

Appendix A

RF Test Data for BT(BDR/EDR) (Conducted Measurement)

Product Name: Portable Bluetooth Headphone

Trade Mark: N/A

Test Model: LH-36

FCC ID: 2A2HB-LH36

Environmental Conditions

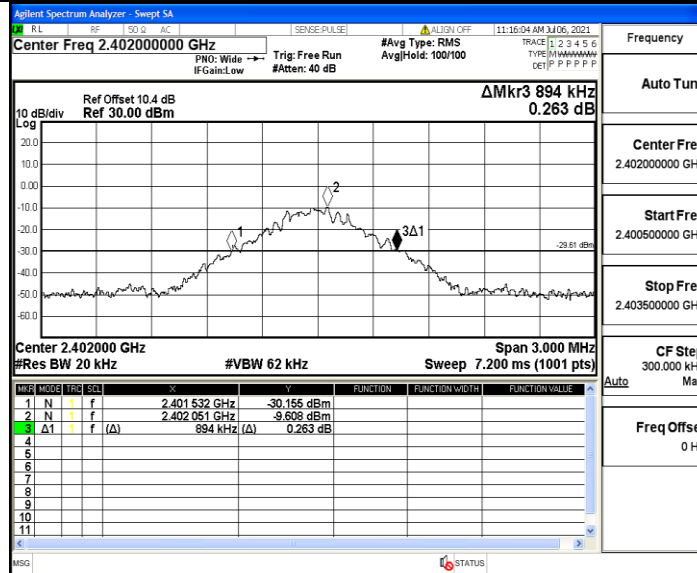
Temperature:	22.8° C
Relative Humidity:	56%
ATM Pressure:	100.0 kPa
Test Engineer:	Anna Hu
Supervised by:	Hugo Chen

A.1 20 dB Bandwidth

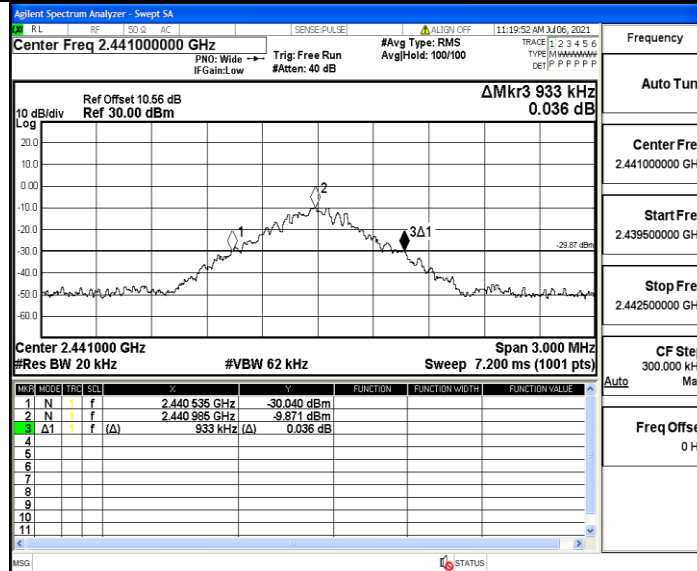
TestMode	Antenna	Channel	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.894	2401.532	2402.426	---	PASS
		2441	0.933	2440.535	2441.468	---	PASS
		2480	0.801	2479.592	2480.393	---	PASS
2DH5	Ant1	2402	1.182	2401.394	2402.576	---	PASS
		2441	1.182	2440.394	2441.576	---	PASS
		2480	1.200	2479.391	2480.591	---	PASS

