

Appendix B

RF Test Data for BT V5.0(BTLE) (Conducted Measurement)

Product Name:Bluetooth thermometer

Trade Mark: /

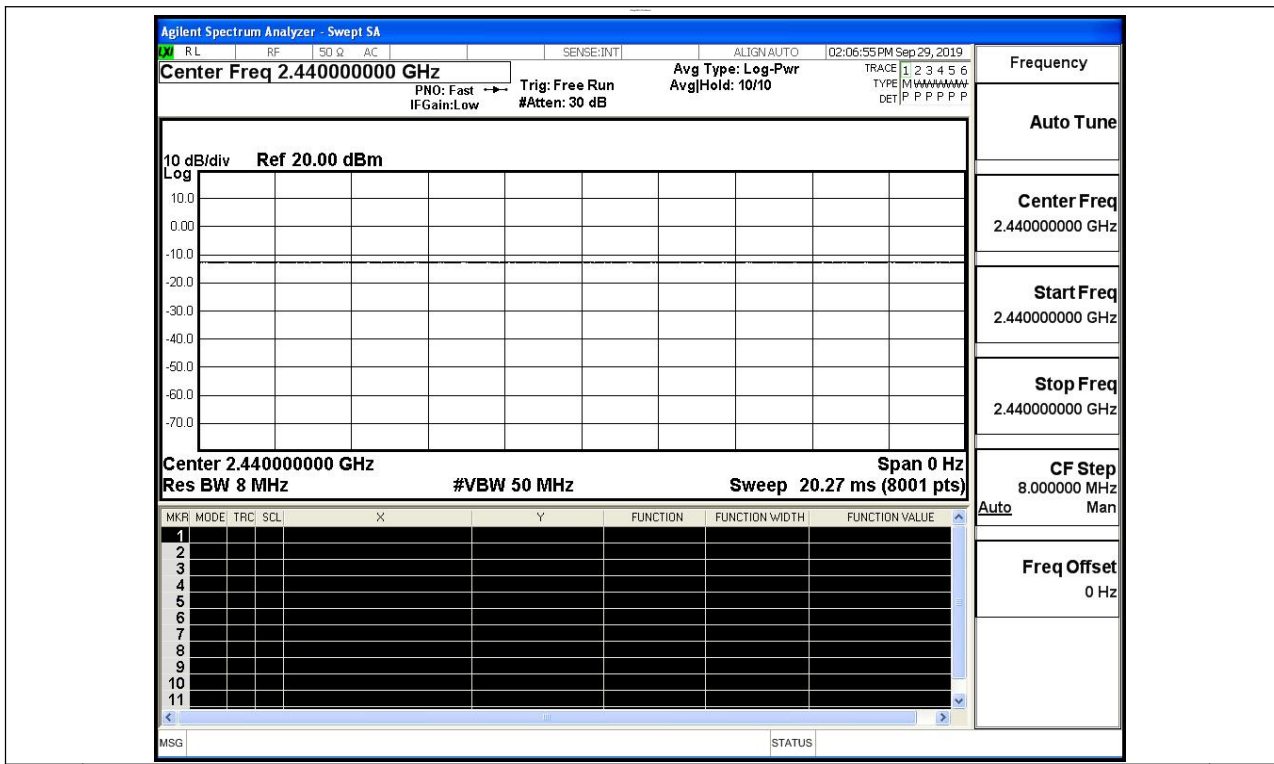
Test Model: TP-25

Environmental Conditions

Temperature:	22.6 ° C
Relative Humidity:	53.6%
ATM Pressure:	100.0 kPa
Test Engineer:	SCOUT WU
Supervised by:	Wang.Chuang

