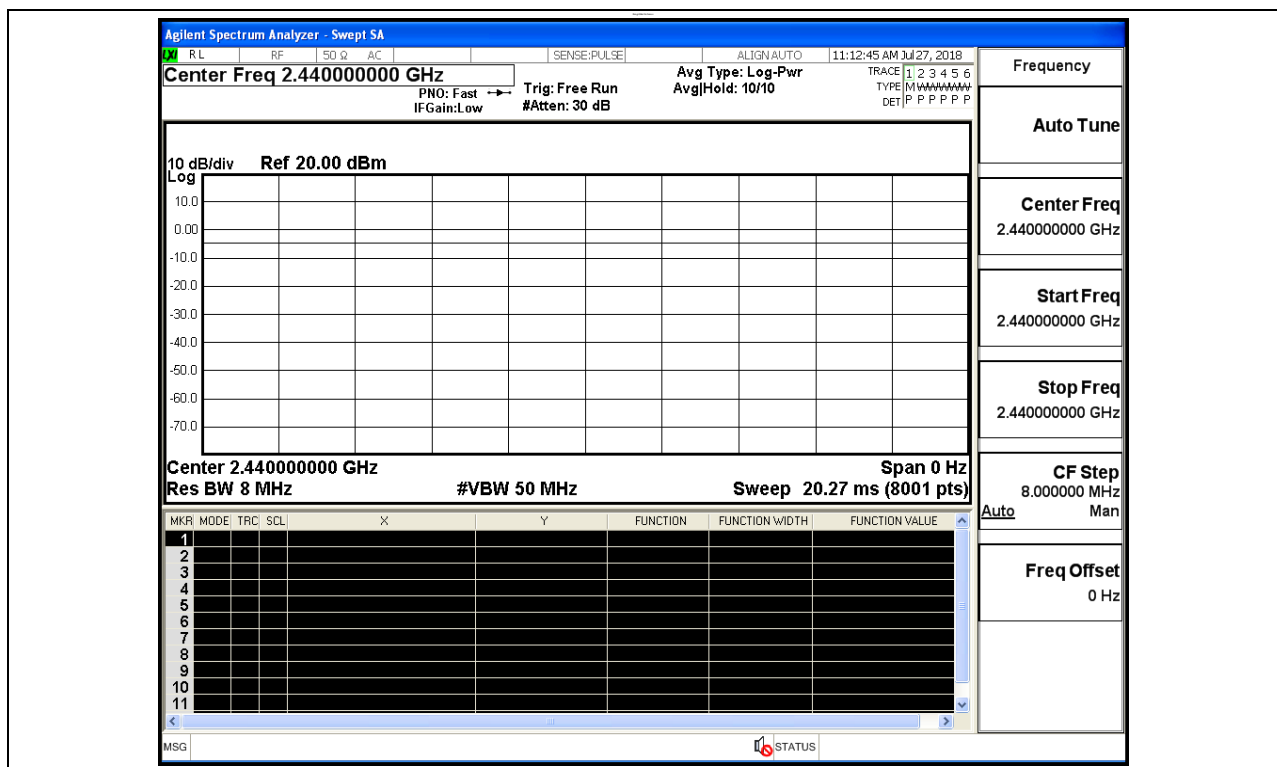
Test Model: 14523

#### Environmental Conditions

|                    |             |
|--------------------|-------------|
| Temperature:       | 23.3 ° C    |
| Relative Humidity: | 52.4%       |
| ATM Pressure:      | 100.0 kPa   |
| Test Engineer:     | Wilson.Hong |
| Supervised by:     | Jayden.Zhuo |

