



Appendix B

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

Product Name: Bluetooth Speaker

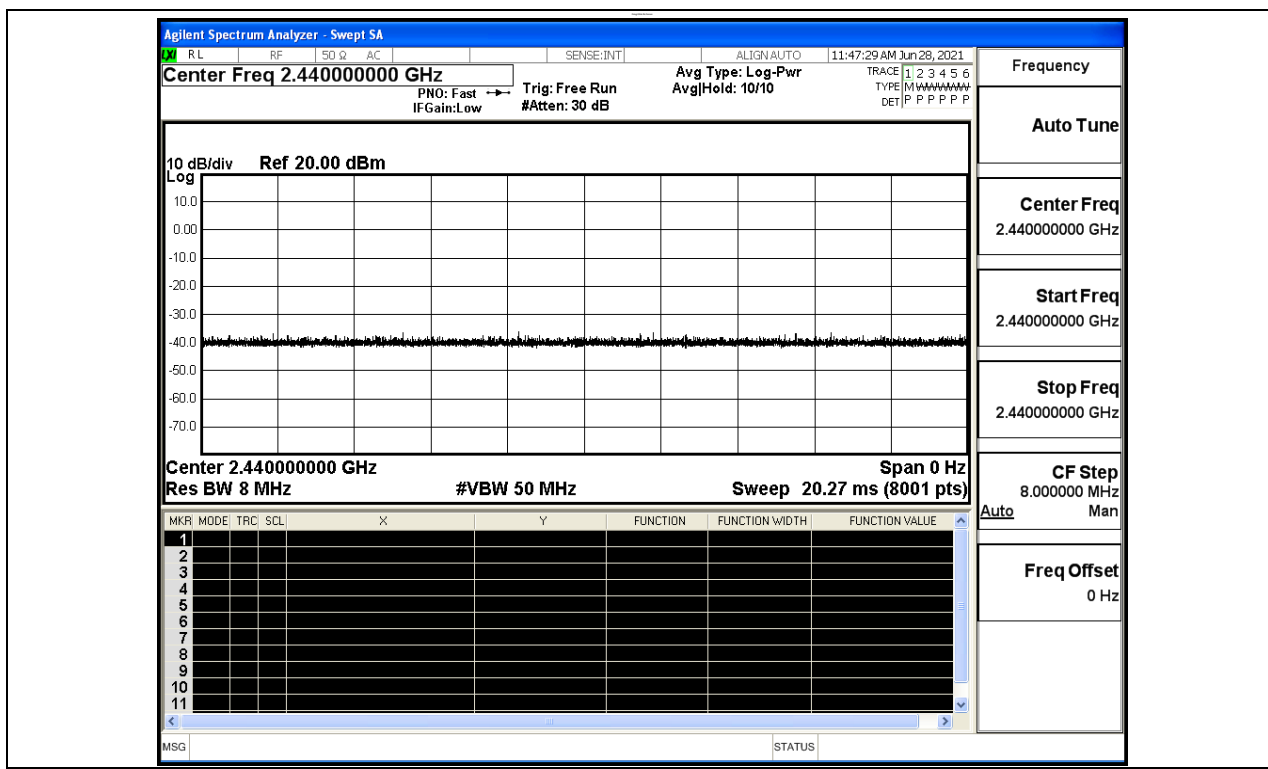
Test Model: ESS-209

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

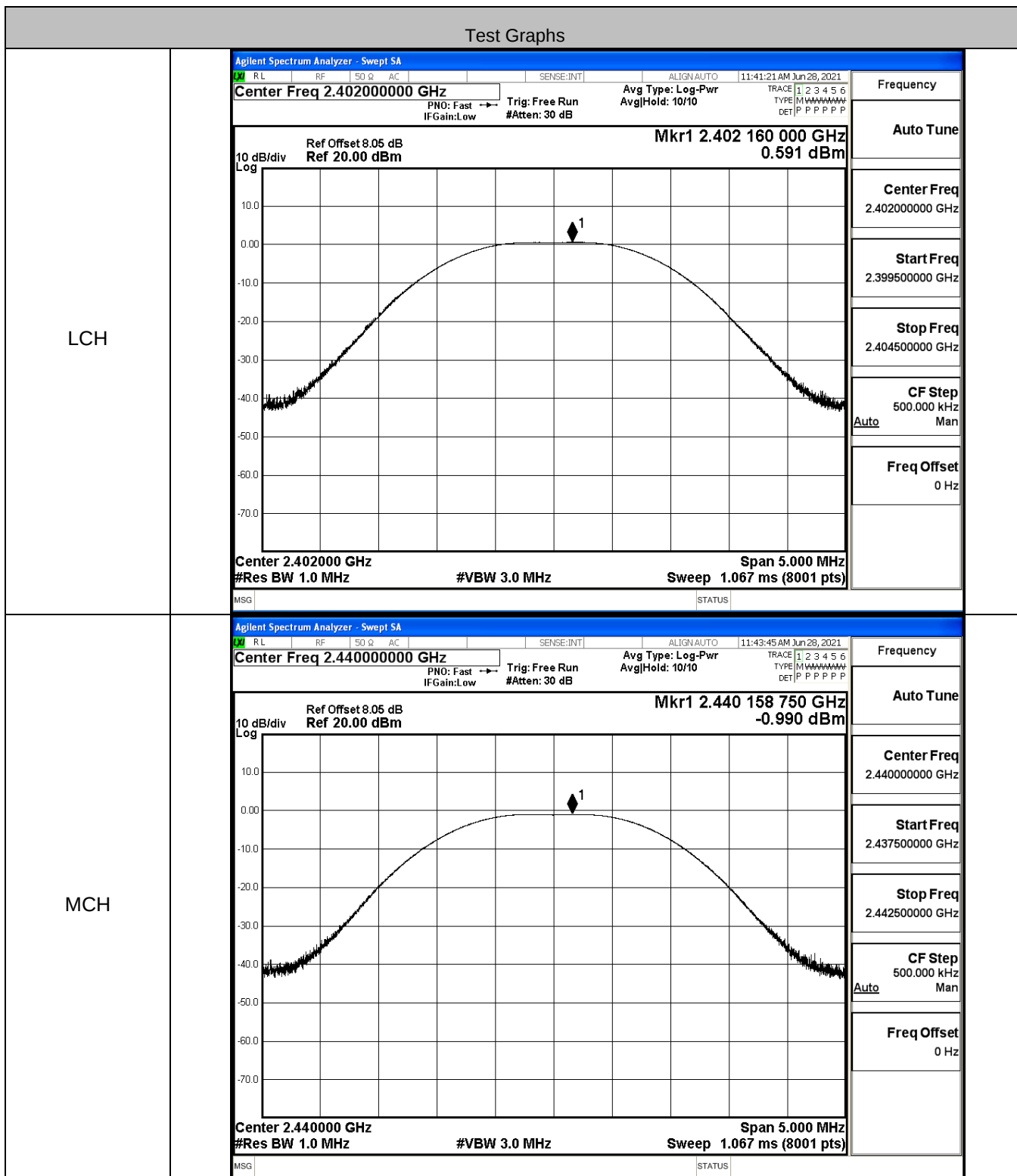
Test Mode	Test Channel	Ant	Duty Cycle[%]	Verdict
BT LE	2440	Ant1	100	PASS





