

Appendix A

RF Test Data for BT V4.0 (Conducted Measurement)

Product Name: keyless padlock

Trade Mark: HIZIMA 

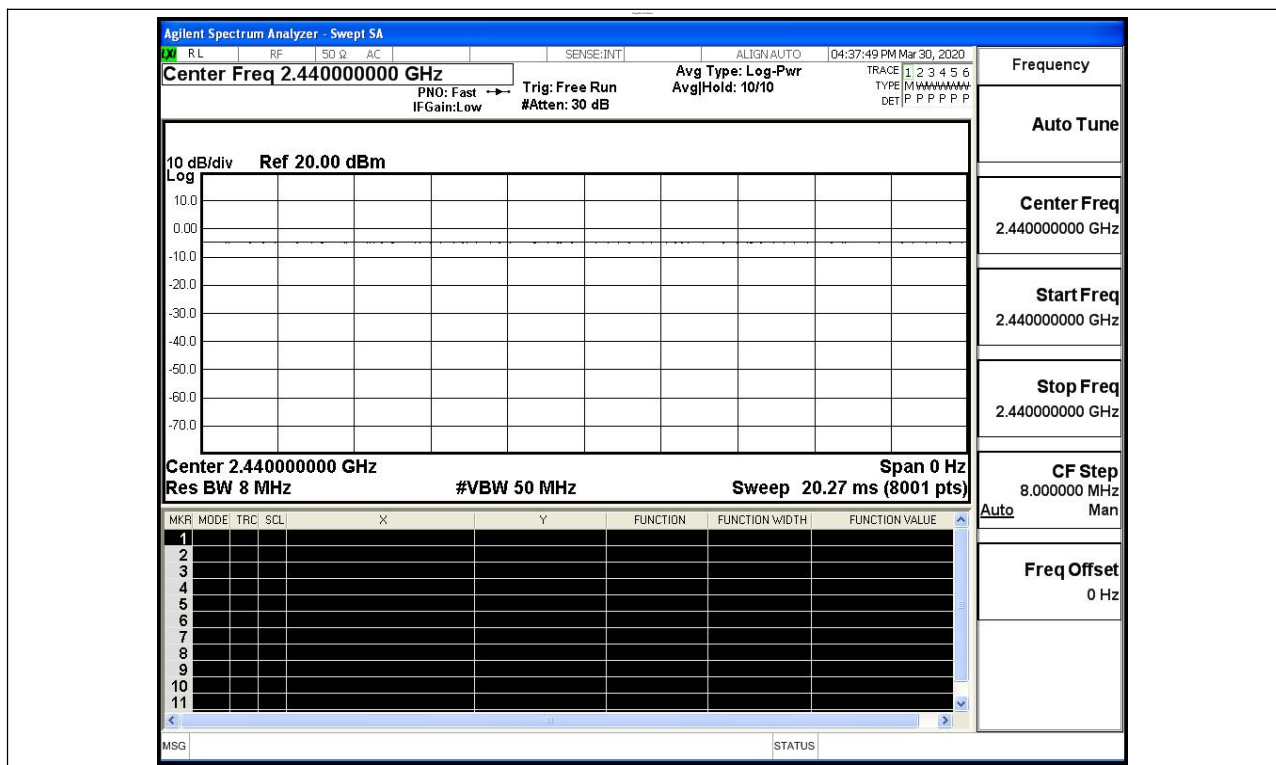
Test Model: ZMP-40K

Environmental Conditions

Temperature:	23.5 ° C
Relative Humidity:	54.8%
ATM Pressure:	100.0 kPa
Test Engineer:	Alisa Huang
Supervised by:	Tom.Liu

