

Appendix B

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

Product Name: LED bluetooth controller

Trade Mark: N/A

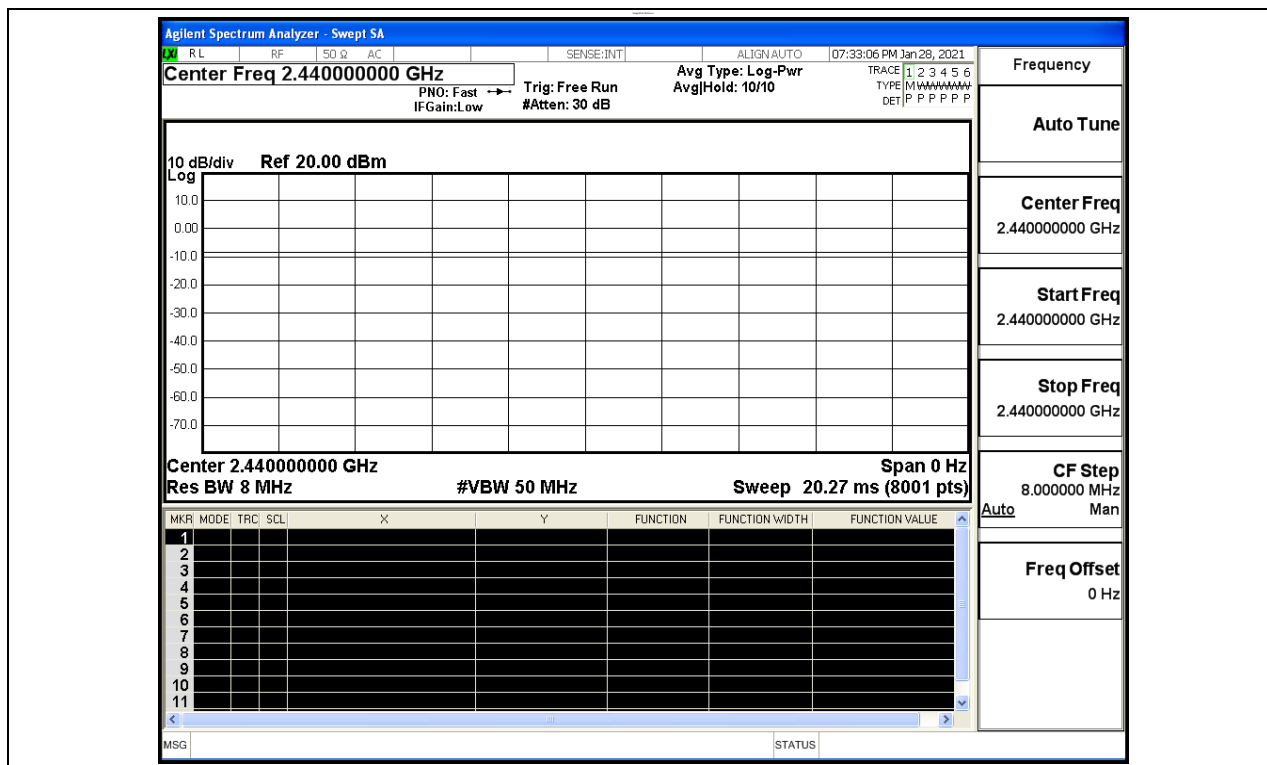
Test Model: 30MAC864WB

Environmental Conditions

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

B.1 Duty Cycle

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

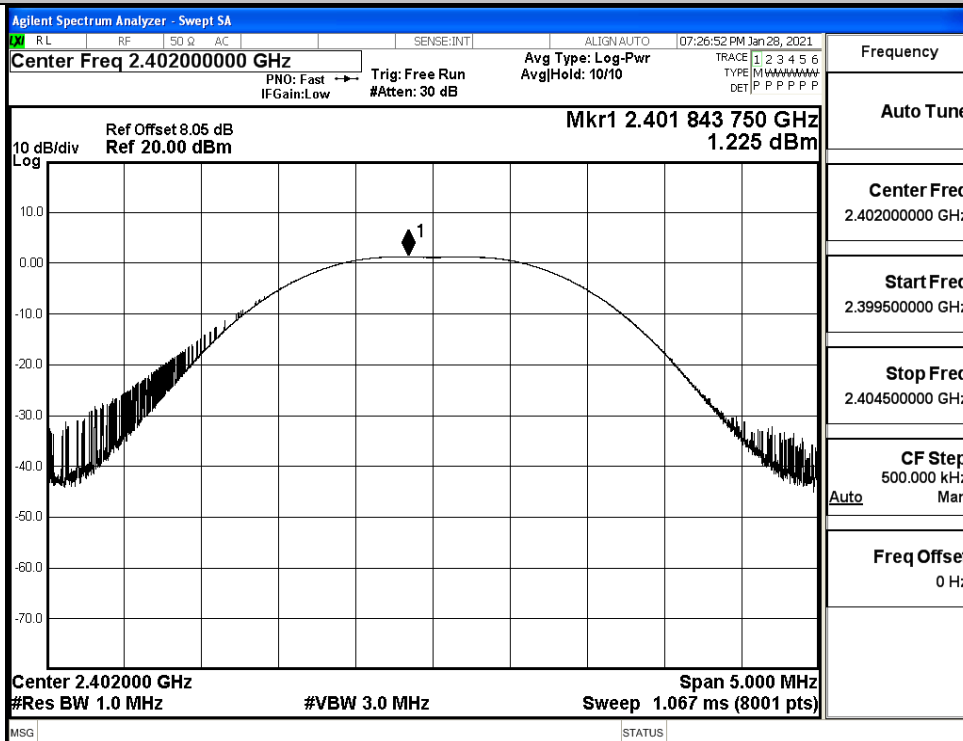


B.2 Maximum Conducted Peak Output Power

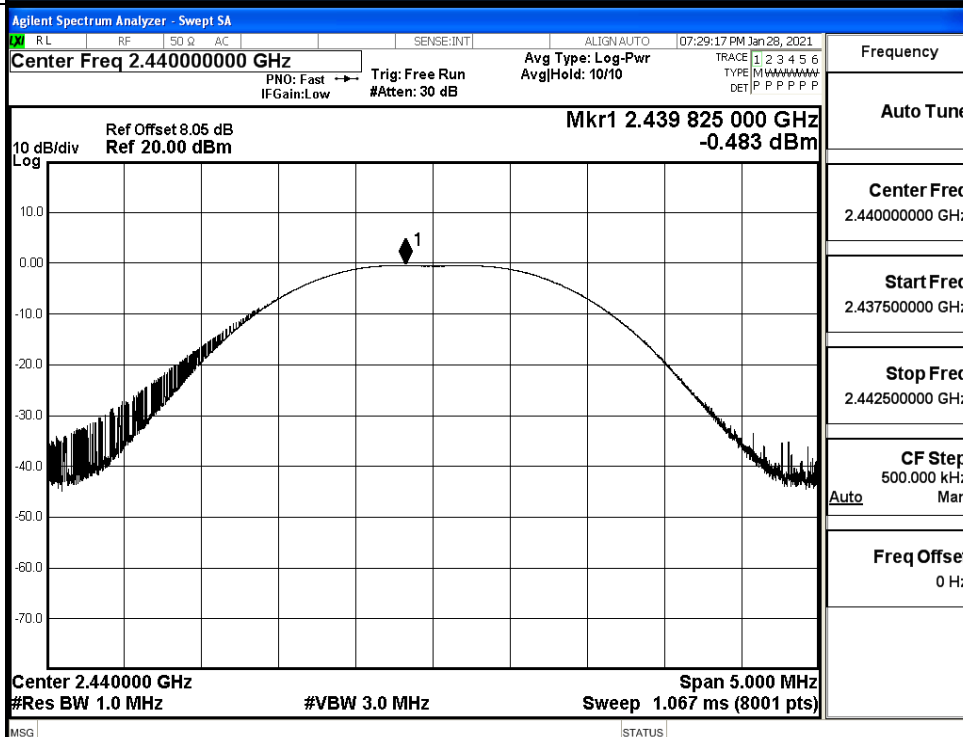
Mode	Channel	Conduct Peak Power[dBm]	Limit [dBm]	Verdict
BT LE	LCH	1.225	30	PASS
BT LE	MCH	-0.483	30	PASS
BT LE	HCH	-2.481	30	PASS

