

Appendix A

RF Test Data for BT V4.2(BT LE) (Conducted Measurement)

Product Name: CommaCube RFID

Trade Mark: Comma Technology™

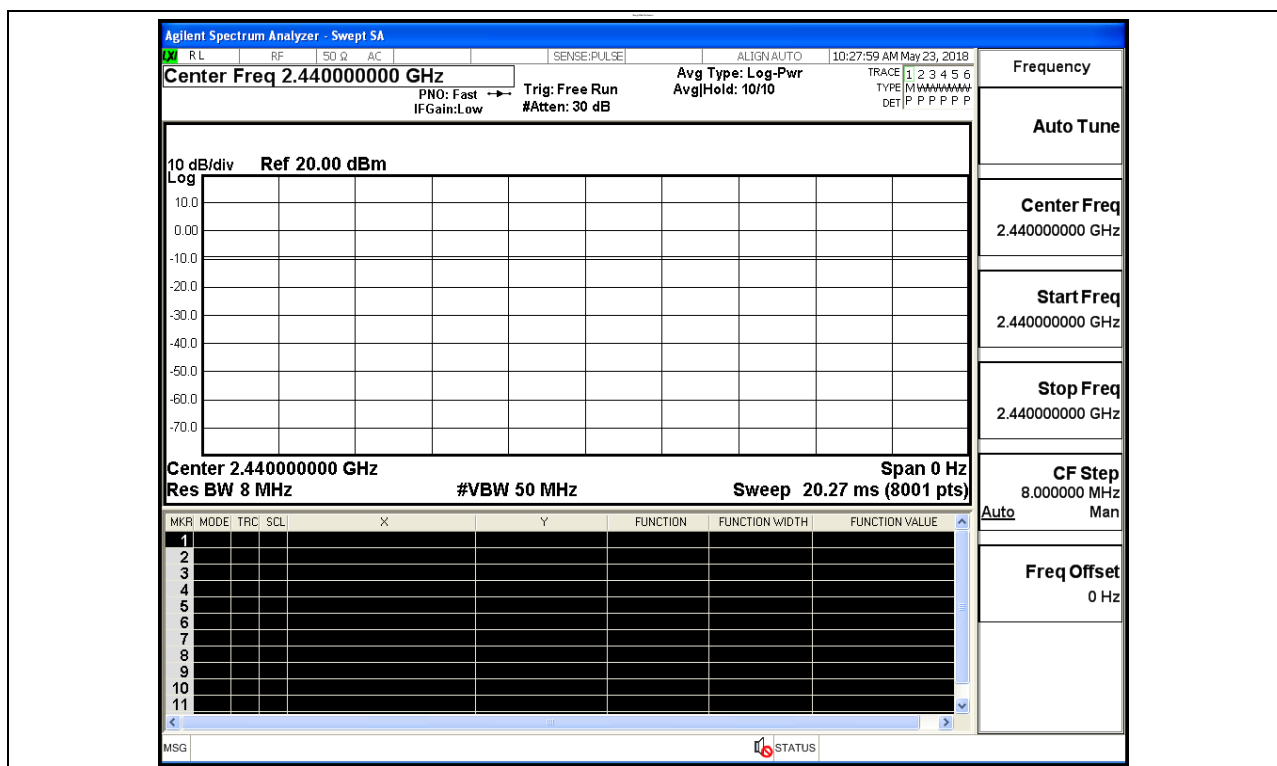
Test Model: CommaCube RFID

Environmental Conditions

Temperature:	25 ° C
Relative Humidity:	50%
ATM Pressure:	100.0 kPa
Test Engineer:	Ryan Hu
Supervised by:	Jayden.Zhuo