A.1 Duty Cycle

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

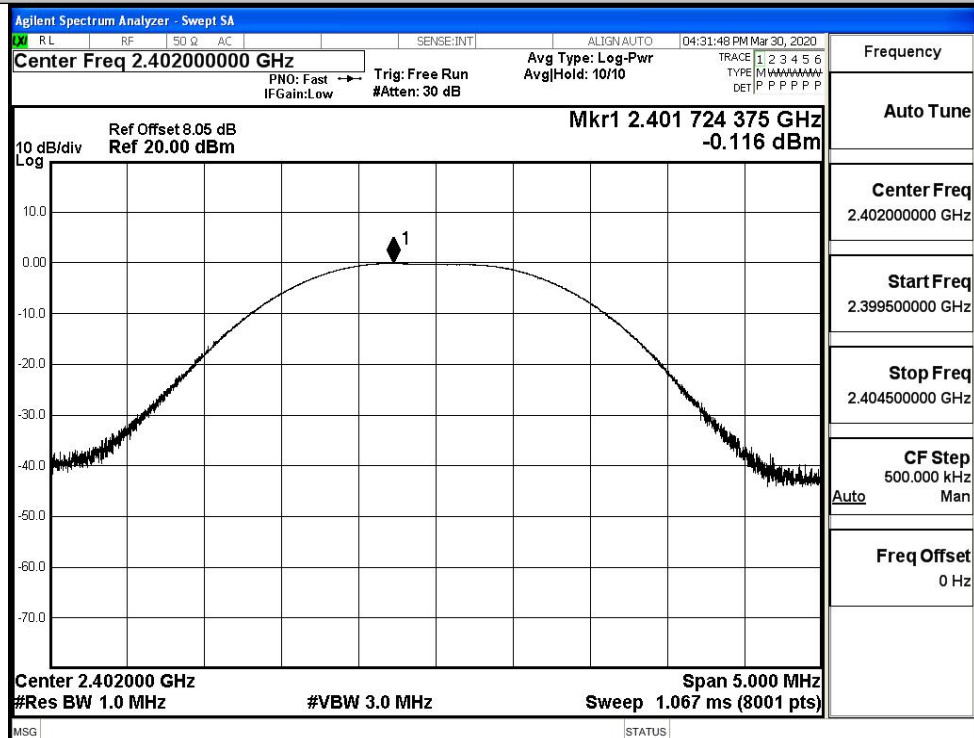


A.2 Maximum Conducted Peak Output Power

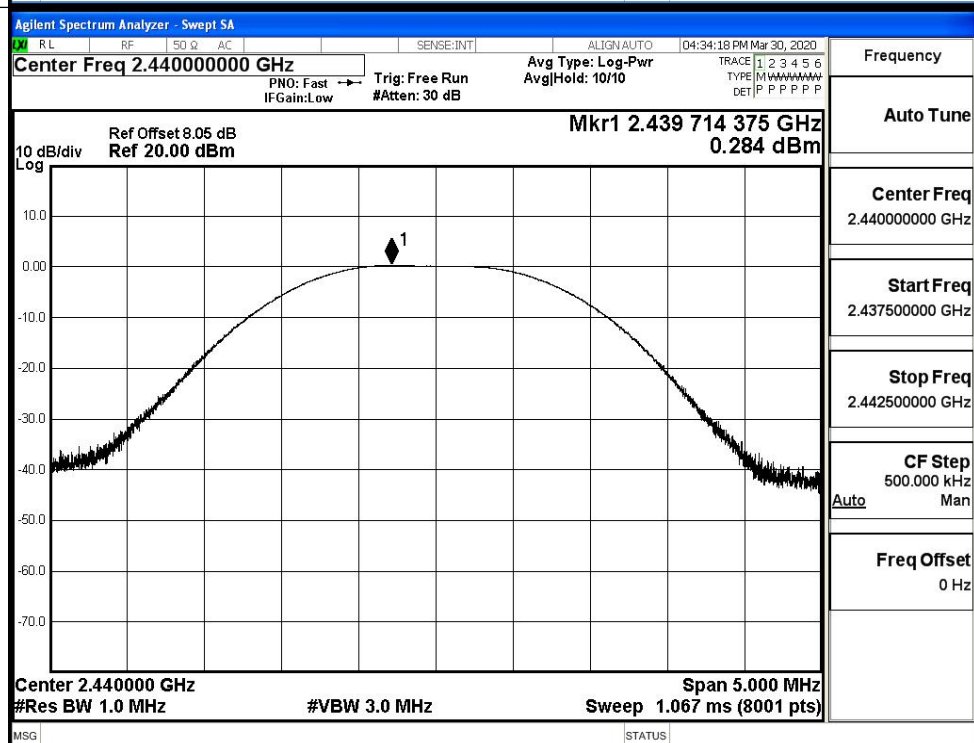
Mode	Channel	Conduct Peak Power[dBm]	Limit [dBm]	Verdict
BT LE	LCH	-0.116	30	PASS
BT LE	MCH	0.284	30	PASS
BT LE	HCH	0.473	30	PASS