Test Graph

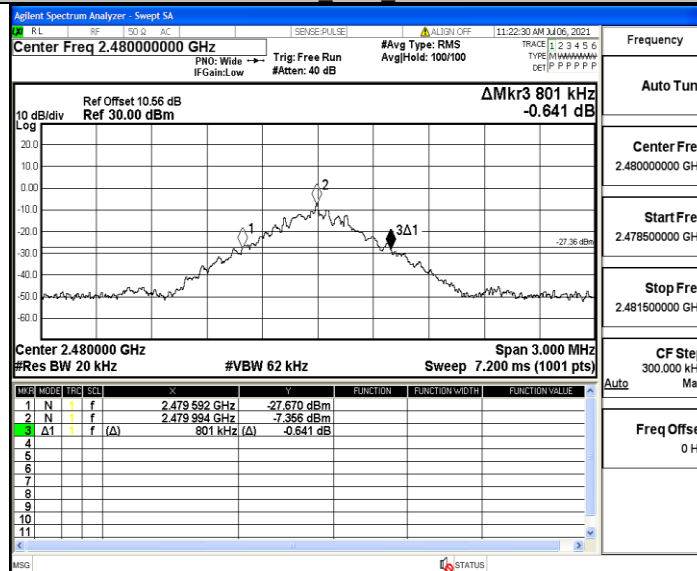
DH5_Ant1_2402



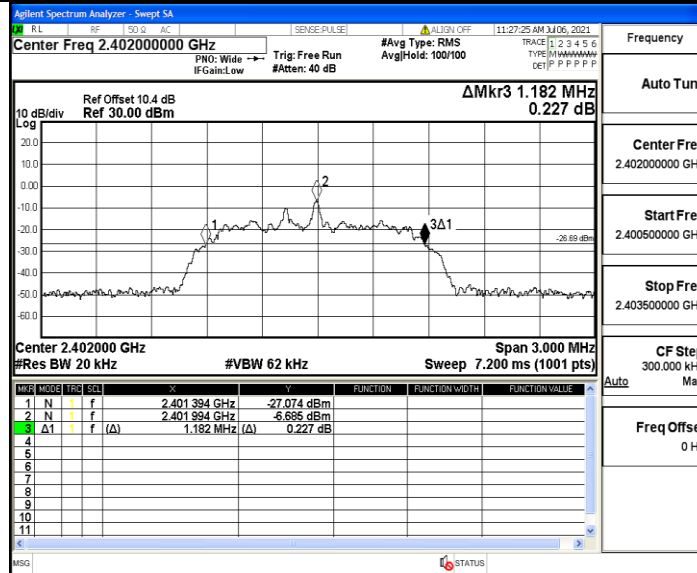
DH5_Ant1_2441



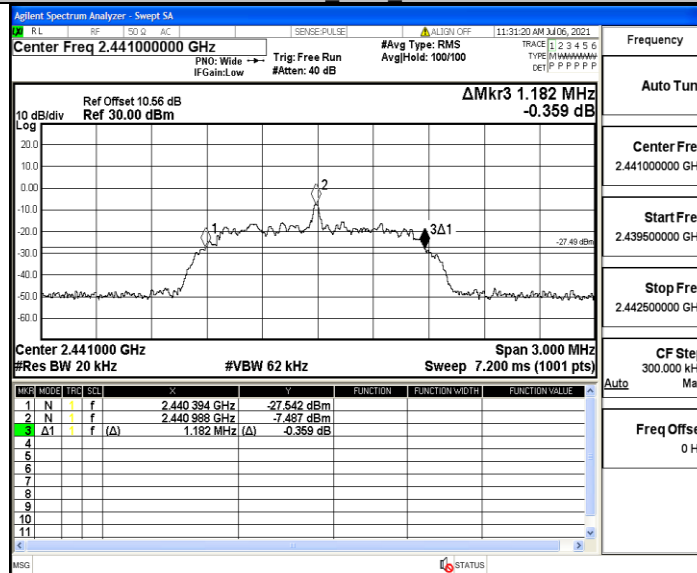
DH5_Ant1_2480



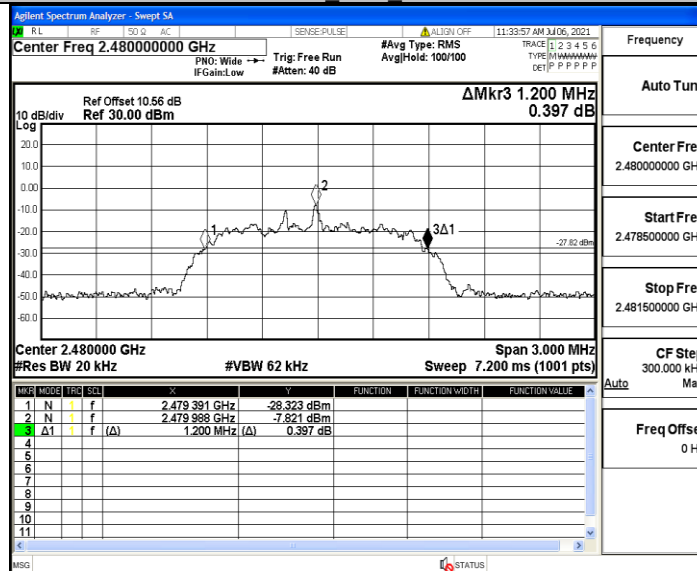
2DH5_Ant1_2402



2DH5_Ant1_2441



2DH5_Ant1_2480

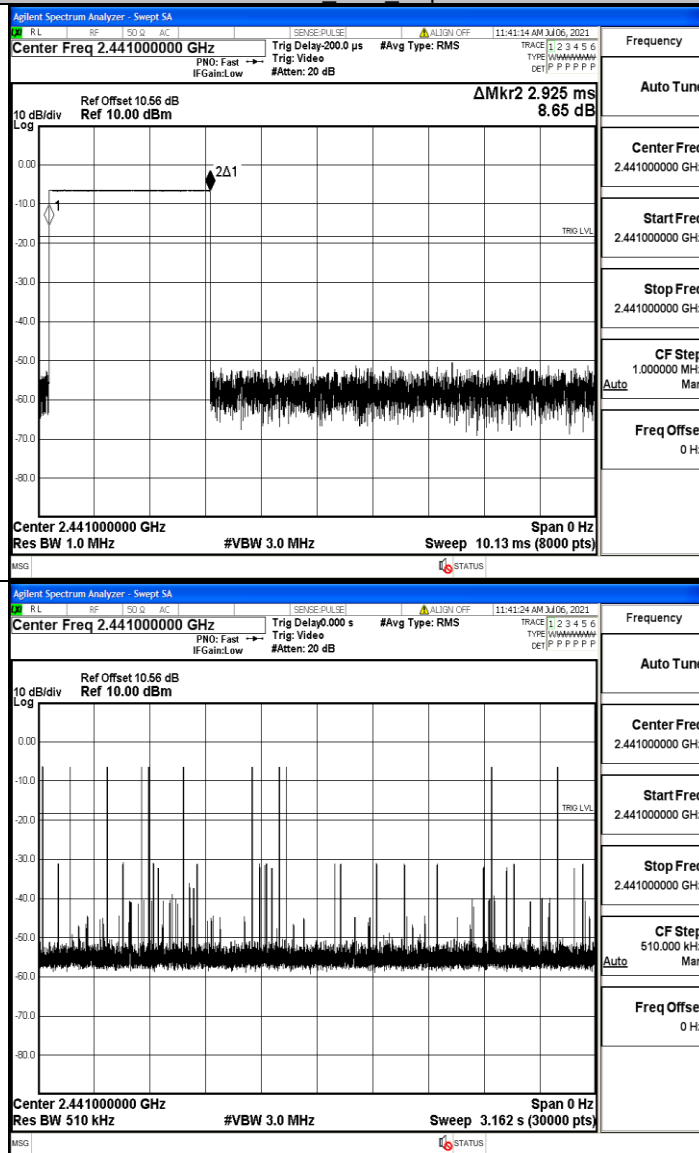


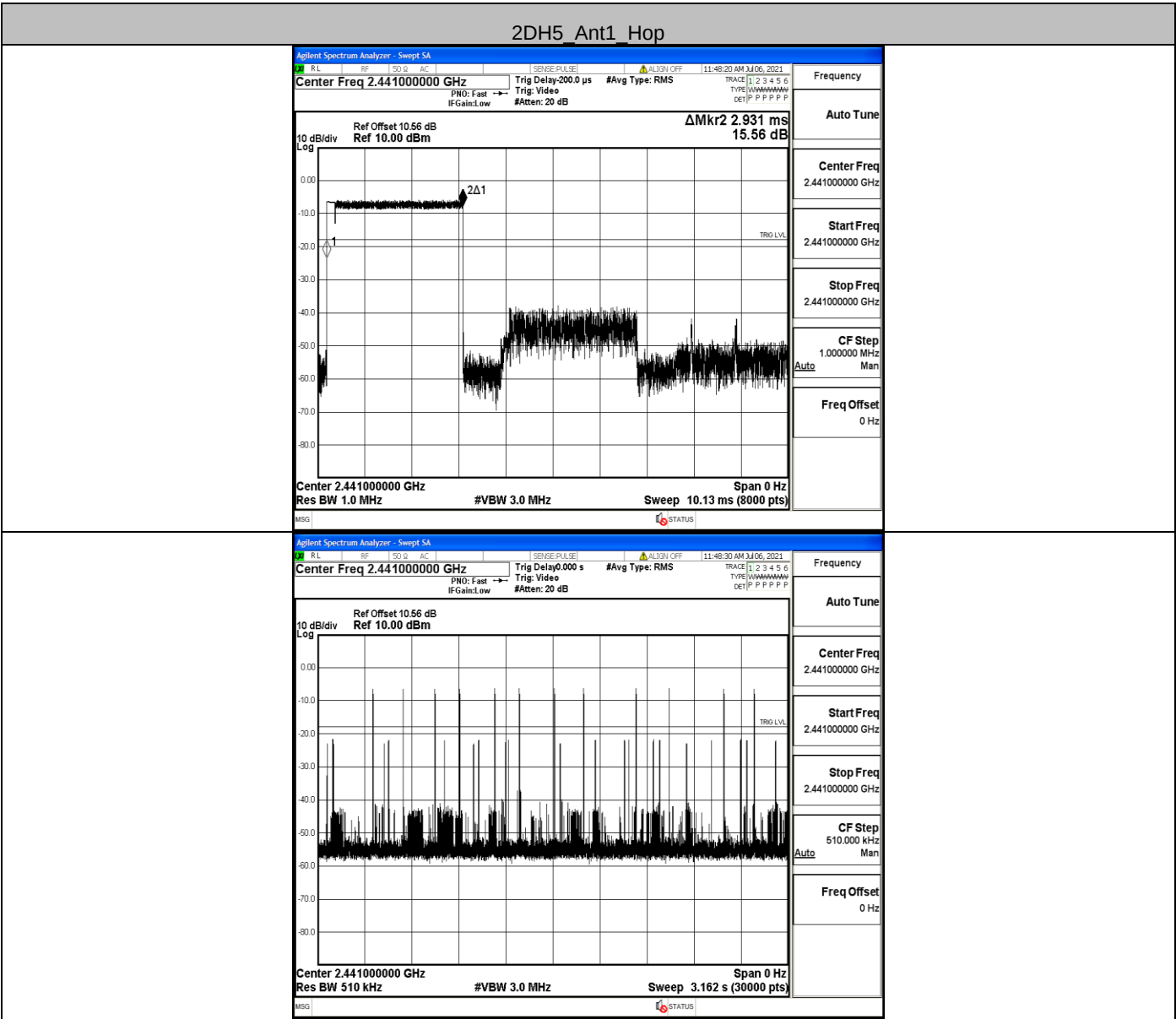
A.2 Dwell Time

TestMode	Antenna	Channel	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH5	Ant1	Hop	2.92	120	0.351	<=0.4	PASS
2DH5	Ant1	Hop	2.93	130	0.381	<=0.4	PASS

Test Graph

DH5_Ant1_Hop

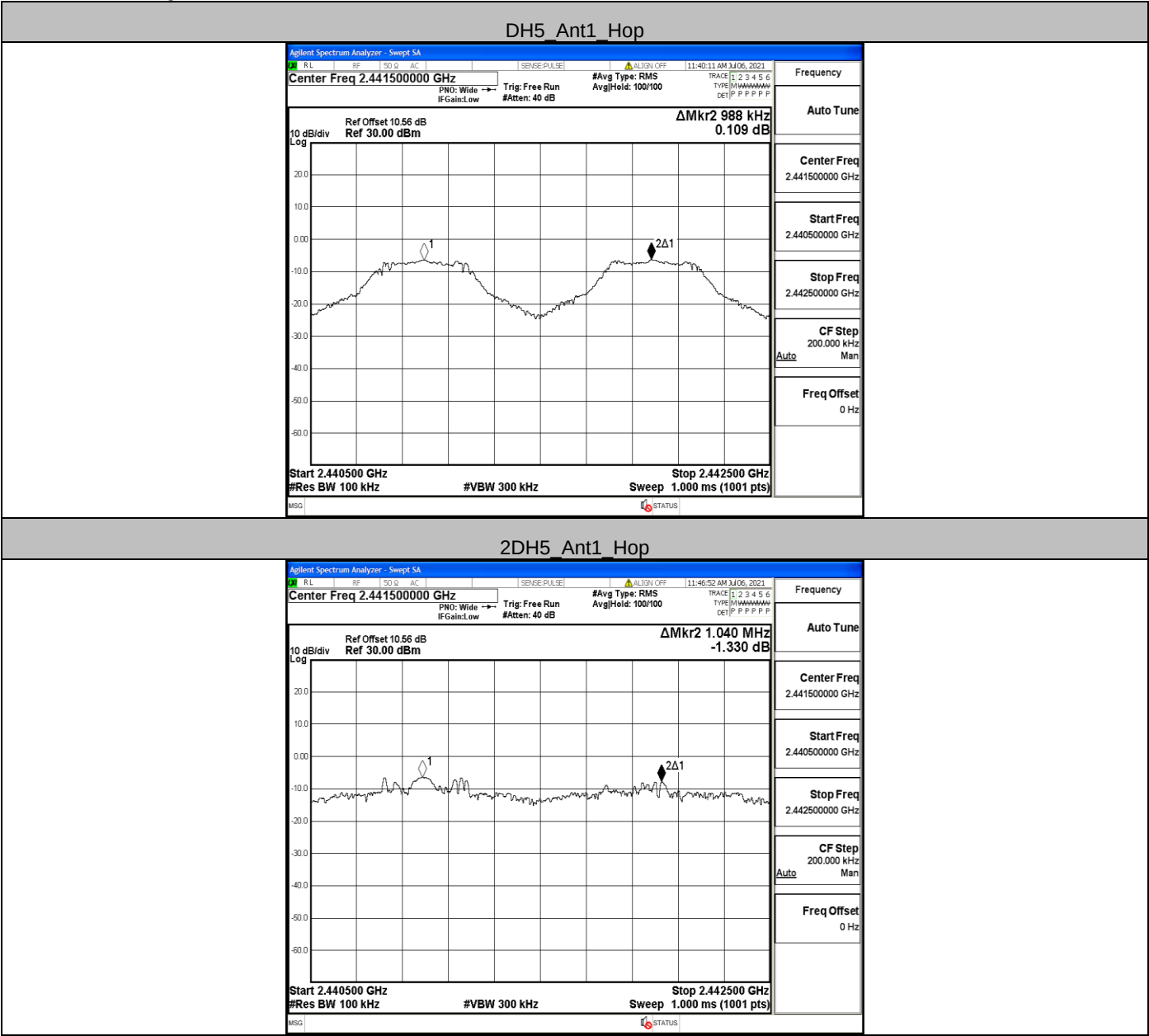




A.3 Carrier Frequency Separation

TestMode	Antenna	Channel	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	0.988	≥ 0.933	PASS
2DH5	Ant1	Hop	1.04	≥ 0.800	PASS

