

Appendix A

RF Test Data for BT V4.1 (LE) (Conducted Measurement)

Product Name: ST008 Smart Tag

Trade Mark: SportIQ

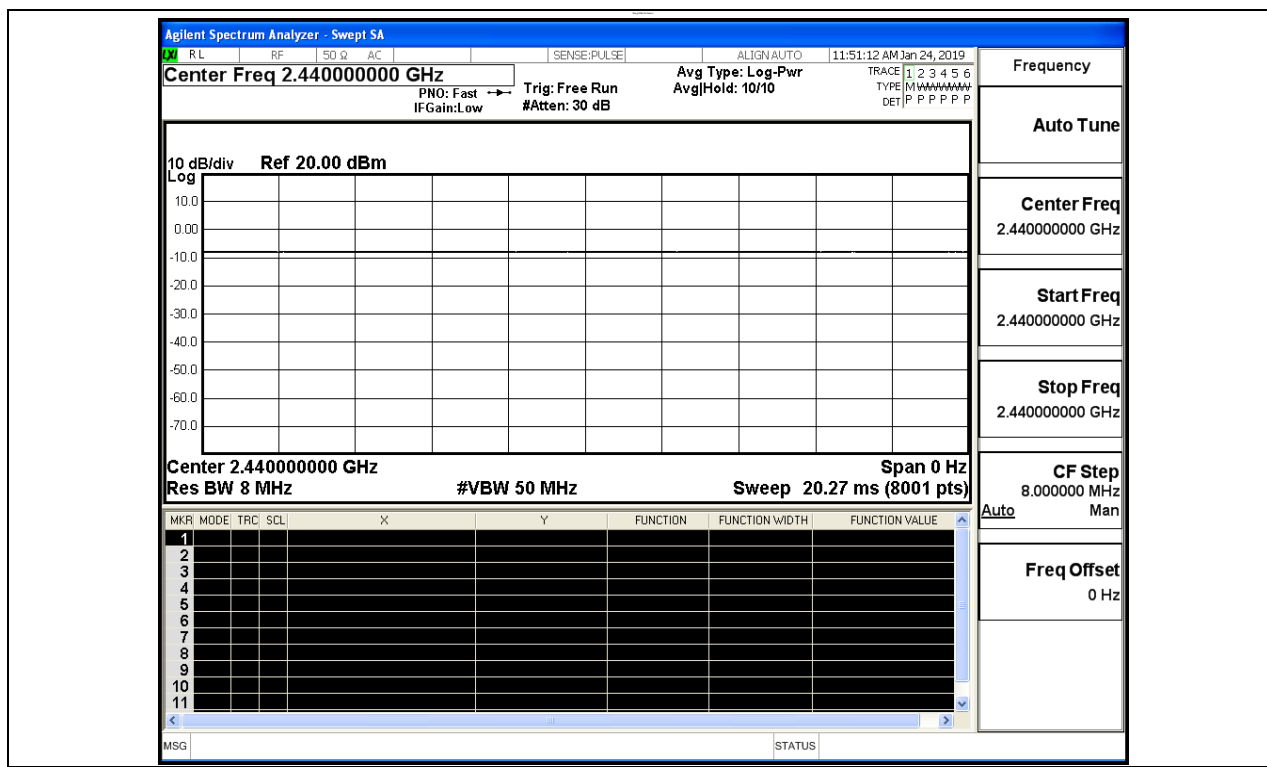
Test Model: ST008

Environmental Conditions

Temperature:	24.3 ° C
Relative Humidity:	53.3%
ATM Pressure:	100.0 kPa
Test Engineer:	Mina.Xu
Supervised by:	Jayden.Zhuo

