

Appendix B

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

Product Name: True Wireless Earbuds

Trade Mark: Energizer

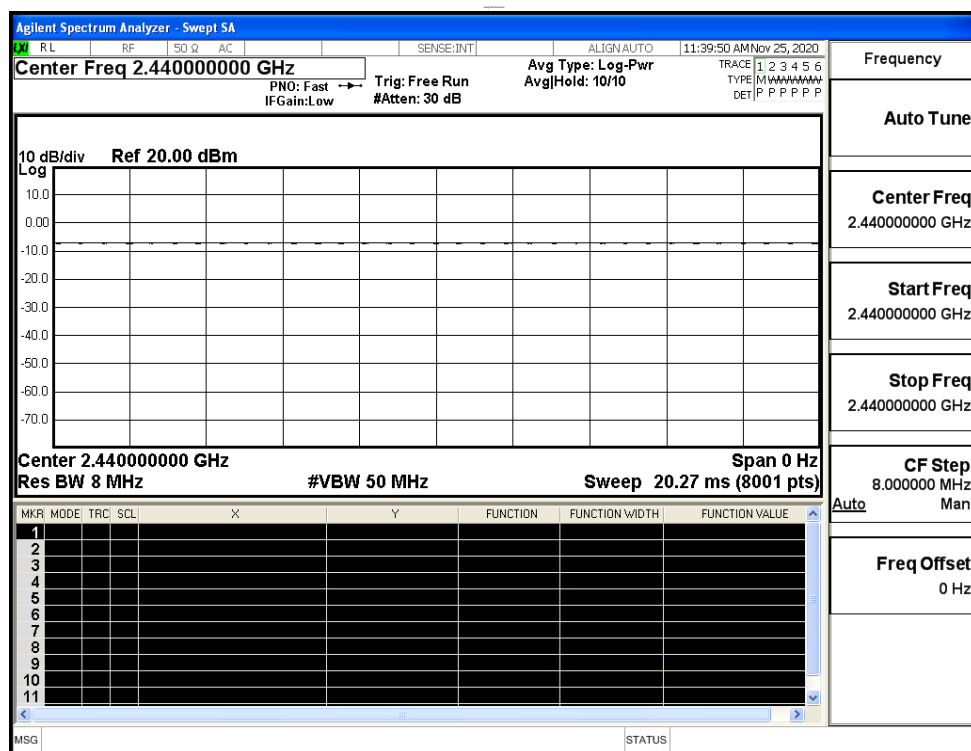
Test Model: UB2605

Environmental Conditions

Temperature:	22.5° C
Relative Humidity:	53.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Kay Hu
Supervised by:	Li Huan

B.1 Duty Cycle

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



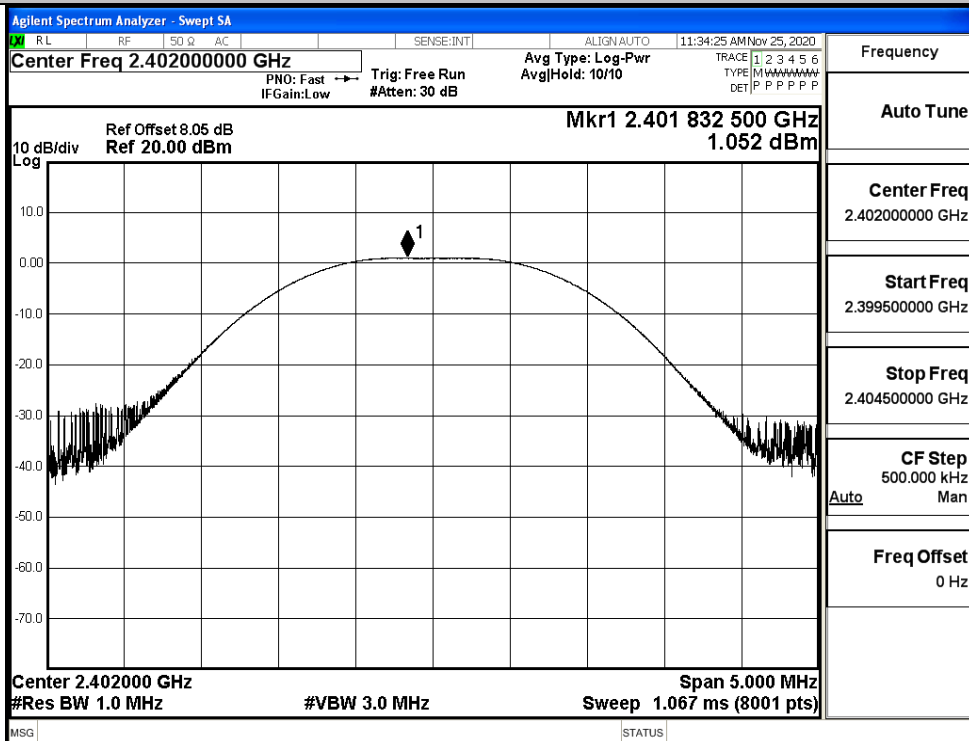
[illegible]

B.2 Maximum Conducted Peak Output Power

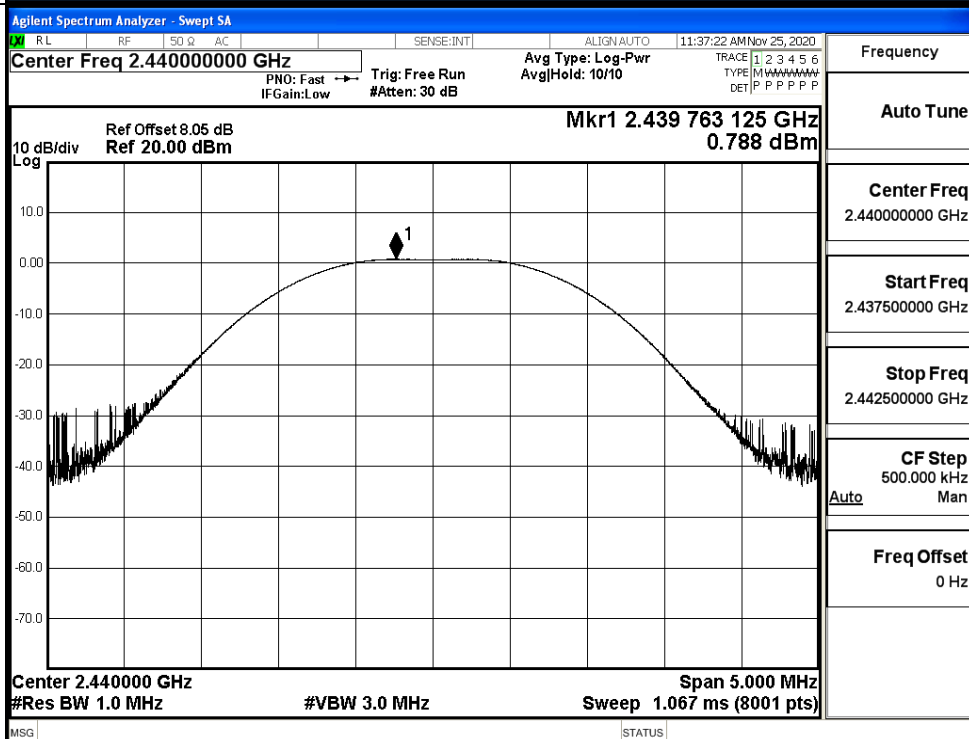
Mode	Channel	Conduct Peak Power[dBm]	Limit [dBm]	Verdict
BT LE	LCH	1.052	30	PASS
BT LE	MCH	0.788	30	PASS
BT LE	HCH	0.091	30	PASS