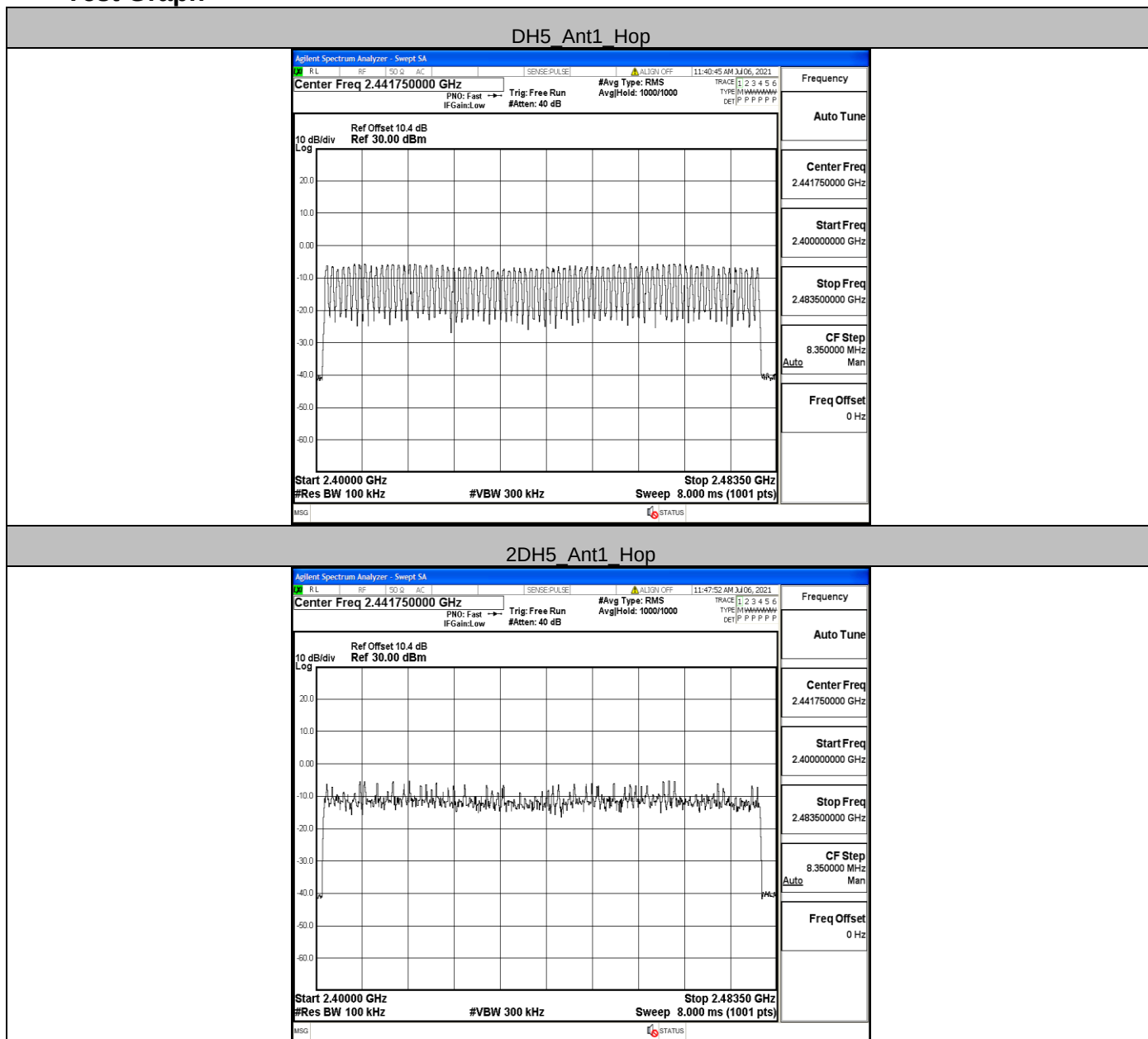
Test Graph



A.4 Hopping Channel Number

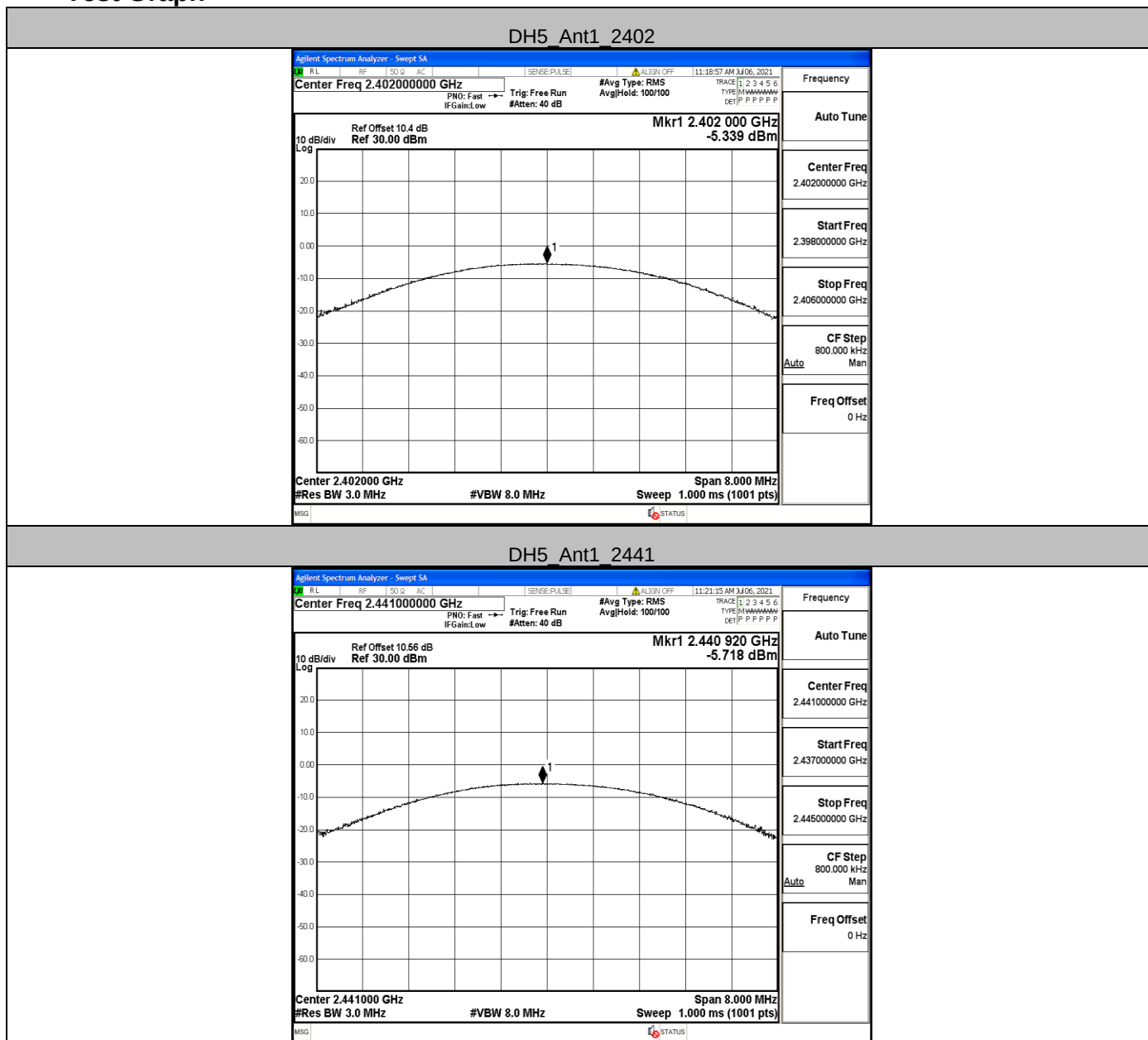
TestMode	Antenna	Channel	Result[Num]	Limit[Num]	Verdict
DH5	Ant1	Hop	79	>=15	PASS
2DH5	Ant1	Hop	79	>=15	PASS

Test Graph

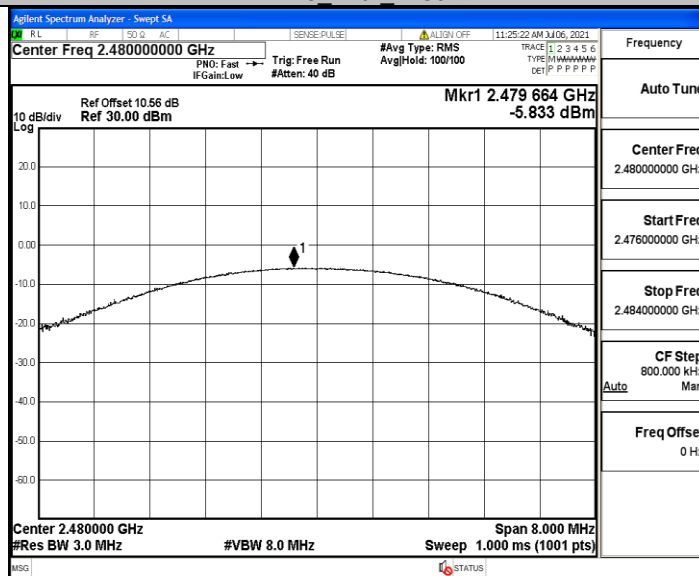


A.5 Conducted Peak Output Power

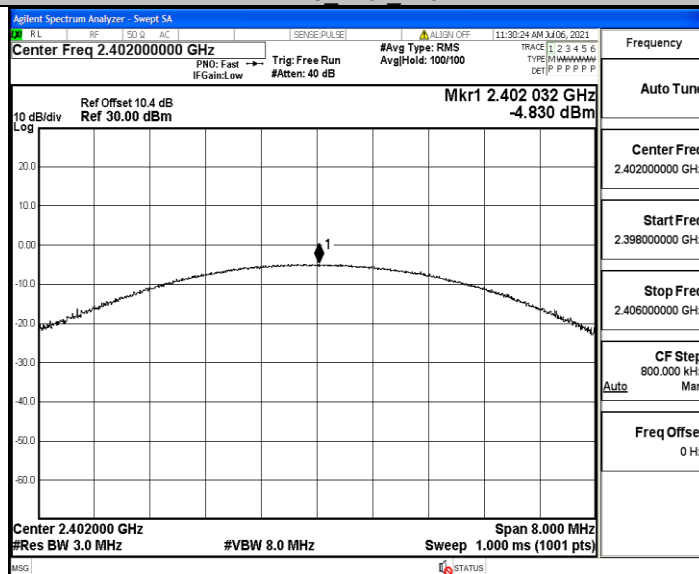
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
DH5	Ant1	2402	-5.34	<=20.97	PASS
		2441	-5.72	<=20.97	PASS
		2480	-5.83	<=20.97	PASS
2DH5	Ant1	2402	-4.83	<=20.97	PASS
		2441	-5.14	<=20.97	PASS
		2480	-5.27	<=20.97	PASS

