

Appendix B

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

Product Name: Bluetooth earphone

Trade Mark: billboard

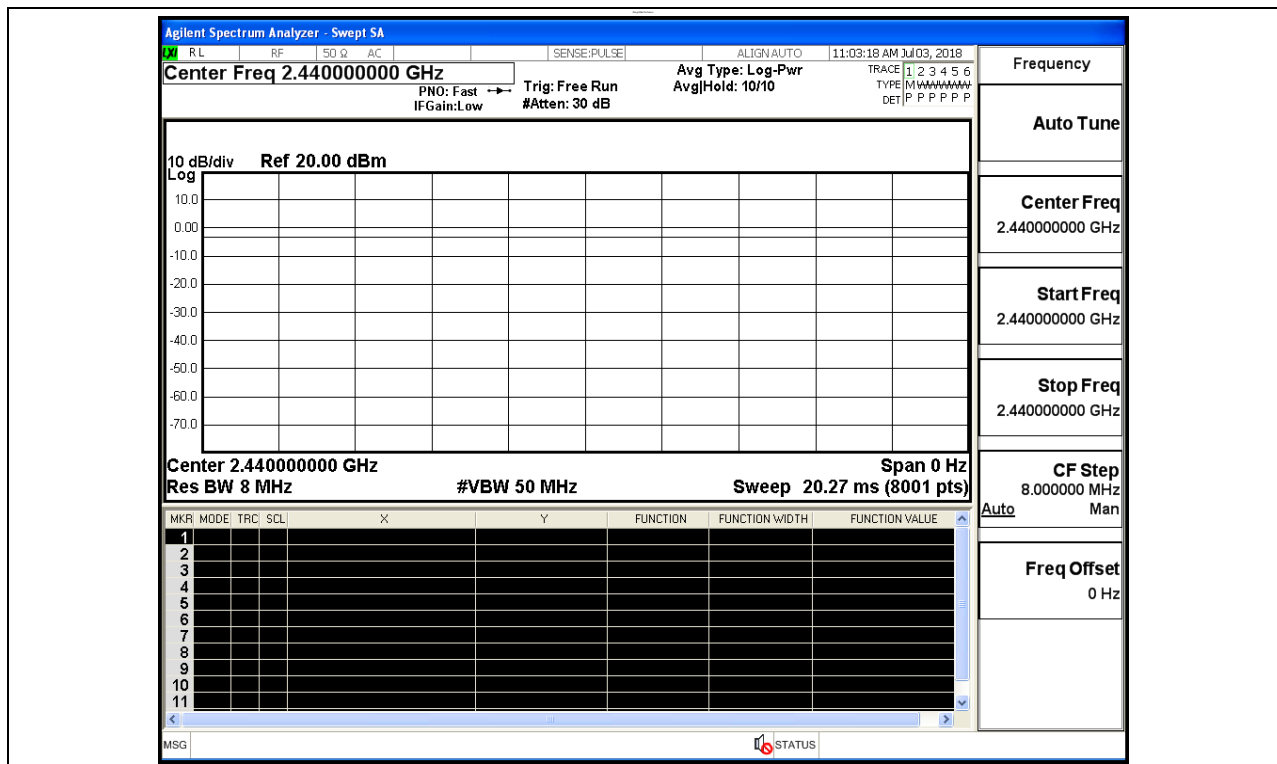
Test Model: MG508

Environmental Conditions

Temperature:	23.4 ° C
Relative Humidity:	52.6%
ATM Pressure:	100.0 kPa
Test Engineer:	Wilson.Hong
Supervised by:	Jayden.Zhuo

