

## Appendix A

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

Product Name: Bone Conduction Headphone

Trade Mark: N/A

Test Model: X14

FCC ID: 2AXV7-X14

### Environmental Conditions

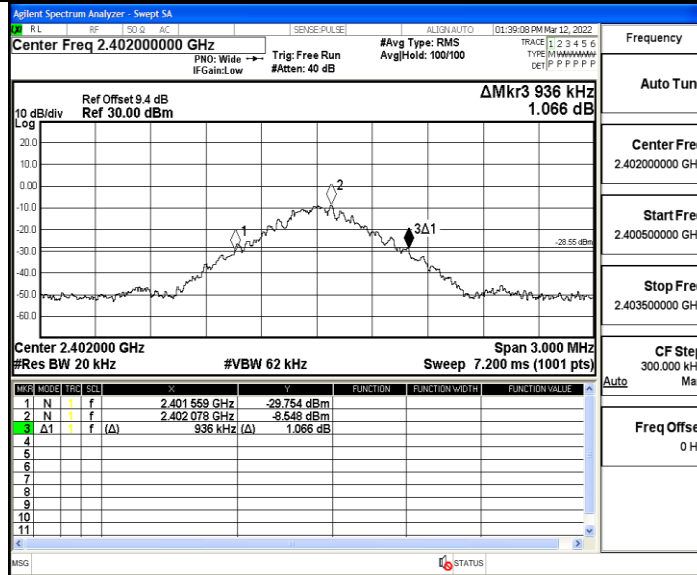
Temperature:	22.8° C
Relative Humidity:	56%
ATM Pressure:	100.0 kPa
Test Engineer:	Nancy Li
Supervised by:	Hugo Chen

#### A.1 20 dB Bandwidth

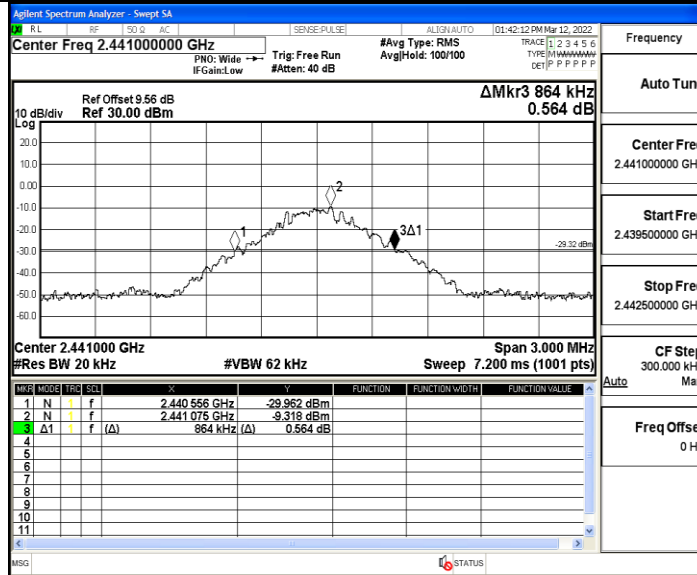
TestMode	Antenna	Channel	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.936	2401.559	2402.495	---	---
		2441	0.864	2440.556	2441.420	---	---
		2480	0.891	2479.559	2480.450	---	---
2DH5	Ant1	2402	1.329	2401.352	2402.681	---	---
		2441	1.287	2440.382	2441.669	---	---
		2480	1.329	2479.352	2480.681	---	---
3DH5	Ant1	2402	1.281	2401.376	2402.657	---	---
		2441	1.281	2440.370	2441.651	---	---
		2480	1.332	2479.349	2480.681	---	---

