

Appendix A

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

Product Name: Bluetooth Speaker

Trade Mark: Altec Lansing

Test Model: IMW258N

FCC ID: 2AL9B-IMW258N

Environmental Conditions

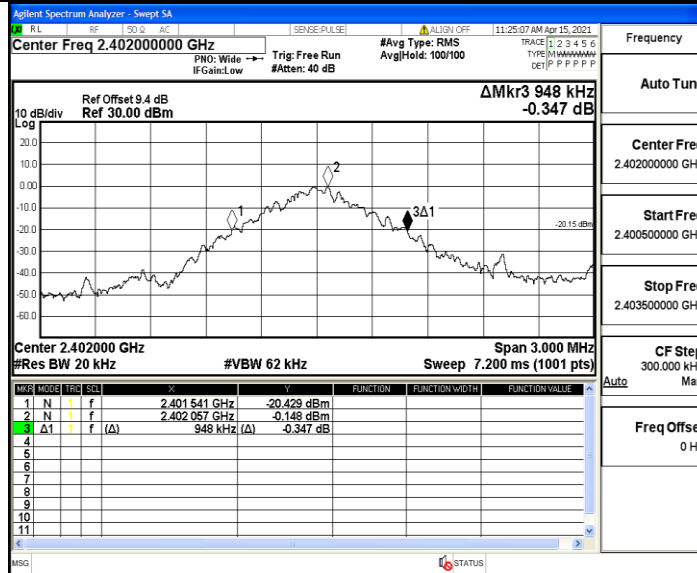
Temperature:	22.8° C
Relative Humidity:	56%
ATM Pressure:	100.0 kPa
Test Engineer:	Anna Hu
Supervised by:	Hugo Chen

A.1 20 dB Bandwidth

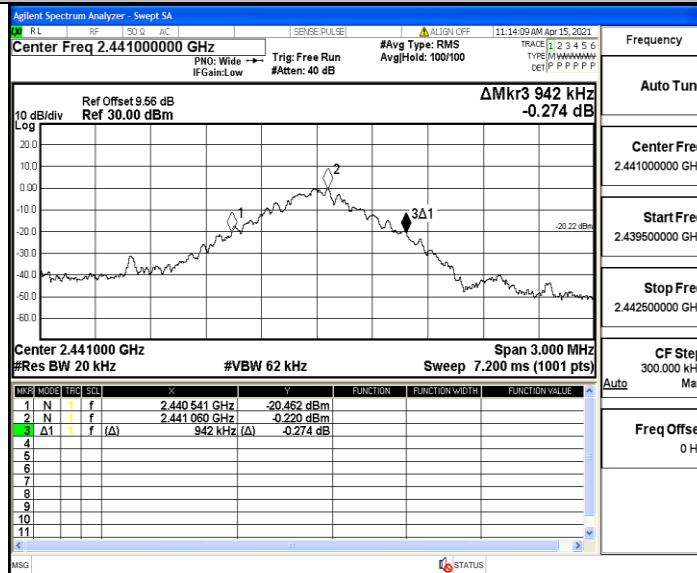
TestMode	Antenna	Channel	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.948	2401.541	2402.489	---	PASS
		2441	0.942	2440.541	2441.483	---	PASS
		2480	0.951	2479.535	2480.486	---	PASS
2DH5	Ant1	2402	1.314	2401.343	2402.657	---	PASS
		2441	1.248	2440.370	2441.618	---	PASS
		2480	1.323	2479.343	2480.666	---	PASS

