

## Appendix A

### RF Test Data for BT V4.2 (BLE) (Conducted Measurement)

Product Name: WCD2CS

Trade Mark:



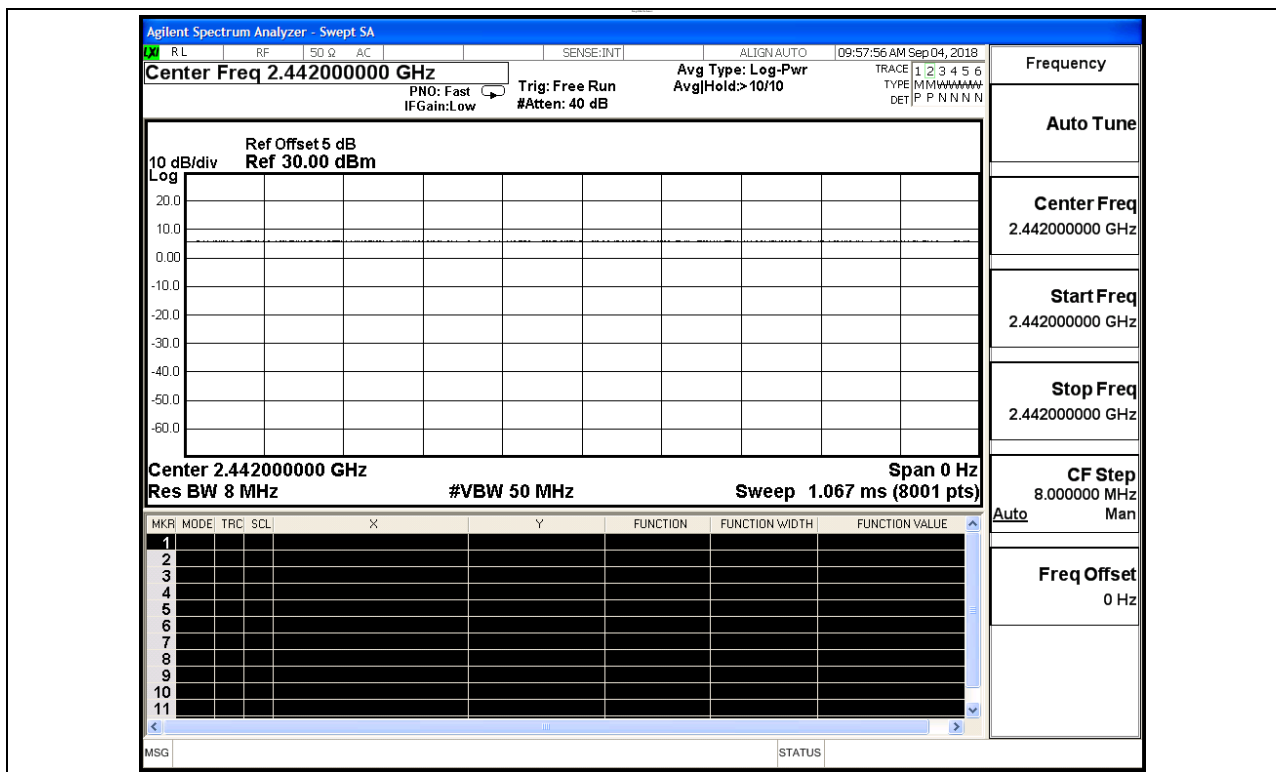
Test Model: WCD2CS

#### Environmental Conditions

|                    |             |
|--------------------|-------------|
| Temperature:       | 23.3° C     |
| Relative Humidity: | 51.3%       |
| ATM Pressure:      | 100.0 kPa   |
| Test Engineer:     | WangChuang  |
| Supervised by:     | Jayden.Zhuo |

#### A.1 Duty Cycle

| Test Mode | Test Channel | Ant  | Duty Cycle[%] | Verdict |
|-----------|--------------|------|---------------|---------|
| BT LE     | 2442         | Ant1 | 100           | PASS    |

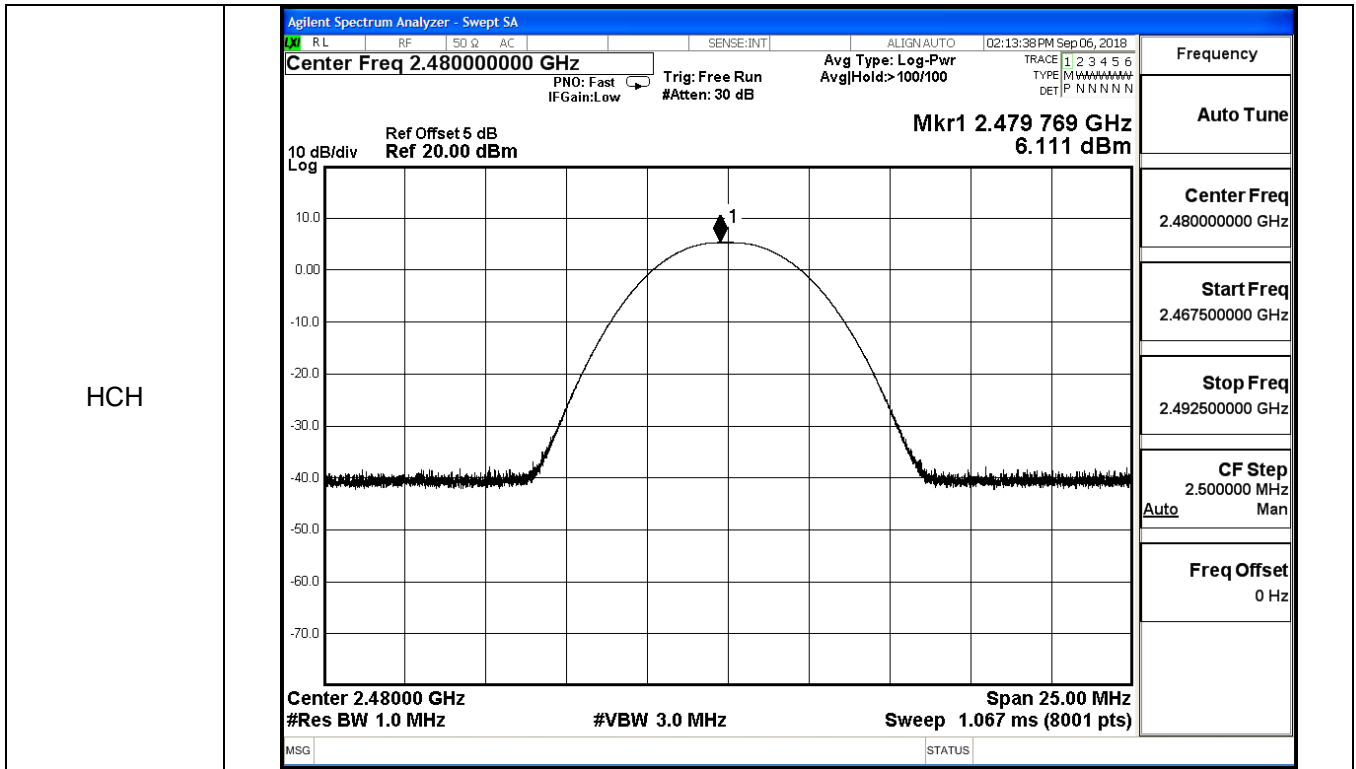


### A.2 Maximum Conducted Peak Output Power

| Mode  | Channel | Conduct Peak Power[dBm] | Limit [dBm] | Verdict |
|-------|---------|-------------------------|-------------|---------|
| BT LE | LCH     | 7.383                   | 30          | PASS    |
| BT LE | MCH     | 6.764                   | 30          | PASS    |
| BT LE | HCH     | 6.111                   | 30          | PASS    |

