

Appendix A

RF Test Data for BT V4.0(BLE) (Conducted Measurement)

Product Name: Bluetooth light controller

Trade Mark: none

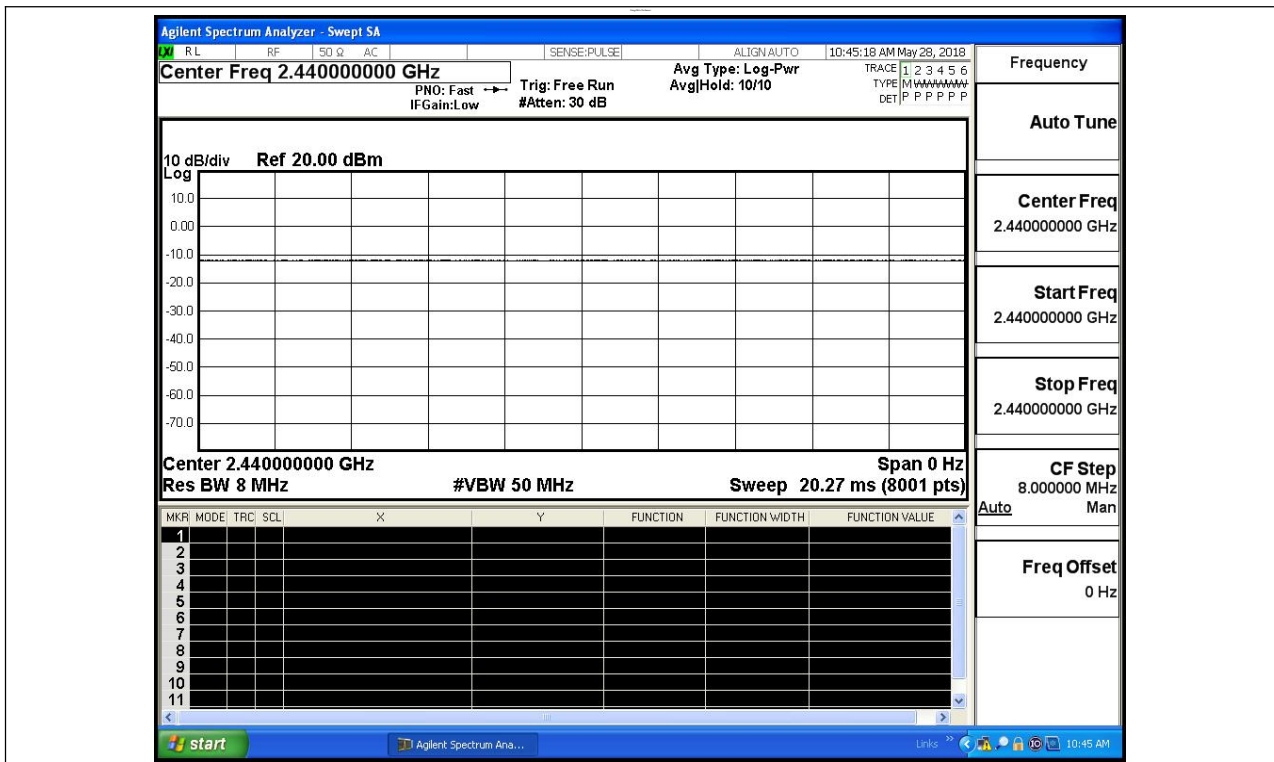
Test Model: BT-TLC-1

Environmental Conditions

Temperature:	22.3 ° C
Relative Humidity:	54.6%
ATM Pressure:	100.0 kPa
Test Engineer:	Tom.Liu
Supervised by:	Jayden.Zhuo

