



Appendix B

RF Test Data for BT V5.0(BT LE / BT 2LE) (Conducted Measurement)

Product Name: Firewalla Purple

Trade Mark: Firewalla

Test Model: Firewalla Purple

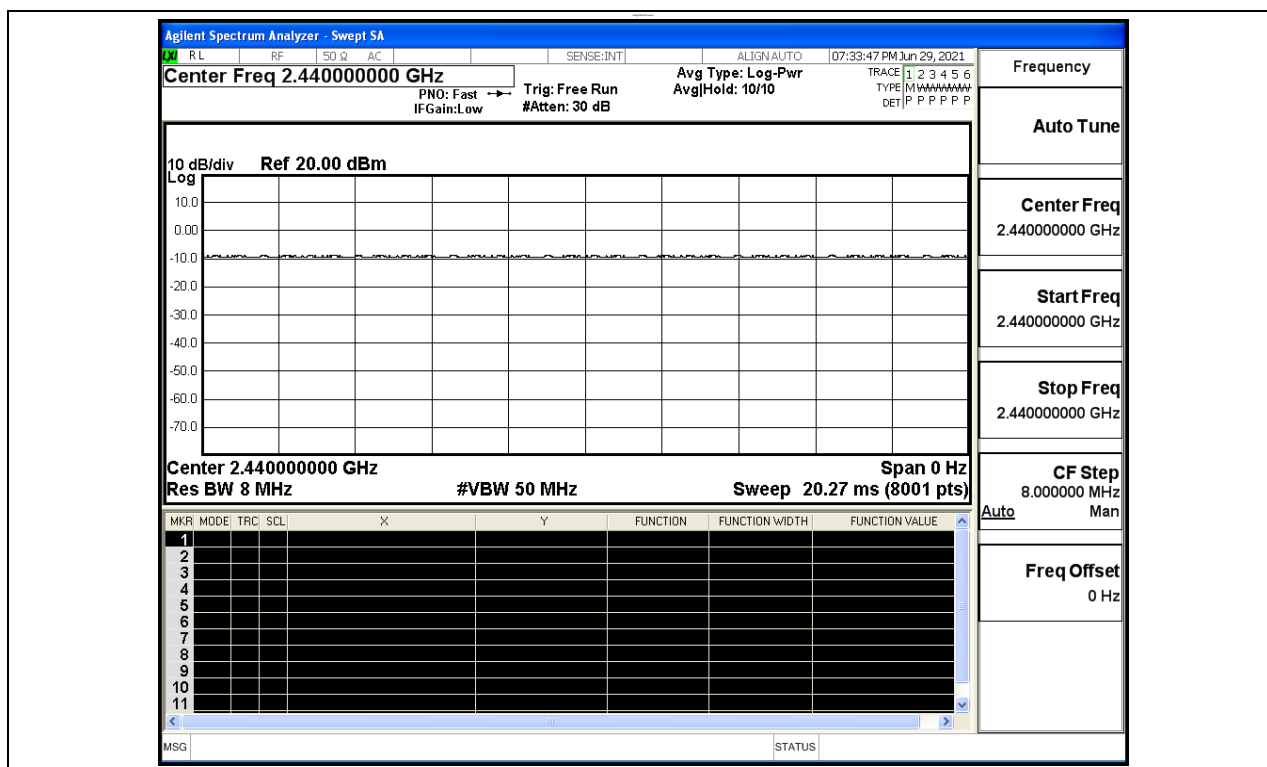
Environmental Conditions

Temperature:	21.6° C
Relative Humidity:	52.7%
ATM Pressure:	100.0 kPa
Test Engineer:	Carl Fu
Supervised by:	Li Huan

B.1 Duty Cycle

BT LE

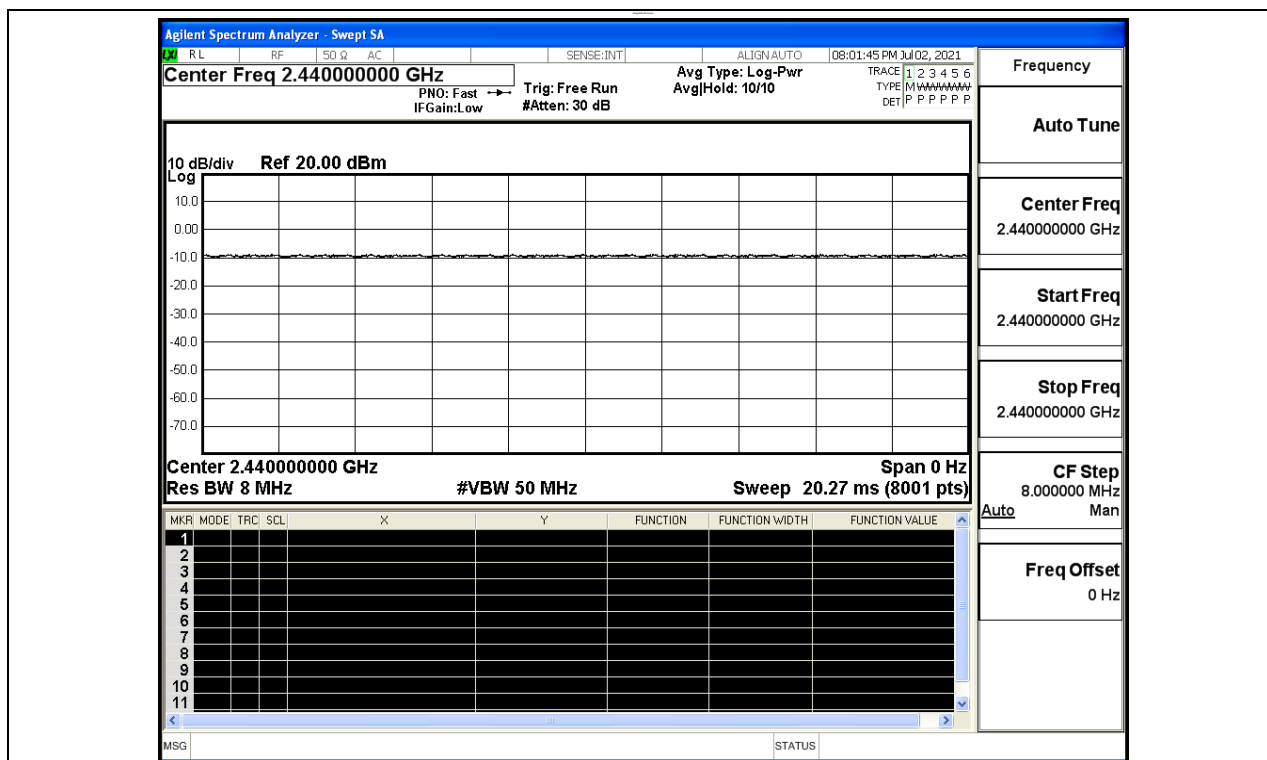
Test Mode	Test Channel	Ant	Duty Cycle[%]	Verdict
BT LE	2440	Ant1	100	PASS





BT 2LE

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

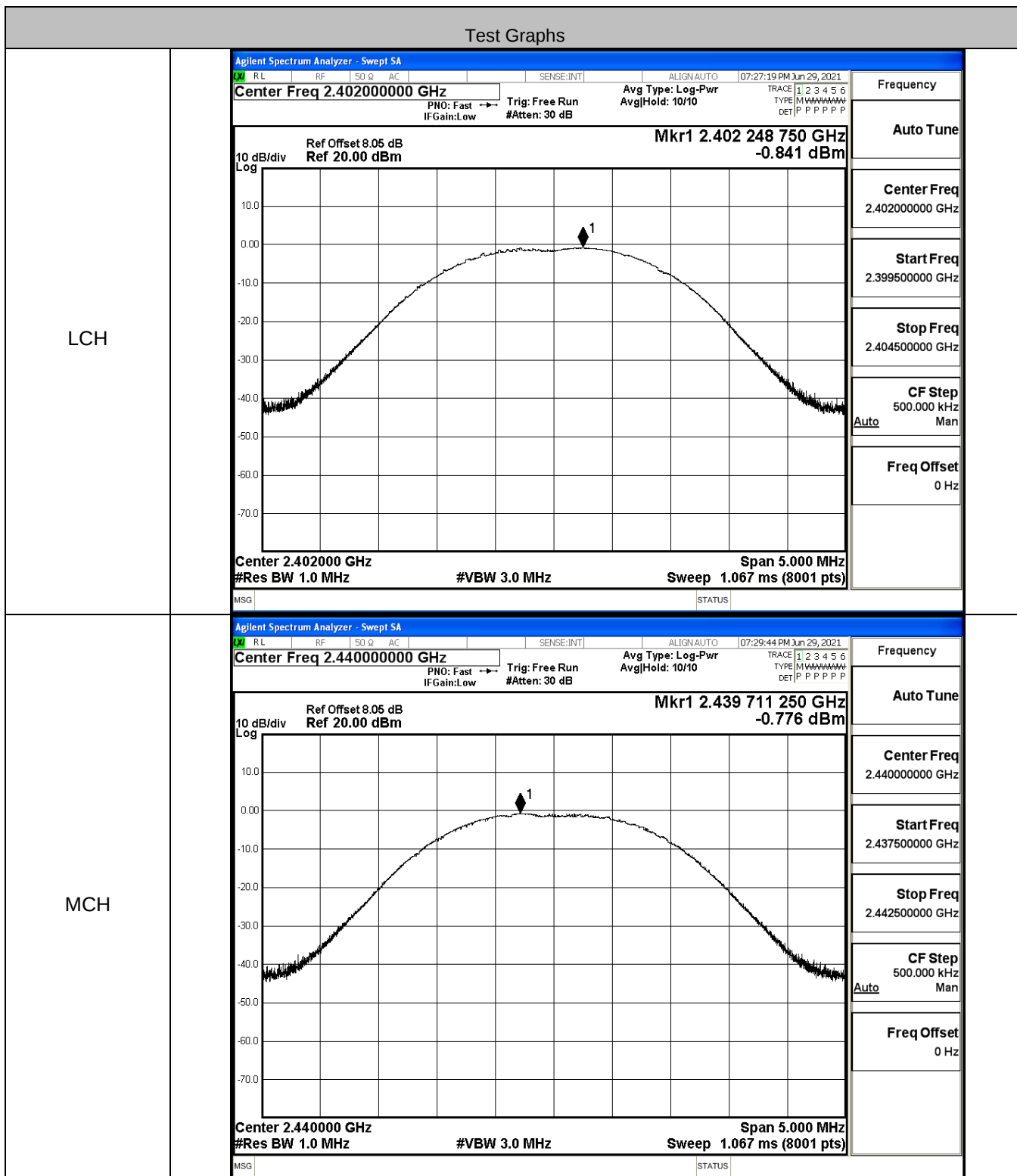




B.2 Maximum Conducted Peak Output Power

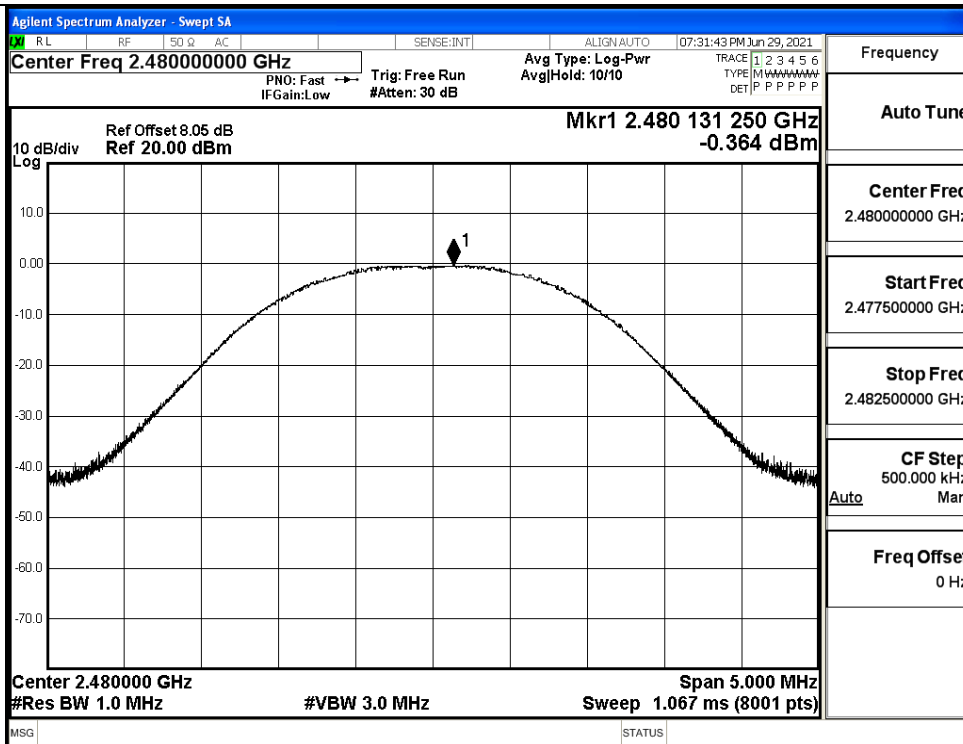
BT LE

Mode	Channel	Conduct Peak Power[dBm]	Limit [dBm]	Verdict
BT LE	LCH	-0.841	30	PASS
BT LE	MCH	-0.776	30	PASS
BT LE	HCH	-0.364	30	PASS