#### Test Graphs

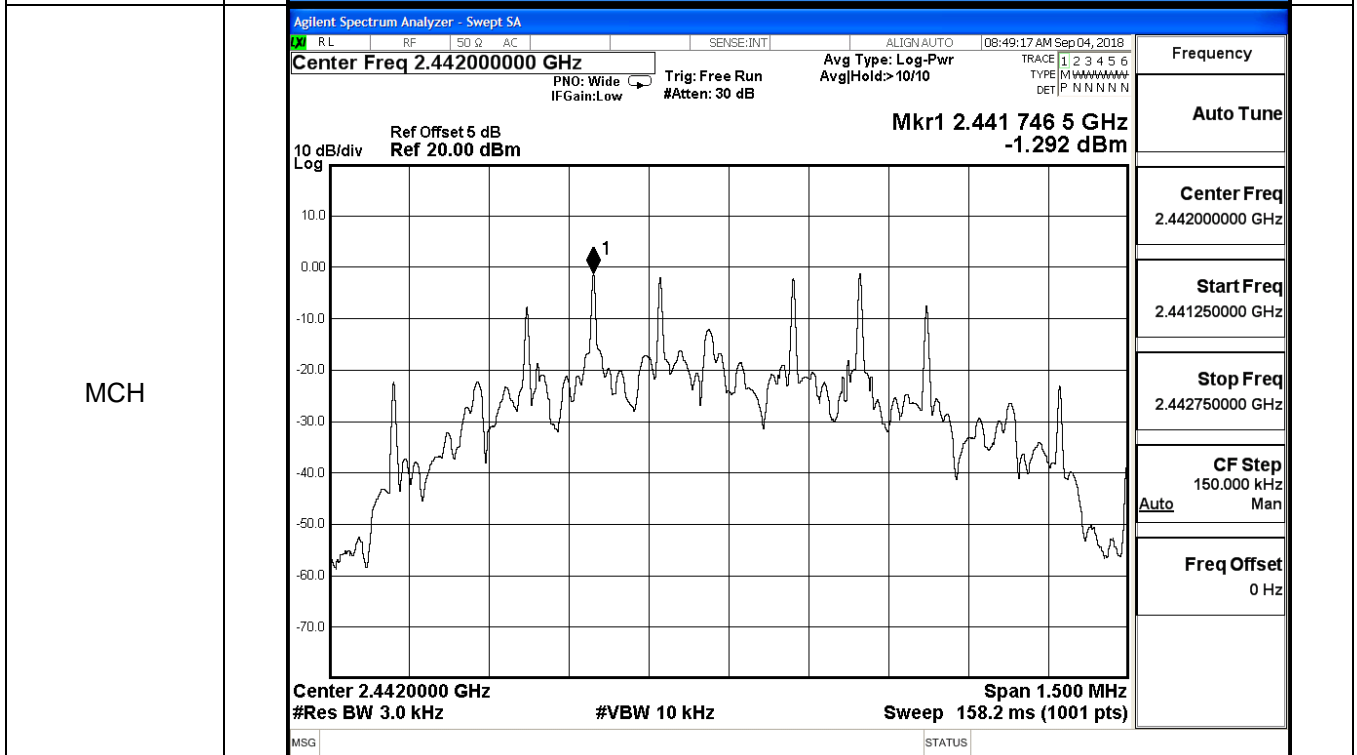
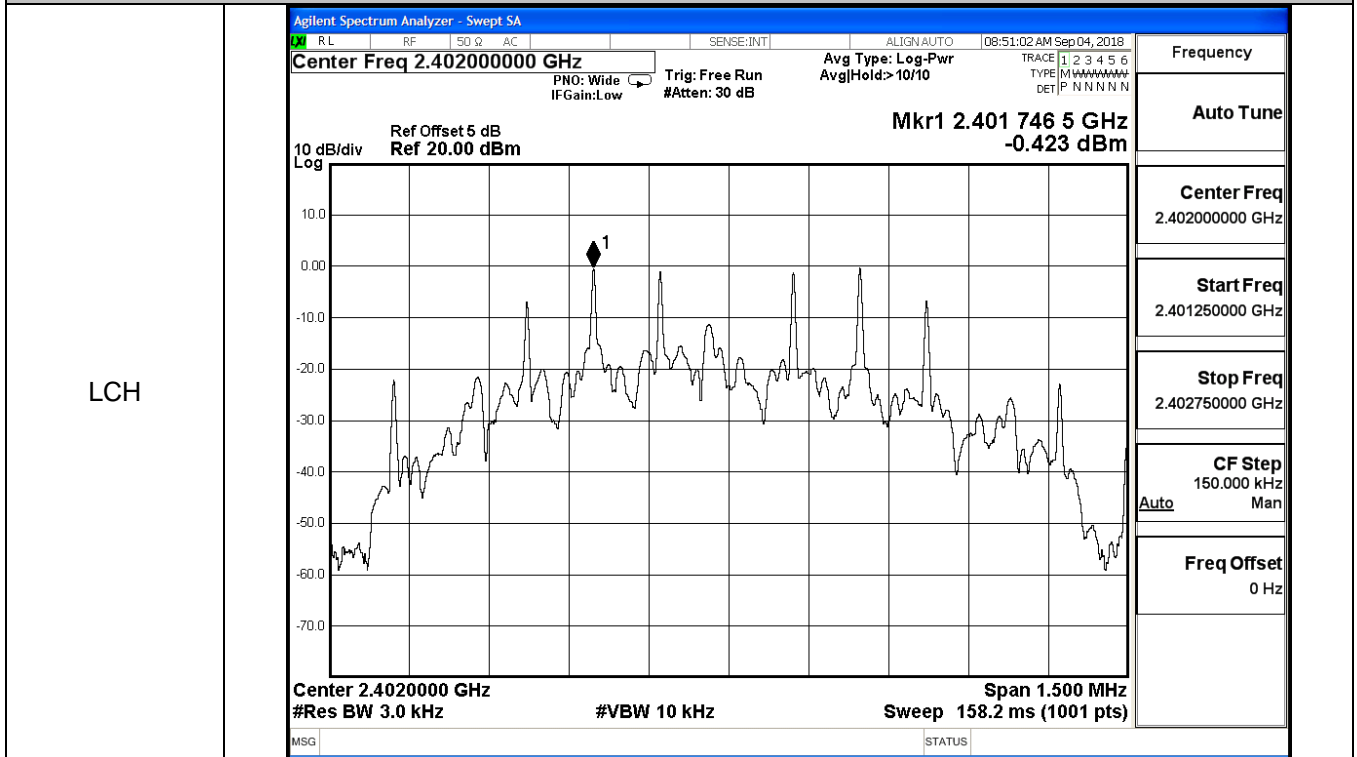
|     |  |  |
|-----|--|--|
| LCH | <p>Agilent Spectrum Analyzer - Swept SA</p> <p>Center Freq 2.40200000 GHz</p> <p>Ref Offset 5 dB<br/>Ref 20.00 dBm</p> <p>Mkr1 2.402 150 GHz<br/>7.383 dBm</p> <p>Center 2.40200 GHz<br/>#Res BW 1.0 MHz<br/>#VBW 3.0 MHz<br/>Span 25.00 MHz<br/>Sweep 1.067 ms (8001 pts)</p> | <p>Frequency</p> <p>Auto Tune</p> <p>Center Freq<br/>2.402000000 GHz</p> <p>Start Freq<br/>2.389500000 GHz</p> <p>Stop Freq<br/>2.414500000 GHz</p> <p>CF Step<br/>2.500000 MHz<br/>Auto Man</p> <p>Freq Offset<br/>0 Hz</p> |
|     | <p>Agilent Spectrum Analyzer - Swept SA</p> <p>Center Freq 2.44200000 GHz</p> <p>Ref Offset 5 dB<br/>Ref 20.00 dBm</p> <p>Mkr1 2.441 747 GHz<br/>6.764 dBm</p> <p>Center 2.44200 GHz<br/>#Res BW 1.0 MHz<br/>#VBW 3.0 MHz<br/>Span 25.00 MHz<br/>Sweep 1.067 ms (8001 pts)</p> | <p>Frequency</p> <p>Auto Tune</p> <p>Center Freq<br/>2.442000000 GHz</p> <p>Start Freq<br/>2.429500000 GHz</p> <p>Stop Freq<br/>2.454500000 GHz</p> <p>CF Step<br/>2.500000 MHz<br/>Auto Man</p> <p>Freq Offset<br/>0 Hz</p> |

