

Appendix A

RF Test Data for BT LE(DTS) (Conducted Measurement)

Product Name: Smart LED Security Lights

Trade Mark: Ustellar

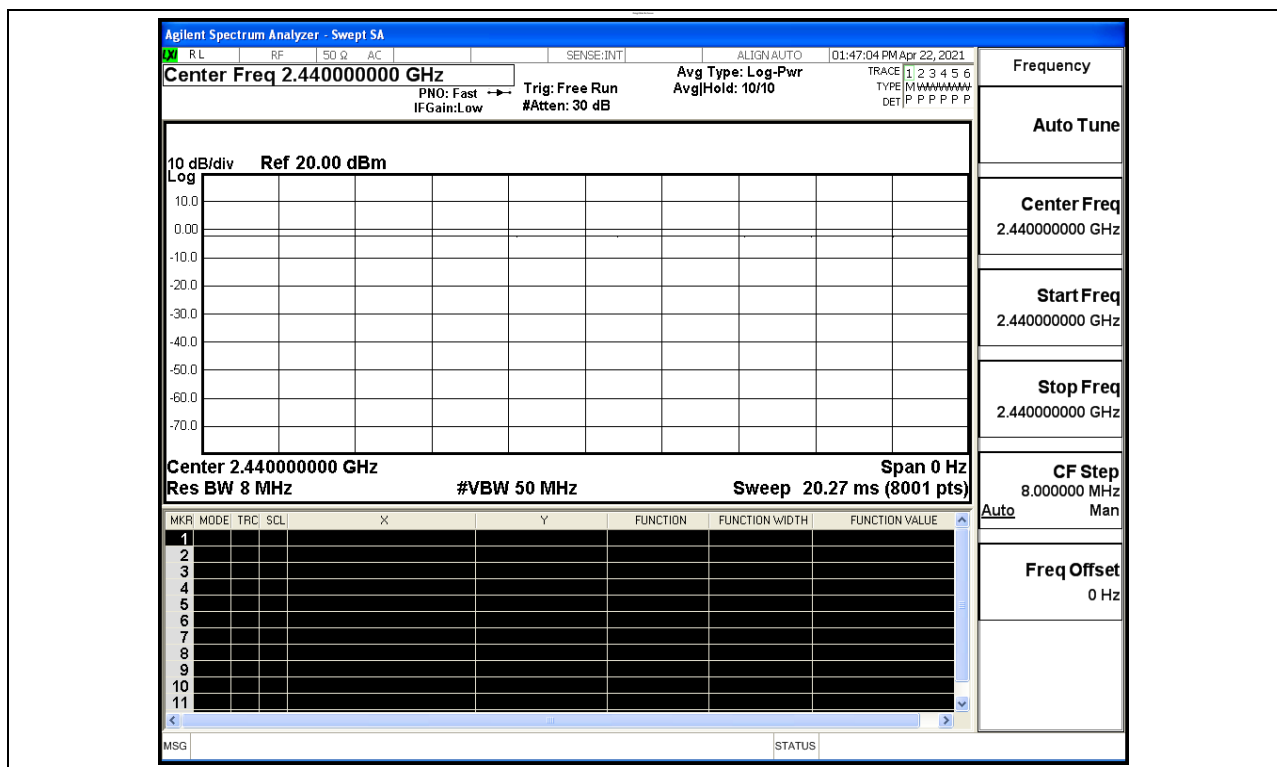
Test Model: UT88105

Environmental Conditions

Temperature:	24 ° C
Relative Humidity:	52%
ATM Pressure:	100.0 kPa
Test Engineer:	Jay Li
Supervised by:	Li Huan