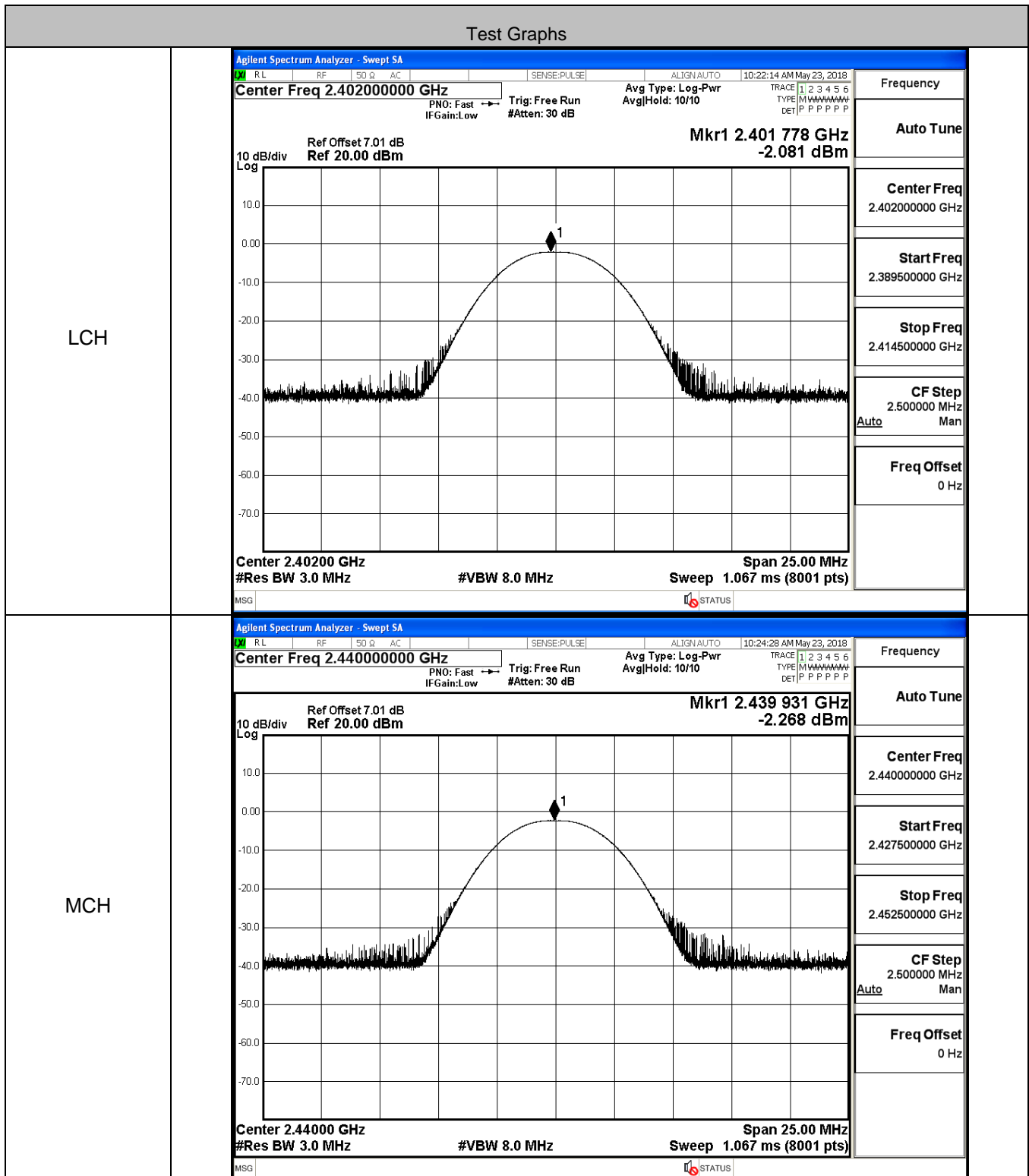
A.1 Duty Cycle

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

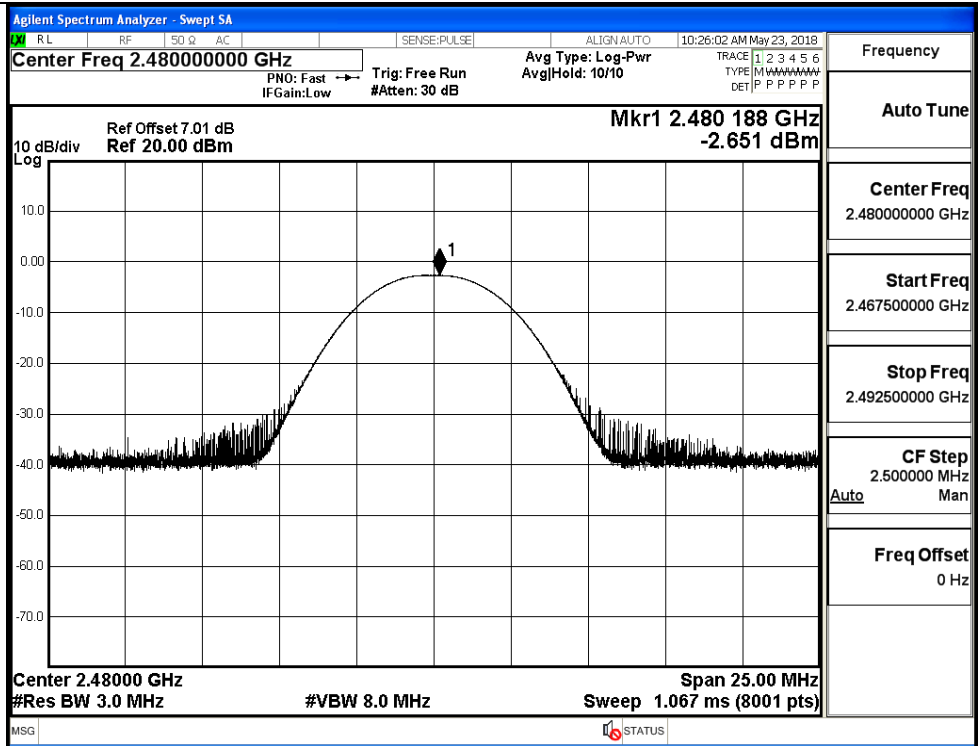


A.2 Maximum Conducted Peak Output Power

Mode	Channel	Conduct Peak Power[dBm]	Limit [dBm]	Verdict
BT LE	LCH	-2.081	30	PASS
BT LE	MCH	-2.268	30	PASS
BT LE	HCH	-2.651	30	PASS

