

## Appendix A

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

Product Name: Bluetooth Earbuds

Trade Mark: N/A

Test Model: T7

FCC ID: 2AVRU-T7

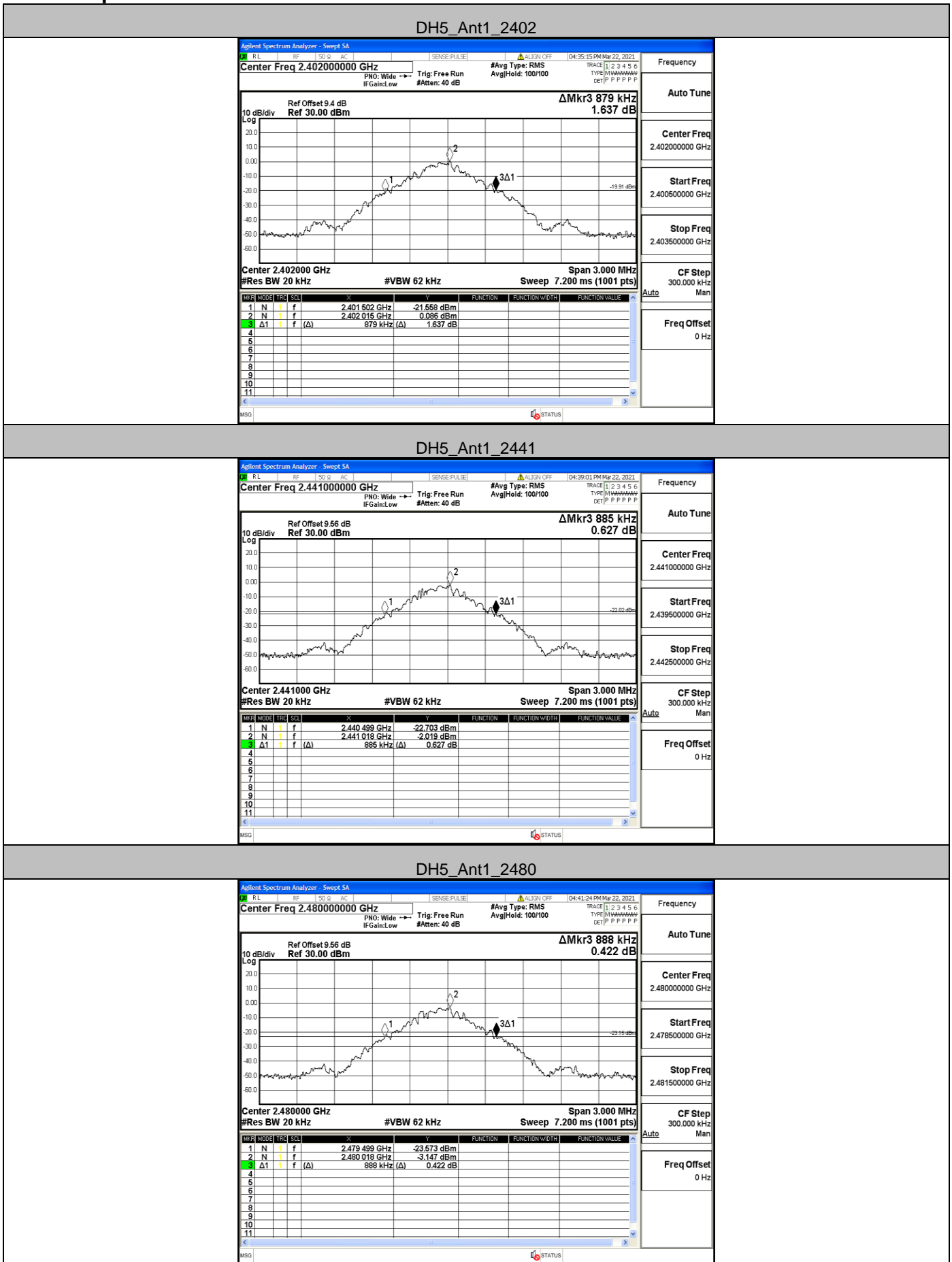
### Environmental Conditions

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

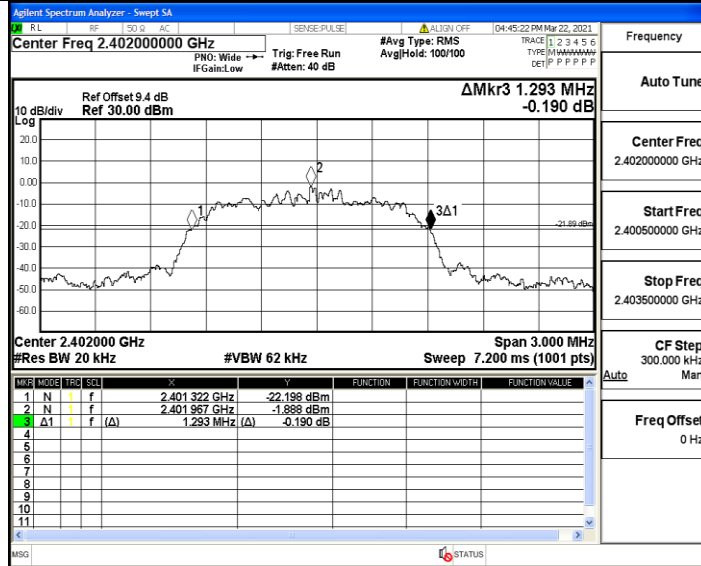
#### A.1 20 dB Bandwidth

TestMode	Antenna	Channel	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.879	2401.502	2402.381	---	PASS
		2441	0.885	2440.499	2441.384	---	PASS
		2480	0.888	2479.499	2480.387	---	PASS
2DH5	Ant1	2402	1.293	2401.322	2402.615	---	PASS
		2441	1.287	2440.325	2441.612	---	PASS
		2480	1.284	2479.325	2480.609	---	PASS
3DH5	Ant1	2402	1.278	2401.313	2402.591	---	PASS
		2441	1.296	2440.313	2441.609	---	PASS
		2480	1.296	2479.310	2480.606	---	PASS