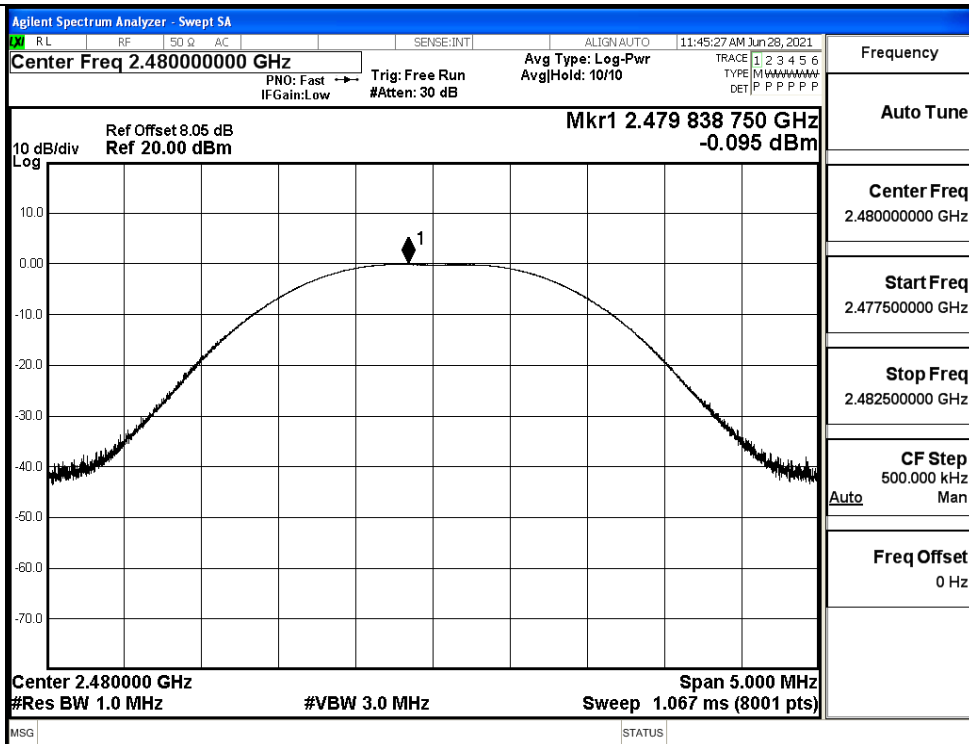
B.2 Maximum Conducted Peak Output Power

Mode	Channel	Conduct Peak Power[dBm]	Limit [dBm]	Verdict
BT LE	LCH	0.591	30	PASS
BT LE	MCH	-0.99	30	PASS
BT LE	HCH	-0.095	30	PASS