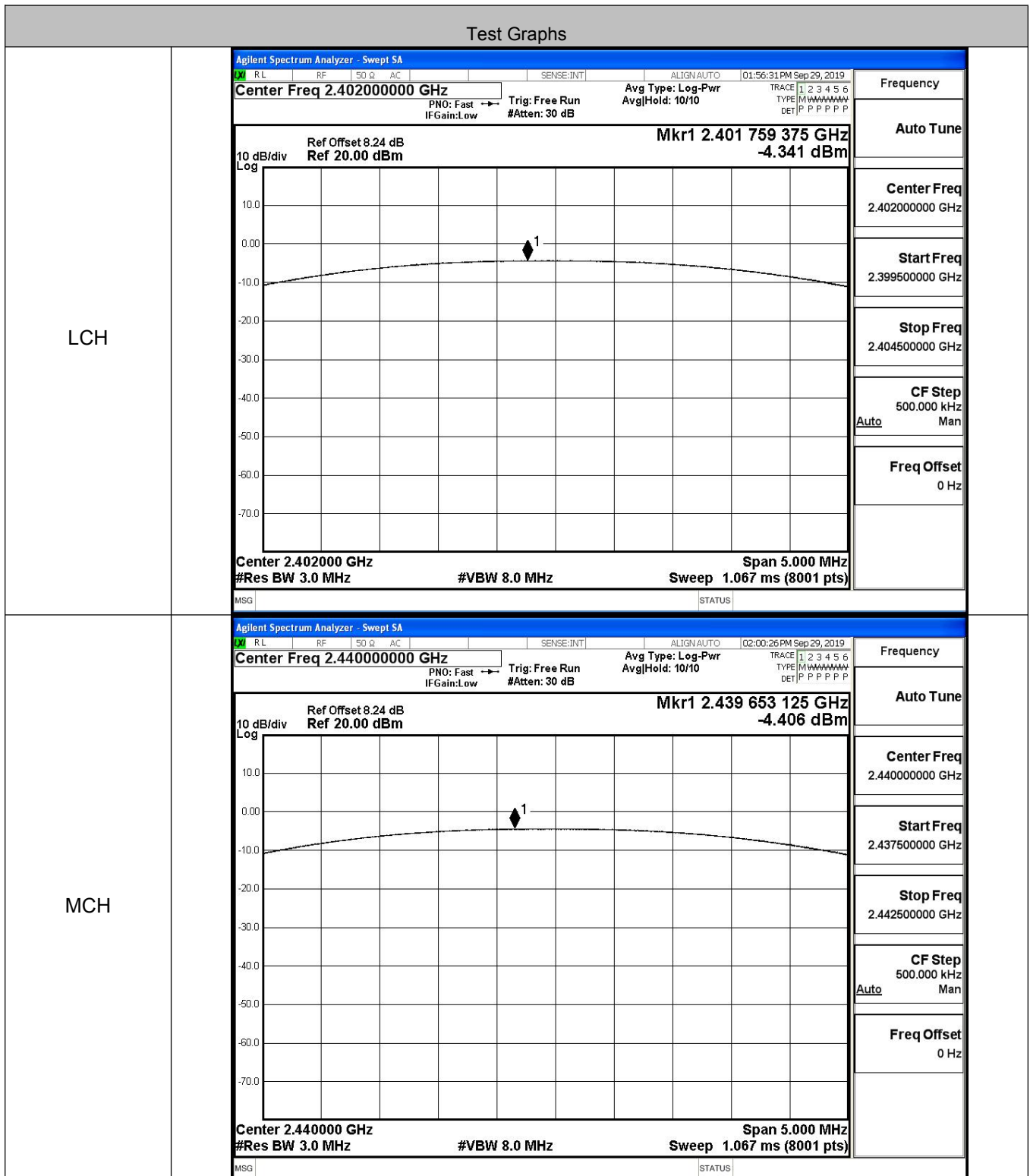
B.1 Duty Cycle

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

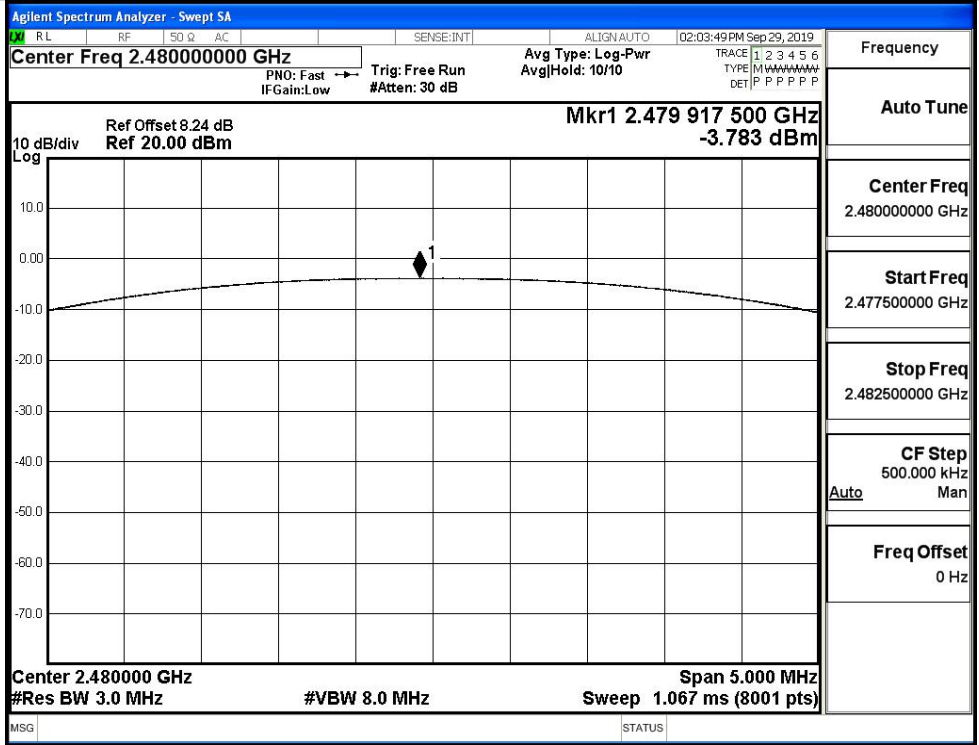


B.2 Maximum Conducted Peak Output Power

Mode	Channel	Conduct Peak Power[dBm]	Limit [dBm]	Verdict
BT LE	LCH	-4.341	30	PASS
BT LE	MCH	-4.406	30	PASS
BT LE	HCH	-3.783	30	PASS



