

Appendix A

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

Product Name: Weatherman® Droplet

Trade Mark: Weatherman

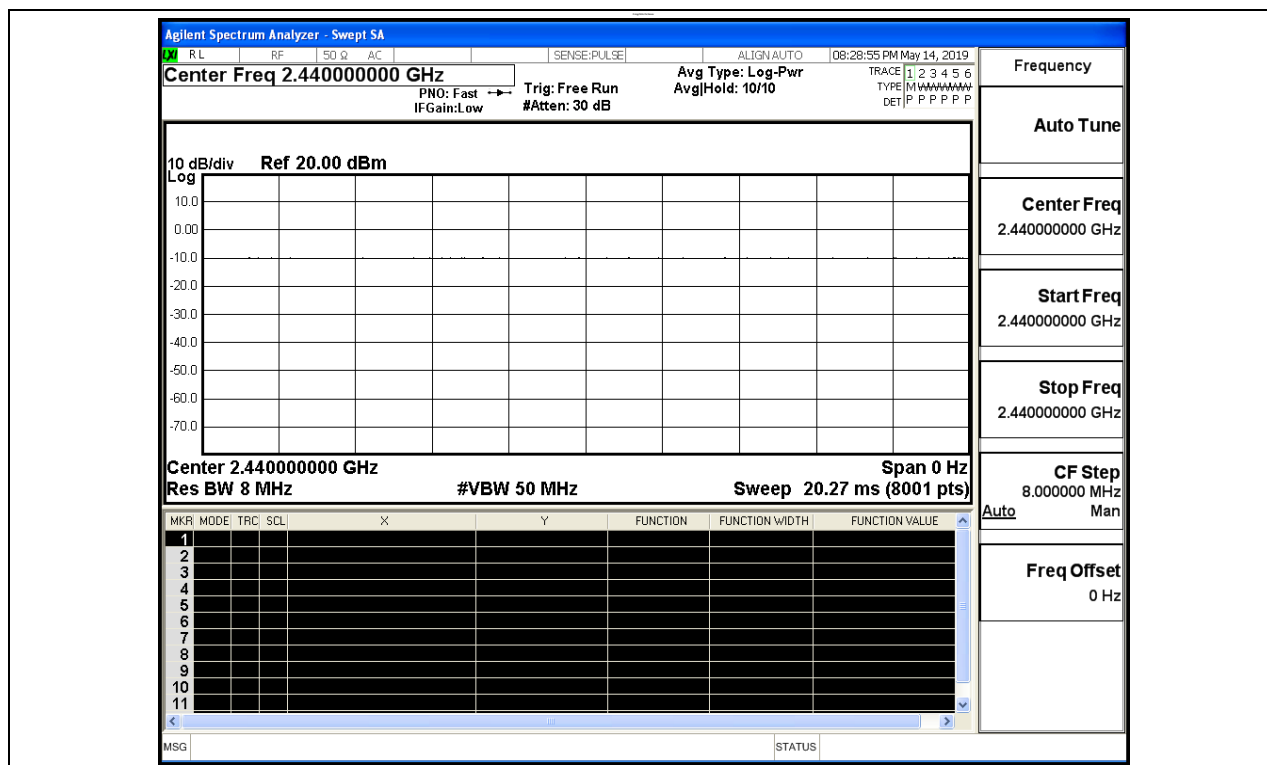
Test Model: WMN111

Environmental Conditions

Temperature:	24.8 °C
Relative Humidity:	52.9%
ATM Pressure:	100.0 kPa
Test Engineer:	JERRY.ZENG
Supervised by:	Tom.Liu

A.1 Duty Cycle

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

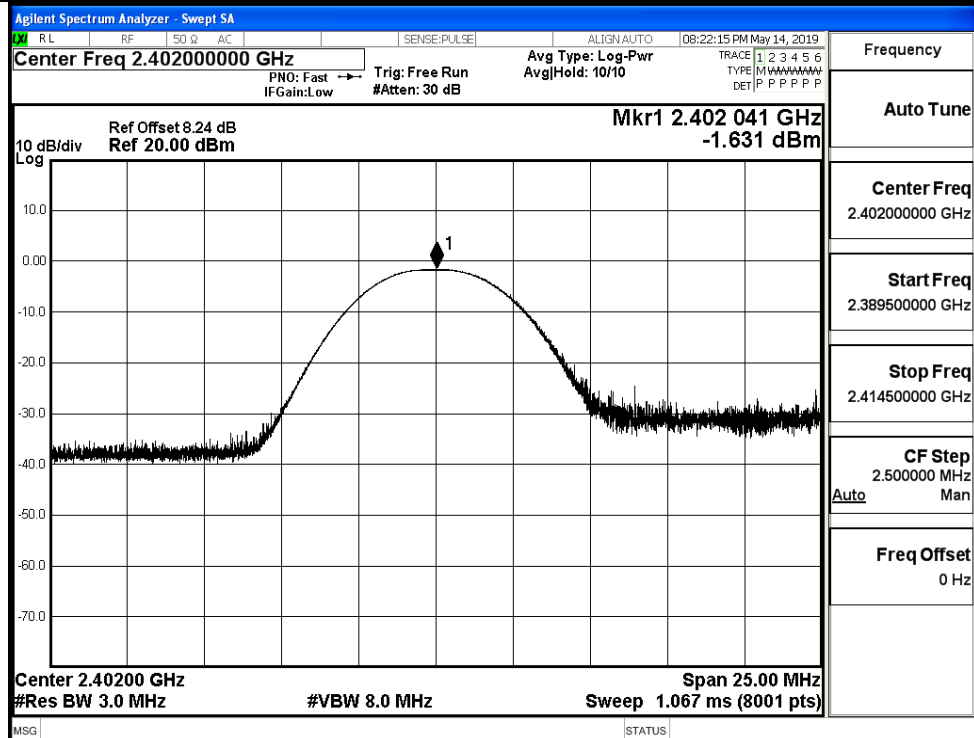


A.2 Maximum Conducted Peak Output Power

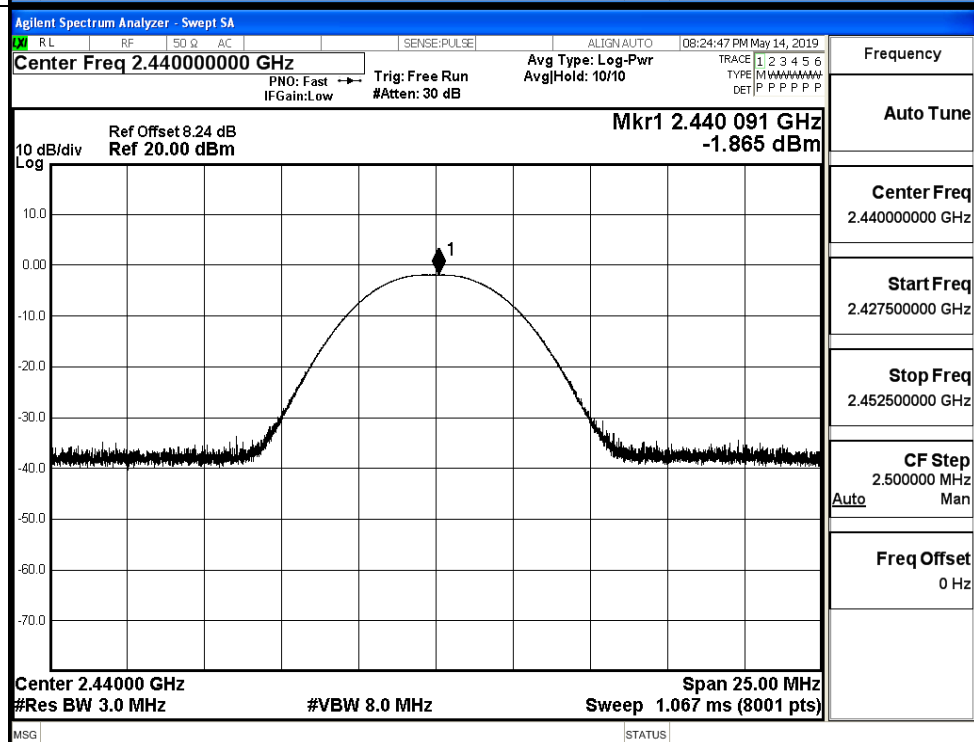
Mode	Channel	Conduct Peak Power[dBm]	Limit [dBm]	Verdict
BT LE	LCH	-1.631	30	PASS
BT LE	MCH	-1.865	30	PASS
BT LE	HCH	-2.003	30	PASS