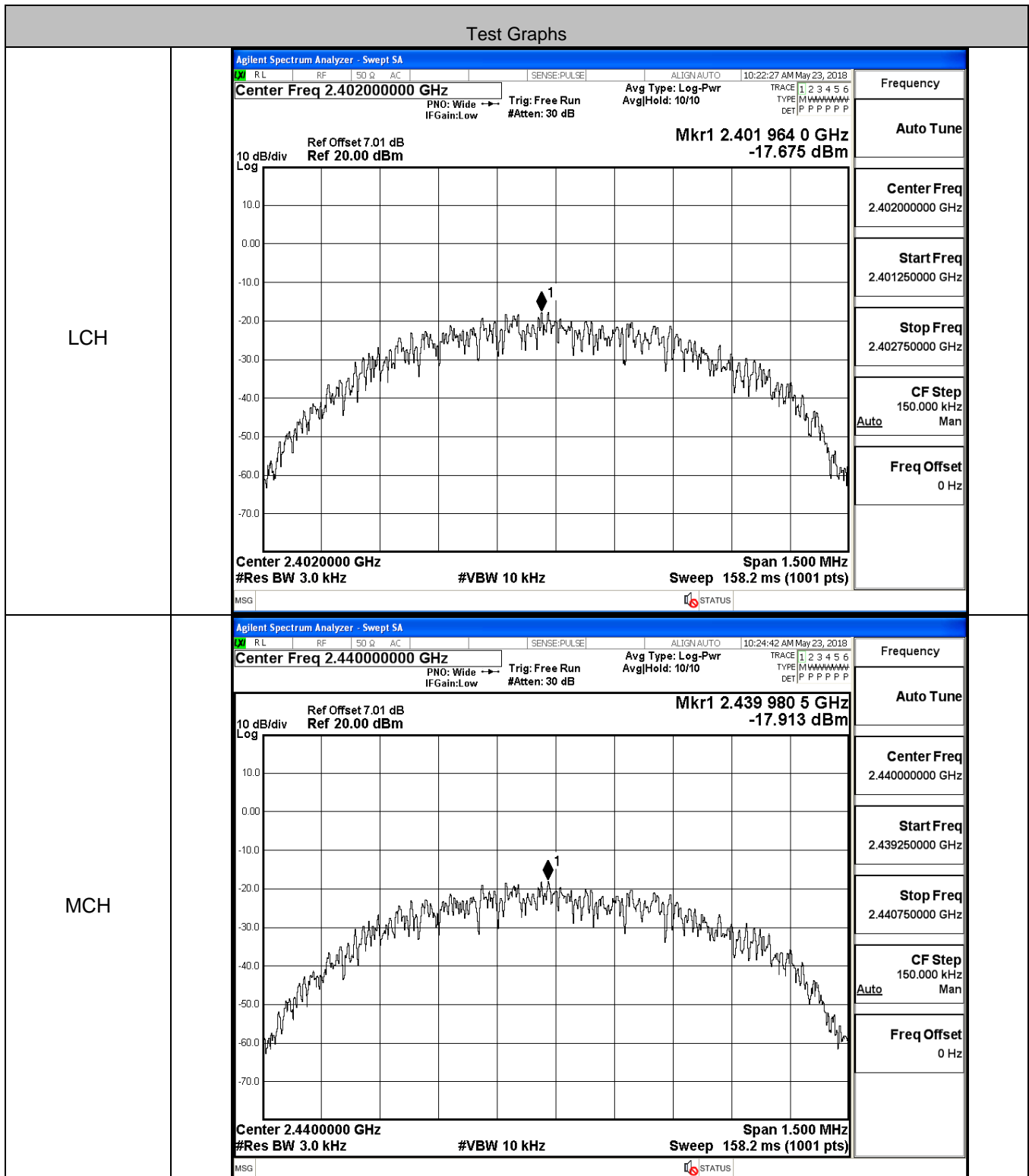


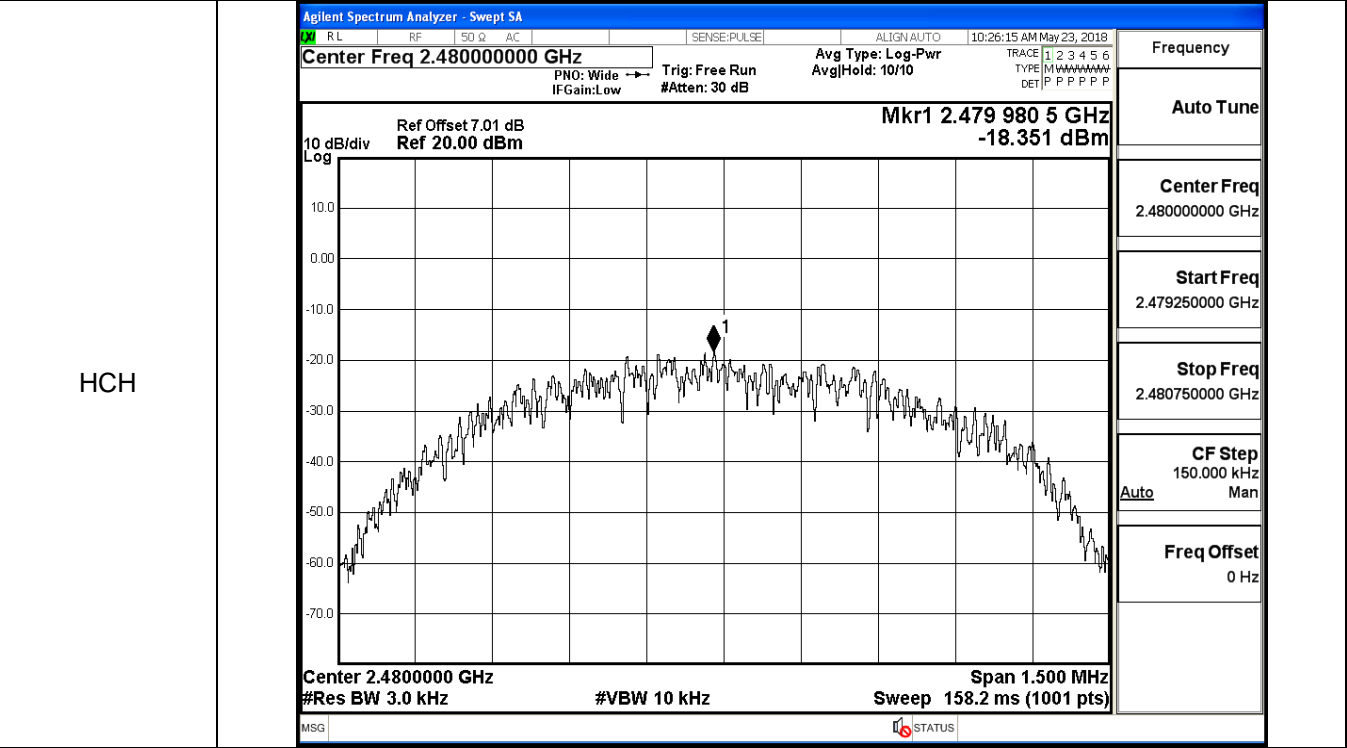
HCH



A.3 Maximum Power Spectral Density

Mode	Channel	PSD [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
BT LE	LCH	-17.675	8	PASS
BT LE	MCH	-17.913	8	PASS
BT LE	HCH	-18.351	8	PASS



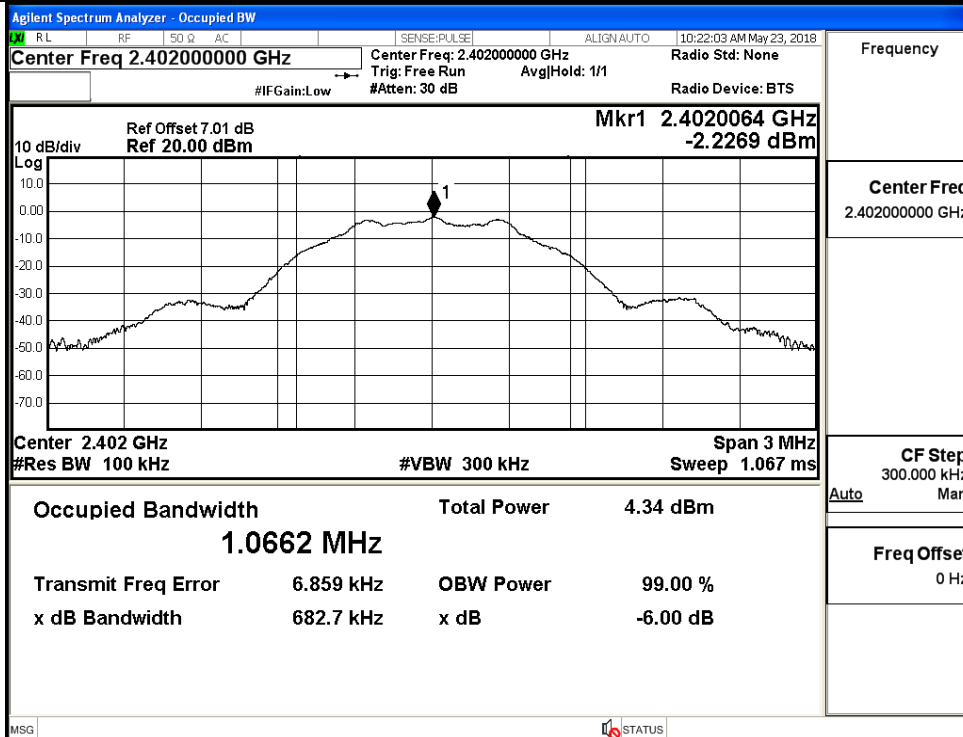


A.4 6dB Bandwidth

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
BT LE	LCH	0.6827	≥ 0.5	PASS
BT LE	MCH	0.6784	≥ 0.5	PASS
BT LE	HCH	0.6885	≥ 0.5	PASS