Test Graph

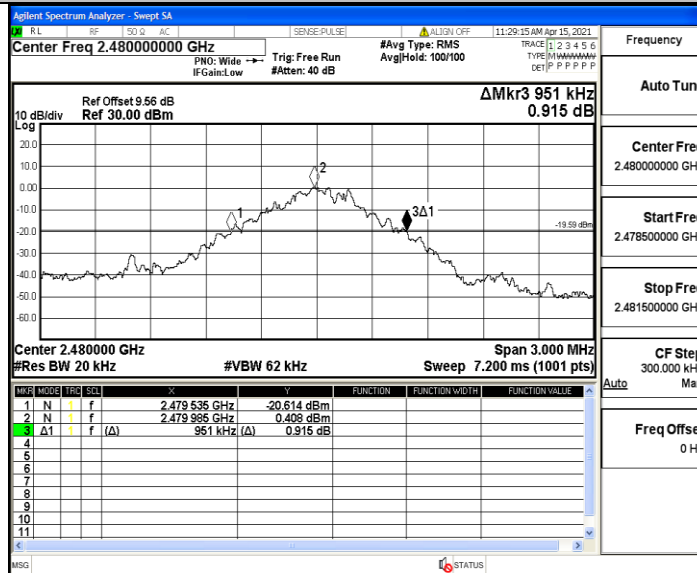
DH5_Ant1_2402



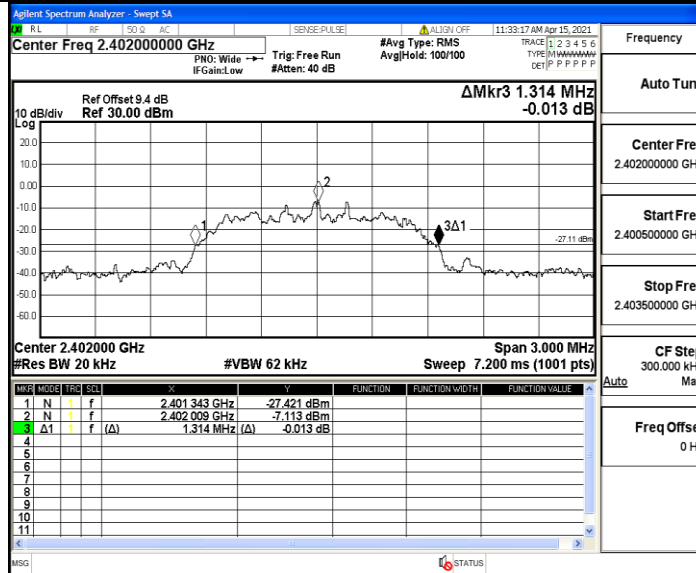
DH5_Ant1_2441



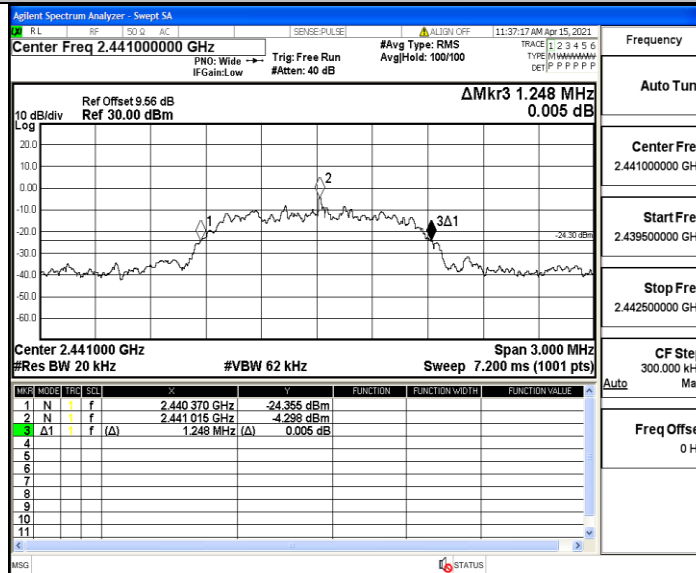
DH5_Ant1_2480



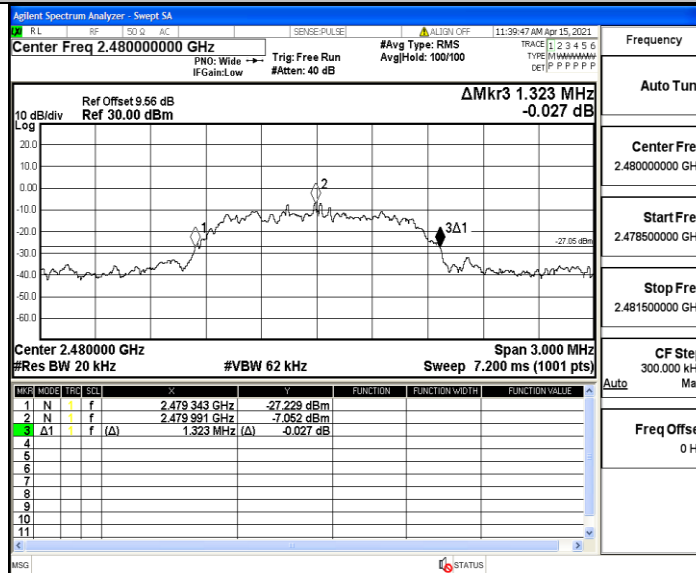
2DH5_Ant1_2402



2DH5_Ant1_2441



2DH5_Ant1_2480

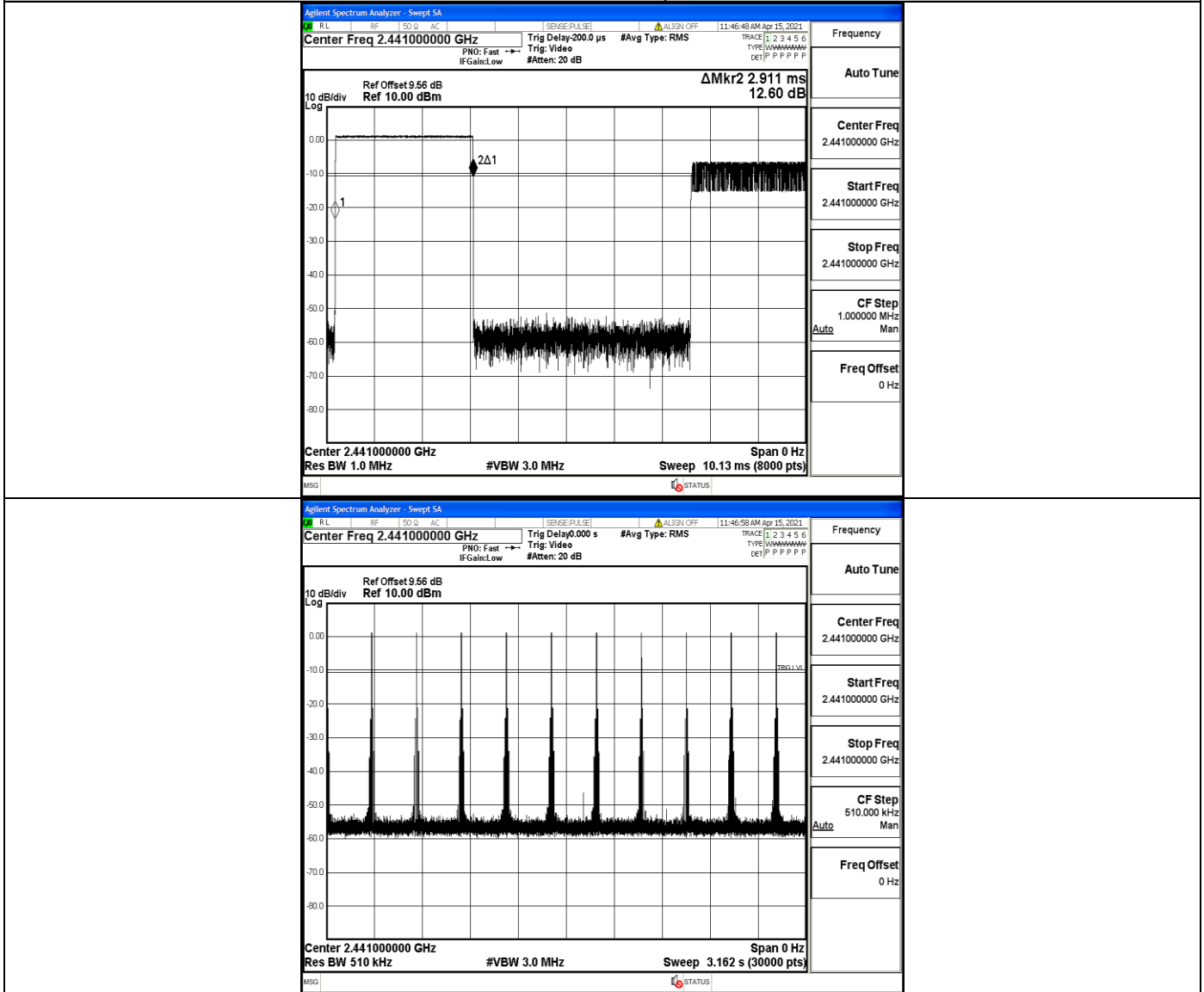


A.2 Dwell Time

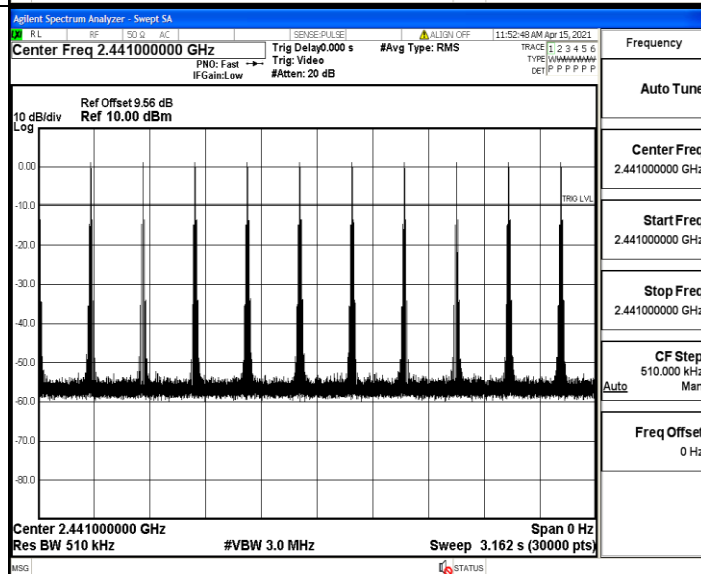
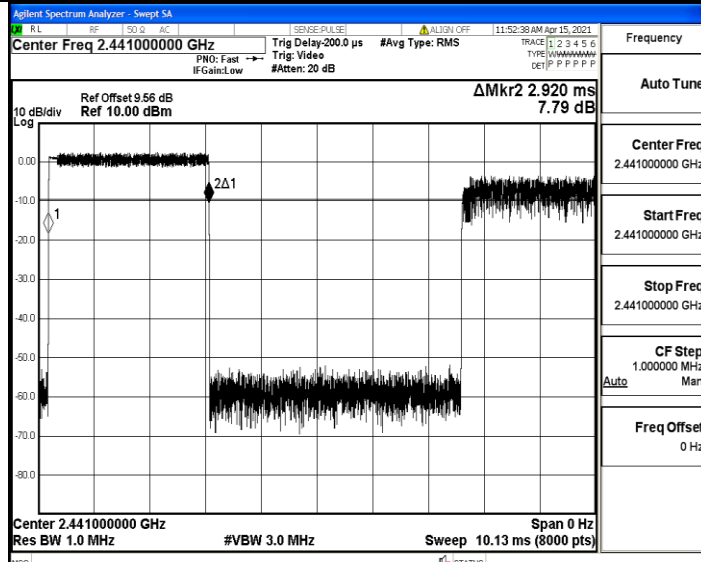
TestMode	Antenna	Channel	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH5	Ant1	Hop	2.91	110	0.32	<=0.4	PASS
2DH5	Ant1	Hop	2.92	110	0.321	<=0.4	PASS

Test Graph

DH5_Ant1_Hop



2DH5_Ant1_Hop

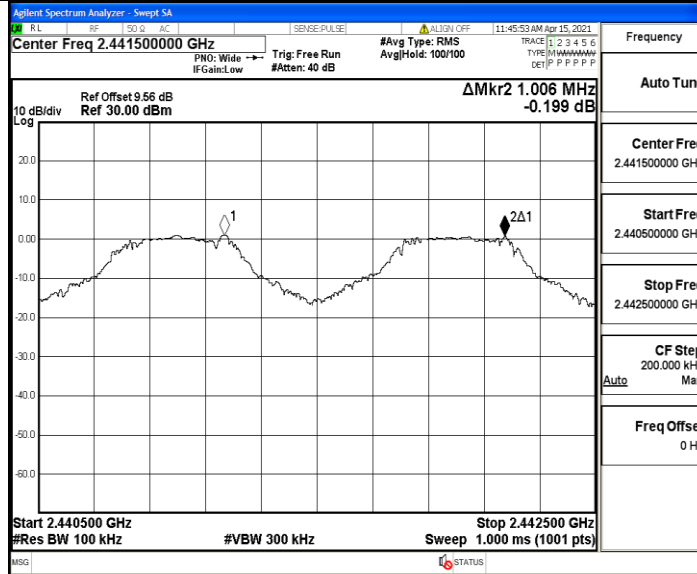


A.3 Carrier Frequency Separation

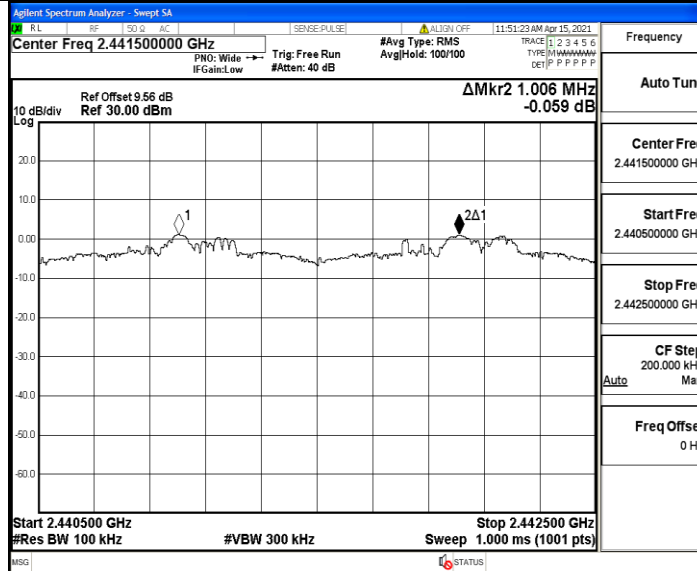
TestMode	Antenna	Channel	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	1.006	≥ 0.951	PASS
2DH5	Ant1	Hop	1.006	≥ 0.882	PASS