Test Graphs

LCH



MCH



Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω AC SENSE:PULSE ALIGN:AUTO 08:26:28 PM May 14, 2019

Center Freq 2.480000000 GHz PNO: Fast Trg: Free Run Avg Type: Log-Pwr Avg/Hold: 10/10

IF Gain: Low #Atten: 30 dB TRACE 1 2 3 4 5 6 TYPE M W W W W W W W DET P P P P P P

Ref Offset 8.24 dB Mkr1 2.480 269 GHz 10 dB/div Ref 20.00 dBm -2.003 dBm

Log

Center Freq 2.480000000 GHz Auto Tune

Start Freq 2.467500000 GHz

Stop Freq 2.492500000 GHz

CF Step 2.500000 MHz

Auto Man

Freq Offset 0 Hz

Center 2.48000 GHz Span 25.00 MHz

#Res BW 3.0 MHz #VBW 8.0 MHz Sweep 1.067 ms (8001 pts)

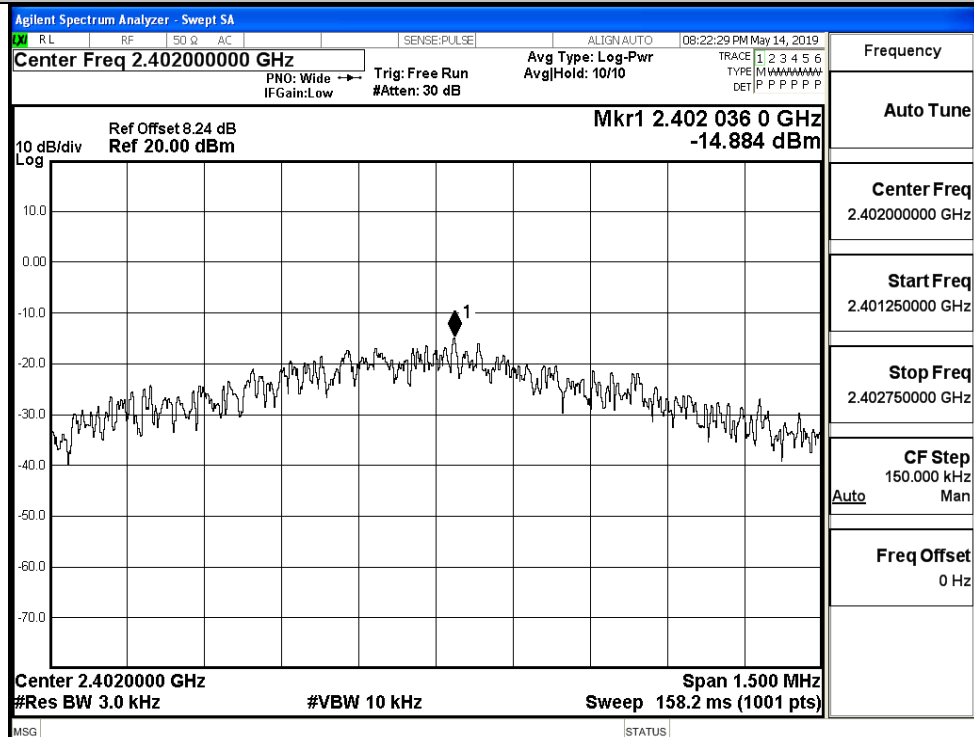
MSG STATUS

A.3 Maximum Power Spectral Density

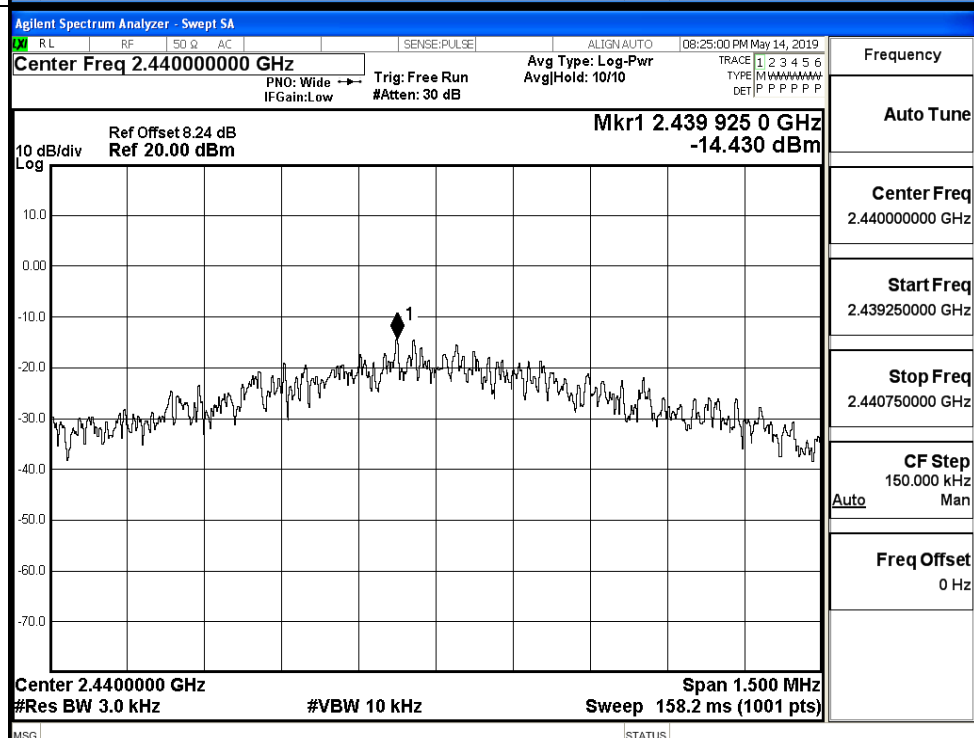
Mode	Channel	PSD [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
BT LE	LCH	-14.884	8	PASS
BT LE	MCH	-14.430	8	PASS
BT LE	HCH	-15.219	8	PASS