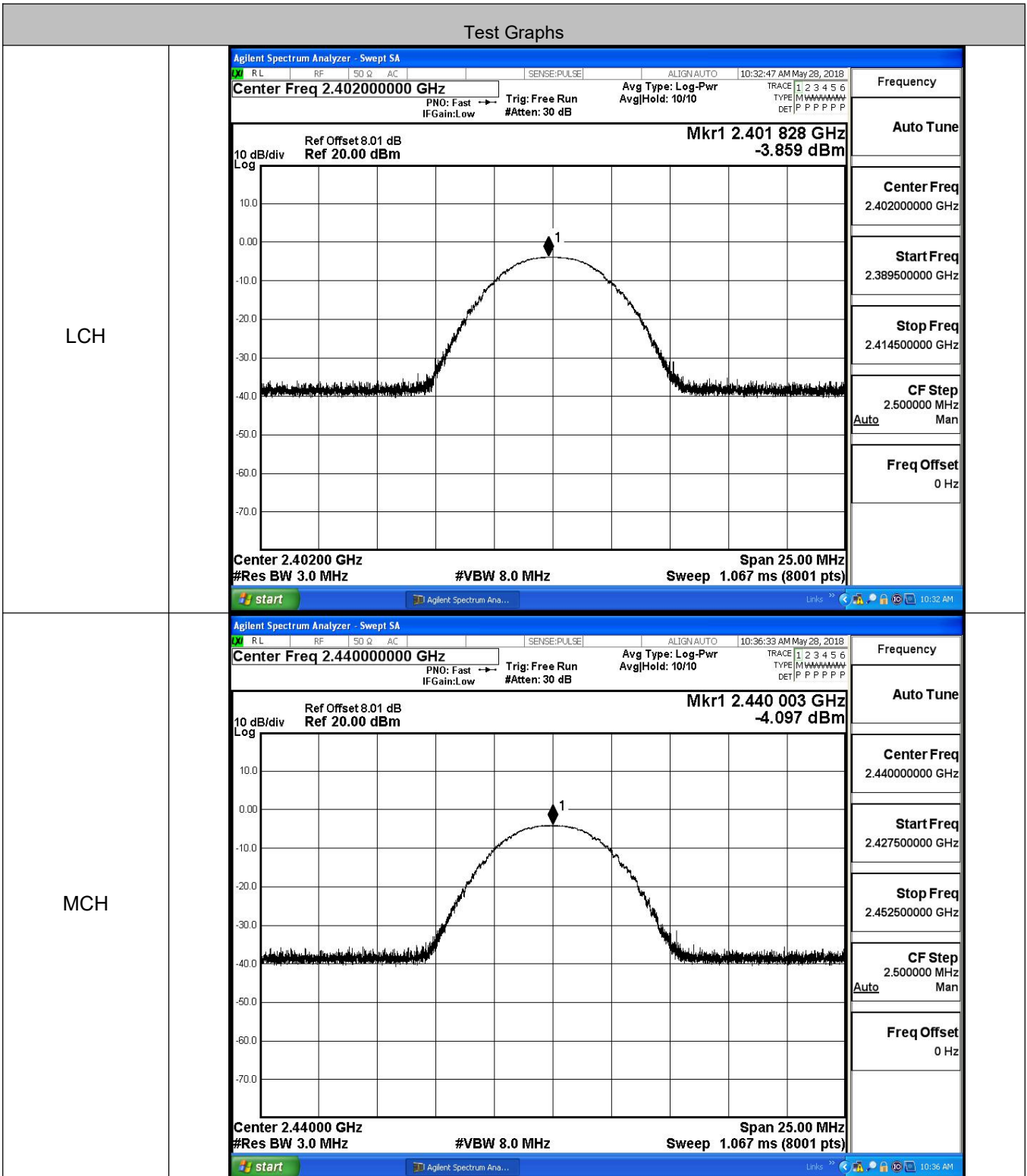
B.1 Duty Cycle

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

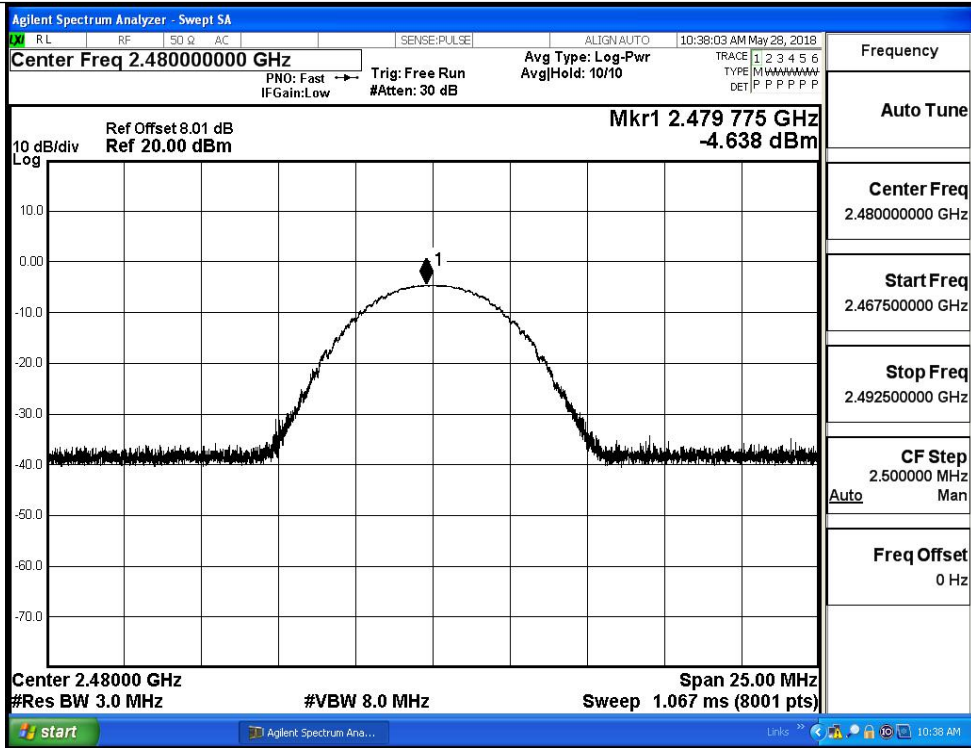


B.2 Maximum Conducted Peak Output Power

Mode	Channel	Conduct Peak Power[dBm]	Limit [dBm]	Verdict
BT LE	LCH	-3.859	30	PASS
BT LE	MCH	-4.097	30	PASS
BT LE	HCH	-4.638	30	PASS