Test Graph

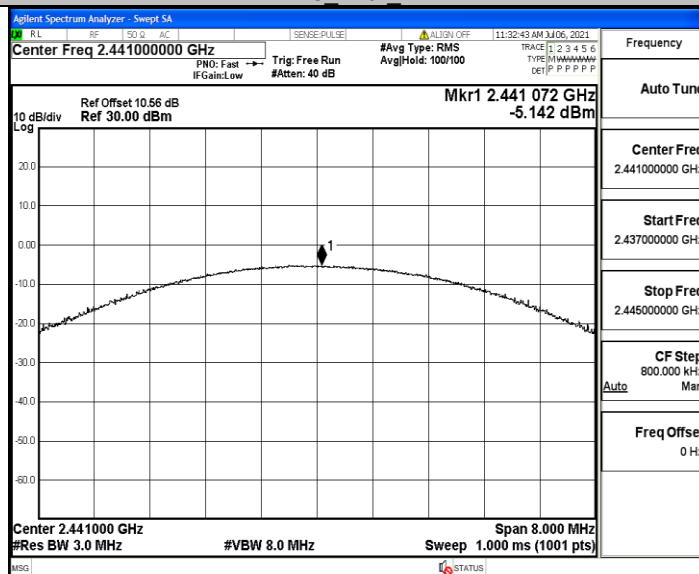
DH5_Ant1_2480

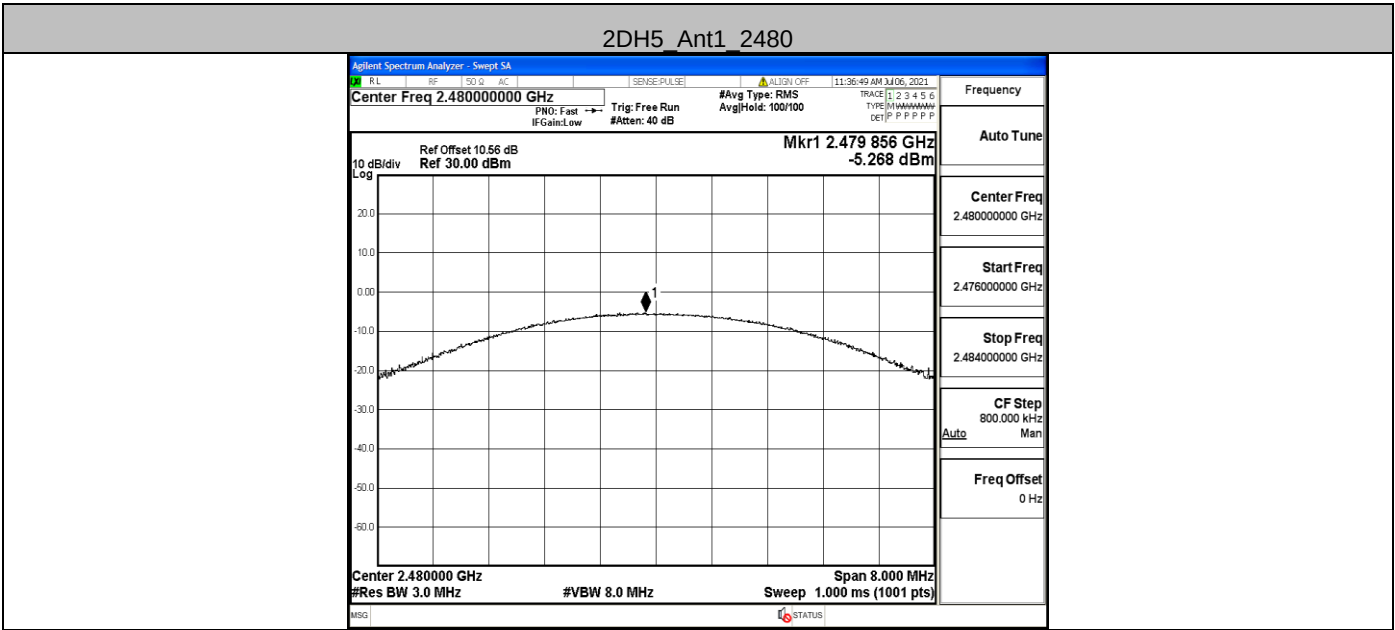


2DH5_Ant1_2402



2DH5_Ant1_2441



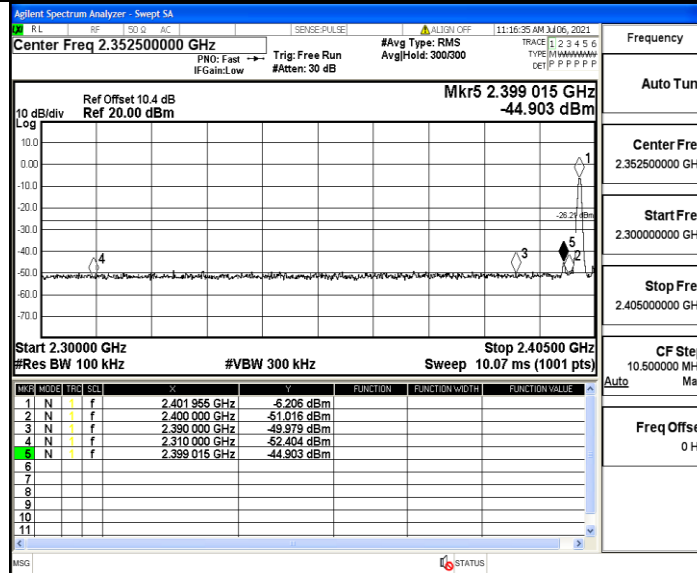


A.6 Band-edge for RF Conducted Emissions

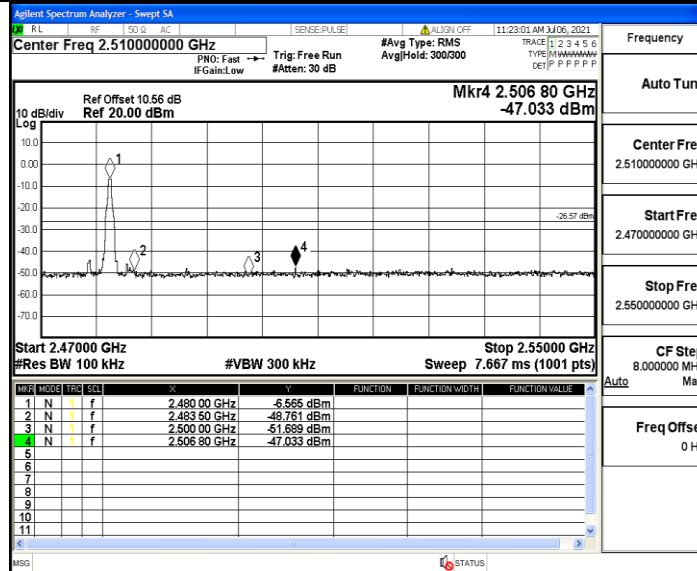
TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-6.21	-44.9	<=-26.21	PASS
		High	2480	-6.57	-47.03	<=-26.57	PASS
		Low	Hop_2402	-6.50	-48.88	<=-26.5	PASS
		High	Hop_2480	-5.60	-48.39	<=-25.6	PASS
2DH5	Ant1	Low	2402	-6.12	-47.03	<=-26.12	PASS
		High	2480	-6.54	-47.14	<=-26.54	PASS
		Low	Hop_2402	-10.39	-48.78	<=-30.39	PASS
		High	Hop_2480	-8.38	-48.02	<=-28.38	PASS