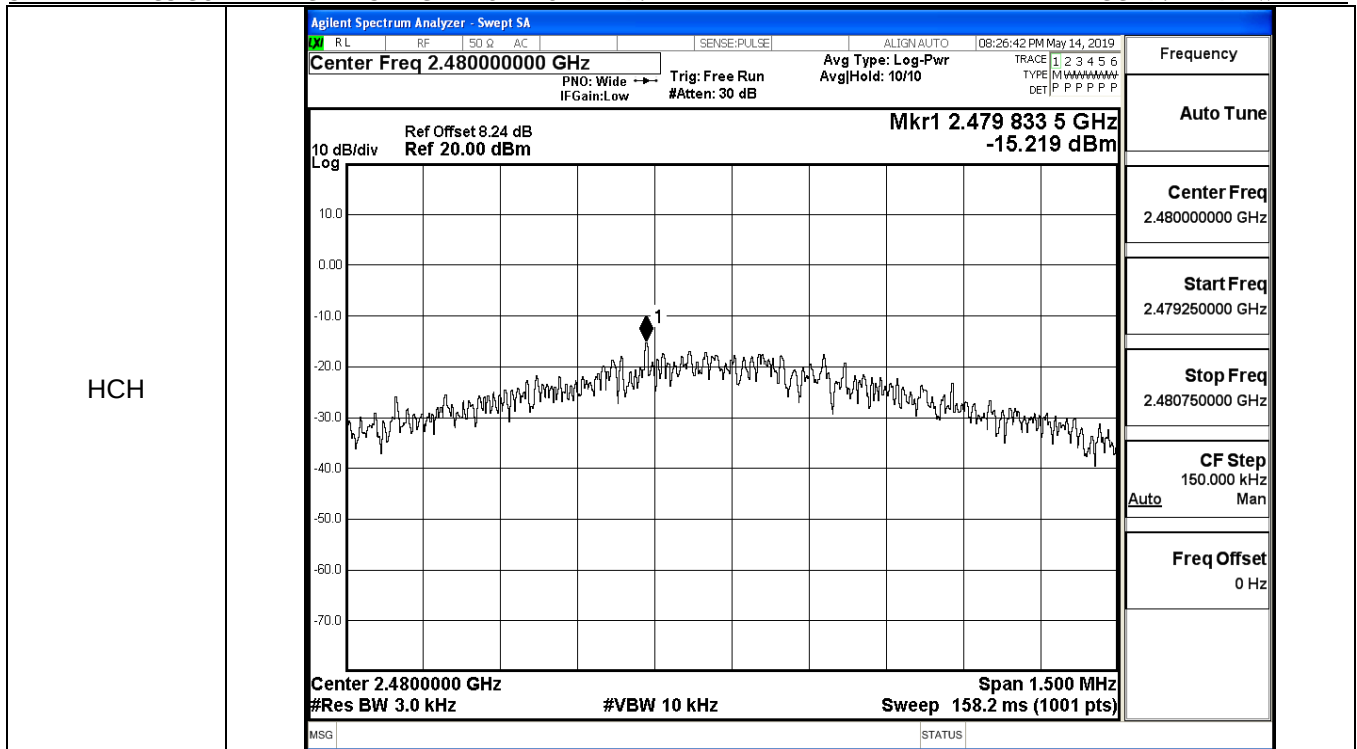
Test Graphs

LCH



MCH



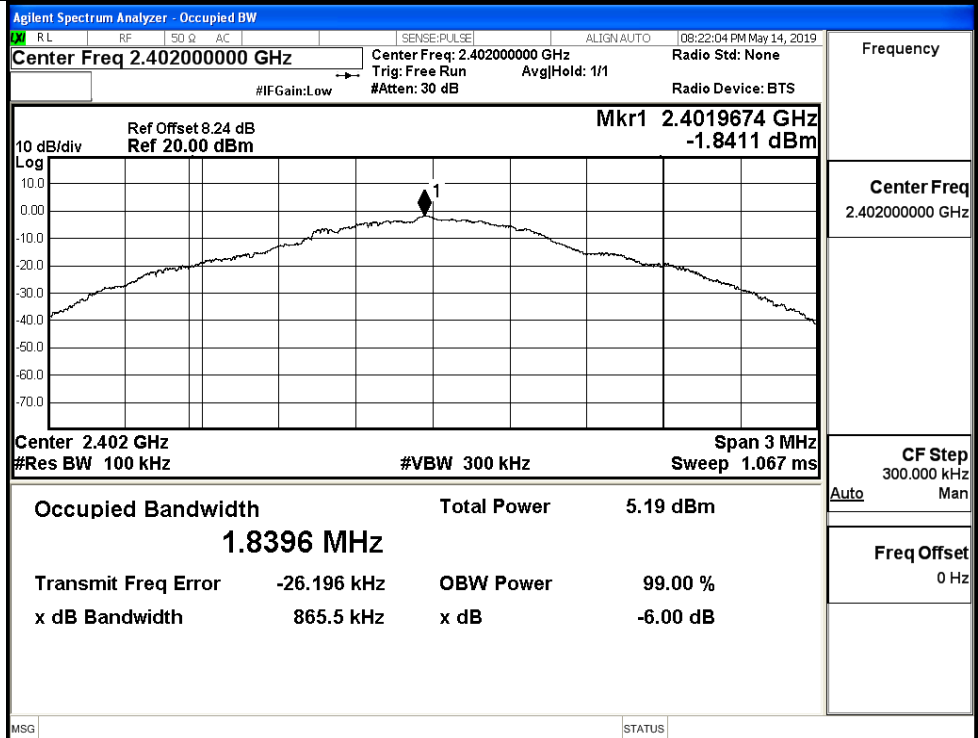


A.4 6dB Bandwidth

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
BT LE	LCH	0.8655	≥ 0.5	PASS
BT LE	MCH	0.8567	≥ 0.5	PASS
BT LE	HCH	0.8468	≥ 0.5	PASS