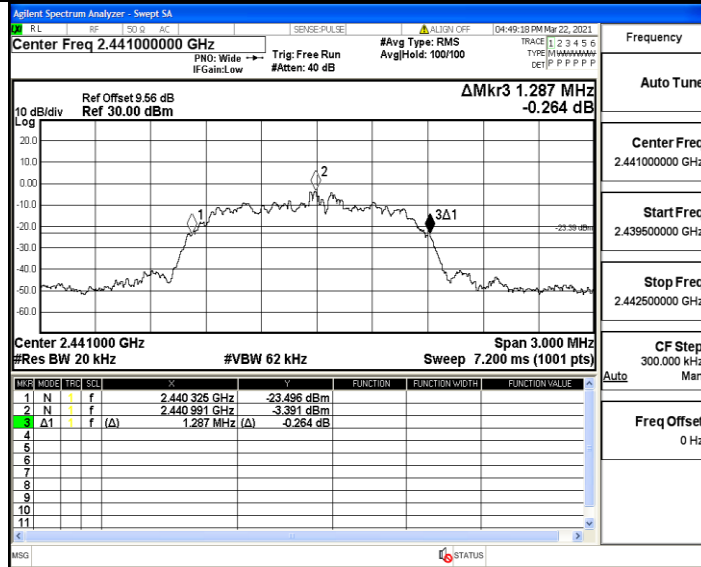
Test Graph



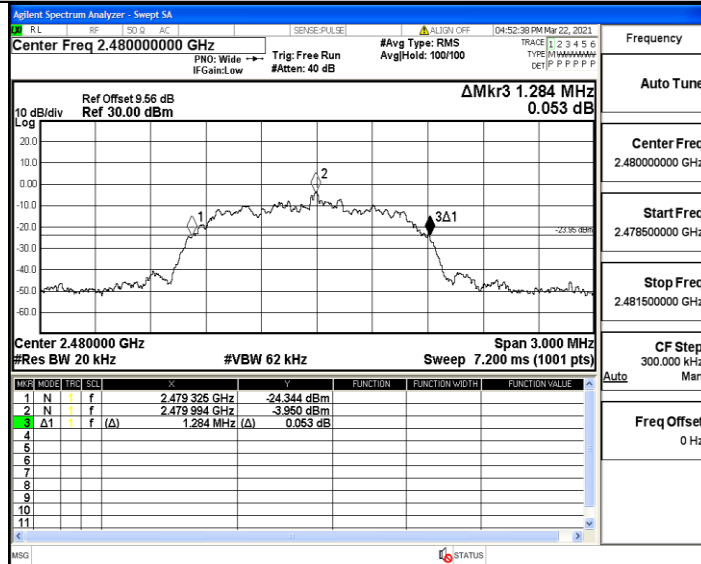
2DH5\_Ant1\_2402



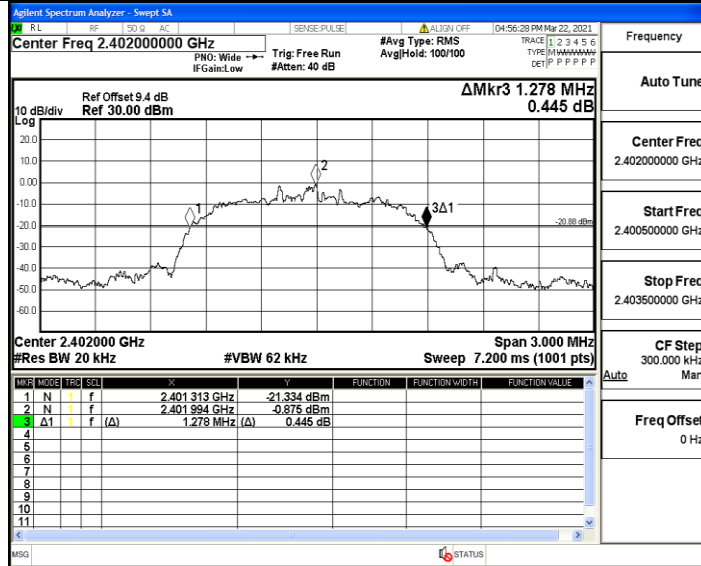
2DH5\_Ant1\_2441



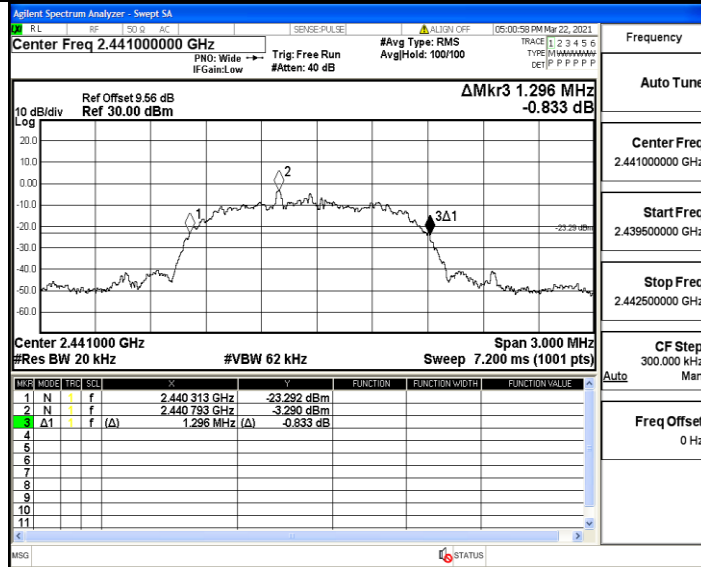
2DH5\_Ant1\_2480



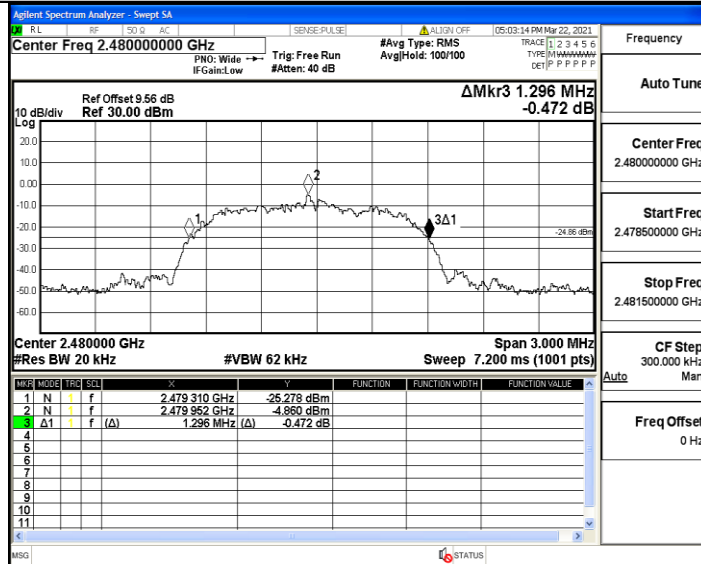
3DH5\_Ant1\_2402



3DH5\_Ant1\_2441



3DH5\_Ant1\_2480

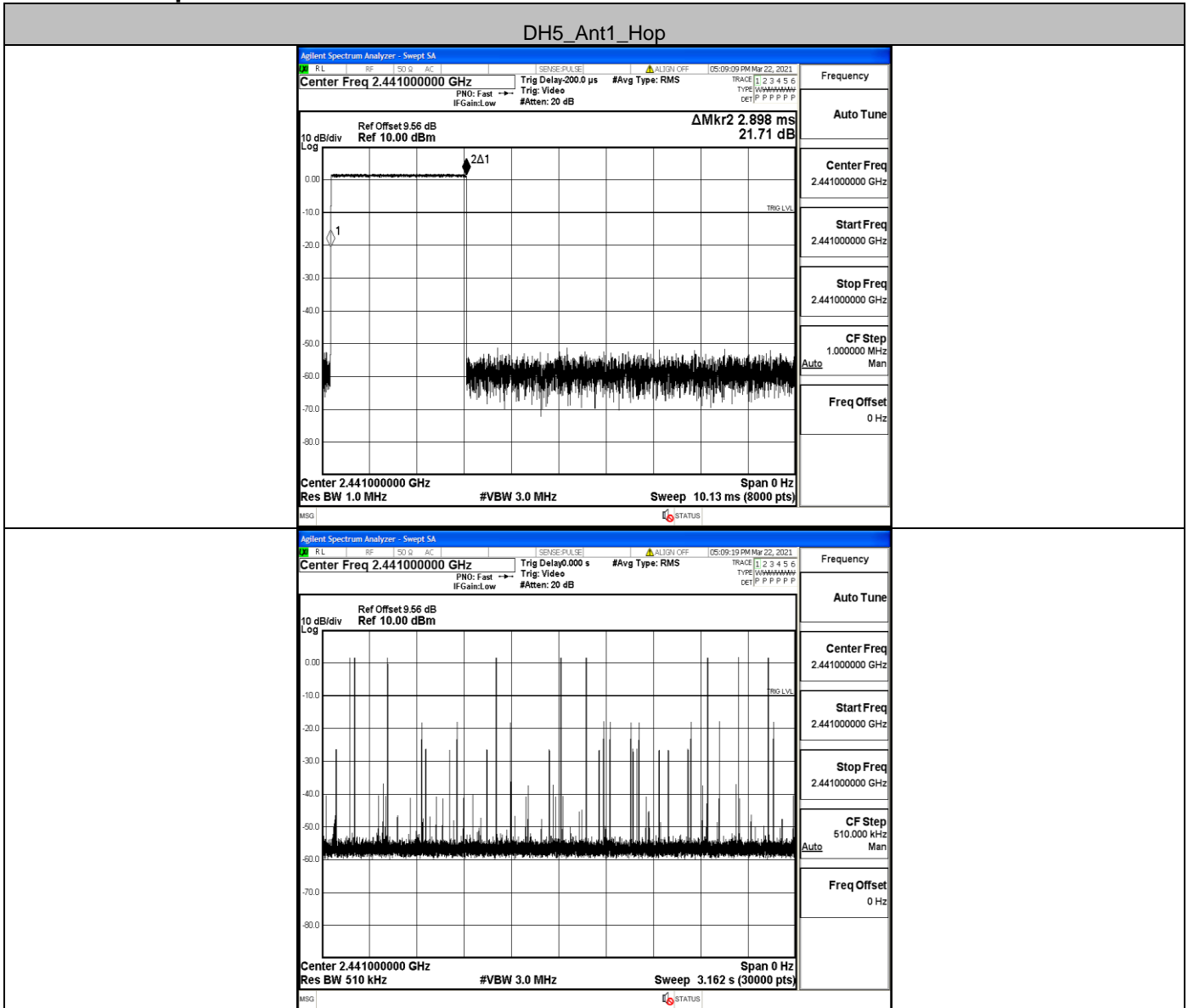


**A.2 Dwell Time**

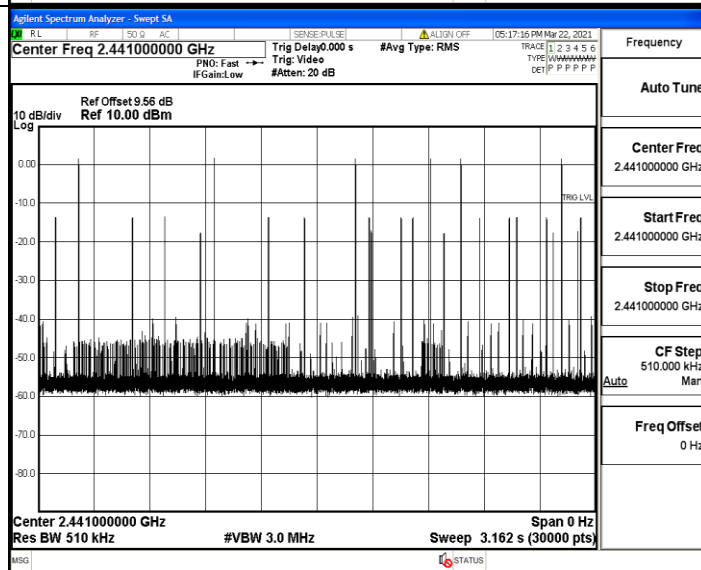
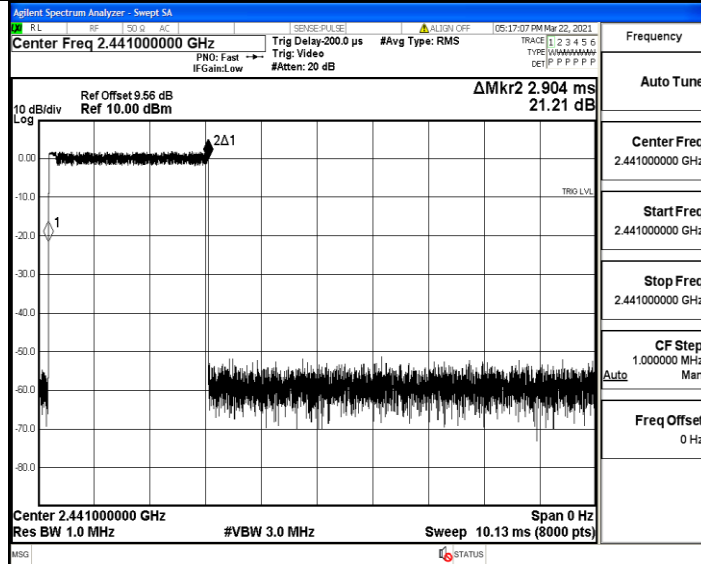
TestMode	Antenna	Channel	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH5	Ant1	Hop	2.90	110	0.319	<=0.4	PASS
2DH5	Ant1	Hop	2.90	70	0.203	<=0.4	PASS
3DH5	Ant1	Hop	2.91	130	0.378	<=0.4	PASS

Test Graph

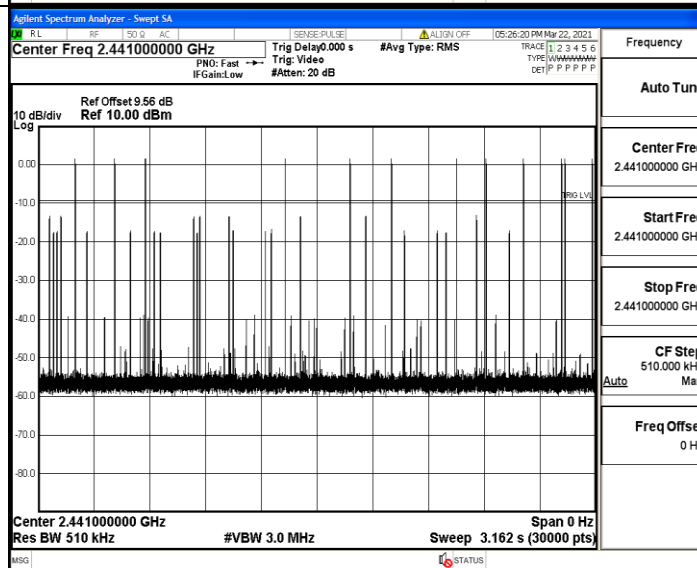
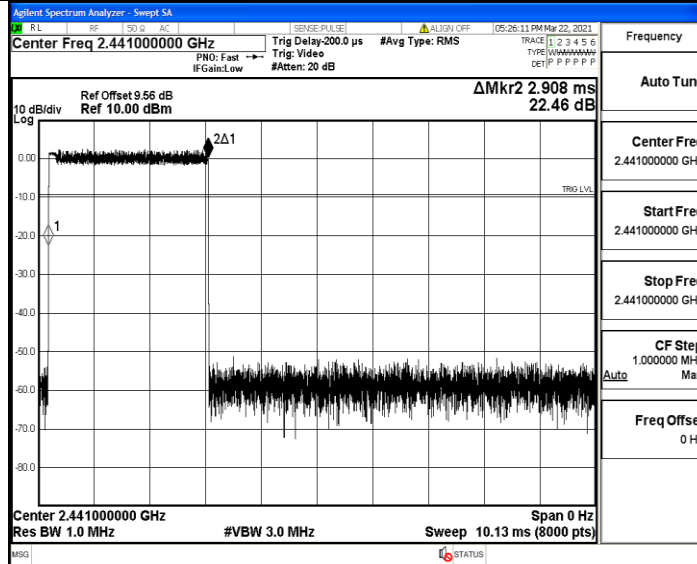
DH5\_Ant1\_Hop



2DH5\_Ant1\_Hop



3DH5\_Ant1\_Hop



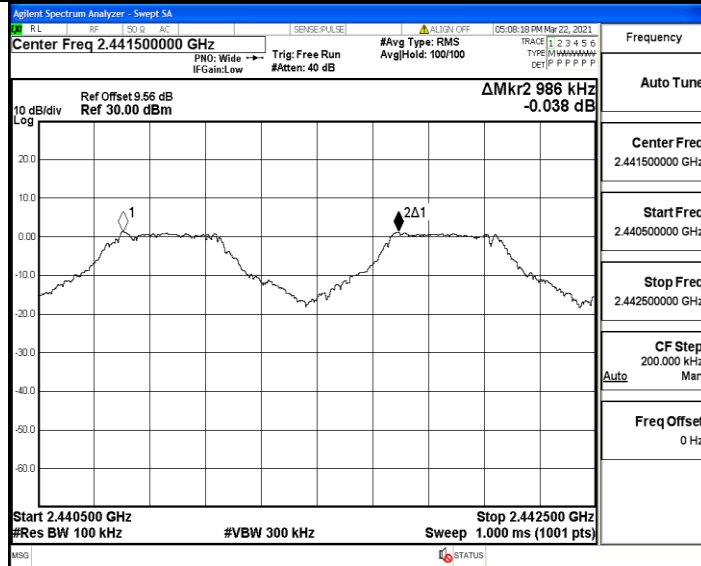


### A.3 Carrier Frequency Separation

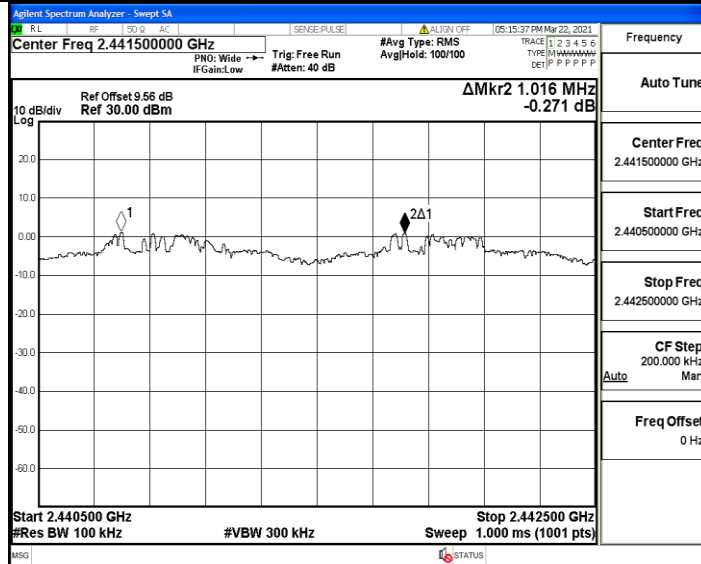
TestMode	Antenna	Channel	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	0.986	$\geq 0.888$	PASS
2DH5	Ant1	Hop	1.016	$\geq 0.862$	PASS
3DH5	Ant1	Hop	0.992	$\geq 0.864$	PASS