Test Graphs

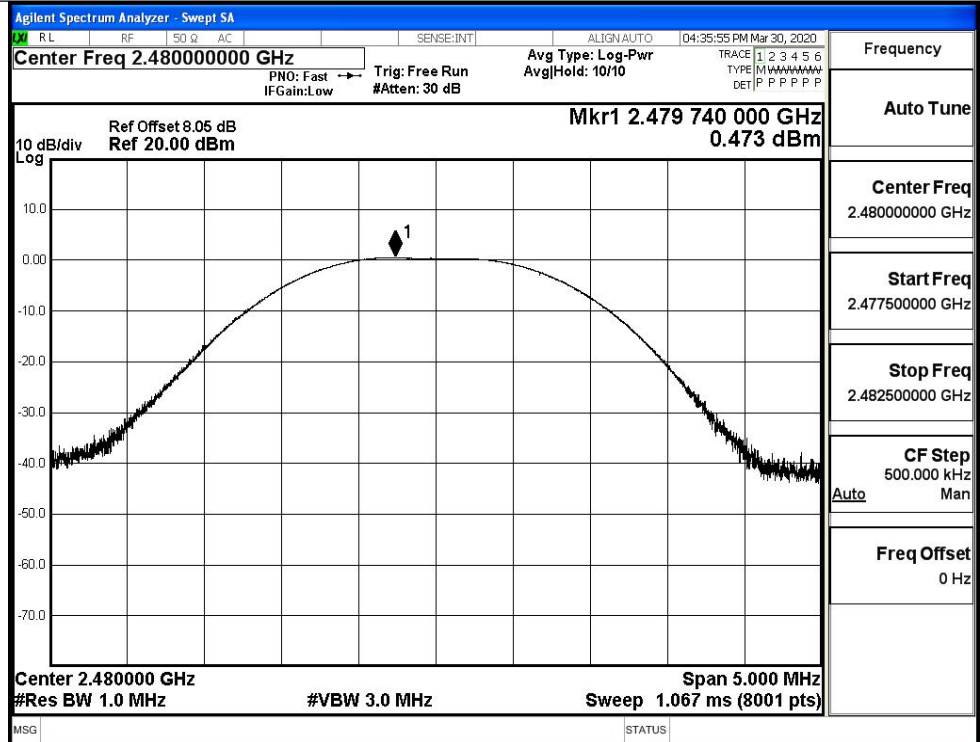
LCH



MCH



HCH

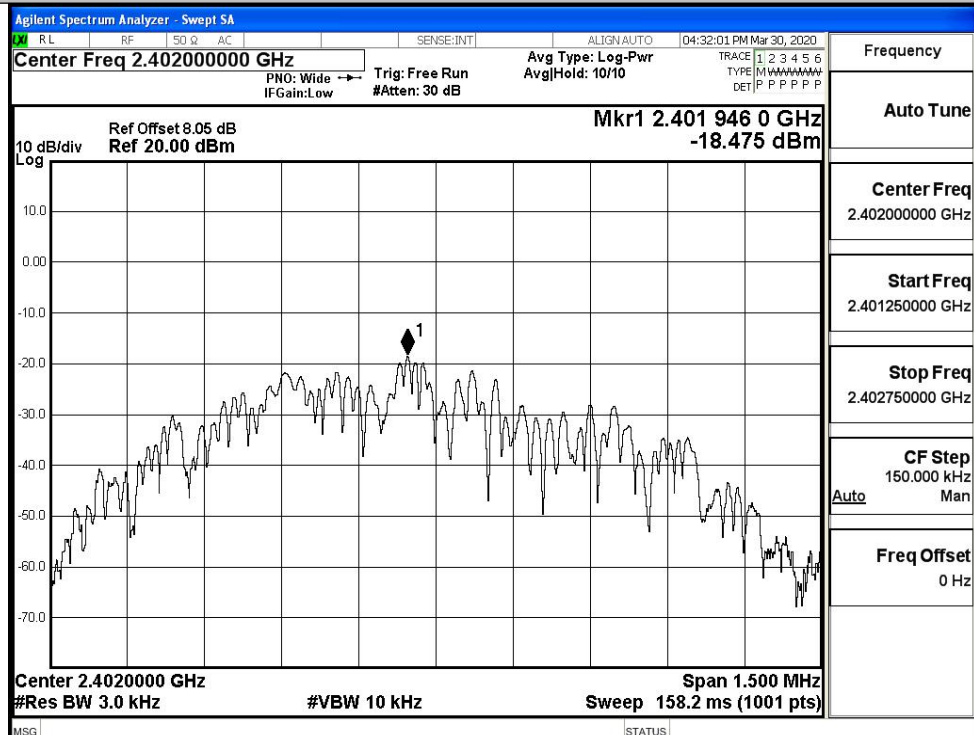


A.3 Maximum Power Spectral Density

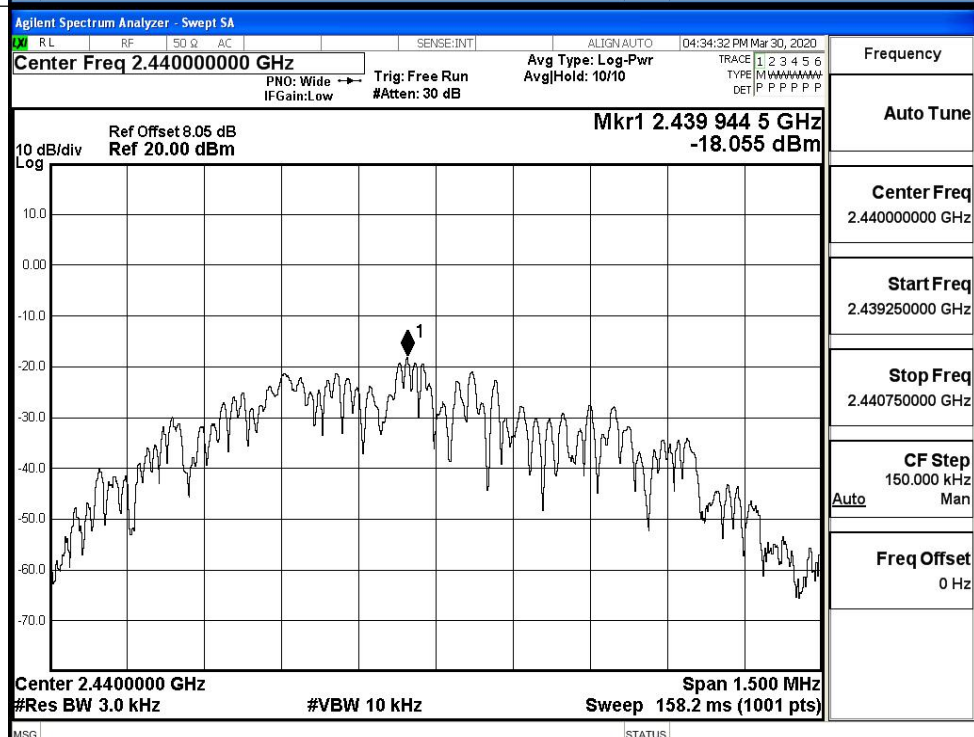
Mode	Channel	PSD [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
BT LE	LCH	-18.475	8	PASS
BT LE	MCH	-18.055	8	PASS
BT LE	HCH	-17.892	8	PASS

