

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

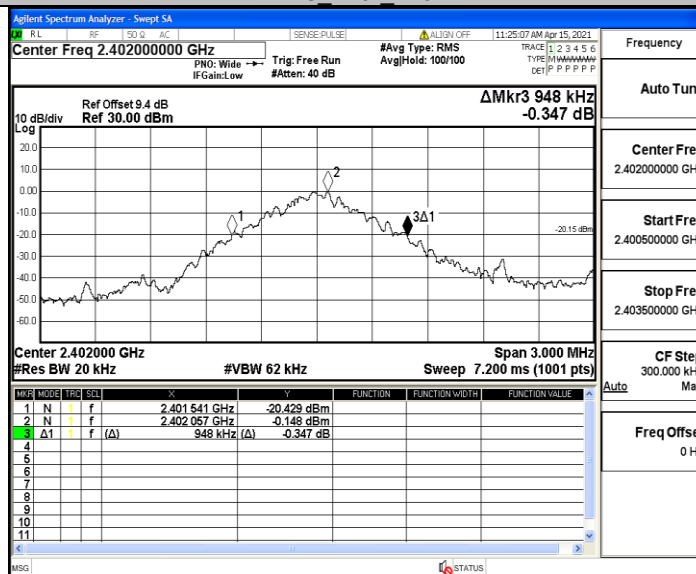
Temperature:	22.8° C
Relative Humidity:	56%
ATM Pressure:	100.0 kPa
Test Engineer:	Anna Hu
Supervised by:	Hugo Chen

A.1 20 dB Bandwidth

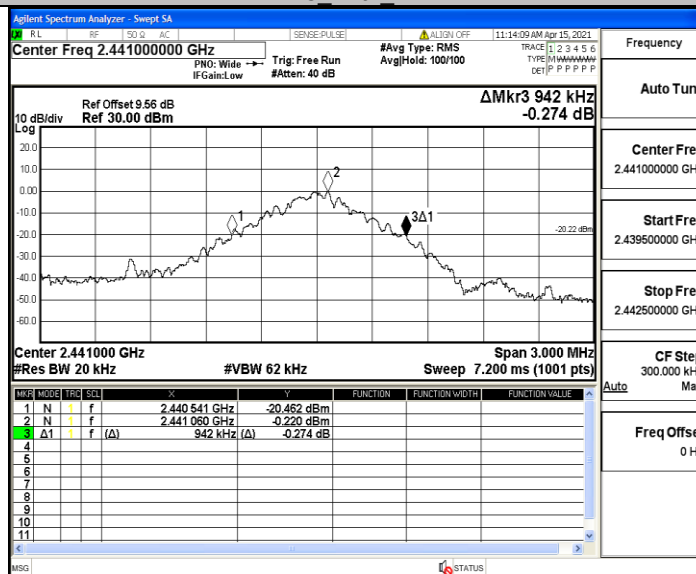
TestMode	Antenna	Channel	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.948	2401.541	2402.489	---	PASS
		2441	0.942	2440.541	2441.483	---	PASS
		2480	0.951	2479.535	2480.486	---	PASS
2DH5	Ant1	2402	1.314	2401.343	2402.657	---	PASS
		2441	1.248	2440.370	2441.618	---	PASS
		2480	1.323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