Test Graphs

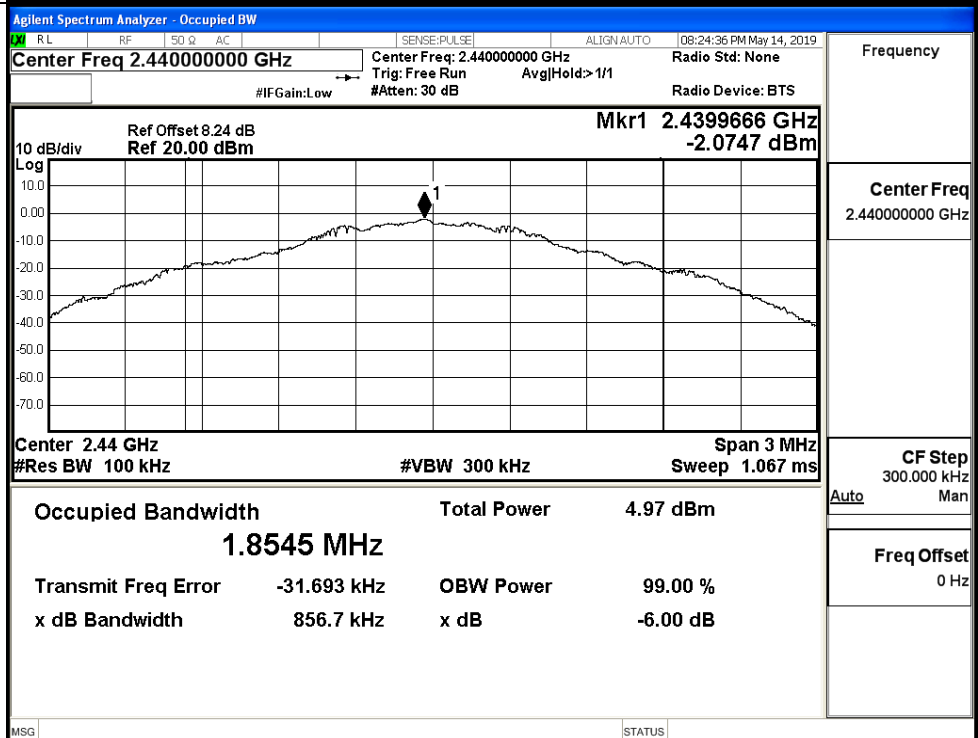
LCH



Frequency

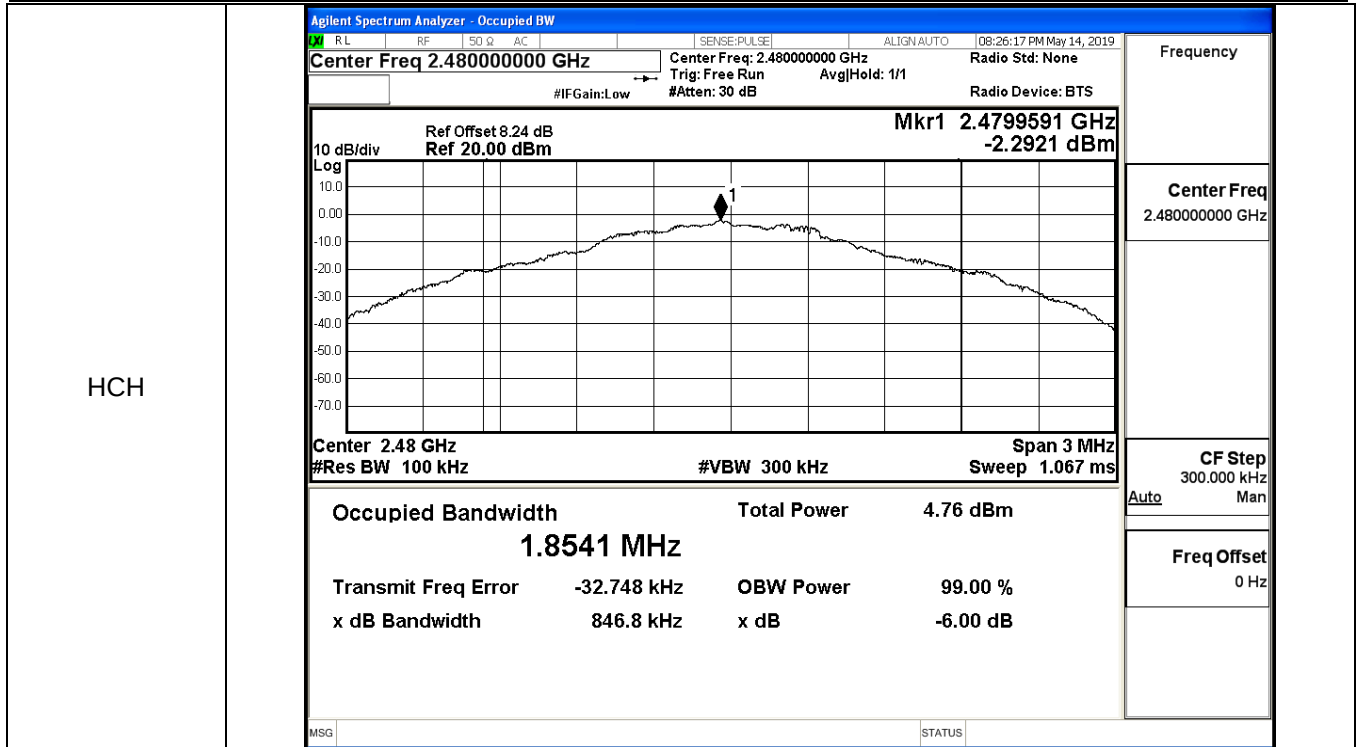
Center Freq
2.402000000 GHzCF Step
300.000 kHz
Auto ManFreq Offset
0 Hz

MCH



Frequency

Center Freq
2.440000000 GHzCF Step
300.000 kHz
Auto ManFreq Offset
0 Hz

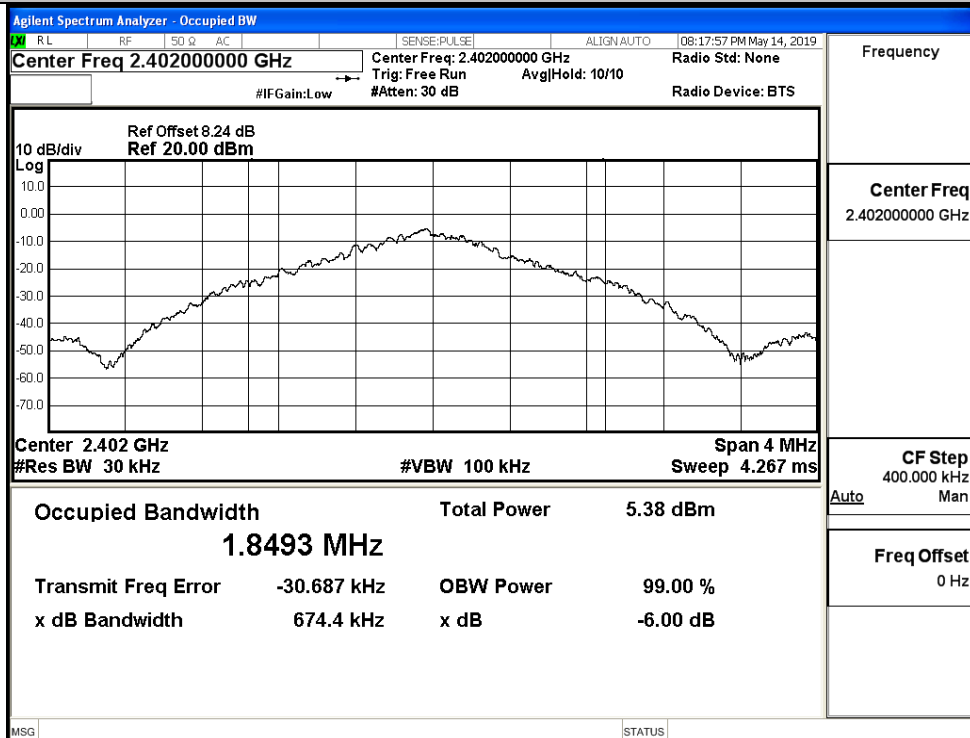


A.5 Occupied Bandwidth

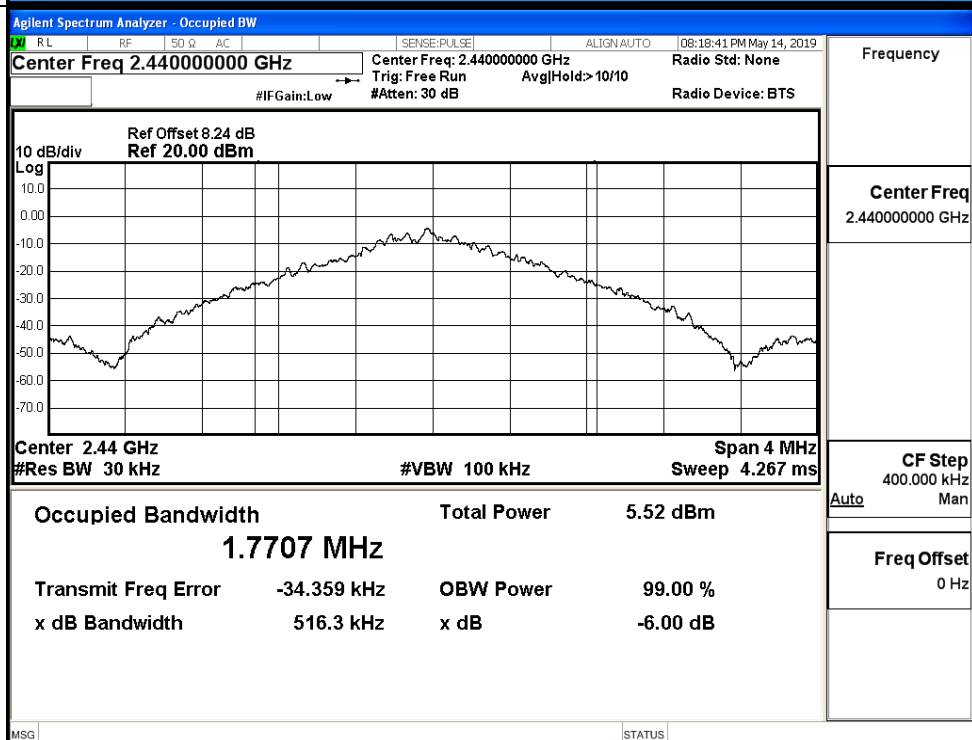
Mode	Channel	Occupied Bandwidth [MHz]	Limit [MHz]	Verdict
BT LE	LCH	1.8493	≥ 0.5	PASS
BT LE	MCH	1.7707	≥ 0.5	PASS
BT LE	HCH	1.8178	≥ 0.5	PASS

