

Appendix A

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

Product Name: LED MUSIC HAT-2167

Trade Mark: N/A

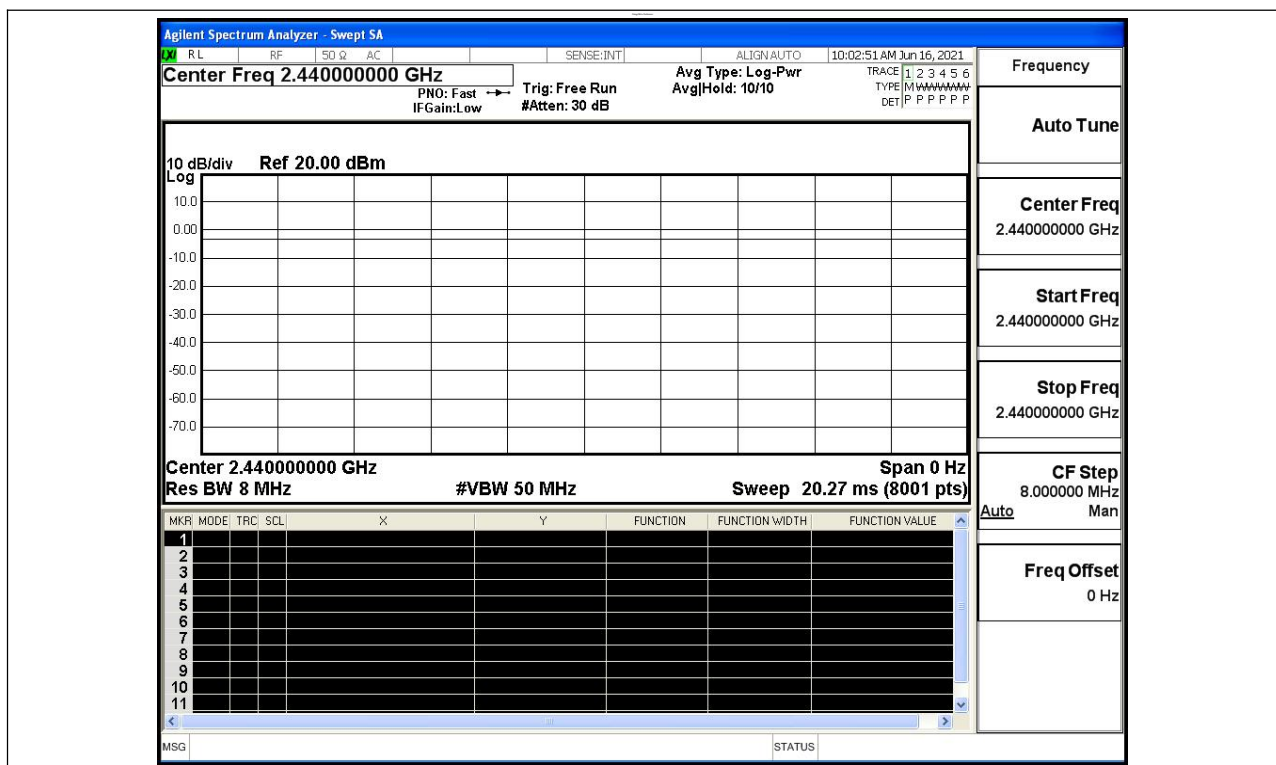
Test Model: MATCO NAPA

Environmental Conditions

Temperature:	21.6° C
Relative Humidity:	52.7%
ATM Pressure:	100.0 kPa
Test Engineer:	Jay Li
Supervised by:	Li Huan