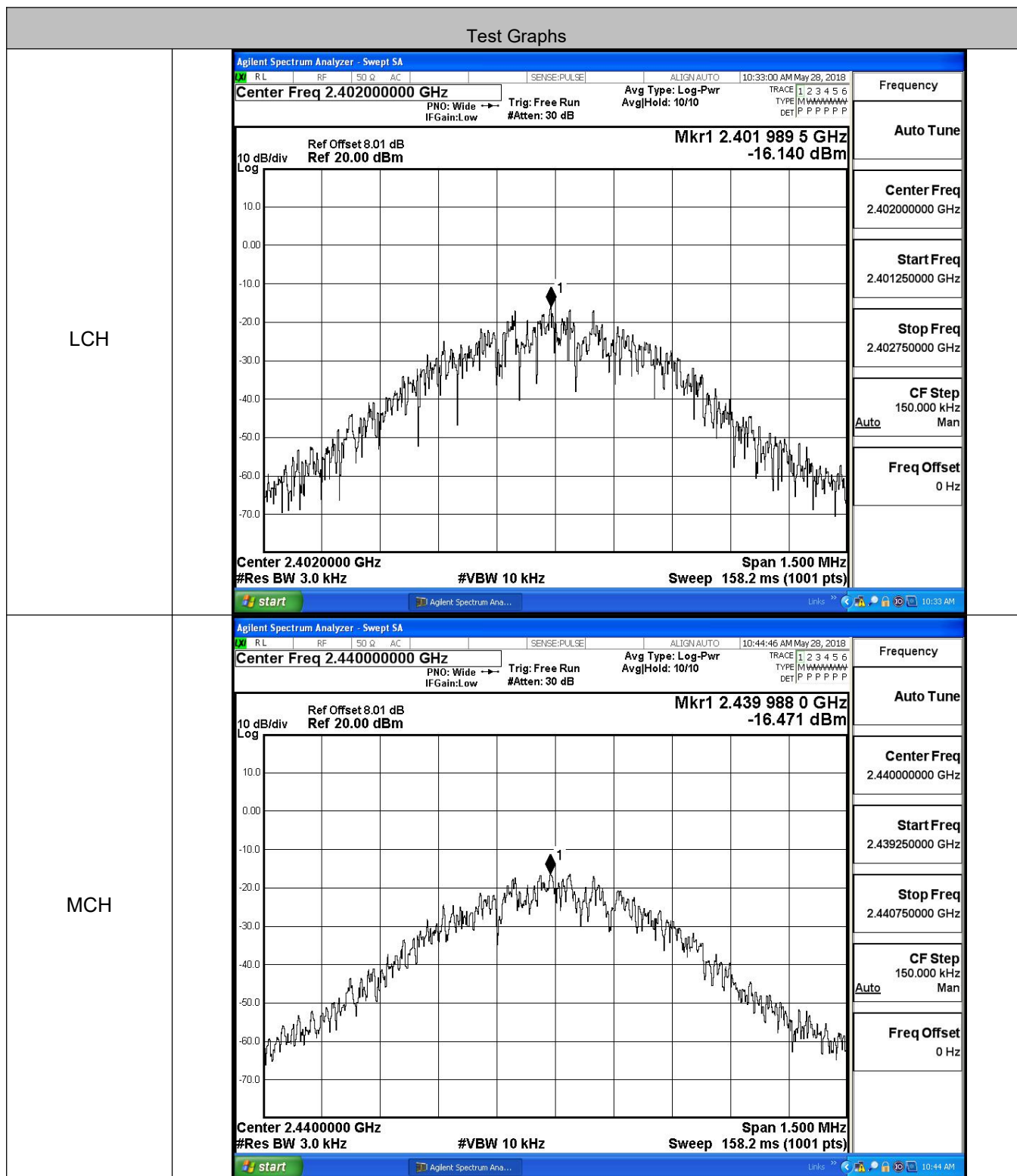
HCH



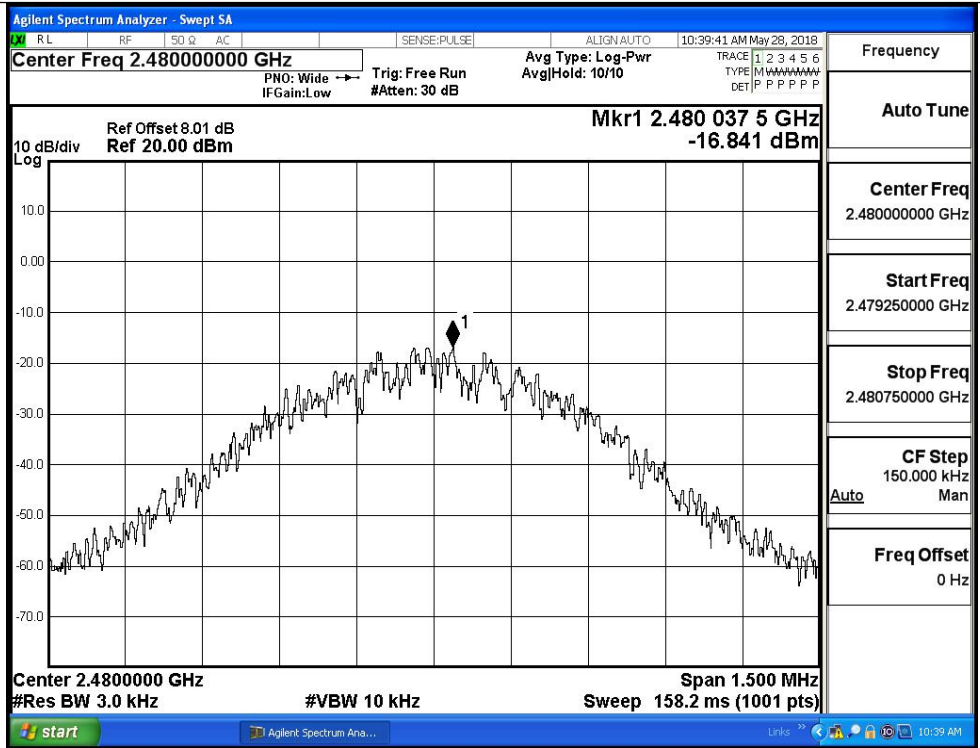
B.3 Maximum Power Spectral Density

Mode	Channel	PSD [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
BT LE	LCH	-16.140	8	PASS
BT LE	MCH	-16.471	8	PASS
BT LE	HCH	-16.841	8	PASS

