

## Appendix A

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

Product Name: Motion Sensor

Trade Mark: RING

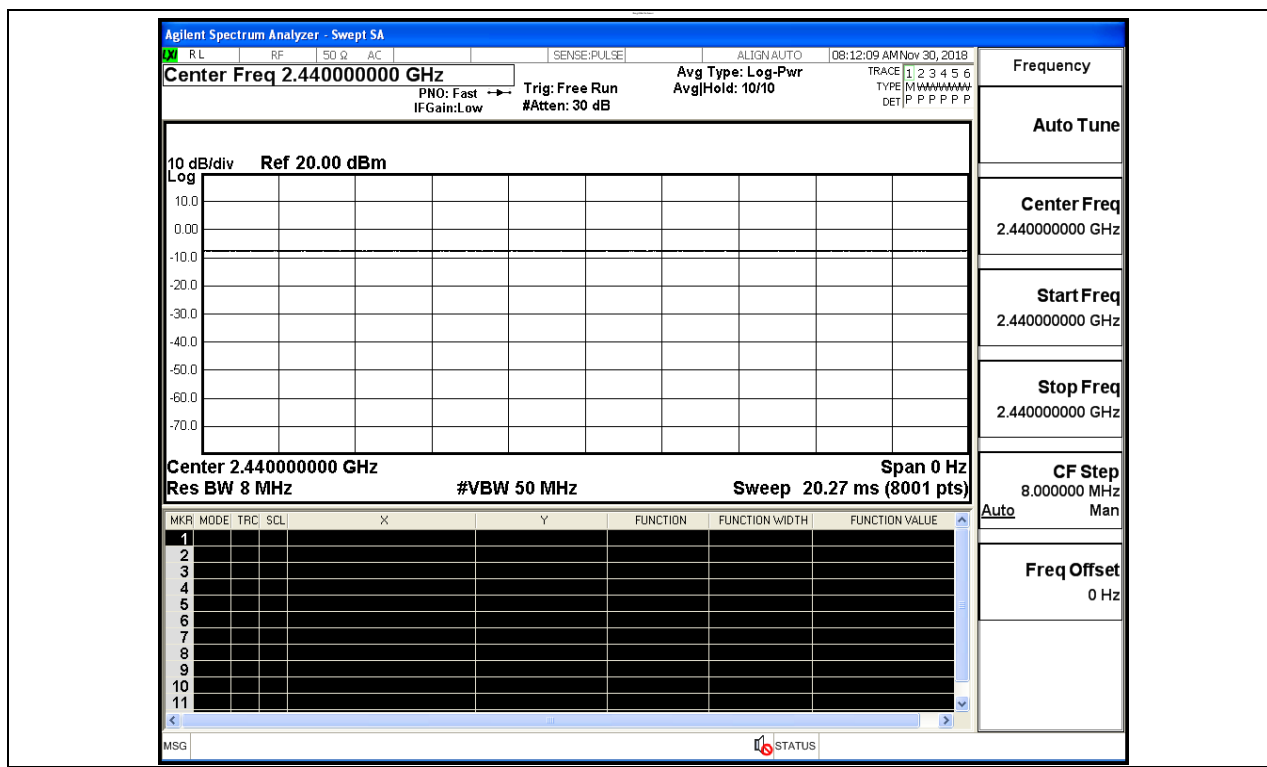
Test Model: 5SM1S8

#### Environmental Conditions

Temperature:	24.5 ° C
Relative Humidity:	53.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Diamond.Lu
Supervised by:	Jayden.Zhuo

#### A.1 Duty Cycle

Test Mode	Data Rate	Test Channel	Ant	Duty Cycle[%]	Verdict
BT LE	1M	2440	Ant1	100	PASS