Test Graph

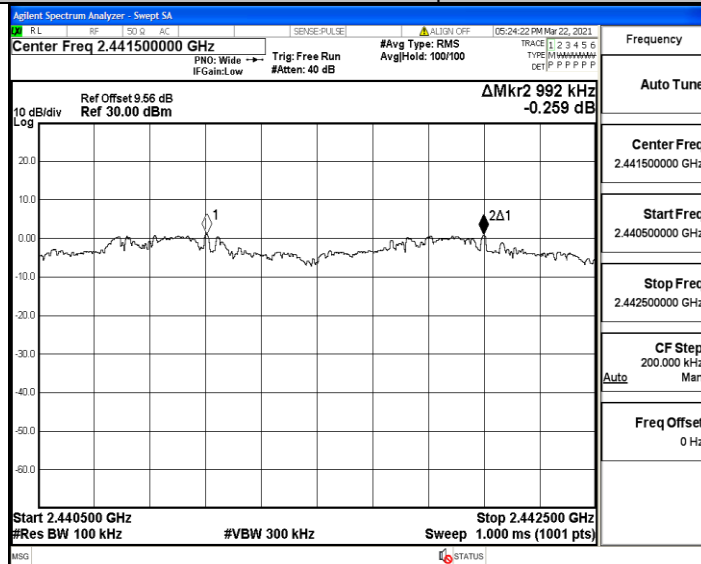
DH5\_Ant1\_Hop



2DH5\_Ant1\_Hop



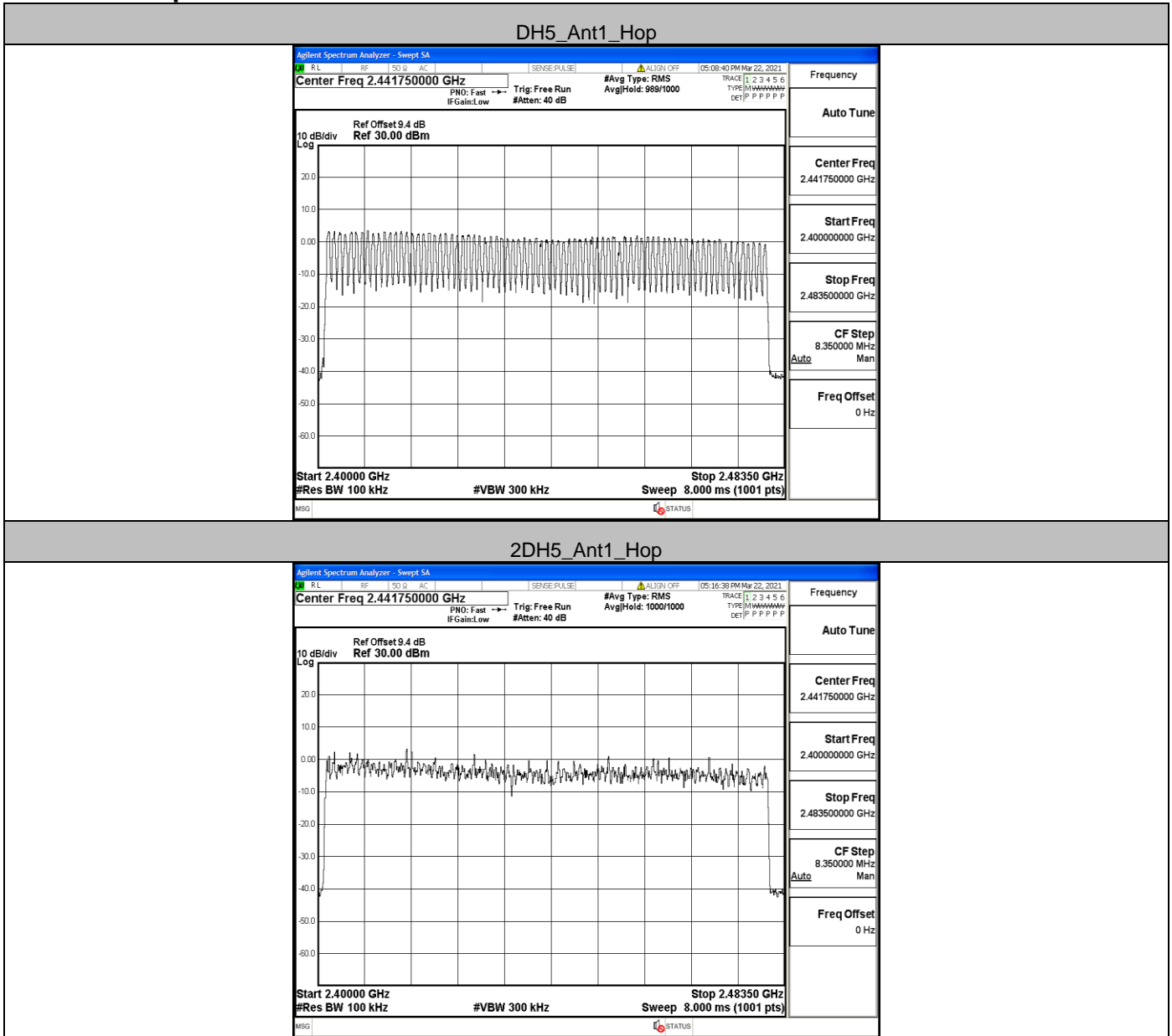
3DH5\_Ant1\_Hop



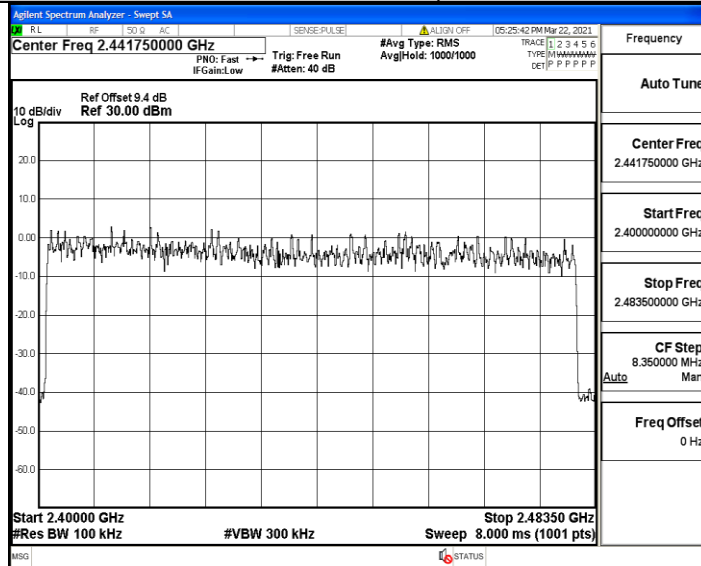
### A.4 Hopping Channel Number

TestMode	Antenna	Channel	Result[Num]	Limit[Num]	Verdict
DH5	Ant1	Hop	79	>=15	PASS
2DH5	Ant1	Hop	79	>=15	PASS
3DH5	Ant1	Hop	79	>=15	PASS

### Test Graph



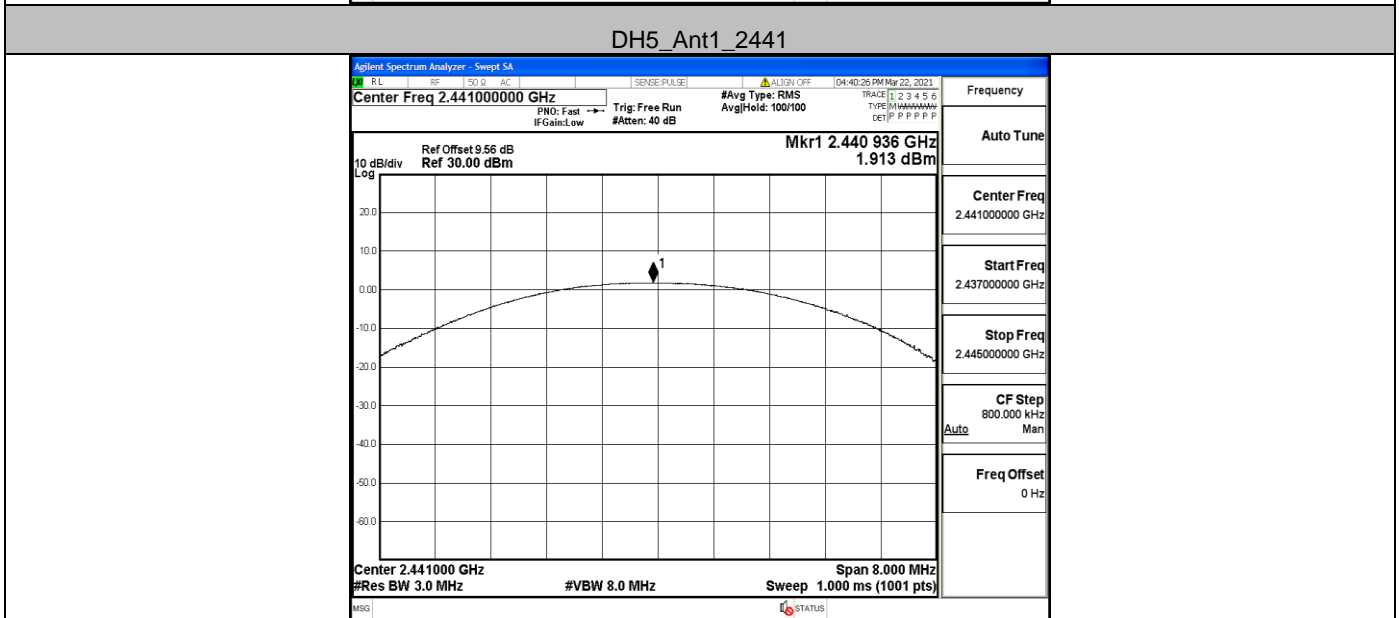
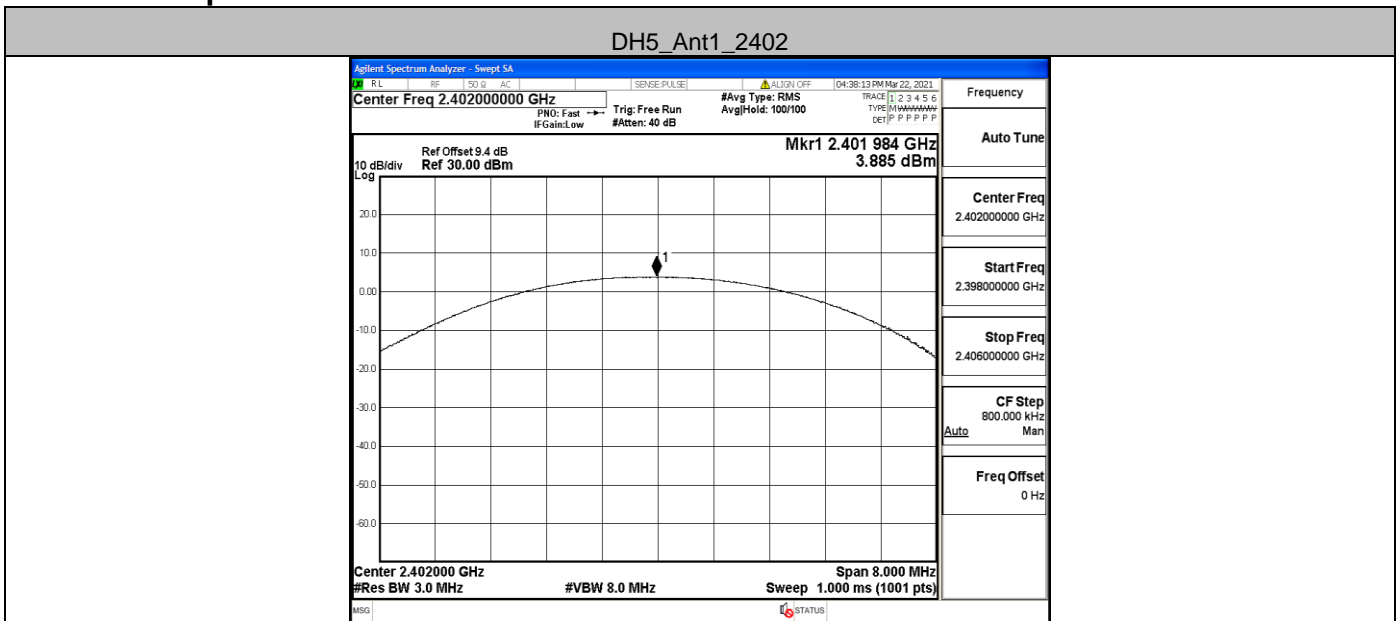
3DH5\_Ant1\_Hop



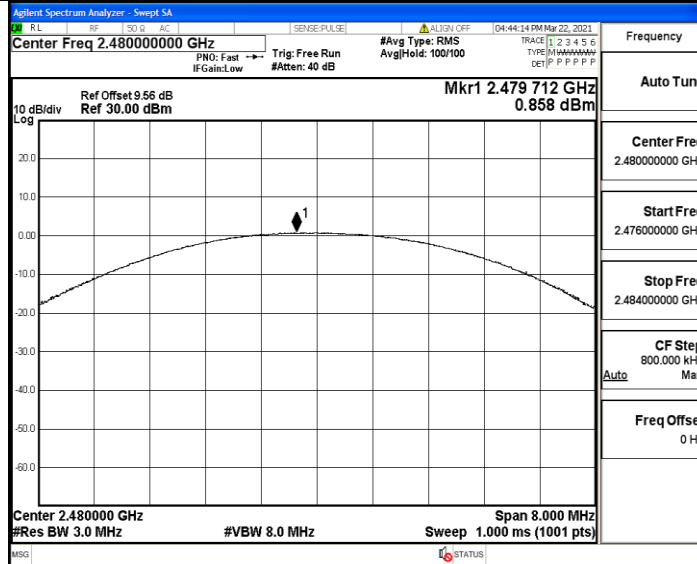
### A.5 Conducted Peak Output Power

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
DH5	Ant1	2402	3.89	<=20.97	PASS
		2441	1.91	<=20.97	PASS
		2480	0.86	<=20.97	PASS
2DH5	Ant1	2402	4.63	<=20.97	PASS
		2441	2.47	<=20.97	PASS
		2480	1.45	<=20.97	PASS
3DH5	Ant1	2402	5.11	<=20.97	PASS
		2441	3.16	<=20.97	PASS
		2480	2.12	<=20.97	PASS

