

Appendix B

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

Product Name: HyBook Plus

Trade Mark: Hyundai

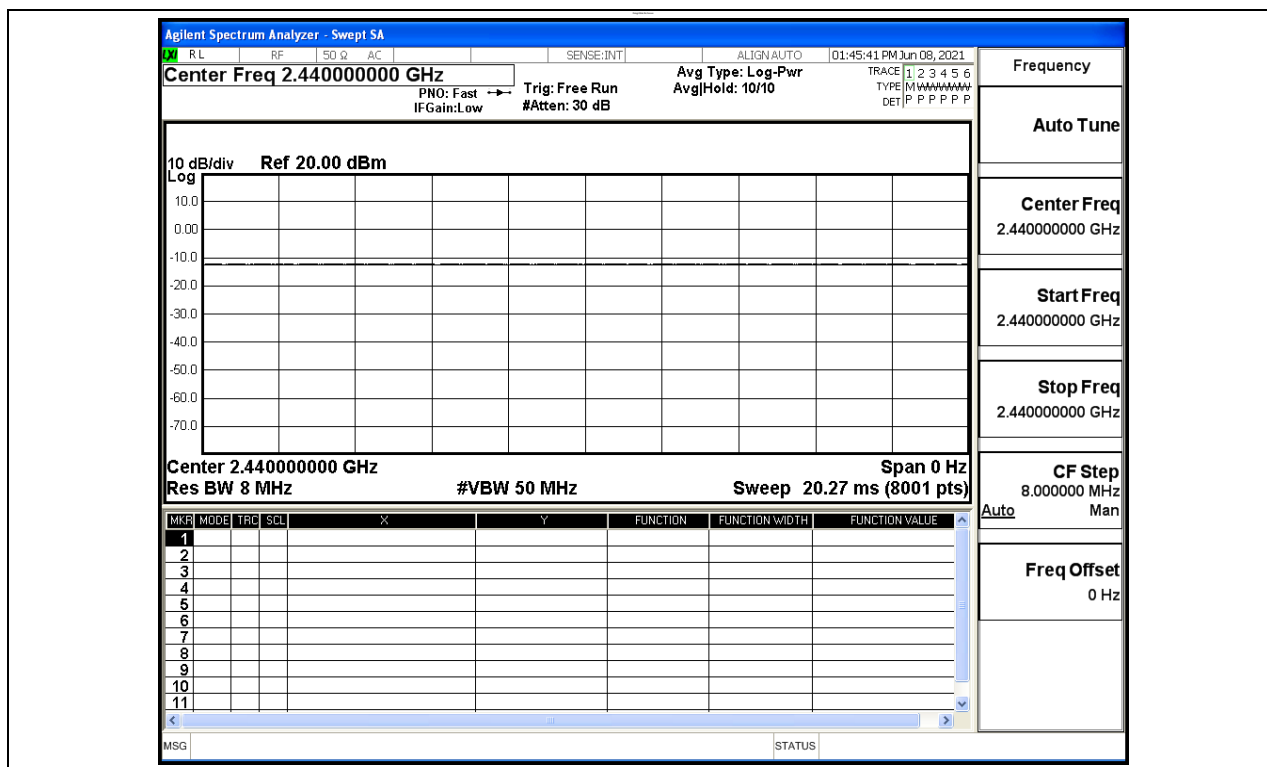
Test Model: HT13FBI381SG

Environmental Conditions

Temperature:	22.6° C
Relative Humidity:	54.3%
ATM Pressure:	100.0 kPa
Test Engineer:	Kay Hu
Supervised by:	Li Huan