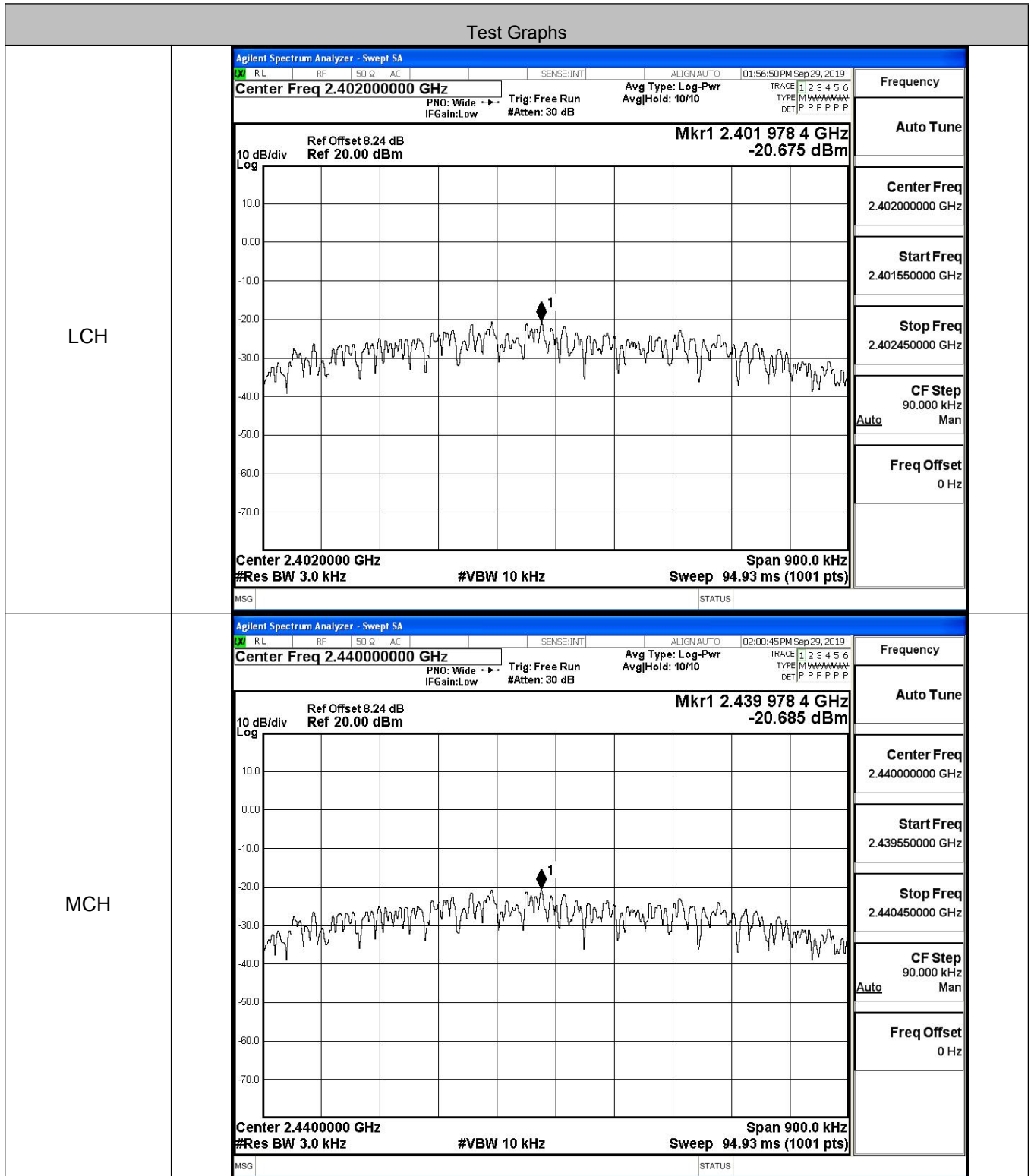
HCH



B.3 Maximum Power Spectral Density

Mode	Channel	PSD [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
BT LE	LCH	-20.675	8	PASS
BT LE	MCH	-20.685	8	PASS
BT LE	HCH	-20.063	8	PASS

Test Graphs



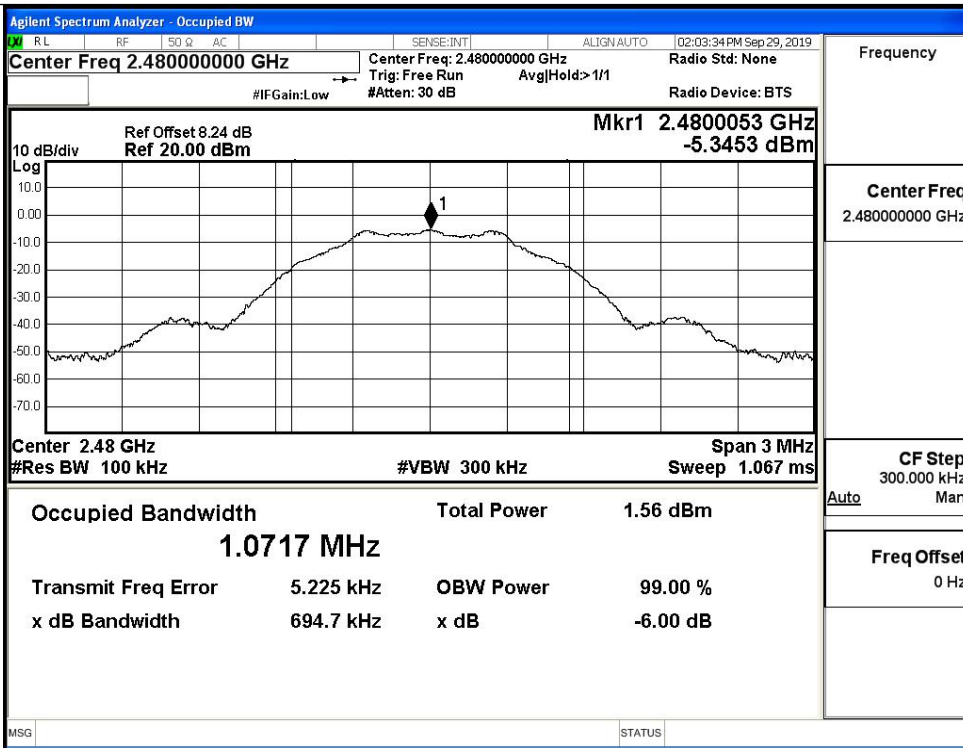
B.4 6dB Bandwidth

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
BT LE	LCH	0.6912	≥0.5	PASS
BT LE	MCH	0.6866	≥0.5	PASS
BT LE	HCH	0.6947	≥0.5	PASS

