

## Appendix A

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

Product Name: Remote Control

Trade Mark: xunison

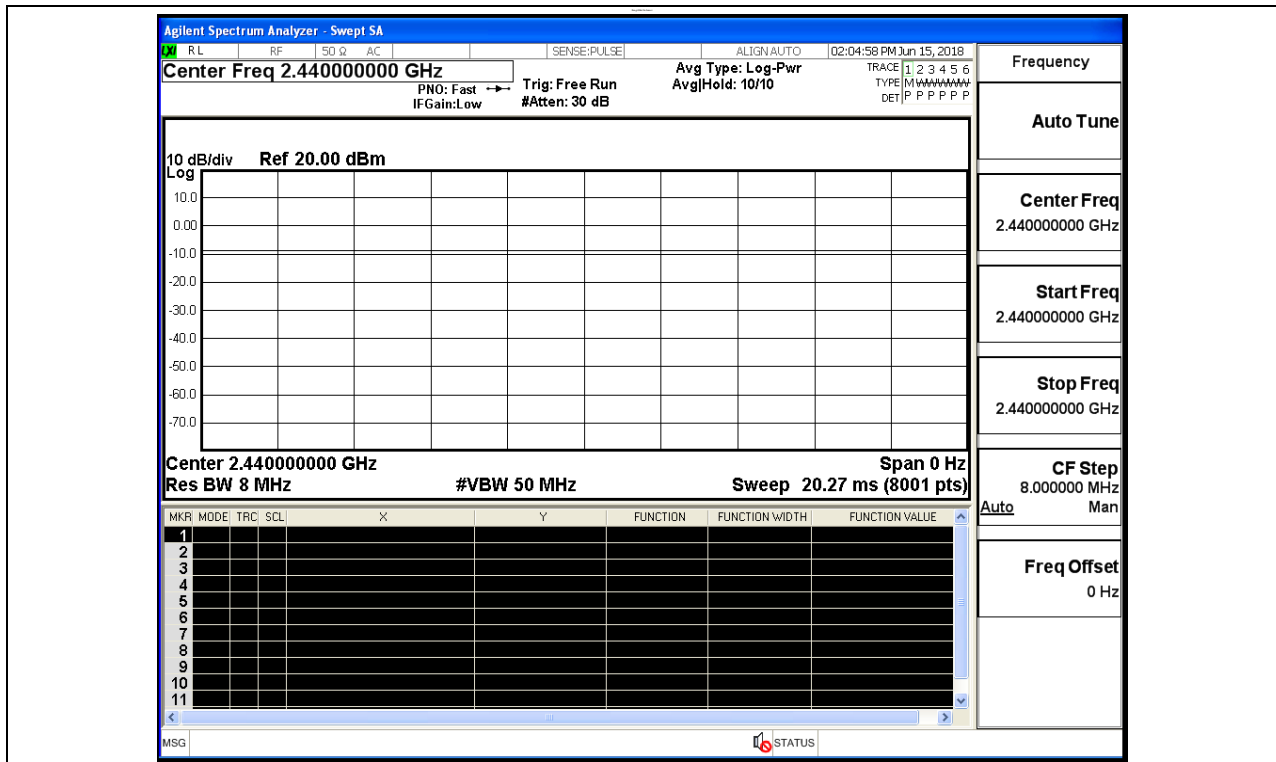
Test Model: BLE RCU

#### Environmental Conditions

Temperature:	22.2 °C
Relative Humidity:	53.7%
ATM Pressure:	100.0 kPa
Test Engineer:	RYAN.HU
Supervised by:	Jayden.Zhuo