Test Graphs

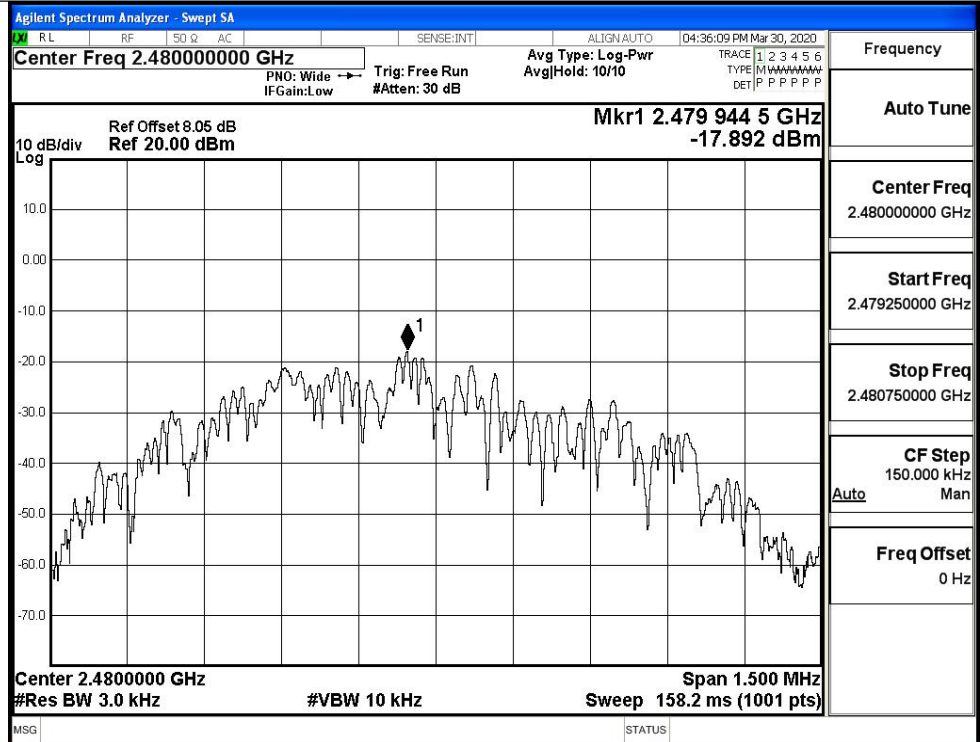
LCH



MCH



HCH

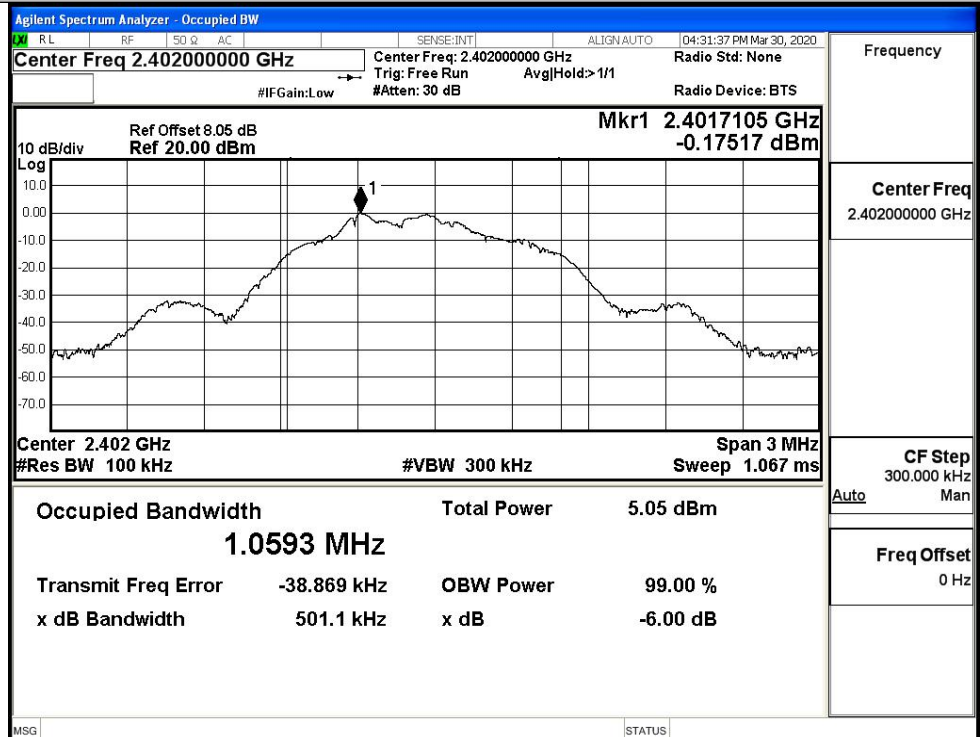


A.4 6dB Bandwidth

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
BT LE	LCH	0.5011	≥ 0.5	PASS
BT LE	MCH	0.5025	≥ 0.5	PASS
BT LE	HCH	0.5039	≥ 0.5	PASS