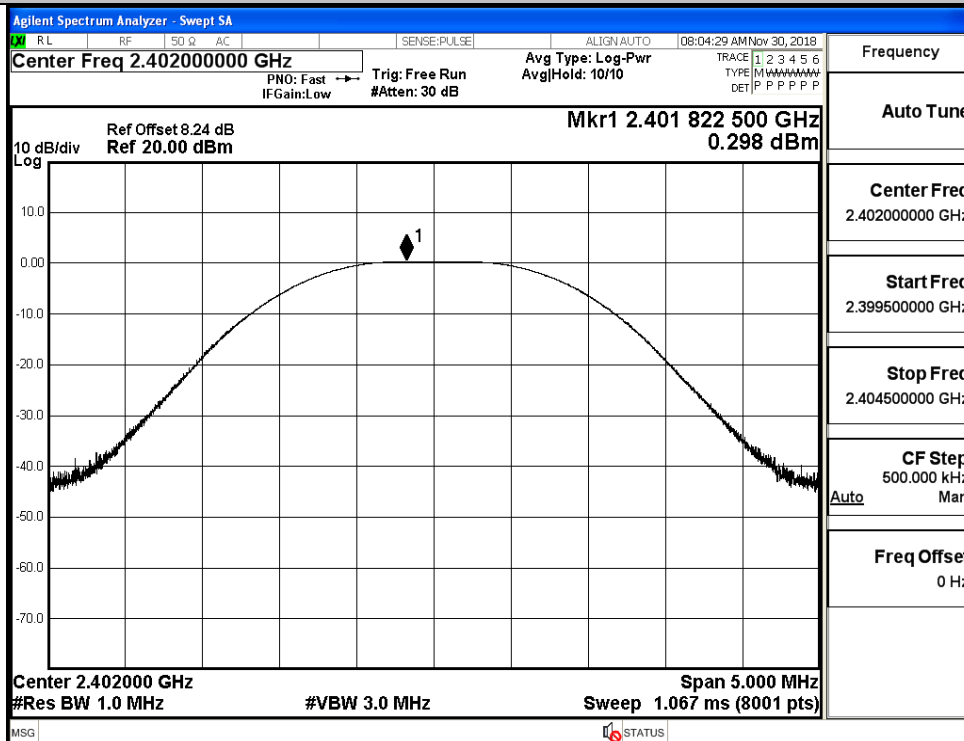


## A.2 Maximum Conducted Peak Output Power

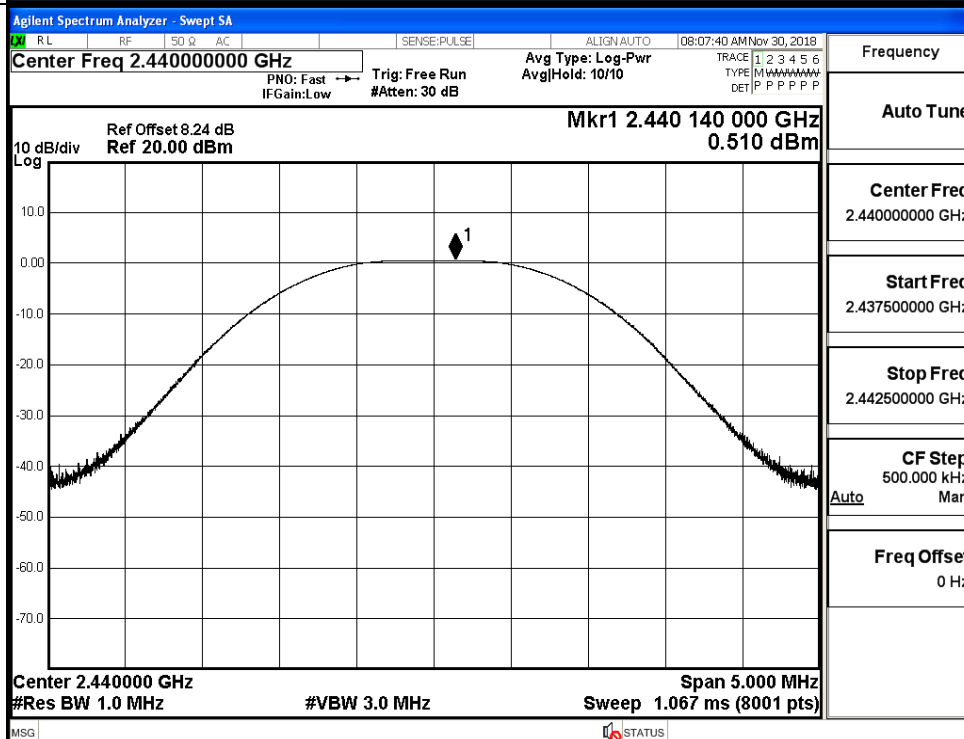
Mode	Data Rate	Channel	Conduct Peak Power[dBm]	Limit [dBm]	Verdict
BT LE	1M	LCH	0.298	30	PASS
BT LE	1M	MCH	0.510	30	PASS
BT LE	1M	HCH	-0.502	30	PASS

Test Graphs

LCH



MCH



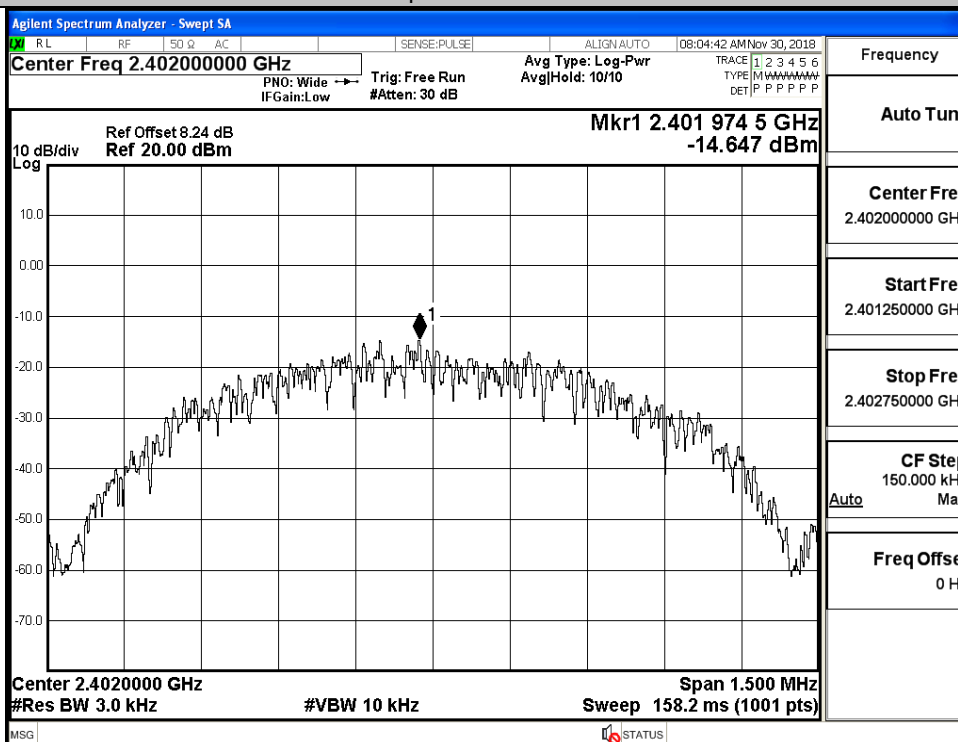


### A.3 Maximum Power Spectral Density

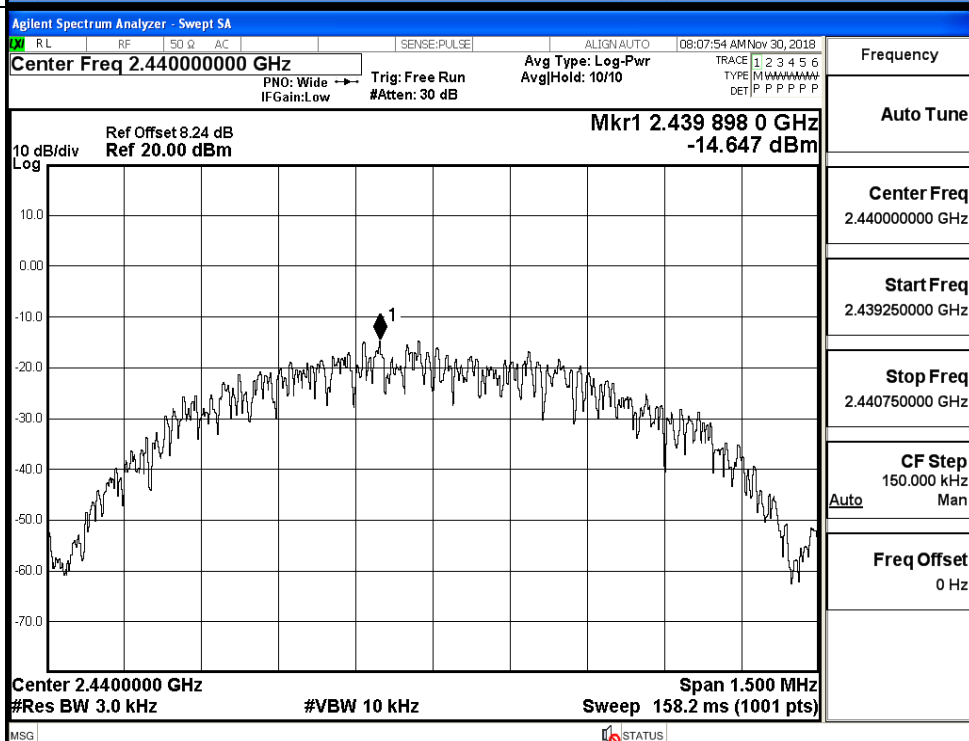
Mode	Data Rate	Channel	PSD [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
BT LE	1M	LCH	-14.647	8	PASS
BT LE	1M	MCH	-14.647	8	PASS
BT LE	1M	HCH	-15.503	8	PASS