Test Graphs

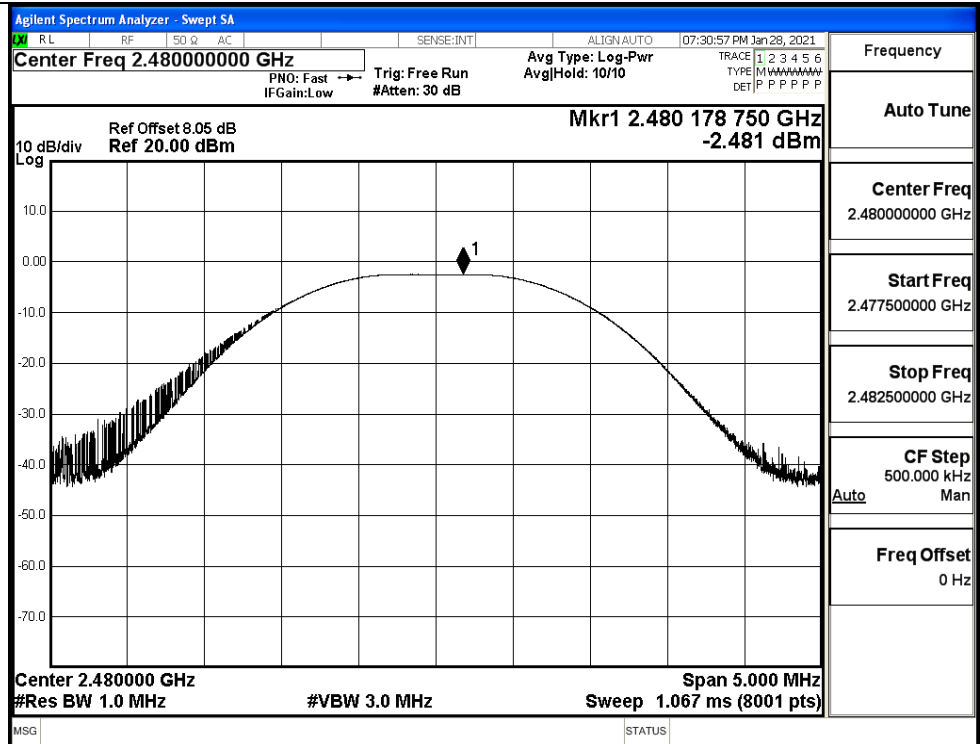
LCH



MCH



HCH

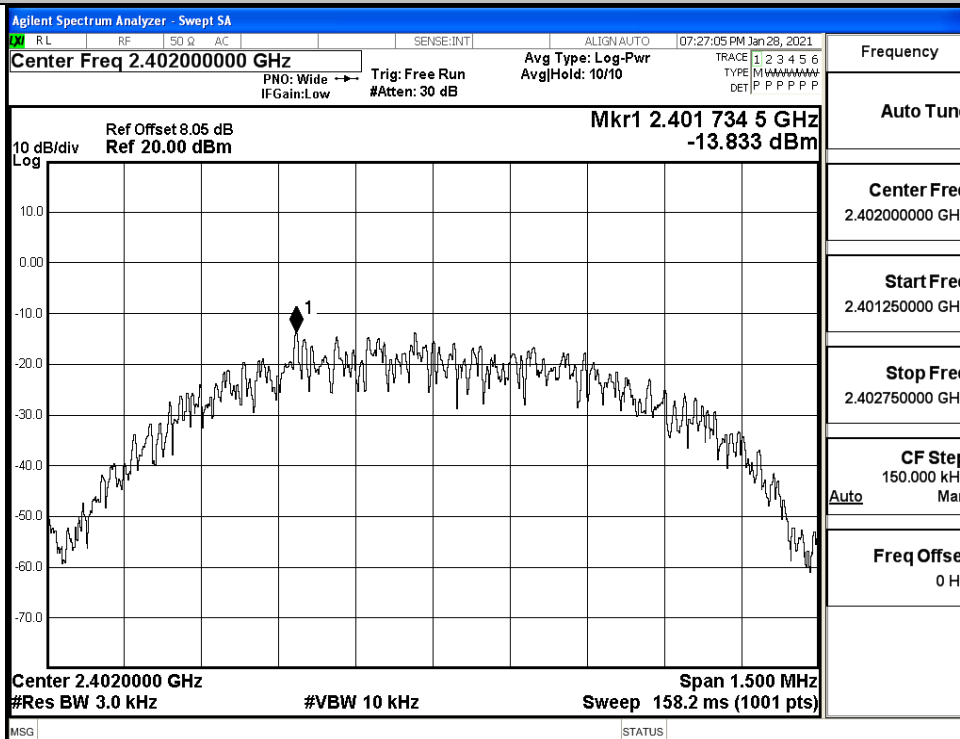


B.3 Maximum Power Spectral Density

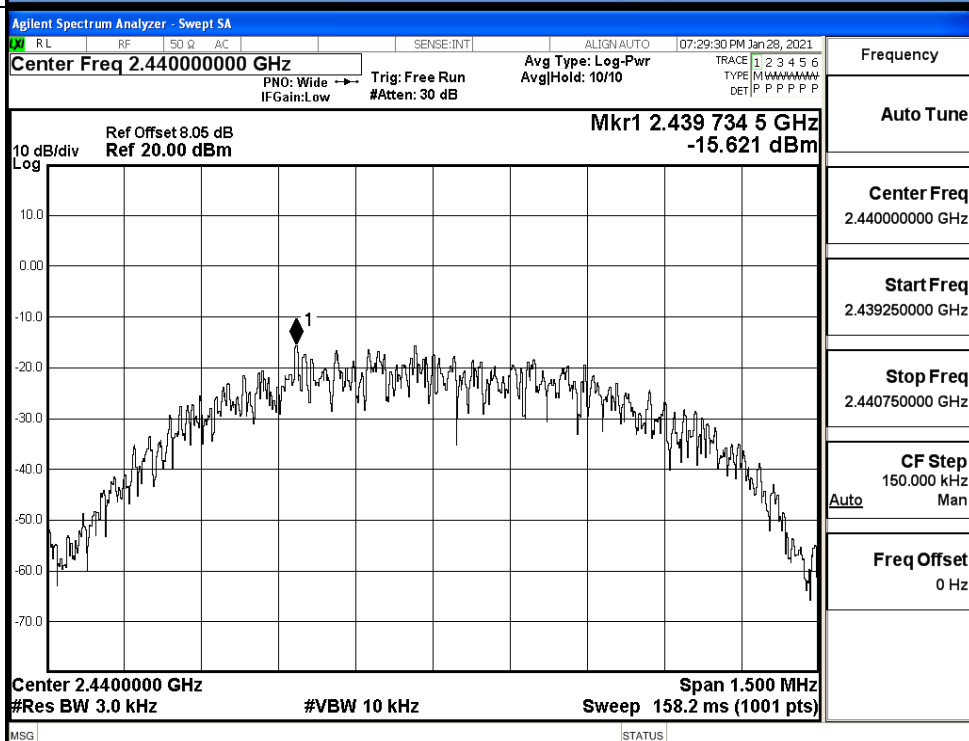
Mode	Channel	PSD [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
BT LE	LCH	-13.833	8	PASS
BT LE	MCH	-15.621	8	PASS
BT LE	HCH	-17.549	8	PASS