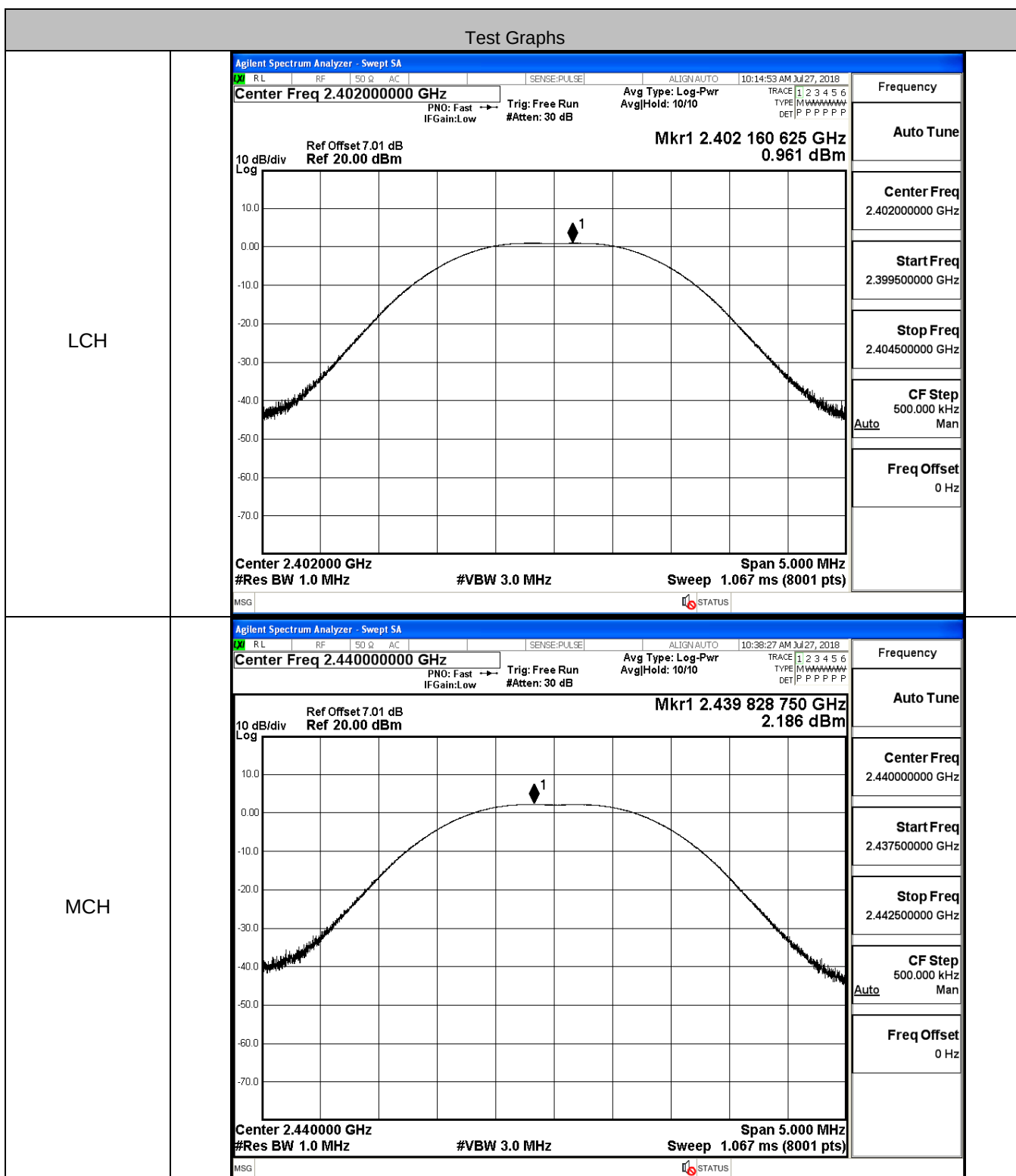
#### A.1 Duty Cycle

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

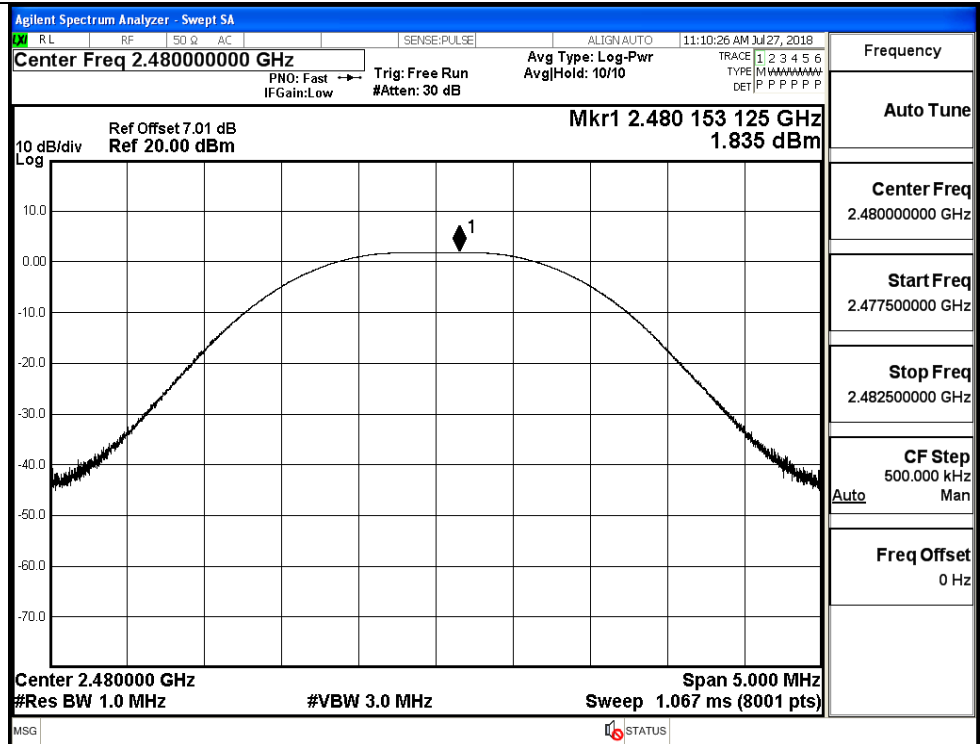


## A.2 Maximum Conducted Peak Output Power

| Mode  | Channel | Conduct Peak Power[dBm] | Limit [dBm] | Verdict |
|-------|---------|-------------------------|-------------|---------|
| BT LE | LCH     | 0.961                   | 30          | PASS    |
| BT LE | MCH     | 2.186                   | 30          | PASS    |
| BT LE | HCH     | 1.835                   | 30          | PASS    |