#### Test Graphs

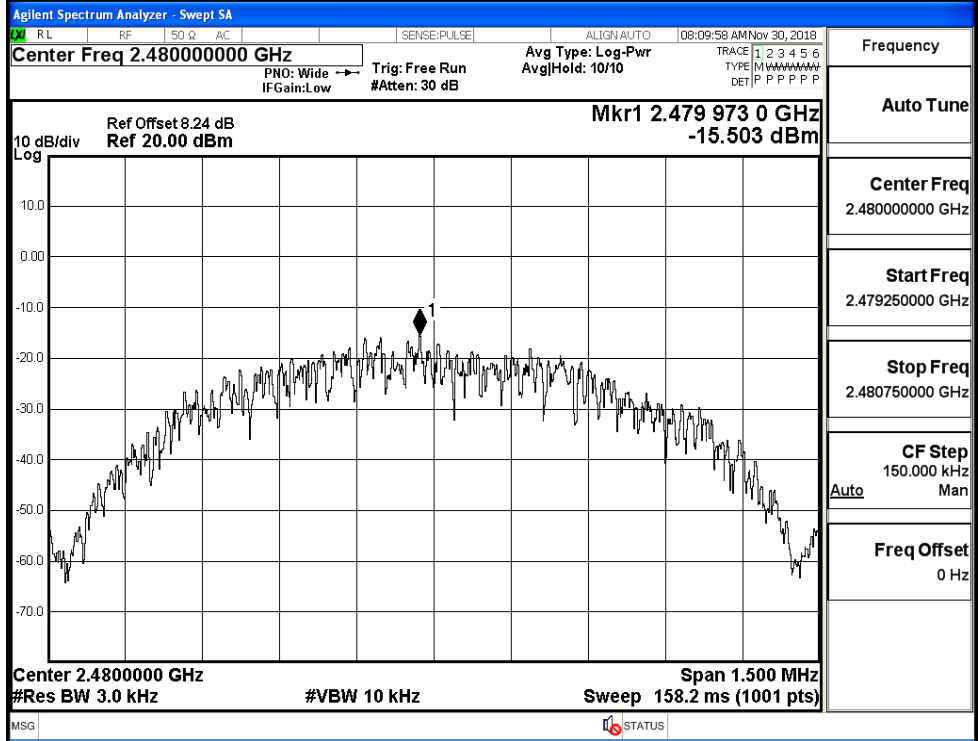
LCH



MCH



HCH

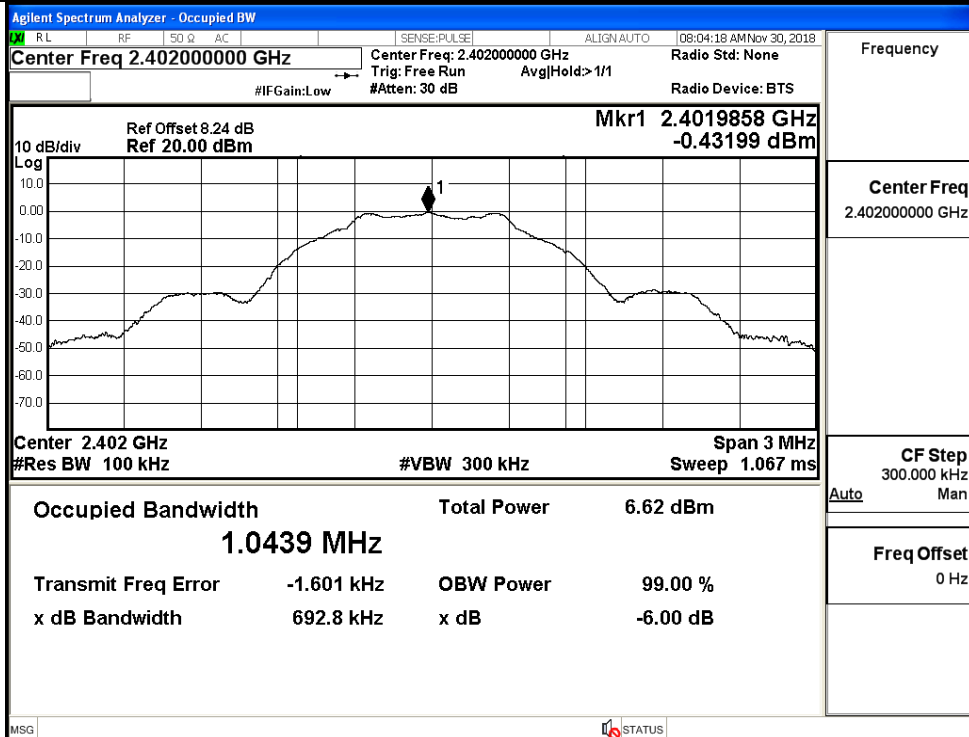


## A.4 6dB Bandwidth

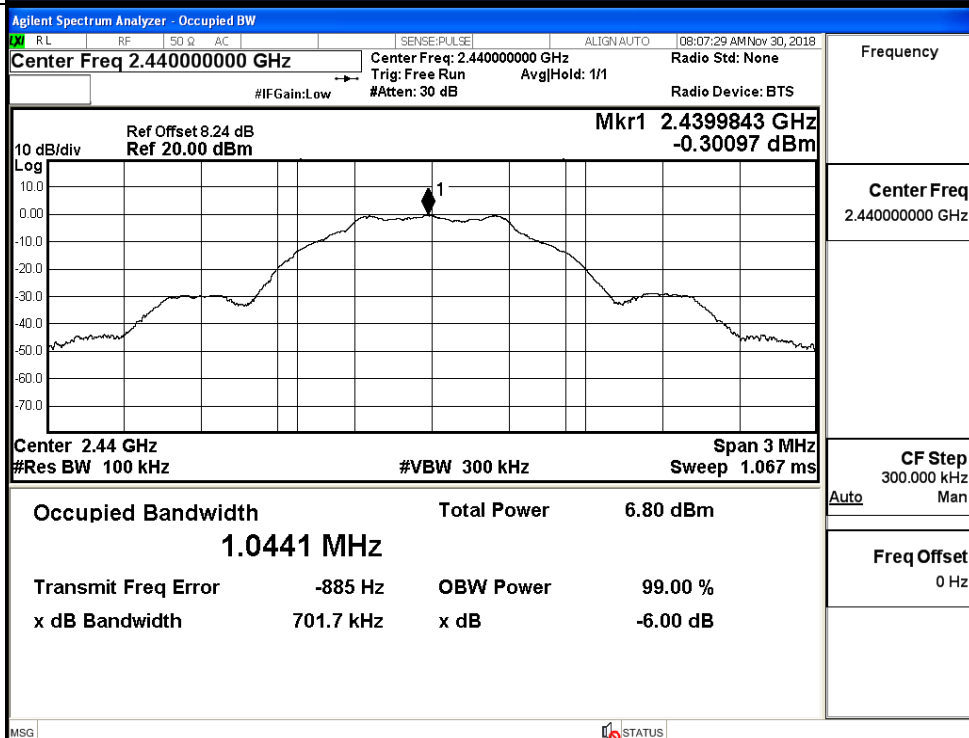
Mode	Data Rate	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
BT LE	1M	LCH	0.6928	$\geq 0.5$	PASS
BT LE	1M	MCH	0.7017	$\geq 0.5$	PASS
BT LE	1M	HCH	0.6937	$\geq 0.5$	PASS