HCH

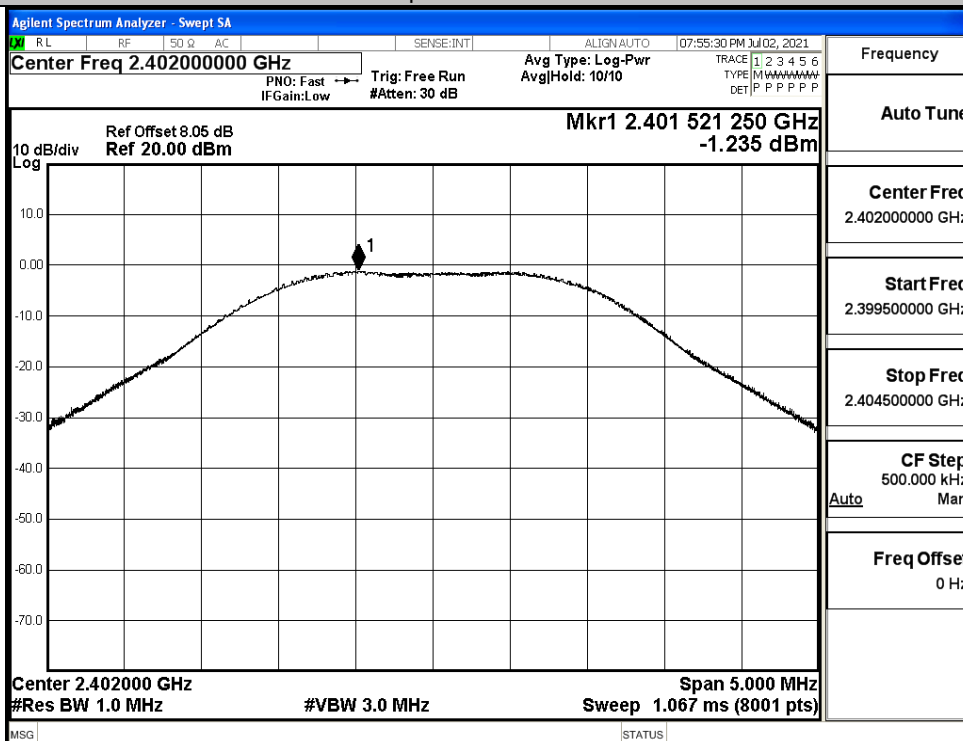


BT 2LE

Mode	Channel	Conduct Peak Power[dBm]	Limit [dBm]	Verdict
BT LE	LCH	-1.235	30	PASS
BT LE	MCH	-1.227	30	PASS
BT LE	HCH	-0.916	30	PASS

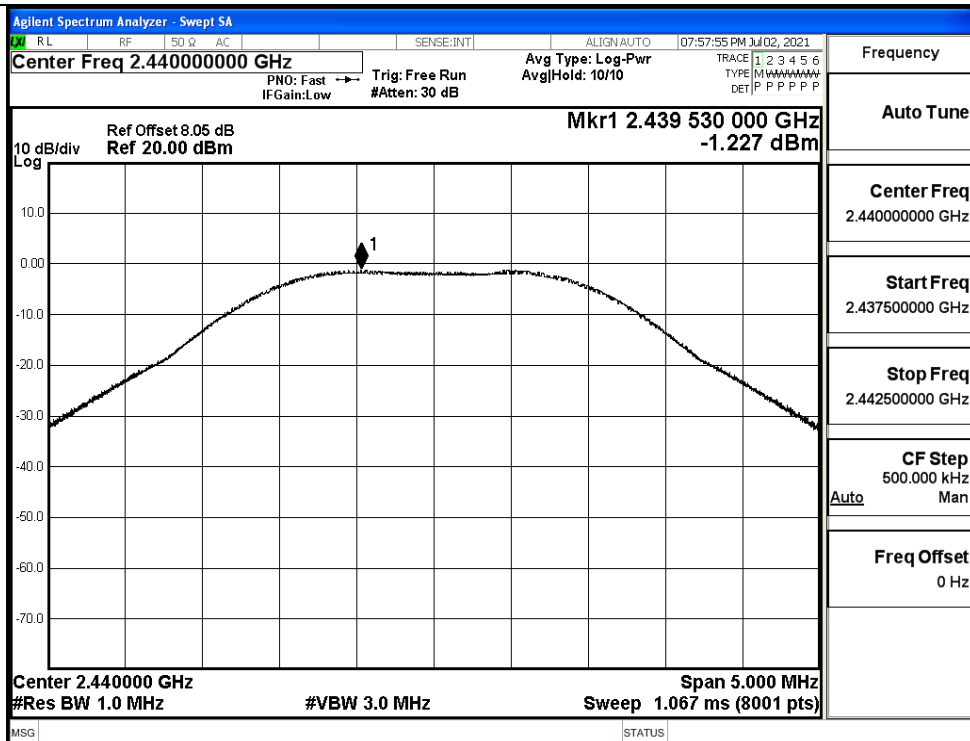
Test Graphs

LCH

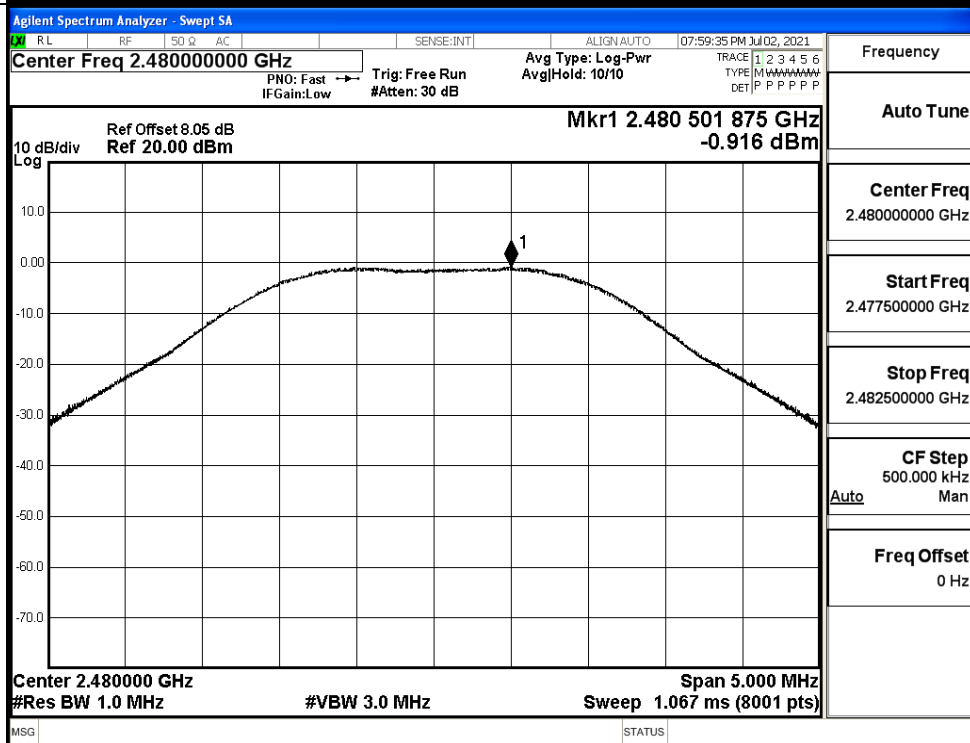




MCH



HCH





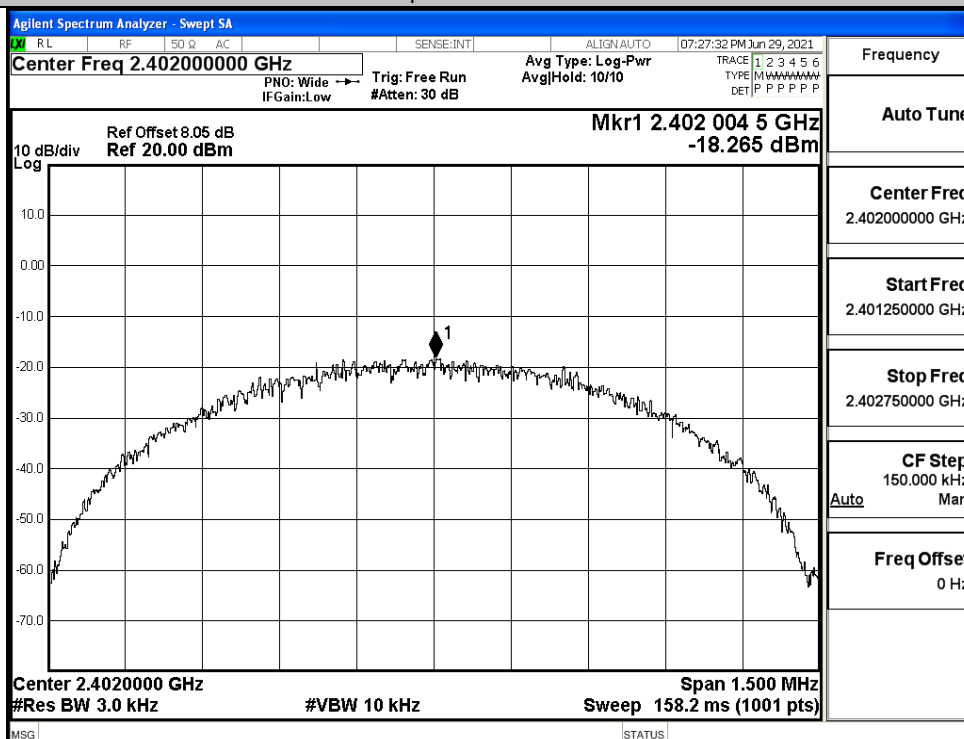
B.3 Maximum Power Spectral Density

BT LE

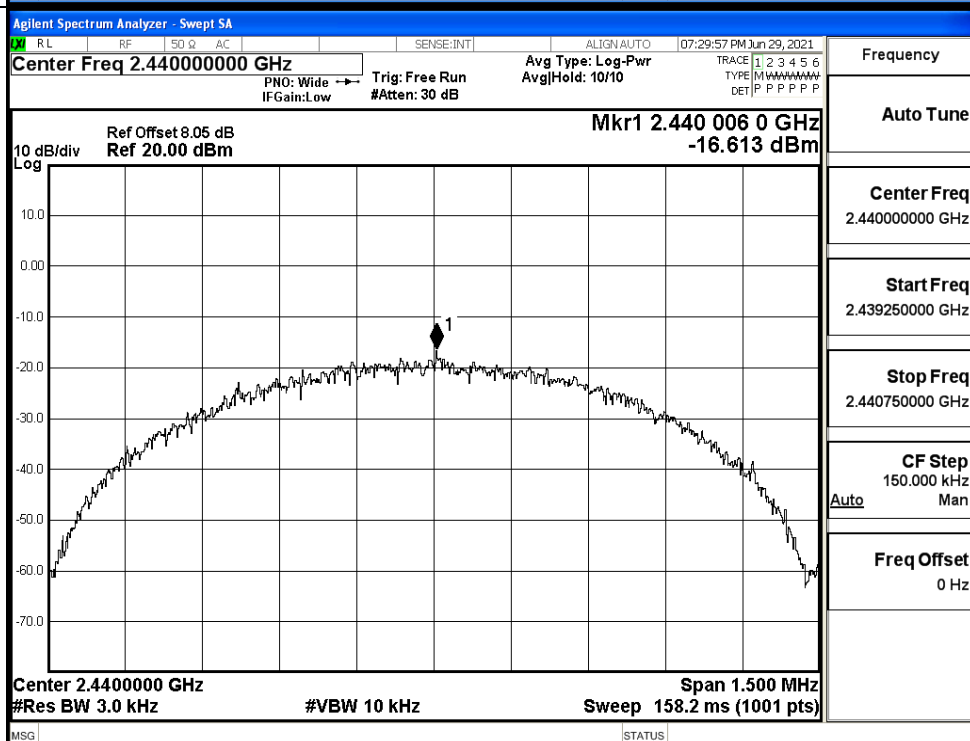
Mode	Channel	PSD [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
BT LE	LCH	-18.265	8	PASS
BT LE	MCH	-16.613	8	PASS
BT LE	HCH	-17.393	8	PASS