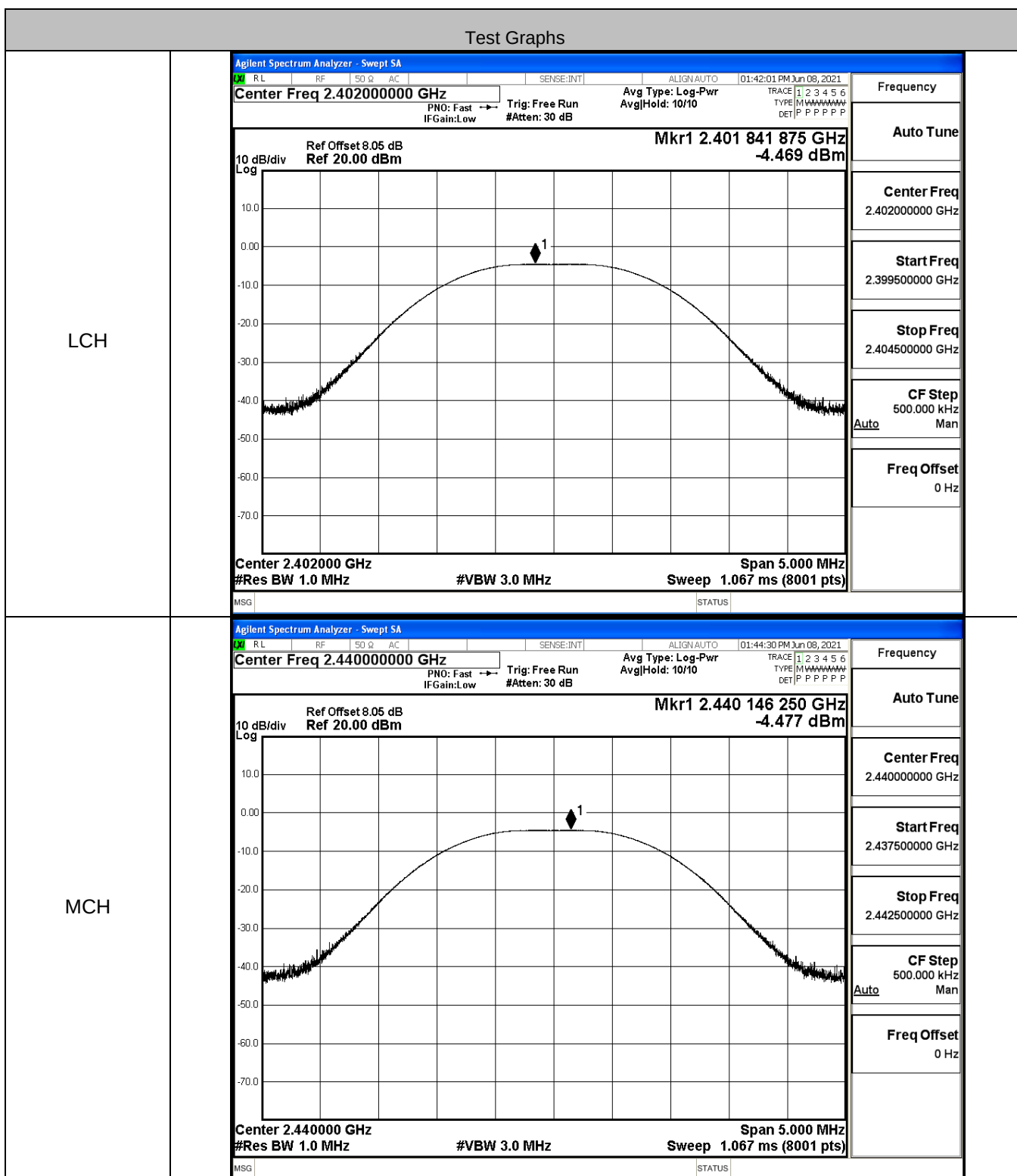
B.1 Duty Cycle

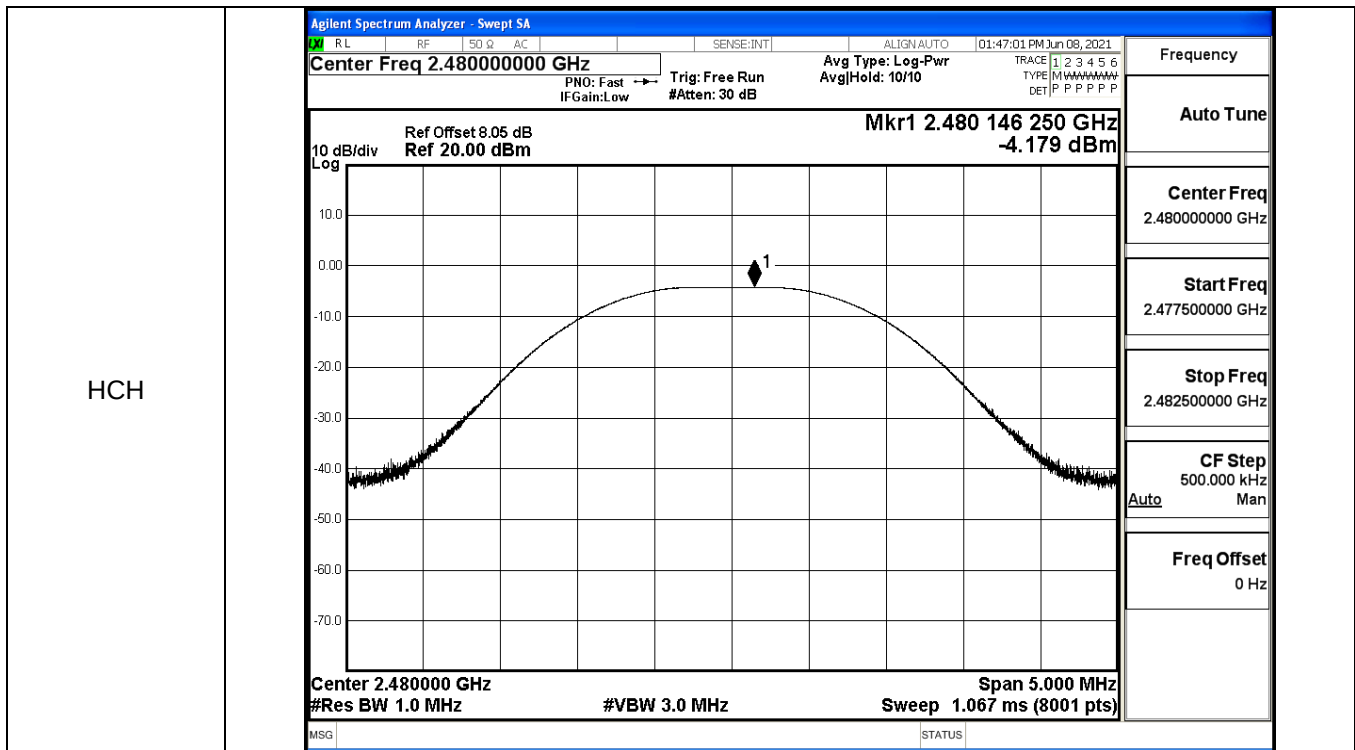
Test Mode	Test Channel	Ant	Duty Cycle[%]	Verdict
BT LE	2440	Ant1	100	PASS