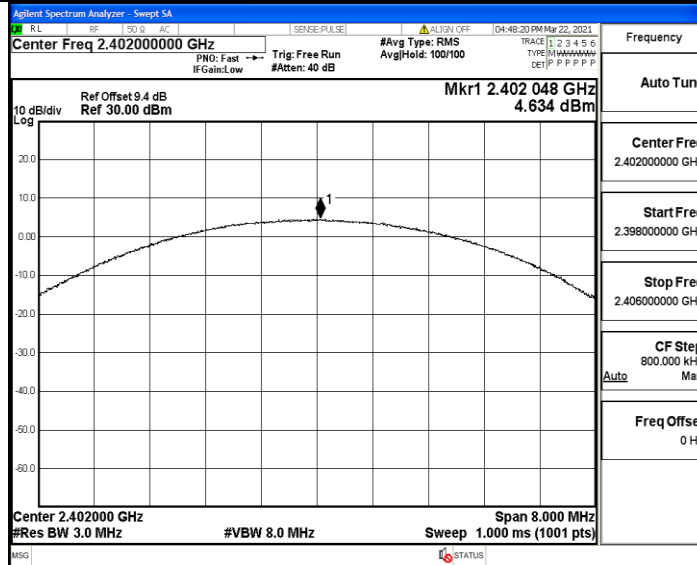
### Test Graph



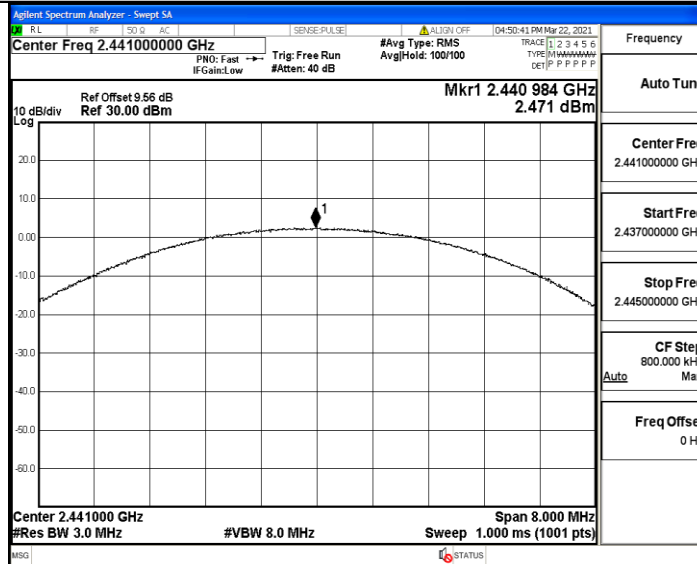
DH5\_Ant1\_2480



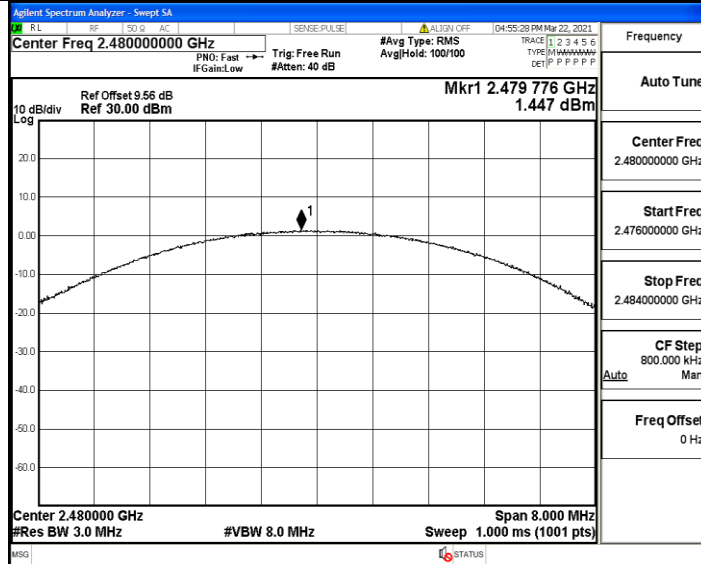
2DH5\_Ant1\_2402



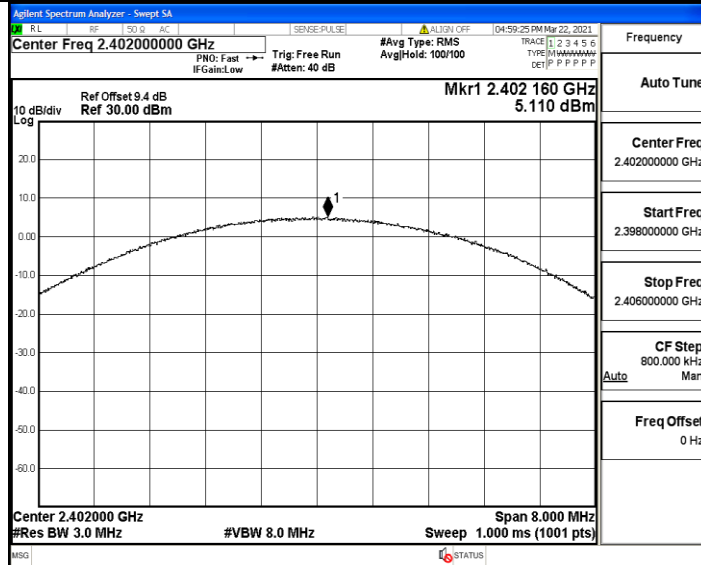
2DH5\_Ant1\_2441



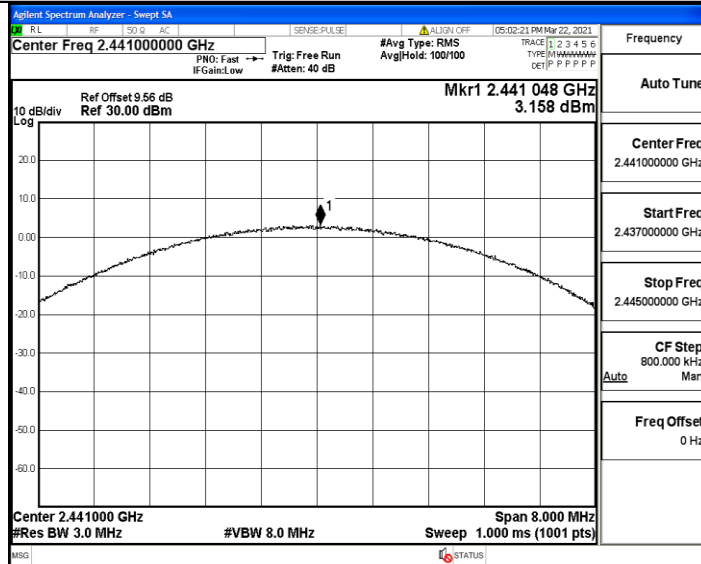
2DH5\_Ant1\_2480



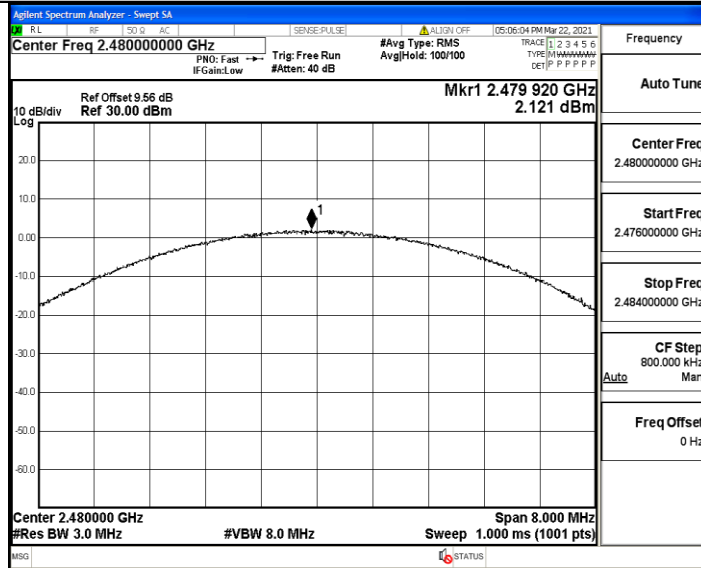
3DH5\_Ant1\_2402



3DH5\_Ant1\_2441



3DH5\_Ant1\_2480



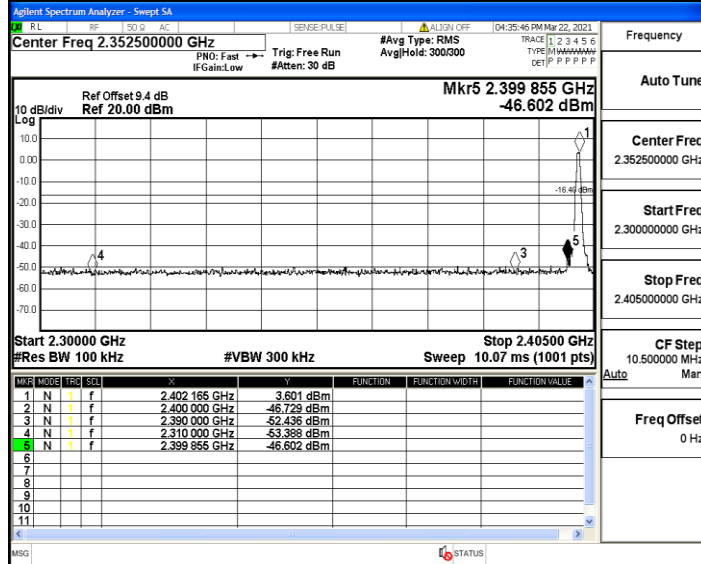


**A.6 Band-edge for RF Conducted Emissions**

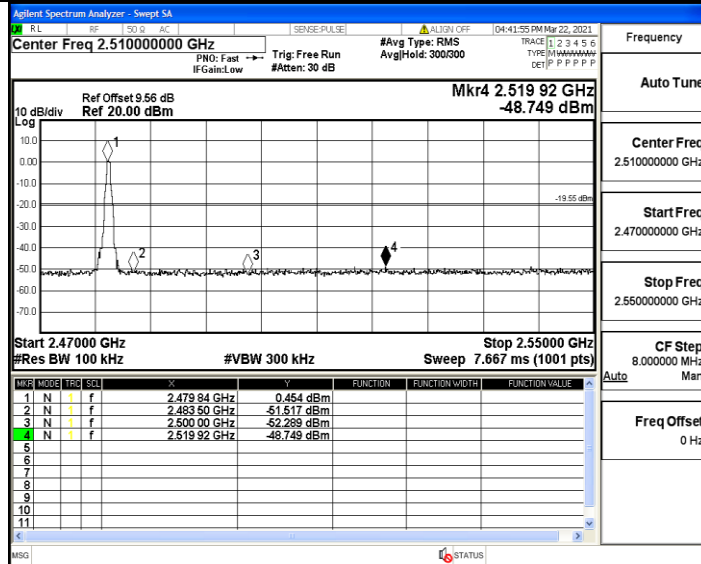
TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	3.60	-46.6	<=-16.4	PASS
		High	2480	0.45	-48.75	<=-19.55	PASS
		Low	Hop_2402	2.77	-50.06	<=-17.23	PASS
		High	Hop_2480	0.88	-47.94	<=-19.12	PASS
2DH5	Ant1	Low	2402	2.90	-49.31	<=-17.1	PASS
		High	2480	0.10	-48.77	<=-19.9	PASS
		Low	Hop_2402	-2.21	-49.73	<=-22.21	PASS
		High	Hop_2480	0.69	-48.21	<=-19.31	PASS
3DH5	Ant1	Low	2402	3.32	-47.86	<=-16.68	PASS
		High	2480	-0.08	-47.2	<=-20.08	PASS
		Low	Hop_2402	1.16	-49.73	<=-18.84	PASS
		High	Hop_2480	-2.41	-48.59	<=-22.41	PASS