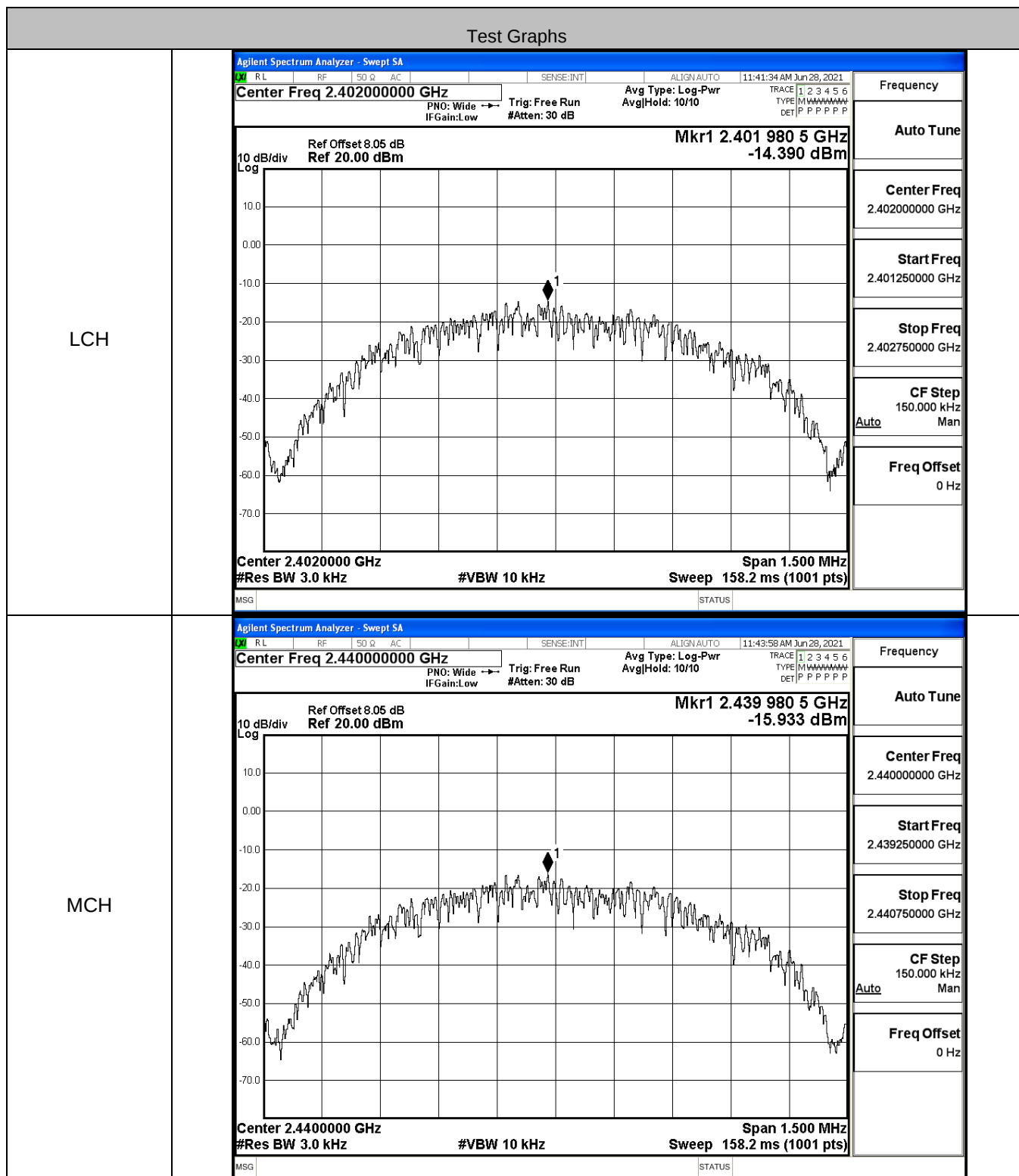
HCH





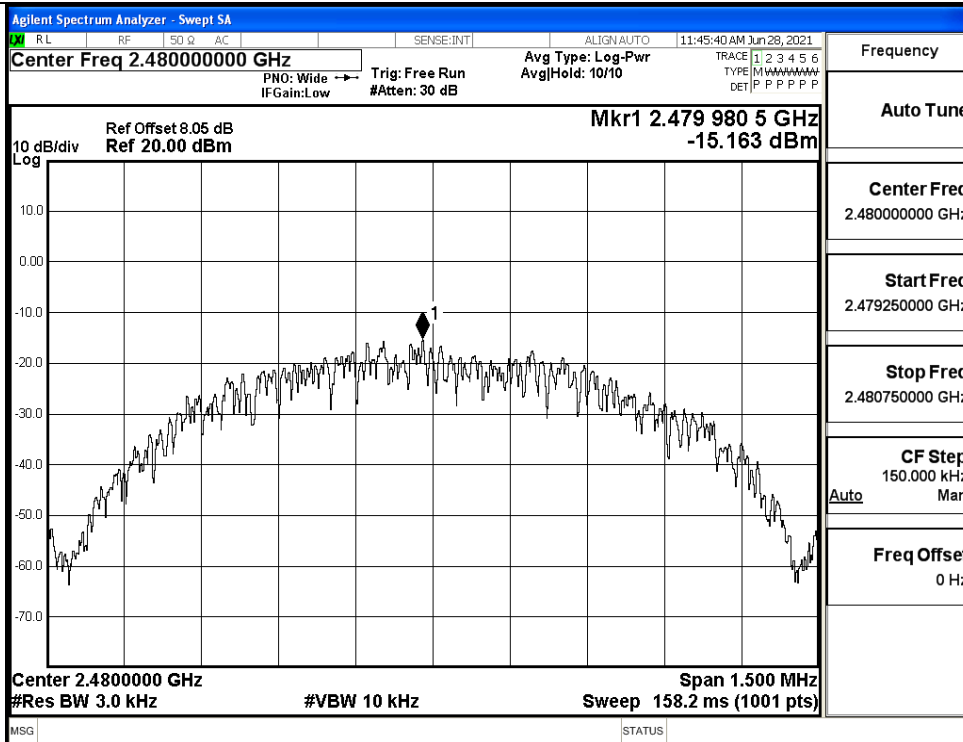
B.3 Maximum Power Spectral Density

Mode	Channel	PSD [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
BT LE	LCH	-14.390	8	PASS
BT LE	MCH	-15.933	8	PASS
BT LE	HCH	-15.163	8	PASS