## Test Graphs

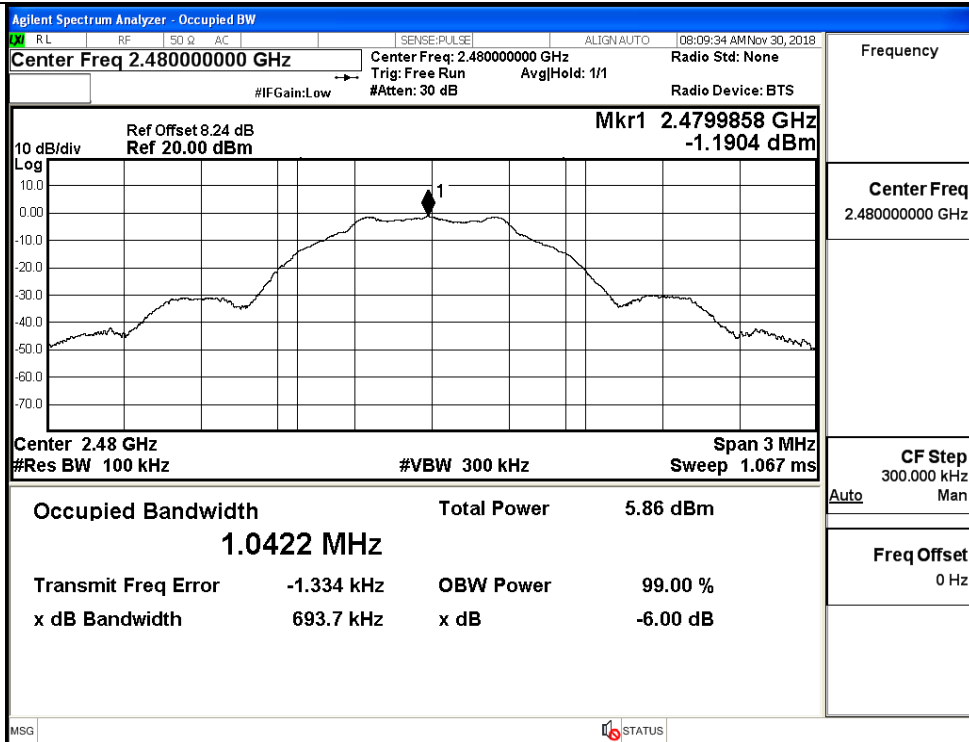
LCH



MCH



HCH

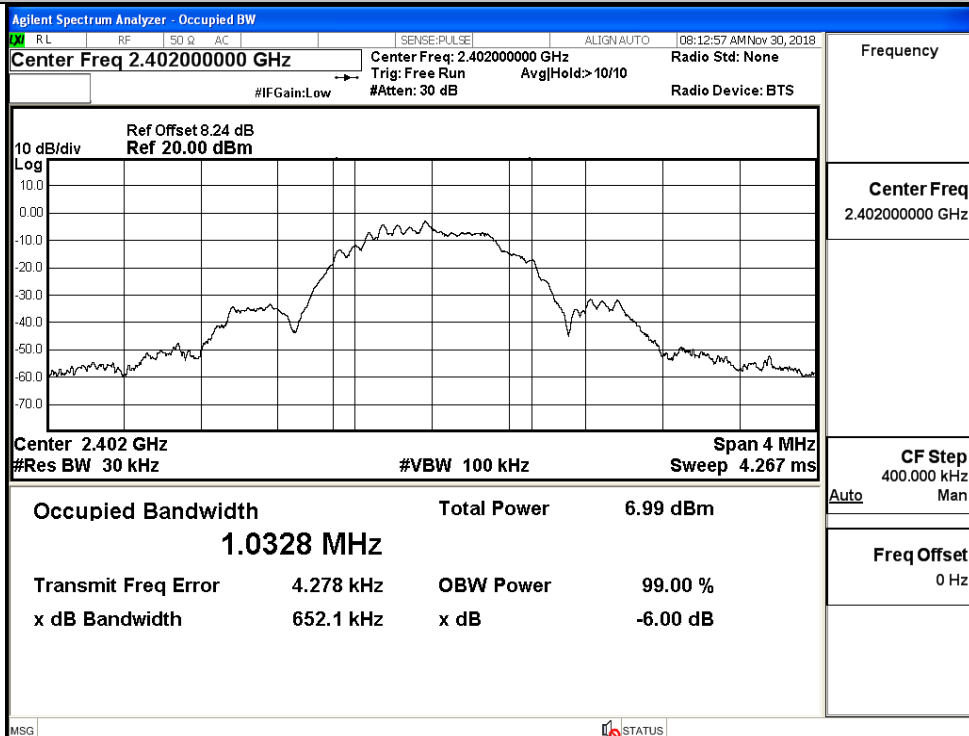


## A.5 Occupied Bandwidth

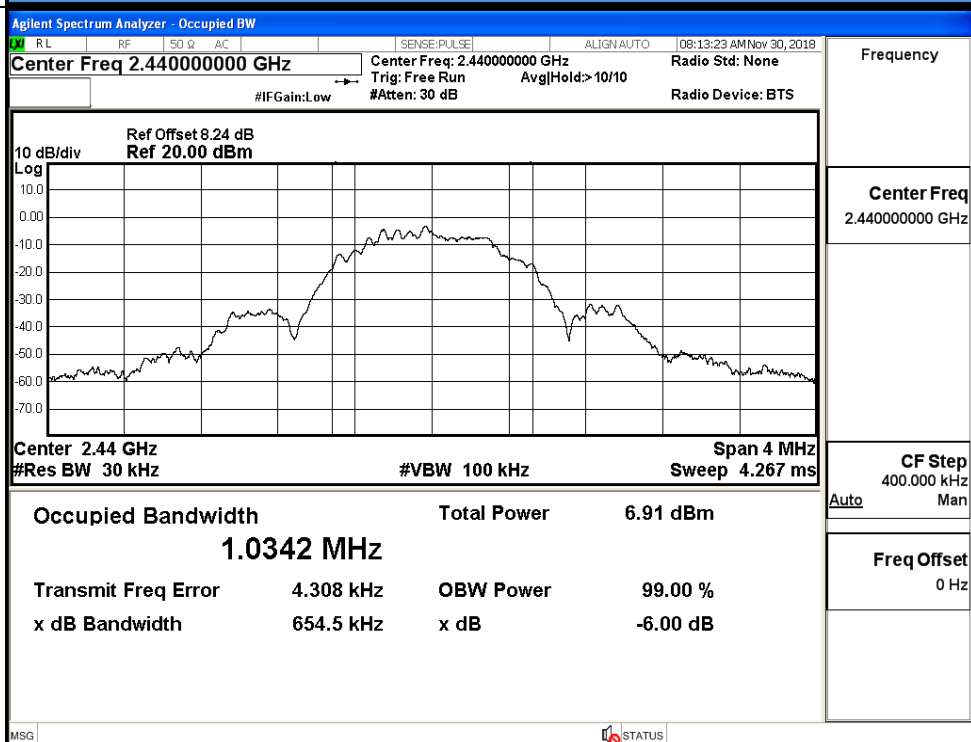
Mode	Data Rate	Channel	Occupied Bandwidth [MHz]	Limit [MHz]	Verdict
BT LE	1M	LCH	1.0328	No Limit	PASS
BT LE	1M	MCH	1.0342	No Limit	PASS
BT LE	1M	HCH	1.0342	No Limit	PASS