Test Graph

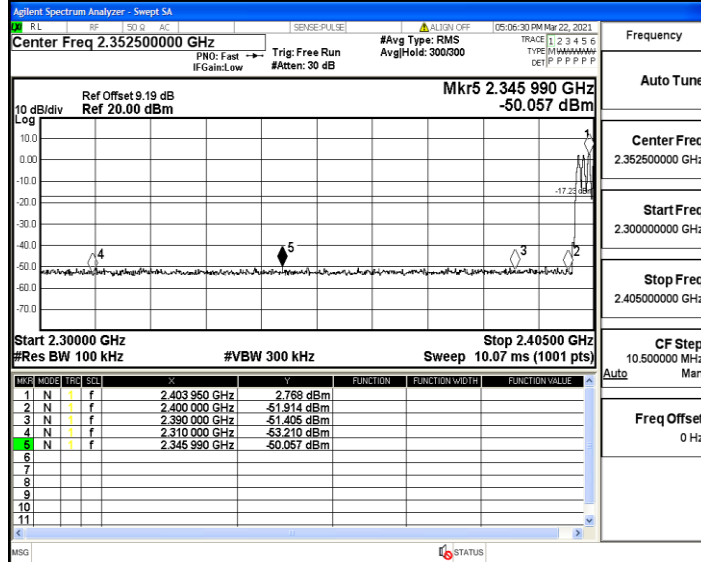
DH5\_Ant1\_Low\_2402



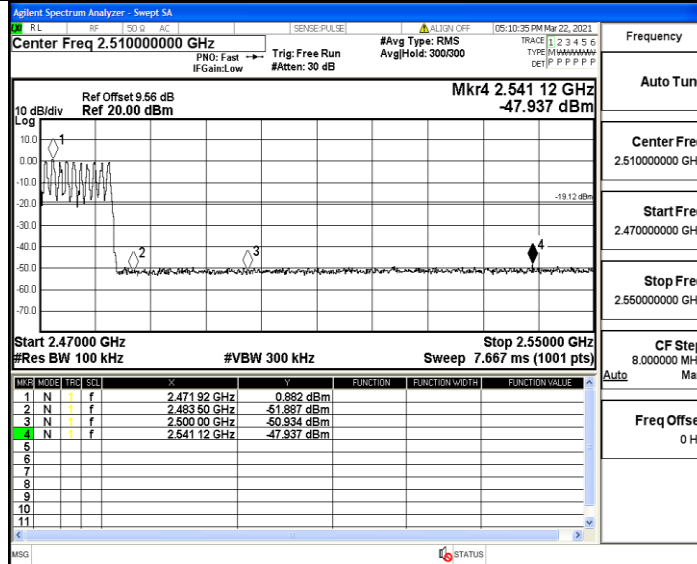
DH5\_Ant1\_High\_2480



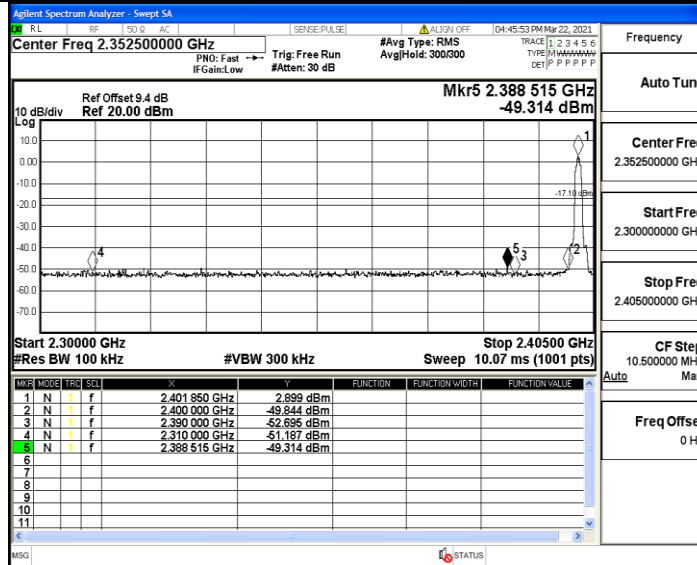
DH5\_Ant1\_Low\_Hop\_2402



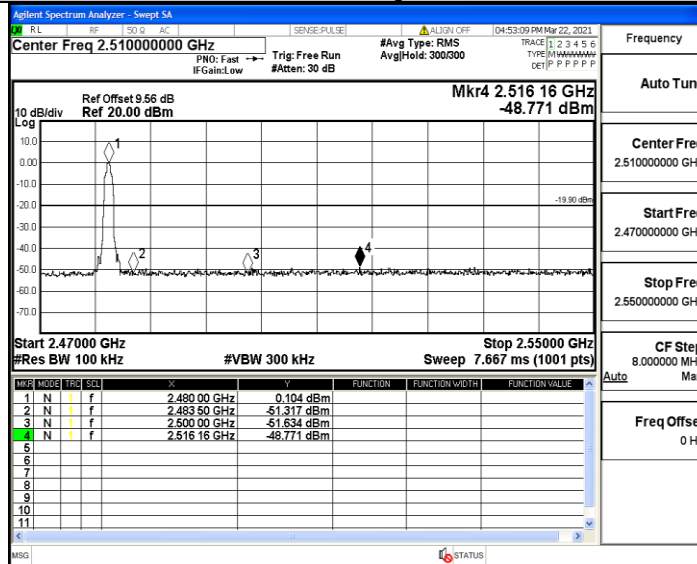
DH5\_Ant1\_High\_Hop\_2480



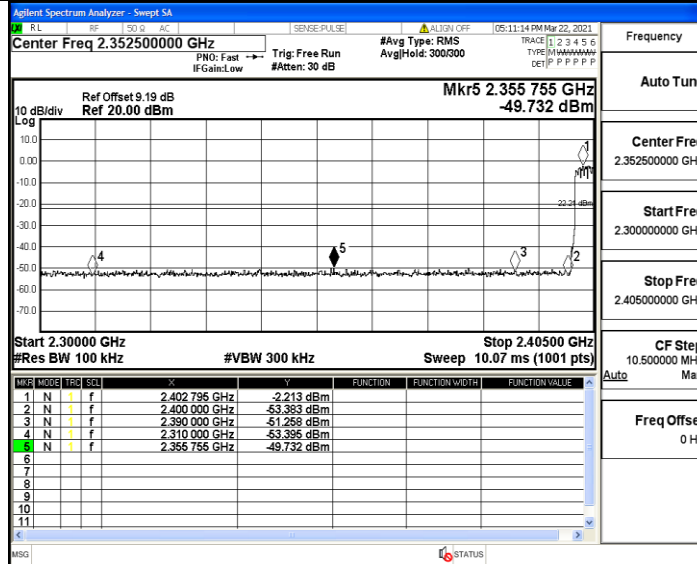
2DH5\_Ant1\_Low\_2402



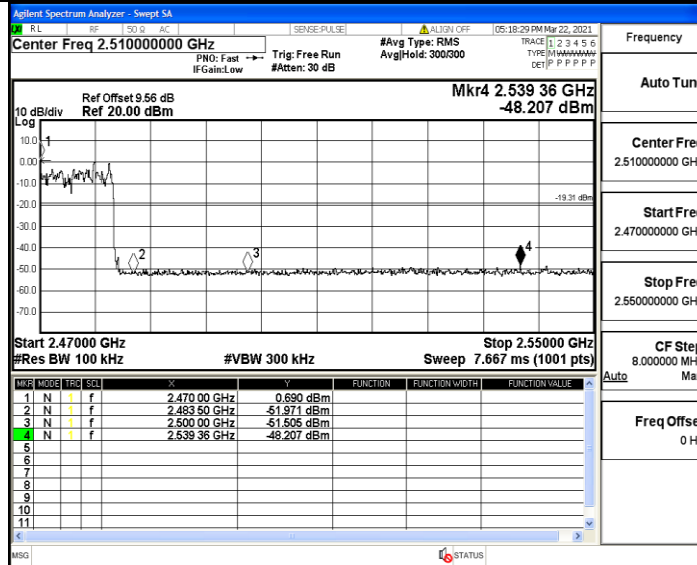
2DH5\_Ant1\_High\_2480



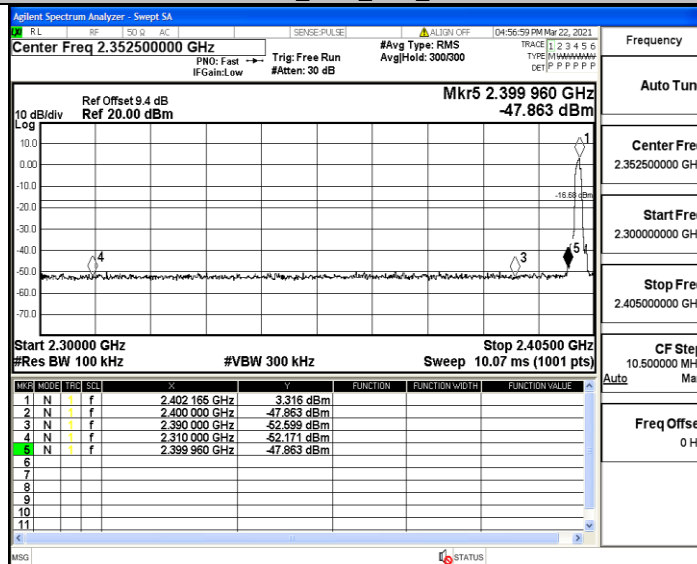
2DH5\_Ant1\_Low\_Hop\_2402



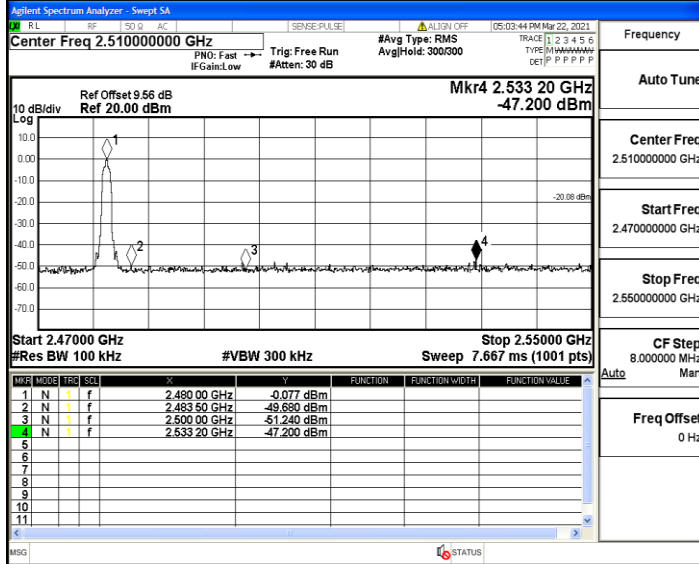
2DH5\_Ant1\_High\_Hop\_2480



3DH5\_Ant1\_Low\_2402

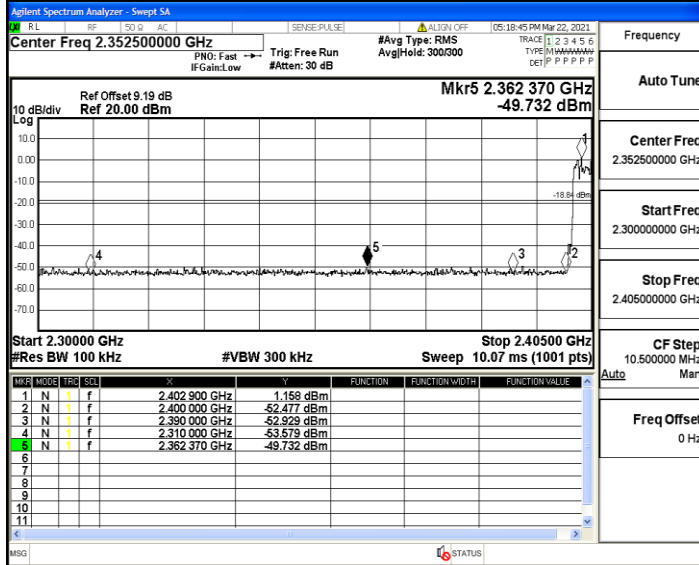


3DH5\_Ant1\_High\_2480



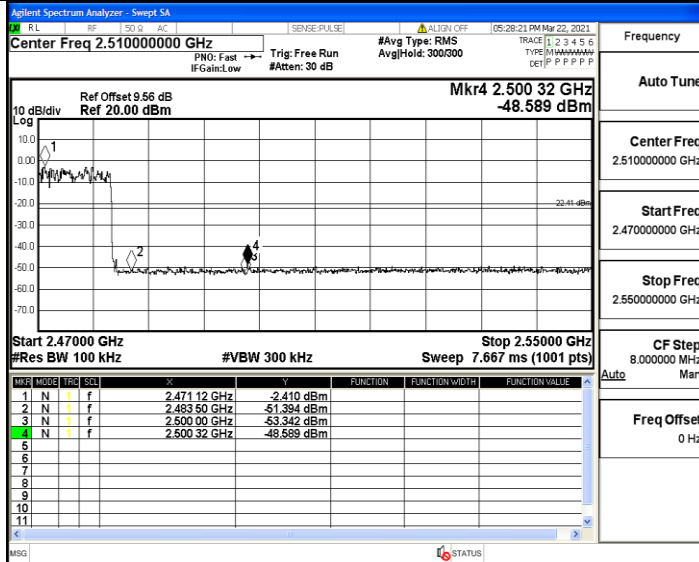
Frequency	Auto Tune
Center Freq	2.510000000 GHz
Start Freq	2.470000000 GHz
Stop Freq	2.550000000 GHz
CF Step	8.000000 MHz
Freq Offset	0 Hz

3DH5\_Ant1\_Low\_Hop\_2402



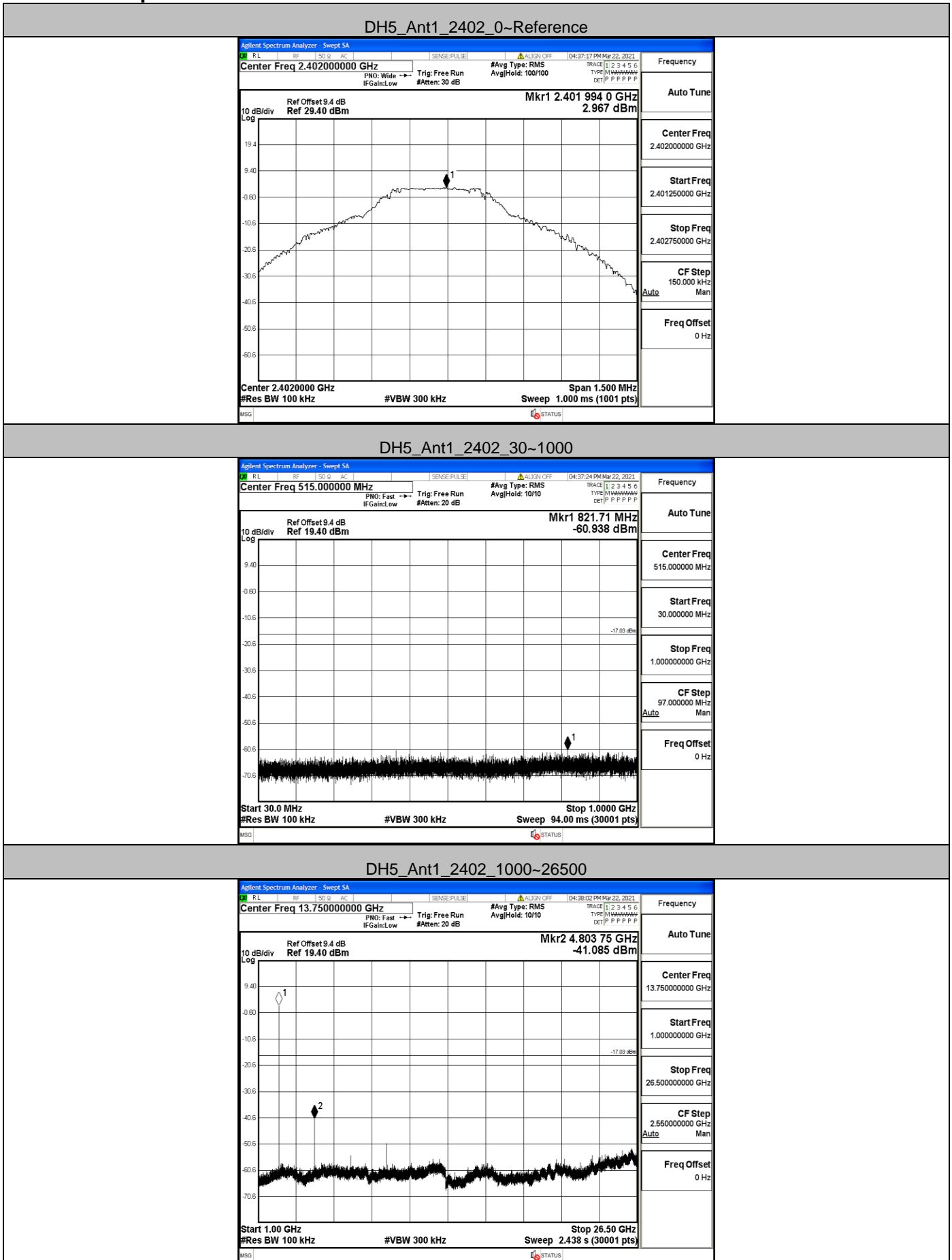
Frequency	Auto Tune
Center Freq	2.352500000 GHz
Start Freq	2.300000000 GHz
Stop Freq	2.405000000 GHz
CF Step	10.500000 MHz
Freq Offset	0 Hz

3DH5\_Ant1\_High\_Hop\_2480

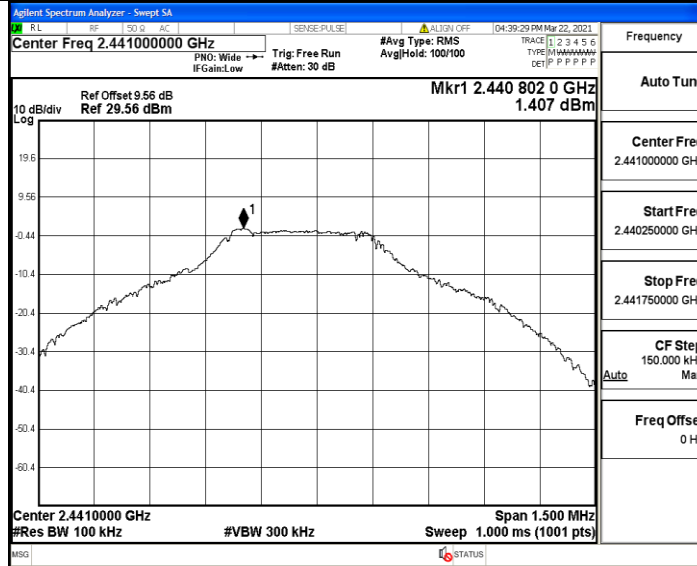


Frequency	Auto Tune
Center Freq	2.510000000 GHz
Start Freq	2.470000000 GHz
Stop Freq	2.550000000 GHz
CF Step	8.000000 MHz
Freq Offset	0 Hz

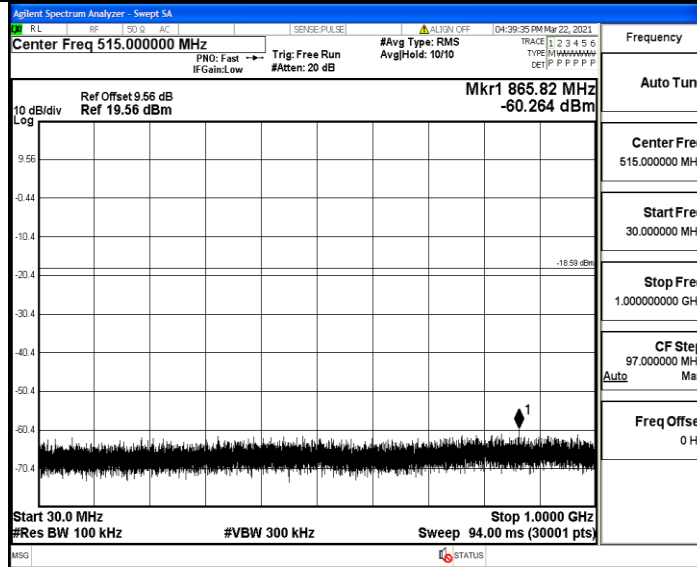
### A.7 RF Conducted Spurious Emissions Test Graph