Test Graphs

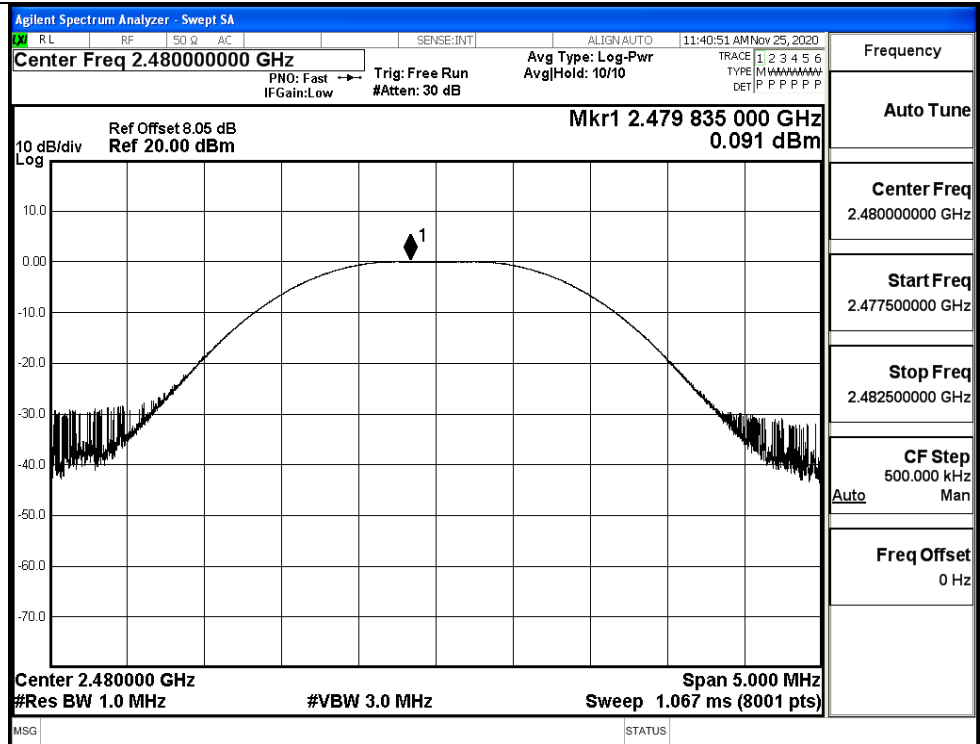
LCH



MCH



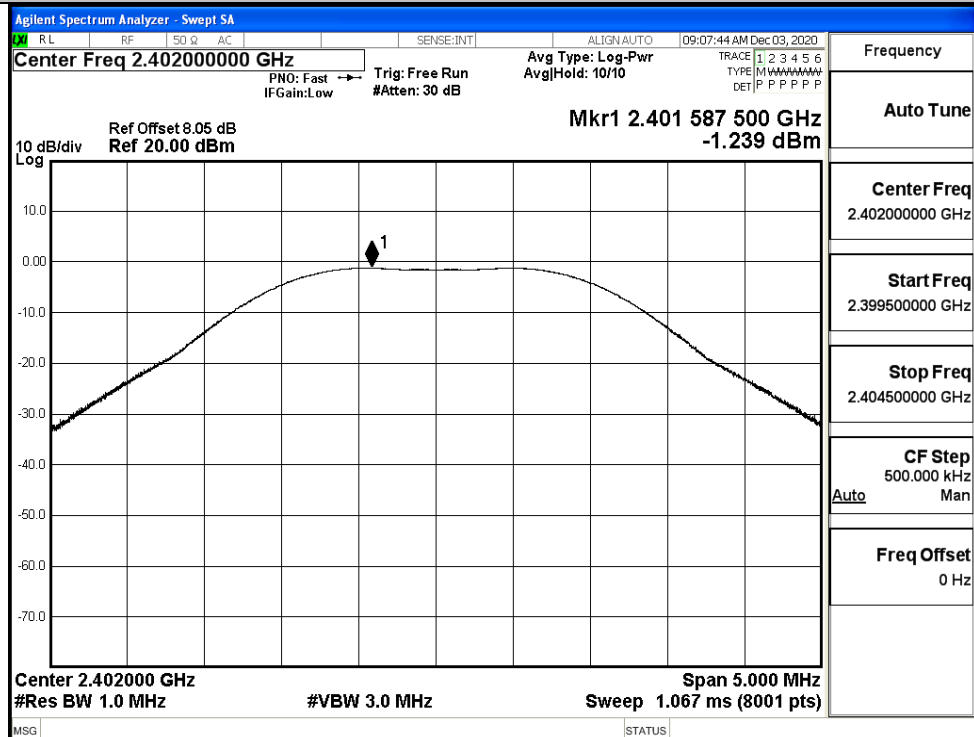
HCH



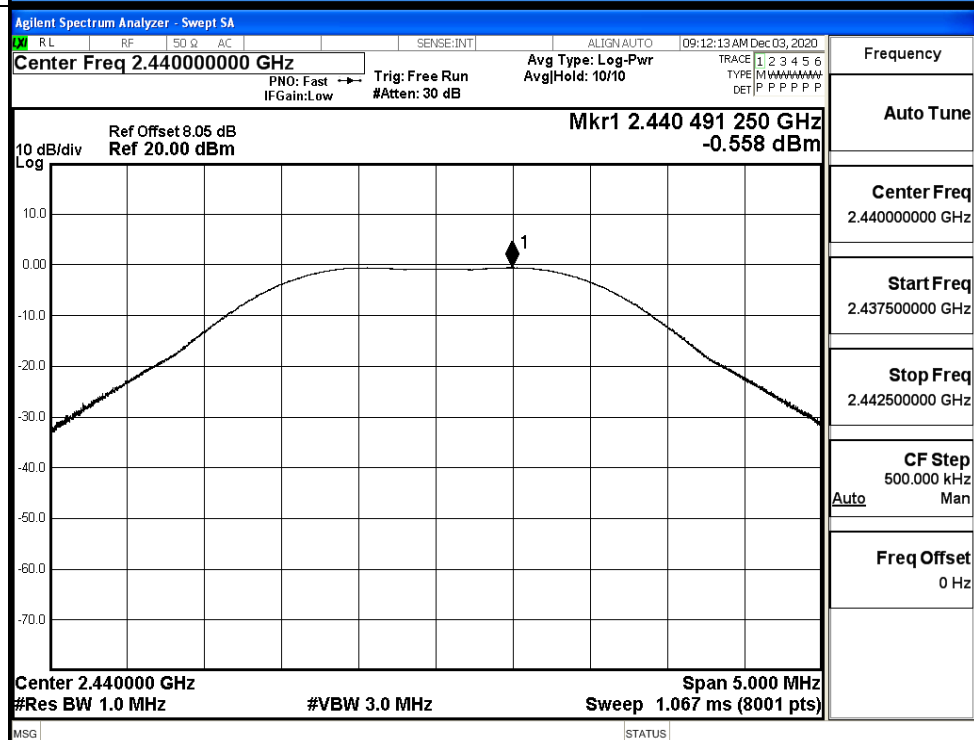
Mode	Channel	Conduct Peak Power[dBm]	Limit [dBm]	Verdict
BT 2LE	LCH	-1.239	30	PASS
BT 2LE	MCH	-0.558	30	PASS
BT 2LE	HCH	-0.113	30	PASS

Test Graphs

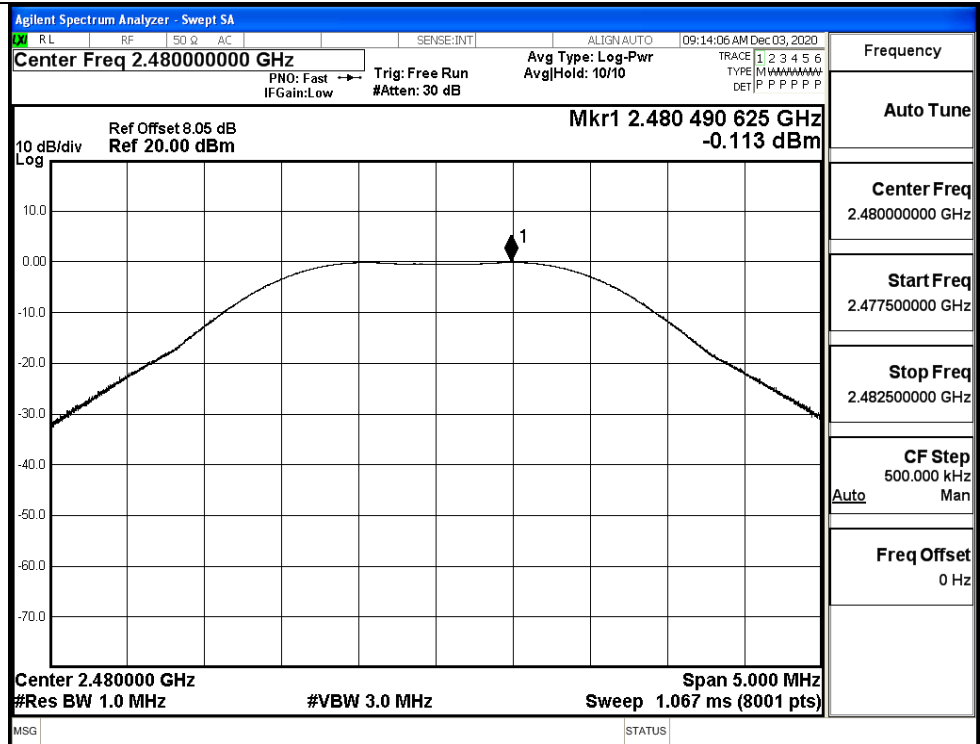
LCH



MCH



HCH

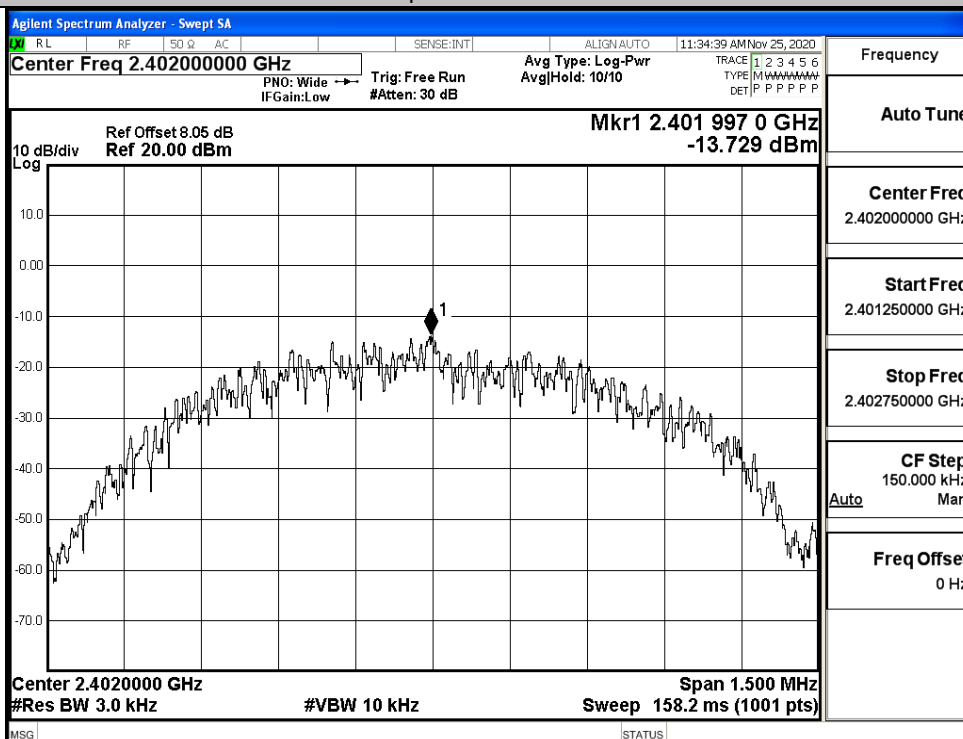


B.3 Maximum Power Spectral Density

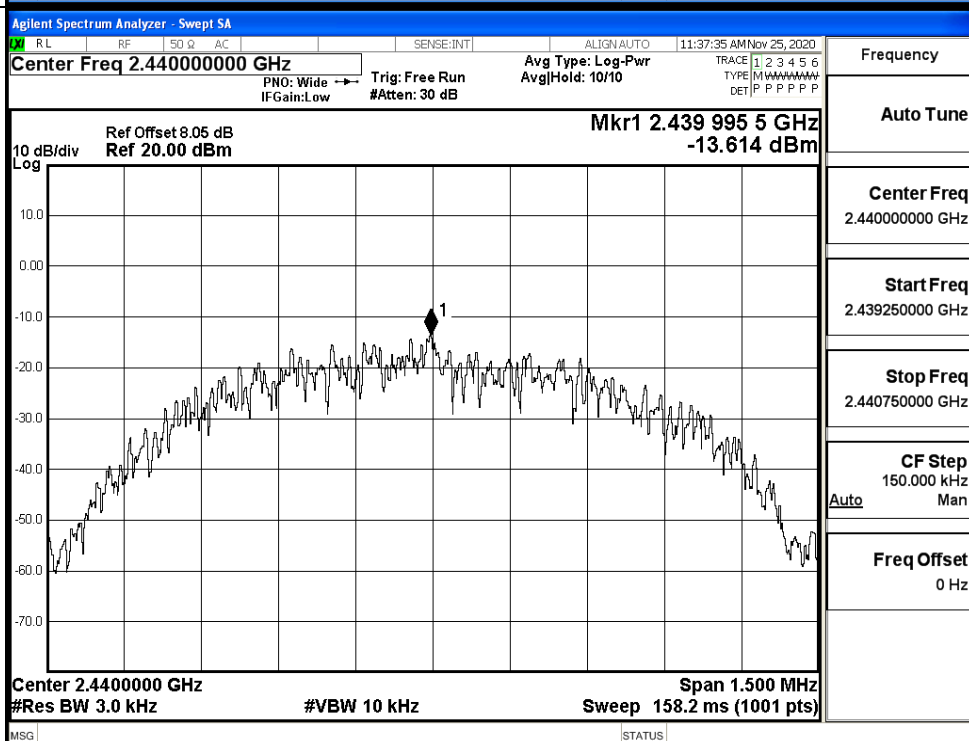
Mode	Channel	PSD [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
BT LE	LCH	-13.729	8	PASS
BT LE	MCH	-13.614	8	PASS
BT LE	HCH	-14.634	8	PASS