HCH



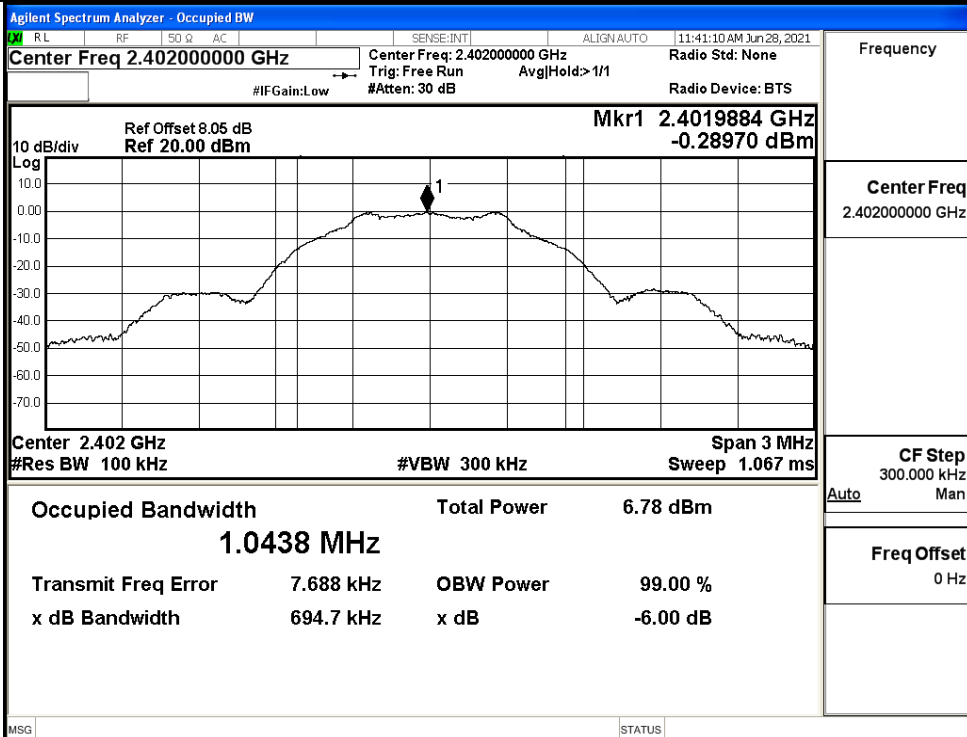


B.4 6dB Bandwidth

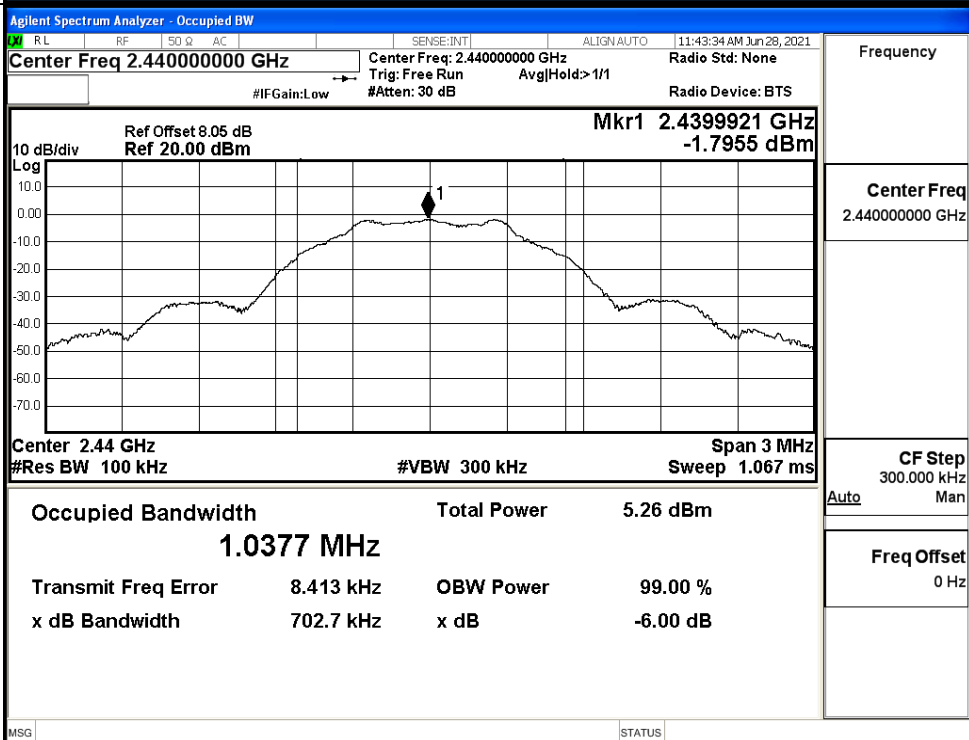
Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
BT LE	LCH	0.6947	≥ 0.5	PASS
BT LE	MCH	0.7027	≥ 0.5	PASS
BT LE	HCH	0.7042	≥ 0.5	PASS