HCH

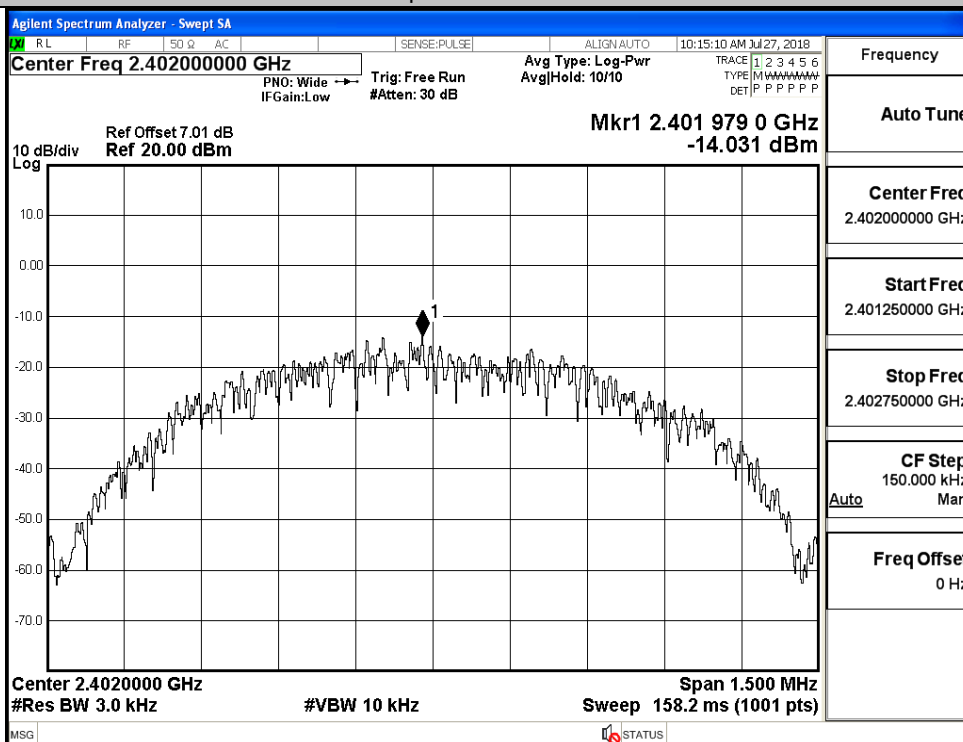


### A.3 Maximum Power Spectral Density

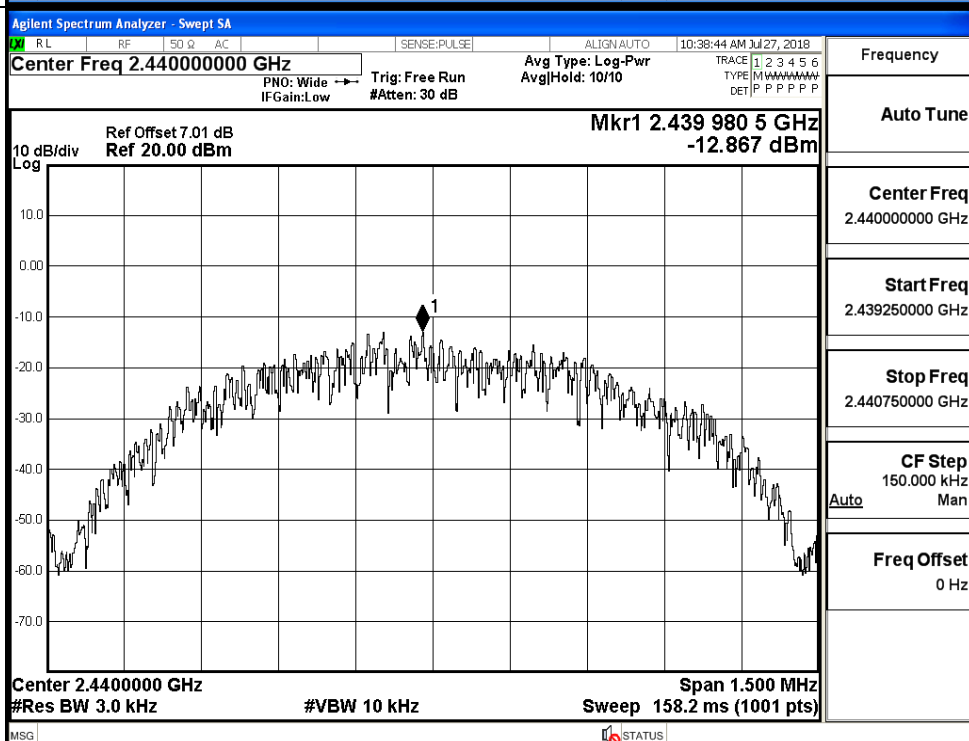
| Mode  | Channel | PSD [dBm/3KHz] | Limit [dBm/3KHz] | Verdict |
|-------|---------|----------------|------------------|---------|
| BT LE | LCH     | -14.031        | 8                | PASS    |
| BT LE | MCH     | -12.867        | 8                | PASS    |
| BT LE | HCH     | -13.162        | 8                | PASS    |

