

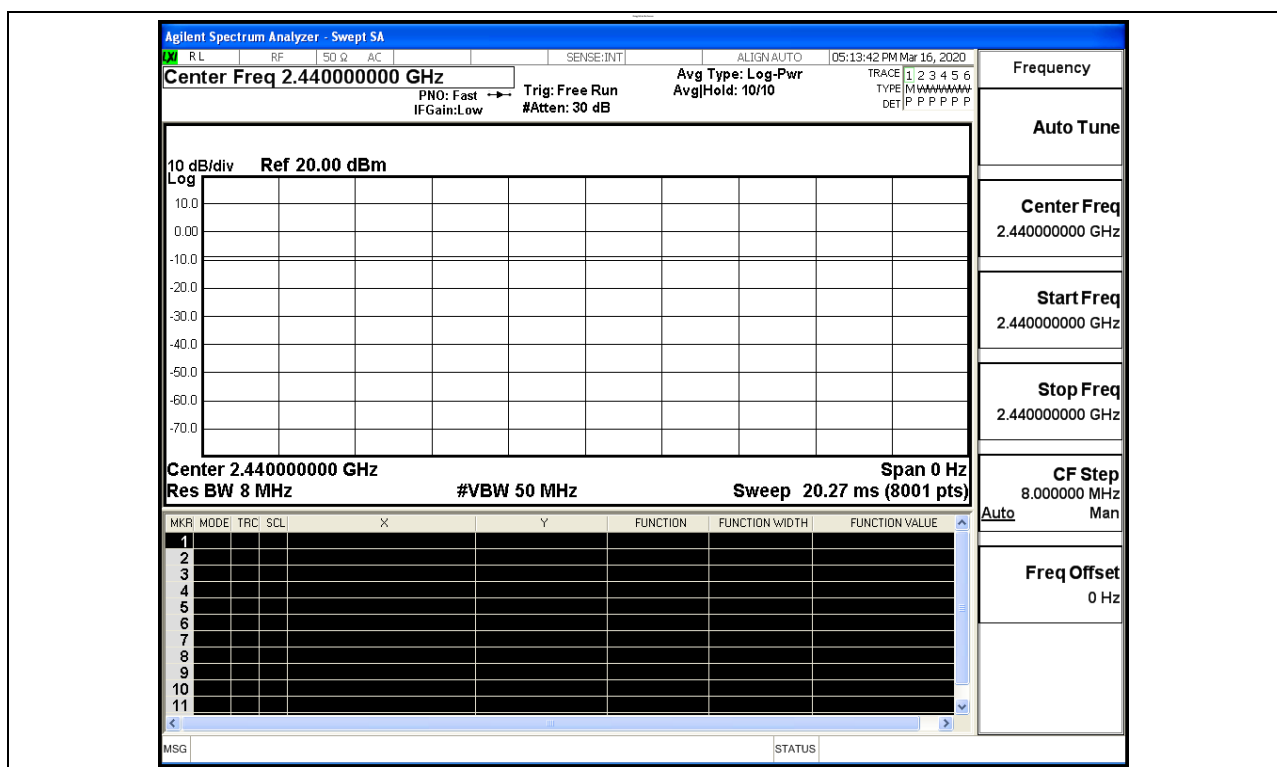
Appendix B
RF Test Data for BT V5.0(DTS) (Conducted Measurement)
Product Name: Bluetooth Speaker
Trade Mark: Origaudio
Test Model: AMPZER

Environmental Conditions

Temperature:	22.3 ° C
Relative Humidity:	53.0%
ATM Pressure:	100.0 kPa
Test Engineer:	Qu Xin
Supervised by:	Wang Chuang