Test Graph

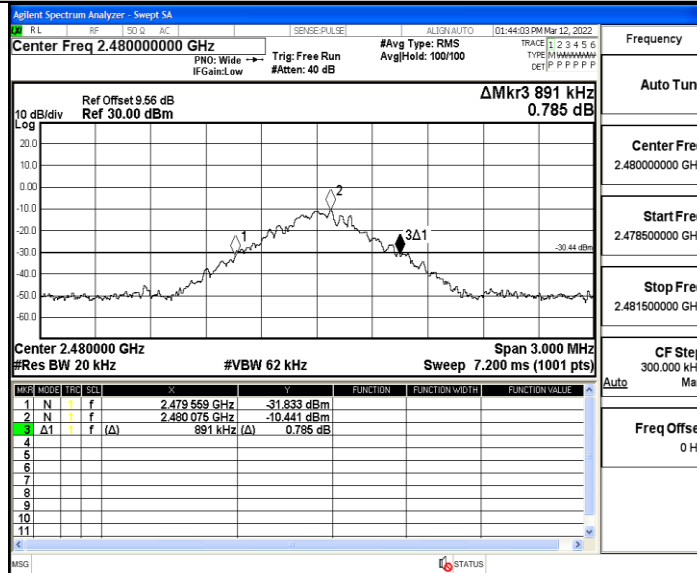
DH5\_Ant1\_2402



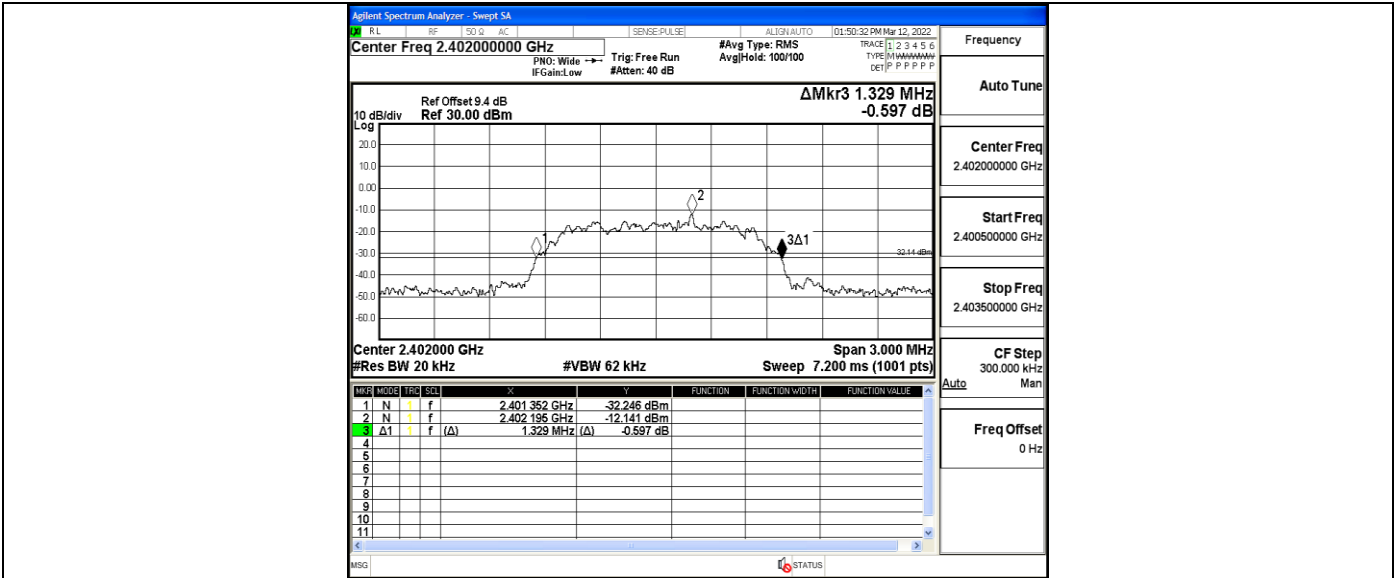
DH5\_Ant1\_2441



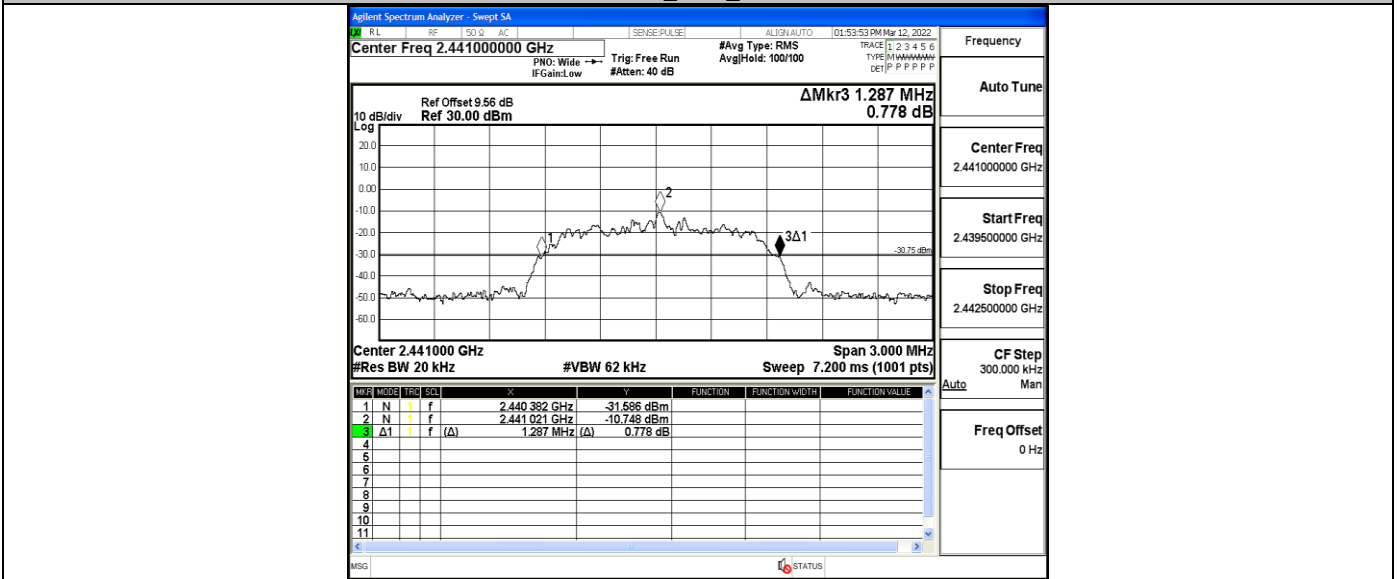
DH5\_Ant1\_2480



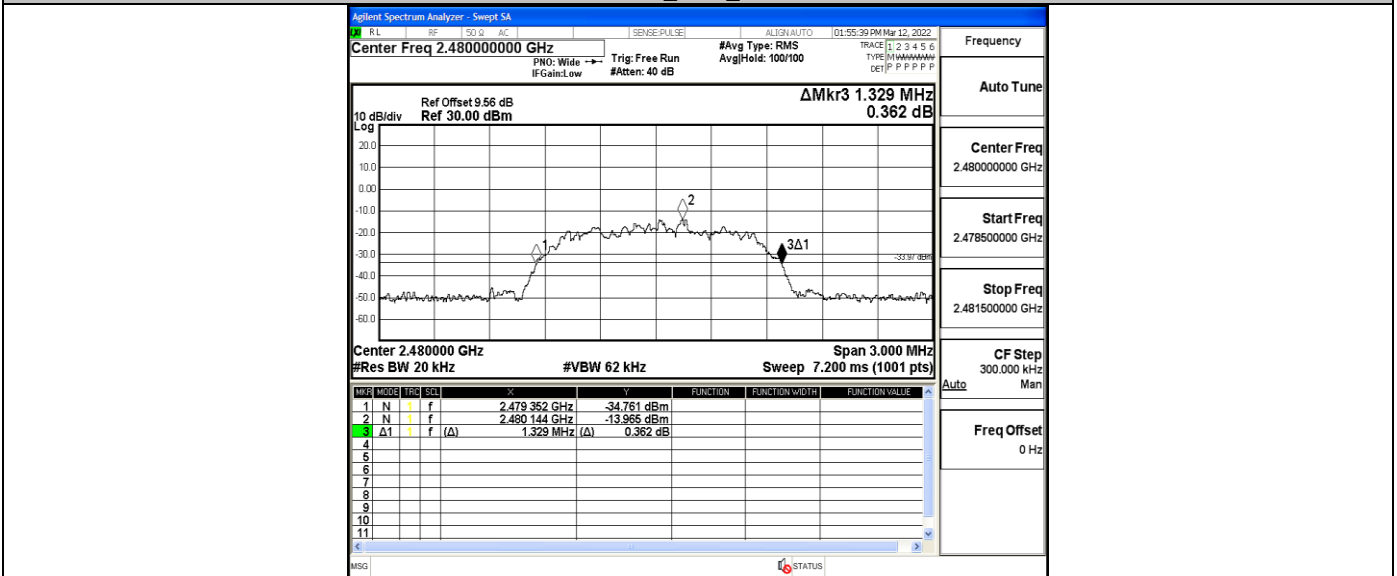
2DH5\_Ant1\_2402



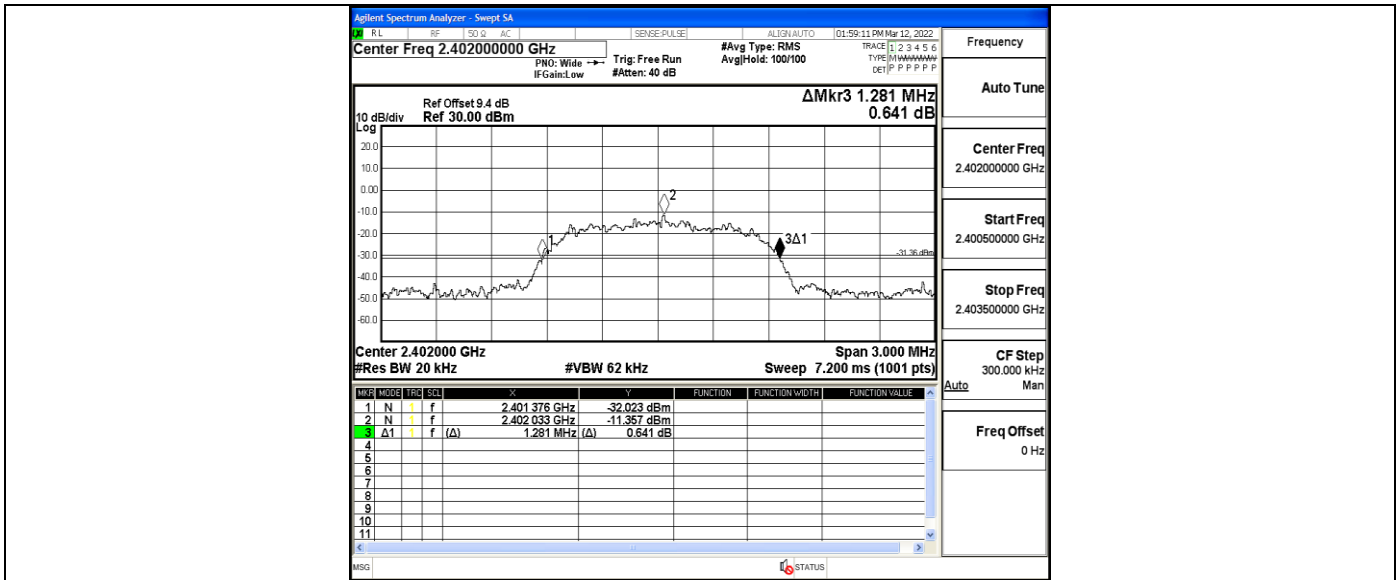
2DH5\_Ant1\_2441



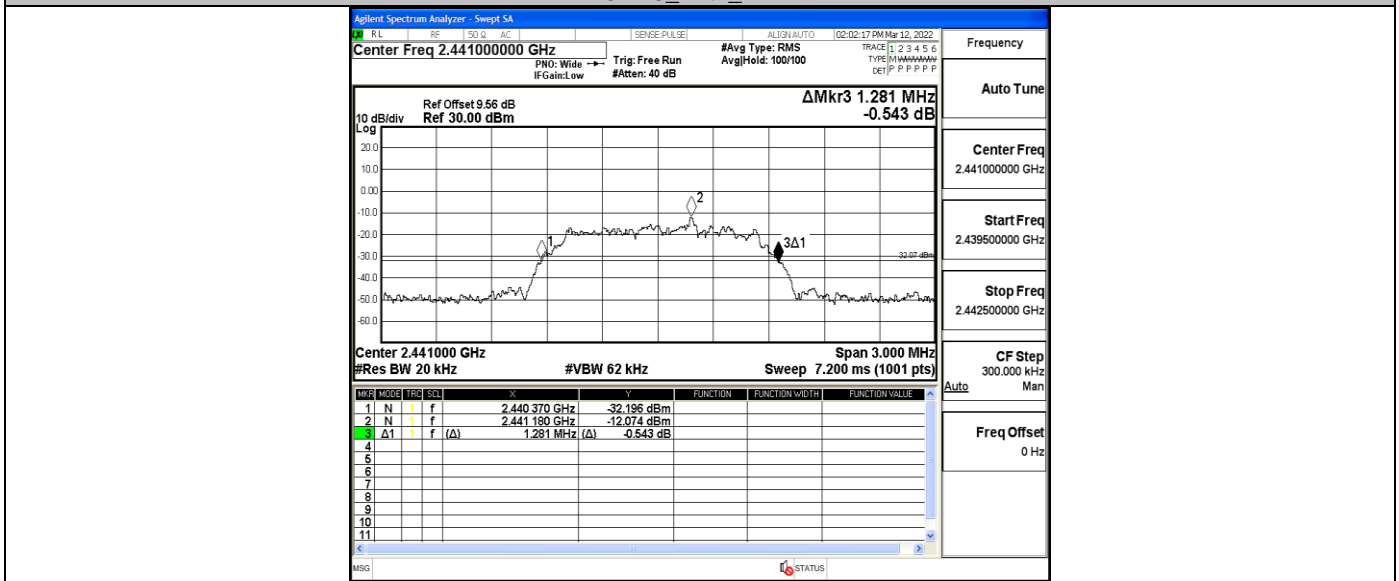
2DH5\_Ant1\_2480



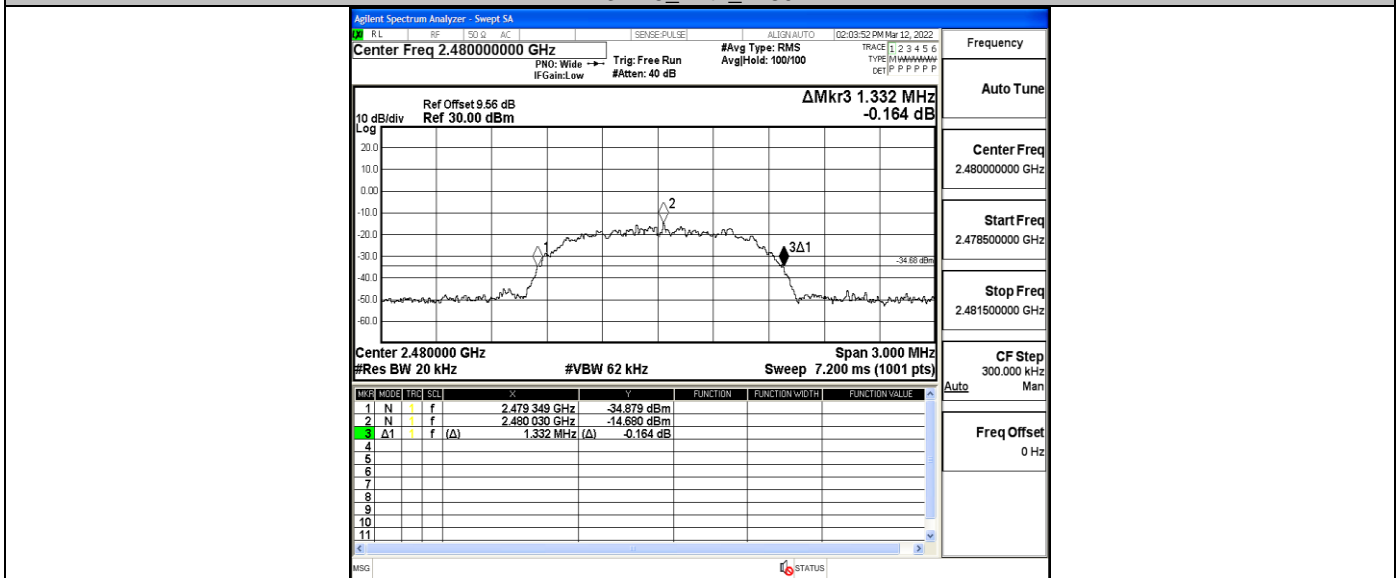
3DH5\_Ant1\_2402



3DH5\_Ant1\_2441



3DH5\_Ant1\_2480

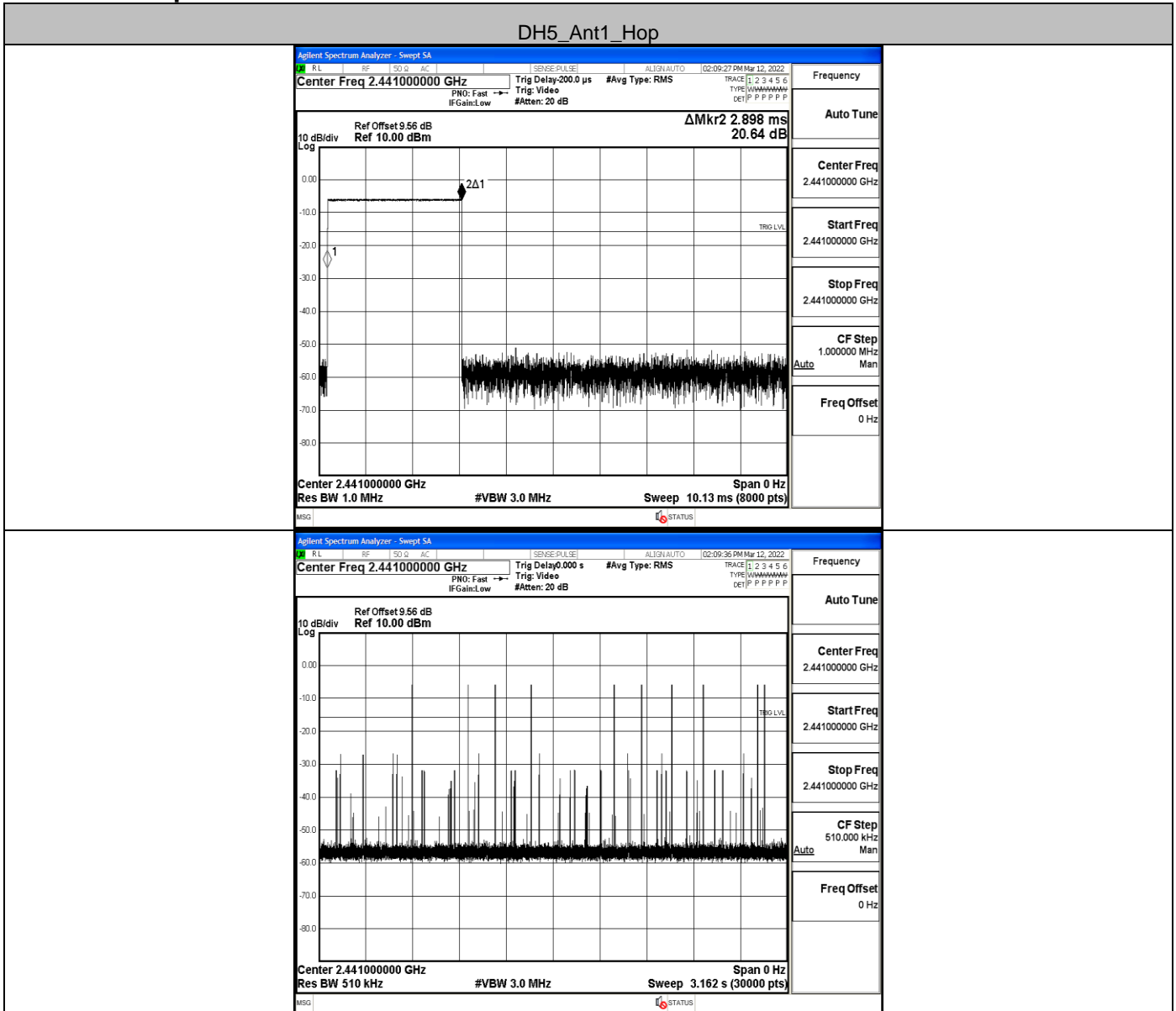


**A.2 Dwell Time**

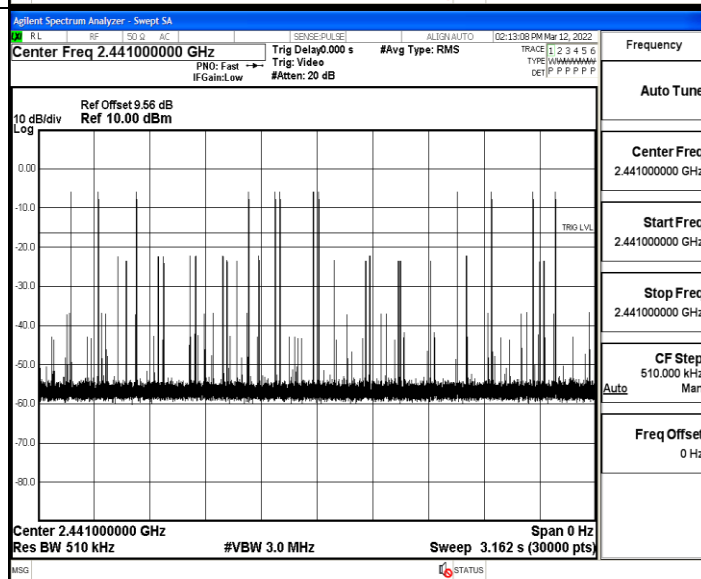
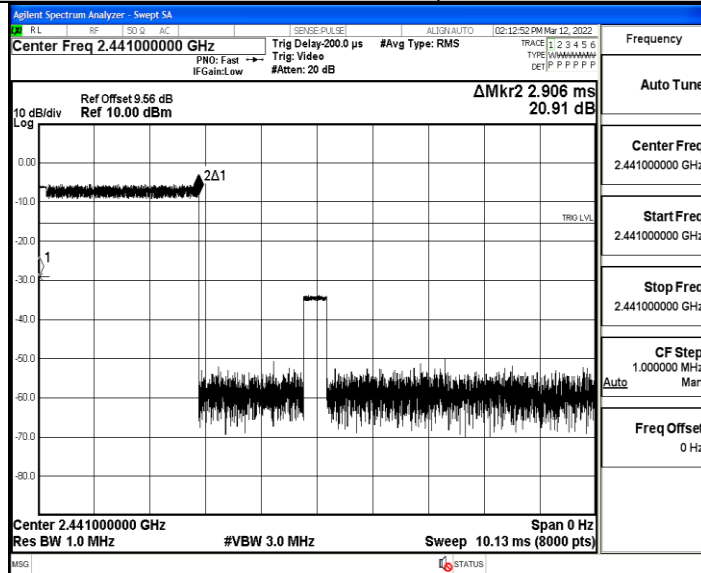
TestMode	Antenna	Channel	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH5	Ant1	Hop	2.902	110	0.319	<=0.4	PASS
2DH5	Ant1	Hop	2.912	110	0.32	<=0.4	PASS
3DH5	Ant1	Hop	2.912	110	0.32	<=0.4	PASS

### Test Graph

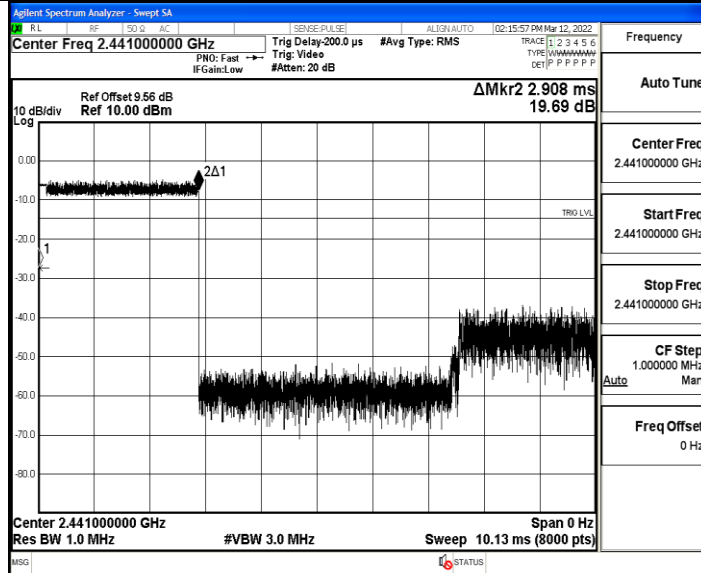
#### DH5\_Ant1\_Hop



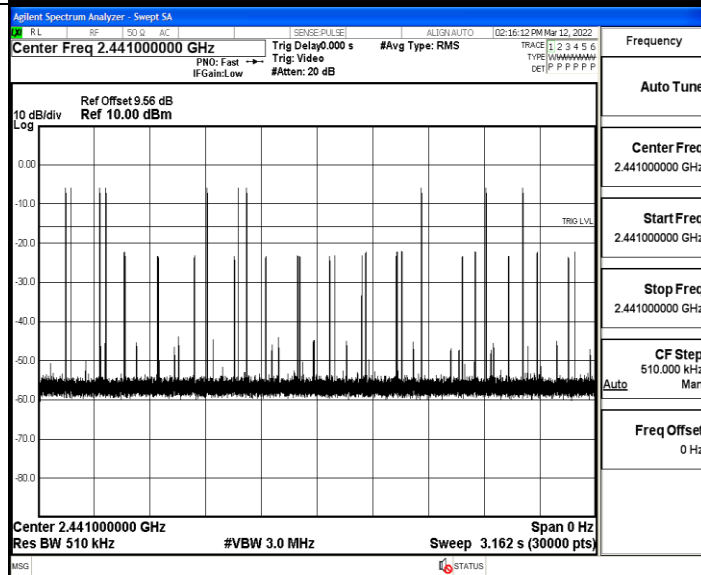
2DH5\_Ant1\_Hop



3DH5\_Ant1\_Hop



Frequency
Auto Tune
Center Freq 2.441000000 GHz
Start Freq 2.441000000 GHz
Stop Freq 2.441000000 GHz
CF Step 1.000000 MHz Auto
Freq Offset 0 Hz