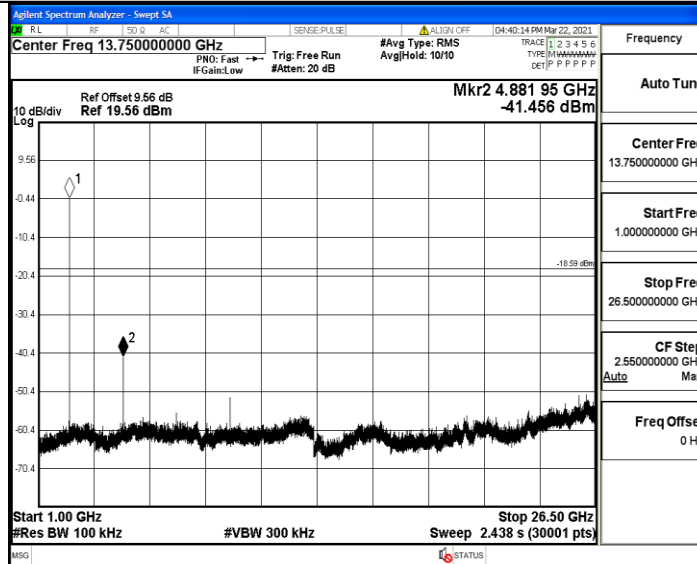
DH5\_Ant1\_2441\_0~Reference



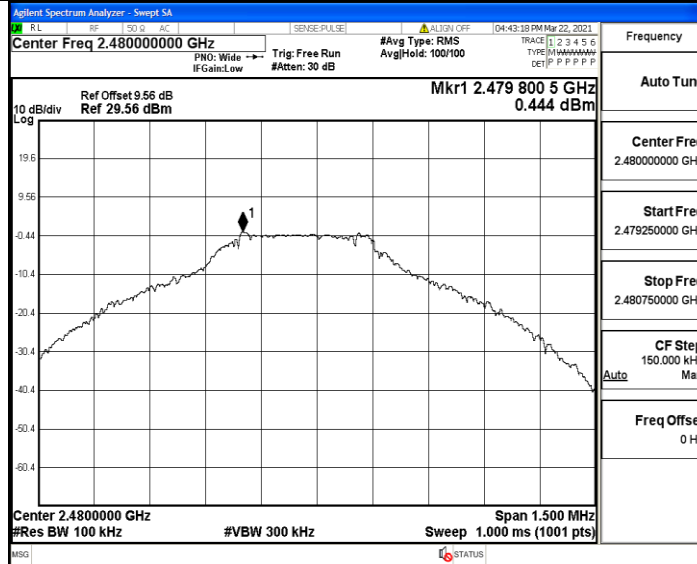
DH5\_Ant1\_2441\_30~1000



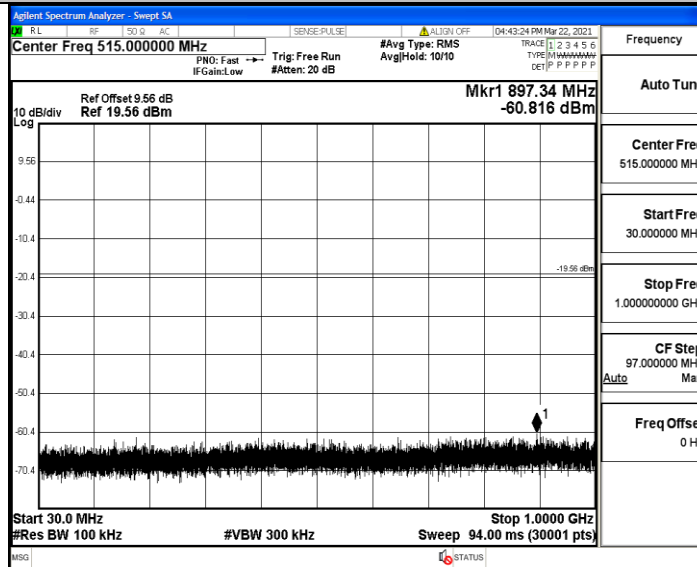
DH5\_Ant1\_2441\_1000~26500



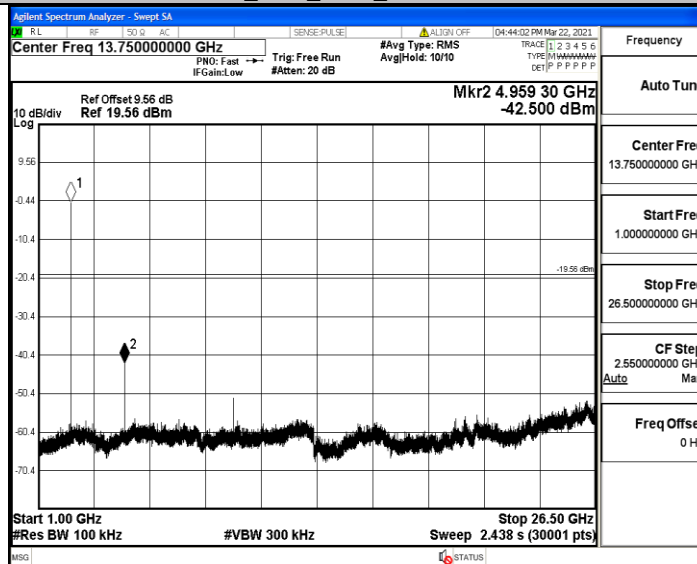
DH5\_Ant1\_2480\_0~Reference



DH5\_Ant1\_2480\_30~1000

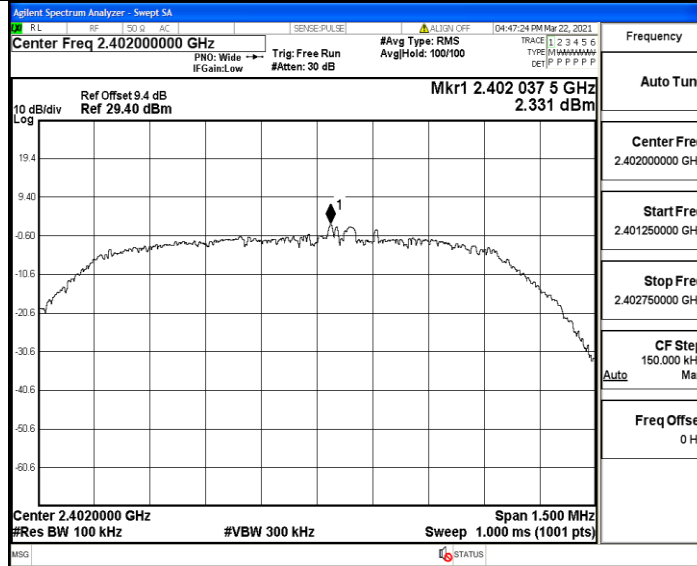


DH5\_Ant1\_2480\_1000~26500

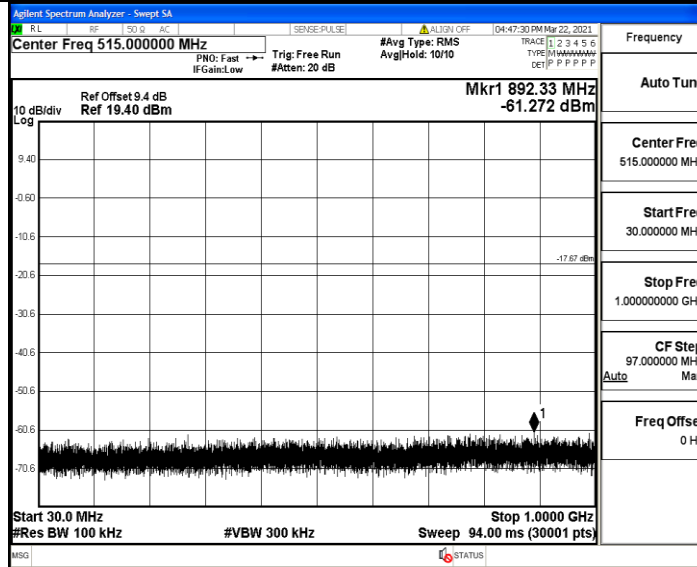




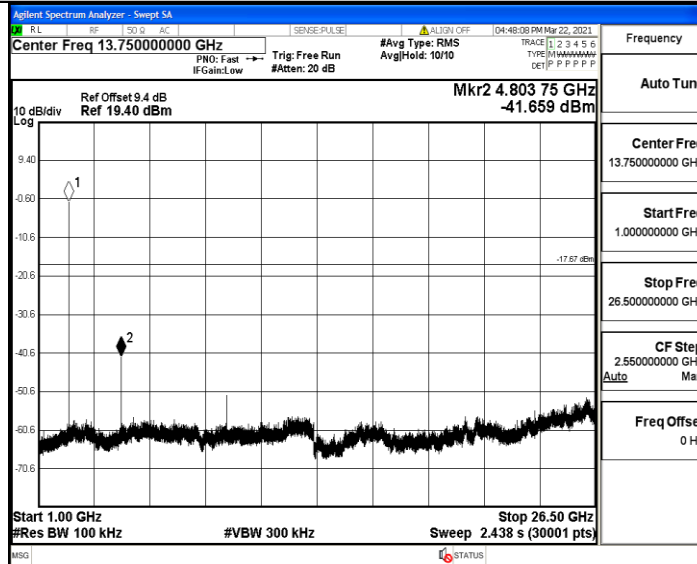
2DH5\_Ant1\_2402\_0~Reference



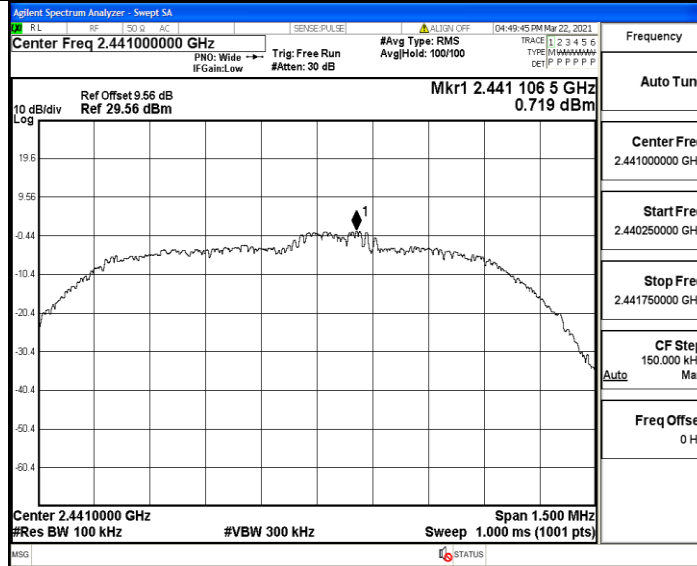
2DH5\_Ant1\_2402\_30~1000



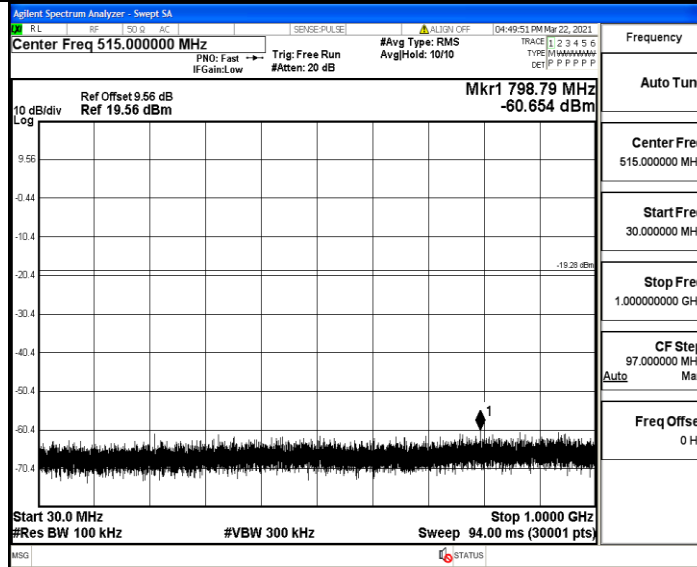
2DH5\_Ant1\_2402\_1000~26500



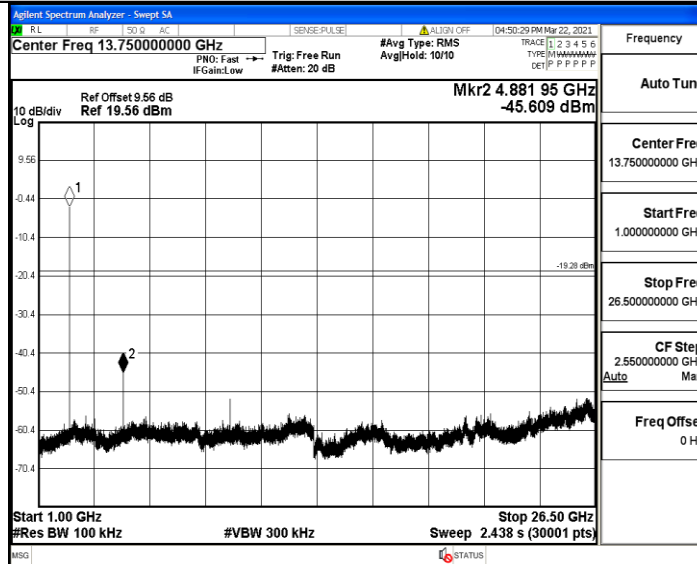
2DH5\_Ant1\_2441\_0~Reference



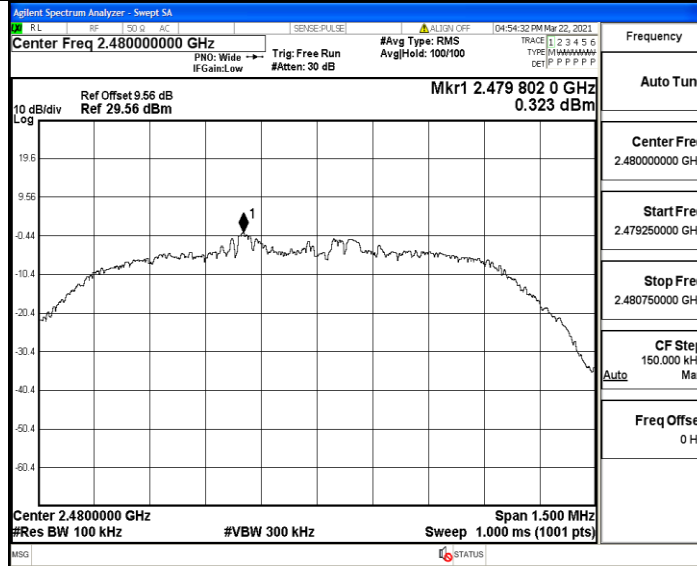
2DH5\_Ant1\_2441\_30~1000



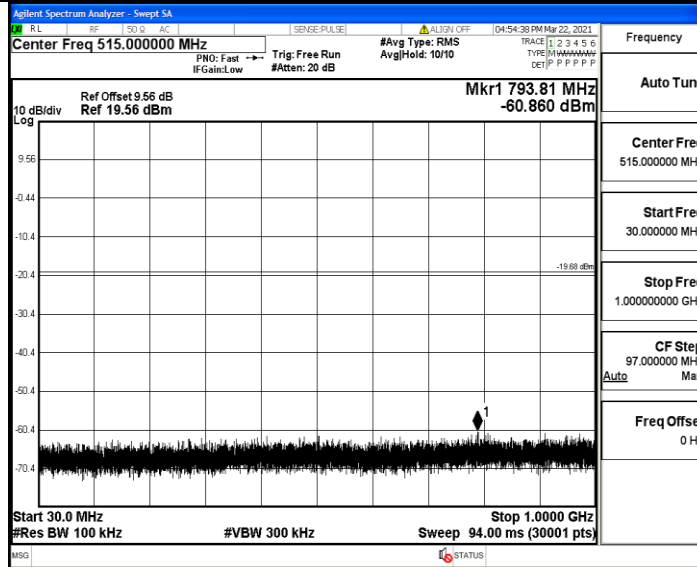
2DH5\_Ant1\_2441\_1000~26500



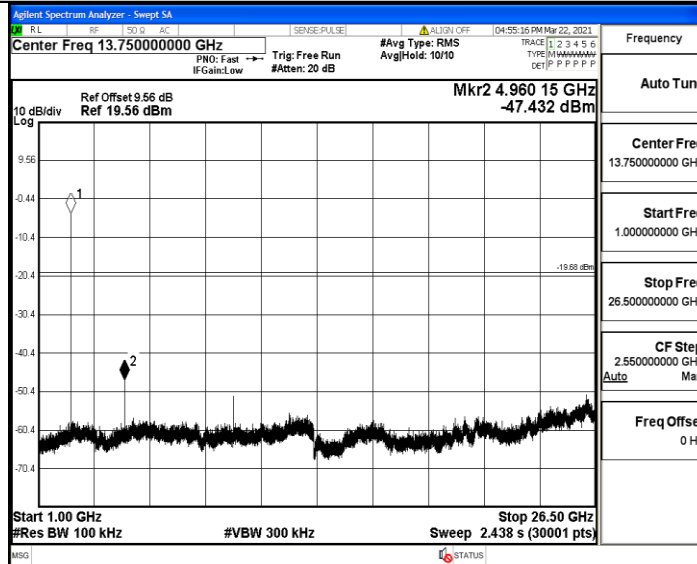
2DH5\_Ant1\_2480\_0~Reference



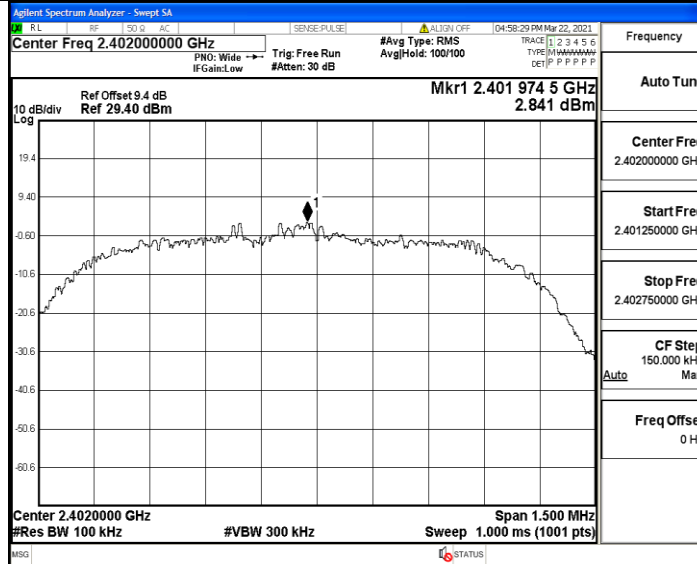
2DH5\_Ant1\_2480\_30~1000



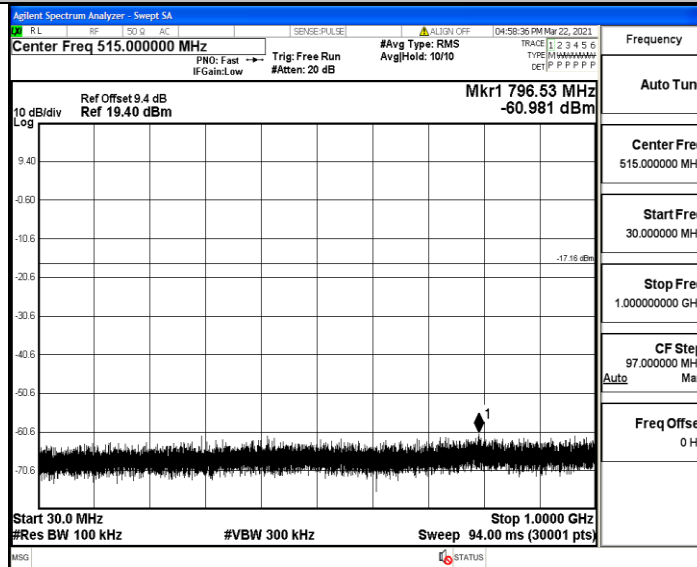
2DH5\_Ant1\_2480\_1000~26500



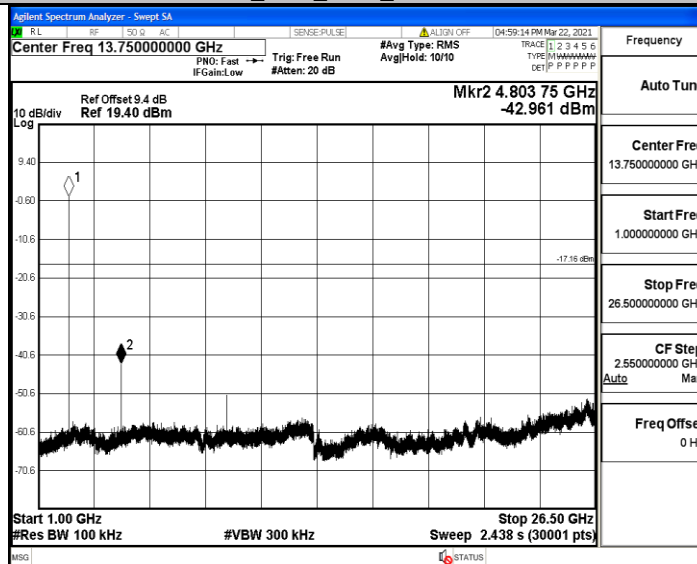
3DH5\_Ant1\_2402\_0~Reference



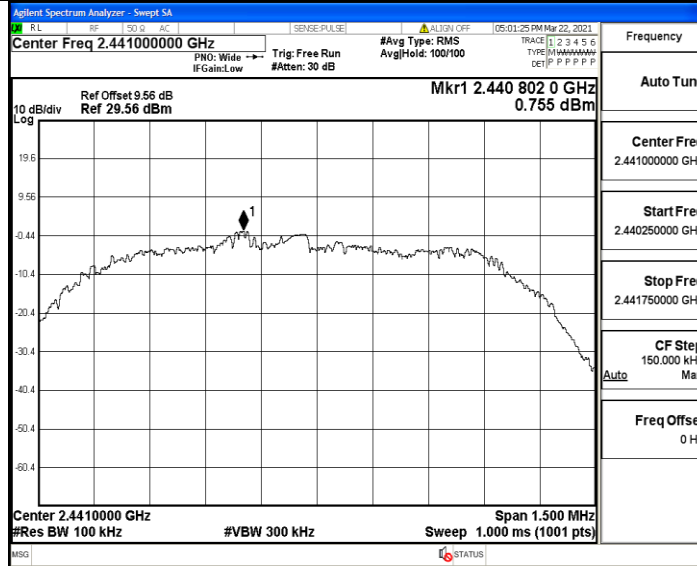
3DH5\_Ant1\_2402\_30~1000



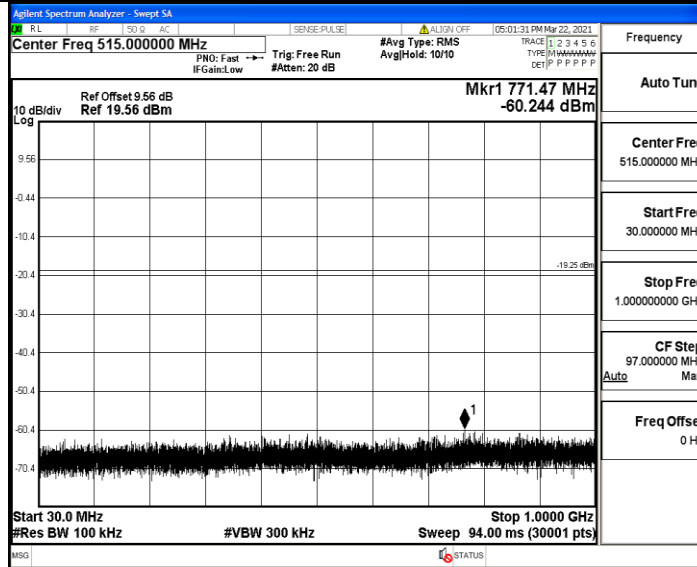
3DH5\_Ant1\_2402\_1000~26500



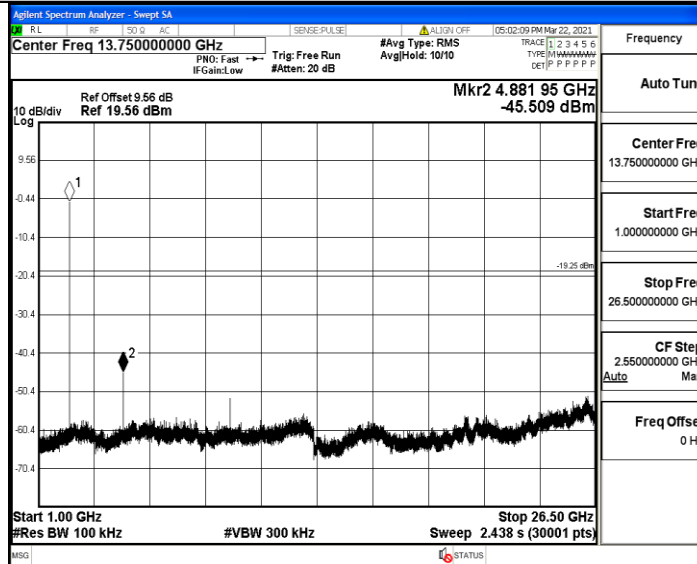
3DH5\_Ant1\_2441\_0~Reference



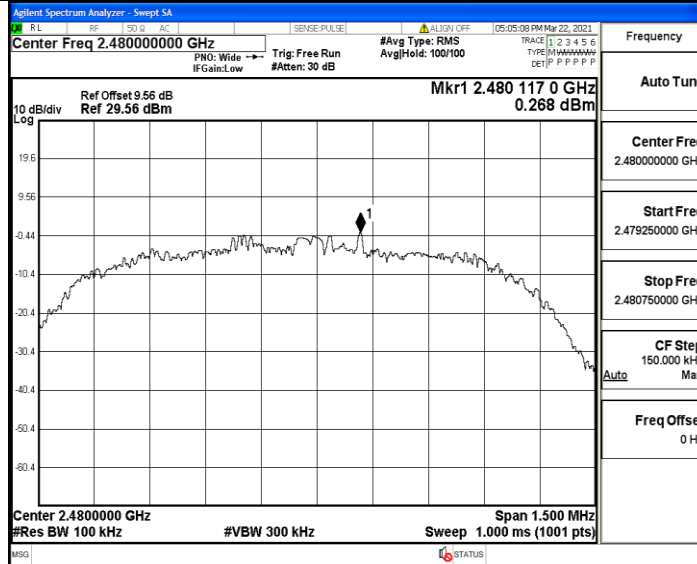
3DH5\_Ant1\_2441\_30~1000



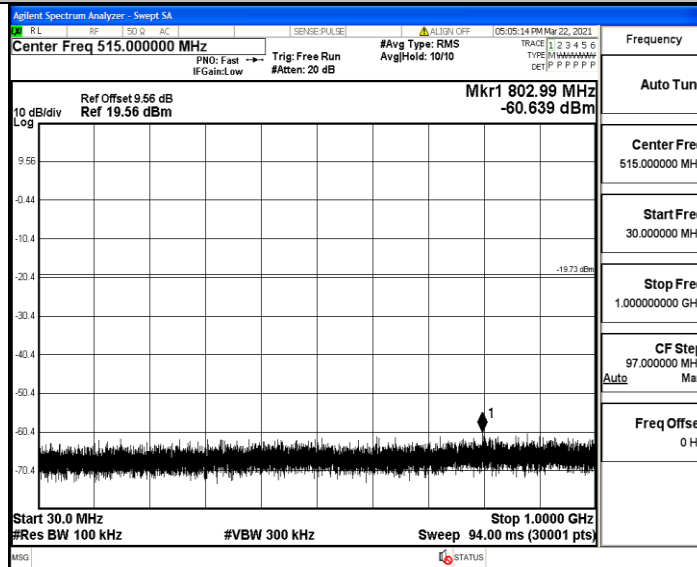
3DH5\_Ant1\_2441\_1000~26500



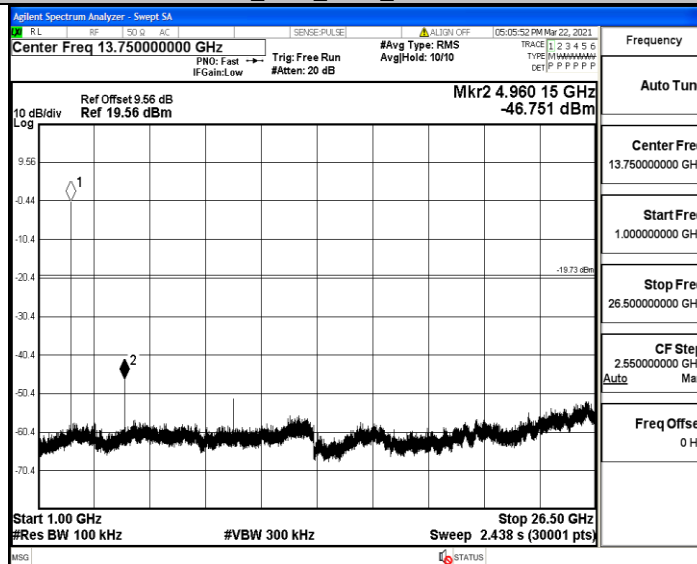
3DH5\_Ant1\_2480\_0~Reference



3DH5\_Ant1\_2480\_30~1000