B.1 Duty Cycle

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

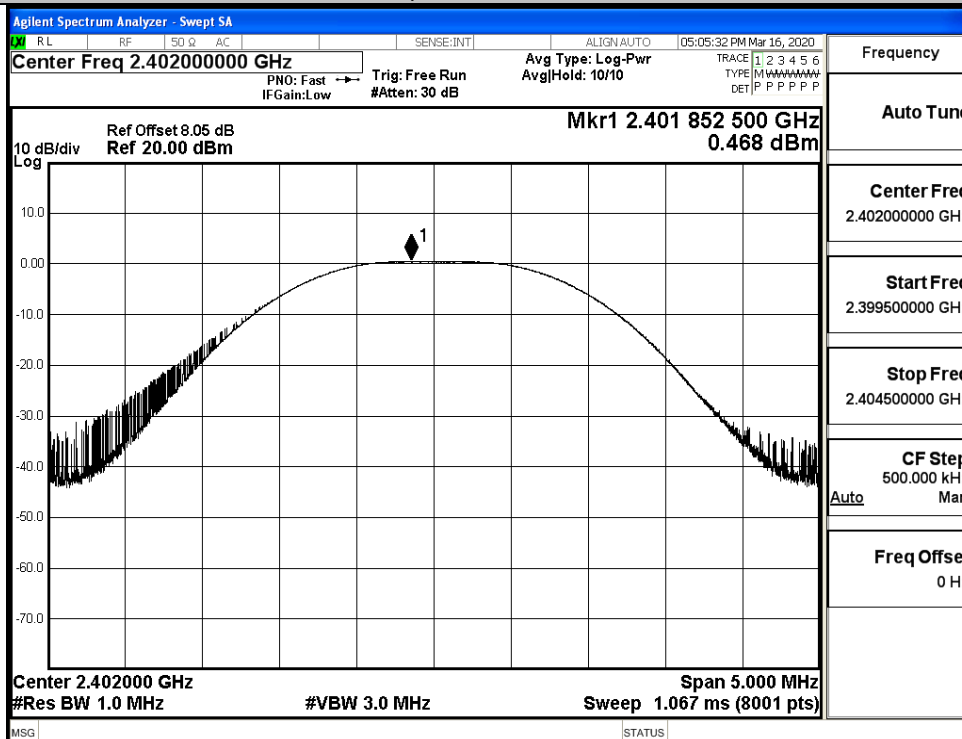


B.2 Maximum Conducted Peak Output Power

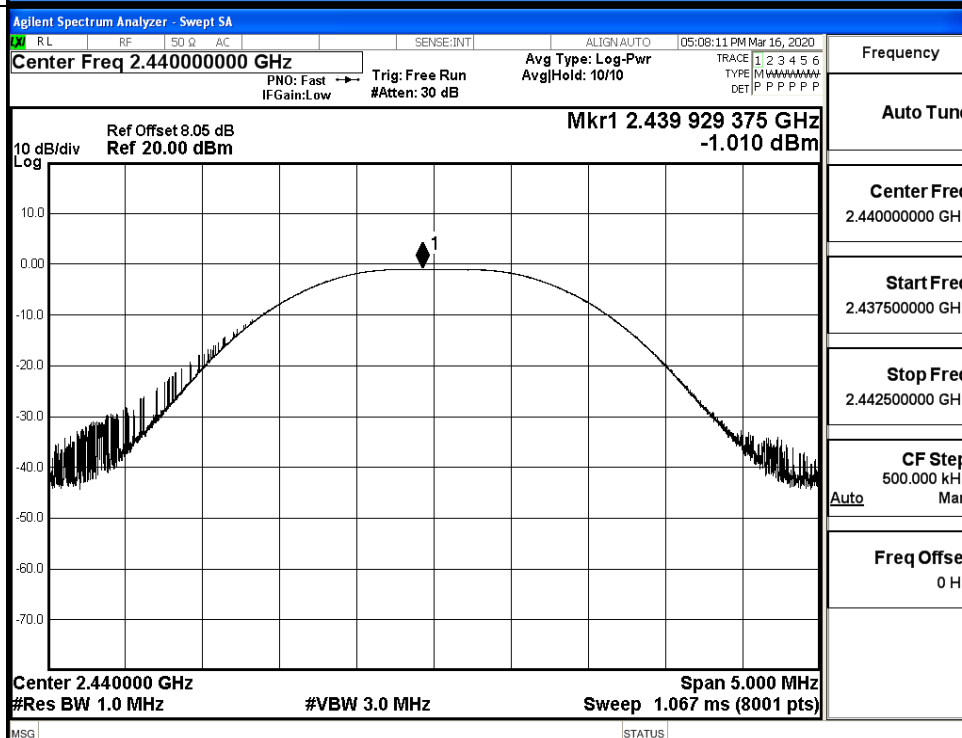
Mode	Channel	Conduct Peak Power[dBm]	Limit [dBm]	Verdict
BT LE	LCH	0.468	30	PASS
BT LE	MCH	-1.01	30	PASS
BT LE	HCH	-2.688	30	PASS

