

## Appendix A

### RF Test Data for BT LE V5.0 (Conducted Measurement)

Product Name: Watch

Trade Mark: DOOGEE

Test Model: CR1

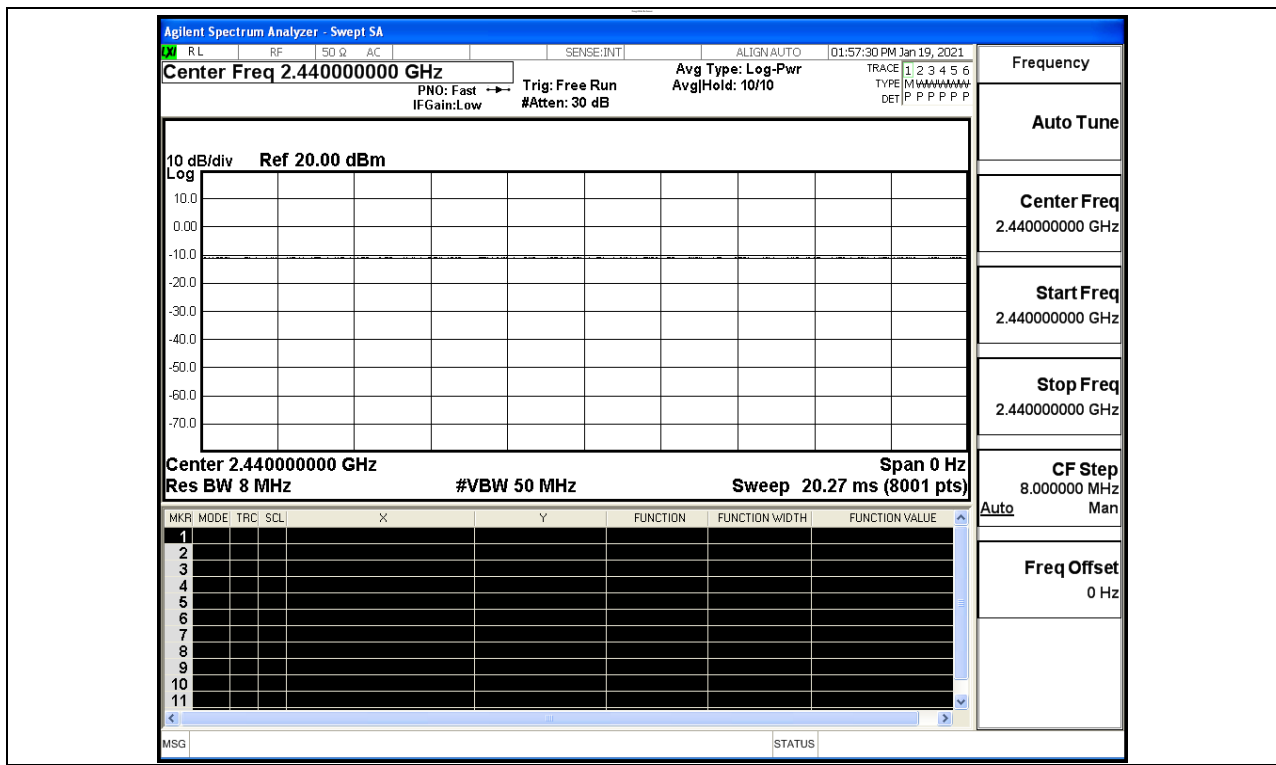
#### Environmental Conditions

Temperature:	23.2° C
Relative Humidity:	54.6%
ATM Pressure:	100.0 kPa
Test Engineer:	Carl Fu
Supervised by:	Li Huan

#### A.1 Duty Cycle

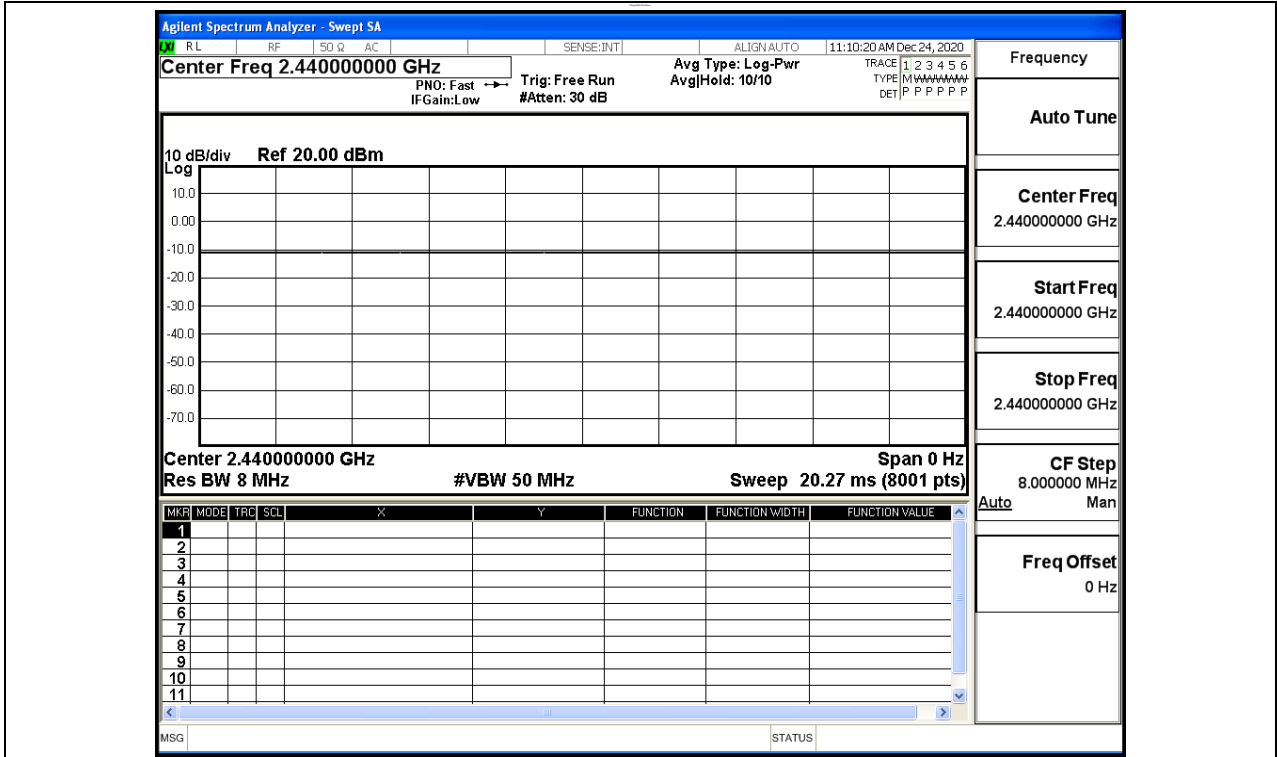
BT LE

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 2LE	2440	Ant1	100	PASS



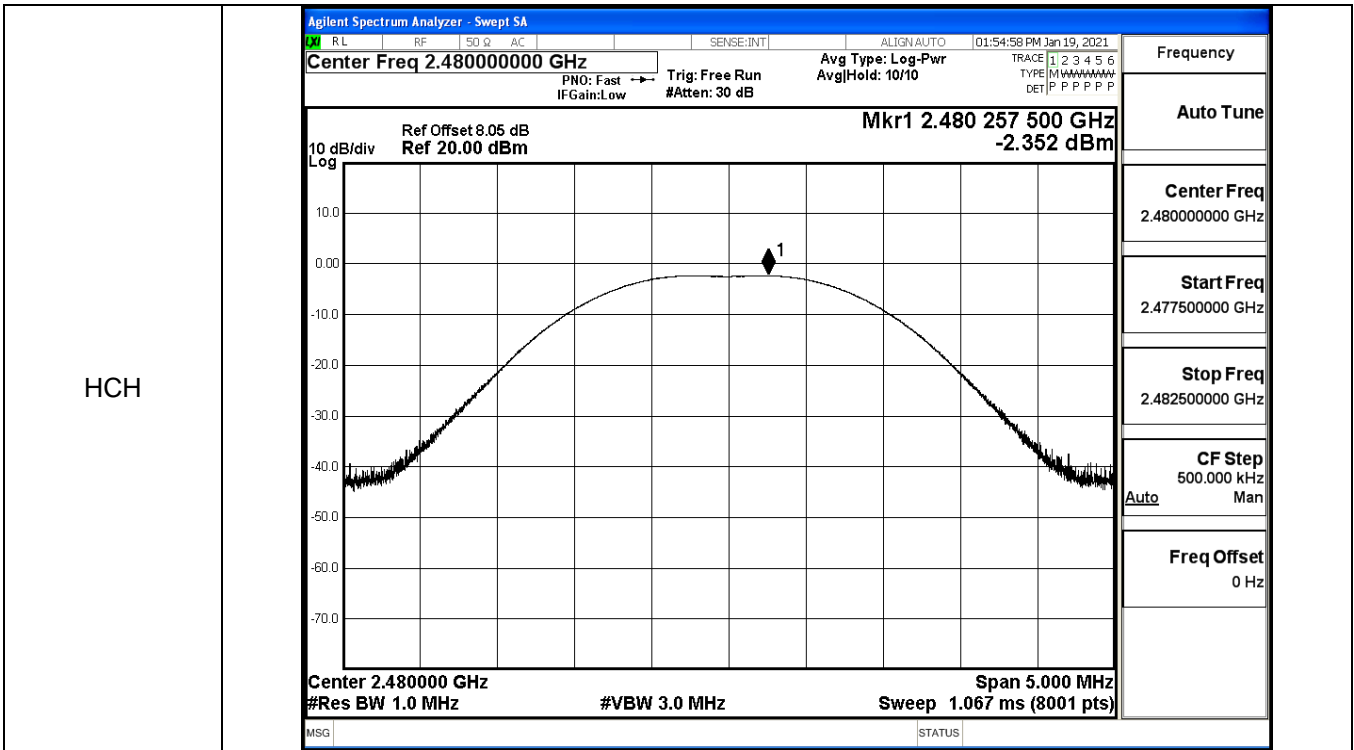
### A.2 Maximum Conducted Peak Output Power

BT LE

Mode	Channel	Conduct Peak Power[dBm]	Limit [dBm]	Verdict
BT LE	LCH	-3.954	30	PASS
BT LE	MCH	-3.141	30	PASS
BT LE	HCH	-2.352	30	PASS