Test Graph

DH5_Ant1_Hop



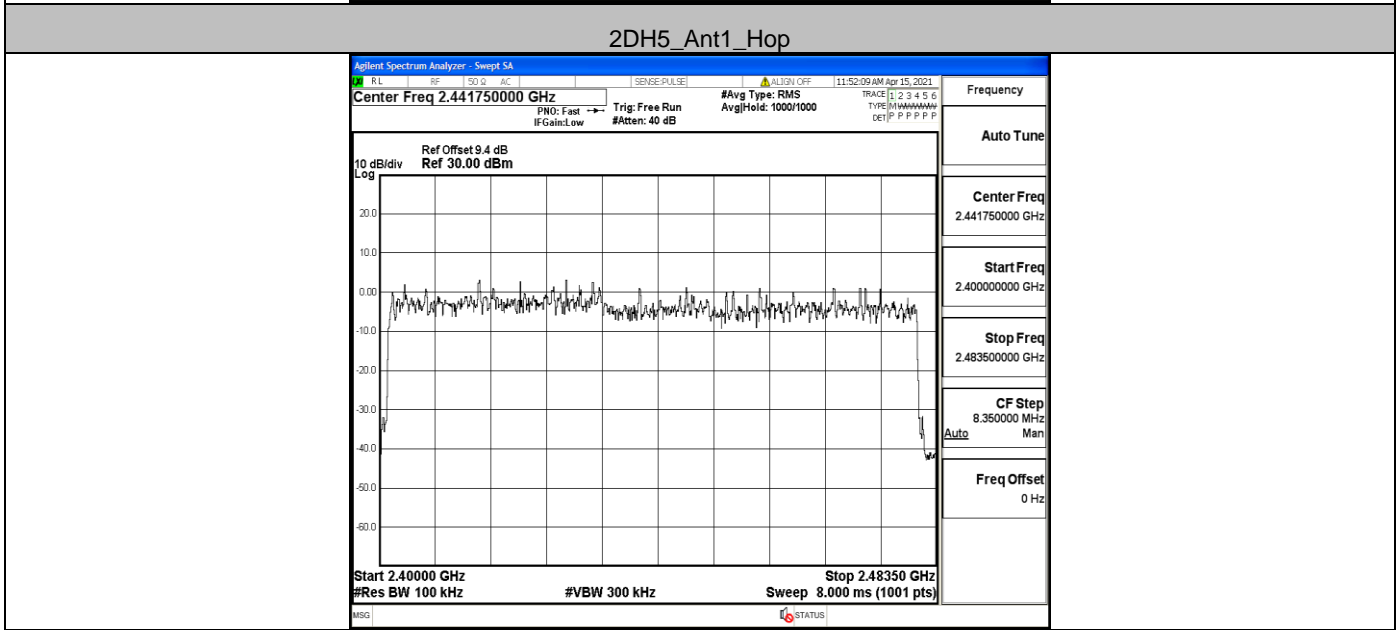
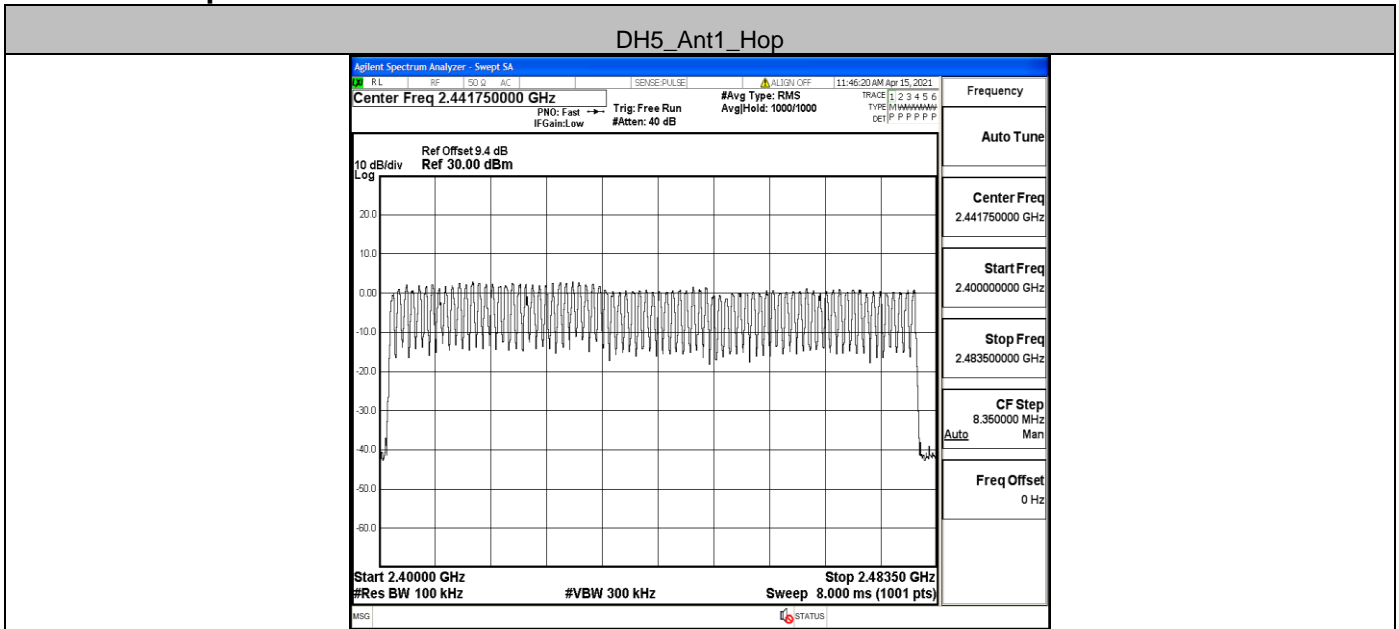
2DH5_Ant1_Hop



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

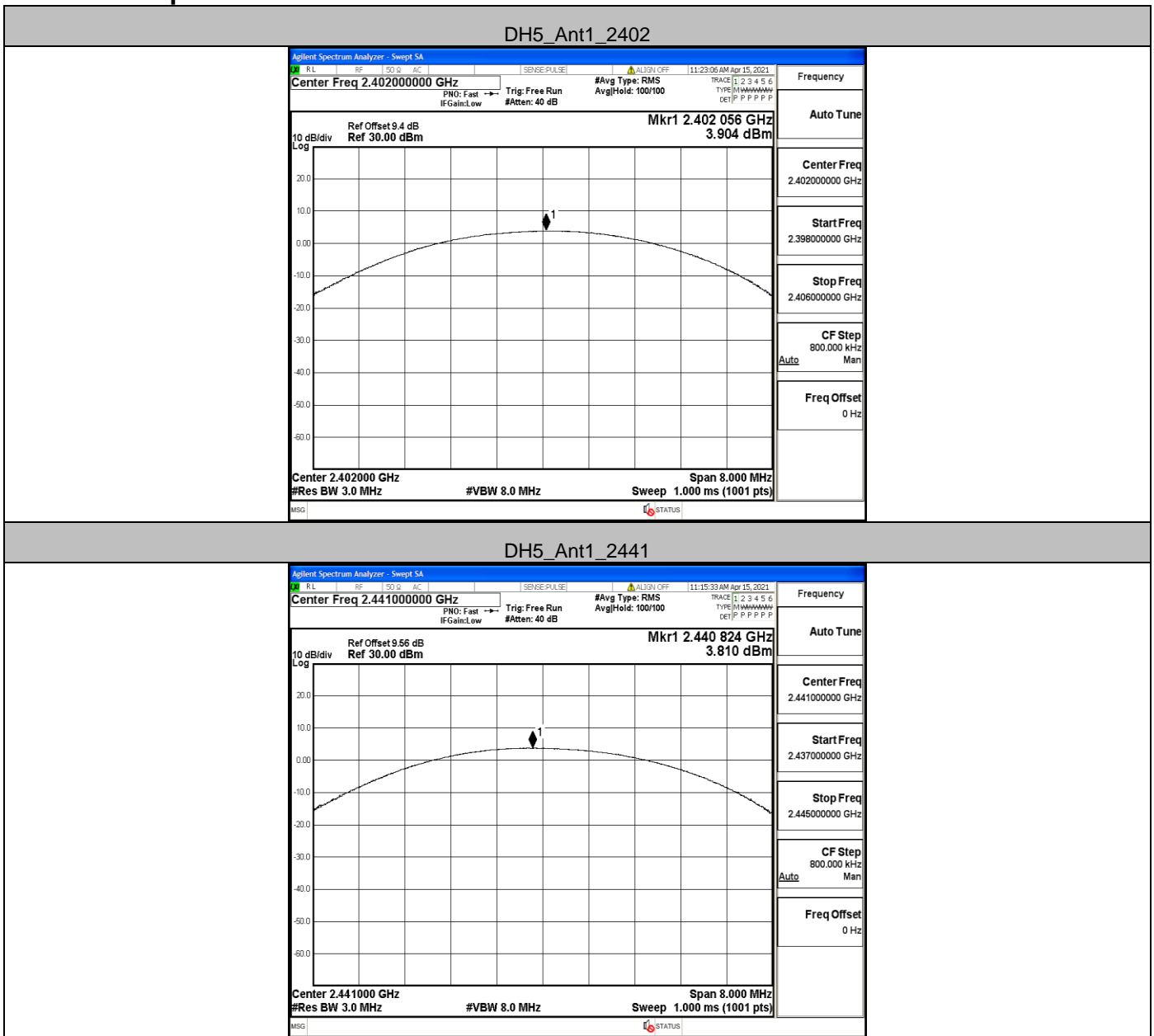
Test Graph



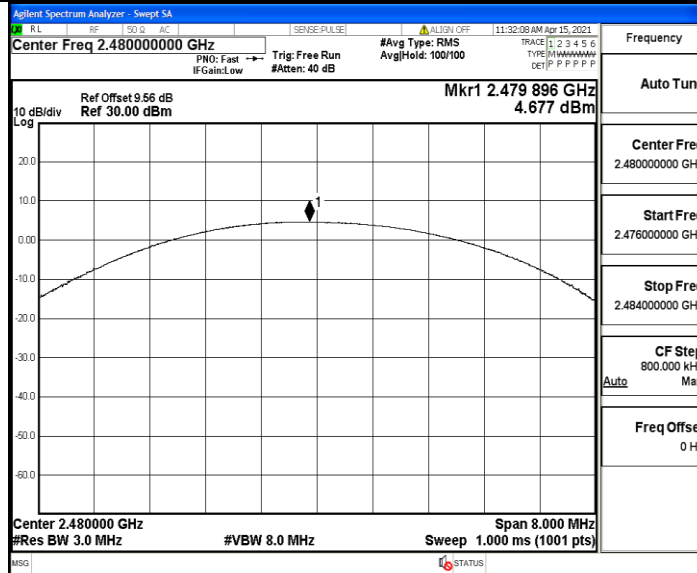
A.5 Conducted Peak Output Power

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
DH5	Ant1	2402	3.9	<=20.97	PASS
		2441	3.81	<=20.97	PASS
		2480	4.68	<=20.97	PASS
2DH5	Ant1	2402	0.31	<=20.97	PASS
		2441	1.7	<=20.97	PASS
		2480	1.4	<=20.97	PASS