Test Graph

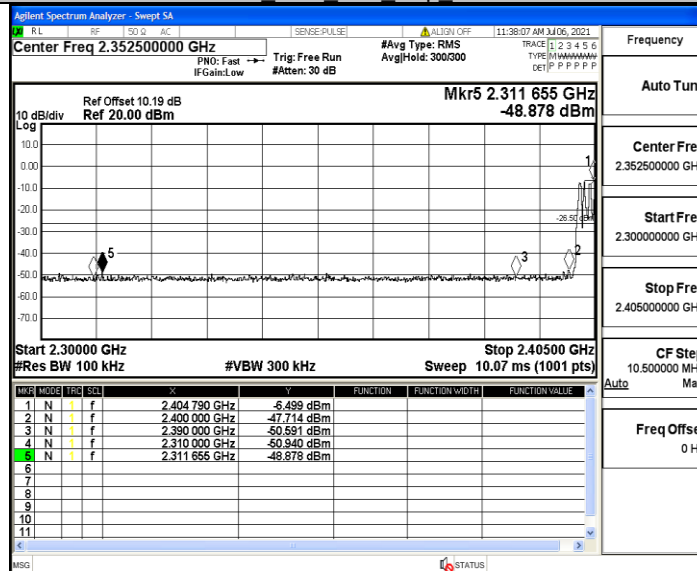
DH5_Ant1_Low_2402



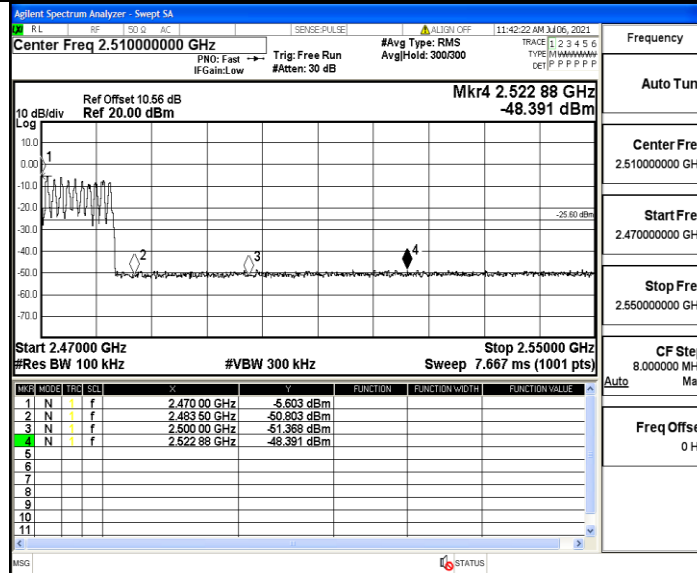
DH5_Ant1_High_2480



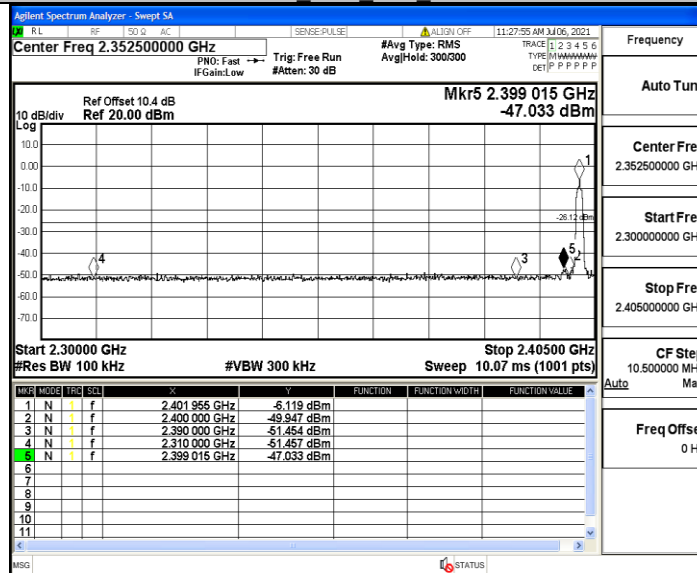
DH5_Ant1_Low_Hop_2402



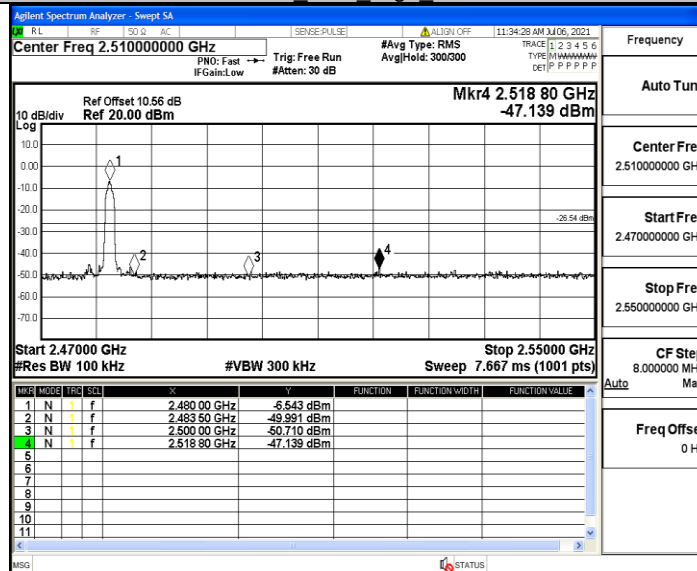
DH5 Ant1_High_Hop_2480



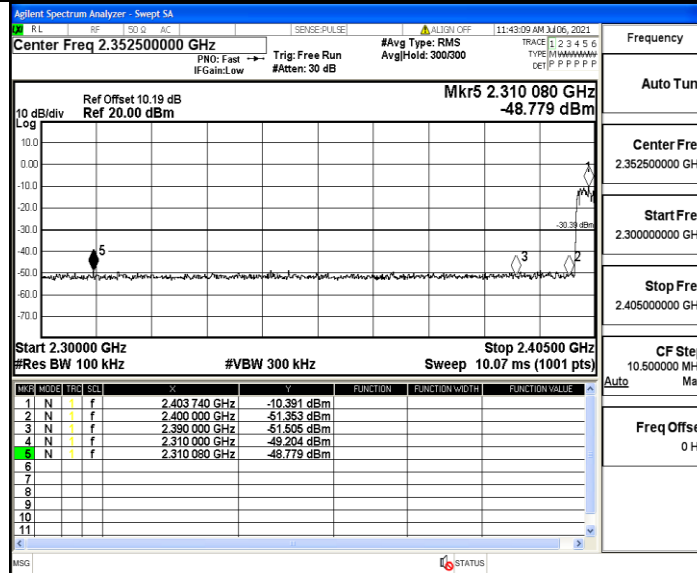
2DH5 Ant1_Low_2402



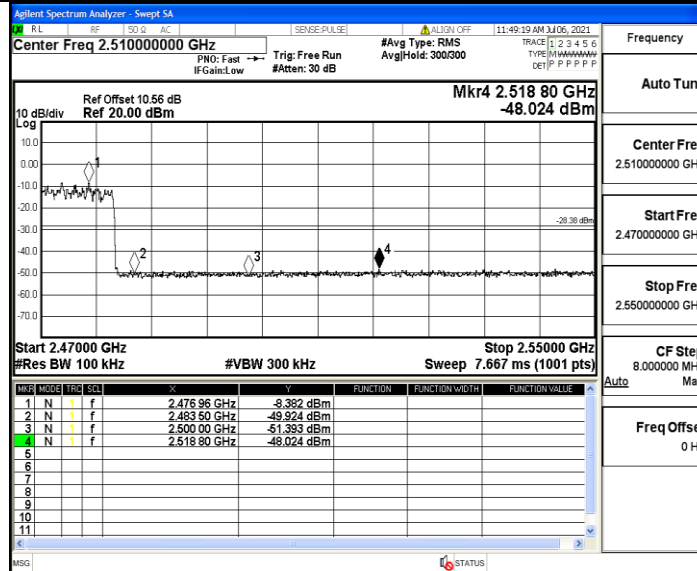
2DH5 Ant1_High_2480



2DH5 Ant1 Low Hop 2402

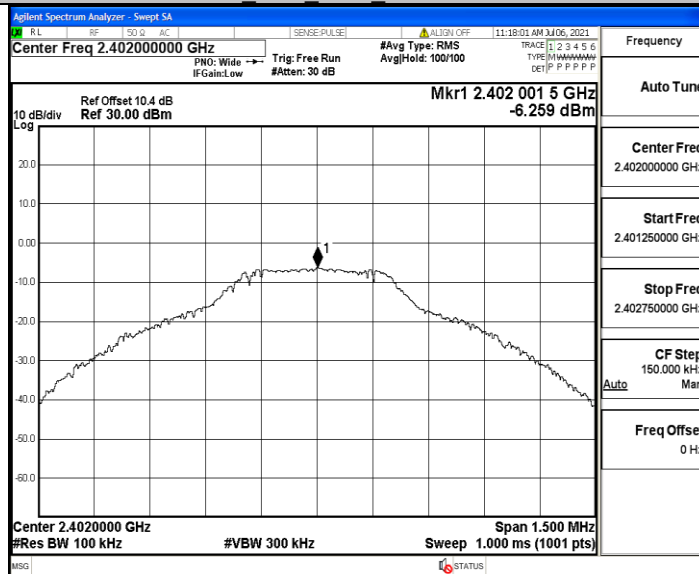


2DH5 Ant1 High Hop 2480

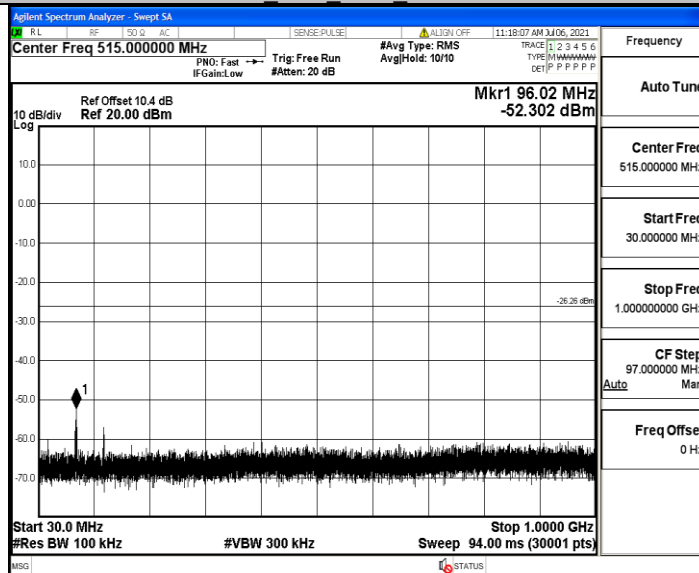


A.7 RF Conducted Spurious Emissions Test Graph

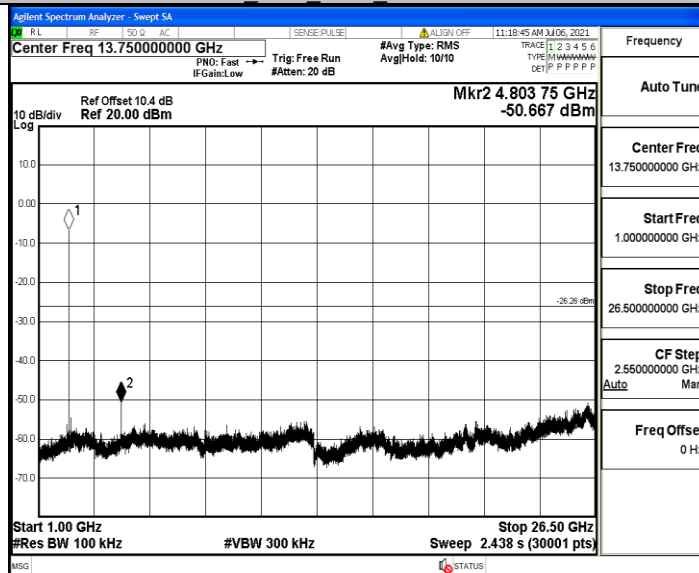
DH5_Ant1_2402_0-Reference



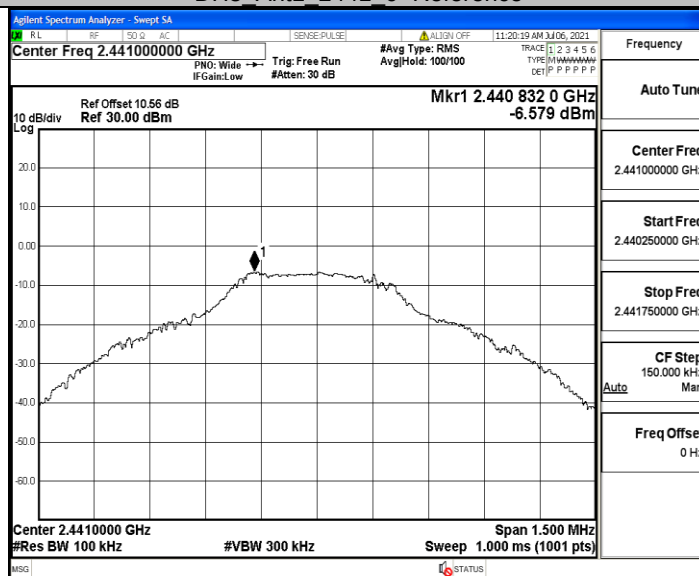
DH5_Ant1_2402_30~1000



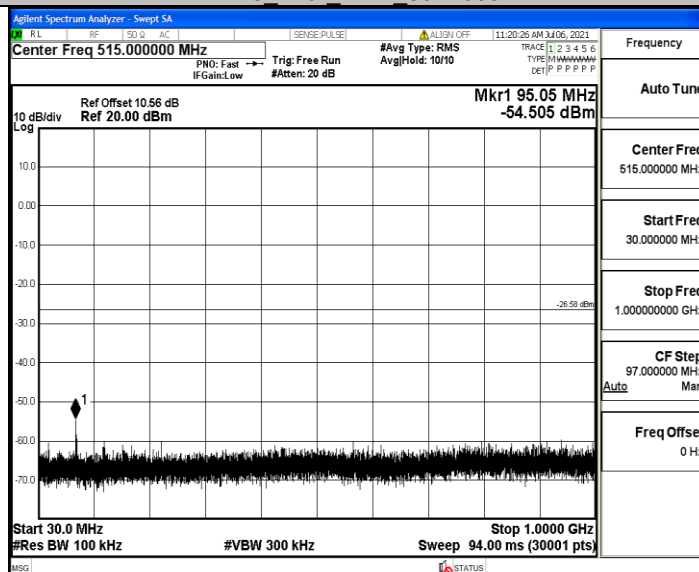
DH5_Ant1_2402_1000~26500



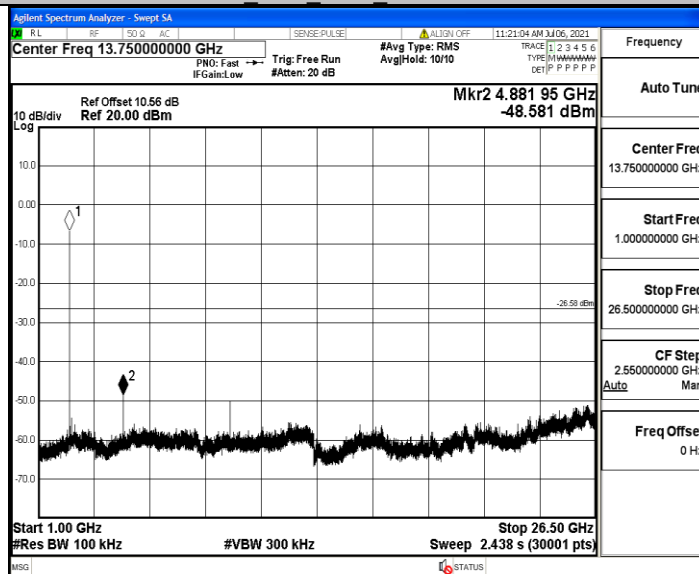
DH5_Ant1_2441_0~Reference



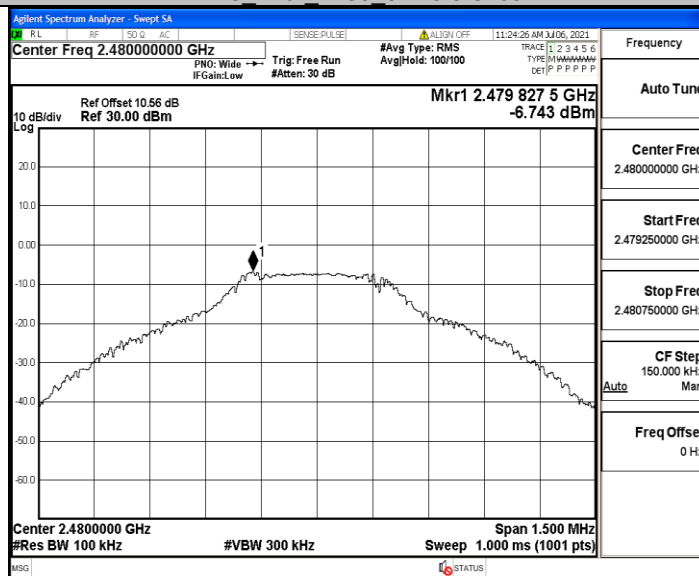
DH5_Ant1_2441_30~1000



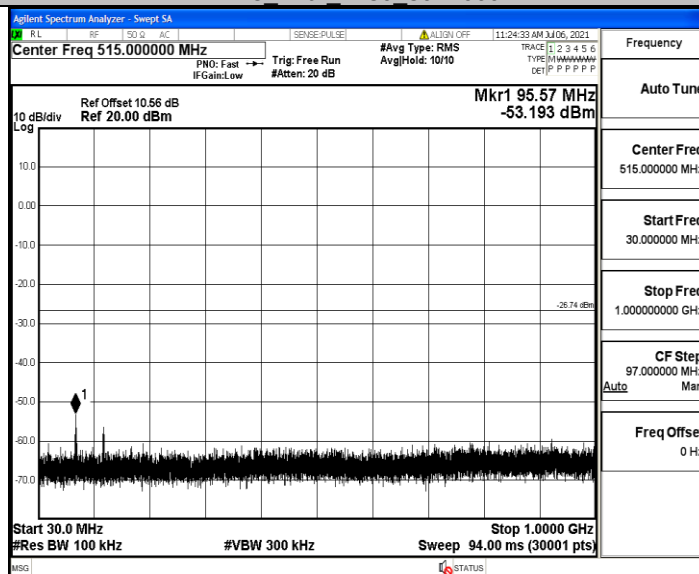
DH5_Ant1_2441_1000~26500



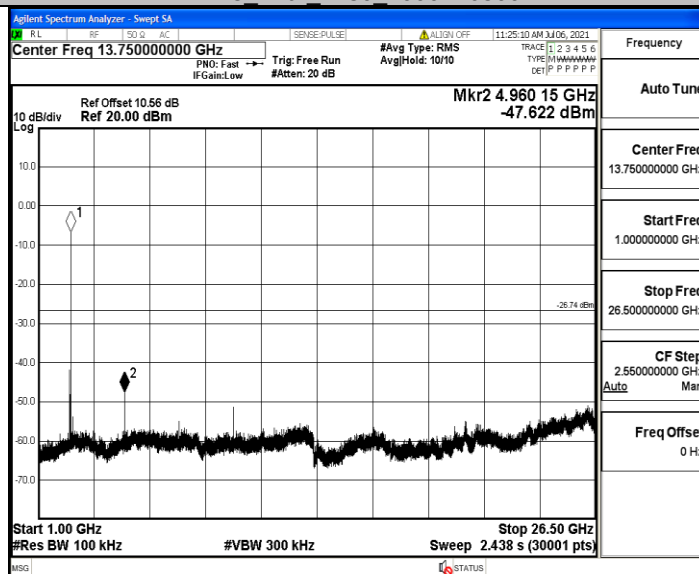
DH5_Ant1_2480_0-Reference



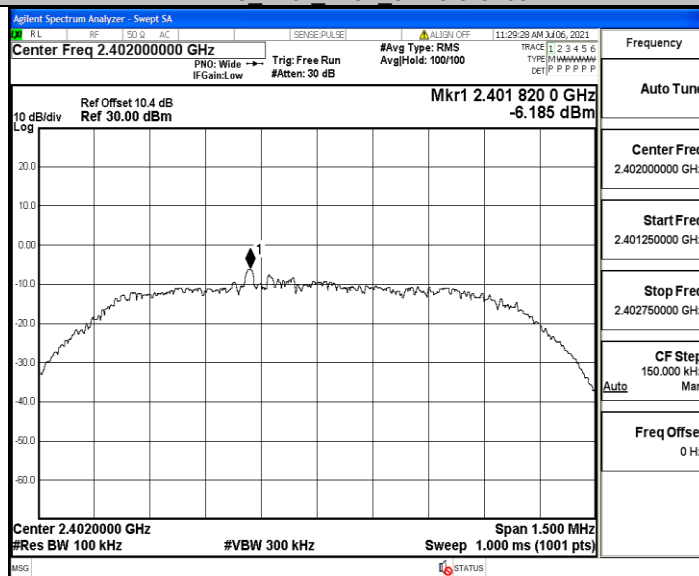