A.1 Duty Cycle

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

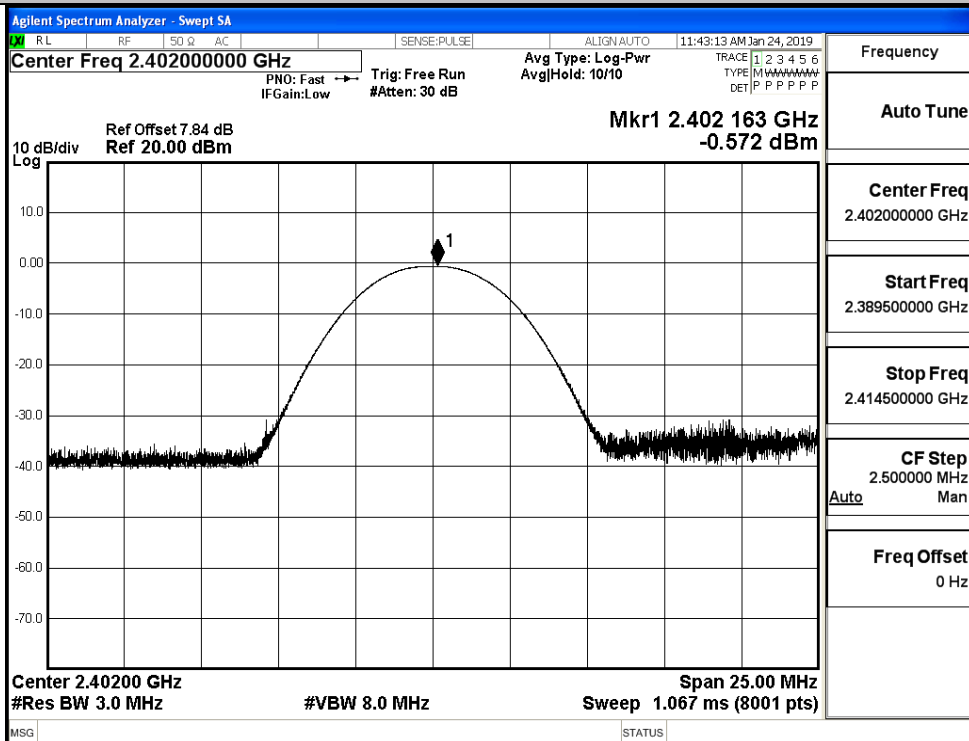


A.2 Maximum Conducted Peak Output Power

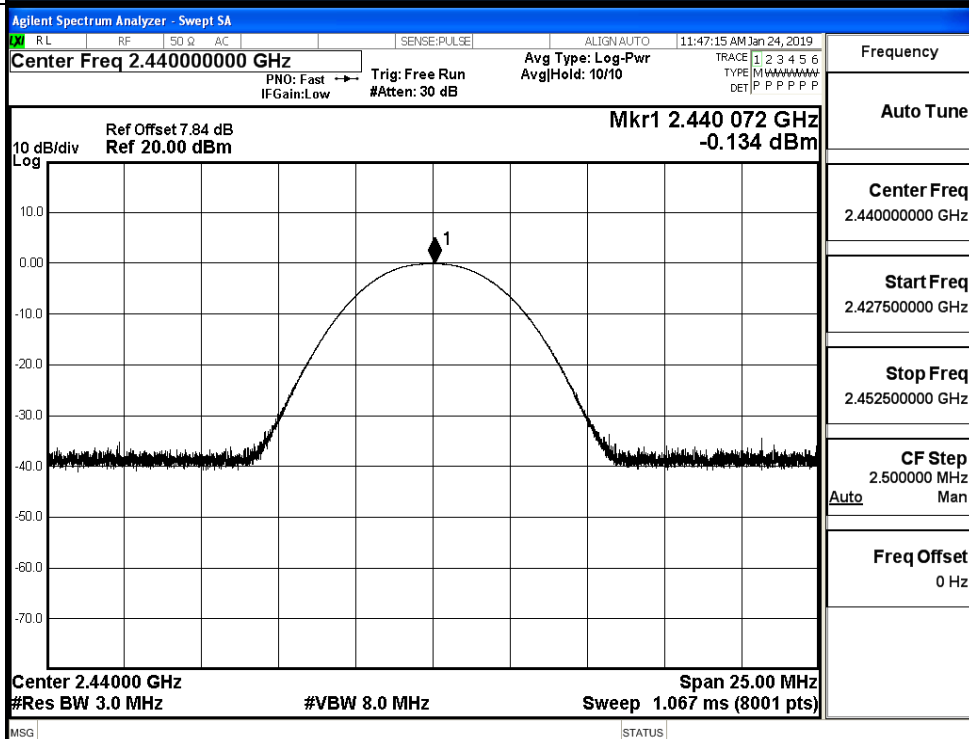
Mode	Channel	Conduct Peak Power[dBm]	Limit [dBm]	Verdict
BT LE	LCH	-0.572	30	PASS
BT LE	MCH	-0.134	30	PASS
BT LE	HCH	-1.322	30	PASS