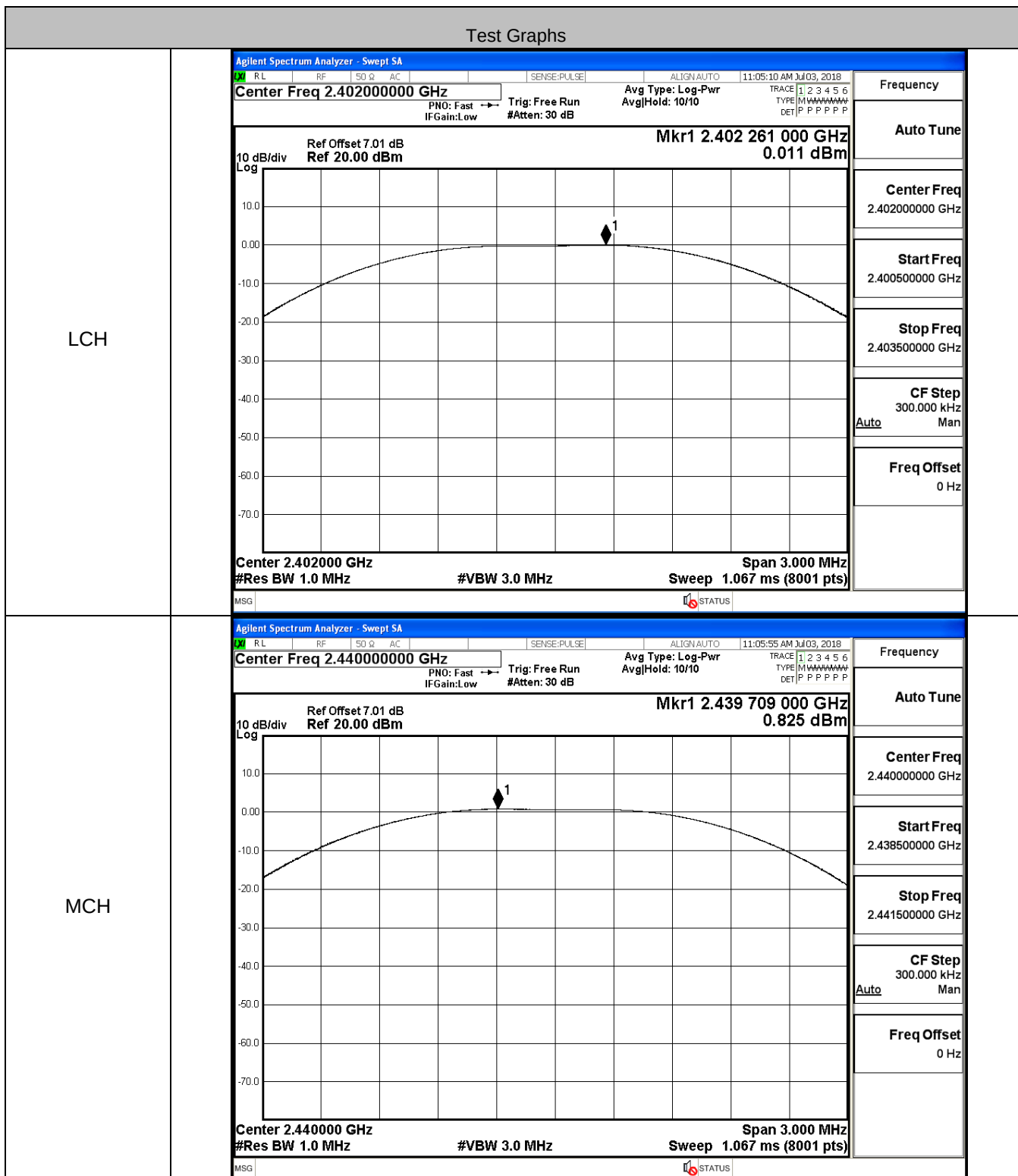
B.1 Duty Cycle

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

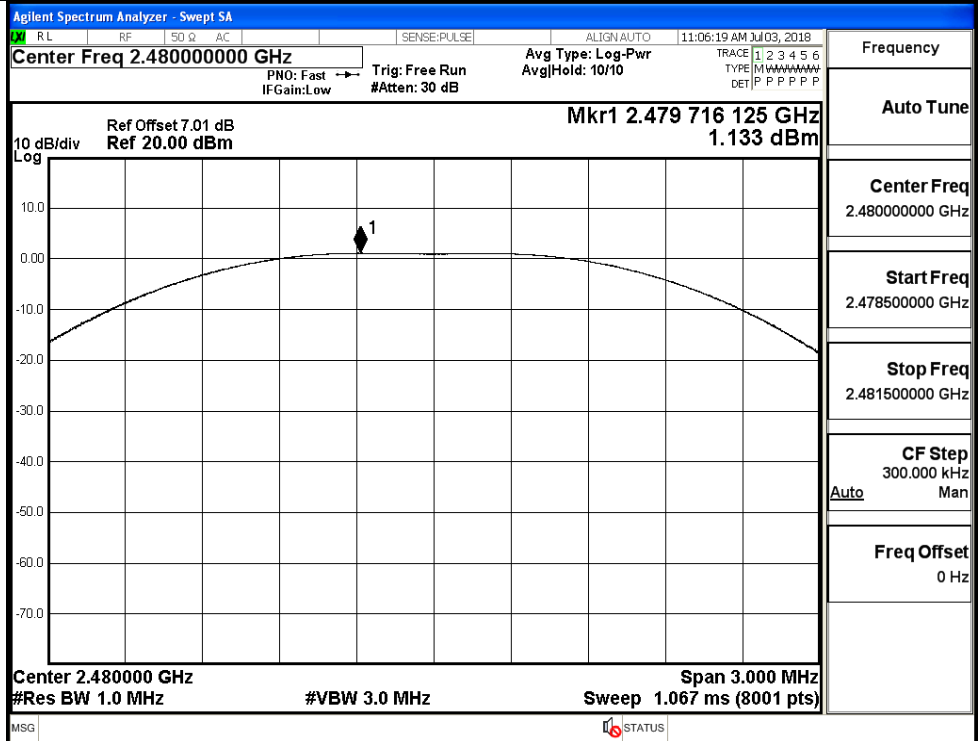


B.2 Maximum Conducted Peak Output Power

Mode	Channel	Conduct Peak Power[dBm]	Limit [dBm]	Verdict
BT LE	LCH	0.011	30	PASS
BT LE	MCH	0.825	30	PASS
BT LE	HCH	1.133	30	PASS



HCH

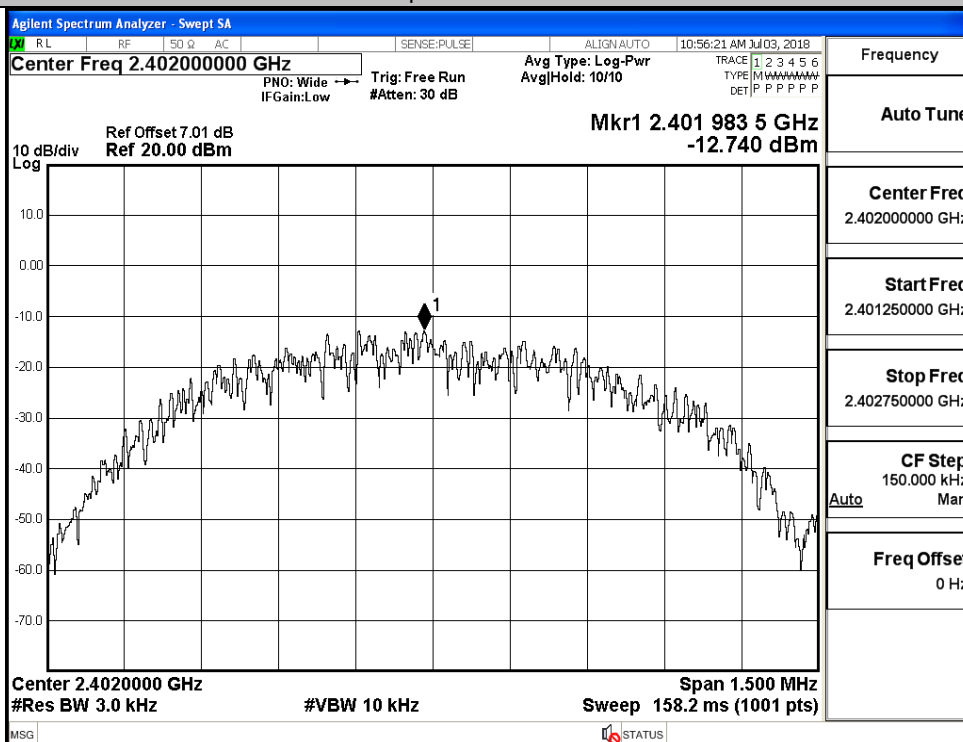


B.3 Maximum Power Spectral Density

Mode	Channel	PSD [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
BT LE	LCH	-12.740	8	PASS
BT LE	MCH	-11.700	8	PASS
BT LE	HCH	-11.500	8	PASS