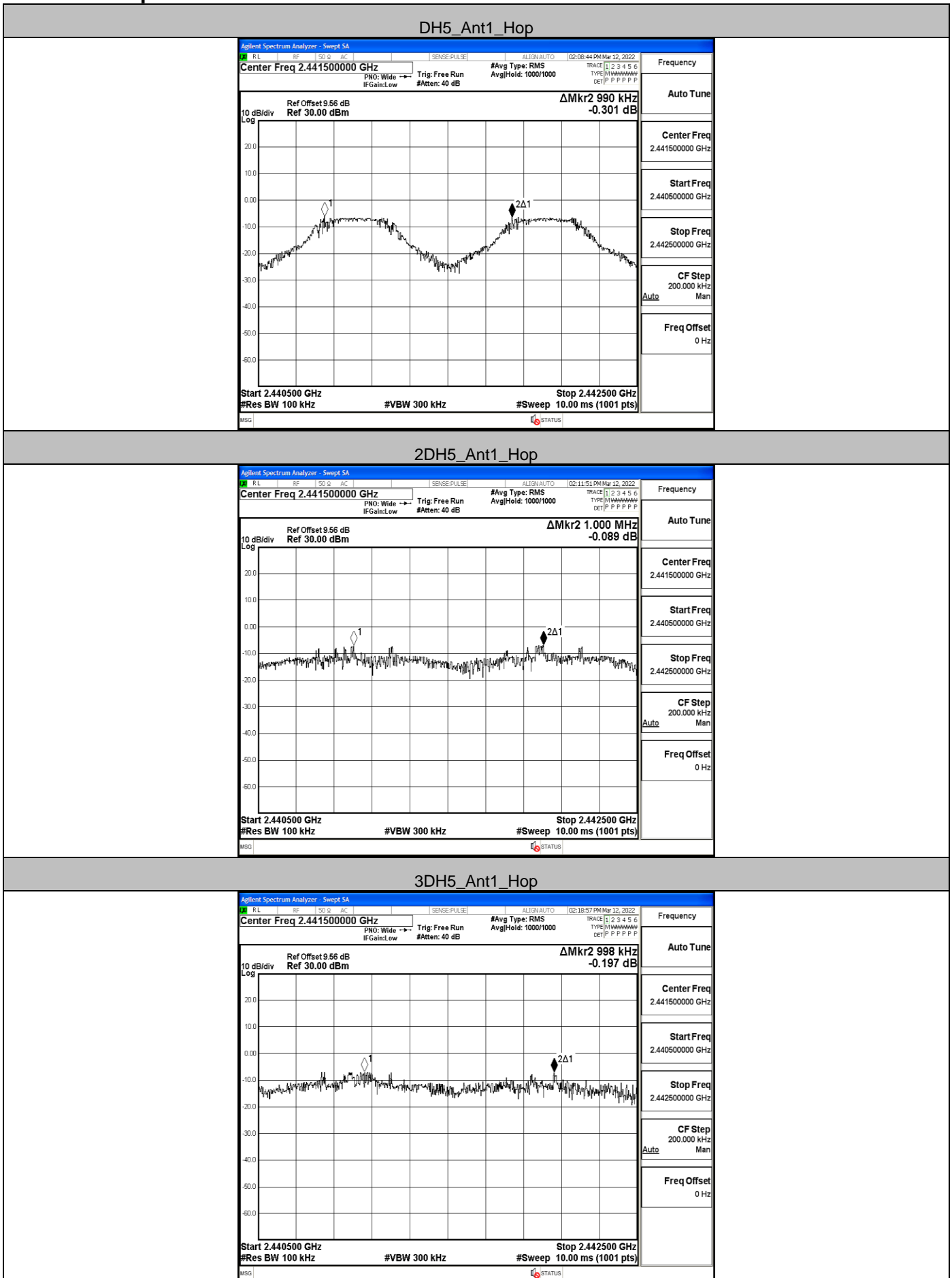
Frequency
Auto Tune
Center Freq 2.441000000 GHz
Start Freq 2.441000000 GHz
Stop Freq 2.441000000 GHz
CF Step 510.000 kHz Auto
Freq Offset 0 Hz



### A.3 Carrier Frequency Separation

TestMode	Antenna	Channel	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	0.99	$\geq 0.936$	PASS
2DH5	Ant1	Hop	1	$\geq 0.886$	PASS
3DH5	Ant1	Hop	0.998	$\geq 0.888$	PASS

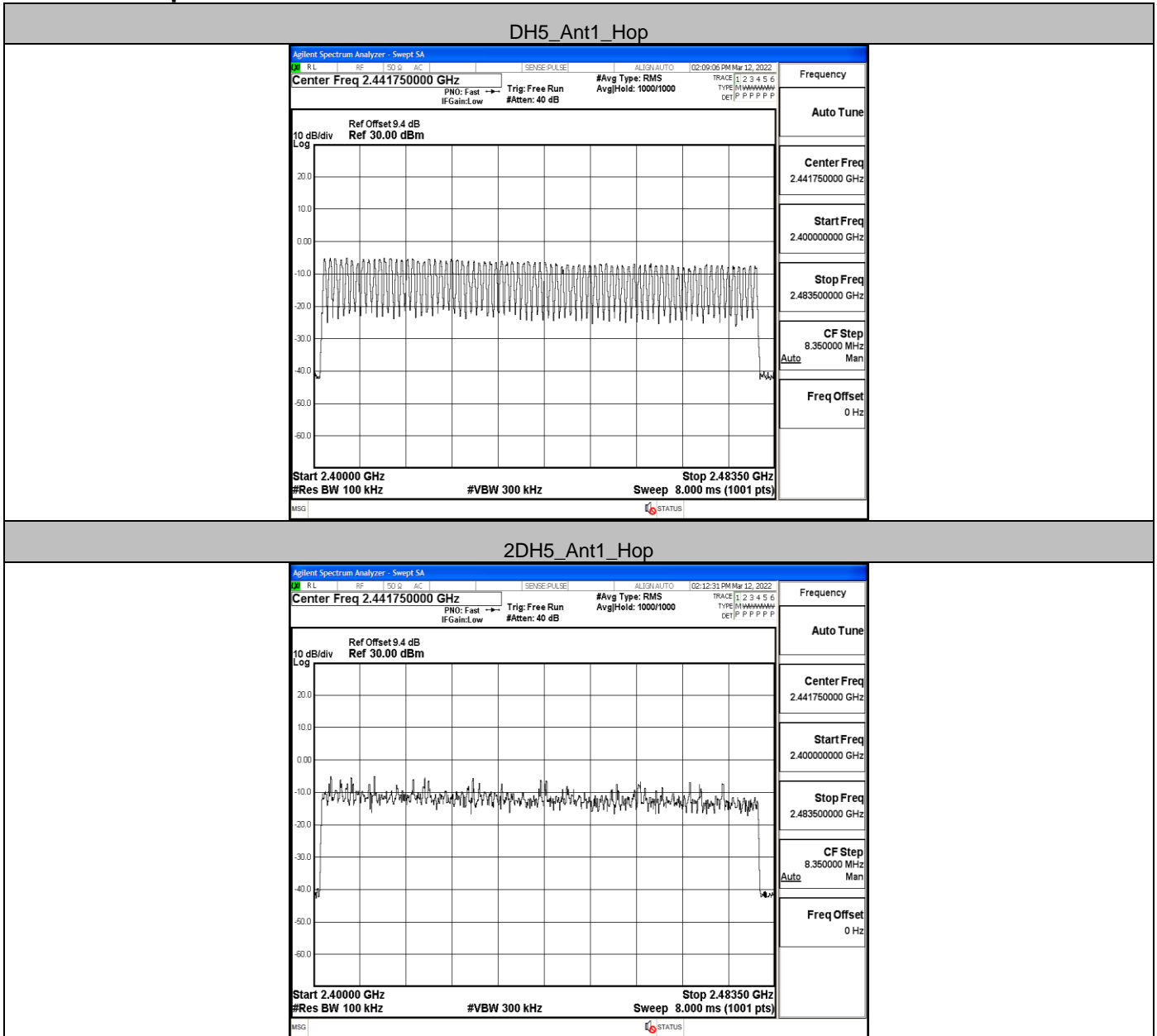
Test Graph



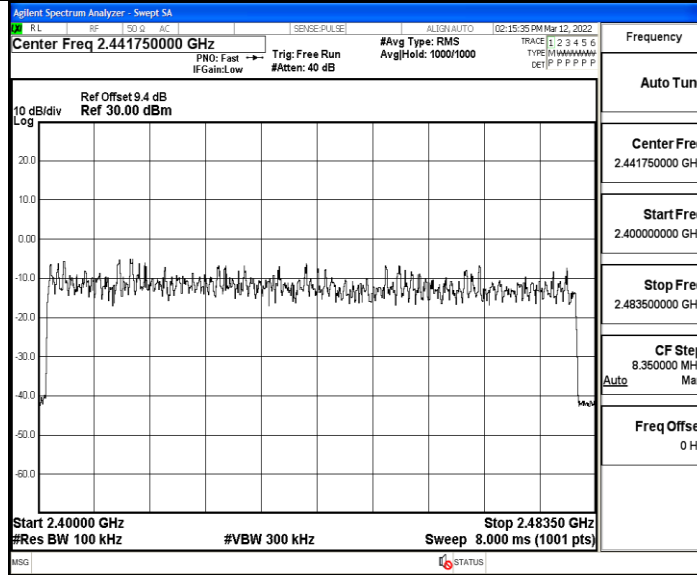
### A.4 Hopping Channel Number

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

### Test Graph



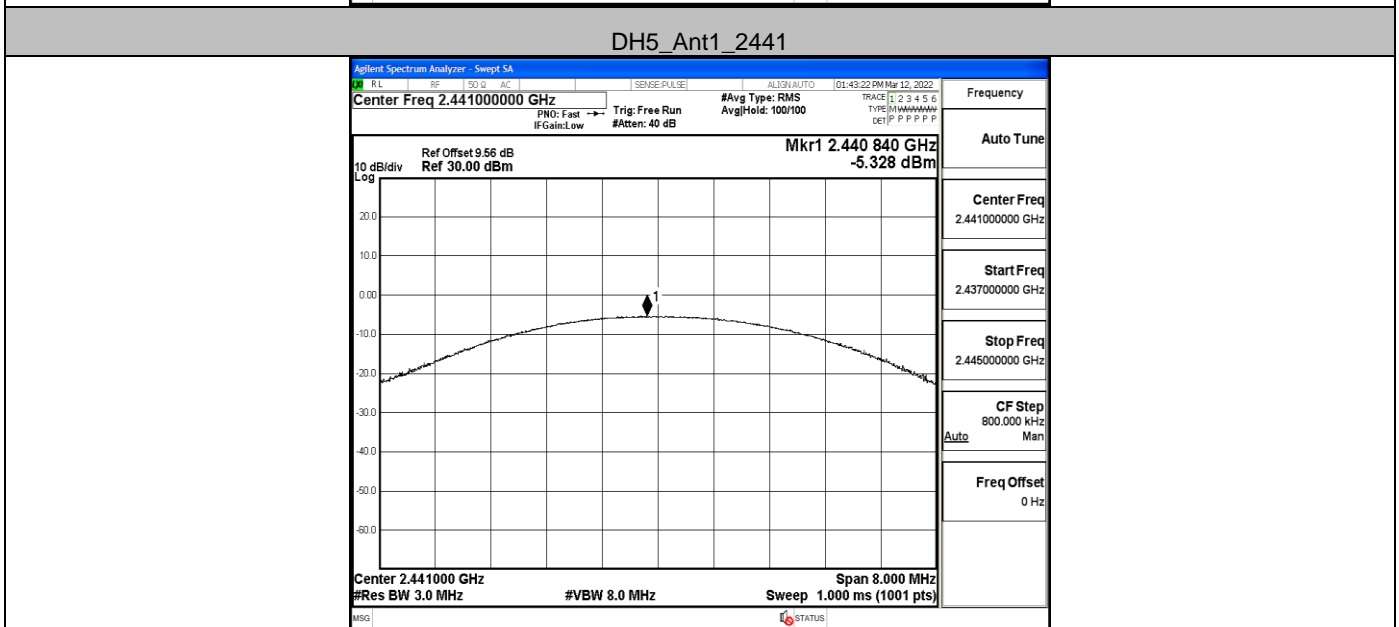
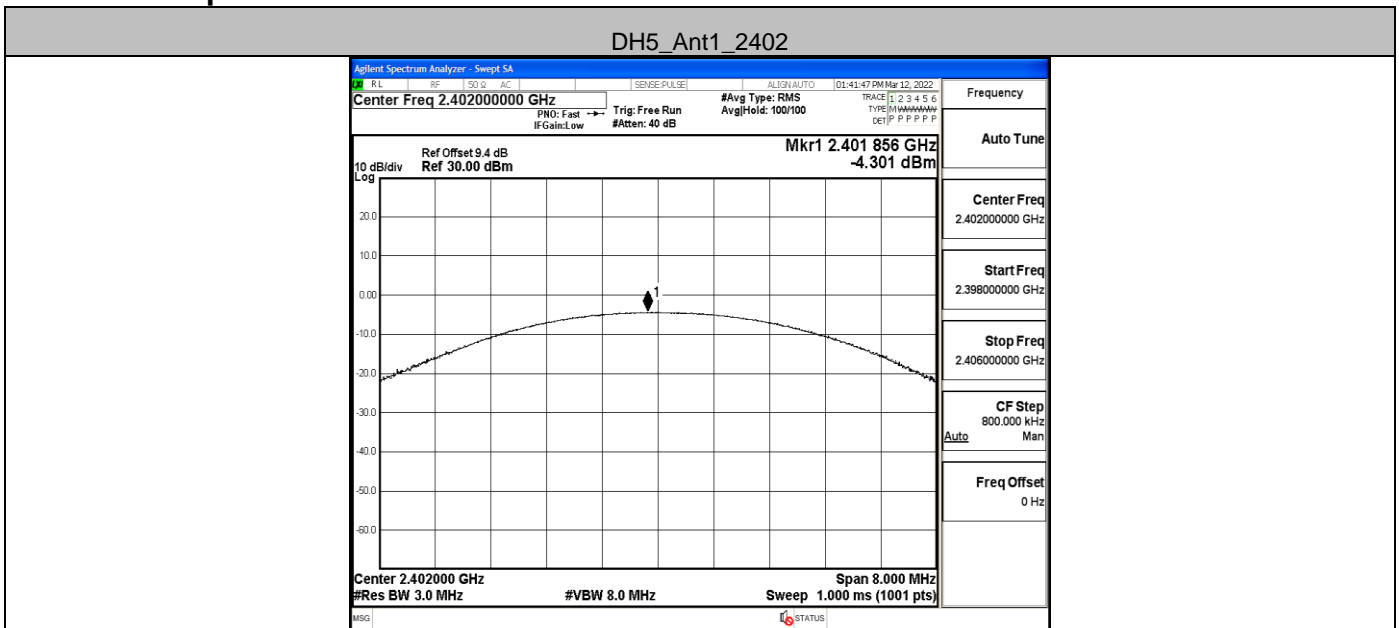
3DH5\_Ant1\_Hop