Test Graph

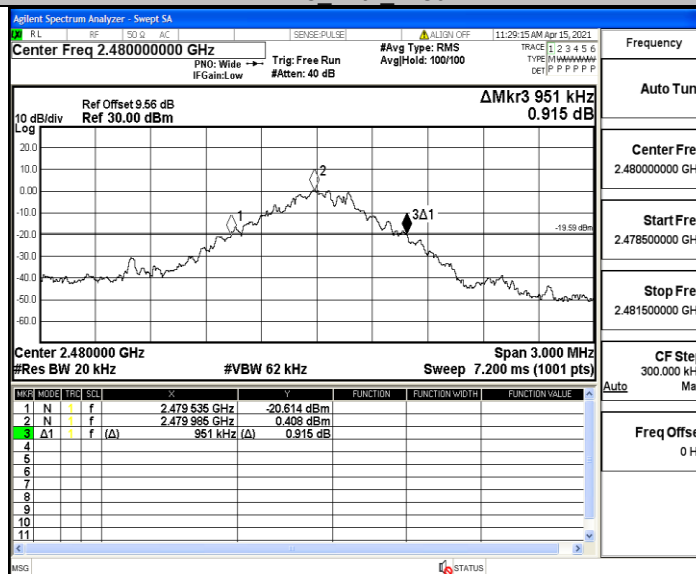
DH5_Ant1_2402



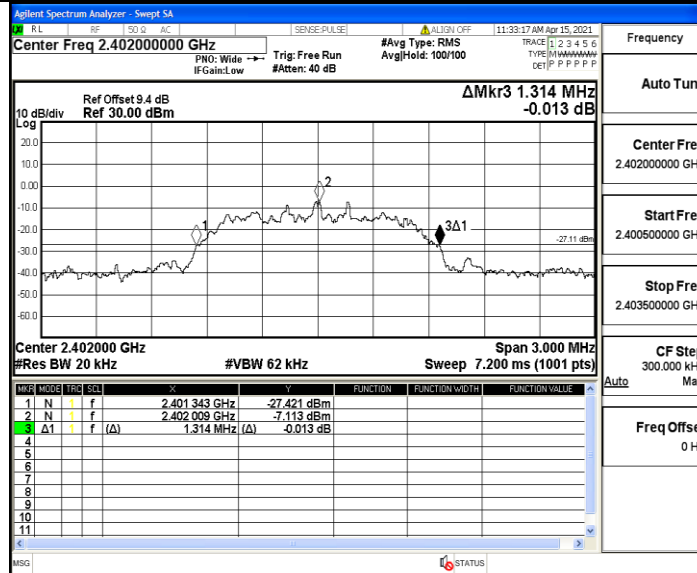
DH5_Ant1_2441



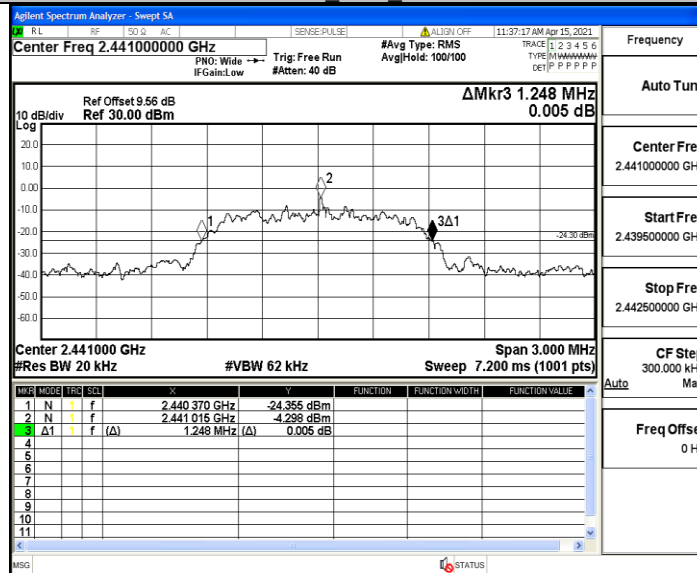
DH5_Ant1_2480



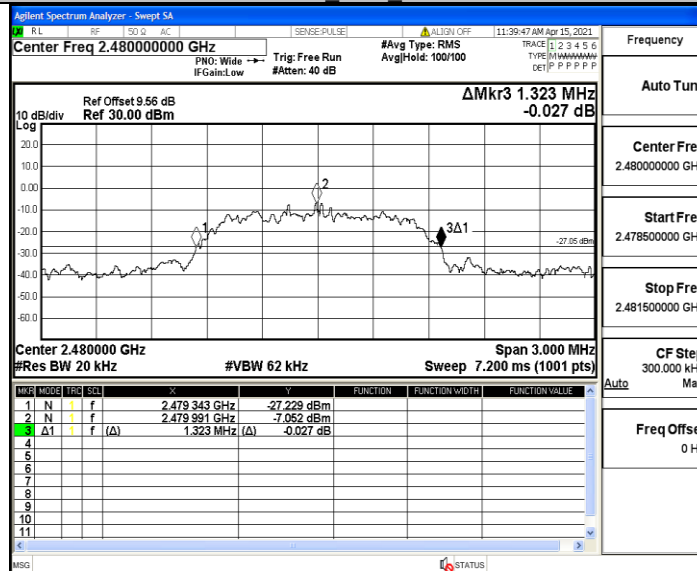
2DH5_Ant1_2402



2DH5_Ant1_2441



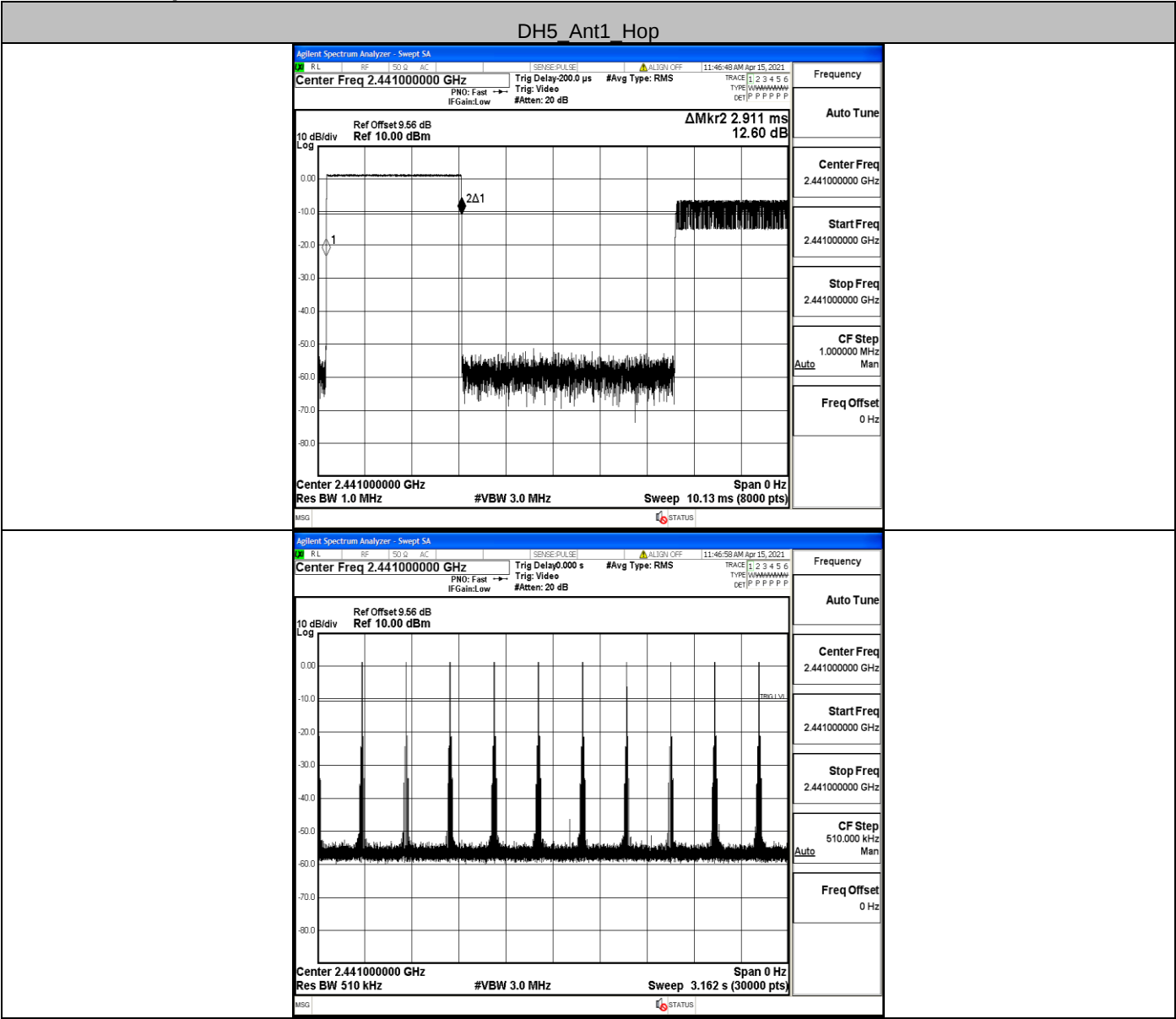
2DH5_Ant1_2480

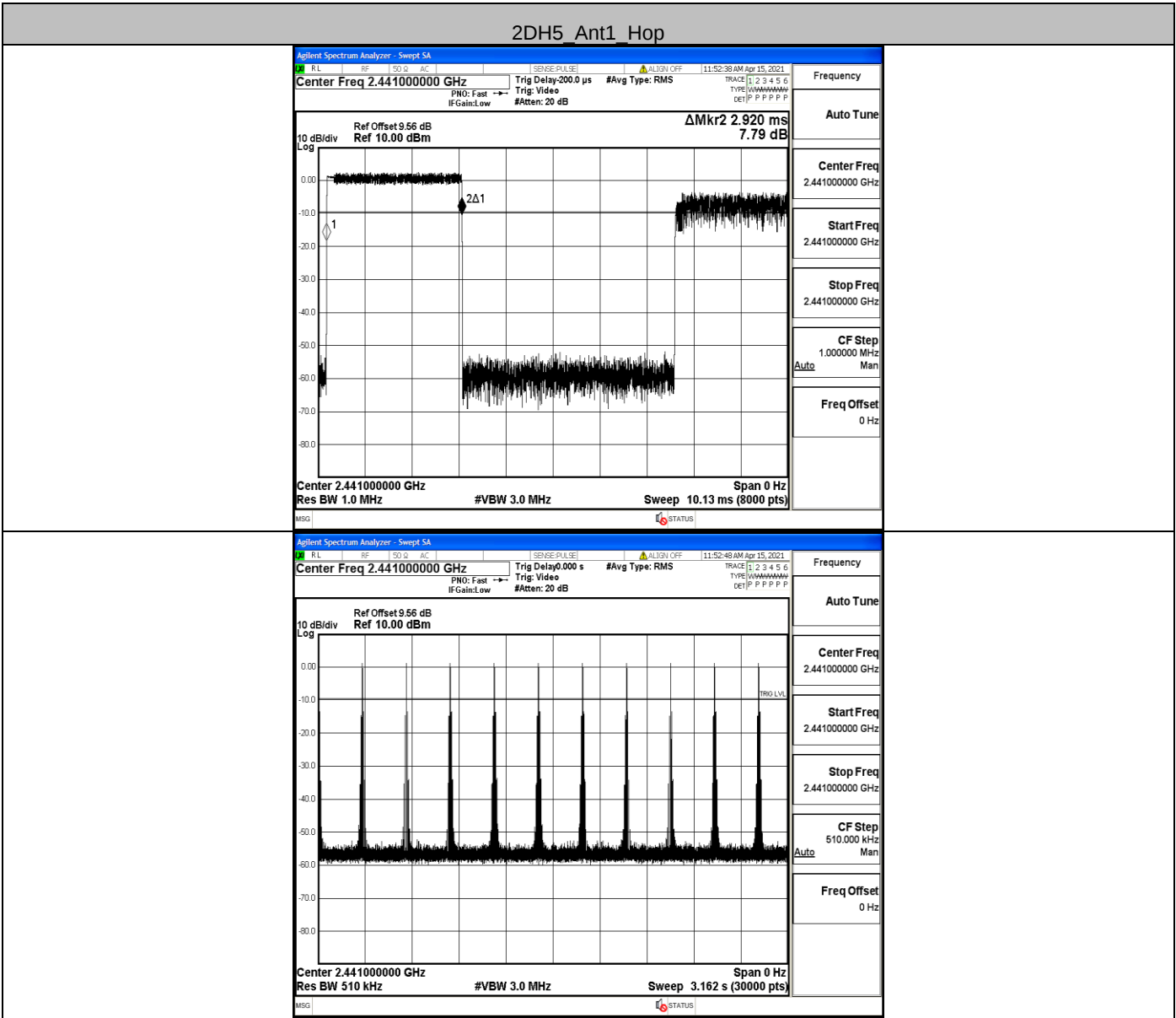


A.2 Dwell Time

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

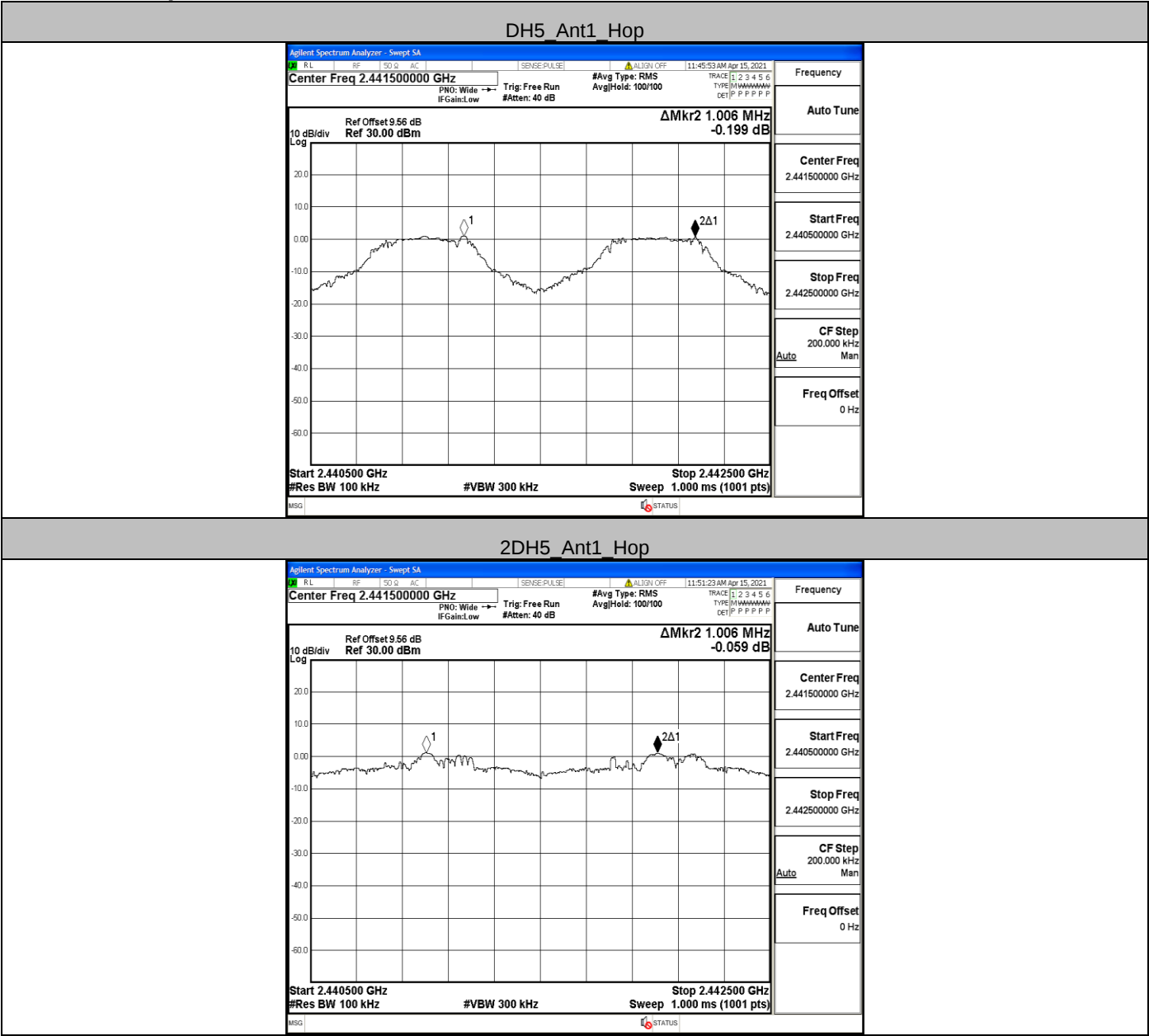




A.3 Carrier Frequency Separation

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