Test Graphs

LCH



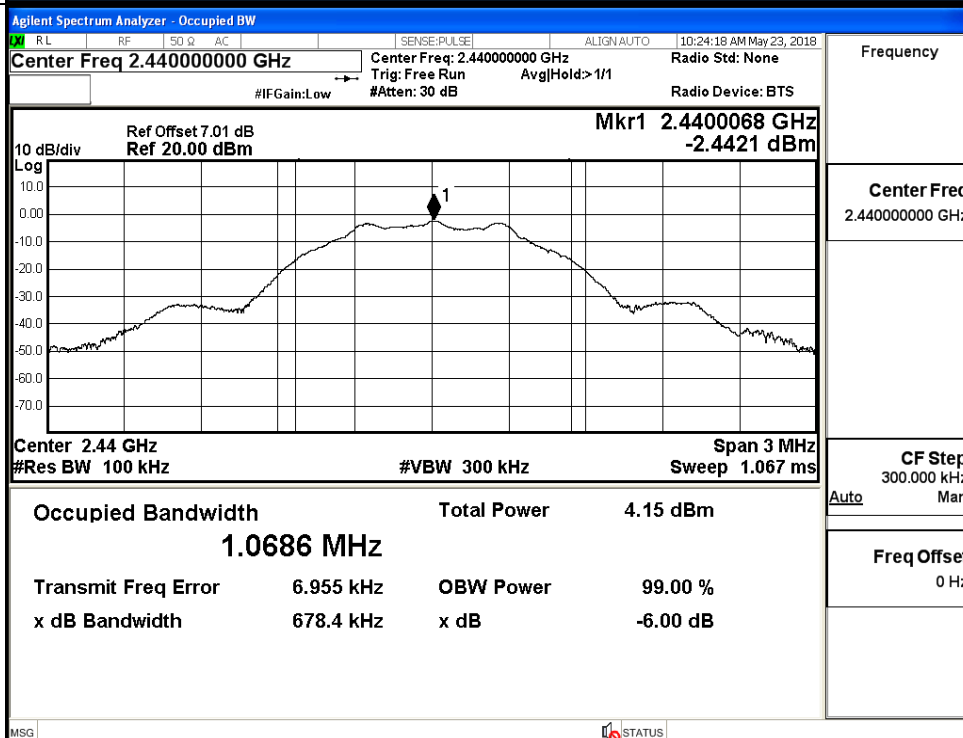
Frequency

Center Freq
2.402000000 GHz

CF Step
300.000 kHz
Auto Man

Freq Offset
0 Hz

MCH



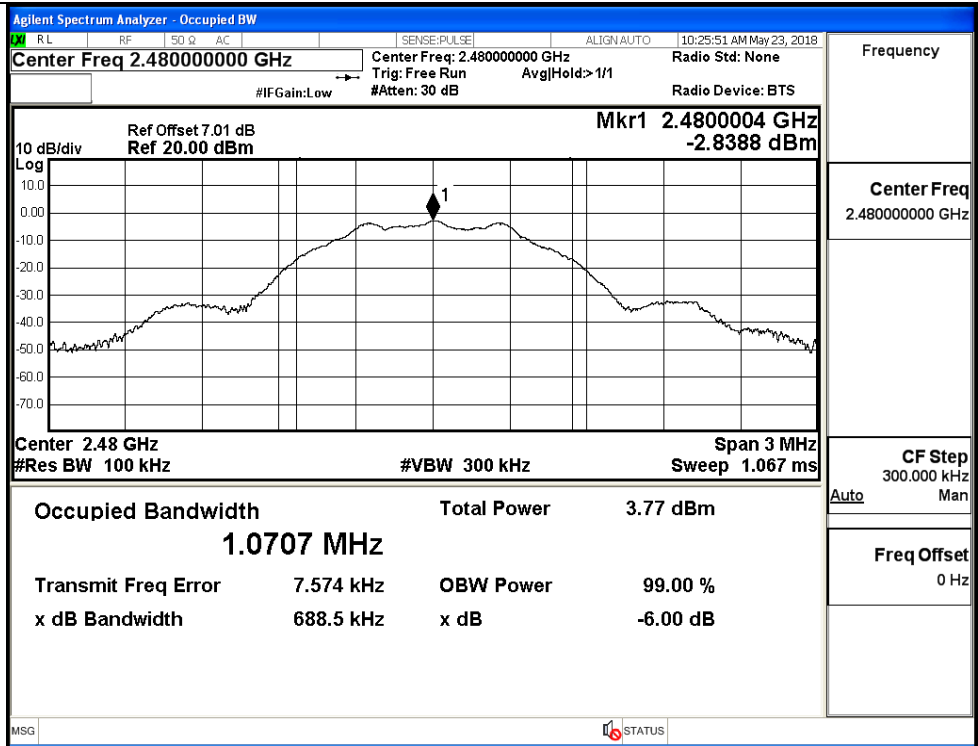
Frequency

Center Freq
2.440000000 GHz

CF Step
300.000 kHz
Auto Man

