

Appendix A

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

Product Name: Smart Sleep Monitor

Trade Mark: N/A

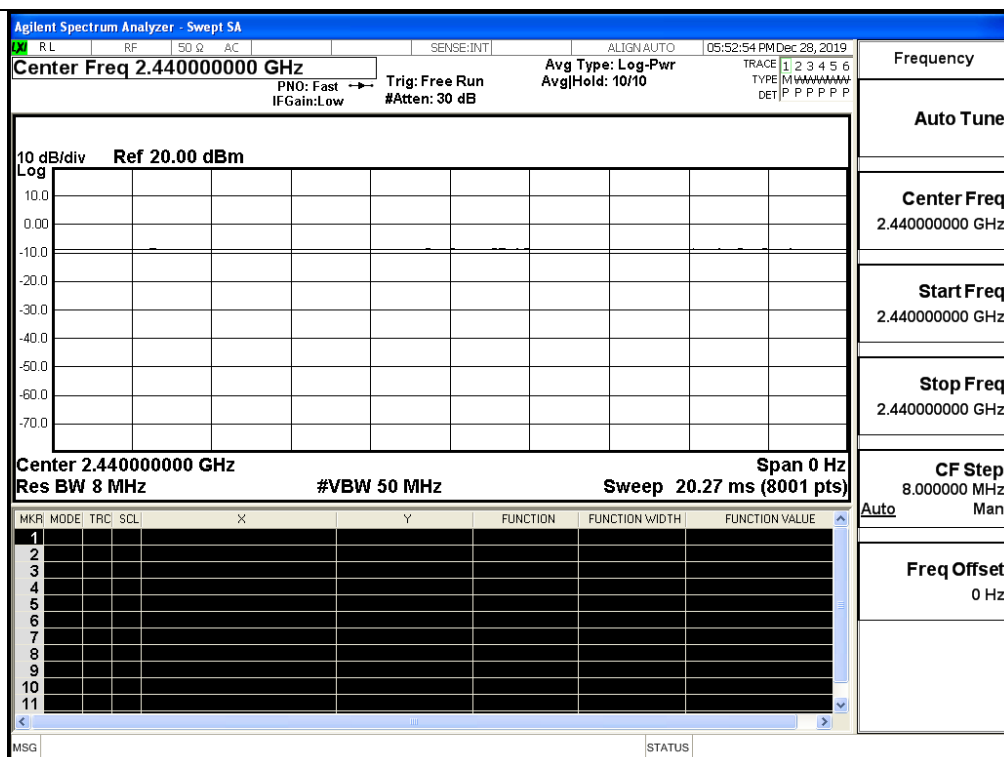
Test Model: Sleeppee

Environmental Conditions

Temperature:	23.2 °C
Relative Humidity:	54.3%
ATM Pressure:	100.0 kPa
Test Engineer:	Scout Wu
Supervised by:	Wang Chuang