Test Graphs

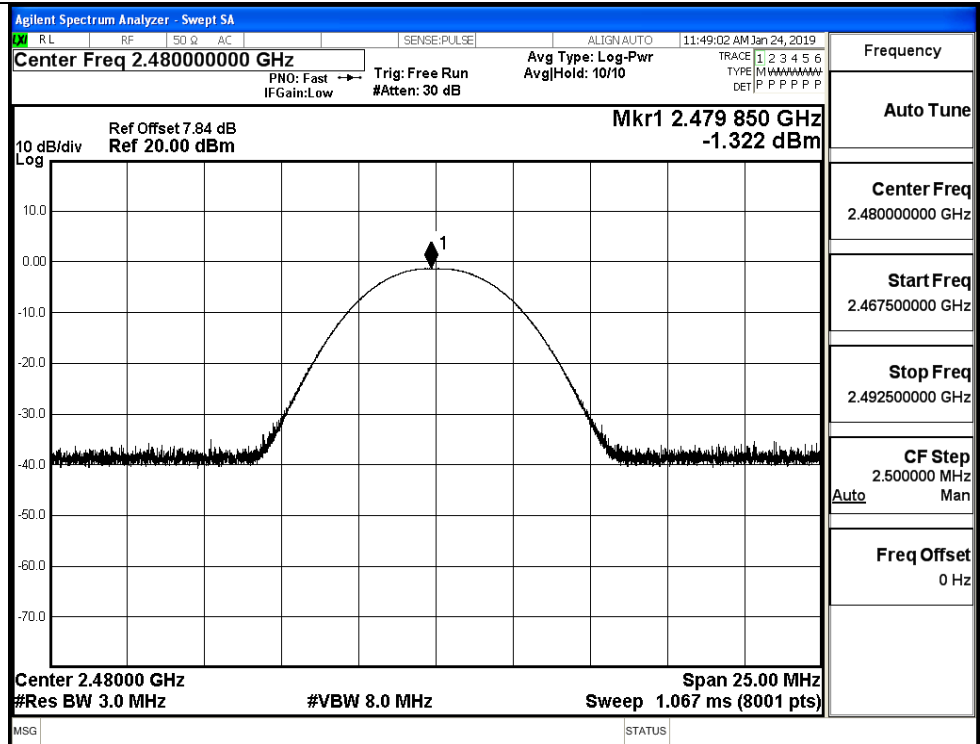
LCH



MCH



HCH

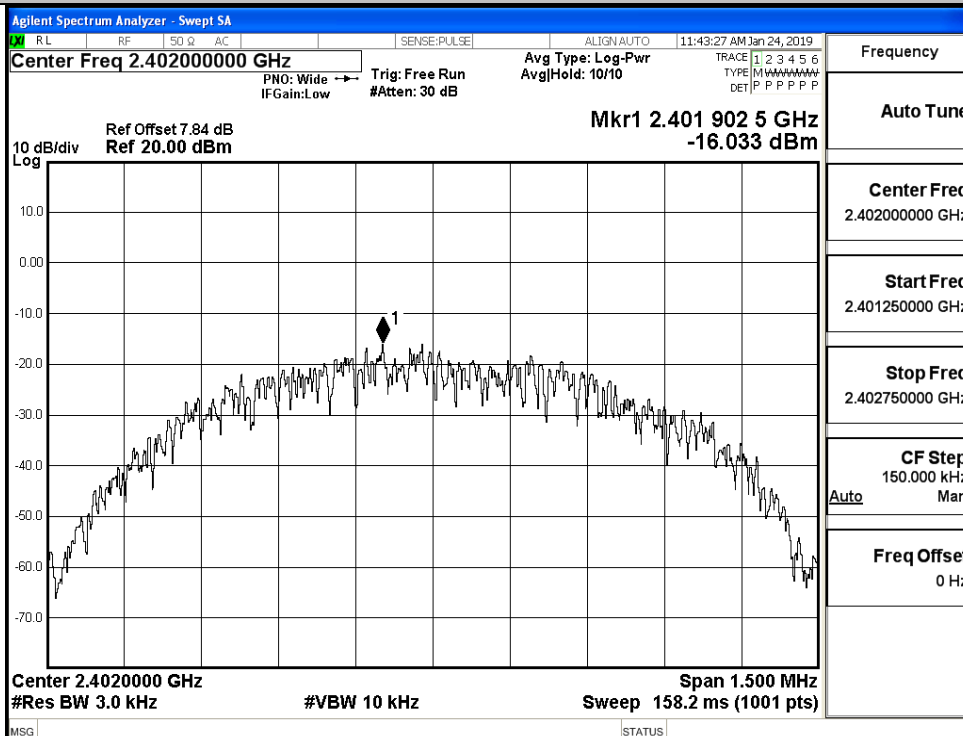


A.3 Maximum Power Spectral Density

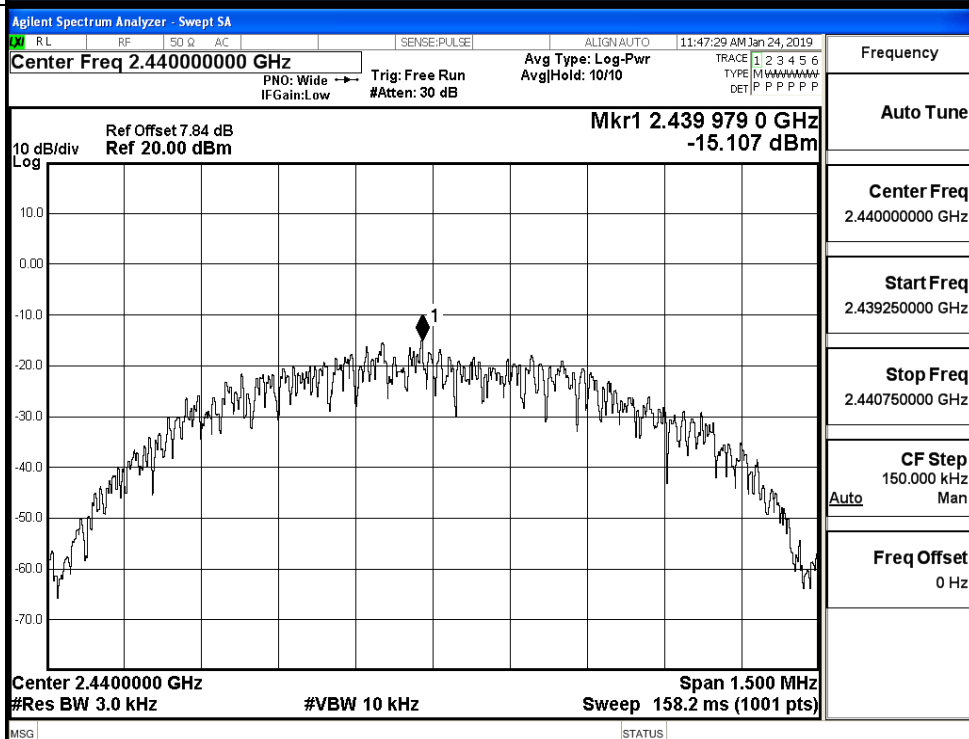
Mode	Channel	PSD [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
BT LE	LCH	-16.033	8	PASS
BT LE	MCH	-15.107	8	PASS