Test Graphs

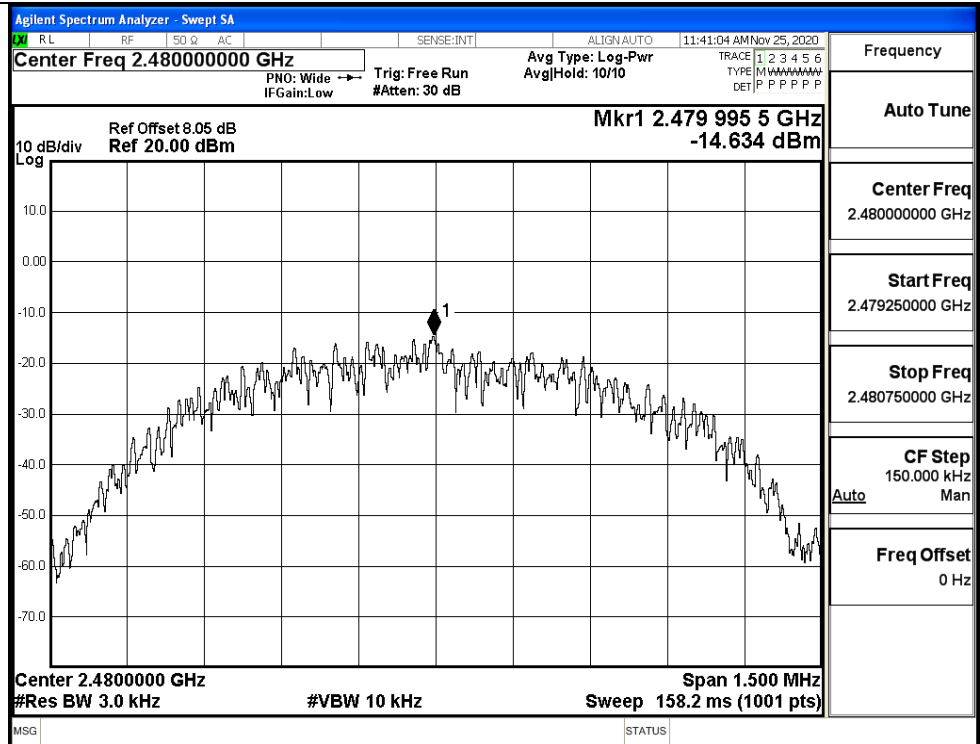
LCH



MCH



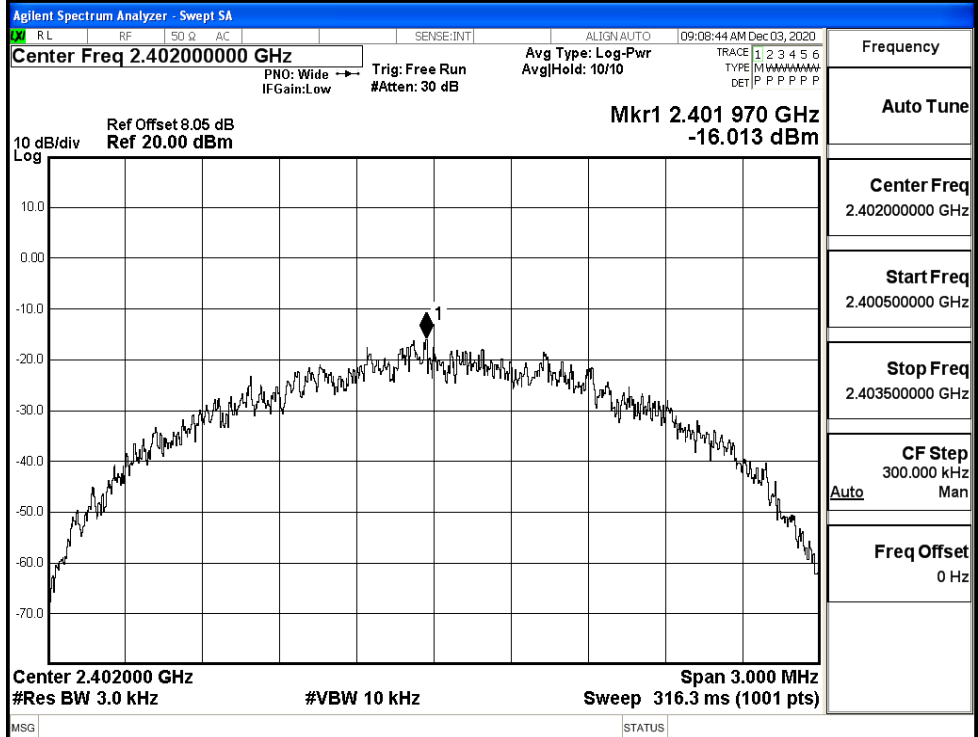
HCH



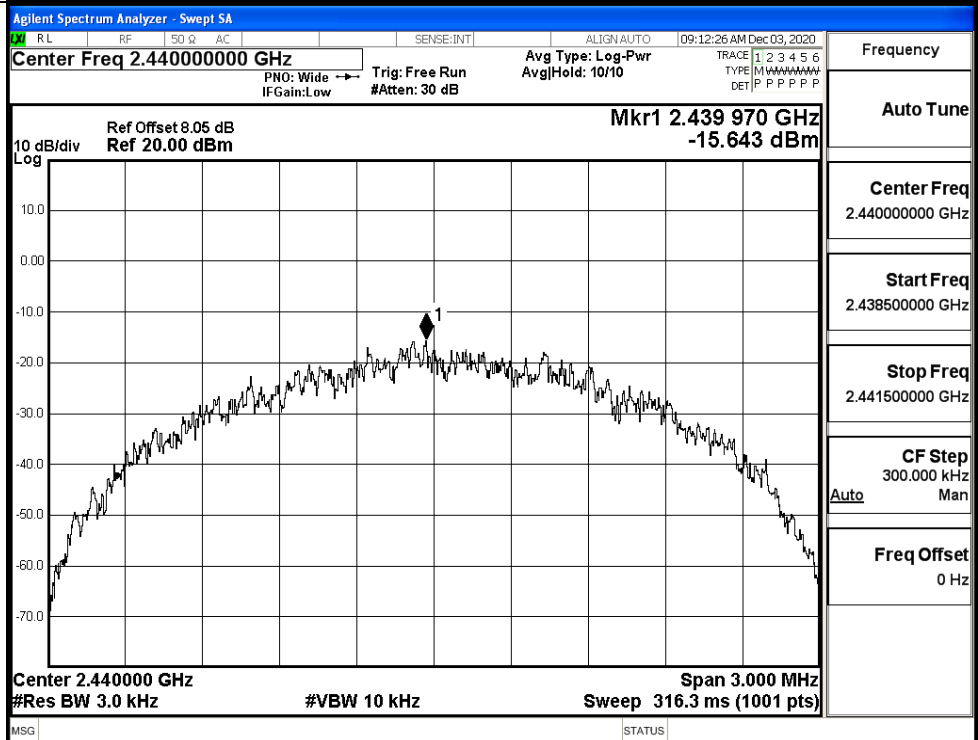
Mode	Channel	PSD [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
BT 2LE	LCH	-16.013	8	PASS
BT 2LE	MCH	-15.643	8	PASS
BT 2LE	HCH	-15.233	8	PASS

Test Graphs

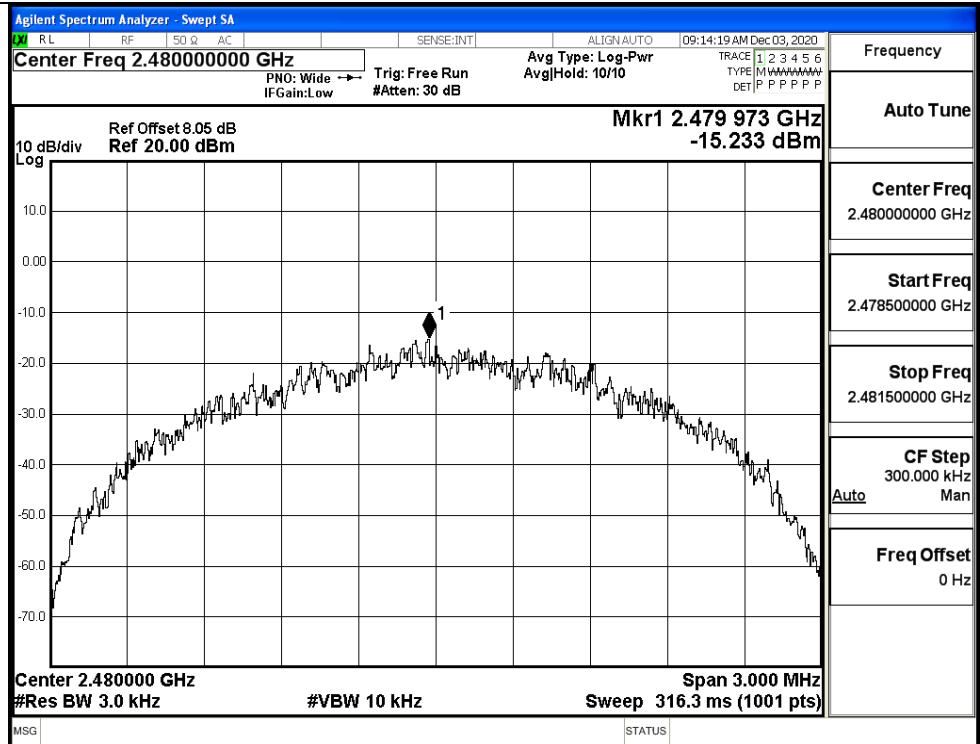
LCH



MCH



HCH

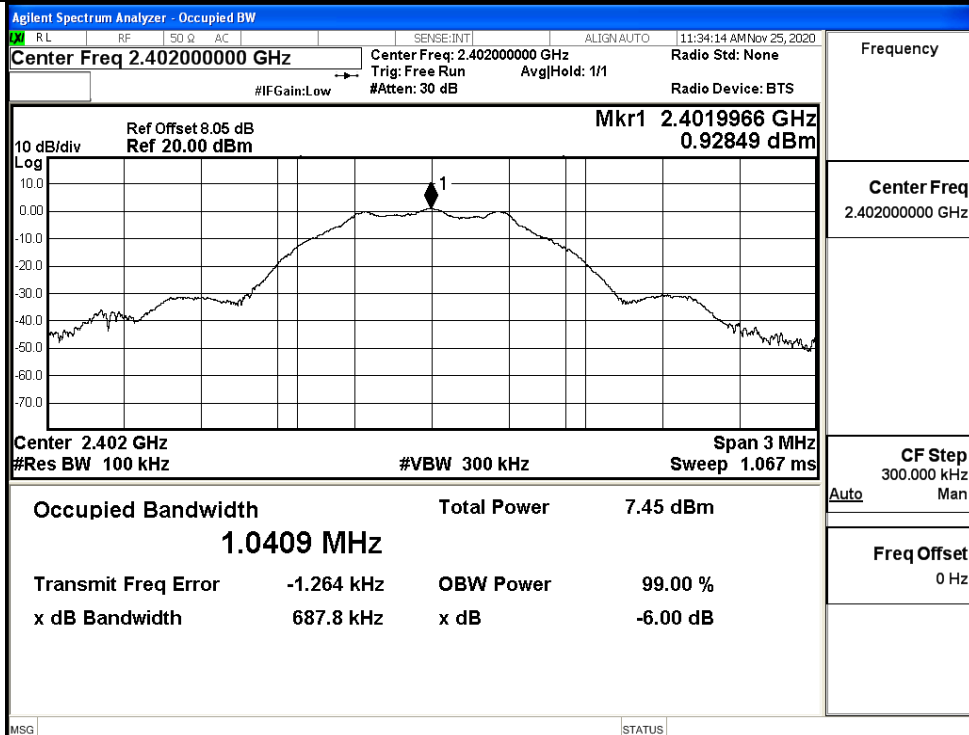


B.4 6dB Bandwidth

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
BT LE	LCH	0.6878	≥ 0.5	PASS
BT LE	MCH	0.6966	≥ 0.5	PASS
BT LE	HCH	0.6992	≥ 0.5	PASS