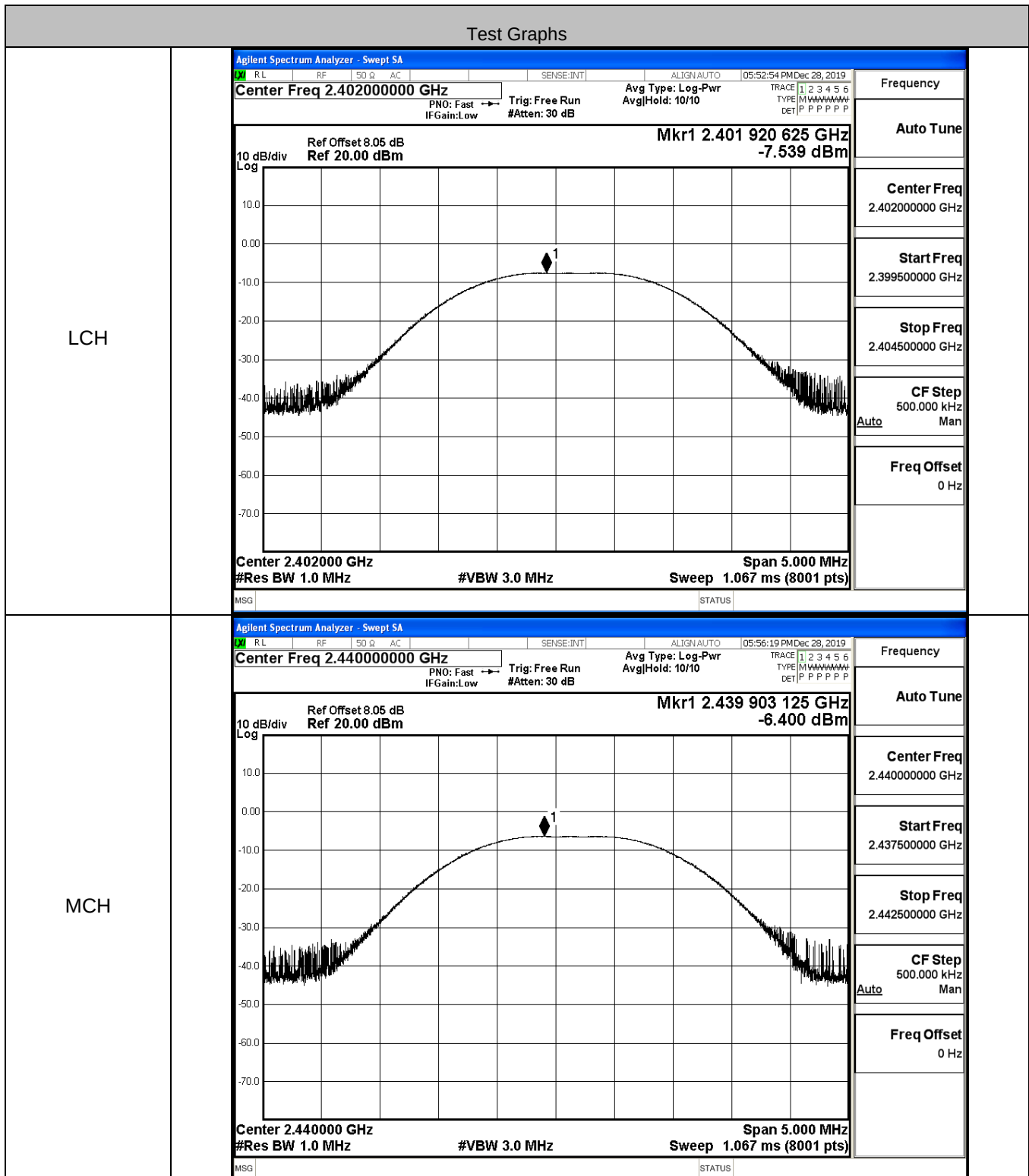
A.1 Duty Cycle

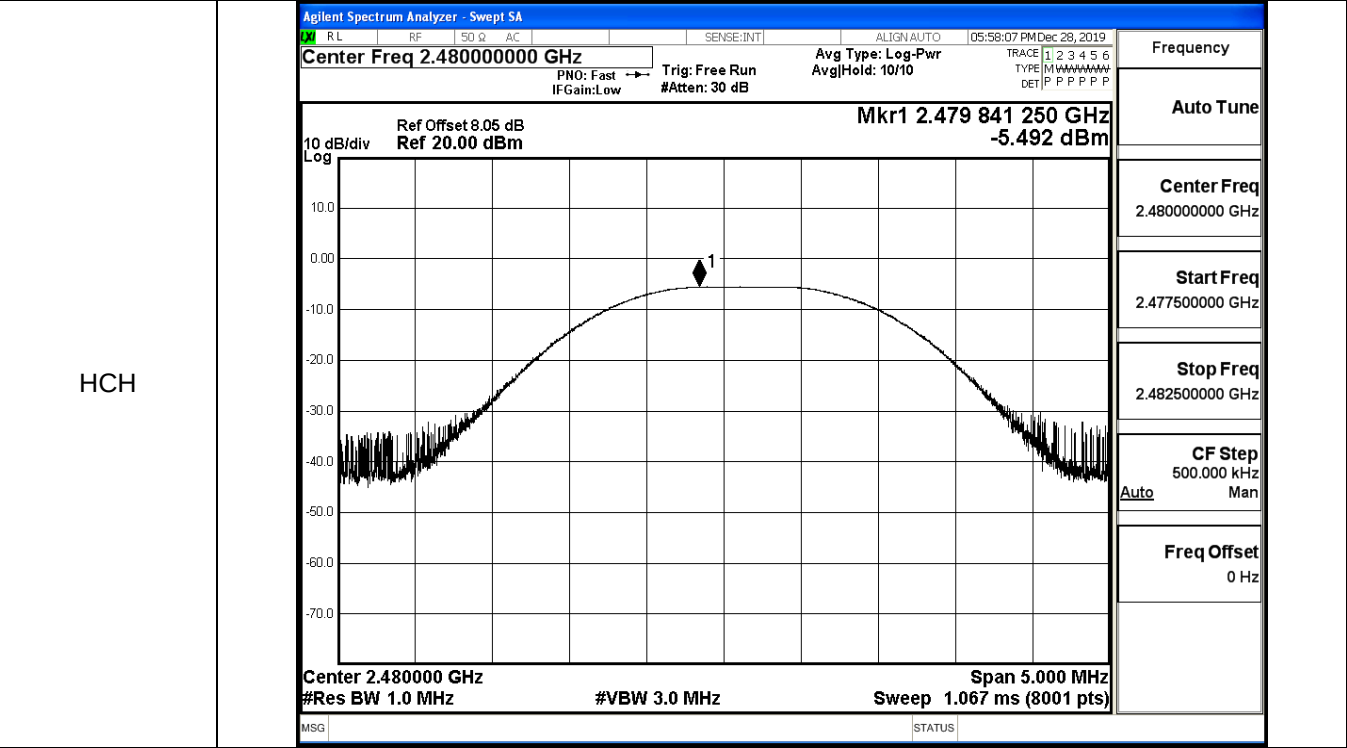
Test Mode	Test Channel	Ant	Duty Cycle[%]	Verdict
BT LE	2440	Ant1	100	PASS



A.2 Maximum Conducted Peak Output Power

Mode	Channel	Conduct Peak Power[dBm]	Limit [dBm]	Verdict
BT LE	LCH	-7.539	30	PASS
BT LE	MCH	-6.4	30	PASS
BT LE	HCH	-5.492	30	PASS