B.2 Maximum Conducted Peak Output Power

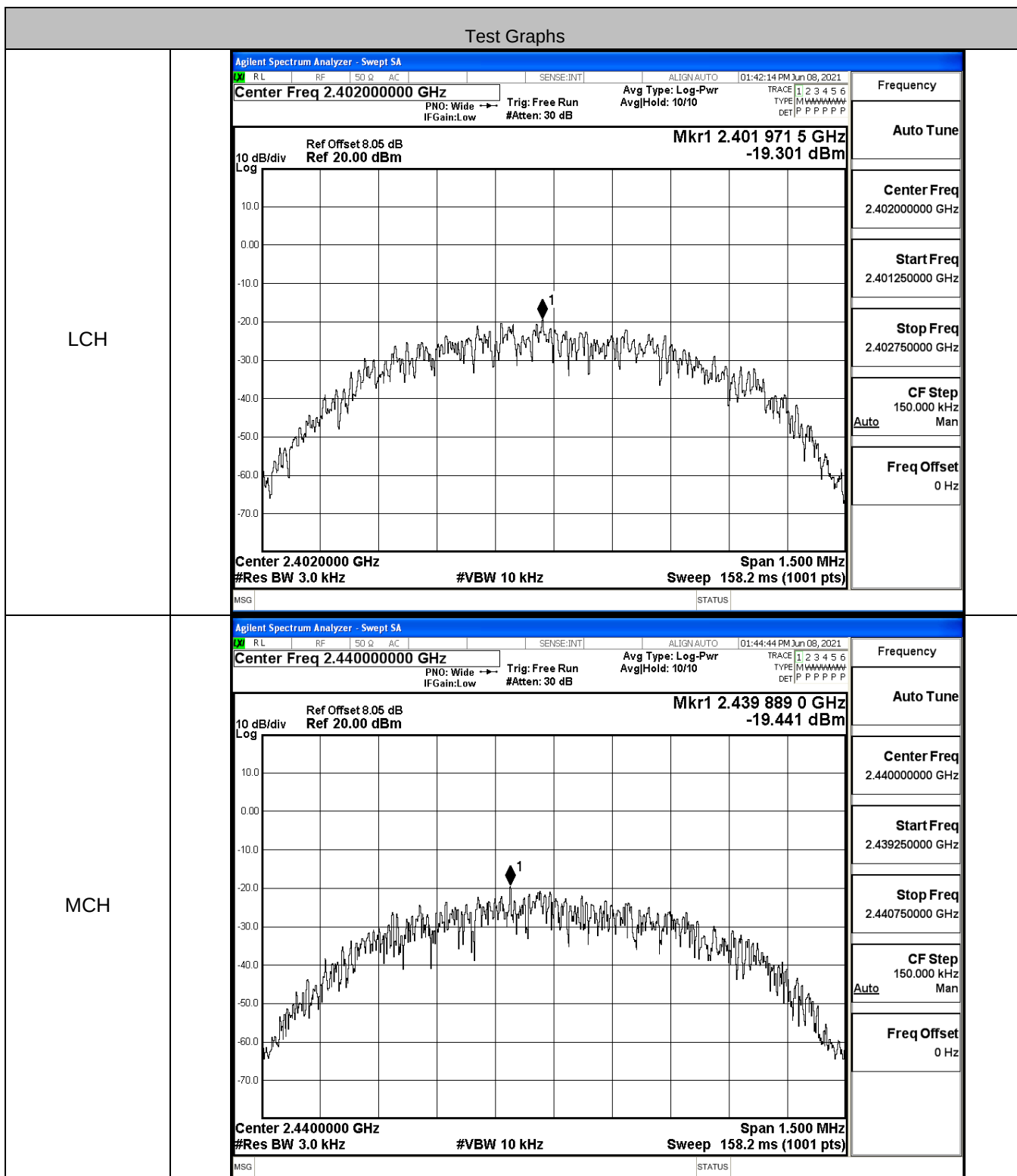
Mode	Channel	Conduct Peak Power[dBm]	Limit [dBm]	Verdict
BT LE	LCH	-4.469	30	PASS
BT LE	MCH	-4.477	30	PASS
BT LE	HCH	-4.179	30	PASS



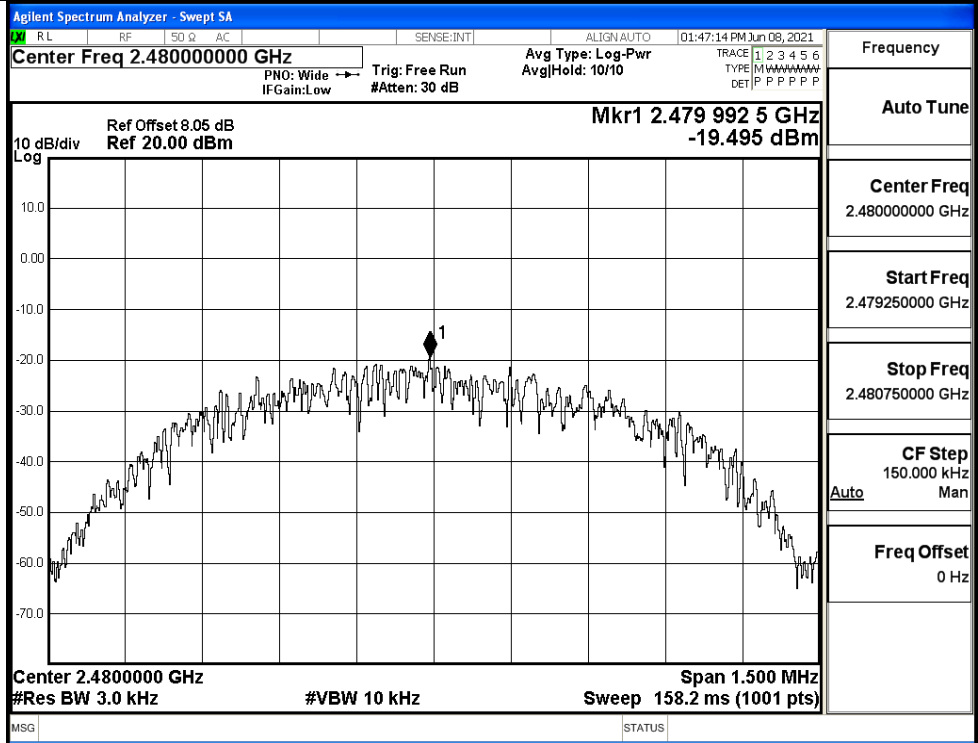


B.3 Maximum Power Spectral Density

Mode	Channel	PSD [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
BT LE	LCH	-19.301	8	PASS
BT LE	MCH	-19.441	8	PASS
BT LE	HCH	-19.495	8	PASS