Test Graphs

LCH	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.40200000 GHz Center Freq: 2.402000000 GHz Radio Std: None</p> <p>Trig: Free Run AvgHold>1/1</p> <p>#IFGain:Low #Atten: 30 dB Radio Device: BTS</p> <p>Ref Offset 8.24 dB Mkr1 2.4020064 GHz Ref 20.00 dBm -5.8894 dBm</p> <p>10 dB/div Log</p> <p>Center 2.402 GHz Span 3 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 1.067 ms</p> <p>Occupied Bandwidth Total Power 1.04 dBm</p> <p>1.0726 MHz</p> <p>Transmit Freq Error 5.327 kHz OBW Power 99.00 % x dB Bandwidth 691.2 kHz x dB -6.00 dB</p>	<p>Frequency</p> <p>Center Freq 2.402000000 GHz</p> <p>CF Step 300.000 kHz Auto Man</p> <p>Freq Offset 0 Hz</p>
MCH	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.44000000 GHz Center Freq: 2.440000000 GHz Radio Std: None</p> <p>Trig: Free Run AvgHold>1/1</p> <p>#IFGain:Low #Atten: 30 dB Radio Device: BTS</p> <p>Ref Offset 8.24 dB Mkr1 2.4400086 GHz Ref 20.00 dBm -5.9621 dBm</p> <p>10 dB/div Log</p> <p>Center 2.44 GHz Span 3 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 1.067 ms</p> <p>Occupied Bandwidth Total Power 0.94 dBm</p> <p>1.0714 MHz</p> <p>Transmit Freq Error 6.064 kHz OBW Power 99.00 % x dB Bandwidth 686.6 kHz x dB -6.00 dB</p>	<p>Frequency</p> <p>Center Freq 2.440000000 GHz</p> <p>CF Step 300.000 kHz Auto Man</p> <p>Freq Offset 0 Hz</p>

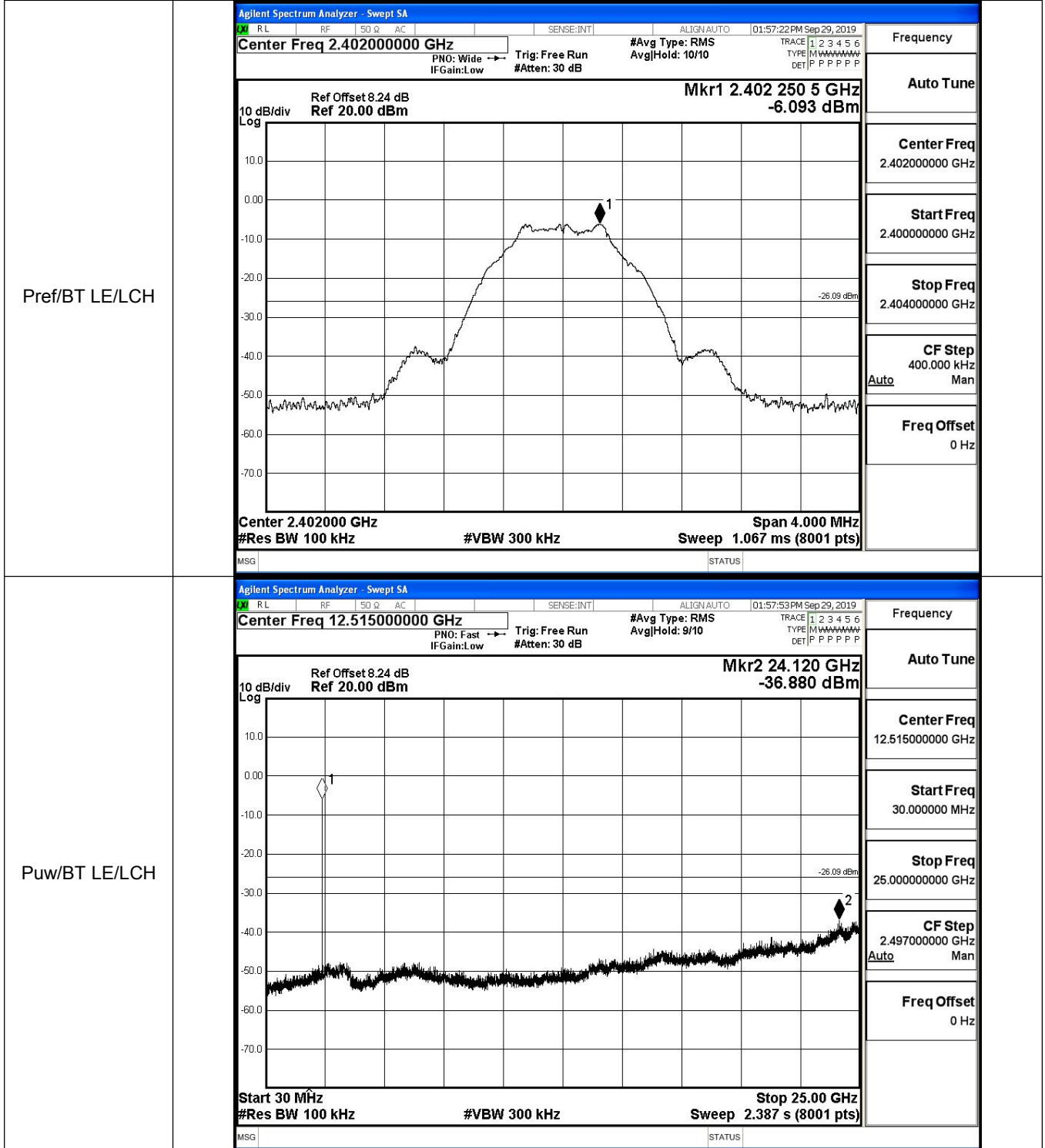
HCH



B.5 RF Conducted Spurious Emissions

Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	-6.093	-36.880	-26.093	PASS
BT LE	MCH	-5.898	-36.324	-25.898	PASS
BT LE	HCH	-5.509	-37.348	-25.509	PASS