Test Graphs

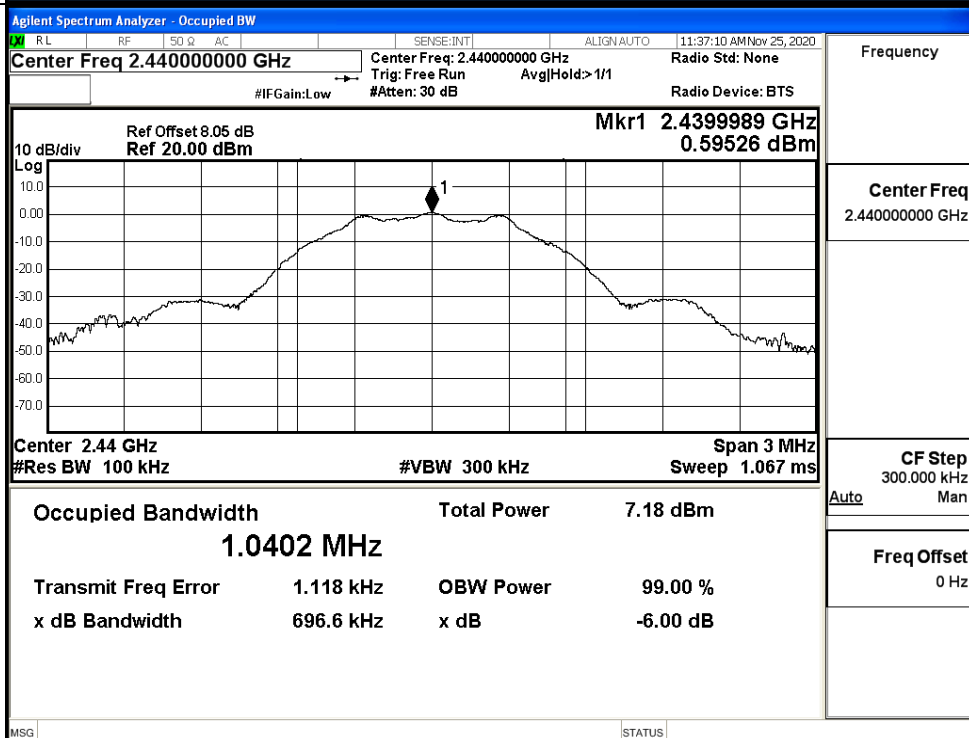
LCH



Frequency

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

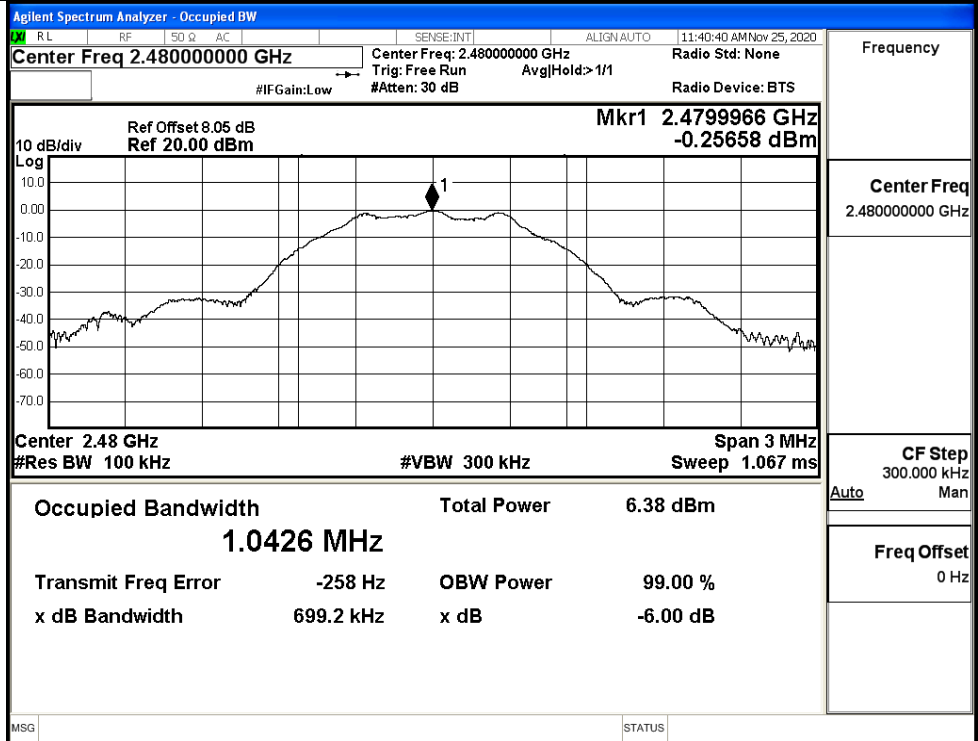
MCH



Frequency

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

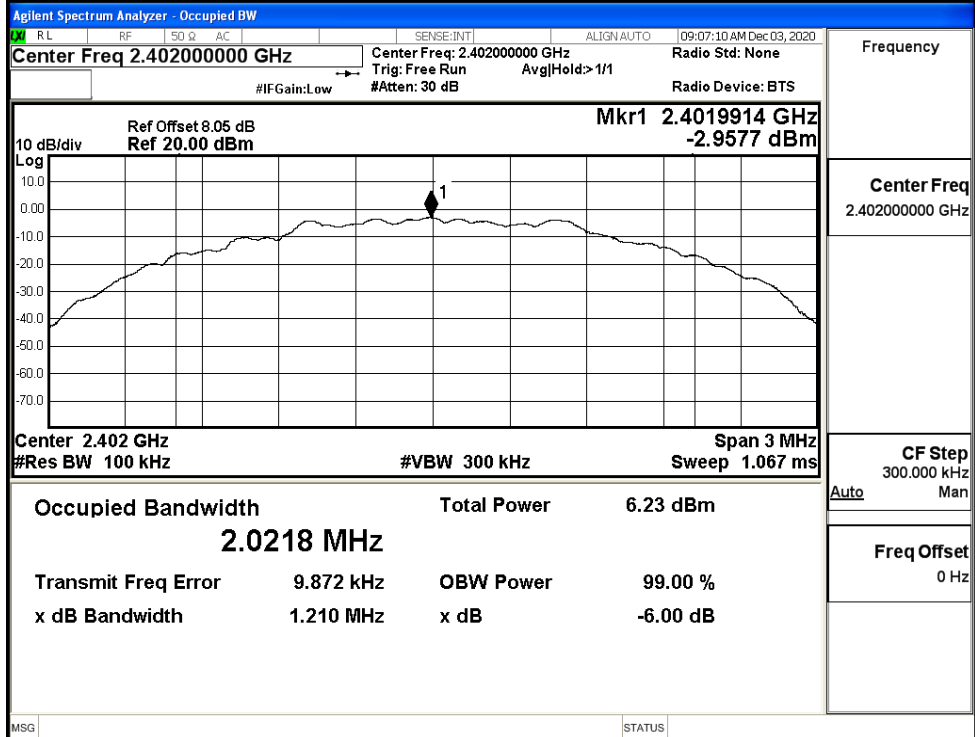
HCH



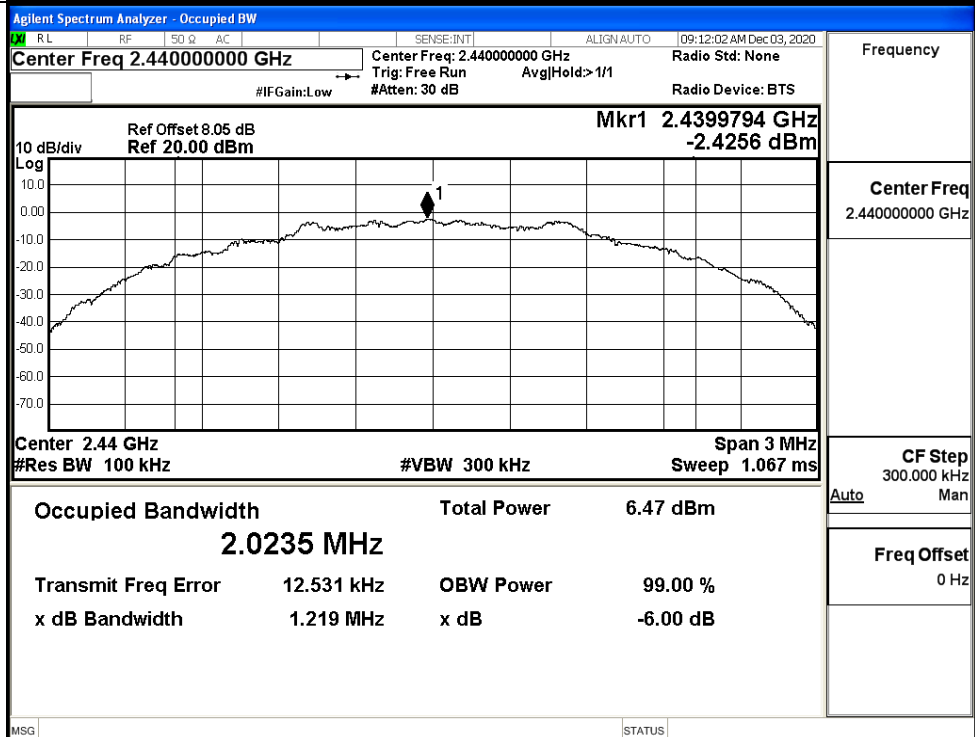
Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
BT 2LE	LCH	1.210	≥ 0.5	PASS
BT 2LE	MCH	1.219	≥ 0.5	PASS
BT 2LE	HCH	1.216	≥ 0.5	PASS

Test Graphs

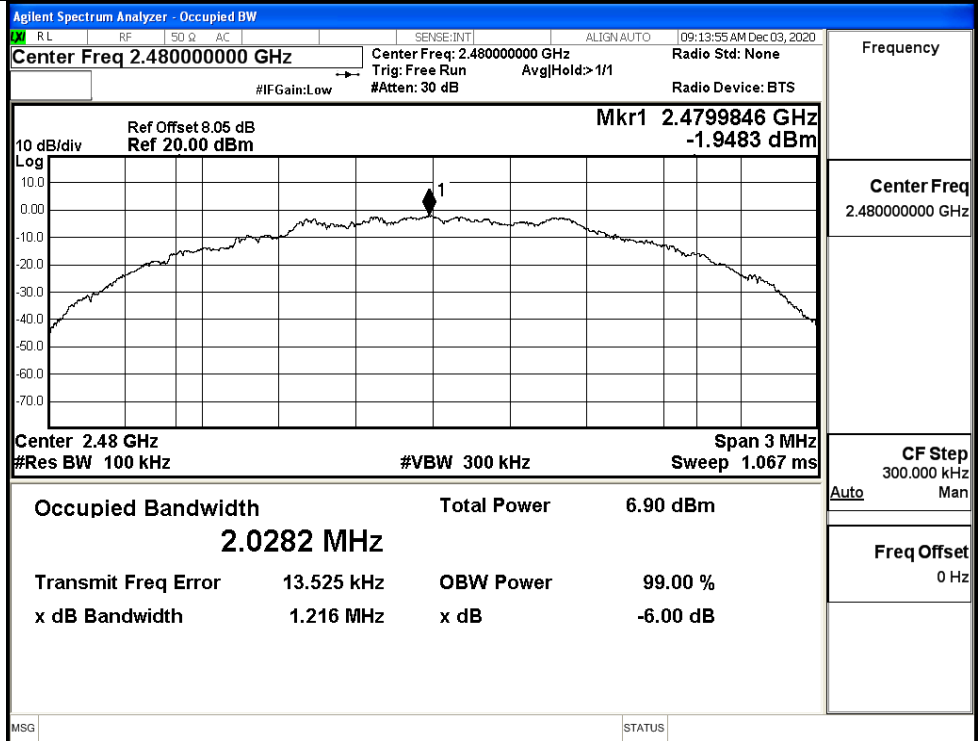
LCH



MCH



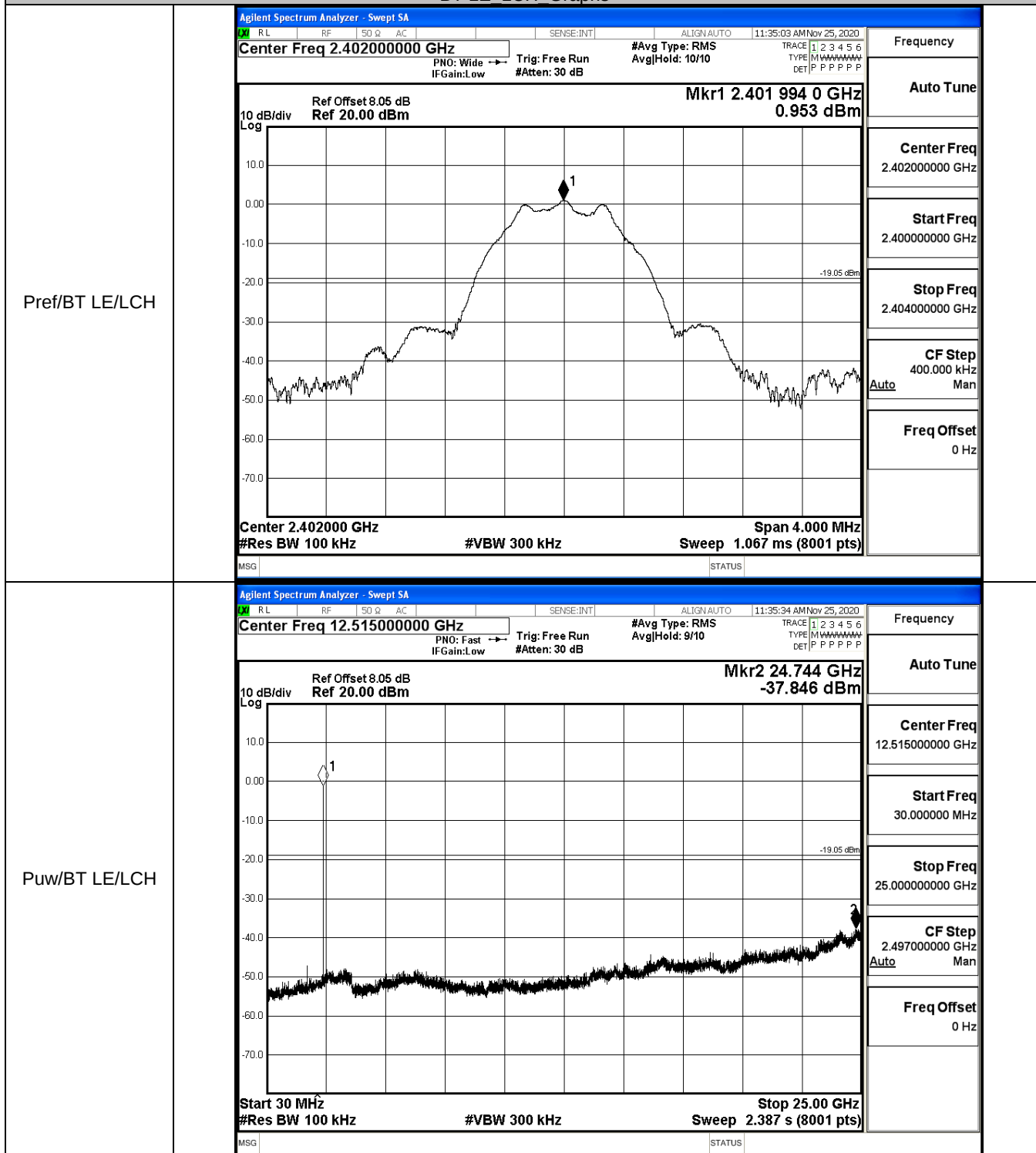
HCH



B.5 RF Conducted Spurious Emissions

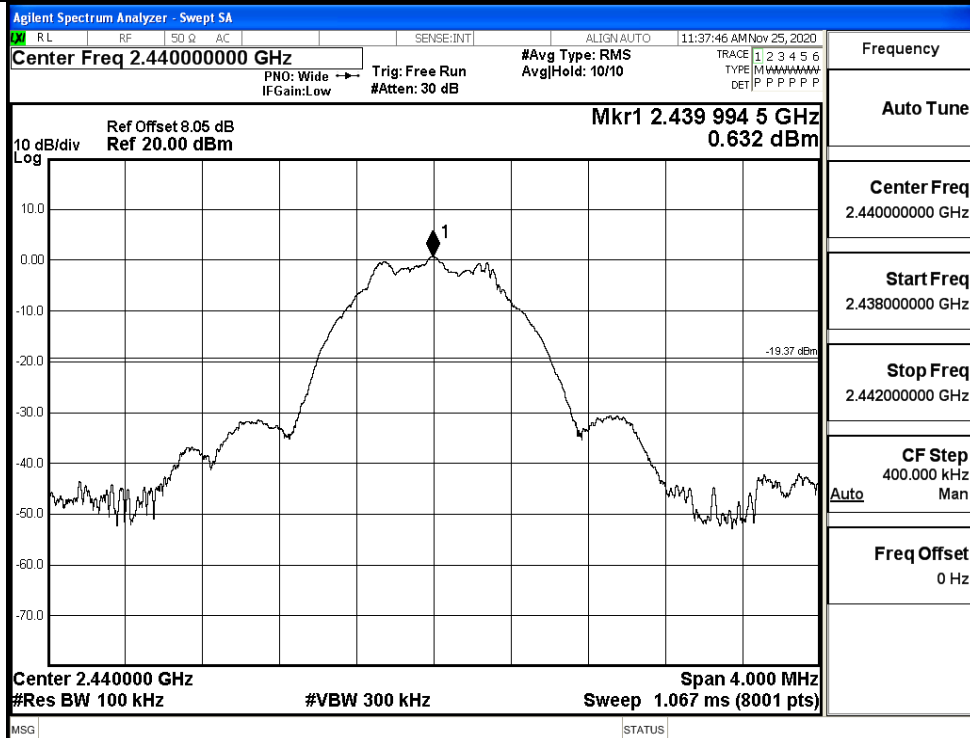
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	0.953	-37.846	-19.047	PASS
BT LE	MCH	0.632	-37.523	-19.368	PASS
BT LE	HCH	-0.235	-37.077	-20.235	PASS