HCH

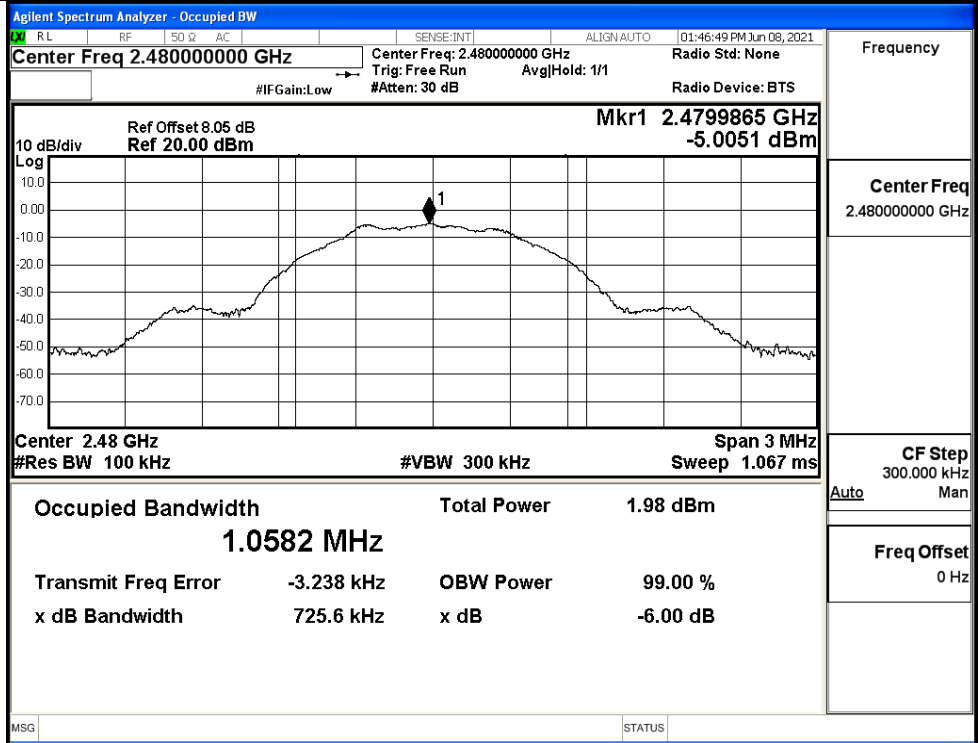


B.4 6dB Bandwidth

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
BT LE	LCH	0.7262	≥ 0.5	PASS
BT LE	MCH	0.7178	≥ 0.5	PASS
BT LE	HCH	0.7256	≥ 0.5	PASS

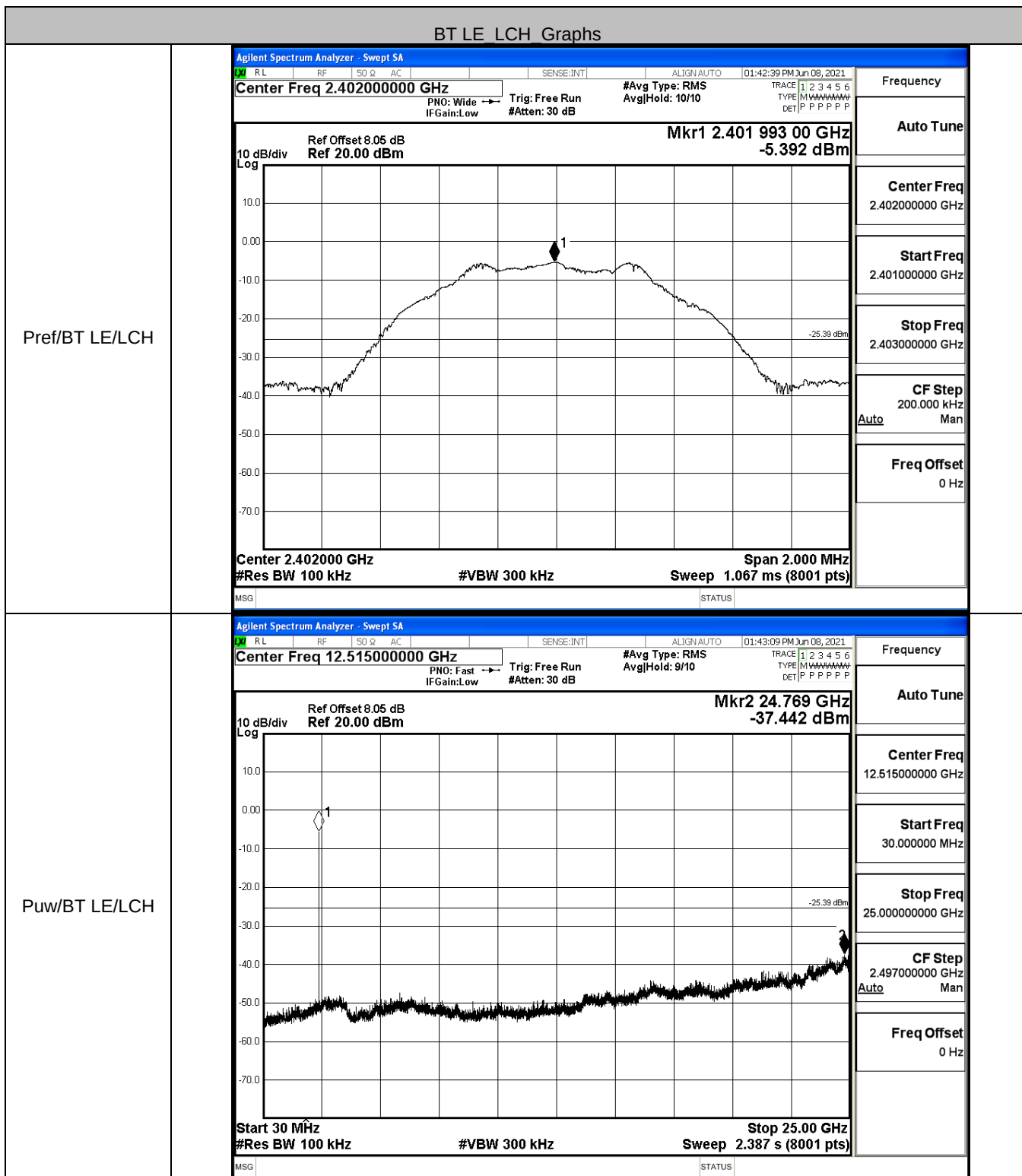
Test Graphs			
LCH		Agilent Spectrum Analyzer - Occupied BW RL RF 50 Ω AC SENSE:INT ALIGN: AUTO 01:41:50 PM Jun 08, 2021 Center Freq 2.402000000 GHz Center Freq: 2.402000000 GHz Radio Std: None Trig: Free Run Avg/Hold: 1/1 #IF Gain: Low #Atten: 30 dB Radio Device: BTS Ref Offset 8.05 dB Mkr1 2.4019963 GHz Ref 20.00 dBm -5.3539 dBm Center 2.402 GHz Span 3 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 1.067 ms Occupied Bandwidth Total Power 1.69 dBm 1.0565 MHz Transmit Freq Error -326 Hz OBW Power 99.00 % x dB Bandwidth 726.2 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
		Agilent Spectrum Analyzer - Occupied BW RL RF 50 Ω AC SENSE:INT ALIGN: AUTO 01:44:19 PM Jun 08, 2021 Center Freq 2.440000000 GHz Center Freq: 2.440000000 GHz Radio Std: None Trig: Free Run Avg/Hold: 1/1 #IF Gain: Low #Atten: 30 dB Radio Device: BTS Ref Offset 8.05 dB Mkr1 2.4399936 GHz Ref 20.00 dBm -5.3707 dBm Center 2.44 GHz Span 3 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 1.067 ms Occupied Bandwidth Total Power 1.53 dBm 1.0625 MHz Transmit Freq Error -2.434 kHz OBW Power 99.00 % x dB Bandwidth 717.8 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
MCH			