Test Graphs

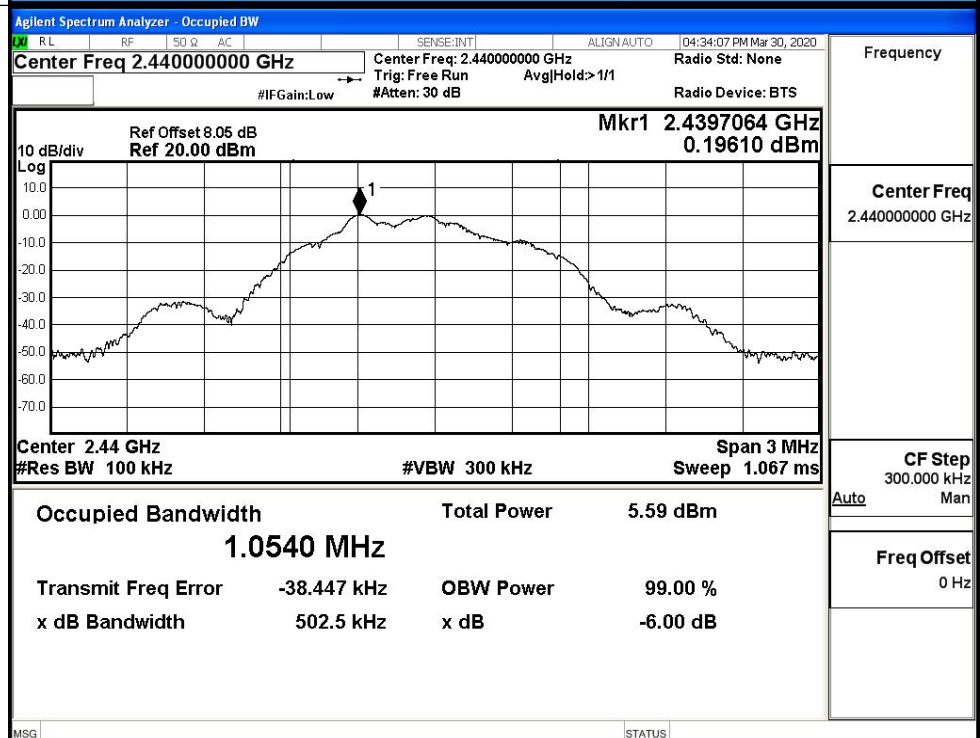
LCH



Frequency

Center Freq
2.402000000 GHzCF Step
300.000 kHz
Auto ManFreq Offset
0 Hz

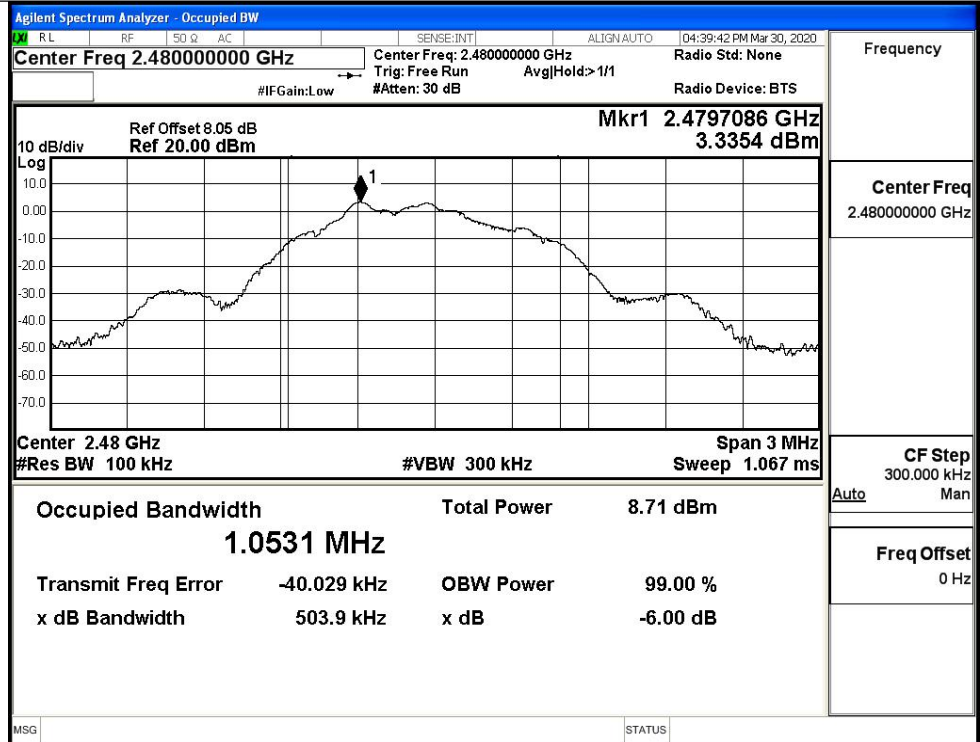
MCH



Frequency

Center Freq
2.440000000 GHzCF Step
300.000 kHz
Auto ManFreq Offset
0 Hz

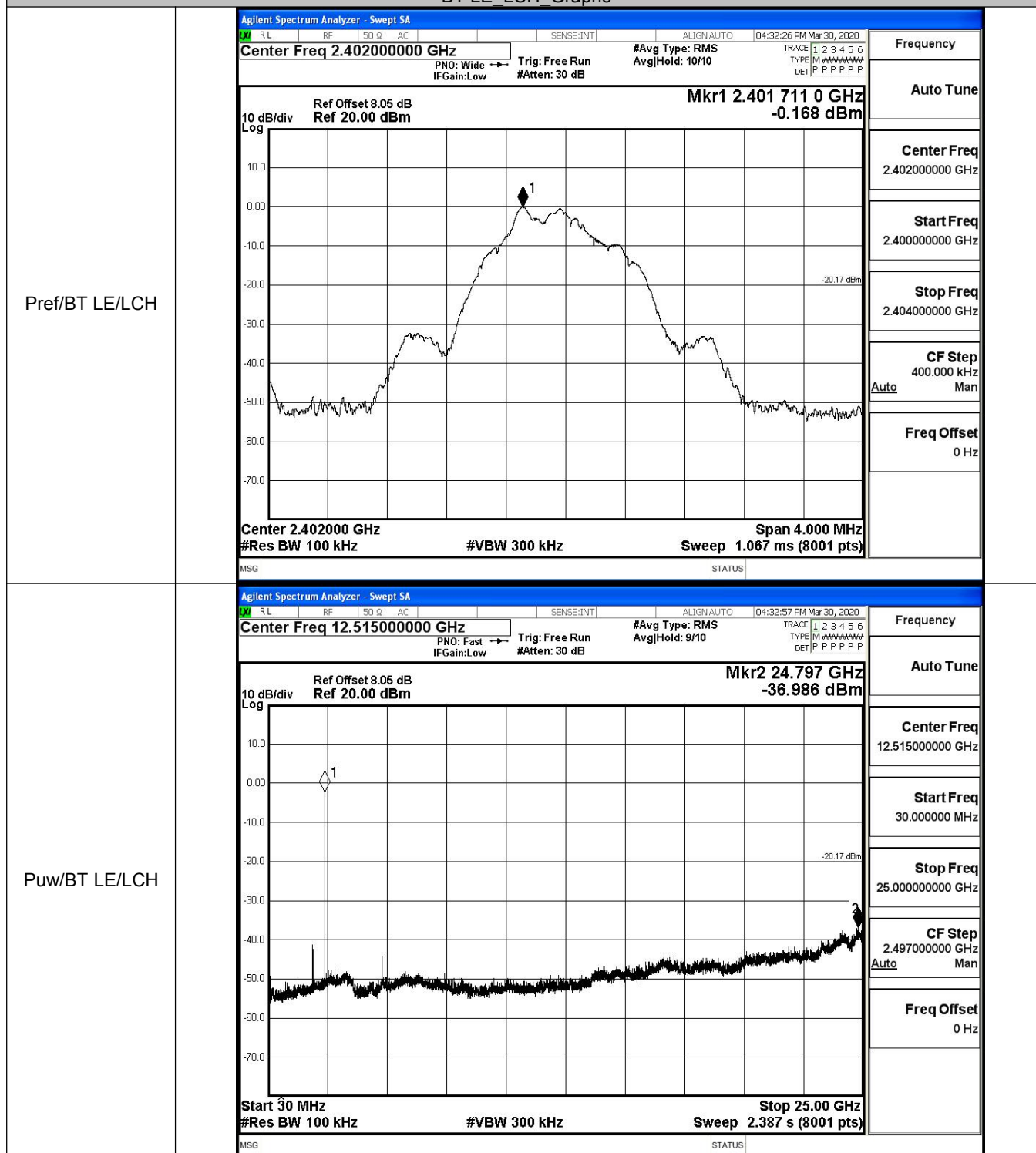
HCH



A.5 RF Conducted Spurious Emissions

Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	-0.168	-36.986	-20.168	PASS
BT LE	MCH	0.252	-37.037	-19.748	PASS
BT LE	HCH	3.37	-37.143	-16.630	PASS