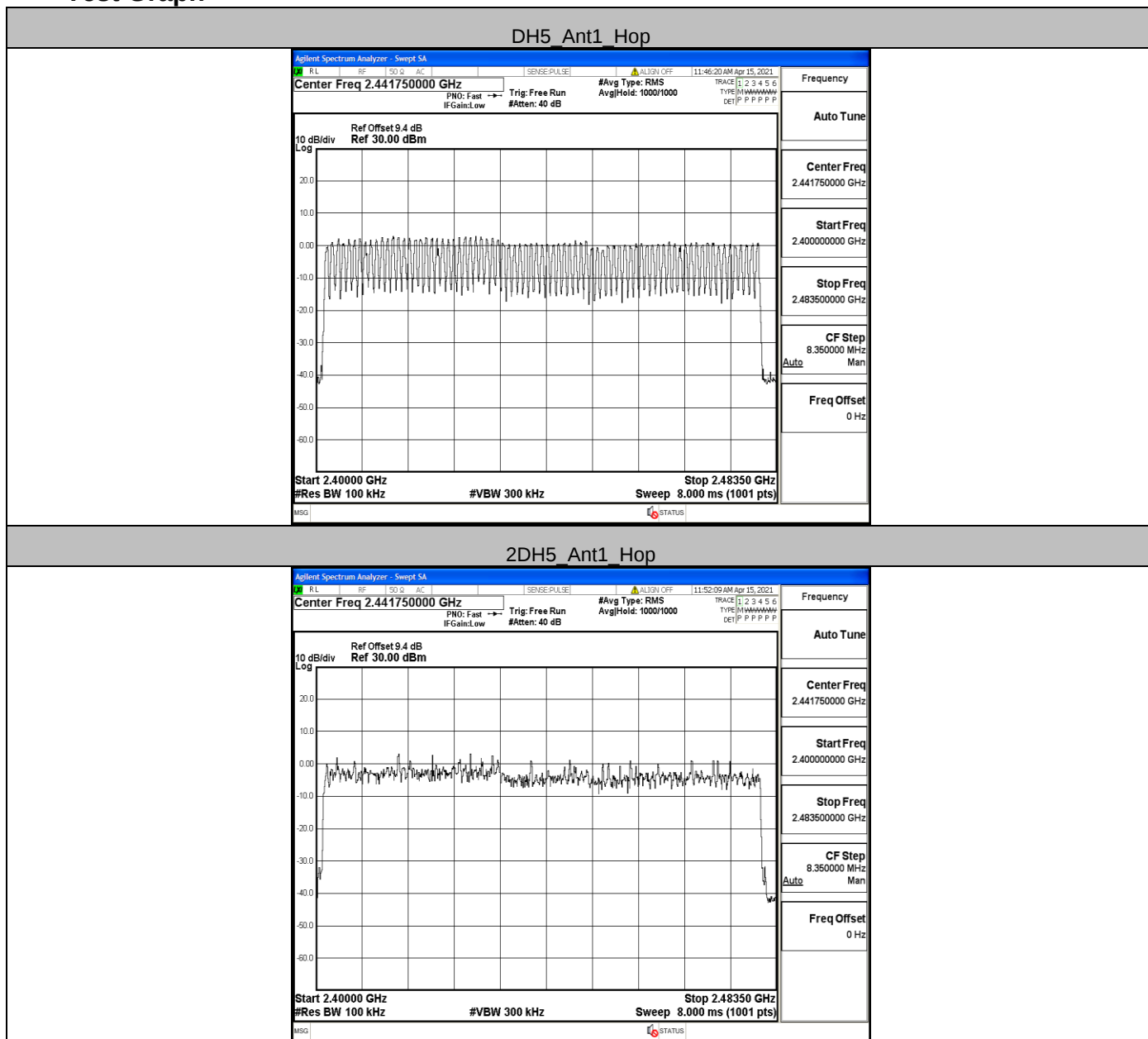
Test Graph



A.4 Hopping Channel Number

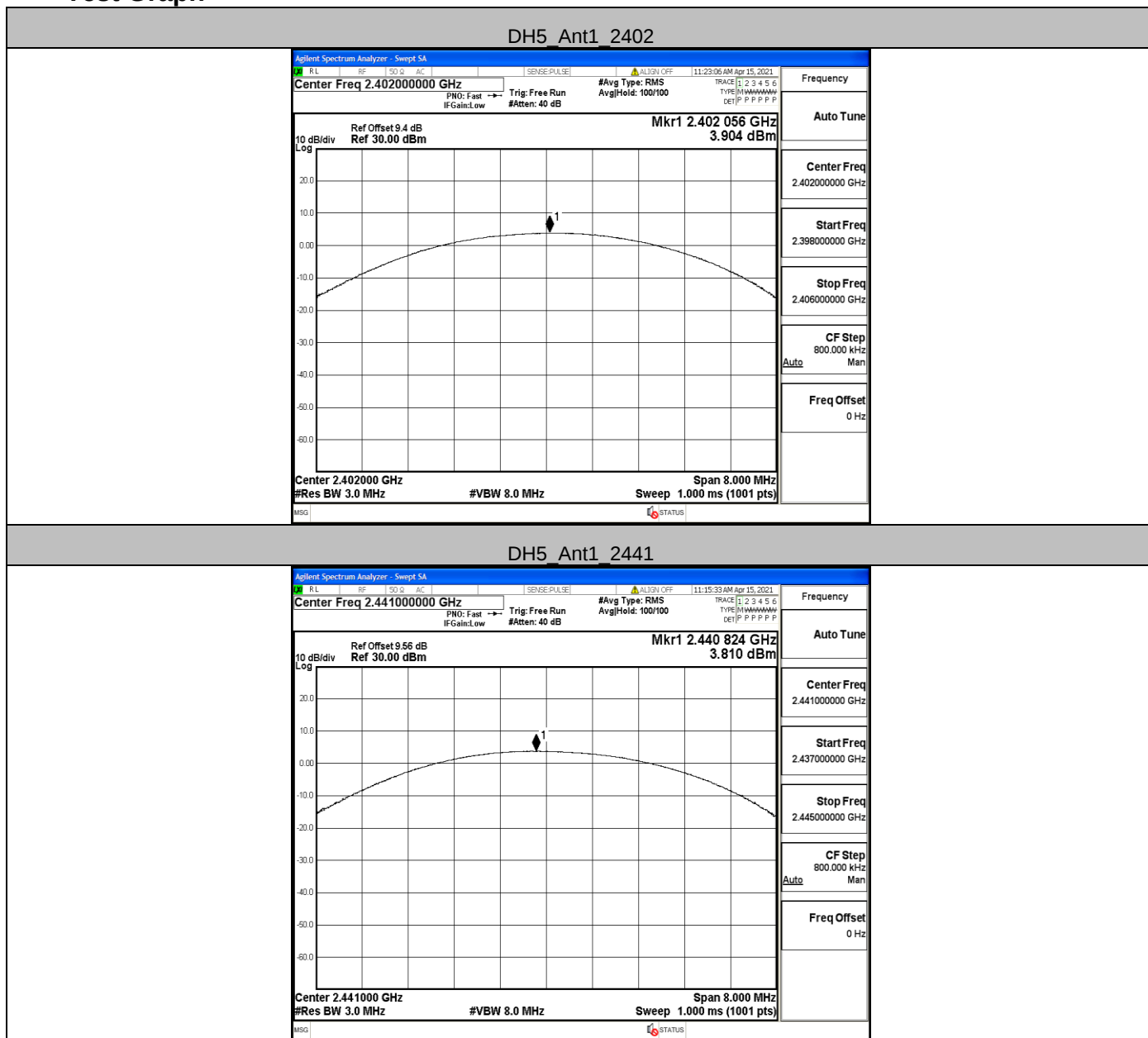
TestMode	Antenna	Channel	Result[Num]	Limit[Num]	Verdict
DH5	Ant1	Hop	79	>=15	PASS
2DH5	Ant1	Hop	79	>=15	PASS

Test Graph

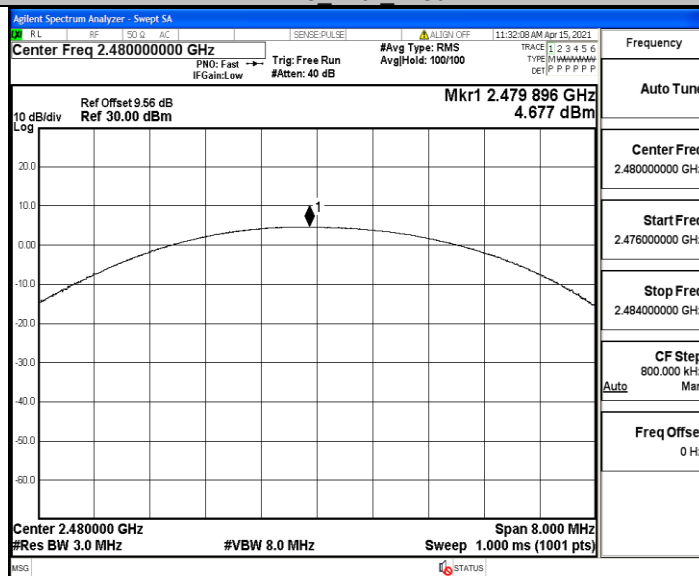


A.5 Conducted Peak Output Power

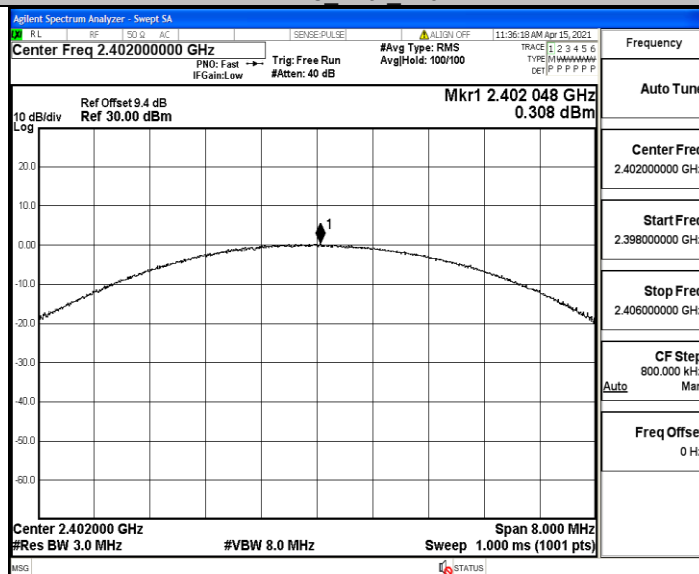
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
DH5	Ant1	2402	3.9	<=20.97	PASS
		2441	3.81	<=20.97	PASS
		2480	4.68	<=20.97	PASS
2DH5	Ant1	2402	0.31	<=20.97	PASS
		2441	1.7	<=20.97	PASS
		2480	1.4	<=20.97	PASS