HCH



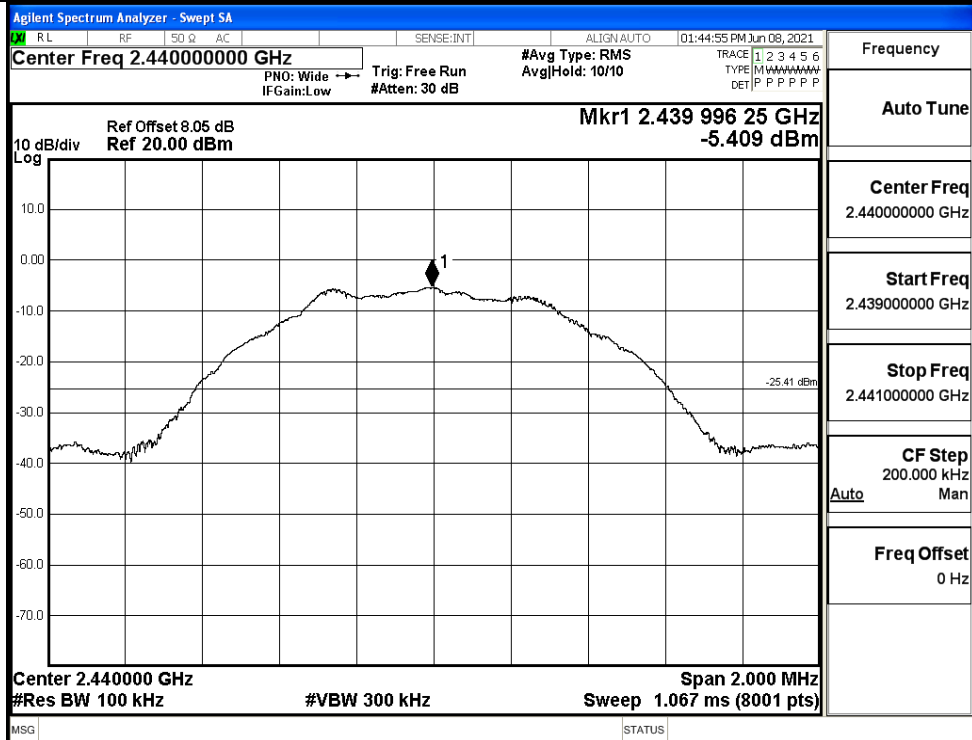
B.5 RF Conducted Spurious Emissions

Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	-5.392	-37.442	-25.392	PASS
BT LE	MCH	-5.409	-37.215	-25.409	PASS
BT LE	HCH	-5.06	-35.846	-25.060	PASS