#### Test Graphs

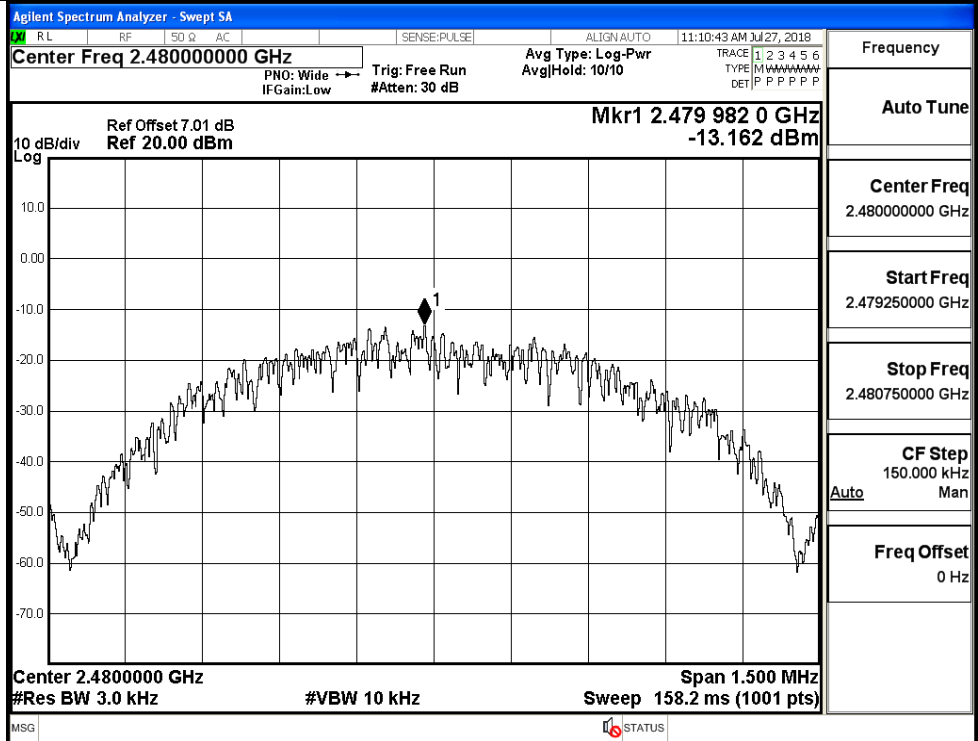
LCH



MCH



HCH

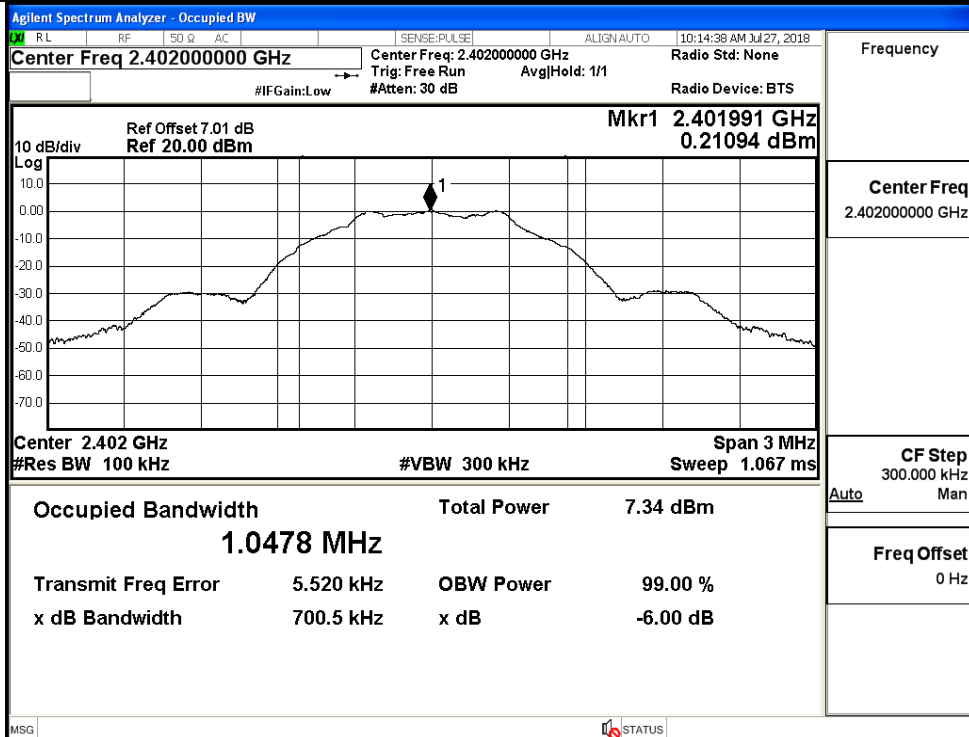


## A.4 6dB Bandwidth

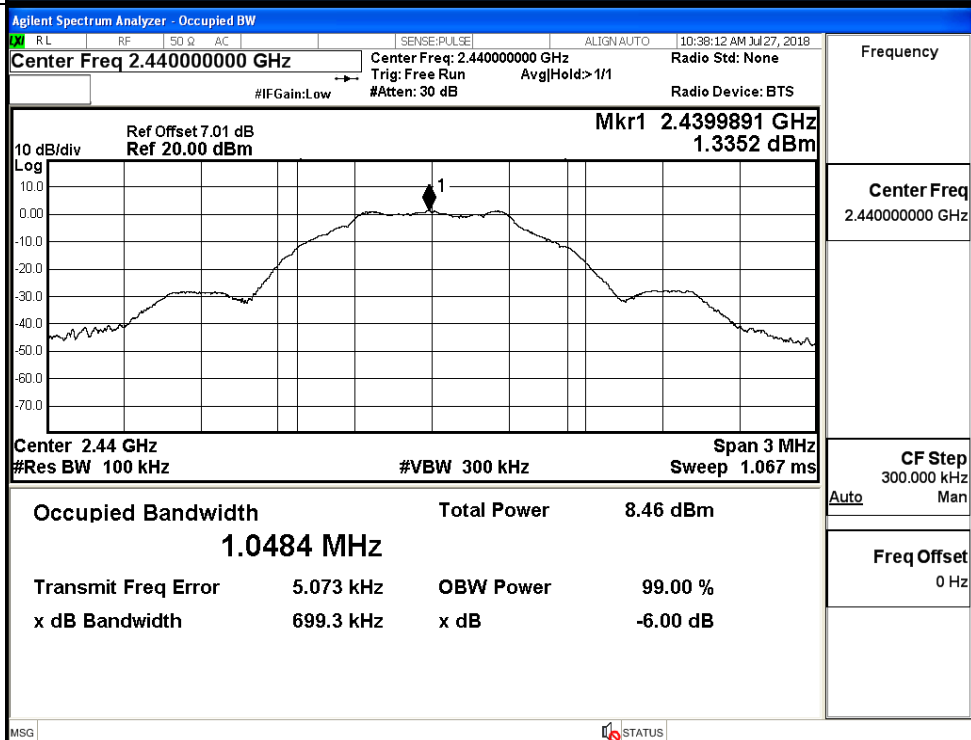
| Mode  | Channel | 6dB Bandwidth [MHz] | Limit [MHz] | Verdict |
|-------|---------|---------------------|-------------|---------|
| BT LE | LCH     | 0.7005              | $\geq 0.5$  | PASS    |
| BT LE | MCH     | 0.6993              | $\geq 0.5$  | PASS    |
| BT LE | HCH     | 0.6958              | $\geq 0.5$  | PASS    |