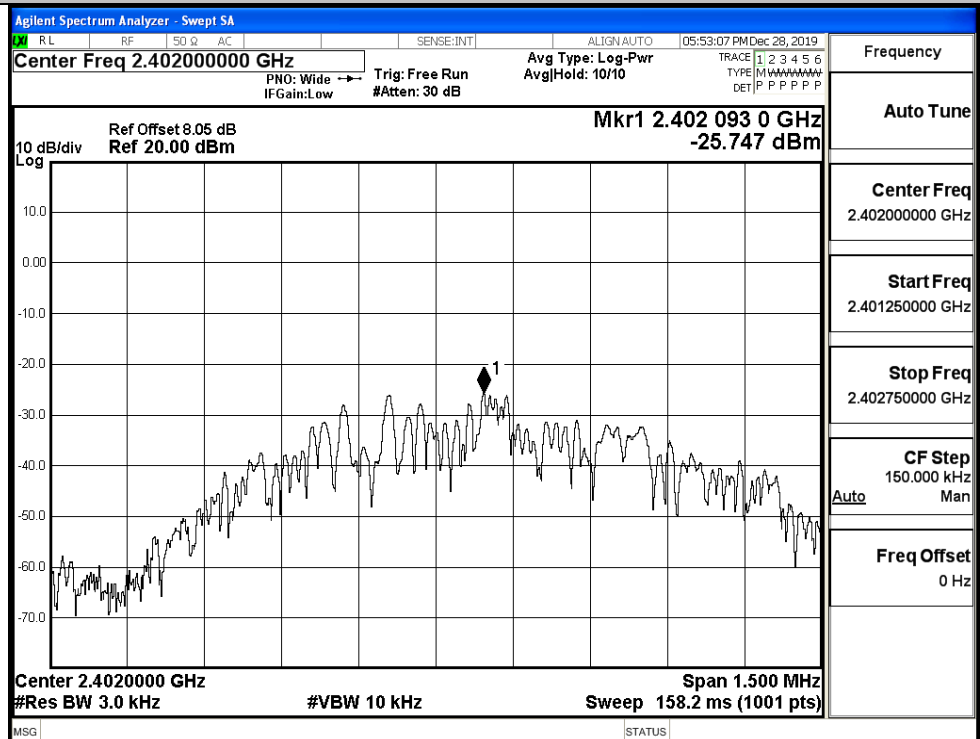


A.3 Maximum Power Spectral Density

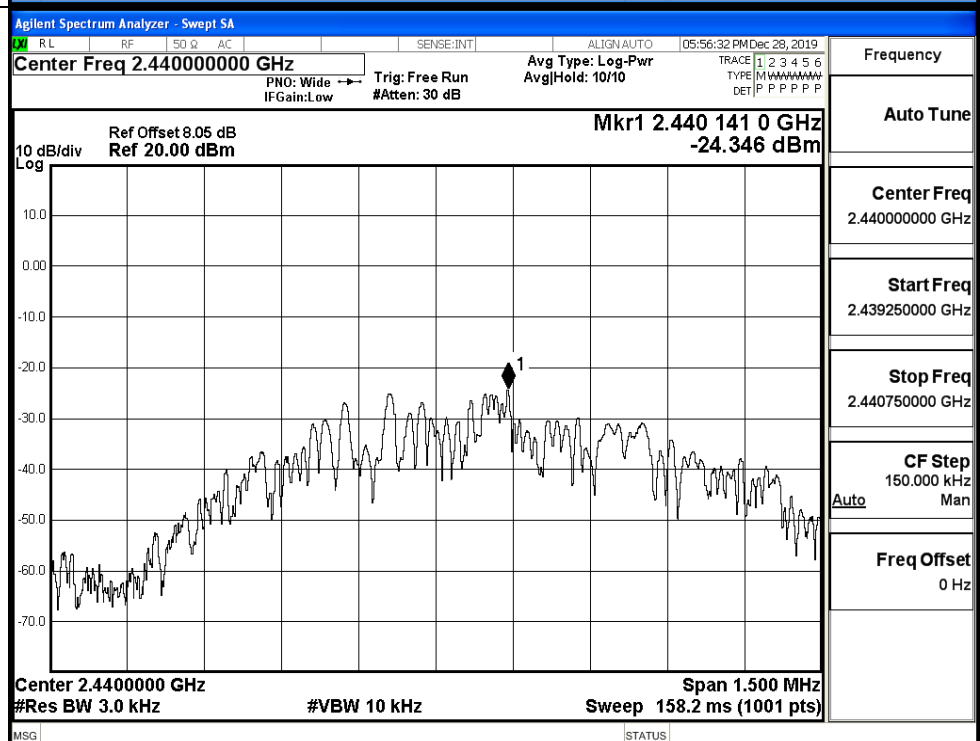
Mode	Channel	PSD [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
BT LE	LCH	-25.747	8	PASS
BT LE	MCH	-24.346	8	PASS
BT LE	HCH	-23.368	8	PASS