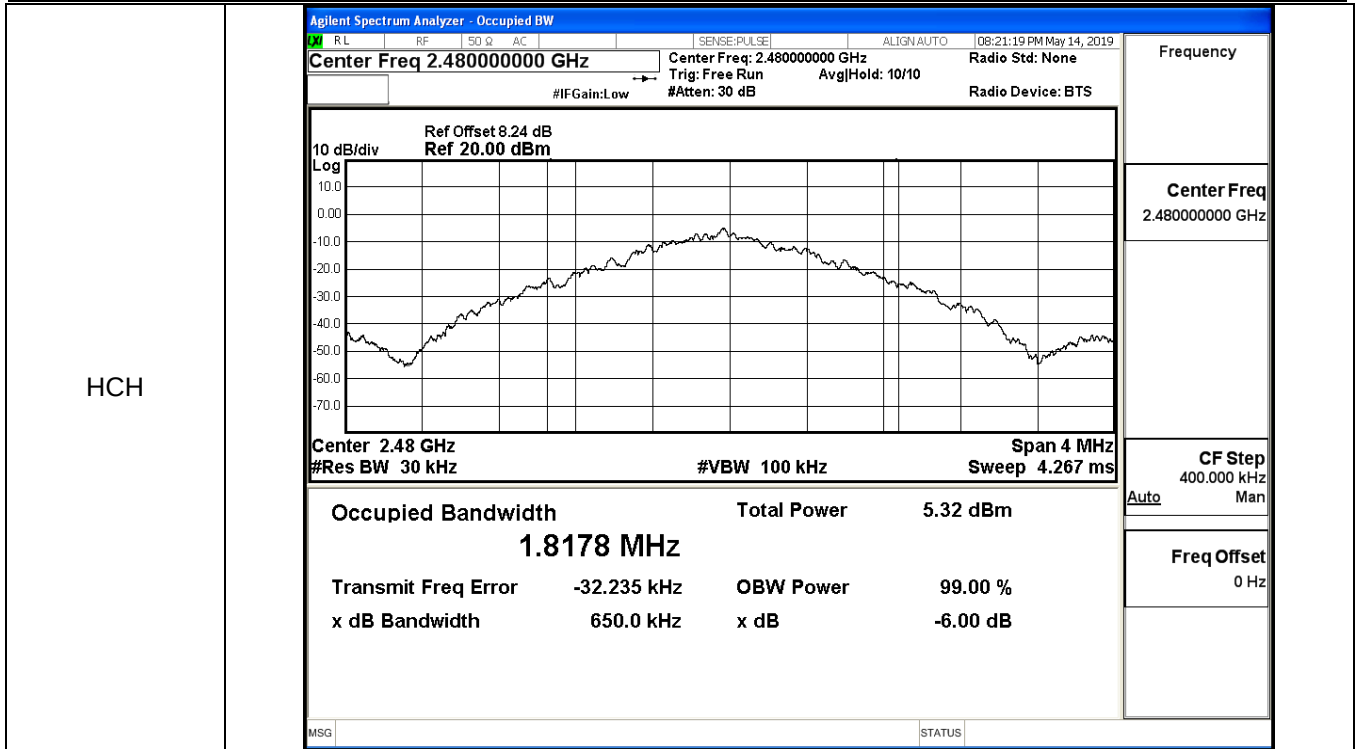
Test Graphs

LCH



MCH



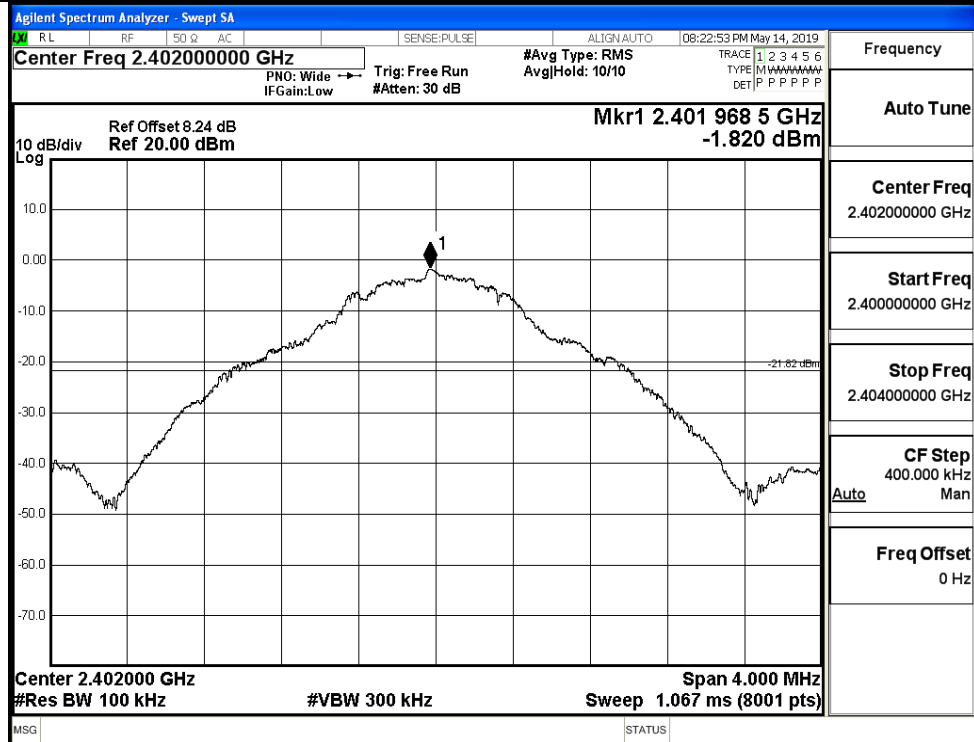


A.6 RF Conducted Spurious Emissions

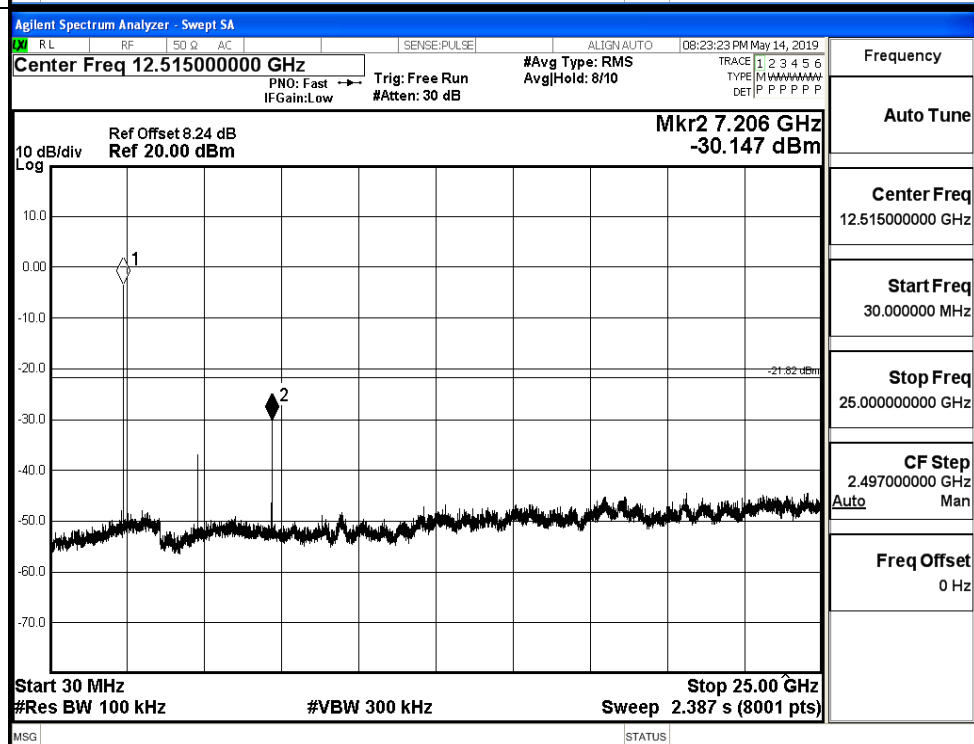
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	-1.82	-30.147	-21.820	PASS
BT LE	MCH	-2.081	-29.457	-22.081	PASS
BT LE	HCH	-2.228	-33.080	-22.228	PASS