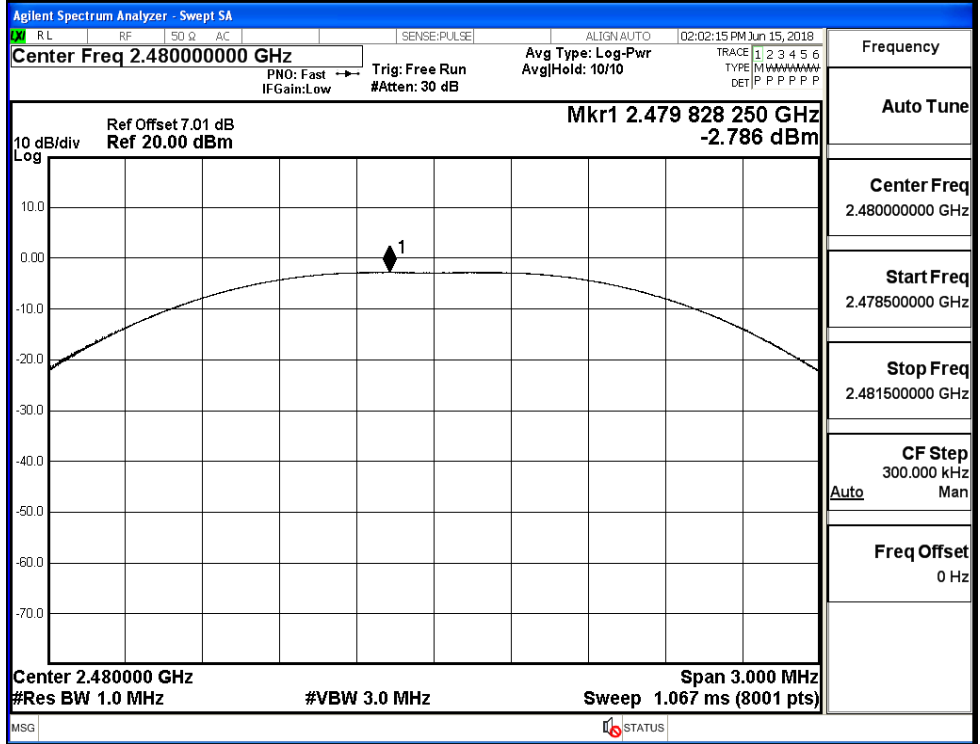
#### A.1 Duty Cycle

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



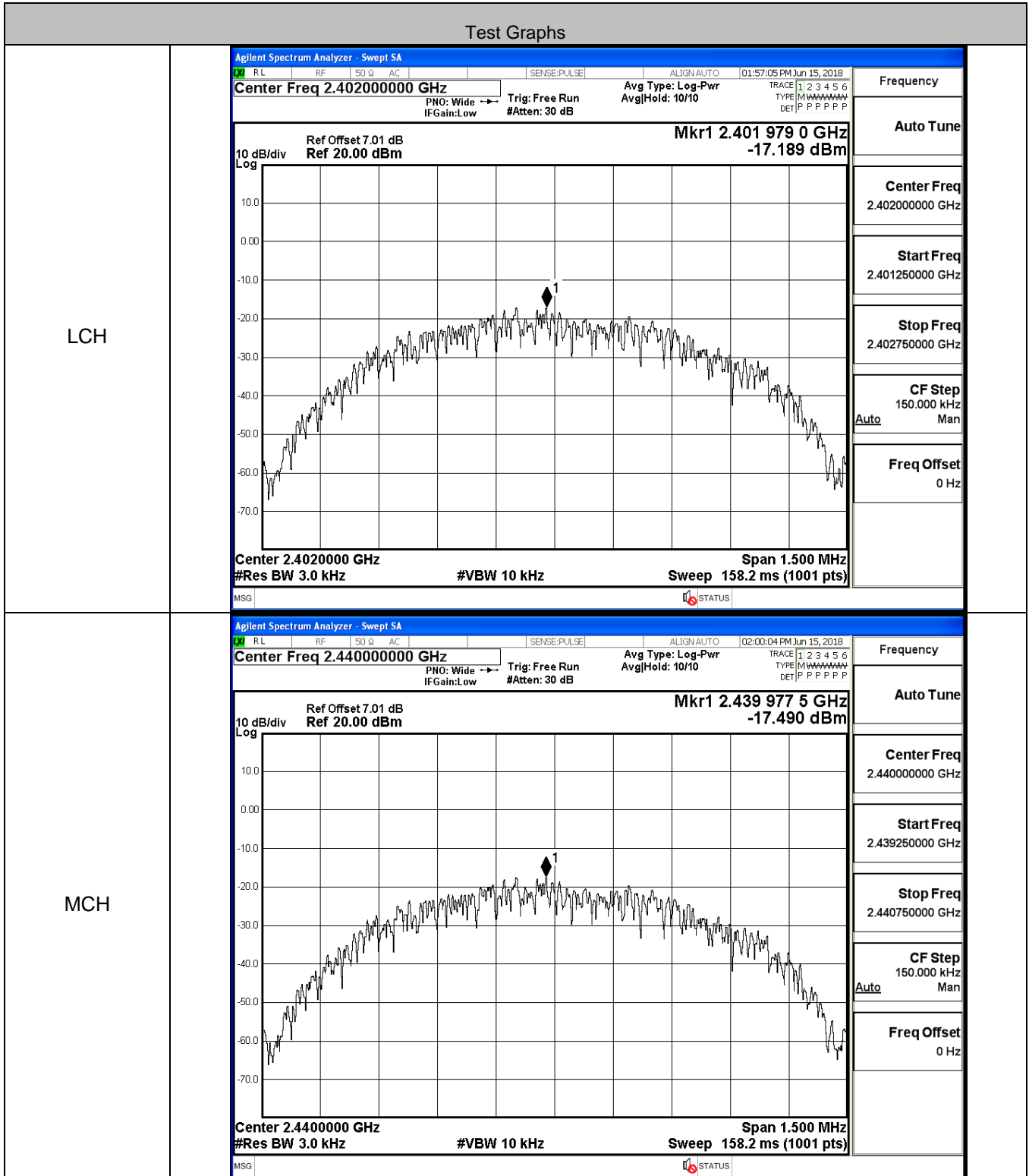


HCH

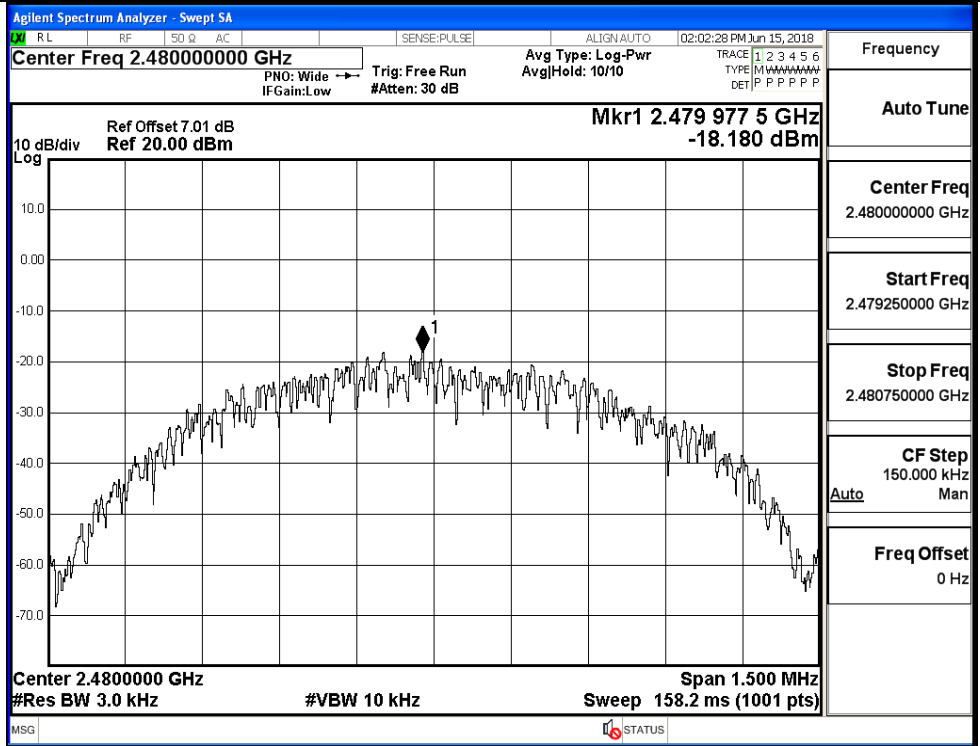


### A.3 Maximum Power Spectral Density

Mode	Channel	PSD [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
BT LE	LCH	-17.189	8	PASS