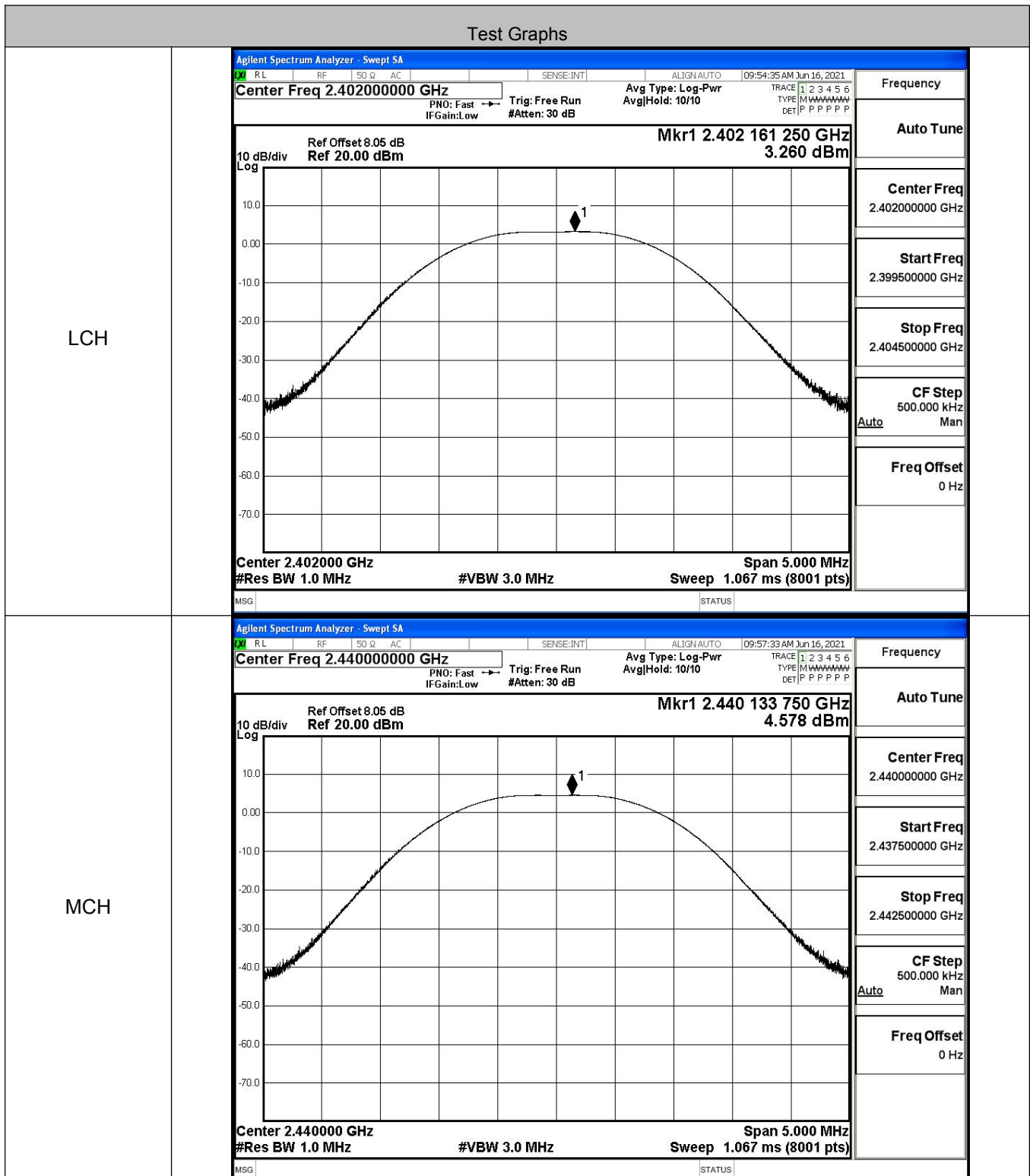
A.1 Duty Cycle

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

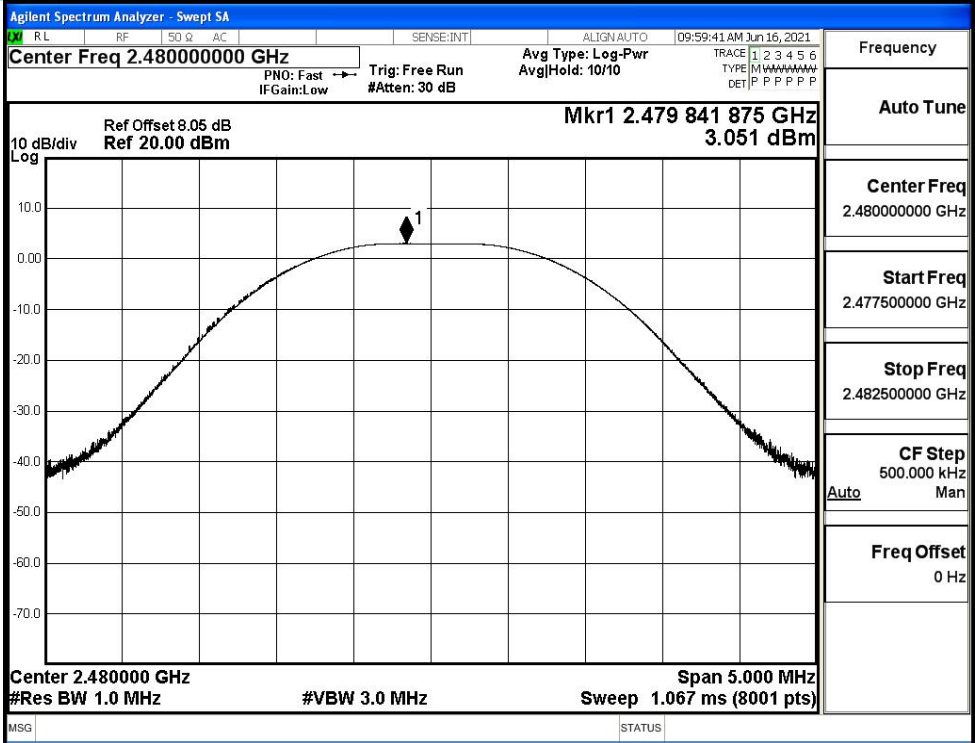


A.2 Maximum Conducted Peak Output Power

Mode	Channel	Conduct Peak Power[dBm]	Limit [dBm]	Verdict
BT LE	LCH	3.26	30	PASS
BT LE	MCH	4.578	30	PASS
BT LE	HCH	3.051	30	PASS