#### Test Graphs

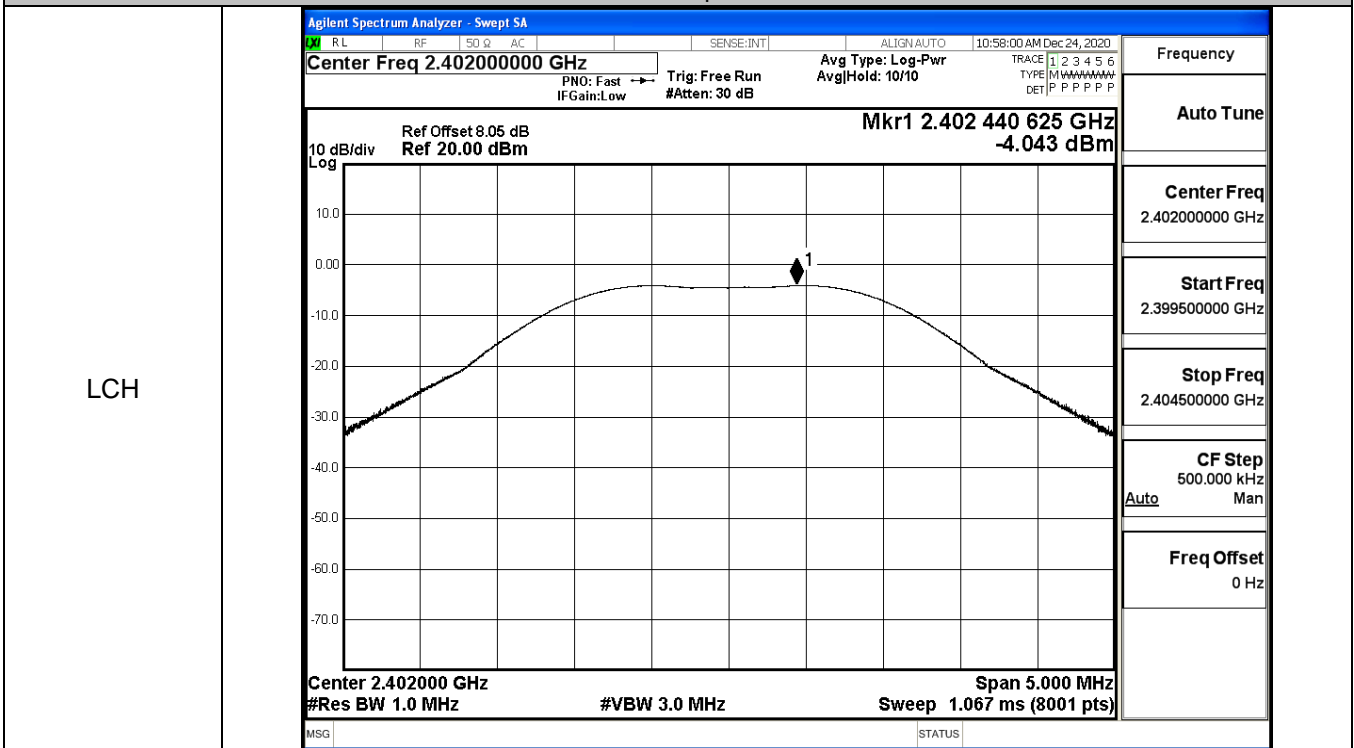
LCH		<table border="1"> <tr><td>Frequency</td></tr> <tr><td>Auto Tune</td></tr> <tr><td>Center Freq 2.402000000 GHz</td></tr> <tr><td>Start Freq 2.399500000 GHz</td></tr> <tr><td>Stop Freq 2.404500000 GHz</td></tr> <tr><td>CF Step 500.000 kHz Auto Man</td></tr> <tr><td>Freq Offset 0 Hz</td></tr> </table>	Frequency	Auto Tune	Center Freq 2.402000000 GHz	Start Freq 2.399500000 GHz	Stop Freq 2.404500000 GHz	CF Step 500.000 kHz Auto Man	Freq Offset 0 Hz
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Start Freq 2.399500000 GHz									
Stop Freq 2.404500000 GHz									
CF Step 500.000 kHz Auto Man									
Freq Offset 0 Hz									
MCH		<table border="1"> <tr><td>Frequency</td></tr> <tr><td>Auto Tune</td></tr> <tr><td>Center Freq 2.440000000 GHz</td></tr> <tr><td>Start Freq 2.437500000 GHz</td></tr> <tr><td>Stop Freq 2.442500000 GHz</td></tr> <tr><td>CF Step 500.000 kHz Auto Man</td></tr> <tr><td>Freq Offset 0 Hz</td></tr> </table>	Frequency	Auto Tune	Center Freq 2.440000000 GHz	Start Freq 2.437500000 GHz	Stop Freq 2.442500000 GHz	CF Step 500.000 kHz Auto Man	Freq Offset 0 Hz
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Stop Freq 2.442500000 GHz									
CF Step 500.000 kHz Auto Man									
Freq Offset 0 Hz									



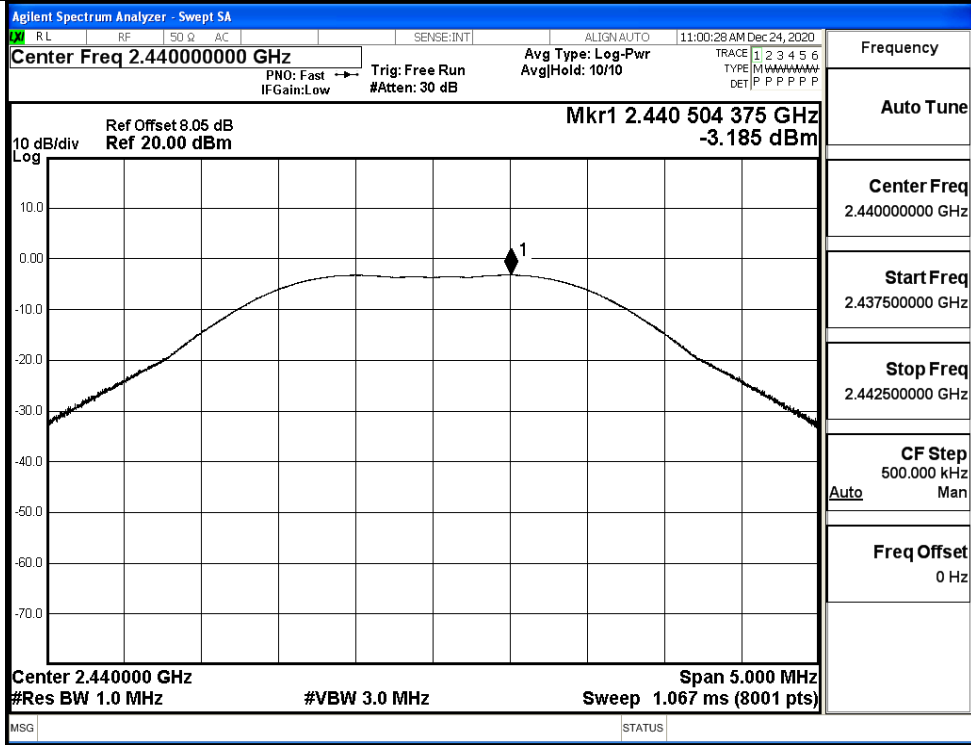
BT 2LE

Mode	Channel	Conduct Peak Power[dBm]	Limit [dBm]	Verdict
BT 2LE	LCH	-4.043	30	PASS
BT 2LE	MCH	-3.185	30	PASS
BT 2LE	HCH	-2.559	30	PASS

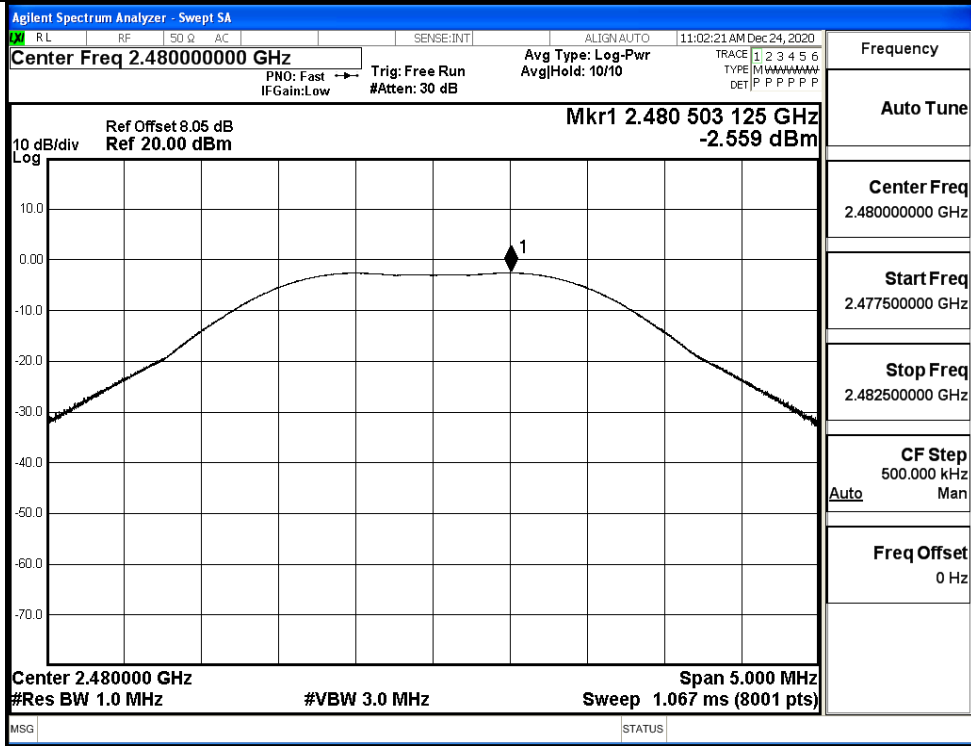
Test Graphs



MCH



HCH



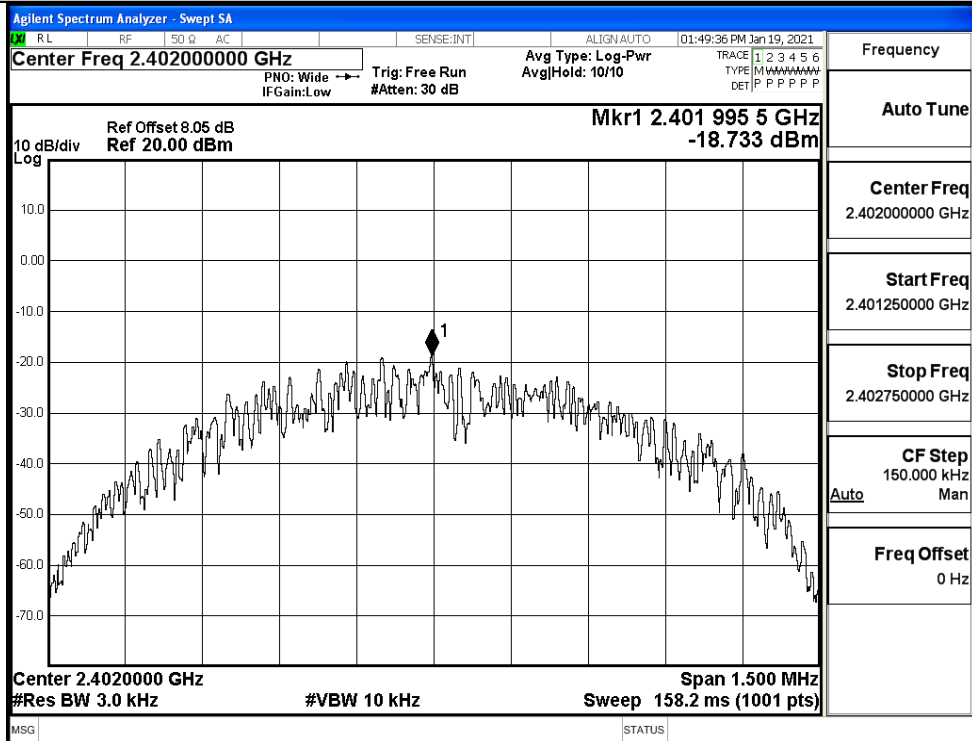
### A.3 Maximum Power Spectral Density

BT LE

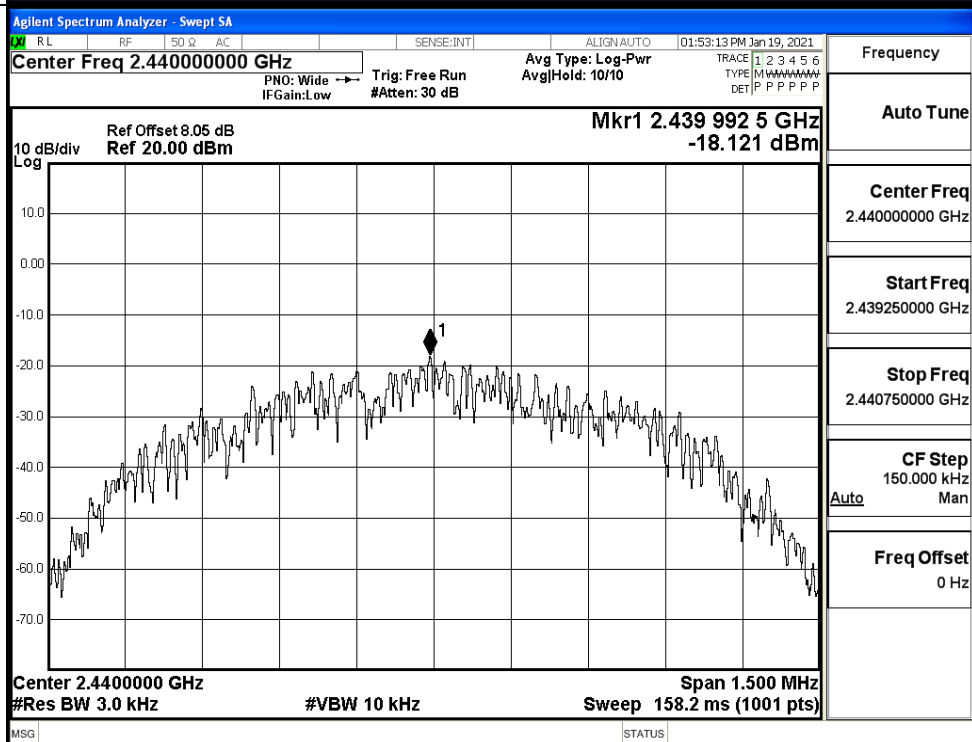
Mode	Channel	PSD [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
BT LE	LCH	-18.733	8	PASS
BT LE	MCH	-18.121	8	PASS
BT LE	HCH	-18.124	8	PASS