Test Graphs



HCH



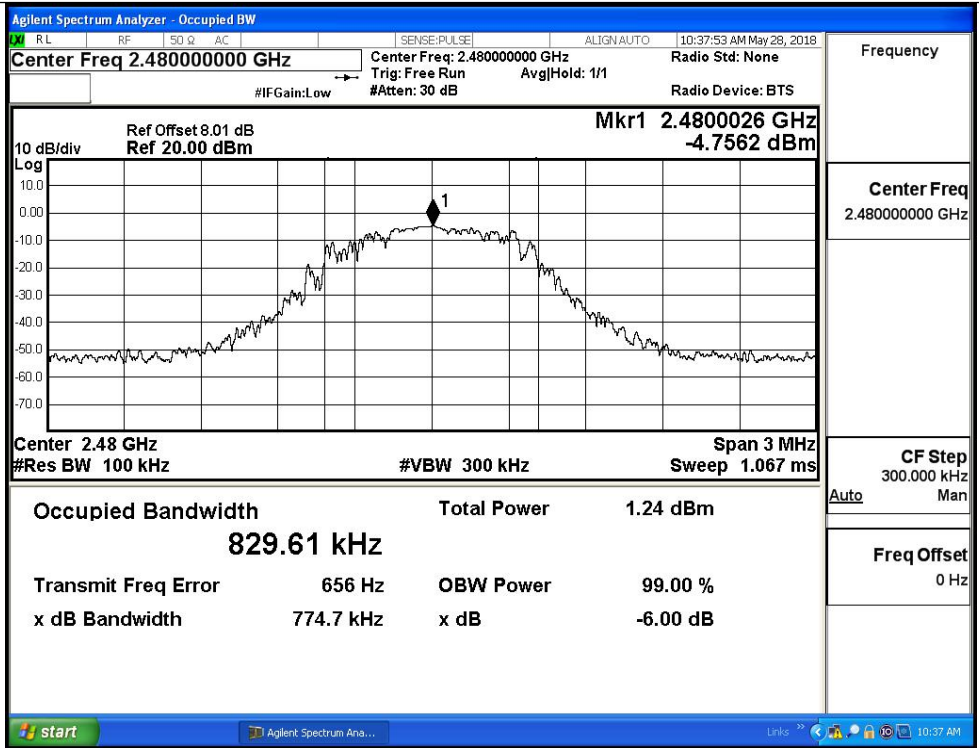
B.4 6dB Bandwidth

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
BT LE	LCH	0.7517	≥0.5	PASS
BT LE	MCH	0.7084	≥0.5	PASS
BT LE	HCH	0.7747	≥0.5	PASS

Test Graphs

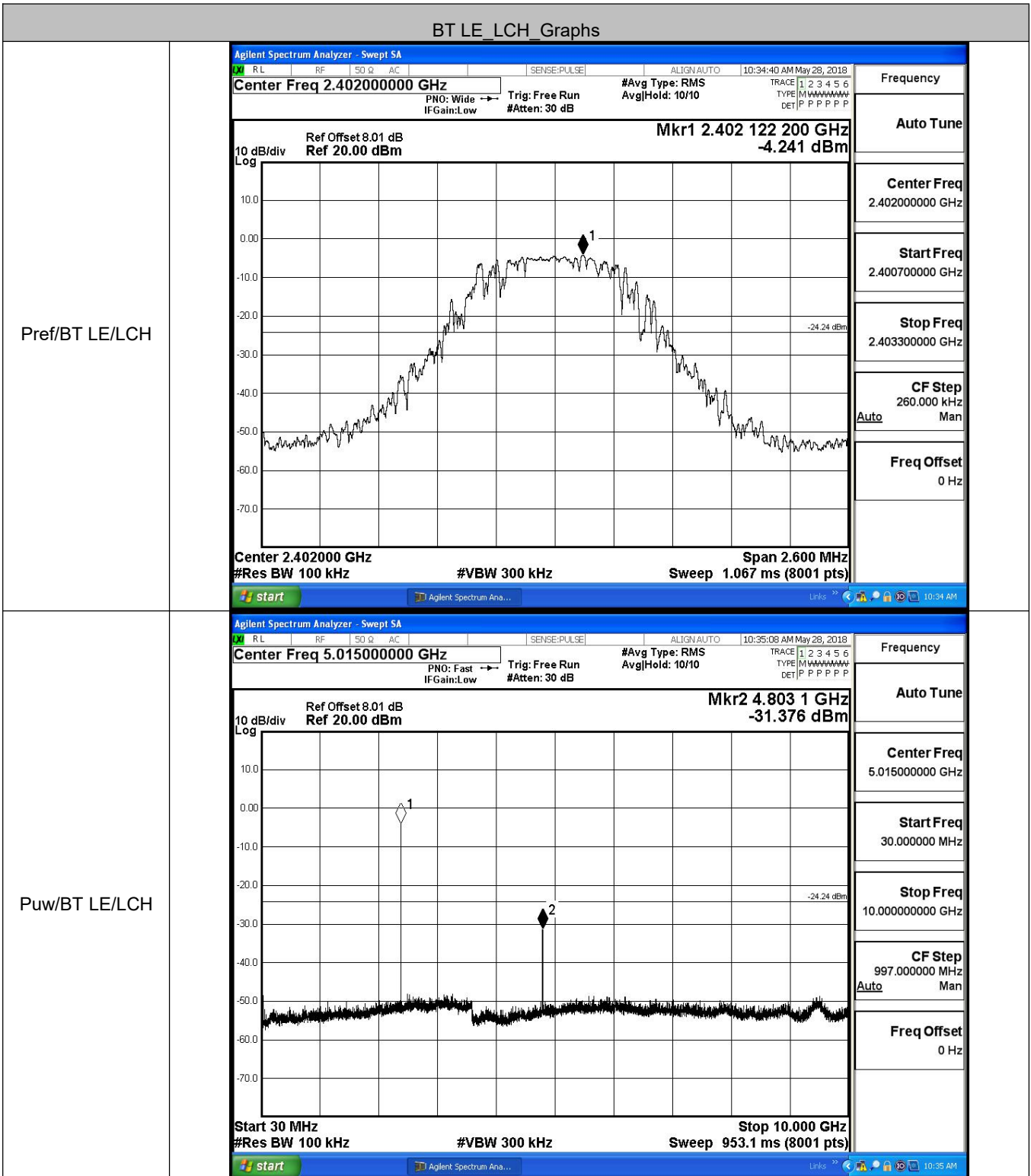
LCH	<p>Agilent Spectrum Analyzer - Occupied BW Center Freq 2.40200000 GHz Mkr1 2.4020004 GHz -4.0040 dBm Occupied Bandwidth 819.30 kHz Total Power 2.19 dBm Transmit Freq Error -13.226 kHz x dB Bandwidth 751.7 kHz</p>	Frequency Center Freq 2.40200000 GHz CF Step 300.000 kHz Freq Offset 0 Hz
	<p>Agilent Spectrum Analyzer - Occupied BW Center Freq 2.44000000 GHz Mkr1 2.439997 GHz -4.5374 dBm Occupied Bandwidth 795.50 kHz Total Power 0.80 dBm Transmit Freq Error -11.733 kHz x dB Bandwidth 708.4 kHz</p>	Frequency Center Freq 2.44000000 GHz CF Step 300.000 kHz Freq Offset 0 Hz