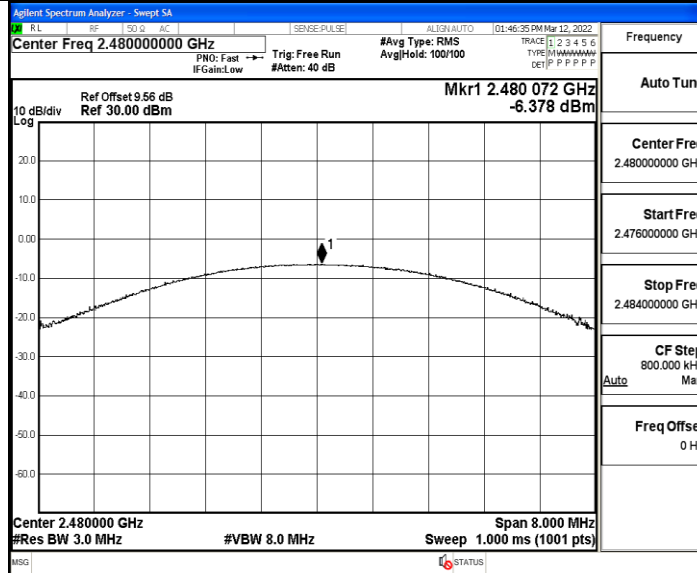
### A.5 Conducted Peak Output Power

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
DH5	Ant1	2402	-4.3	≤30	PASS
		2441	-5.33	≤30	PASS
		2480	-6.38	≤30	PASS
2DH5	Ant1	2402	-3.56	≤20.97	PASS
		2441	-4.75	≤20.97	PASS
		2480	-5.84	≤20.97	PASS
3DH5	Ant1	2402	-2.9	≤20.97	PASS
		2441	-4.12	≤20.97	PASS
		2480	-5.28	≤20.97	PASS

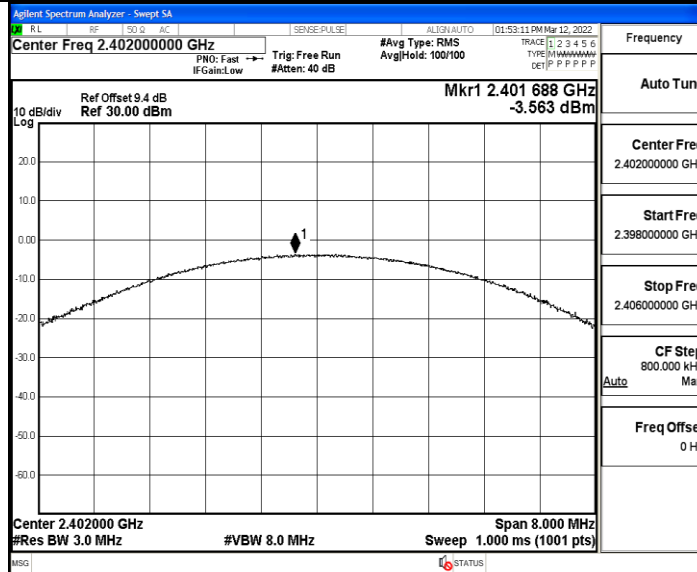
### Test Graph



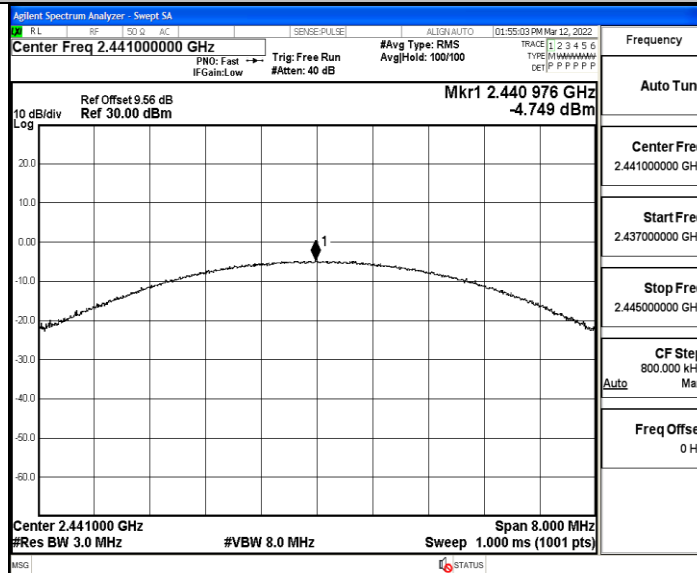
DH5\_Ant1\_2480



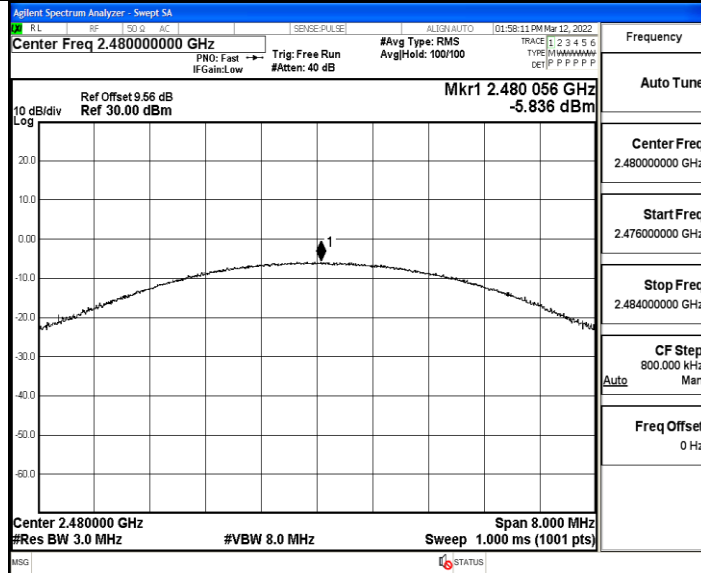
2DH5\_Ant1\_2402



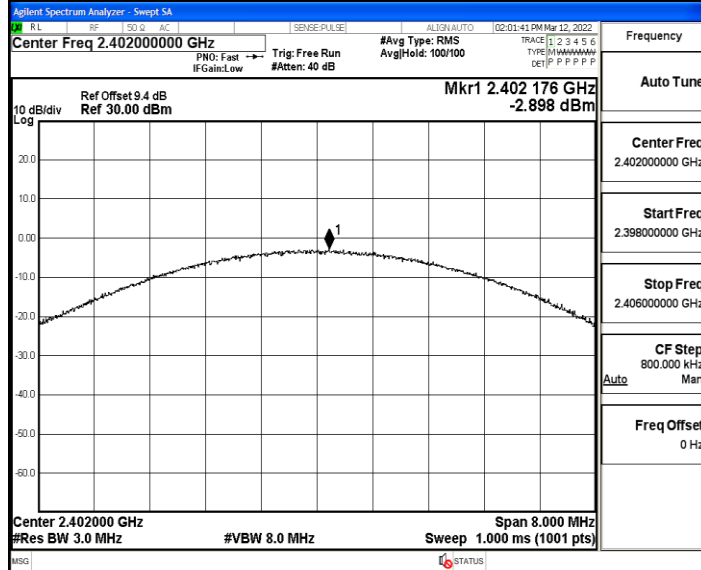
2DH5\_Ant1\_2441



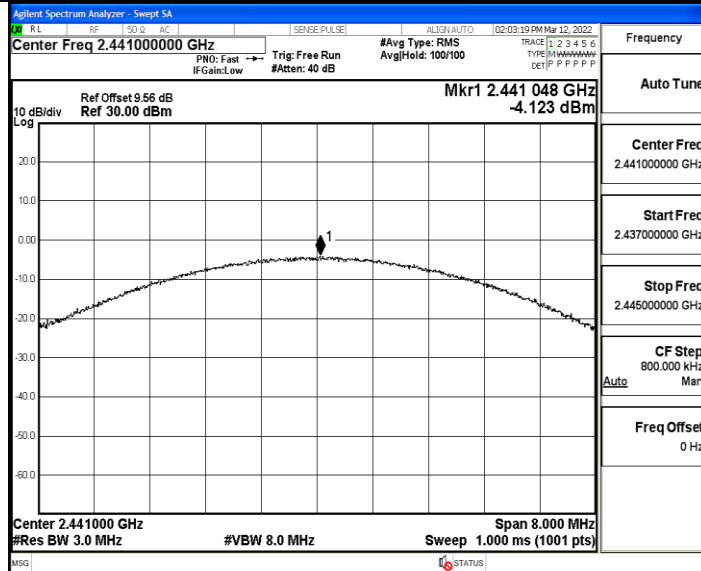
2DH5\_Ant1\_2480



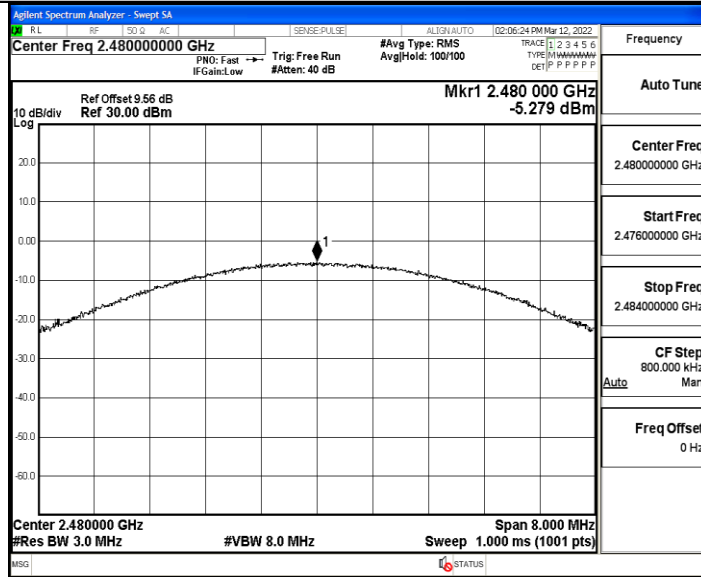
3DH5\_Ant1\_2402



3DH5\_Ant1\_2441



3DH5\_Ant1\_2480



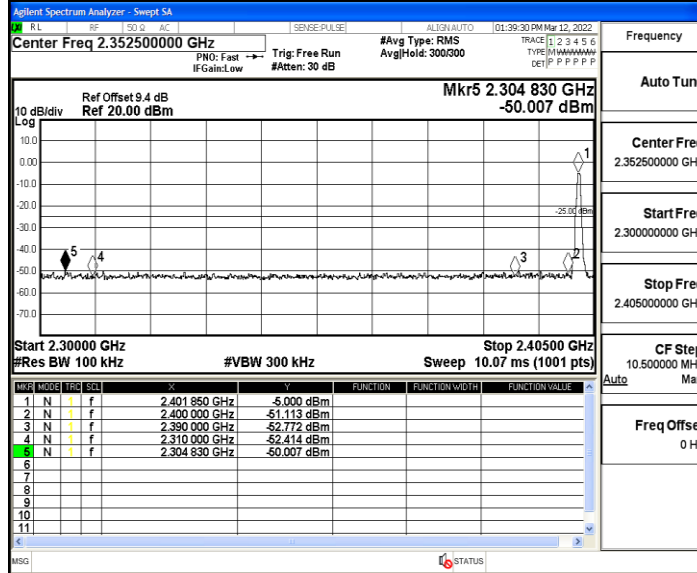


**A.6 Band-edge for RF Conducted Emissions**

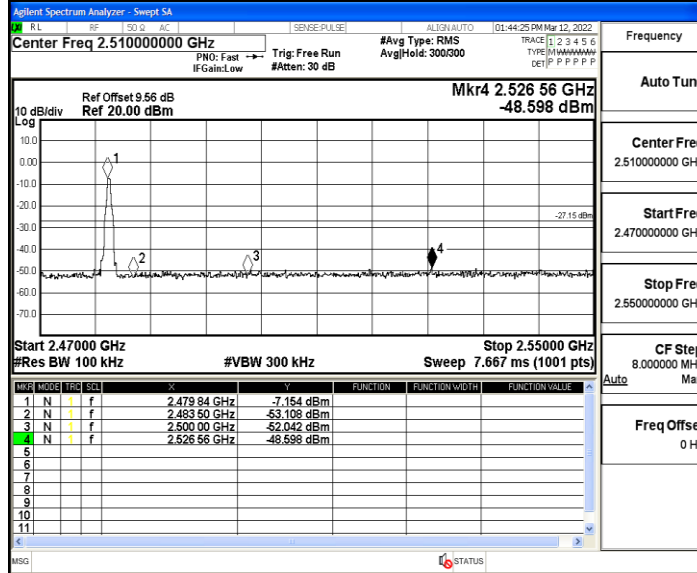
TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-5.00	-50.01	≤-25	PASS
		High	2480	-7.15	-48.6	≤-27.15	PASS
		Low	Hop_2402	-5.58	-49.27	≤-25.58	PASS
		High	Hop_2480	-7.13	-49.3	≤-27.13	PASS
2DH5	Ant1	Low	2402	-5.00	-48.24	≤-25	PASS
		High	2480	-8.08	-48.14	≤-28.08	PASS
		Low	Hop_2402	-6.64	-49.85	≤-26.64	PASS
		High	Hop_2480	-10.70	-48.62	≤-30.7	PASS
3DH5	Ant1	Low	2402	-5.06	-50.11	≤-25.06	PASS
		High	2480	-7.22	-48.33	≤-27.22	PASS
		Low	Hop_2402	-10.08	-50.46	≤-30.08	PASS
		High	Hop_2480	-8.77	-49.31	≤-28.77	PASS