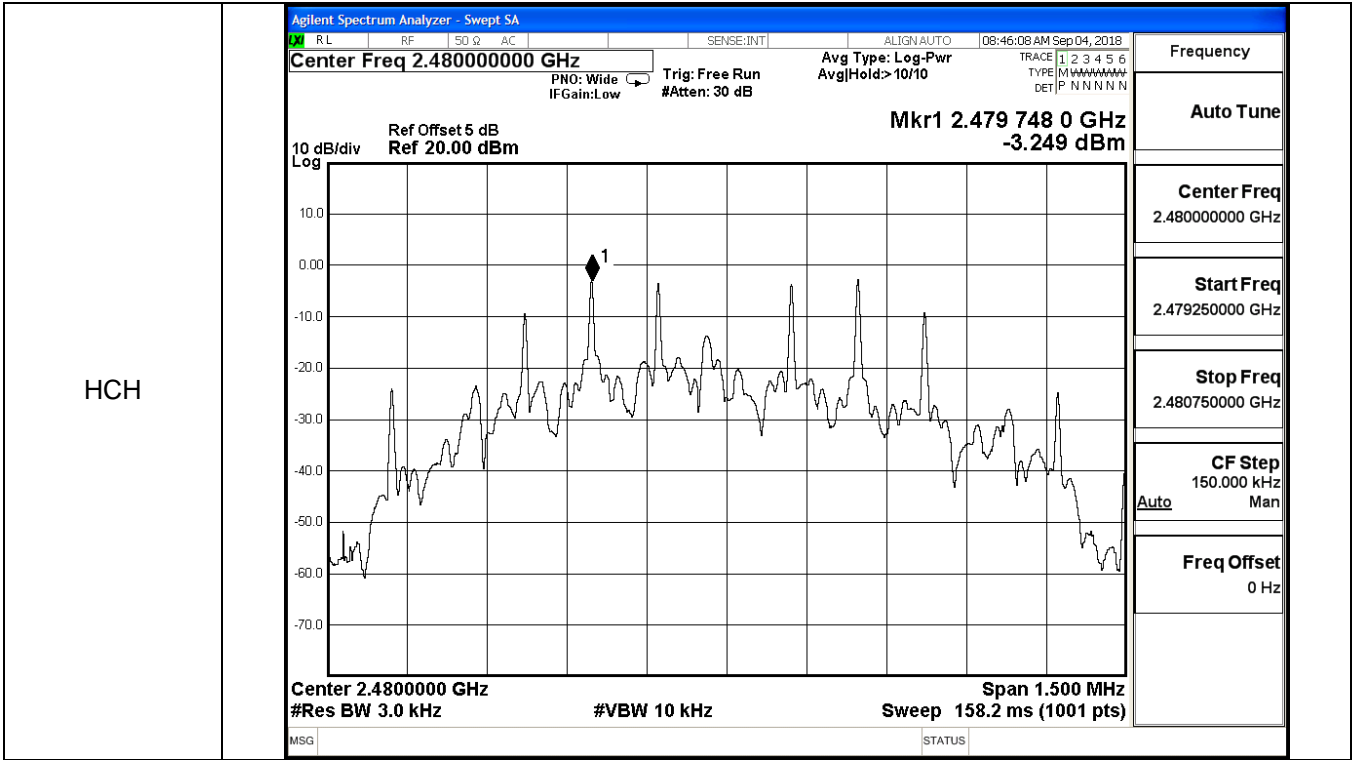


### A.3 Maximum Power Spectral Density

| Mode  | Channel | PSD [dBm/3KHz] | Limit [dBm/3KHz] | Verdict |
|-------|---------|----------------|------------------|---------|
| BT LE | LCH     | -0.423         | 8                | PASS    |
| BT LE | MCH     | -1.292         | 8                | PASS    |
| BT LE | HCH     | -3.249         | 8                | PASS    |