BT LE LCH Graphs

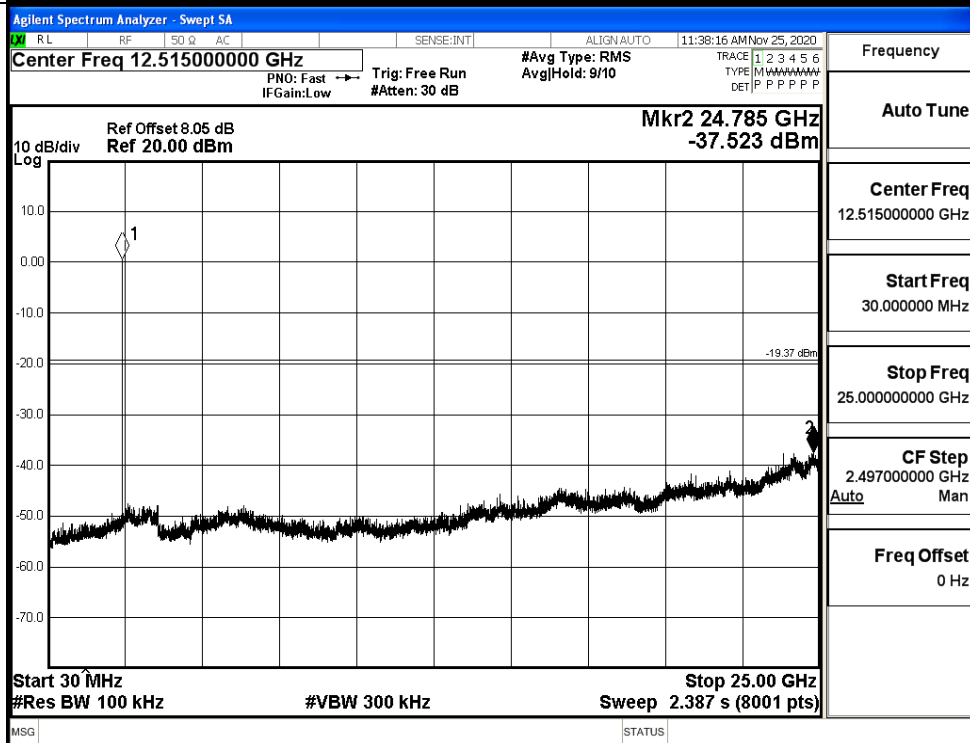


BT LE MCH Graphs

Pref/BT LE/MCH

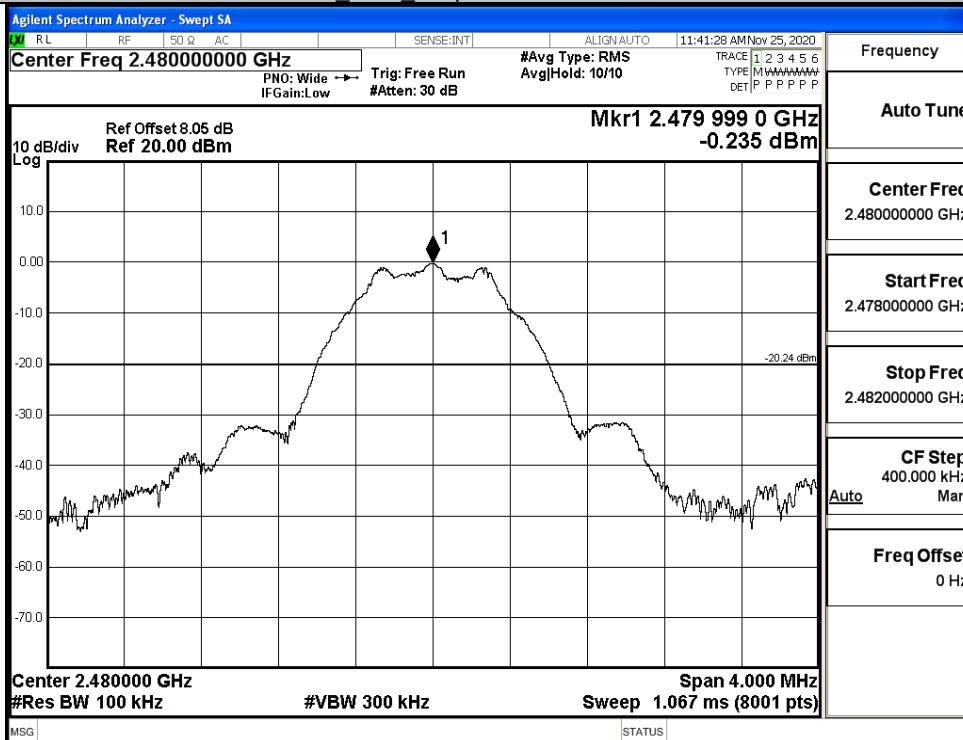


Puw/BT LE/MCH

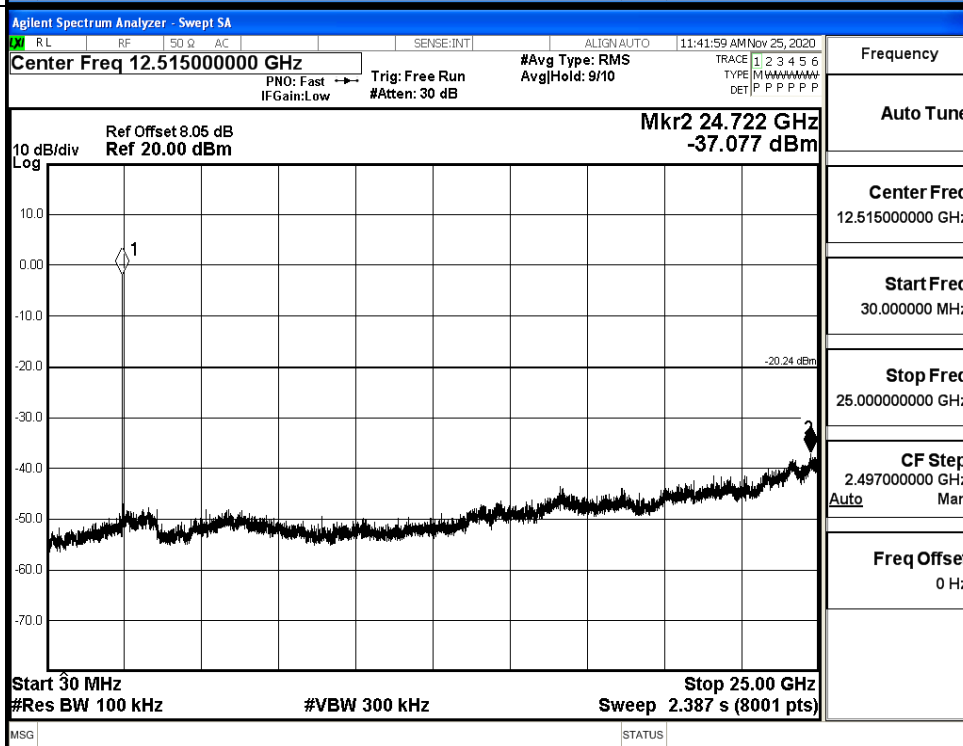


BT LE HCH Graphs

Pref/BT LE/HCH



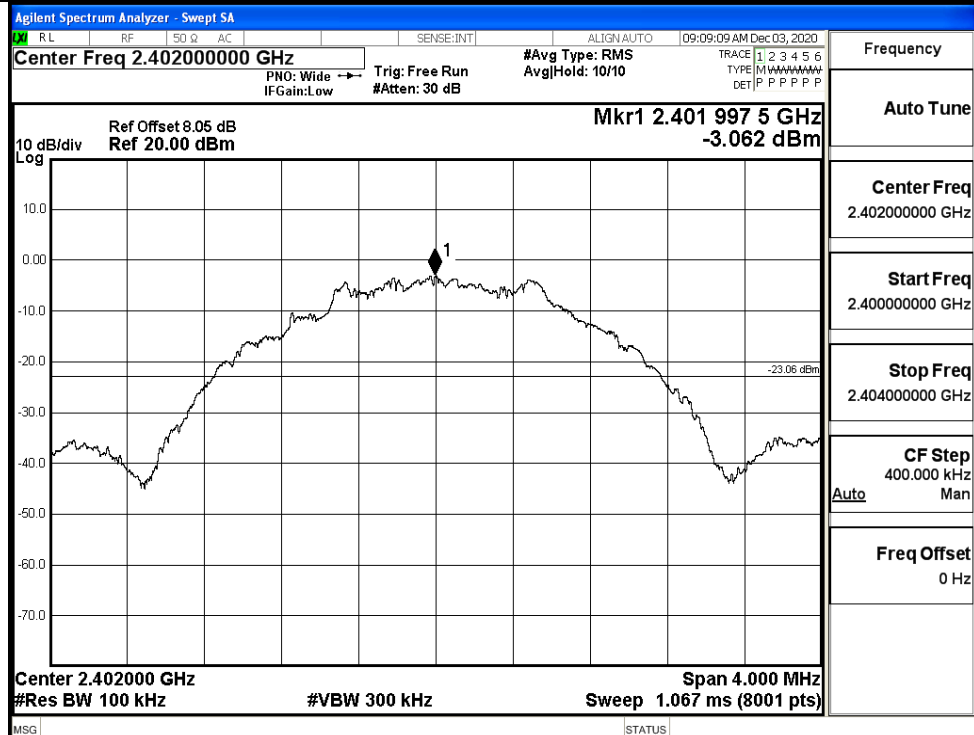
Puw/BT LE/HCH



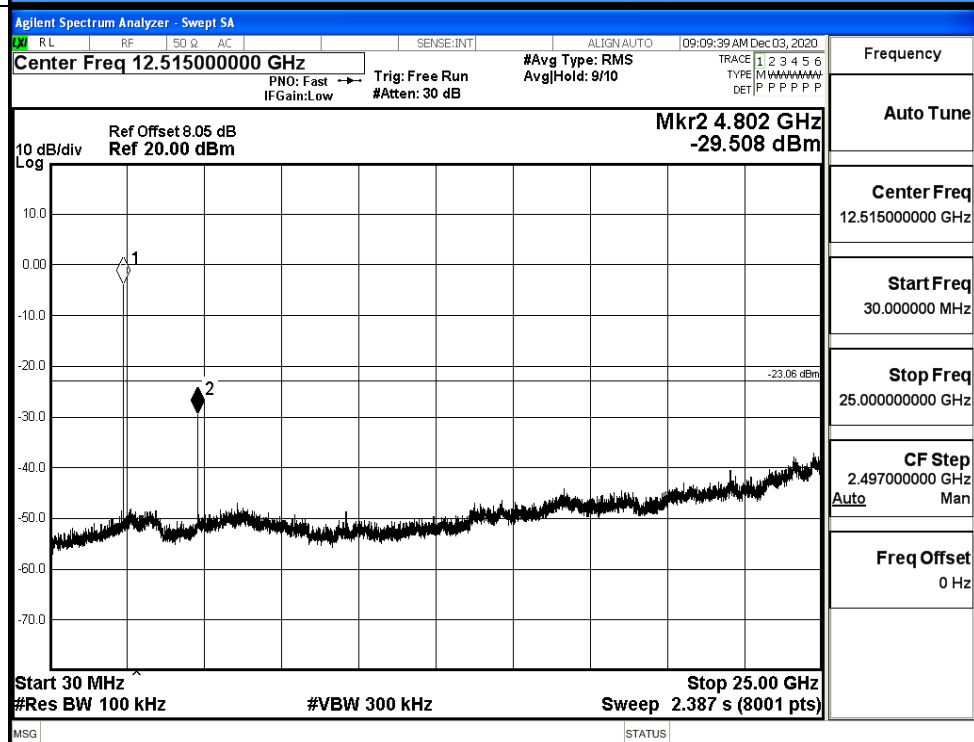
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
BT 2LE	LCH	-3.062	-29.508	-23.062	PASS
BT 2LE	MCH	-2.309	-30.481	-22.309	PASS
BT 2LE	HCH	-1.997	-34.373	-21.997	PASS