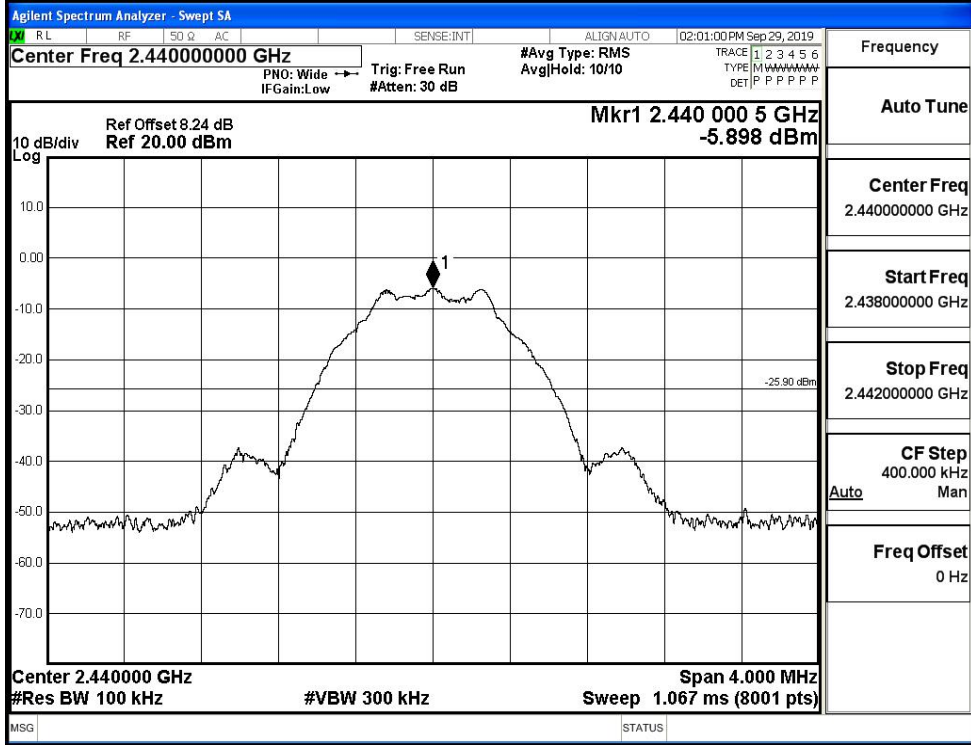
BT LE_LCH_Graphs



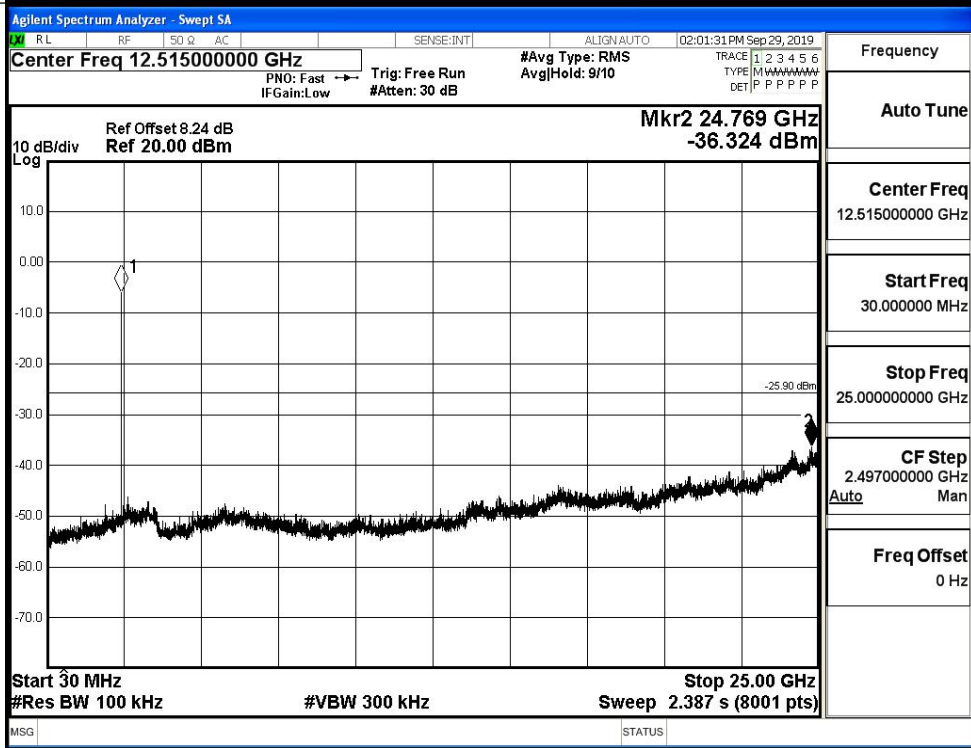
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BT LE MCH Graphs