Test Graph

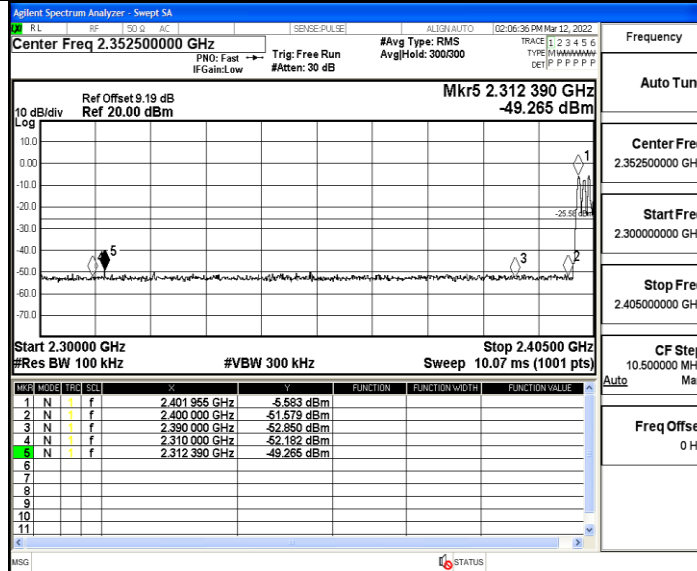
DH5\_Ant1\_Low\_2402



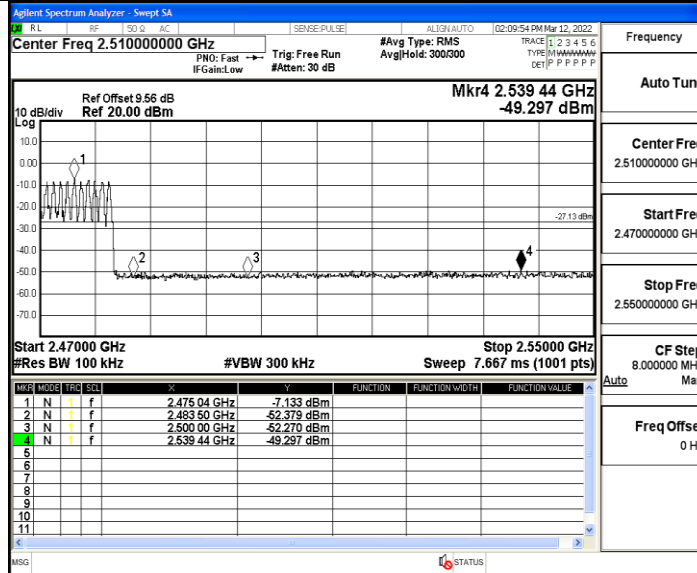
DH5\_Ant1\_High\_2480



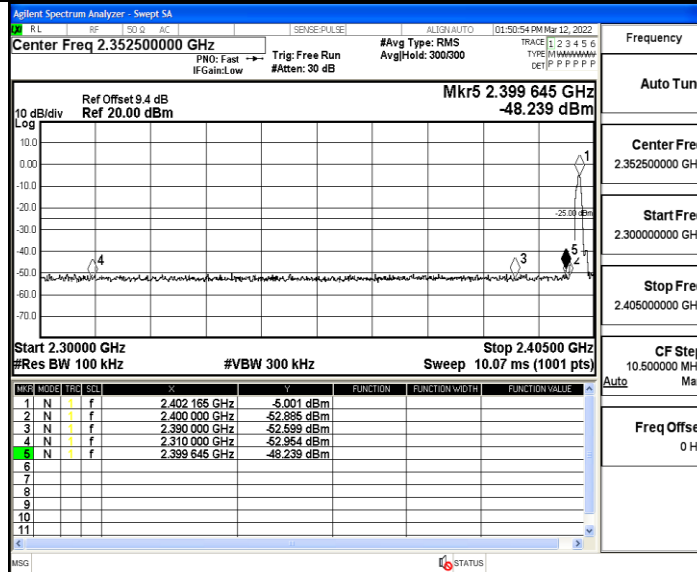
DH5\_Ant1\_Low\_Hop\_2402



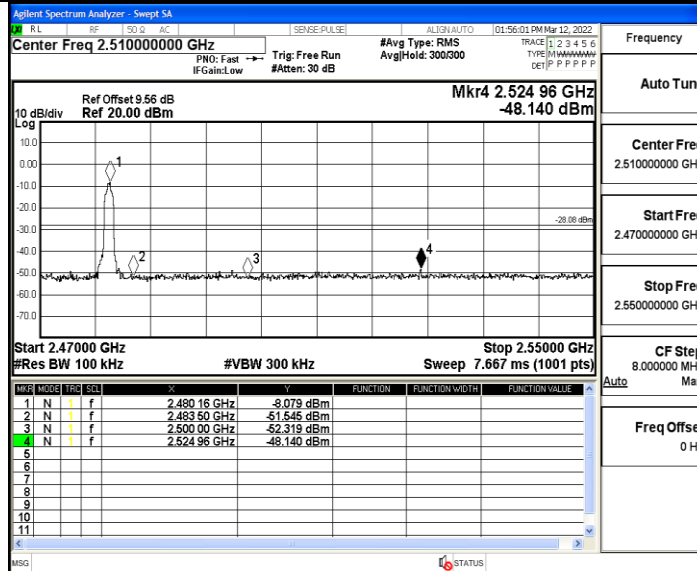
DH5\_Ant1\_High\_Hop\_2480



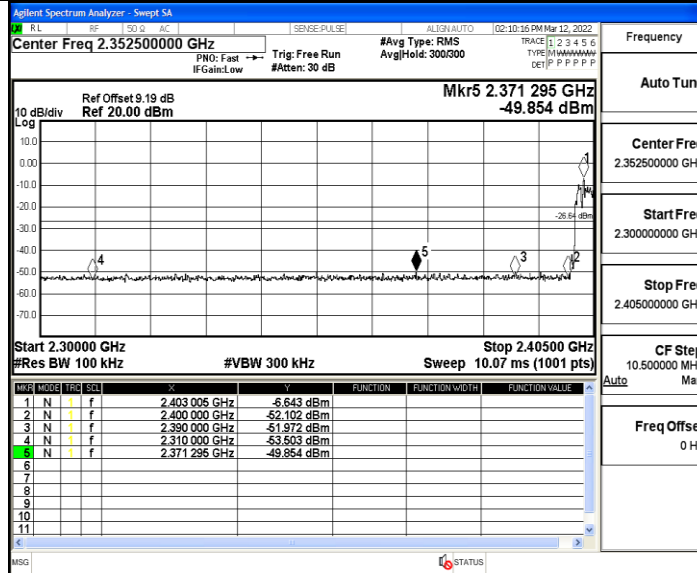
2DH5\_Ant1\_Low\_2402



2DH5\_Ant1\_High\_2480

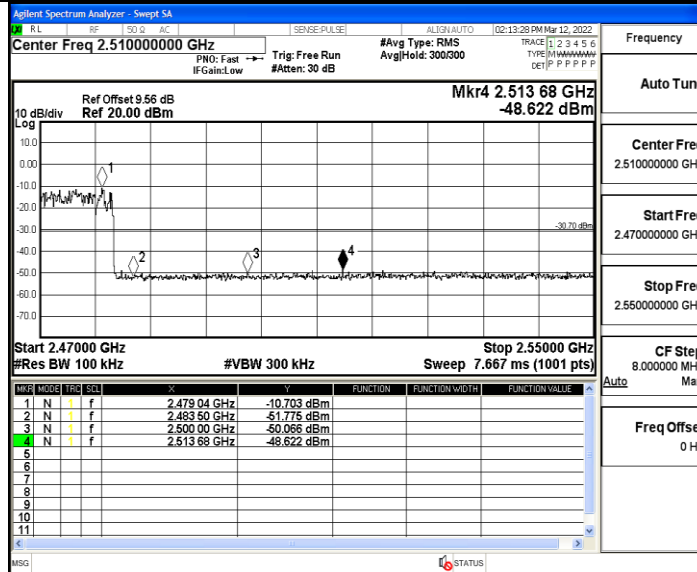


2DH5\_Ant1\_Low\_Hop\_2402



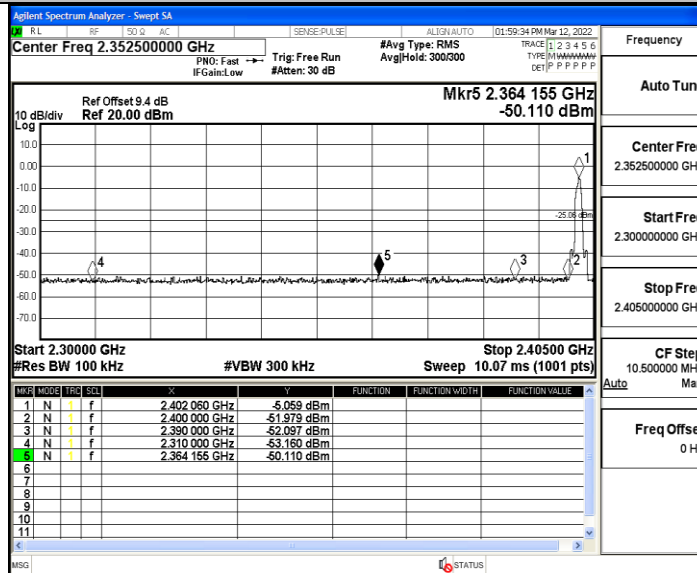
Frequency	
Auto Tune	
Center Freq	2.352500000 GHz
Start Freq	2.300000000 GHz
Stop Freq	2.405000000 GHz
CF Step	10.500000 MHz
Auto	Man
Freq Offset	0 Hz

2DH5\_Ant1\_High\_Hop\_2480



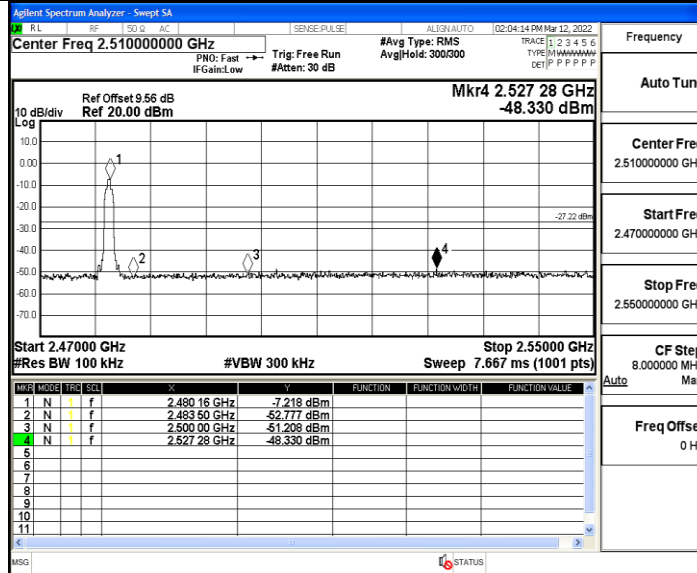
Frequency	
Auto Tune	
Center Freq	2.510000000 GHz
Start Freq	2.470000000 GHz
Stop Freq	2.550000000 GHz
CF Step	8.000000 MHz
Auto	Man
Freq Offset	0 Hz

3DH5\_Ant1\_Low\_2402



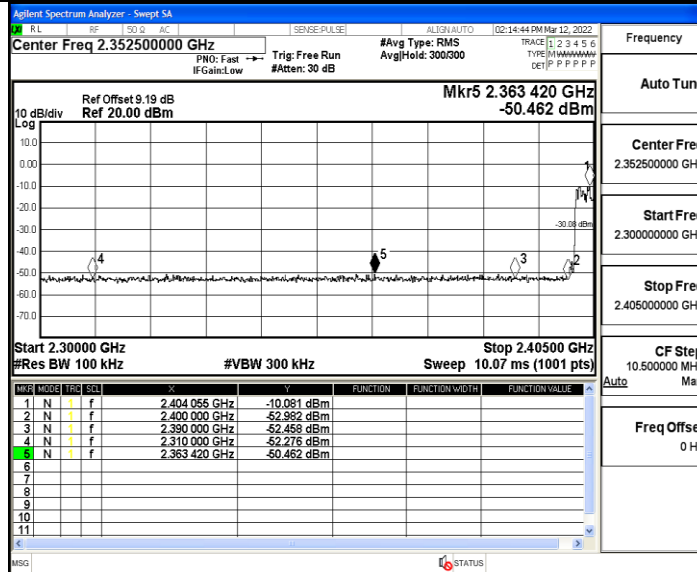
Frequency	
Auto Tune	
Center Freq	2.352500000 GHz
Start Freq	2.300000000 GHz
Stop Freq	2.405000000 GHz
CF Step	10.500000 MHz
Auto	Man
Freq Offset	0 Hz

3DH5\_Ant1\_High\_2480



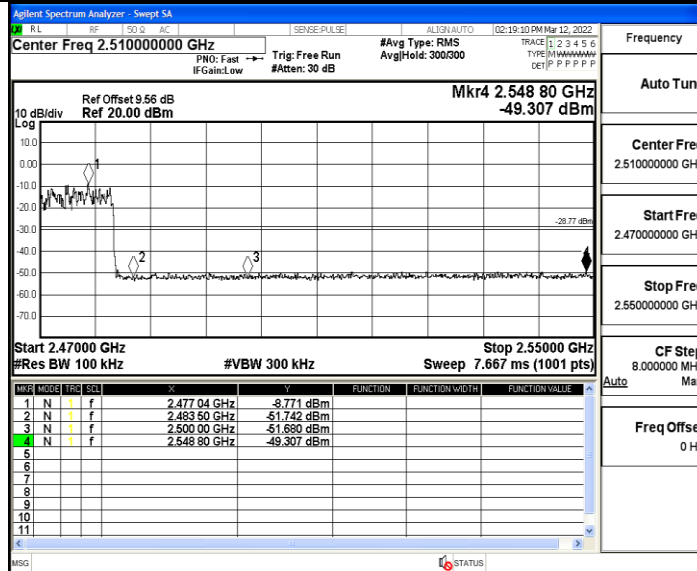
Frequency	Auto Tune
Center Freq	2.510000000 GHz
Start Freq	2.470000000 GHz
Stop Freq	2.550000000 GHz
CF Step	8.000000 MHz
Freq Offset	0 Hz