Test Graphs

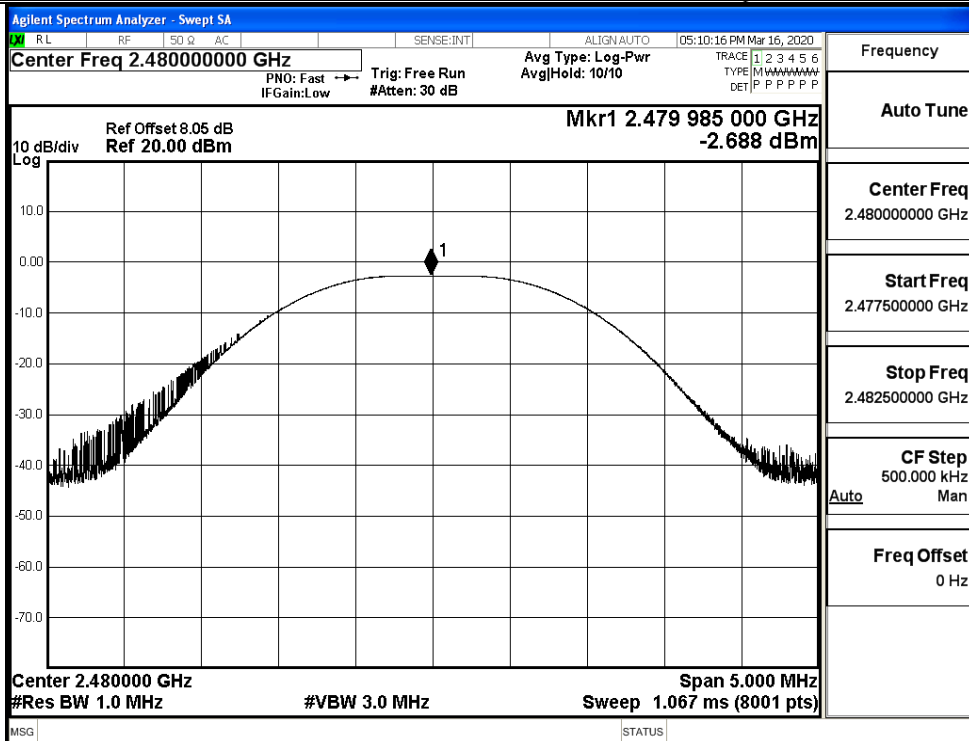
LCH



MCH



HCH

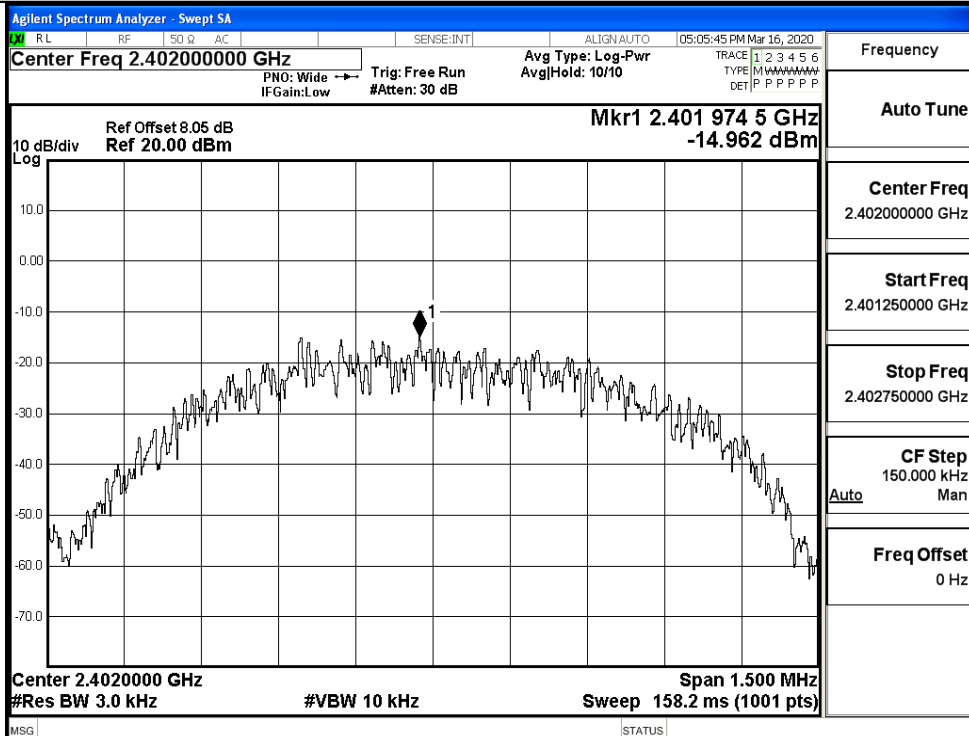


B.3 Maximum Power Spectral Density

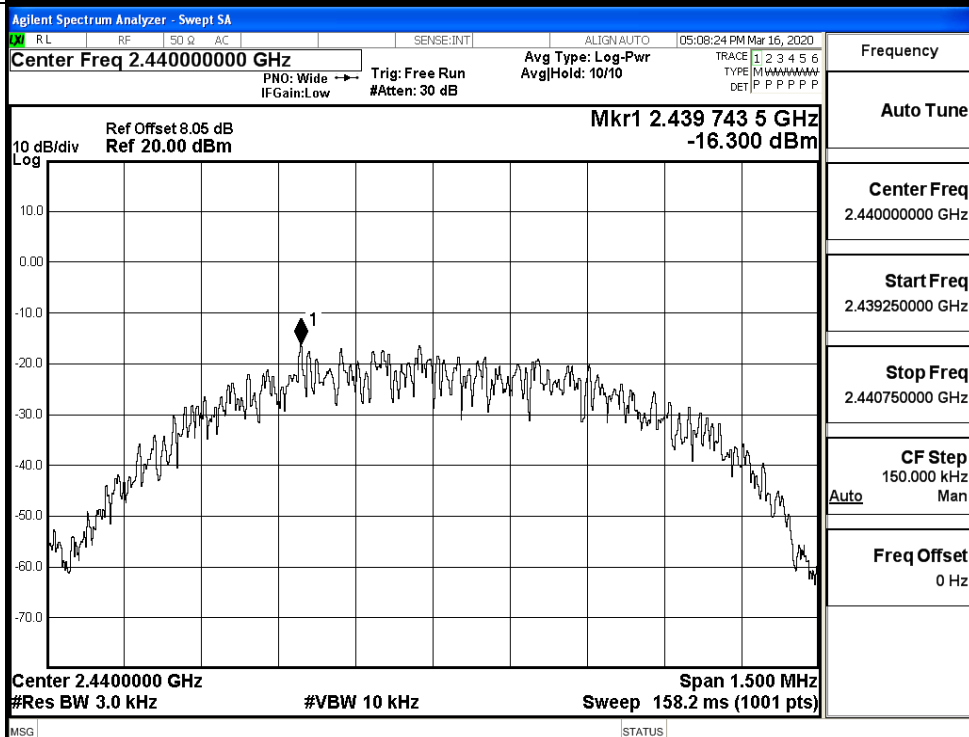
Mode	Channel	PSD [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
BT LE	LCH	-14.962	8	PASS
BT LE	MCH	-16.300	8	PASS
BT LE	HCH	-17.916	8	PASS