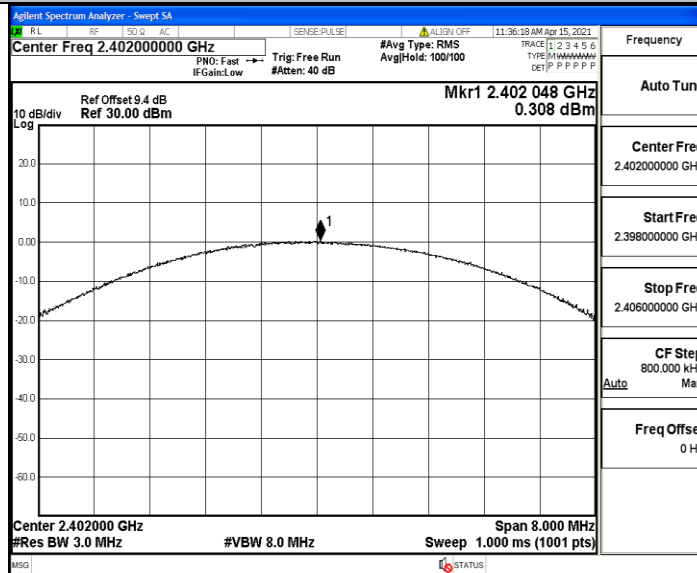
Test Graph



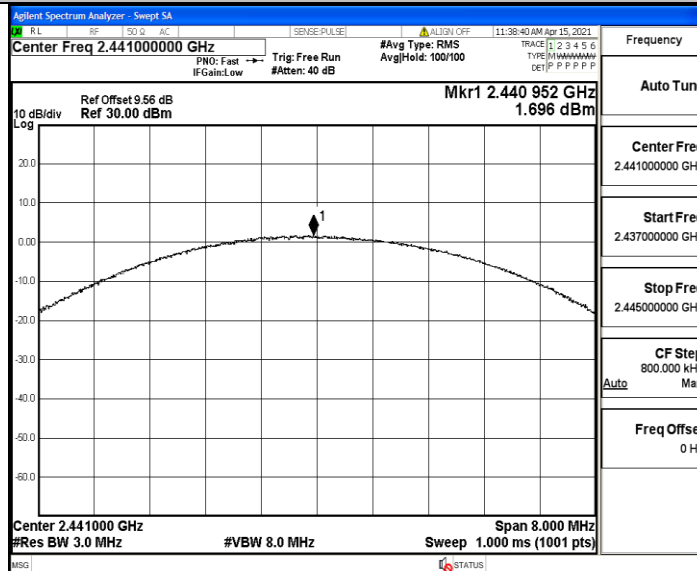
DH5_Ant1_2480



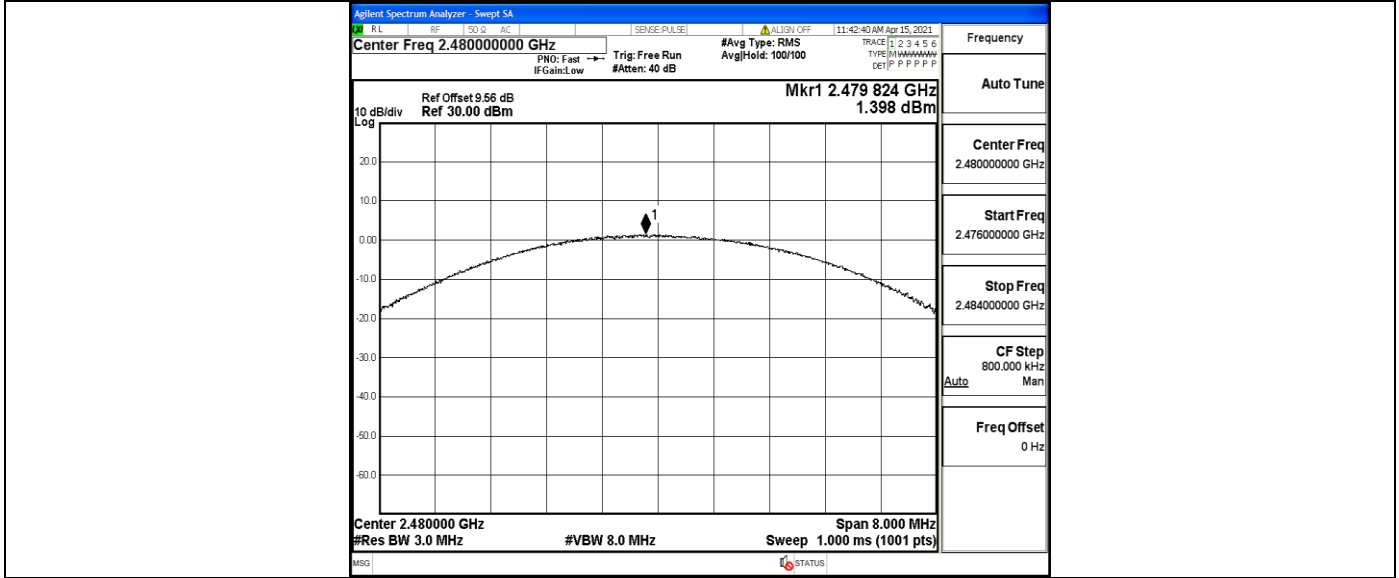
2DH5_Ant1_2402



2DH5_Ant1_2441



2DH5_Ant1_2480

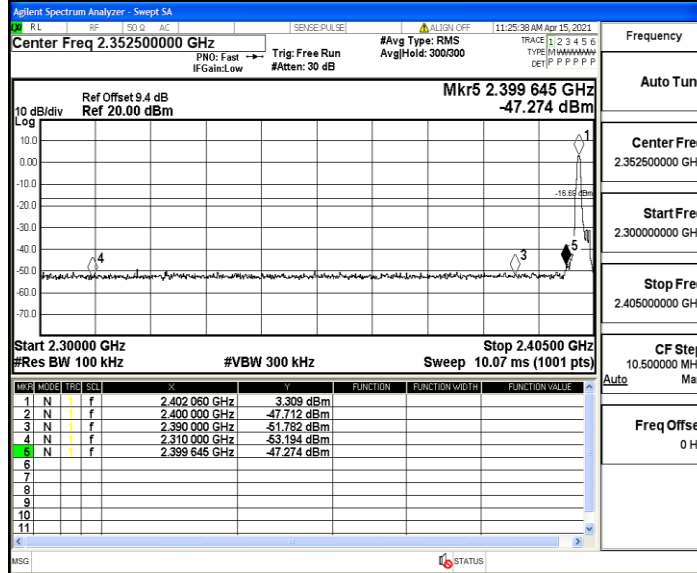


A.6 Band-edge for RF Conducted Emissions

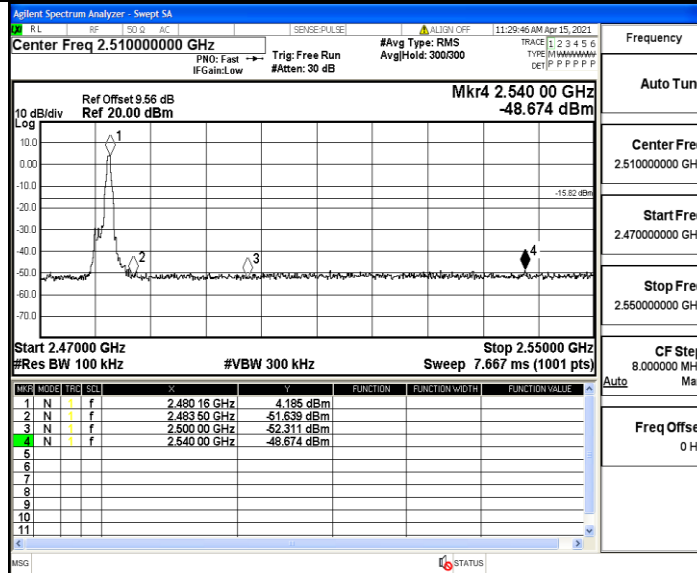
TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	3.31	-47.27	<=-16.69	PASS
		High	2480	4.18	-48.67	<=-15.82	PASS
		Low	Hop_2402	1.57	-49.69	<=-18.43	PASS
		High	Hop_2480	0.62	-48.27	<=-19.39	PASS
2DH5	Ant1	Low	2402	-2.32	-43.08	<=-22.32	PASS
		High	2480	-1.98	-48.29	<=-21.98	PASS
		Low	Hop_2402	1.76	-50.35	<=-18.24	PASS
		High	Hop_2480	-2.25	-48.42	<=-22.25	PASS