HCH



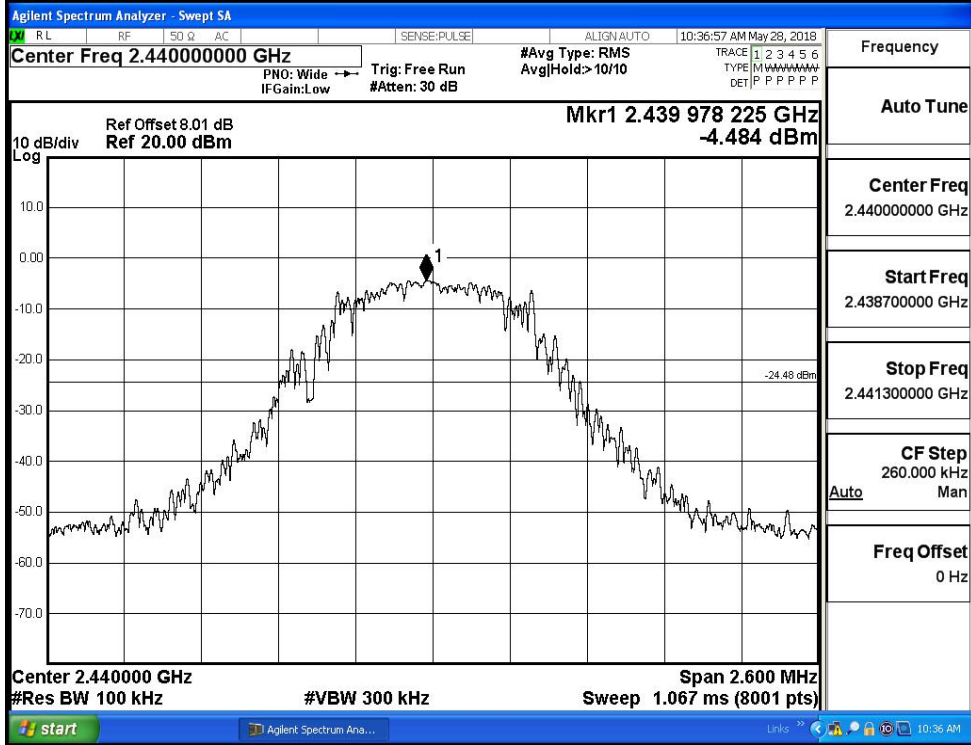
B.5 RF Conducted Spurious Emissions

Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	-4.241	-31.376	-24.241	PASS
BT LE	MCH	-4.484	-29.651	-24.484	PASS
BT LE	HCH	-5.099	-32.257	-25.099	PASS