Test Graph

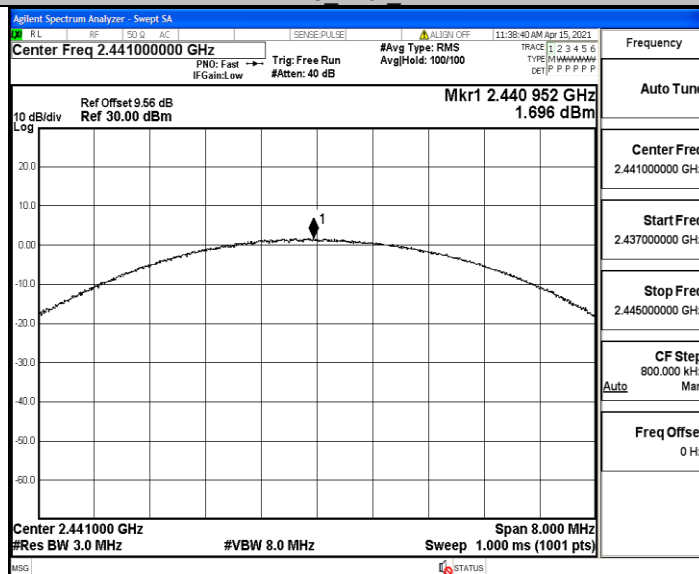
DH5 Ant1 2480

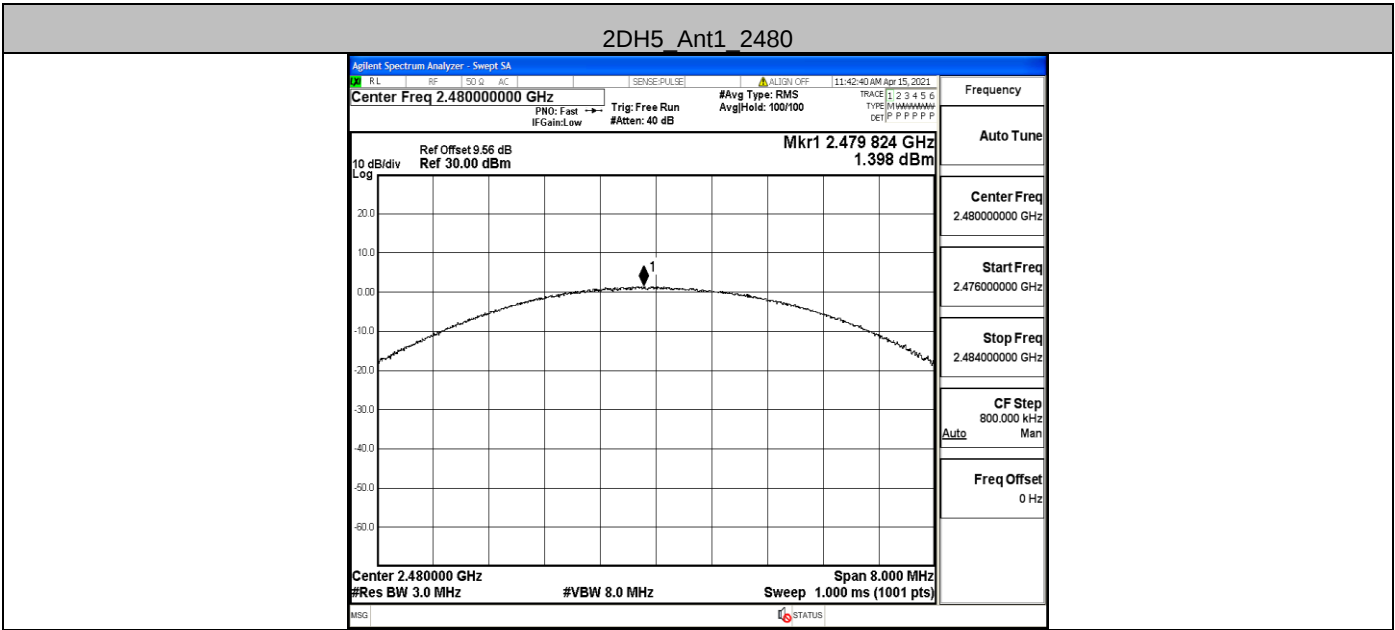


2DH5 Ant1 2402



2DH5 Ant1 2441



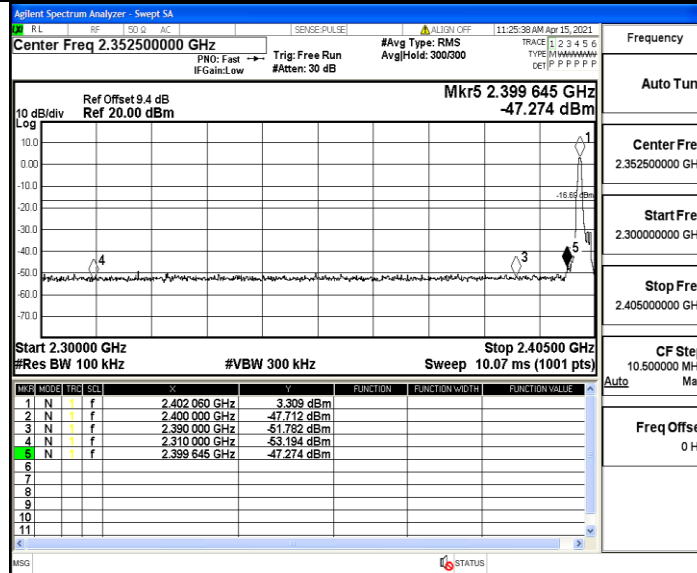


A.6 Band-edge for RF Conducted Emissions

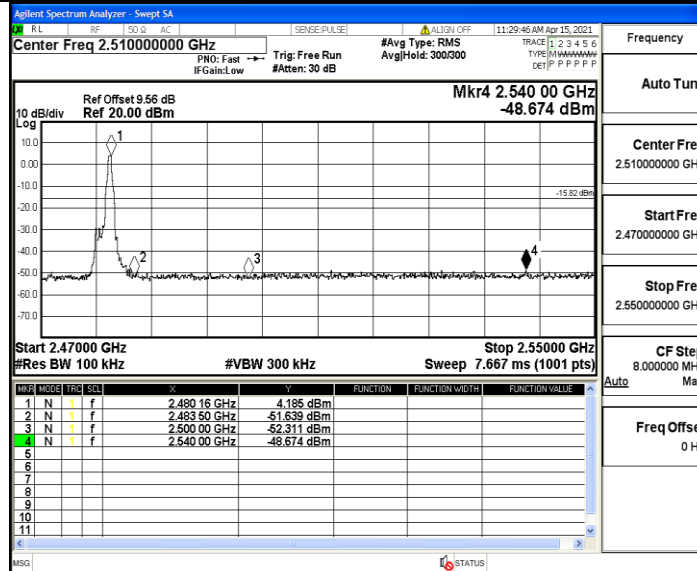
TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	3.31	-47.27	<=-16.69	PASS
		High	2480	4.18	-48.67	<=-15.82	PASS
		Low	Hop_2402	1.57	-49.69	<=-18.43	PASS
		High	Hop_2480	0.62	-48.27	<=-19.39	PASS
2DH5	Ant1	Low	2402	-2.32	-43.08	<=-22.32	PASS
		High	2480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