BT LE LCH Graphs

Pref/BT LE/LCH

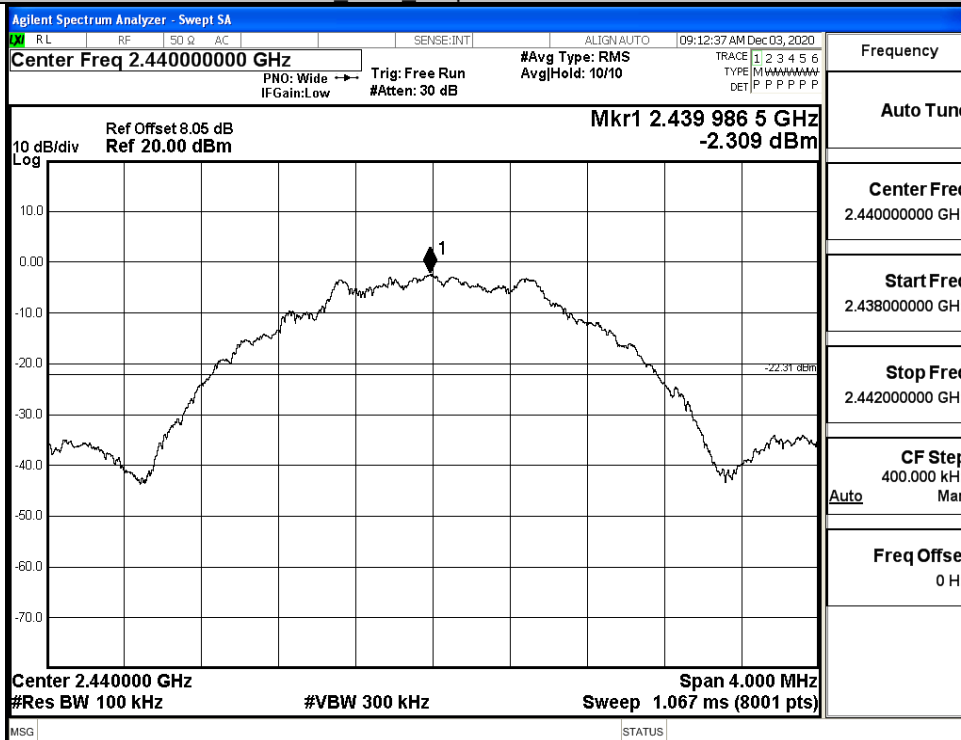


Puw/BT LE/LCH

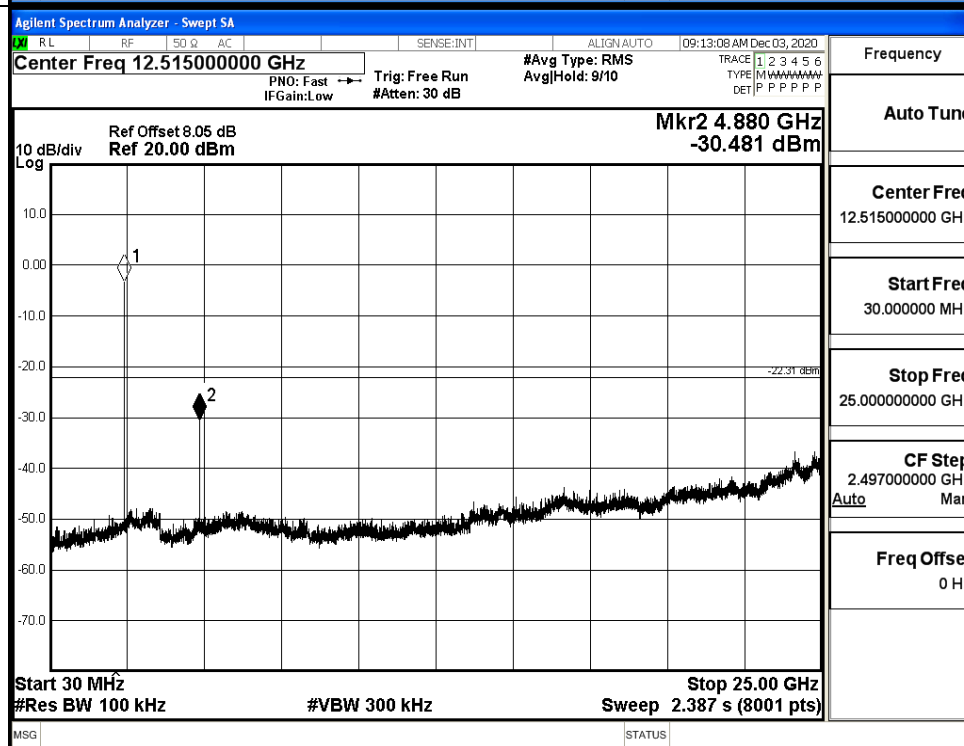


BT LE MCH Graphs

Pref/BT LE/MCH

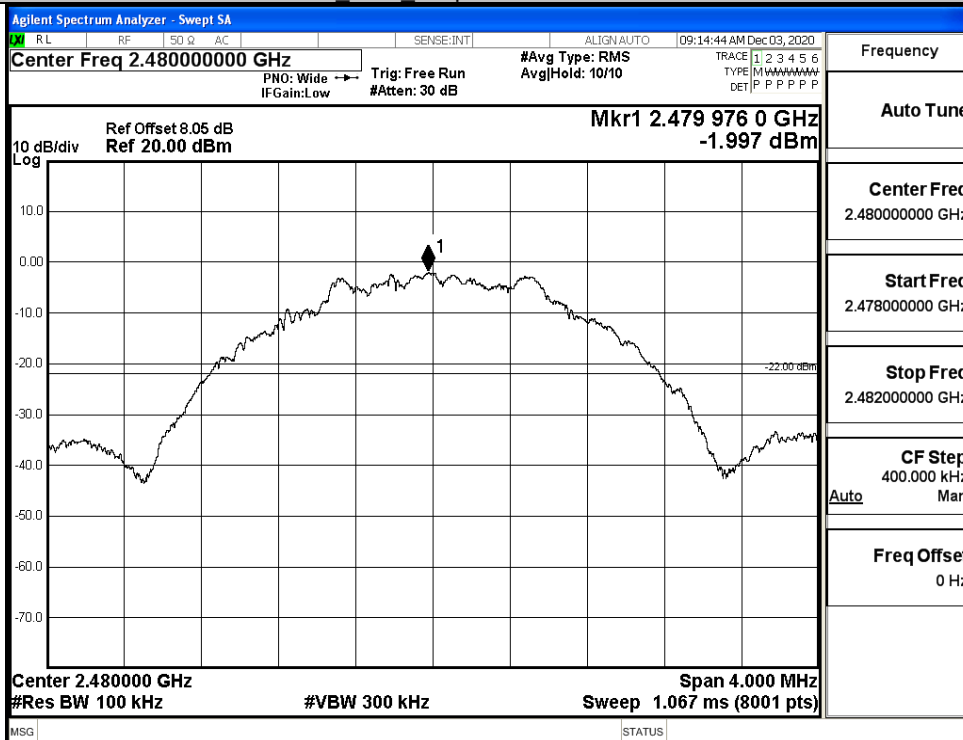


Puw/BT LE/MCH

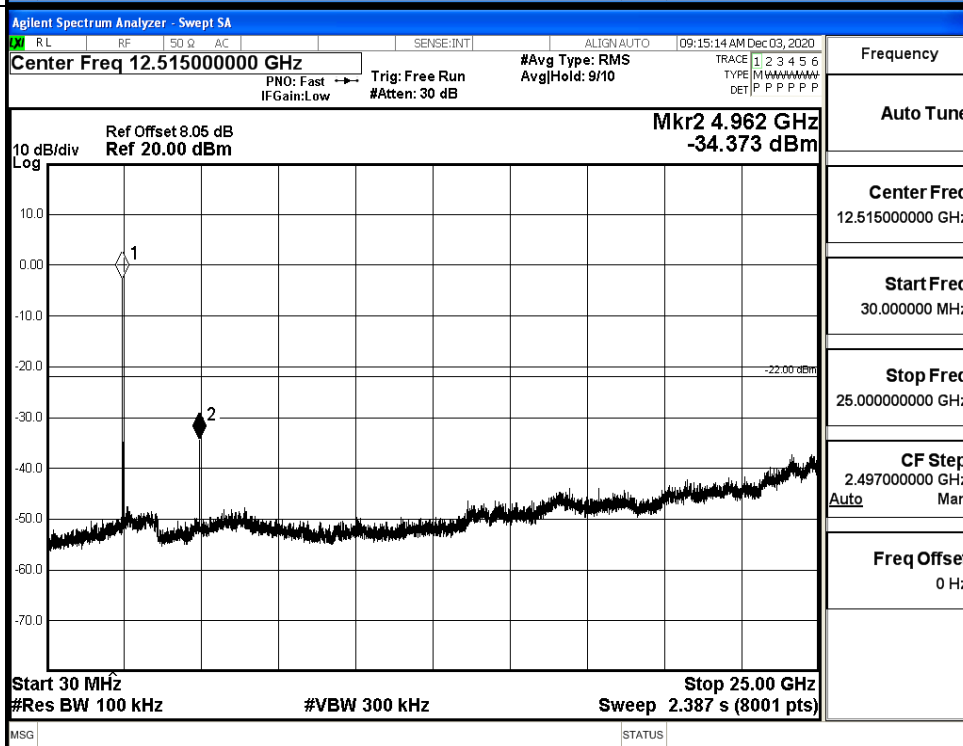


BT LE HCH Graphs

Pref/BT LE/HCH



Puw/BT LE/HCH

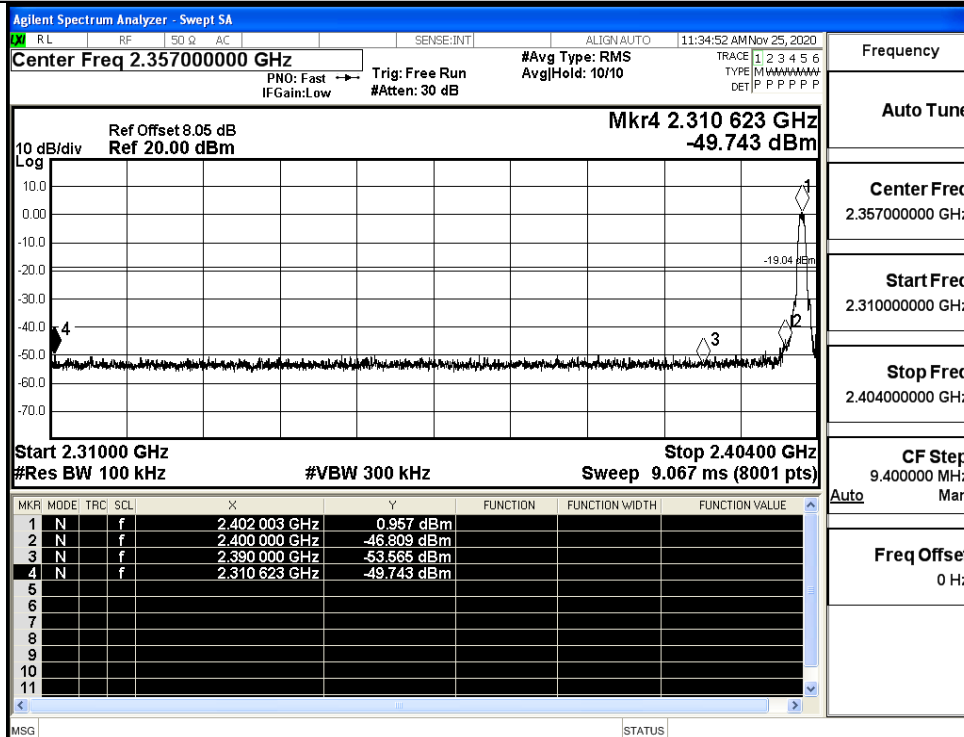


B.6 Band-edge for RF Conducted Emissions

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	0.957	-49.743	-19.04	PASS
BT LE	HCH	-0.147	-48.356	-20.15	PASS