Test Graphs

LCH

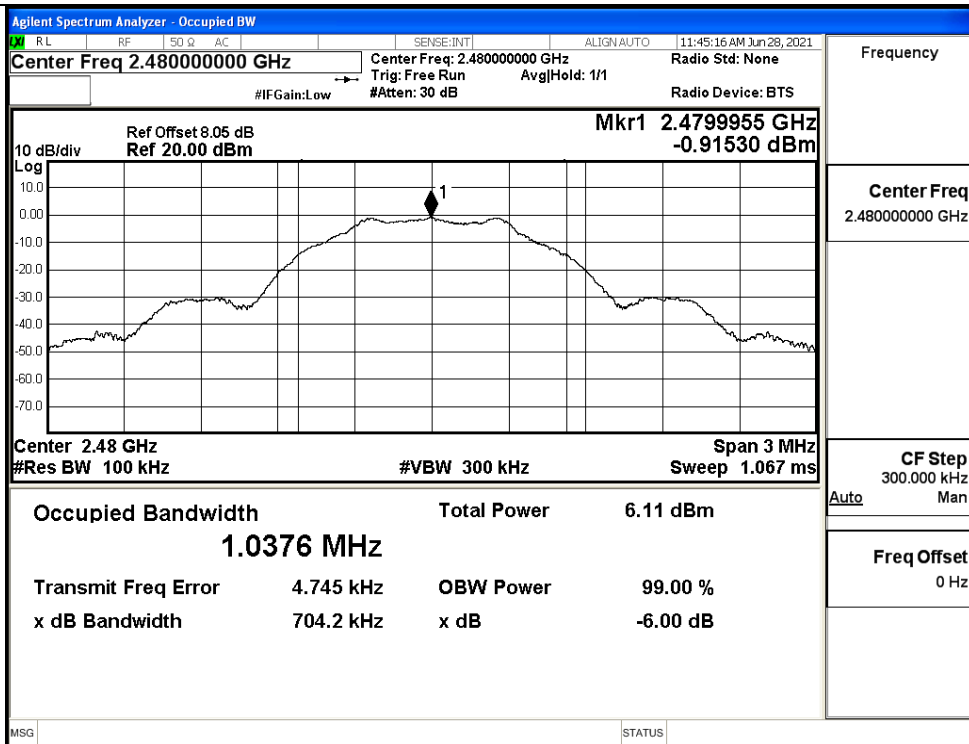


MCH





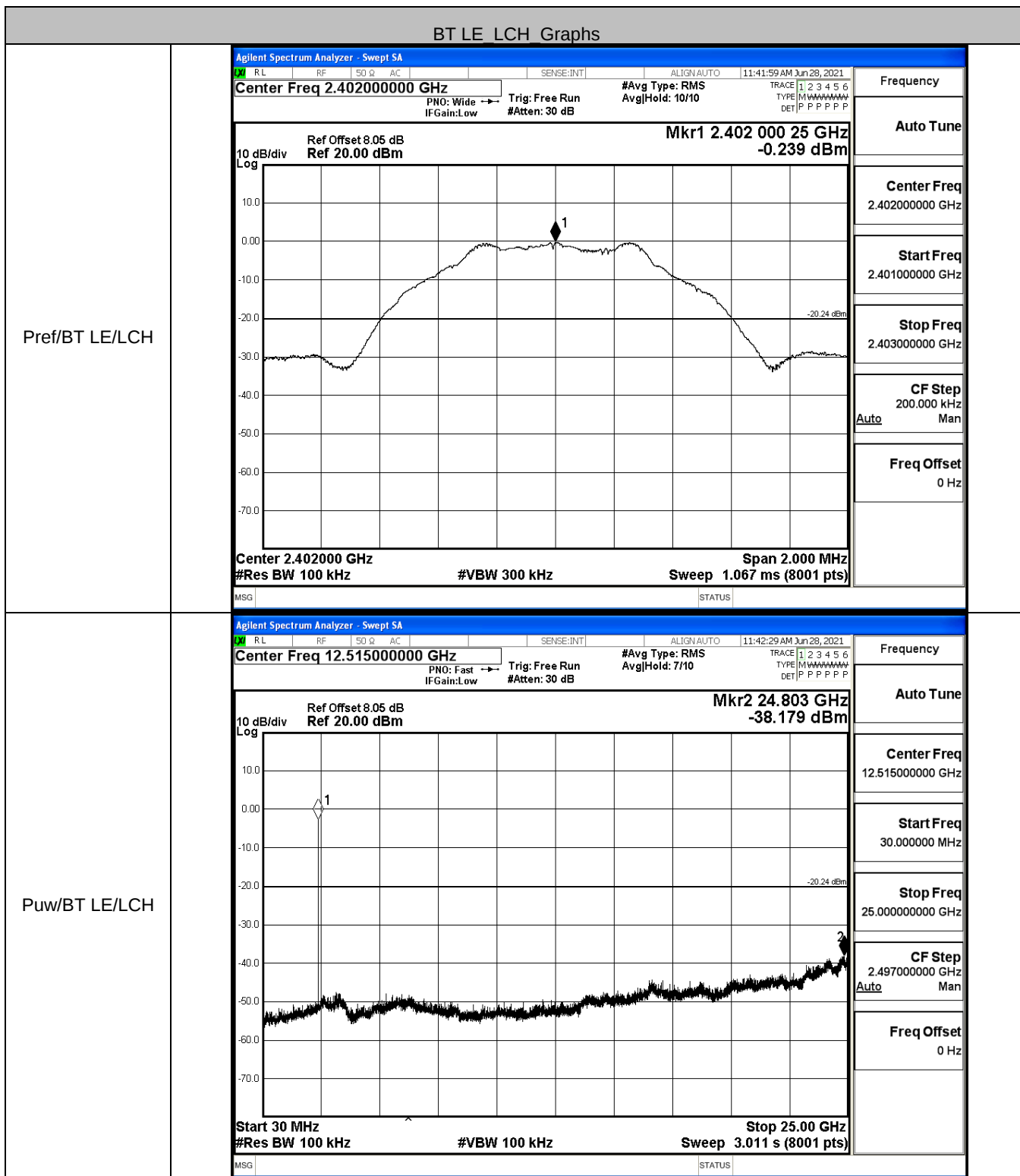
HCH





B.5 RF Conducted Spurious Emissions

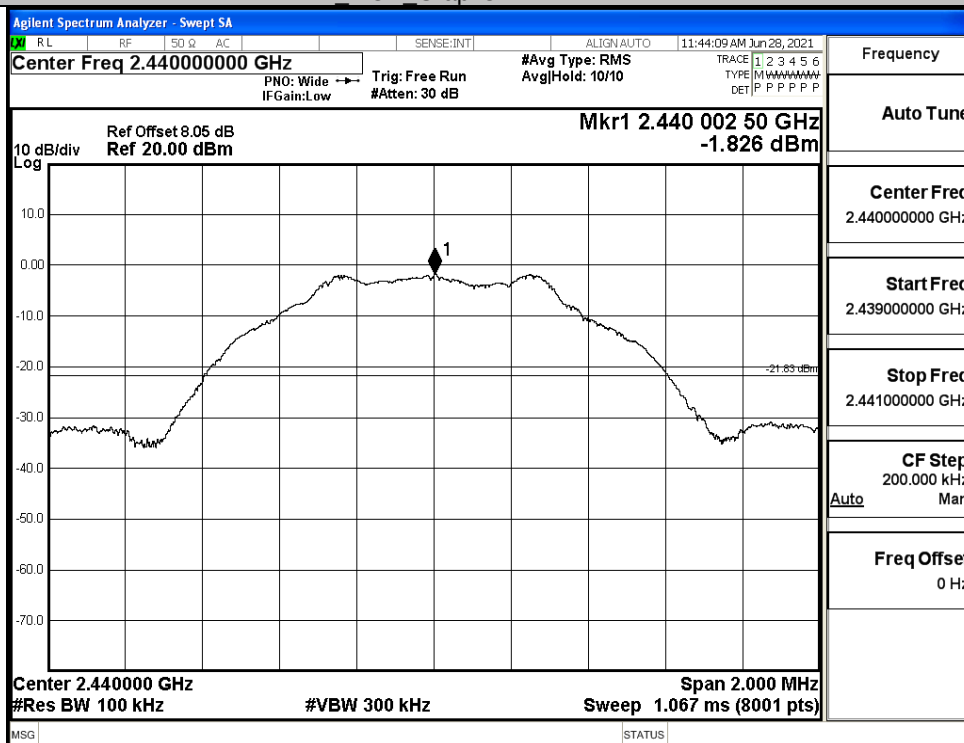
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	-0.239	-38.179	-20.239	PASS
BT LE	MCH	-1.826	-38.256	-21.826	PASS
BT LE	HCH	-0.914	-38.219	-20.914	PASS