Test Graphs

LCH

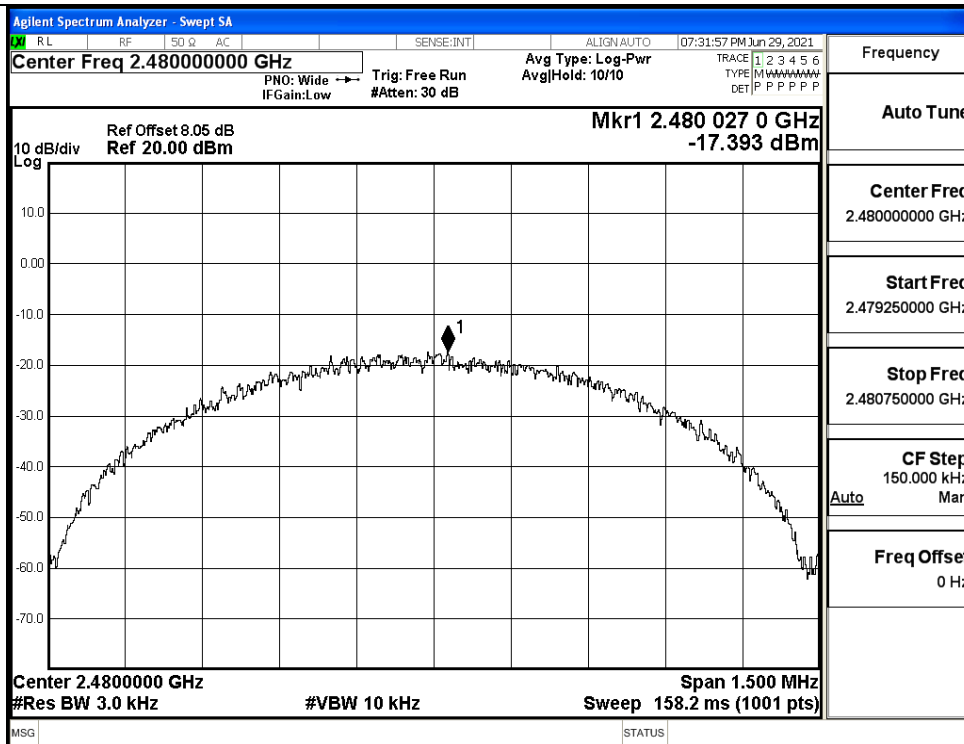


MCH





HCH

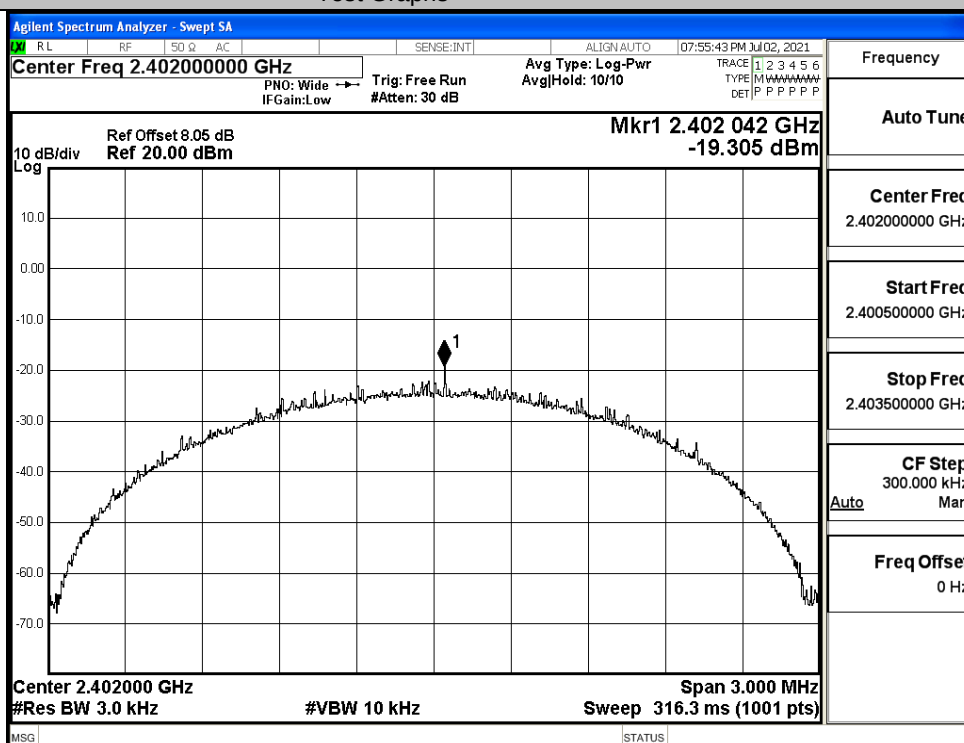


BT 2LE

Mode	Channel	PSD [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
BT LE	LCH	-19.305	8	PASS
BT LE	MCH	-20.000	8	PASS
BT LE	HCH	-20.052	8	PASS