Test Graphs

LCH



Frequency

Auto Tune

Center Freq

2.402000000 GHz

Start Freq

2.401250000 GHz

Stop Freq

2.402750000 GHz

CF Step

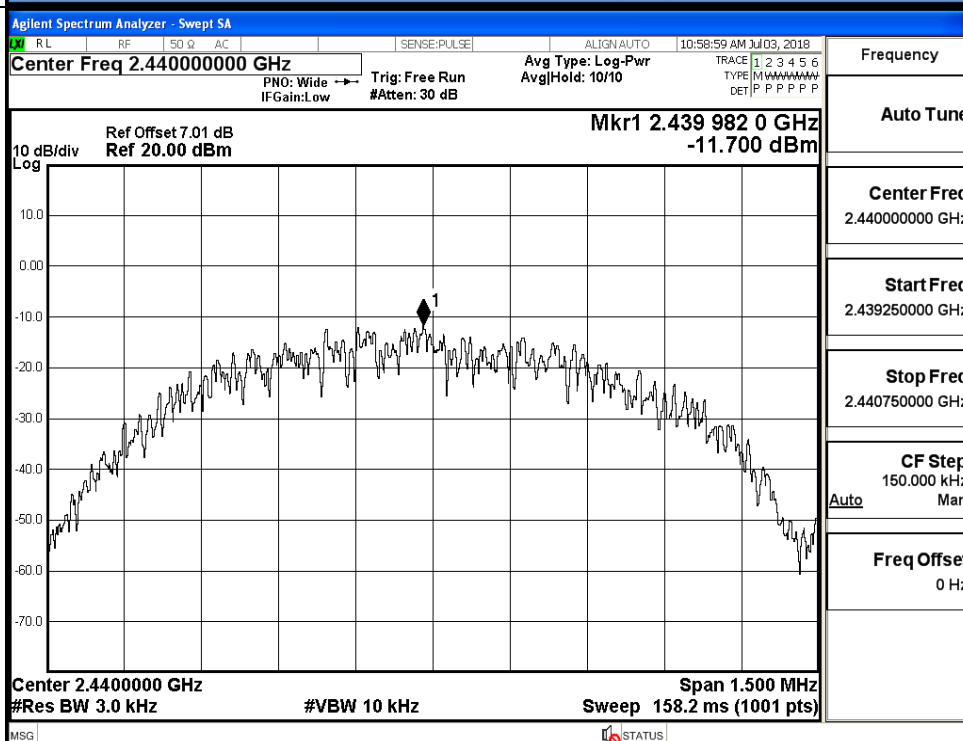
150.000 kHz

Auto

Freq Offset

0 Hz

MCH



Frequency

Auto Tune

Center Freq

2.440000000 GHz

Start Freq

2.439250000 GHz

Stop Freq

2.440750000 GHz