HCH

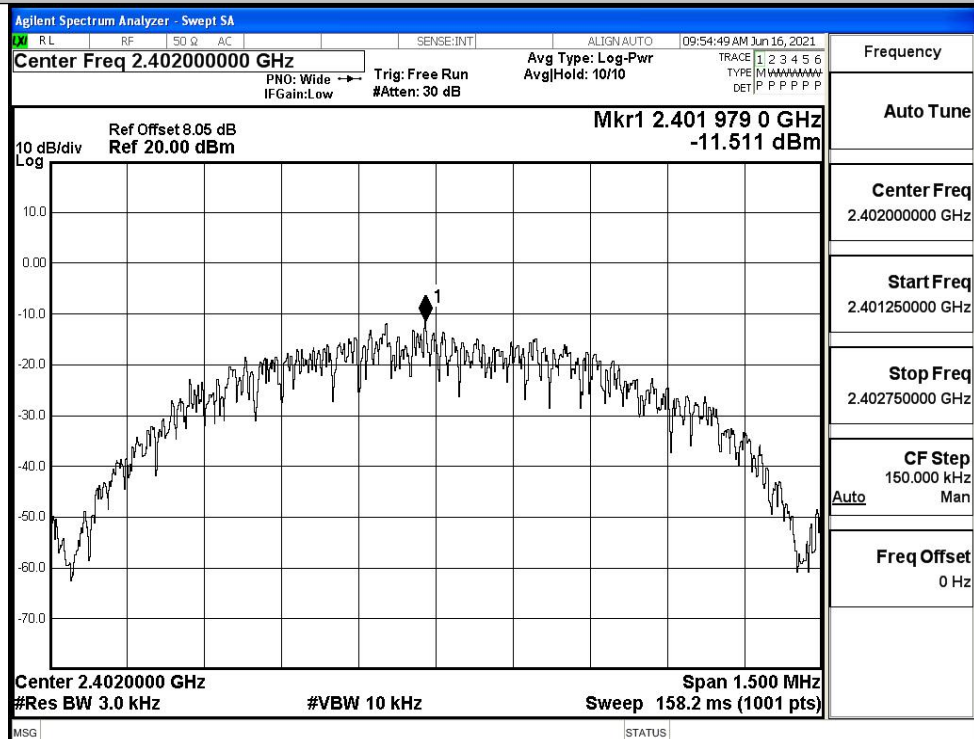


A.3 Maximum Power Spectral Density

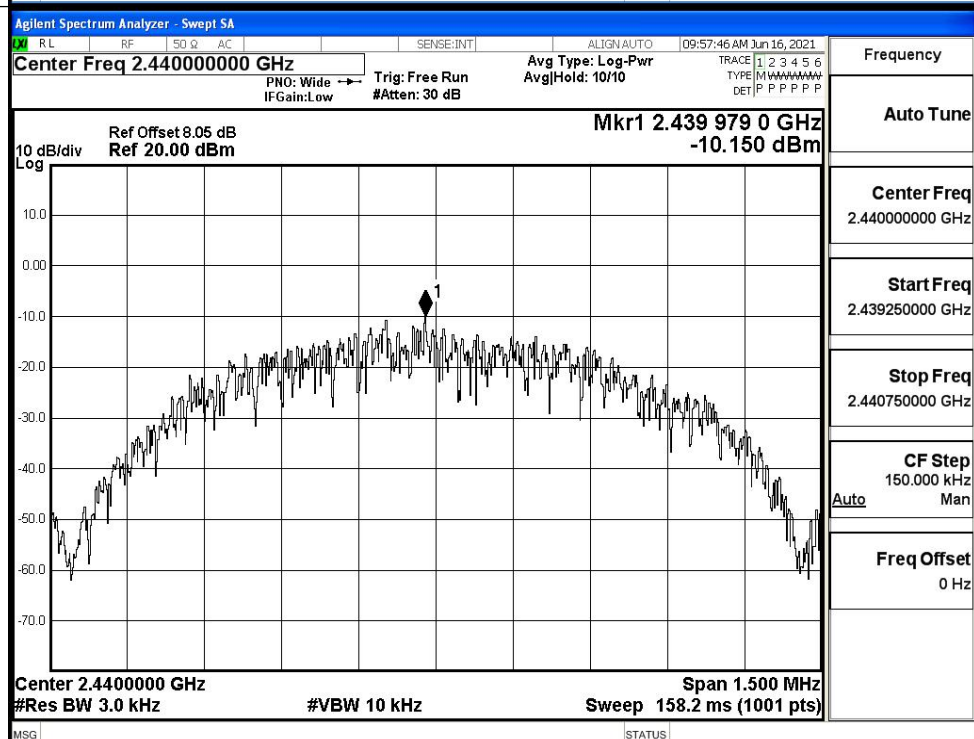
Mode	Channel	PSD [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
BT LE	LCH	-11.511	8	PASS
BT LE	MCH	-10.150	8	PASS
BT LE	HCH	-12.097	8	PASS