## Test Graphs

LCH

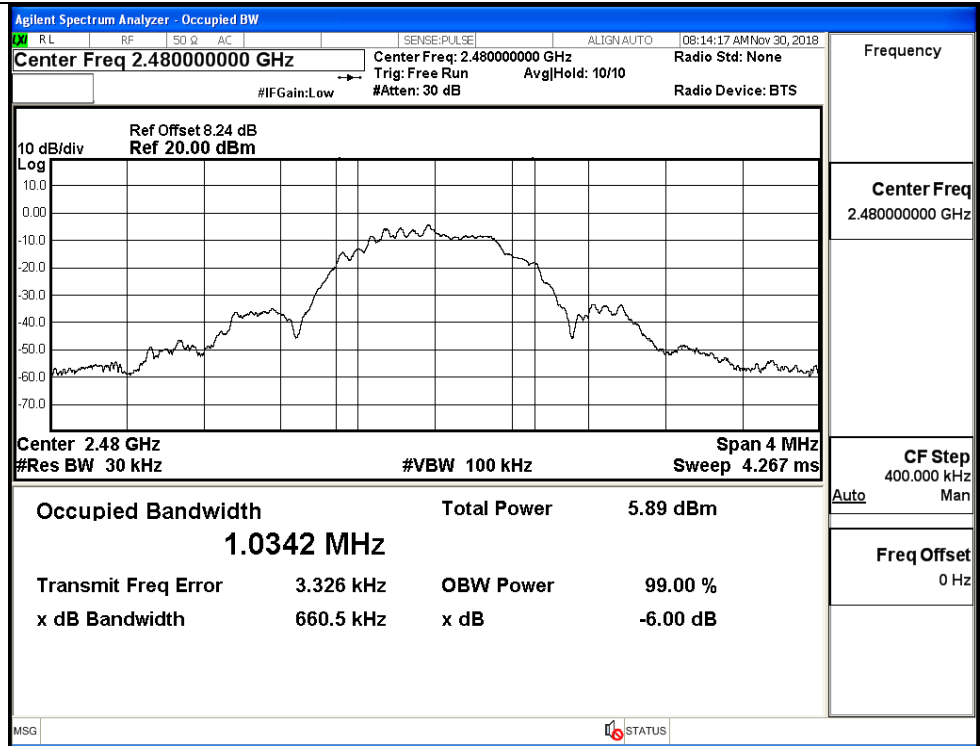


MCH



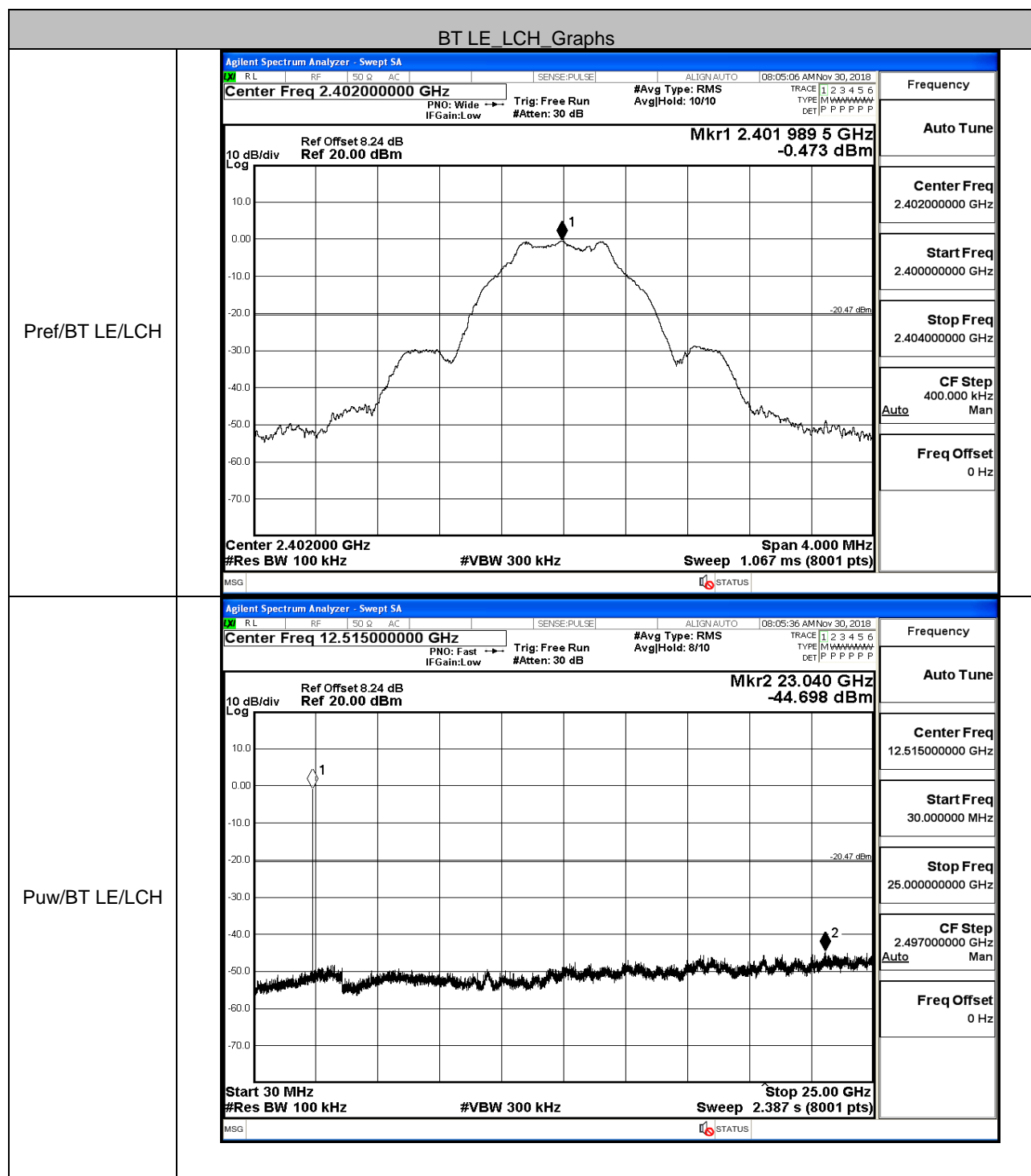


HCH



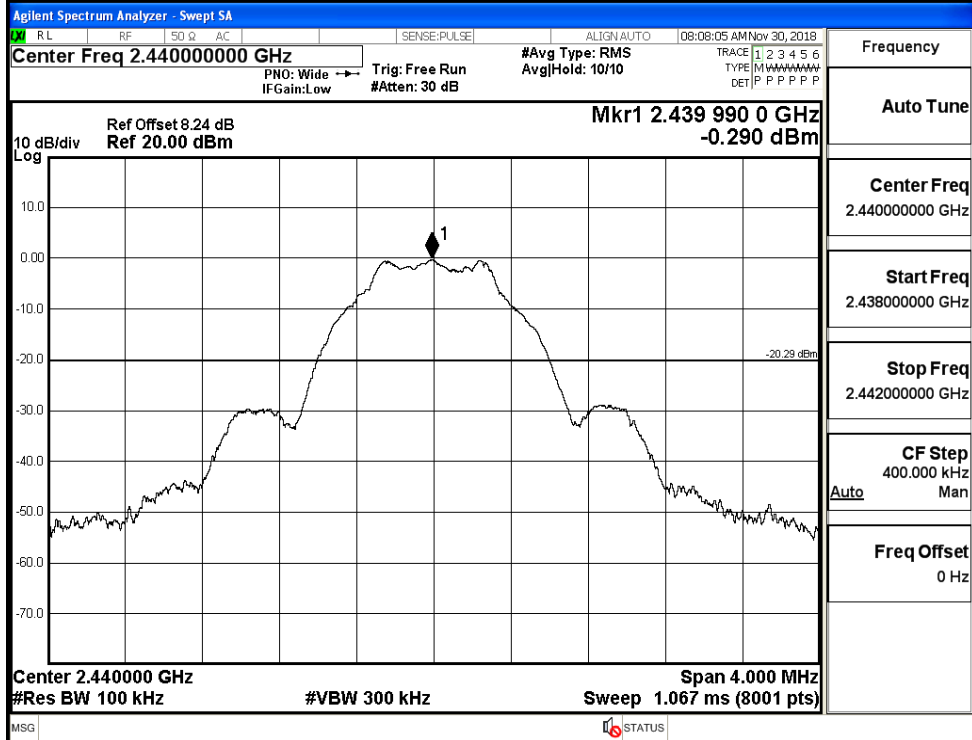
## A.6 RF Conducted Spurious Emissions

Mode	Data Rate	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
BT LE	1M	LCH	-0.473	-44.698	-20.473	PASS
BT LE	1M	MCH	-0.290	-44.348	-20.290	PASS
BT LE	1M	HCH	-1.600	-43.558	-21.600	PASS