Test Graph

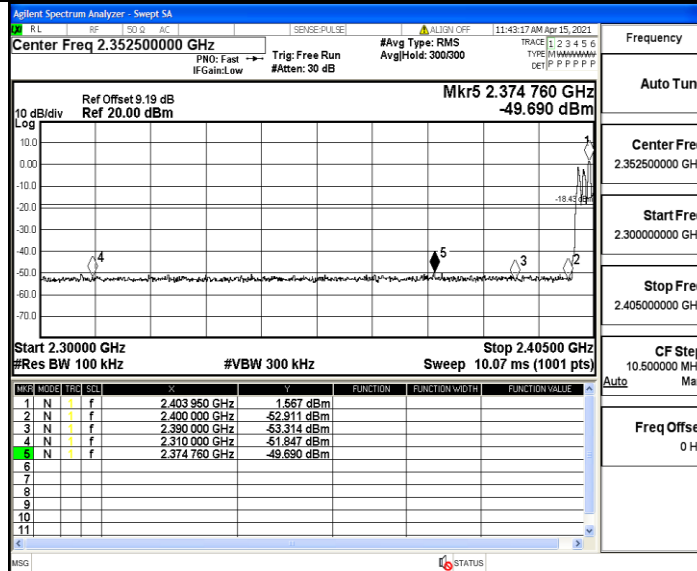
DH5_Ant1_Low_2402



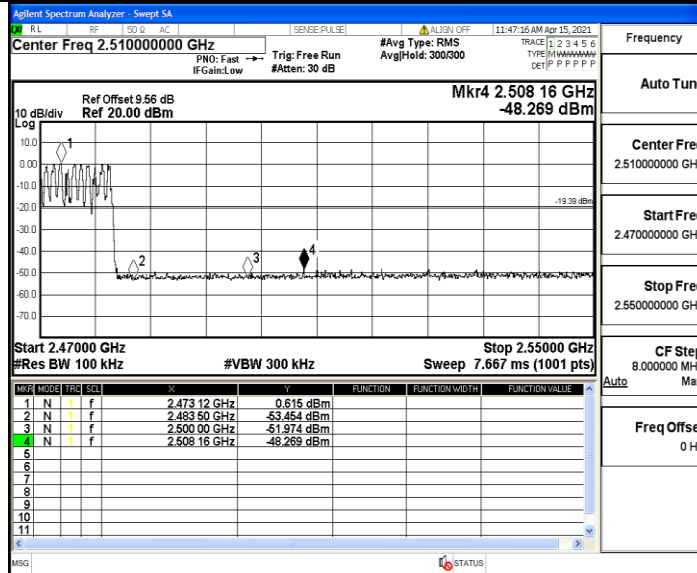
DH5_Ant1_High_2480



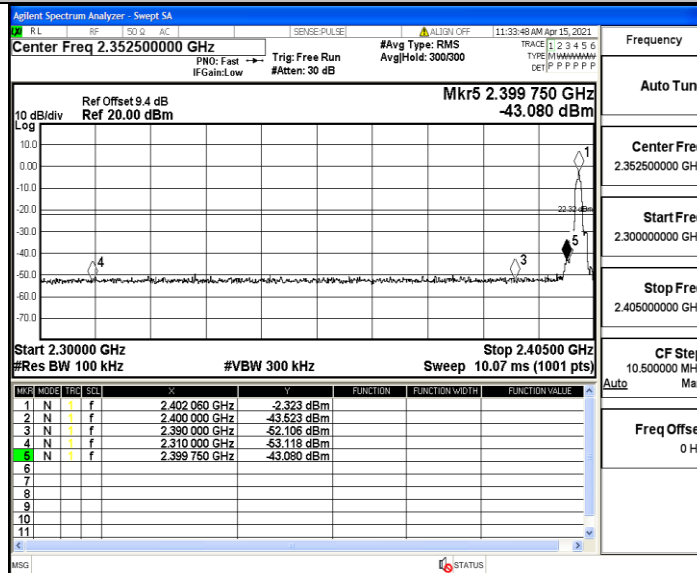
DH5_Ant1_Low_Hop_2402



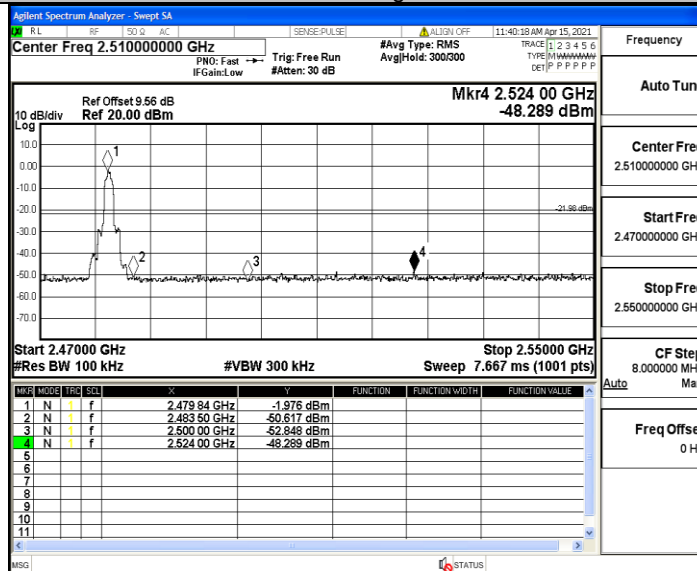
DH5_Ant1_High_Hop_2480



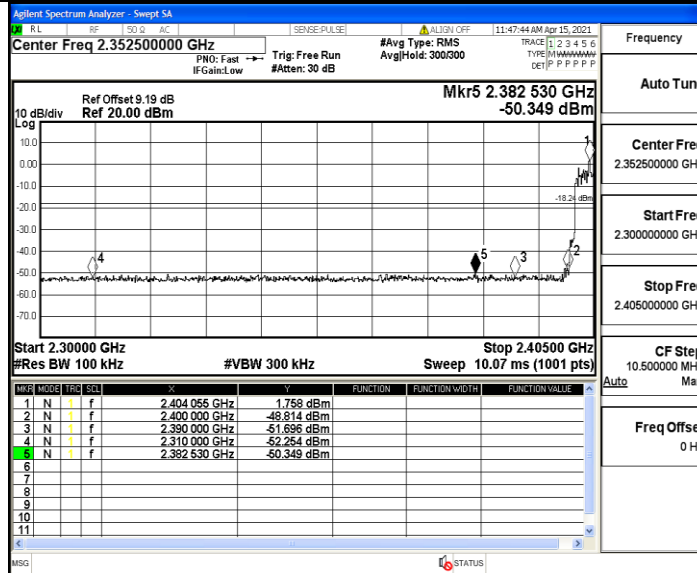
2DH5_Ant1_Low_2402



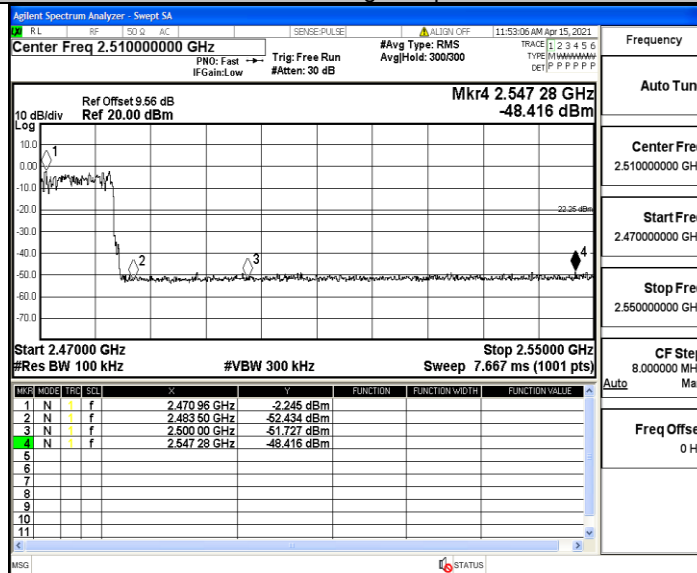
2DH5_Ant1_High_2480



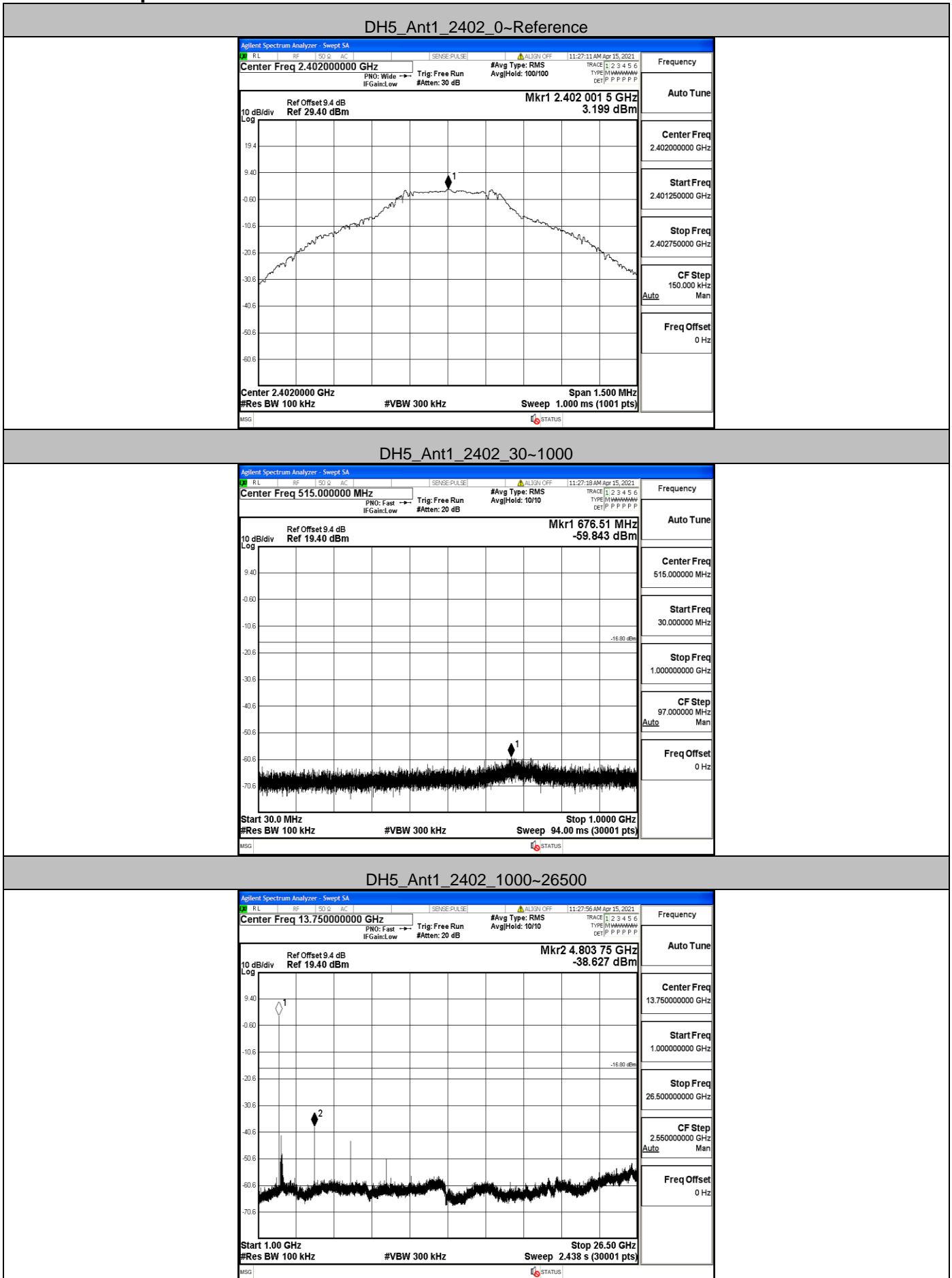
2DH5_Ant1_Low_Hop_2402



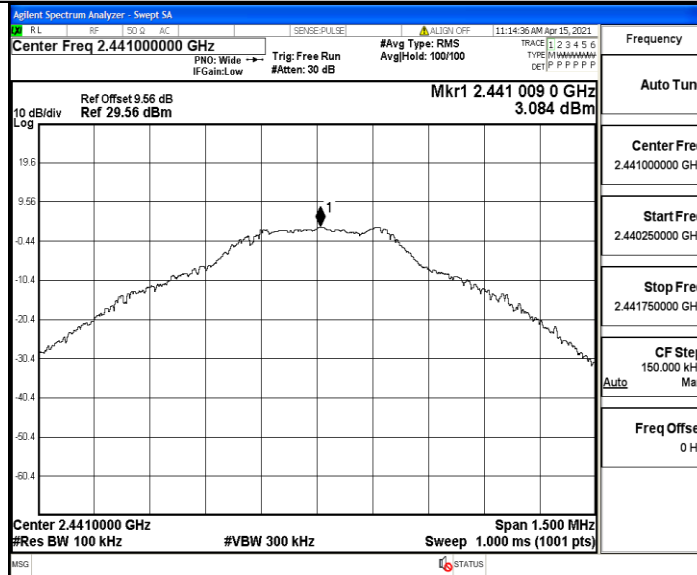
2DH5_Ant1_High_Hop_2480



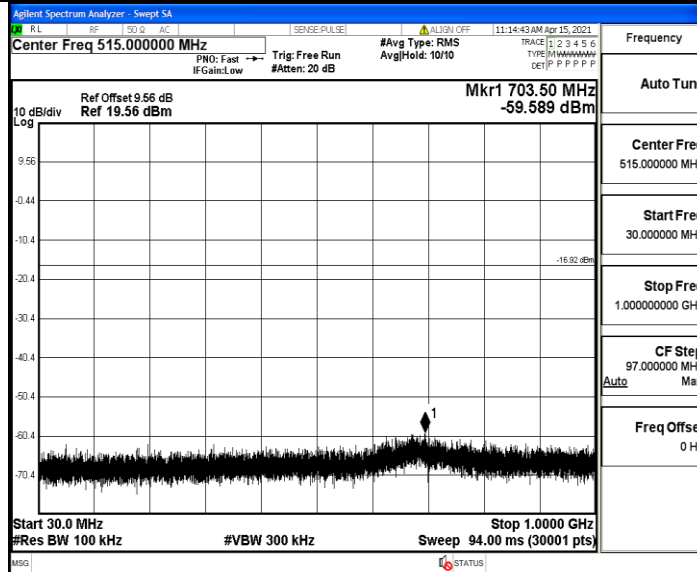
A.7 RF Conducted Spurious Emissions Test Graph