DH5_Ant1_2480_30~1000



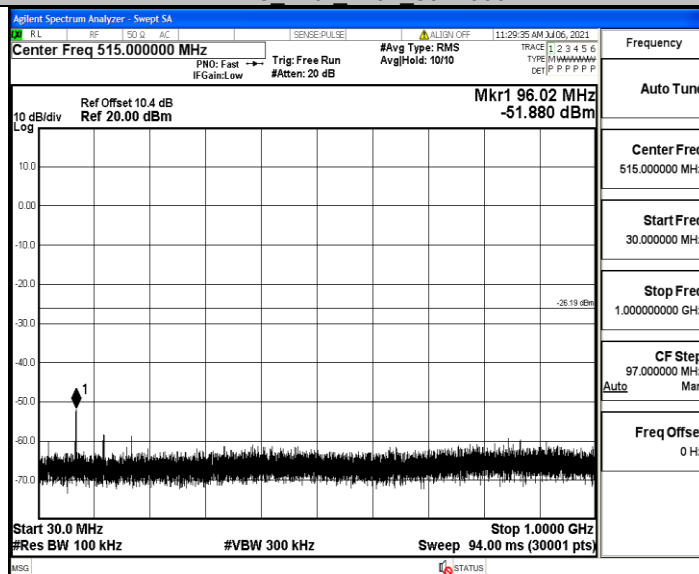
DH5_Ant1_2480_1000~26500



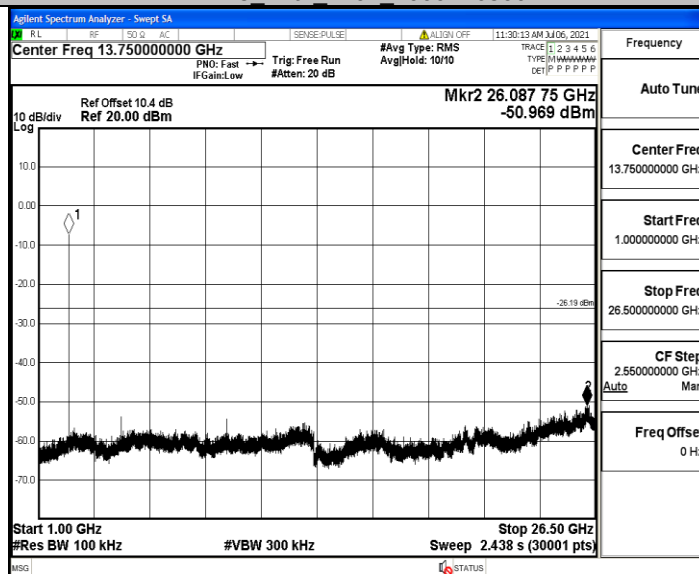
2DH5_Ant1_2402_0~Reference



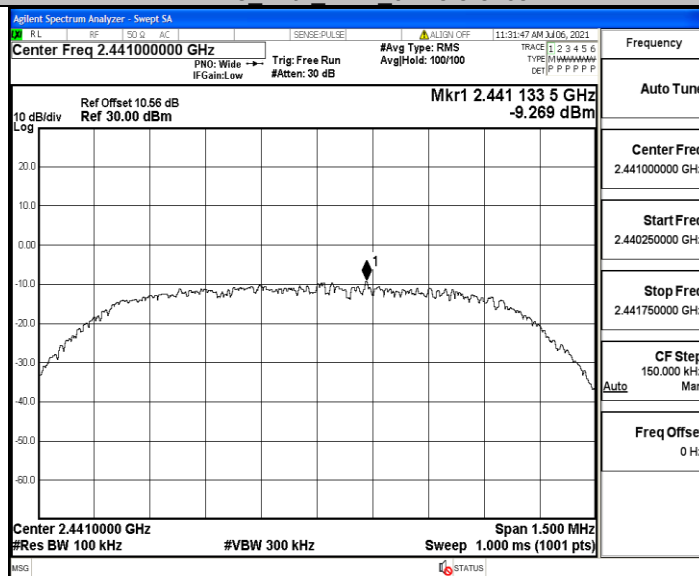
2DH5_Ant1_2402_30~1000



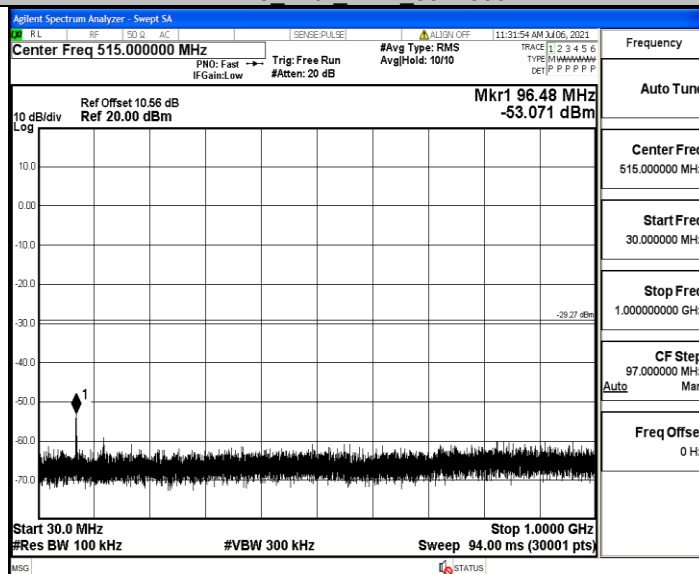
2DH5_Ant1_2402_1000~26500



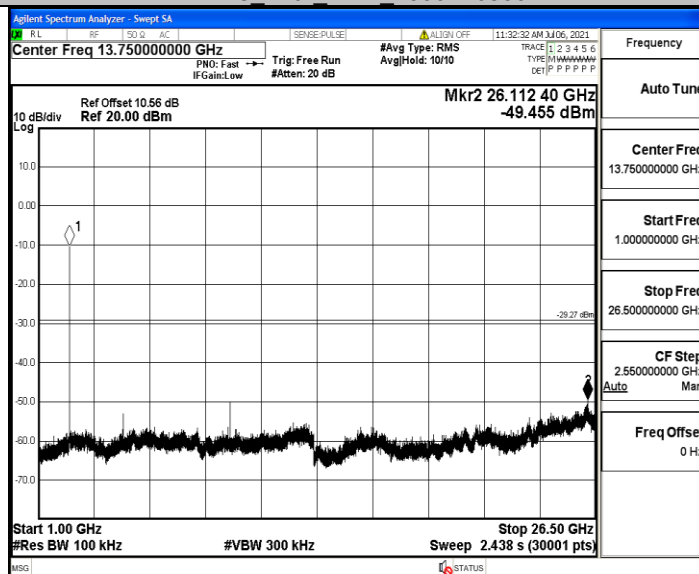
2DH5_Ant1_2441_0~Reference



2DH5_Ant1_2441_30~1000



2DH5_Ant1_2441_1000~26500



Agilent Spectrum Analyzer - Swept SA

RL RF 30.0 AC SENSE-ULPSE ALIGN OFF 11:35:53 AM 3/10/2021

Center Freq 2.480000000 GHz #Avg Type: RMS AvgHold: 100/100

PRF: Wide IF Gain: Low Trig: Free Run #Atten: 30 dB

Mkr1 2.479 994 0 GHz -6.616 dBm

10 dB/div Log

Ref Offset 10.56 dB Ref 30.00 dBm

Center Freq 2.480000000 GHz

Start Freq 2.479250000 GHz

Stop Freq 2.480750000 GHz

CF Ste 150.000 kHz

Auto

Freq Offset 0 Hz

Center 2.4800000 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 1.000 ms (1001 pts)

MSG STATUS

Agilent Spectrum Analyzer - Sweep SA

RF 50.0 AC SENSE PULSE ALIGN OFF 11:35:59 AM 3/10/2021