Test Graphs

LCH



MCH



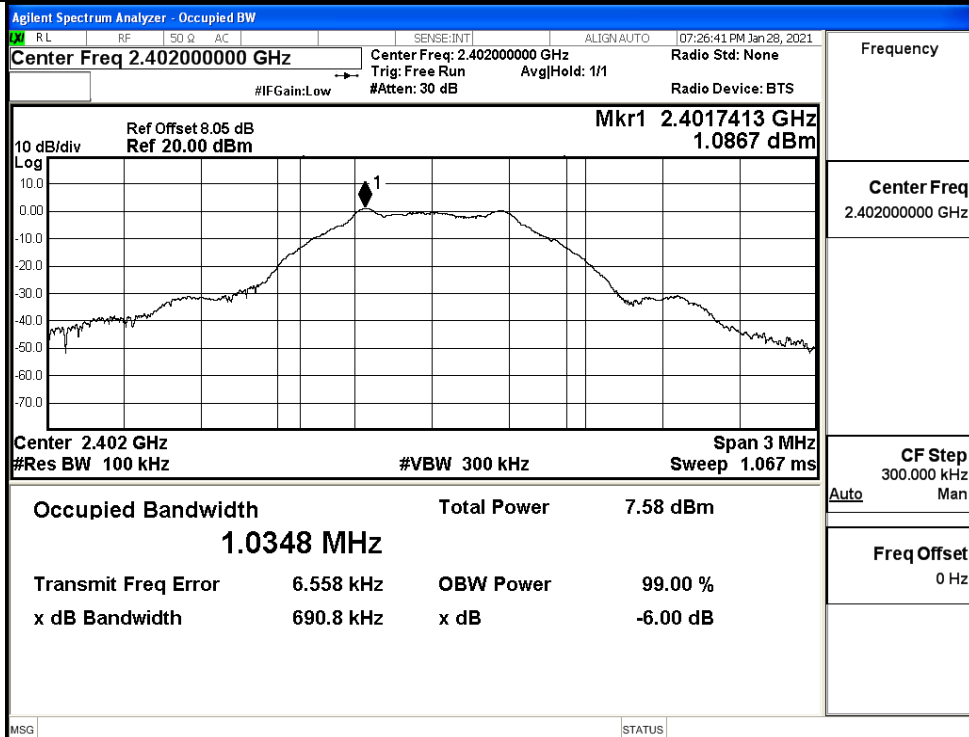


B.4 6dB Bandwidth

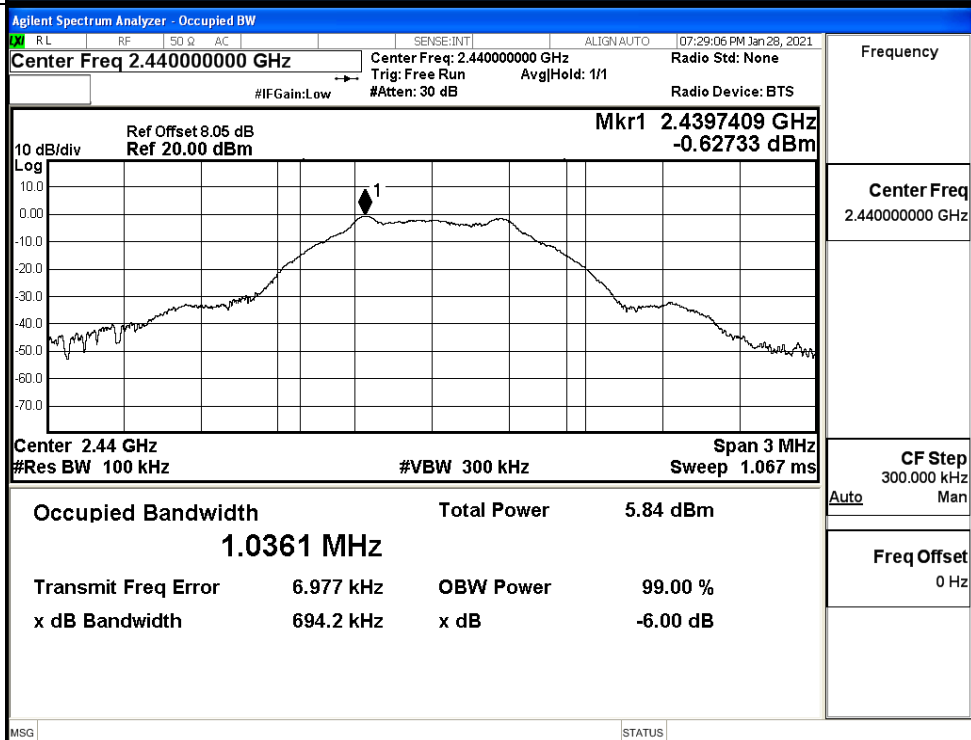
Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
BT LE	LCH	0.6908	≥ 0.5	PASS
BT LE	MCH	0.6942	≥ 0.5	PASS
BT LE	HCH	0.6878	≥ 0.5	PASS