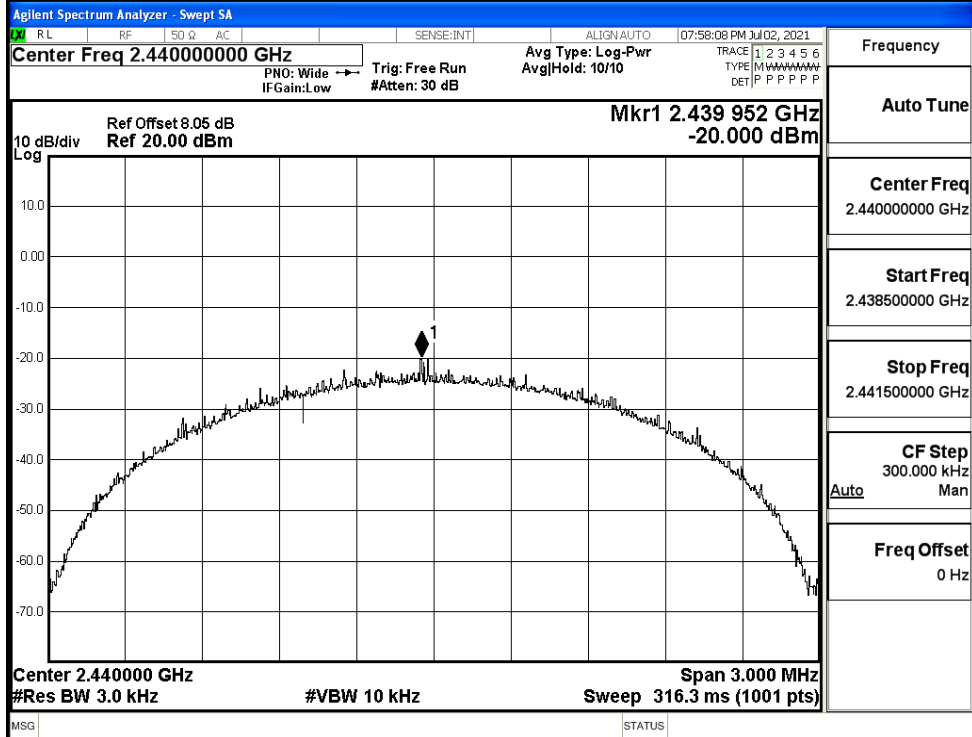
Test Graphs

LCH

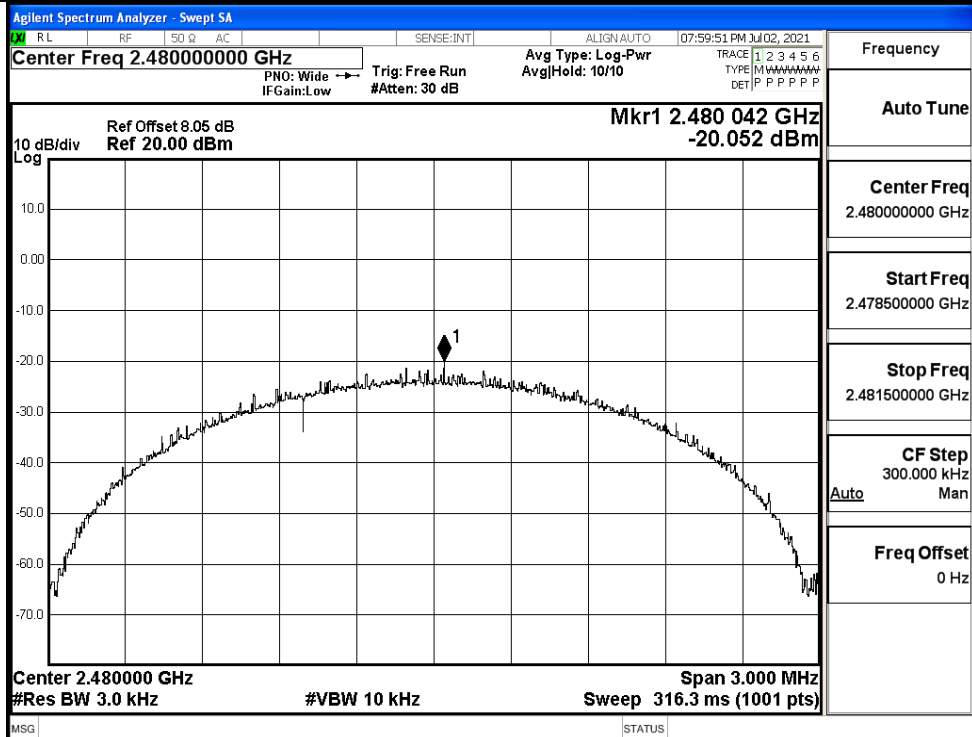




MCH



HCH

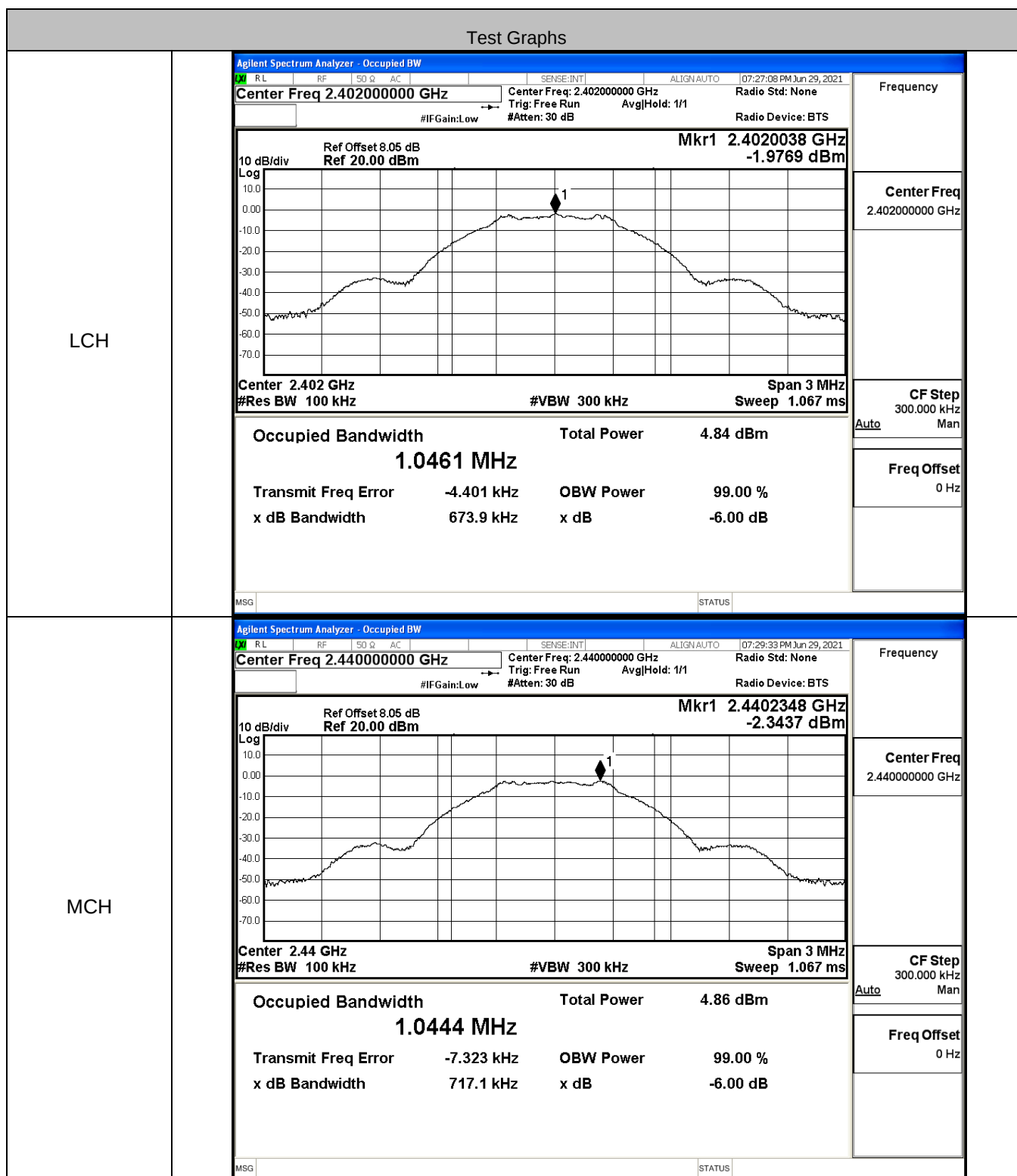


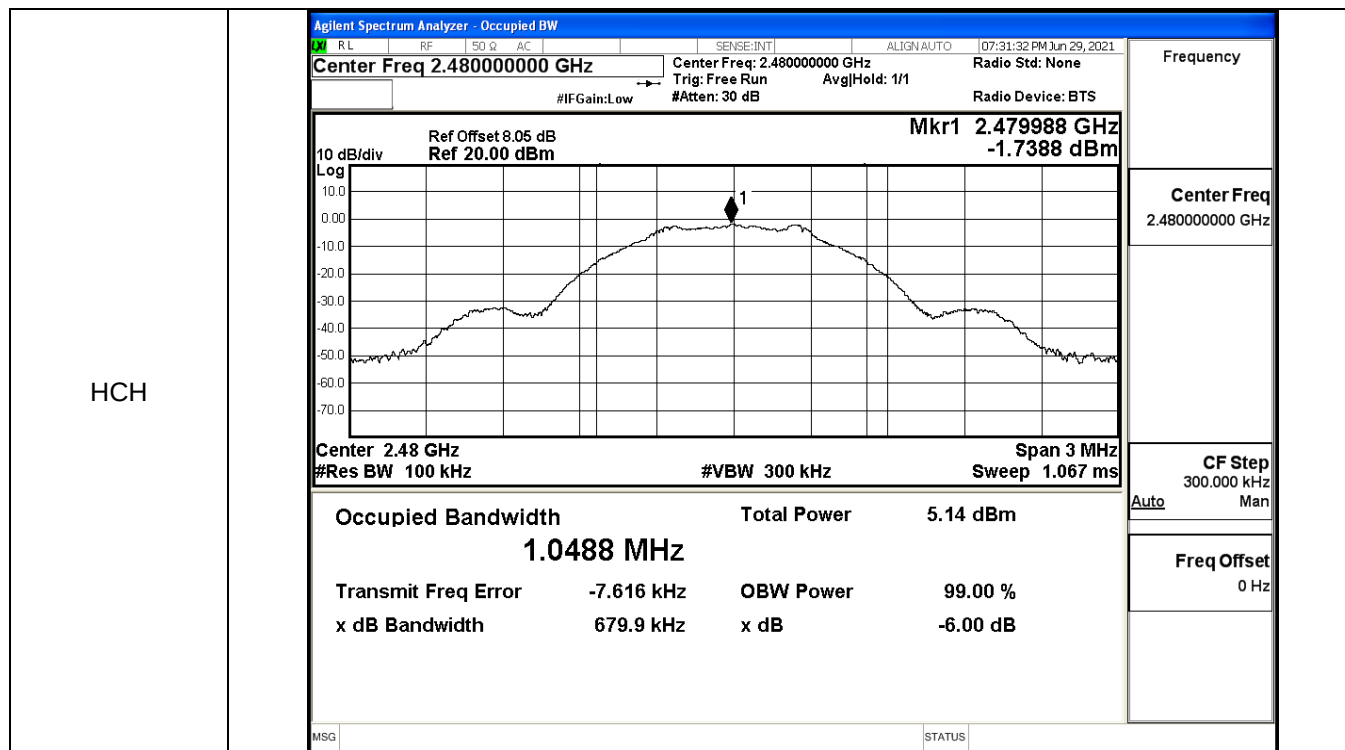


B.4 6dB Bandwidth

BT LE

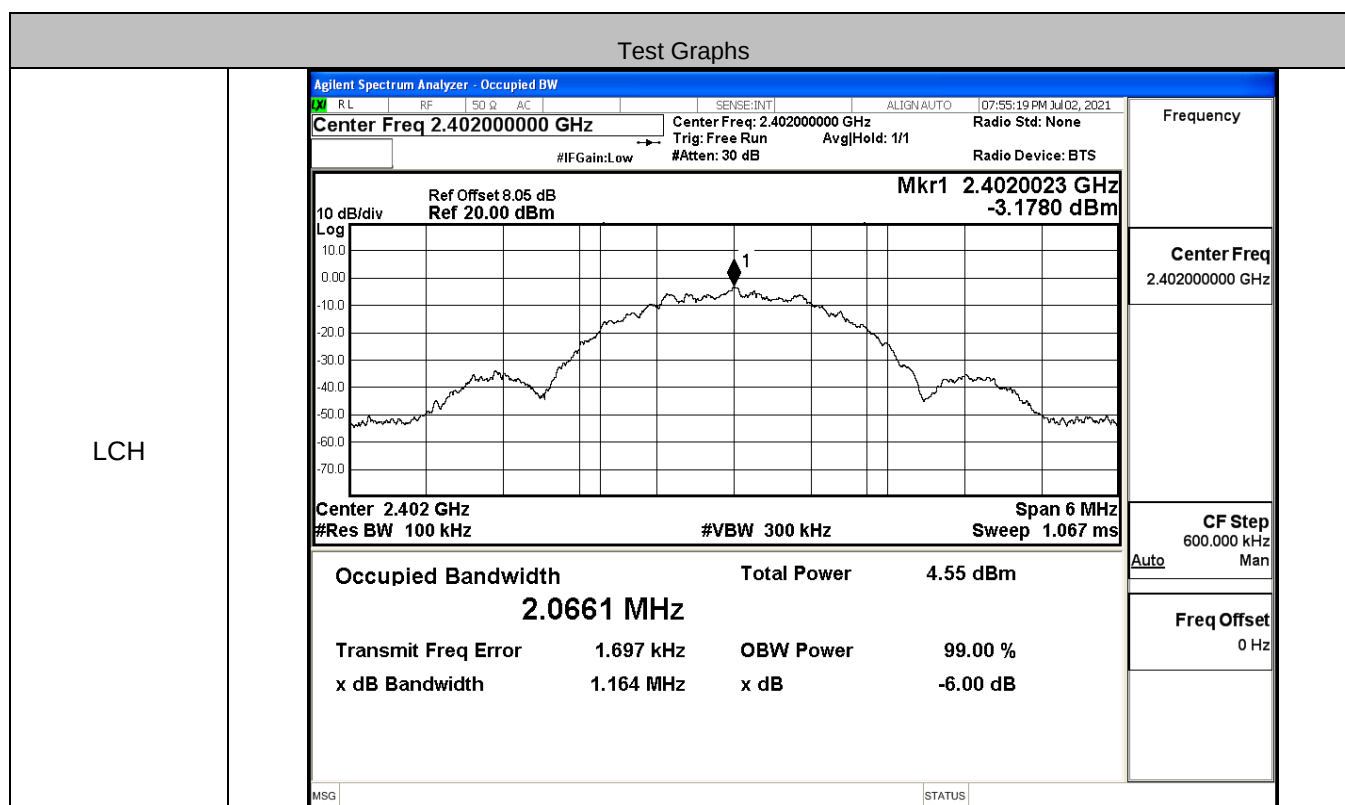
Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
BT LE	LCH	0.6739	≥ 0.5	PASS
BT LE	MCH	0.7171	≥ 0.5	PASS
BT LE	HCH	0.6799	≥ 0.5	PASS





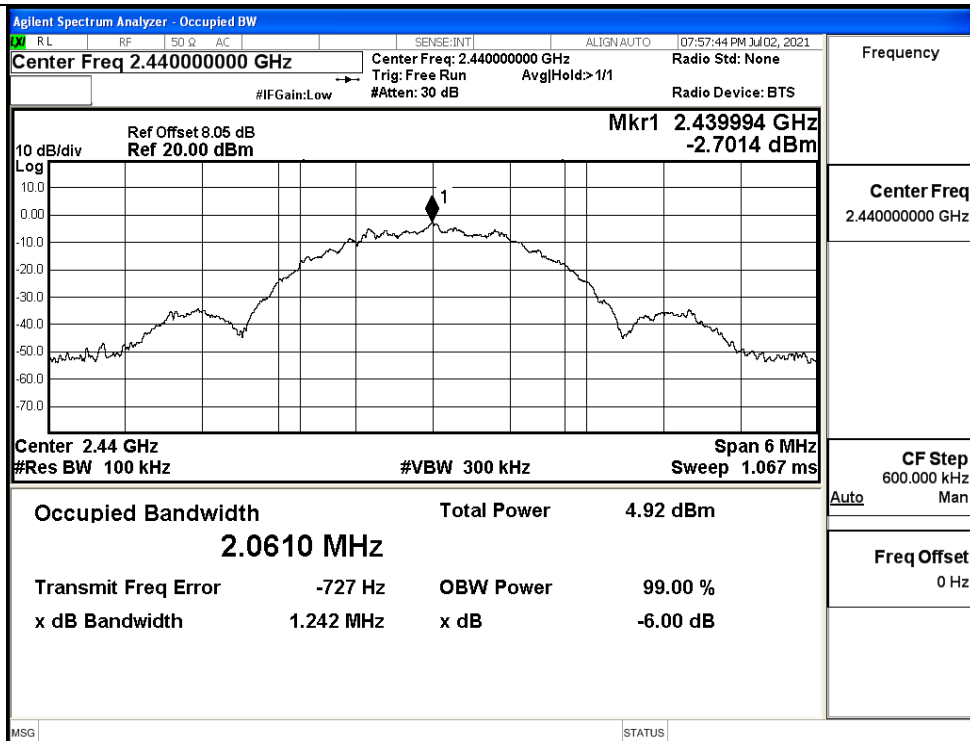
BT 2LE

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
BT LE	LCH	1.164	≥ 0.5	PASS
BT LE	MCH	1.242	≥ 0.5	PASS
BT LE	HCH	1.157	≥ 0.5	PASS