3DH5\_Ant1\_Low\_Hop\_2402



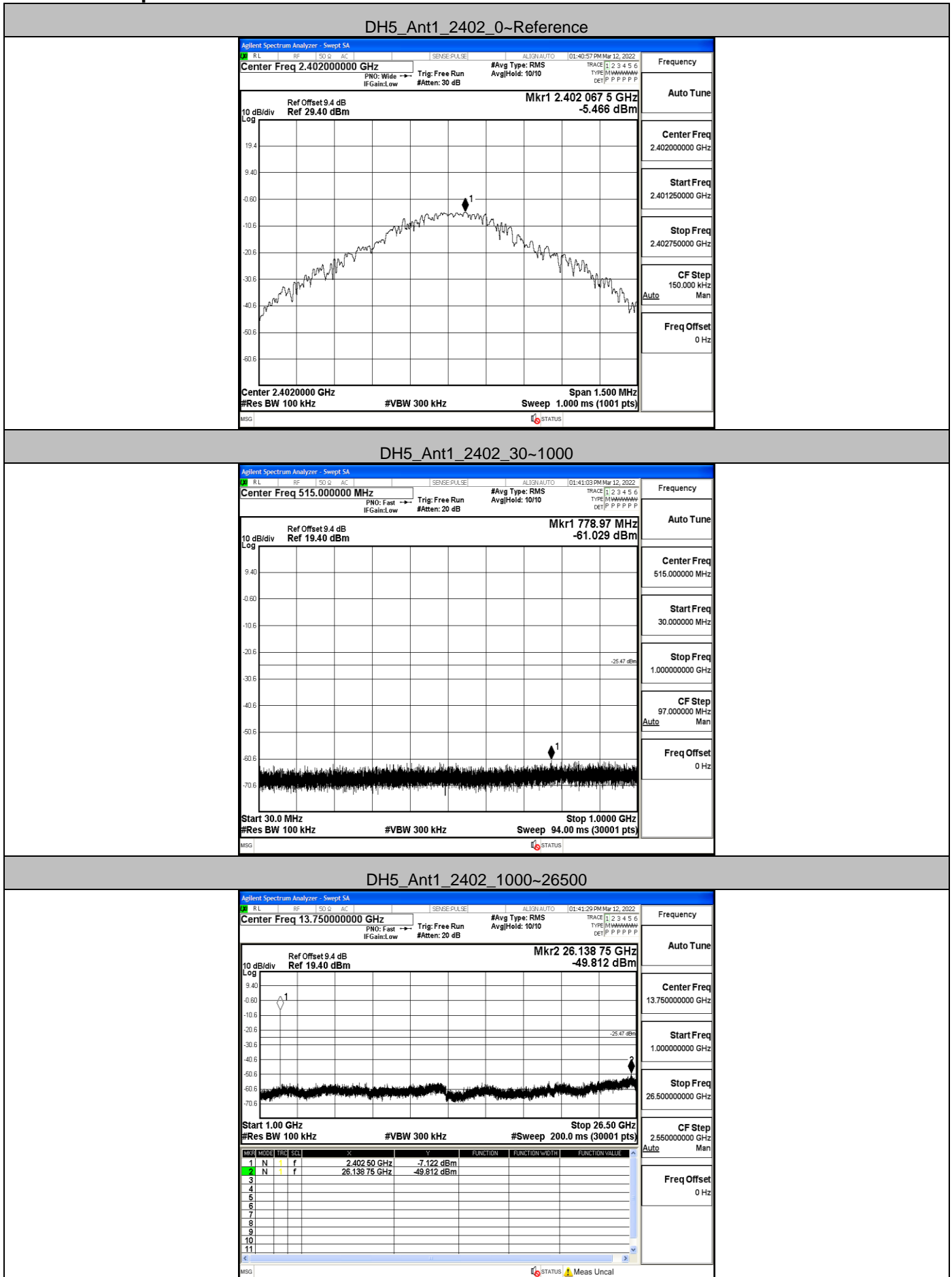
Frequency	Auto Tune
Center Freq	2.352500000 GHz
Start Freq	2.300000000 GHz
Stop Freq	2.405000000 GHz
CF Step	10.500000 MHz
Freq Offset	0 Hz

3DH5\_Ant1\_High\_Hop\_2480

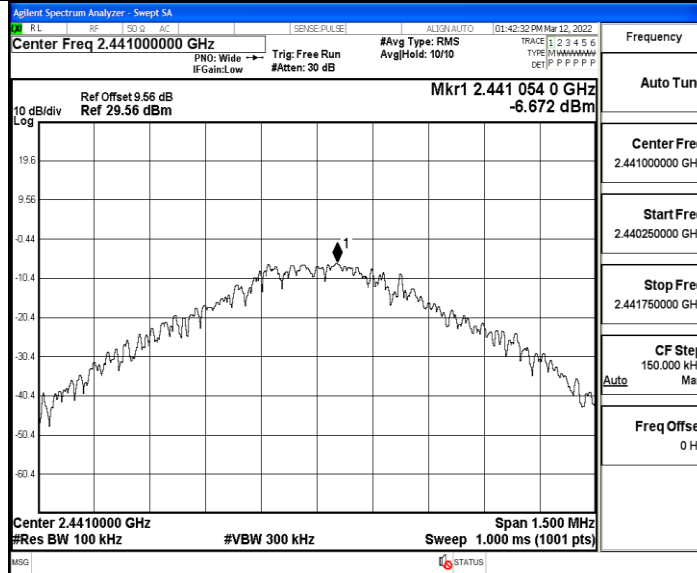


Frequency	Auto Tune
Center Freq	2.510000000 GHz
Start Freq	2.470000000 GHz
Stop Freq	2.550000000 GHz
CF Step	8.000000 MHz
Freq Offset	0 Hz

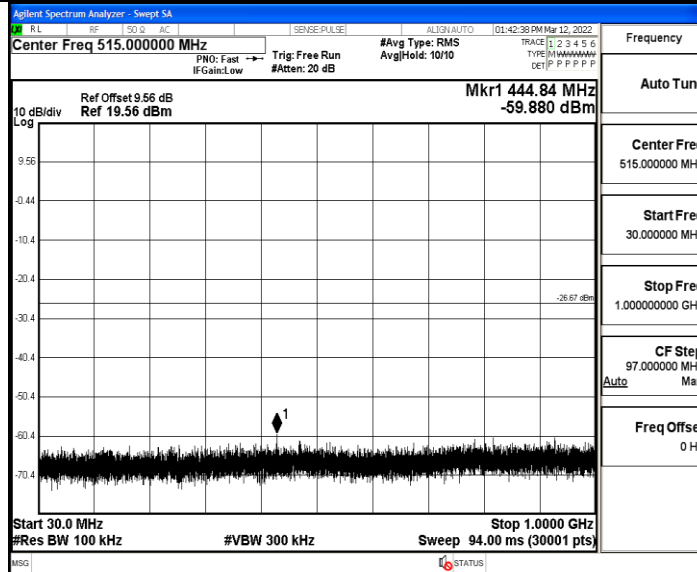
### A.7 RF Conducted Spurious Emissions Test Graph