BT LE	MCH	-17.490	8	PASS
BT LE	HCH	-18.180	8	PASS

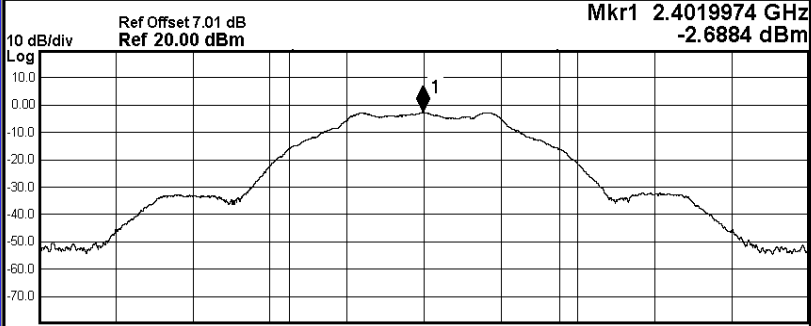
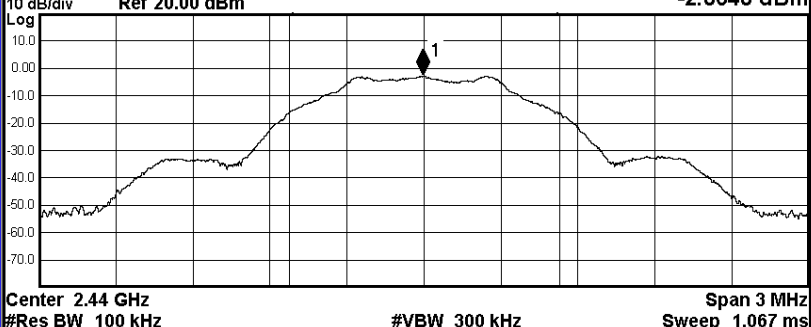


HCH

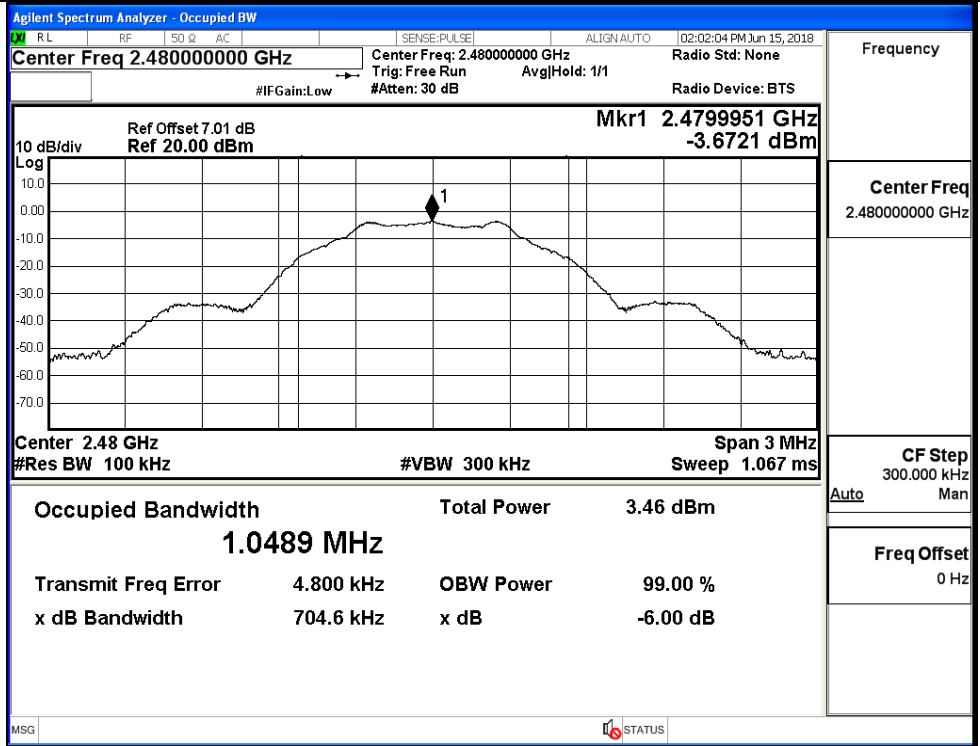


**A.4 6dB Bandwidth**

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
BT LE	LCH	0.6989	≥0.5	PASS
BT LE	MCH	0.7002	≥0.5	PASS
BT LE	HCH	0.7046	≥0.5	PASS