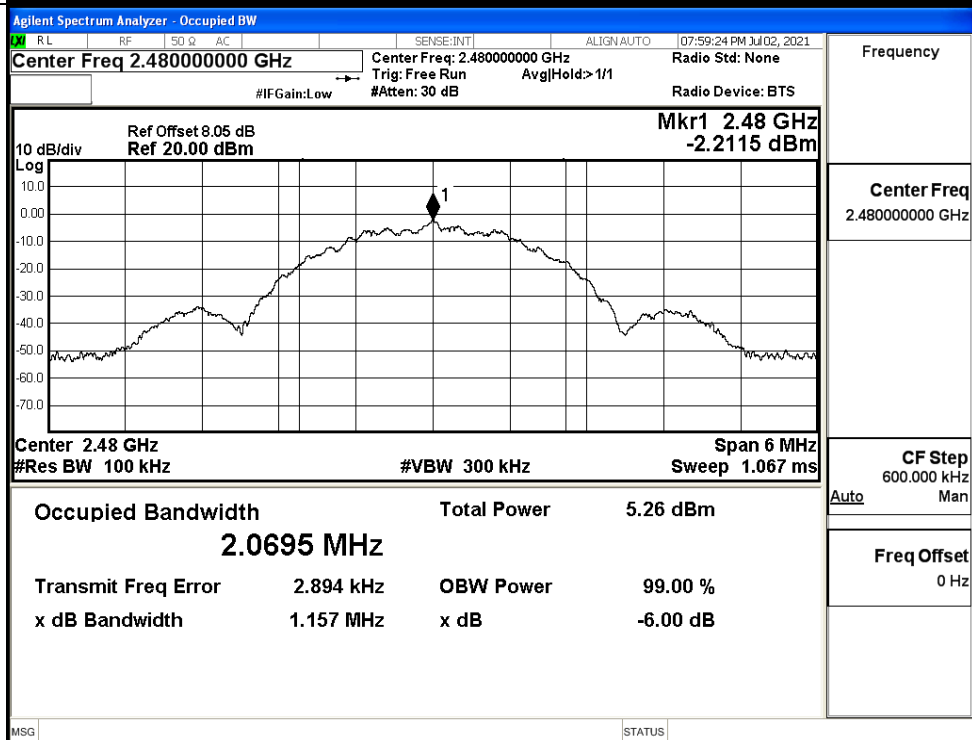




MCH



HCH

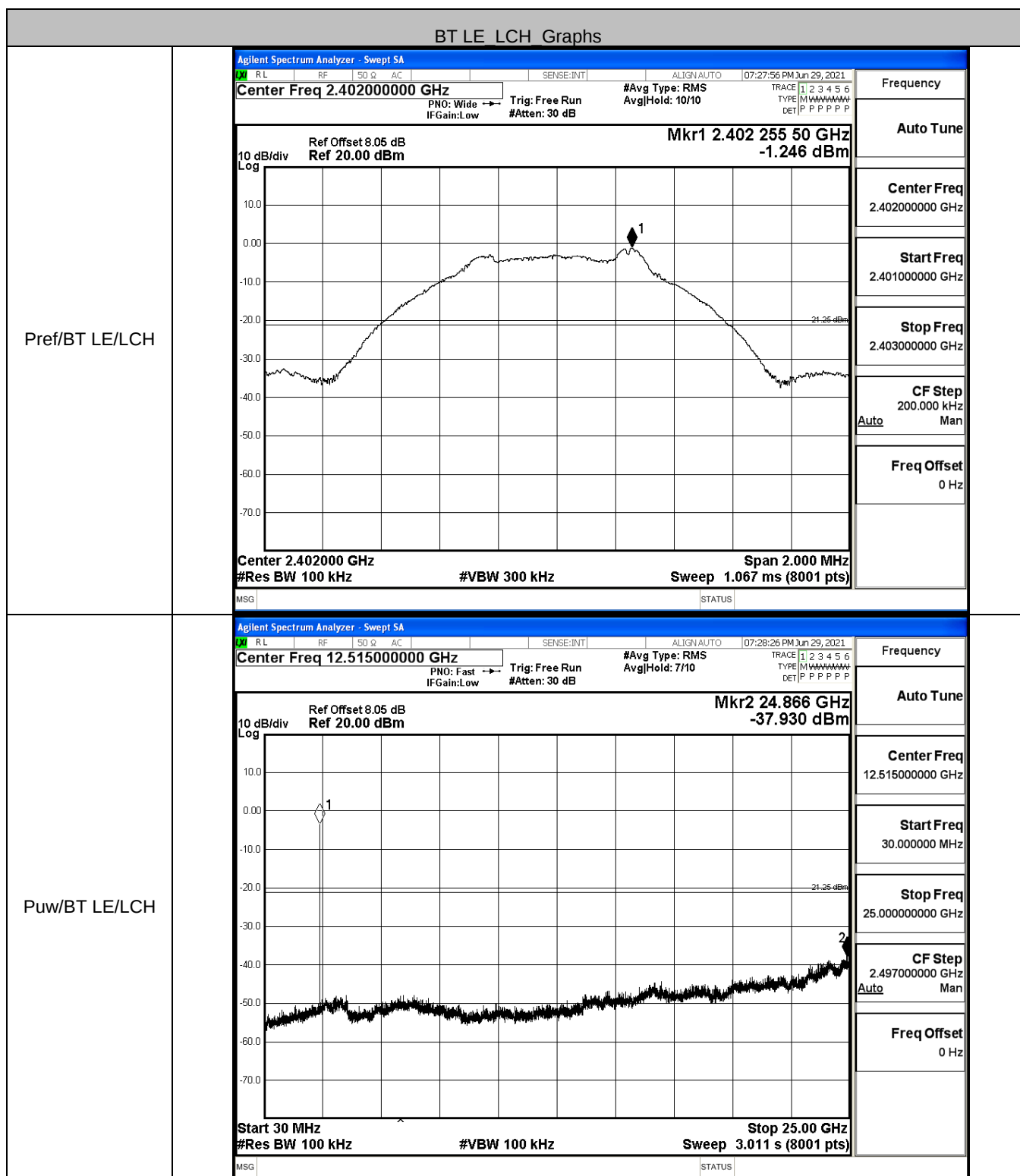




B.5 RF Conducted Spurious Emissions

BT LE

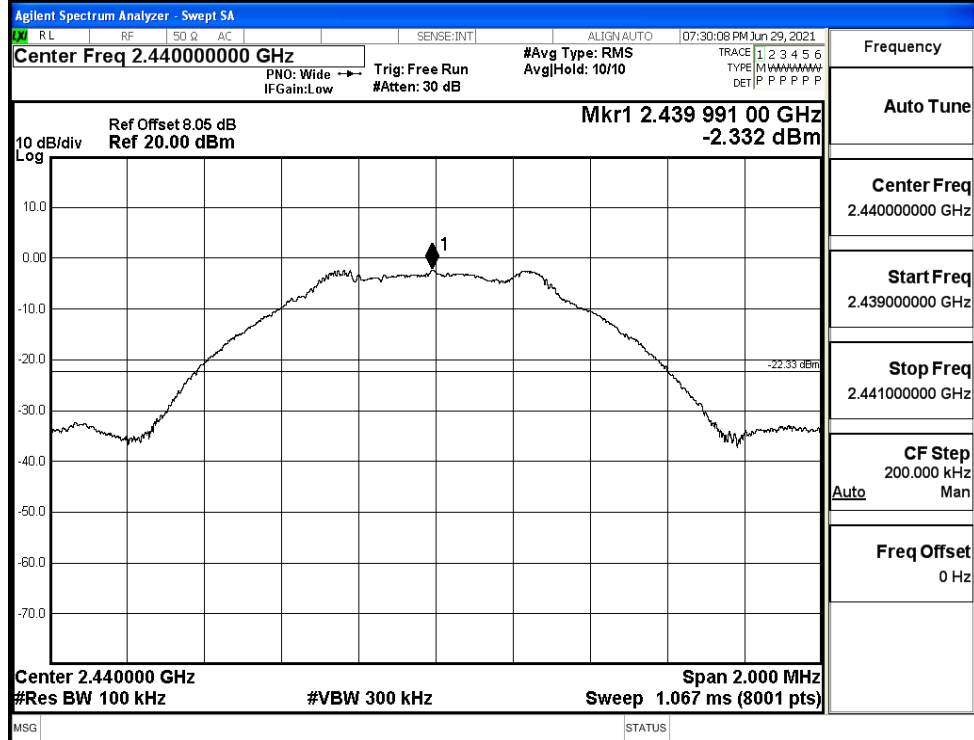
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	-1.246	-37.930	-21.246	PASS
BT LE	MCH	-2.332	-37.443	-22.332	PASS
BT LE	HCH	-1.79	-37.594	-21.790	PASS