Pref/BT LE/MCH

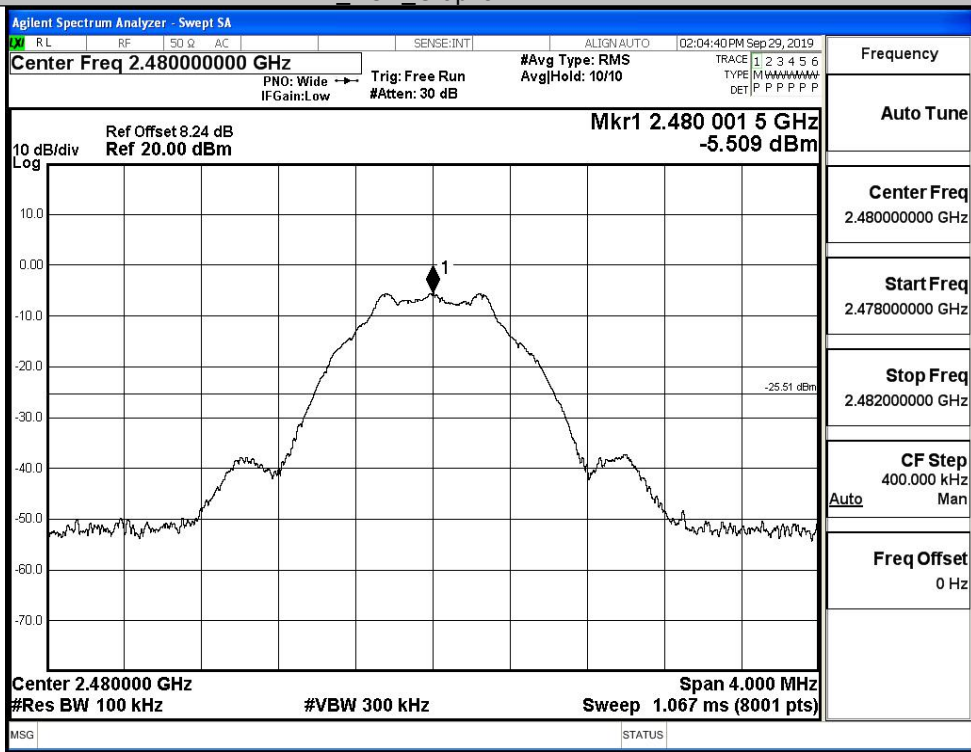


Puw/BT LE/MCH

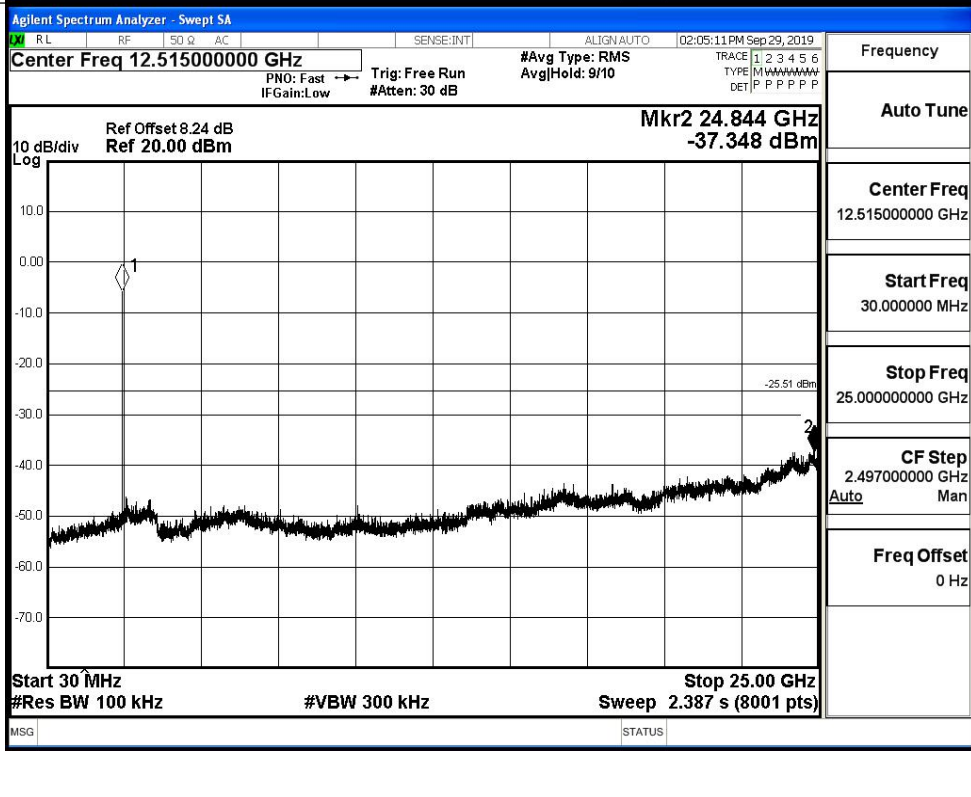


BT LE HCH Graphs

Pref/BT LE/HCH



Puw/BT LE/HCH

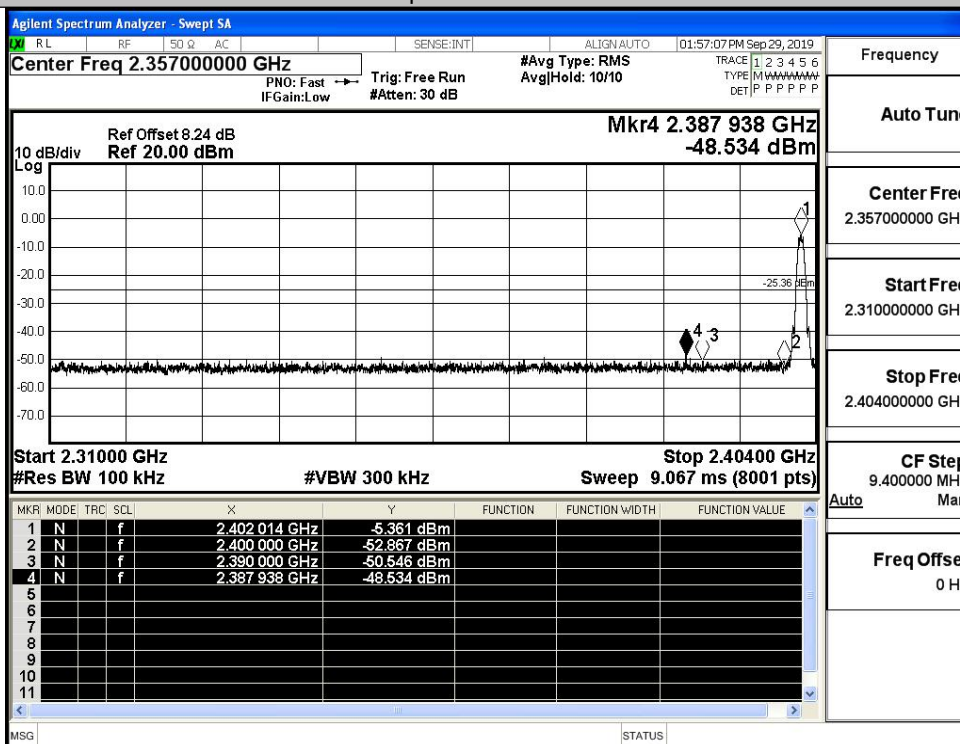