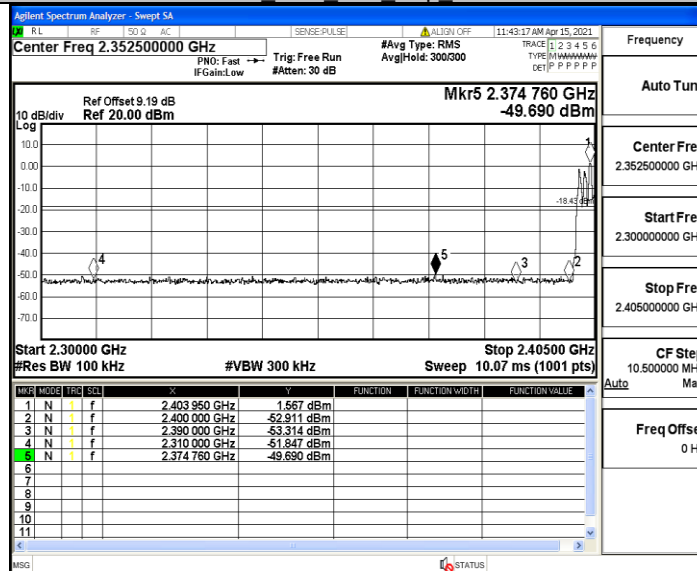
DH5_Ant1_Low_2402



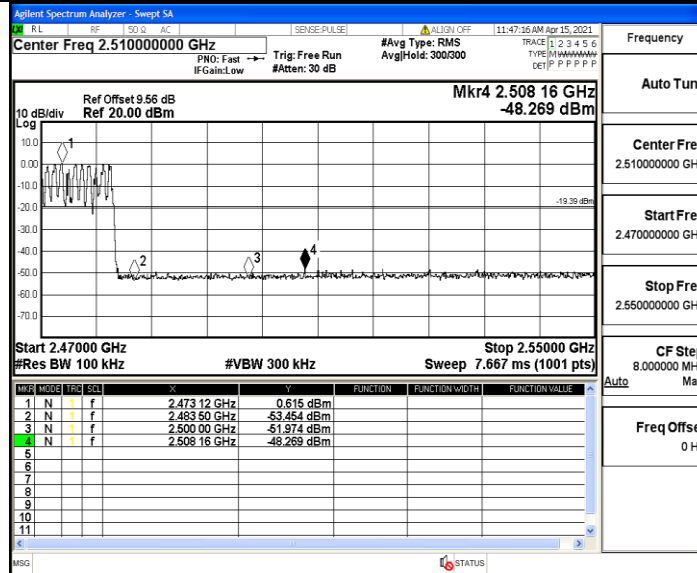
DH5_Ant1_High_2480



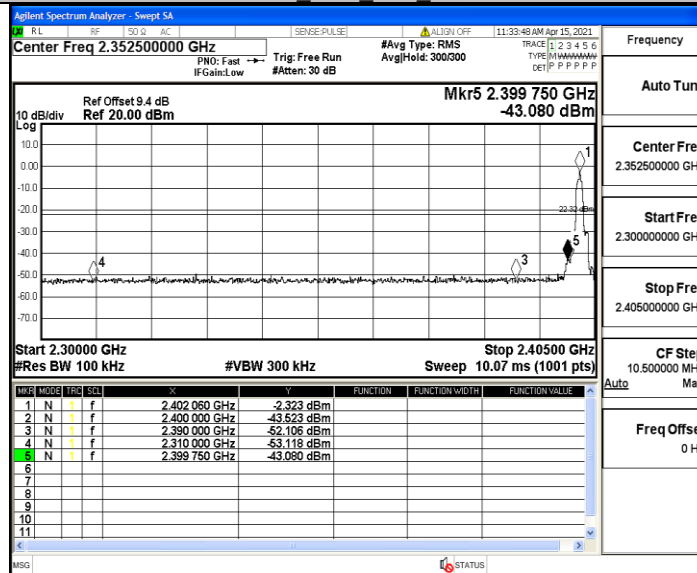
DH5_Ant1_Low_Hop_2402



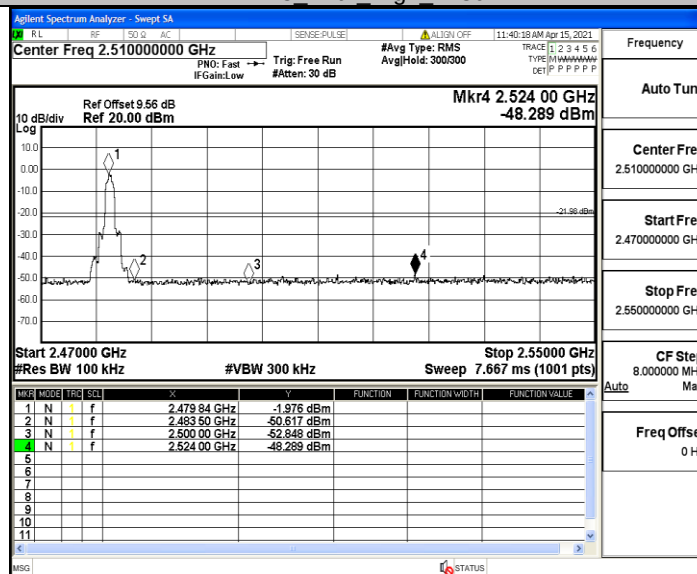
DH5 Ant1_High_Hop_2480

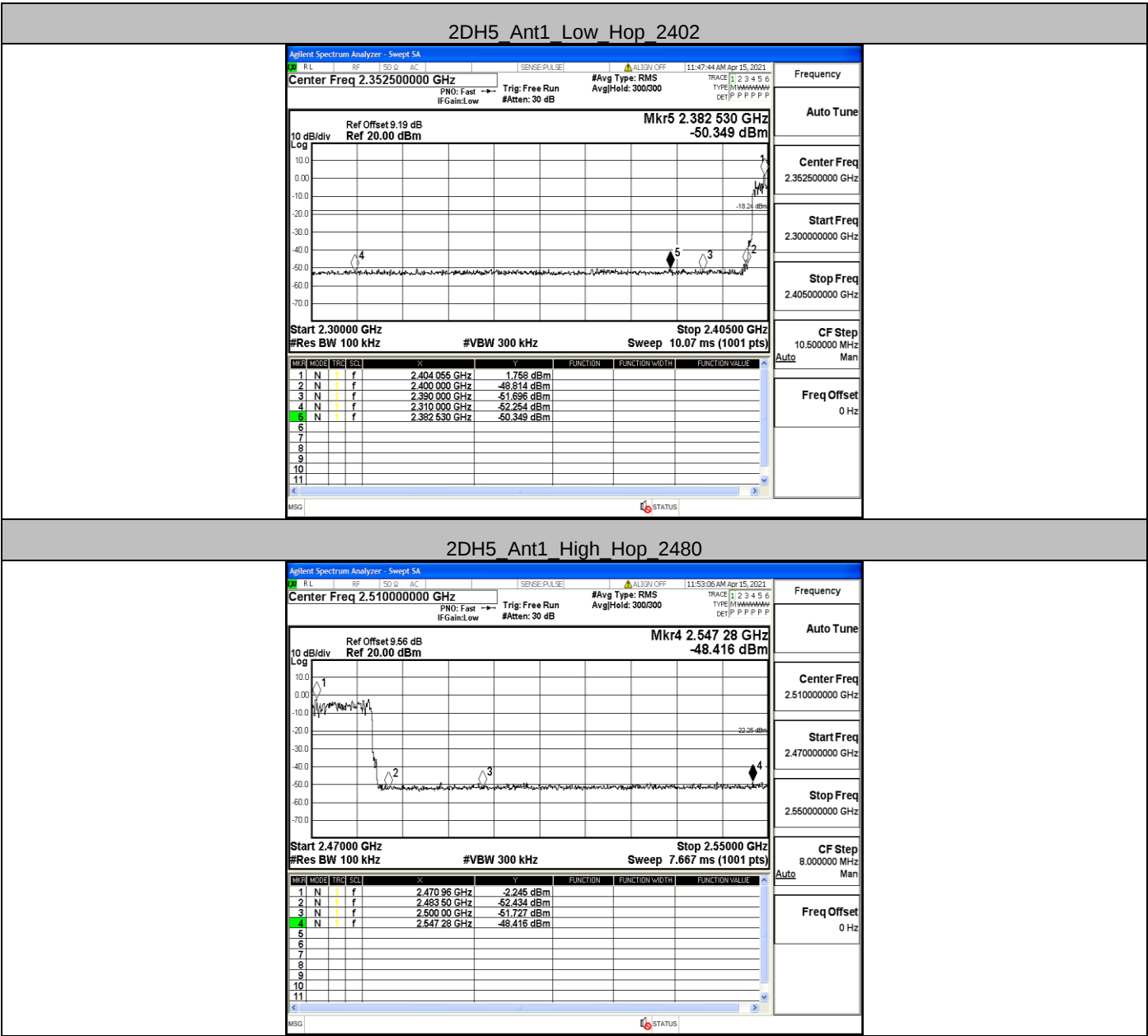


2DH5 Ant1_Low_2402



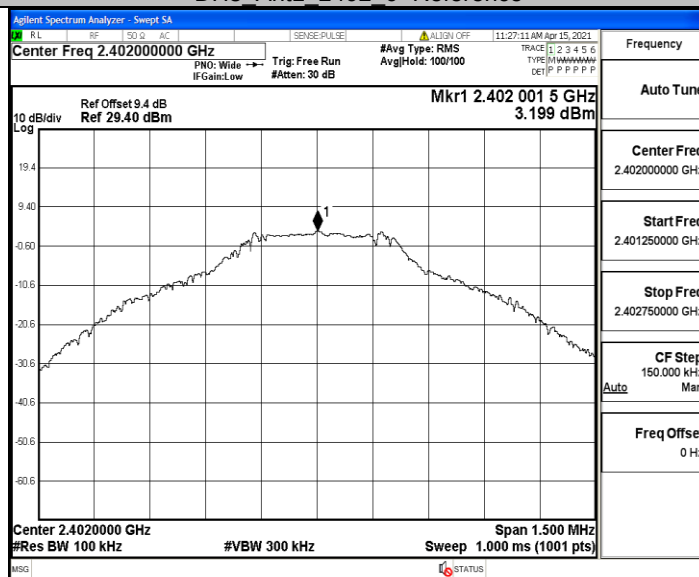
2DH5 Ant1_High_2480



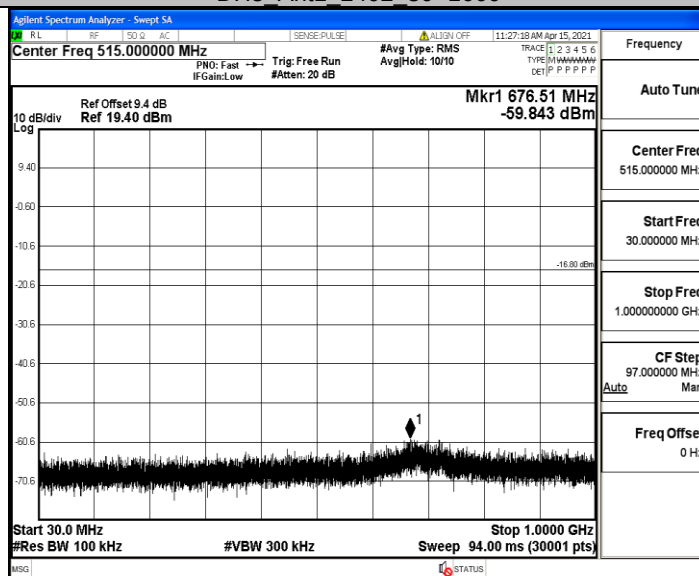


A.7 RF Conducted Spurious Emissions Test Graph

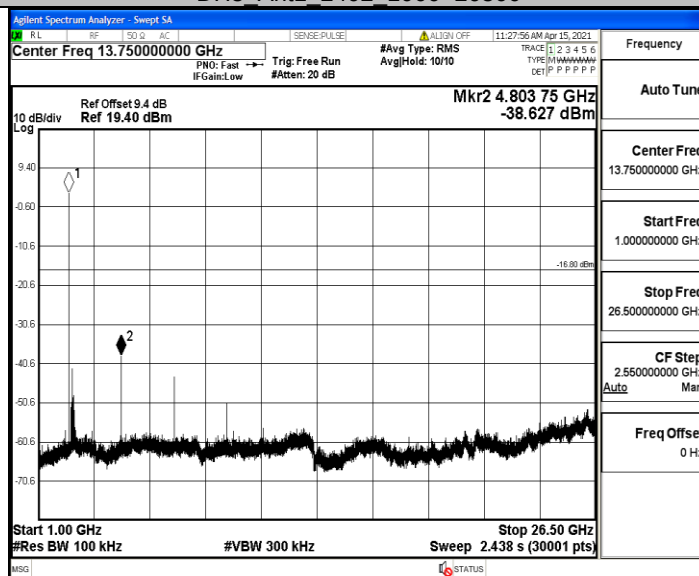
DH5_Ant1_2402_0-Reference



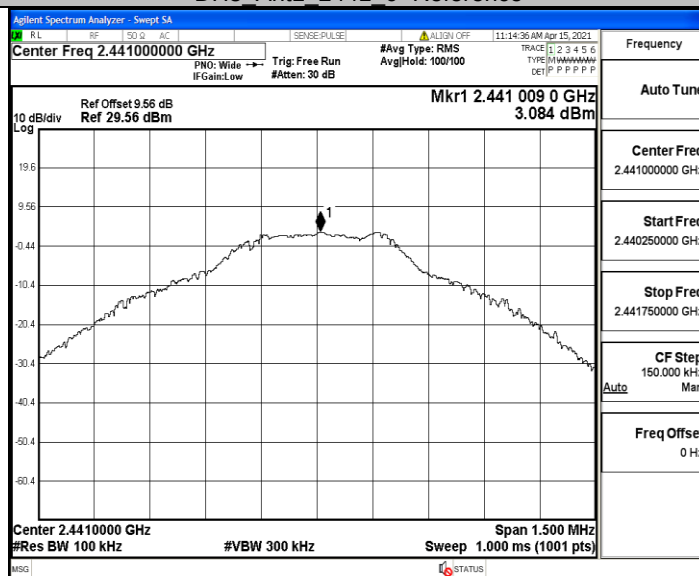