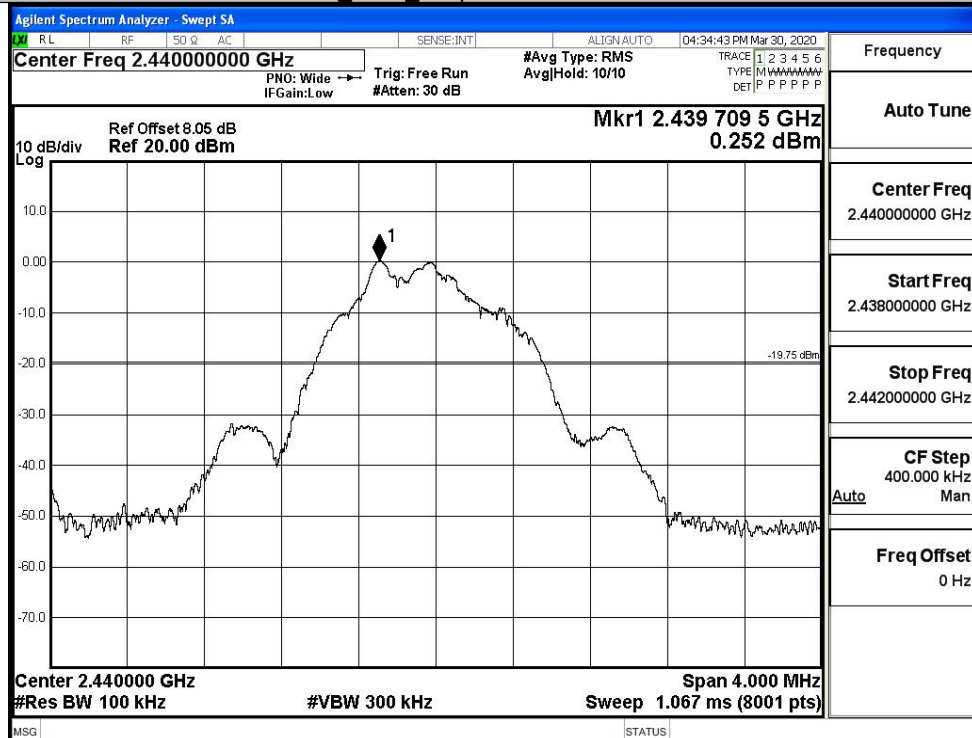
BT LE_LCH_Graphs



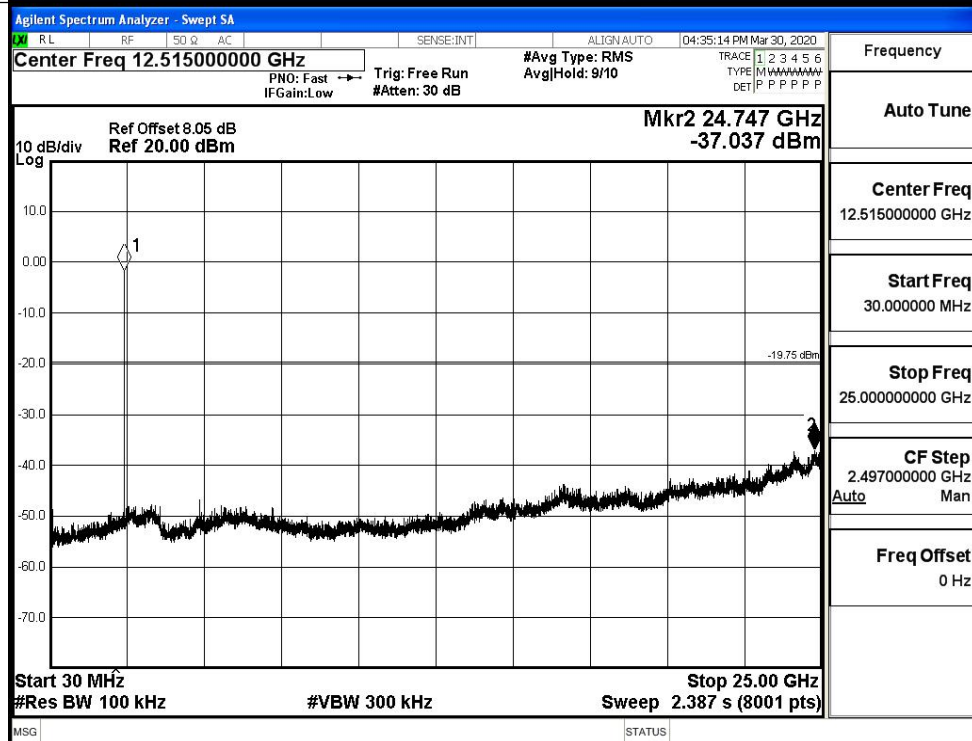
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BT LE MCH Graphs