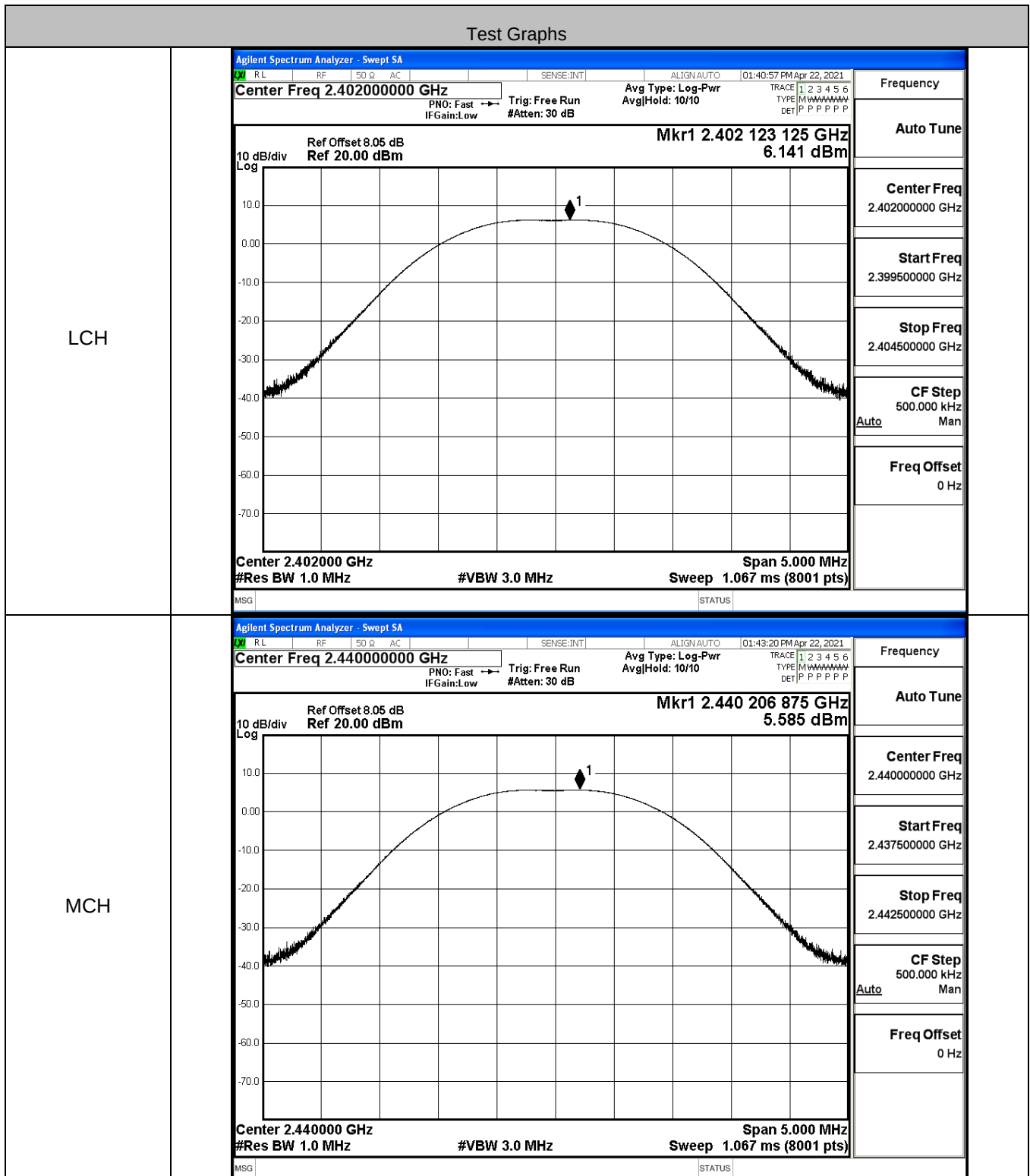
A.1 Duty Cycle

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

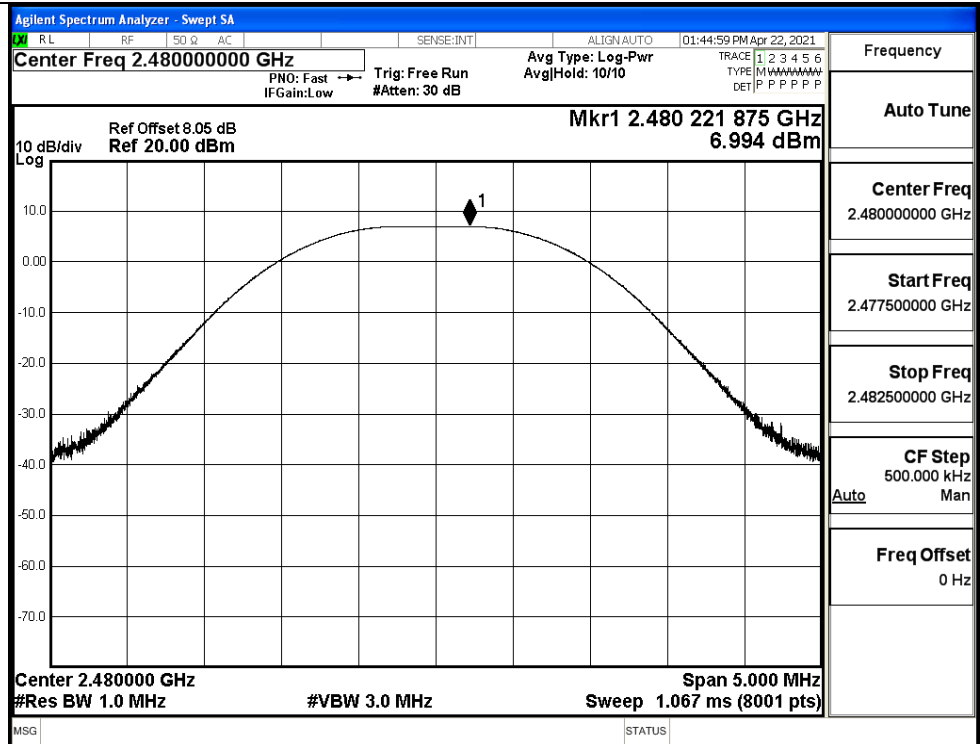


A.2 Maximum Conducted Peak Output Power

Mode	Channel	Conduct Peak Power[dBm]	Limit [dBm]	Verdict
BT LE	LCH	6.141	30	PASS
BT LE	MCH	5.585	30	PASS
BT LE	HCH	6.994	30	PASS