Test Graphs

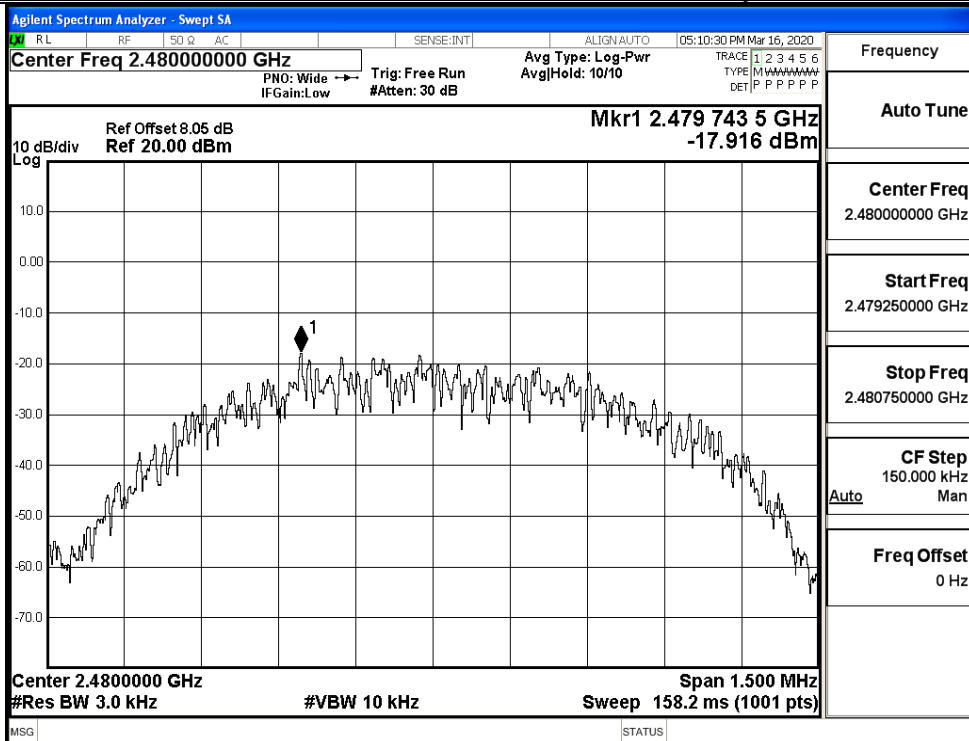
LCH



MCH



HCH

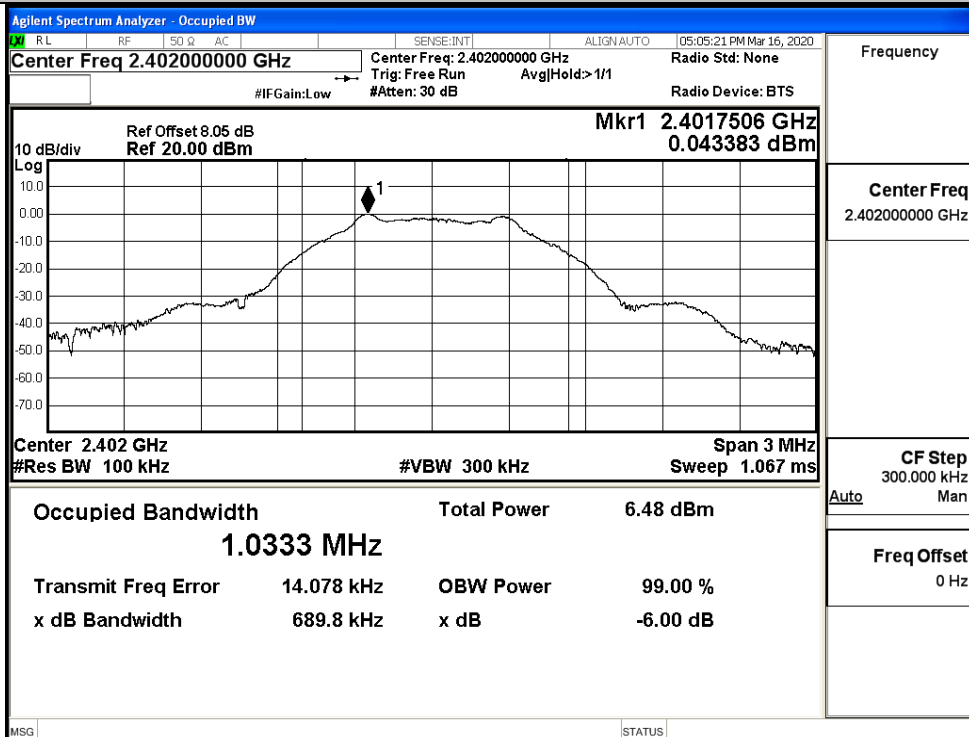


B.4 6dB Bandwidth

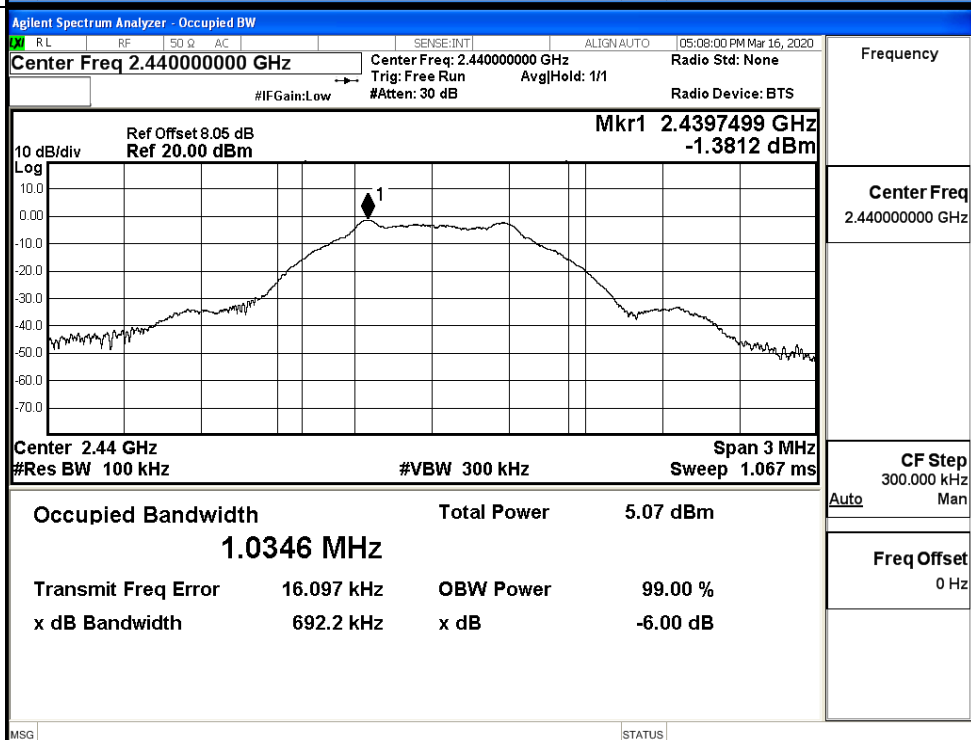
Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
BT LE	LCH	0.6898	≥ 0.5	PASS
BT LE	MCH	0.6922	≥ 0.5	PASS
BT LE	HCH	0.6911	≥ 0.5	PASS