## Test Graphs

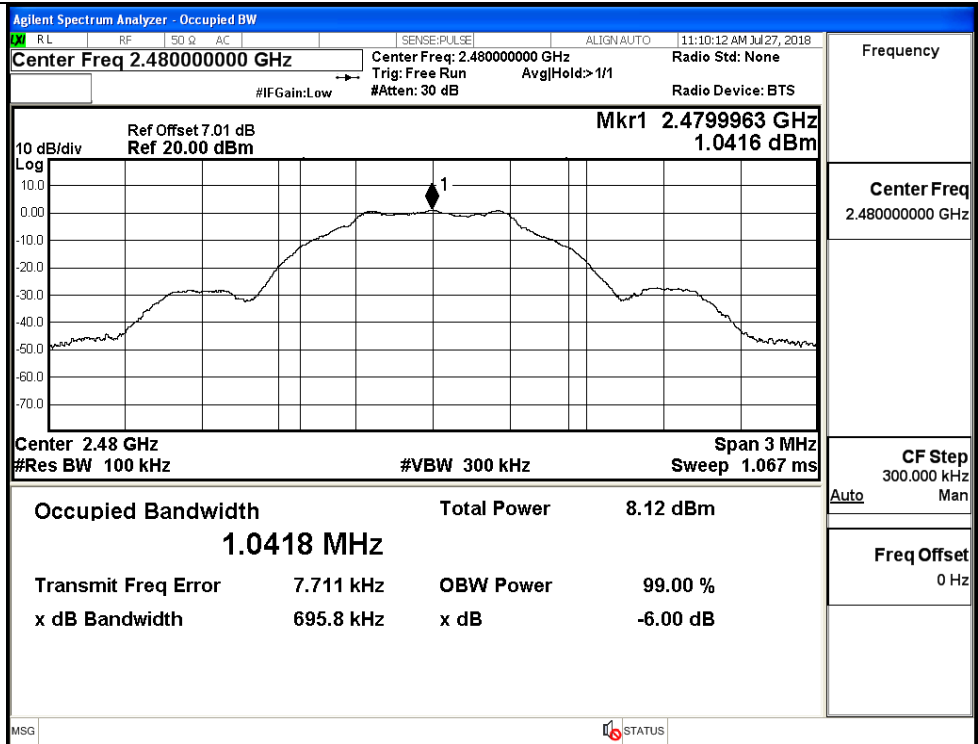
LCH



MCH



HCH

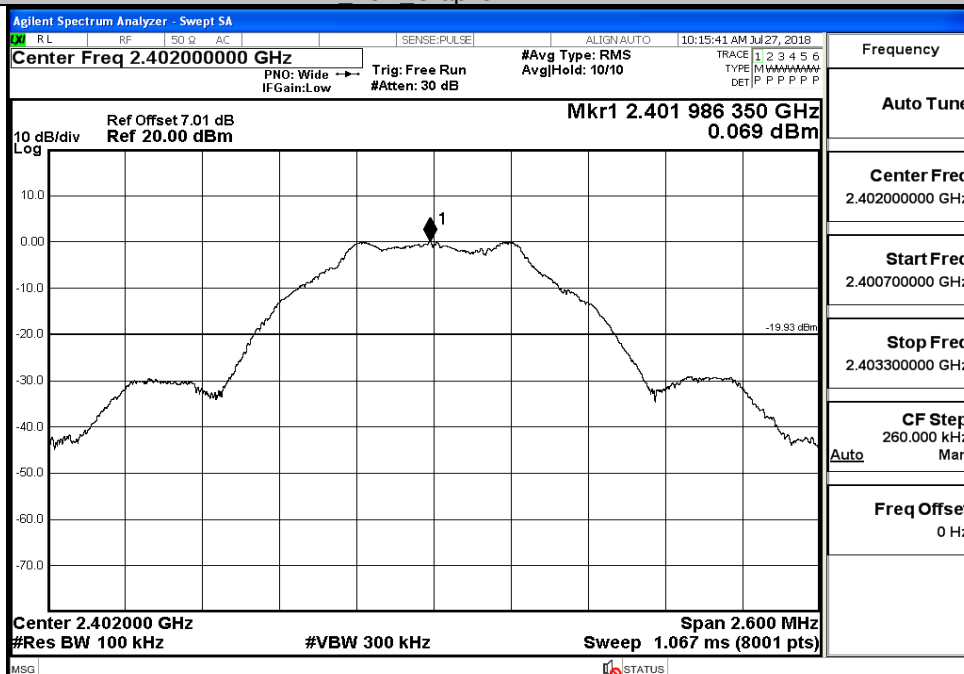


## A.5 RF Conducted Spurious Emissions

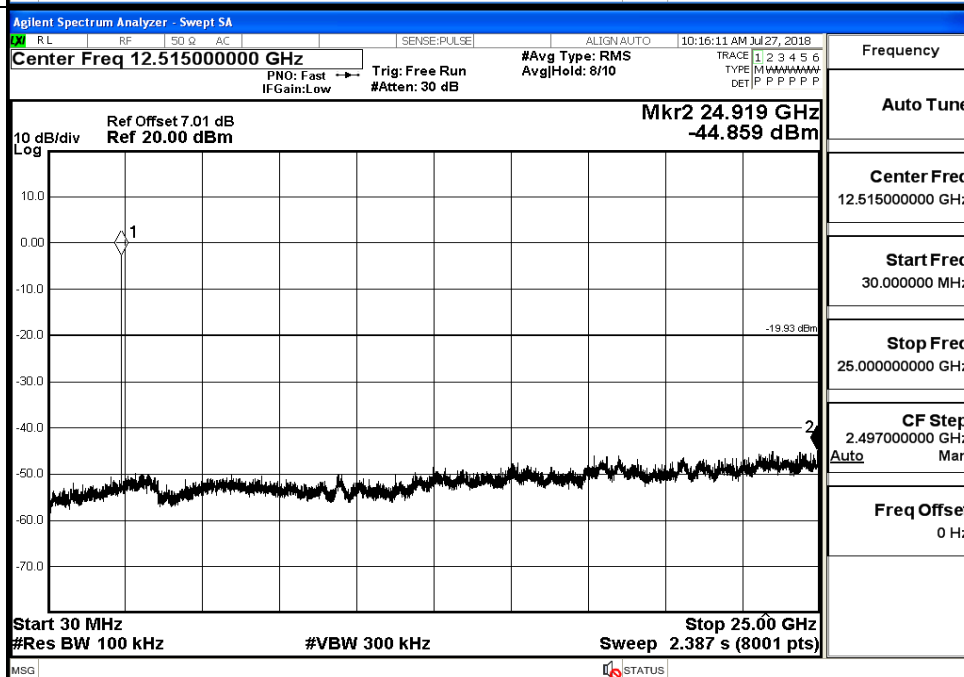
| Mode  | Channel | Pref [dBm] | Max. Level [dBm] | Limit [dBm] | Verdict |
|-------|---------|------------|------------------|-------------|---------|
| BT LE | LCH     | 0.069      | -44.859          | -19.931     | PASS    |
| BT LE | MCH     | 1.378      | -44.109          | -18.622     | PASS    |
| BT LE | HCH     | 1.036      | -42.617          | -18.964     | PASS    |