Test Graphs

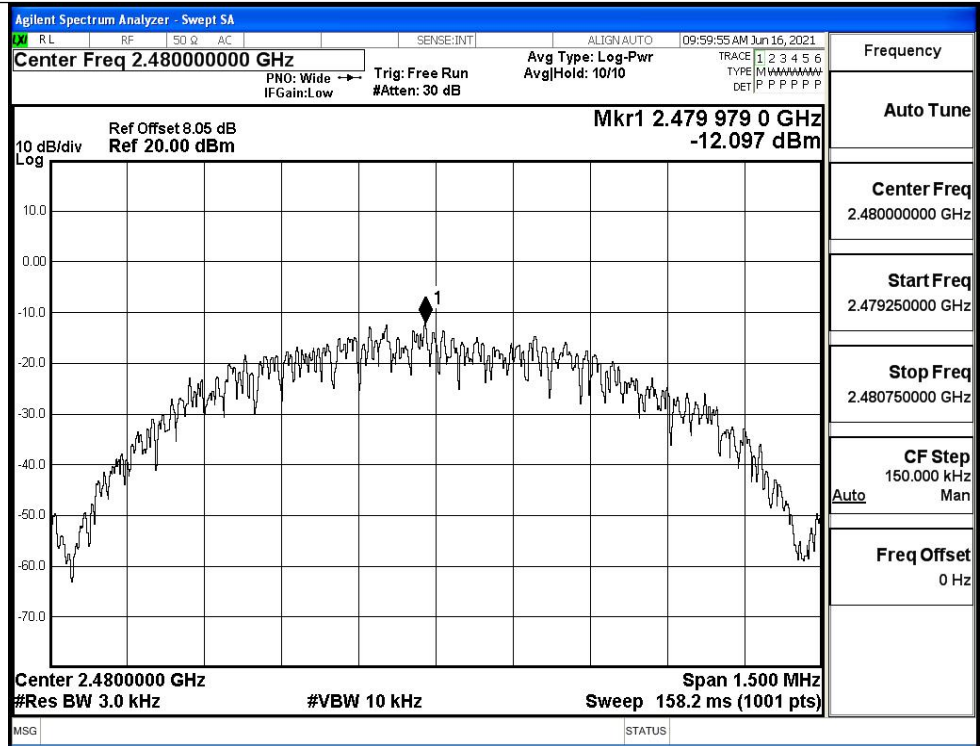
LCH



MCH



HCH

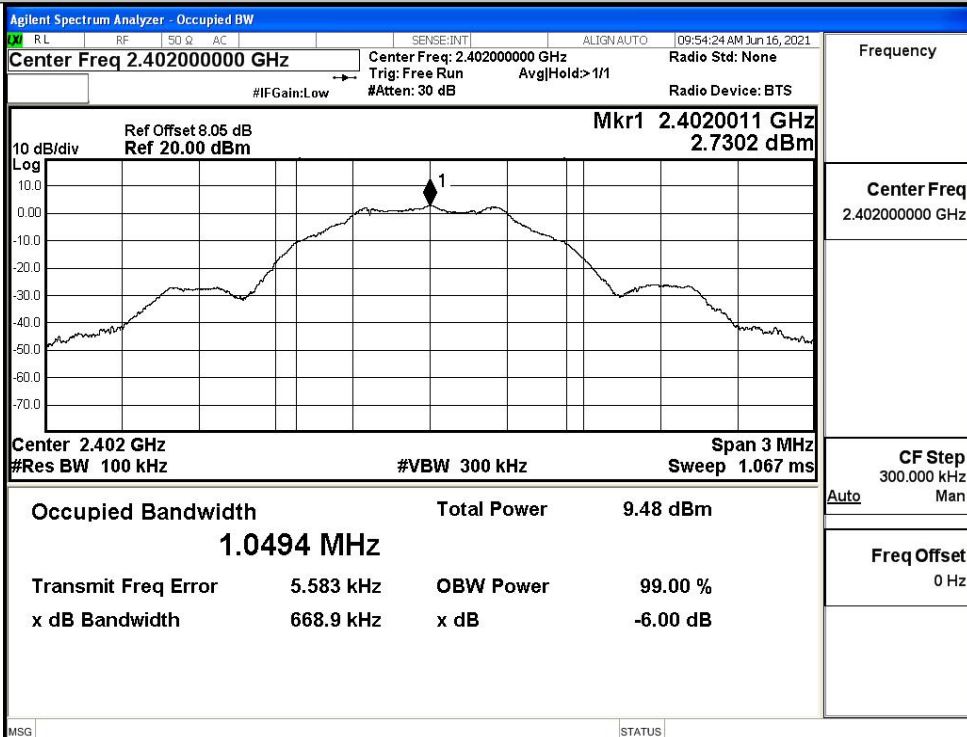


A.4 6dB Bandwidth

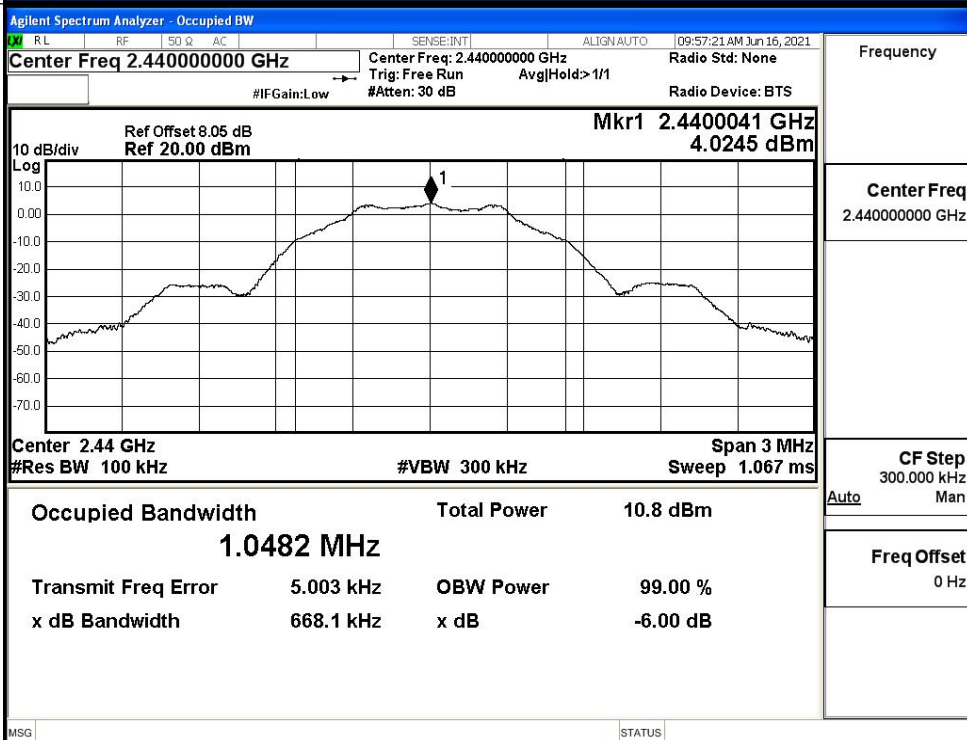
Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
BT LE	LCH	0.6689	≥ 0.5	PASS
BT LE	MCH	0.6681	≥ 0.5	PASS
BT LE	HCH	0.6725	≥ 0.5	PASS