DH5_Ant1_2402_30~1000



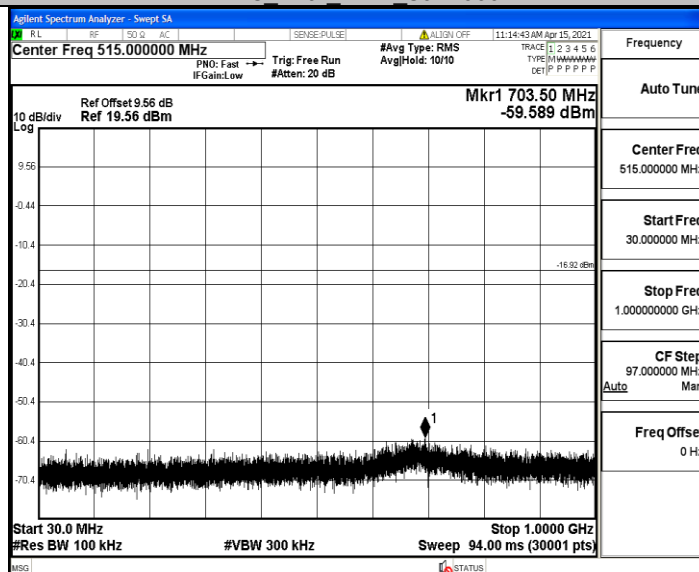
DH5_Ant1_2402_1000~26500



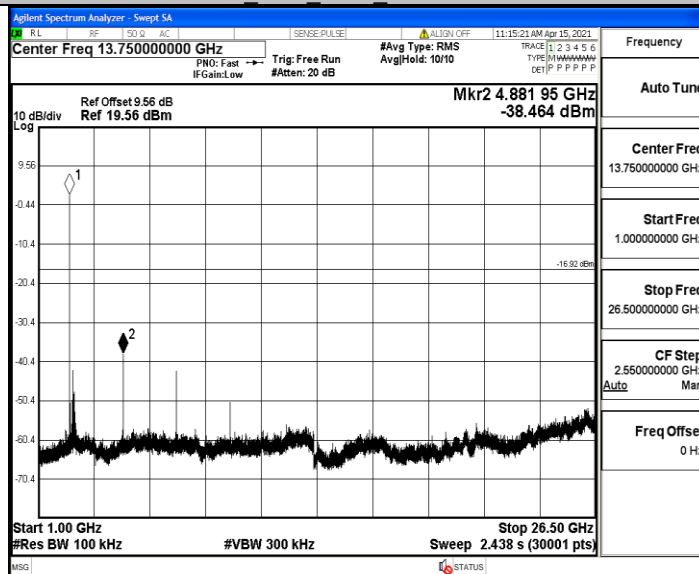
DH5_Ant1_2441_0-Reference



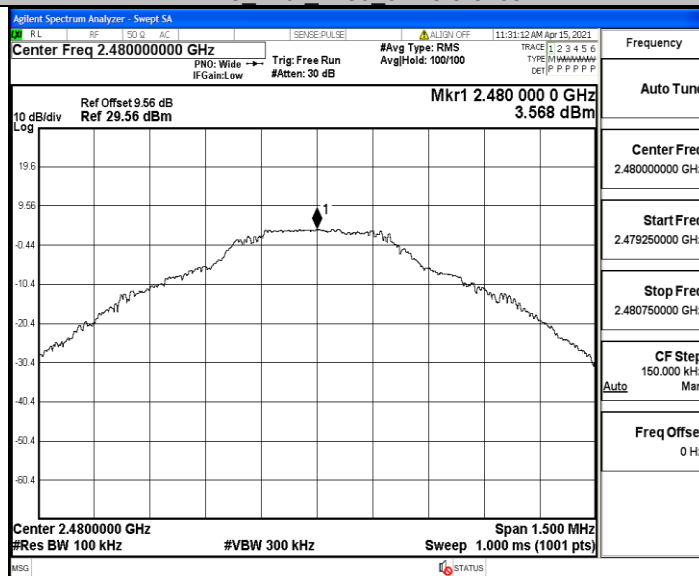
DH5_Ant1_2441_30~1000



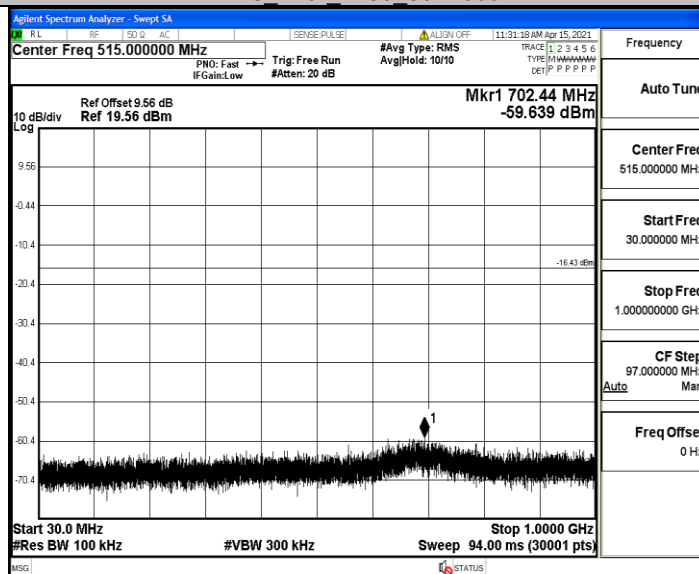
DH5_Ant1_2441_1000~26500



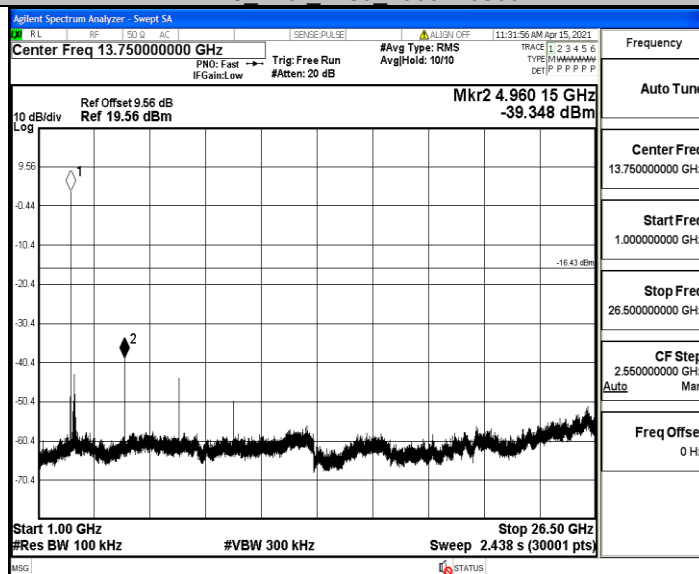
DH5_Ant1_2480_0-Reference



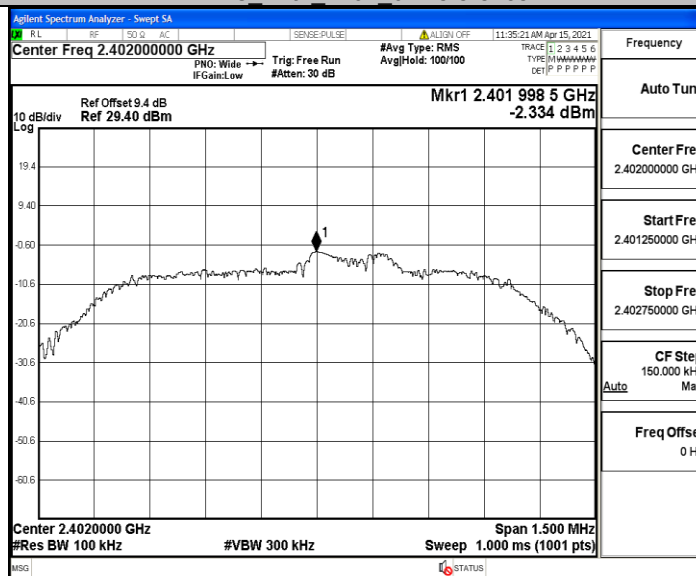
DH5_Ant1_2480_30-1000



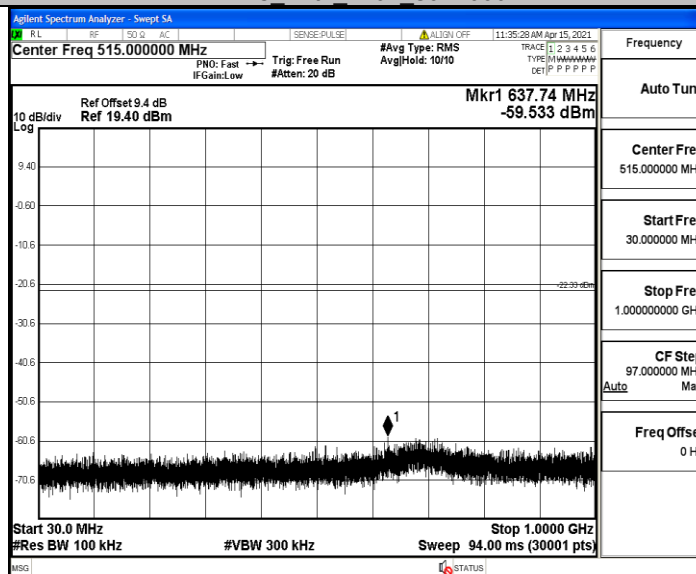
DH5_Ant1_2480_1000-26500



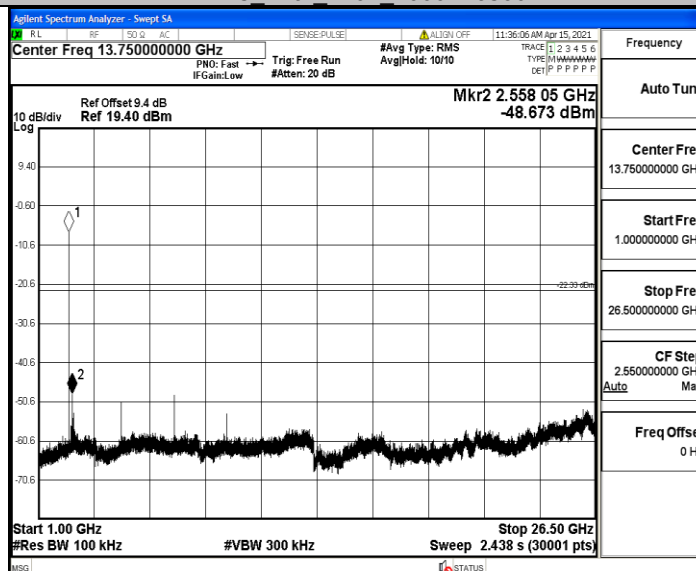