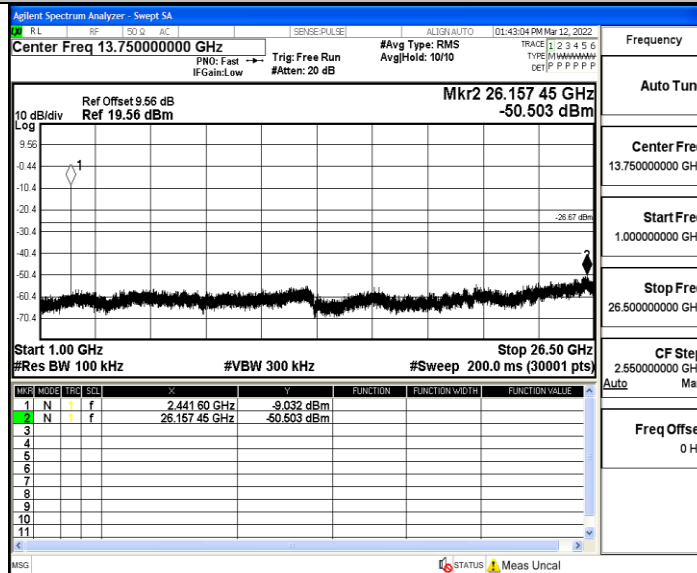
DH5\_Ant1\_2441\_0~Reference



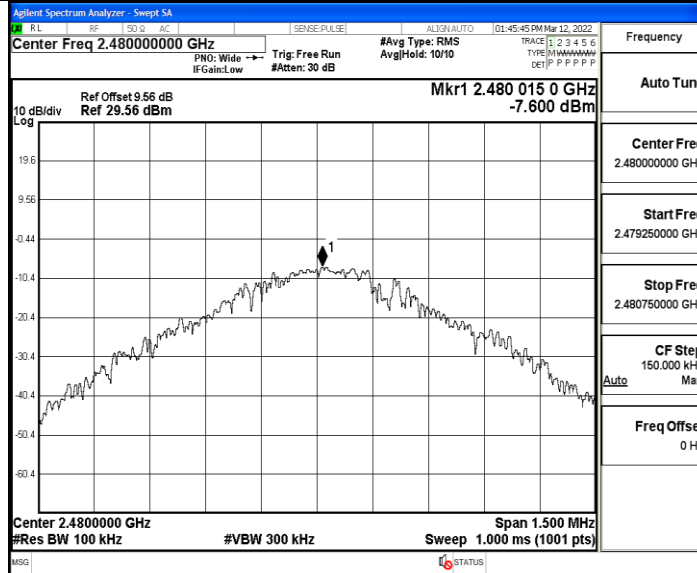
DH5\_Ant1\_2441\_30~1000



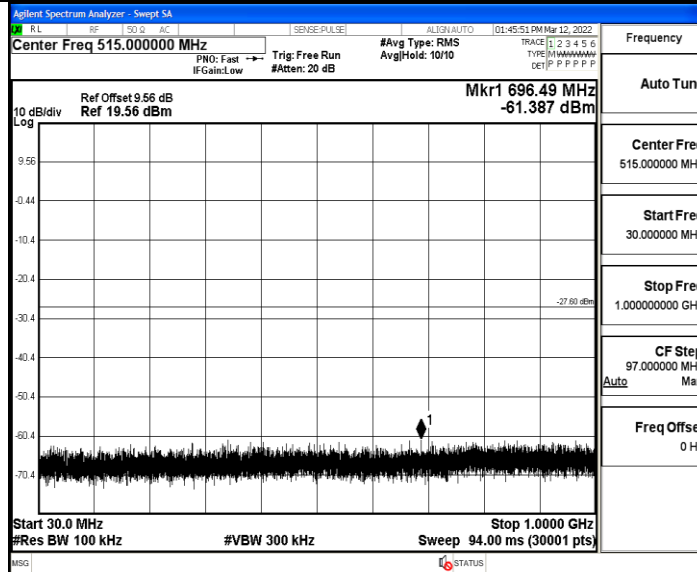
DH5\_Ant1\_2441\_1000~26500



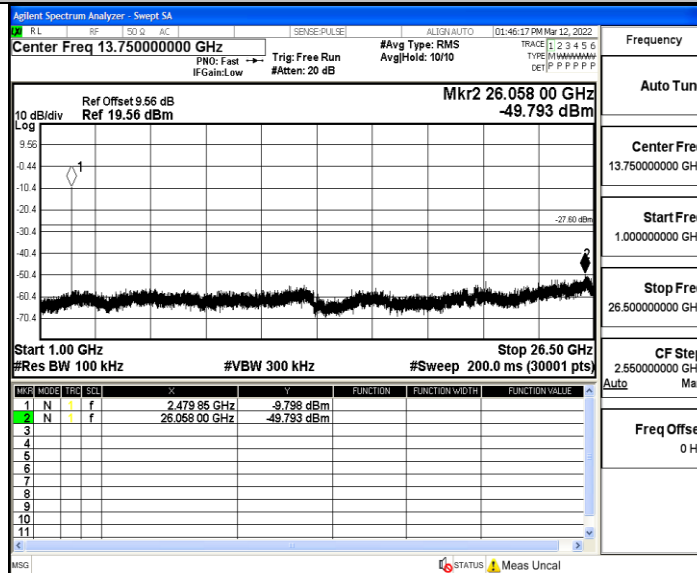
DH5\_Ant1\_2480\_0~Reference



DH5\_Ant1\_2480\_30~1000

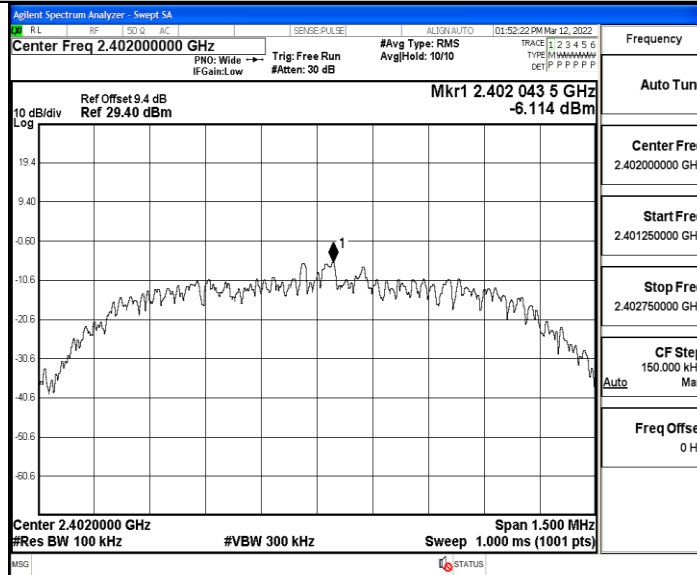


DH5\_Ant1\_2480\_1000~26500

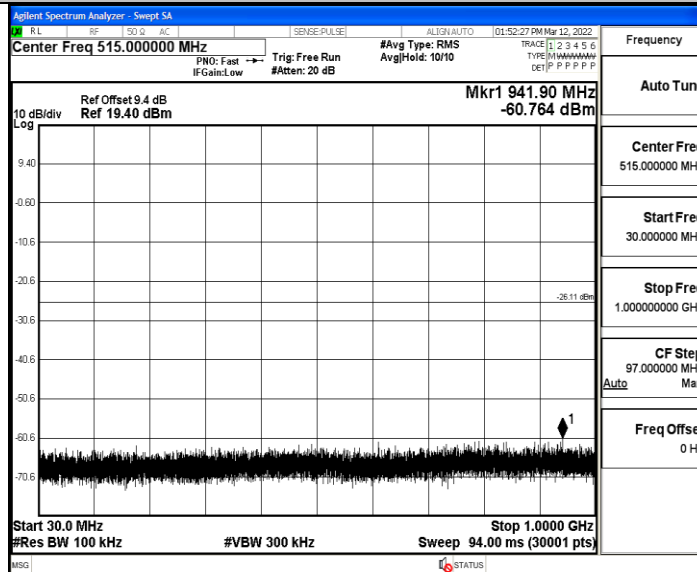




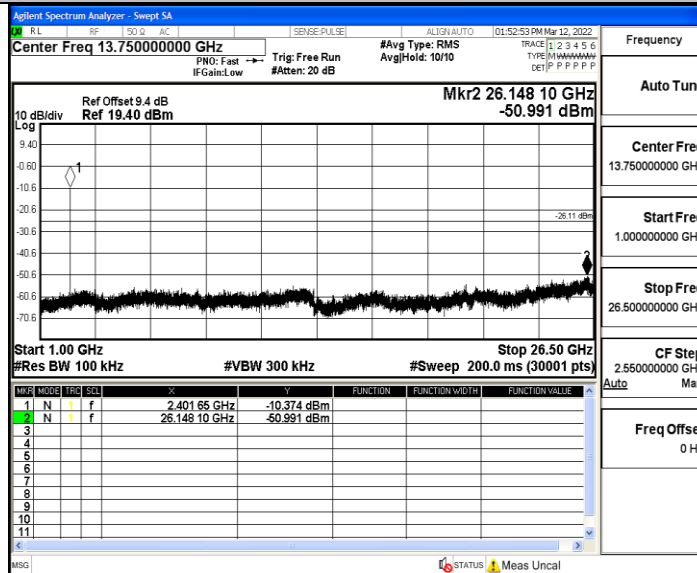
2DH5\_Ant1\_2402\_0~Reference



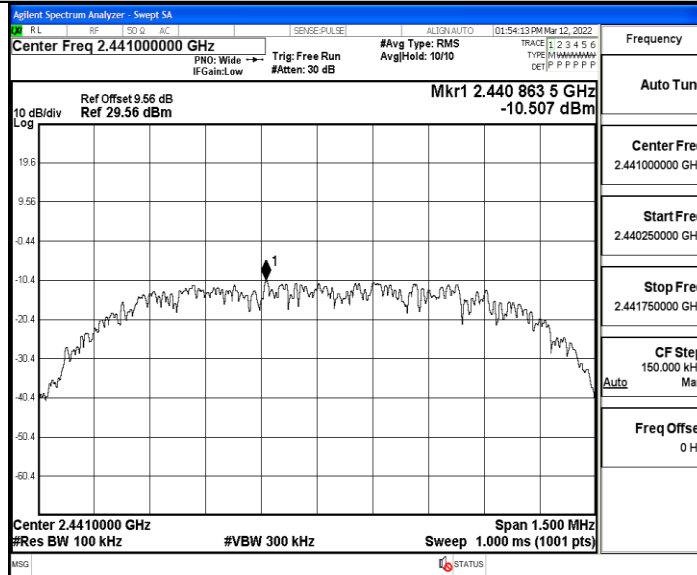
2DH5\_Ant1\_2402\_30~1000



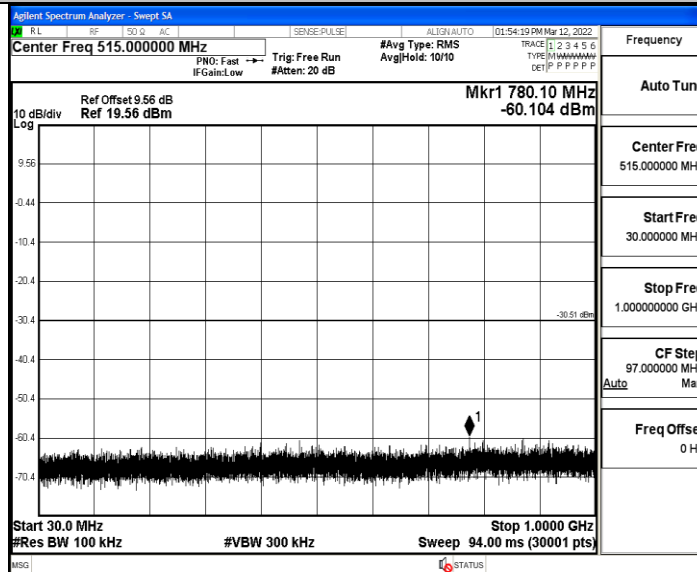
2DH5\_Ant1\_2402\_1000~26500



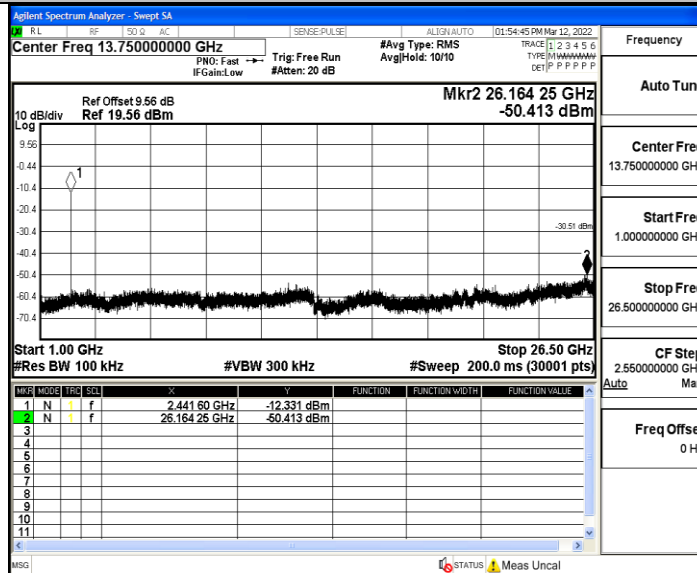
2DH5\_Ant1\_2441\_0~Reference



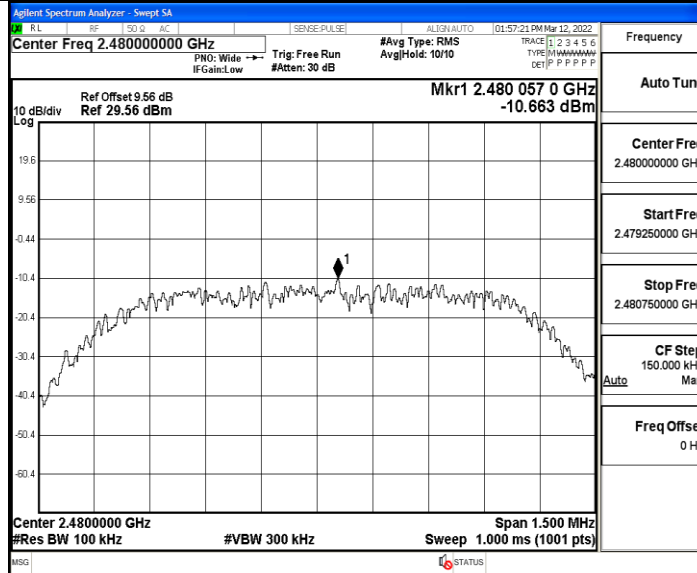
2DH5\_Ant1\_2441\_30~1000



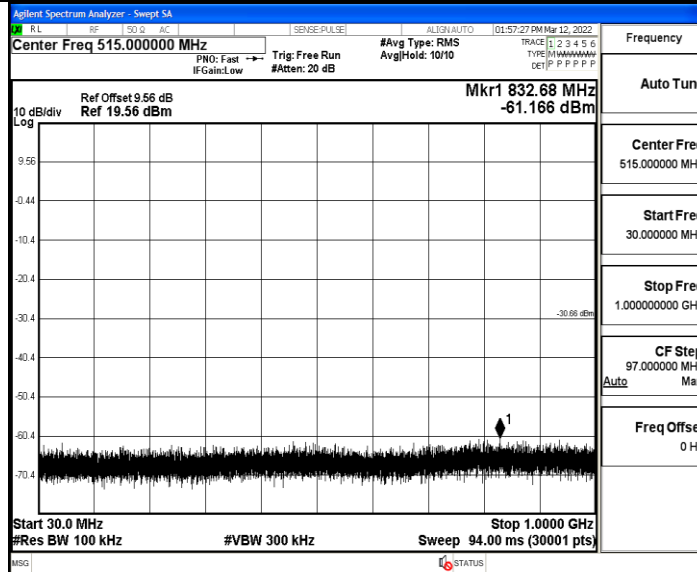
2DH5\_Ant1\_2441\_1000~26500



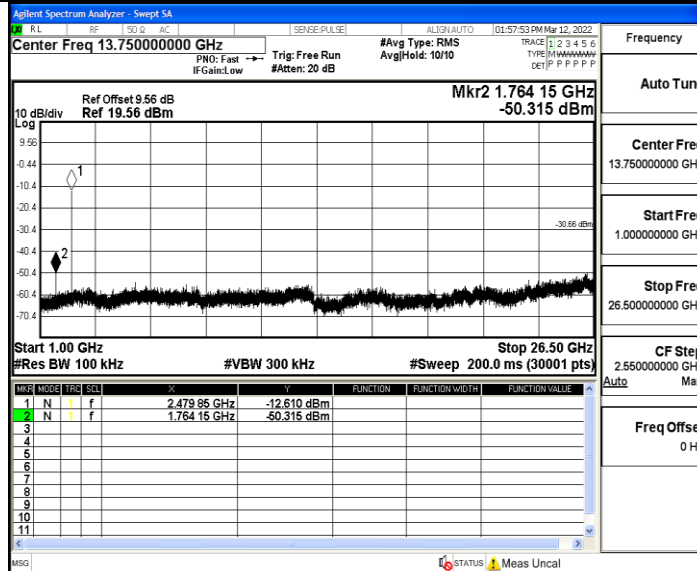
2DH5\_Ant1\_2480\_0~Reference



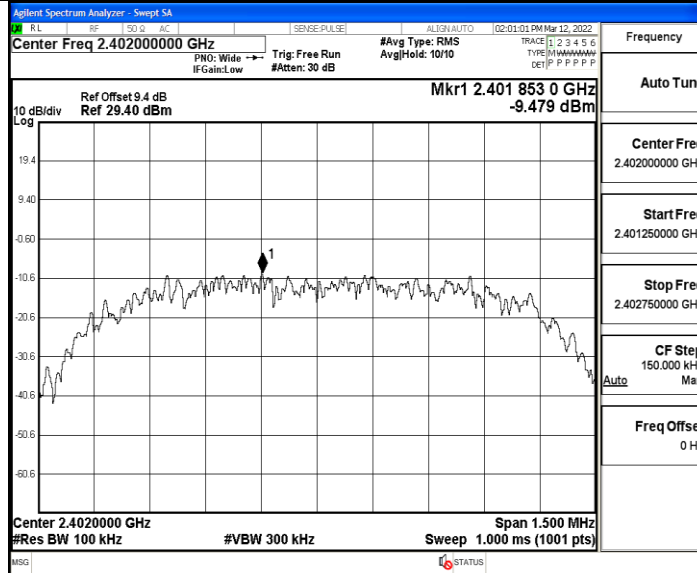
2DH5\_Ant1\_2480\_30~1000



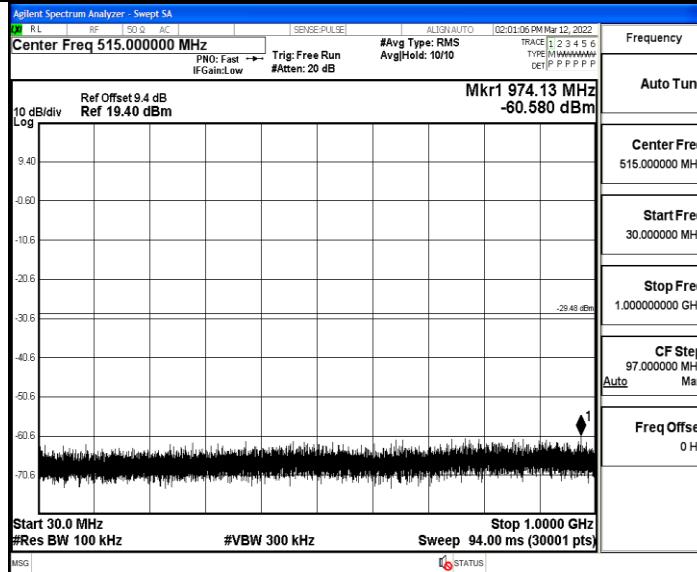
2DH5\_Ant1\_2480\_1000~26500



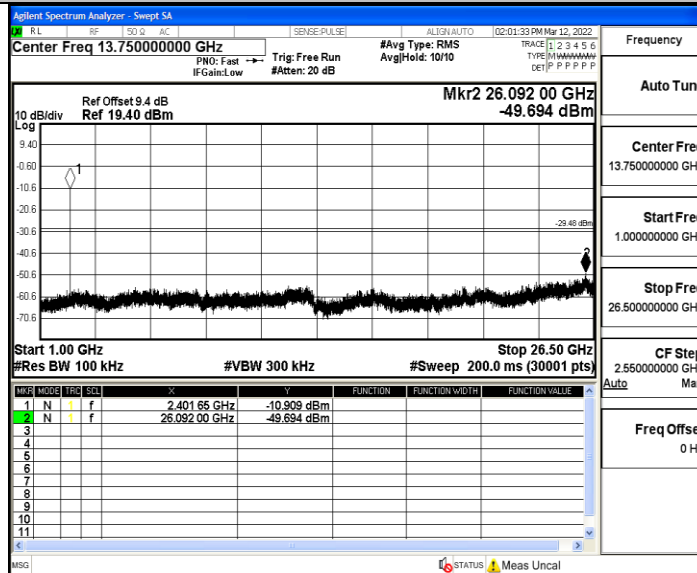
3DH5\_Ant1\_2402\_0~Reference



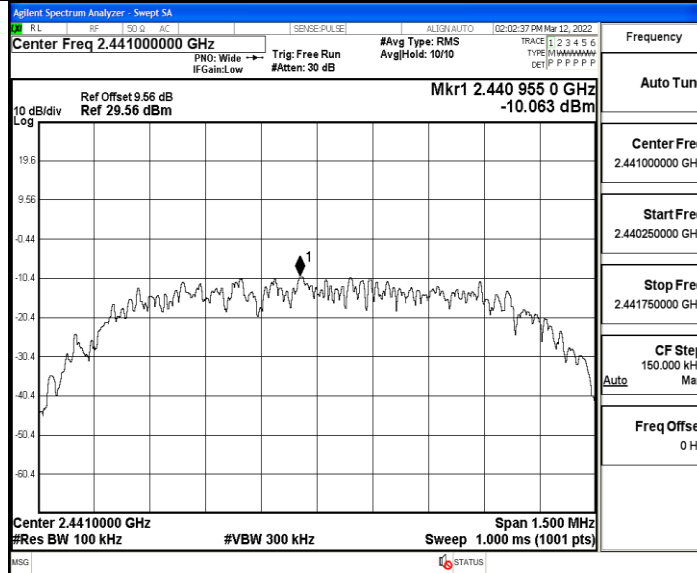
3DH5\_Ant1\_2402\_30~1000



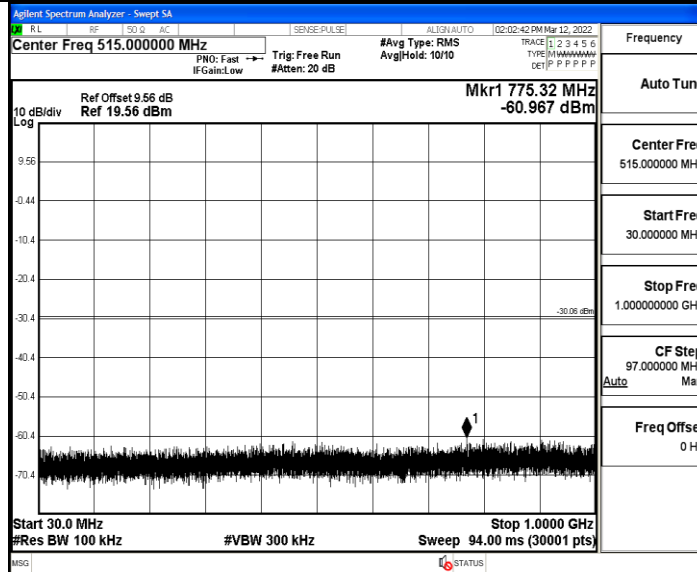
3DH5\_Ant1\_2402\_1000~26500



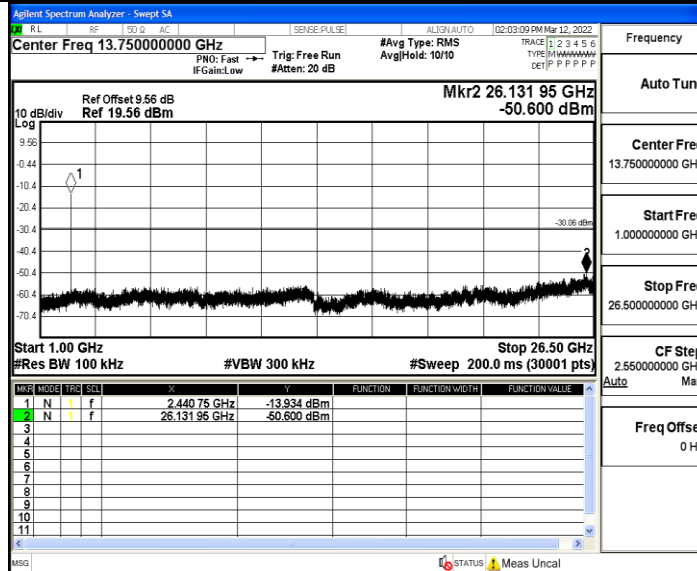
3DH5\_Ant1\_2441\_0~Reference



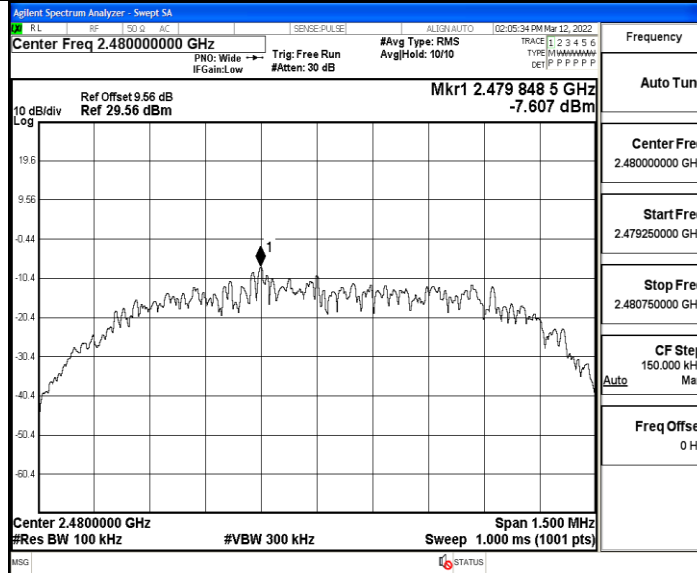
3DH5\_Ant1\_2441\_30~1000



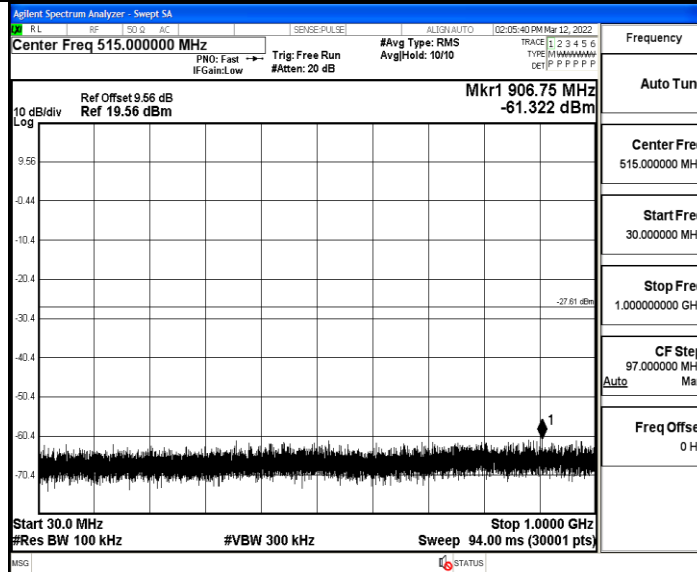
3DH5\_Ant1\_2441\_1000~26500



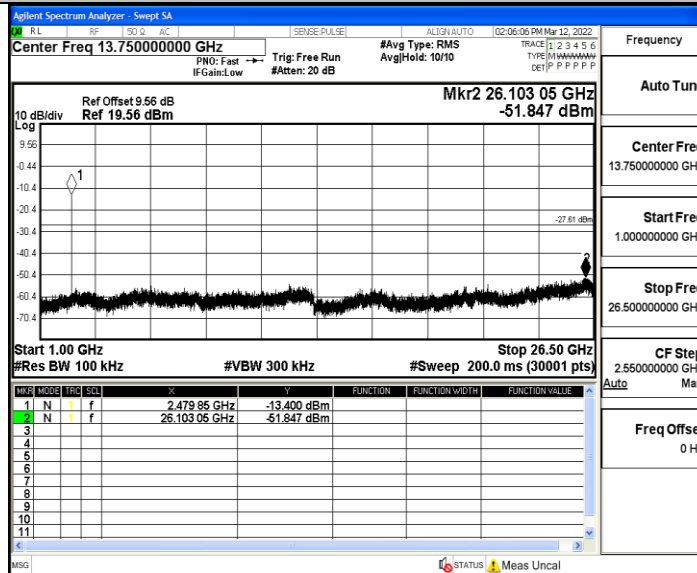
3DH5\_Ant1\_2480\_0~Reference



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	-49.04	≤-41.20	PASS