Test Graphs

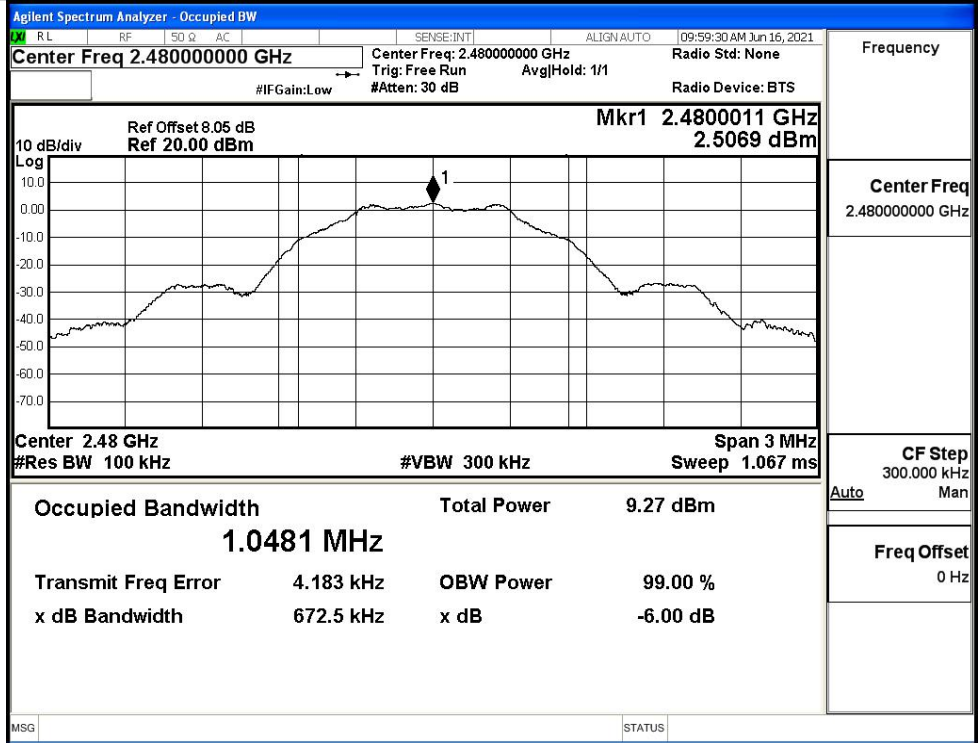
LCH



MCH



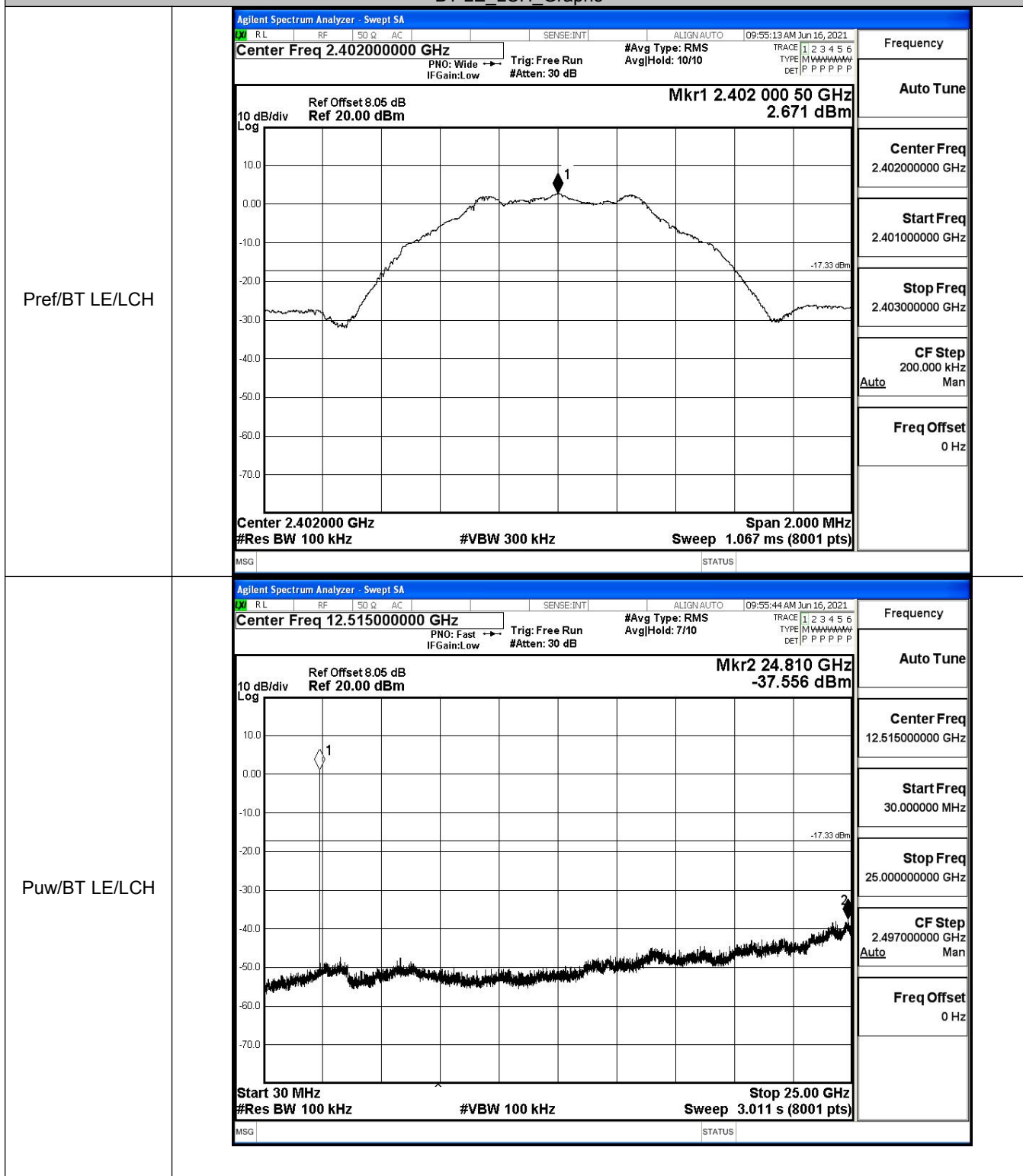
HCH



A.5 RF Conducted Spurious Emissions

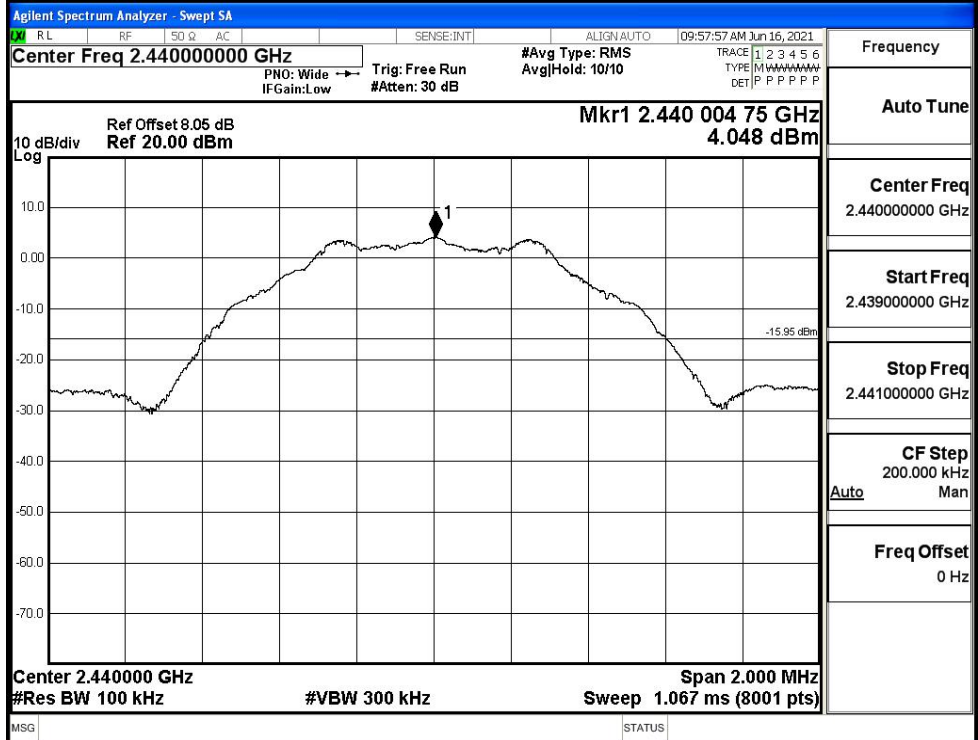
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	2.671	-37.556	-17.329	PASS
BT LE	MCH	4.048	-37.481	-15.952	PASS
BT LE	HCH	2.513	-37.852	-17.487	PASS