HCH

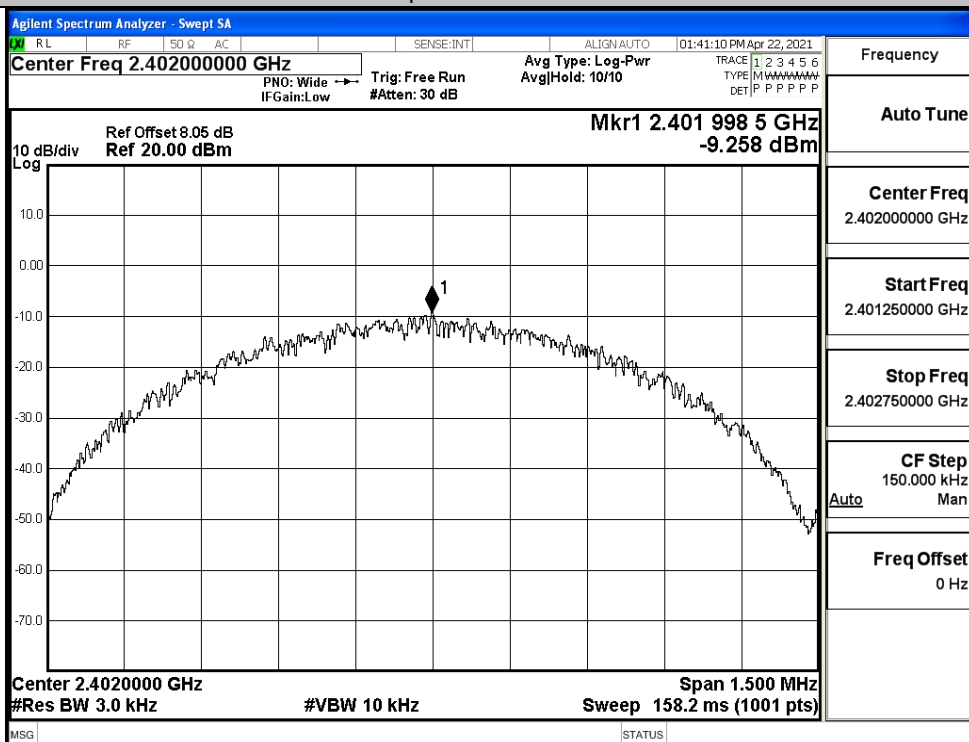


A.3 Maximum Power Spectral Density

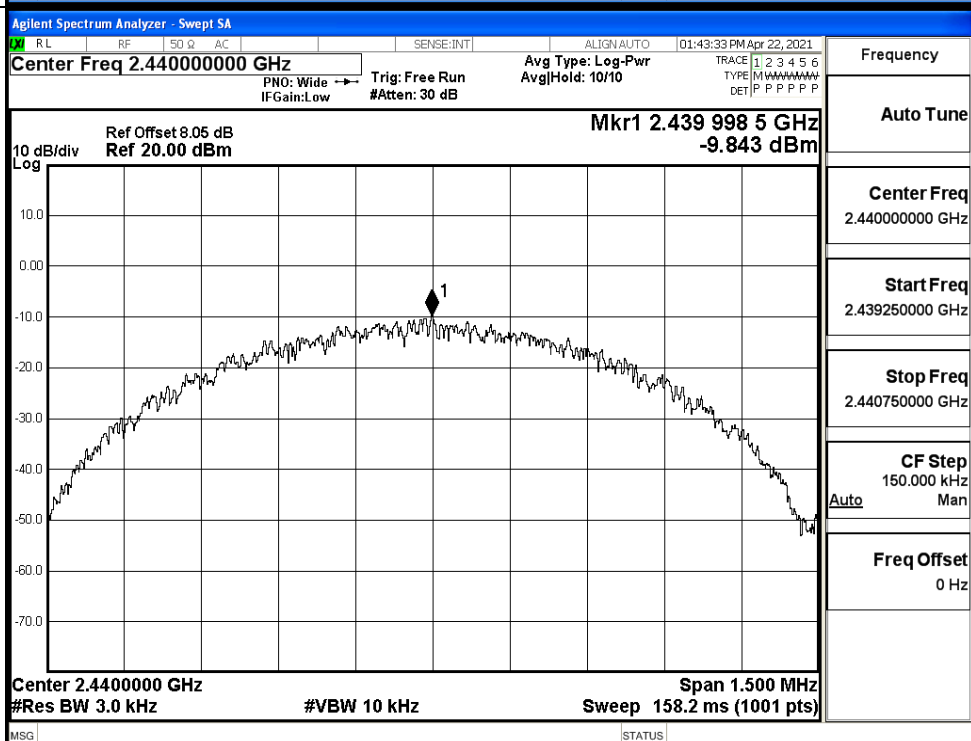
Mode	Channel	PSD [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
BT LE	LCH	-9.258	8	PASS
BT LE	MCH	-9.843	8	PASS
BT LE	HCH	-8.582	8	PASS