BT LE LCH Graphs

Pref/BT LE/LCH

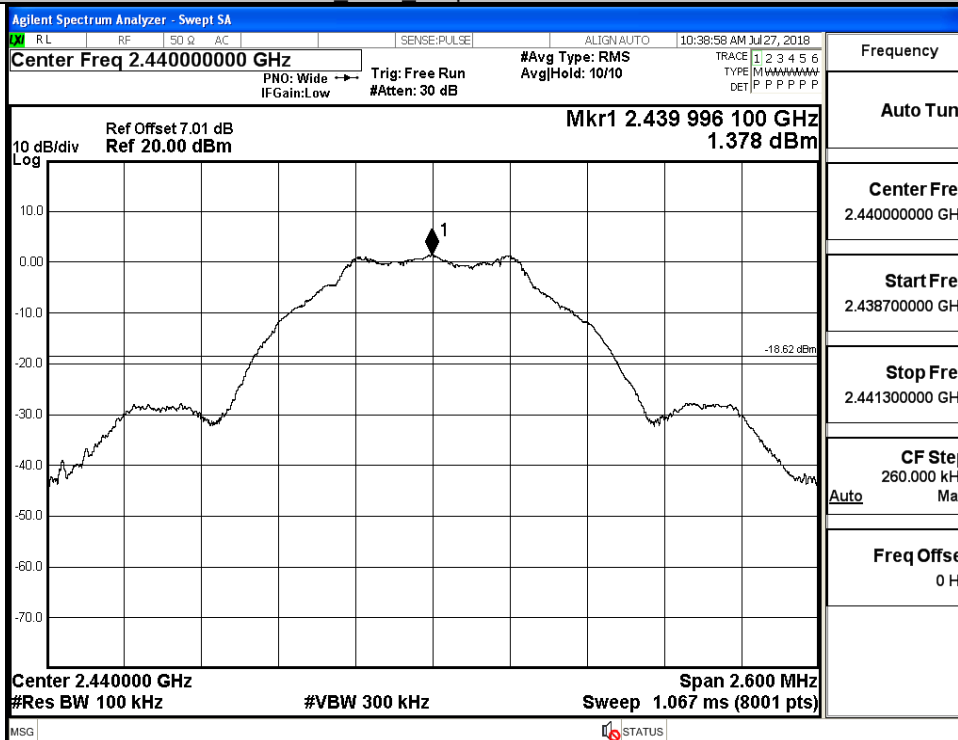


Puw/BT LE/LCH

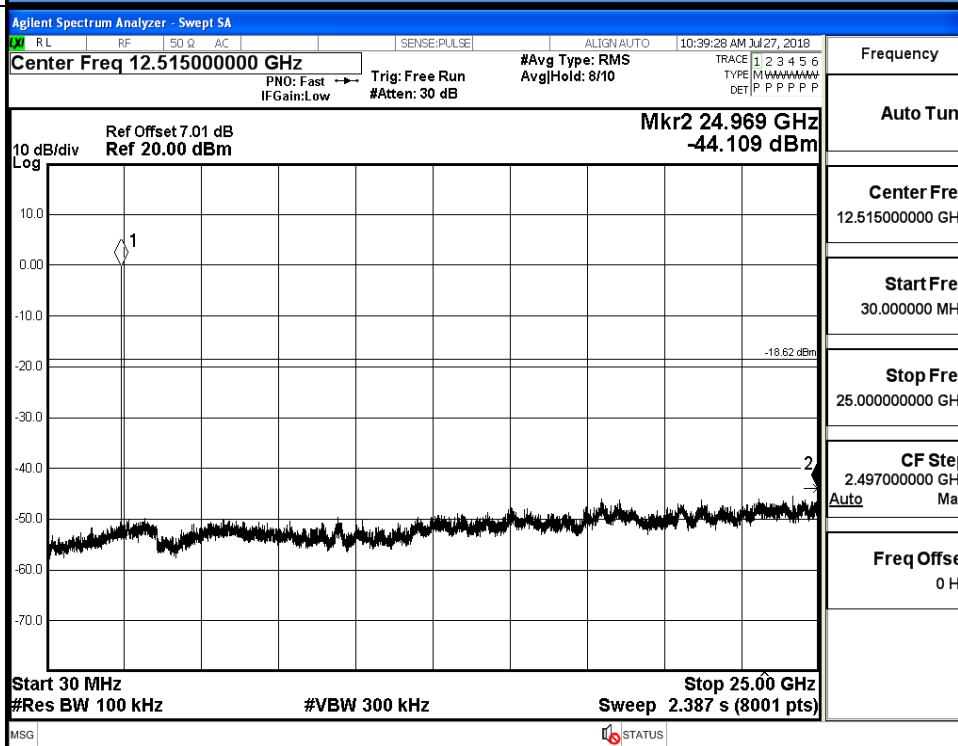


## BT LE MCH Graphs

Pref/BT LE/MCH

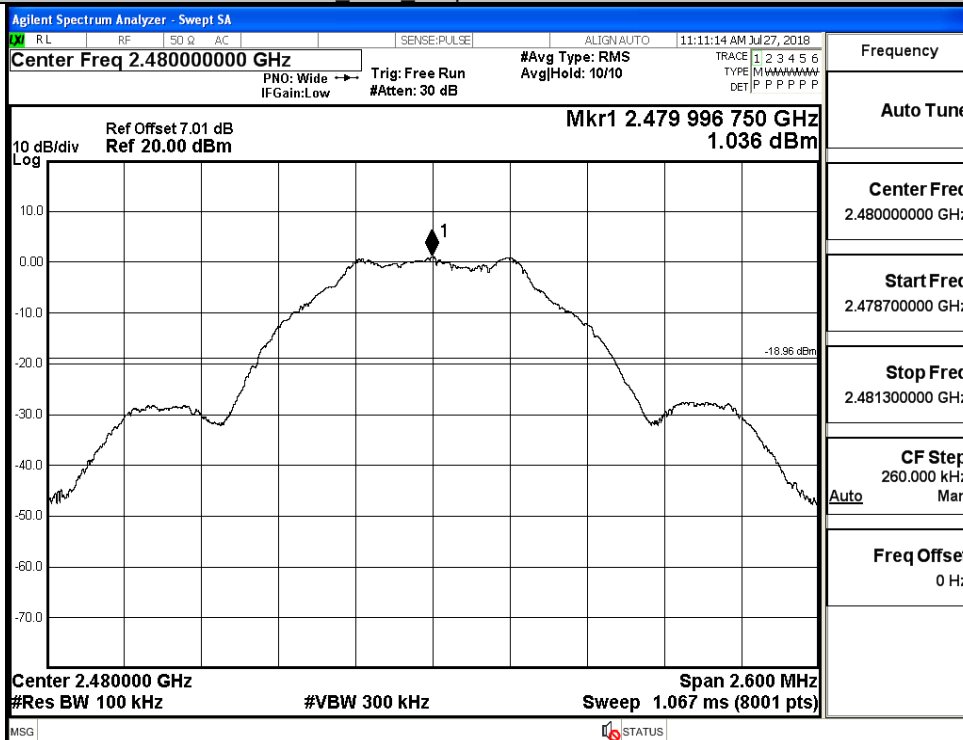


Puw/BT LE/MCH

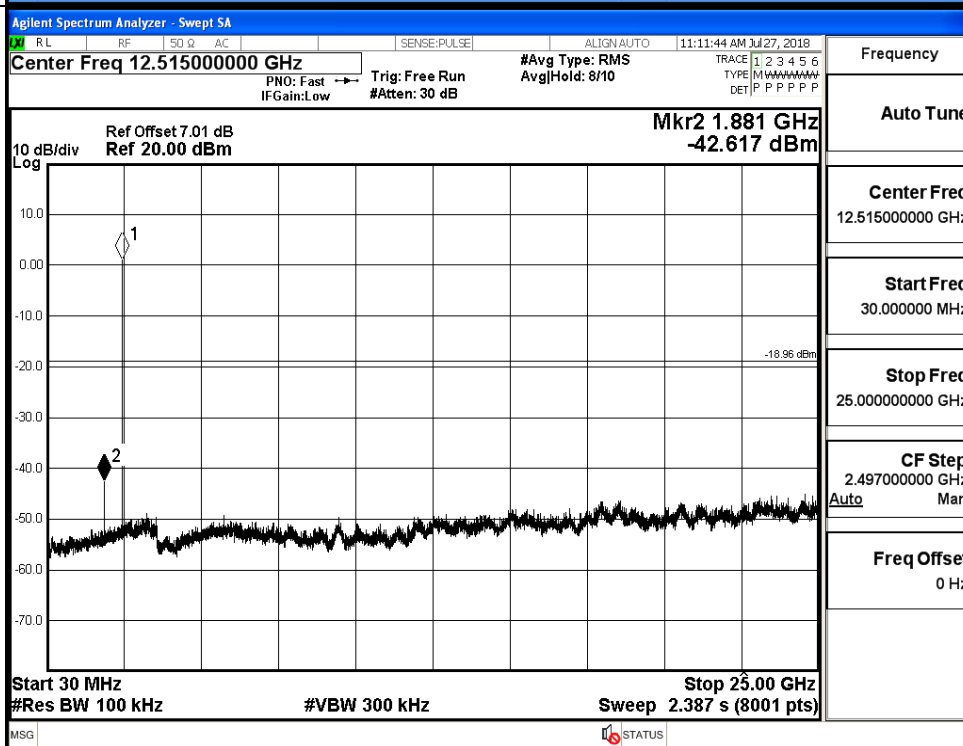


## BT LE HCH Graphs

Pref/BT LE/HCH



Puw/BT LE/HCH

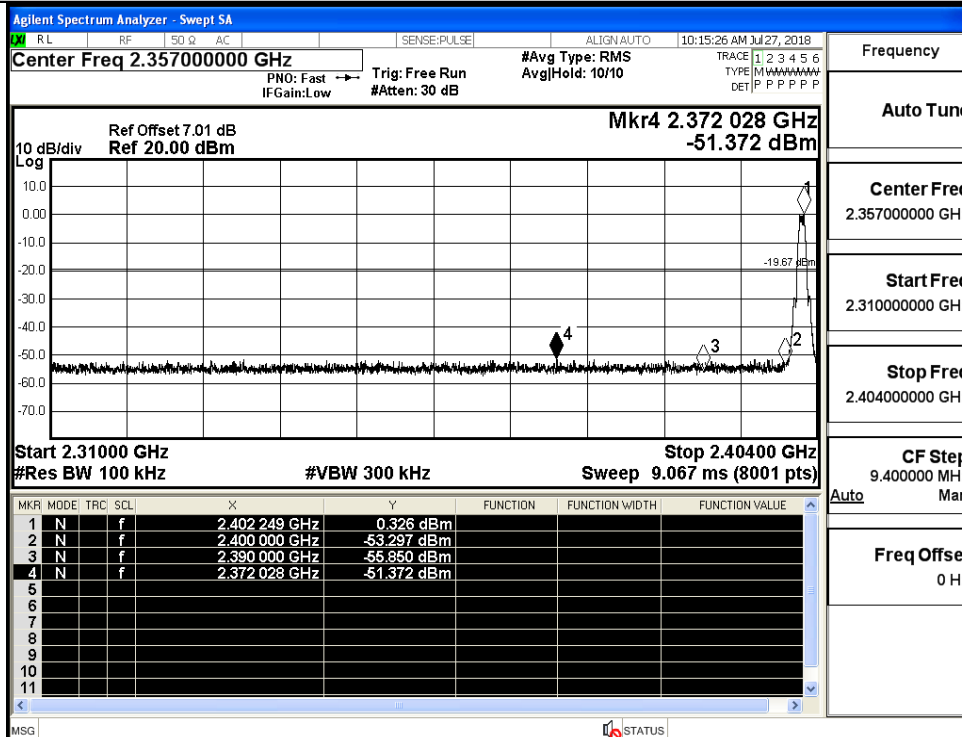