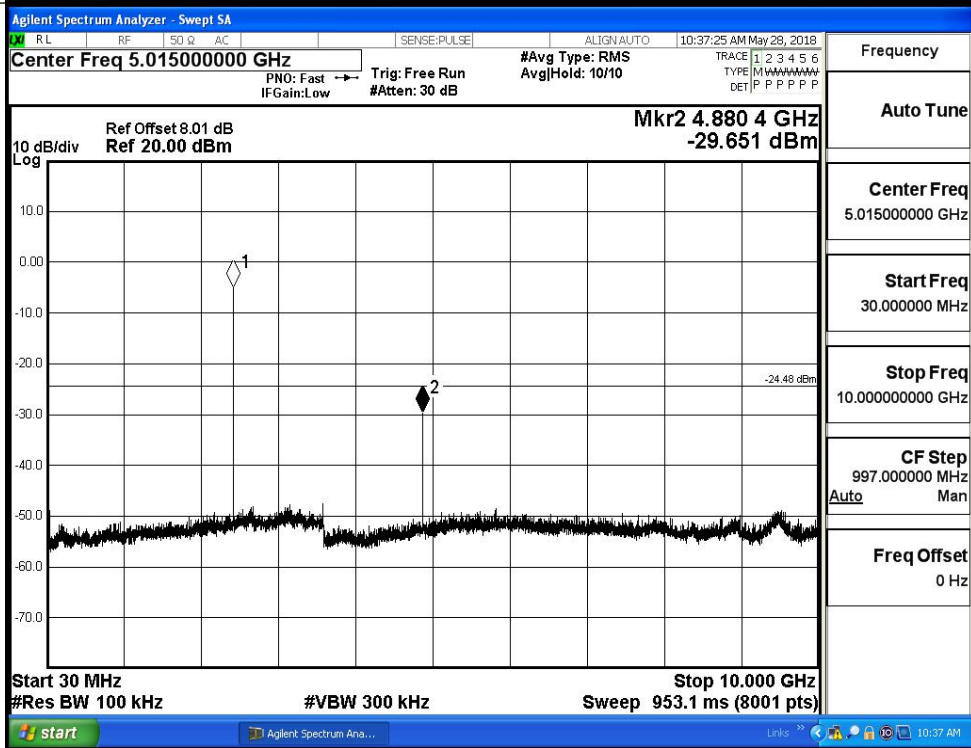


BT LE MCH Graphs

Pref/BT LE/MCH

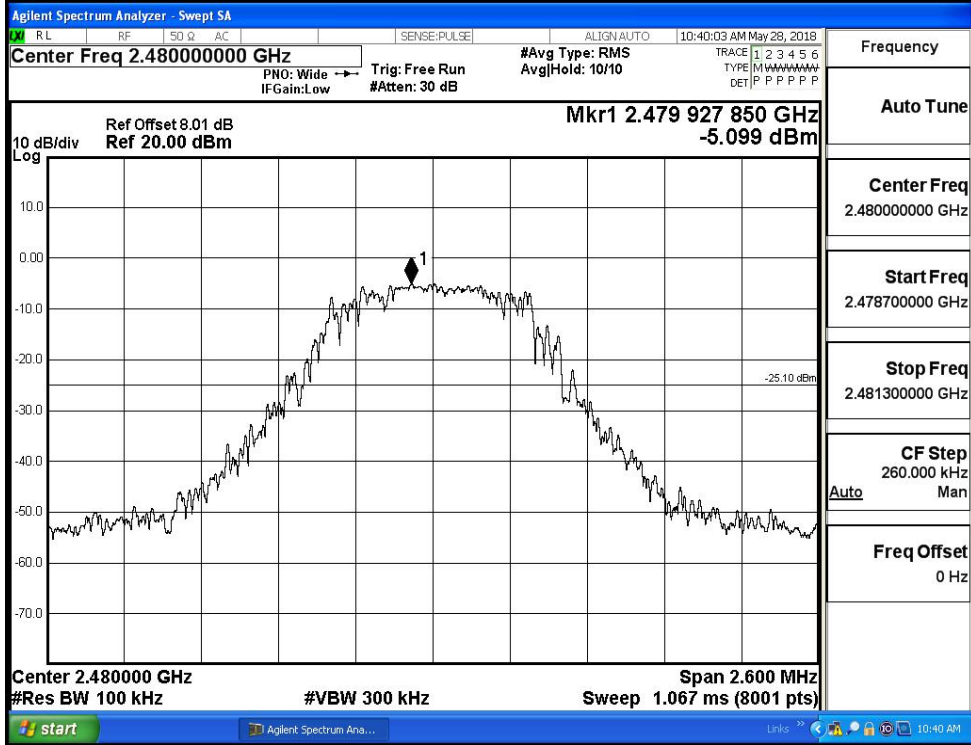


Puw/BT LE/MCH

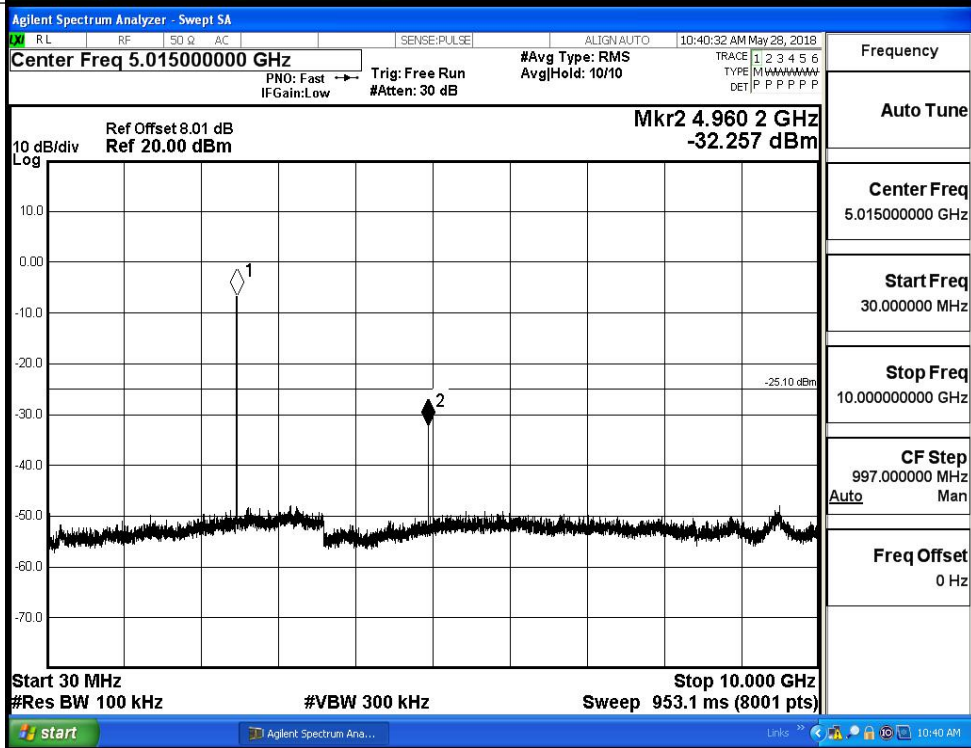


BT LE HCH Graphs

Pref/BT LE/HCH



Puw/BT LE/HCH