Test Graphs

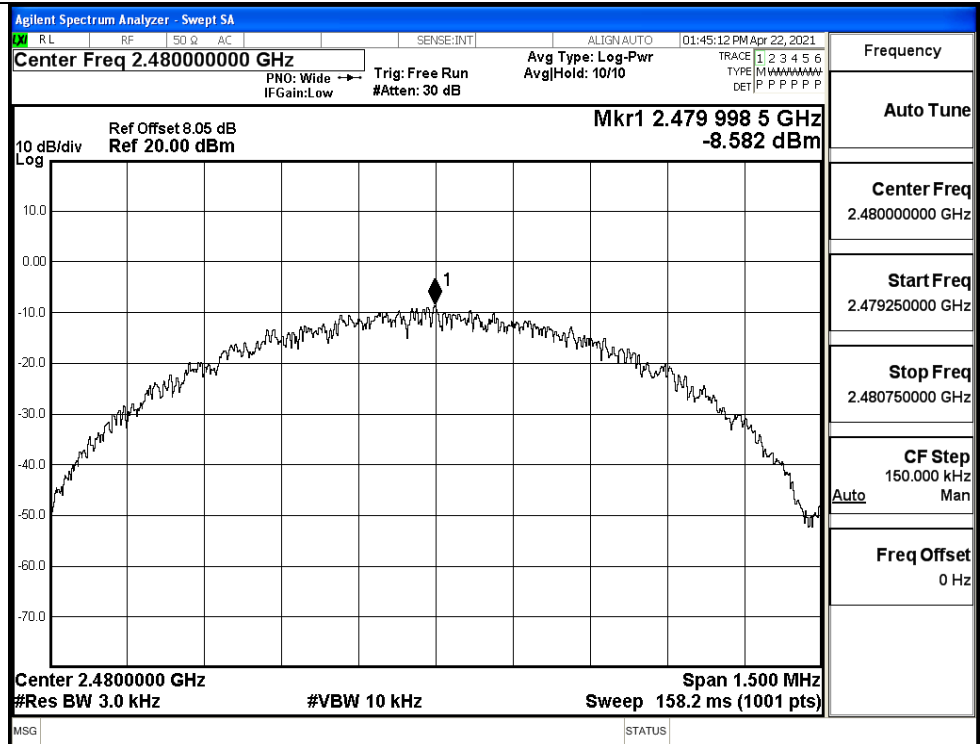
LCH



MCH



HCH

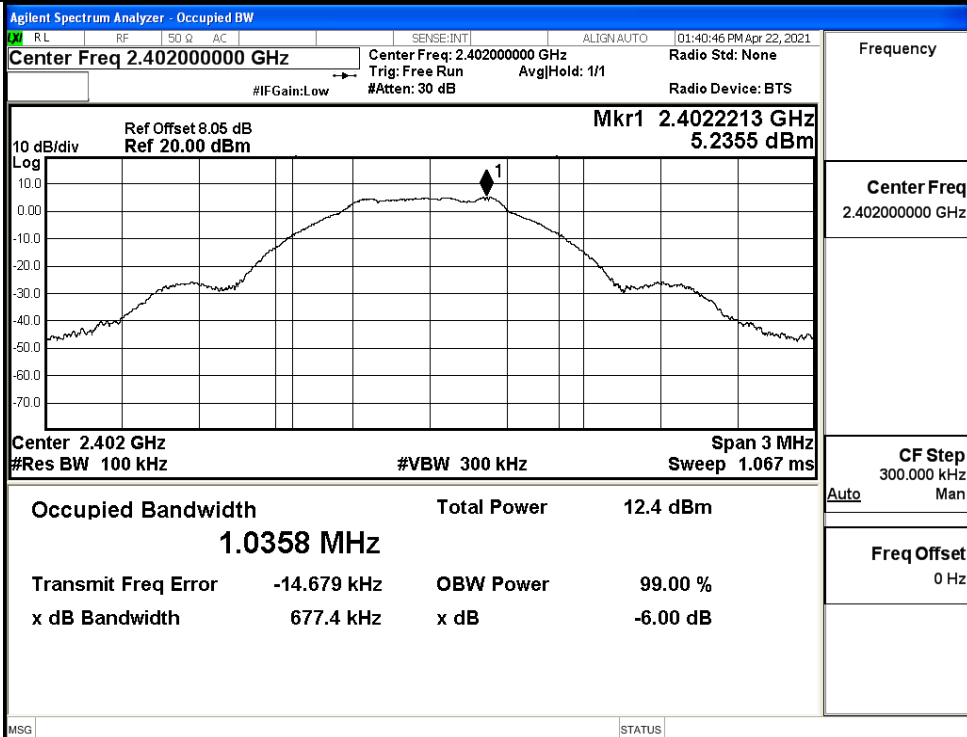


A.4 6dB Bandwidth

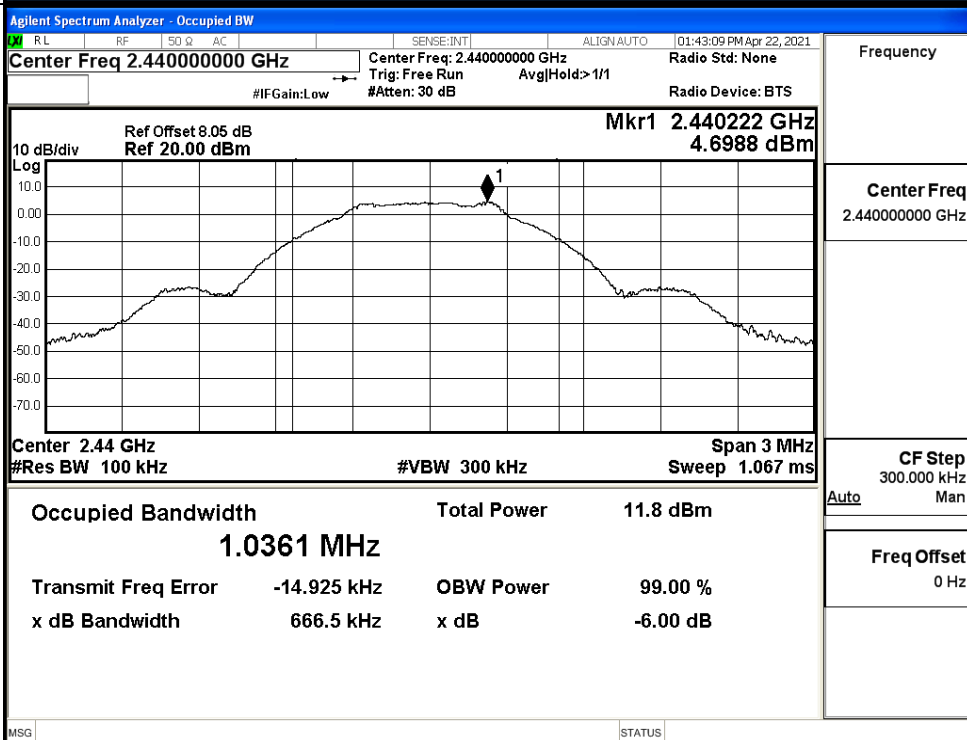
Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
BT LE	LCH	0.6774	≥ 0.5	PASS
BT LE	MCH	0.6665	≥ 0.5	PASS
BT LE	HCH	0.6771	≥ 0.5	PASS