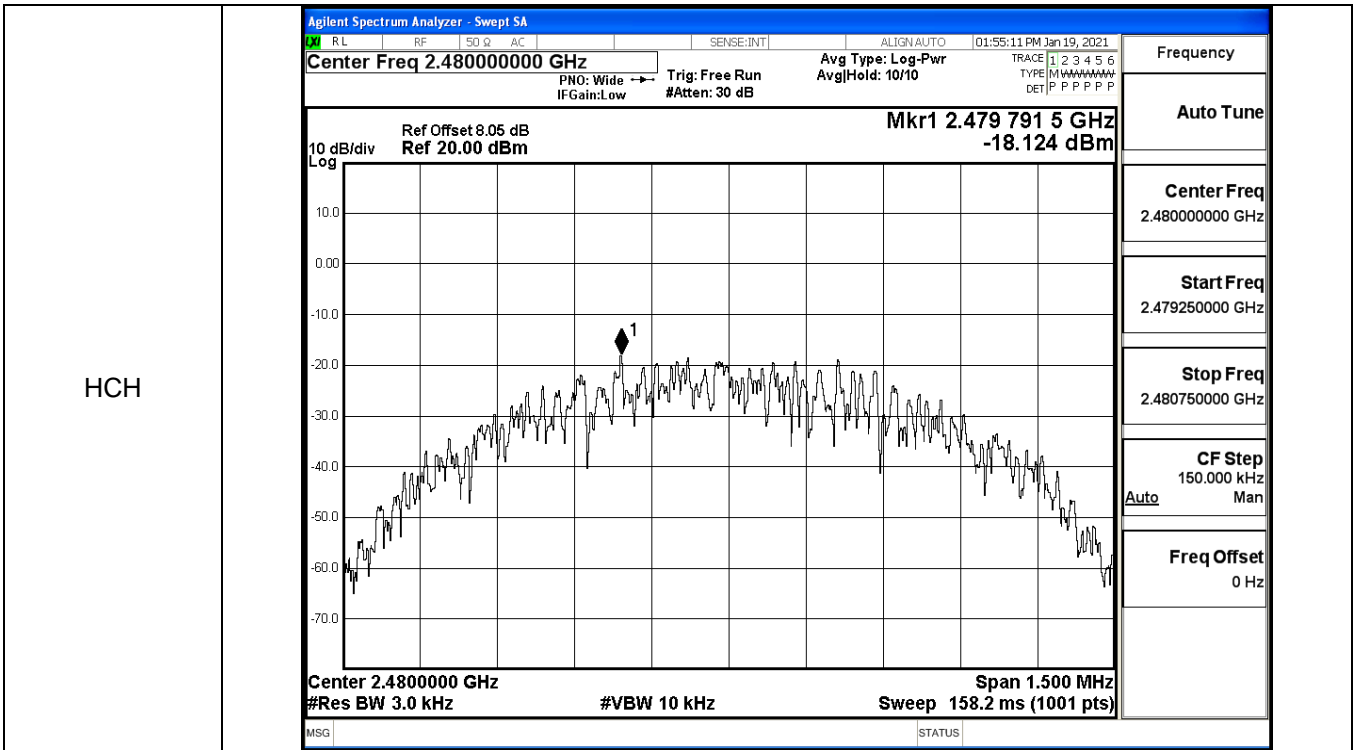
#### Test Graphs

LCH



MCH

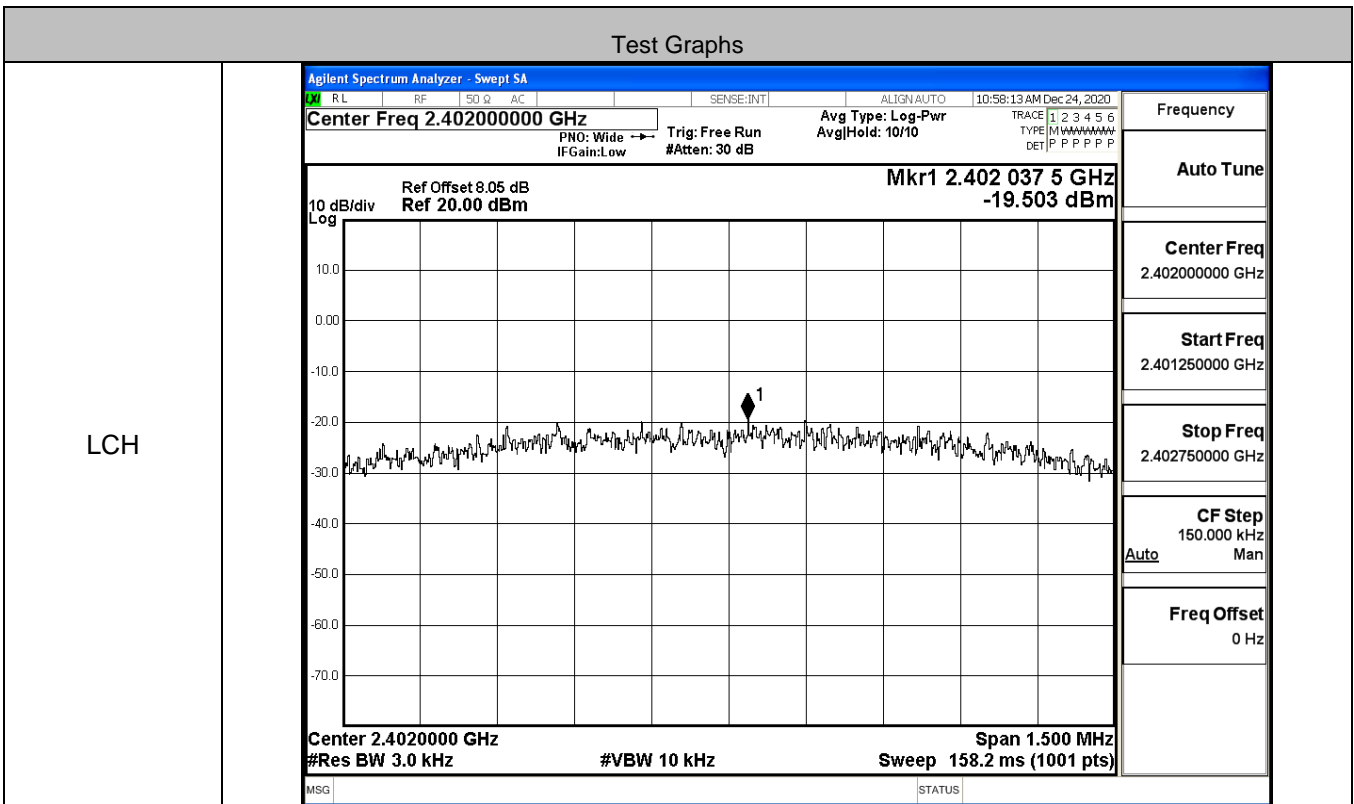




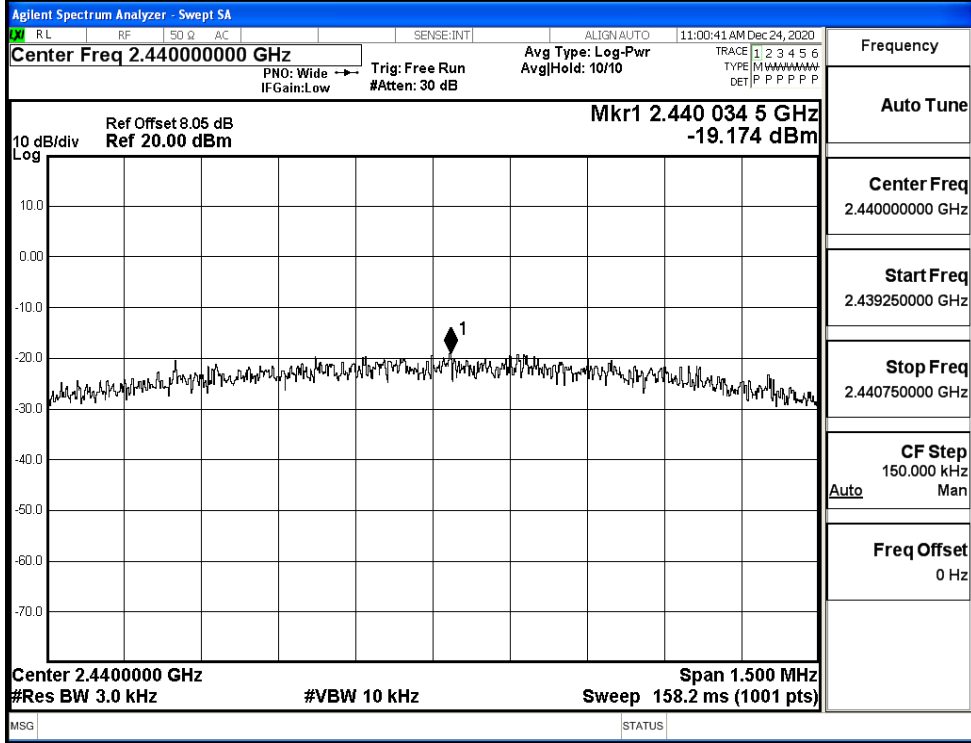
BT 2LE

Mode	Channel	PSD [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
BT 2LE	LCH	-19.503	8	PASS
BT 2LE	MCH	-19.174	8	PASS
BT 2LE	HCH	-17.606	8	PASS