Test Graphs													
LCH	<div style="border: 1px solid black; padding: 5px;"> <p style="font-size: small; margin: 0;">Agilent Spectrum Analyzer - Occupied BW</p> <p style="font-size: x-small; margin: 0;">RL RF 50 Ω AC SENSE:PULSE ALIGN:AUTO 01:56:41 PM Jun 15, 2018</p> <p style="font-size: small; margin: 0;">Center Freq 2.40200000 GHz Center Freq: 2.40200000 GHz Radio Std: None</p> <p style="font-size: x-small; margin: 0;">#IFGain:Low Trig: Free Run AvgHold: 1/1 Radio Device: BTS</p> <div style="border: 1px solid black; padding: 2px; margin: 5px 0;"> <p style="font-size: x-small; margin: 0;">Ref Offset 7.01 dB Mkr1 2.4019974 GHz</p> <p style="font-size: x-small; margin: 0;">Ref 20.00 dBm -2.6884 dBm</p>  <p style="font-size: x-small; margin: 0;">Center 2.402 GHz Span 3 MHz</p> <p style="font-size: x-small; margin: 0;">#Res BW 100 kHz #VBW 300 kHz Sweep 1.067 ms</p> <table style="width: 100%; font-size: x-small; border-collapse: collapse;"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>4.46 dBm</td> </tr> <tr> <td style="text-align: center;"><b>1.0509 MHz</b></td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>x dB Bandwidth</td> <td>x dB</td> <td>-6.00 dB</td> </tr> </table> </div> <p style="font-size: x-small; margin: 0;">MSG STATUS</p> </div>	Occupied Bandwidth	Total Power	4.46 dBm	<b>1.0509 MHz</b>			Transmit Freq Error	OBW Power	99.00 %	x dB Bandwidth	x dB	-6.00 dB
Occupied Bandwidth	Total Power	4.46 dBm											
<b>1.0509 MHz</b>													
Transmit Freq Error	OBW Power	99.00 %											
x dB Bandwidth	x dB	-6.00 dB											
MCH	<div style="border: 1px solid black; padding: 5px;"> <p style="font-size: small; margin: 0;">Agilent Spectrum Analyzer - Occupied BW</p> <p style="font-size: x-small; margin: 0;">RL RF 50 Ω AC SENSE:PULSE ALIGN:AUTO 01:59:40 PM Jun 15, 2018</p> <p style="font-size: small; margin: 0;">Center Freq 2.44000000 GHz Center Freq: 2.44000000 GHz Radio Std: None</p> <p style="font-size: x-small; margin: 0;">#IFGain:Low Trig: Free Run AvgHold: &gt;1/1 Radio Device: BTS</p> <div style="border: 1px solid black; padding: 2px; margin: 5px 0;"> <p style="font-size: x-small; margin: 0;">Ref Offset 7.01 dB Mkr1 2.439997 GHz</p> <p style="font-size: x-small; margin: 0;">Ref 20.00 dBm -2.8648 dBm</p>  <p style="font-size: x-small; margin: 0;">Center 2.44 GHz Span 3 MHz</p> <p style="font-size: x-small; margin: 0;">#Res BW 100 kHz #VBW 300 kHz Sweep 1.067 ms</p> <table style="width: 100%; font-size: x-small; border-collapse: collapse;"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>4.26 dBm</td> </tr> <tr> <td style="text-align: center;"><b>1.0500 MHz</b></td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>x dB Bandwidth</td> <td>x dB</td> <td>-6.00 dB</td> </tr> </table> </div> <p style="font-size: x-small; margin: 0;">MSG STATUS</p> </div>	Occupied Bandwidth	Total Power	4.26 dBm	<b>1.0500 MHz</b>			Transmit Freq Error	OBW Power	99.00 %	x dB Bandwidth	x dB	-6.00 dB
Occupied Bandwidth	Total Power	4.26 dBm											
<b>1.0500 MHz</b>													
Transmit Freq Error	OBW Power	99.00 %											
x dB Bandwidth	x dB	-6.00 dB											

HCH



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

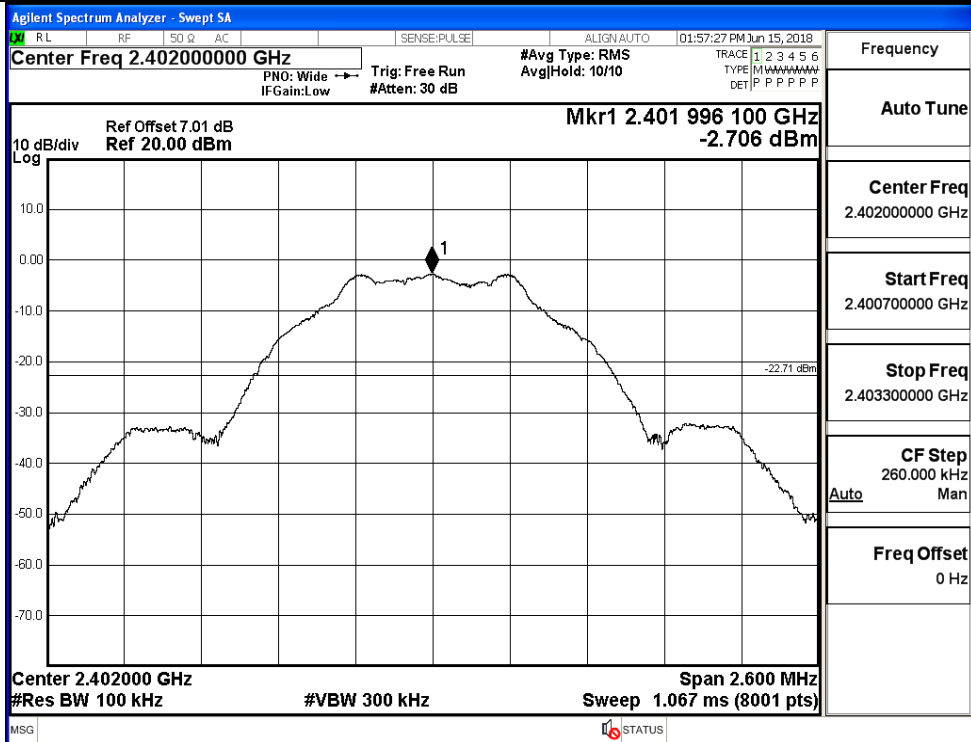
### A.5 RF Conducted Spurious Emissions

Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	-2.706	-44.871	-22.706	PASS
BT LE	MCH	-2.87	-44.623	-22.870	PASS
BT LE	HCH	-3.734	-44.448	-23.734	PASS