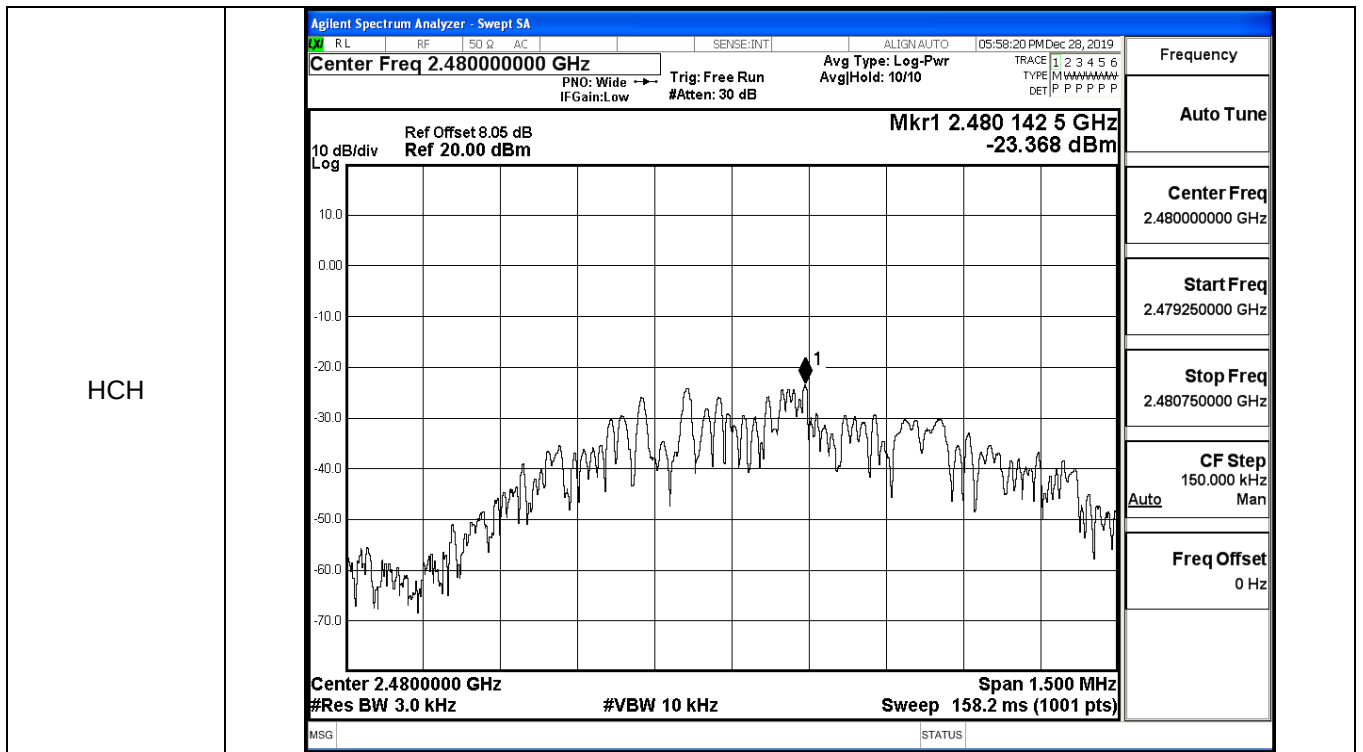
Test Graphs

LCH



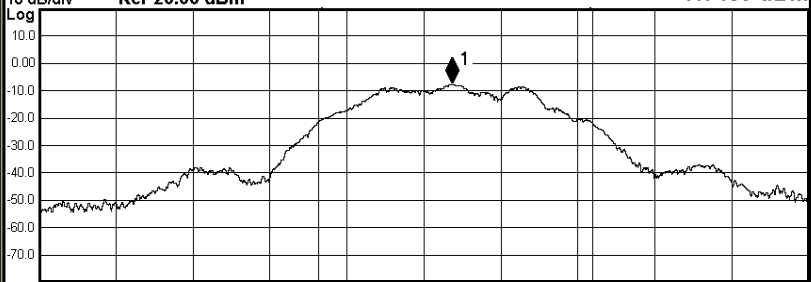
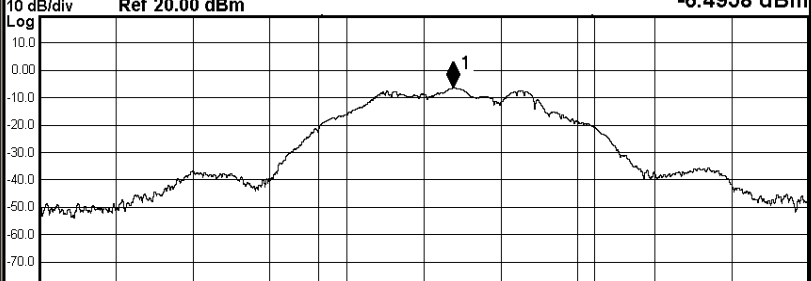
MCH



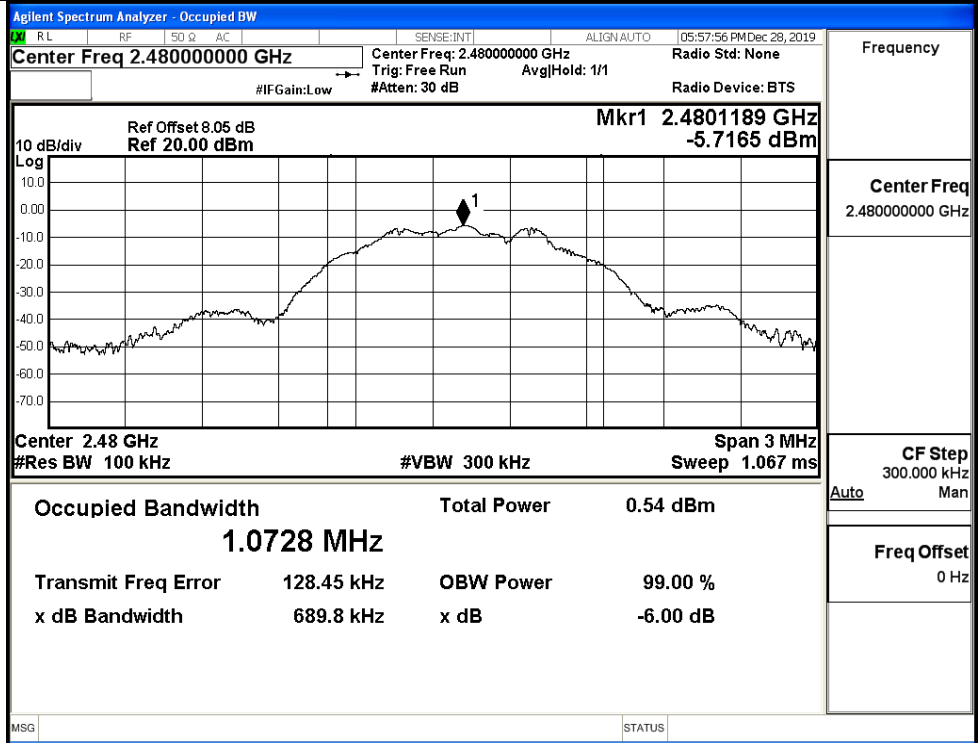


A.4 6dB Bandwidth

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
BT LE	LCH	0.6842	≥ 0.5	PASS
BT LE	MCH	0.6811	≥ 0.5	PASS
BT LE	HCH	0.6898	≥ 0.5	PASS