Center Freq 515.000000 MHz PNO: Fast IF Gain: Low Trig: Free Run #Atten: 20 dB #Avg Type: RMS AvgHold: 10/10

Trace 1 2 3 4 5 6
Type: [1] [2] [3] [4] [5] [6]
Det: [P] [P] [P] [P] [P] [P]

Frequency Auto Tun

Center Freq 515.000000 MHz

Start Freq 30.000000 MHz

Stop Freq 1.000000000 GHz

CF Stop 97.000000 MHz

Auto

Freq Offset 0 Hz

Ref Offset 10.56 dB
Ref 20.00 dBm

Mkr1 95.02 MHz
-53.873 dBm

-26.62 dBm

1

Start 30.0 MHz
#Res BW 100 kHz

#VBW 300 kHz

Stop 1.0000 GHz
Sweep 94.00 ms (30001 pts)

Agilent Spectra Analyzer - Sweep SA

RL RF SO G AC SENSE-PULSE ALIGN OFF 11:36:37 AM 3/10/2021

Center Freq 13.75000000 GHz PNO: Fast Trig: Free Run #Avg Type: RMS AvgHold: 10/10

IF Gain: Low #Atten: 20 dB

Ref Offset 10.56 dB
Ref 20.00 dBm

Mkr2 4.960 15 GHz
-47.074 dBm

10 dB/div
Log

Start 1.00 GHz
#Res BW 100 kHz
#VBW 300 kHz

Stop 26.50 GHz
Sweep 2.438 s (30001 pts)

Frequency

Auto Tun

Center Freq
13.75000000 GHz

Start Freq
1.000000000 GHz

Stop Freq
26.50000000 GHz

CF Ste
2.550000000 GHz
Auto Ma

Freq Offset
0 Hz

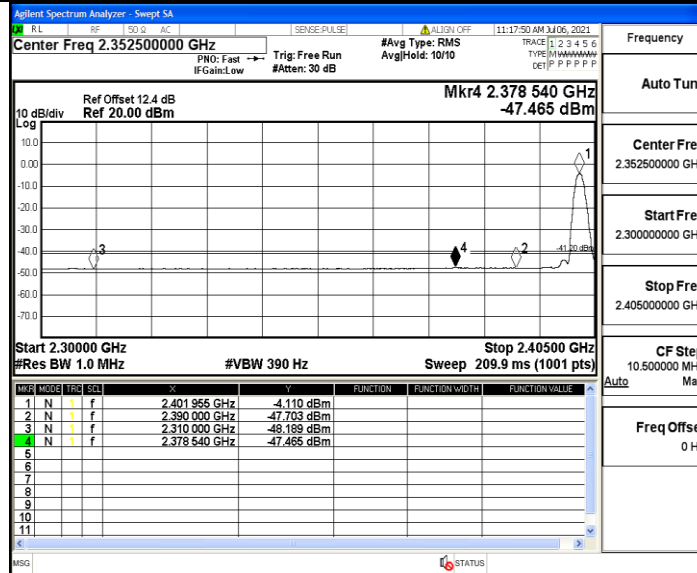
A.8 Restrict-band band-edge measurements