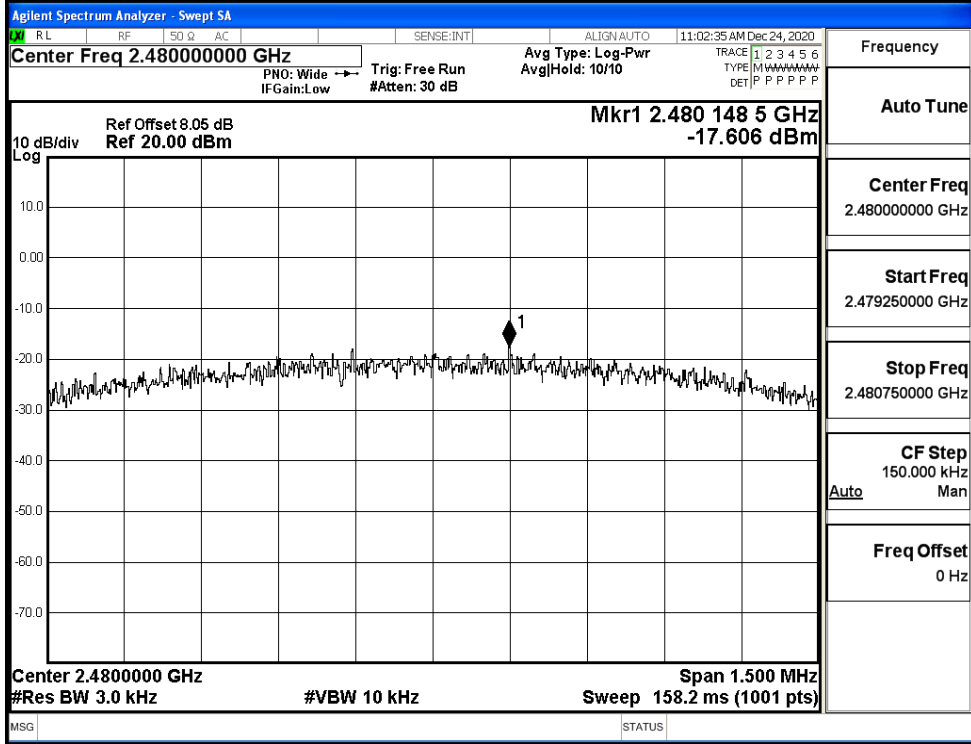
Test Graphs



MCH



HCH





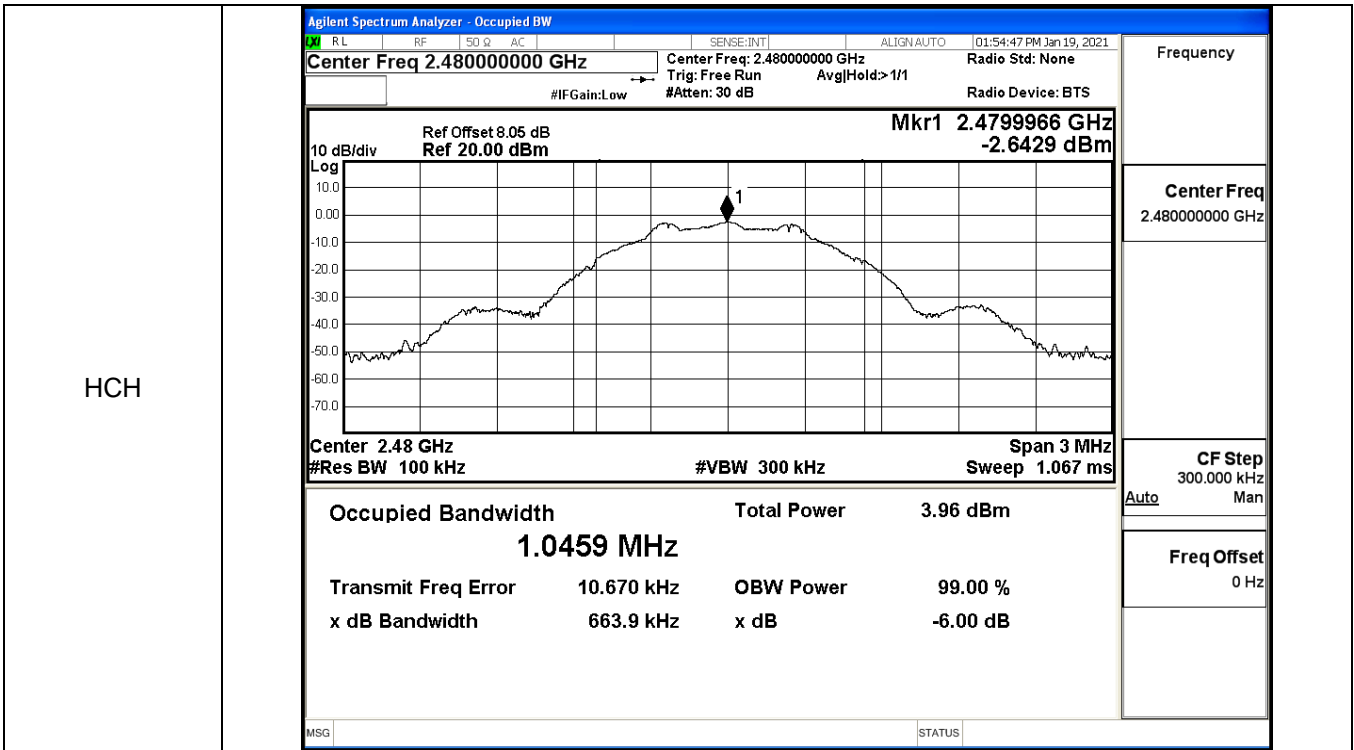
### A.4 6dB Bandwidth

BT LE

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
BT LE	LCH	0.6498	≥0.5	PASS
BT LE	MCH	0.6523	≥0.5	PASS
BT LE	HCH	0.6639	≥0.5	PASS

#### Test Graphs

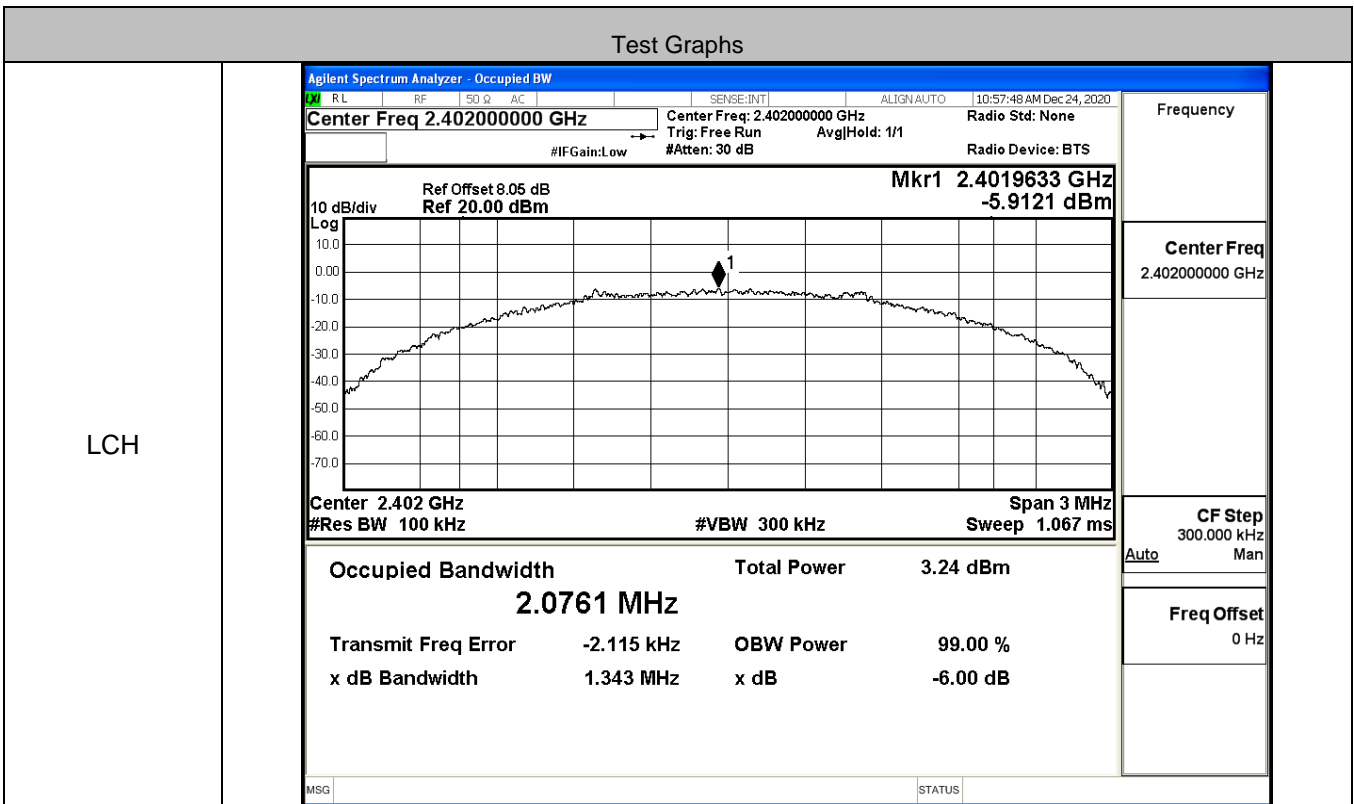
LCH	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.40200000 GHz</p> <p>Mkr1 2.4020015 GHz -4.2675 dBm</p> <p>Center 2.402 GHz</p> <p>Span 3 MHz</p> <p>Occupied Bandwidth 1.0531 MHz</p> <p>Total Power 2.37 dBm</p> <p>Transmit Freq Error 5.294 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 649.8 kHz</p> <p>x dB -6.00 dB</p>	<p>Frequency</p> <p>2.402000000 GHz</p> <p>CF Step 300.000 kHz</p> <p>Freq Offset 0 Hz</p>
MCH	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.440000000 GHz</p> <p>Mkr1 2.4400019 GHz -3.4310 dBm</p> <p>Center 2.44 GHz</p> <p>Span 3 MHz</p> <p>Occupied Bandwidth 1.0654 MHz</p> <p>Total Power 2.97 dBm</p> <p>Transmit Freq Error 1.263 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 652.3 kHz</p> <p>x dB -6.00 dB</p>	<p>Frequency</p> <p>2.440000000 GHz</p> <p>CF Step 300.000 kHz</p> <p>Freq Offset 0 Hz</p>



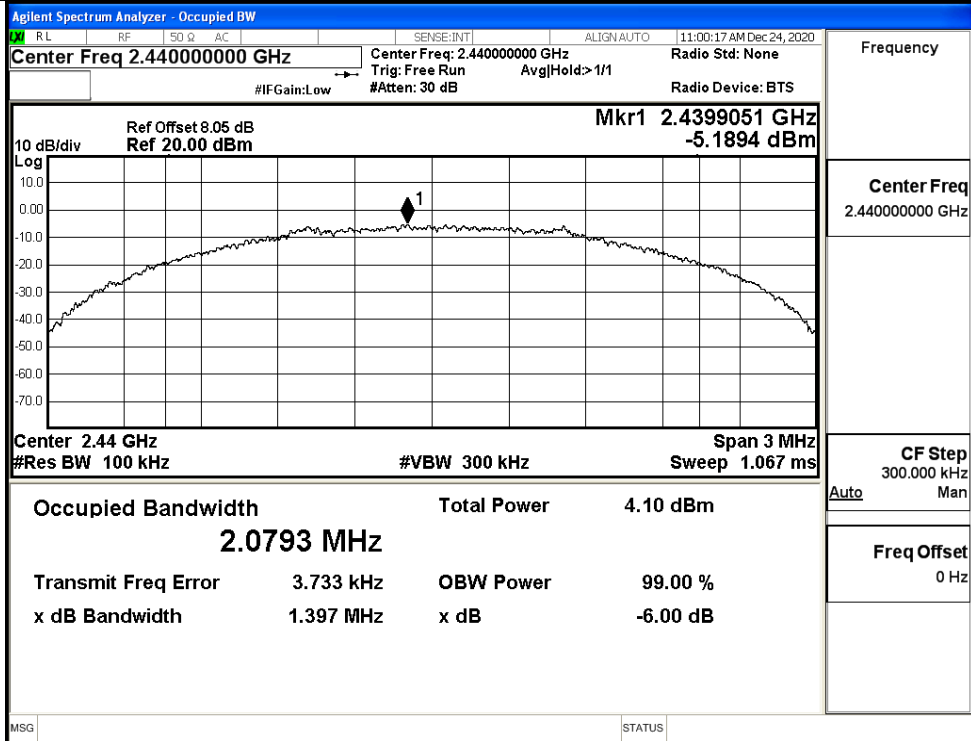
BT 2LE

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
BT 2LE	LCH	1.343	≥0.5	PASS
BT 2LE	MCH	1.397	≥0.5	PASS
BT 2LE	HCH	1.390	≥0.5	PASS

Test Graphs

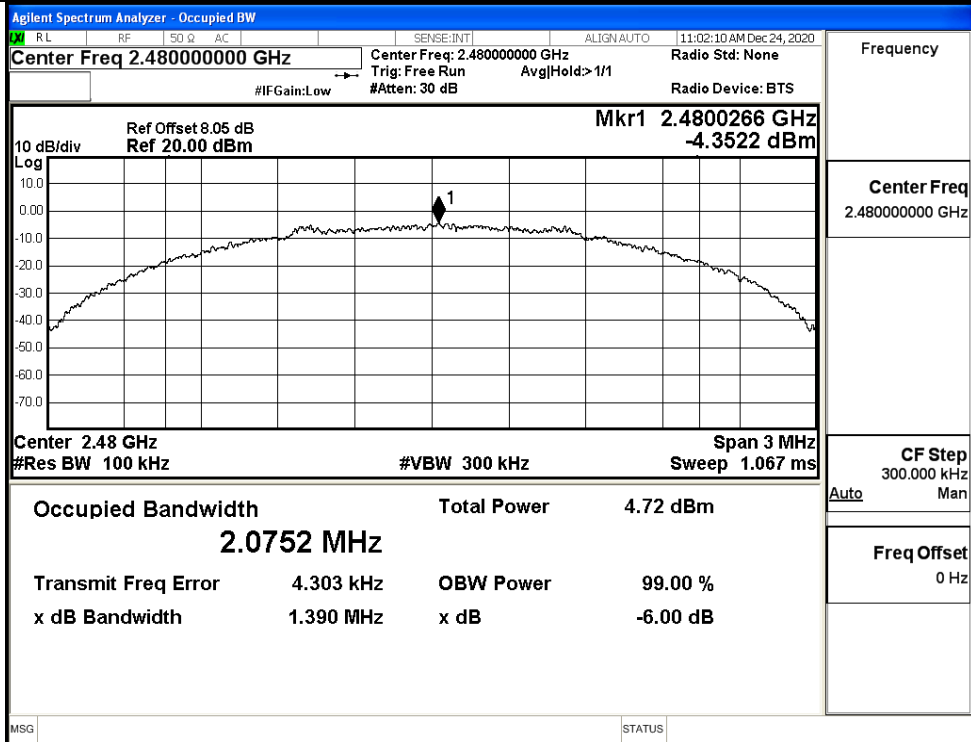


MCH



Frequency	2.44000000 GHz
Center Freq	2.44000000 GHz
CF Step	300.000 kHz
Auto	Man
Freq Offset	0 Hz