2DH5_Ant1_2402_0~Reference



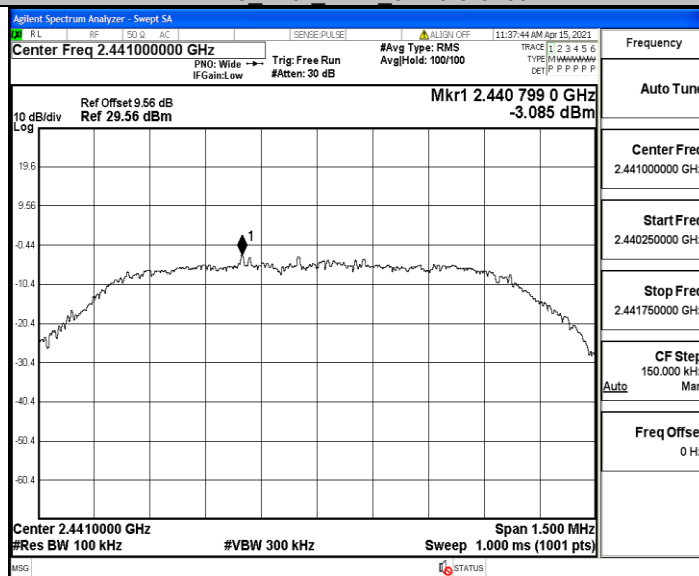
2DH5_Ant1_2402_30~1000



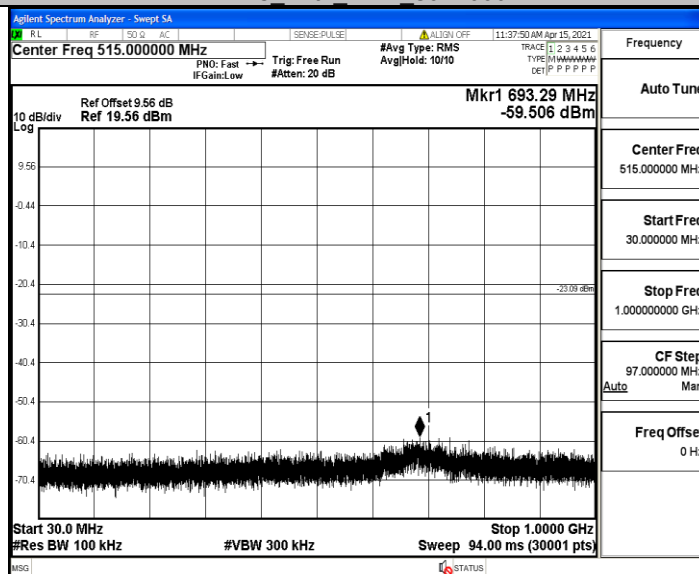
2DH5_Ant1_2402_1000~26500



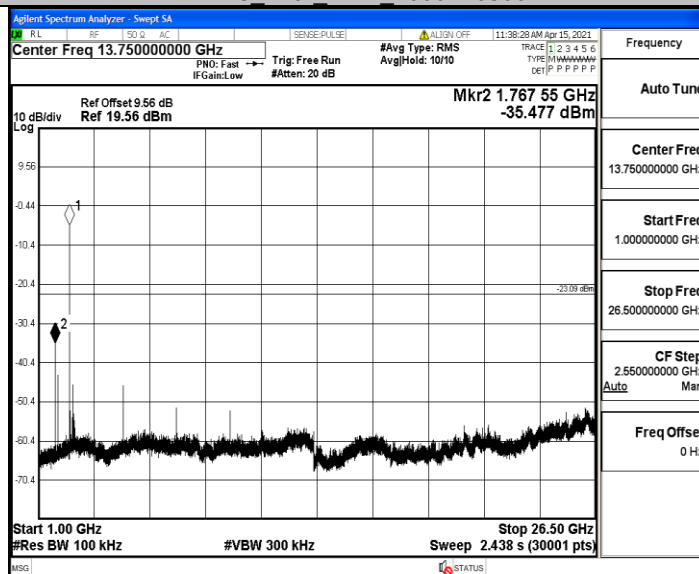
2DH5_Ant1_2441_0-Reference



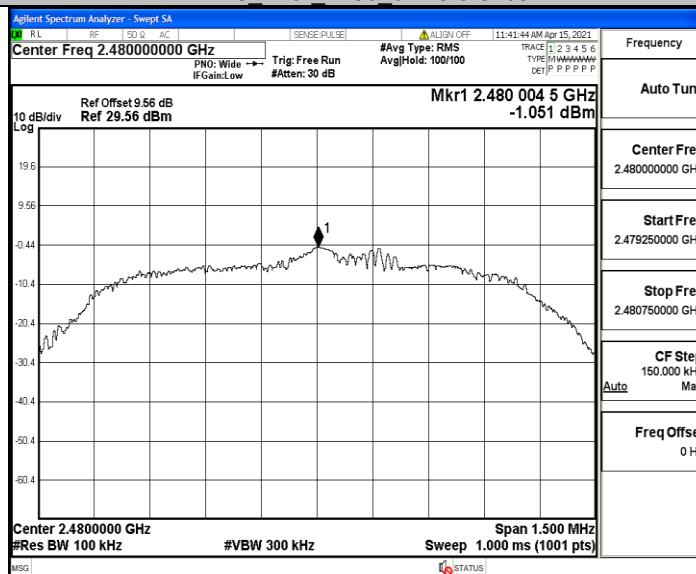
2DH5_Ant1_2441_30-1000



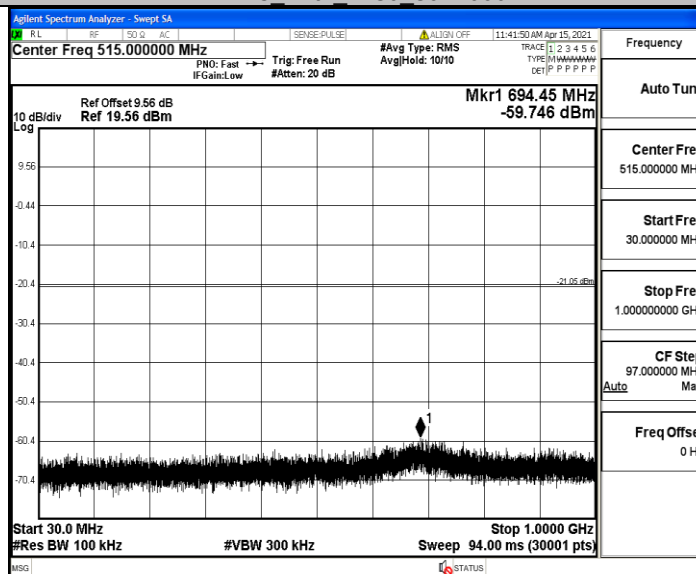
2DH5_Ant1_2441_1000-26500



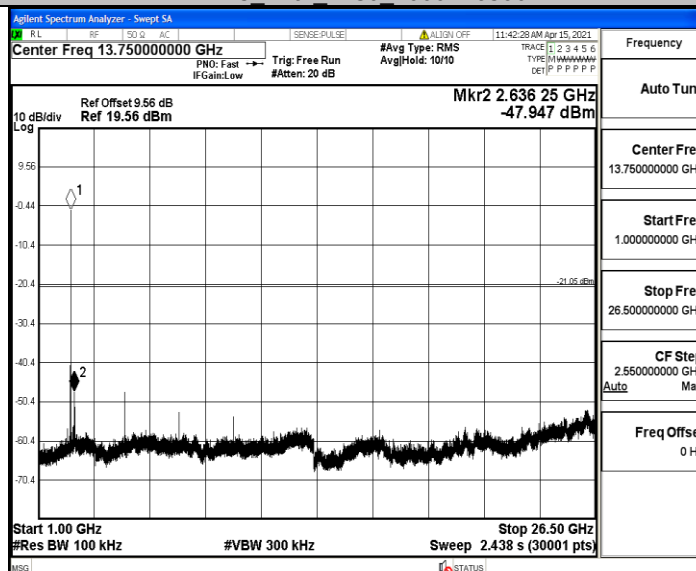
2DH5_Ant1_2480_0~Reference



2DH5_Ant1_2480_30~1000



2DH5_Ant1_2480_1000~26500



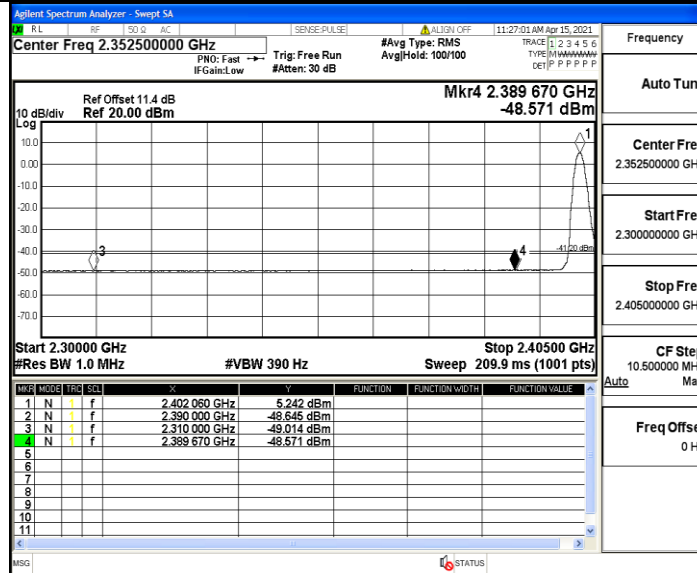
A.8 Restrict-band band-edge measurements