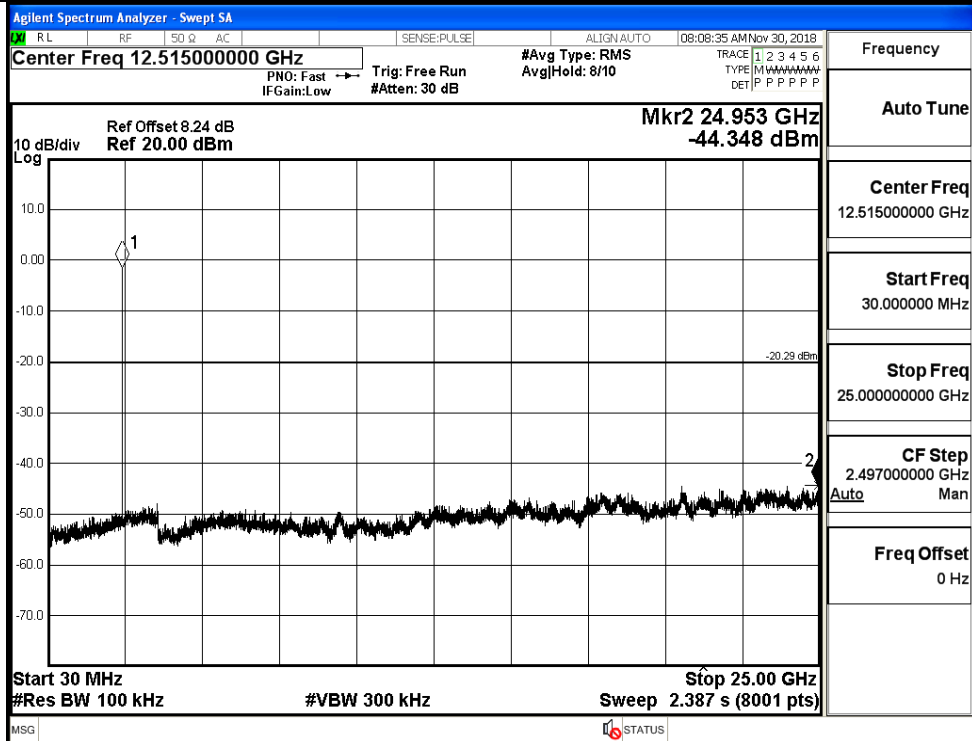


## BT LE\_MCH\_Graphs

Pref/BT LE/MCH

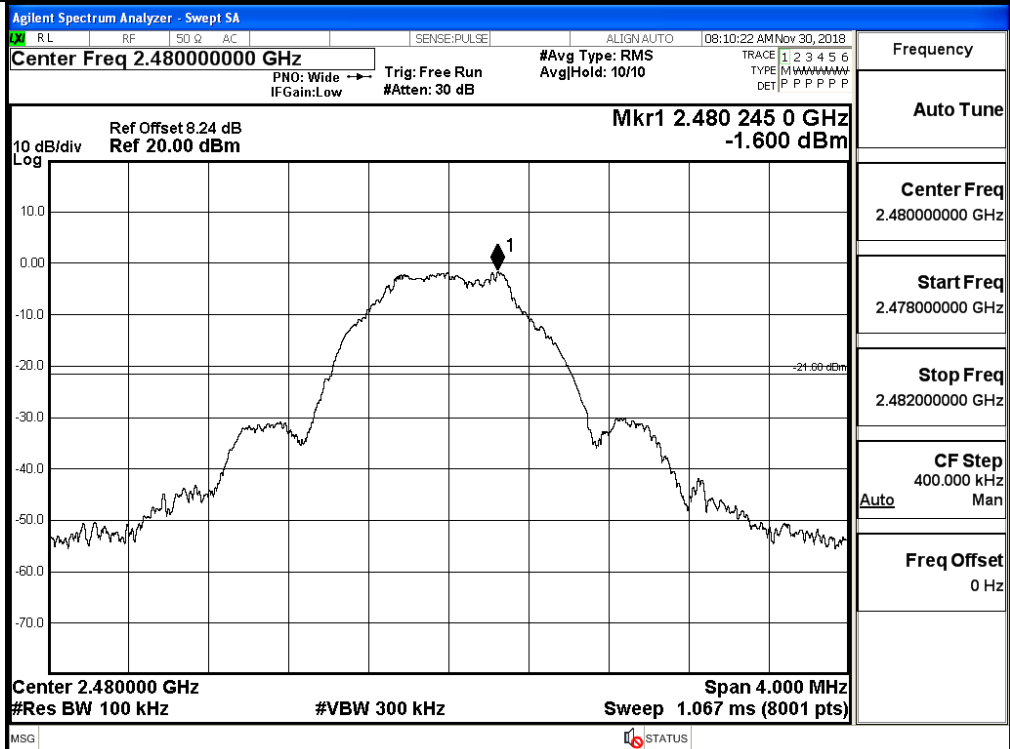


Puw/BT LE/MCH

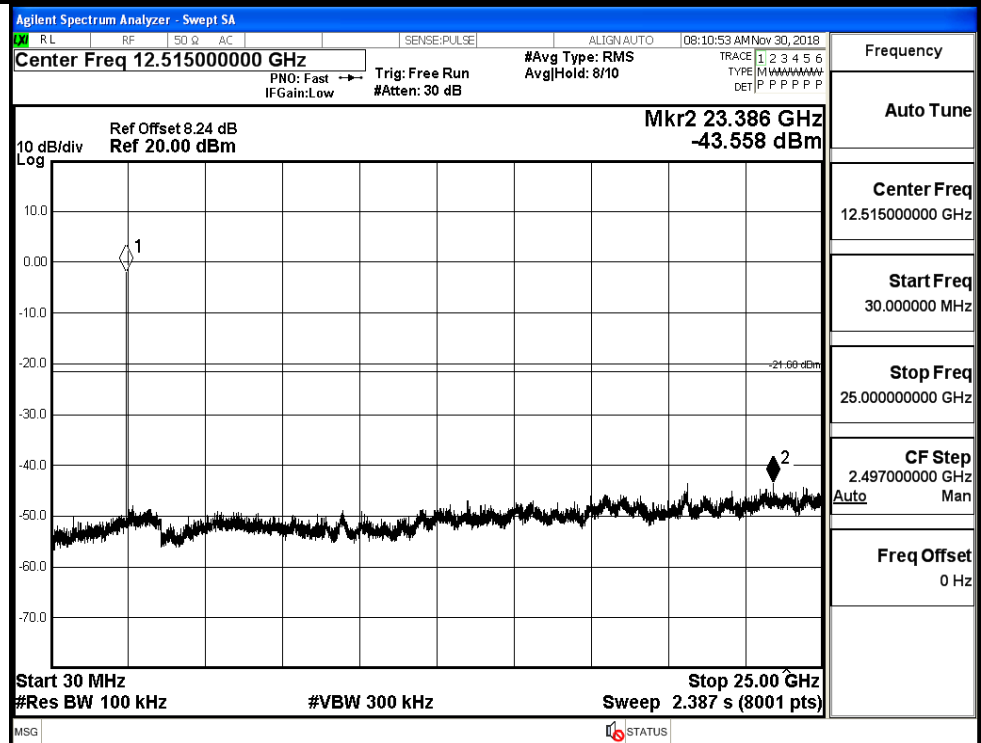


## BT LE\_HCH\_Graphs

Pref/BT LE/HCH



Puw/BT LE/HCH

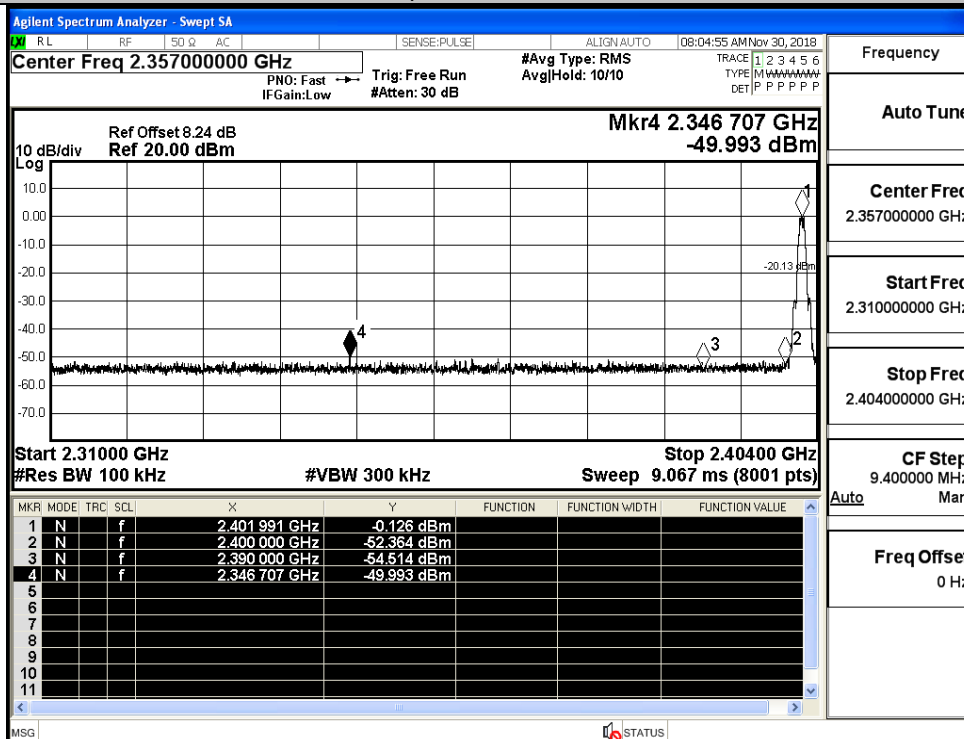


## A.7 Band-edge for RF Conducted Emissions

Mode	Data Rate	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
BT LE	1M	LCH	-0.126	-49.993	-20.13	PASS
BT LE	1M	HCH	-1.269	-48.875	-21.27	PASS