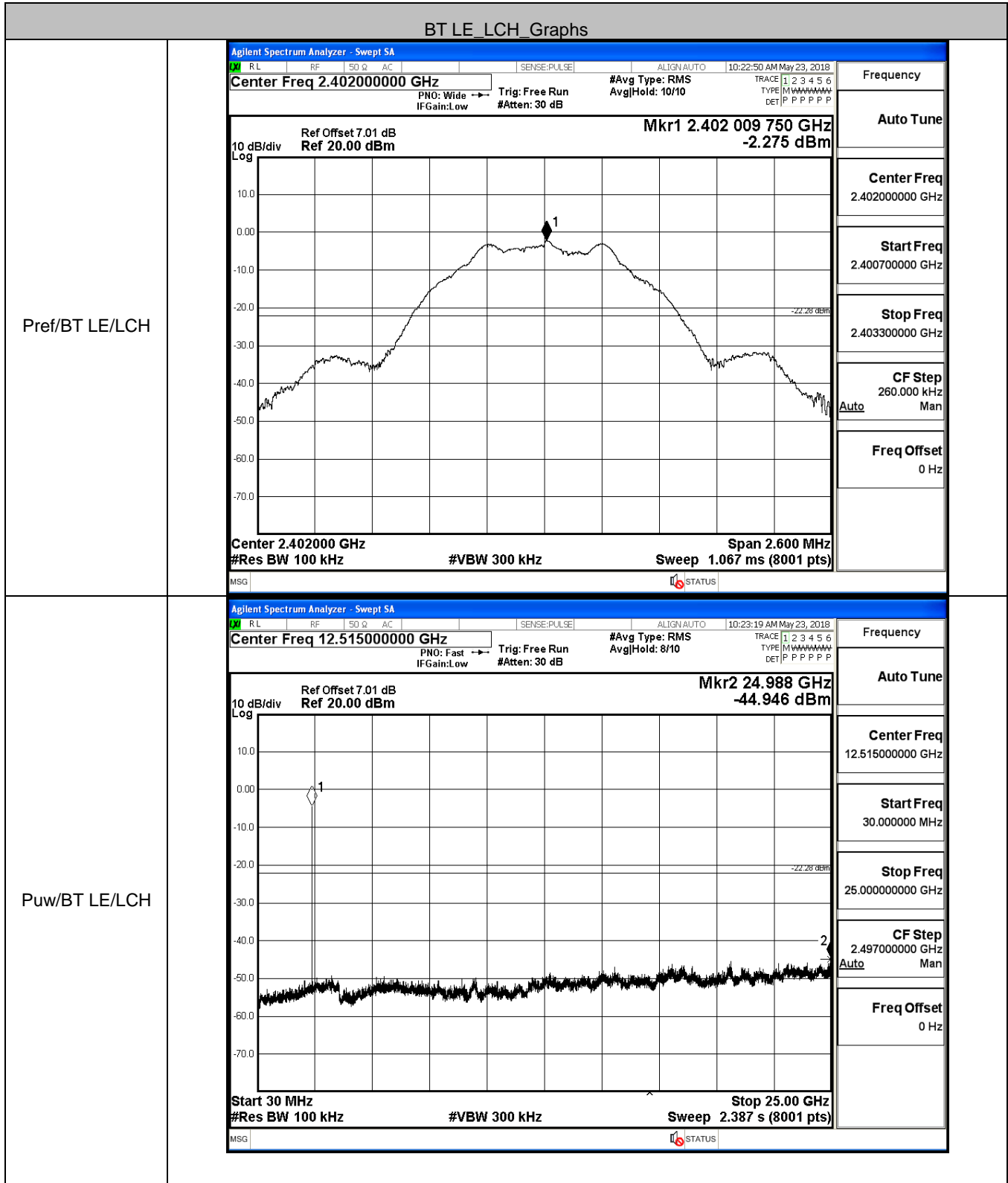
Freq Offset
0 Hz

HCH



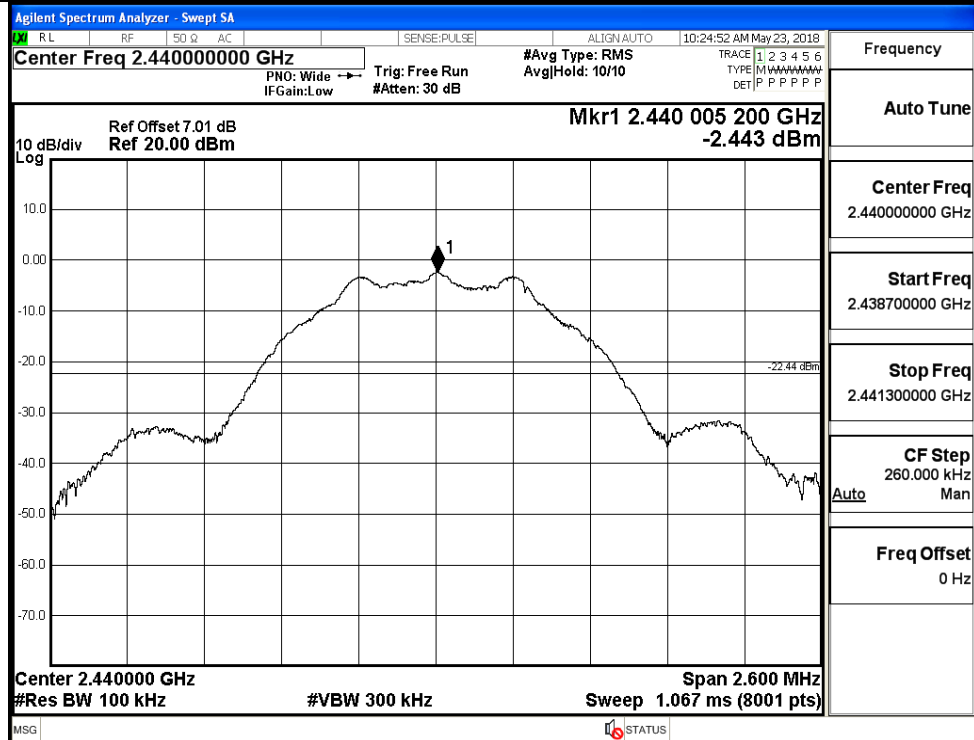
A.5 RF Conducted Spurious Emissions

Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	-2.275	-44.946	-22.275	PASS
BT LE	MCH	-2.443	-45.337	-22.443	PASS
BT LE	HCH	-2.832	-45.658	-22.832	PASS

