

Appendix B

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

Product Name: mobile phone

Trade Mark: Purism

Test Model: Librem 5

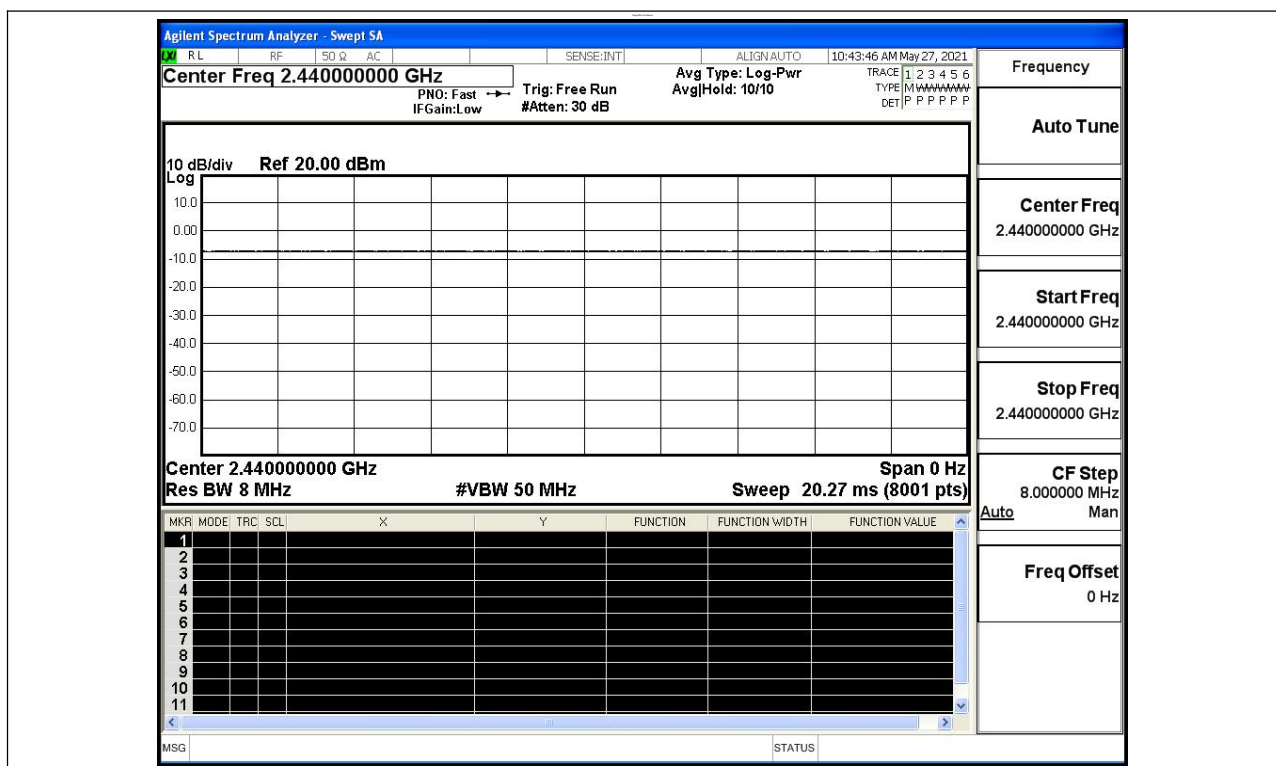
Environmental Conditions

Temperature:	24.6 ° C
Relative Humidity:	54.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Ken He
Supervised by:	Li Huan

B.1 Duty Cycle

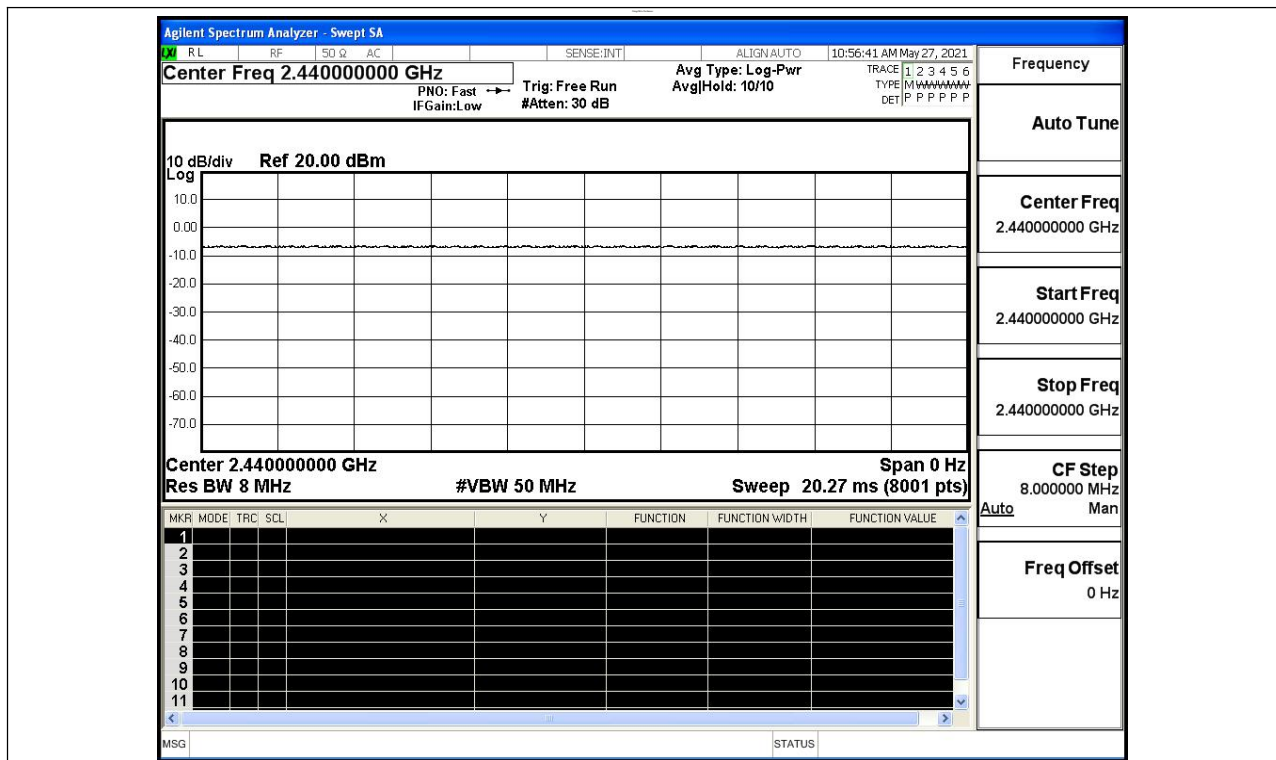
BT LE

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



BT 2LE

Test Mode	Test Channel	Ant	Duty Cycle[%]	Verdict
BT 2LE	2440	Ant1	100	PASS



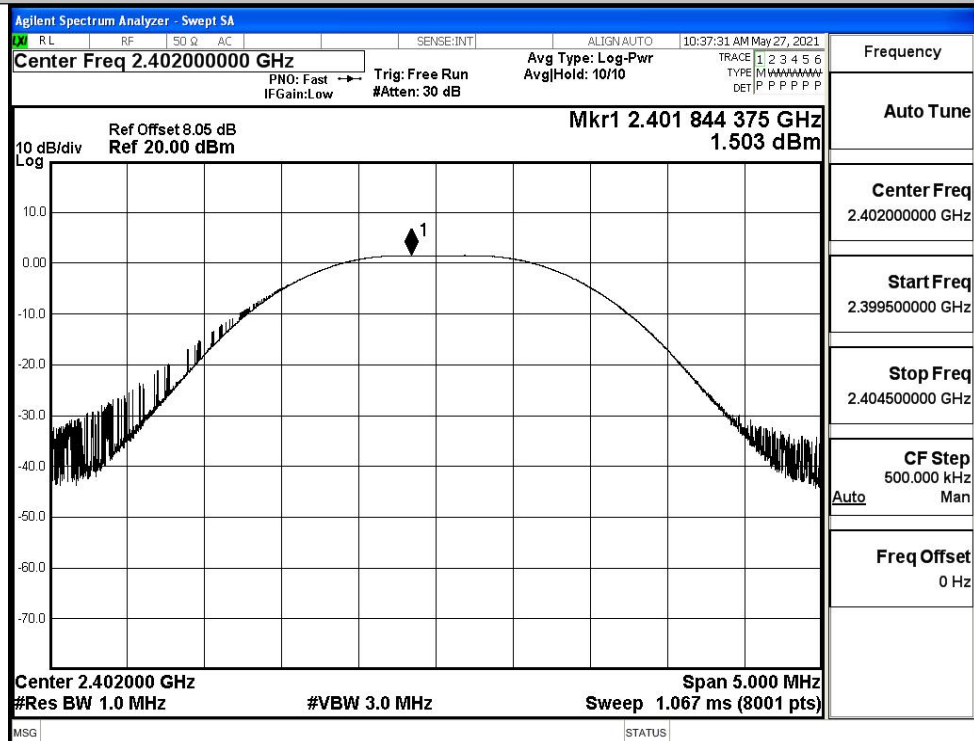
B.2 Maximum Conducted Peak Output Power

BT LE

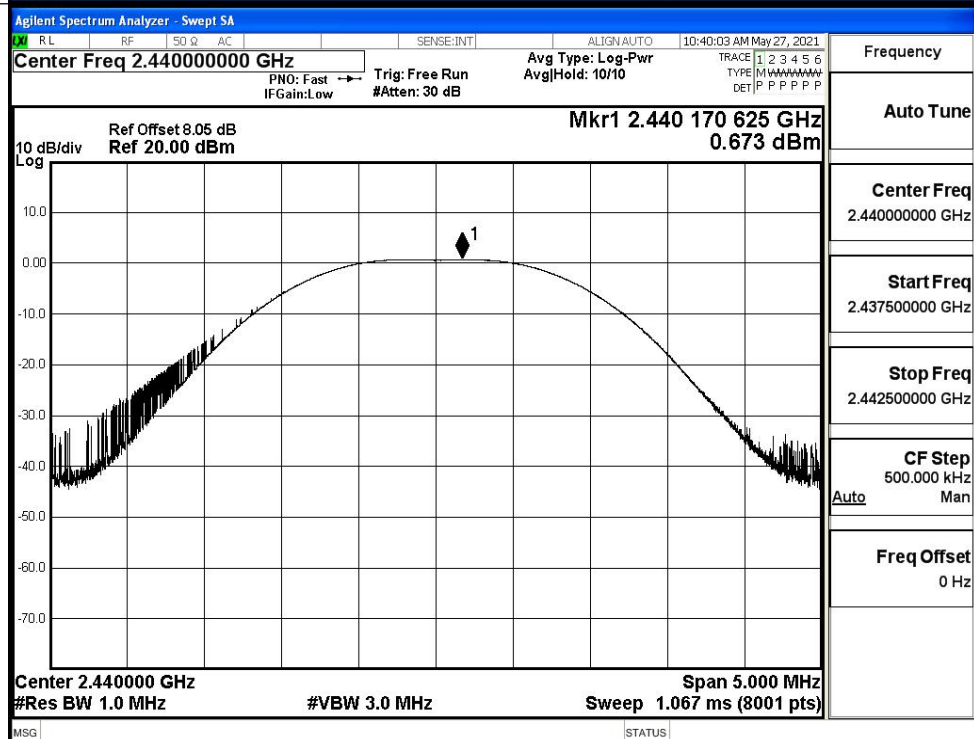
Mode	Channel	Conduct Peak Power[dBm]	Limit [dBm]	Verdict
BT LE	LCH	1.503	30	PASS
BT LE	MCH	0.673	30	PASS
BT LE	HCH	-0.565	30	PASS