HCH



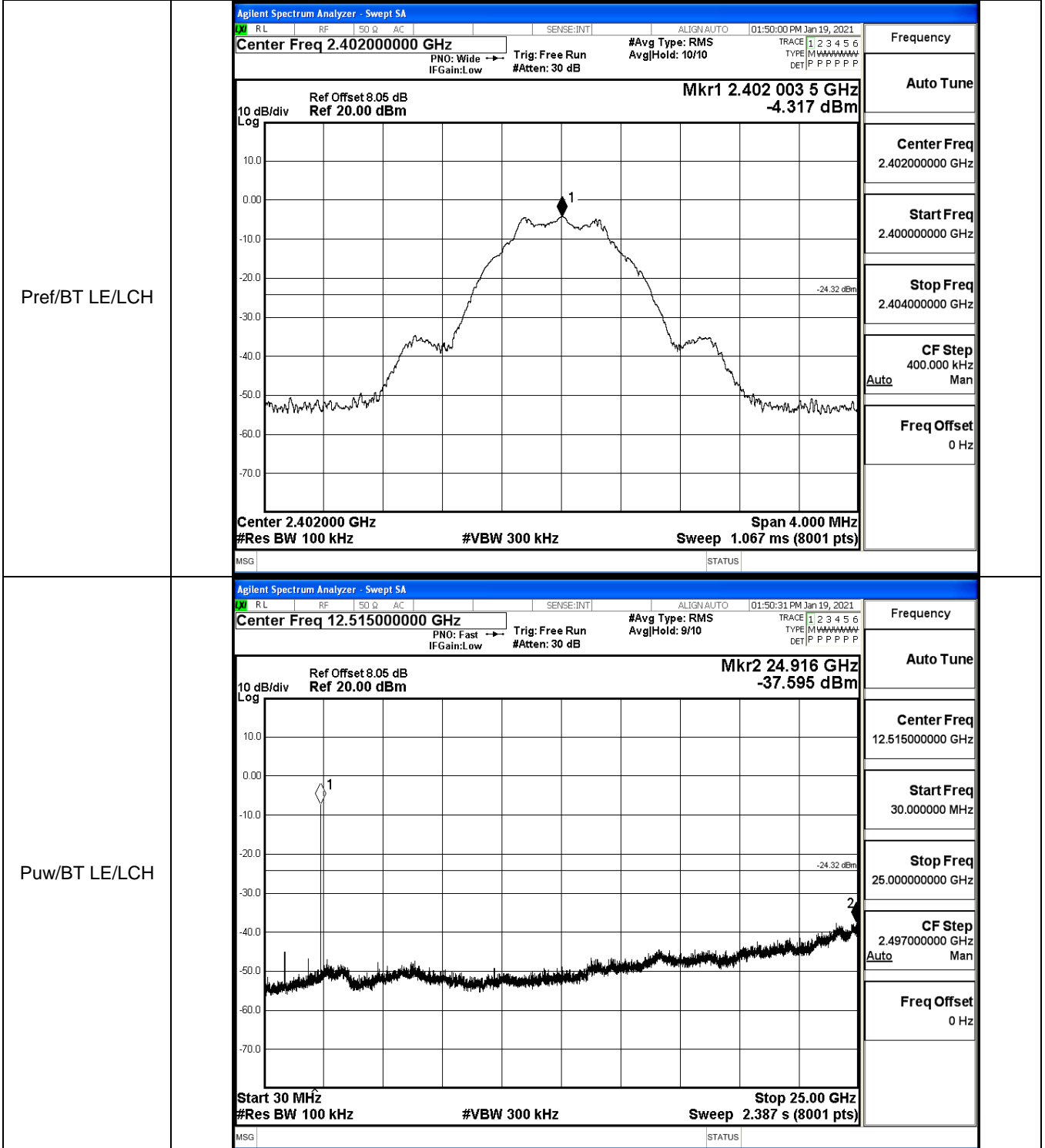
Frequency	2.48000000 GHz
Center Freq	2.48000000 GHz
CF Step	300.000 kHz
Auto	Man
Freq Offset	0 Hz

### A.5 RF Conducted Spurious Emissions

BT LE

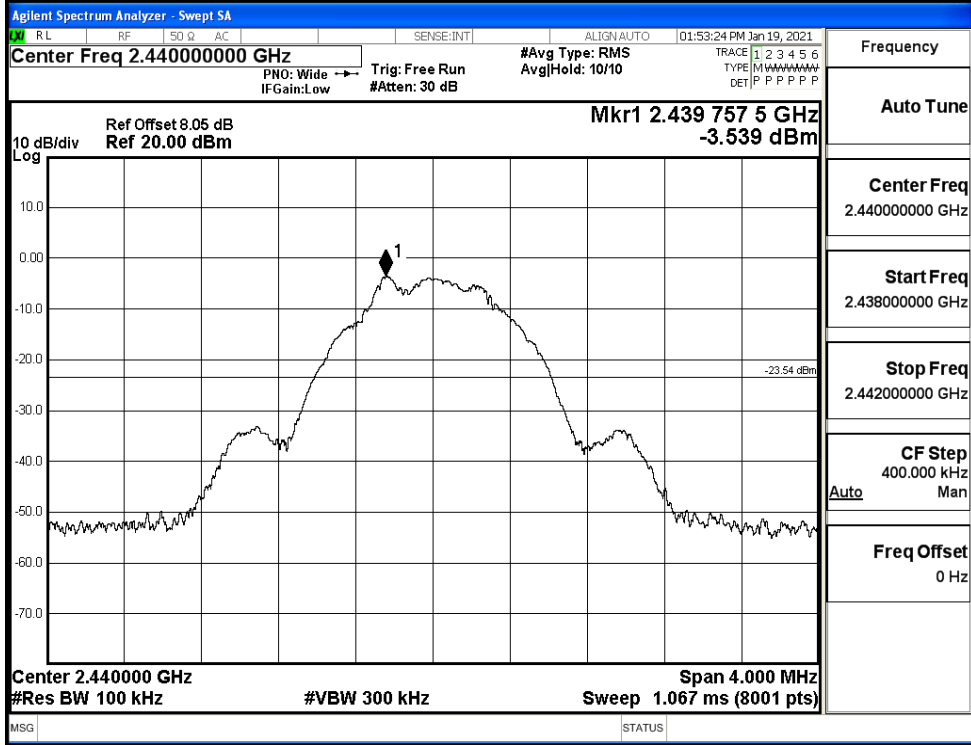
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	-4.317	-37.595	-24.317	PASS
BT LE	MCH	-3.539	-36.967	-23.539	PASS
BT LE	HCH	-2.643	-36.268	-22.643	PASS