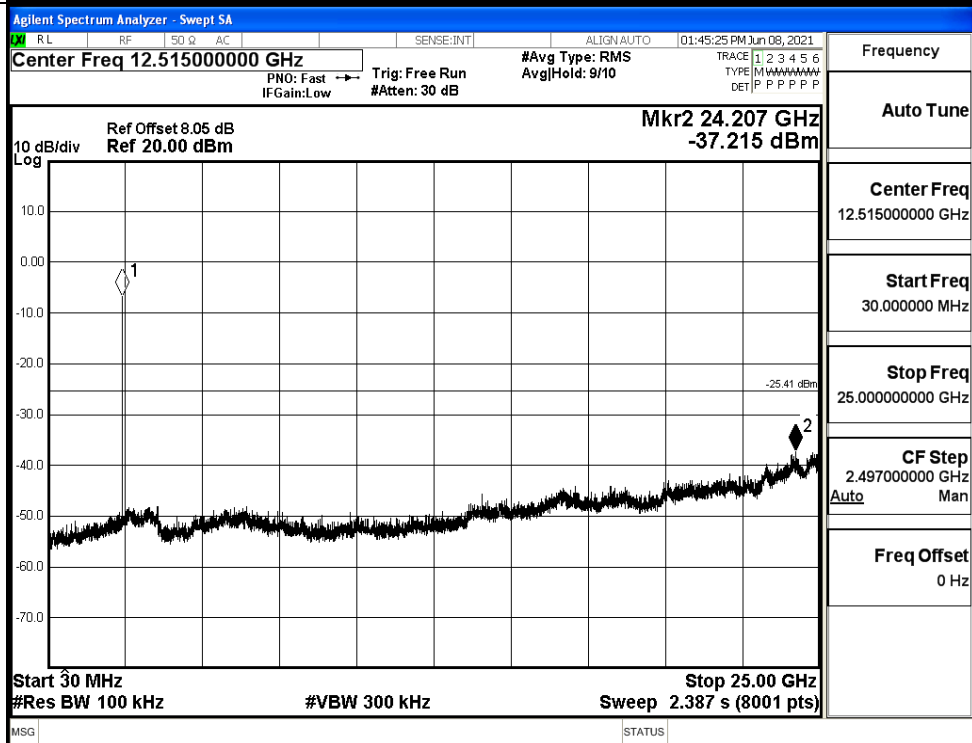


BT LE MCH Graphs

Pref/BT LE/MCH

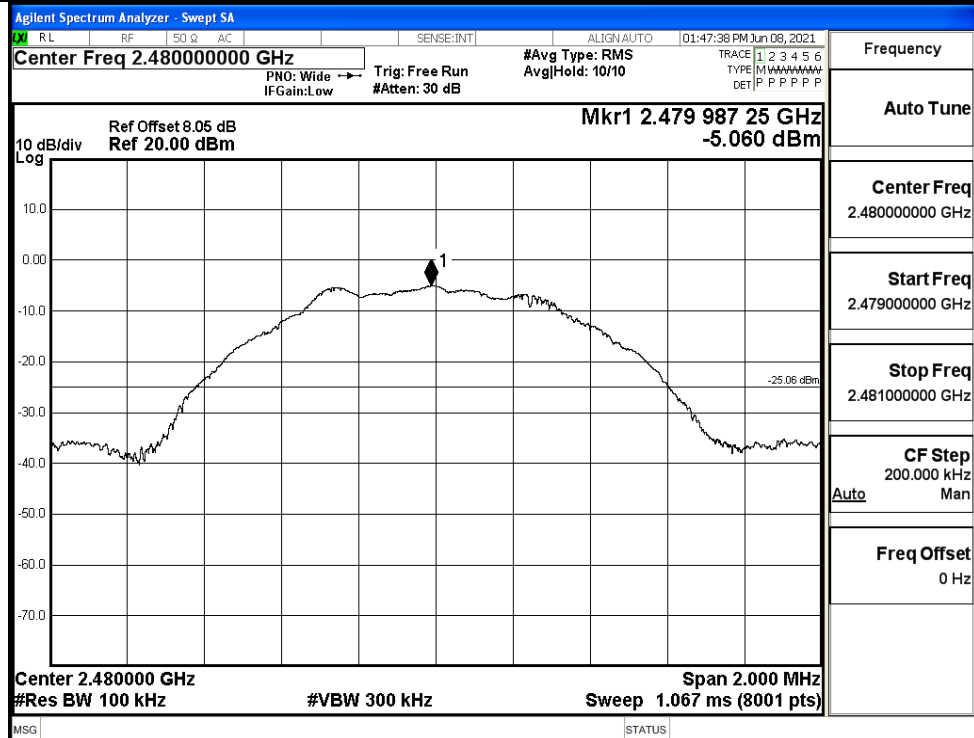


Puw/BT LE/MCH

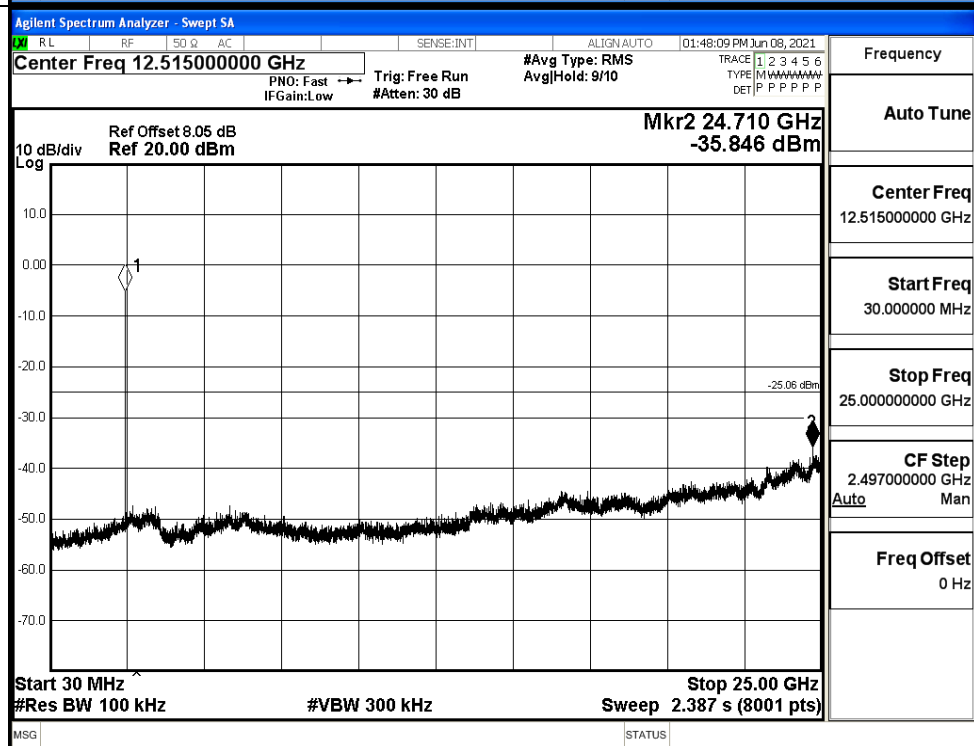


BT LE HCH Graphs

Pref/BT LE/HCH



Puw/BT LE/HCH

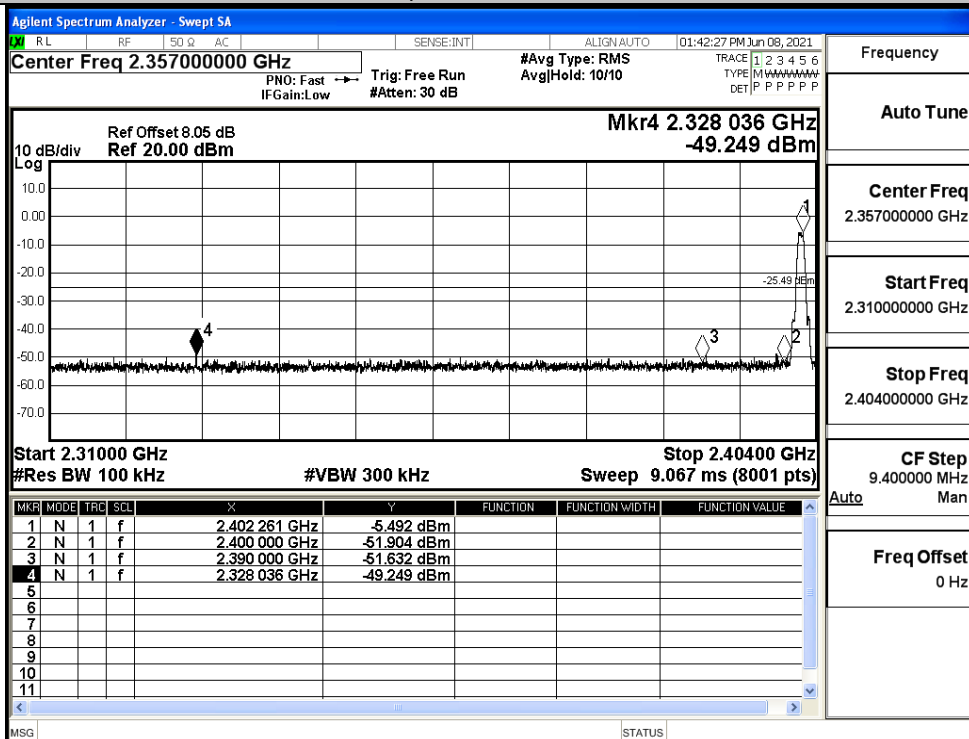


B.6 Band-edge for RF Conducted Emissions

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	-5.492	-49.249	-25.49	PASS
BT LE	HCH	-4.978	-49.047	-24.98	PASS