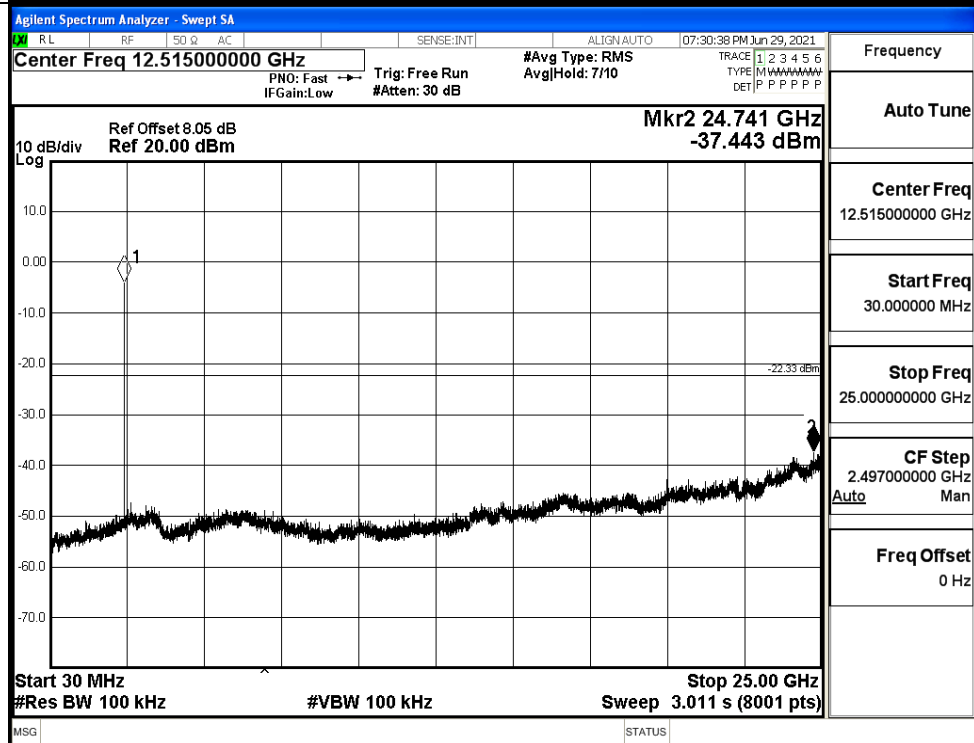


BT LE MCH Graphs

Pref/BT LE/MCH



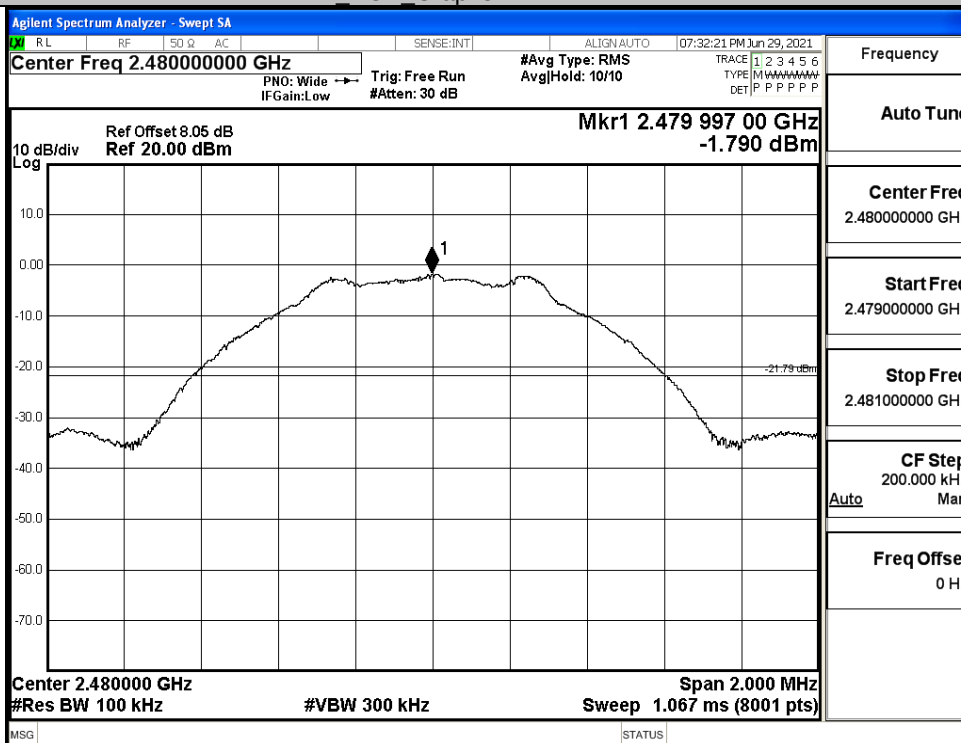
Puw/BT LE/MCH





BT LE HCH Graphs

Pref/BT LE/HCH



Puw/BT LE/HCH



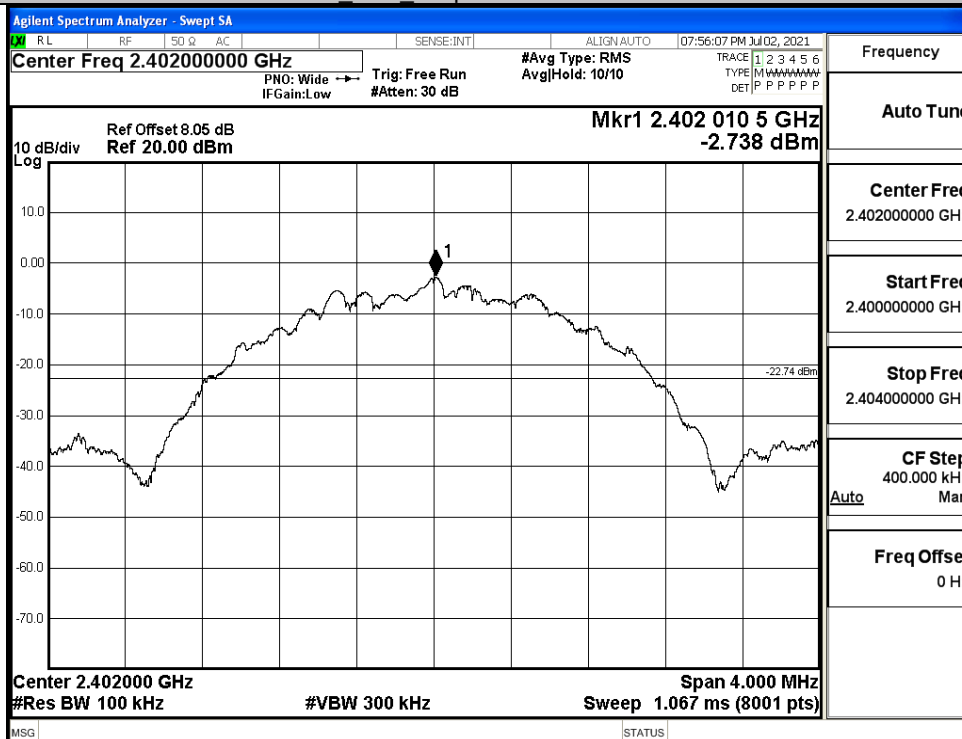


BT 2LE

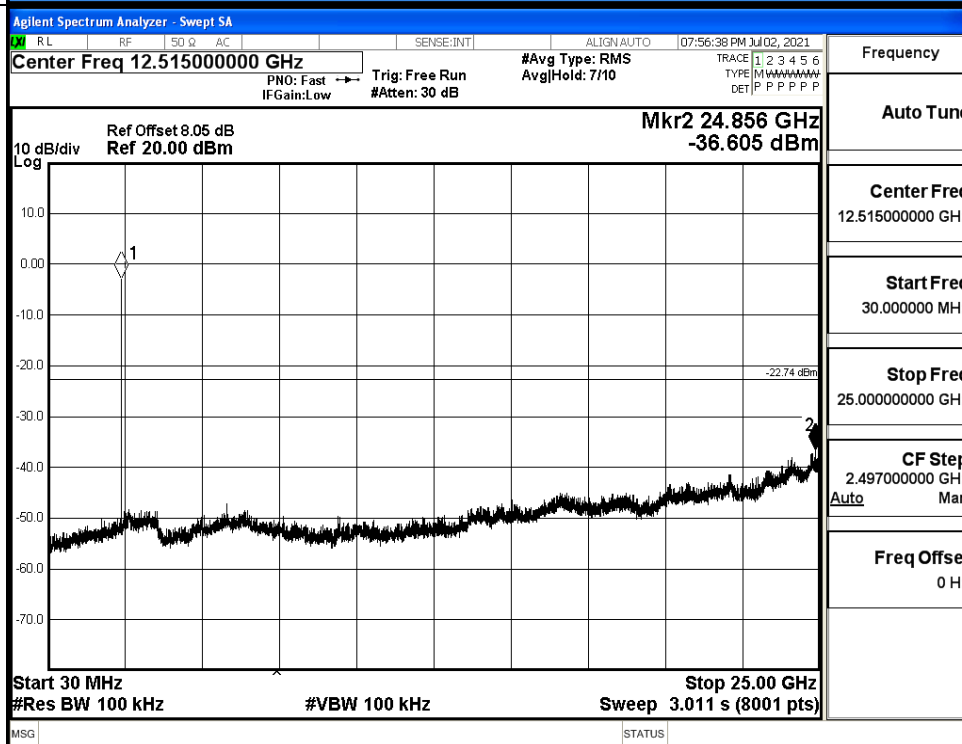
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	-2.738	-36.605	-22.738	PASS
BT LE	MCH	-2.777	-36.803	-22.777	PASS
BT LE	HCH	-2.143	-37.398	-22.143	PASS