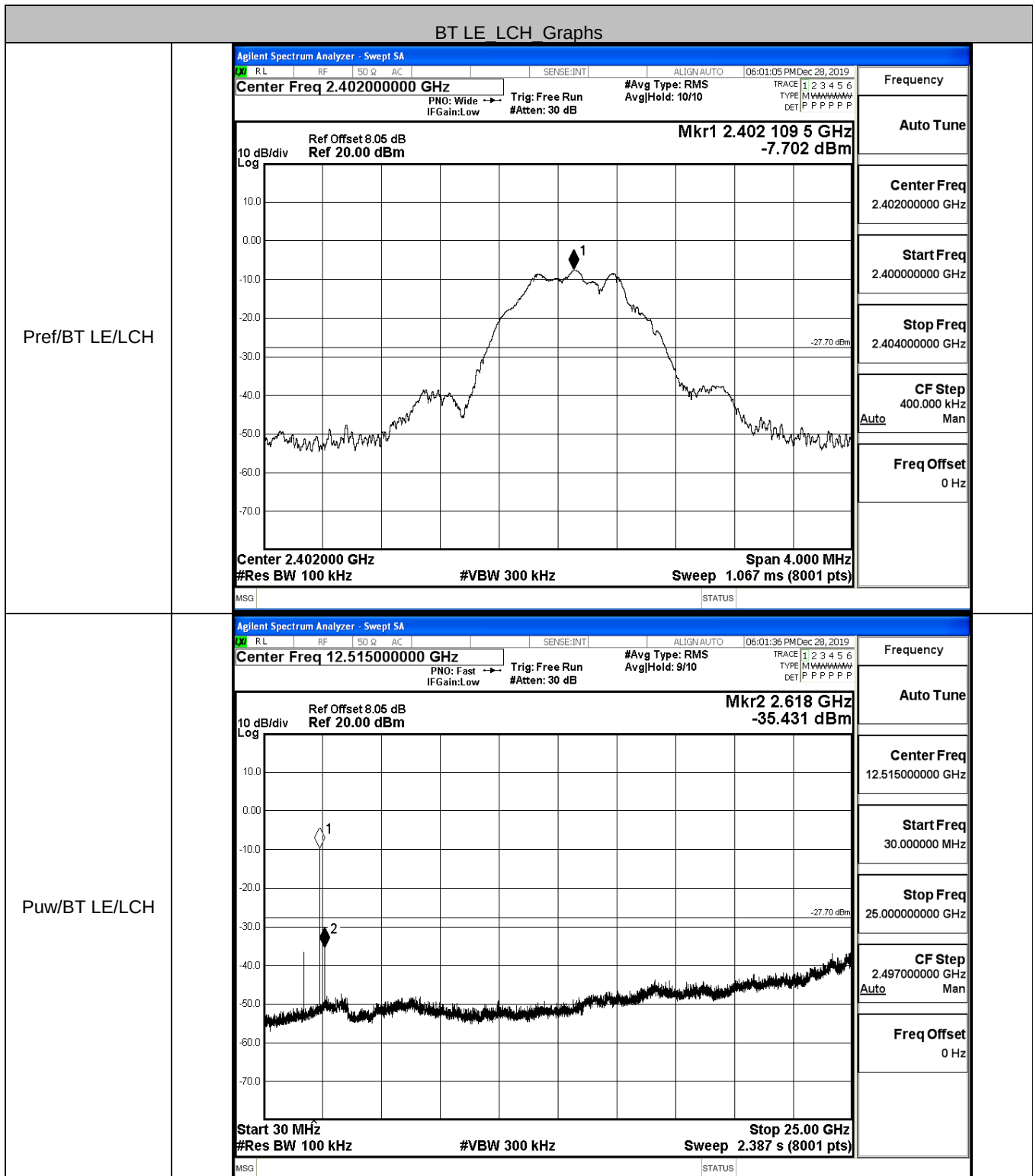
Test Graphs			
LCH		Agilent Spectrum Analyzer - Occupied BW RL RF 50 Ω AC SENSE:INT ALIGN: AUTO 05:52:42 PM Dec 28, 2019 Center Freq 2.402000000 GHz Center Freq: 2.402000000 GHz Radio Std: None Trig: Free Run AvgHold: 1/1 #IFGain: Low #Atten: 30 dB Radio Device: BTS Ref Offset 8.05 dB Mkr1 2.4021095 GHz Ref 20.00 dBm -7.7409 dBm  Center 2.402 GHz Span 3 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 1.067 ms Occupied Bandwidth Total Power -1.49 dBm 1.0658 MHz Transmit Freq Error 123.91 kHz OBW Power 99.00 % x dB Bandwidth 684.2 kHz x dB -6.00 dB MSG STATUS	Frequency Center Freq 2.402000000 GHz CF Step 300.000 kHz Auto Man Freq Offset 0 Hz
MCH		Agilent Spectrum Analyzer - Occupied BW RL RF 50 Ω AC SENSE:INT ALIGN: AUTO 05:55:15 PM Dec 28, 2019 Center Freq 2.440000000 GHz Center Freq: 2.440000000 GHz Radio Std: None Trig: Free Run AvgHold: 1/1 #IFGain: Low #Atten: 30 dB Radio Device: BTS Ref Offset 8.05 dB Mkr1 2.4401144 GHz Ref 20.00 dBm -6.4958 dBm  Center 2.44 GHz Span 3 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 1.067 ms Occupied Bandwidth Total Power -0.34 dBm 1.0693 MHz Transmit Freq Error 128.28 kHz OBW Power 99.00 % x dB Bandwidth 681.1 kHz x dB -6.00 dB MSG STATUS	Frequency Center Freq 2.440000000 GHz CF Step 300.000 kHz Auto Man Freq Offset 0 Hz

HCH



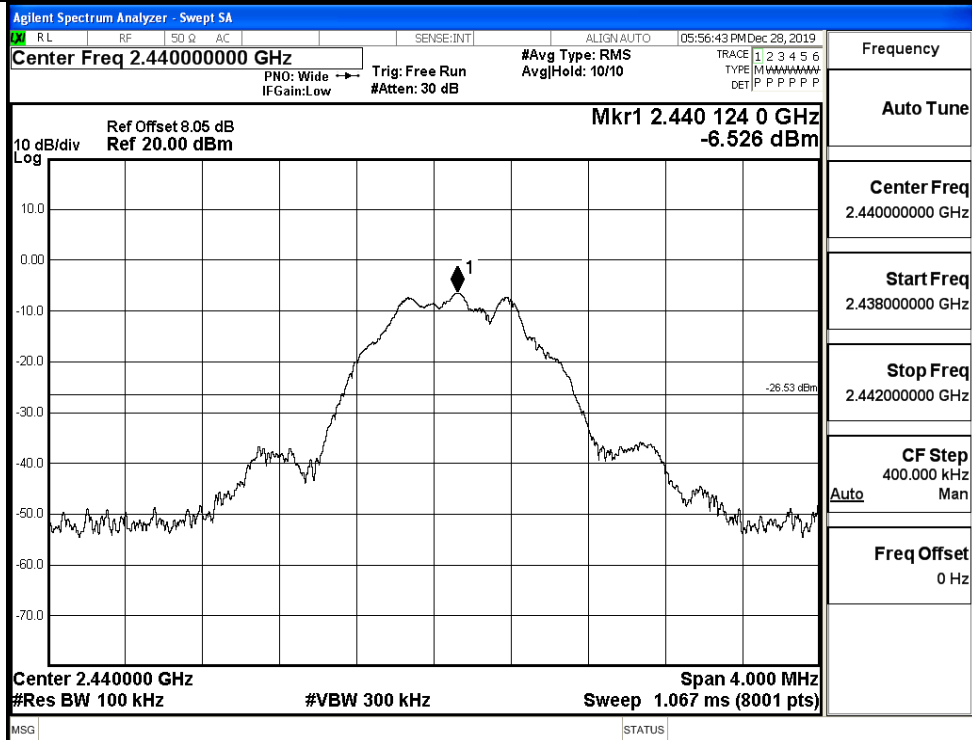
A.5 RF Conducted Spurious Emissions

Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	-7.702	-35.431	-27.702	PASS
BT LE	MCH	-6.526	-36.313	-26.526	PASS
BT LE	HCH	-5.665	-32.687	-25.665	PASS