#### Test Graphs

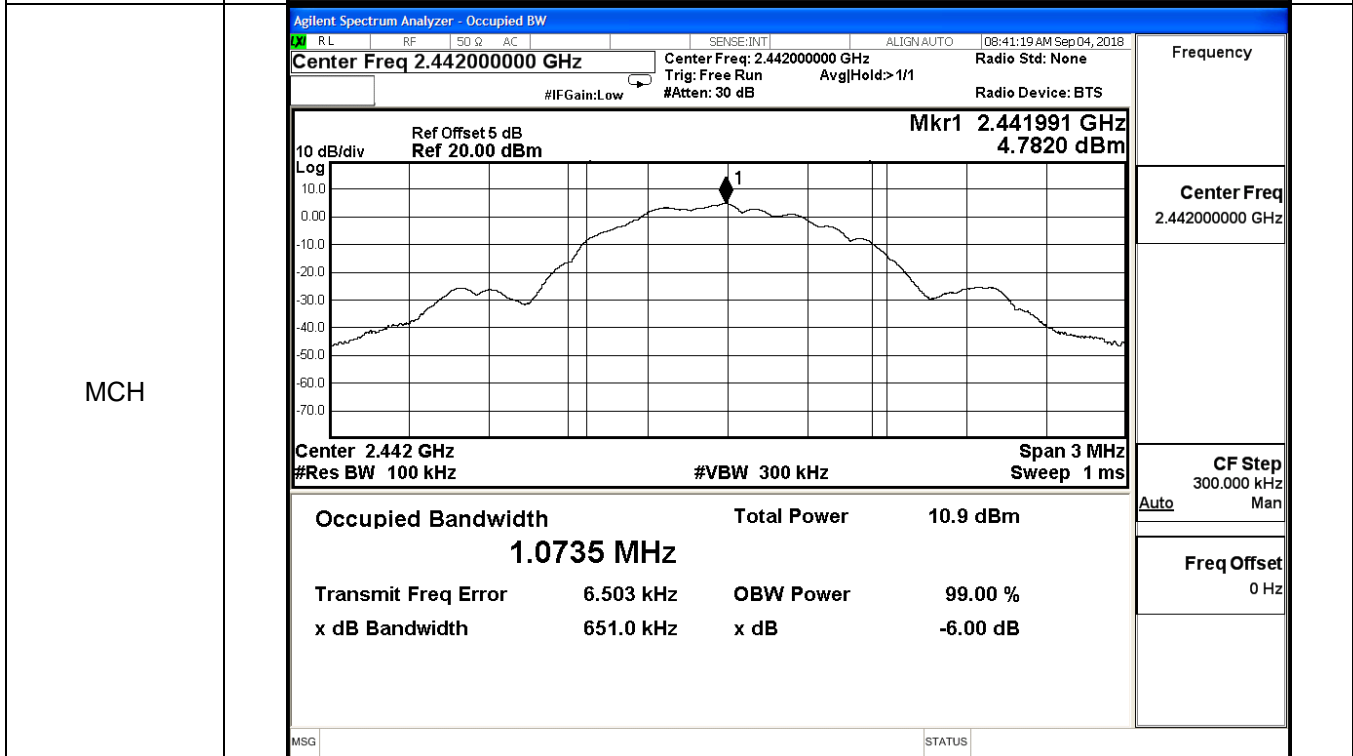
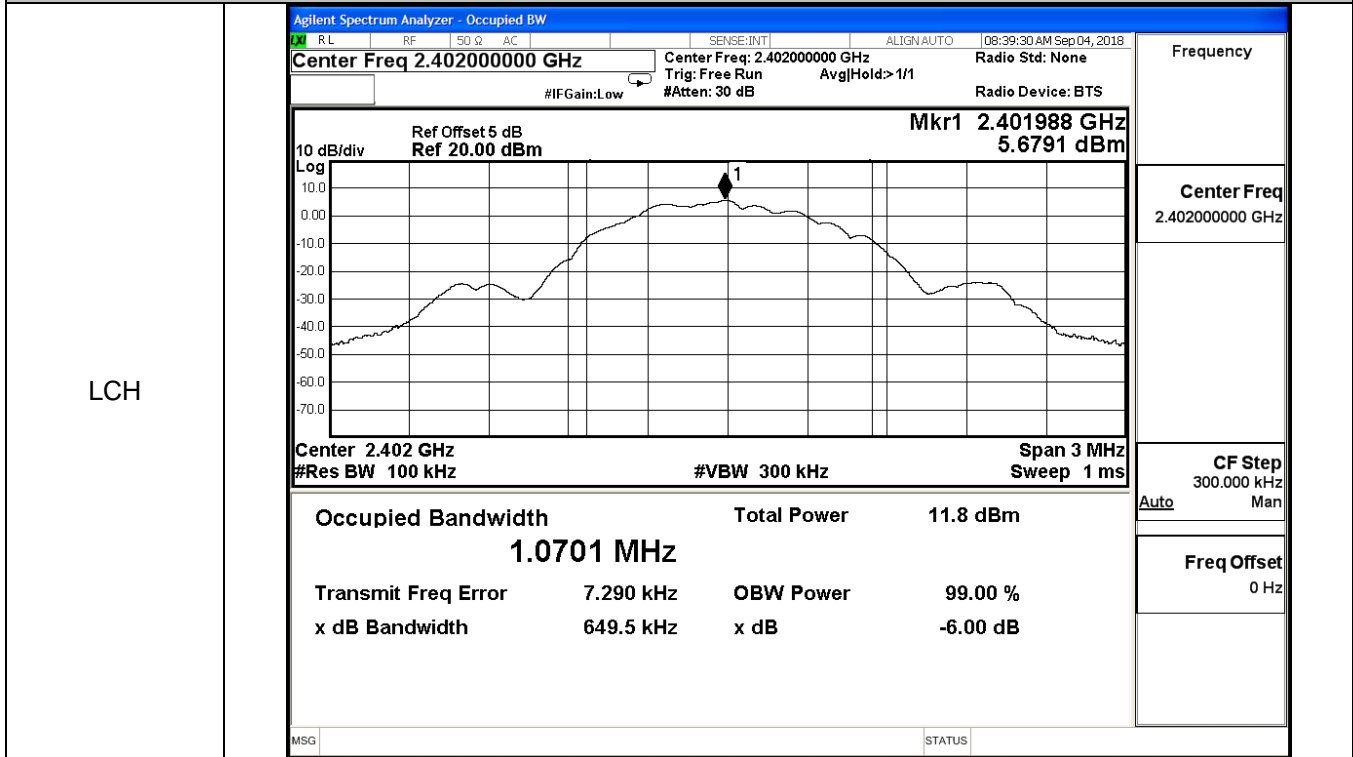


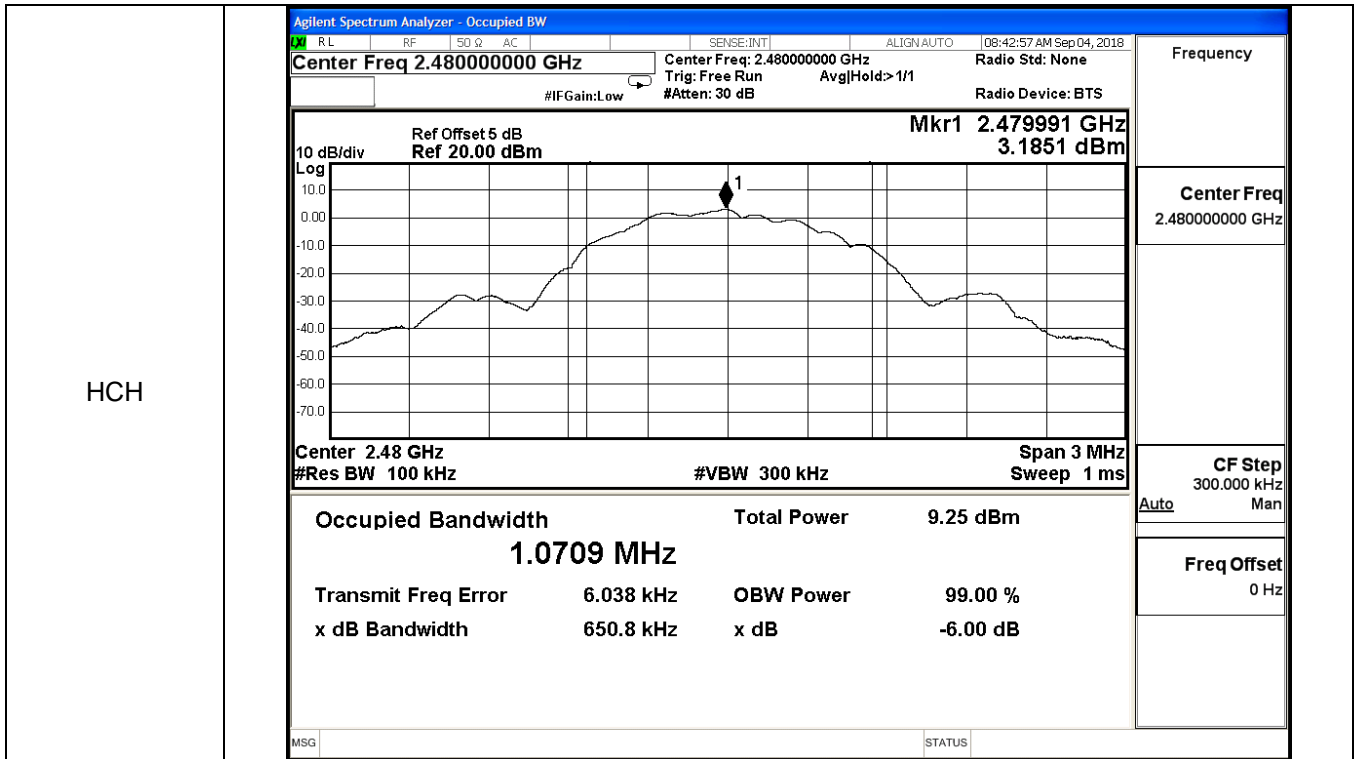


**A.4 6dB Bandwidth**

| Mode  | Channel | 6dB Bandwidth [MHz] | Limit [MHz] | Verdict |
|-------|---------|---------------------|-------------|---------|
| BT LE | LCH     | 0.6495              | ≥0.5        | PASS    |
| BT LE | MCH     | 0.6510              | ≥0.5        | PASS    |
| BT LE | HCH     | 0.6508              | ≥0.5        | PASS    |