Test Graphs

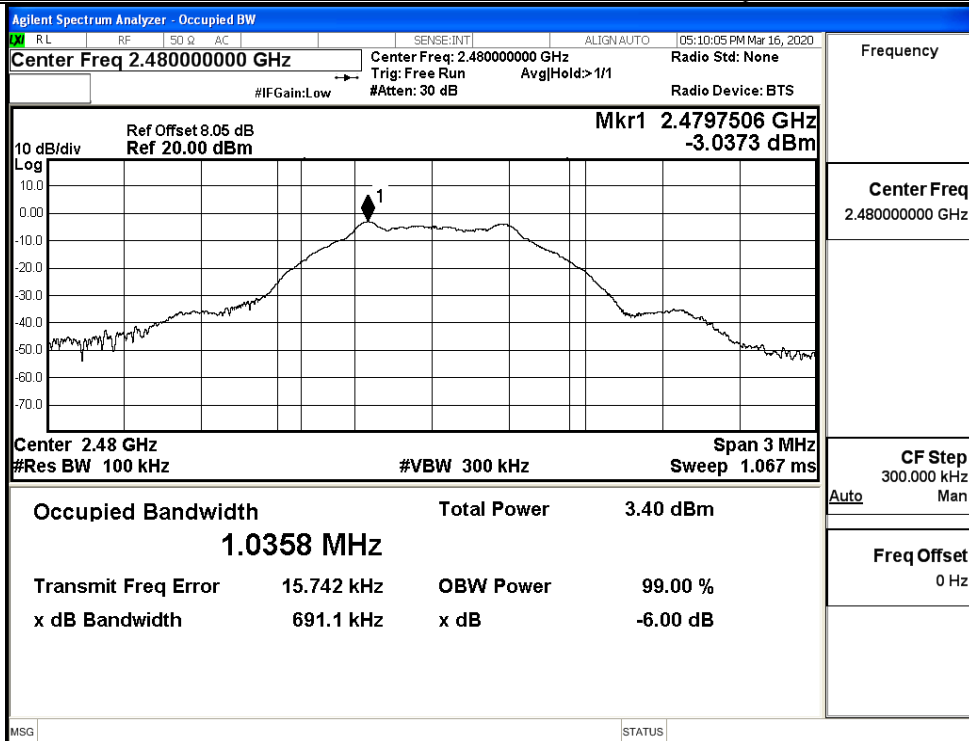
LCH



MCH



HCH

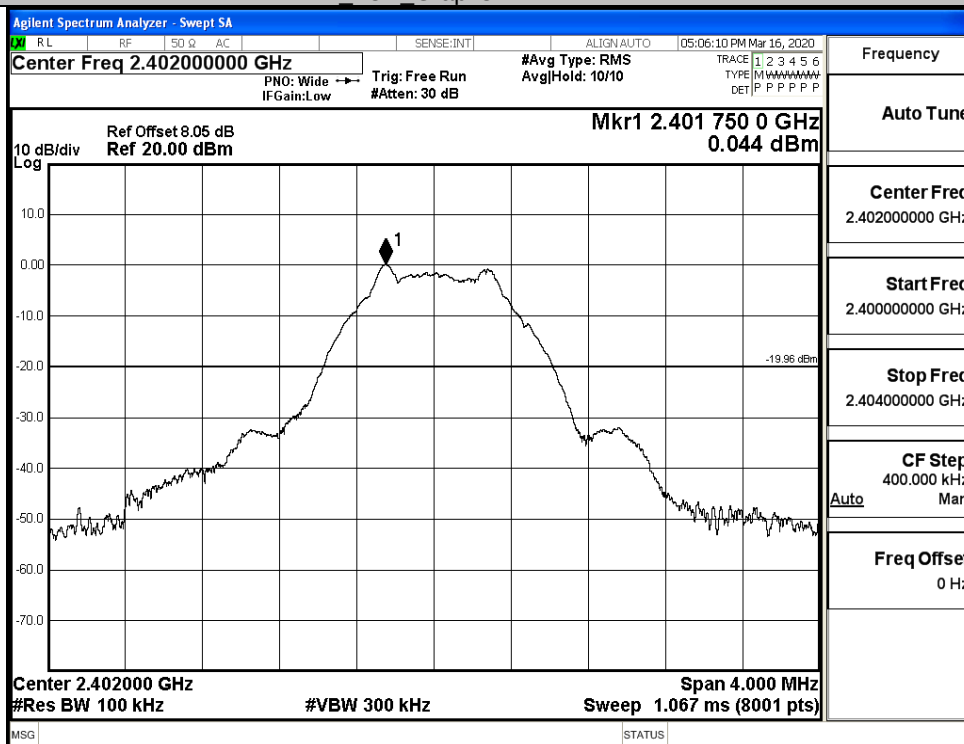


B.5 RF Conducted Spurious Emissions

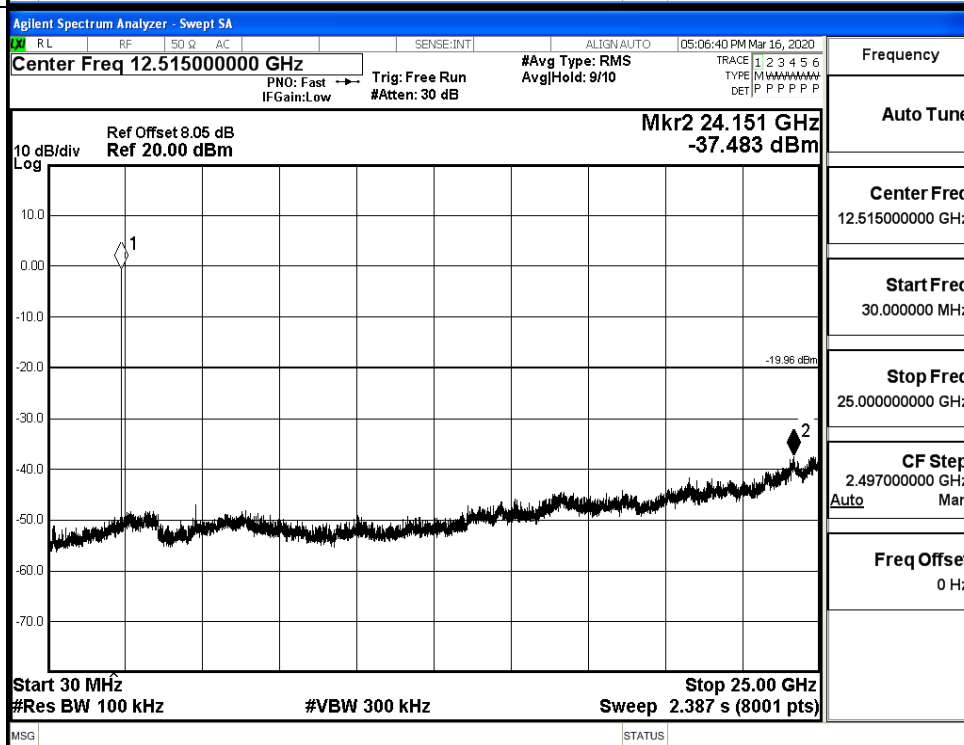
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	0.044	-37.483	-19.956	PASS
BT LE	MCH	-1.389	-37.040	-21.389	PASS
BT LE	HCH	-3.057	-37.358	-23.057	PASS