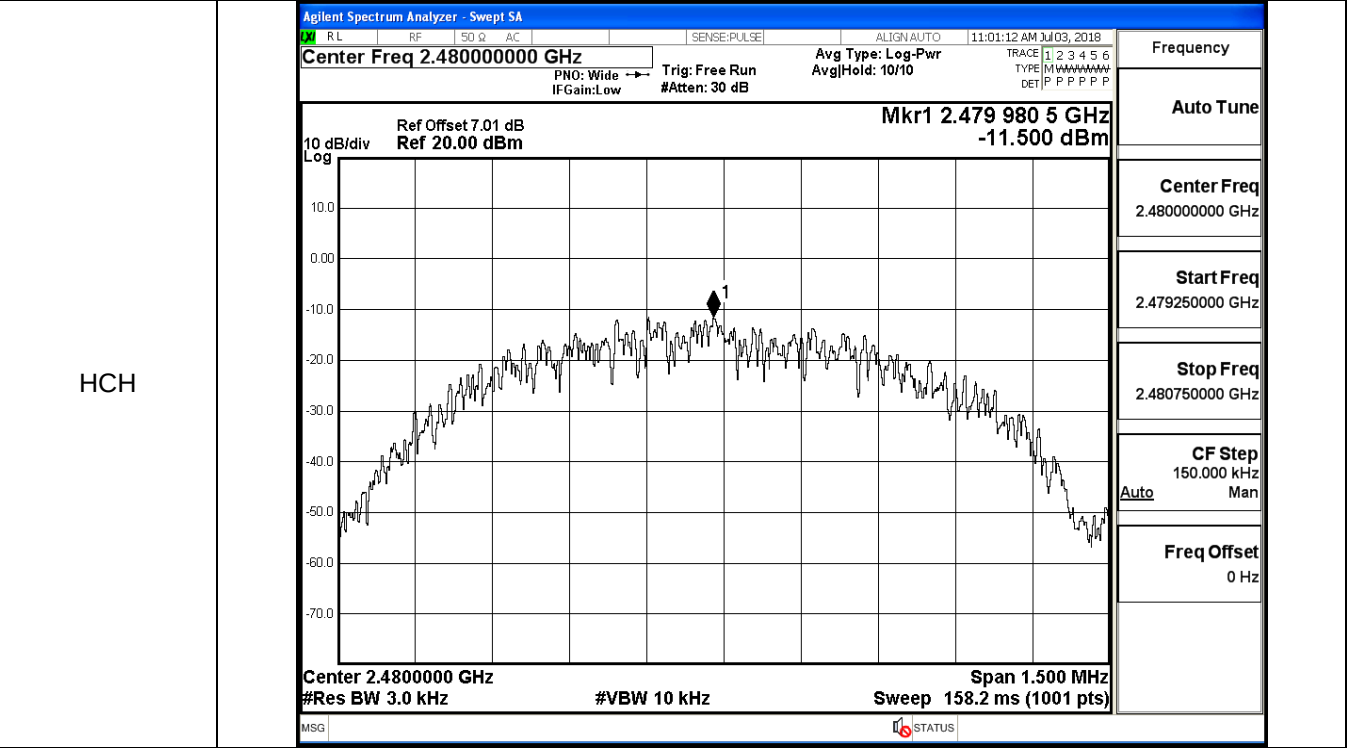
CF Step

150.000 kHz

Auto

Freq Offset

0 Hz

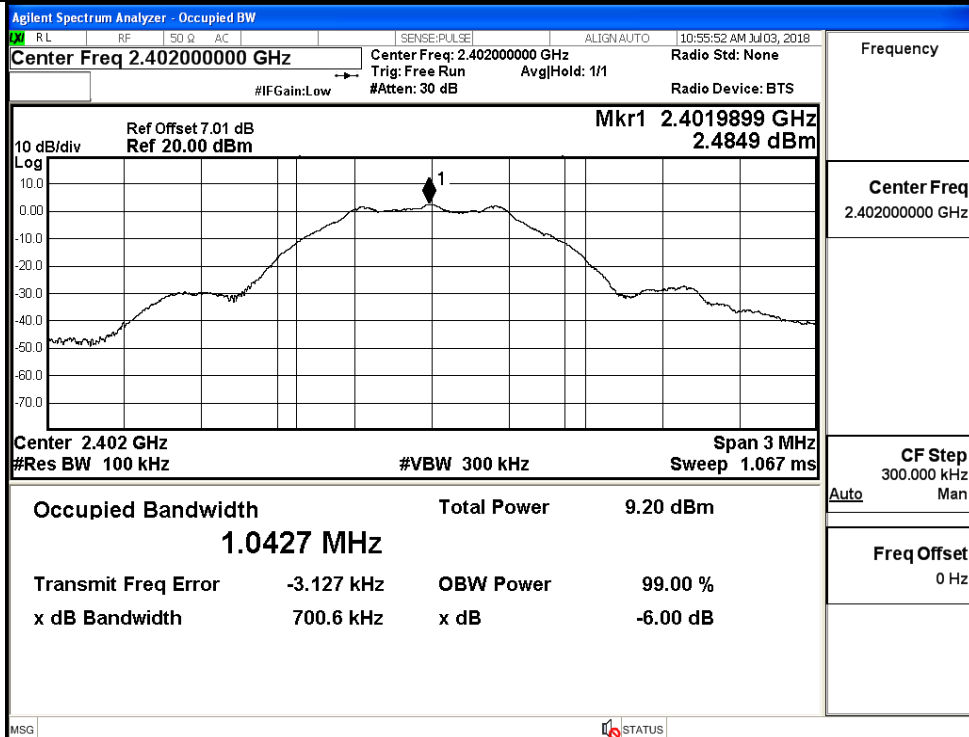


B.4 6dB Bandwidth

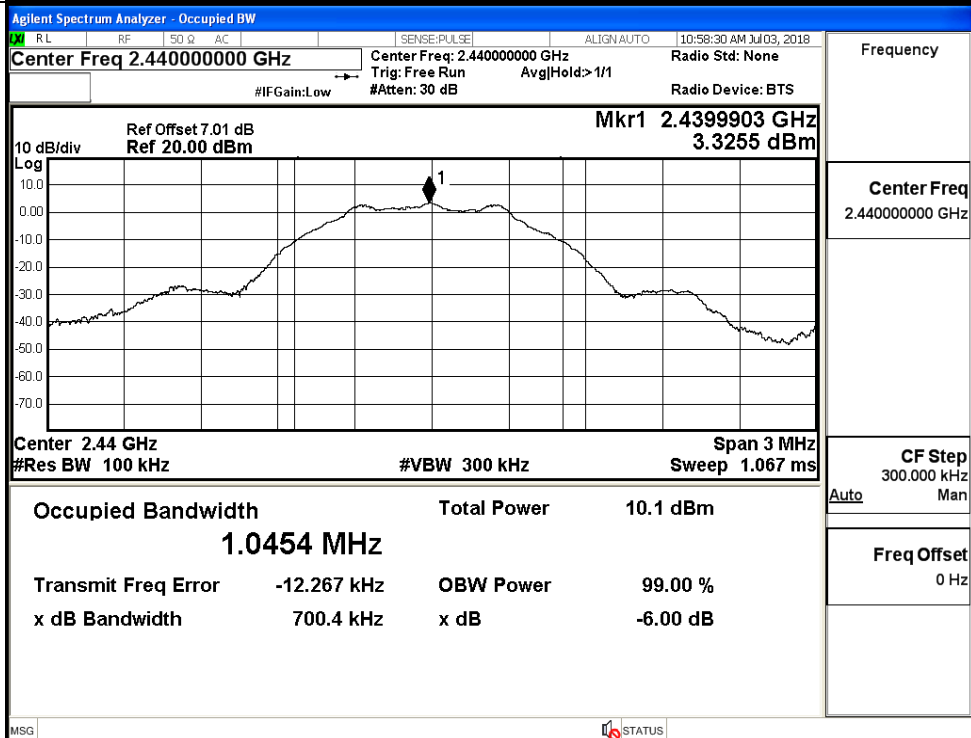
Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
BT LE	LCH	0.7006	≥ 0.5	PASS
BT LE	MCH	0.7004	≥ 0.5	PASS
BT LE	HCH	0.7004	≥ 0.5	PASS