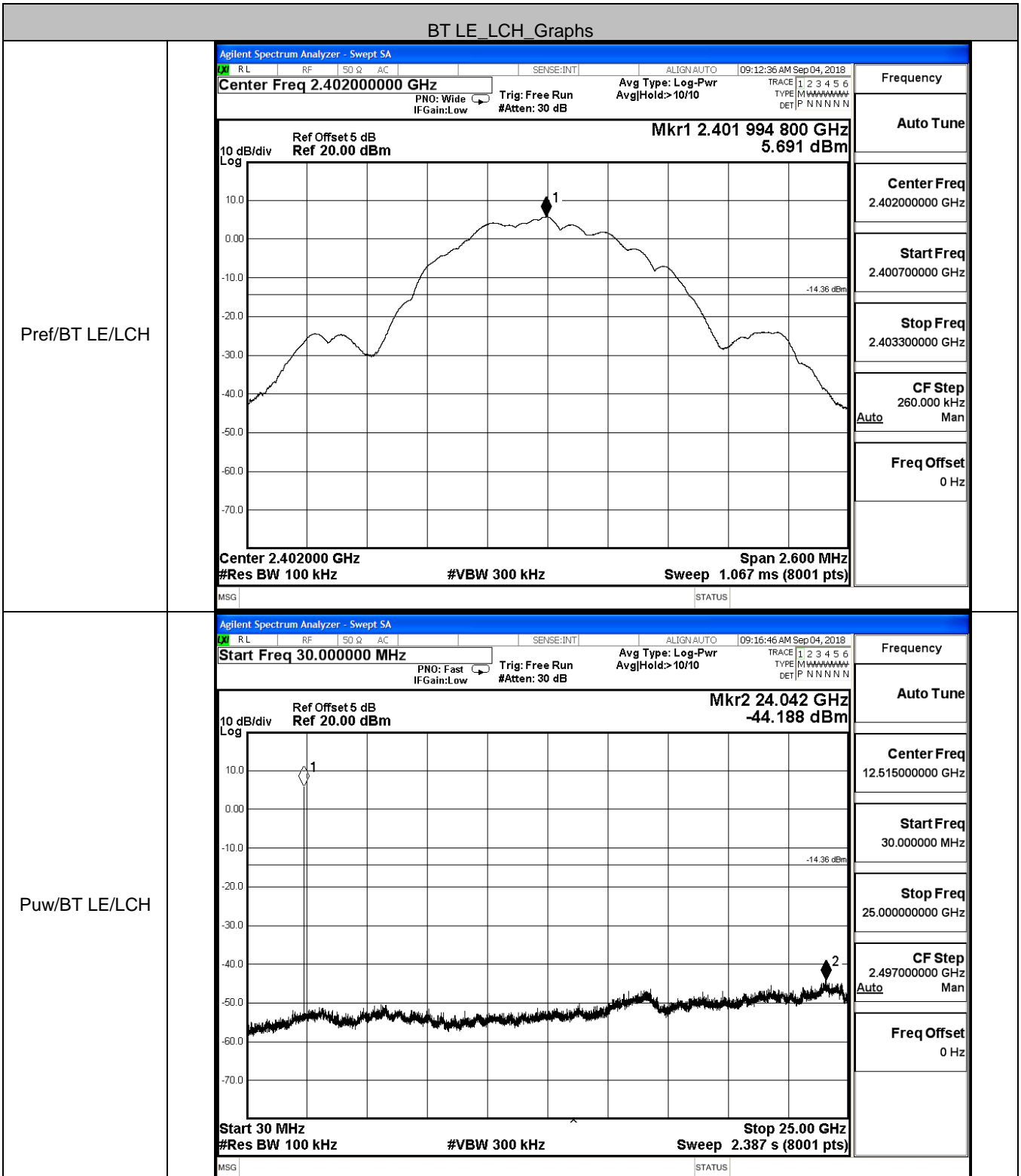
**Test Graphs**





### A.5 RF Conducted Spurious Emissions

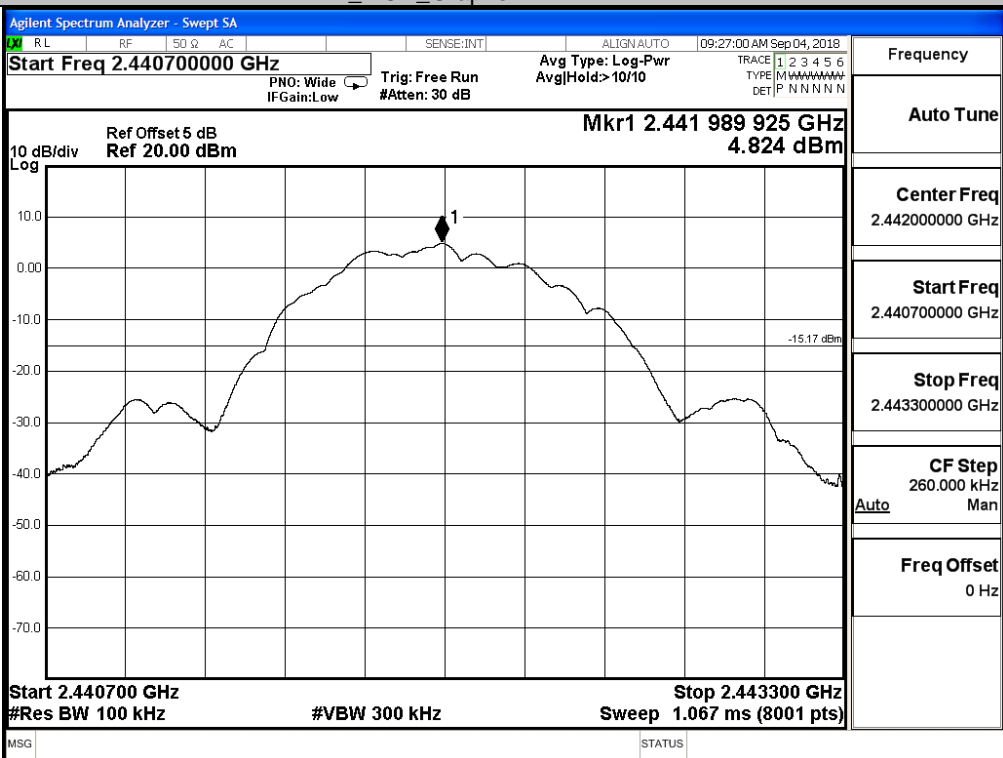
| Mode  | Channel | Pref [dBm] | Max. Level [dBm] | Limit [dBm] | Verdict |
|-------|---------|------------|------------------|-------------|---------|
| BT LE | LCH     | 5.691      | -44.188          | -14.36      | PASS    |
| BT LE | MCH     | 4.824      | -45.412          | -15.17      | PASS    |
| BT LE | HCH     | 3.143      | -45.493          | -16.85      | PASS    |