BT LE LCH Graphs

Pref/BT LE/LCH

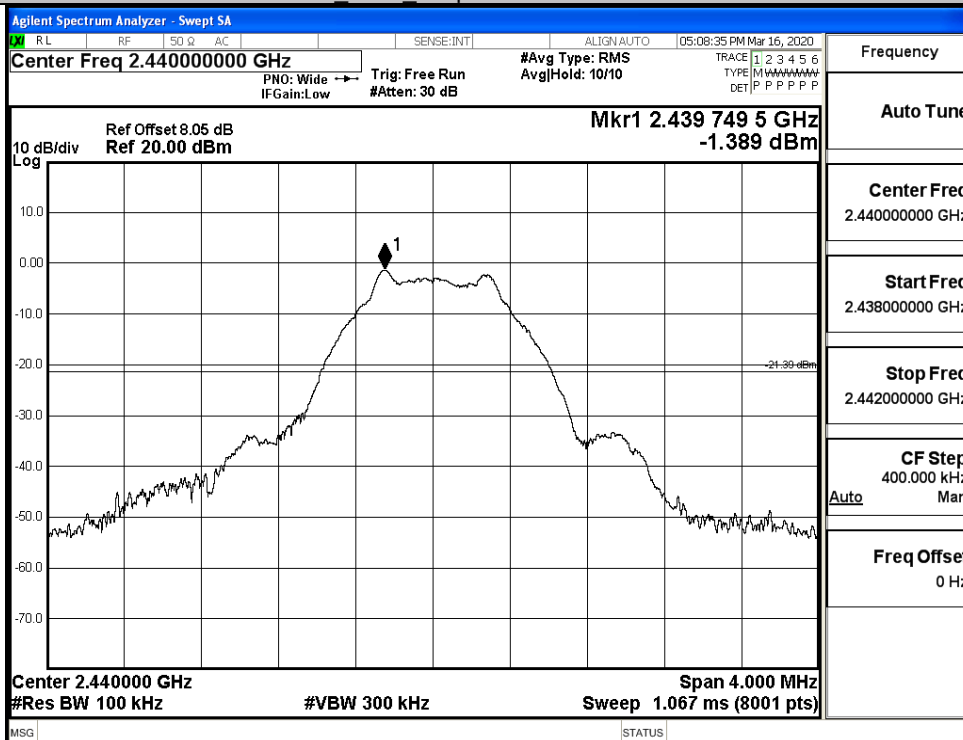


Puw/BT LE/LCH

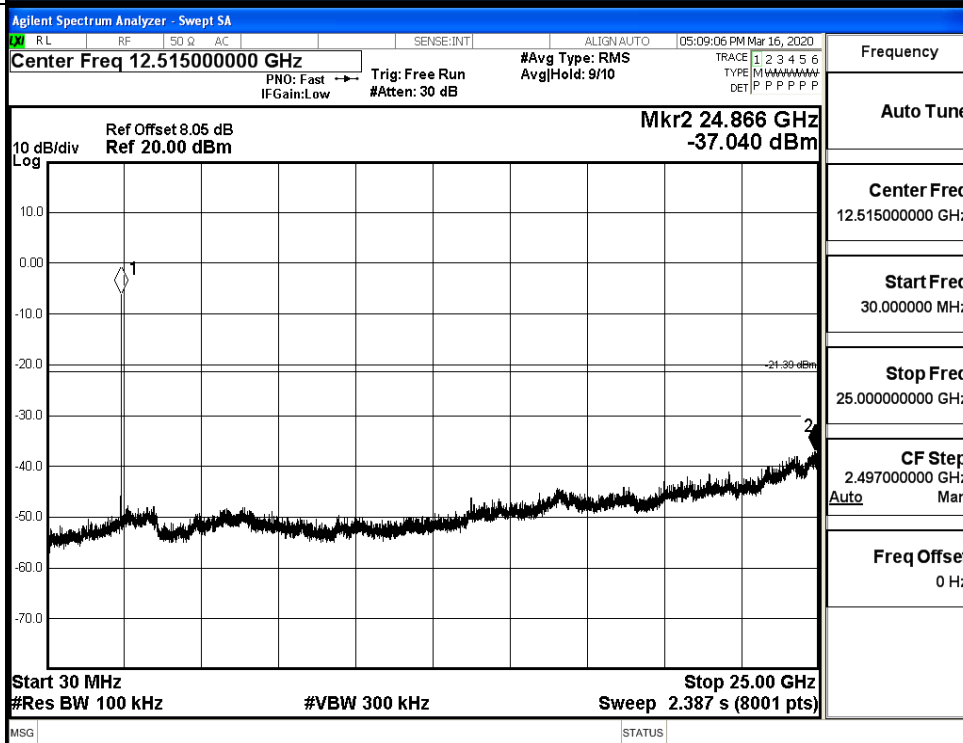


BT LE MCH Graphs

Pref/BT LE/MCH

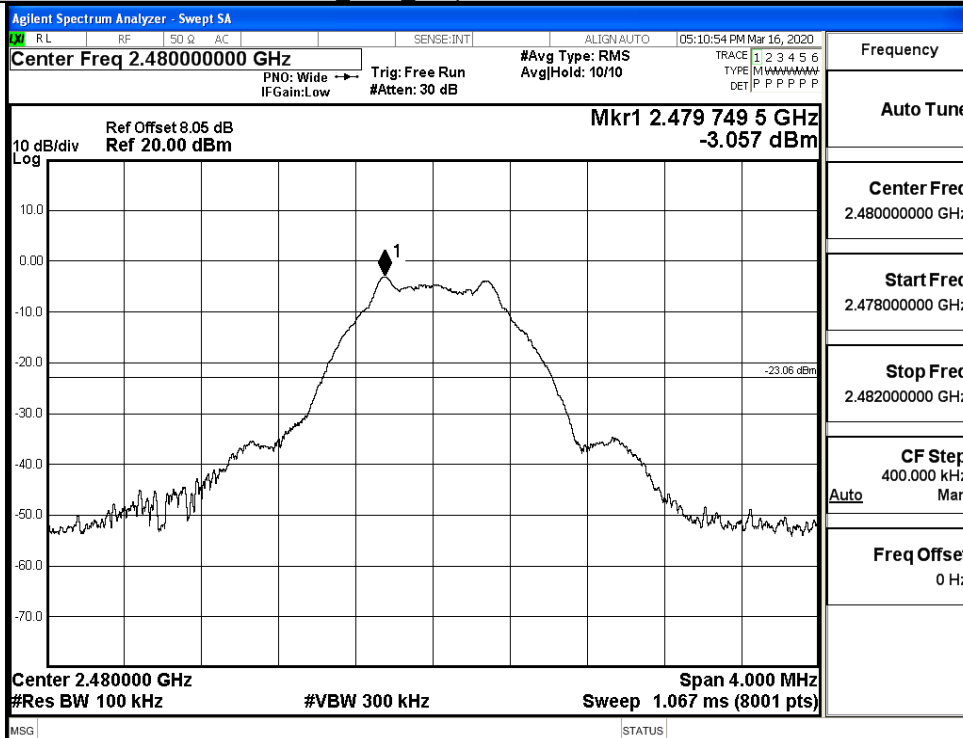


Puw/BT LE/MCH

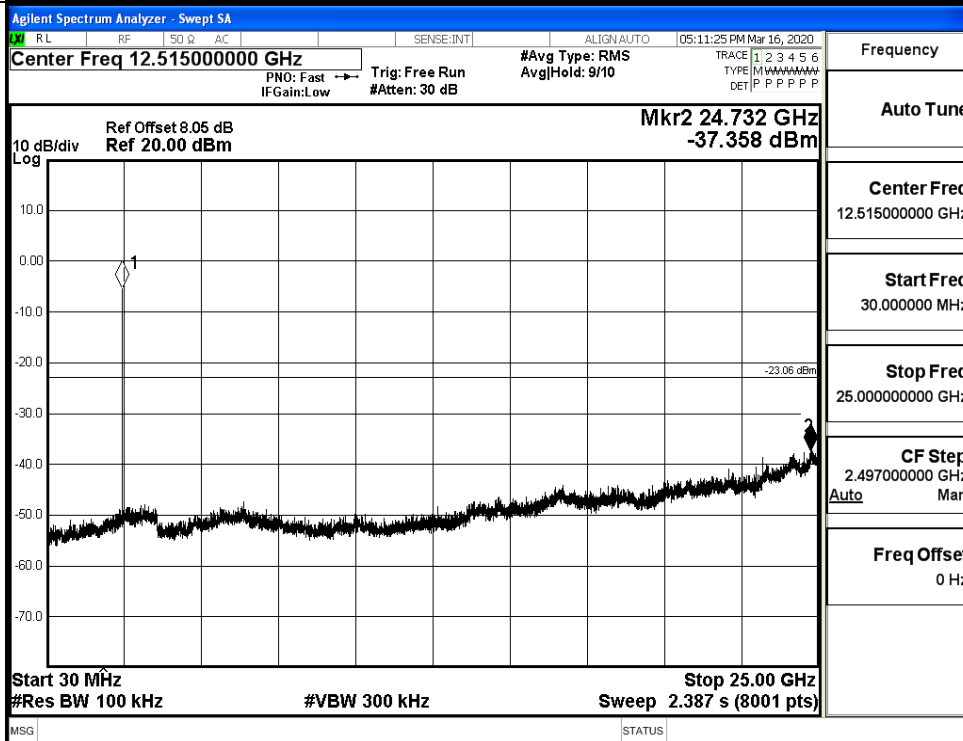


BT LE HCH Graphs