Test Graphs

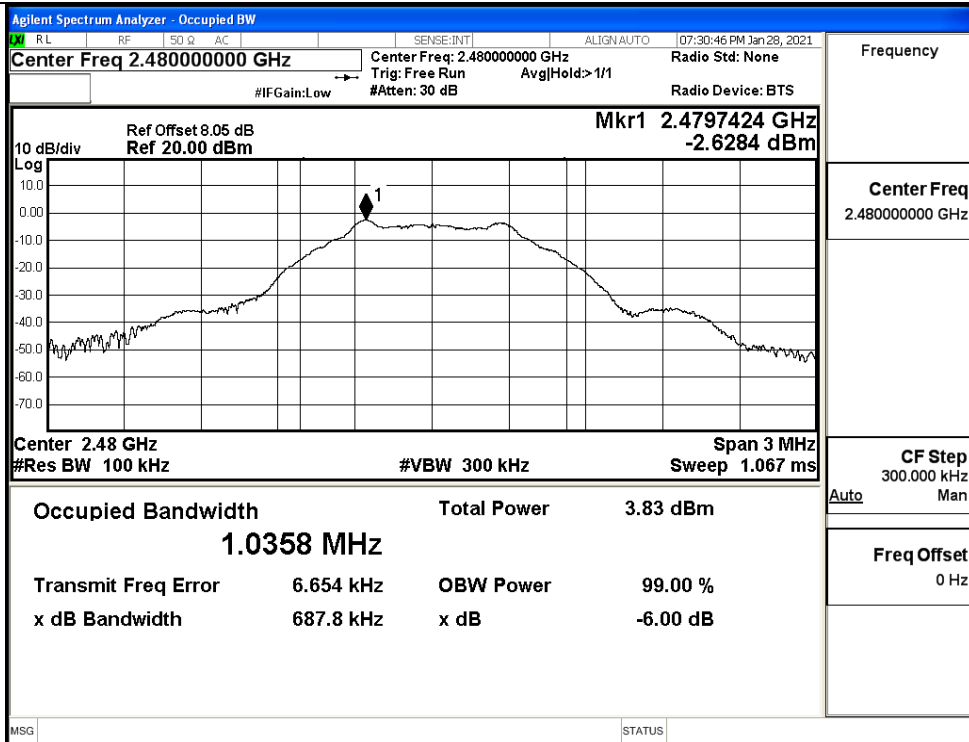
LCH



MCH



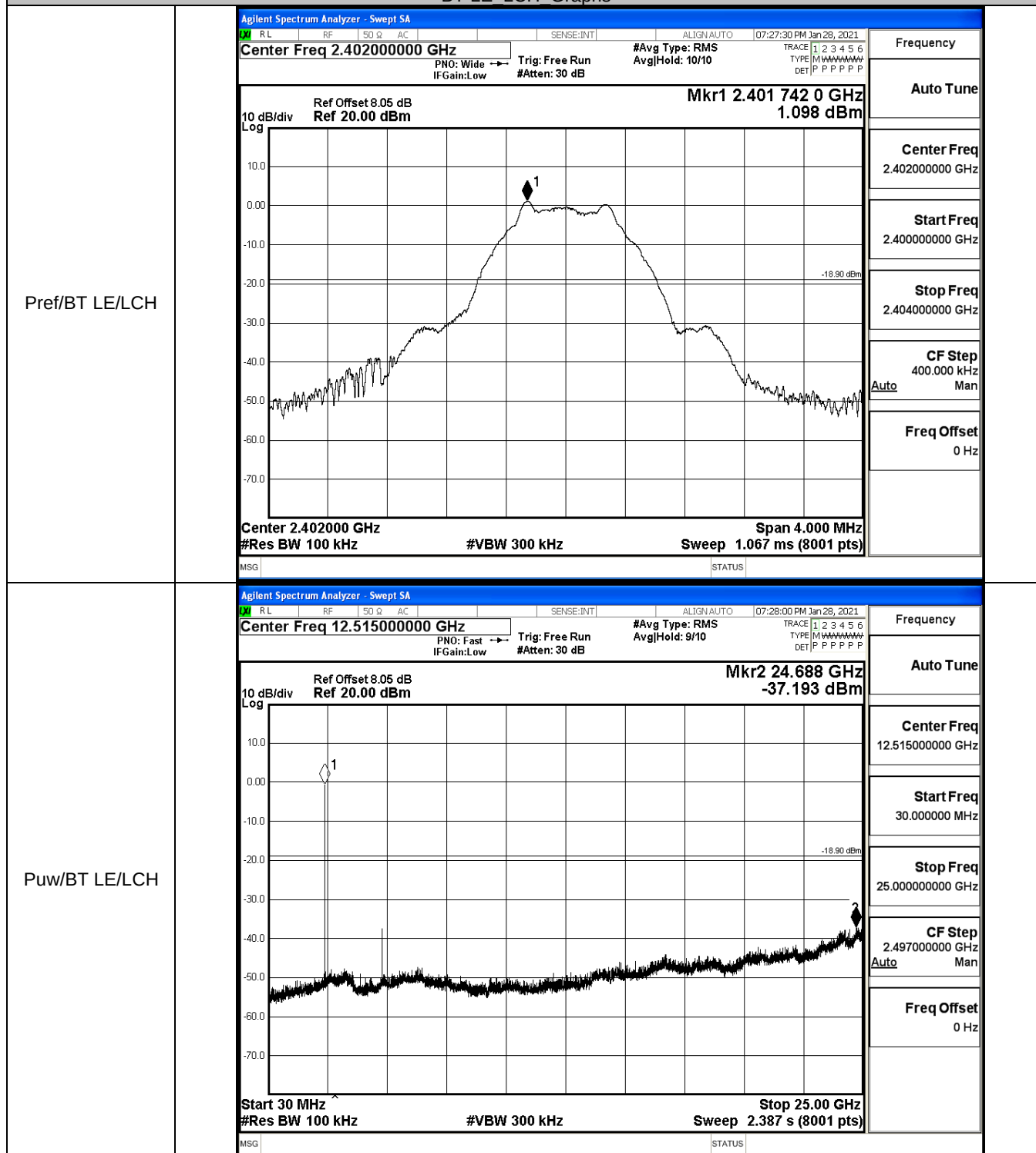
HCH



B.5 RF Conducted Spurious Emissions

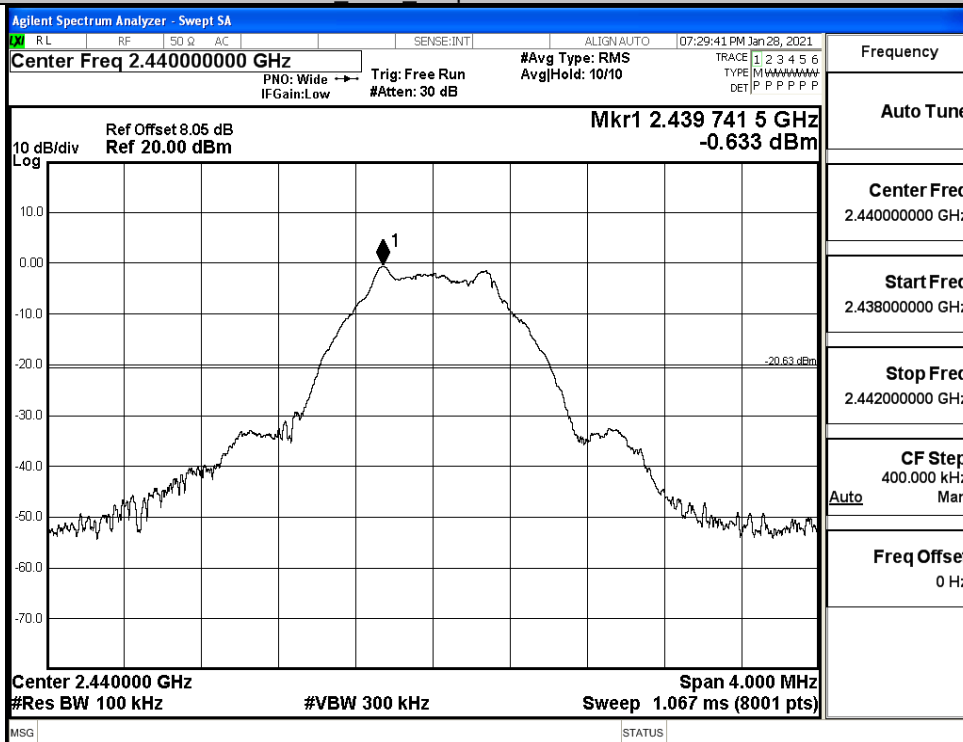
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	1.098	-37.193	-18.902	PASS
BT LE	MCH	-0.633	-36.878	-20.633	PASS
BT LE	HCH	-2.637	-37.007	-22.637	PASS