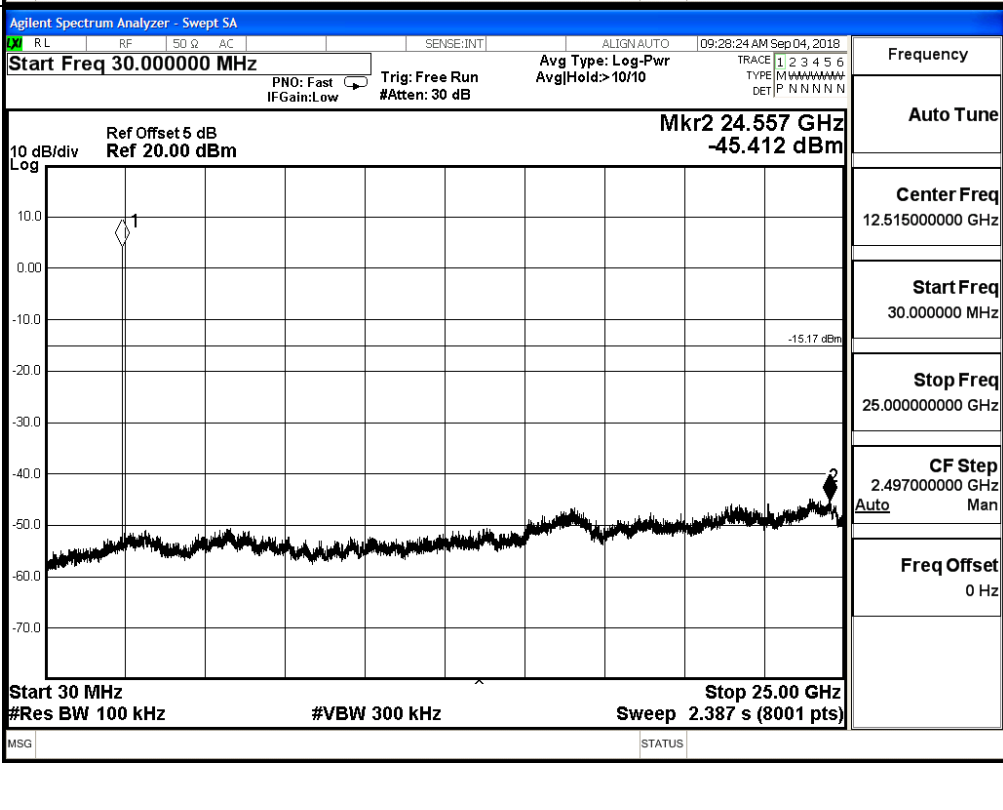


BT LE\_MCH\_Graphs

Pref/BT LE/MCH

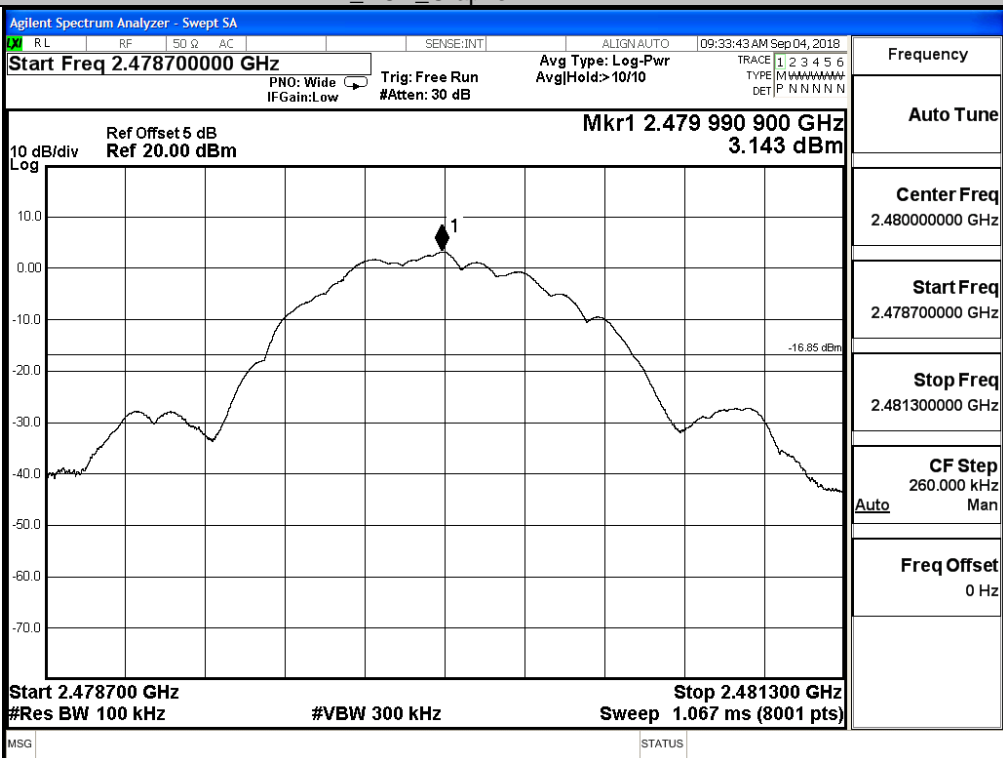


Puw/BT LE/MCH

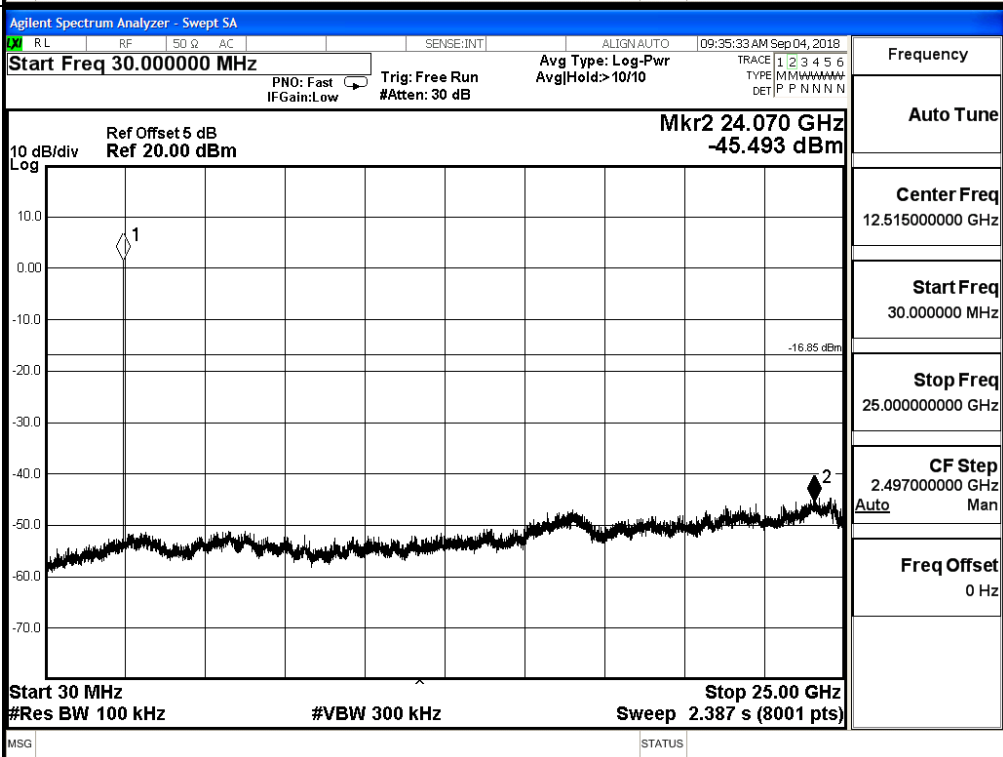


BT LE\_HCH\_Graphs

Pref/BT LE/HCH



Puw/BT LE/HCH

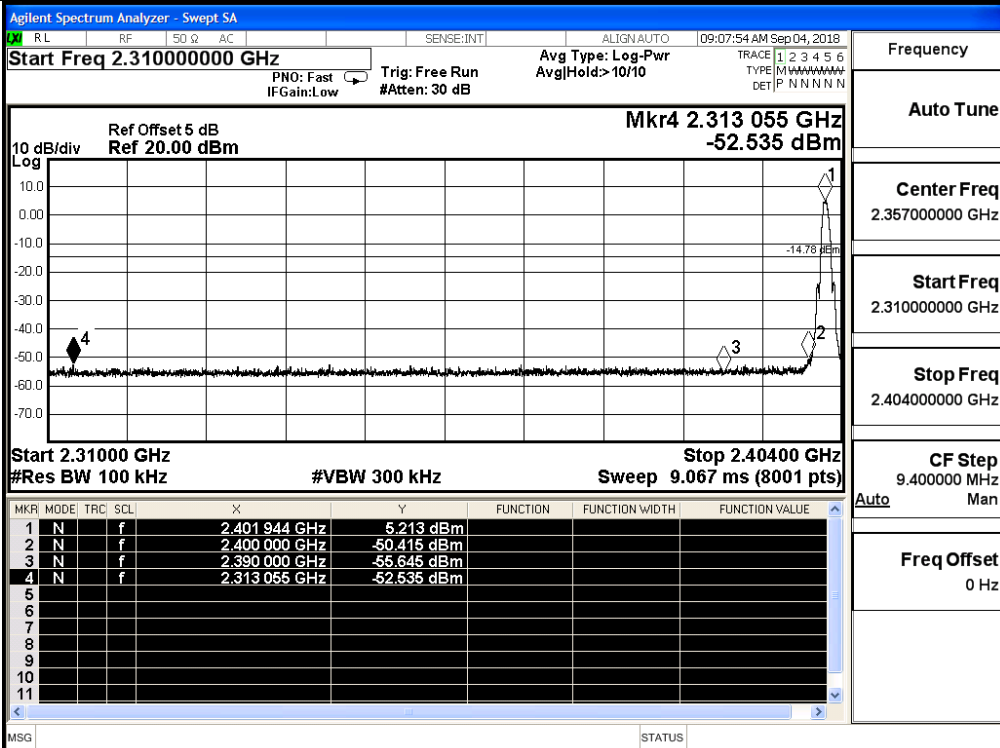


### A.6 Band-edge for RF Conducted Emissions

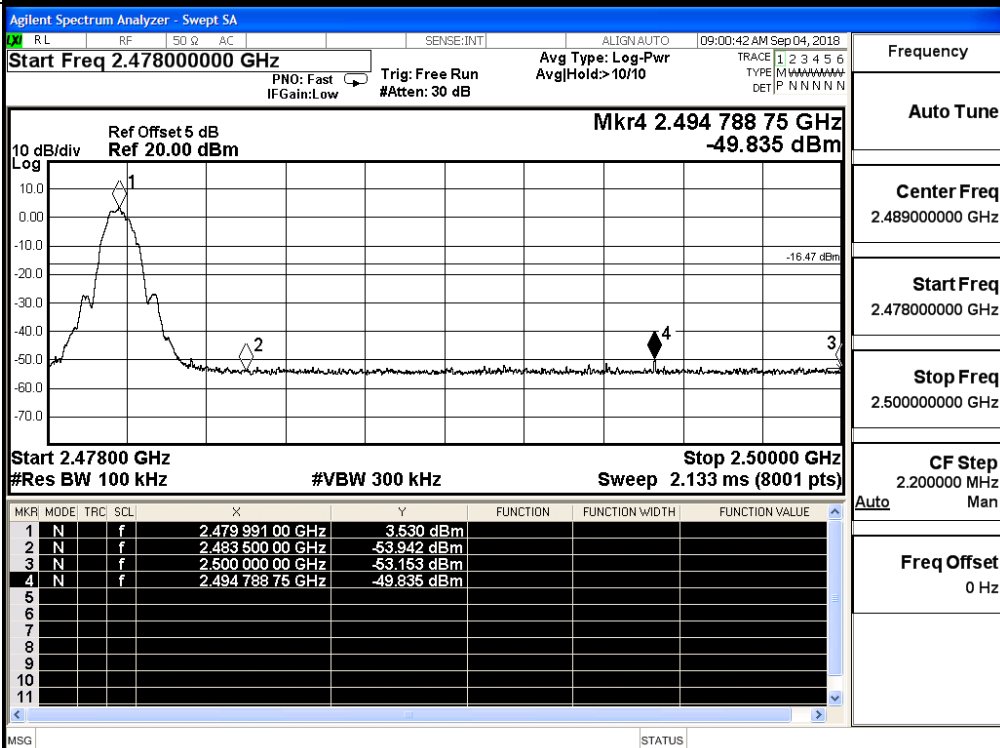
| Mode  | Channel | Carrier Power[dBm] | Max.Spurious Level [dBm] | Limit [dBm] | Verdict |
|-------|---------|--------------------|--------------------------|-------------|---------|
| BT LE | LCH     | 5.213              | -52.535                  | -14.78      | PASS    |
| BT LE | HCH     | 3.530              | -49.835                  | -16.47      | PASS    |