Test Graphs

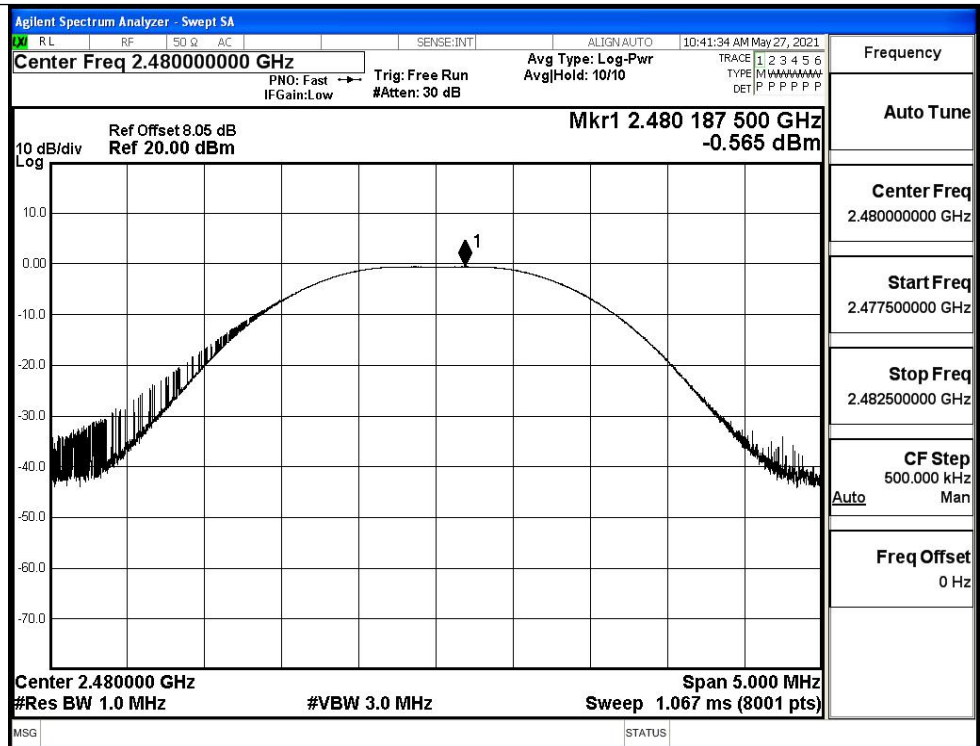
LCH



MCH



HCH

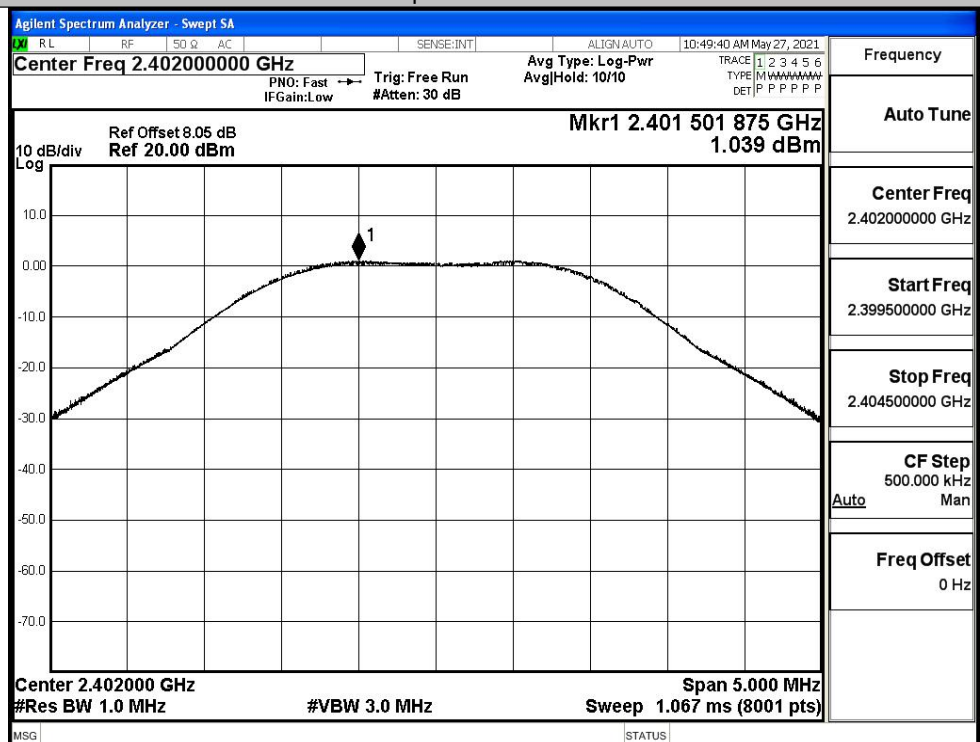


BT 2LE

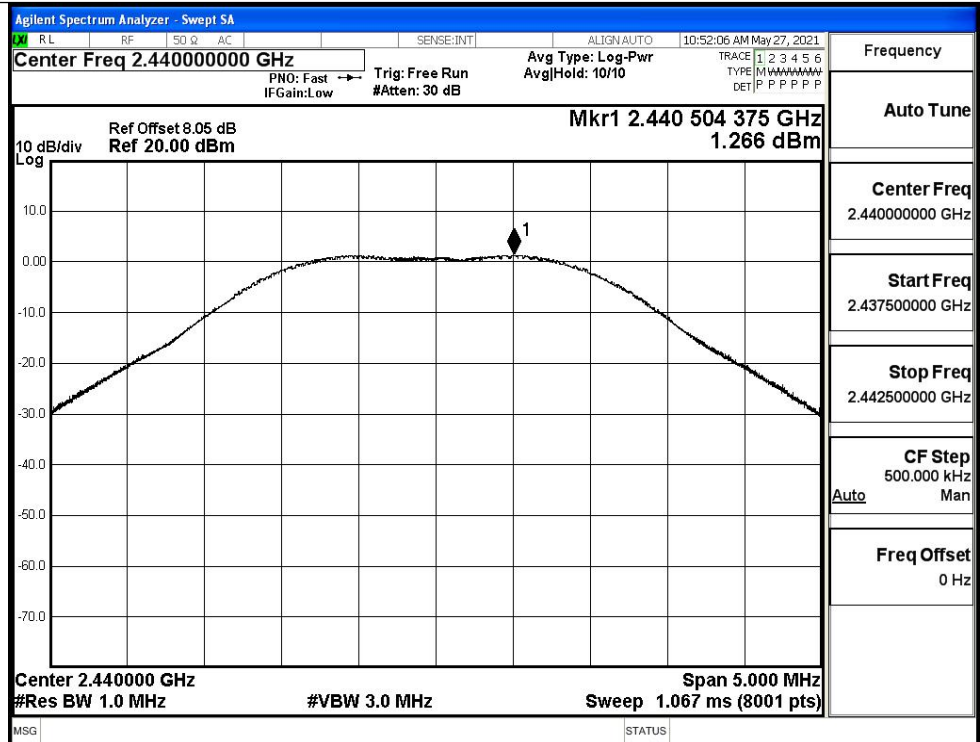
Mode	Channel	Conduct Peak Power[dBm]	Limit [dBm]	Verdict
BT 2LE	LCH	1.039	30	PASS
BT 2LE	MCH	1.266	30	PASS
BT 2LE	HCH	-0.565	30	PASS

Test Graphs

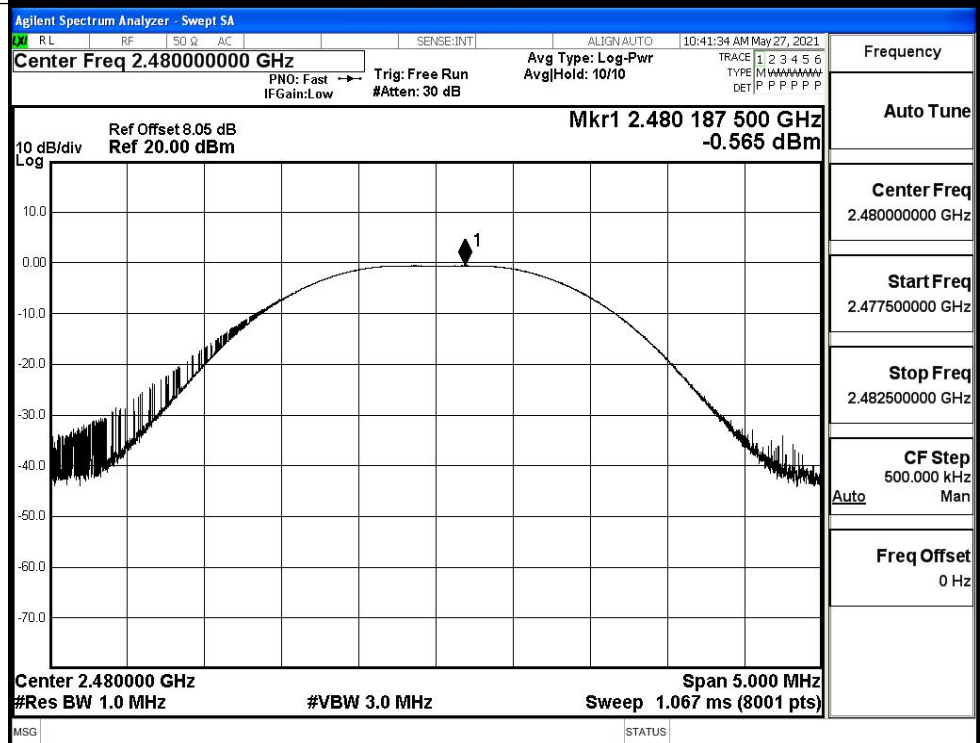
LCH



MCH



HCH



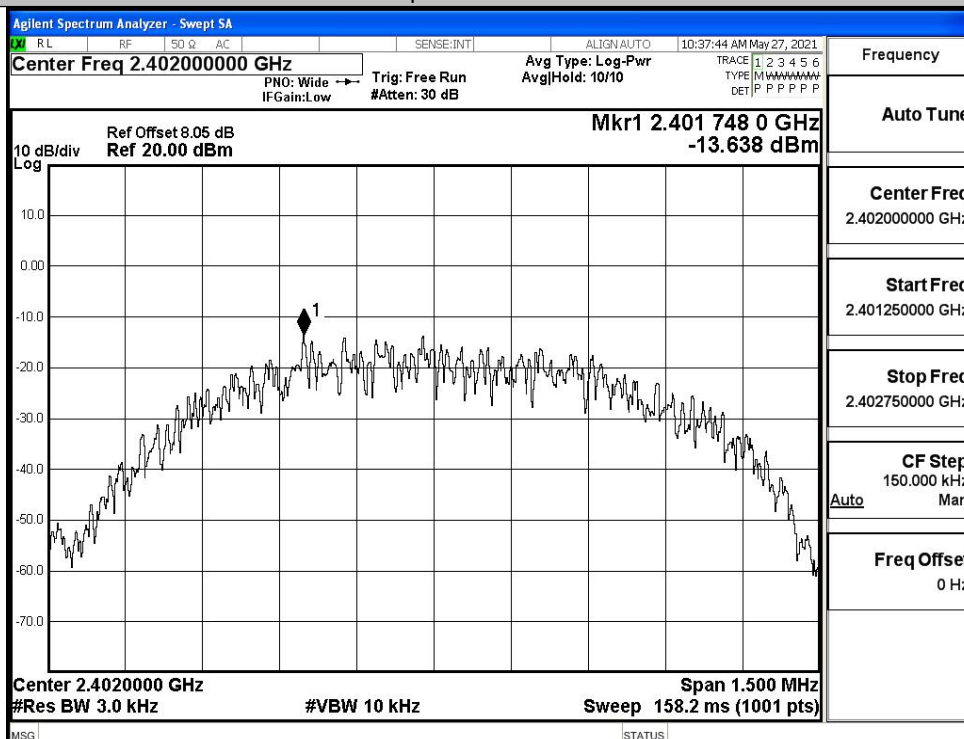
B.3 Maximum Power Spectral Density

BT LE

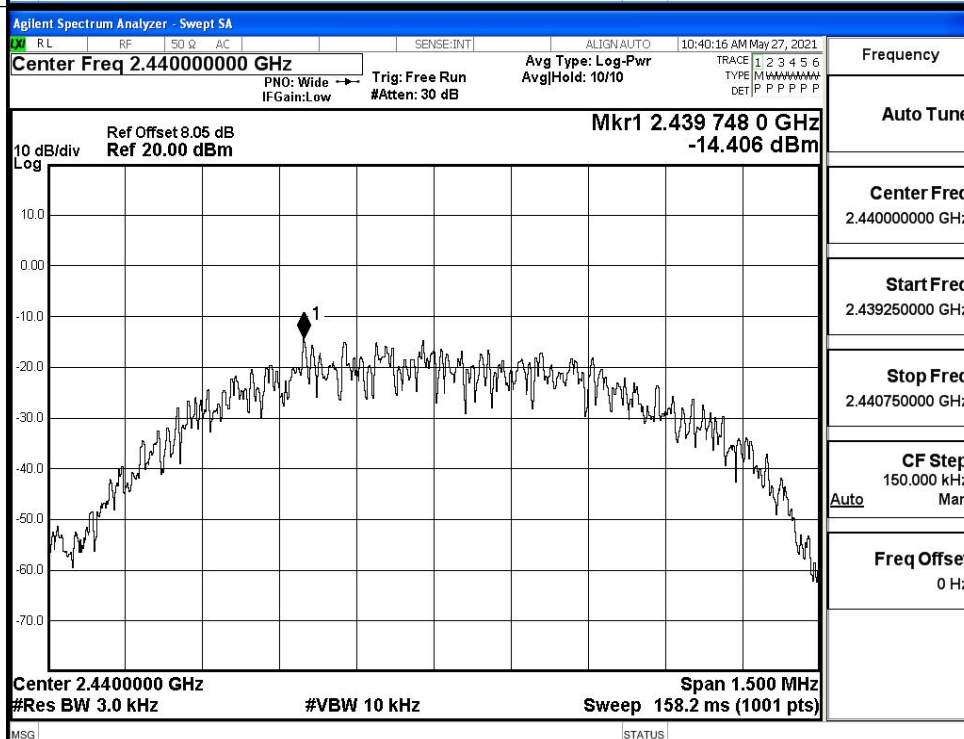
Mode	Channel	PSD [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
BT LE	LCH	-13.638	8	PASS
BT LE	MCH	-14.406	8	PASS
BT LE	HCH	-15.723	8	PASS