BT LE LCH Graphs

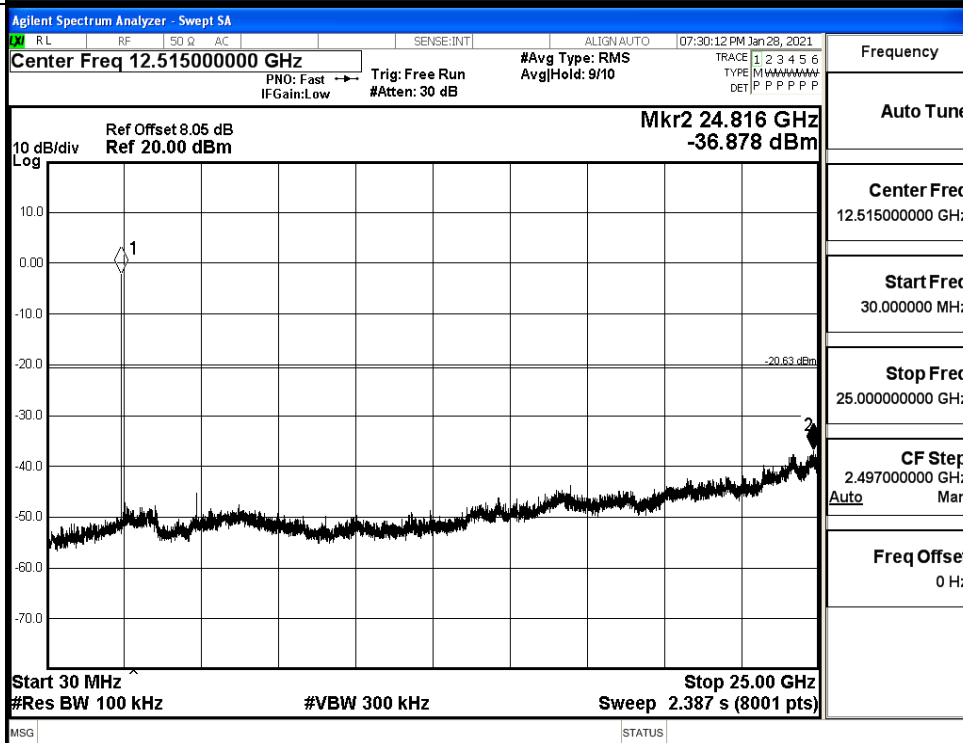


BT LE MCH Graphs

Pref/BT LE/MCH

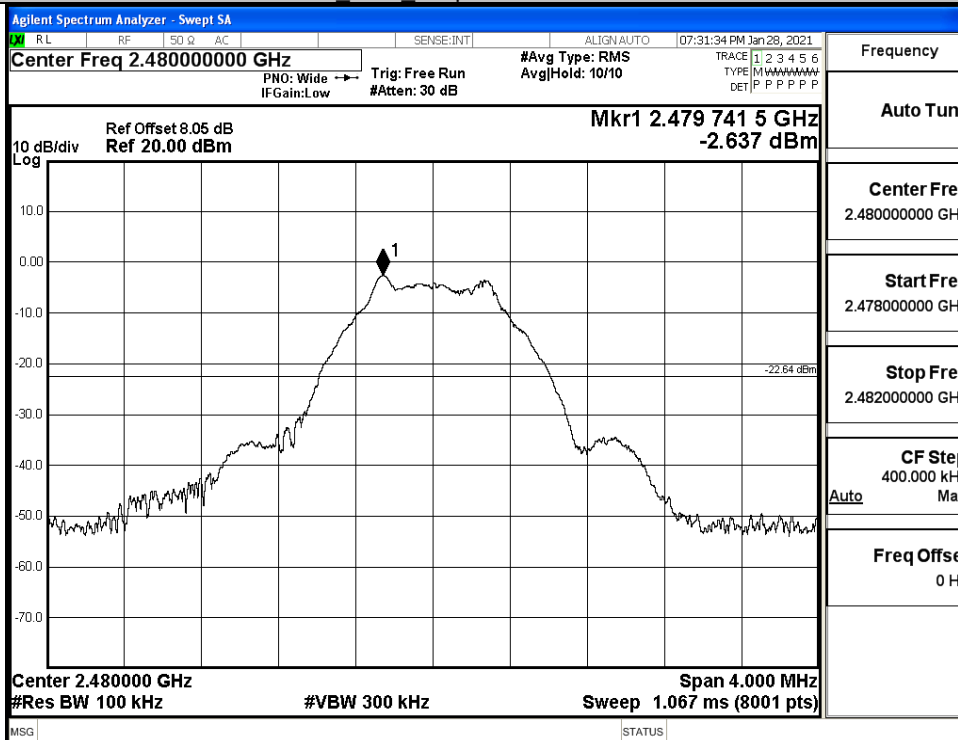


Puw/BT LE/MCH

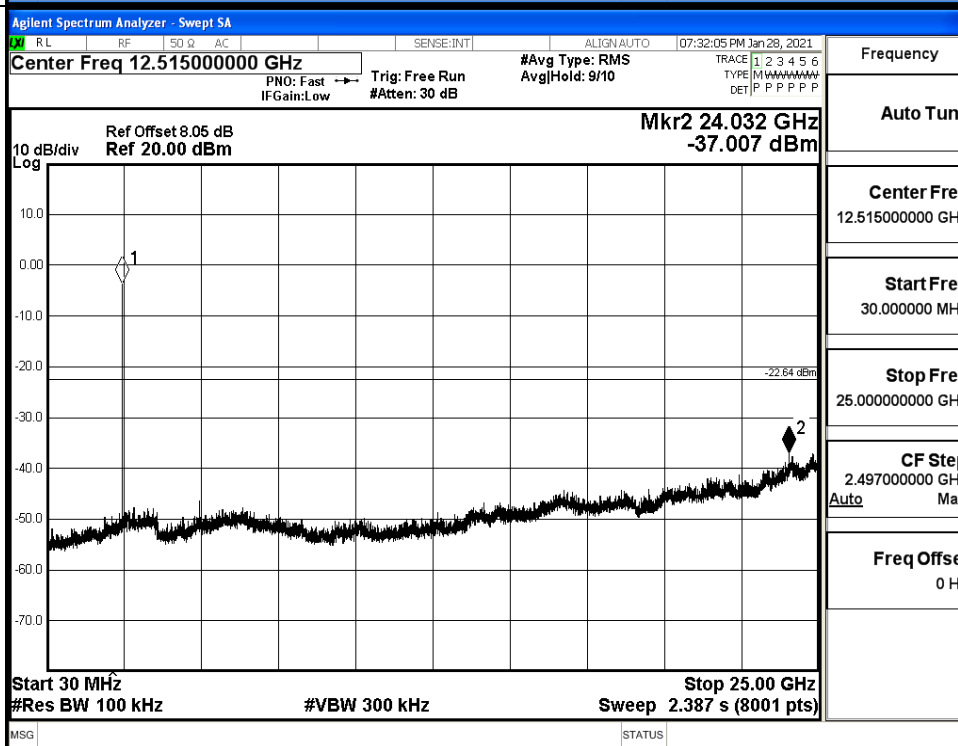


BT LE HCH Graphs

Pref/BT LE/HCH