BT LE	HCH	-16.245	8	PASS

Test Graphs

LCH



MCH



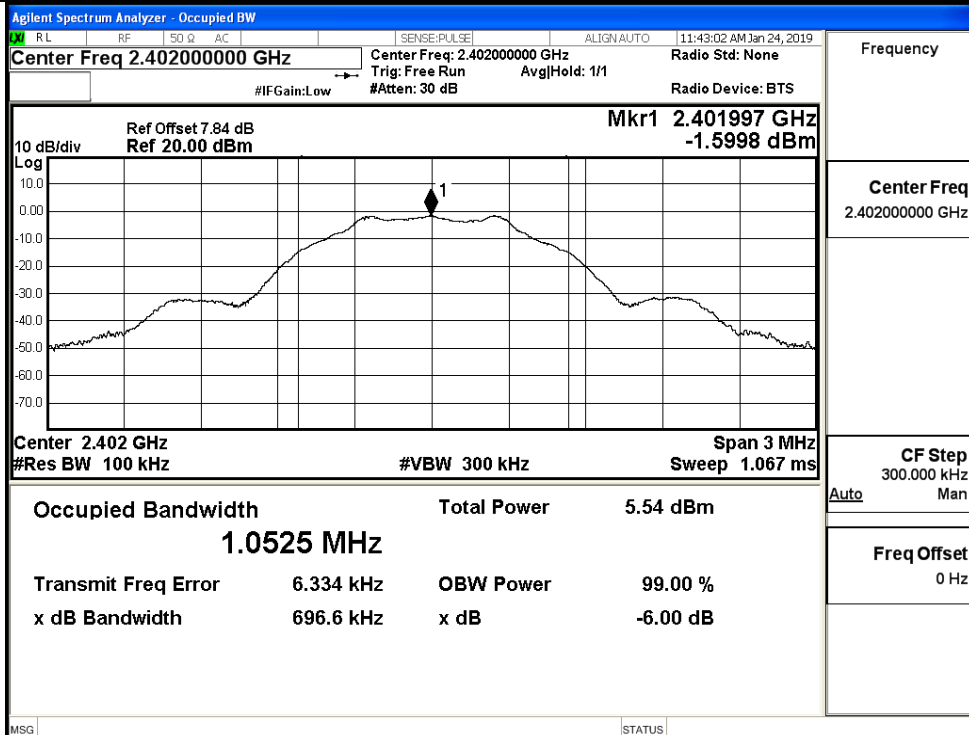


A.4 6dB Bandwidth

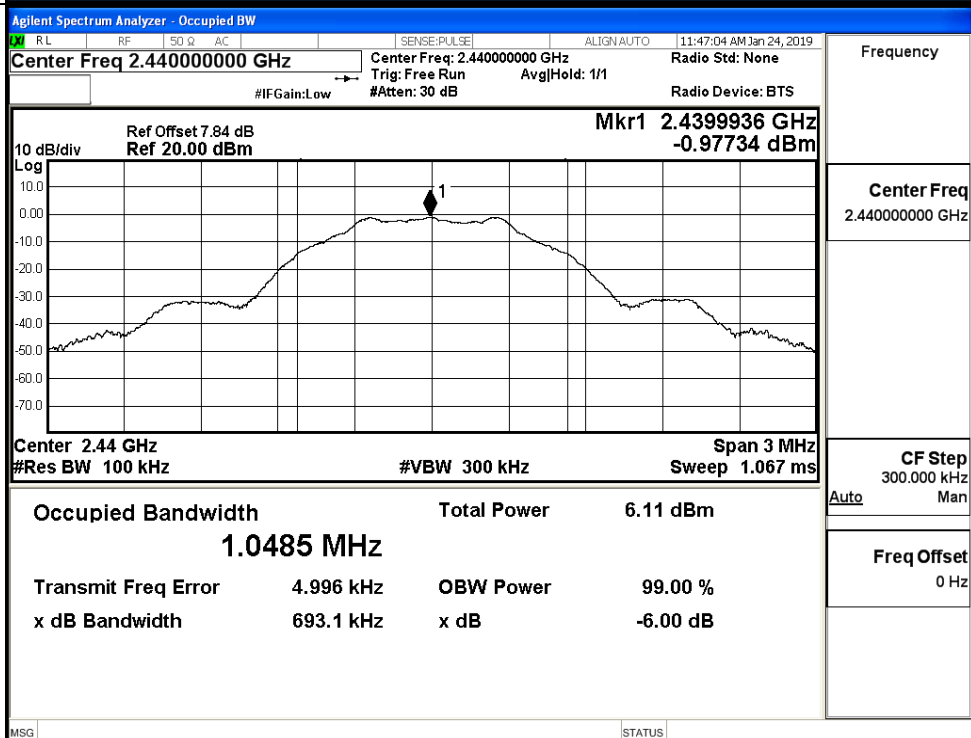
Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
BT LE	LCH	0.6966	≥ 0.5	PASS
BT LE	MCH	0.6931	≥ 0.5	PASS
BT LE	HCH	0.6857	≥ 0.5	PASS