Test Graphs

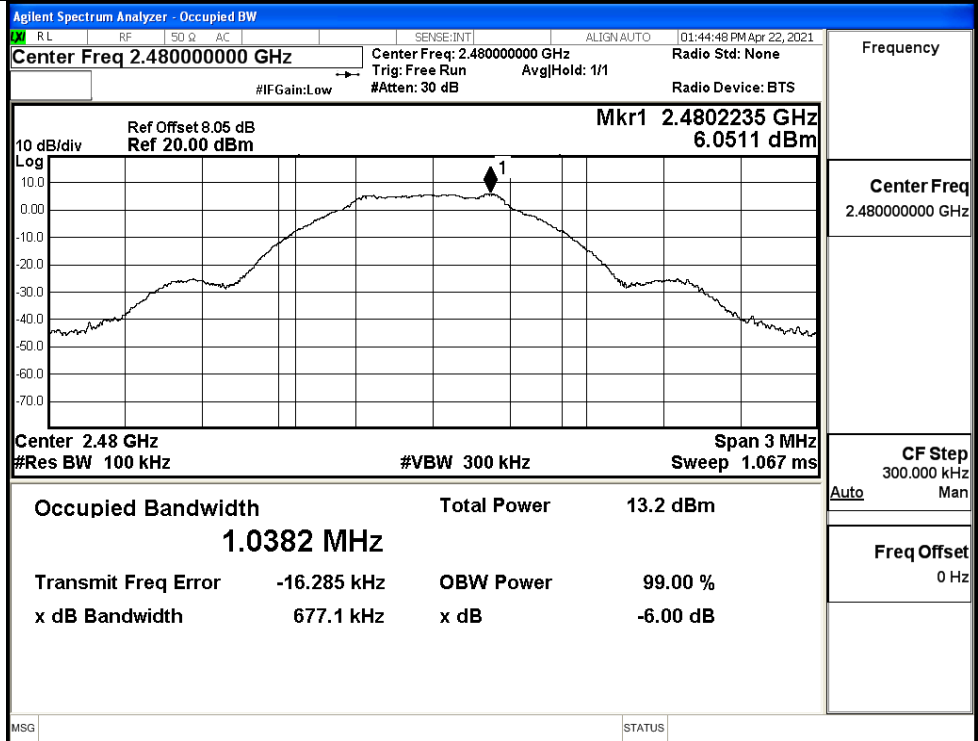
LCH



MCH



HCH

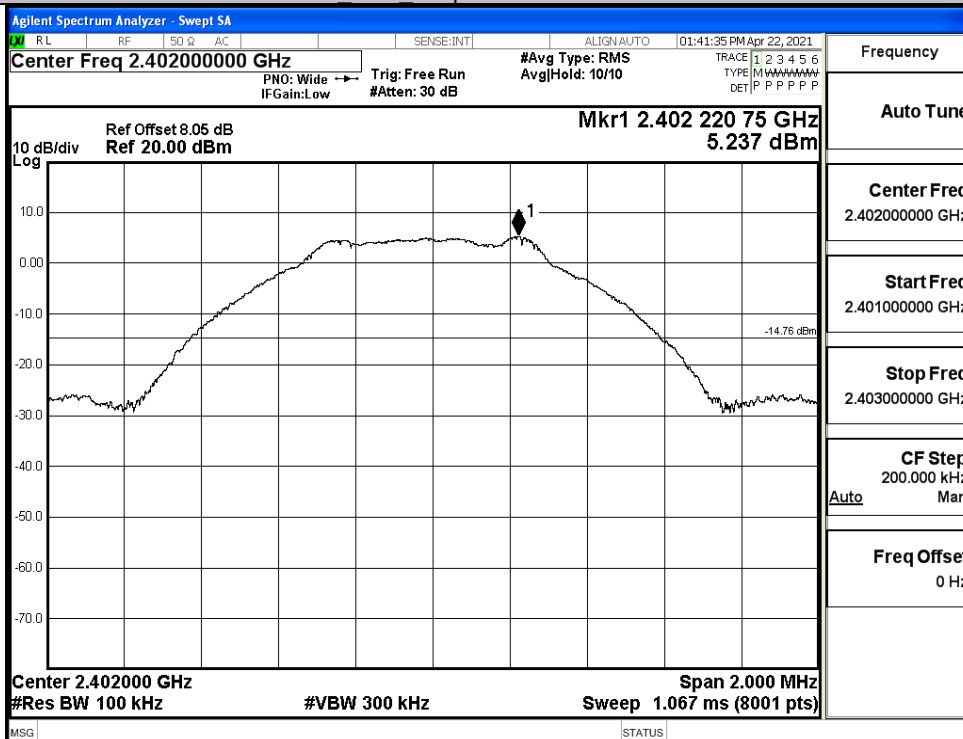


A.5 RF Conducted Spurious Emissions

Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	5.237	-37.245	-14.763	PASS
BT LE	MCH	4.683	-38.004	-15.317	PASS
BT LE	HCH	6.007	-37.419	-13.993	PASS