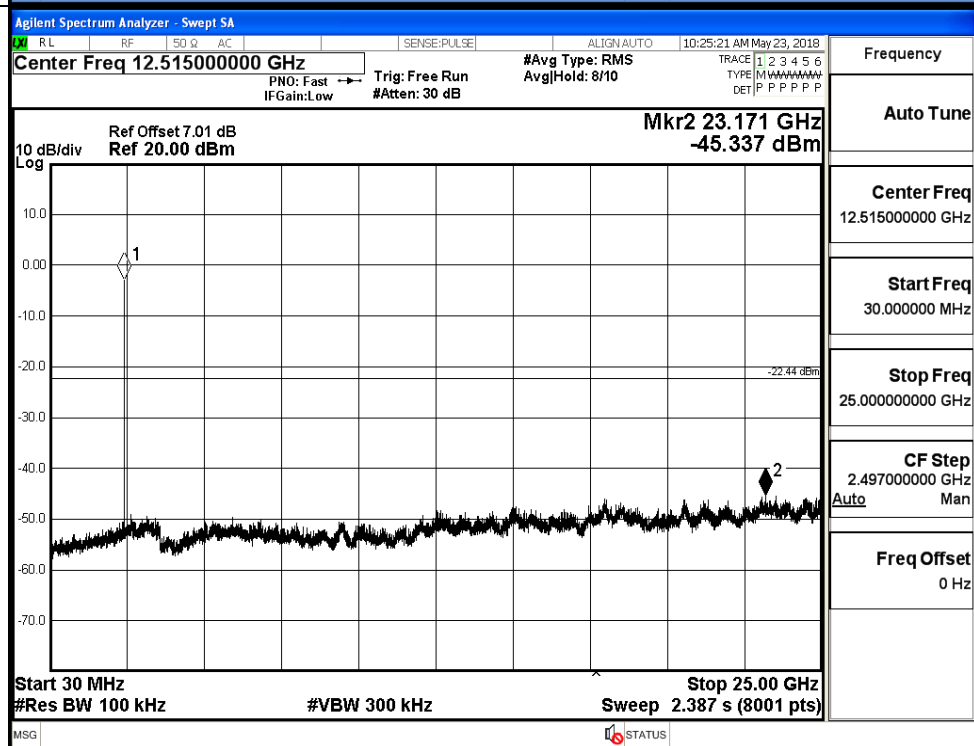


BT LE_MCH_Graphs

Pref/BT LE/MCH

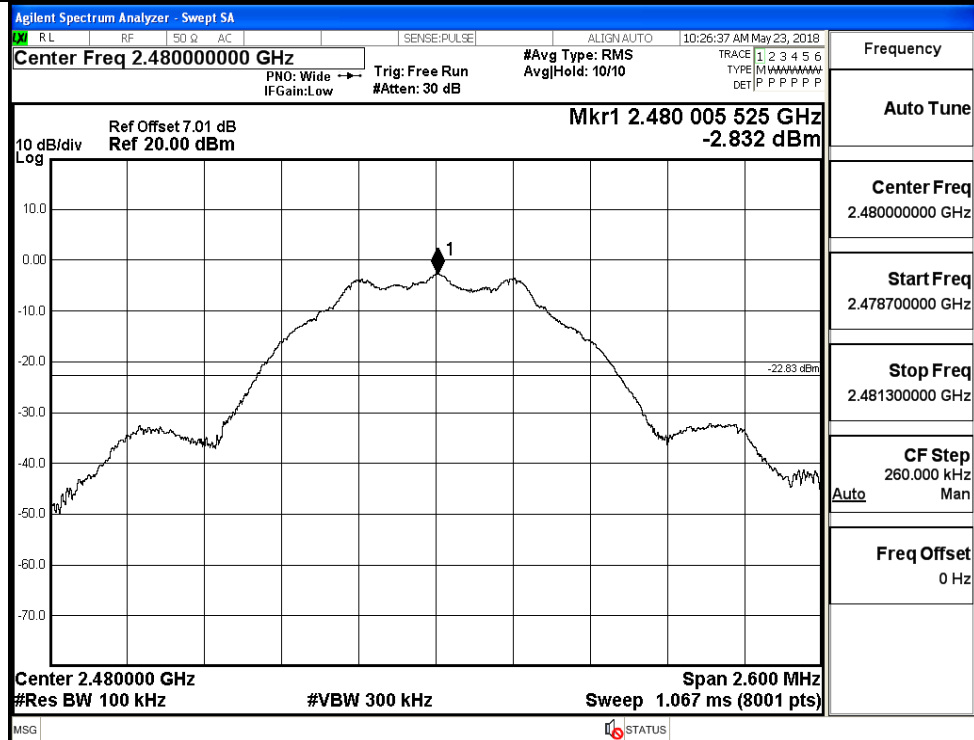


Puw/BT LE/MCH

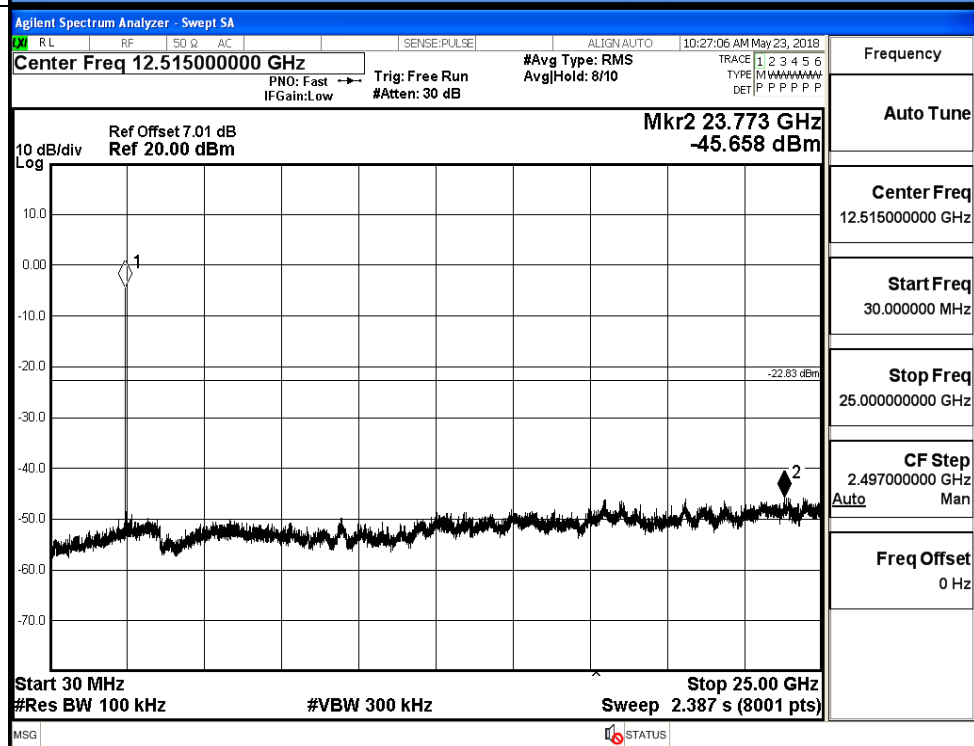


BT LE_HCH_Graphs

Pref/BT LE/HCH



Puw/BT LE/HCH