BT LE\_LCH\_Graphs

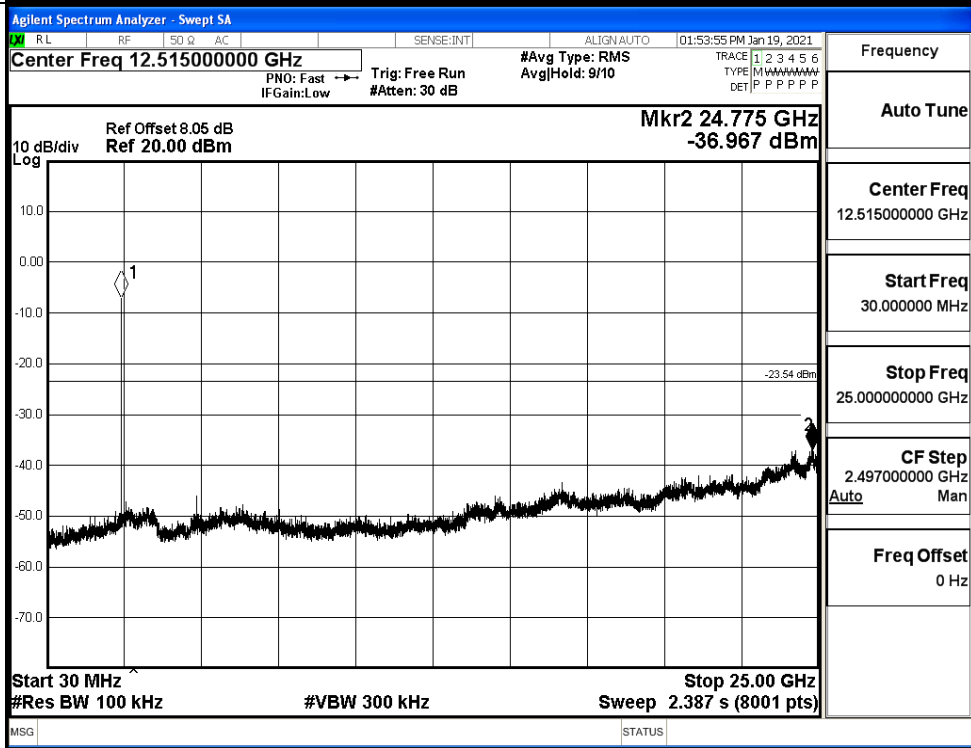


BT LE\_MCH\_Graphs

Pref/BT LE/MCH

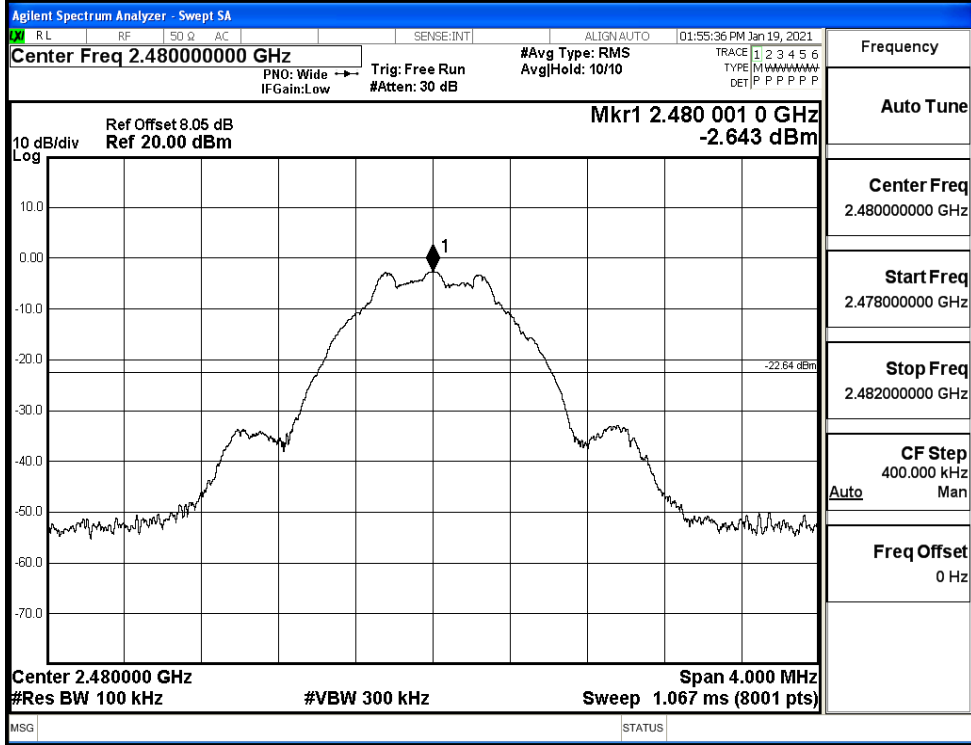


Puw/BT LE/MCH

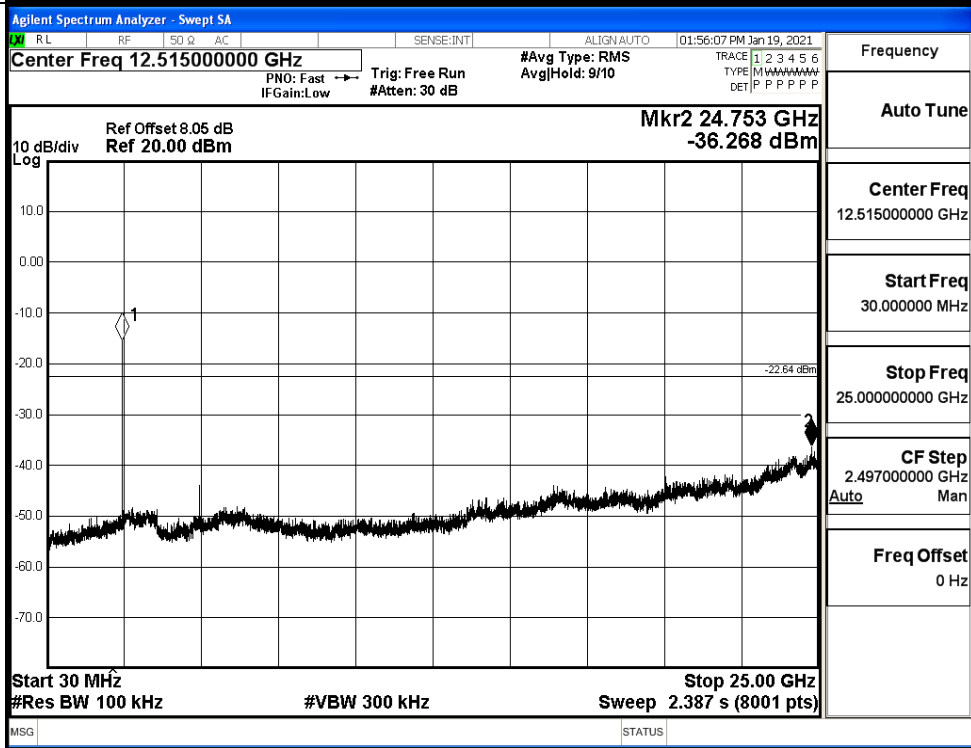


BT LE\_HCH\_Graphs

Pref/BT LE/HCH



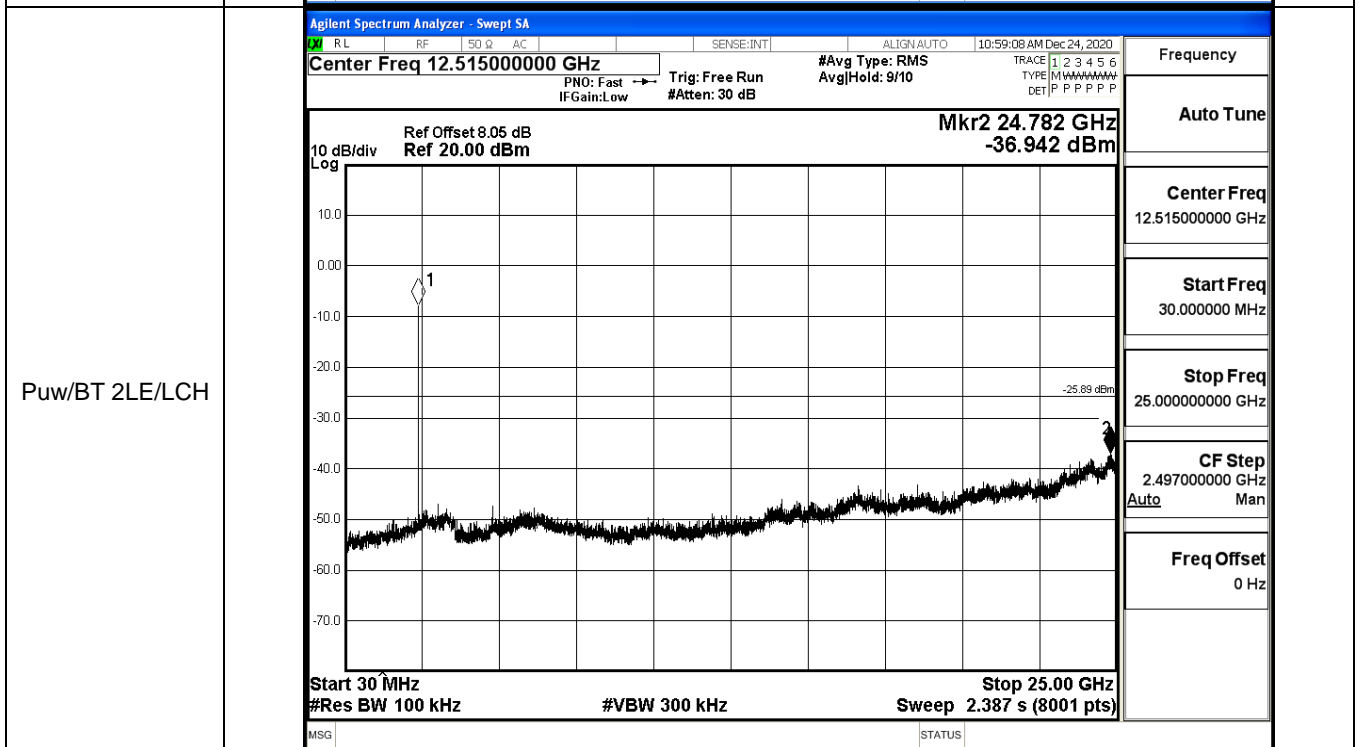
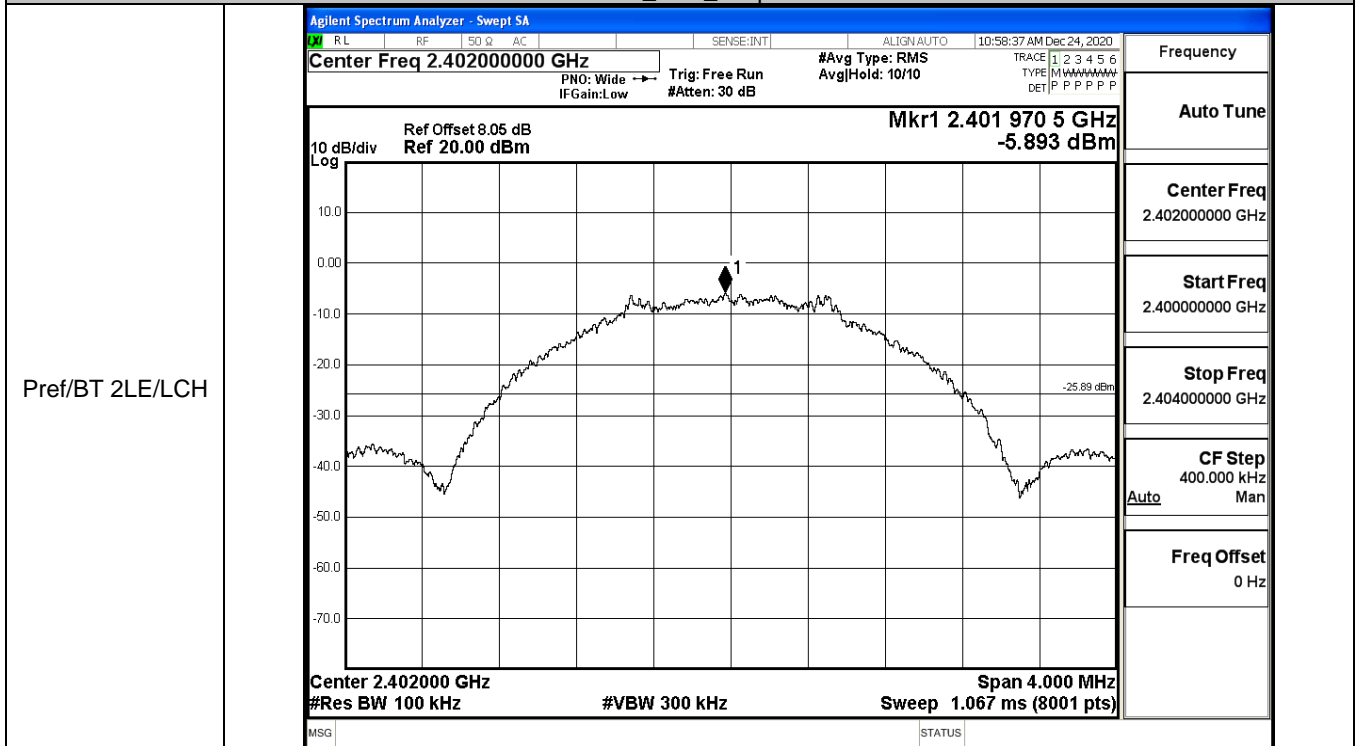
Puw/BT LE/HCH



BT 2LE

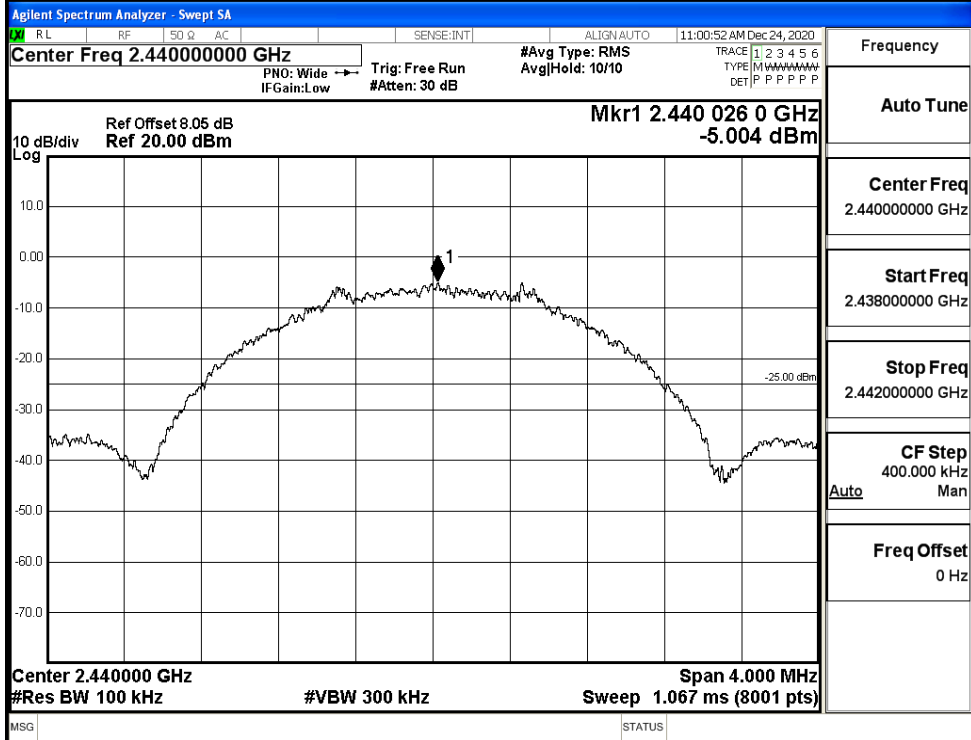
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
BT 2LE	LCH	-5.893	-36.942	-25.893	PASS
BT 2LE	MCH	-5.004	-36.422	-25.004	PASS
BT 2LE	HCH	-4.31	-37.087	-24.310	PASS