3DH5\_Ant1\_2480\_1000~26500



### A.8 Restrict-band band-edge measurements

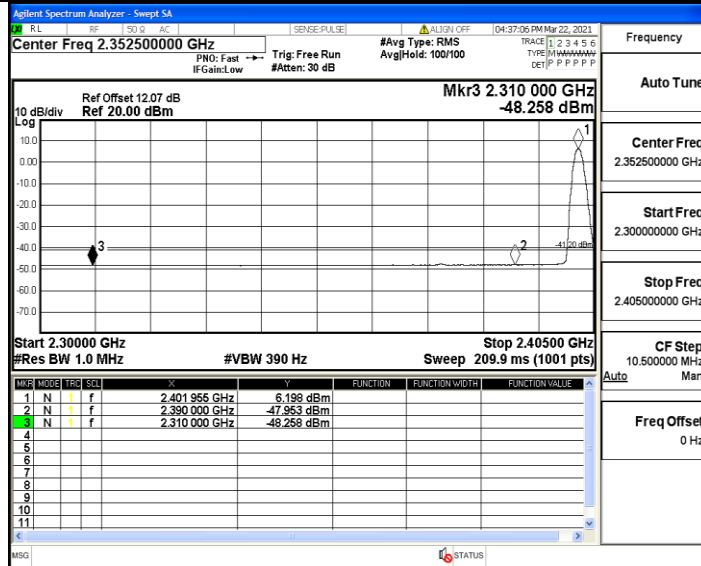
TestMode	Antenna	ChName	Channel	Detector	Freq(MHz)	Result(dBm)	Limit(dBm)	Verdict
DH5	Ant1	Low	2402	AV	2310.000	-48.26	<=-41.20	PASS
				AV	2375.915	-47.45	<=-41.20	PASS
				AV	2390.000	-47.95	<=-41.20	PASS
				Peak	2310.000	-40.51	<=-21.20	PASS
				Peak	2329.085	-36.97	<=-21.20	PASS
				Peak	2390.000	-41.28	<=-21.20	PASS
		High	2480	AV	2483.500	-47.19	<=-41.20	PASS
				AV	2483.840	-47.13	<=-41.20	PASS
				AV	2500.000	-47.31	<=-41.20	PASS
				Peak	2483.500	-40.5	<=-21.20	PASS
				Peak	2499.440	-38.06	<=-21.20	PASS
				Peak	2500.000	-39.29	<=-21.20	PASS
2DH5	Ant1	Low	2402	AV	2310.000	-48.24	<=-41.20	PASS
				AV	2376.020	-47.73	<=-41.20	PASS
				AV	2390.000	-47.86	<=-41.20	PASS
				Peak	2310.000	-41.35	<=-21.20	PASS
				Peak	2368.670	-37.98	<=-21.20	PASS
				Peak	2390.000	-39.28	<=-21.20	PASS
		High	2480	AV	2483.500	-47.16	<=-41.20	PASS
				AV	2500.000	-47.24	<=-41.20	PASS
				Peak	2483.500	-39.22	<=-21.20	PASS
				Peak	2483.760	-36.67	<=-21.20	PASS
				Peak	2500.000	-40.24	<=-21.20	PASS
				3DH5	Ant1	Low	2402	AV
AV	2376.020	-47.67	<=-41.20					PASS
AV	2390.000	-47.91	<=-41.20					PASS
Peak	2310.000	-42.05	<=-21.20					PASS
Peak	2385.785	-37.71	<=-21.20					PASS
Peak	2390.000	-40.74	<=-21.20					PASS
High	2480	AV	2483.500			-47.2	<=-41.20	PASS
		AV	2499.840			-47.09	<=-41.20	PASS
		AV	2500.000			-47.14	<=-41.20	PASS
		Peak	2483.500			-39.56	<=-21.20	PASS
		Peak	2494.480			-37.78	<=-21.20	PASS
		Peak	2500.000			-40.65	<=-21.20	PASS

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.