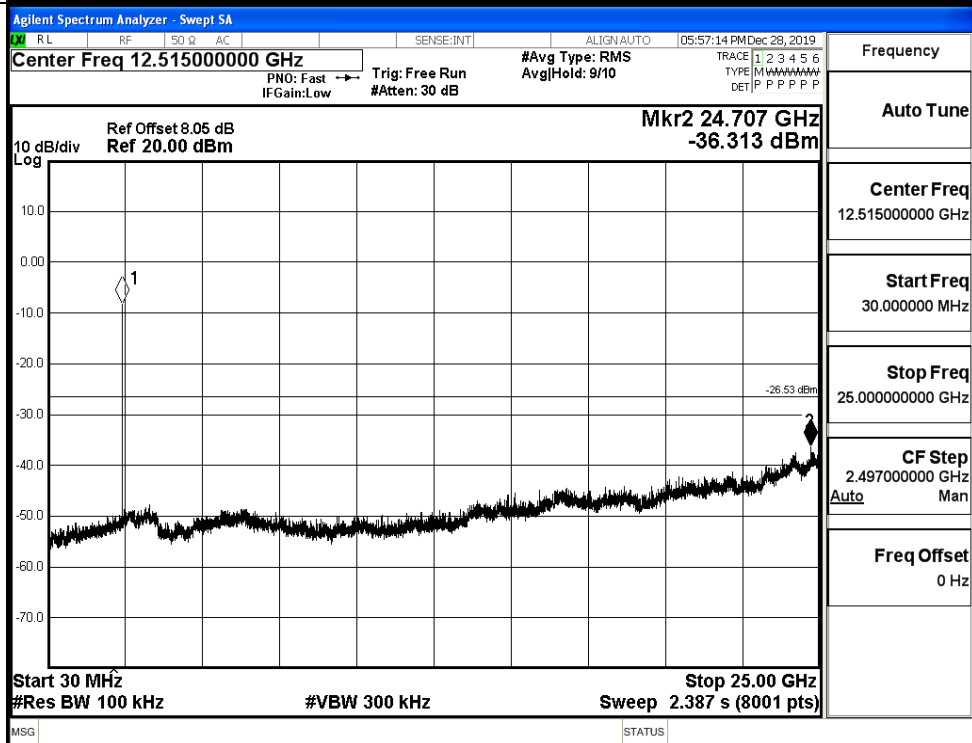


BT LE MCH Graphs

Pref/BT LE/MCH

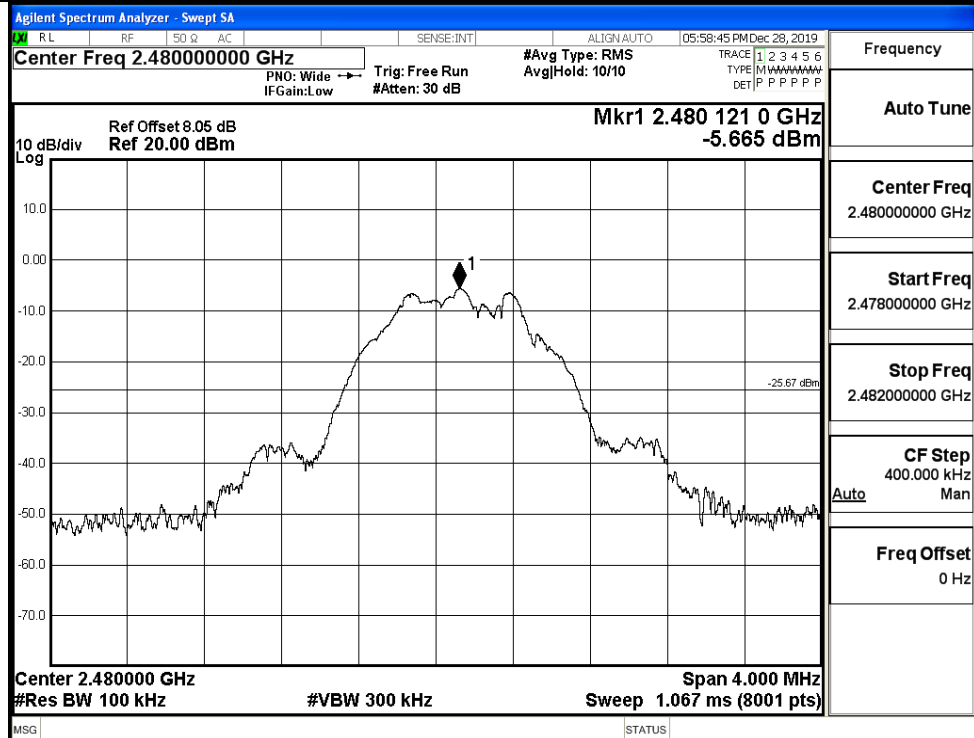


Puw/BT LE/MCH

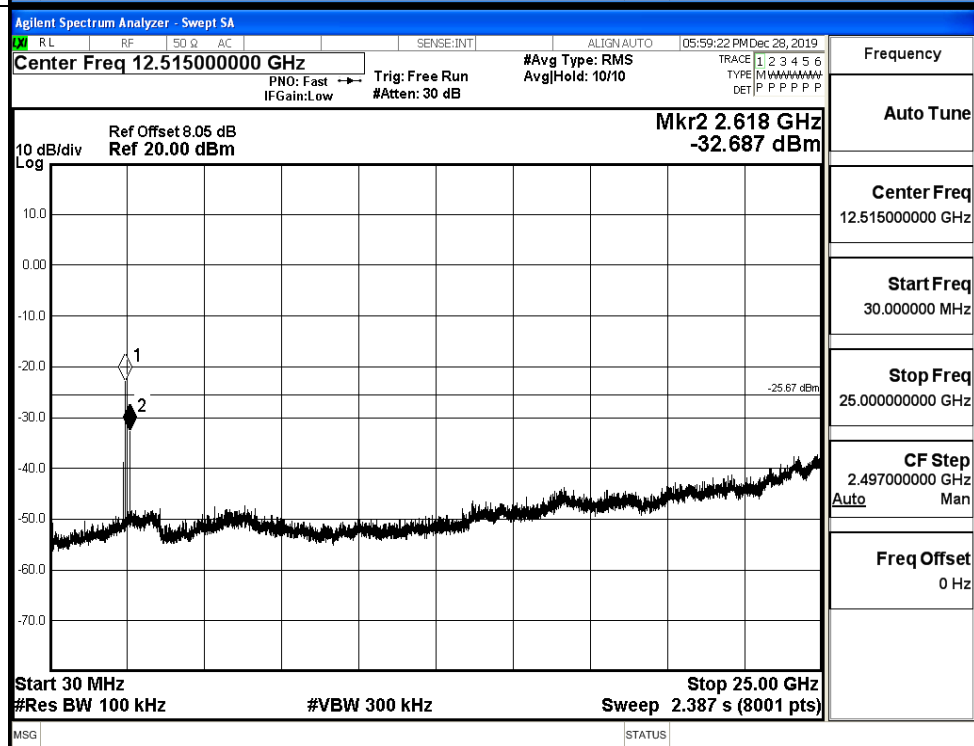


BT LE HCH Graphs

Pref/BT LE/HCH

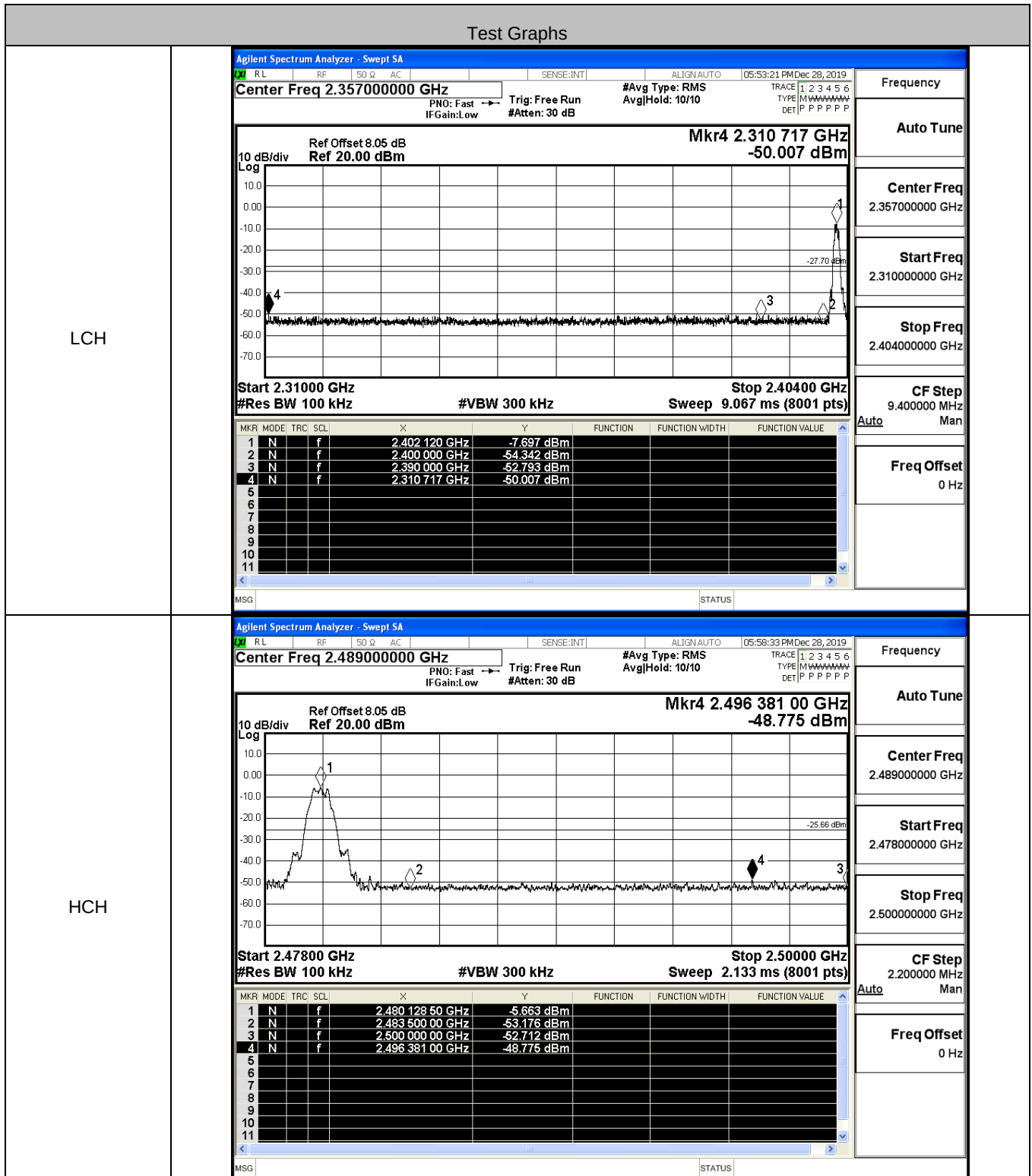