Test Graphs

LCH



Frequency

Auto Tune

Center Freq

2.357000000 GHz

Start Freq

2.310000000 GHz

Stop Freq

2.404000000 GHz

CF Step

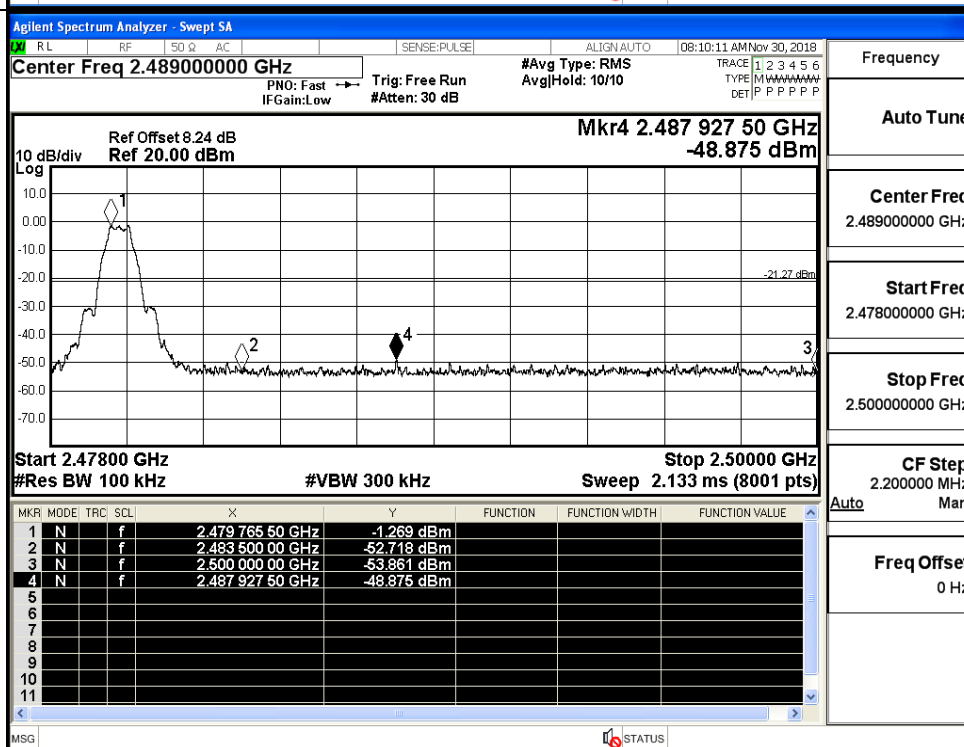
9.400000 MHz

Auto Man

Freq Offset

0 Hz

HCH



Frequency

Auto Tune

Center Freq

2.489000000 GHz

Start Freq

2.478000000 GHz

Stop Freq

2.500000000 GHz

CF Step

2.200000 MHz

Auto Man

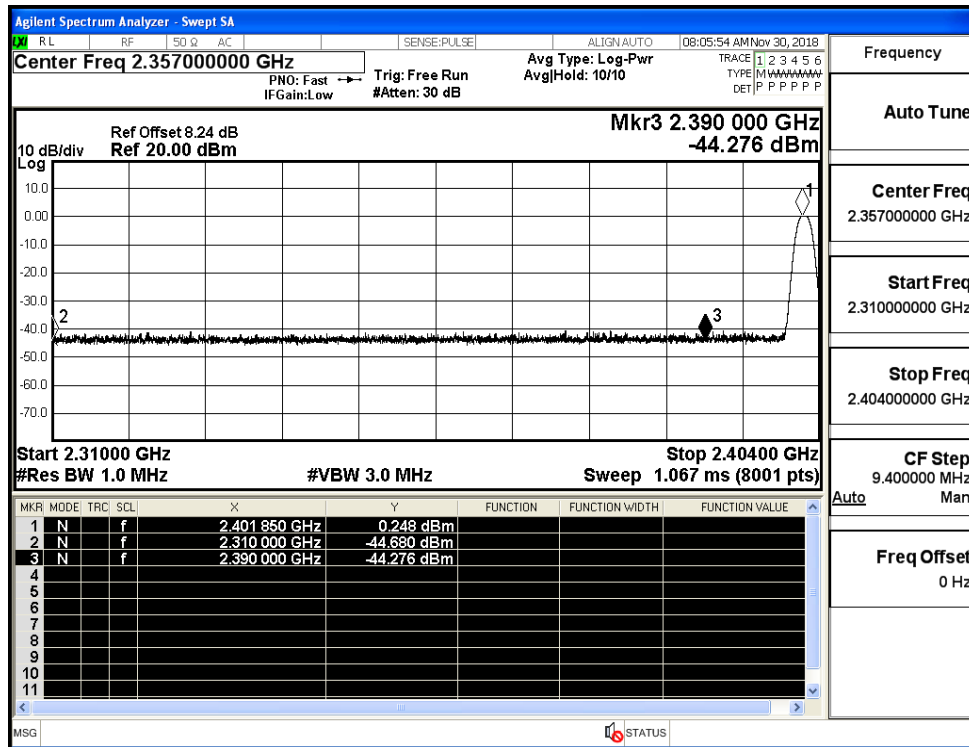
Freq Offset

0 Hz

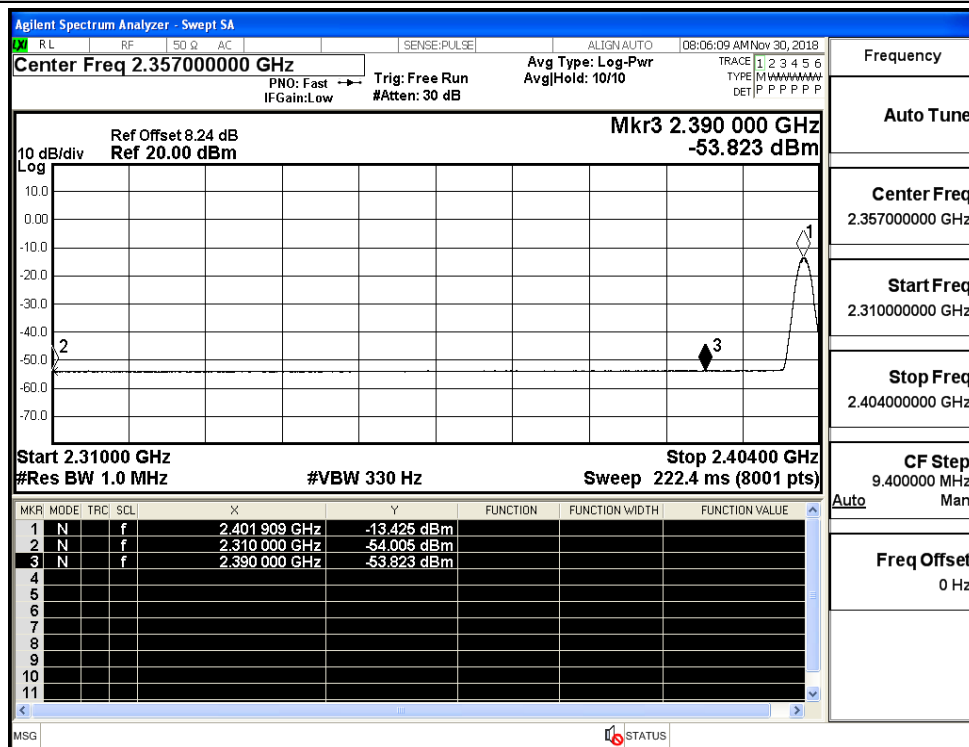
## A.8 Restrict-band band-edge measurements

Test Mode	Data Rate	Test Channel	Ant	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