Test Graphs

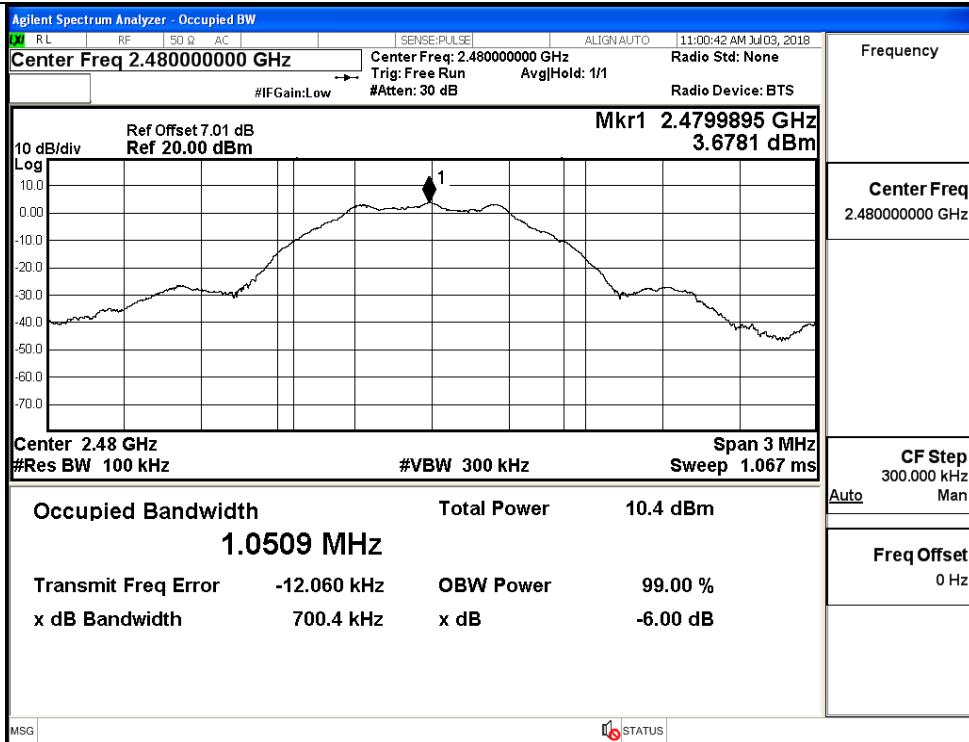
LCH



MCH



HCH

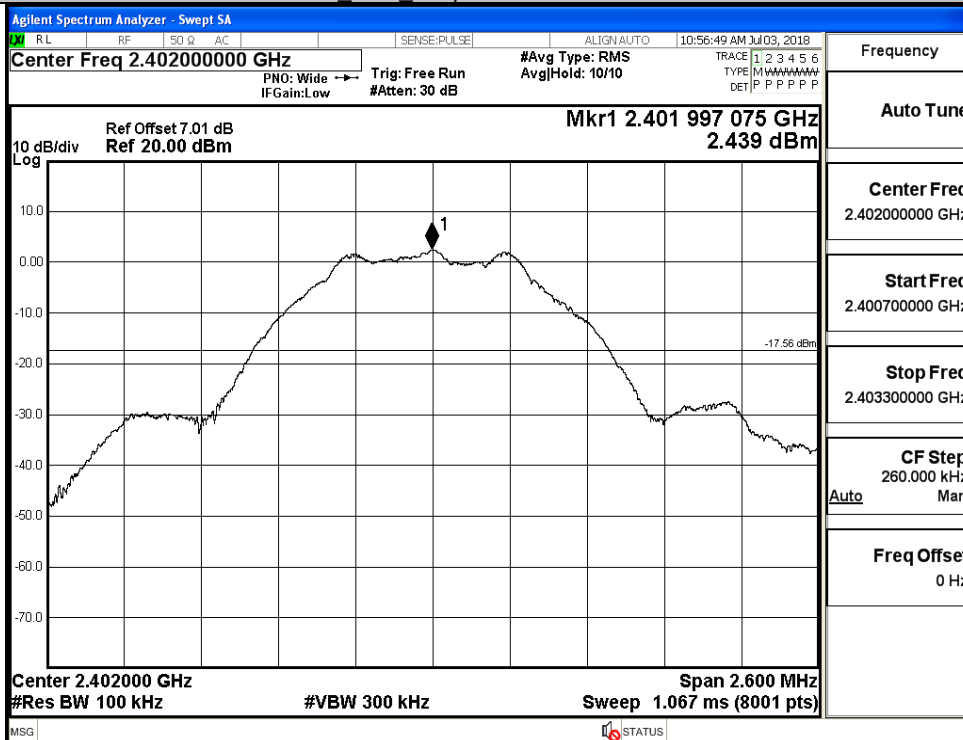


B.5 RF Conducted Spurious Emissions

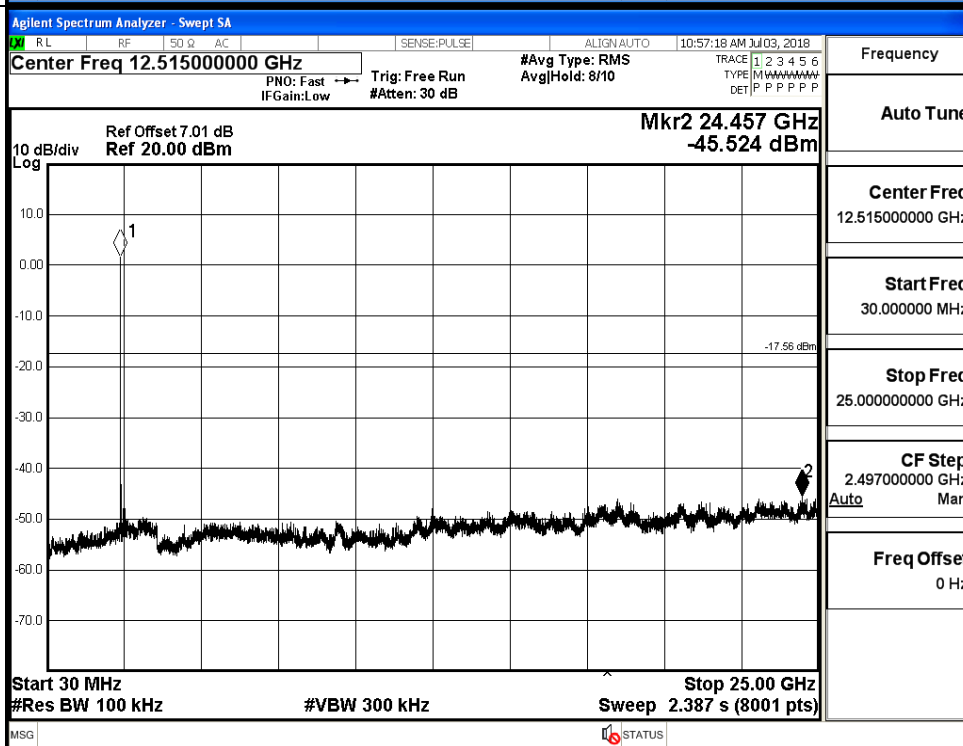
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	2.439	-45.524	-17.561	PASS
BT LE	MCH	3.31	-44.875	-16.690	PASS
BT LE	HCH	3.642	-45.168	-16.358	PASS