BT LE LCH Graphs

Pref/BT LE/LCH

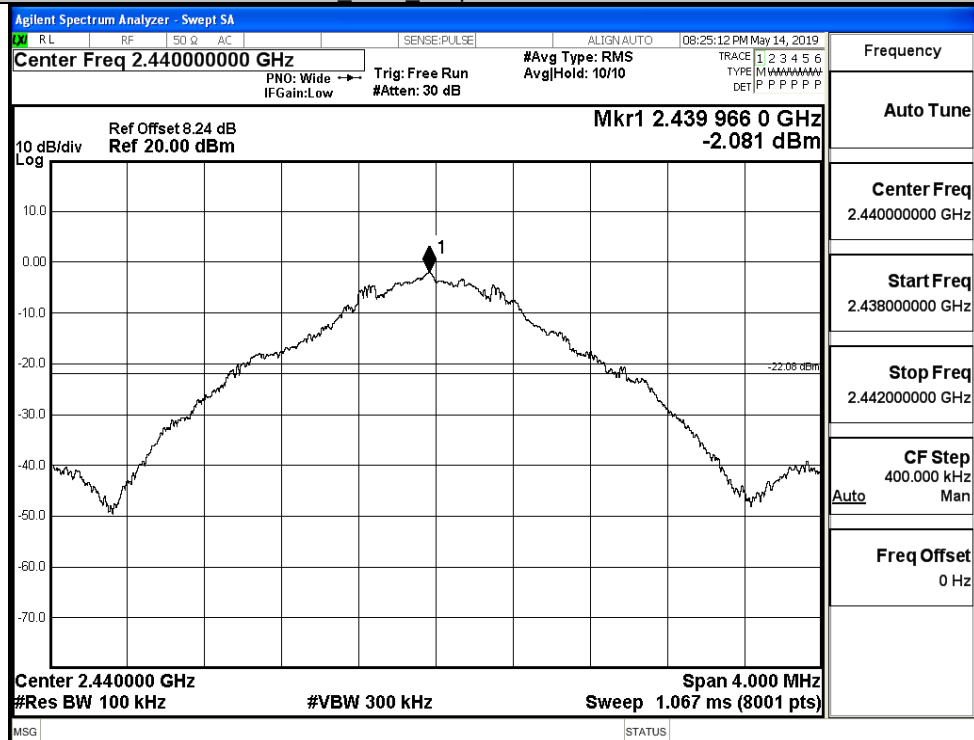


Puw/BT LE/LCH

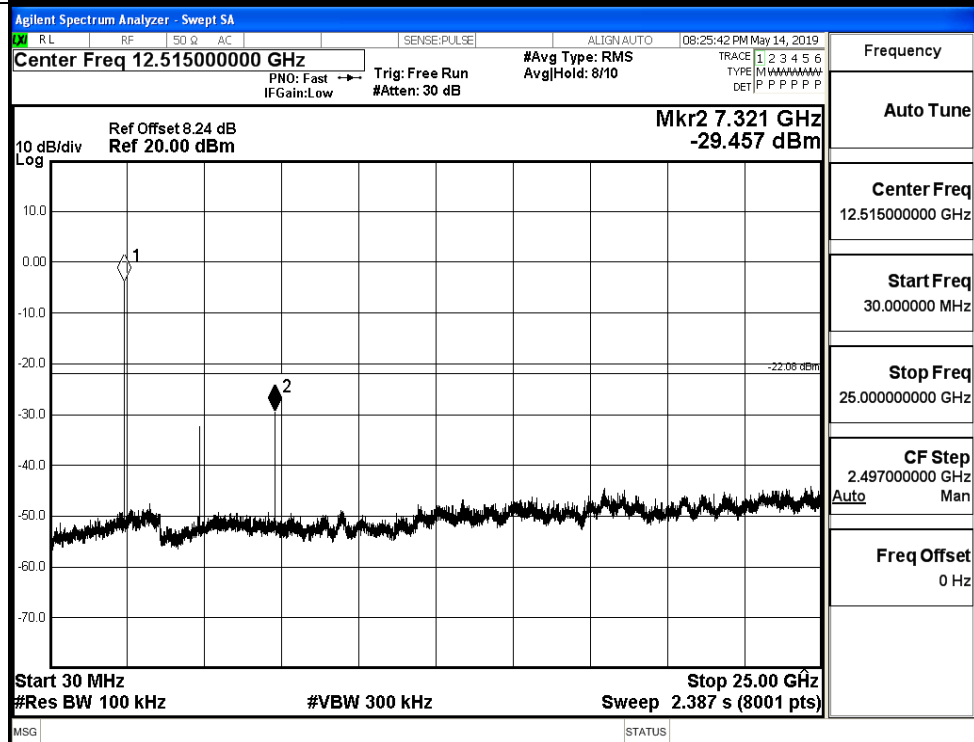


BT LE MCH Graphs

Pref/BT LE/MCH

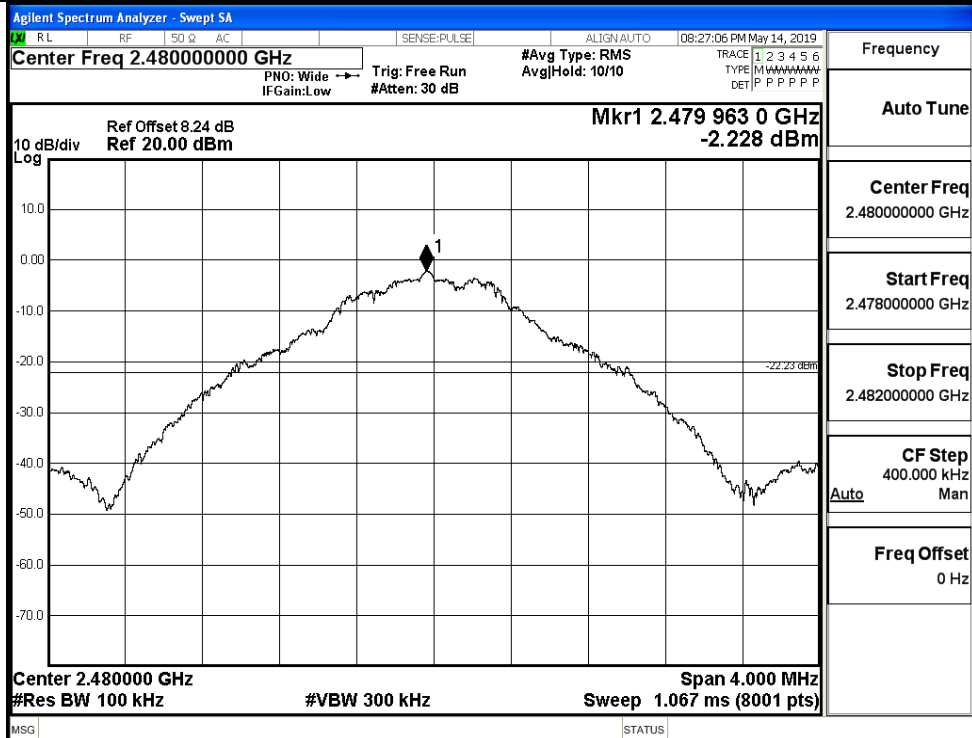


Puw/BT LE/MCH

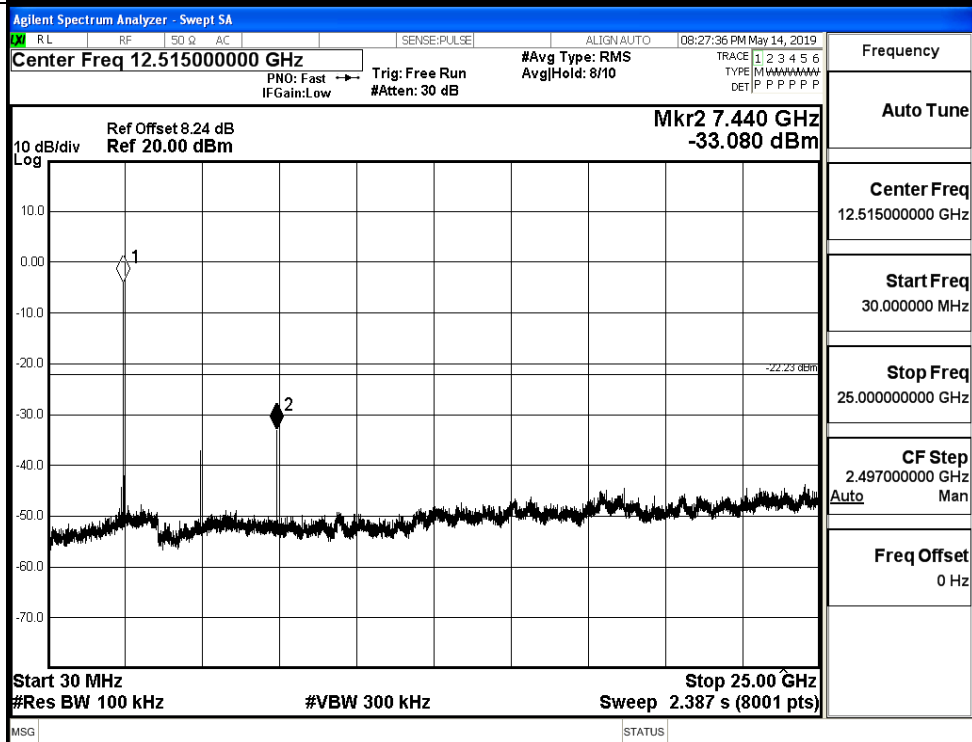


BT LE HCH Graphs

Pref/BT LE/HCH



Puw/BT LE/HCH

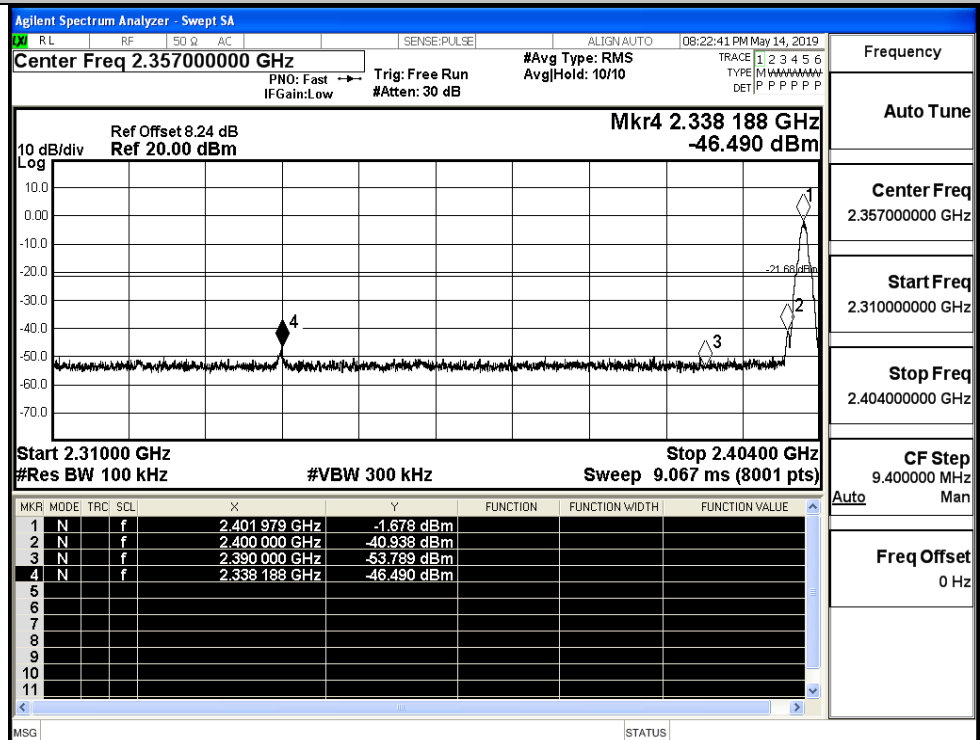