BT 2LE\_LCH\_Graphs

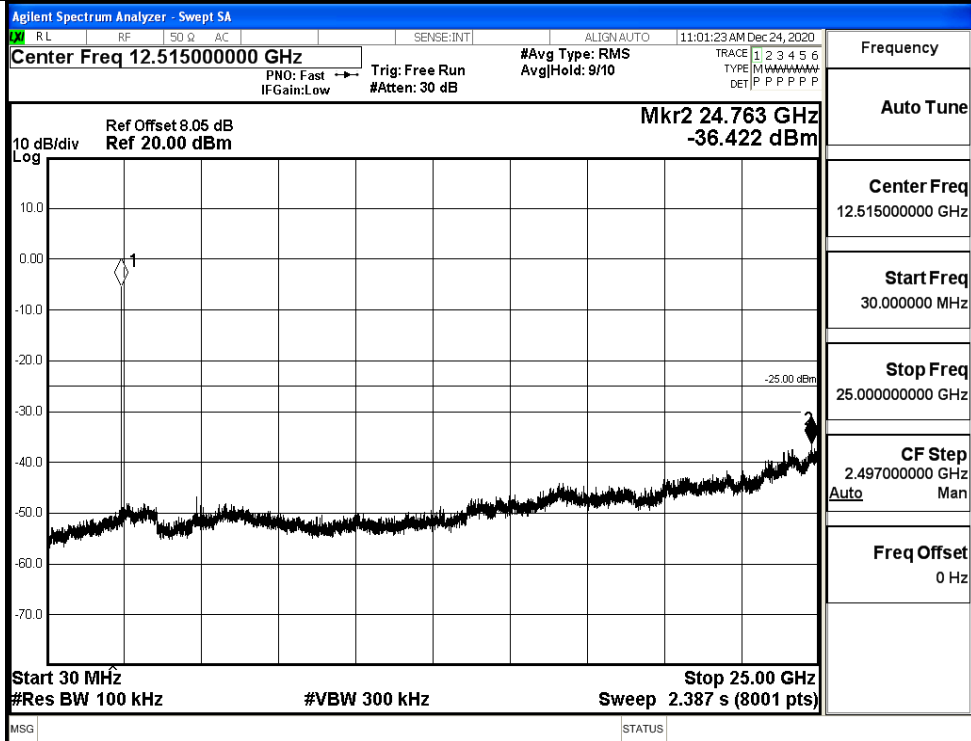


BT 2LE\_MCH\_Graphs

Pref/BT  
2LE/MCH



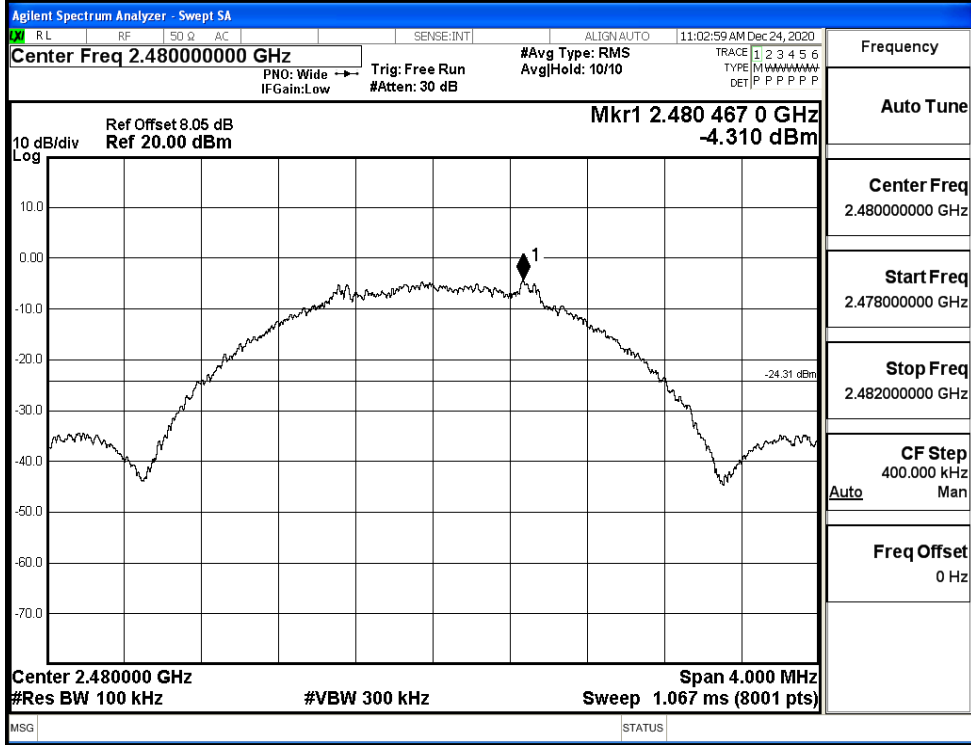
Puw/BT  
2LE/MCH



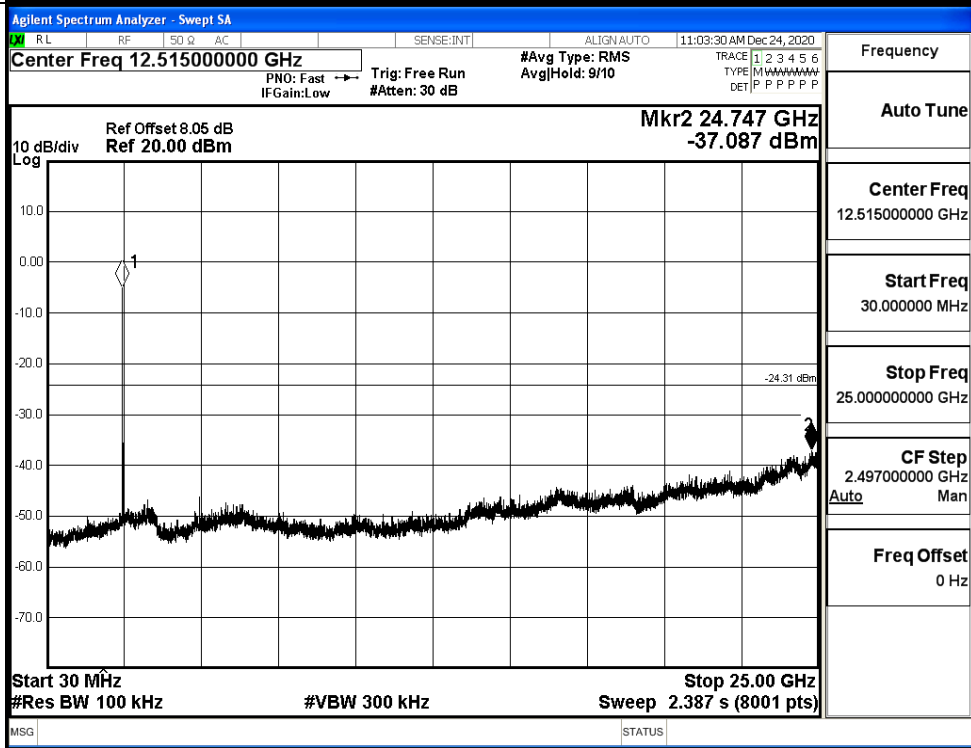


BT 2LE\_HCH\_Graphs

Pref/BT 2LE/HCH



Puw/BT 2LE/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	-4.201	-50.608	-24.2	PASS
BT LE	HCH	-2.563	-48.526	-22.56	PASS

#### Test Graphs

<p>LCH</p>		<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 2.35700000 GHz</p> <p>Start Freq 2.31000000 GHz</p> <p>Stop Freq 2.40400000 GHz</p> <p>CF Step 9.400000 MHz</p> <p>Freq Offset 0 Hz</p>
<p>HCH</p>		<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 2.48900000 GHz</p> <p>Start Freq 2.47800000 GHz</p> <p>Stop Freq 2.50000000 GHz</p> <p>CF Step 2.200000 MHz</p> <p>Freq Offset 0 Hz</p>

BT 2LE

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
BT 2LE	LCH	-6.105	-49.657	-26.11	PASS
BT 2LE	HCH	-4.319	-49.347	-24.32	PASS

Test Graphs

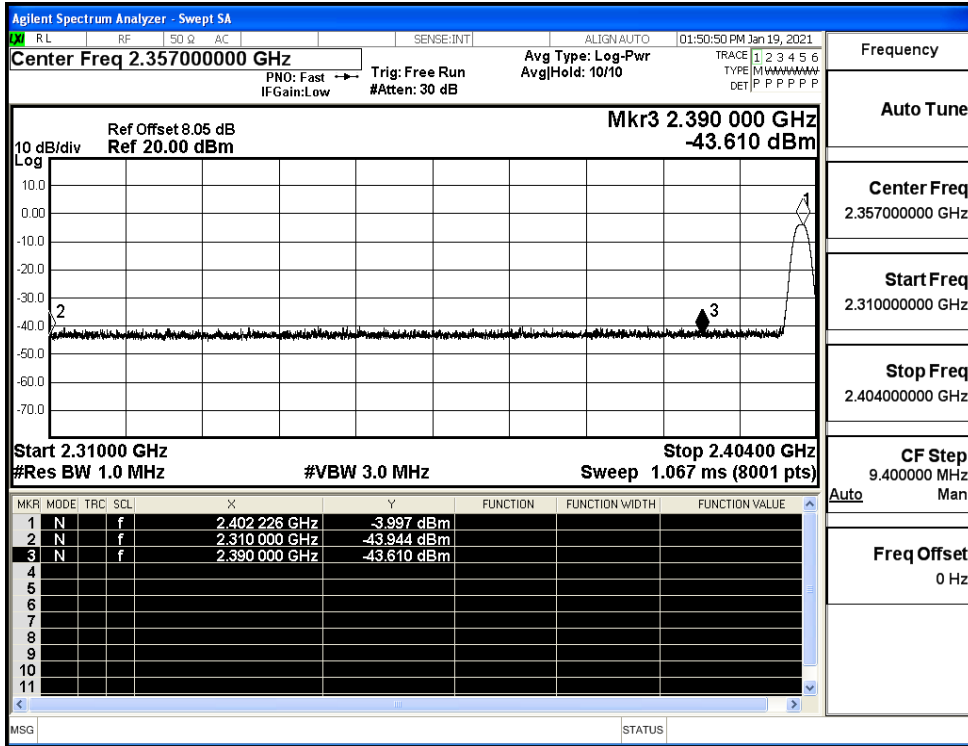
LCH		<p>Agilent Spectrum Analyzer - Swept SA</p> <p>Center Freq 2.35700000 GHz</p> <p>Mkr4 2.338 576 GHz -49.657 dBm</p> <p>Start 2.31000 GHz #Res BW 100 kHz #VBW 300 kHz Stop 2.40400 GHz Sweep 9.067 ms (8001 pts)</p> <table border="1"> <thead> <tr> <th>MKR</th> <th>MODE</th> <th>TRC</th> <th>SCL</th> <th>X</th> <th>Y</th> <th>FUNCTION</th> <th>FUNCTION WIDTH</th> <th>FUNCTION VALUE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>N</td> <td>1</td> <td>f</td> <td>2.402026 GHz</td> <td>-6.105 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>N</td> <td>1</td> <td>f</td> <td>2.400000 GHz</td> <td>-38.330 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td>N</td> <td>1</td> <td>f</td> <td>2.390000 GHz</td> <td>-54.171 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>4</td> <td>N</td> <td>1</td> <td>f</td> <td>2.338576 GHz</td> <td>-49.657 dBm</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	1	f	2.402026 GHz	-6.105 dBm				2	N	1	f	2.400000 GHz	-38.330 dBm				3	N	1	f	2.390000 GHz	-54.171 dBm				4	N	1	f	2.338576 GHz	-49.657 dBm			
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4	N	1	f	2.338576 GHz	-49.657 dBm																																										
HCH		<p>Agilent Spectrum Analyzer - Swept SA</p> <p>Center Freq 2.48900000 GHz</p> <p>Mkr4 2.499 172 25 GHz -49.347 dBm</p> <p>Start 2.47800 GHz #Res BW 100 kHz #VBW 300 kHz Stop 2.50000 GHz Sweep 2.133 ms (8001 pts)</p> <table border="1"> <thead> <tr> <th>MKR</th> <th>MODE</th> <th>TRC</th> <th>SCL</th> <th>X</th> <th>Y</th> <th>FUNCTION</th> <th>FUNCTION WIDTH</th> <th>FUNCTION VALUE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>N</td> <td>1</td> <td>f</td> <td>2.48012300 GHz</td> <td>-4.319 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>N</td> <td>1</td> <td>f</td> <td>2.48350000 GHz</td> <td>-51.198 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td>N</td> <td>1</td> <td>f</td> <td>2.50000000 GHz</td> <td>-50.861 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>4</td> <td>N</td> <td>1</td> <td>f</td> <td>2.49917225 GHz</td> <td>-49.347 dBm</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	1	f	2.48012300 GHz	-4.319 dBm				2	N	1	f	2.48350000 GHz	-51.198 dBm				3	N	1	f	2.50000000 GHz	-50.861 dBm				4	N	1	f	2.49917225 GHz	-49.347 dBm			
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3	N	1	f	2.50000000 GHz	-50.861 dBm																																										
4	N	1	f	2.49917225 GHz	-49.347 dBm																																										

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

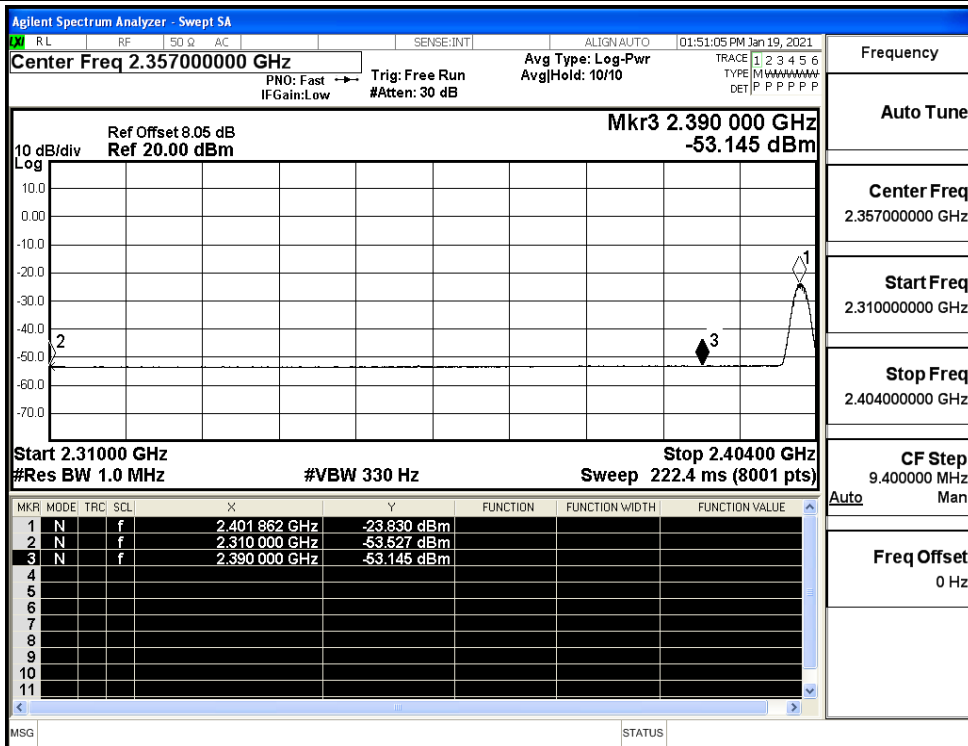
BT LE

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	-43.94	2.0	0	53.32	PEAK	74	PASS
		Ant1	2310.0	-53.53	2.0	0	43.73	AV	54	PASS
		Ant1	2390.0	-43.61	2.0	0	53.65	PEAK	74	PASS
		Ant1	2390.0	-53.15	2.0	0	44.11	AV	54	PASS
	2480	Ant1	2483.5	-42.61	2.0	0	54.65	PEAK	74	PASS
		Ant1	2483.5	-52.74	2.0	0	44.52	AV	54	PASS
		Ant1	2500.0	-42.96	2.0	0	54.30	PEAK	74	PASS
		Ant1	2500.0	-52.62	2.0	0	44.64	AV	54	PASS