BT LE LCH Graphs

Pref/BT LE/LCH



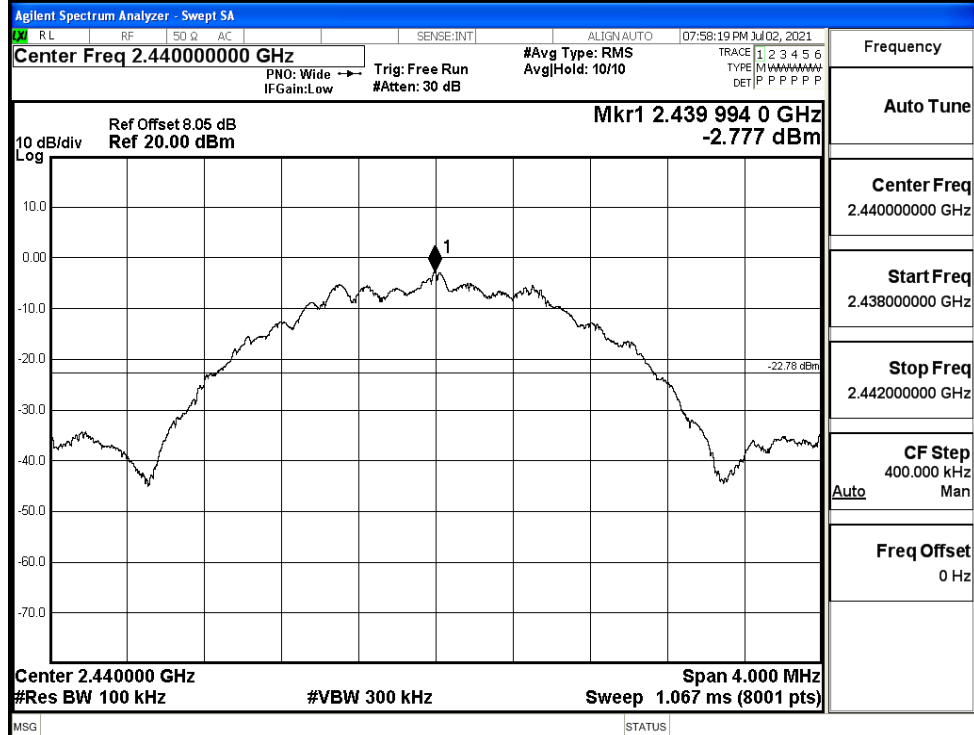
Puw/BT LE/LCH



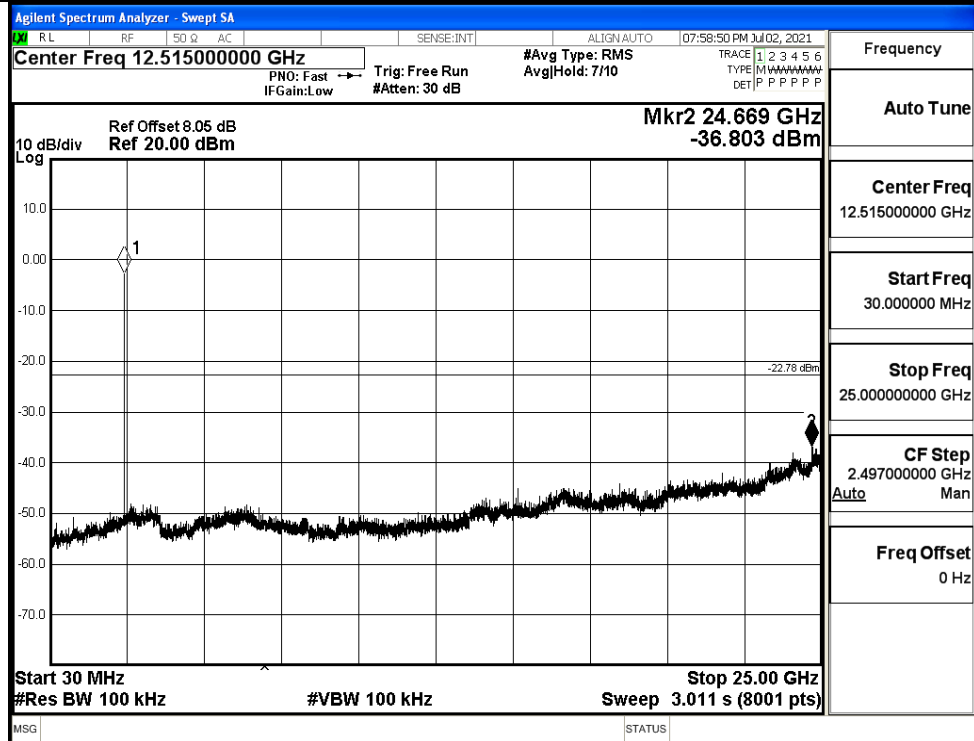


BT LE MCH Graphs

Pref/BT LE/MCH



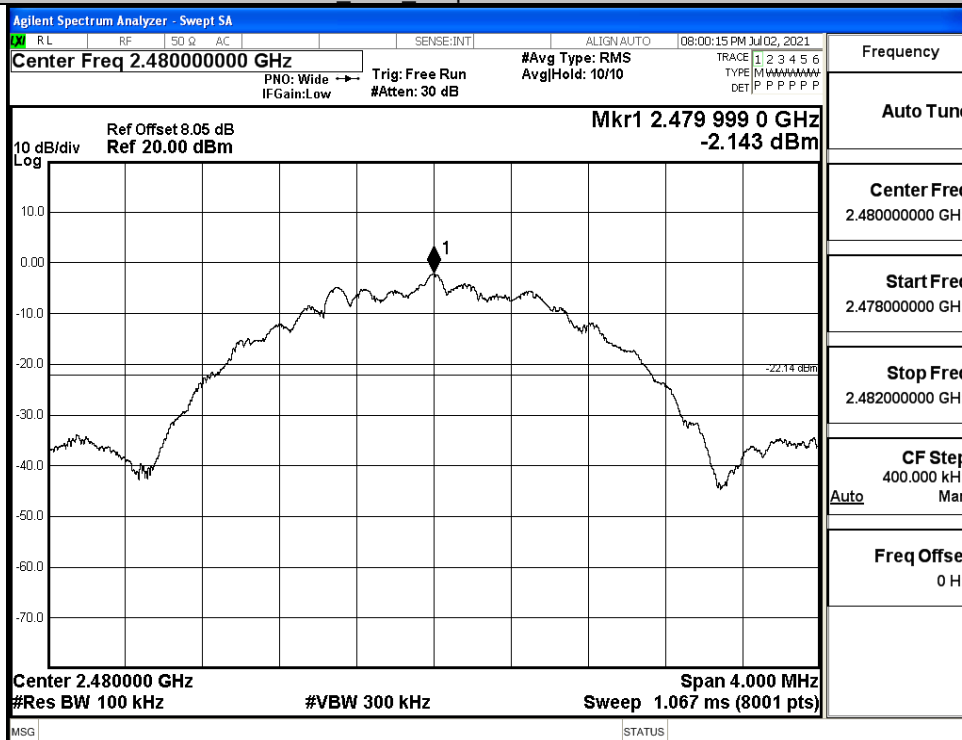
Puw/BT LE/MCH



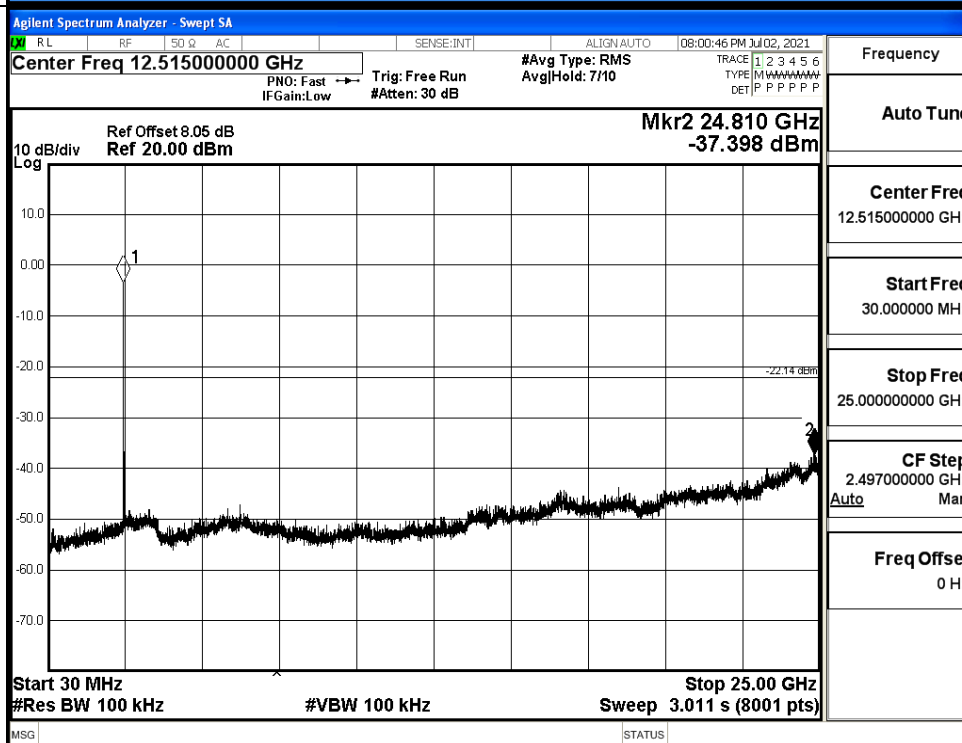


BT LE HCH Graphs

Pref/BT LE/HCH



Puw/BT LE/HCH

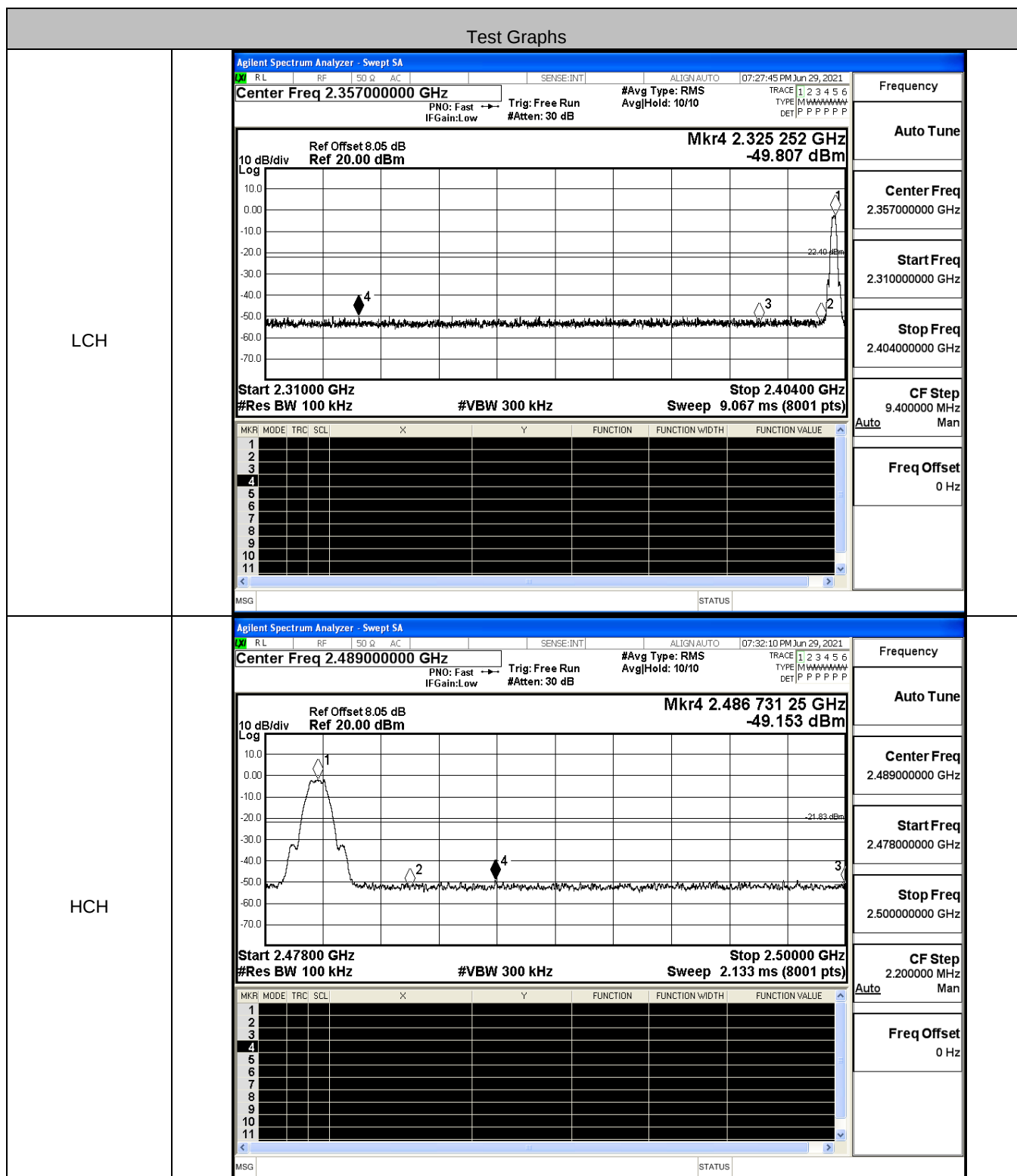




B.6 Band-edge for RF Conducted Emissions

BT LE

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	-2.399	-49.807	-22.4	PASS
BT LE	HCH	-1.832	-49.153	-21.83	PASS

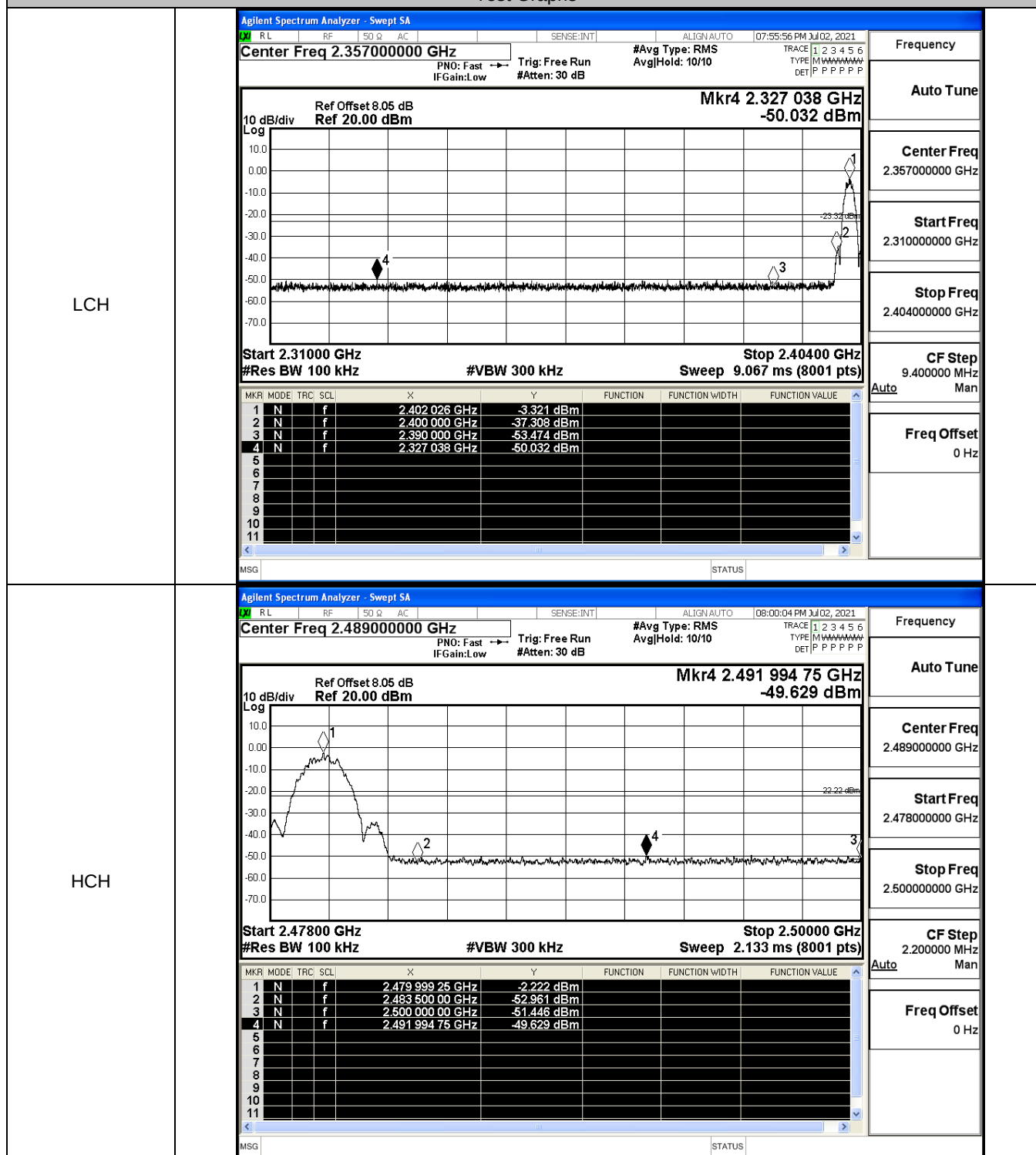




BT 2LE

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	-3.321	-50.032	-23.32	PASS
BT LE	HCH	-2.222	-49.629	-22.22	PASS

Test Graphs





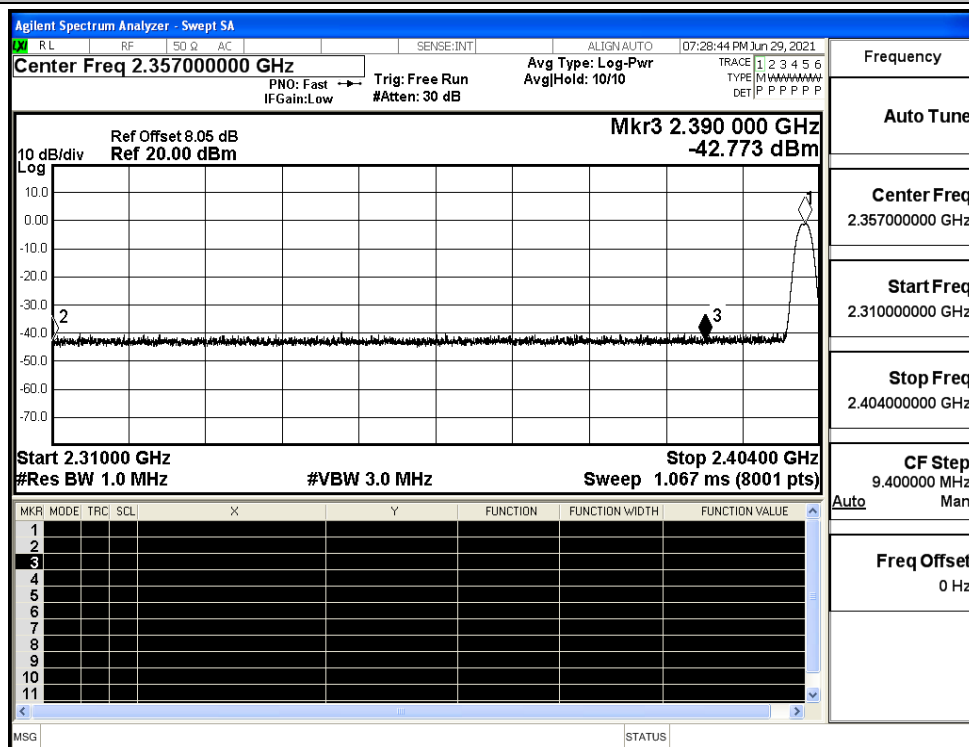
B.7 Restrict-band band-edge measurements

BT LE

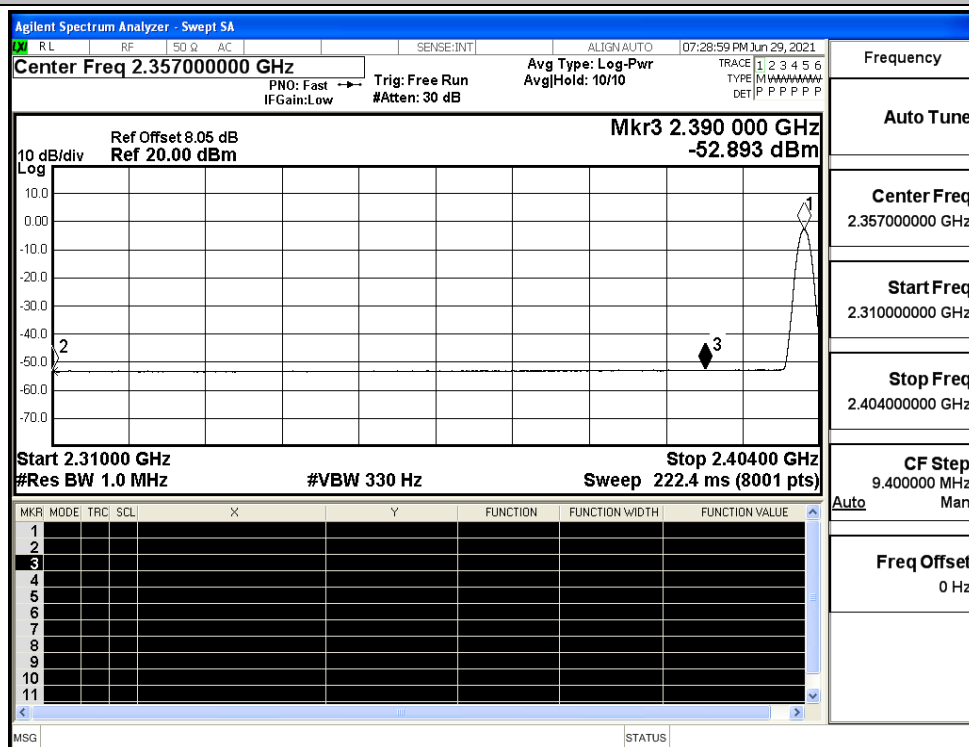
Test Mode	Test Channel	Ant	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdi
BT LE	2402	Ant1	2310.0	-43.03	2.0	0	52.23	PEAK	74	PASS
		Ant1	2310.0	-53.38	2.0	0	41.88	AV	54	PASS
		Ant1	2390.0	-42.77	2.0	0	52.48	PEAK	74	PASS
		Ant1	2390.0	-52.89	2.0	0	42.36	AV	54	PASS
	2480	Ant1	2483.5	-42.36	2.0	0	52.90	PEAK	74	PASS
		Ant1	2483.5	-52.52	2.0	0	42.74	AV	54	PASS
		Ant1	2500.0	-41.15	2.0	0	54.10	PEAK	74	PASS
		Ant1	2500.0	-52.32	2.0	0	42.94	AV	54	PASS