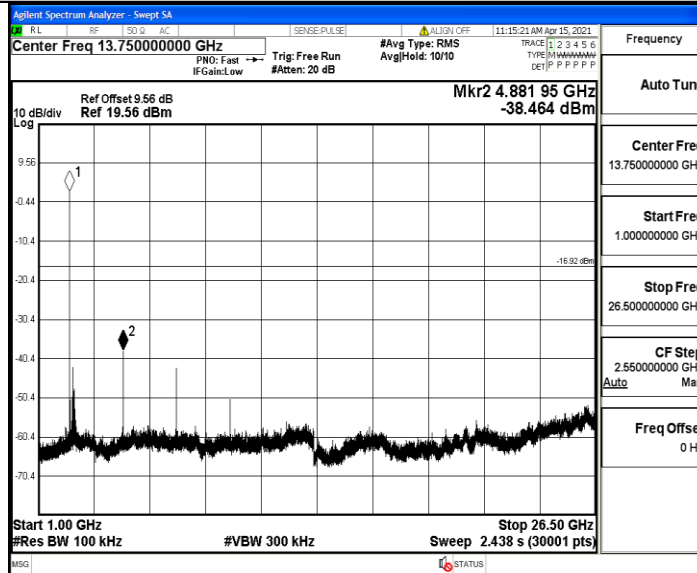
DH5_Ant1_2441_0~Reference



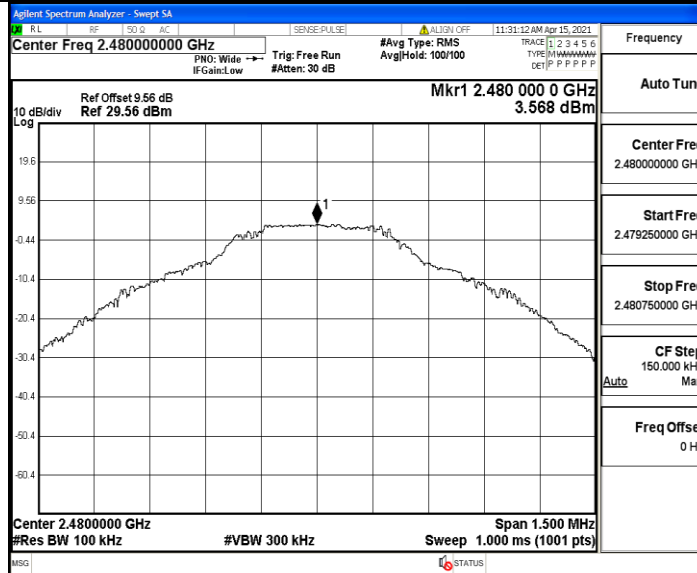
DH5_Ant1_2441_30~1000



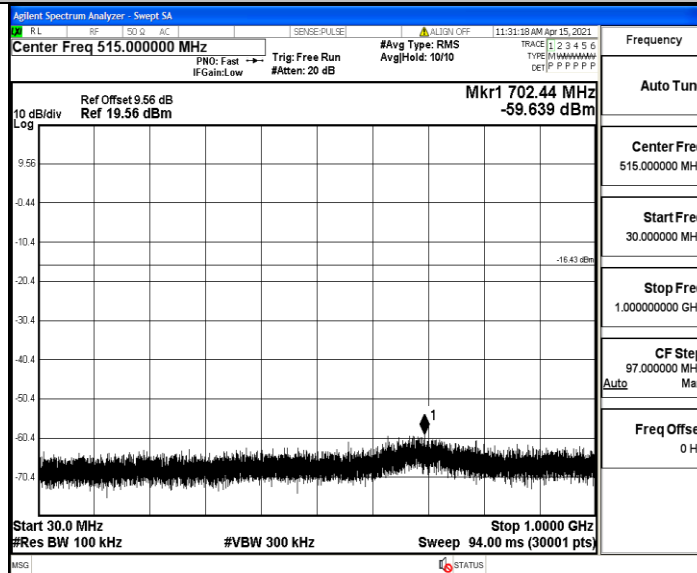
DH5_Ant1_2441_1000~26500



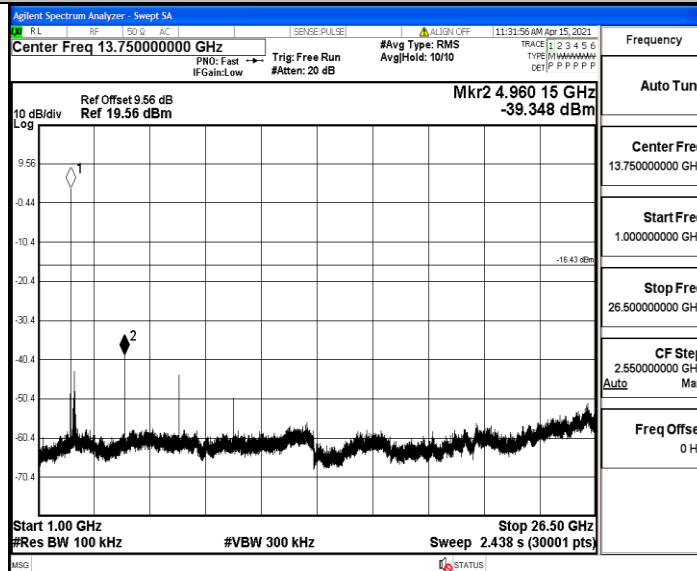
DH5_Ant1_2480_0-Reference



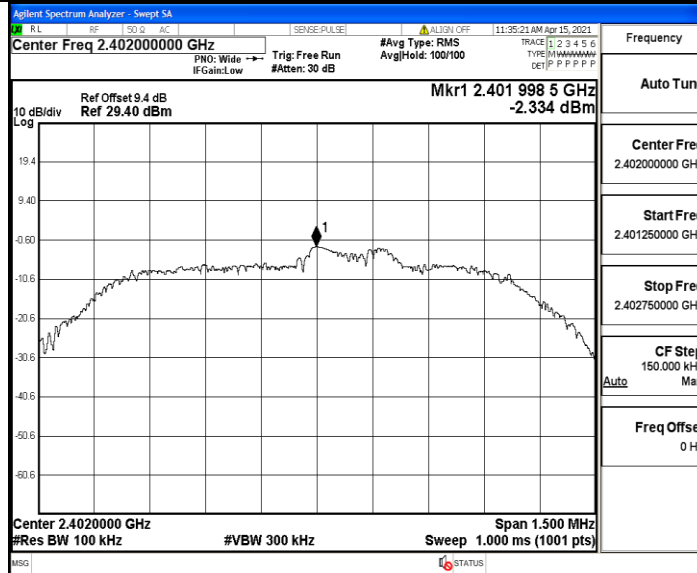
DH5_Ant1_2480_30-1000



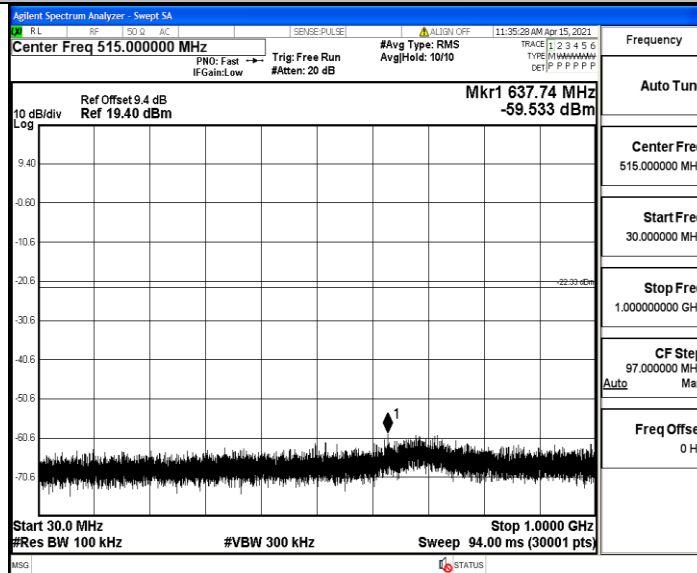
DH5_Ant1_2480_1000-26500



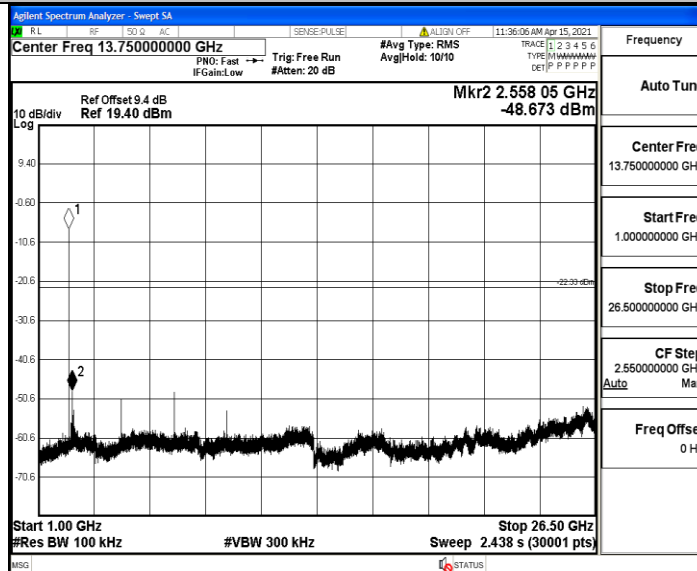
2DH5_Ant1_2402_0~Reference



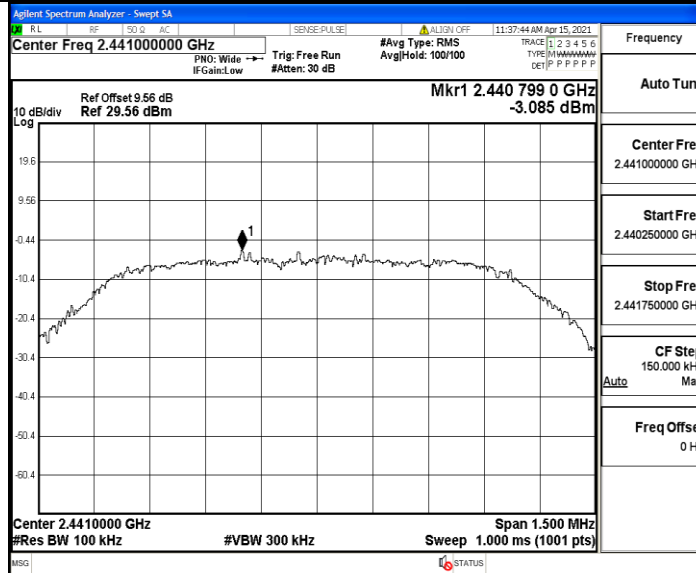
2DH5_Ant1_2402_30~1000



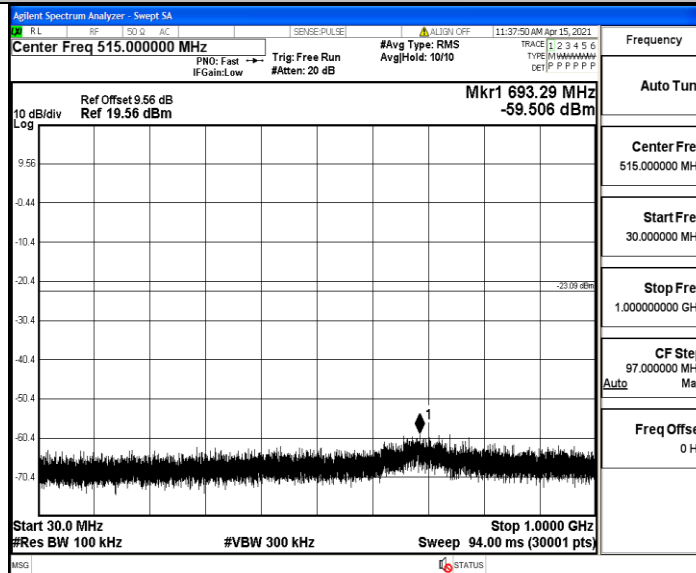
2DH5_Ant1_2402_1000~26500



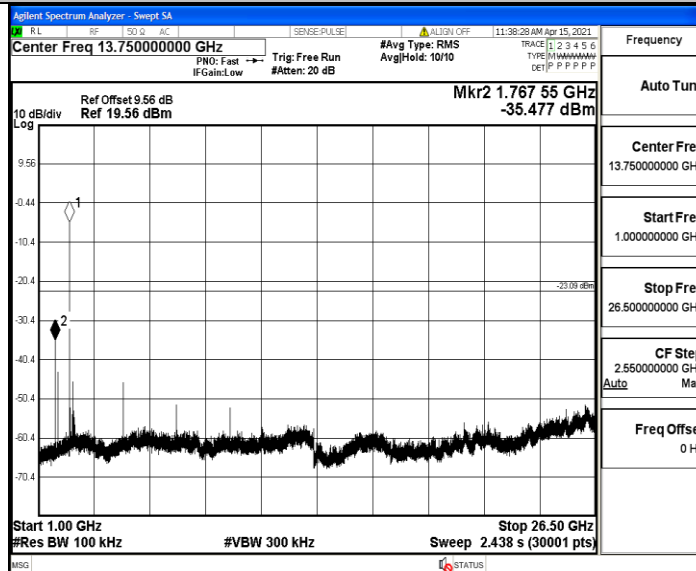
2DH5_Ant1_2441_0-Reference



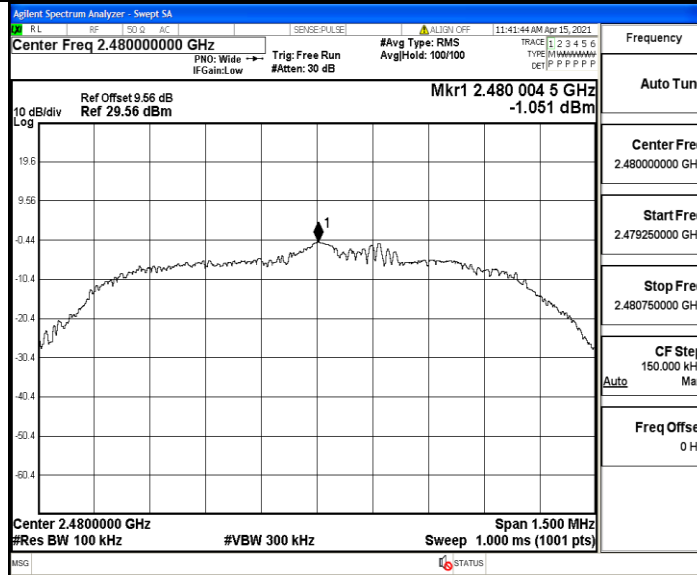
2DH5_Ant1_2441_30~1000



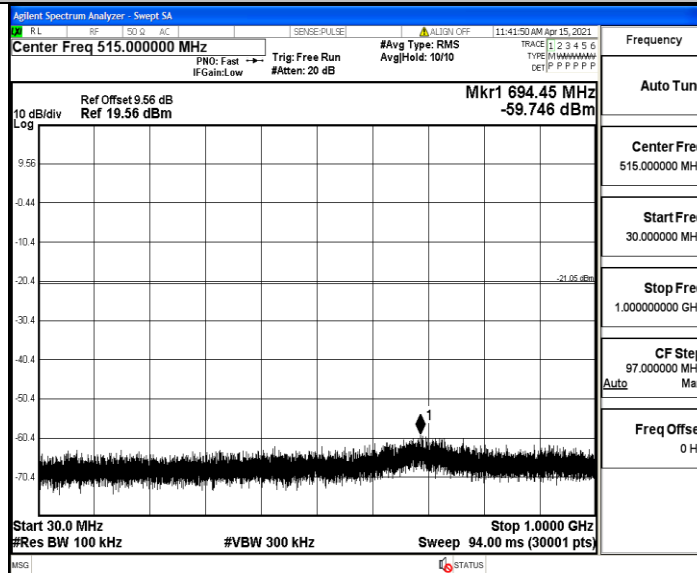
2DH5_Ant1_2441_1000~26500



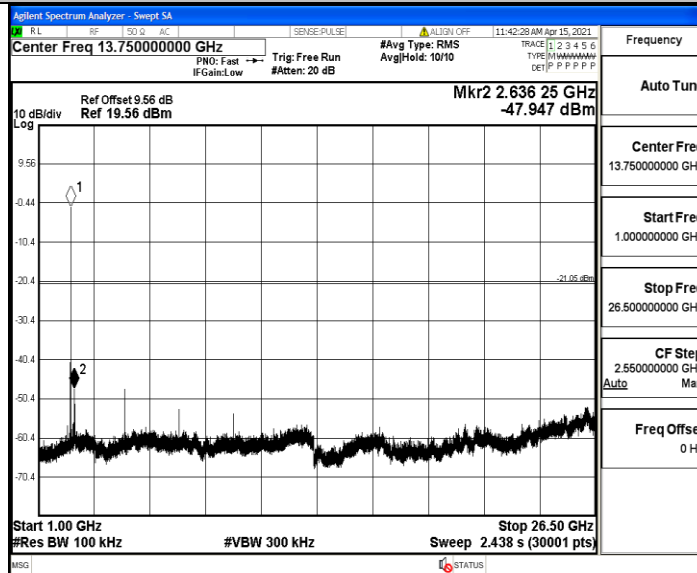
2DH5_Ant1_2480_0~Reference



2DH5_Ant1_2480_30~1000



2DH5_Ant1_2480_1000~26500



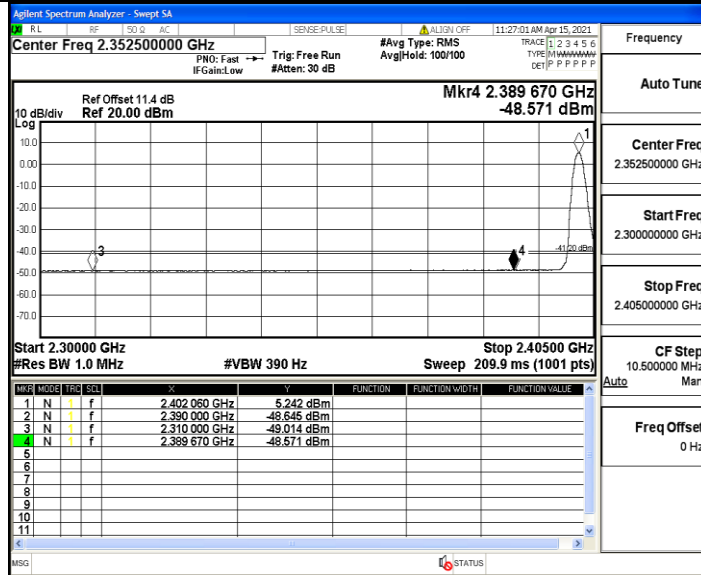