A.7 Band-edge for RF Conducted Emissions

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	-1.678	-46.490	-21.68	PASS
BT LE	HCH	-2.262	-49.450	-22.26	PASS

Test Graphs

LCH

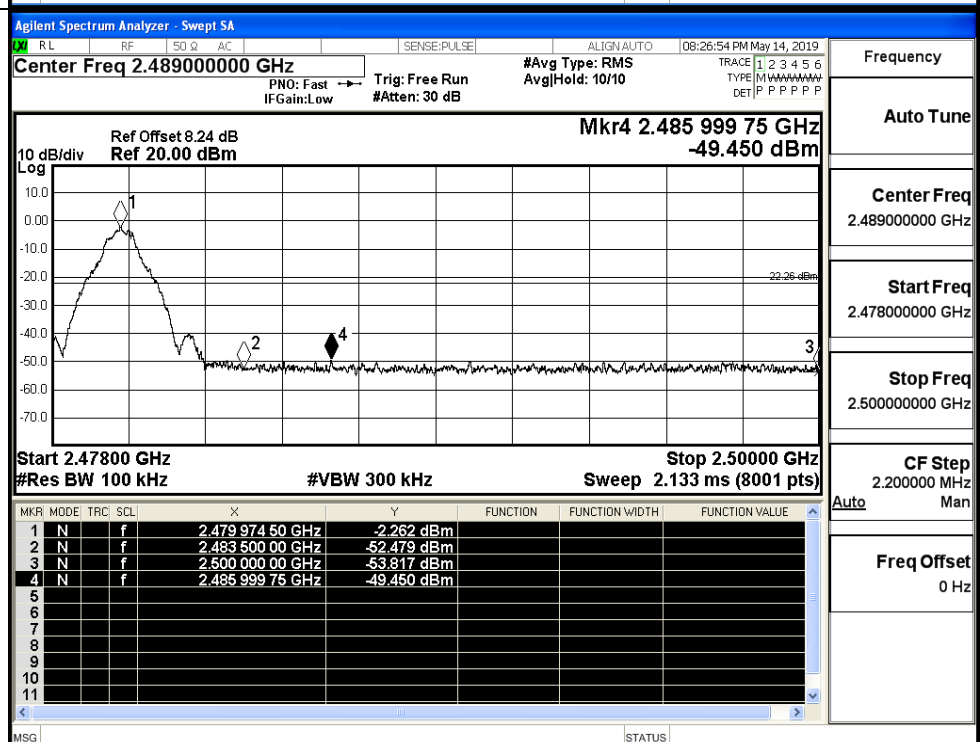


Frequency

Auto Tune

Center Freq
2.357000000 GHzStart Freq
2.310000000 GHzStop Freq
2.404000000 GHzCF Step
9.400000 MHz
Auto ManFreq Offset
0 Hz