BT LE_LCH_Graphs

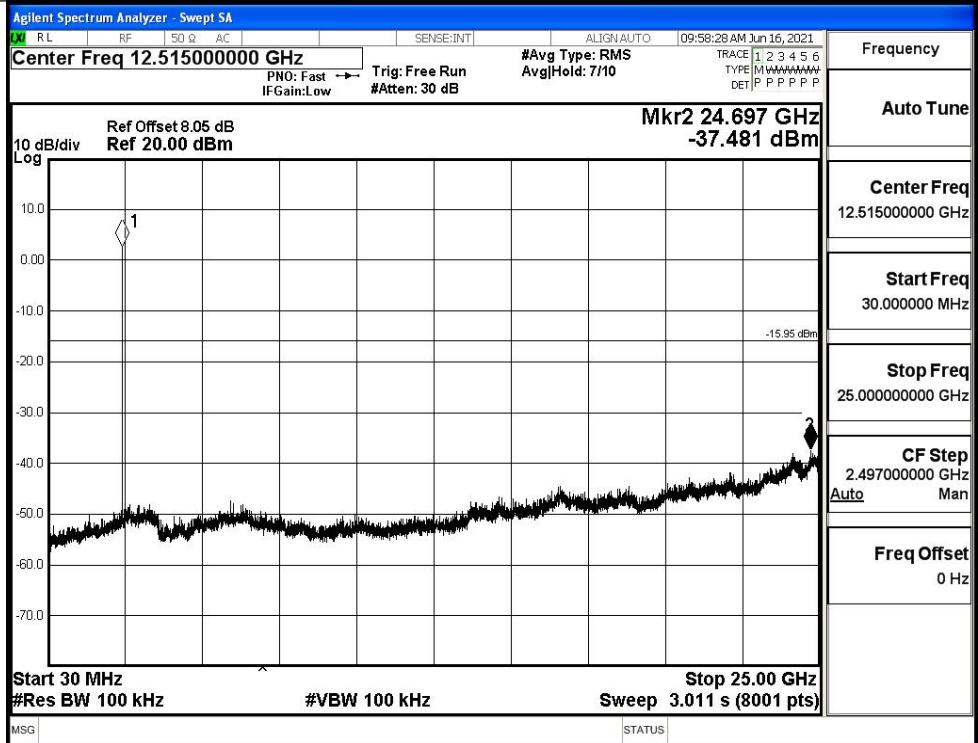


BT LE MCH Graphs

Pref/BT LE/MCH

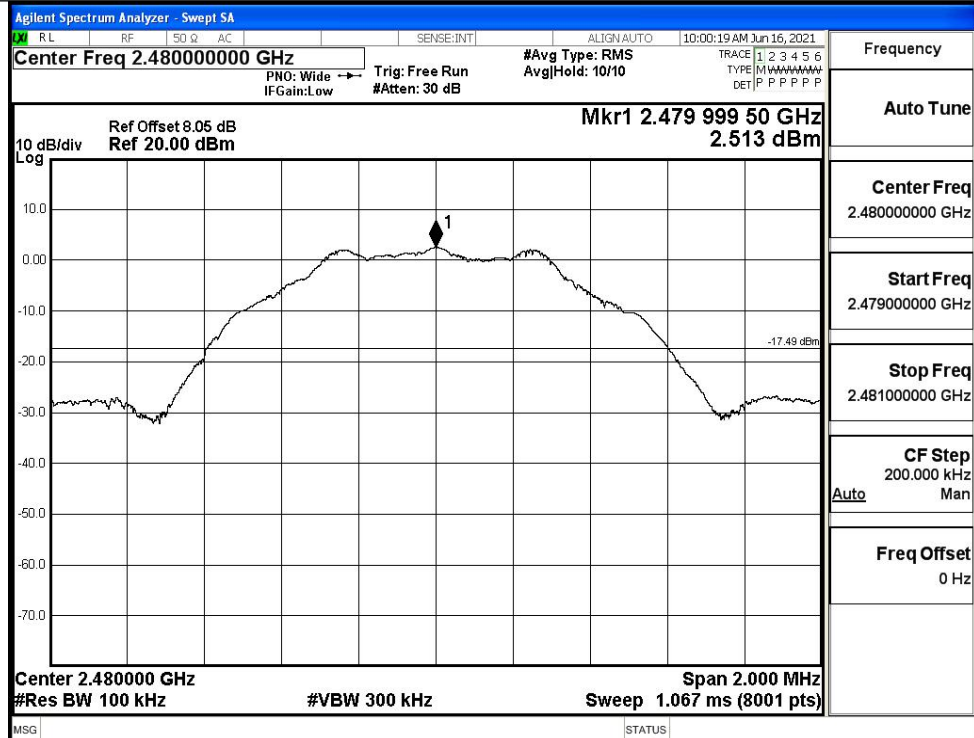


Puw/BT LE/MCH

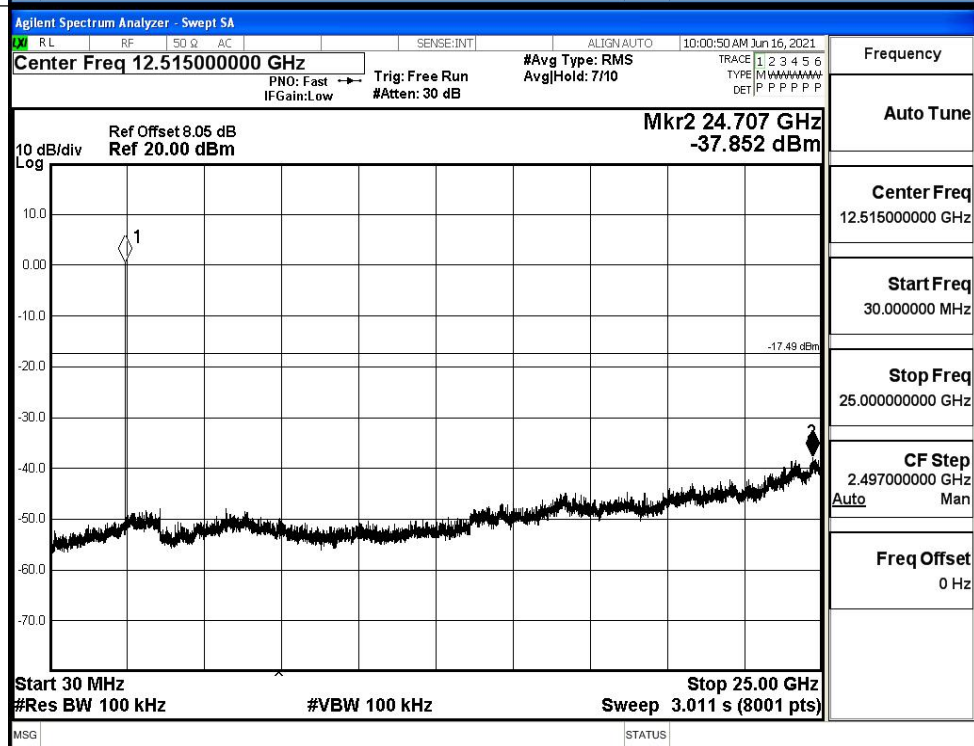


BT LE HCH Graphs

Pref/BT LE/HCH