Test Graphs

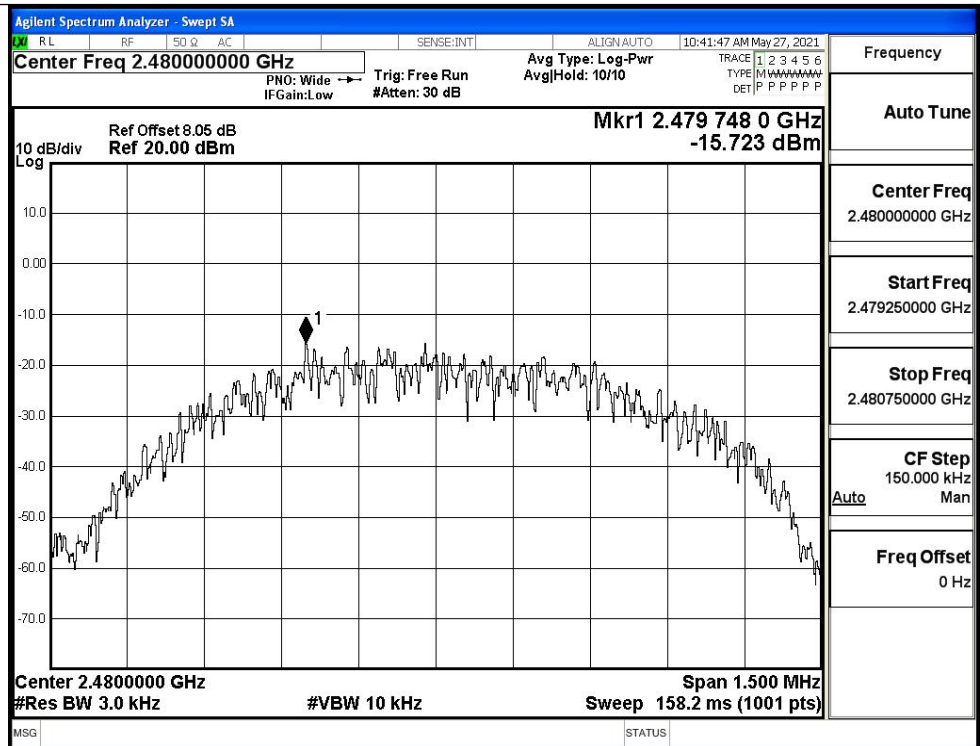
LCH



MCH



HCH

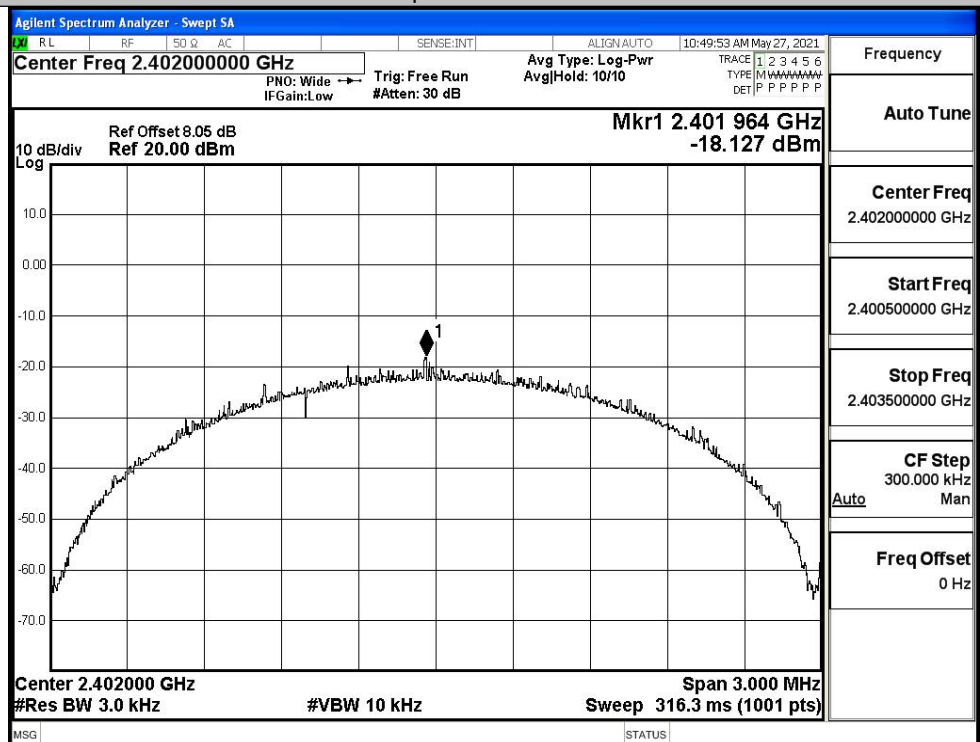


BT 2LE

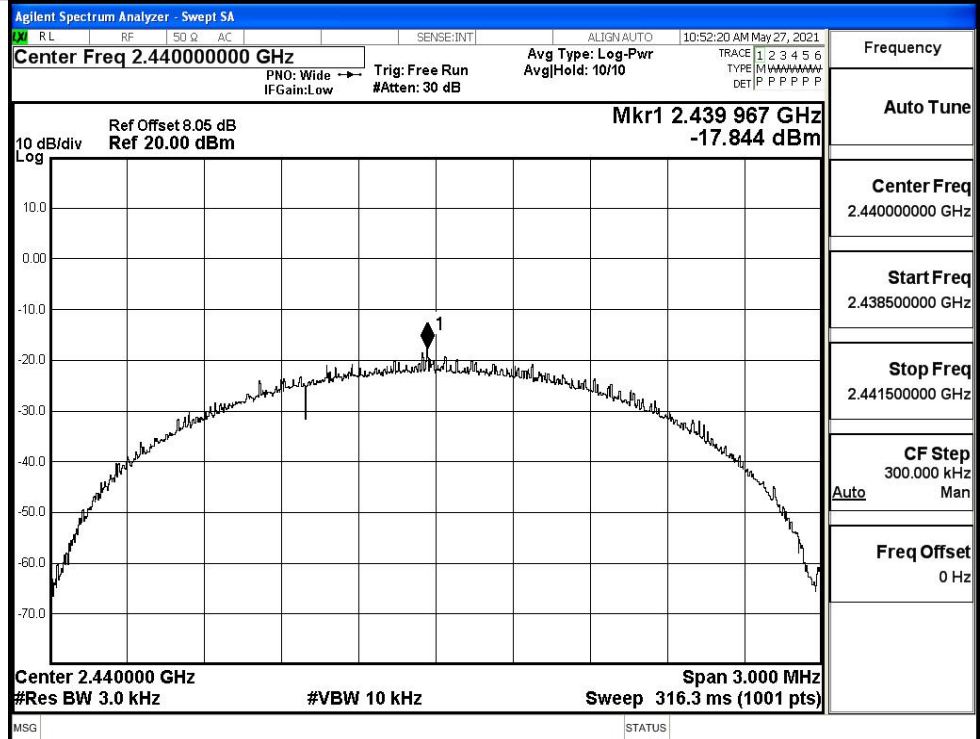
Mode	Channel	PSD [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
BT 2LE	LCH	-18.127	8	PASS
BT 2LE	MCH	-17.844	8	PASS
BT 2LE	HCH	-16.699	8	PASS

Test Graphs

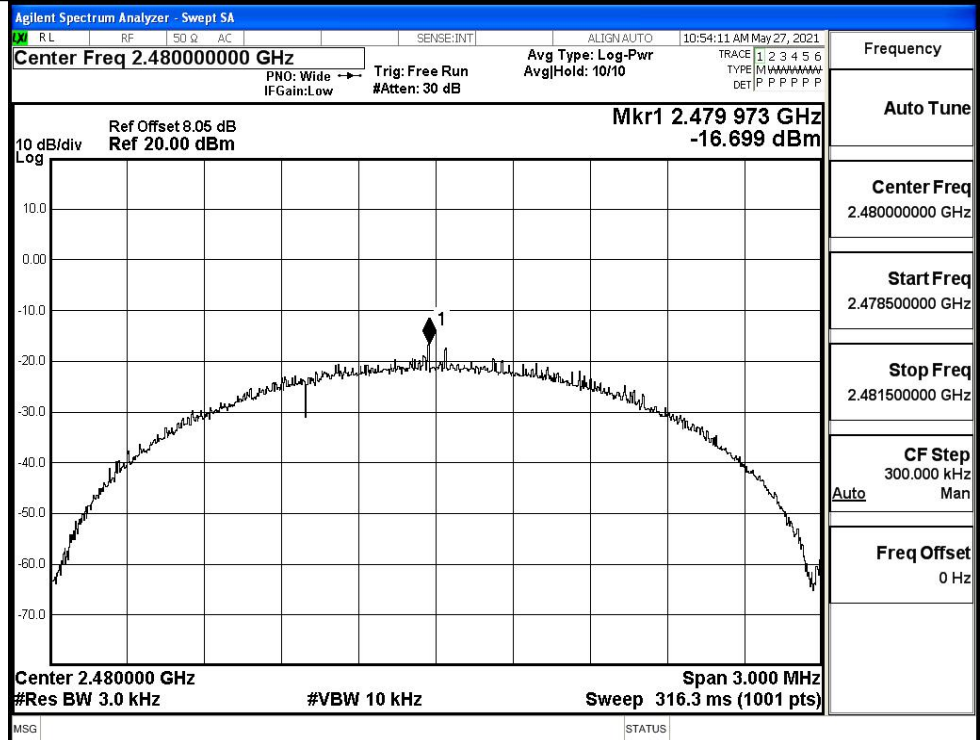
LCH



MCH



HCH



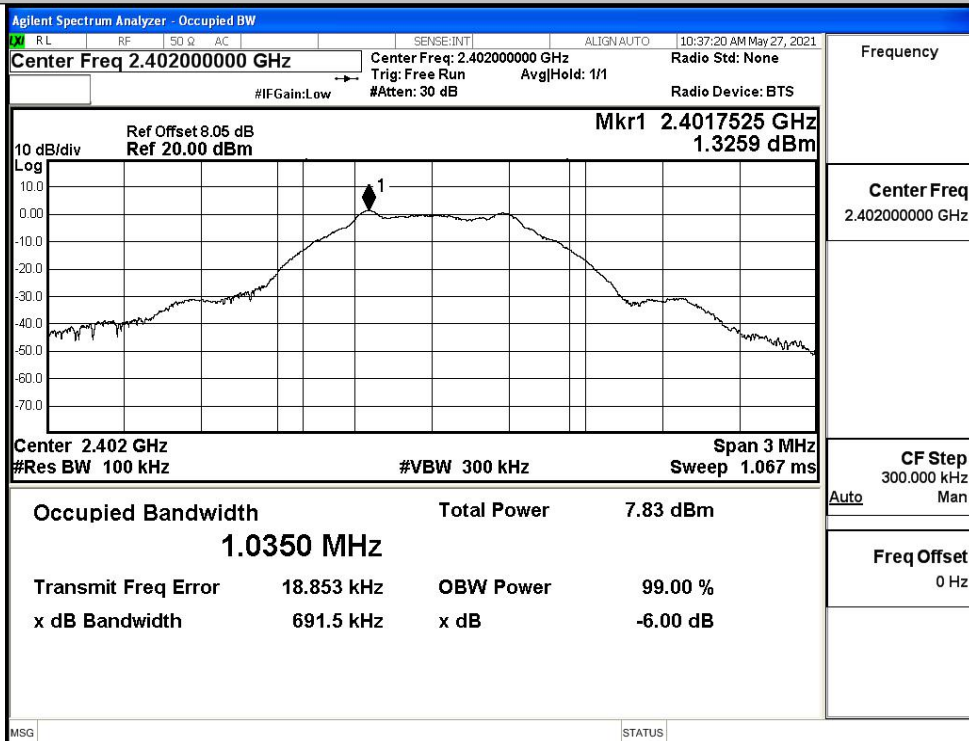
B.4 6dB Bandwidth

BT LE

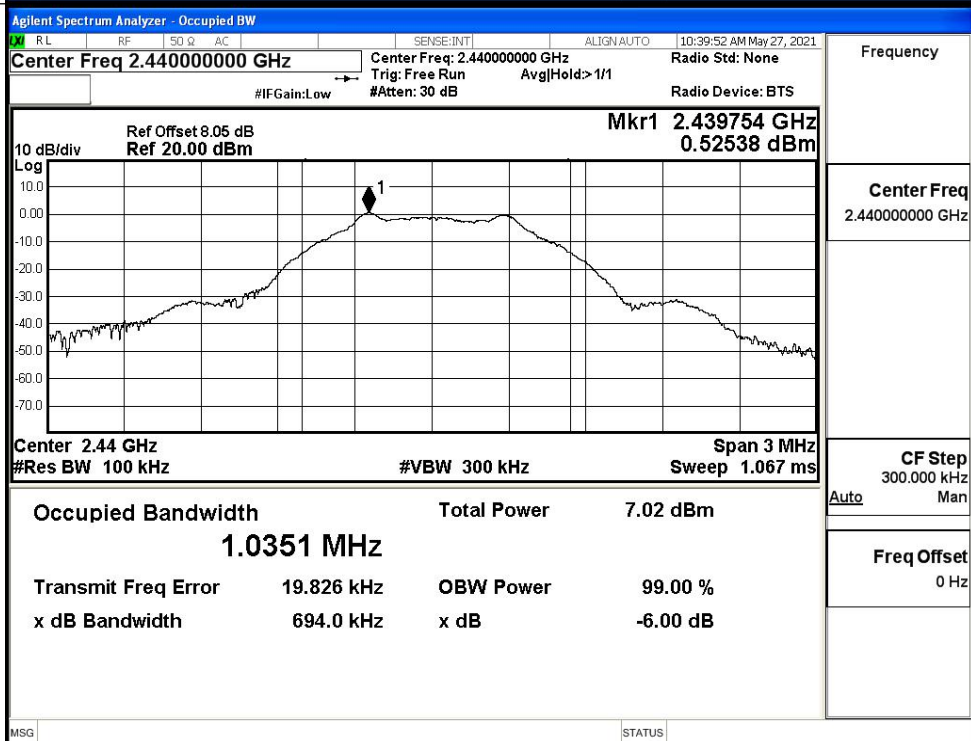
Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
BT LE	LCH	0.6915	≥ 0.5	PASS
BT LE	MCH	0.6940	≥ 0.5	PASS
BT LE	HCH	0.6886	≥ 0.5	PASS