Puw/BT LE/HCH

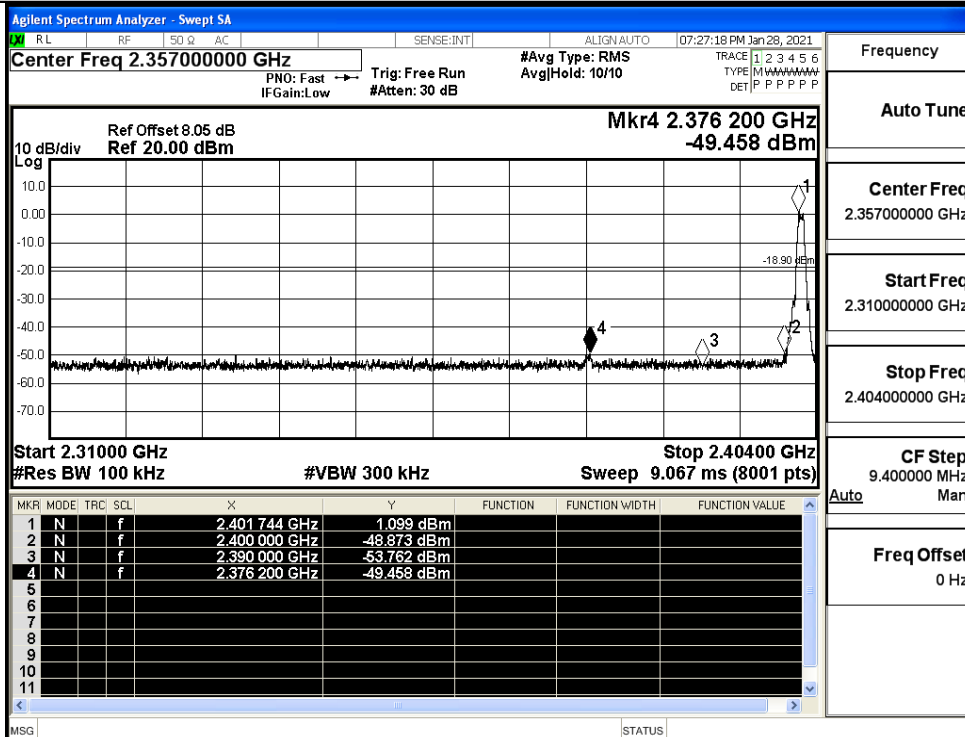


B.6 Band-edge for RF Conducted Emissions

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	1.099	-49.458	-18.9	PASS
BT LE	HCH	-2.636	-49.401	-22.64	PASS