Puw/BT LE/HCH



A.6 Band-edge for RF Conducted Emissions

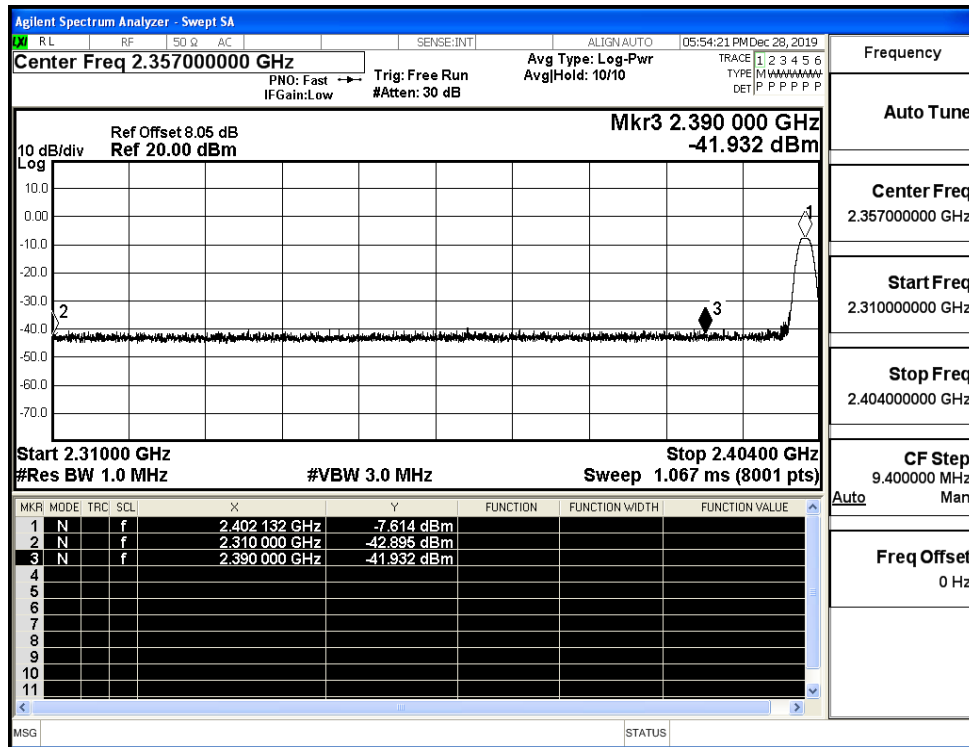
Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	-7.697	-50.007	-27.7	PASS
BT LE	HCH	-5.663	-48.775	-25.66	PASS