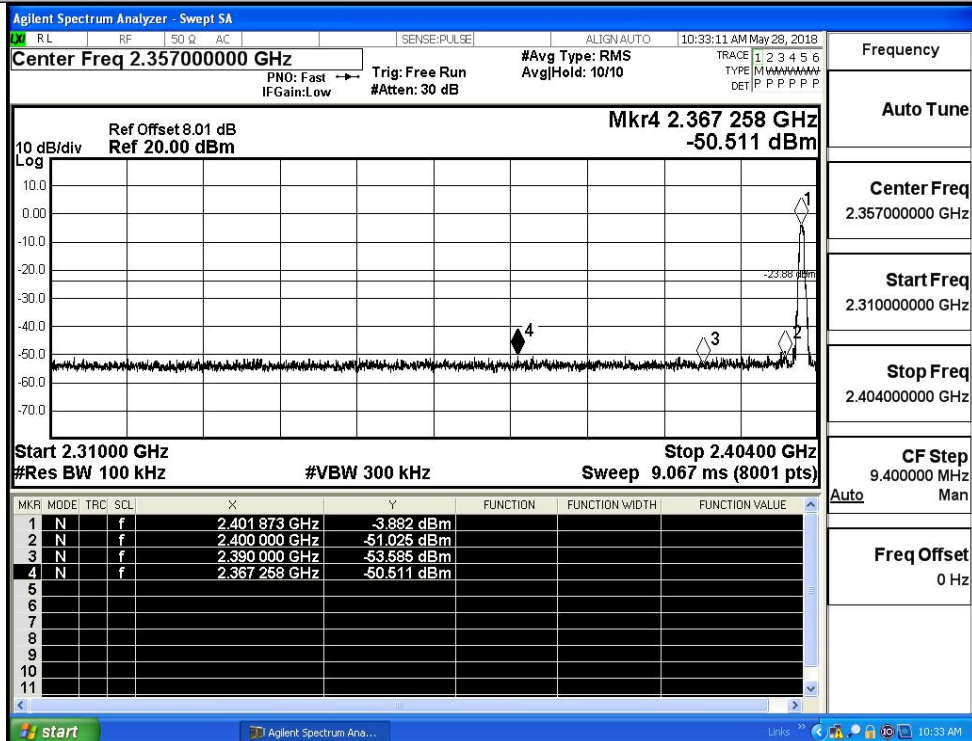


B.6 Band-edge for RF Conducted Emissions

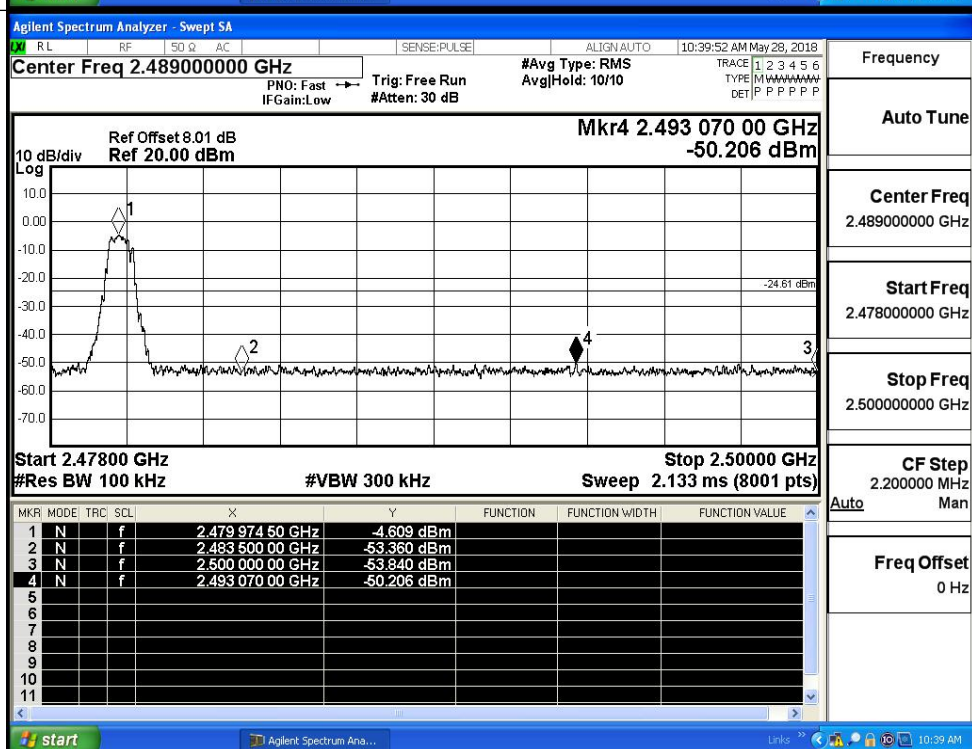
Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	-3.882	-50.511	-23.88	PASS
BT LE	HCH	-4.609	-50.206	-24.61	PASS