BT LE LCH Graphs

Pref/BT LE/LCH



Frequency

Auto Tune

Center Freq
2.402000000 GHz

Start Freq
2.401000000 GHz

Stop Freq
2.403000000 GHz

CF Step
200.000 kHz
Auto Man

Freq Offset
0 Hz

Puw/BT LE/LCH



Frequency

Auto Tune

Center Freq
12.515000000 GHz

Start Freq
30.000000 MHz

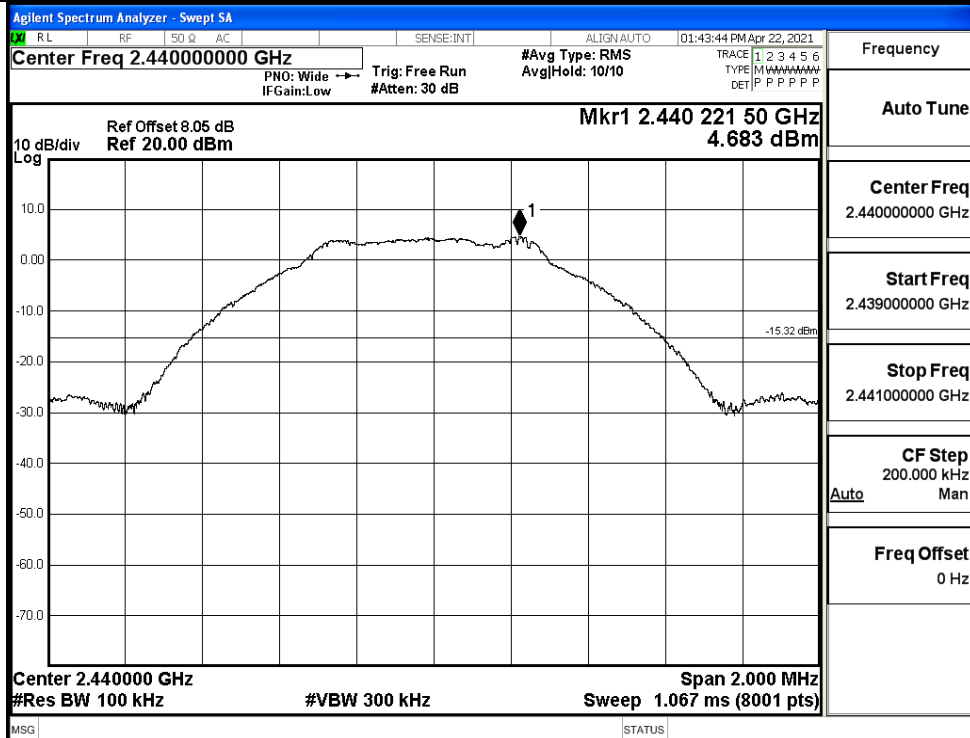
Stop Freq
25.000000000 GHz

CF Step
2.497000000 GHz
Auto Man

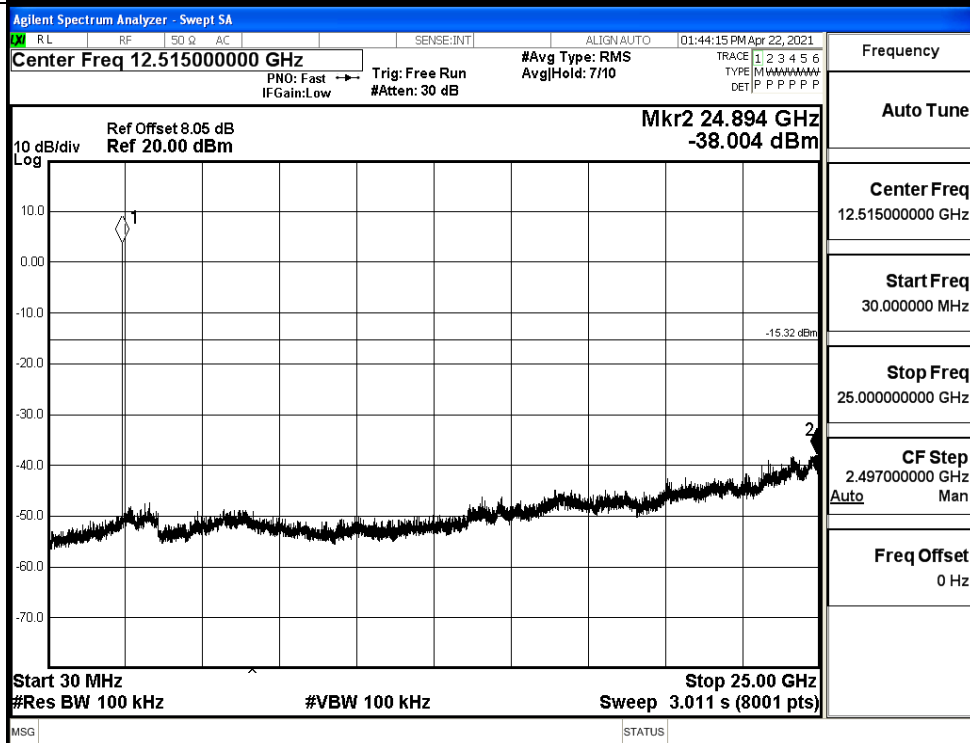