B.6 Band-edge for RF Conducted Emissions

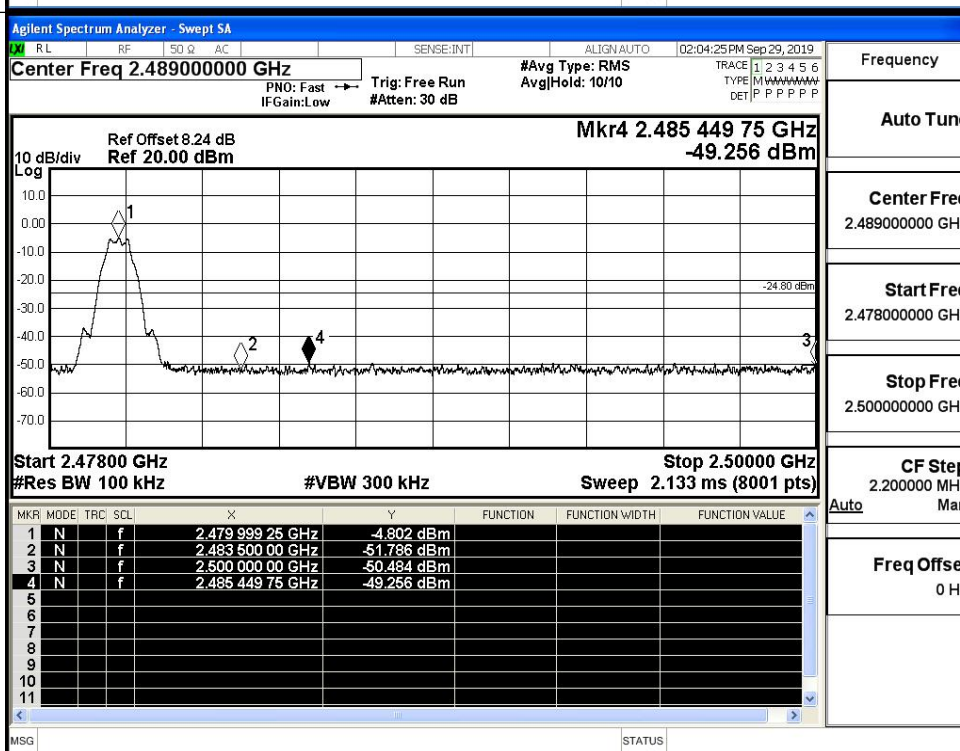
Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	-5.361	-48.534	-25.36	PASS
BT LE	HCH	-4.802	-49.256	-24.8	PASS