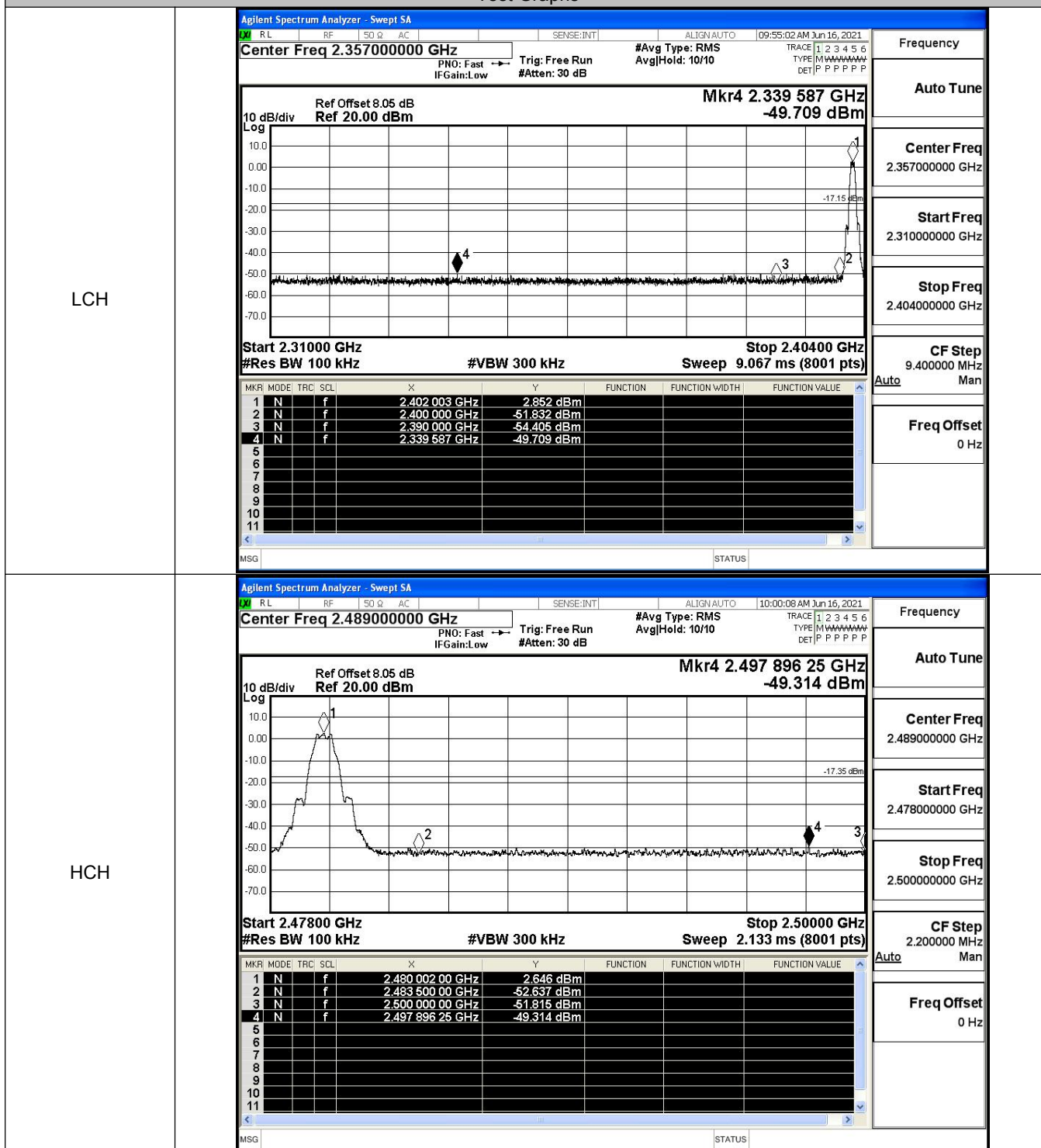
Puw/BT LE/HCH



A.6 Band-edge for RF Conducted Emissions

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	2.852	-49.709	-17.15	PASS
BT LE	HCH	2.646	-49.314	-17.35	PASS