Freq Offset
0 Hz

BT LE MCH Graphs

Pref/BT LE/MCH

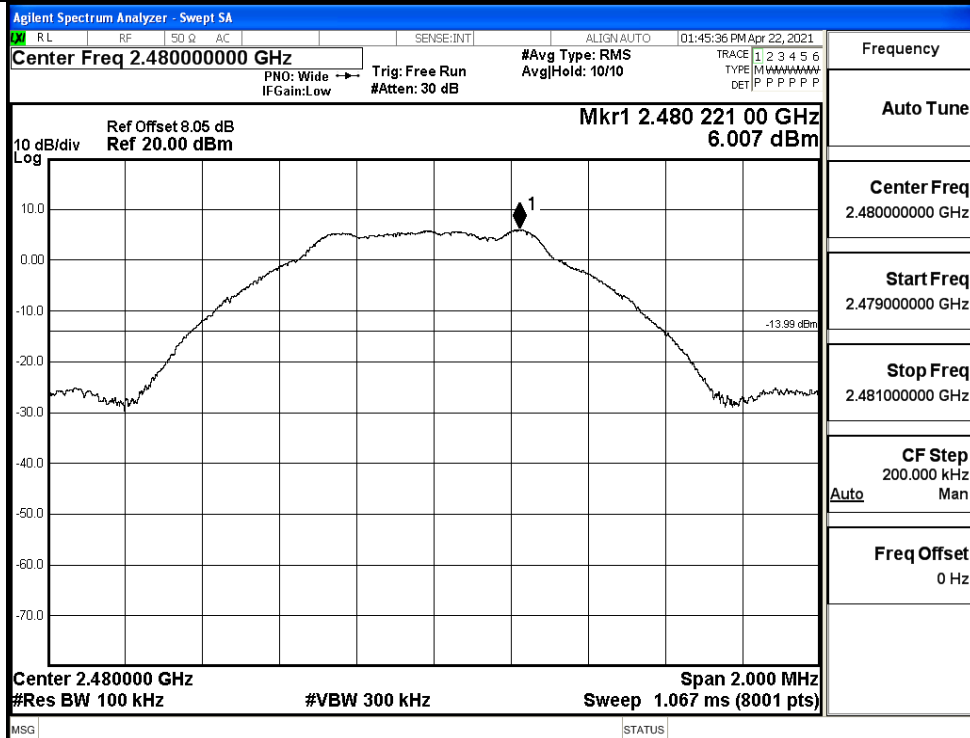


Puw/BT LE/MCH

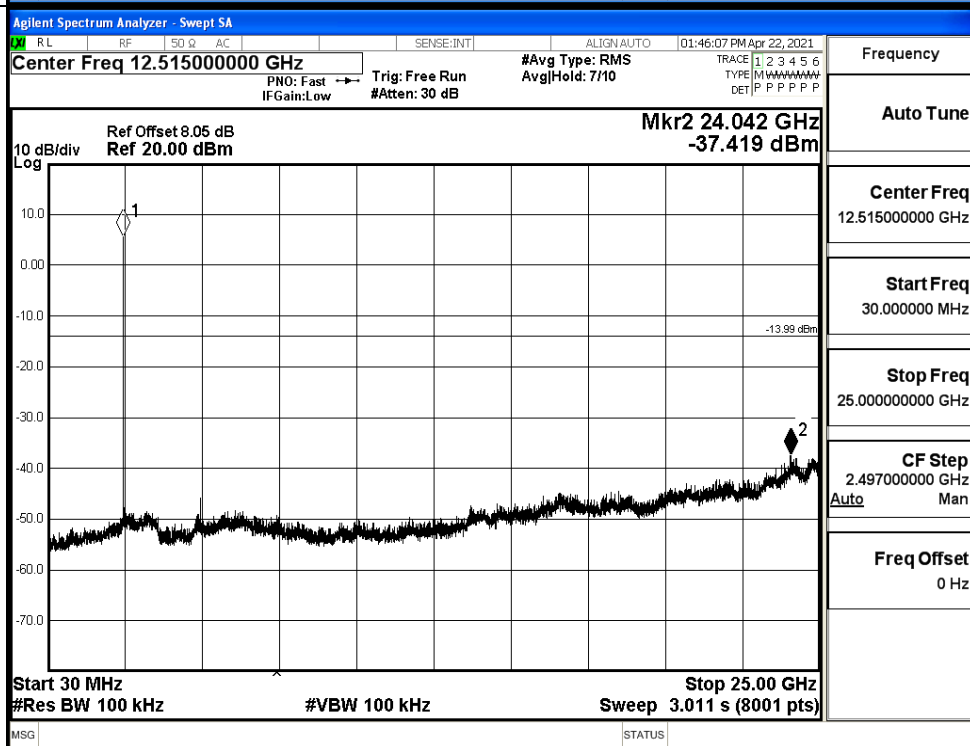


BT LE HCH Graphs

Pref/BT LE/HCH



Puw/BT LE/HCH

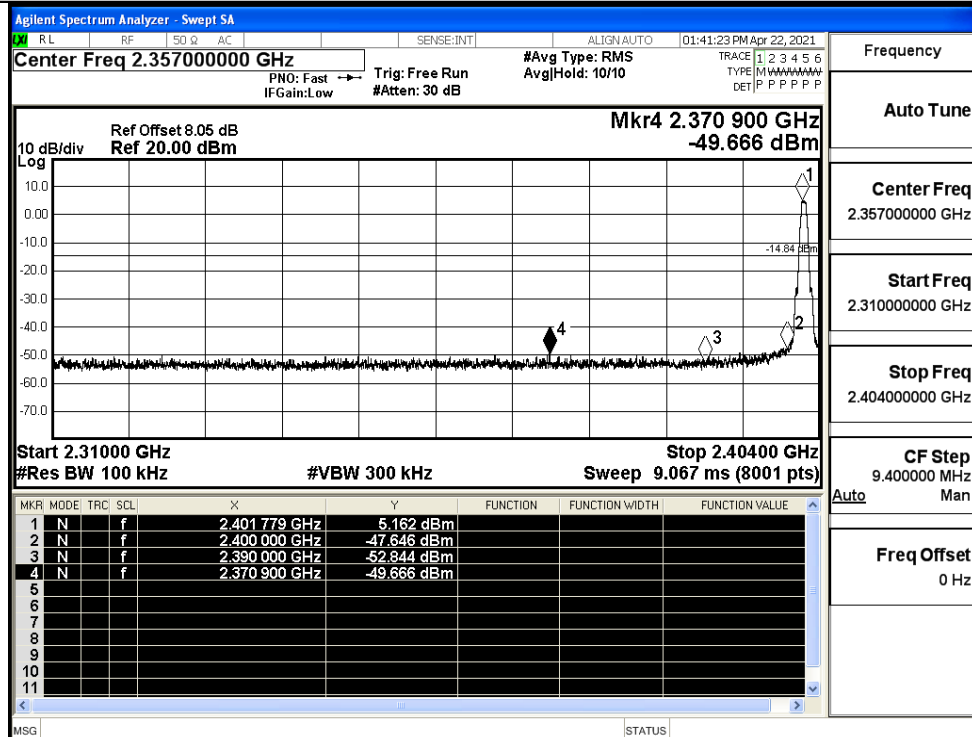


A.6 Band-edge for RF Conducted Emissions

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	5.162	-49.666	-14.84	PASS
BT LE	HCH	6.180	-46.402	-13.82	PASS