A.8 Restrict-band band-edge measurements

TestMode	Antenna	ChName	Channel	Detector	Freq(MHz)	Result(dBm)	Limit(dBm)	Verdict
DH5	Ant1	Low	2402	AV	2310.000	-49.01	<=-41.20	PASS
				AV	2389.670	-48.58	<=-41.20	PASS
				AV	2390.000	-48.65	<=-41.20	PASS
				Peak	2310.000	-41.44	<=-21.20	PASS
				Peak	2360.900	-38.59	<=-21.20	PASS
				Peak	2390.000	-41.18	<=-21.20	PASS
		High	2480	AV	2483.500	-46.91	<=-41.20	PASS
				AV	2500.000	-48.06	<=-41.20	PASS
				Peak	2483.500	-41.02	<=-21.20	PASS
				Peak	2485.120	-33.12	<=-21.20	PASS
				Peak	2500.000	-41.01	<=-21.20	PASS
2DH5	Ant1	Low	2402	AV	2310.000	-48.92	<=-41.20	PASS
				AV	2378.120	-48.56	<=-41.20	PASS
				AV	2390.000	-48.75	<=-41.20	PASS
				Peak	2310.000	-39.99	<=-21.20	PASS
				Peak	2337.905	-38.74	<=-21.20	PASS
				Peak	2390.000	-40.20	<=-21.20	PASS
		High	2480	AV	2483.500	-47.46	<=-41.20	PASS
				AV	2500.000	-48.11	<=-41.20	PASS
				Peak	2483.500	-40.50	<=-21.20	PASS
				Peak	2497.120	-38.16	<=-21.20	PASS
				Peak	2500.000	-41.80	<=-21.20	PASS