Test Graphs

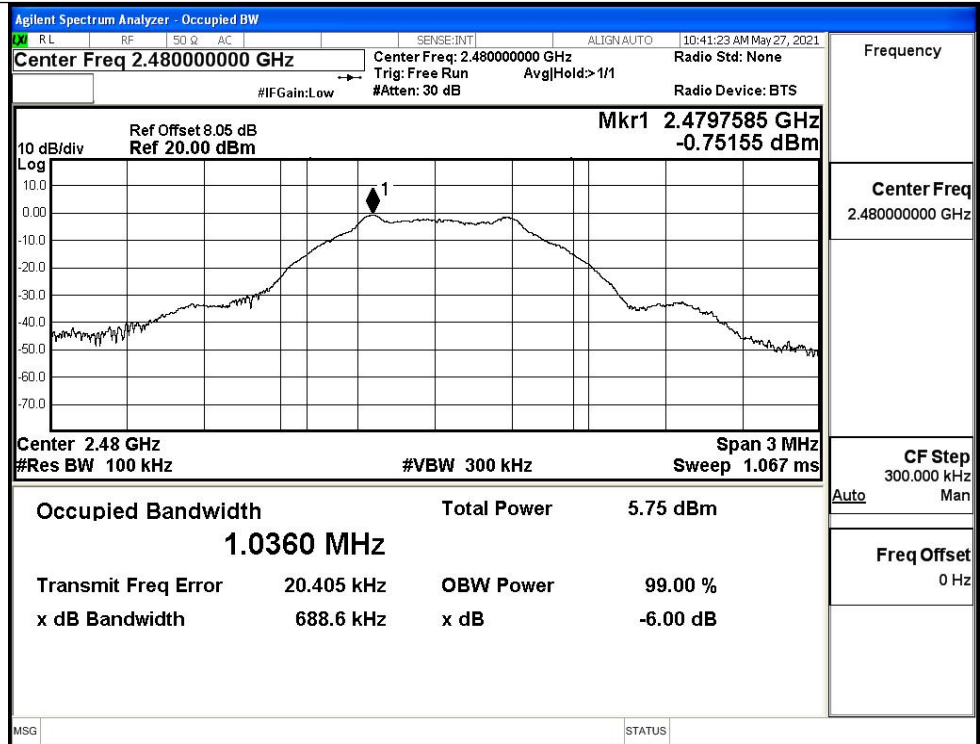
LCH



MCH



HCH

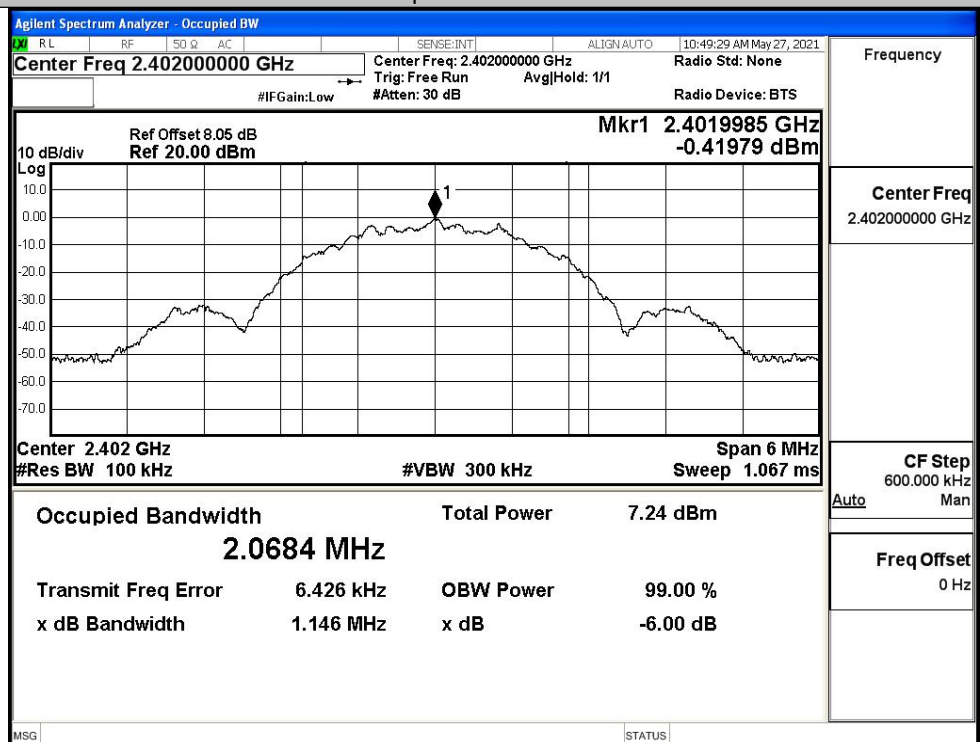


BT 2LE

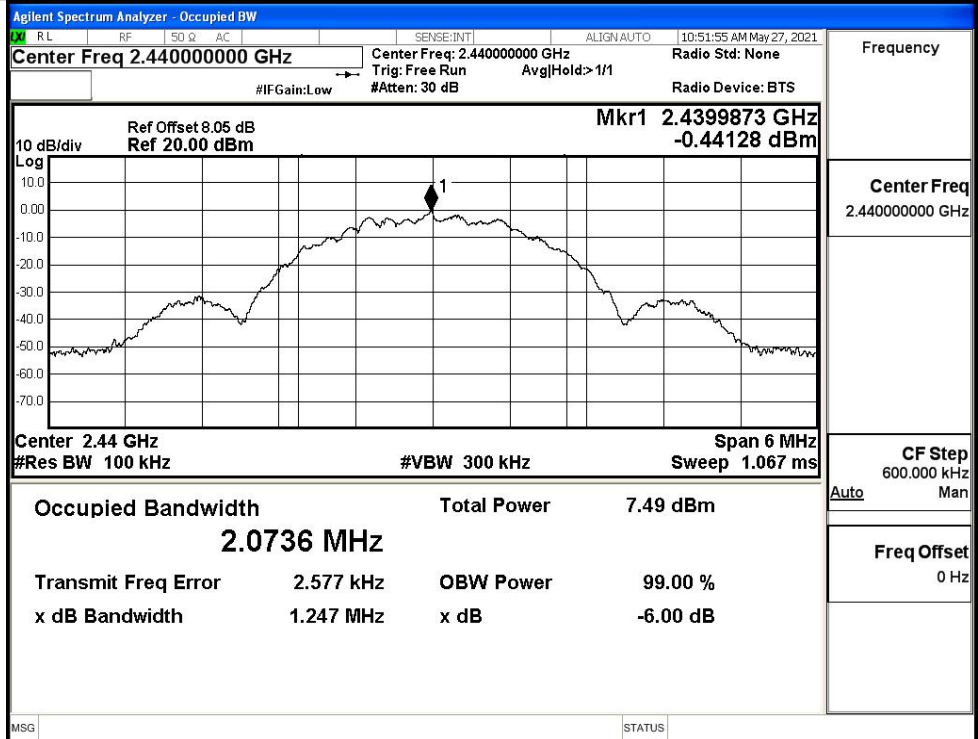
Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
BT 2LE	LCH	1.146	≥ 0.5	PASS
BT 2LE	MCH	1.247	≥ 0.5	PASS
BT 2LE	HCH	1.185	≥ 0.5	PASS

Test Graphs

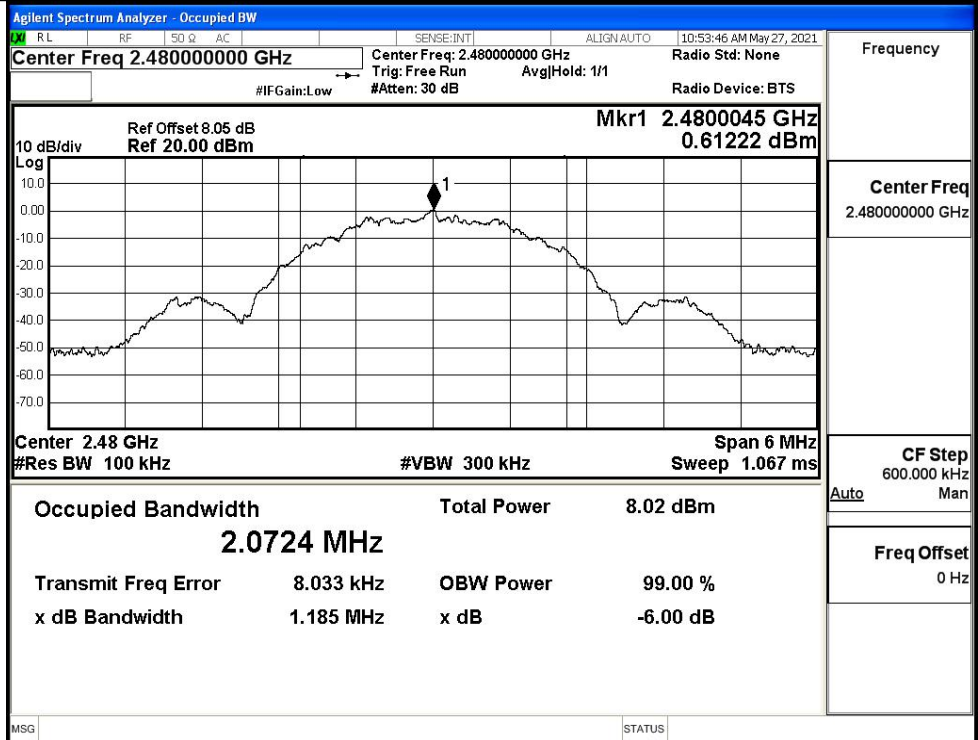
LCH



MCH



HCH



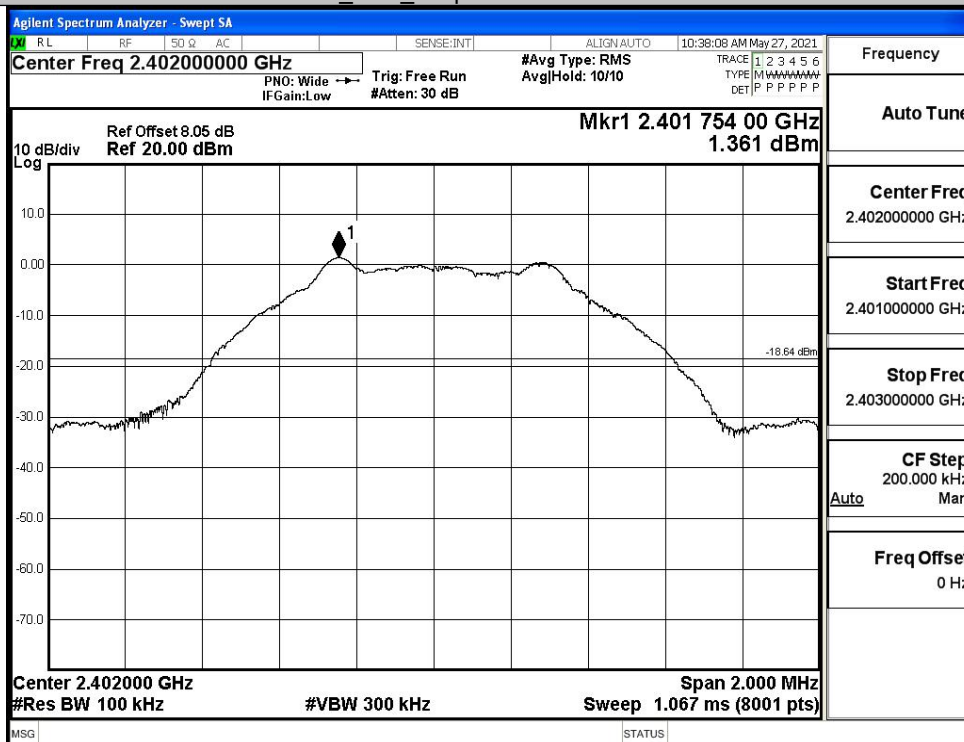
B.5 RF Conducted Spurious Emissions

BT LE

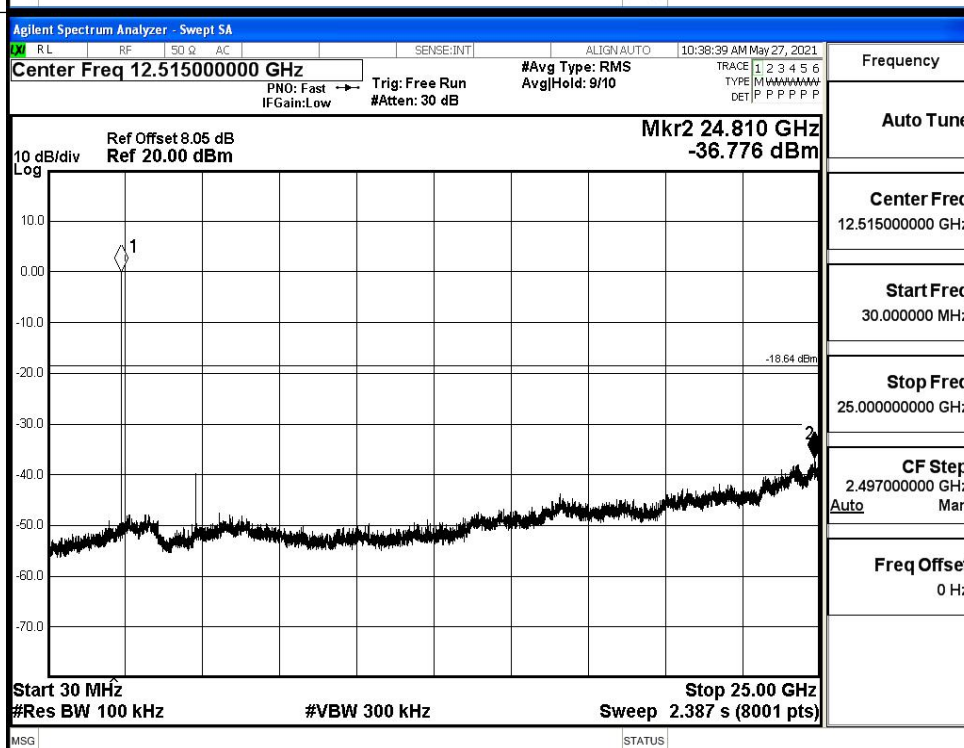
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	1.361	-36.776	-18.639	PASS
BT LE	MCH	0.518	-36.687	-19.482	PASS
BT LE	HCH	-0.726	-37.145	-20.726	PASS