TestMode	Antenna	ChName	Channel	Detector	Freq (MHz)	Result(dBm)	Limit(dBm)	Verdict
DH5	Ant1	Low	2402	AV	2310.000	-48.19	<=-41.20	PASS
				AV	2378.540	-47.46	<=-41.20	PASS
				AV	2390.000	-47.7	<=-41.20	PASS
				Peak	2310.000	-42.17	<=-21.20	PASS
				Peak	2354.495	-37.58	<=-21.20	PASS
				Peak	2390.000	-42.12	<=-21.20	PASS
		High	2480	AV	2483.500	-45.47	<=-41.20	PASS
				AV	2500.000	-46.85	<=-41.20	PASS
				Peak	2483.500	-41.56	<=-21.20	PASS
				Peak	2495.200	-37.42	<=-21.20	PASS
				Peak	2500.000	-42.54	<=-21.20	PASS
2DH5	Ant1	Low	2402	AV	2310.000	-48.02	<=-41.20	PASS
				AV	2379.695	-47.42	<=-41.20	PASS
				AV	2390.000	-47.67	<=-41.20	PASS
				Peak	2310.000	-39.32	<=-21.20	PASS
				Peak	2363.630	-37.27	<=-21.20	PASS
				Peak	2390.000	-40.18	<=-21.20	PASS
		High	2480	AV	2483.500	-46.27	<=-41.20	PASS
				AV	2500.000	-46.93	<=-41.20	PASS
				Peak	2483.500	-39.64	<=-21.20	PASS
				Peak	2497.920	-36.64	<=-21.20	PASS
				Peak	2500.000	-40.02	<=-21.20	PASS

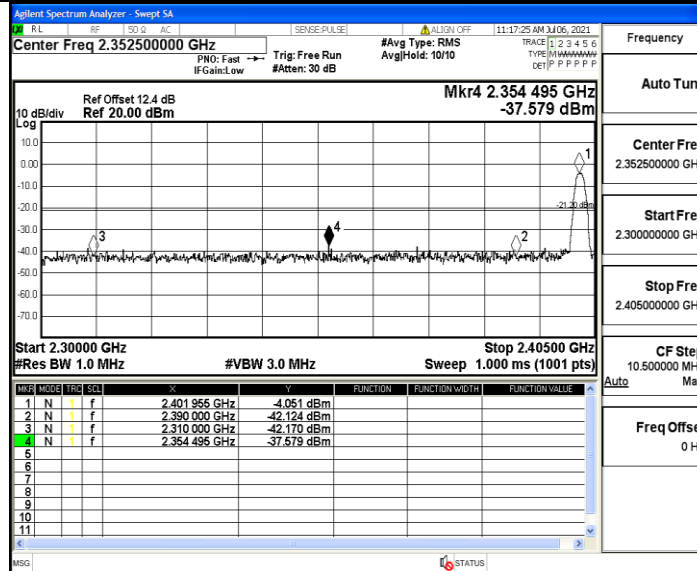
Note:

1. The Antenna Gain is compensated in the graph with 2dBi and Antenna Gain which is Higher.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

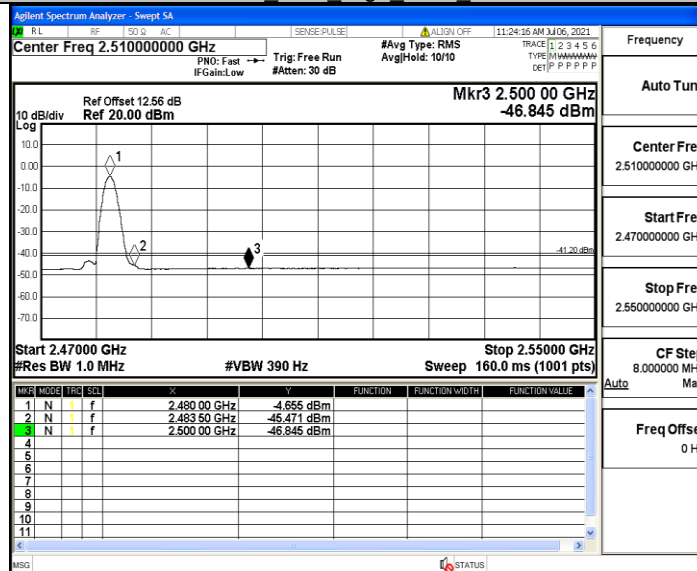
DH5 Ant1 Low 2402 AV



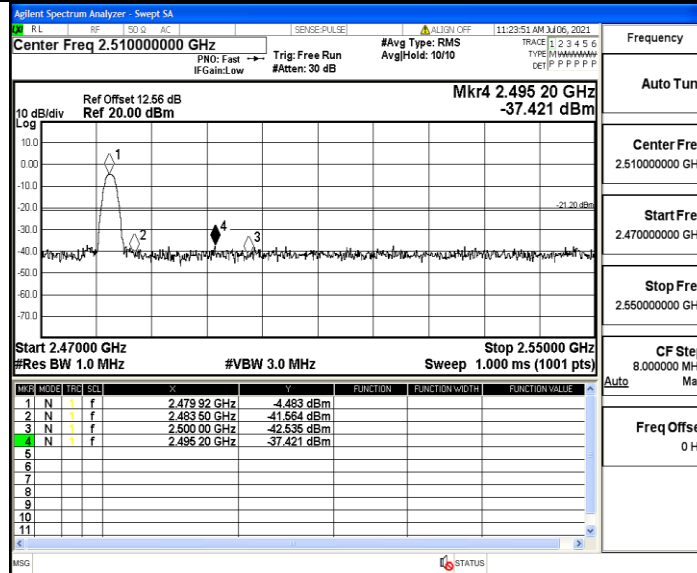
DH5 Ant1 Low 2402 Peak



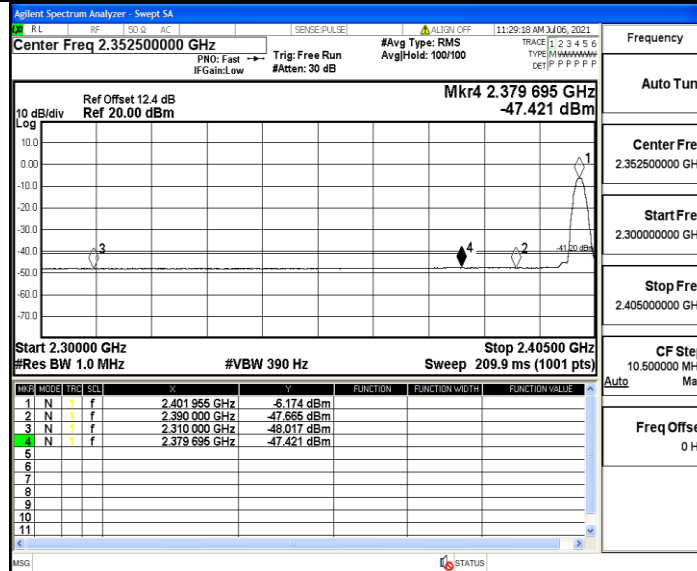
DH5 Ant1 High 2480 AV



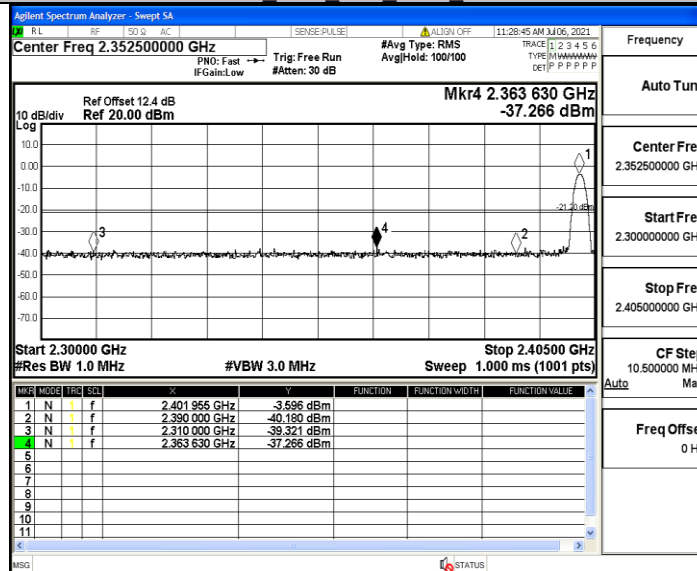
DH5_Ant1_High_2480_Peak



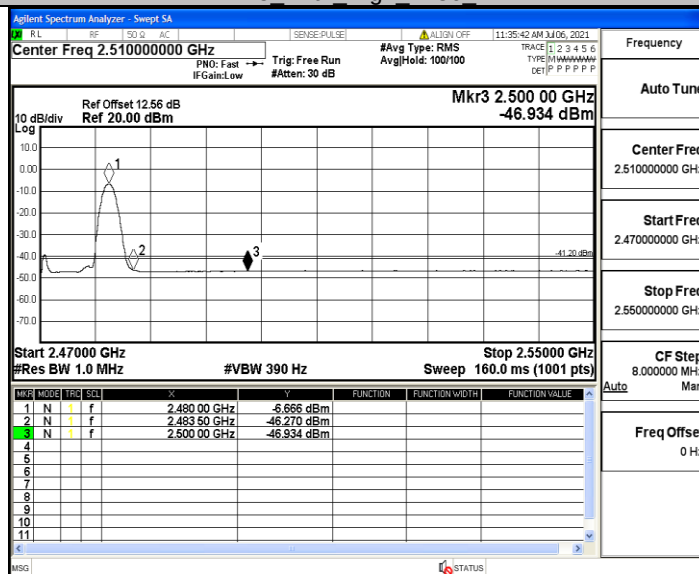
2DH5_Ant1_Low_2402_AV



2DH5_Ant1_Low_2402_Peak



2DH5_Ant1_High_2480_AV



2DH5_Ant1_High_2480 Peak