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

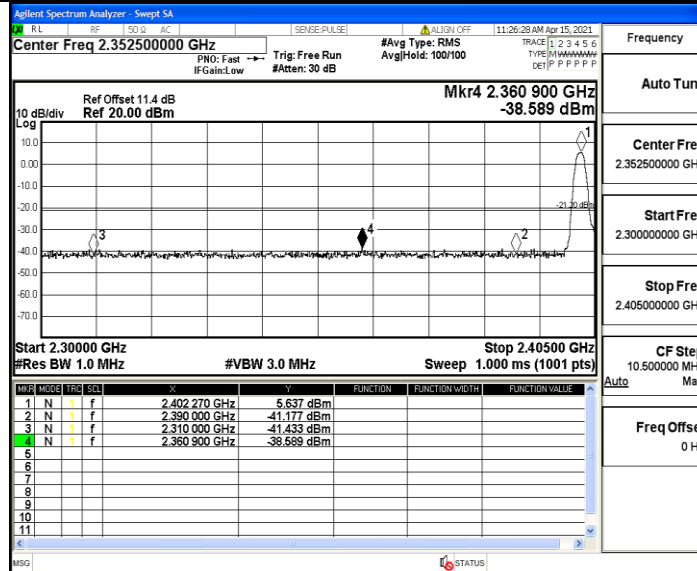
Note:

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.

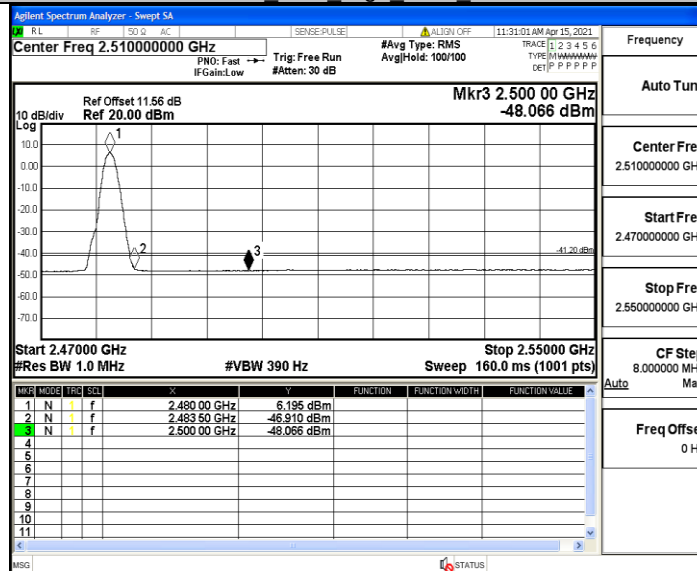
DH5 Ant1 Low 2402 AV



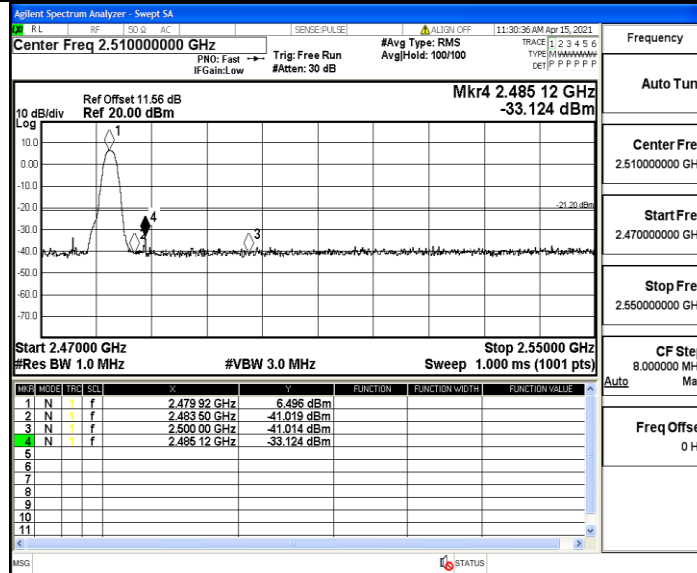
DH5 Ant1 Low 2402 Peak



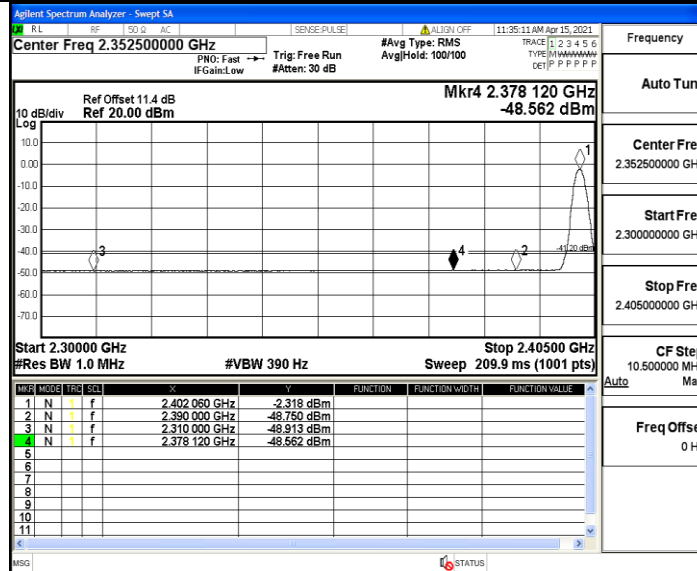
DH5 Ant1 High 2480 AV



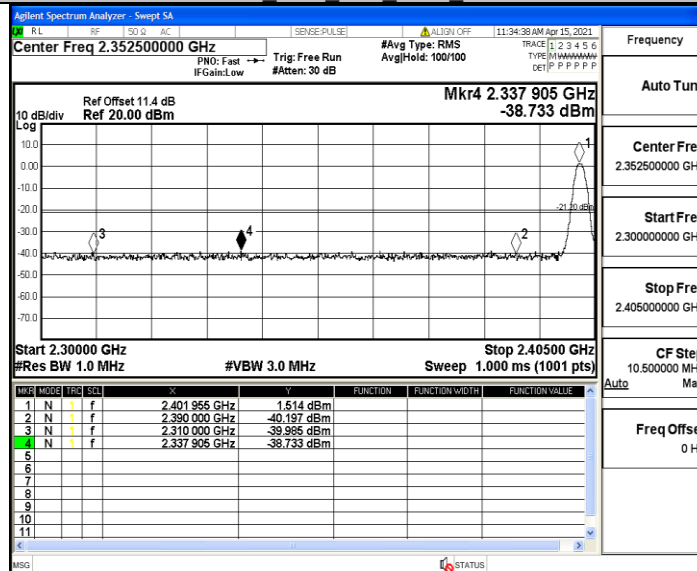
DH5_Ant1_High_2480_Peak



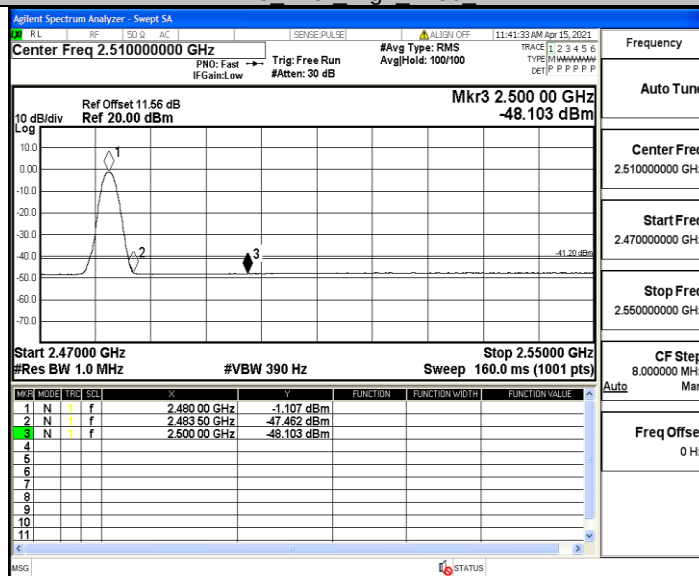
2DH5_Ant1_Low_2402_AV



2DH5_Ant1_Low_2402_Peak



2DH5_Ant1_High_2480_AV



2DH5_Ant1_High_2480 Peak