BT LE_LCH_Graphs

Pref/BT LE/LCH

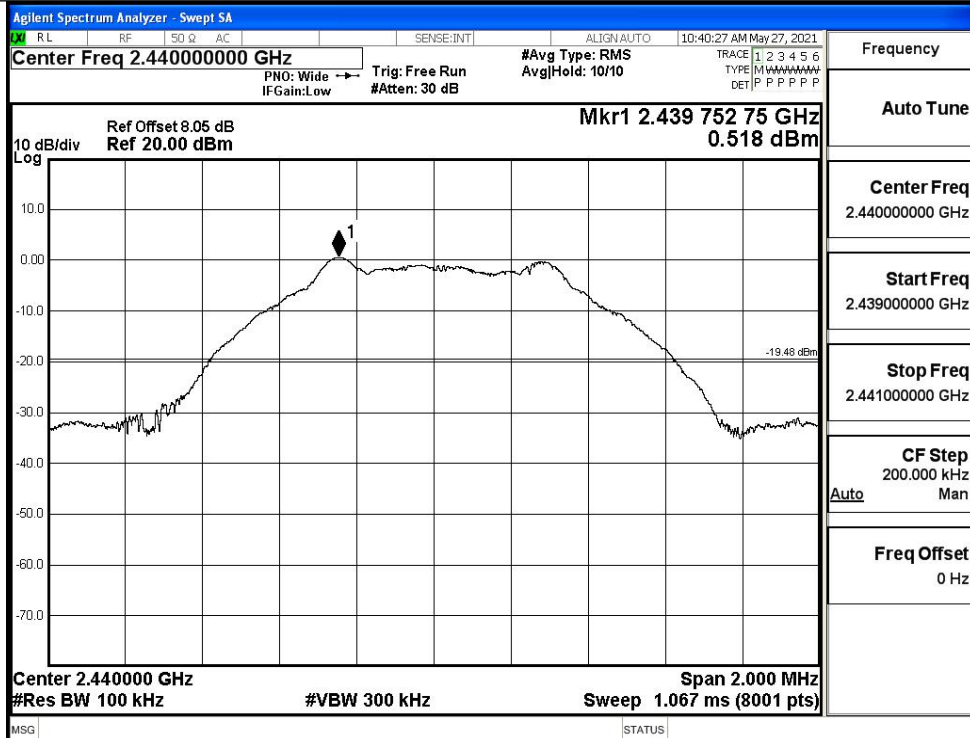


Puw/BT LE/LCH

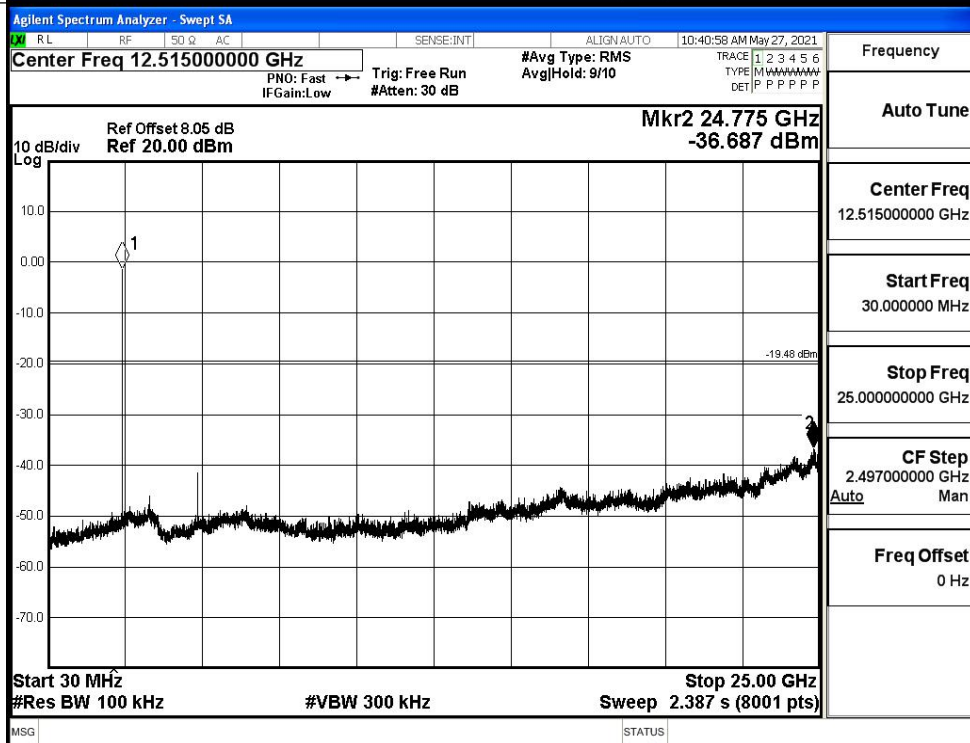


BT LE MCH Graphs

Pref/BT LE/MCH

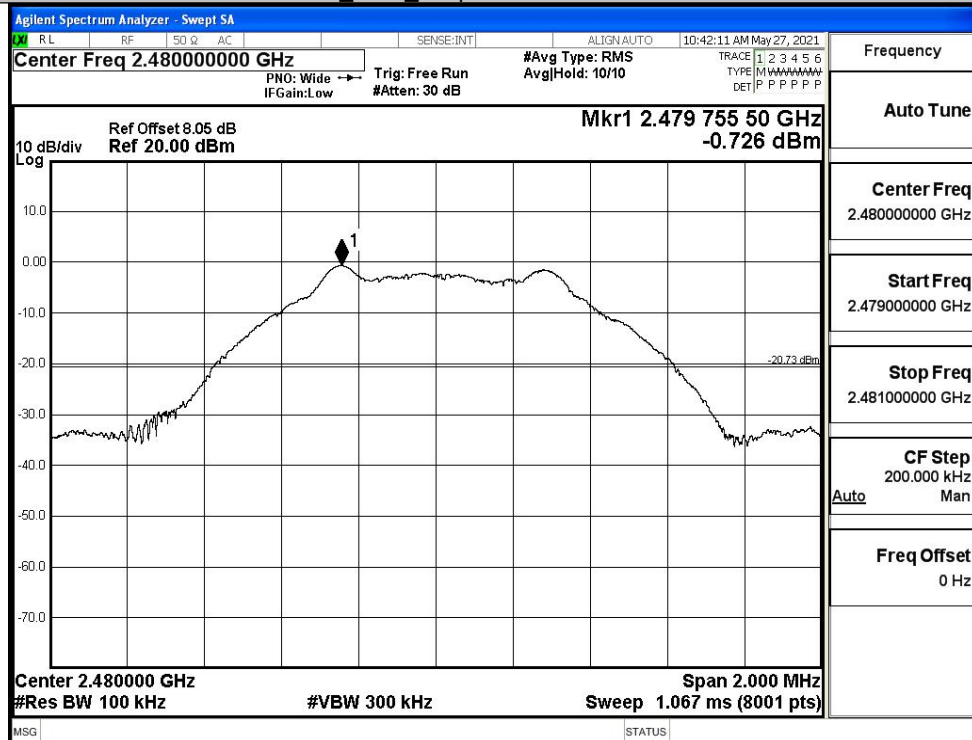


Puw/BT LE/MCH

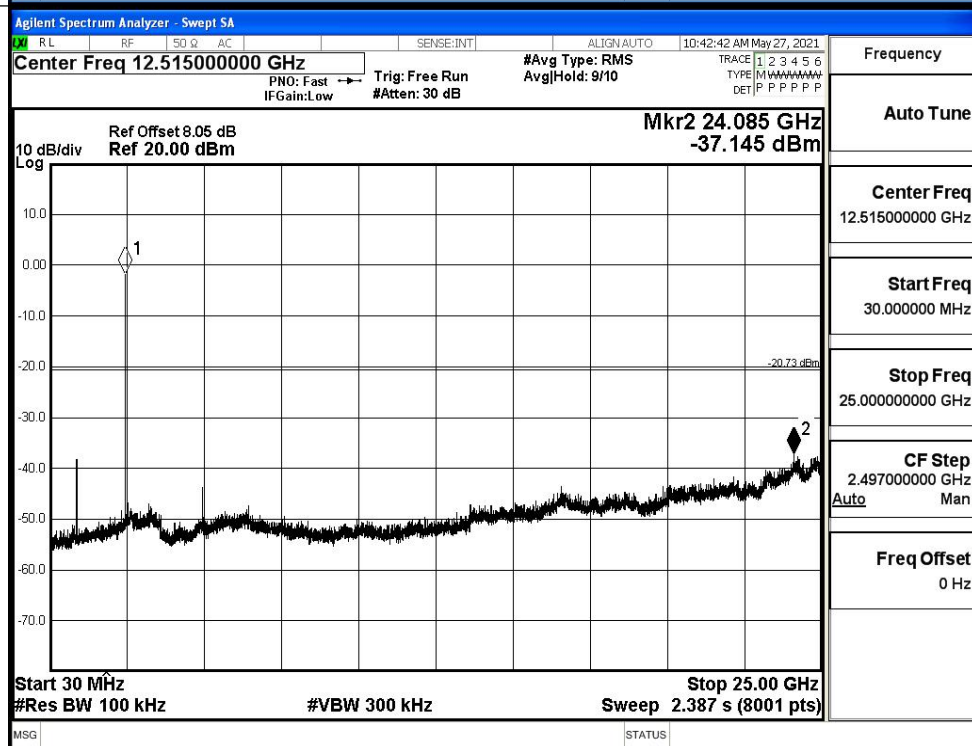


BT LE HCH Graphs

Pref/BT LE/HCH



Puw/BT LE/HCH

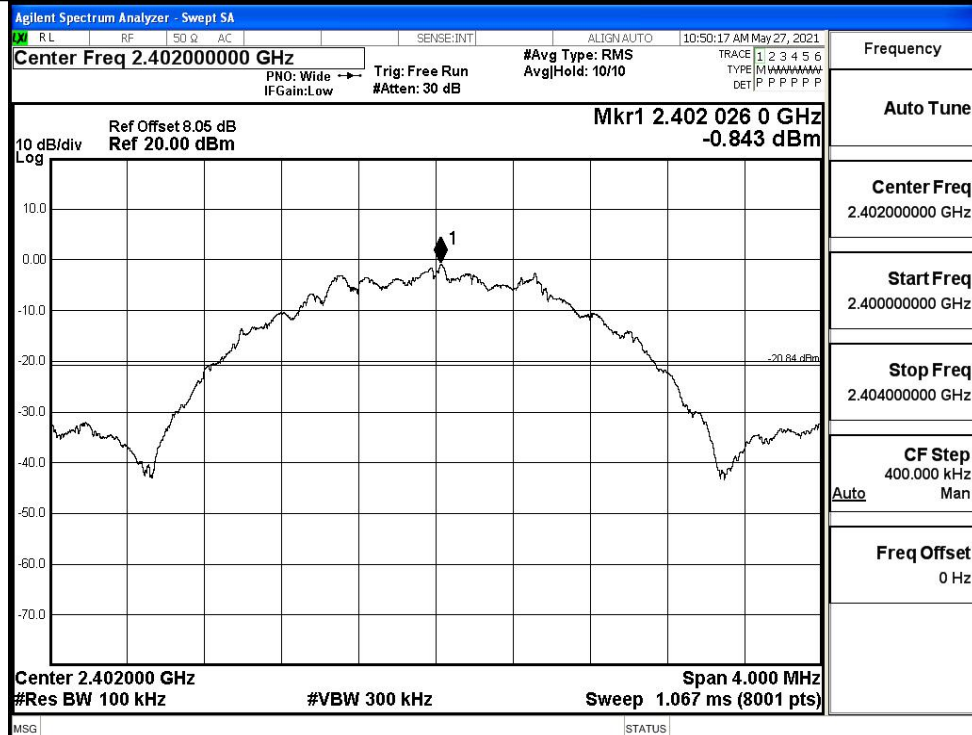


BT 2LE

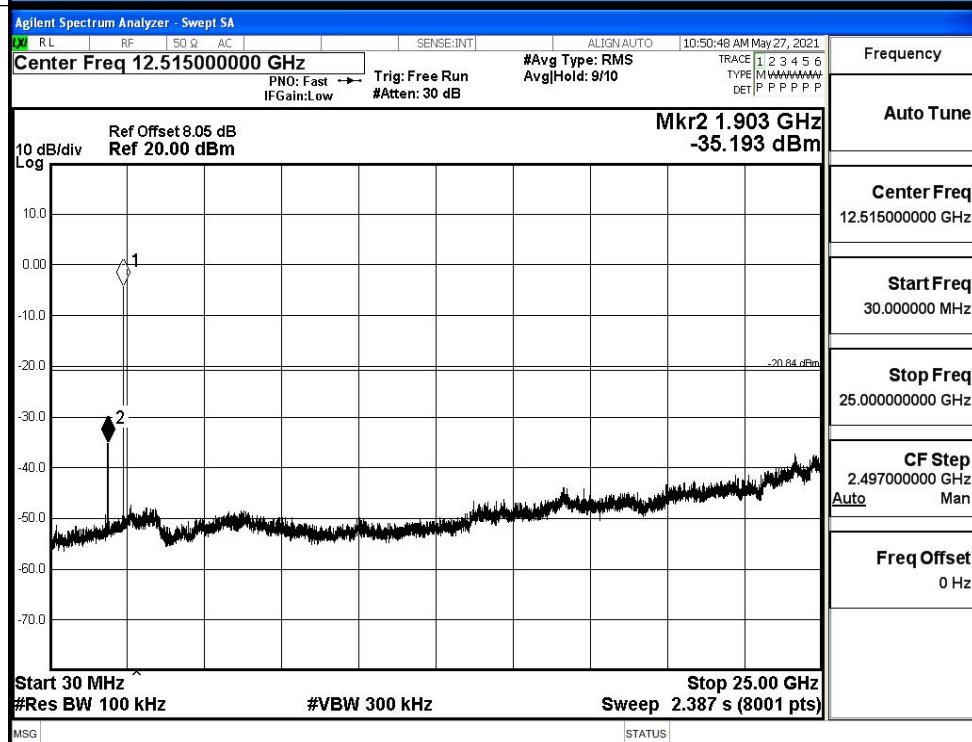
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
BT 2LE	LCH	-0.843	-35.193	-20.843	PASS