Test Graphs

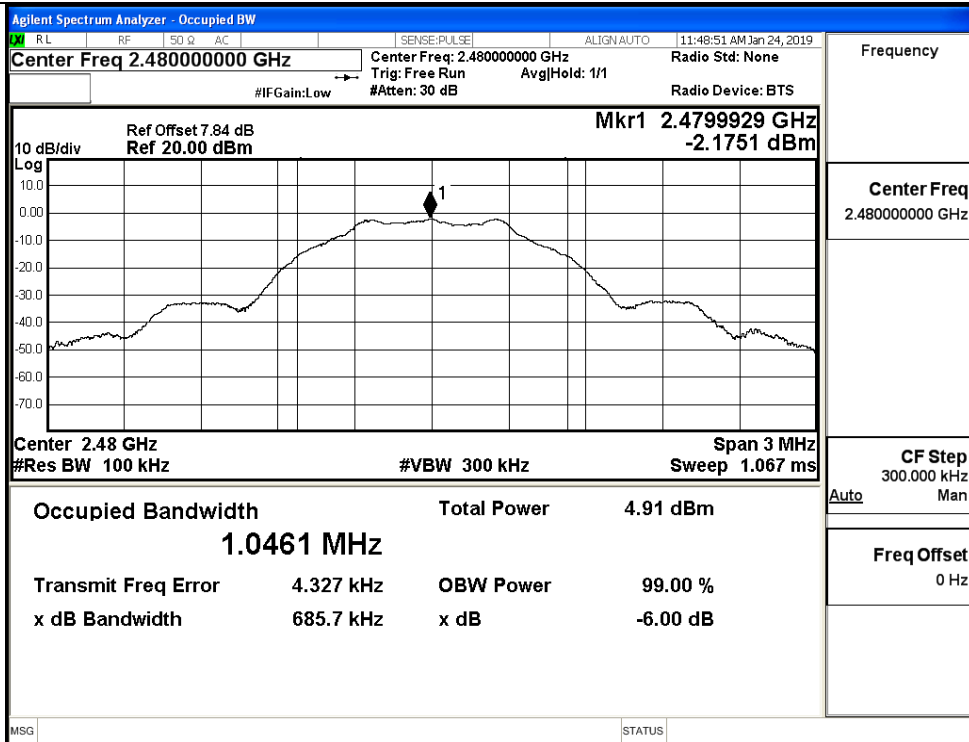
LCH



MCH



HCH

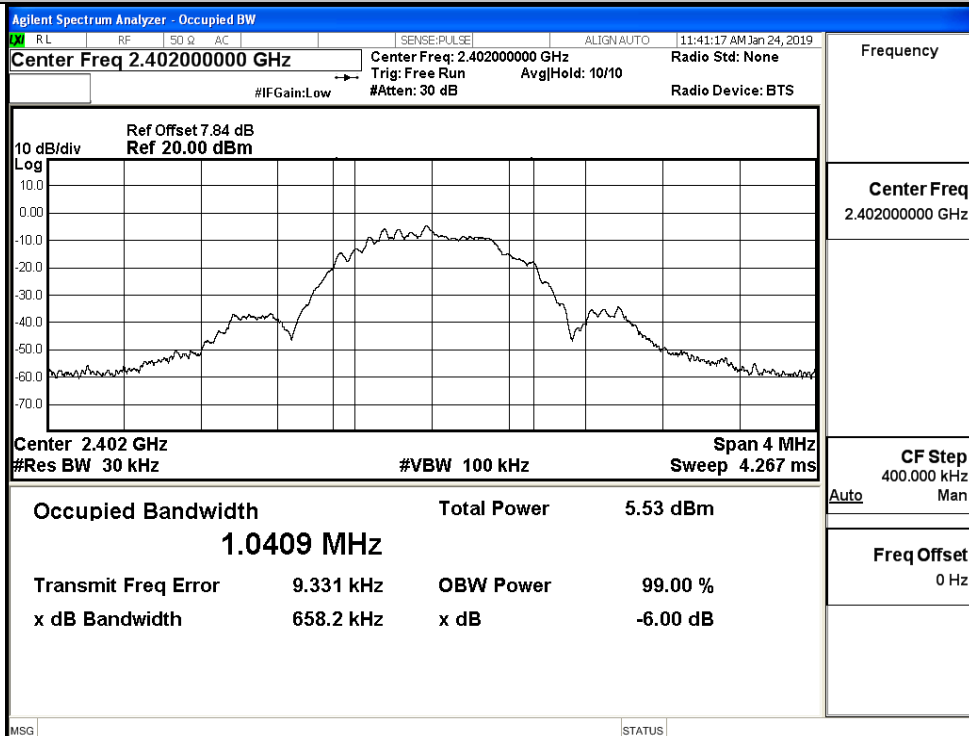


A.5 Occupied Bandwidth

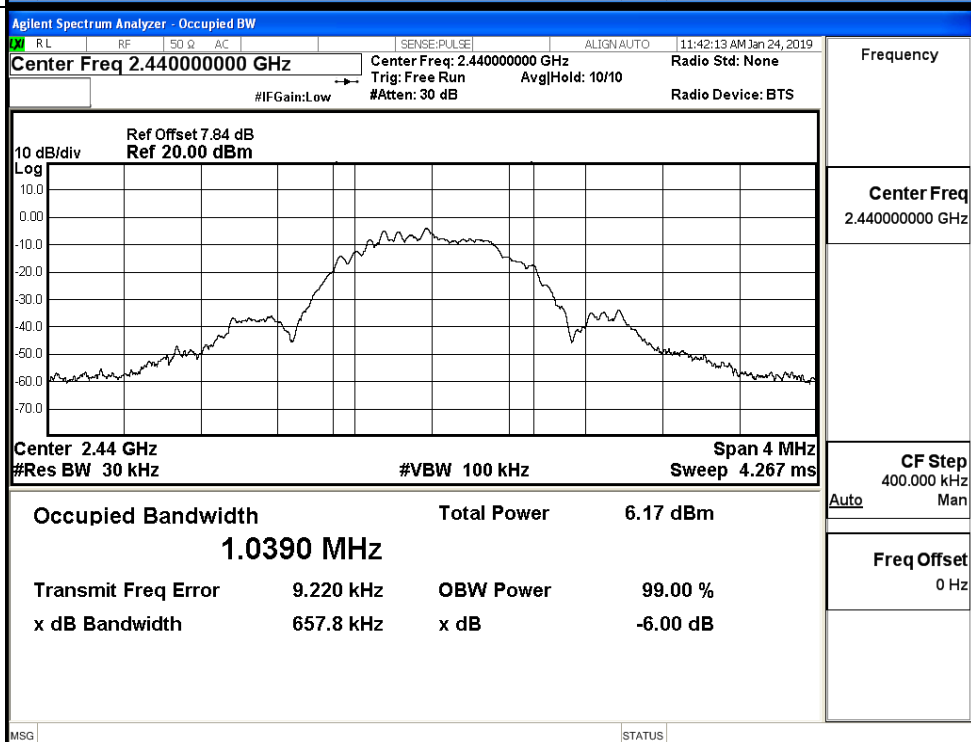
Mode	Channel	Occupied Bandwidth [MHz]	Limit [MHz]	Verdict
BT LE	LCH	1.0409	No Limit	PASS
BT LE	MCH	1.0390	No Limit	PASS
BT LE	HCH	1.0363	No Limit	PASS