BT LE LCH Graphs

Pref/BT LE/LCH

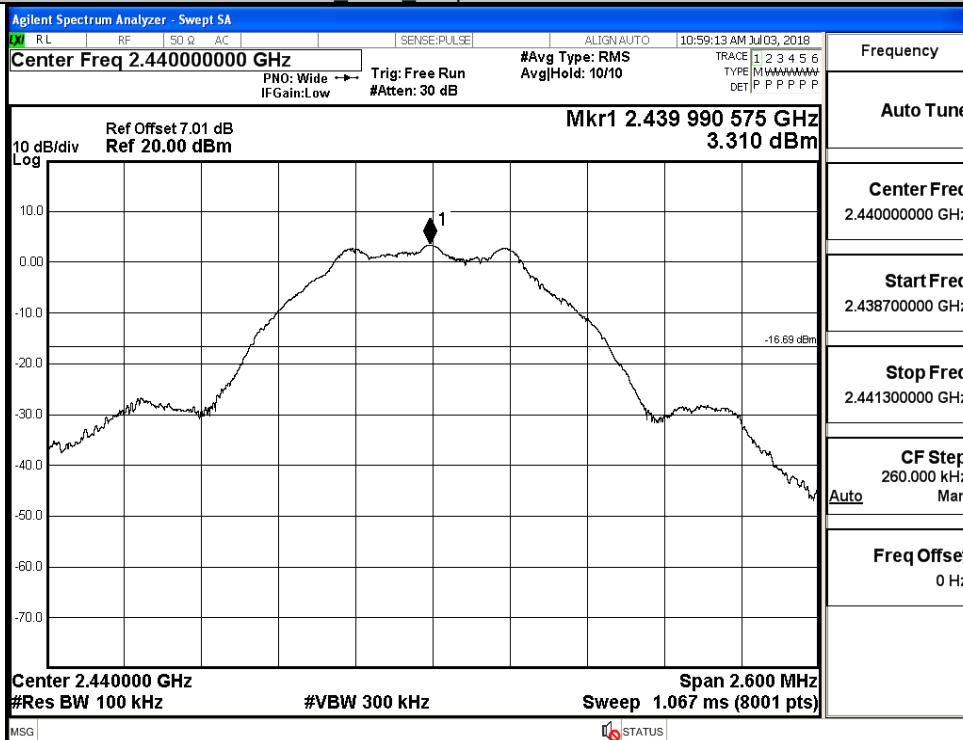


Puw/BT LE/LCH

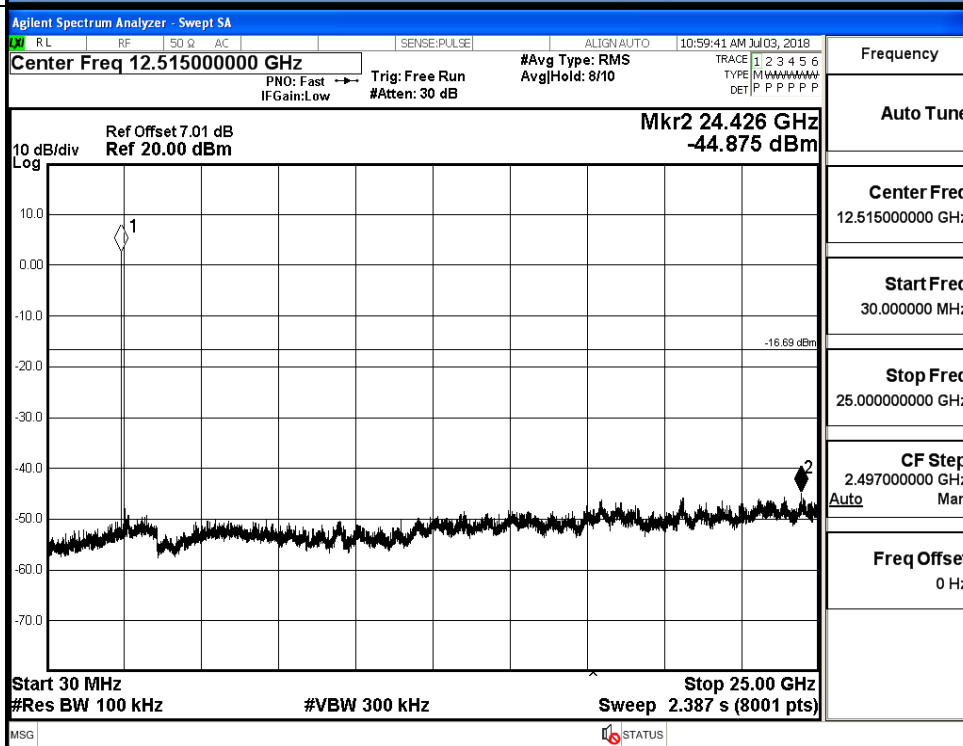


BT LE MCH Graphs

Pref/BT LE/MCH

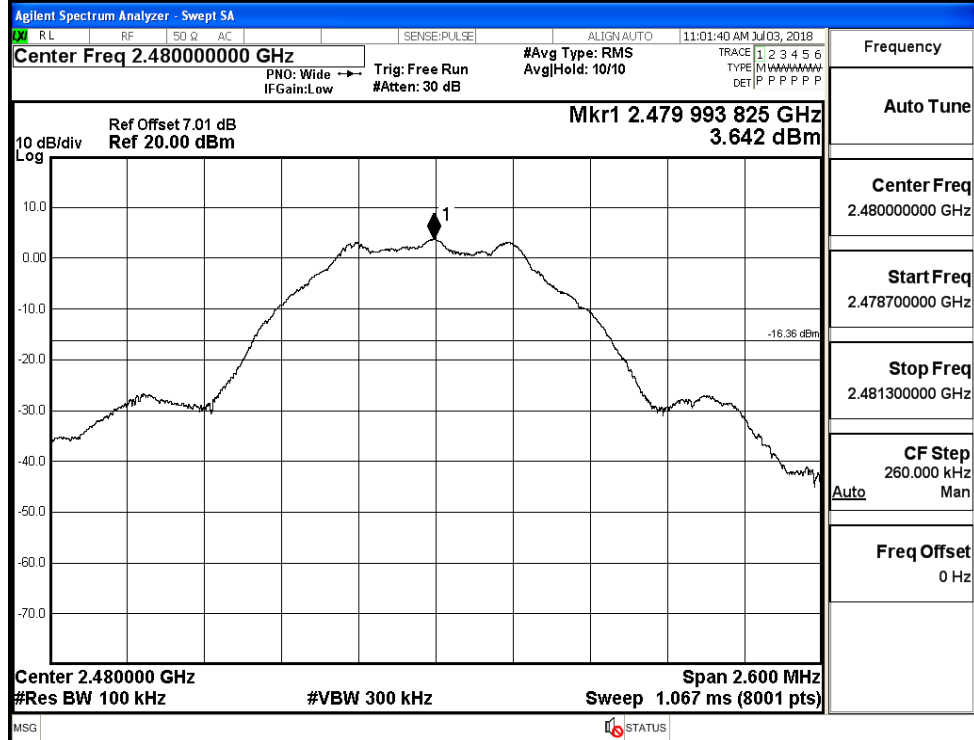


Puw/BT LE/MCH

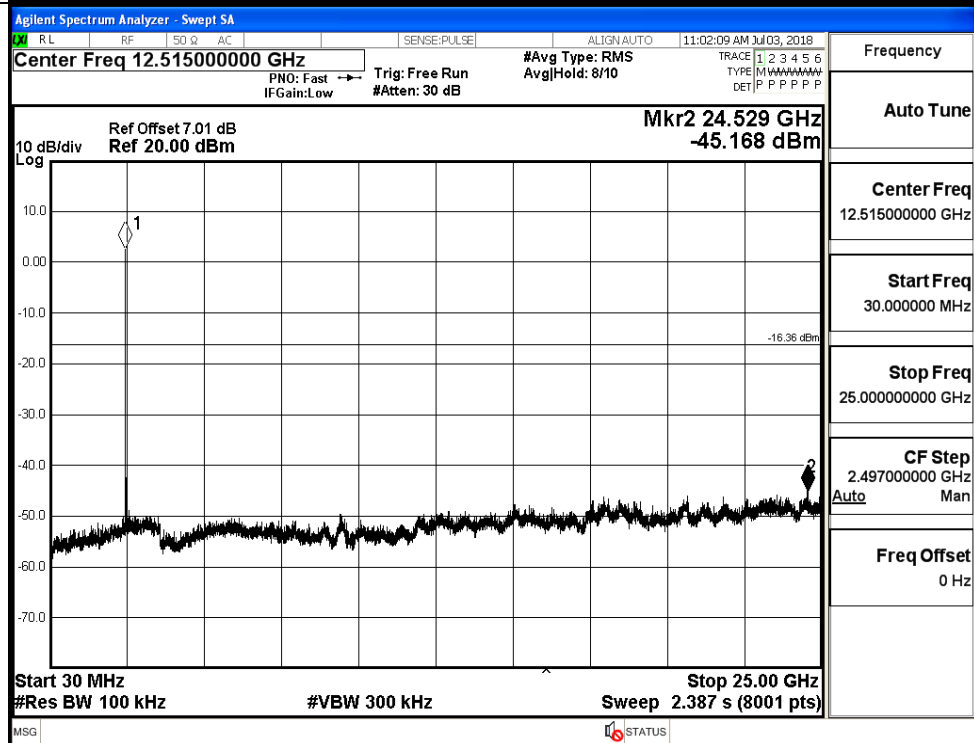