BT 2LE	MCH	-0.227	-37.962	-20.227	PASS
BT 2LE	HCH	1.038	-29.816	-18.962	PASS

BT LE LCH Graphs

Pref/BT LE/LCH

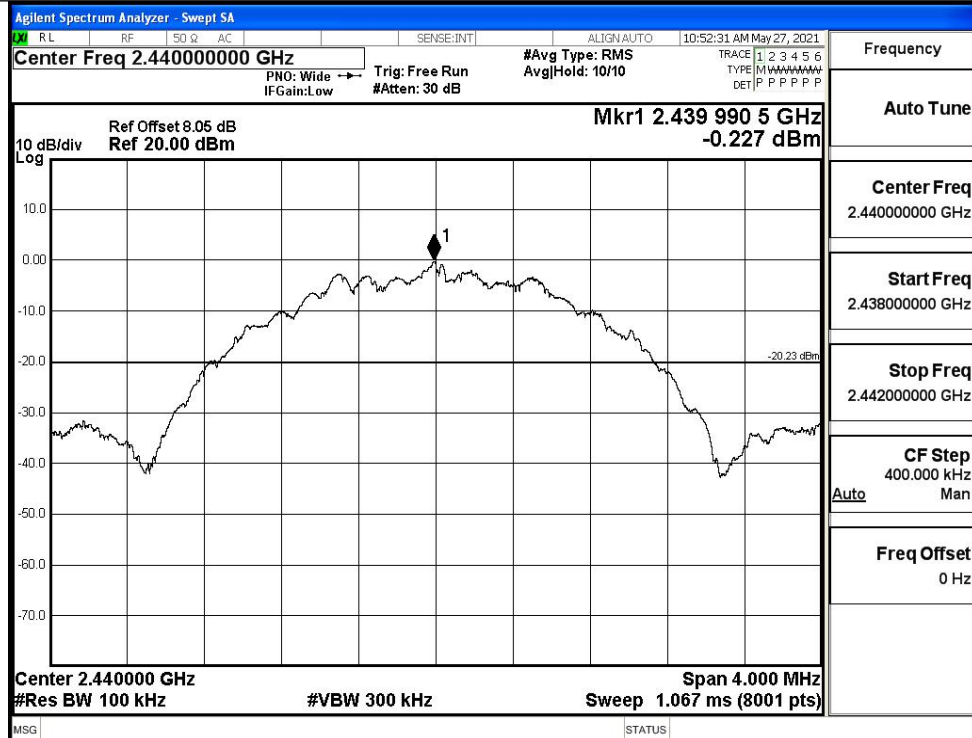


Puw/BT LE/LCH

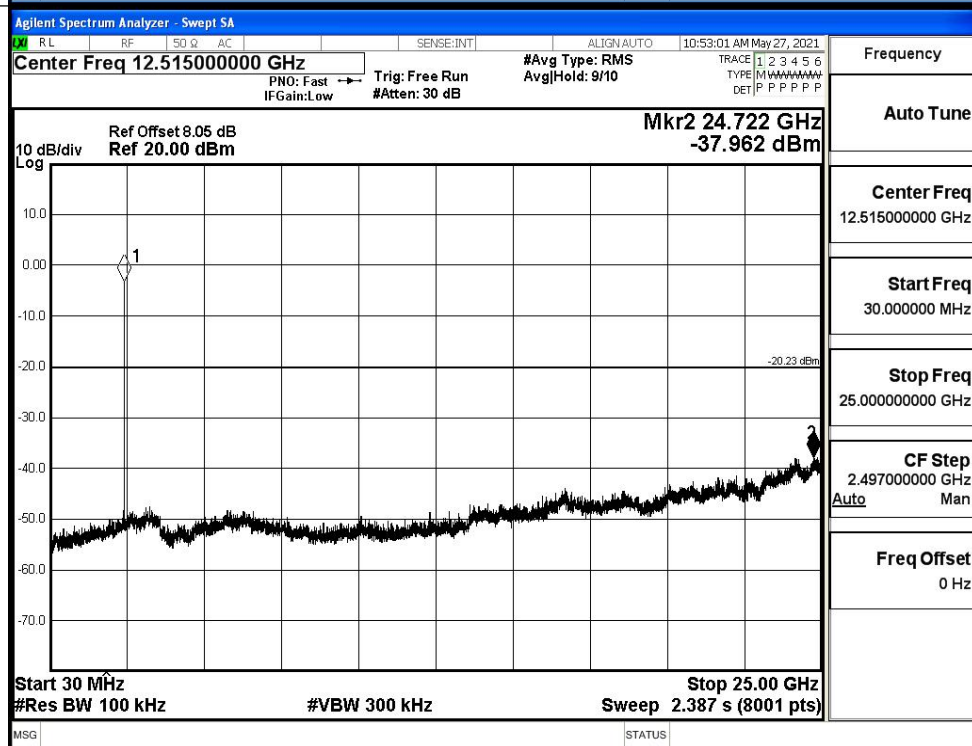


BT LE MCH Graphs

Pref/BT LE/MCH

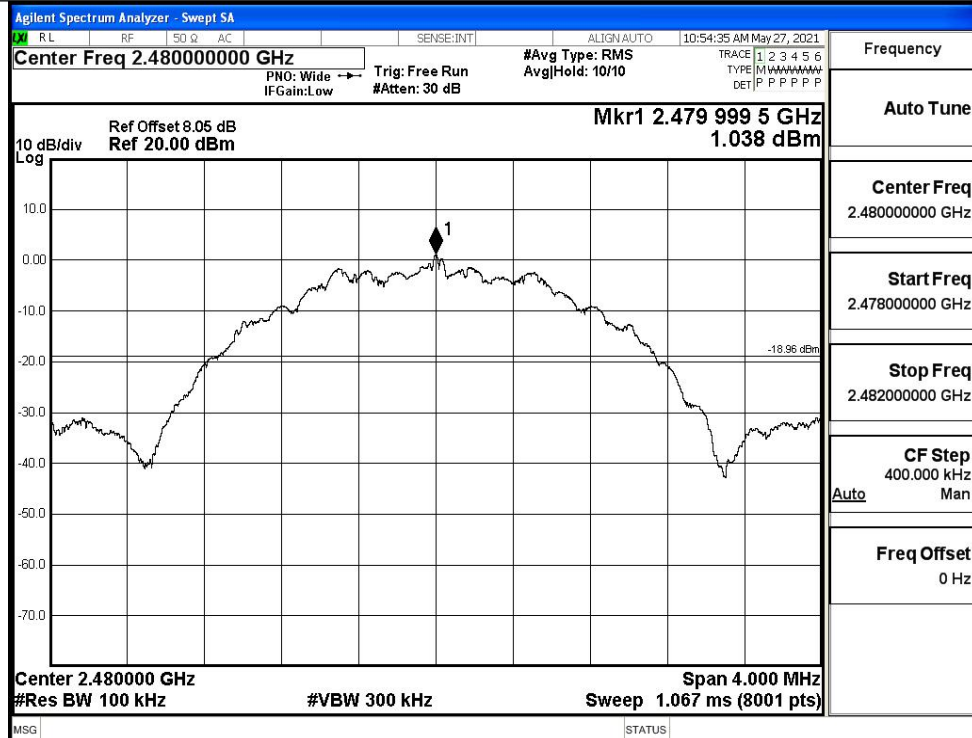


Puw/BT LE/MCH

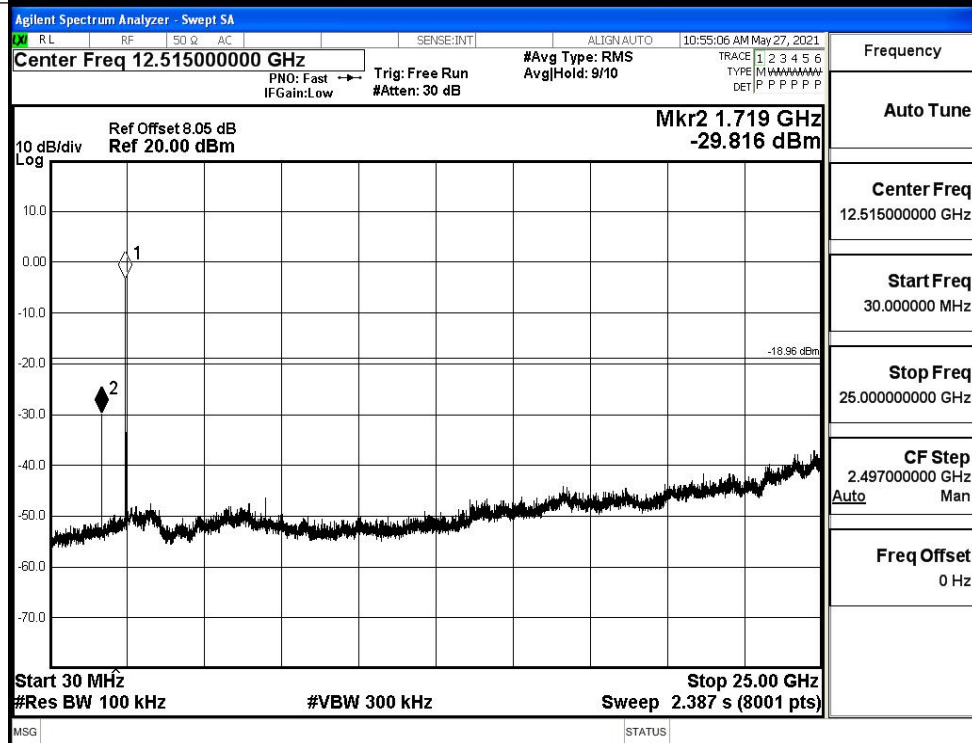


BT LE HCH Graphs

Pref/BT LE/HCH



Puw/BT LE/HCH



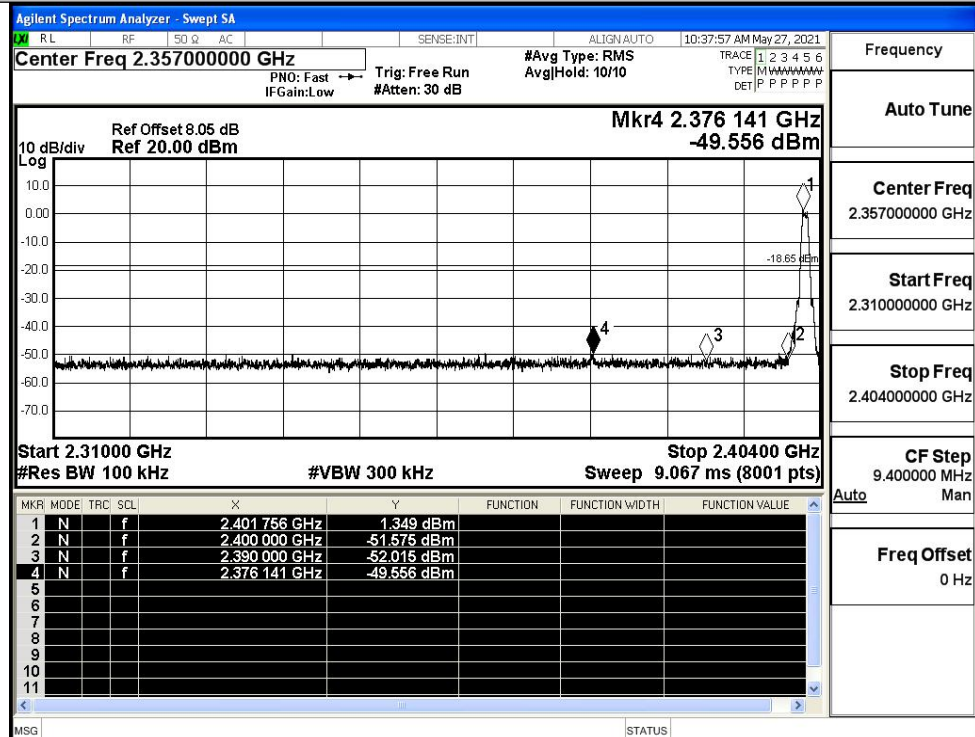
B.6 Band-edge for RF Conducted Emissions