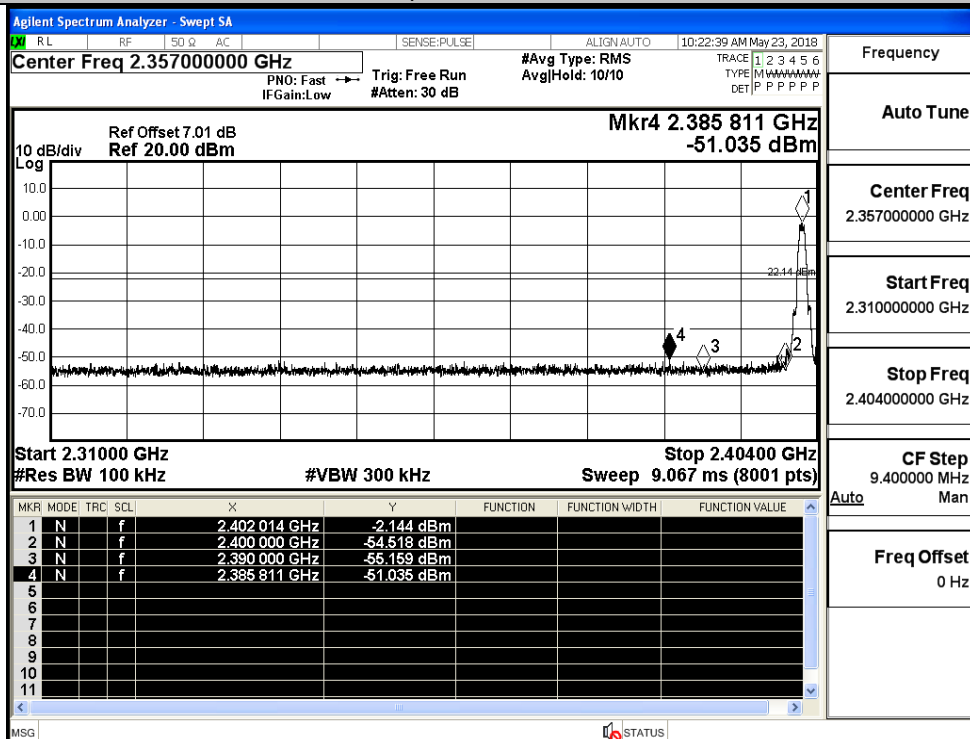


A.6 Band-edge for RF Conducted Emissions

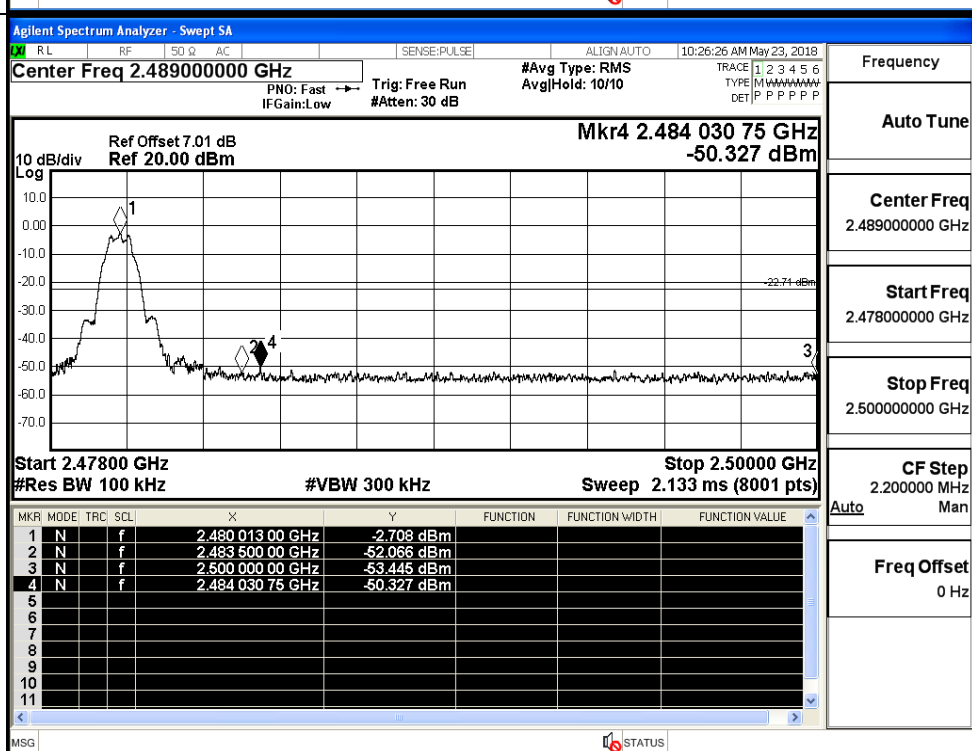
Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	-2.144	-51.035	-22.14	PASS
BT LE	HCH	-2.708	-50.327	-22.71	PASS