BT LE HCH Graphs

Pref/BT LE/HCH



Puw/BT LE/HCH

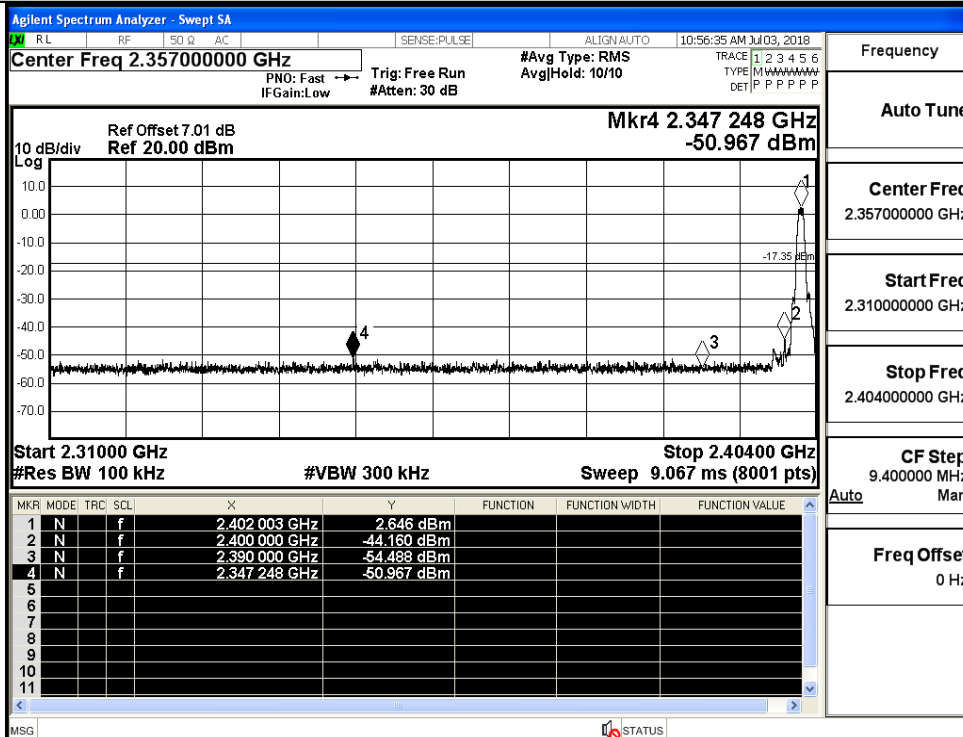


B.6 Band-edge for RF Conducted Emissions

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	2.646	-50.967	-17.35	PASS
BT LE	HCH	3.732	-49.264	-16.27	PASS