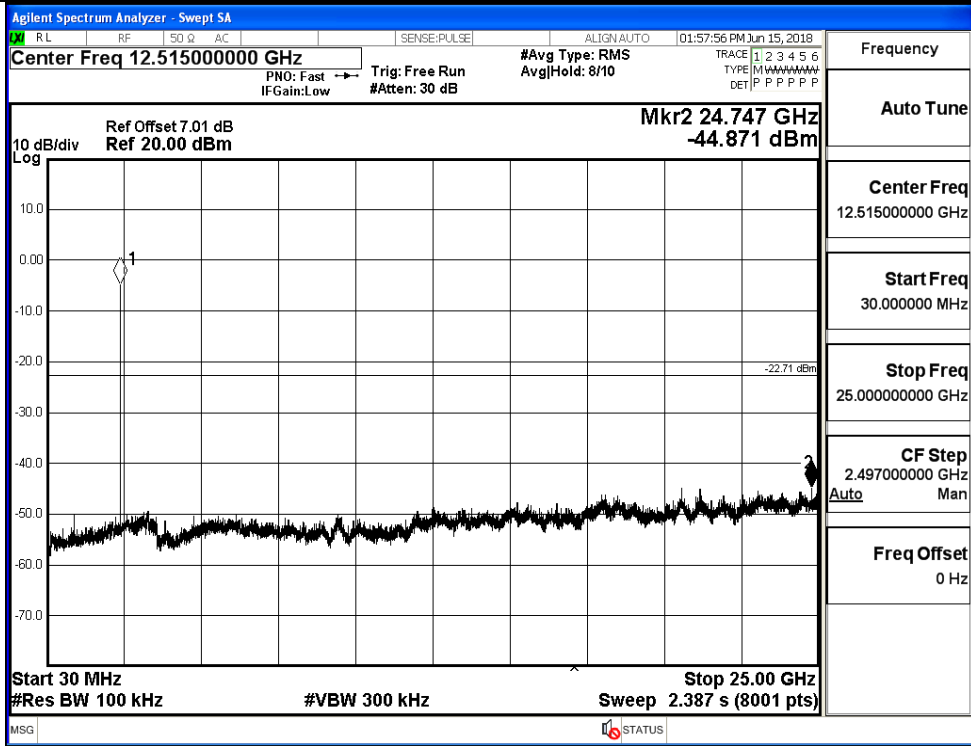


BT LE\_LCH\_Graphs

Pref/BT LE/LCH

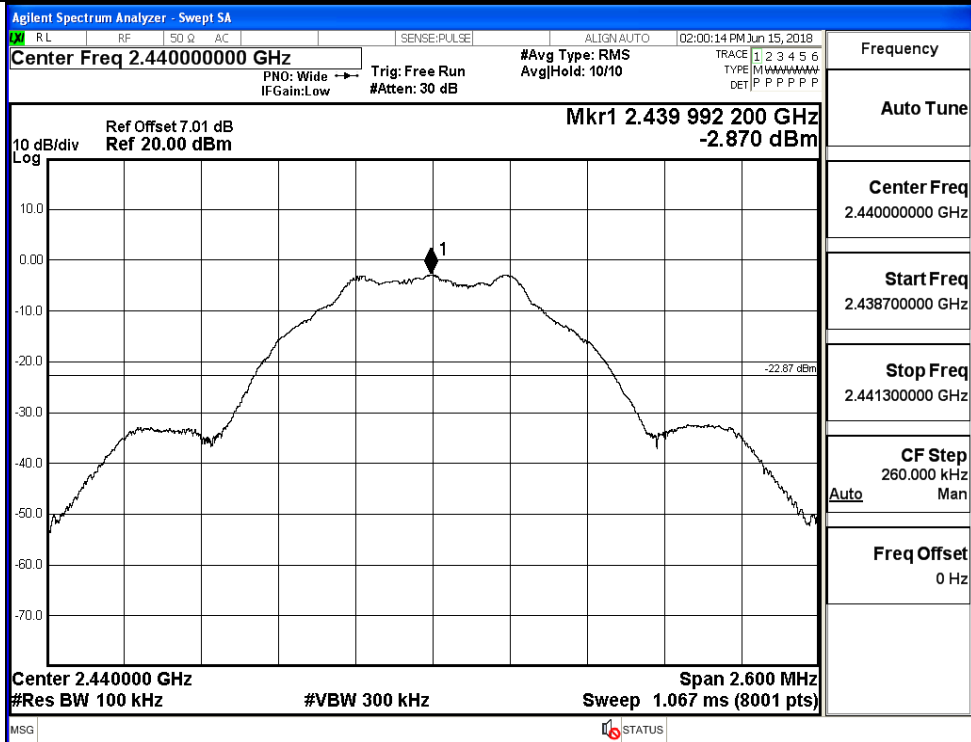


Puw/BT LE/LCH

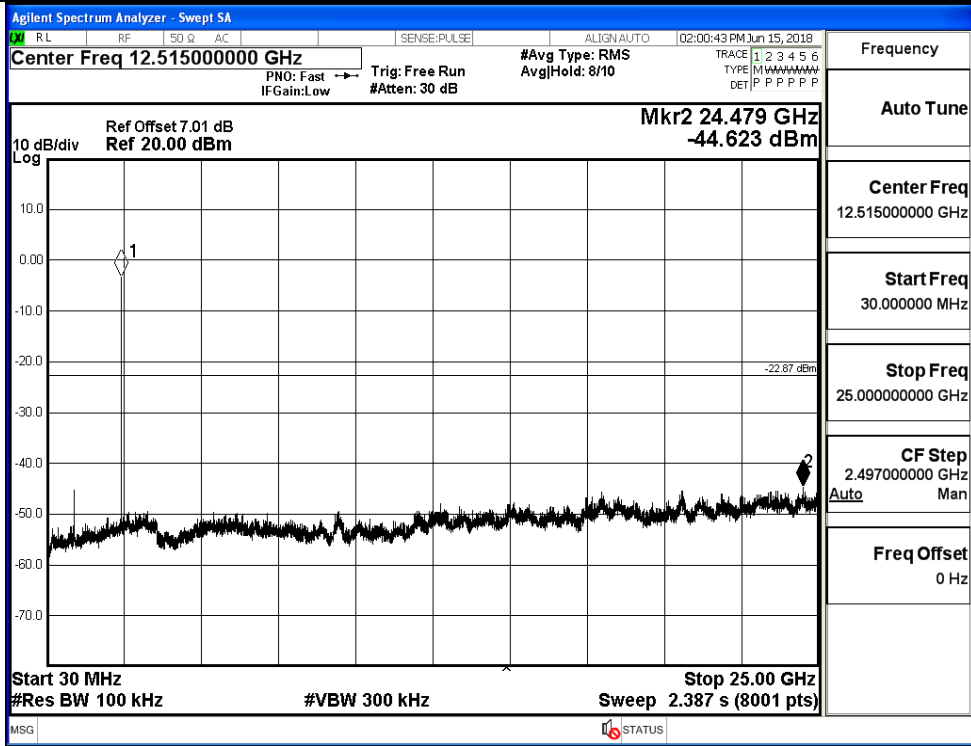


BT LE\_MCH\_Graphs

Pref/BT LE/MCH

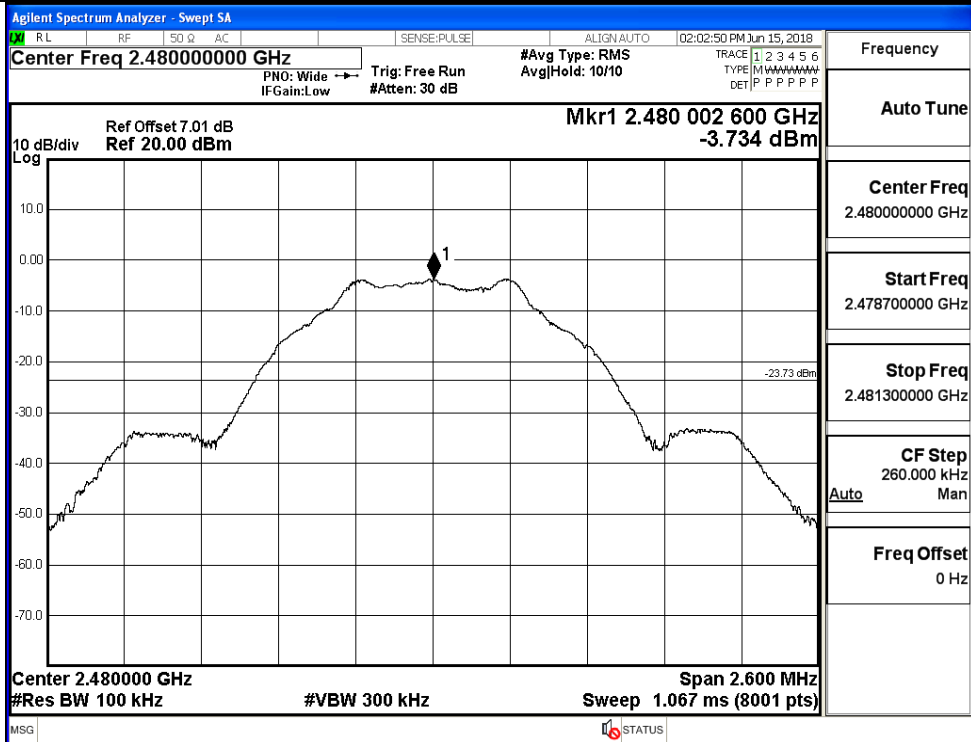


Puw/BT LE/MCH

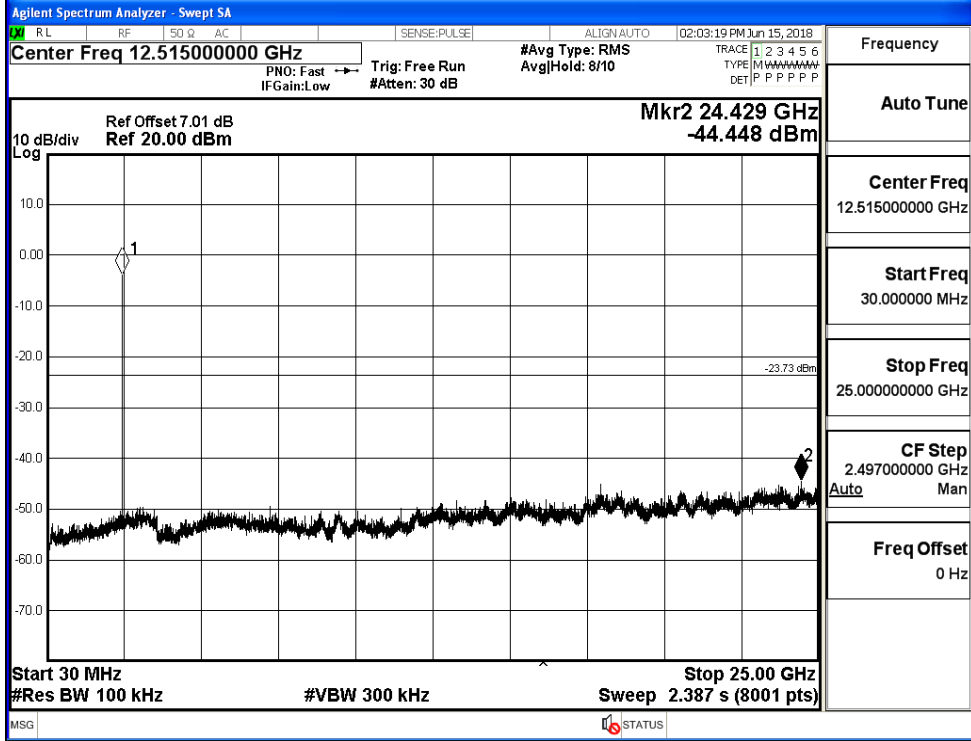


BT LE\_HCH\_Graphs

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	-2.508	-51.237	-22.51	PASS
BT LE	HCH	-3.557	-50.752	-23.56	PASS

Test Graphs

LCH

Agilent Spectrum Analyzer - Swept SA

Center Freq 2.357000000 GHz

Ref Offset 7.01 dB  
Ref 20.00 dBm

Mkr4 2.369 866 GHz  
-51.237 dBm