Pref/BT LE/MCH

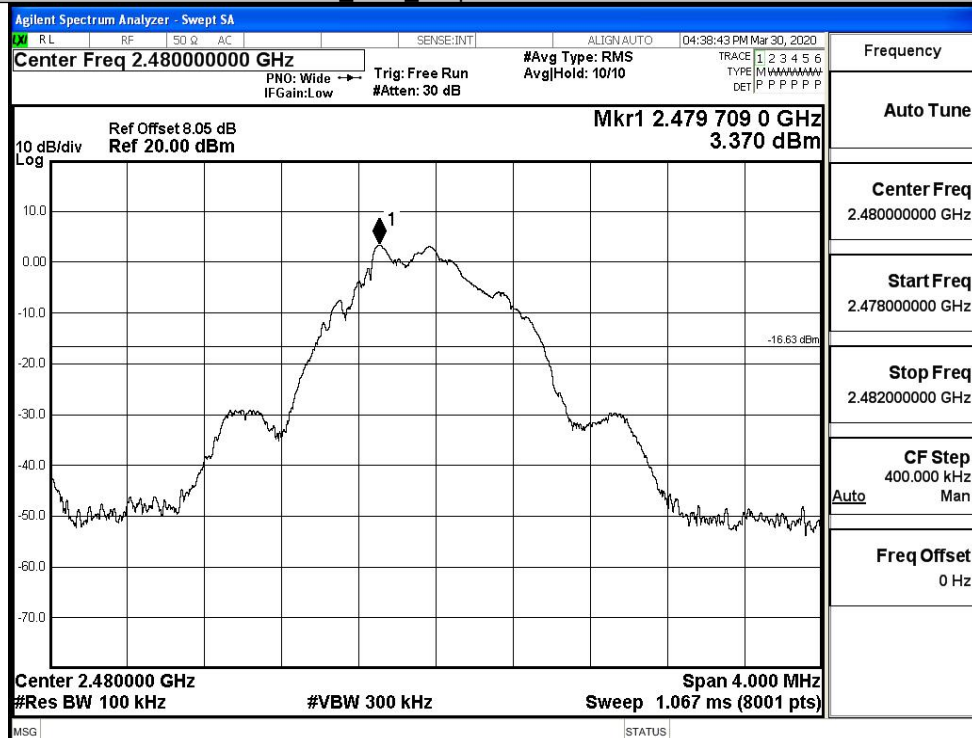


Puw/BT LE/MCH

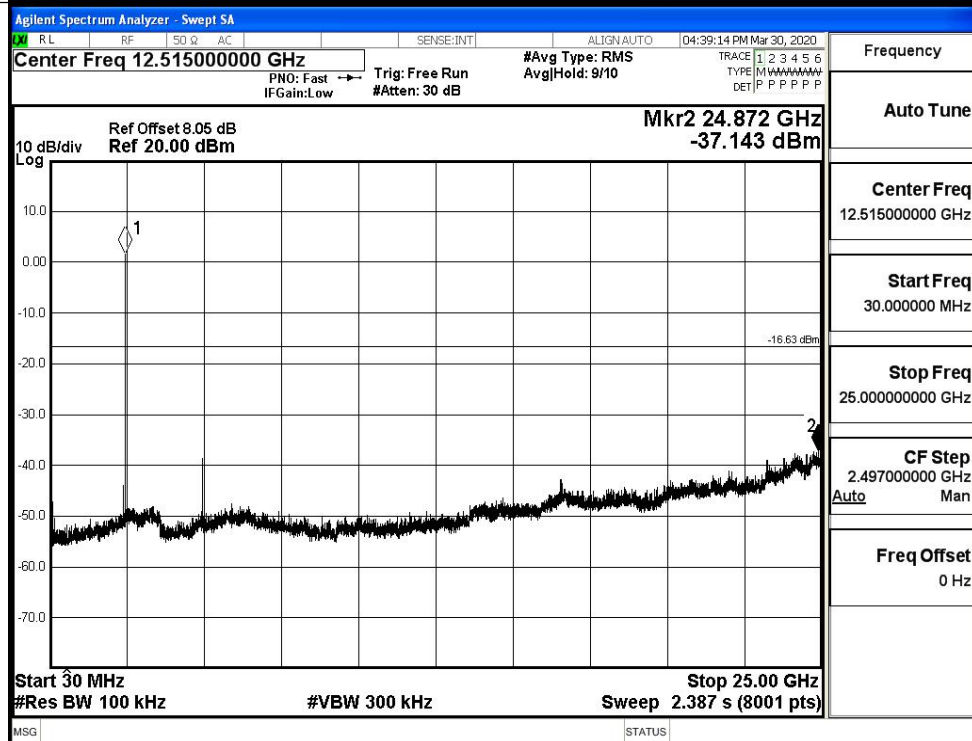


BT LE HCH Graphs

Pref/BT LE/HCH



Puw/BT LE/HCH

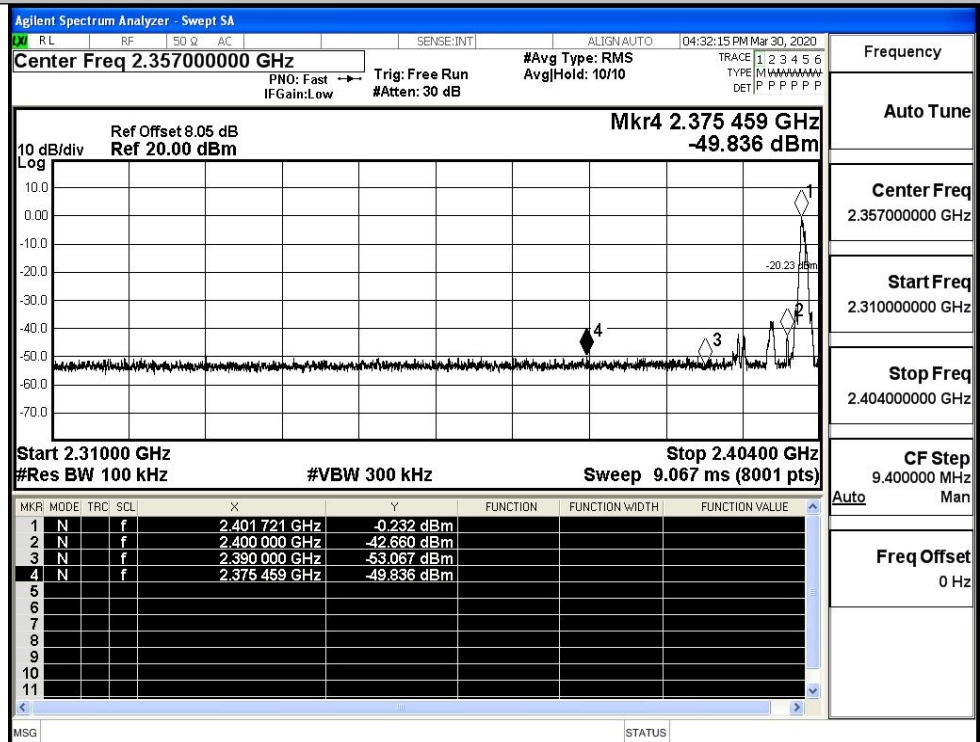


A.6 Band-edge for RF Conducted Emissions

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	-0.232	-49.836	-20.23	PASS
BT LE	HCH	0.510	-46.078	-19.49	PASS

Test Graphs

LCH

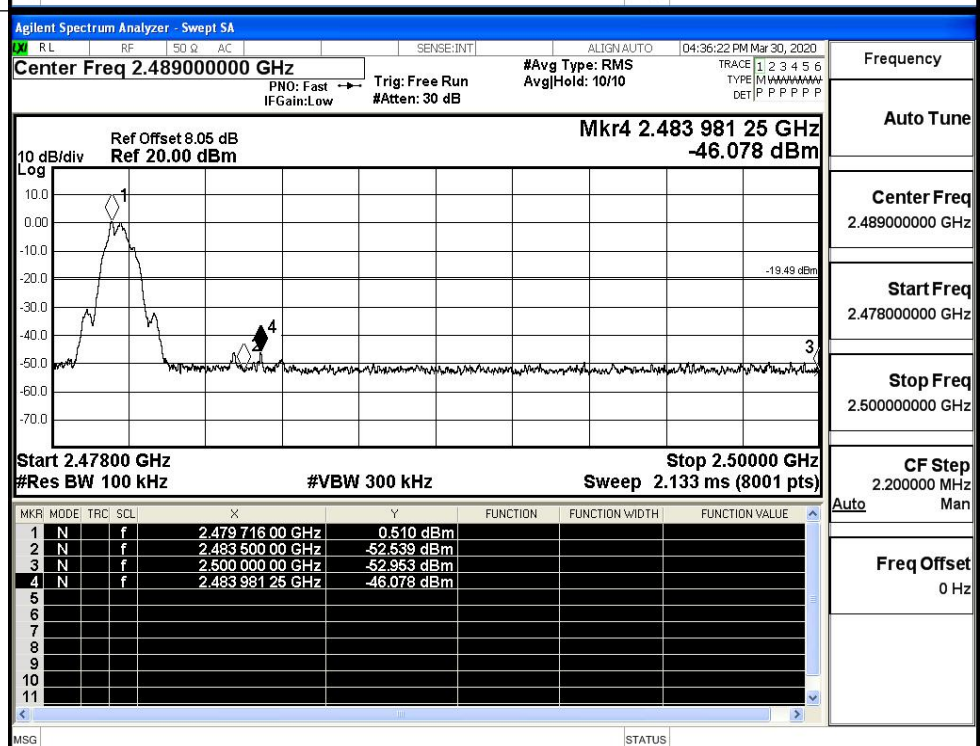


Frequency

Auto Tune

Center Freq
2.357000000 GHzStart Freq
2.310000000 GHzStop Freq
2.404000000 GHzCF Step
9.400000 MHz
Auto ManFreq Offset
0 Hz