Test Graphs

LCH



Frequency

Auto Tune

Center Freq

2.357000000 GHz

Start Freq

2.310000000 GHz

Stop Freq

2.404000000 GHz

CF Step

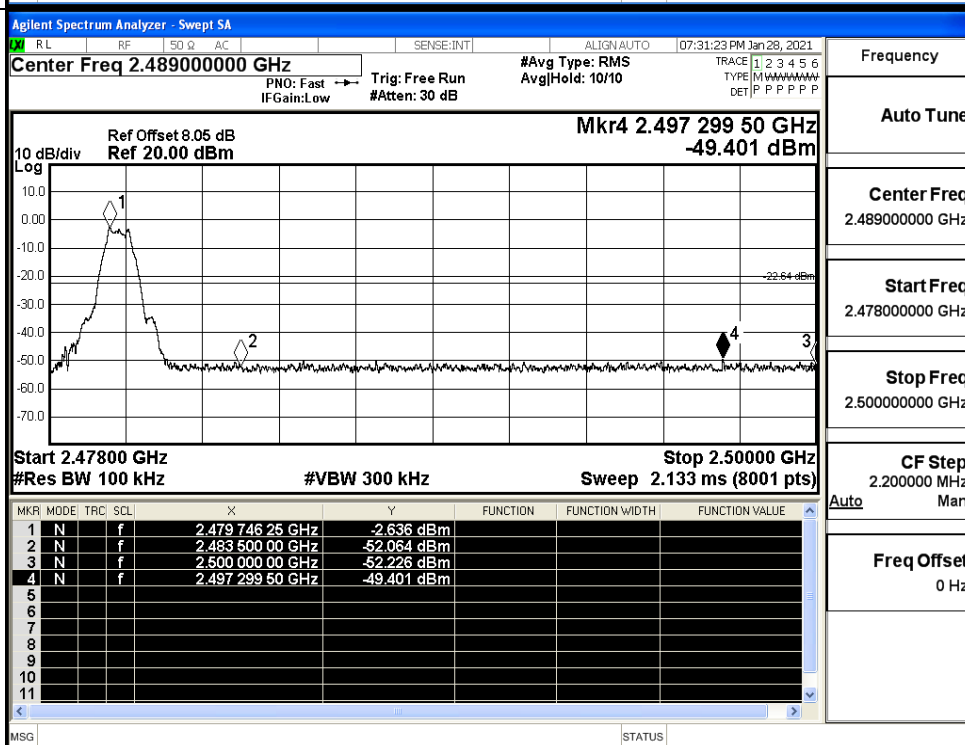
9.400000 MHz

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

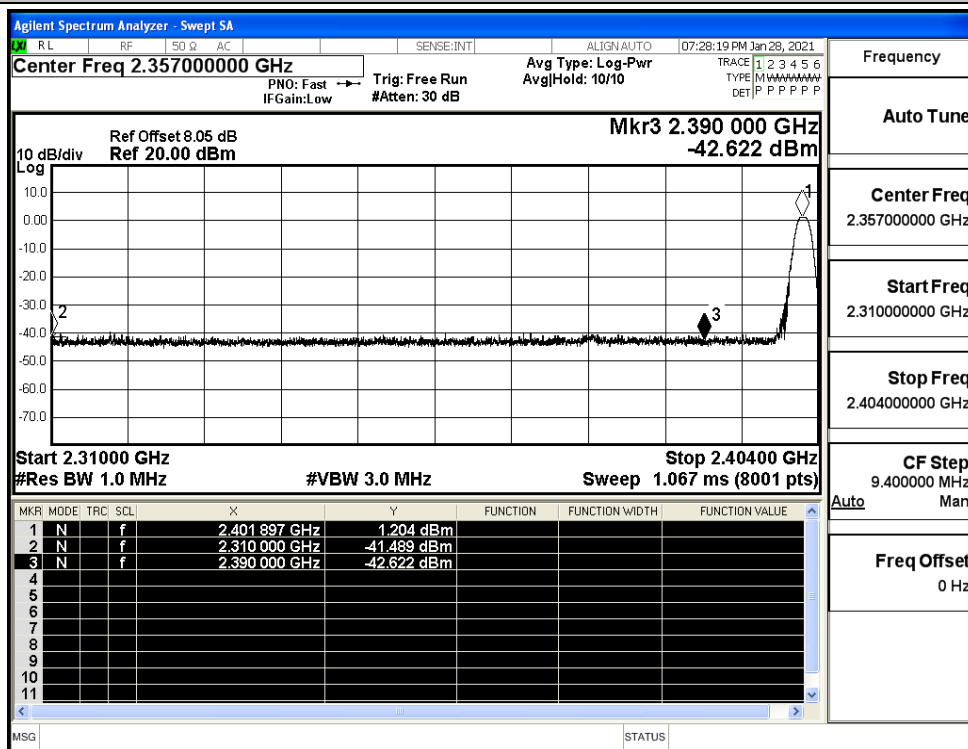
Freq Offset

0 Hz

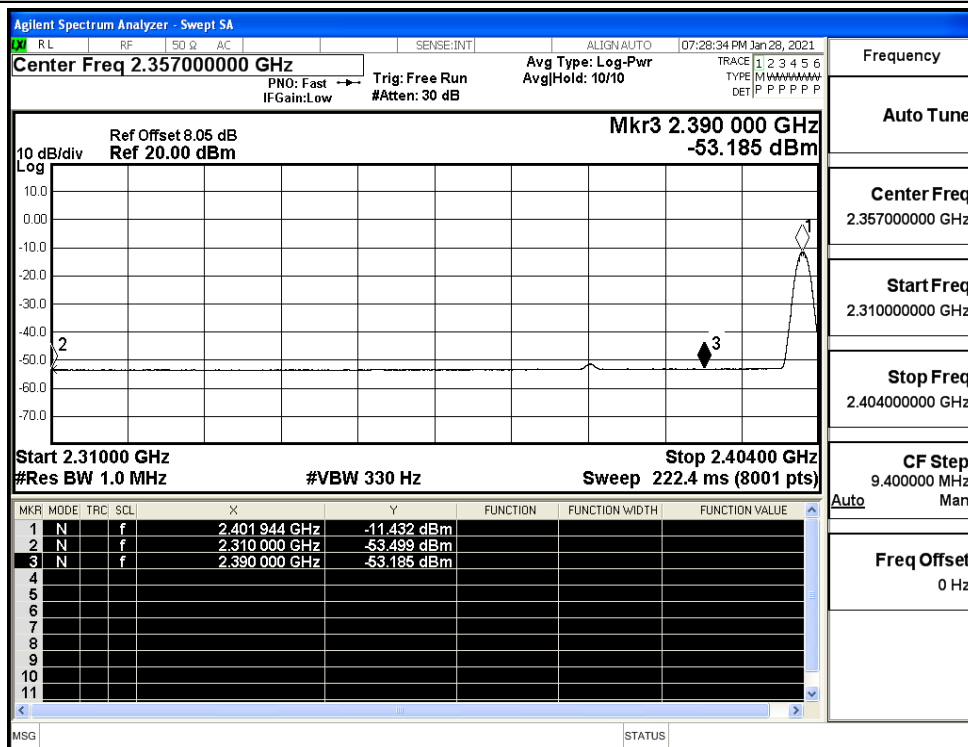
B.7 Restrict-band band-edge measurements

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	-41.49	2.0	0	55.77	PEAK	74	PASS