Test Graphs

LCH



Frequency

Auto Tune

Center Freq
2.357000000 GHz

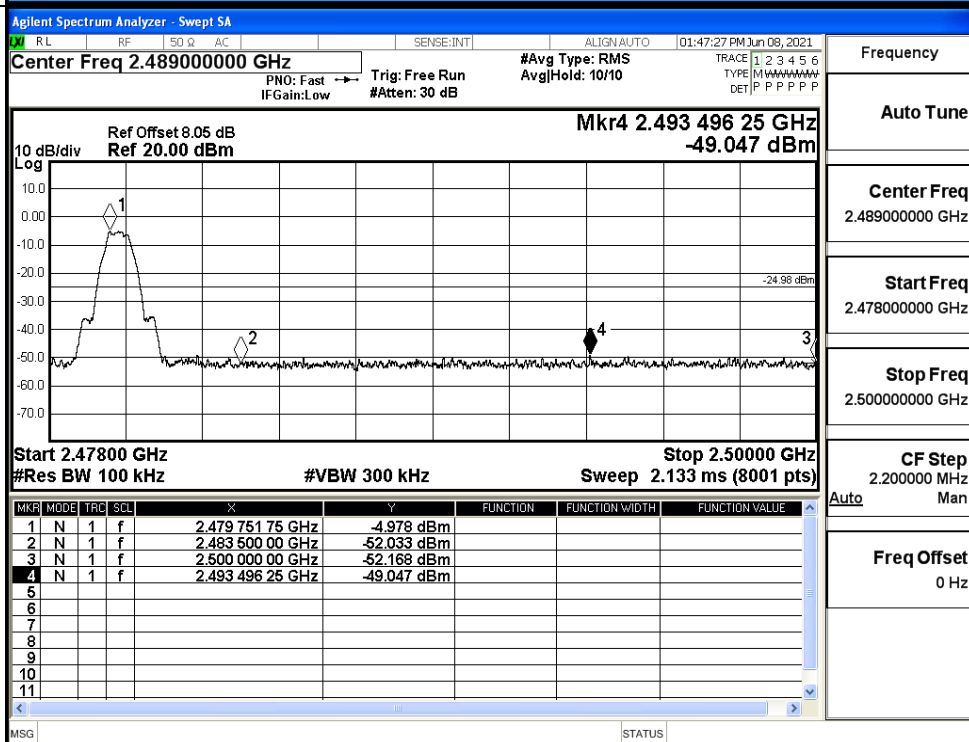
Start Freq
2.310000000 GHz

Stop Freq
2.404000000 GHz

CF Step
9.400000 MHz

Freq Offset
0 Hz

HCH



Frequency

Auto Tune

Center Freq
2.489000000 GHz

Start Freq
2.478000000 GHz

Stop Freq
2.500000000 GHz

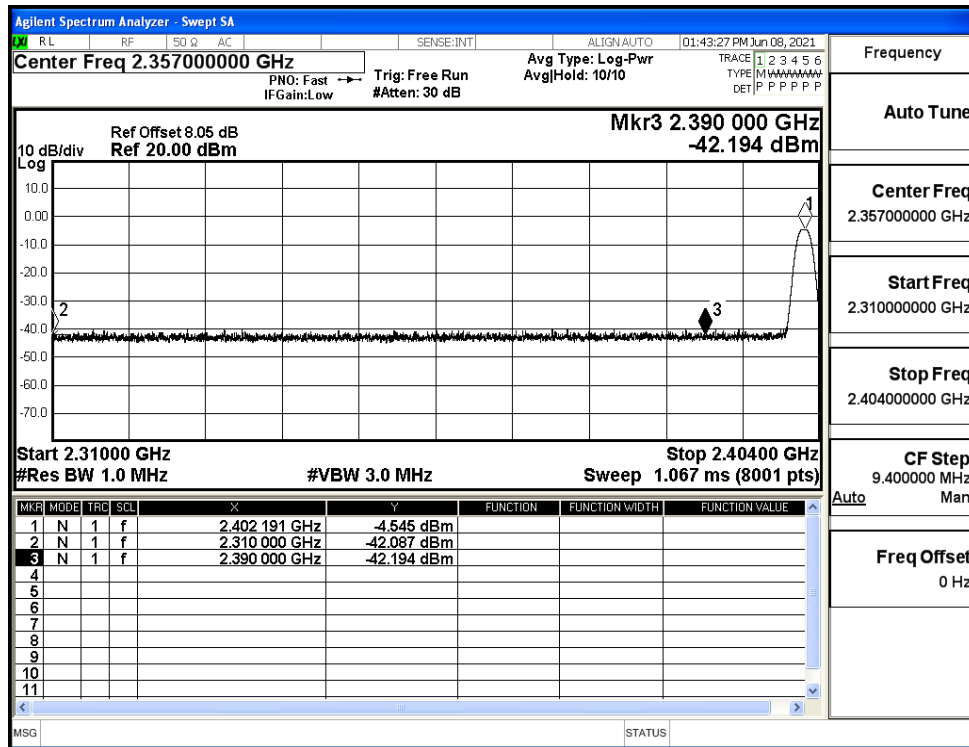
CF Step
2.200000 MHz

Freq Offset
0 Hz

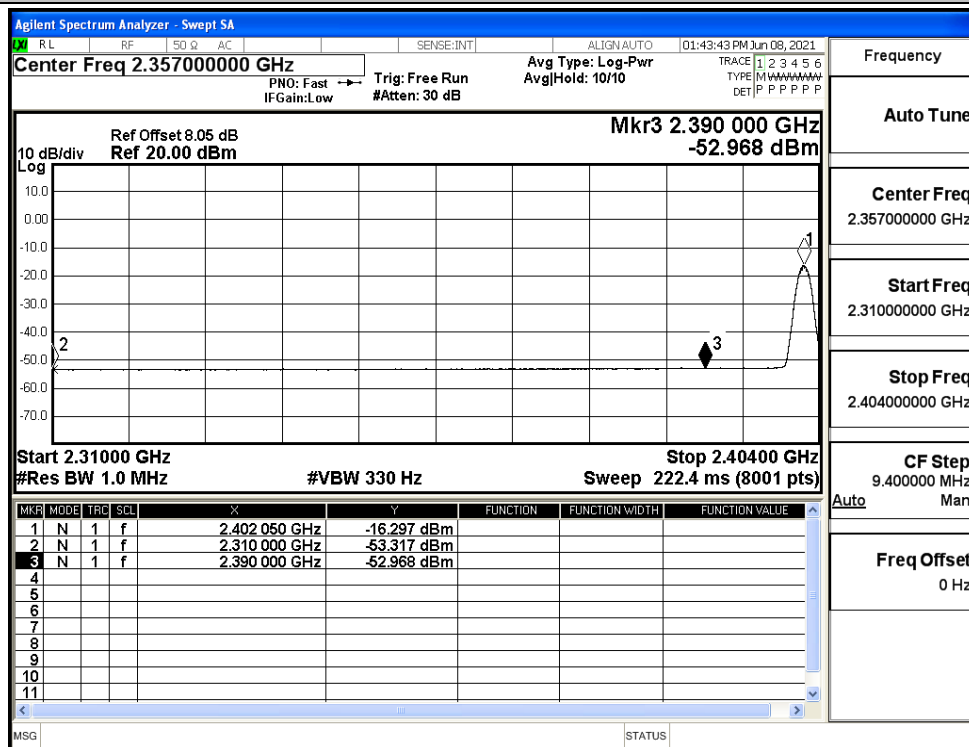
B.7 Restrict-band band-edge measurements