Pref/BT LE/HCH



Puw/BT LE/HCH

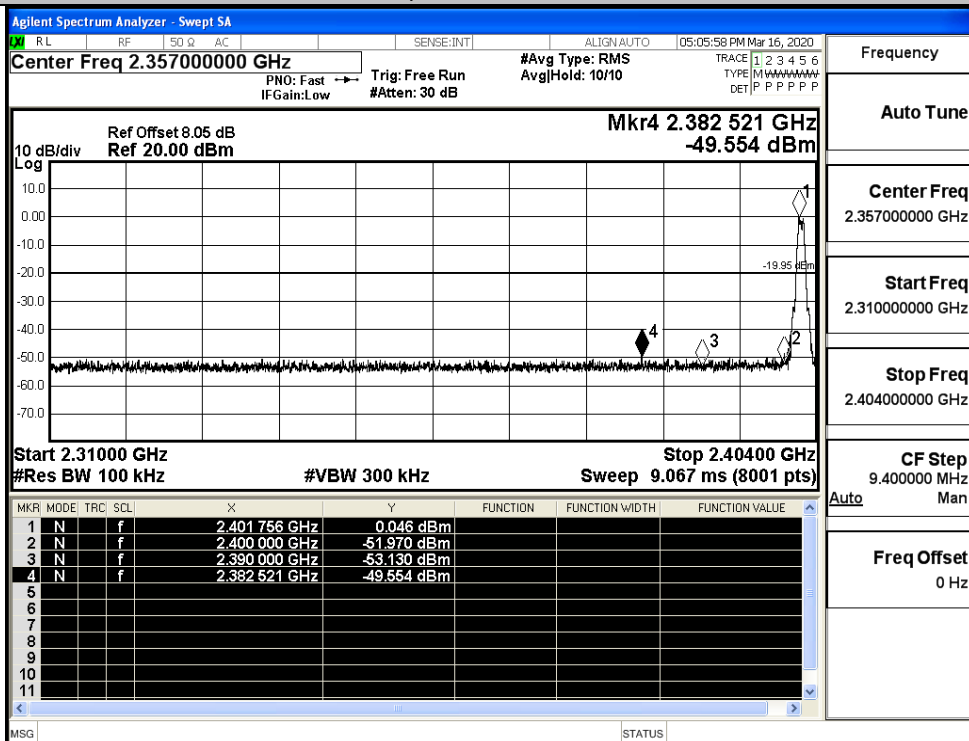


B.6 Band-edge for RF Conducted Emissions

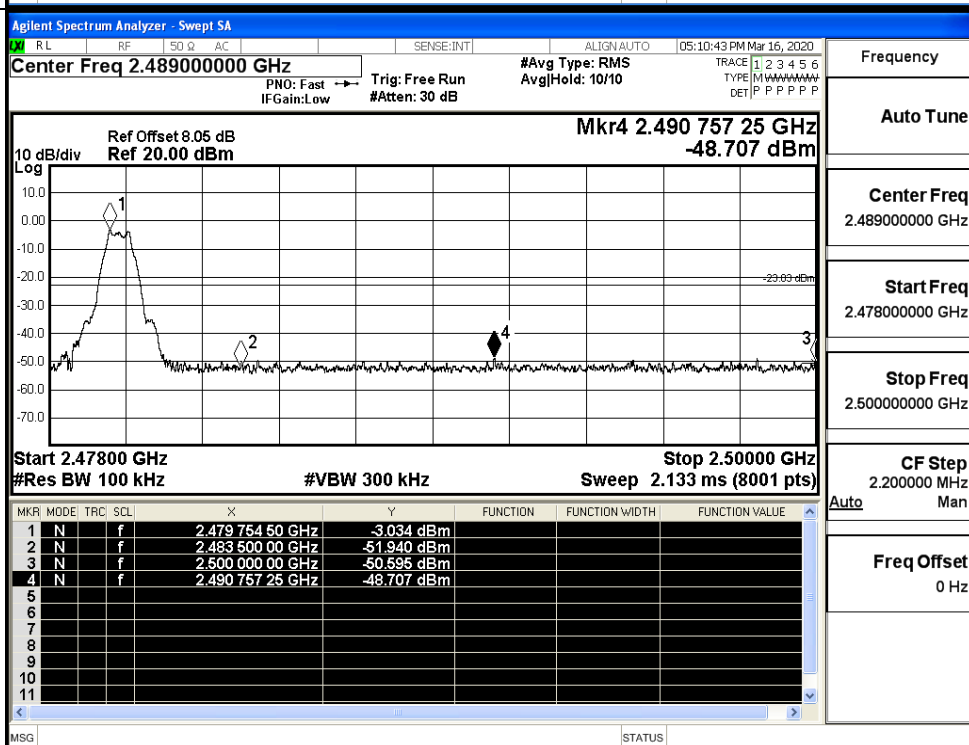
Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
BT LE	LCH	0.046	-49.554	-19.95	PASS
BT LE	HCH	-3.034	-48.707	-23.03	PASS