BT LE

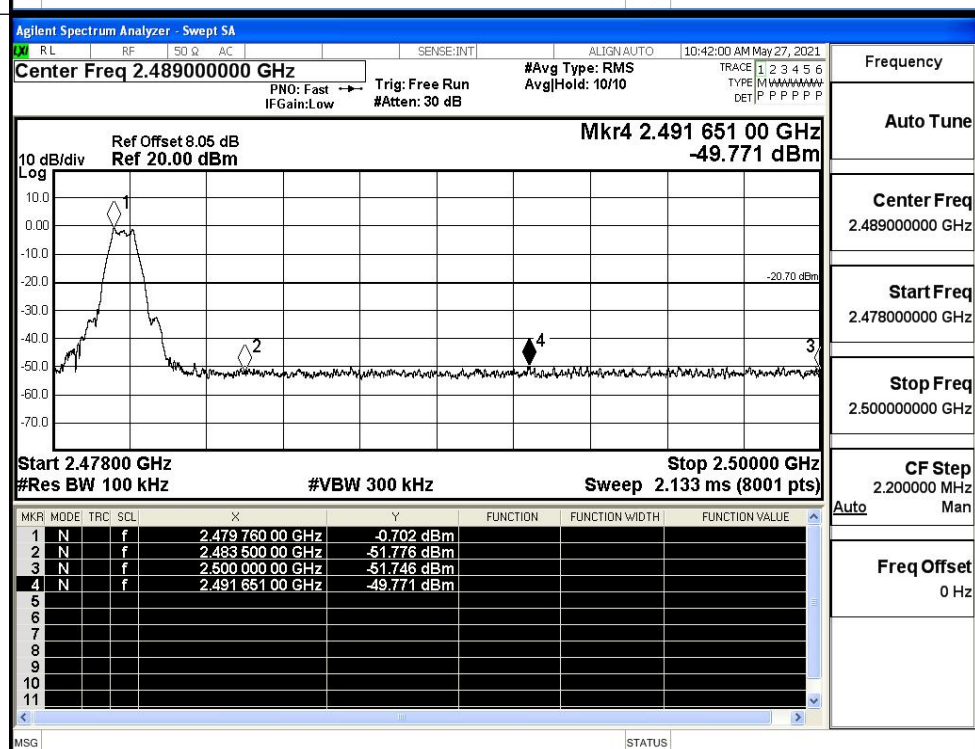
Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	1.349	-49.556	-18.65	PASS
BT LE	HCH	-0.702	-49.771	-20.7	PASS

Test Graphs

LCH



HCH

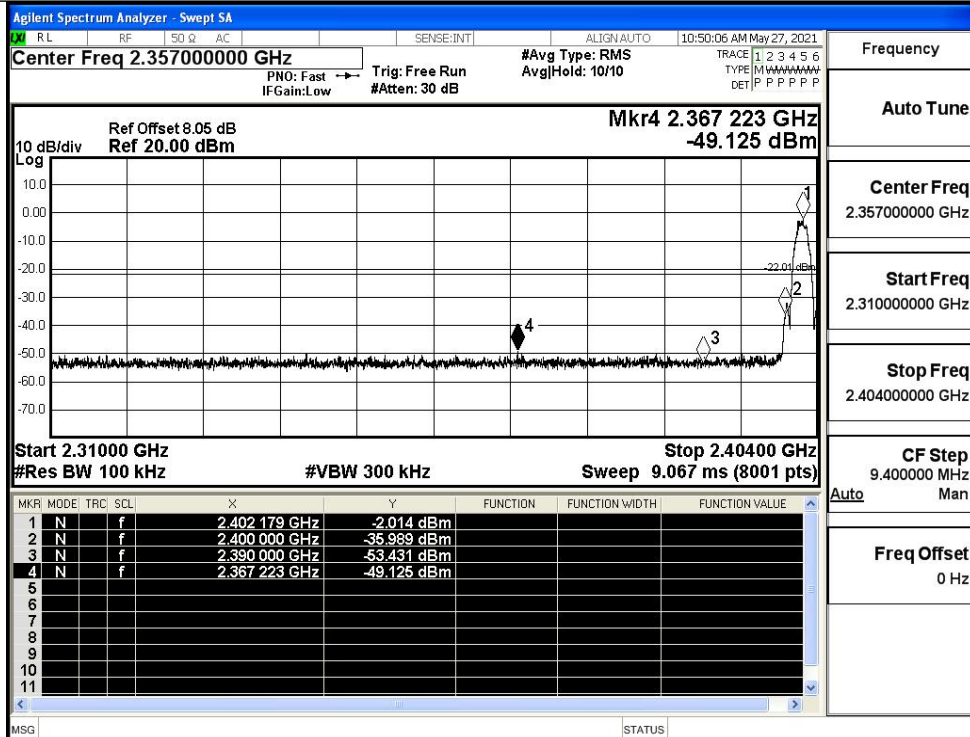


BT 2LE

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
BT 2LE	LCH	-2.014	-49.125	-22.01	PASS
BT 2LE	HCH	0.664	-49.449	-19.34	PASS

Test Graphs

LCH



Frequency

Auto Tune

Center Freq

2.357000000 GHz

Start Freq

2.310000000 GHz

Stop Freq

2.404000000 GHz

CF Step

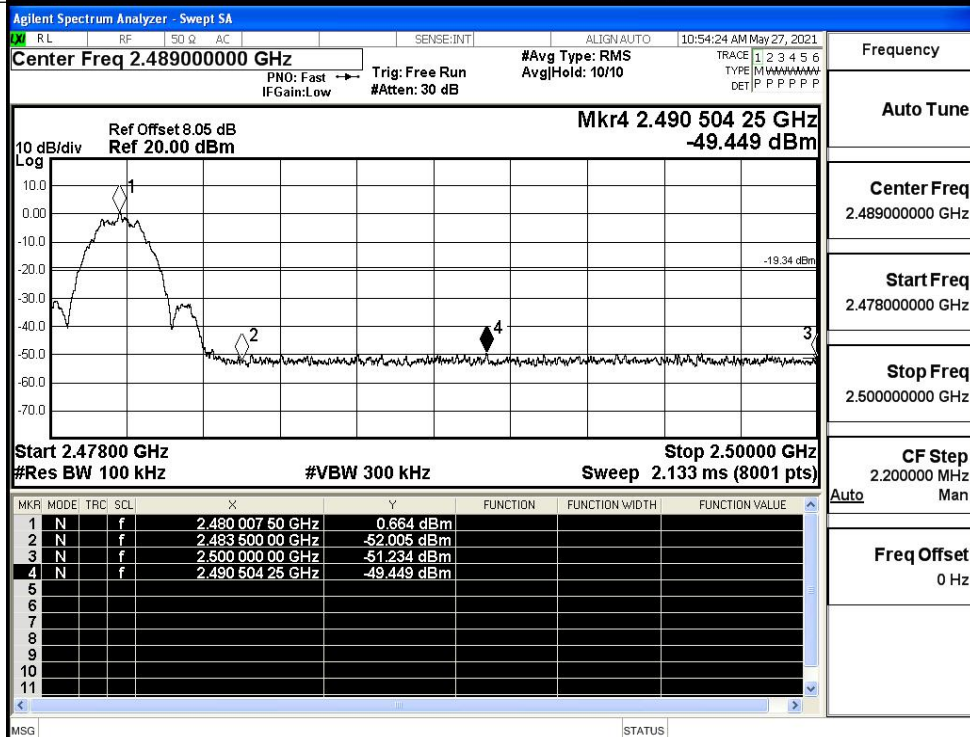
9.400000 MHz

Auto

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

Freq Offset

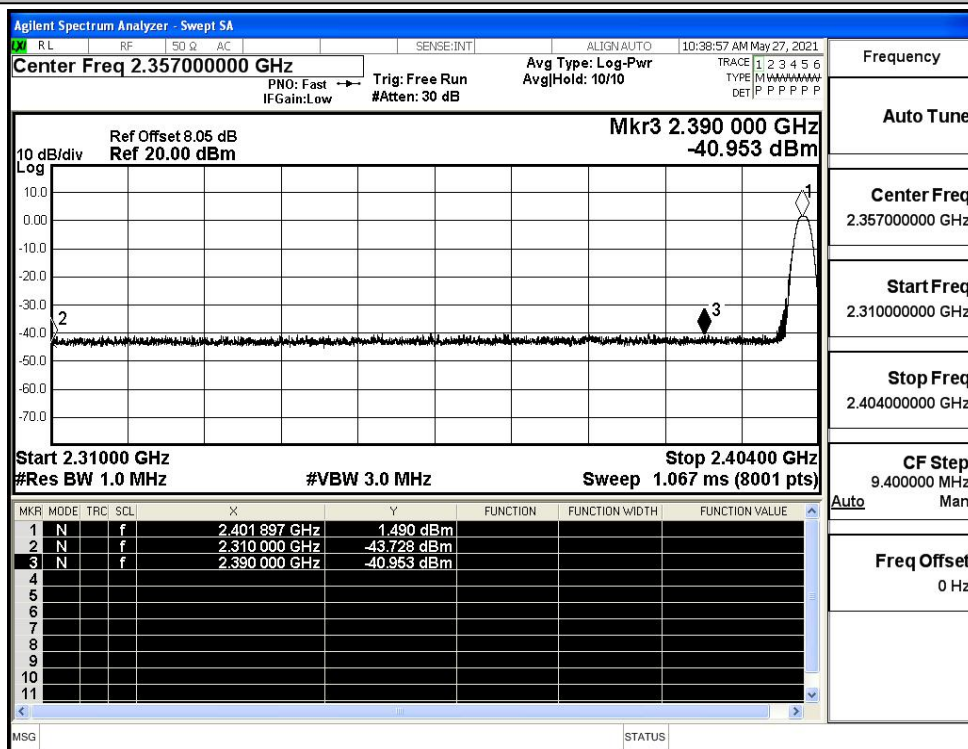
0 Hz

B.7 Restrict-band band-edge measurements

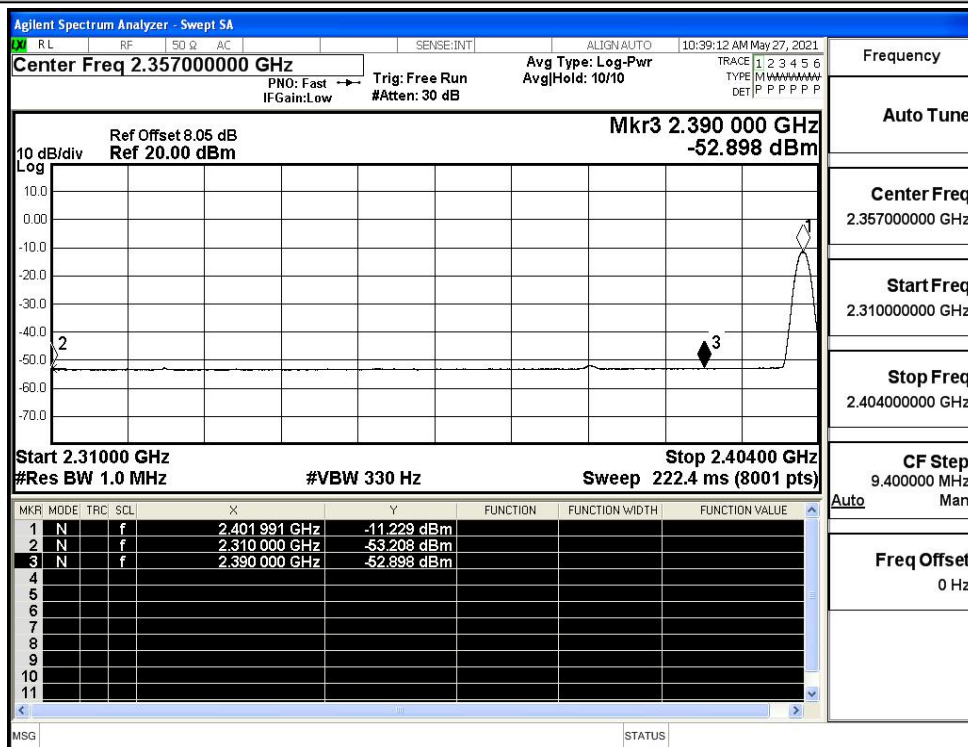
BT LE

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	-43.73	2.0	0	53.50	PEAK	74	PASS
		Ant1	2310.0	-53.21	2.0	0	44.02	AV	54	PASS
		Ant1	2390.0	-40.95	2.0	0	56.28	PEAK	74	PASS
		Ant1	2390.0	-52.90	2.0	0	44.33	AV	54	PASS
	2480	Ant1	2483.5	-41.95	2.0	0	55.28	PEAK	74	PASS
		Ant1	2483.5	-52.45	2.0	0	44.78	AV	54	PASS
		Ant1	2500.0	-42.76	2.0	0	54.47	PEAK	74	PASS
		Ant1	2500.0	-52.32	2.0	0	44.91	AV	54	PASS