Start 2.31000 GHz  
#Res BW 100 kHz

Stop 2.40400 GHz  
#VBW 300 kHz  
Sweep 9.067 ms (8001 pts)

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	f		2.401 756 GHz	-2.508 dBm			
2	N	f		2.400 000 GHz	-54.231 dBm			
3	N	f		2.390 000 GHz	-55.561 dBm			
4	N	f		2.369 866 GHz	-51.237 dBm			
5								
6								
7								
8								
9								
10								
11								

Frequency: 2.357000000 GHz  
Auto Tune  
Start Freq: 2.310000000 GHz  
Stop Freq: 2.404000000 GHz  
CF Step: 9.400000 MHz  
Freq Offset: 0 Hz

HCH

Agilent Spectrum Analyzer - Swept SA

Center Freq 2.489000000 GHz

Ref Offset 7.01 dB  
Ref 20.00 dBm

Mkr4 2.494 986 75 GHz  
-50.752 dBm

Start 2.47800 GHz  
#Res BW 100 kHz

Stop 2.50000 GHz  
#VBW 300 kHz  
Sweep 2.133 ms (8001 pts)

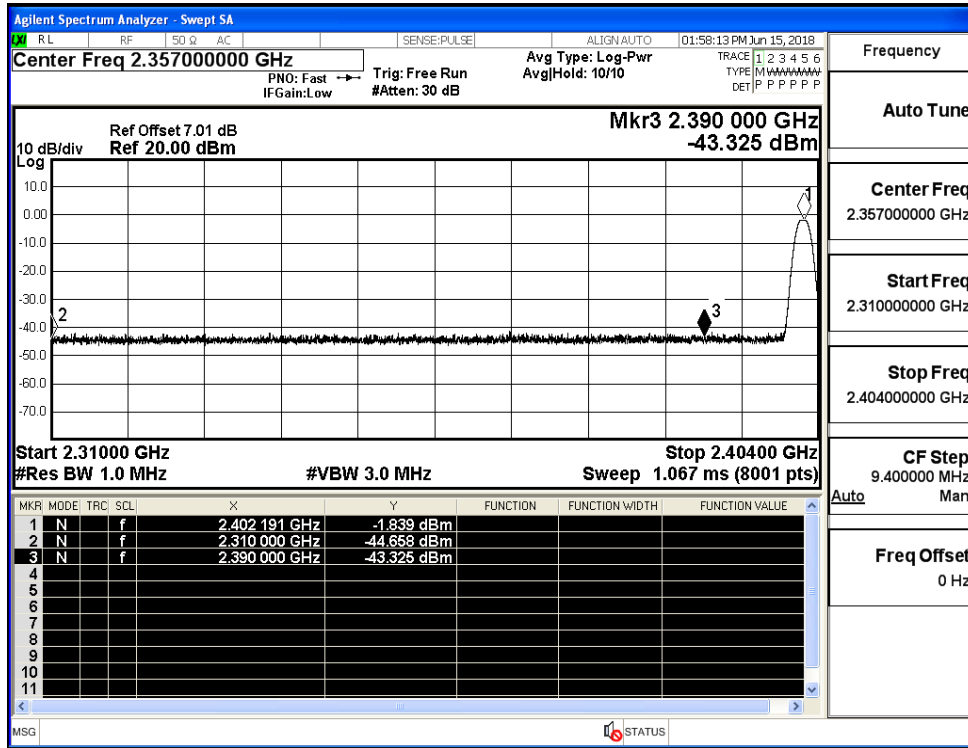
MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	f		2.480 004 75 GHz	-3.557 dBm			
2	N	f		2.483 500 00 GHz	-53.818 dBm			
3	N	f		2.500 000 00 GHz	-51.185 dBm			
4	N	f		2.494 986 75 GHz	-50.752 dBm			
5								
6								
7								
8								
9								
10								
11								

Frequency: 2.489000000 GHz  
Auto Tune  
Start Freq: 2.478000000 GHz  
Stop Freq: 2.500000000 GHz  
CF Step: 2.200000 MHz  
Freq Offset: 0 Hz