Test Graphs

LCH



Frequency

Auto Tune

Center Freq

2.357000000 GHz

Start Freq

2.310000000 GHz

Stop Freq

2.404000000 GHz

CF Step

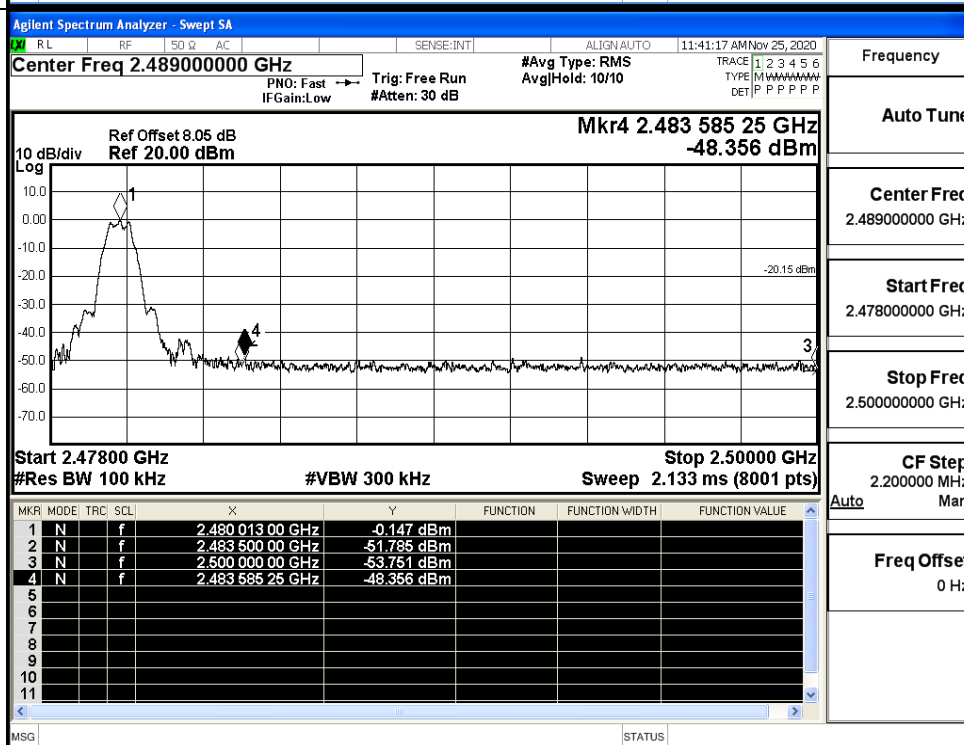
9.400000 MHz

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

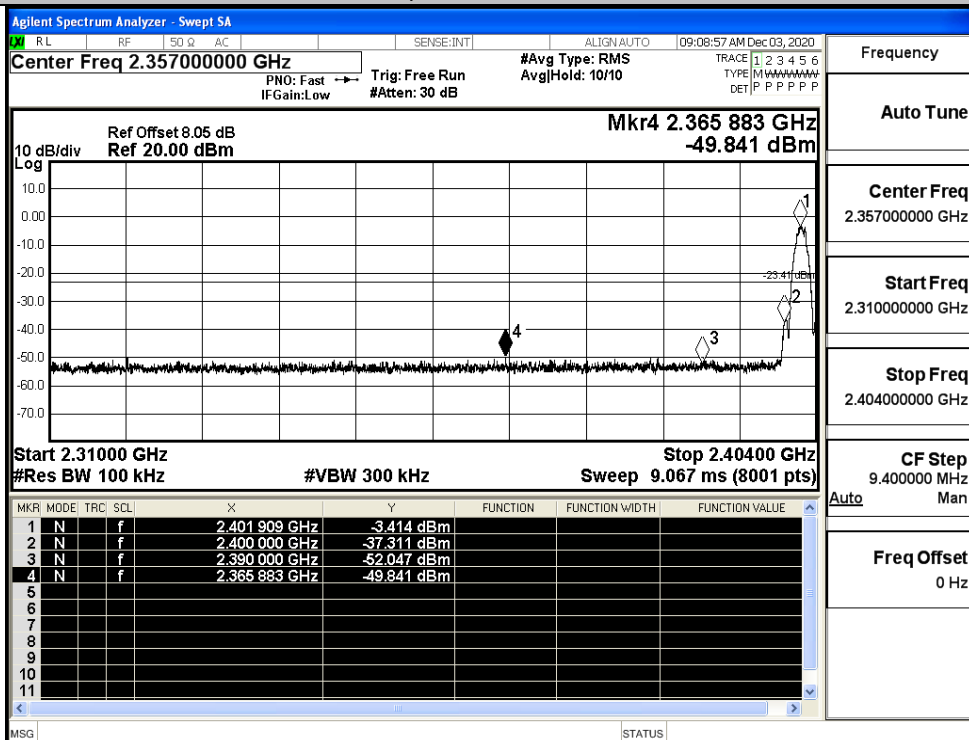
Freq Offset

0 Hz

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
BT 2LE	LCH	-3.414	-49.841	-23.41	PASS
BT 2LE	HCH	-1.471	-49.298	-21.47	PASS

Test Graphs

LCH

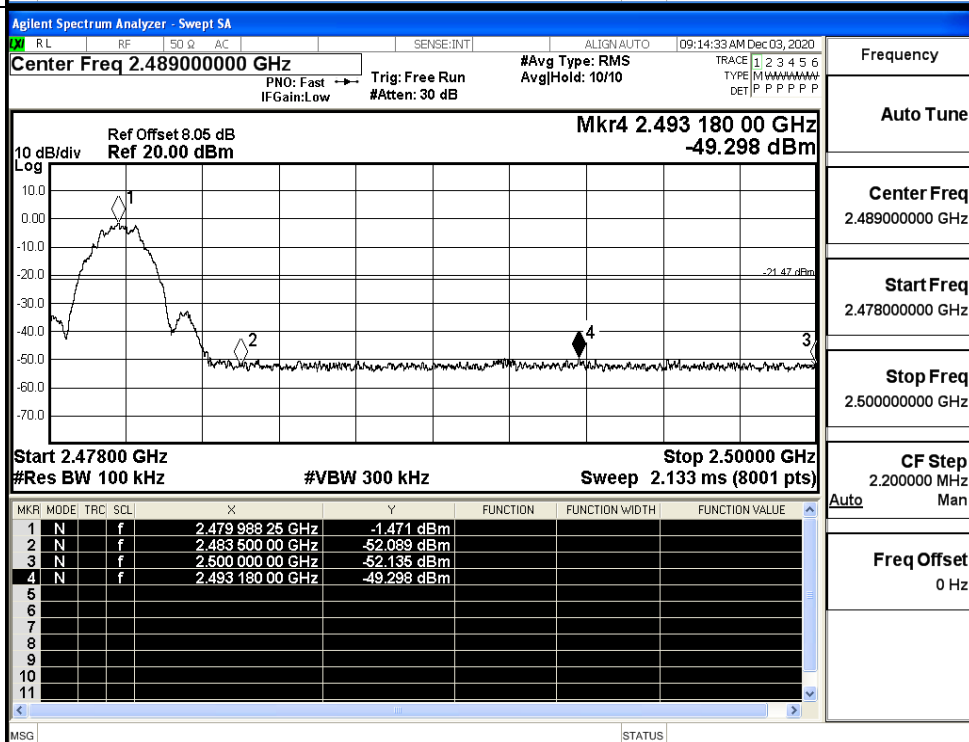


Frequency

Auto Tune

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

HCH



Frequency

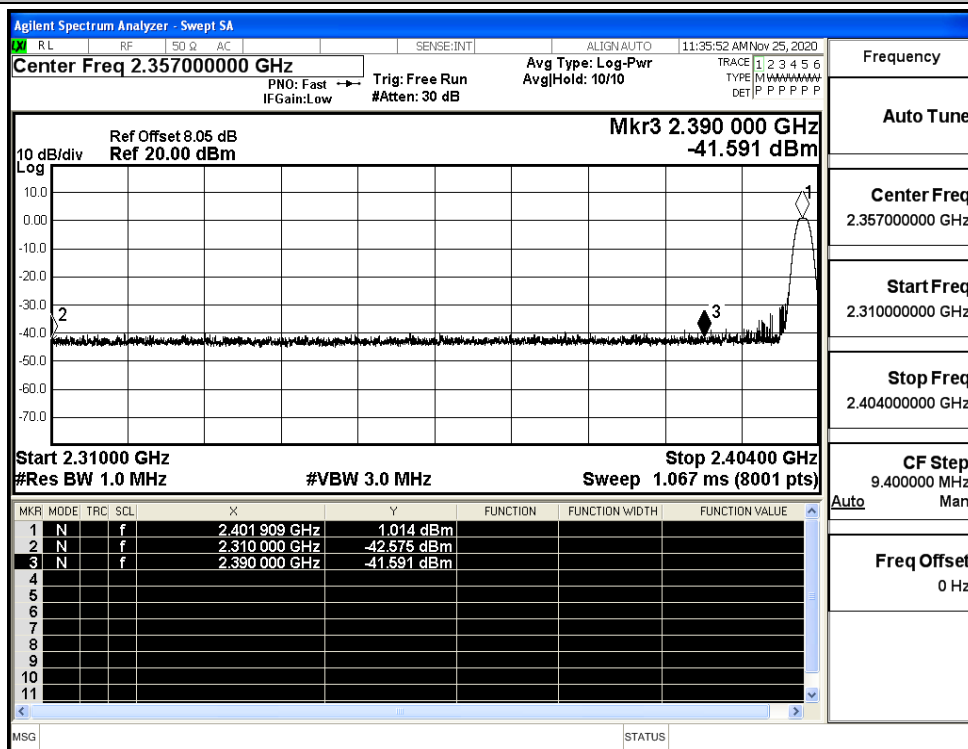
Auto Tune

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

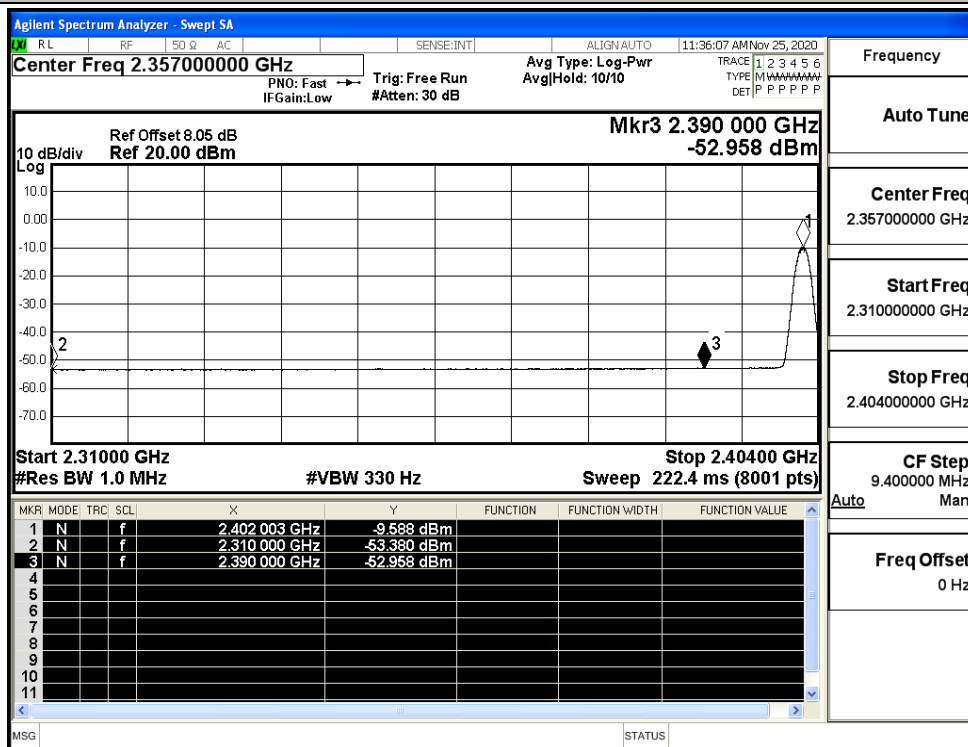
B.7 Restrict-band band-edge measurements

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	-42.58	2.5	0	55.18	PEAK	74	PASS
		Ant1	2310.0	-53.38	2.5	0	44.38	AV	54	PASS
		Ant1	2390.0	-41.59	2.5	0	56.17	PEAK	74	PASS
		Ant1	2390.0	-52.96	2.5	0	44.80	AV	54	PASS
	2480	Ant1	2483.5	-34.82	2.5	0	62.94	PEAK	74	PASS
		Ant1	2483.5	-52.37	2.5	0	45.39	AV	54	PASS
		Ant1	2500.0	-41.57	2.5	0	56.19	PEAK	74	PASS
		Ant1	2500.0	-52.37	2.5	0	45.39	AV	54	PASS