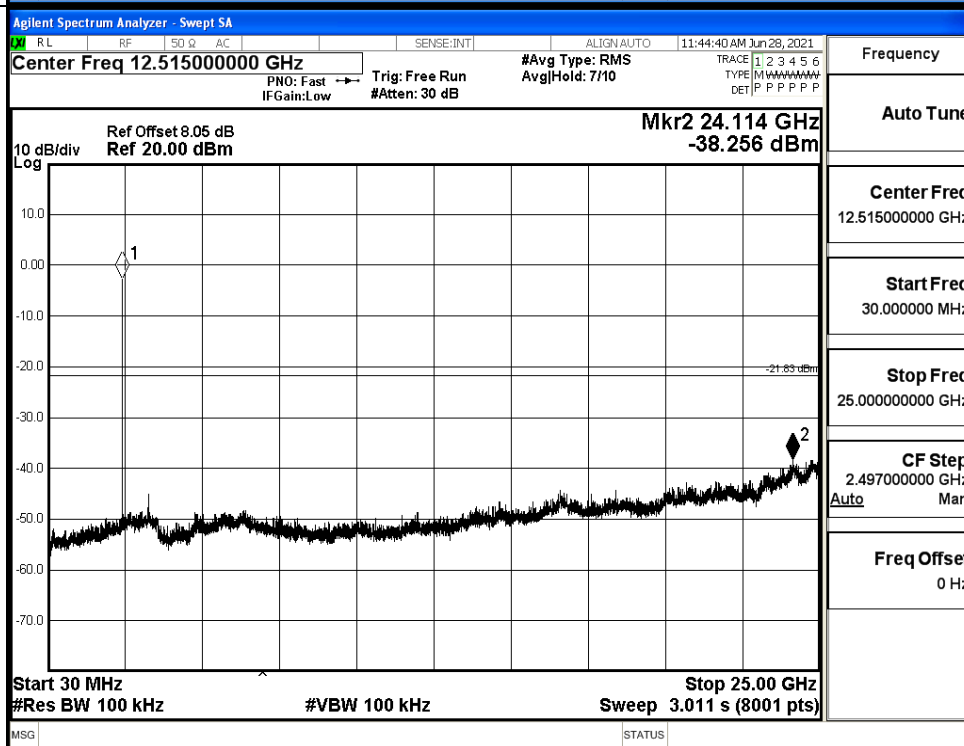


BT LE MCH Graphs

Pref/BT LE/MCH



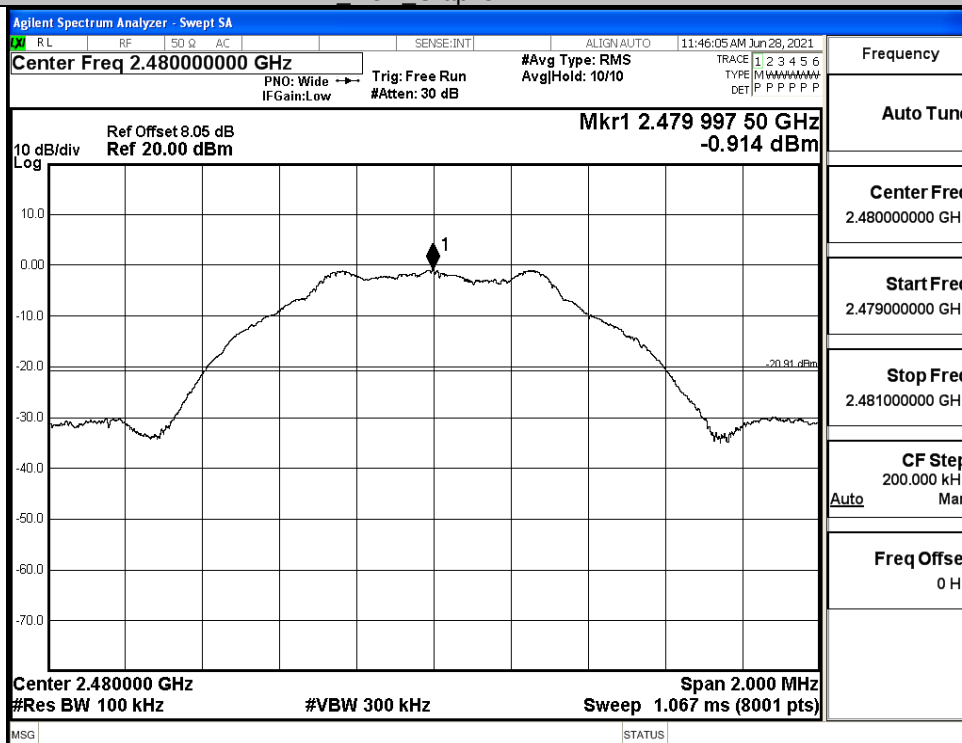
Puw/BT LE/MCH



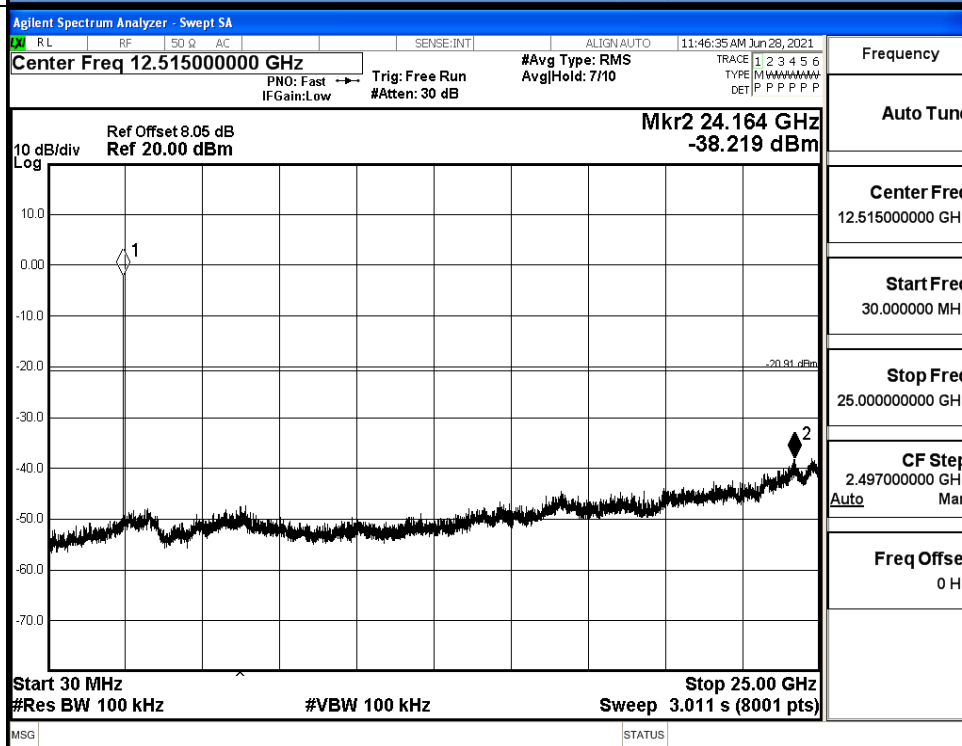


BT LE HCH Graphs

Pref/BT LE/HCH



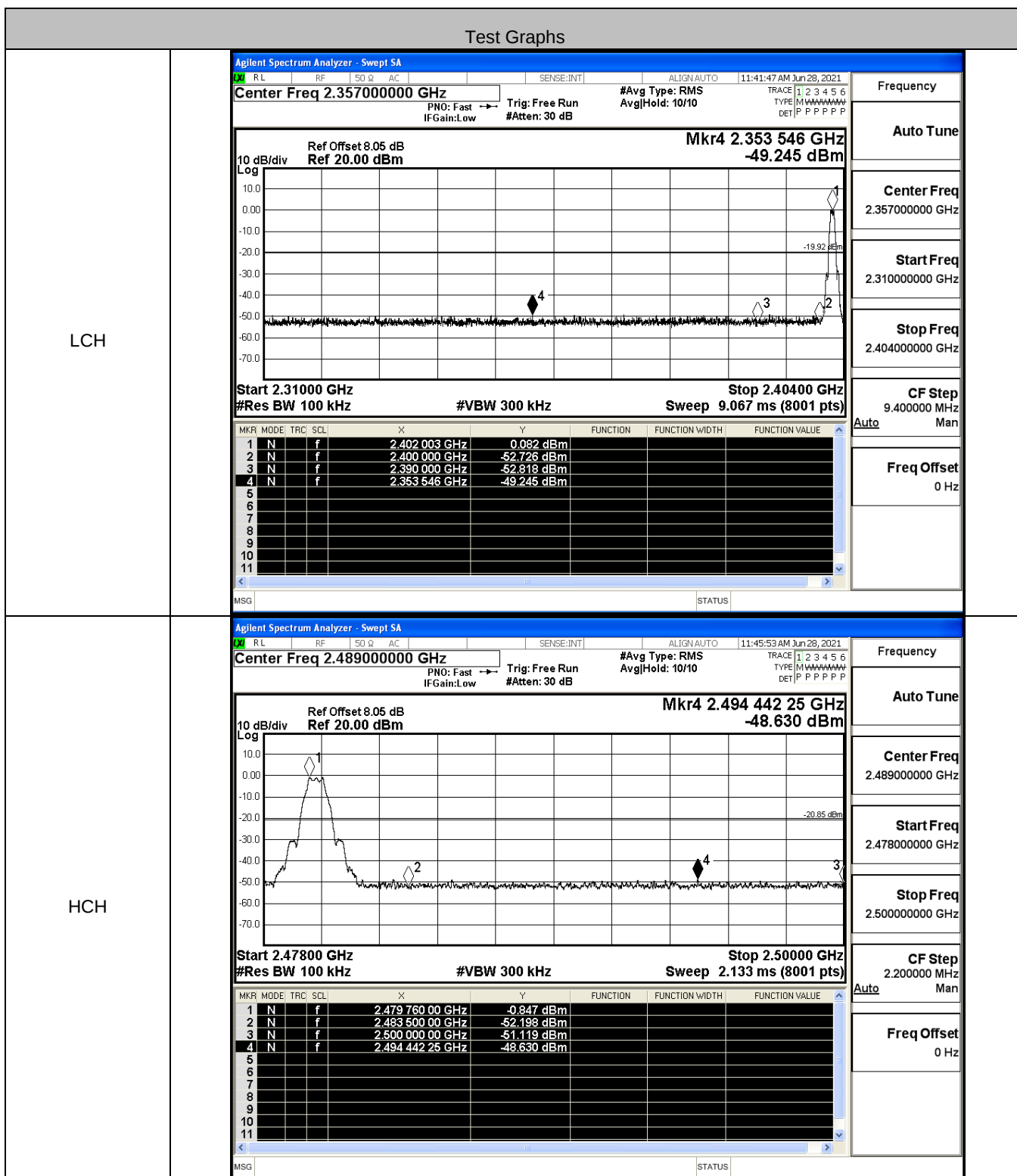
Puw/BT LE/HCH





B.6 Band-edge for RF Conducted Emissions

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	0.082	-49.245	-19.92	PASS
BT LE	HCH	-0.847	-48.630	-20.85	PASS



**B.7 Restrict-band band-edge measurements**

TestMode	Antenna	ChName	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