Test Graphs

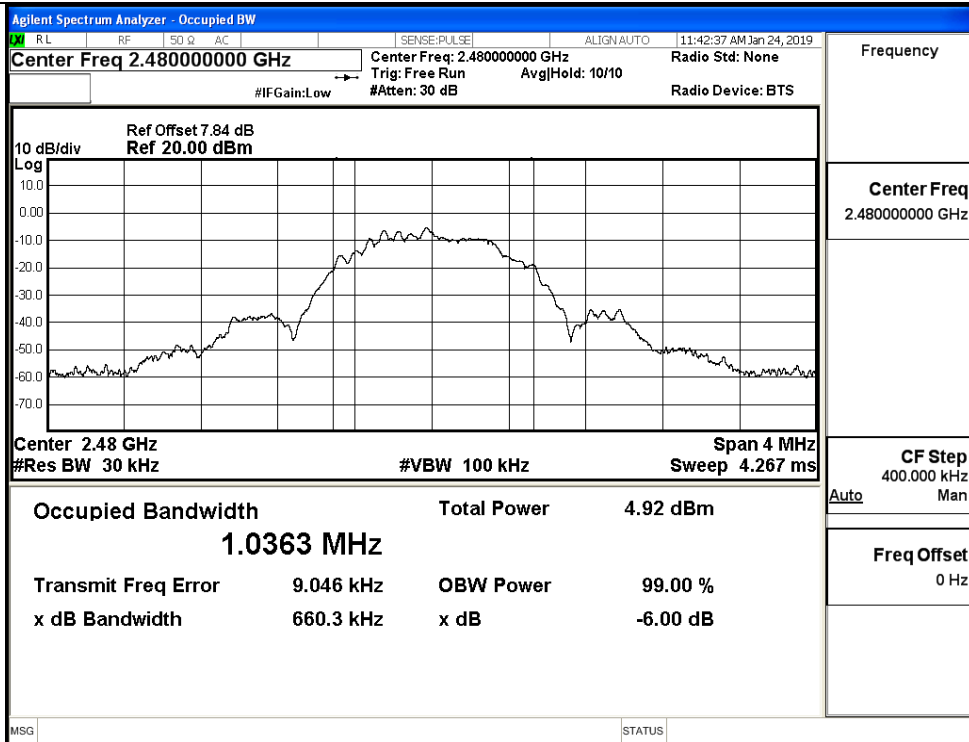
LCH



MCH



HCH

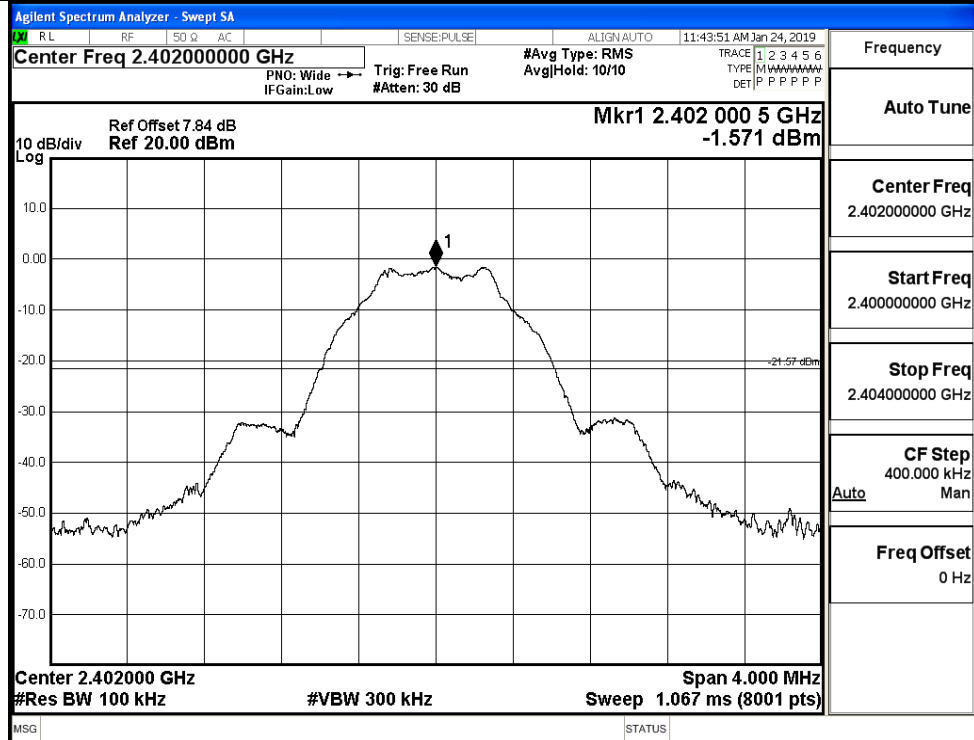


A.6 RF Conducted Spurious Emissions

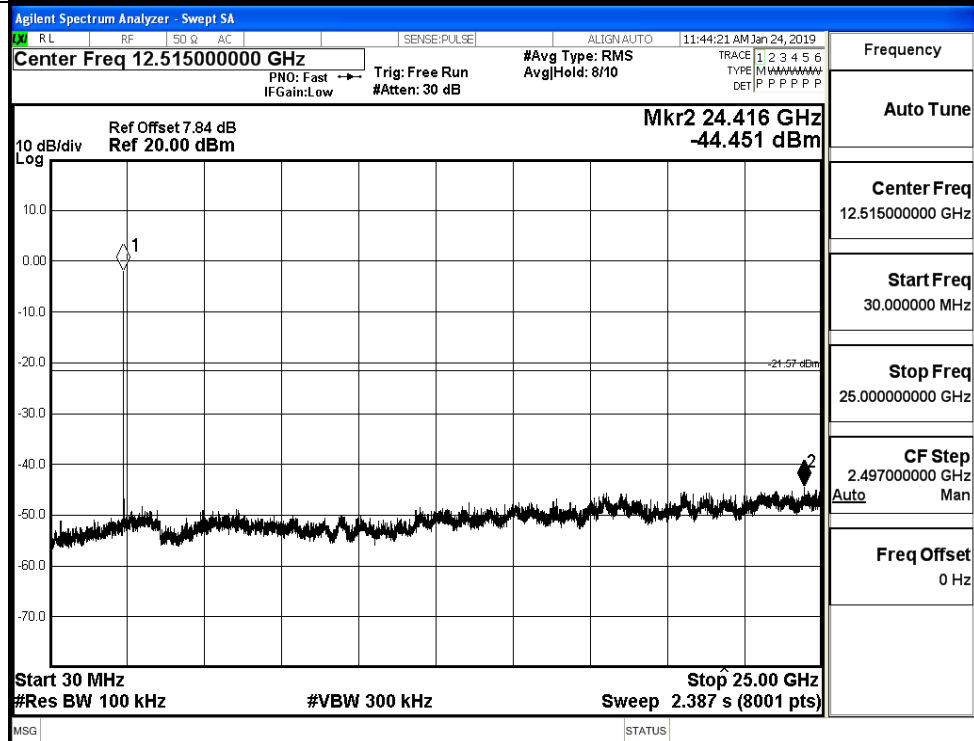
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	-1.571	-44.451	-21.571	PASS
BT LE	MCH	-0.983	-44.664	-20.983	PASS
BT LE	HCH	-2.236	-44.179	-22.236	PASS