## A.6 Band-edge for RF Conducted Emissions

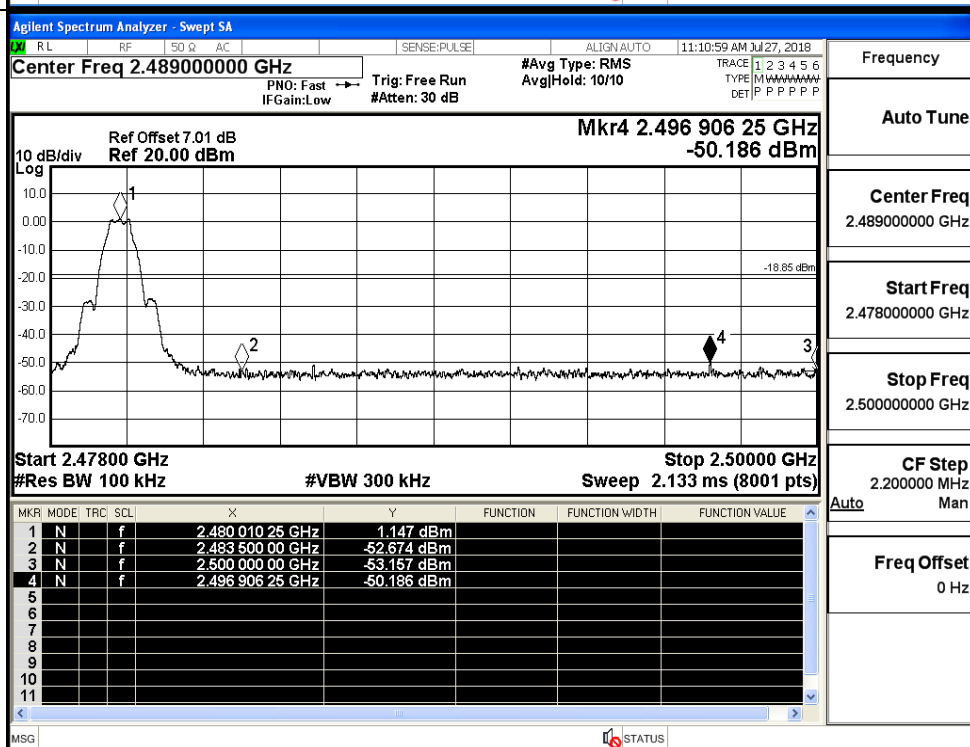
| Mode  | Channel | Carrier Power[dBm] | Max.Spurious Level [dBm] | Limit [dBm] | Verdict |
|-------|---------|--------------------|--------------------------|-------------|---------|
| BT LE | LCH     | 0.326              | -51.372                  | -19.67      | PASS    |
| BT LE | HCH     | 1.147              | -50.186                  | -18.85      | PASS    |