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	-42.09	2.0	0	55.14	PEAK	74	PASS
		Ant1	2310.0	-53.32	2.0	0	43.91	AV	54	PASS
		Ant1	2390.0	-42.19	2.0	0	55.04	PEAK	74	PASS
		Ant1	2390.0	-52.97	2.0	0	44.26	AV	54	PASS
	2480	Ant1	2483.5	-42.32	2.0	0	54.91	PEAK	74	PASS
		Ant1	2483.5	-52.48	2.0	0	44.75	AV	54	PASS
		Ant1	2500.0	-40.87	2.0	0	56.36	PEAK	74	PASS
		Ant1	2500.0	-52.33	2.0	0	44.90	AV	54	PASS

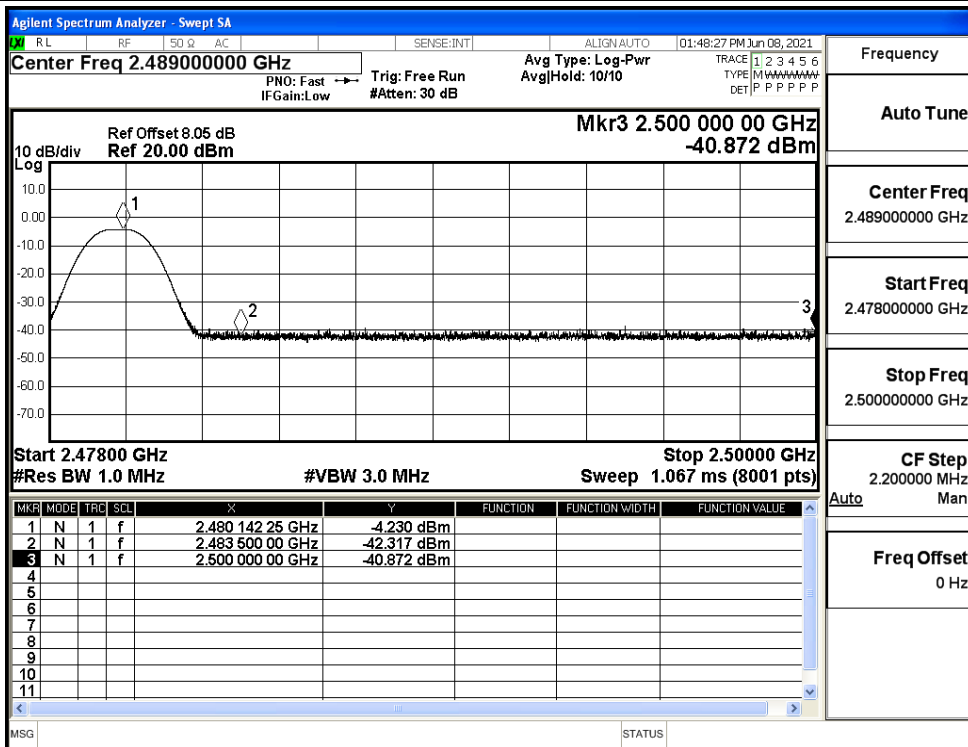
Restrict-band band-edge measurements_BT LE_2402_Ant1_PEAK



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