Test Graphs

LCH



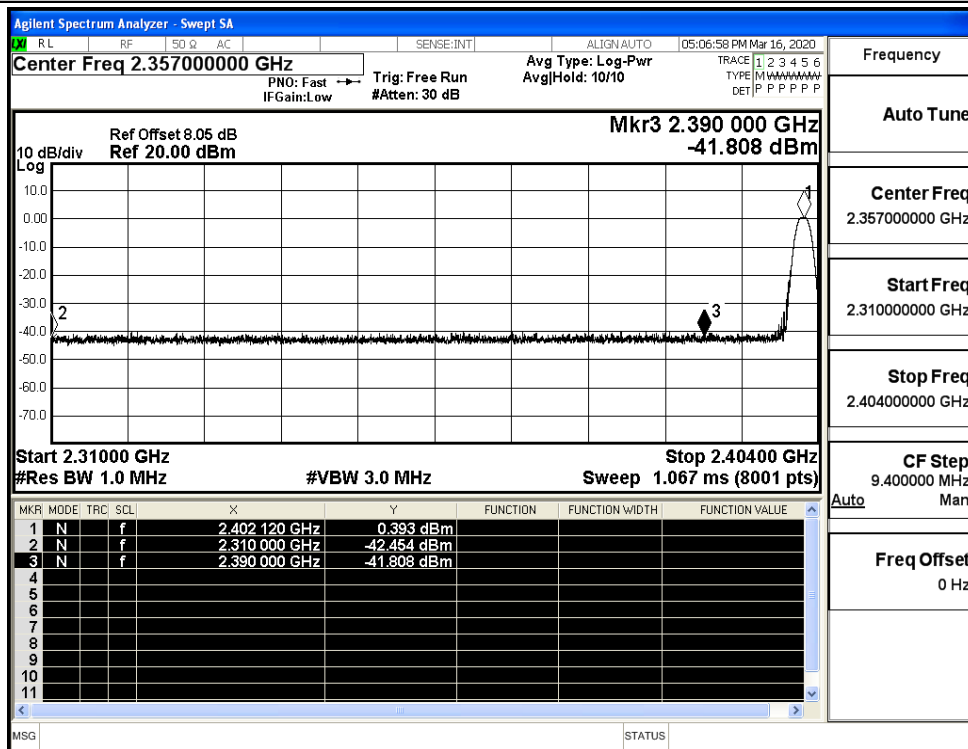
HCH



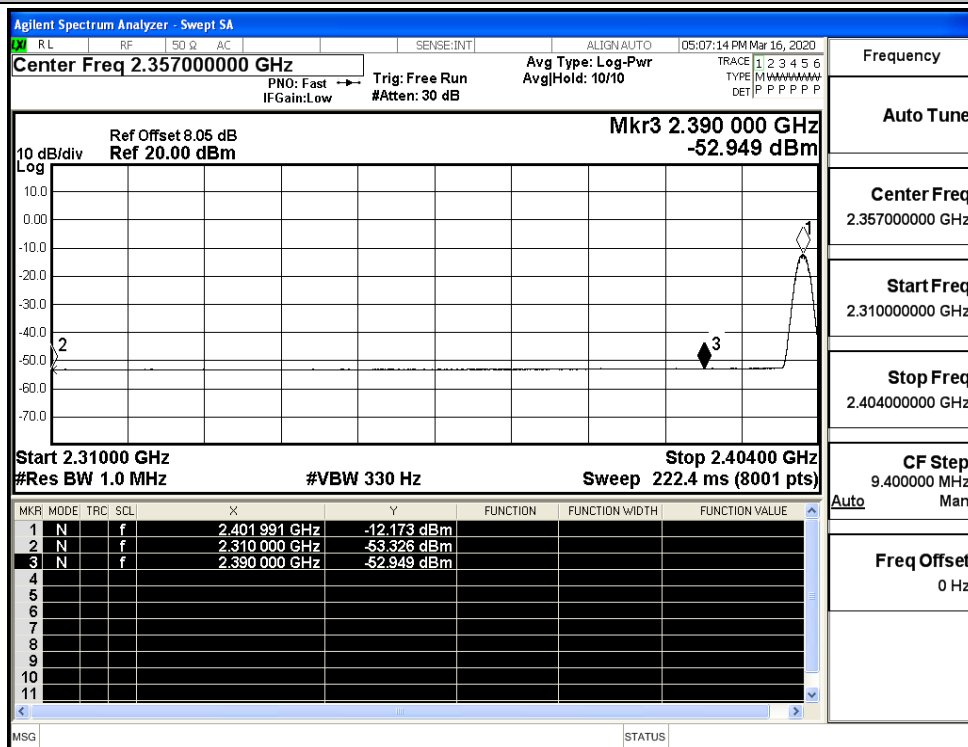
B.7 Restrict-band band-edge measurements

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	-42.45	2.0	0	54.78	PEAK	74	PASS
		Ant1	2310.0	-53.33	2.0	0	43.90	AV	54	PASS
		Ant1	2390.0	-41.81	2.0	0	55.42	PEAK	74	PASS
		Ant1	2390.0	-52.95	2.0	0	44.28	AV	54	PASS
	2480	Ant1	2483.5	-42.06	2.0	0	55.17	PEAK	74	PASS
		Ant1	2483.5	-52.47	2.0	0	44.76	AV	54	PASS
		Ant1	2500.0	-41.11	2.0	0	56.12	PEAK	74	PASS
		Ant1	2500.0	-52.06	2.0	0	45.17	AV	54	PASS

Restrict-band band-edge measurements_BT LE_2402_Ant1_PEAK



Restrict-band band-edge measurements_BT LE_2402_Ant1_AV



Agilent Spectrum Analyzer - Swept SA

RL RF 50 Q AC SENSE:INT ALIGN: AUTO 05:11:43 PM Mar 16, 2020

Center Freq 2.489000000 GHz PNO: Fast → Trig: Free Run Avg Type: Log-Pwr Avg/Hold: 10/10 TYPE: M W A W A W A W A W DET: P P P P P P

IF Gain: Low #Atten: 30 dB

Ref Offset 8.05 dB Mkr3 2.500 000 00 GHz Ref 20.00 dBm -41.107 dBm

10 dB/div Log

Start 2.47800 GHz Stop 2.50000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz Sweep 1.067 ms (8001 pts)

MRK	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N		f	2.479 914 00 GHz	-2.673 dBm			
2	N		f	2.483 500 00 GHz	-42.056 dBm			
3	N		f	2.500 000 00 GHz	-41.107 dBm			
4								
5								
6								
7								
8								
9								
10								
11								

Auto Auto

CF Step 2.200000 MHz Man

Freq Offset 0 Hz

MSG STATUS

Agilent Spectrum Analyzer - Swept SA

RL RF SO Q AC SENSE:INT ALIGN: AUTO 05:11:58 PM Mar 16, 2020

Center Freq 2.489000000 GHz PNO: Fast Trig: 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 W W DET: P P P P P P P

Ref Offset 8.05 dB Mkr3 2.500 000 00 GHz

Ref 20.00 dBm -52.057 dBm

10 dB/div Log

Start 2.47800 GHz Stop 2.50000 GHz

#Res BW 1.0 MHz #VBW 330 Hz Sweep 52.27 ms (8001 pts)

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N		f	2.480 018 50 GHz	-14.513 dBm			
2	N		f	2.483 500 00 GHz	-52.465 dBm			
3	N		f	2.500 000 00 GHz	-52.057 dBm			
4								
5								
6								
7								
8								
9								
10								
11								

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

MSG STATUS