BT LE_LCH_Graphs

Pref/BT LE/LCH

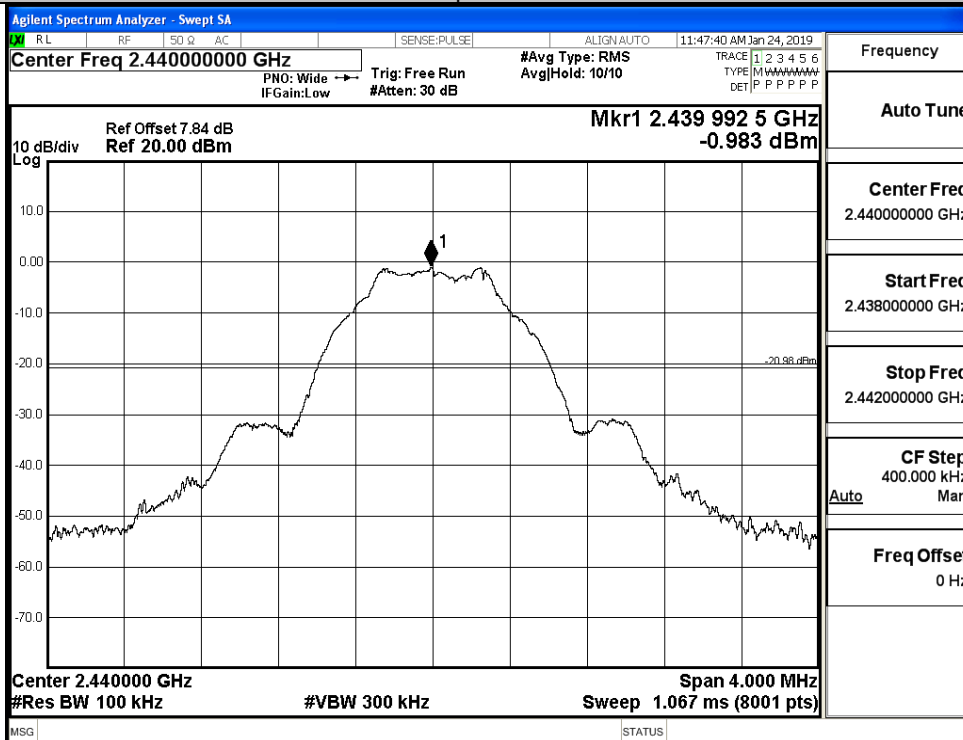


Puw/BT LE/LCH

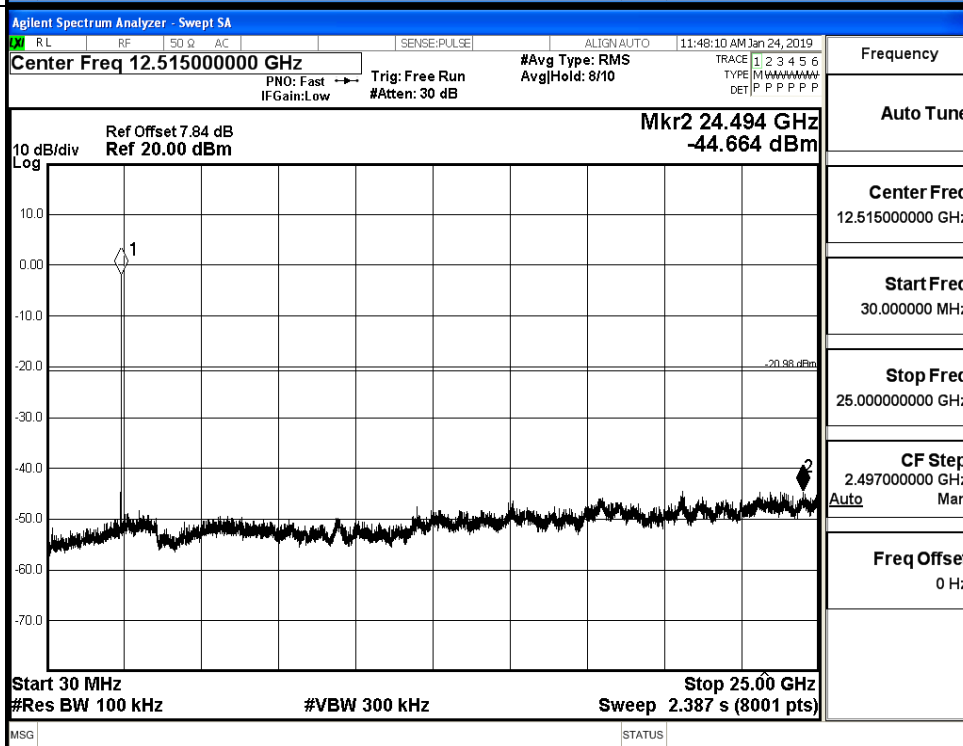


BT LE_MCH_Graphs

Pref/BT LE/MCH

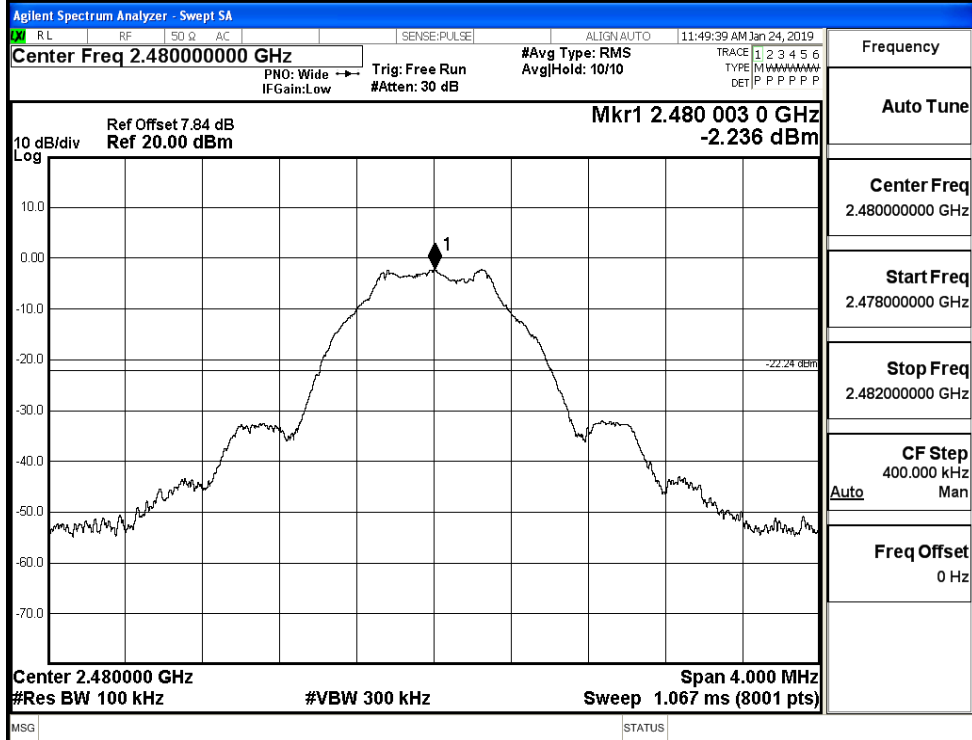


Puw/BT LE/MCH

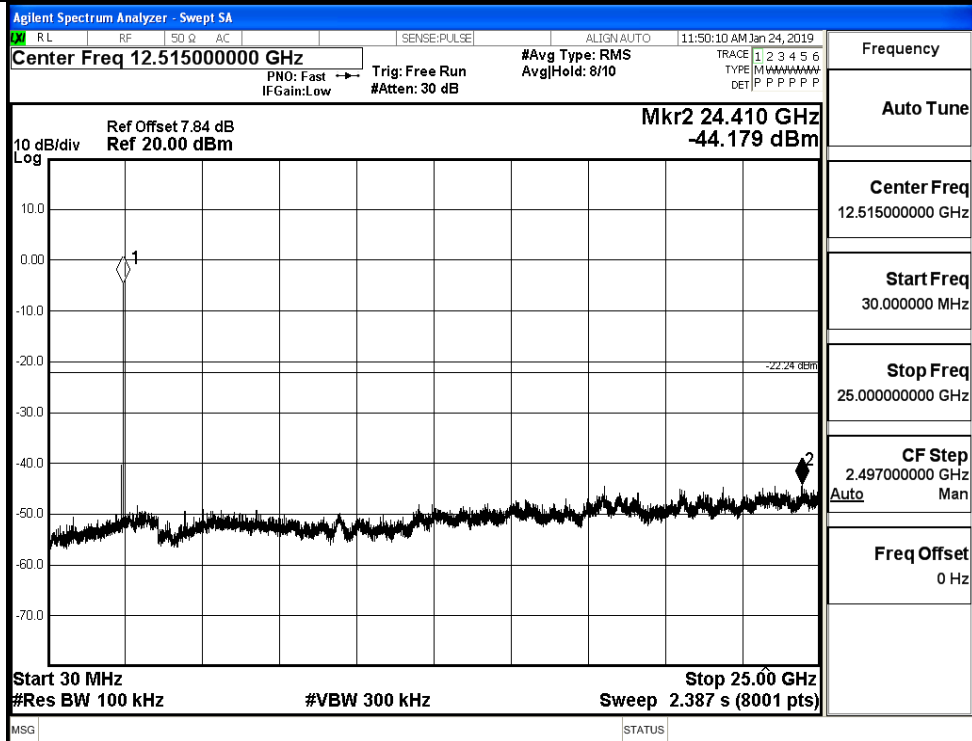


BT LE_HCH_Graphs

Pref/BT LE/HCH



Puw/BT LE/HCH

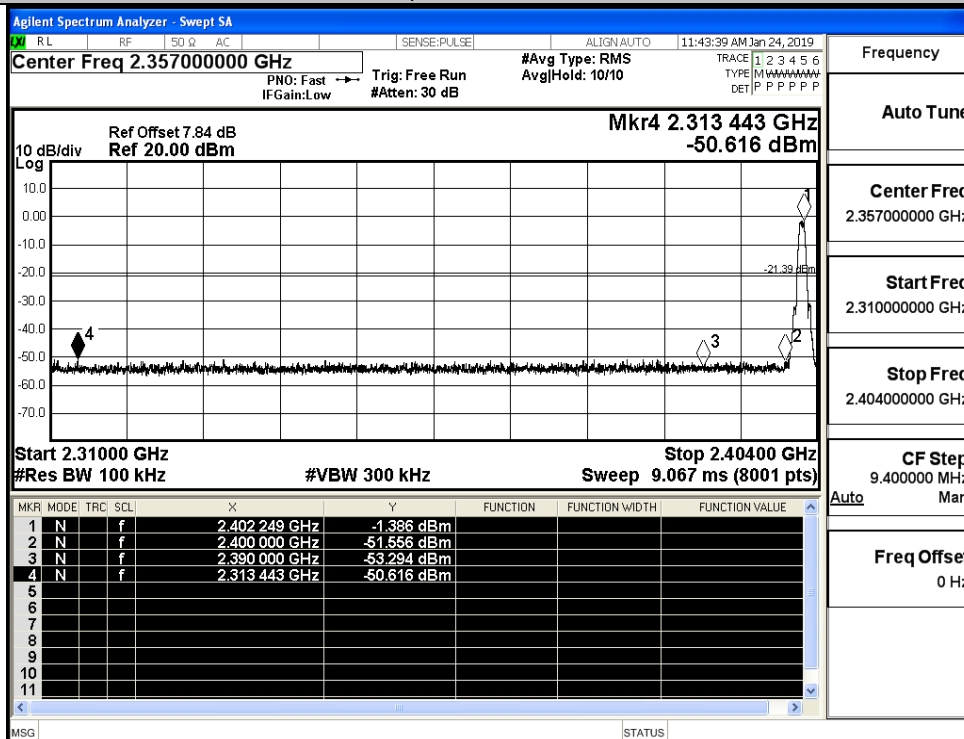


A.7 Band-edge for RF Conducted Emissions

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	-1.386	-50.616	-21.39	PASS
BT LE	HCH	-1.954	-49.326	-21.95	PASS