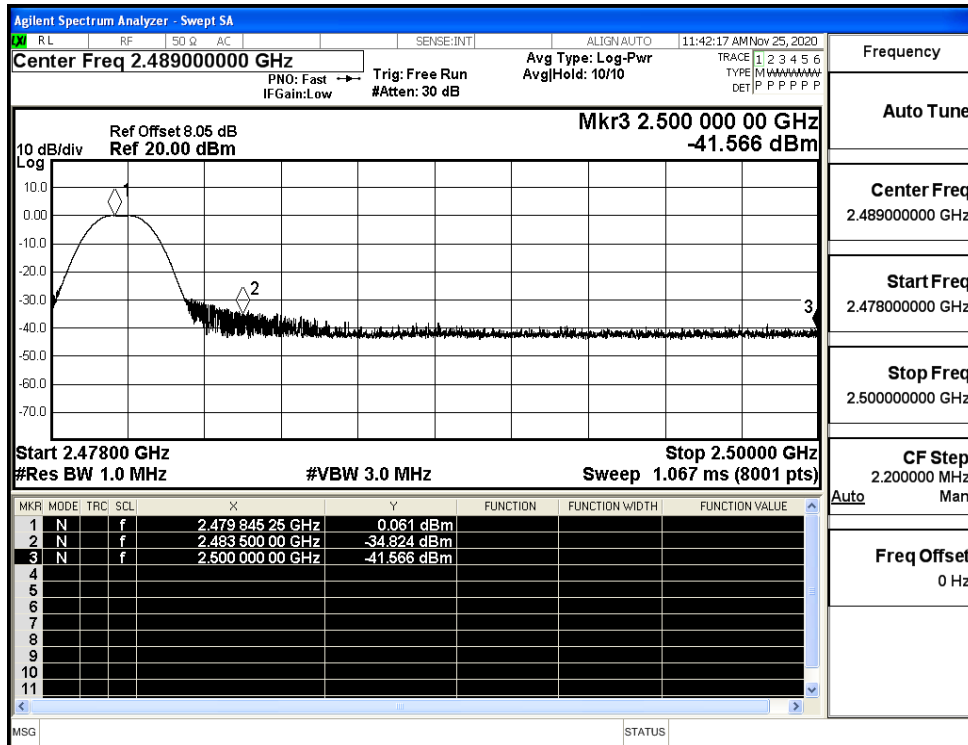
Restrict-band band-edge measurements_BT LE_2402_Ant1_PEAK



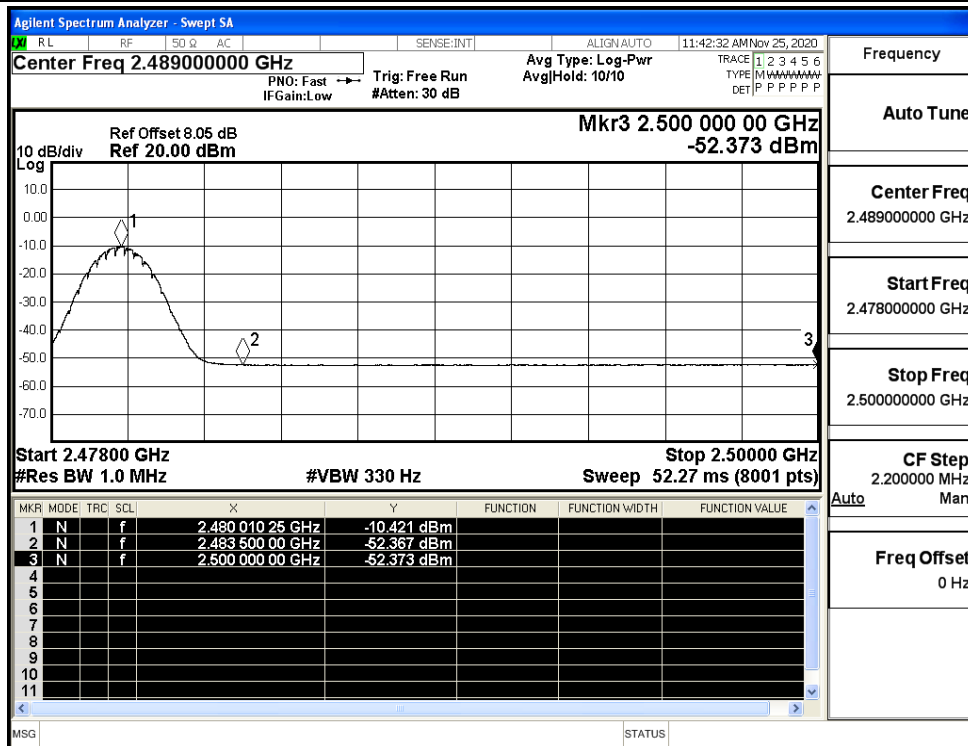
Restrict-band band-edge measurements_BT LE_2402_Ant1_AV



Restrict-band band-edge measurements_BT LE_2480_Ant1_PEAK

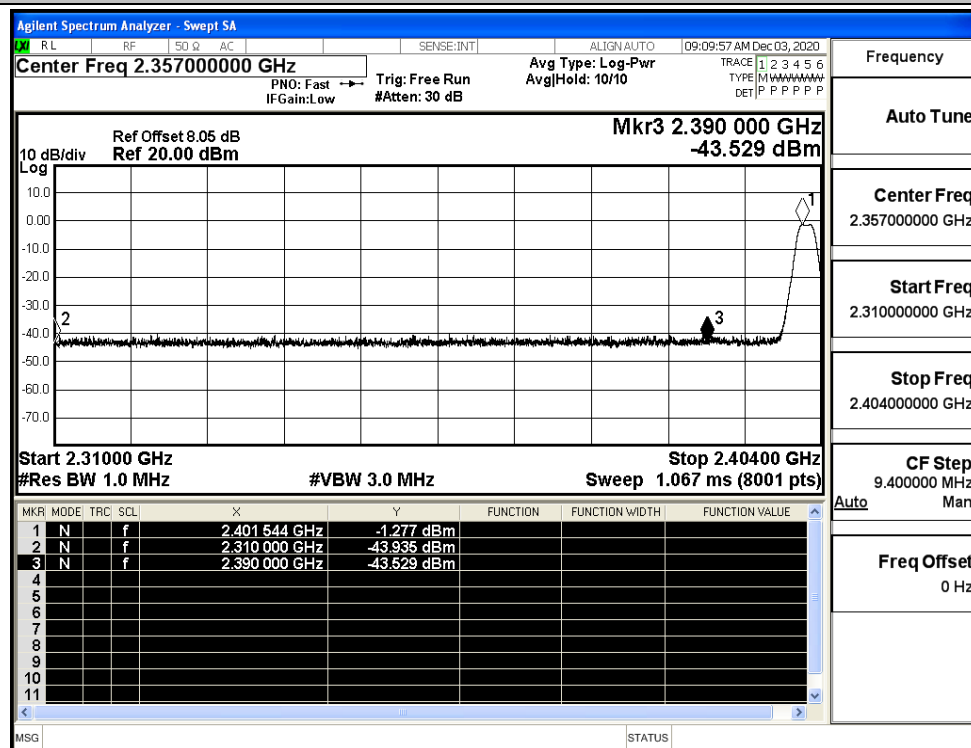


Restrict-band band-edge measurements_BT LE_2480_Ant1_AV

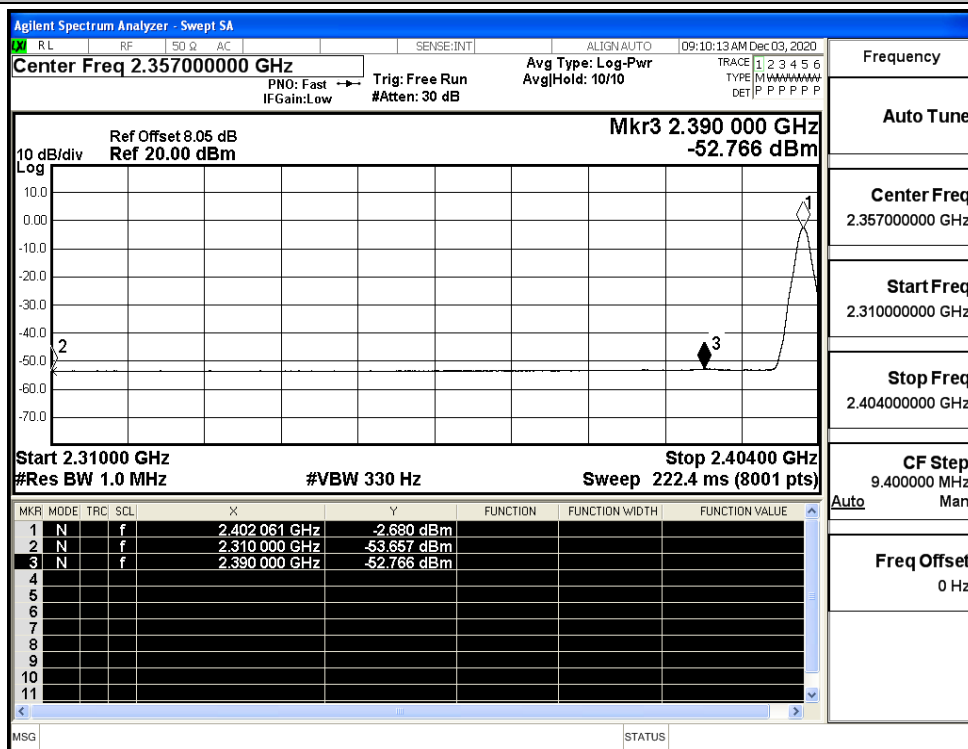


Test Mode	Test Channel	Ant	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdi
BT 2LE	2402	Ant1	2310.0	-43.94	2.0	0	51.32	PEAK	74	PASS
		Ant1	2310.0	-53.66	2.0	0	41.60	AV	54	PASS
		Ant1	2390.0	-43.53	2.0	0	51.73	PEAK	74	PASS
		Ant1	2390.0	-52.77	2.0	0	42.49	AV	54	PASS
	2480	Ant1	2483.5	-41.01	2.0	0	54.25	PEAK	74	PASS
		Ant1	2483.5	-51.43	2.0	0	43.83	AV	54	PASS
		Ant1	2500.0	-41.49	2.0	0	53.77	PEAK	74	PASS
		Ant1	2500.0	-52.46	2.0	0	42.80	AV	54	PASS

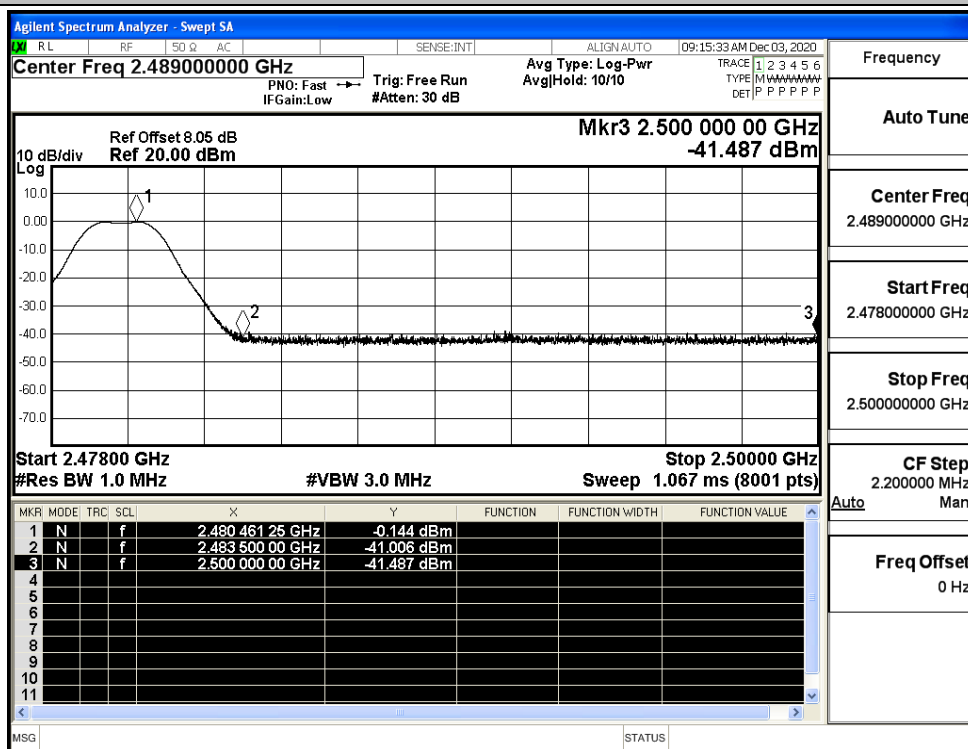
Restrict-band band-edge measurements_BT LE_2402_Ant1_PEAK



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