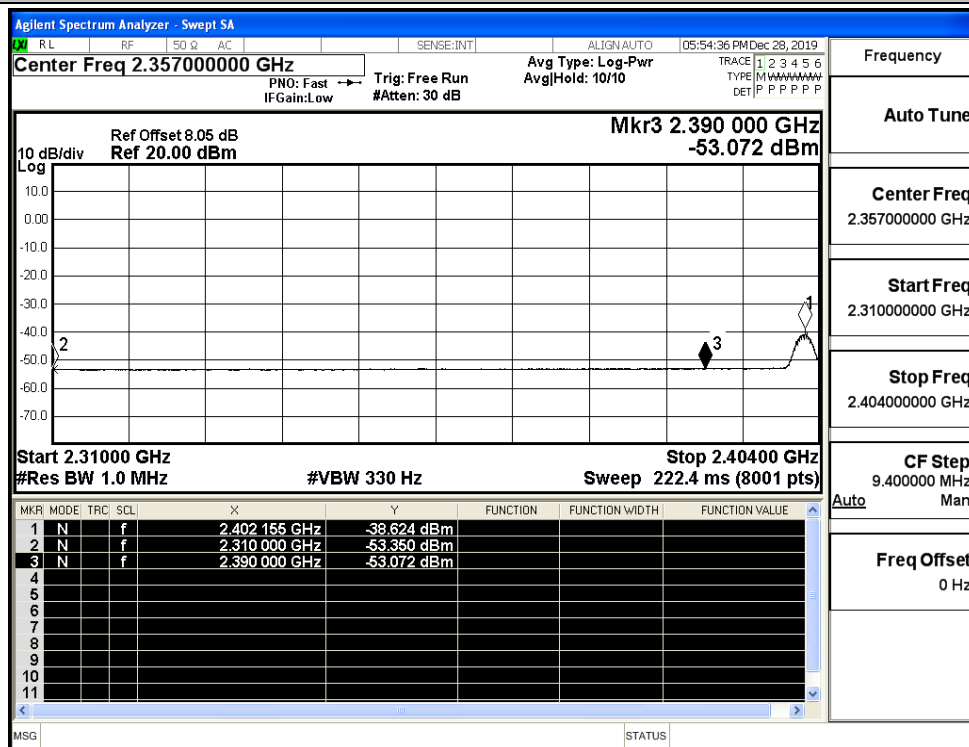
A.7 Restrict-band band-edge measurements

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	-42.90	2.0	0	54.36	PEAK	74	PASS
		Ant1	2310.0	-53.35	2.0	0	43.91	AV	54	PASS
		Ant1	2390.0	-41.93	2.0	0	55.33	PEAK	74	PASS
		Ant1	2390.0	-53.07	2.0	0	44.19	AV	54	PASS
	2480	Ant1	2483.5	-42.21	2.0	0	55.05	PEAK	74	PASS
		Ant1	2483.5	-52.50	2.0	0	44.76	AV	54	PASS
		Ant1	2500.0	-42.36	2.0	0	54.90	PEAK	74	PASS
		Ant1	2500.0	-52.40	2.0	0	44.86	AV	54	PASS

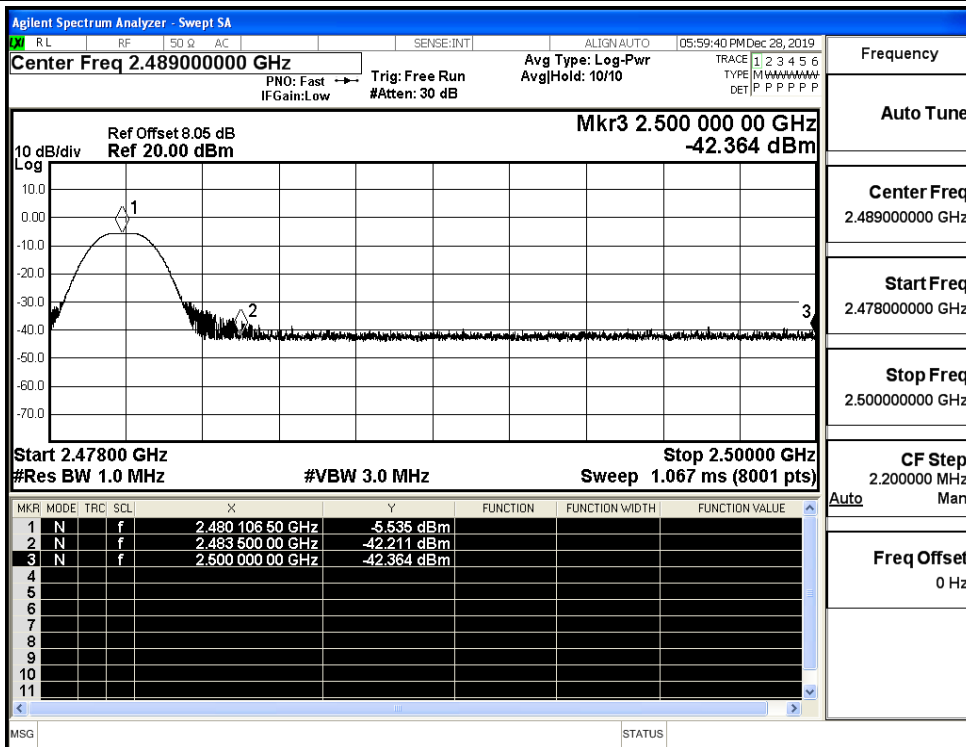
Restrict-band band-edge measurements_BT LE_2402_Ant1_PEAK



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