Test Graphs

LCH



Frequency

Auto Tune

Center Freq

2.357000000 GHz

Start Freq

2.310000000 GHz

Stop Freq

2.404000000 GHz

CF Step

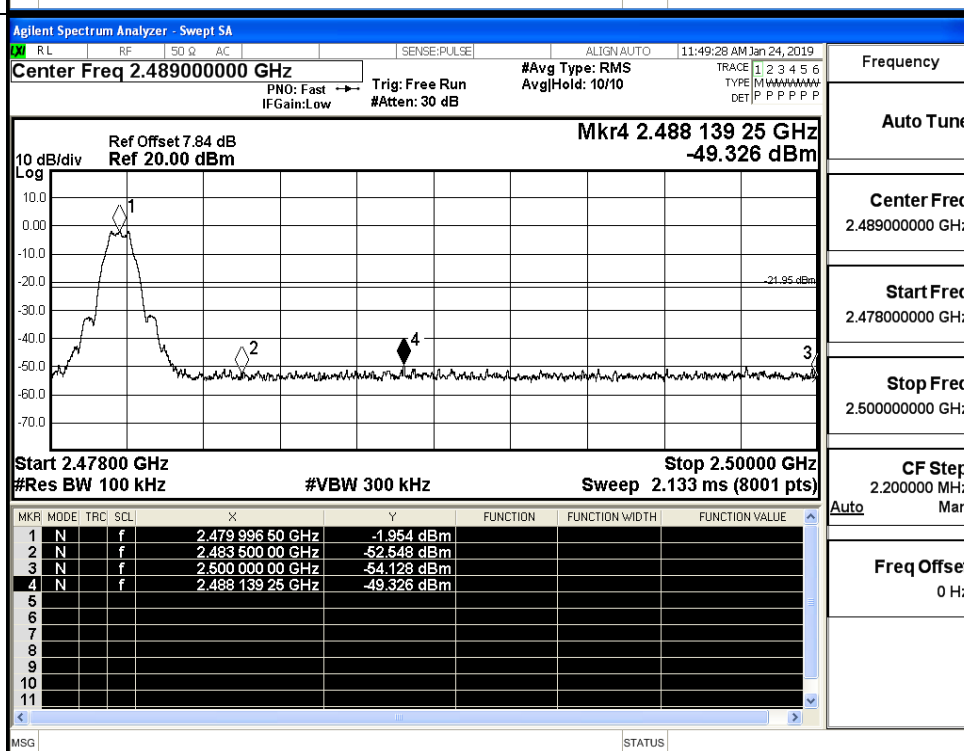
9.400000 MHz

Auto Man

Freq Offset

0 Hz

HCH



Frequency

Auto Tune

Center Freq

2.489000000 GHz

Start Freq

2.478000000 GHz

Stop Freq

2.500000000 GHz

CF Step

2.200000 MHz

Auto Man

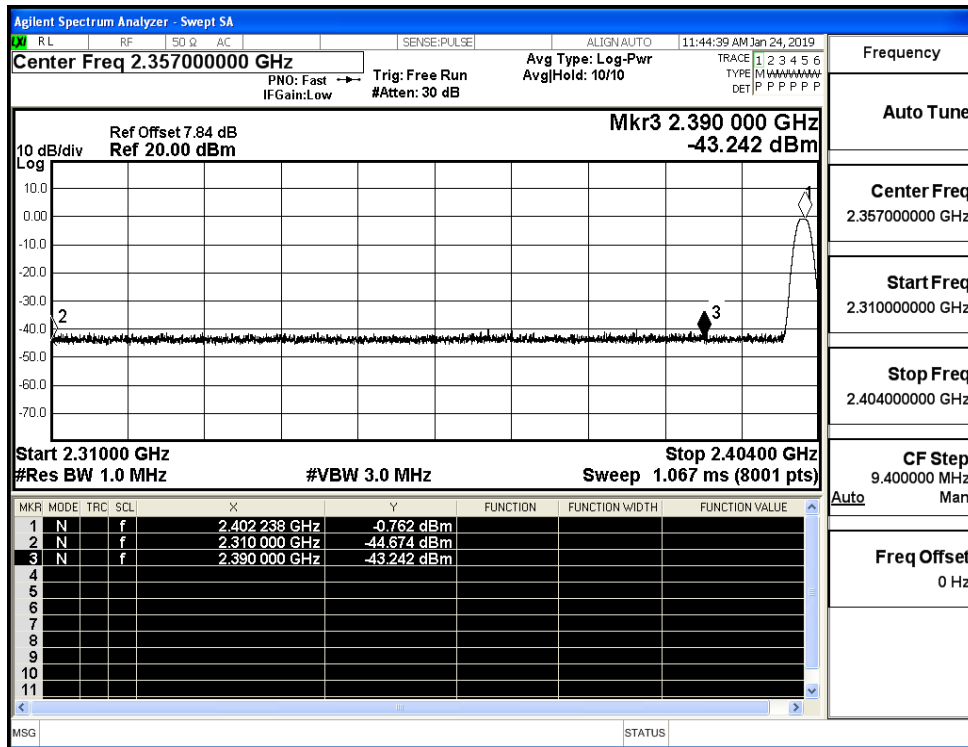
Freq Offset

0 Hz

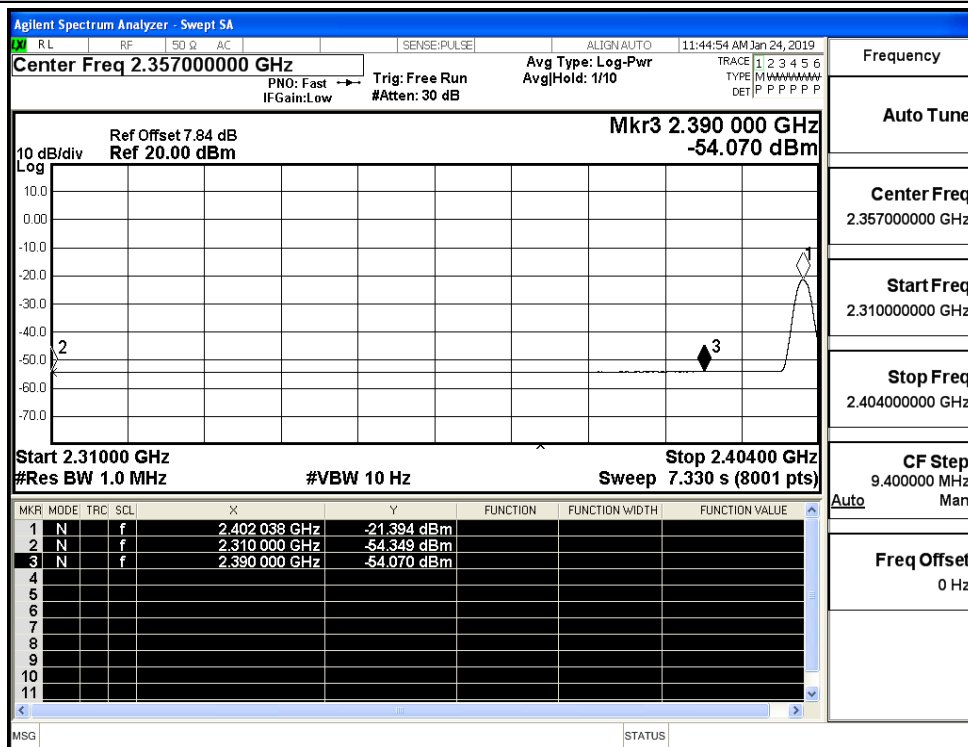
A.8 Restrict-band band-edge measurements

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	-44.67	2.0	0	52.58	PEAK	74	PASS
		Ant1	2310.0	-54.35	2.0	0	42.91	AV	54	PASS
		Ant1	2390.0	-43.24	2.0	0	54.02	PEAK	74	PASS
		Ant1	2390.0	-54.07	2.0	0	43.19	AV	54	PASS
	2480	Ant1	2483.5	-43.22	2.0	0	54.04	PEAK	74	PASS
		Ant1	2483.5	-53.86	2.0	0	43.40	AV	54	PASS
		Ant1	2500.0	-44.38	2.0	0	52.88	PEAK	74	PASS
		Ant1	2500.0	-53.74	2.0	0	43.51	AV	54	PASS

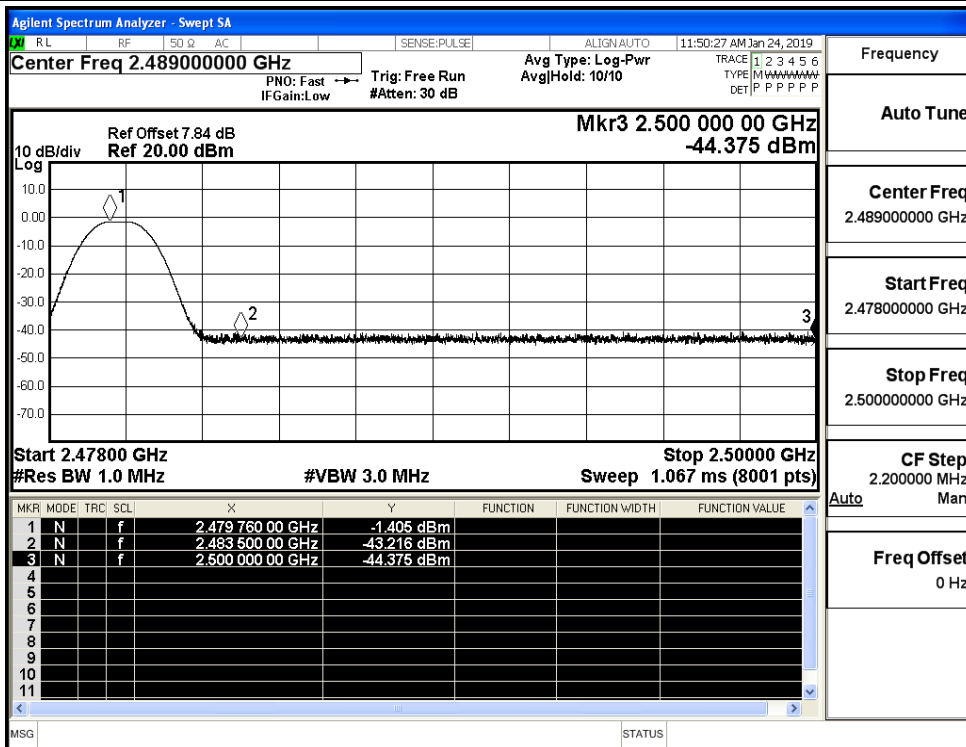
Restrict-band band-edge measurements_BT LE_2402_Ant1_PEAK



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