Test Graphs

LCH



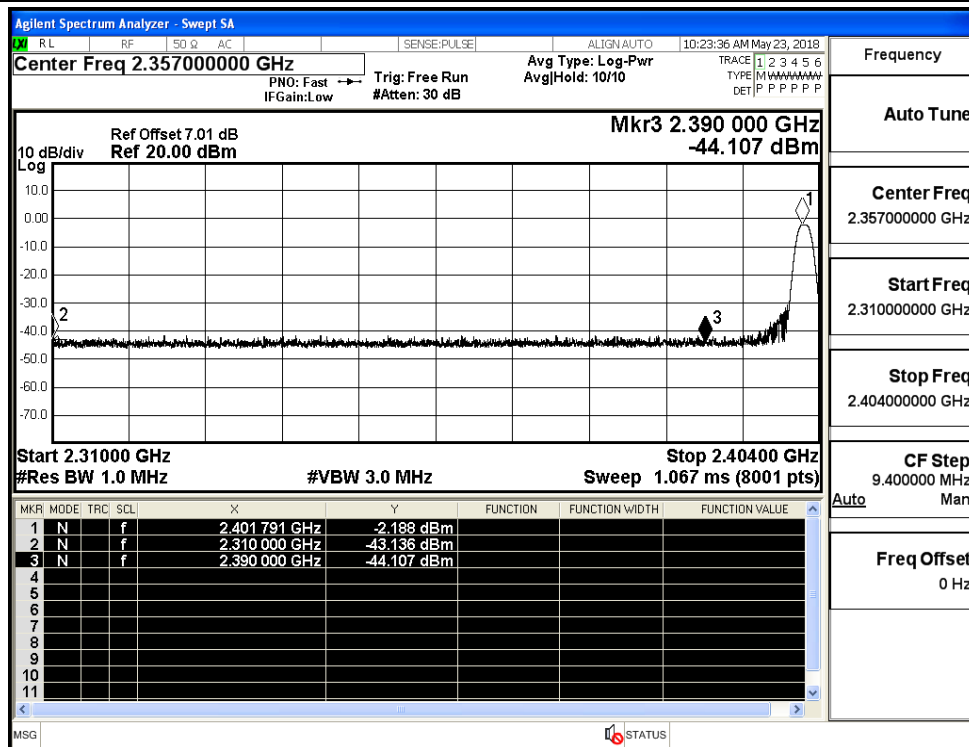
HCH



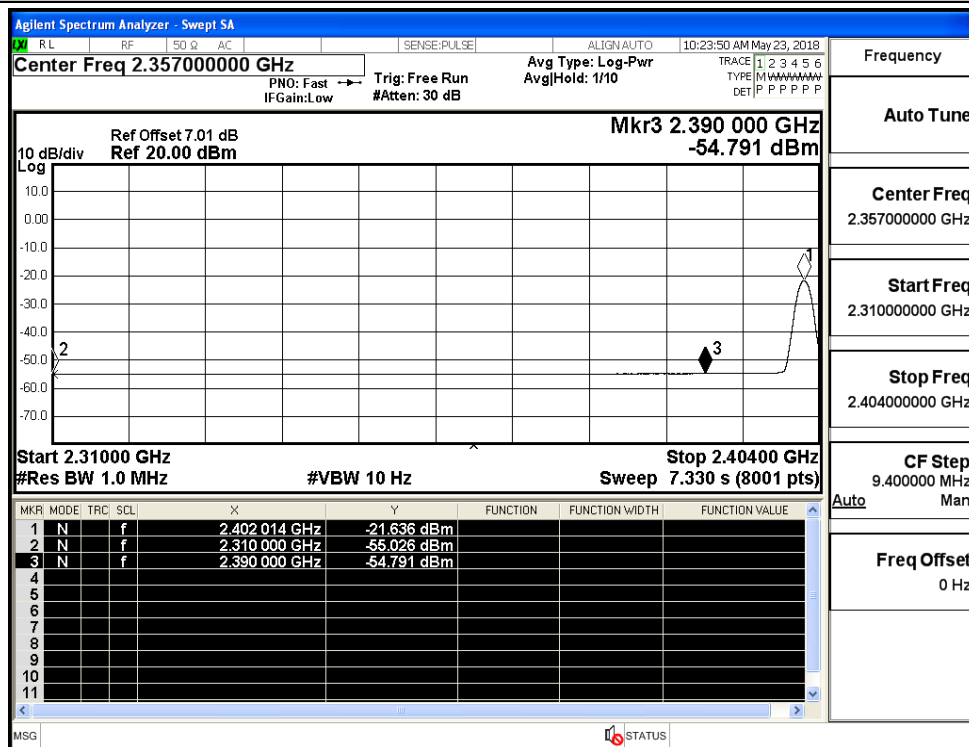
A.7 Restrict-band band-edge measurements

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	-43.14	2.0	0	52.12	PEAK	74	PASS
		Ant1	2310.0	-55.03	2.0	0	40.23	AV	54	PASS
		Ant1	2390.0	-44.11	2.0	0	51.15	PEAK	74	PASS
		Ant1	2390.0	-54.79	2.0	0	40.47	AV	54	PASS
	2480	Ant1	2483.5	-44.66	2.0	0	50.60	PEAK	74	PASS
		Ant1	2483.5	-54.33	2.0	0	40.93	AV	54	PASS
		Ant1	2500.0	-43.00	2.0	0	52.26	PEAK	74	PASS
		Ant1	2500.0	-54.39	2.0	0	40.87	AV	54	PASS

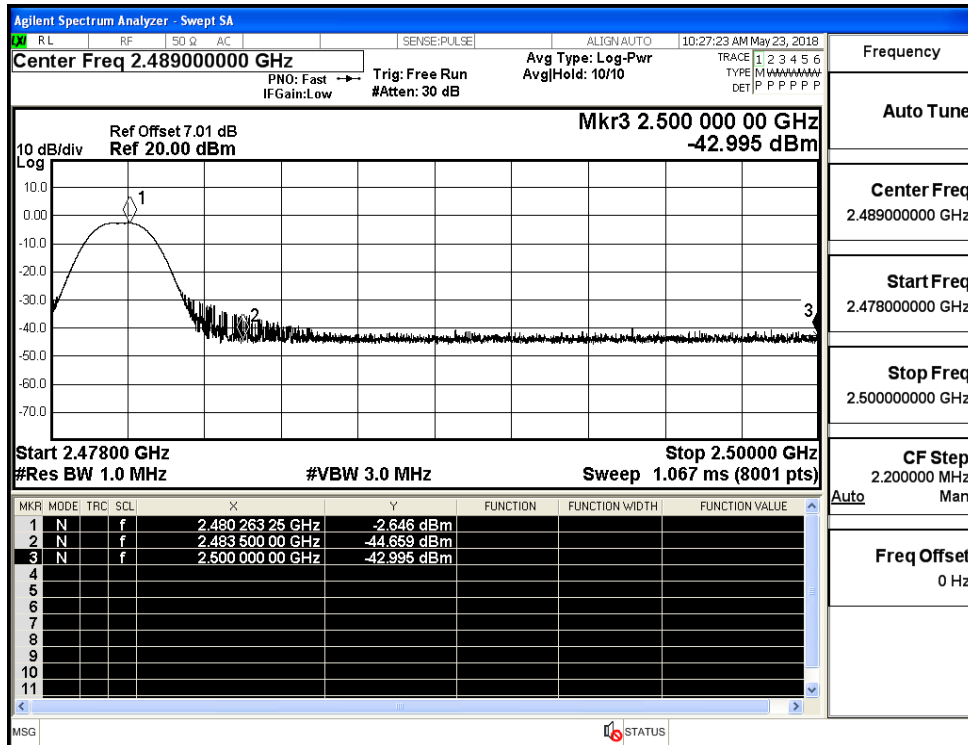
Restrict-band band-edge measurements_BT LE_2402_Ant1_PEAK



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