Test Graphs

LCH



Frequency

Auto Tune

Center Freq

2.357000000 GHz

Start Freq

2.310000000 GHz

Stop Freq

2.404000000 GHz

CF Step

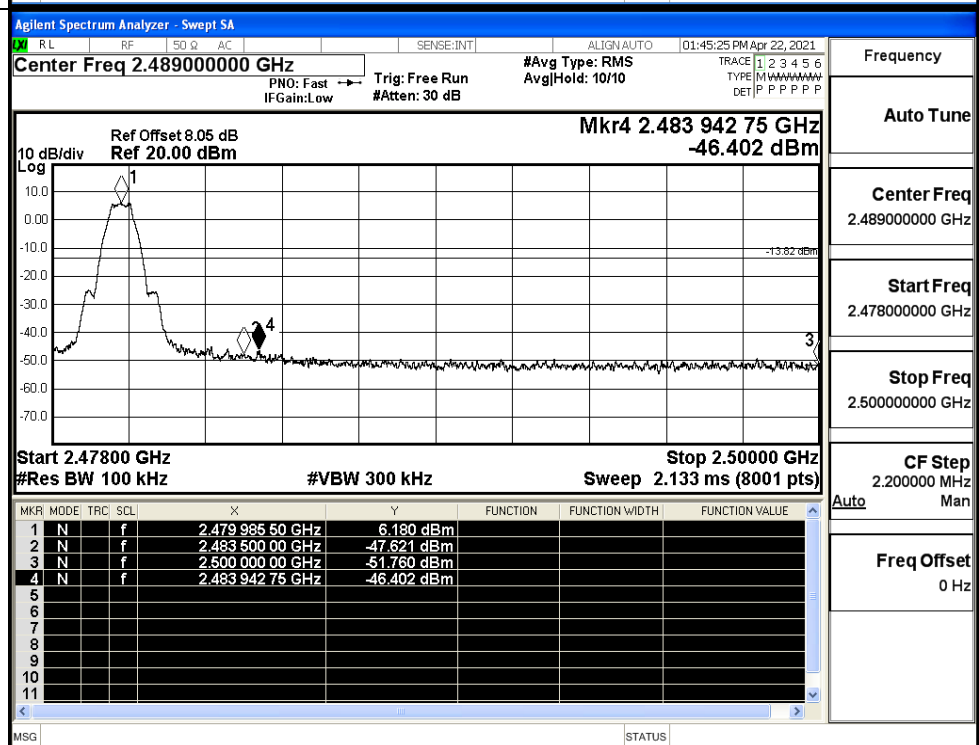
9.400000 MHz

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

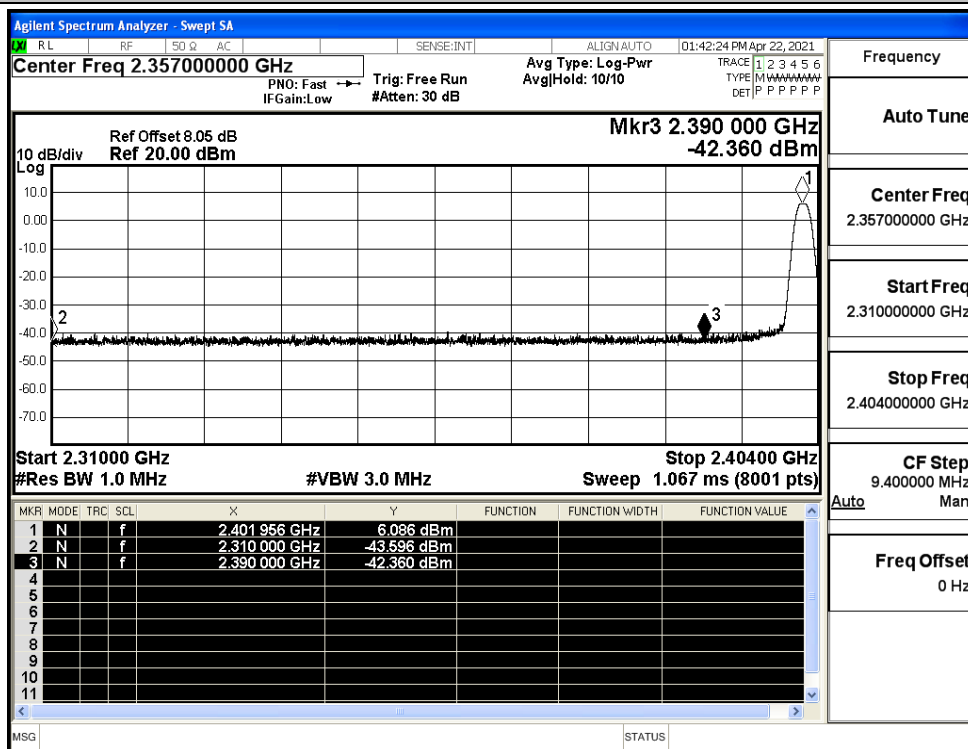
Freq Offset

0 Hz

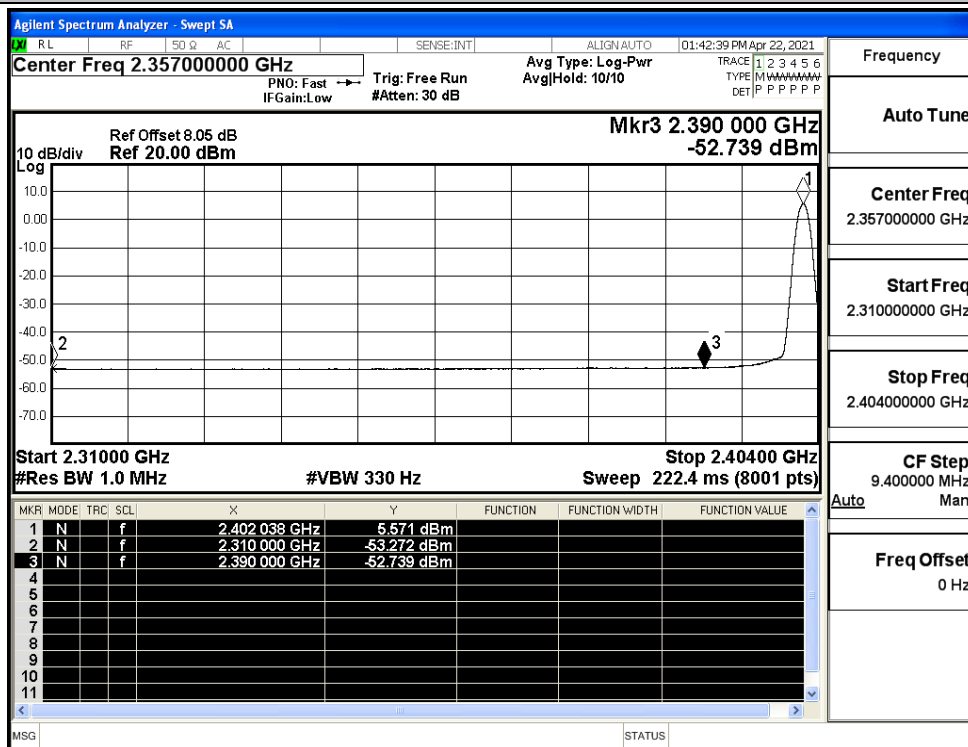
A.7 Restrict-band band-edge measurements

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	-43.60	2.0	0	53.63	PEAK	74	PASS
		Ant1	2310.0	-53.27	2.0	0	43.96	AV	54	PASS
		Ant1	2390.0	-42.36	2.0	0	54.87	PEAK	74	PASS
		Ant1	2390.0	-52.74	2.0	0	44.49	AV	54	PASS
	2480	Ant1	2483.5	-39.66	2.0	0	57.57	PEAK	74	PASS
		Ant1	2483.5	-48.77	2.0	0	48.46	AV	54	PASS
		Ant1	2500.0	-41.69	2.0	0	55.54	PEAK	74	PASS
		Ant1	2500.0	-52.11	2.0	0	45.12	AV	54	PASS

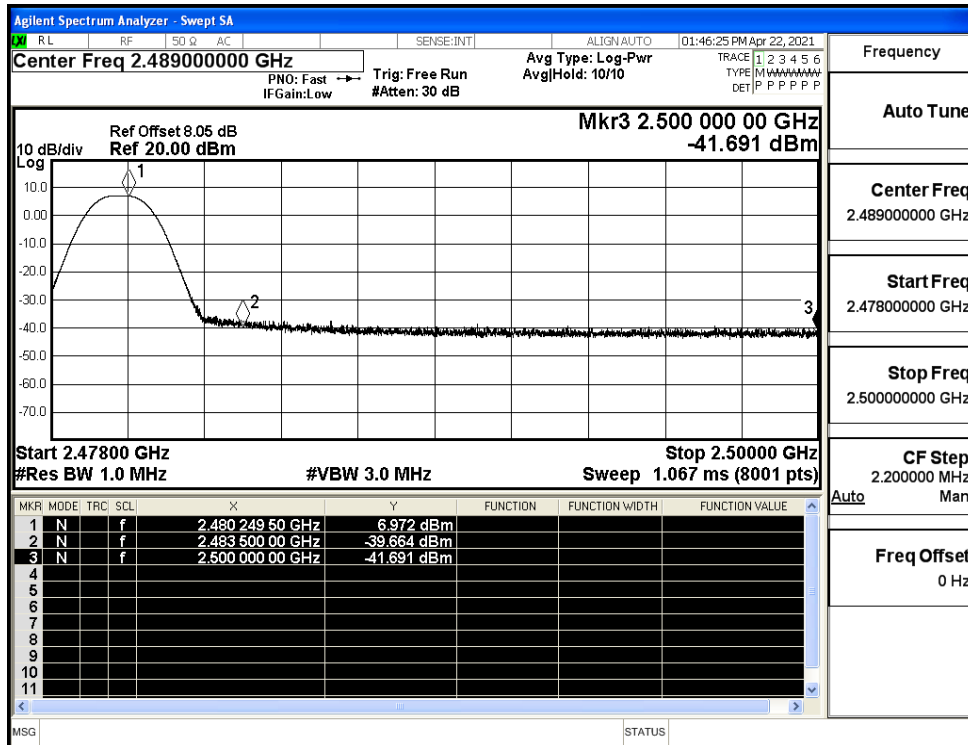
Restrict-band band-edge measurements_BT LE_2402_Ant1_PEAK



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