Note:

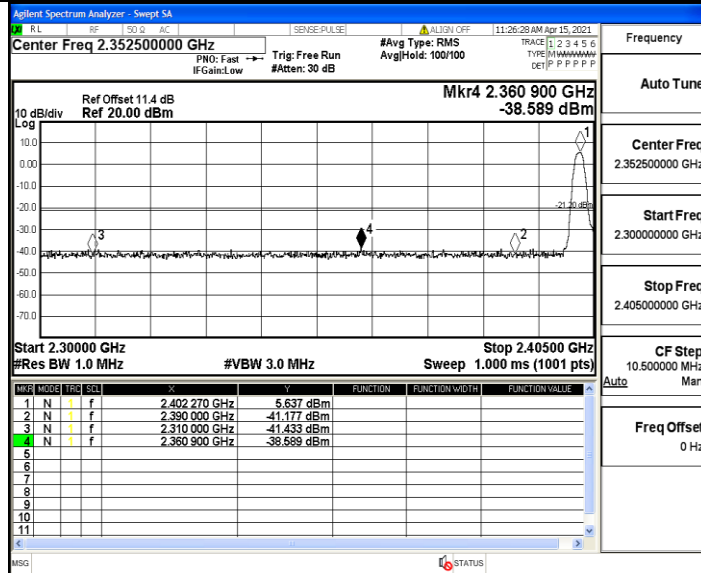
1. The Antenna Gain is compensated in the graph with 2dBi and Antenna Gain which is Higher.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

DH5_Ant1_Low_2402_AV



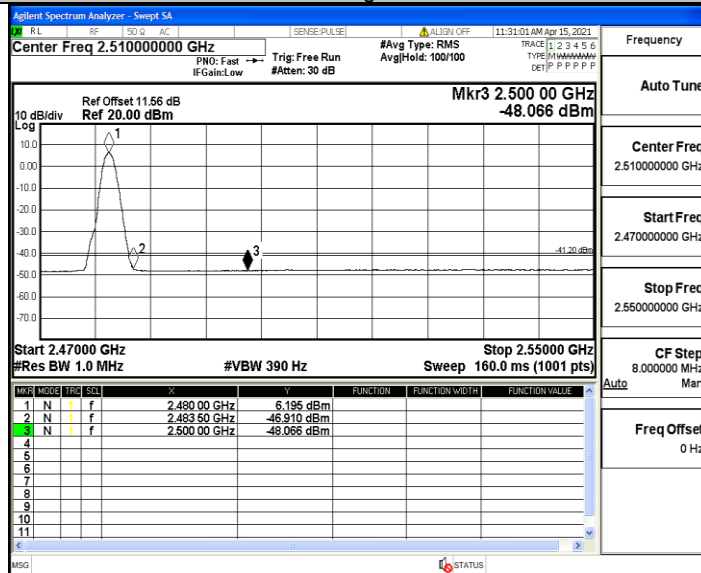
Frequency	Auto Tune
Center Freq	2.352500000 GHz
Start Freq	2.300000000 GHz
Stop Freq	2.405000000 GHz
CF Step	10.500000 MHz
Auto	Man
Freq Offset	0 Hz

DH5_Ant1_Low_2402_Peak



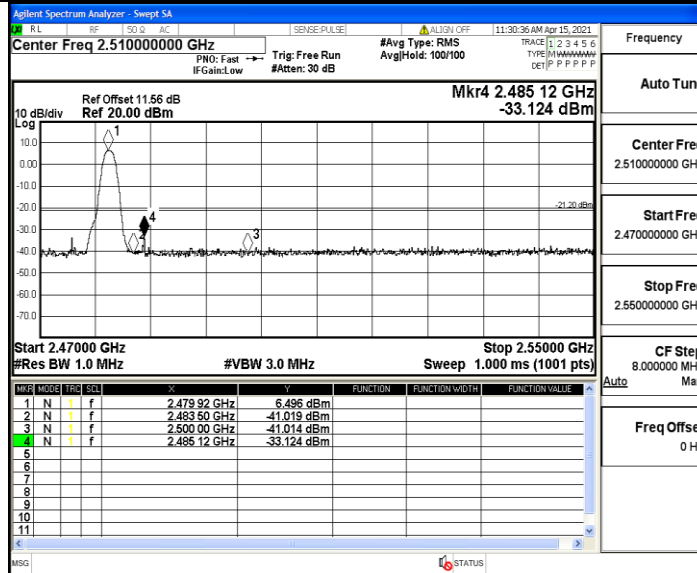
Frequency	Auto Tune
Center Freq	2.352500000 GHz
Start Freq	2.300000000 GHz
Stop Freq	2.405000000 GHz
CF Step	10.500000 MHz
Auto	Man
Freq Offset	0 Hz

DH5_Ant1_High_2480_AV



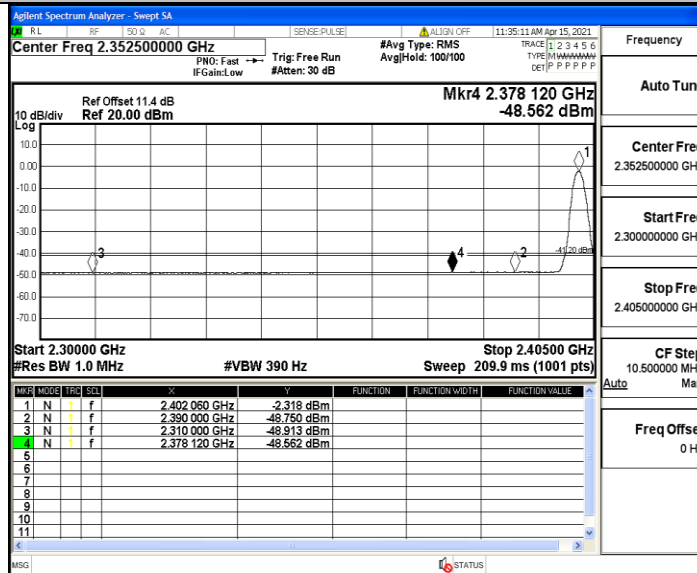
Frequency	Auto Tune
Center Freq	2.510000000 GHz
Start Freq	2.470000000 GHz
Stop Freq	2.550000000 GHz
CF Step	8.000000 MHz
Auto	Man
Freq Offset	0 Hz

DH5_Ant1_High_2480_Peak



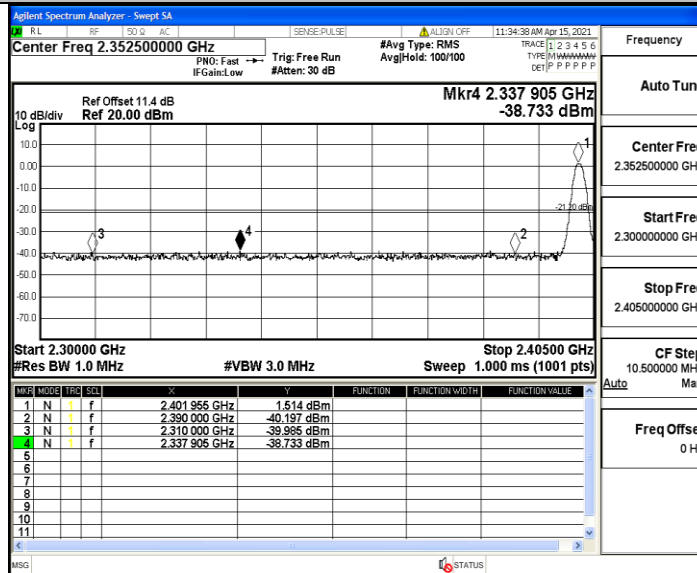
Frequency	Auto Tune
Center Freq	2.510000000 GHz
Start Freq	2.470000000 GHz
Stop Freq	2.550000000 GHz
CF Step	8.000000 MHz
Freq Offset	0 Hz

2DH5_Ant1_Low_2402_AV



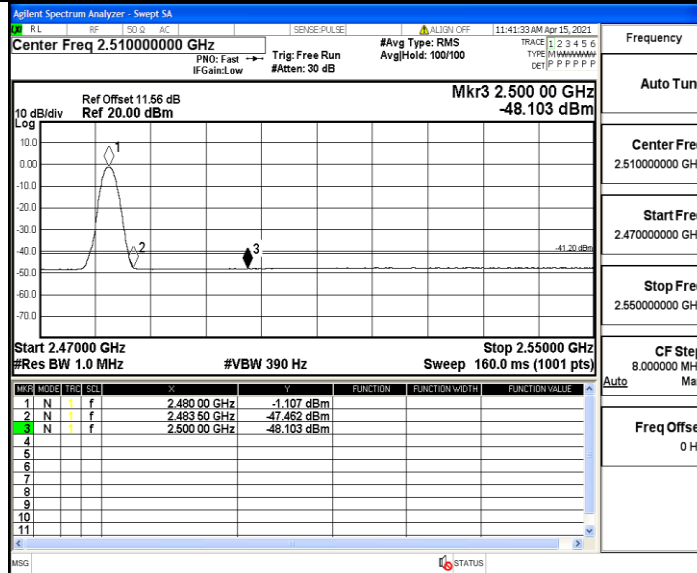
Frequency	Auto Tune
Center Freq	2.352500000 GHz
Start Freq	2.300000000 GHz
Stop Freq	2.405000000 GHz
CF Step	10.500000 MHz
Freq Offset	0 Hz

2DH5_Ant1_Low_2402_Peak



Frequency	Auto Tune
Center Freq	2.352500000 GHz
Start Freq	2.300000000 GHz
Stop Freq	2.405000000 GHz
CF Step	10.500000 MHz
Freq Offset	0 Hz

2DH5_Ant1_High_2480_AV



2DH5_Ant1_High_2480_Peak