HCH



Frequency

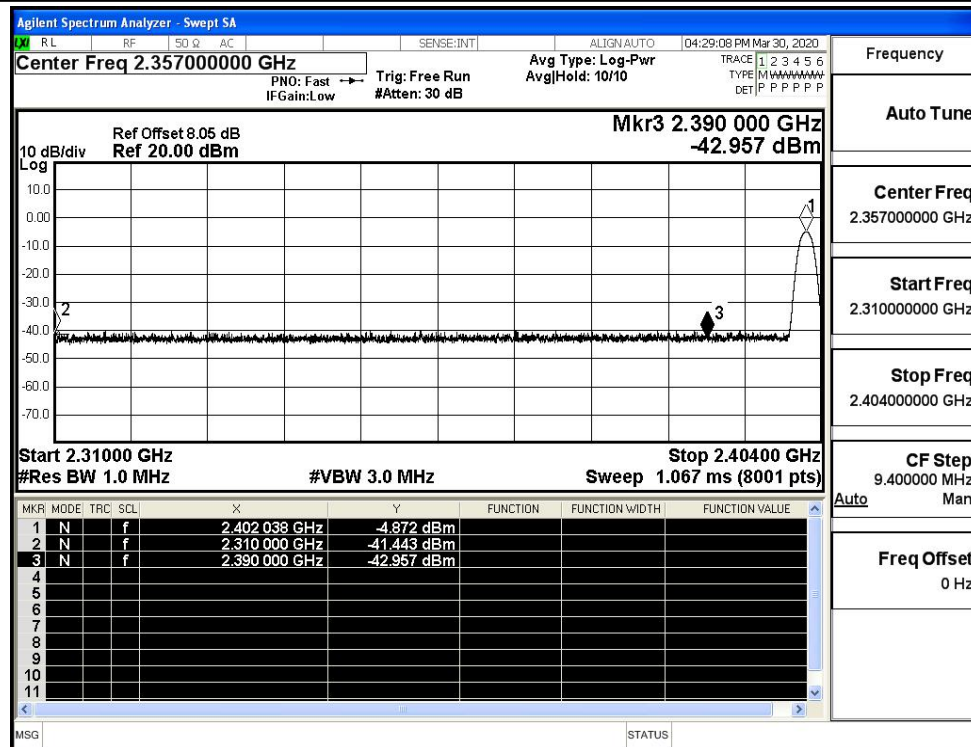
Auto Tune

Center Freq
2.489000000 GHzStart Freq
2.478000000 GHzStop Freq
2.500000000 GHzCF Step
2.200000 MHz
Auto ManFreq Offset
0 Hz

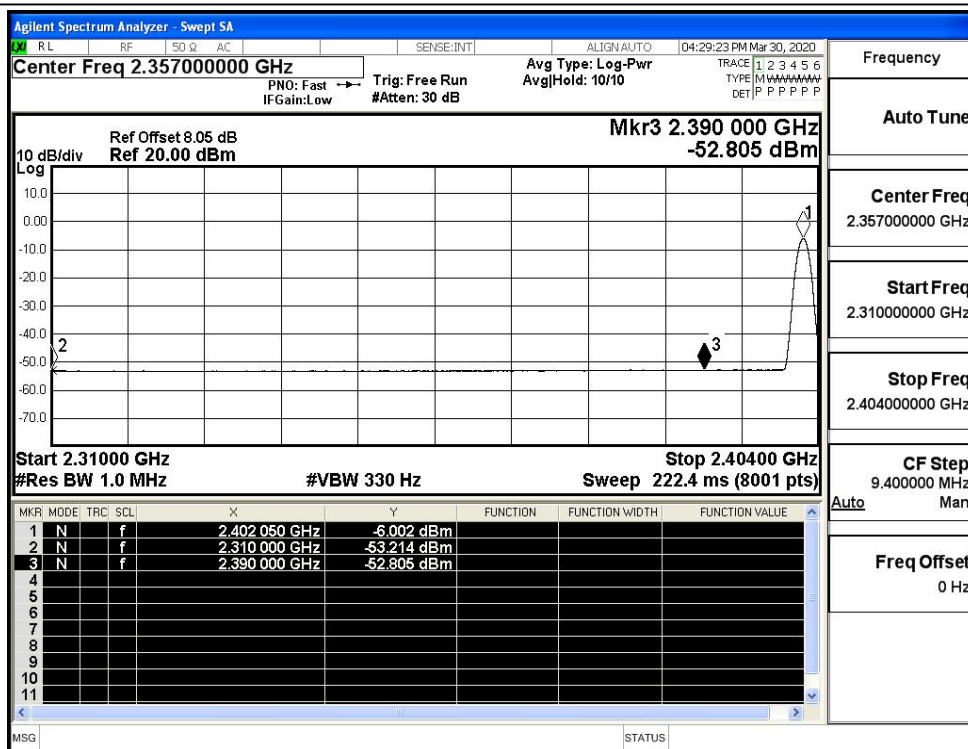
A.7 Restrict-band band-edge measurements

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	-41.44	2.0	0	55.79	PEAK	74	PASS
		Ant1	2310.0	-53.21	2.0	0	44.02	AV	54	PASS
		Ant1	2390.0	-42.96	2.0	0	54.27	PEAK	74	PASS
		Ant1	2390.0	-52.81	2.0	0	44.42	AV	54	PASS
	2480	Ant1	2483.5	-42.94	2.0	0	54.29	PEAK	74	PASS
		Ant1	2483.5	-52.43	2.0	0	44.80	AV	54	PASS
		Ant1	2500.0	-42.47	2.0	0	54.76	PEAK	74	PASS
		Ant1	2500.0	-52.24	2.0	0	44.99	AV	54	PASS

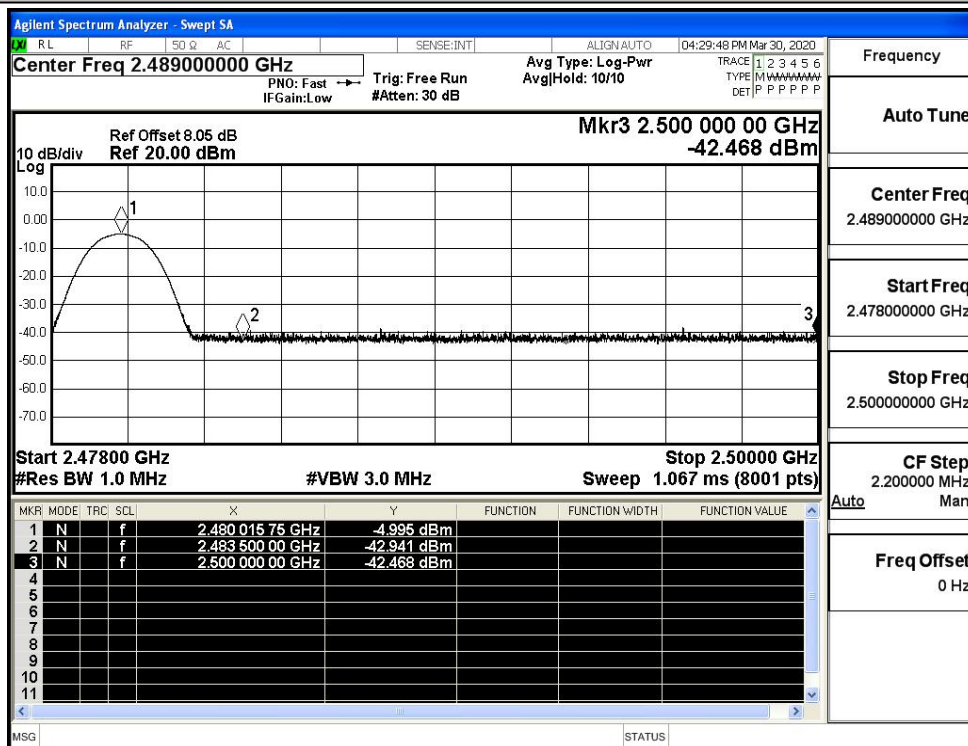
Restrict-band band-edge measurements_BT LE_2402_Ant1_PEAK



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