BT LE	1M	2402	Ant1	2310.0	-44.68	2.0	0	50.58	PEAK	74	PASS
			Ant1	2310.0	-54.01	2.0	0	41.25	AV	54	PASS
			Ant1	2390.0	-44.28	2.0	0	50.98	PEAK	74	PASS
			Ant1	2390.0	-53.82	2.0	0	41.43	AV	54	PASS
		2480	Ant1	2483.5	-43.10	2.0	0	52.16	PEAK	74	PASS
			Ant1	2483.5	-53.18	2.0	0	42.08	AV	54	PASS
			Ant1	2500.0	-43.66	2.0	0	51.60	PEAK	74	PASS
			Ant1	2500.0	-53.08	2.0	0	42.18	AV	54	PASS

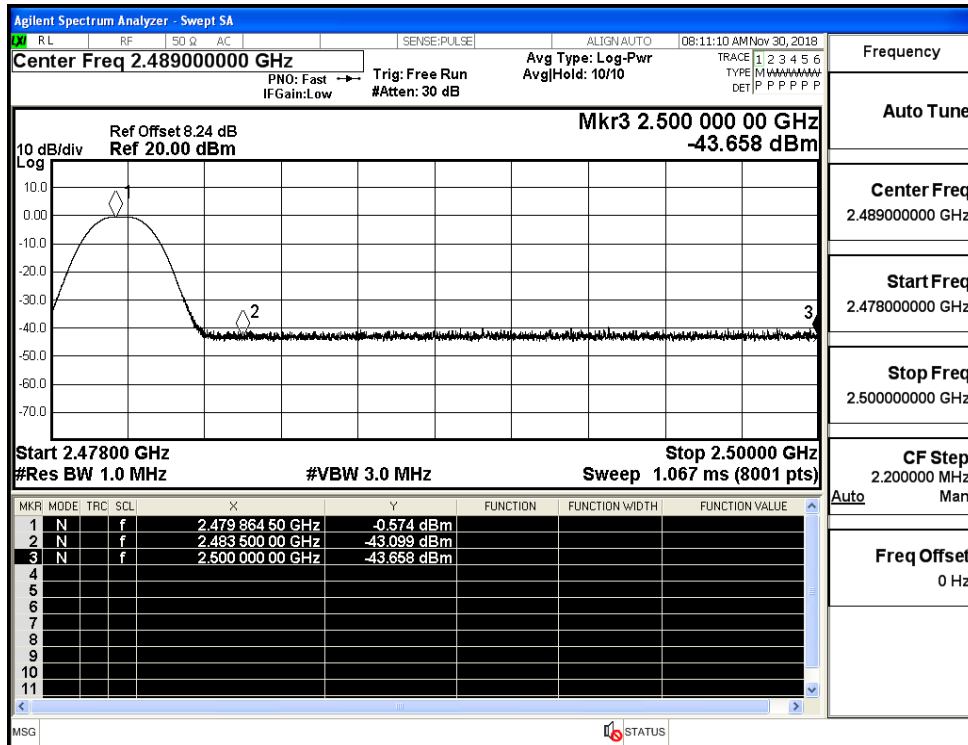
## Restrict-band band-edge measurements\_BT LE\_2402\_Ant1\_PEAK



## 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