Test Graphs

LCH



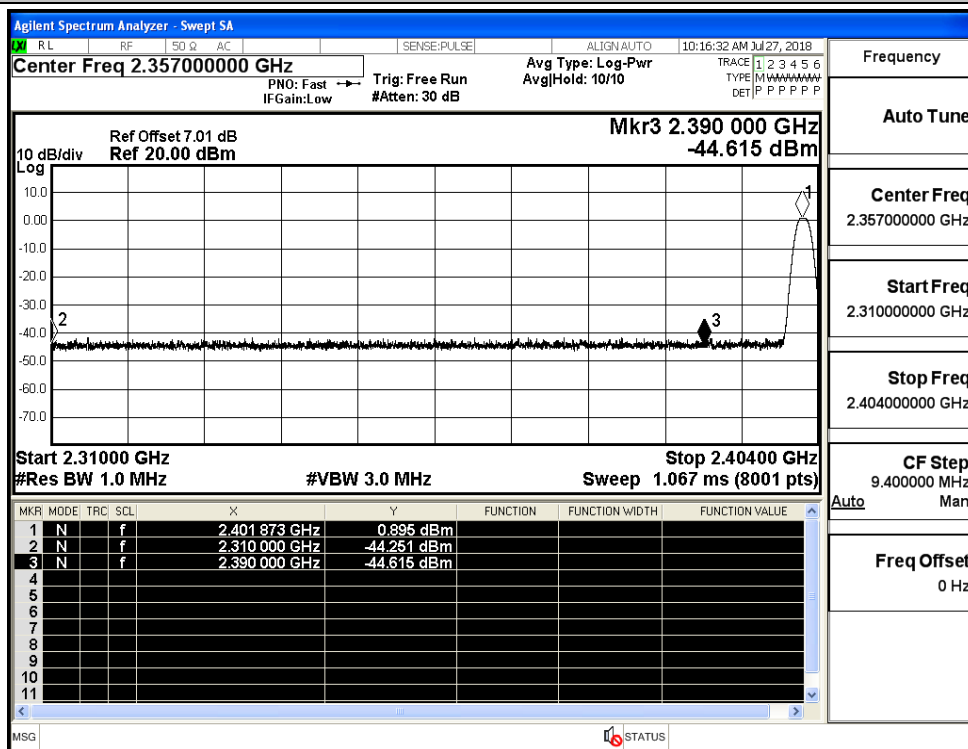
HCH



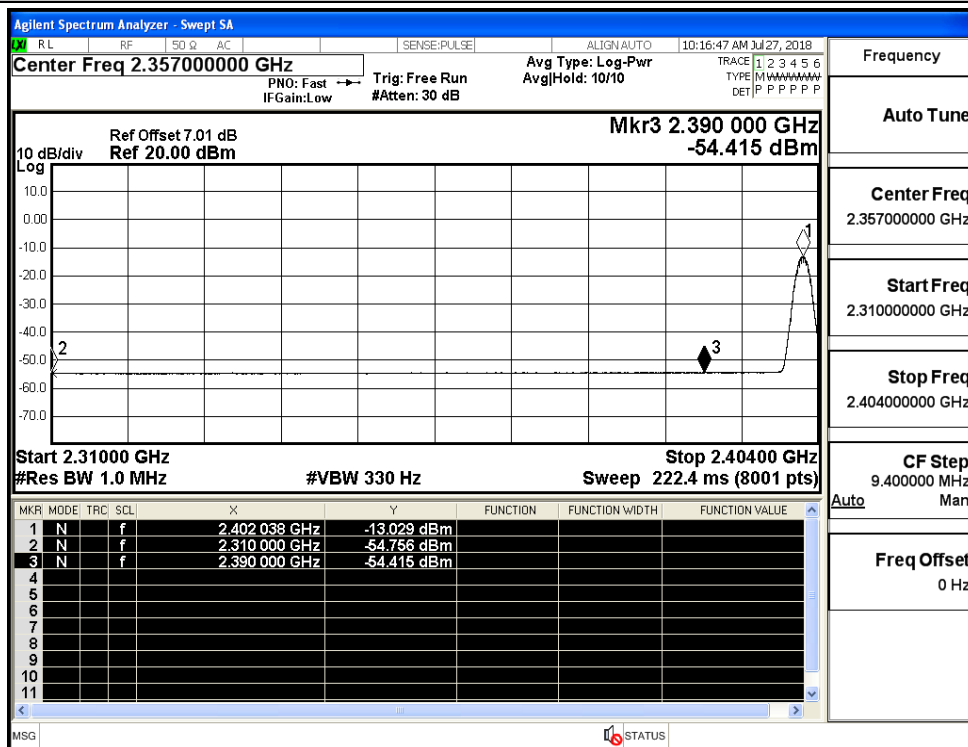
## A.7 Restrict-band band-edge measurements

| 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 | -44.25      | 2.0  | 0             | 53.01      | PEAK     | 74             | PASS  |
|           |              | Ant1 | 2310.0 | -54.76      | 2.0  | 0             | 42.50      | AV       | 54             | PASS  |
|           |              | Ant1 | 2390.0 | -44.62      | 2.0  | 0             | 52.64      | PEAK     | 74             | PASS  |
|           |              | Ant1 | 2390.0 | -54.42      | 2.0  | 0             | 42.84      | AV       | 54             | PASS  |
|           | 2480         | Ant1 | 2483.5 | -44.87      | 2.0  | 0             | 52.39      | PEAK     | 74             | PASS  |
|           |              | Ant1 | 2483.5 | -54.11      | 2.0  | 0             | 43.15      | AV       | 54             | PASS  |
|           |              | Ant1 | 2500.0 | -43.67      | 2.0  | 0             | 53.59      | PEAK     | 74             | PASS  |
|           |              | Ant1 | 2500.0 | -54.09      | 2.0  | 0             | 43.17      | AV       | 54             | PASS  |

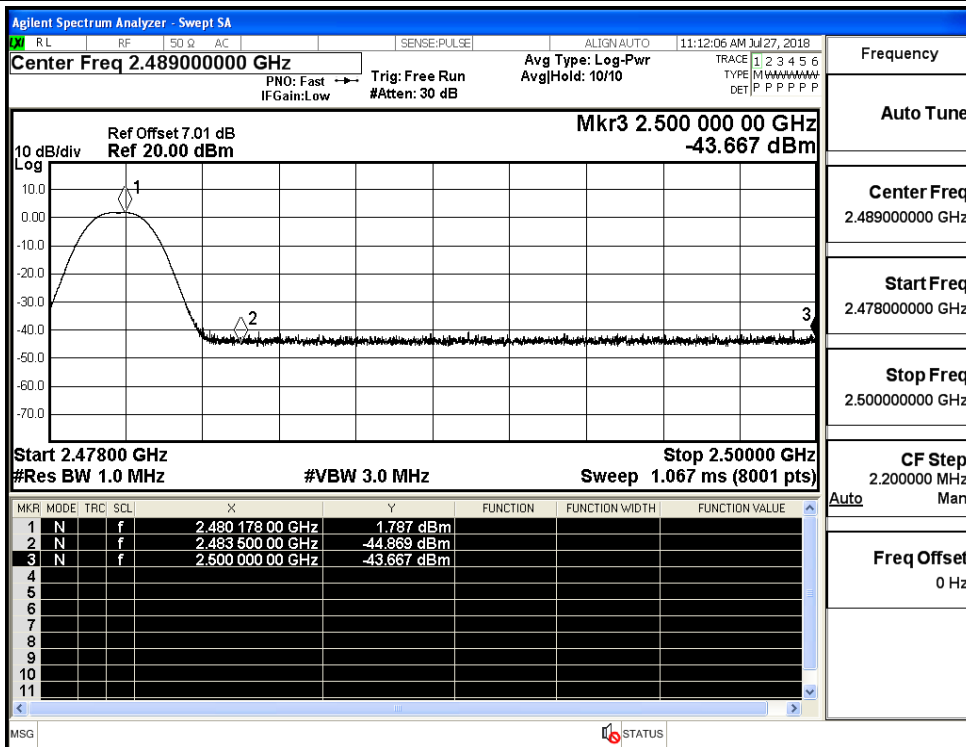
## Restrict-band band-edge measurements\_BT LE\_2402\_Ant1\_PEAK



## 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