		Ant1	2310.0	-53.50	2.0	0	43.76	AV	54	PASS
		Ant1	2390.0	-42.62	2.0	0	54.64	PEAK	74	PASS
		Ant1	2390.0	-53.19	2.0	0	44.07	AV	54	PASS
	2480	Ant1	2483.5	-43.77	2.0	0	53.49	PEAK	74	PASS
		Ant1	2483.5	-52.73	2.0	0	44.53	AV	54	PASS
		Ant1	2500.0	-41.63	2.0	0	55.63	PEAK	74	PASS
		Ant1	2500.0	-52.45	2.0	0	44.80	AV	54	PASS

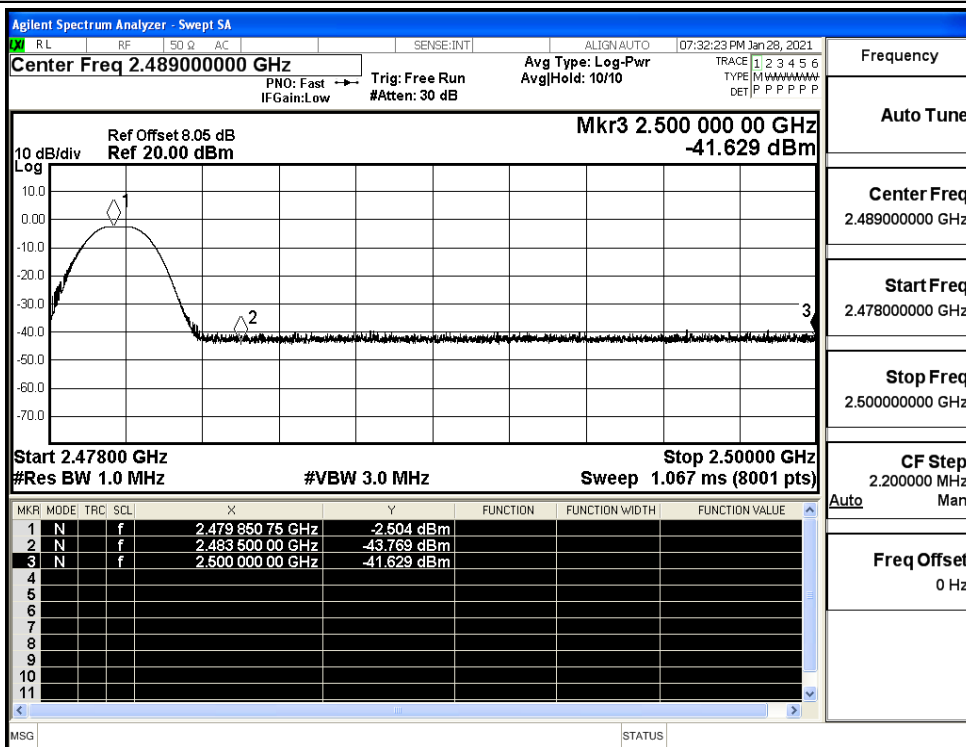
Restrict-band band-edge measurements_BT LE_2402_Ant1_PEAK



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