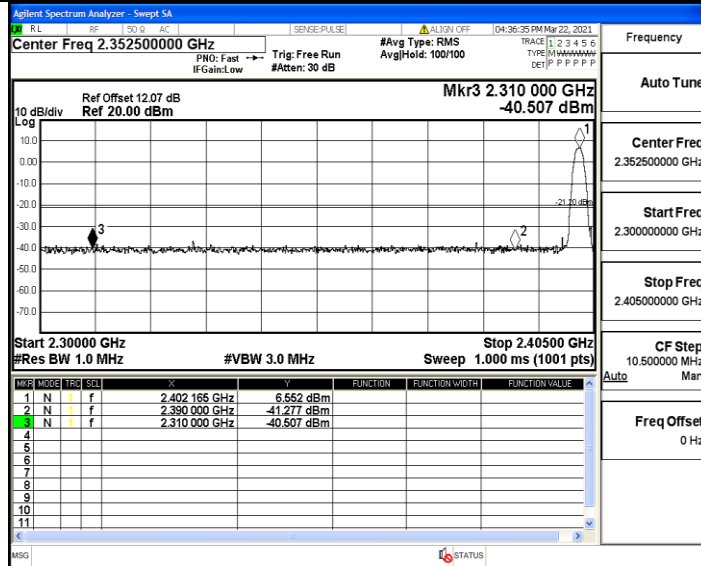


Test Graphs

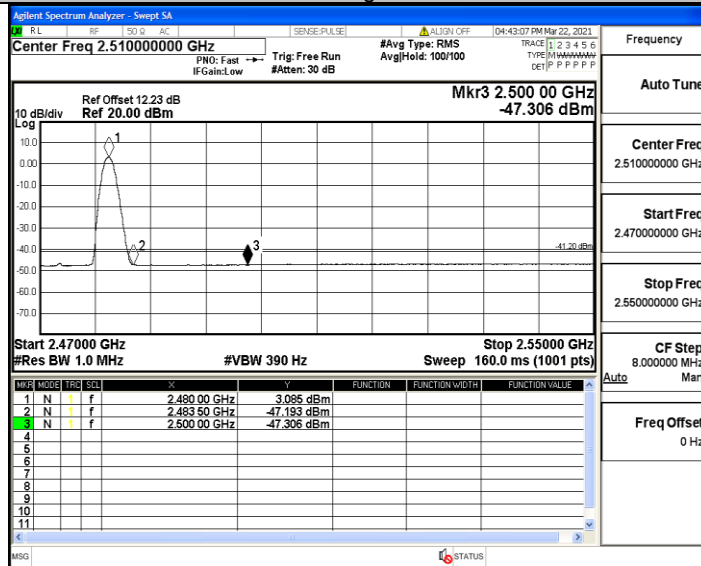
DH5\_Ant1\_Low\_2402\_AV



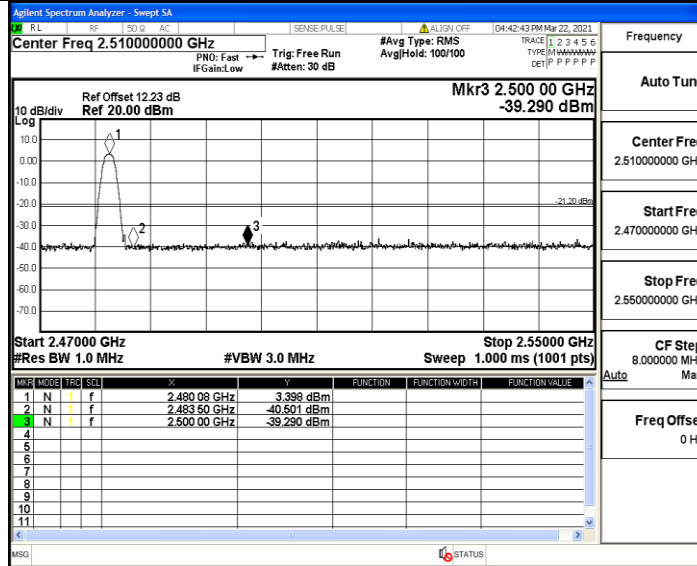
DH5\_Ant1\_Low\_2402\_Peak



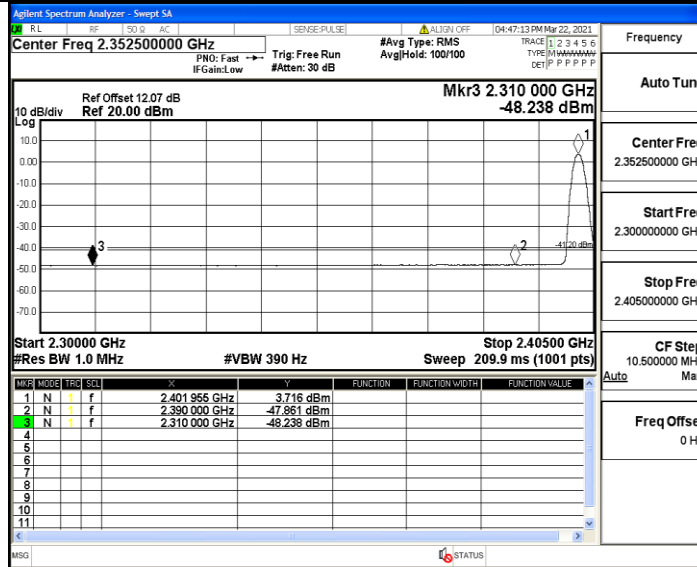
DH5\_Ant1\_High\_2480\_AV



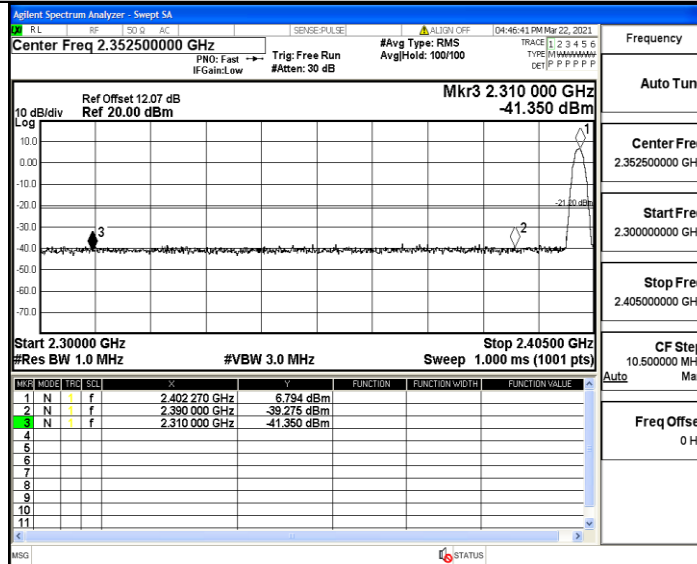
DH5\_Ant1\_High\_2480\_Peak



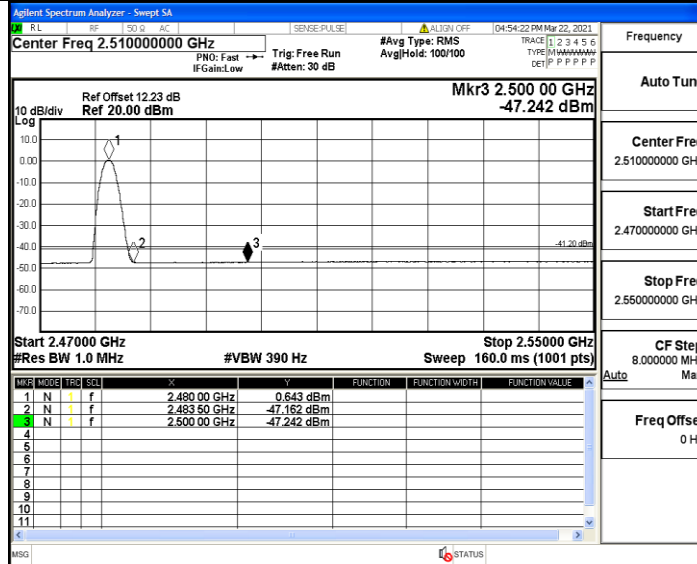
2DH5\_Ant1\_Low\_2402\_AV



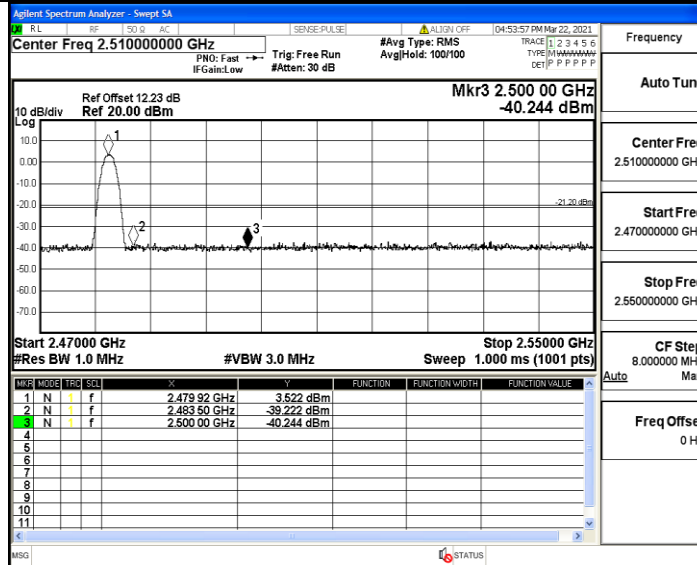
2DH5\_Ant1\_Low\_2402\_Peak



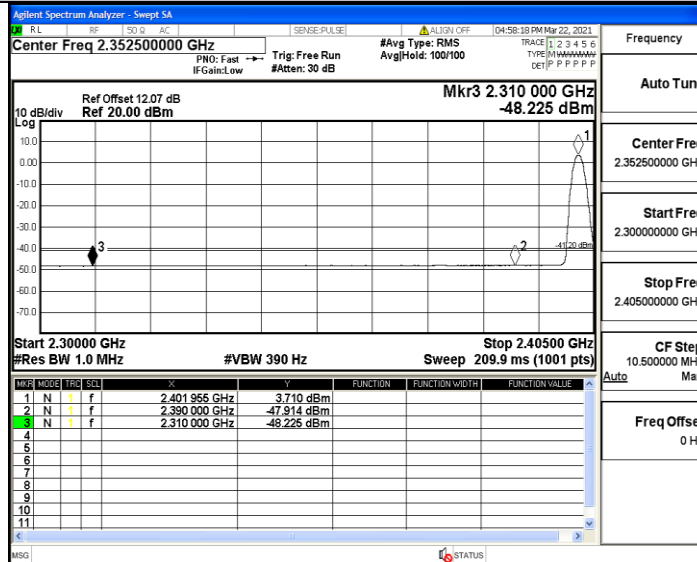
2DH5\_Ant1\_High\_2480\_AV



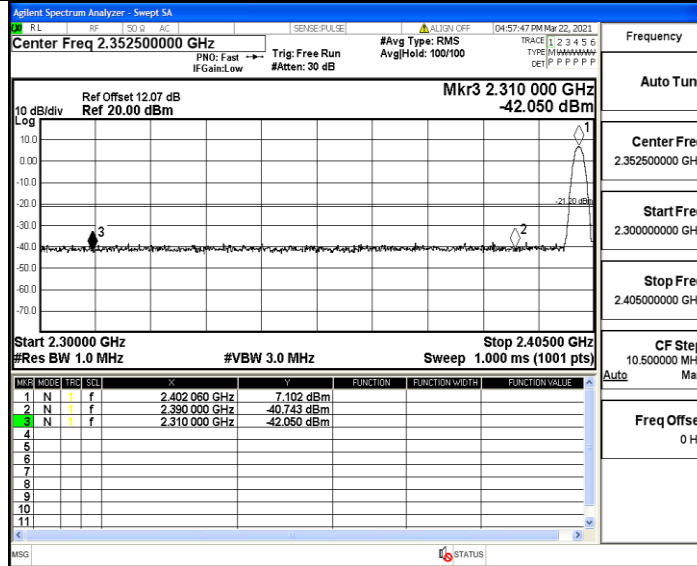
2DH5\_Ant1\_High\_2480\_Peak



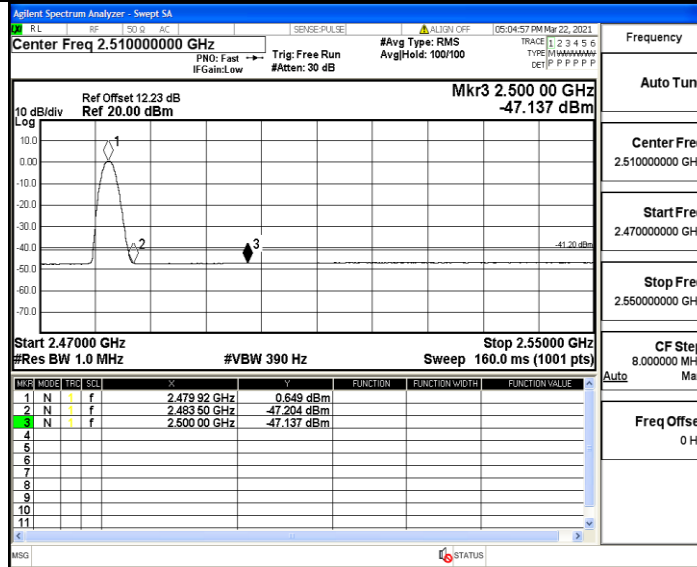
3DH5\_Ant1\_Low\_2402\_AV



3DH5\_Ant1\_Low\_2402\_Peak



3DH5\_Ant1\_High\_2480\_AV



3DH5\_Ant1\_High\_2480\_Peak