#### Test Graphs

LCH



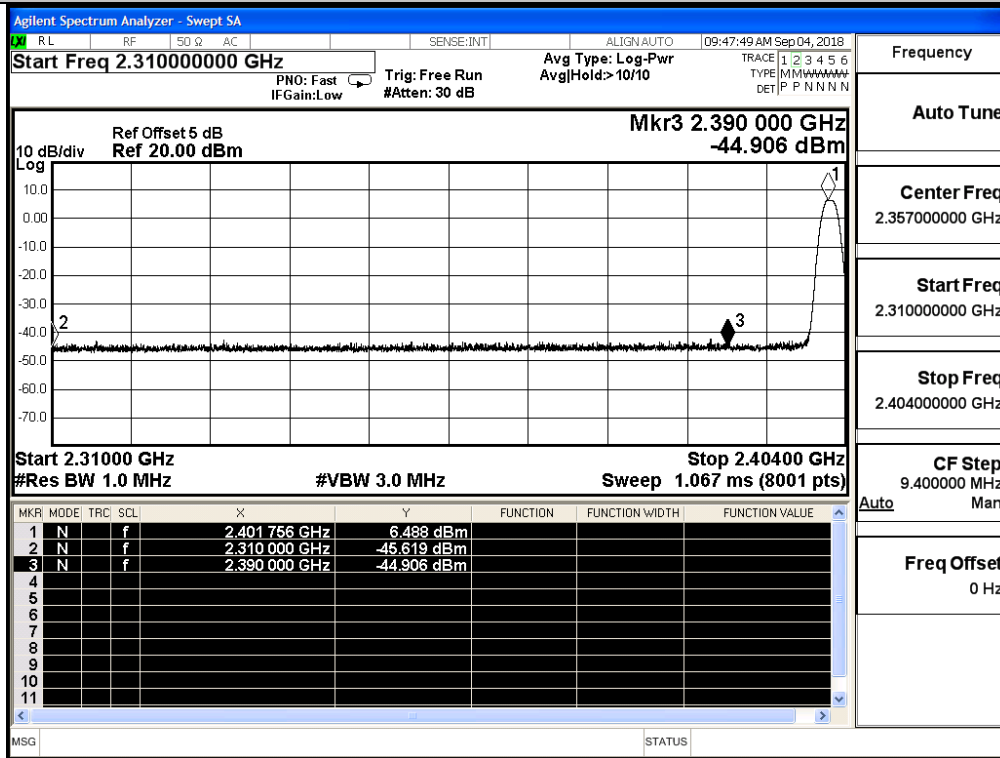
HCH



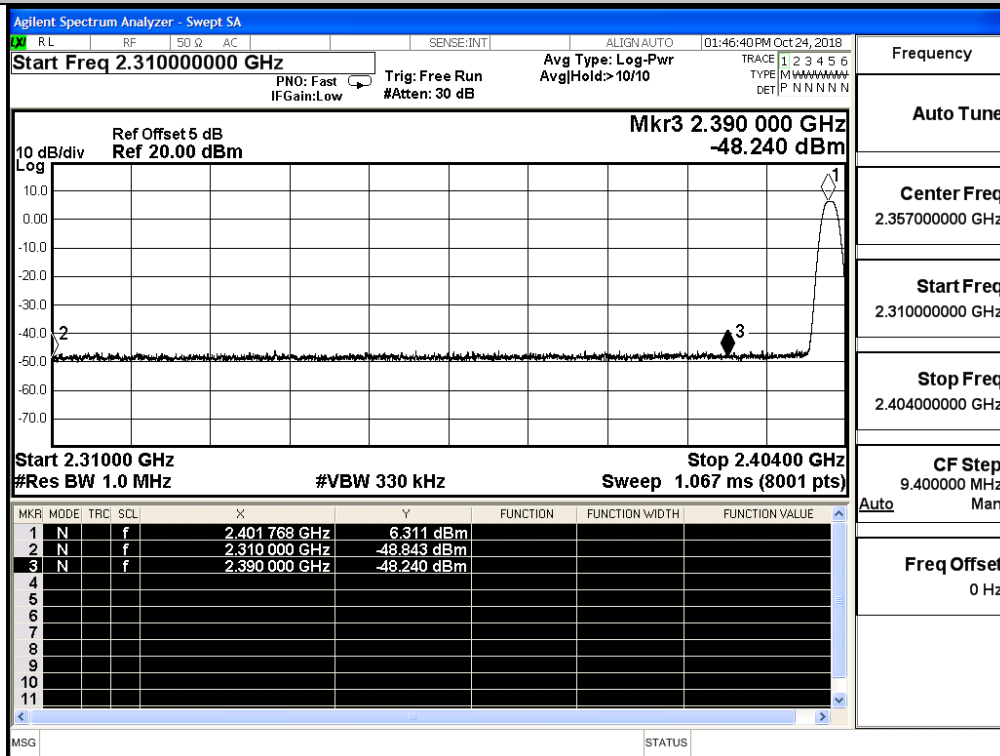
## A.7 Restrict-band band-edge measurements

| 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 | -45.619     | 2    | 0             | 51.64      | PEAK     | 74             | PASS  |
|           |              | Ant1 | 2310.0 | -48.843     | 2    | 0             | 48.42      | AV       | 54             | PASS  |
|           |              | Ant1 | 2390.0 | -44.906     | 2    | 0             | 52.35      | PEAK     | 74             | PASS  |
|           |              | Ant1 | 2390.0 | -48.240     | 2    | 0             | 49.02      | AV       | 54             | PASS  |
|           | 2480         | Ant1 | 2483.5 | -46.354     | 2    | 0             | 50.91      | PEAK     | 74             | PASS  |
|           |              | Ant1 | 2483.5 | -47.182     | 2    | 0             | 50.08      | AV       | 54             | PASS  |
|           |              | Ant1 | 2500.0 | -46.291     | 2    | 0             | 50.97      | PEAK     | 74             | PASS  |
|           |              | Ant1 | 2500.0 | -47.171     | 2    | 0             | 50.09      | AV       | 54             | PASS  |

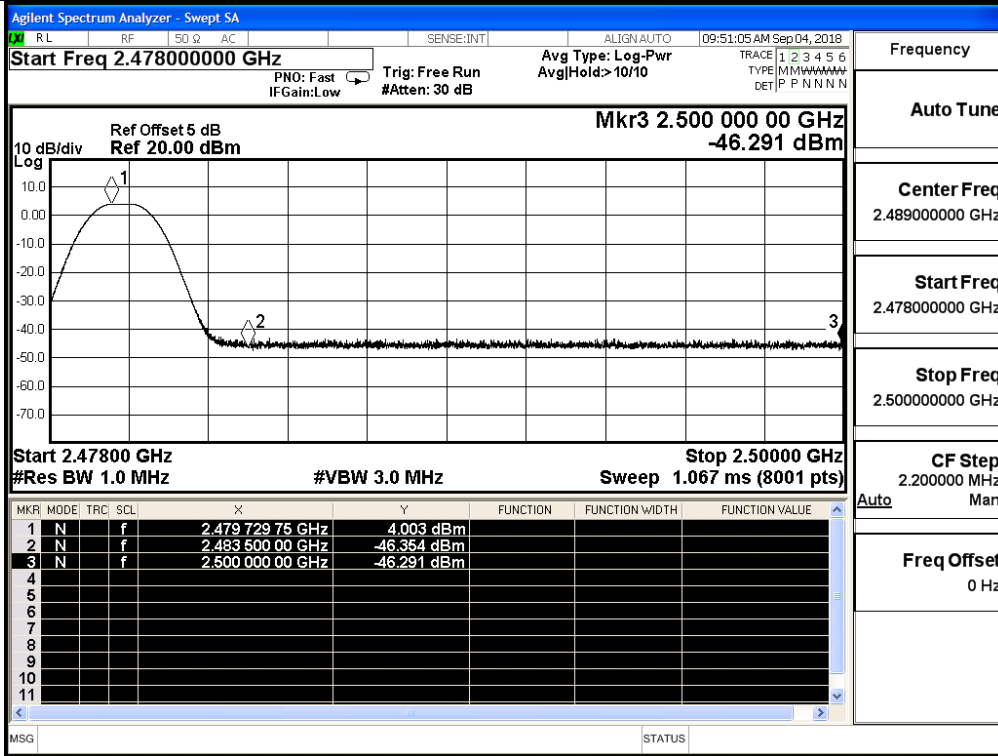
Restrict-band band-edge measurements\_BT LE\_2402\_Ant1\_PEAK



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