Restrict-band band-edge measurements_BT LE_2402_Ant1_PEAK

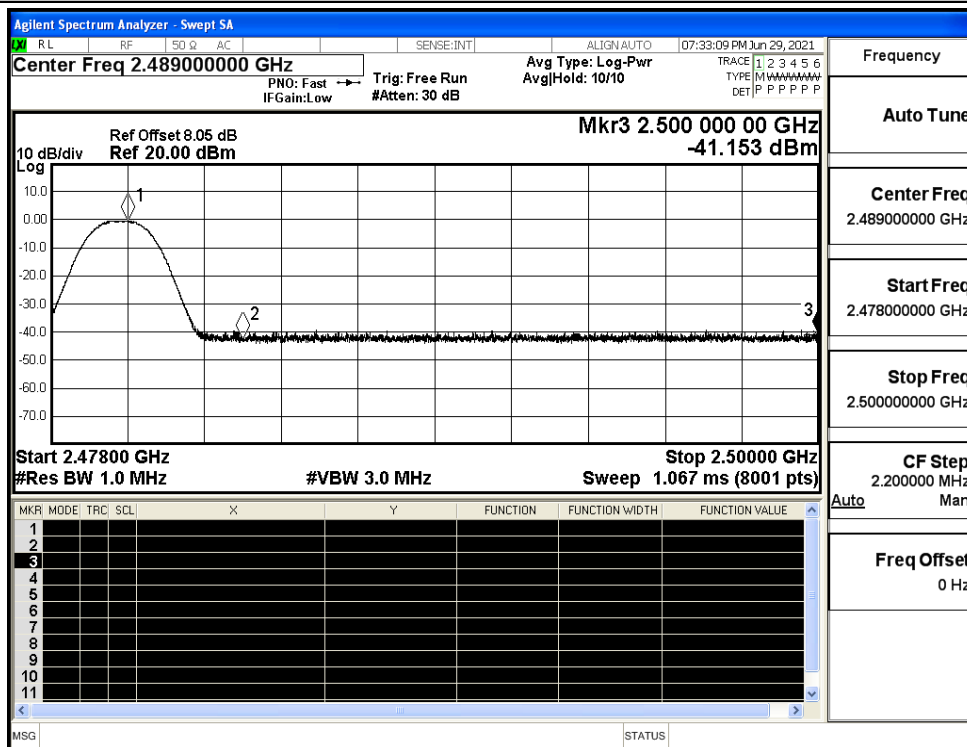


Restrict-band band-edge measurements_BT LE_2402_Ant1_AV

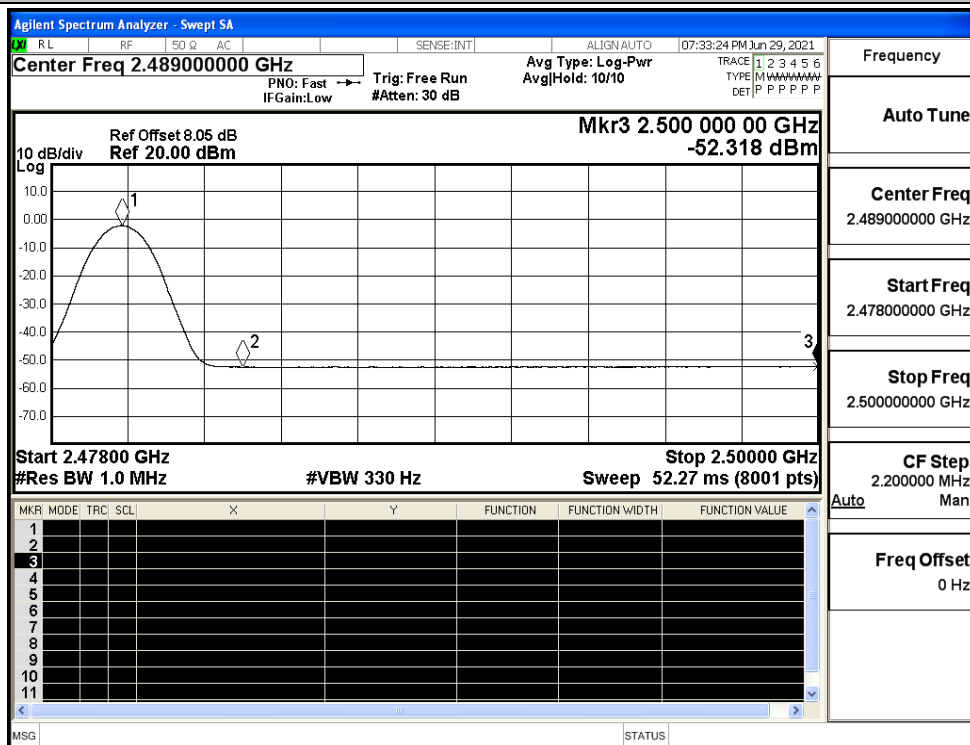




Restrict-band band-edge measurements_BT LE_2480_Ant1_PEAK



Restrict-band band-edge measurements_BT LE_2480_Ant1_AV



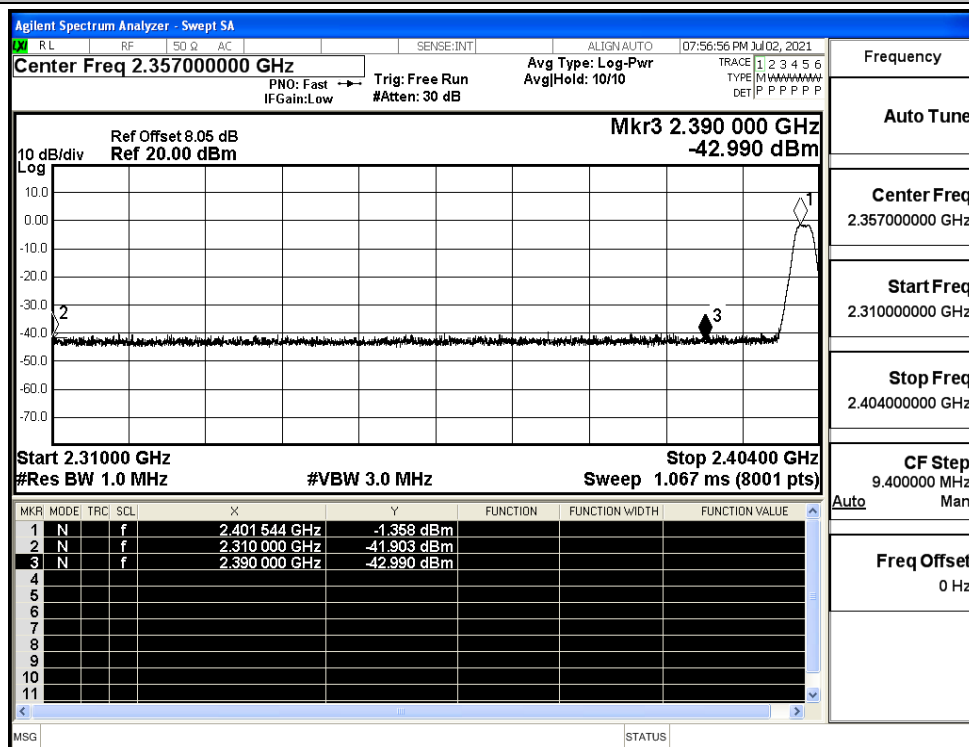


BT 2LE

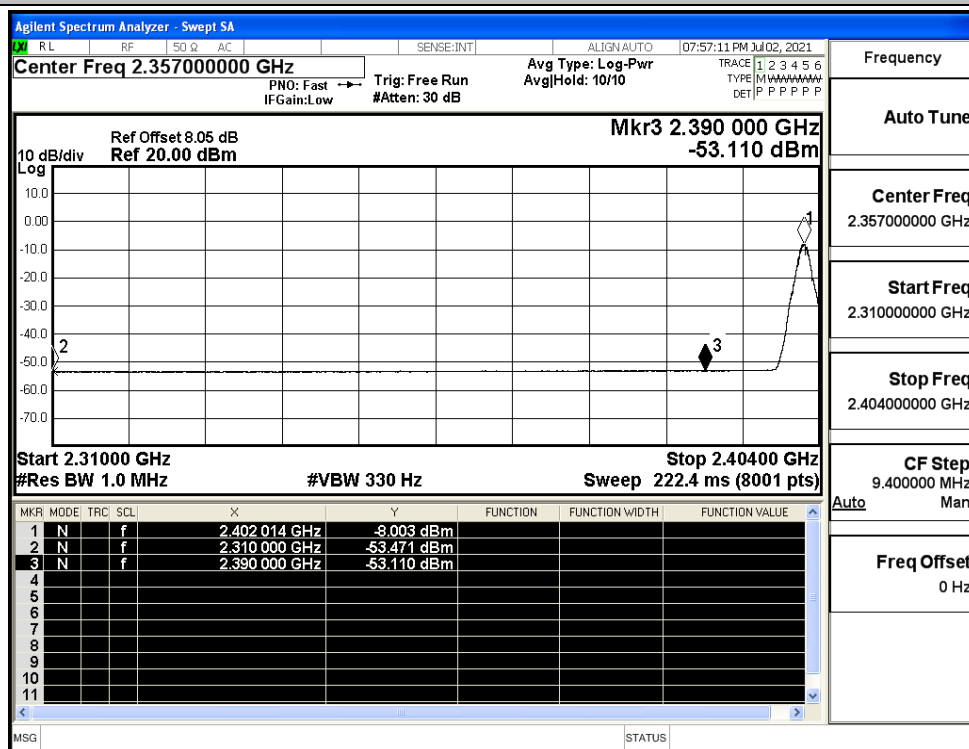
Test Mode	Test Channel	Ant	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdi
BT LE	2402	Ant1	2310.0	-41.90	2.0	0	53.35	PEAK	74	PASS
		Ant1	2310.0	-53.47	2.0	0	41.79	AV	54	PASS
		Ant1	2390.0	-42.99	2.0	0	52.27	PEAK	74	PASS
		Ant1	2390.0	-53.11	2.0	0	42.15	AV	54	PASS
	2480	Ant1	2483.5	-41.45	2.0	0	53.80	PEAK	74	PASS
		Ant1	2483.5	-52.06	2.0	0	43.20	AV	54	PASS
		Ant1	2500.0	-42.12	2.0	0	53.14	PEAK	74	PASS
		Ant1	2500.0	-52.37	2.0	0	42.89	AV	54	PASS



Restrict-band band-edge measurements_BT LE_2402_Ant1_PEAK

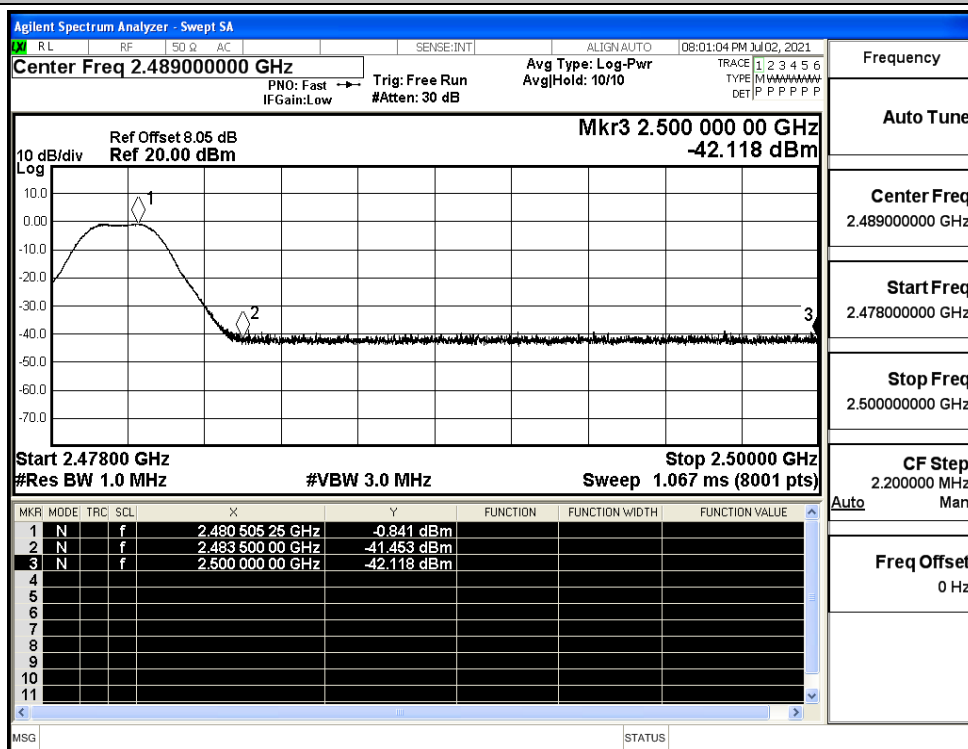


Restrict-band band-edge measurements_BT LE_2402_Ant1_AV





Restrict-band band-edge measurements_BT LE_2480_Ant1_PEAK



Restrict-band band-edge measurements_BT LE_2480_Ant1_AV