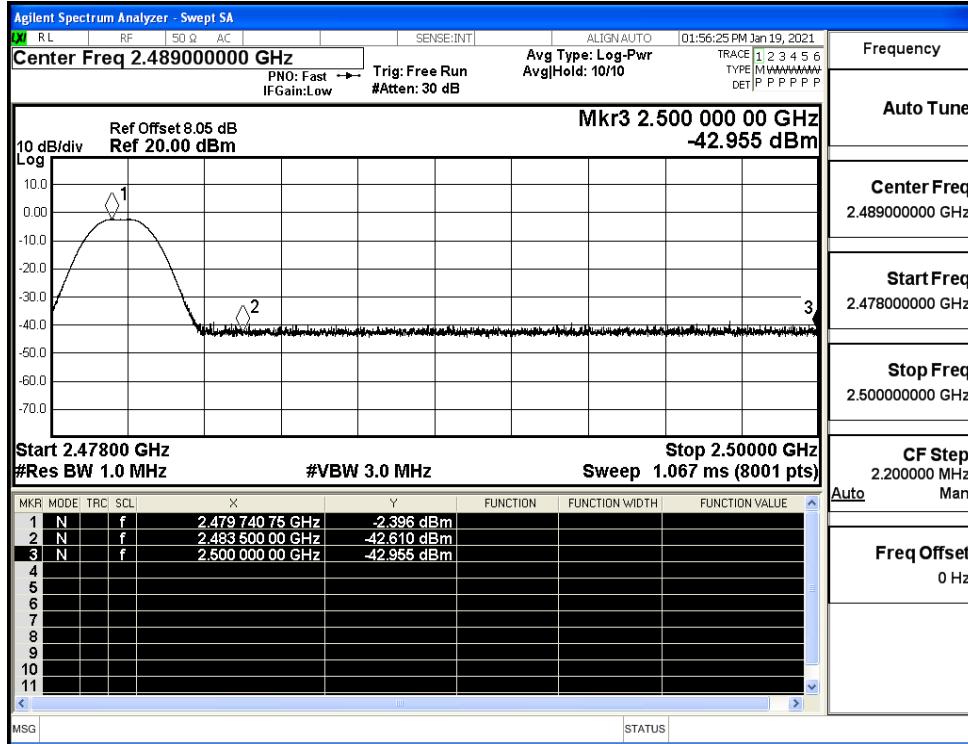
Restrict-band band-edge measurements\_BT LE\_2402\_Ant1\_PEAK



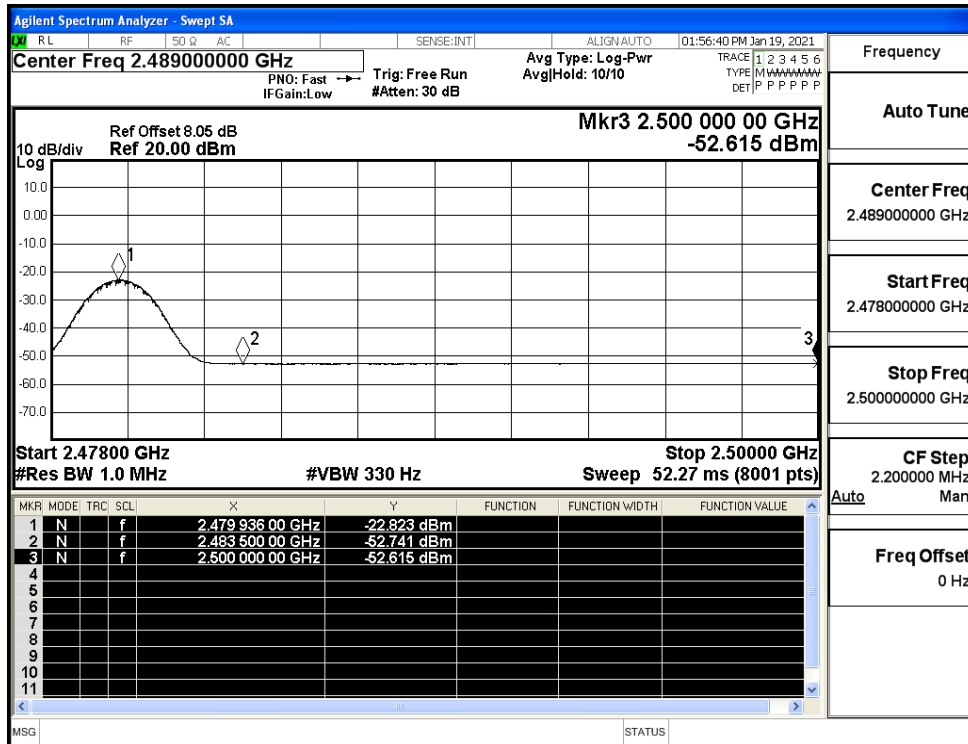
Restrict-band band-edge measurements\_BT LE\_2402\_Ant1\_AV



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



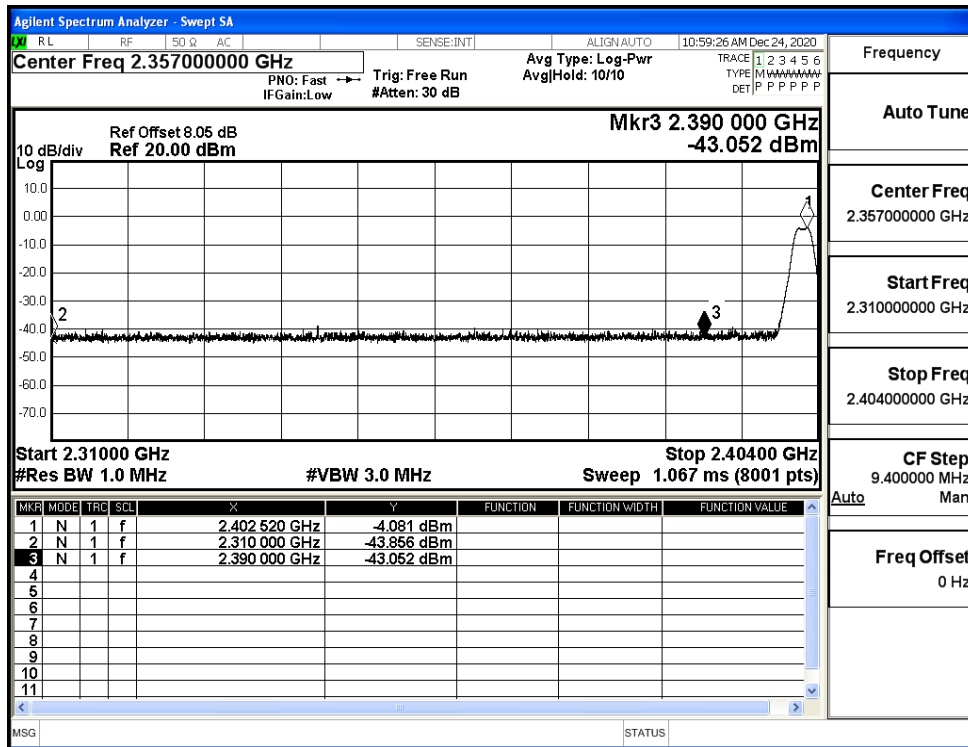
Restrict-band band-edge measurements\_BT LE\_2480\_Ant1\_AV



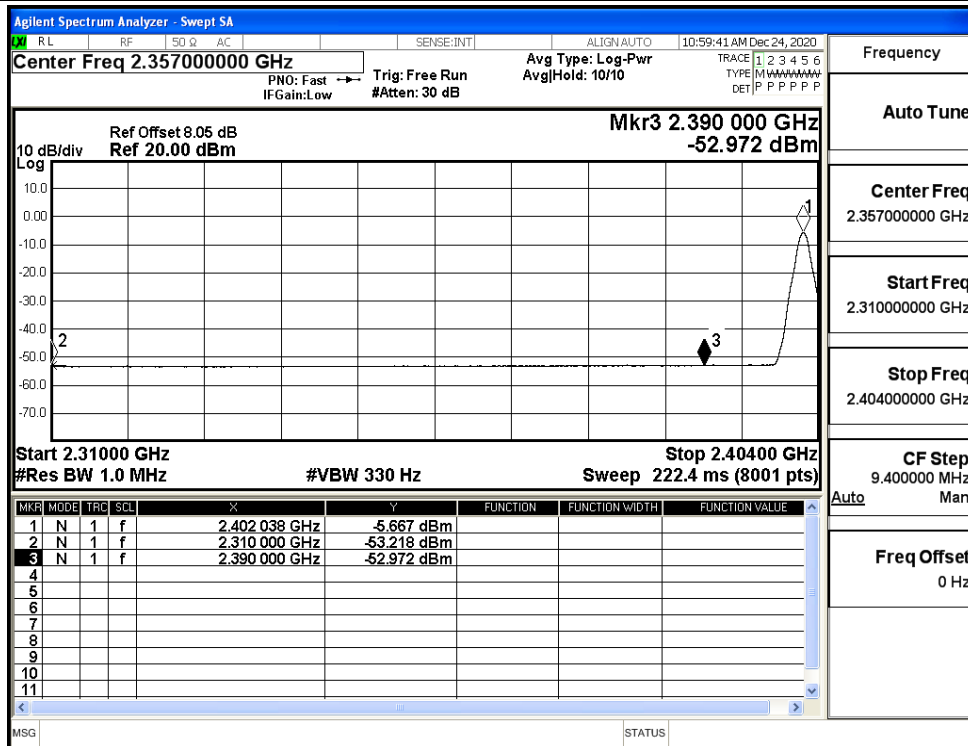
## BT 2LE

Test Mode	Test Channel	Ant	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdi
BT 2LE	2402	Ant1	2310.0	-43.86	2.0	0	53.40	PEAK	74	PASS
		Ant1	2310.0	-53.22	2.0	0	44.04	AV	54	PASS
		Ant1	2390.0	-43.05	2.0	0	54.21	PEAK	74	PASS
		Ant1	2390.0	-52.97	2.0	0	44.29	AV	54	PASS
	2480	Ant1	2483.5	-41.58	2.0	0	55.68	PEAK	74	PASS
		Ant1	2483.5	-51.81	2.0	0	45.45	AV	54	PASS
		Ant1	2500.0	-40.78	2.0	0	56.48	PEAK	74	PASS
		Ant1	2500.0	-52.41	2.0	0	44.85	AV	54	PASS

Restrict-band band-edge measurements\_BT 2LE\_2402\_Ant1\_PEAK

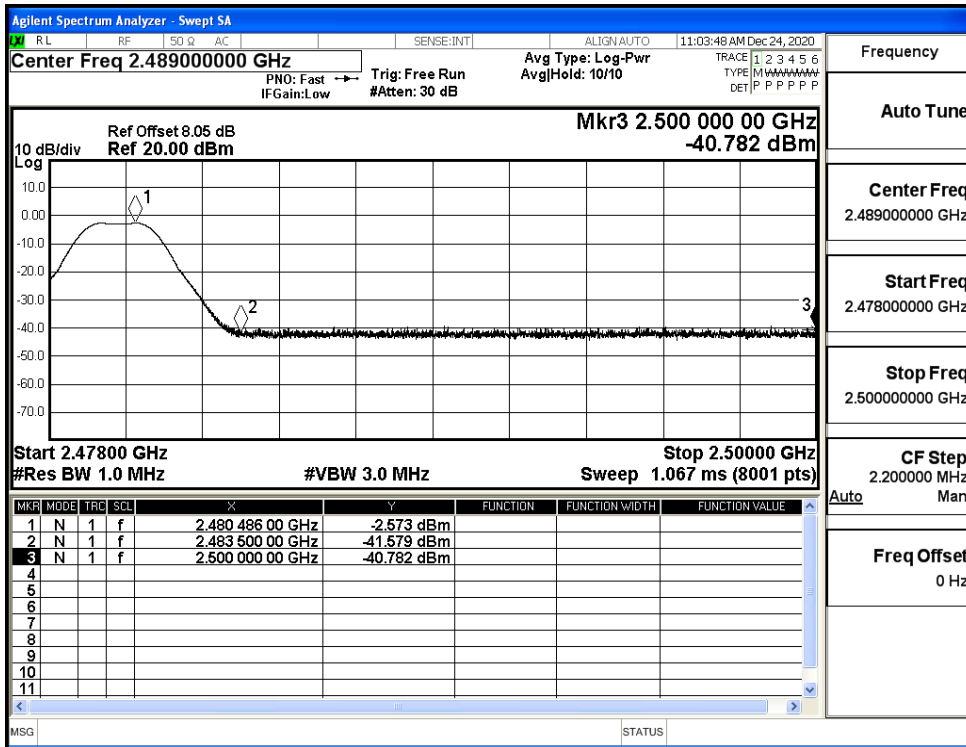


Restrict-band band-edge measurements\_BT 2LE\_2402\_Ant1\_AV





Restrict-band band-edge measurements\_BT 2LE\_2480\_Ant1\_PEAK



Restrict-band band-edge measurements\_BT 2LE\_2480\_Ant1\_AV