Test Graphs

LCH



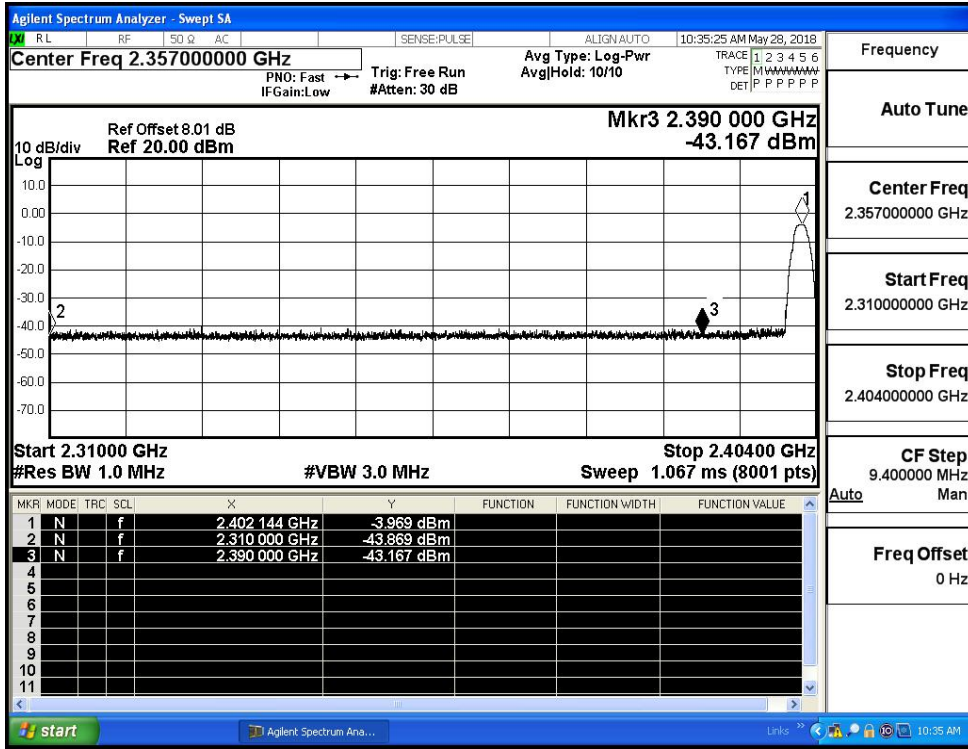
HCH



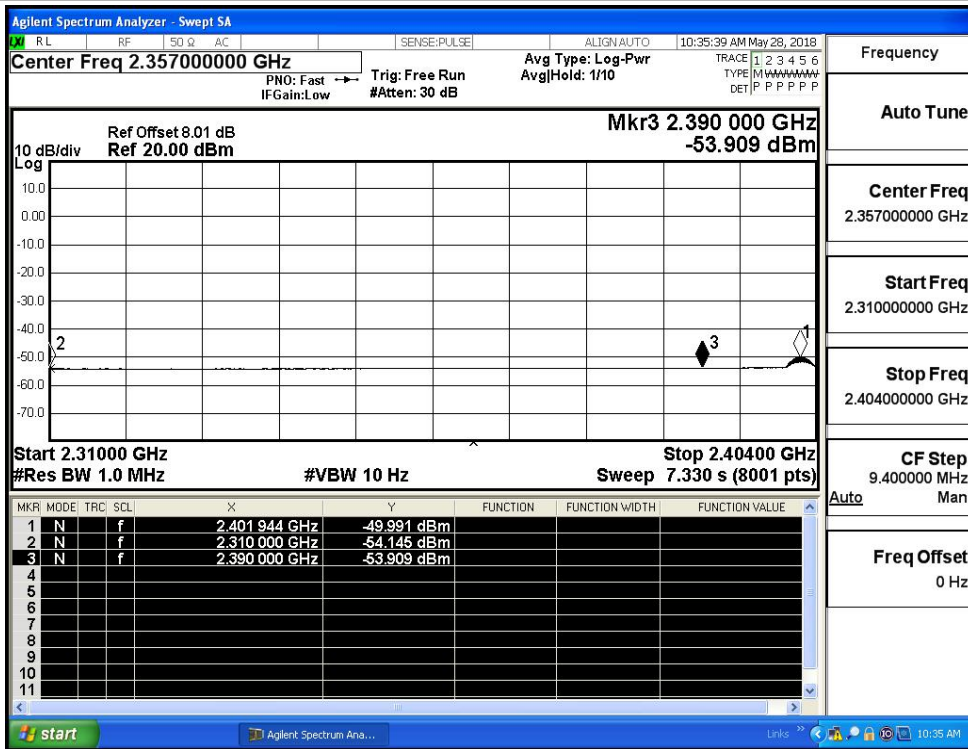
B.7 Restrict-band band-edge measurements

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	-43.87	2.0	0	51.39	PEAK	74	PASS
		Ant1	2310.0	-54.15	2.0	0	41.11	AV	54	PASS
		Ant1	2390.0	-43.17	2.0	0	52.09	PEAK	74	PASS
		Ant1	2390.0	-53.91	2.0	0	41.35	AV	54	PASS
	2480	Ant1	2483.5	-42.91	2.0	0	52.35	PEAK	74	PASS
		Ant1	2483.5	-53.61	2.0	0	41.64	AV	54	PASS
		Ant1	2500.0	-42.77	2.0	0	52.48	PEAK	74	PASS
		Ant1	2500.0	-53.54	2.0	0	41.72	AV	54	PASS

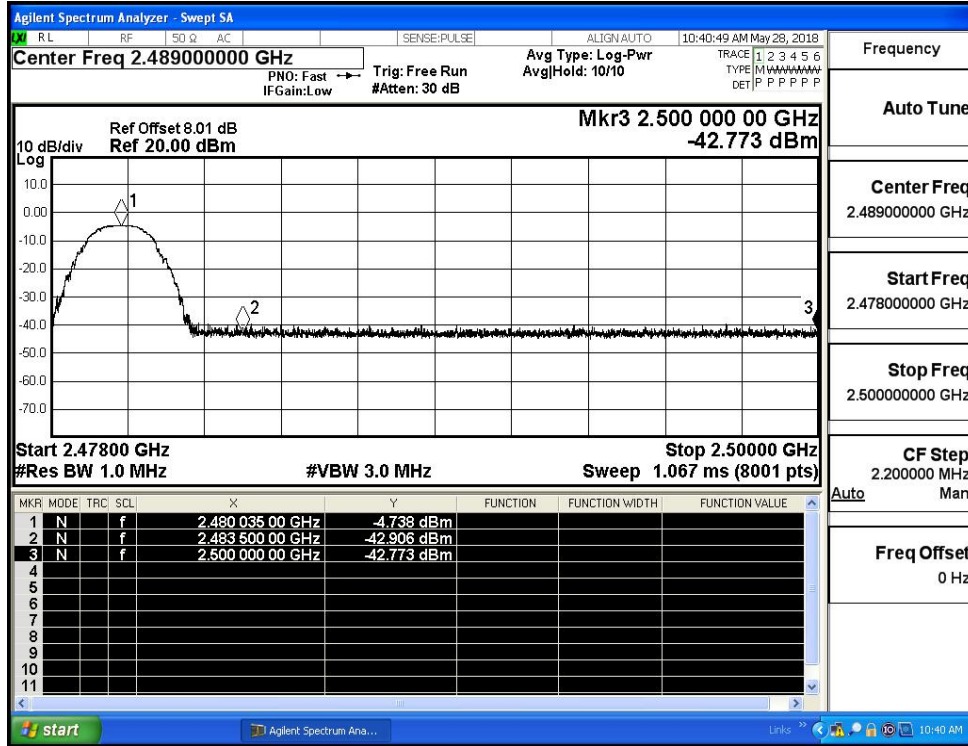
Restrict-band band-edge measurements_BT LE_2402_Ant1_PEAK



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