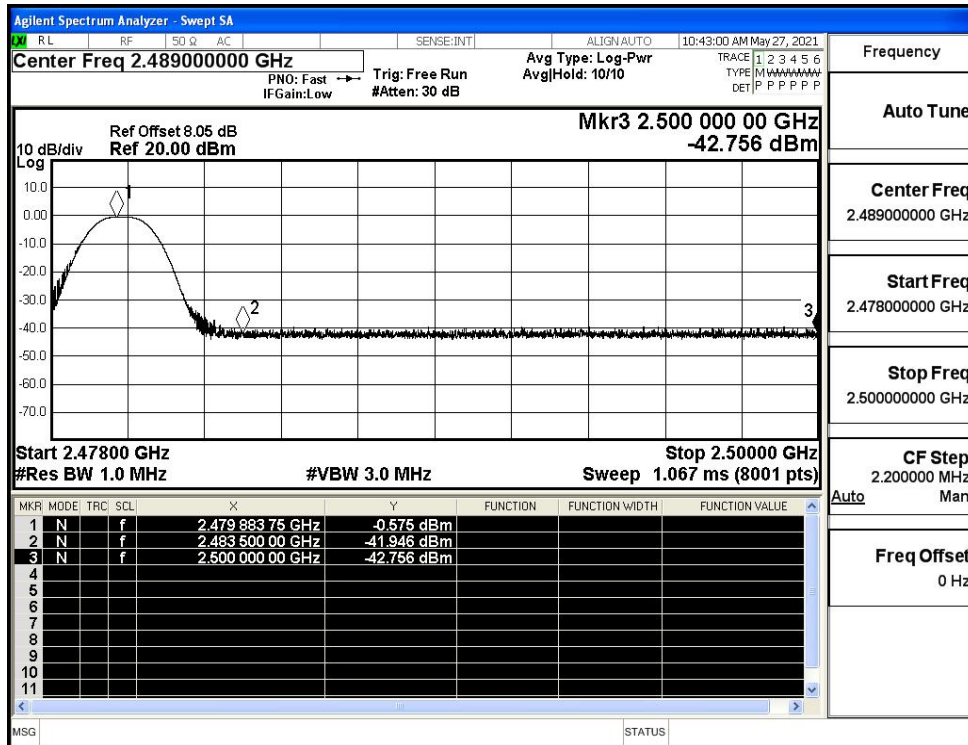
Restrict-band band-edge measurements_BT LE_2402_Ant1_PEAK



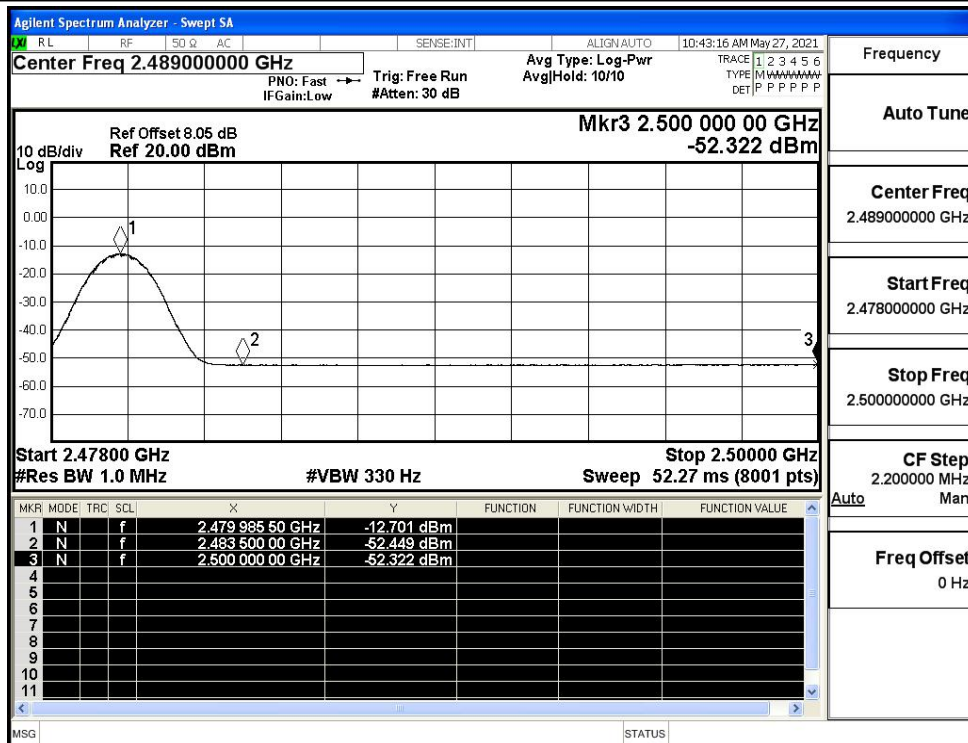
Restrict-band band-edge measurements_BT LE_2402_Ant1_AV



Restrict-band band-edge measurements_BT LE_2480_Ant1_PEAK



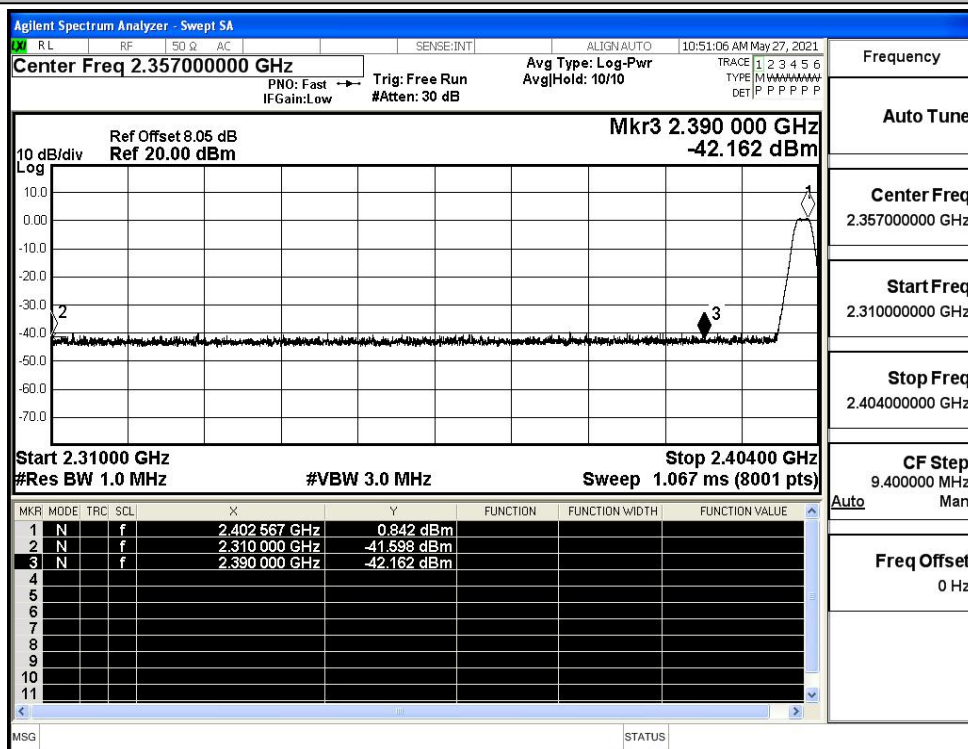
Restrict-band band-edge measurements_BT LE_2480_Ant1_AV



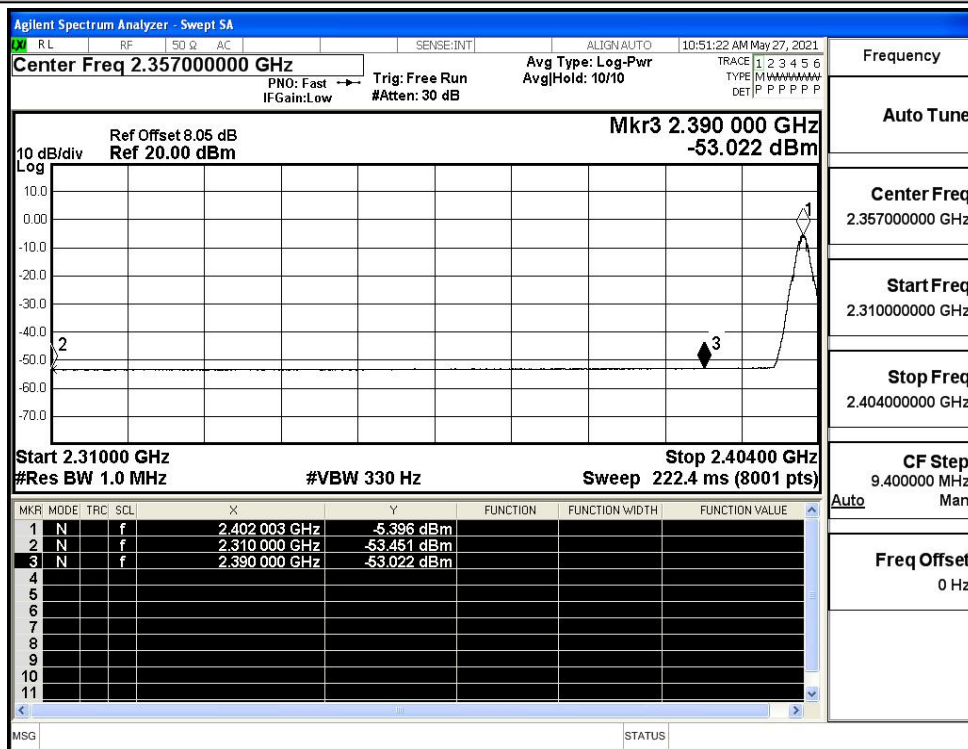
BT 2LE

Test Mode	Test Channel	Ant	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdi
BT 2LE	2402	Ant1	2310.0	-41.60	2.0	0	55.63	PEAK	74	PASS
		Ant1	2310.0	-53.45	2.0	0	43.78	AV	54	PASS
		Ant1	2390.0	-42.16	2.0	0	55.07	PEAK	74	PASS
		Ant1	2390.0	-53.02	2.0	0	44.21	AV	54	PASS
	2480	Ant1	2483.5	-41.85	2.0	0	55.38	PEAK	74	PASS
		Ant1	2483.5	-51.66	2.0	0	45.57	AV	54	PASS
		Ant1	2500.0	-42.24	2.0	0	54.99	PEAK	74	PASS
		Ant1	2500.0	-52.39	2.0	0	44.84	AV	54	PASS

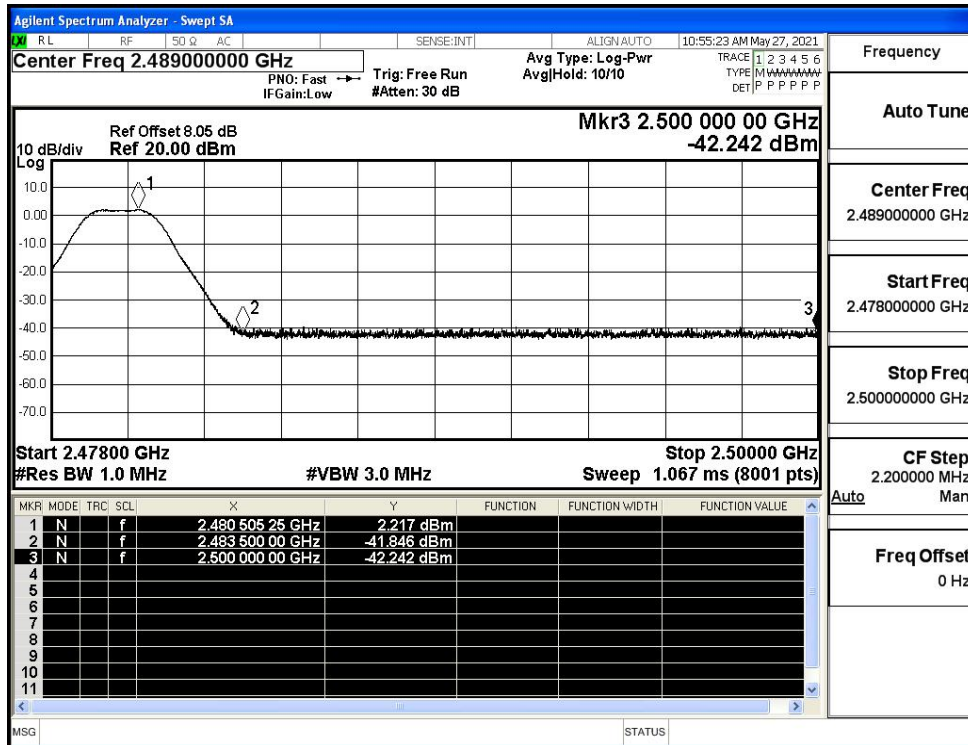
Restrict-band band-edge measurements_BT LE_2402_Ant1_PEAK



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