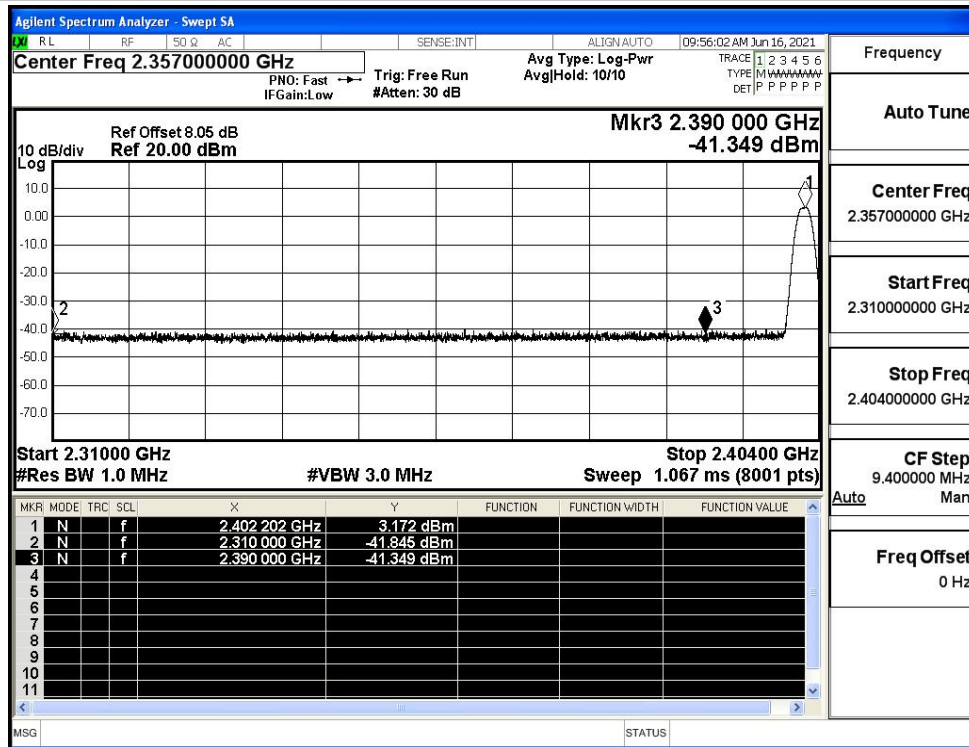
Test Graphs



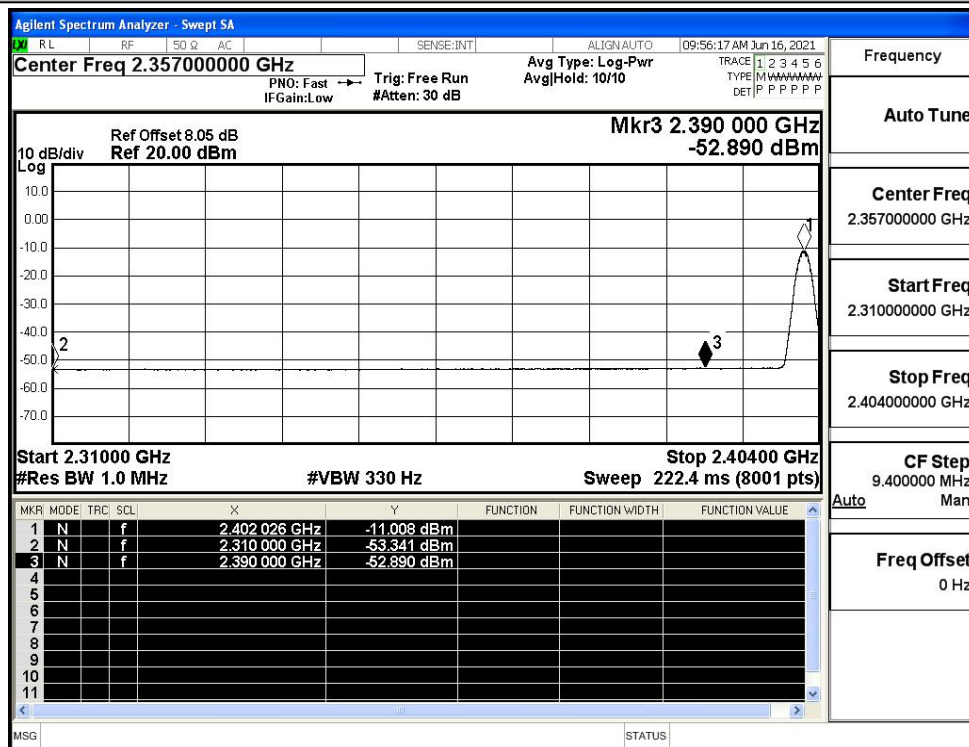
A.7 Restrict-band band-edge measurements

Test Mode	Test Channel	Ant	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
BT LE	2402	Ant1	2310.0	-41.85	2.0	0	53.41	PEAK	74	PASS
		Ant1	2310.0	-53.34	2.0	0	41.92	AV	54	PASS
		Ant1	2390.0	-41.35	2.0	0	53.91	PEAK	74	PASS
		Ant1	2390.0	-52.89	2.0	0	42.37	AV	54	PASS
	2480	Ant1	2483.5	-39.74	2.0	0	55.52	PEAK	74	PASS
		Ant1	2483.5	-52.51	2.0	0	42.75	AV	54	PASS
		Ant1	2500.0	-42.31	2.0	0	52.95	PEAK	74	PASS
		Ant1	2500.0	-52.28	2.0	0	42.98	AV	54	PASS

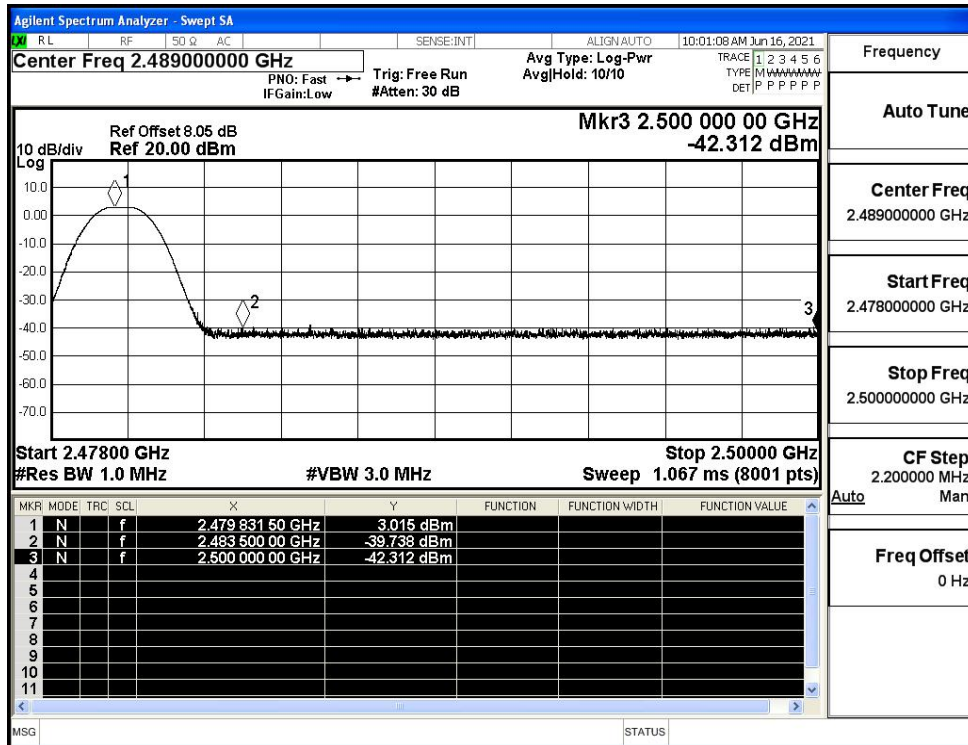
Restrict-band band-edge measurements_BT LE_2402_Ant1_PEAK



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