Test Graphs

LCH



Frequency

Auto Tune

Center Freq

2.357000000 GHz

Start Freq

2.310000000 GHz

Stop Freq

2.404000000 GHz

CF Step

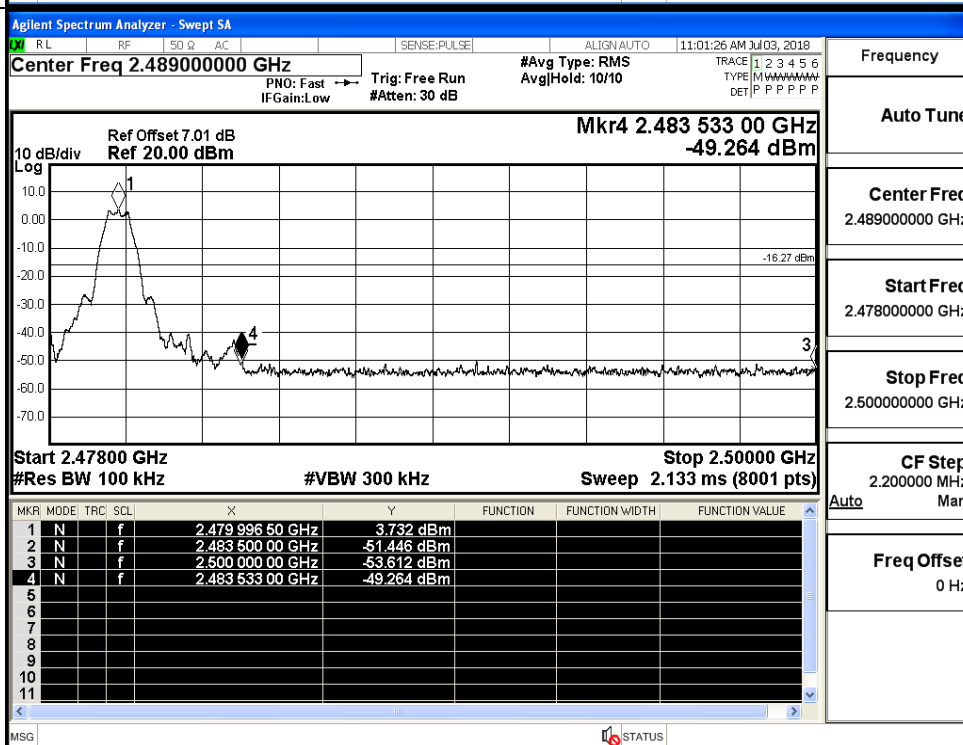
9.400000 MHz

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

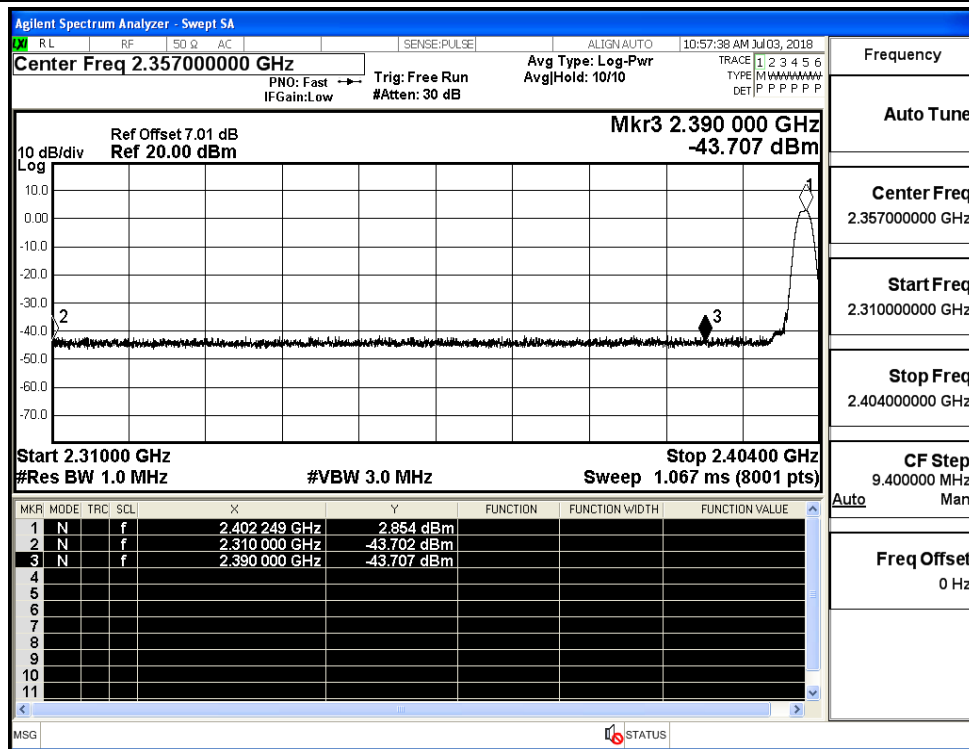
Freq Offset

0 Hz

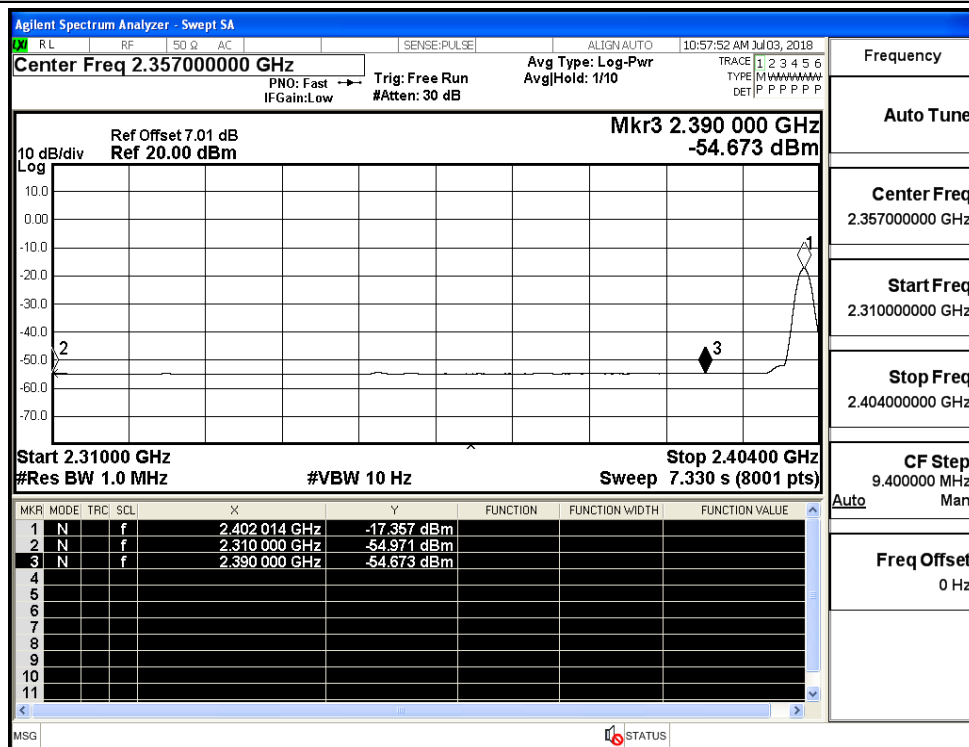
B.7 Restrict-band band-edge measurements

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	-43.70	2.0	0	53.56	PEAK	74	PASS
		Ant1	2310.0	-54.97	2.0	0	42.29	AV	54	PASS
		Ant1	2390.0	-43.71	2.0	0	53.55	PEAK	74	PASS
		Ant1	2390.0	-54.67	2.0	0	42.58	AV	54	PASS
	2480	Ant1	2483.5	-38.01	2.0	0	59.25	PEAK	74	PASS
		Ant1	2483.5	-51.89	2.0	0	45.36	AV	54	PASS
		Ant1	2500.0	-43.63	2.0	0	53.63	PEAK	74	PASS
		Ant1	2500.0	-54.26	2.0	0	43.00	AV	54	PASS

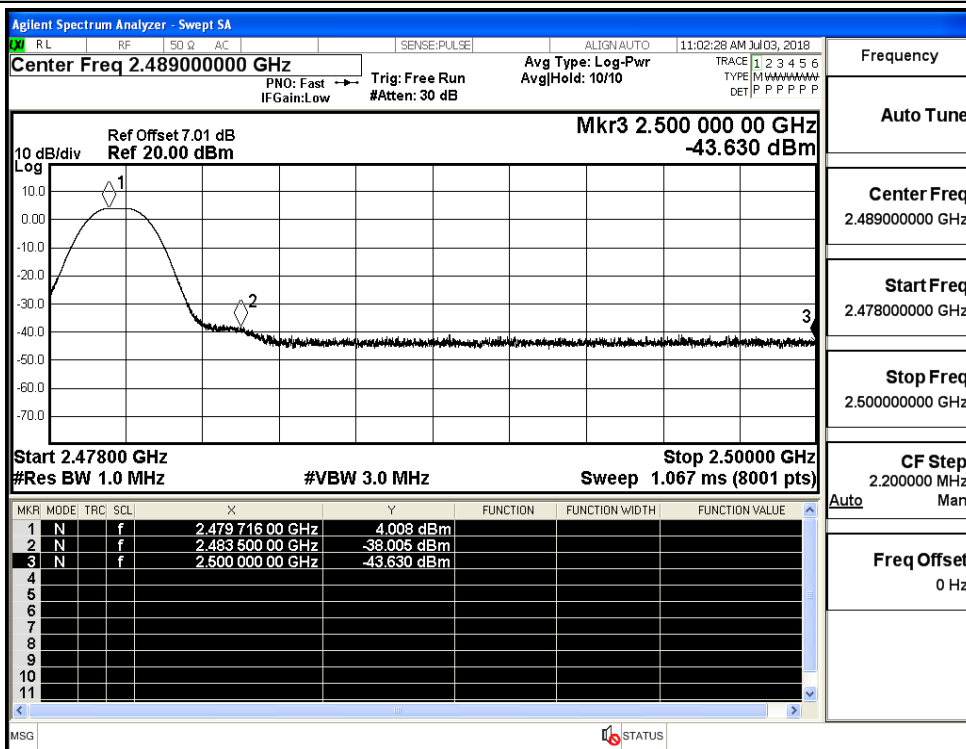
Restrict-band band-edge measurements_BT LE_2402_Ant1_PEAK



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