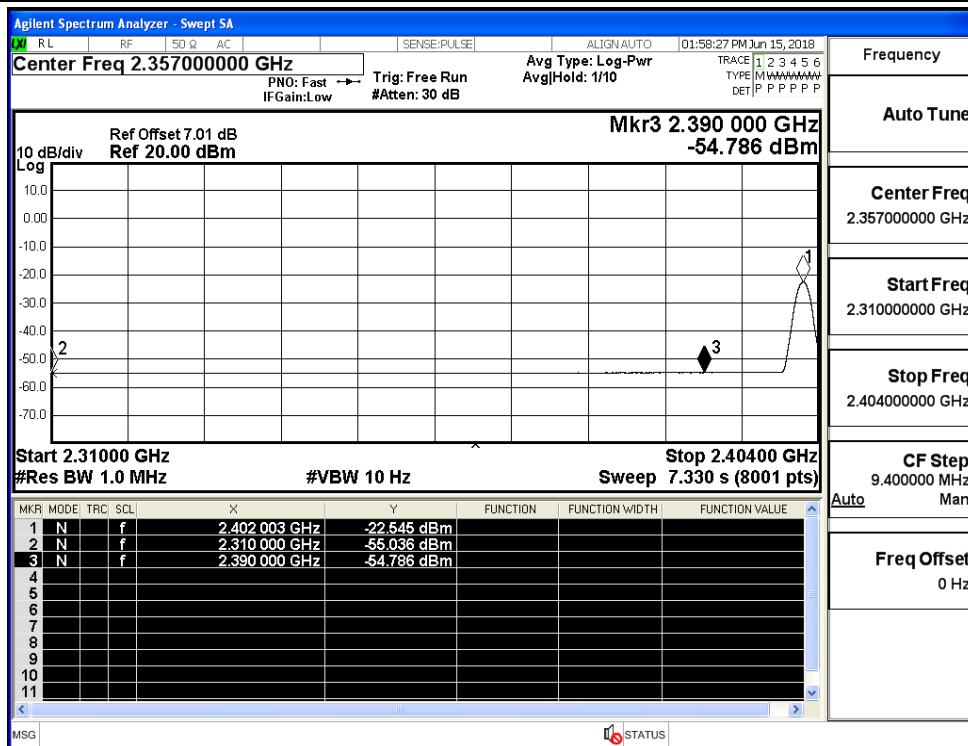
### A.7 Restrict-band band-edge measurements

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	-44.658	4.0	0	54.570	PEAK	74	PASS
		Ant1	2310.0	-55.036	4.0	0	44.192	AV	54	PASS
		Ant1	2390.0	-43.325	4.0	0	55.903	PEAK	74	PASS
		Ant1	2390.0	-54.786	4.0	0	44.442	AV	54	PASS
	2480	Ant1	2483.5	-43.960	4.0	0	55.268	PEAK	74	PASS
		Ant1	2483.5	-54.561	4.0	0	44.667	AV	54	PASS
		Ant1	2500.0	-43.366	4.0	0	55.862	PEAK	74	PASS
		Ant1	2500.0	-54.426	4.0	0	44.802	AV	54	PASS

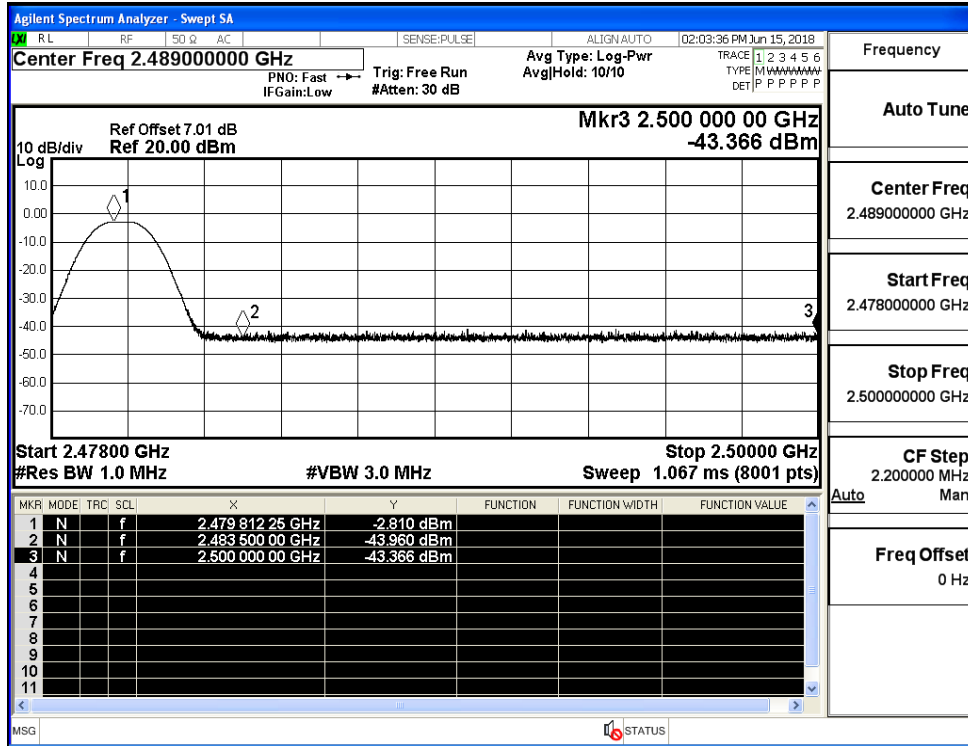
Restrict-band band-edge measurements\_BT LE\_2402\_Ant1\_PEAK



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