HCH



Frequency

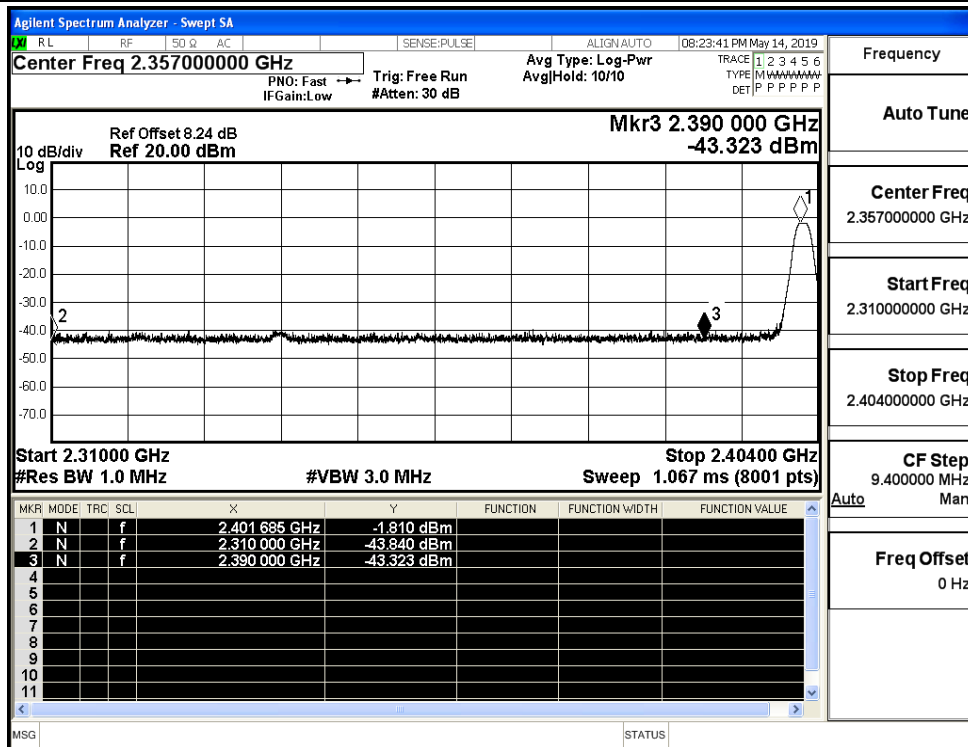
Auto Tune

Center Freq
2.489000000 GHzStart Freq
2.478000000 GHzStop Freq
2.500000000 GHzCF Step
2.200000 MHz
Auto ManFreq Offset
0 Hz

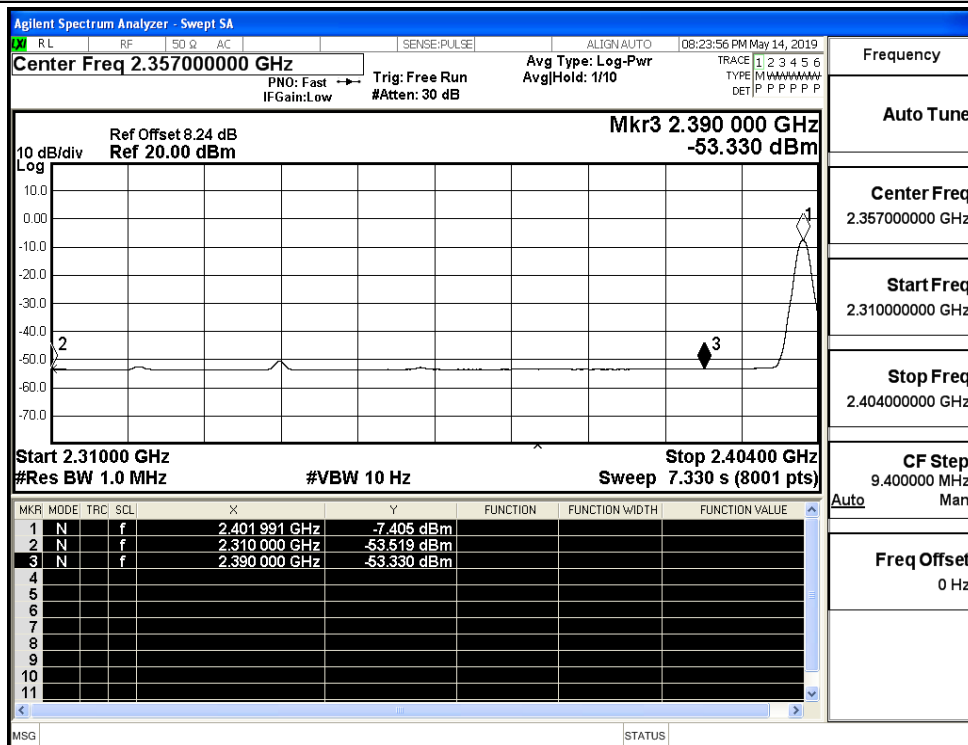
A.8 Restrict-band band-edge measurements

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	-43.84	2.0	0	51.42	PEAK	74	PASS
		Ant1	2310.0	-53.52	2.0	0	41.74	AV	54	PASS
		Ant1	2390.0	-43.32	2.0	0	51.93	PEAK	74	PASS
		Ant1	2390.0	-53.33	2.0	0	41.93	AV	54	PASS
	2480	Ant1	2483.5	-40.81	2.0	0	54.44	PEAK	74	PASS
		Ant1	2483.5	-52.43	2.0	0	42.83	AV	54	PASS
		Ant1	2500.0	-43.02	2.0	0	52.24	PEAK	74	PASS
		Ant1	2500.0	-53.02	2.0	0	42.24	AV	54	PASS

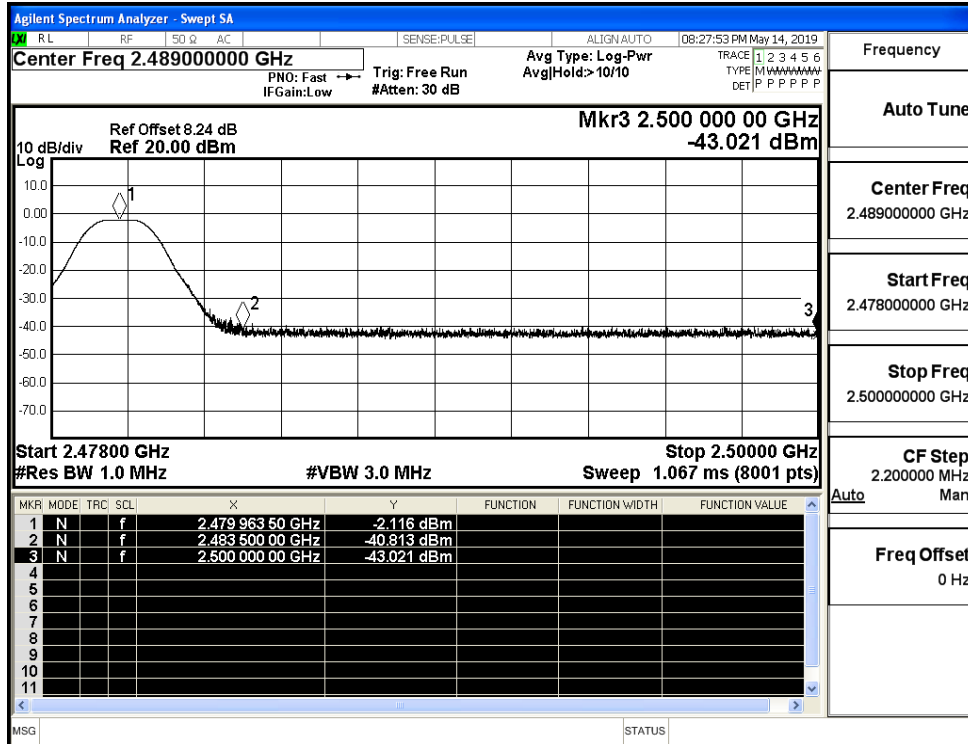
Restrict-band band-edge measurements_BT LE_2402_Ant1_PEAK



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