BLE	Ant1	Low	2402	AV	2310.000	-48.34	≤- 41.20	46.86	≤54	PASS
				AV	2368.355	-47.5	≤- 41.20	47.70	≤54	PASS
				AV	2390.000	-48.14	≤- 41.20	47.06	≤54	PASS
				Peak	2310.000	-42.3	≤- 21.20	52.90	≤74	PASS
				Peak	2387.255	-38.48	≤- 21.20	56.72	≤74	PASS
				Peak	2390.000	-41.77	≤- 21.20	53.43	≤74	PASS
		High	2480	AV	2483.500	-47.45	≤- 41.20	47.75	≤54	PASS
				AV	2497.760	-46.79	≤- 41.20	48.41	≤54	PASS
				AV	2500.000	-47.12	≤- 41.20	48.08	≤54	PASS
				Peak	2483.500	-41.3	≤- 21.20	53.90	≤74	PASS
				Peak	2483.680	-38.4	≤- 21.20	56.80	≤74	PASS
				Peak	2500.000	-40.98	≤- 21.20	54.22	≤74	PASS

Note :

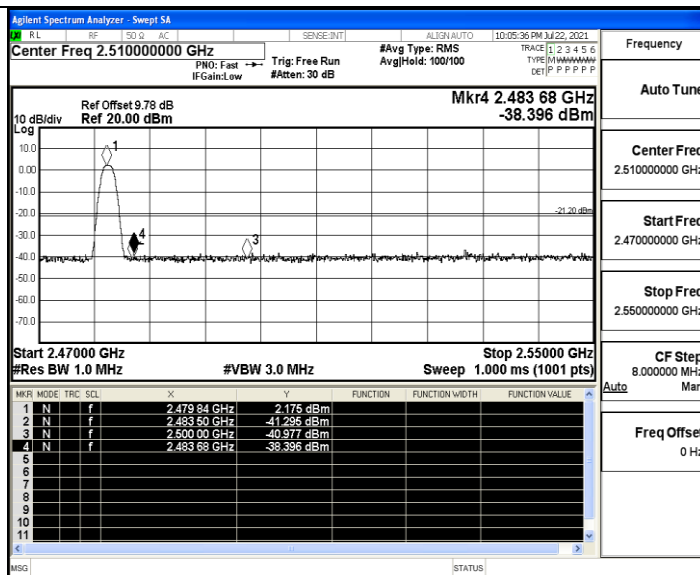
1. The Antenna Gain is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.



Frequency	
Auto Tune	
Center Freq	2.352500000 GHz
Start Freq	2.300000000 GHz
Stop Freq	2.405000000 GHz
CF Step	10.500000 MHz
Auto	Man
Freq Offset	0 Hz

Frequency	
Auto Tune	
Center Freq	2.352500000 GHz
Start Freq	2.300000000 GHz
Stop Freq	2.405000000 GHz
CF Step	10.500000 MHz
Auto	Man
Freq Offset	0 Hz

Frequency
Auto Tune
Center Freq 2.510000000 GHz
Start Freq 2.470000000 GHz
Stop Freq 2.550000000 GHz
CF Step 8.000000 MHz
Auto Man
Freq Offset 0 Hz



BLE Ant1 High 2480 Peak