Test Graphs

LCH



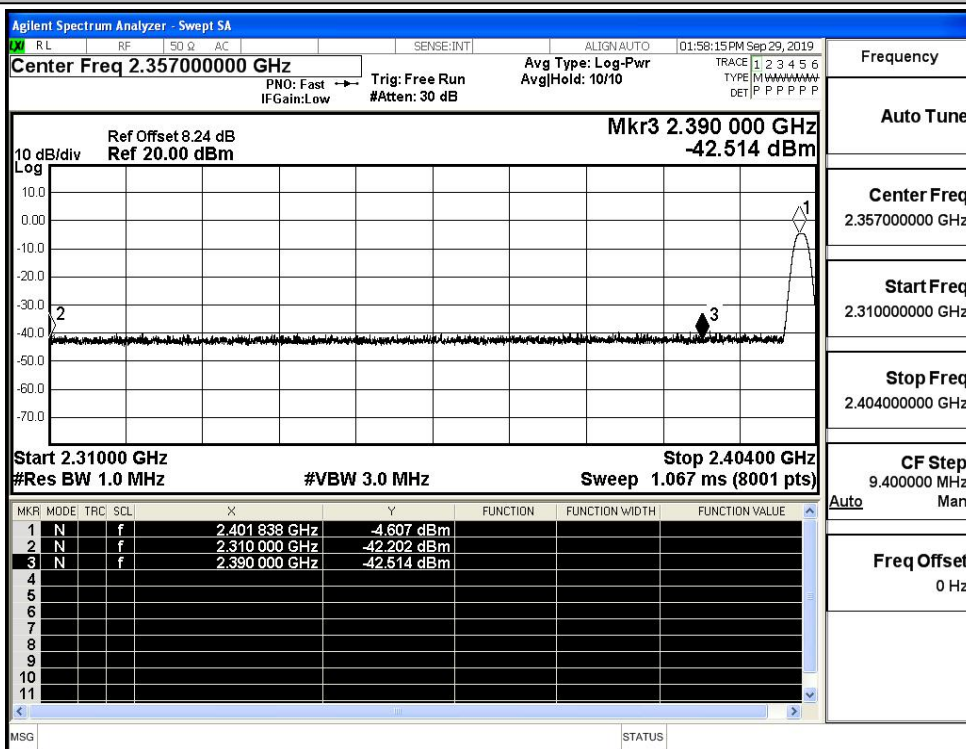
HCH



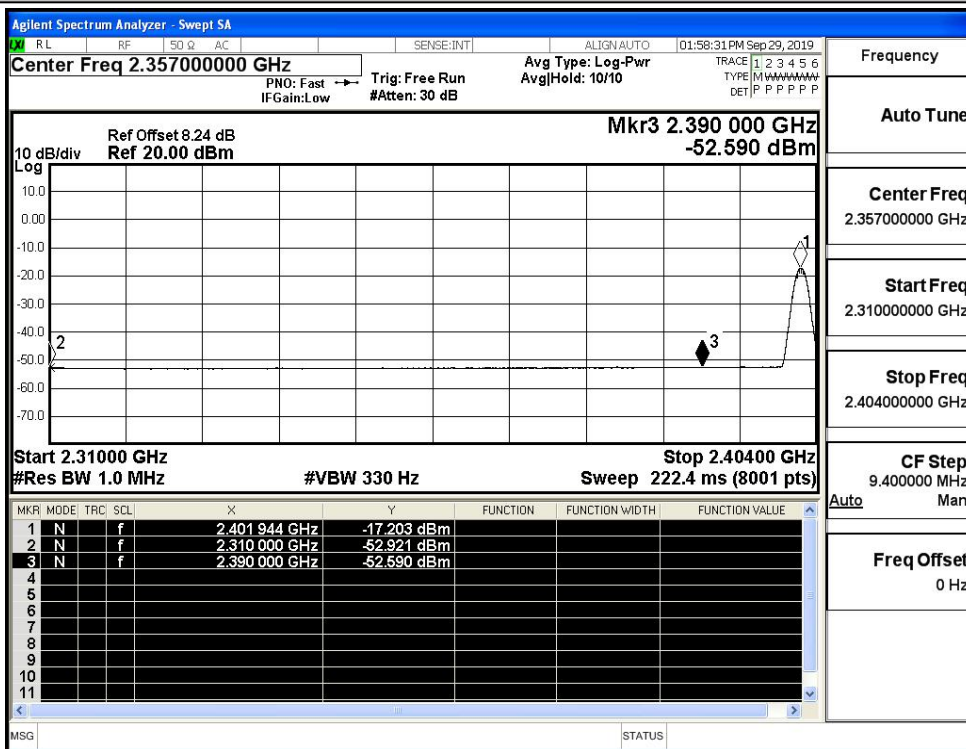
B.7 Restrict-band band-edge measurements

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	-42.20	2.0	0	53.06	PEAK	74	PASS
		Ant1	2310.0	-52.92	2.0	0	42.34	AV	54	PASS
		Ant1	2390.0	-42.51	2.0	0	52.74	PEAK	74	PASS
		Ant1	2390.0	-52.59	2.0	0	42.67	AV	54	PASS
	2480	Ant1	2483.5	-41.75	2.0	0	53.51	PEAK	74	PASS
		Ant1	2483.5	-52.29	2.0	0	42.97	AV	54	PASS
		Ant1	2500.0	-42.78	2.0	0	52.48	PEAK	74	PASS
		Ant1	2500.0	-52.02	2.0	0	43.23	AV	54	PASS

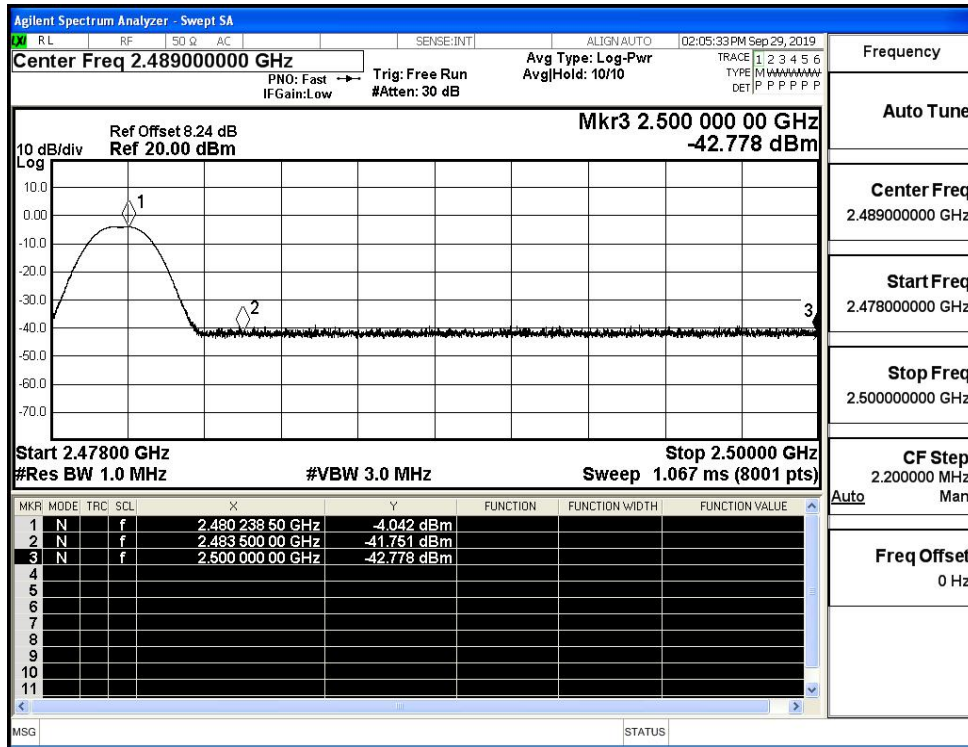
Restrict-band band-edge measurements_BT LE_2402_Ant1_PEAK



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