				AV	2387.045	-48.57	≤-41.20	PASS
				AV	2390.000	-48.73	≤-41.20	PASS
				Peak	2310.000	-41.75	≤-21.20	PASS
				Peak	2358.065	-38.07	≤-21.20	PASS
				Peak	2390.000	-40.61	≤-21.20	PASS
		High	2480	AV	2483.500	-48.28	≤-41.20	PASS
				AV	2497.920	-47.95	≤-41.20	PASS
				AV	2500.000	-47.94	≤-41.20	PASS
				Peak	2483.500	-41.7	≤-21.20	PASS
				Peak	2486.400	-38.51	≤-21.20	PASS
				Peak	2500.000	-40.97	≤-21.20	PASS
2DH5	Ant1	Low	2402	AV	2310.000	-49.02	≤-41.20	PASS
				AV	2386.520	-48.58	≤-41.20	PASS
				AV	2390.000	-48.71	≤-41.20	PASS
				Peak	2310.000	-43.28	≤-21.20	PASS
				Peak	2374.550	-38.69	≤-21.20	PASS
				Peak	2390.000	-41.15	≤-21.20	PASS
		High	2480	AV	2483.500	-48.29	≤-41.20	PASS
				AV	2499.760	-47.95	≤-41.20	PASS
				AV	2500.000	-48.04	≤-41.20	PASS
				Peak	2483.500	-41.52	≤-21.20	PASS
				Peak	2491.680	-38.36	≤-21.20	PASS
				Peak	2500.000	-39.77	≤-21.20	PASS
3DH5	Ant1	Low	2402	AV	2310.000	-49.08	≤-41.20	PASS
				AV	2387.780	-48.63	≤-41.20	PASS
				AV	2390.000	-48.77	≤-41.20	PASS
				Peak	2310.000	-42.15	≤-21.20	PASS
				Peak	2311.550	-38.98	≤-21.20	PASS
				Peak	2390.000	-41.84	≤-21.20	PASS
		High	2480	AV	2483.500	-48.17	≤-41.20	PASS
				AV	2499.120	-48	≤-41.20	PASS
				AV	2500.000	-48.06	≤-41.20	PASS
				Peak	2483.500	-42.52	≤-21.20	PASS
				Peak	2491.040	-38.16	≤-21.20	PASS
				Peak	2500.000	-40.61	≤-21.20	PASS

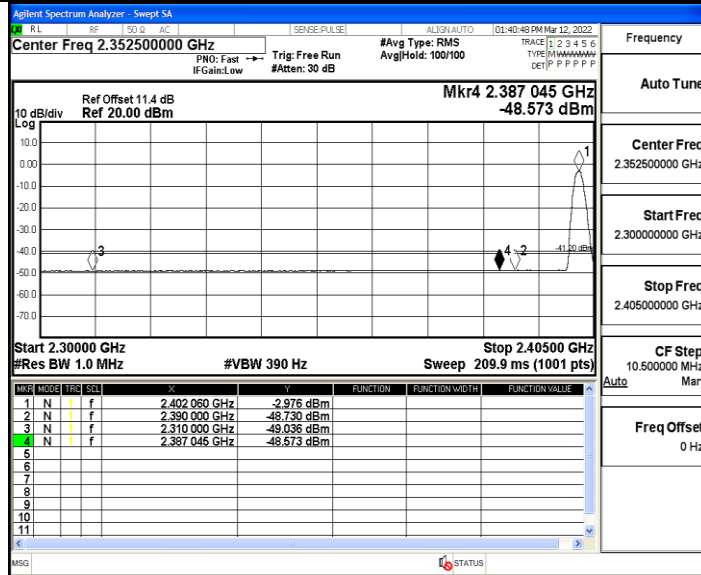
1. The Antenna Gain is compensated in the graph with 2dBi and Antenna Gain which is Higher.

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.

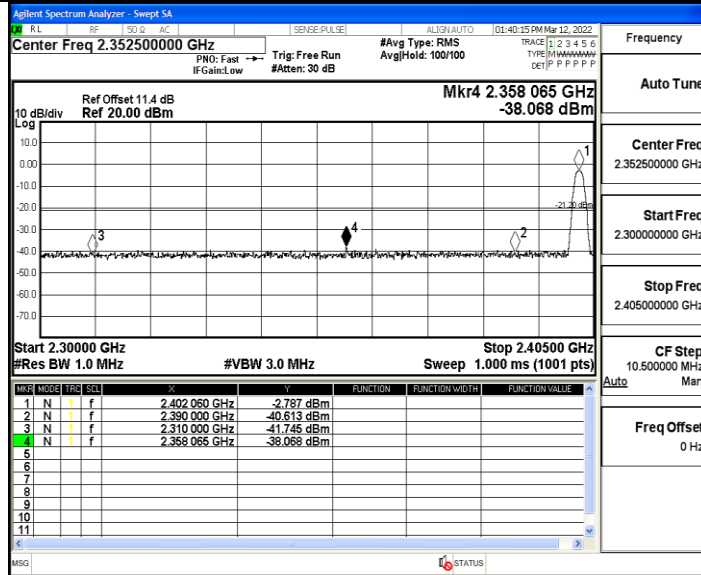


Test Graphs

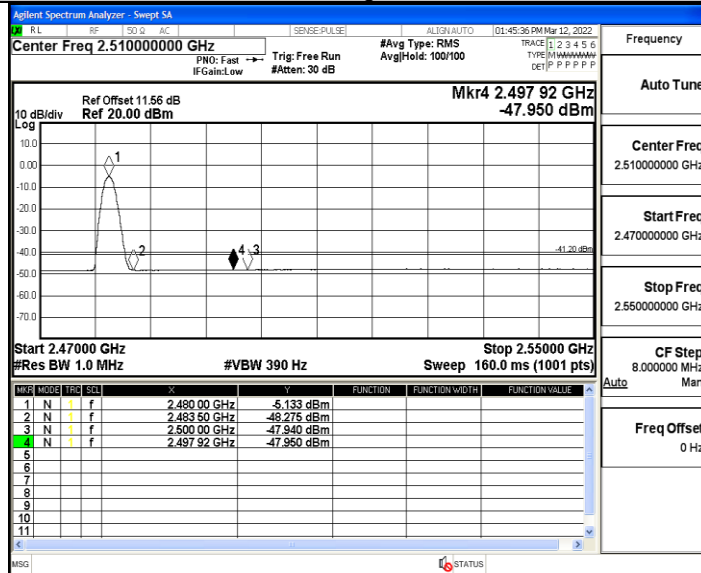
DH5\_Ant1\_Low\_2402\_AV



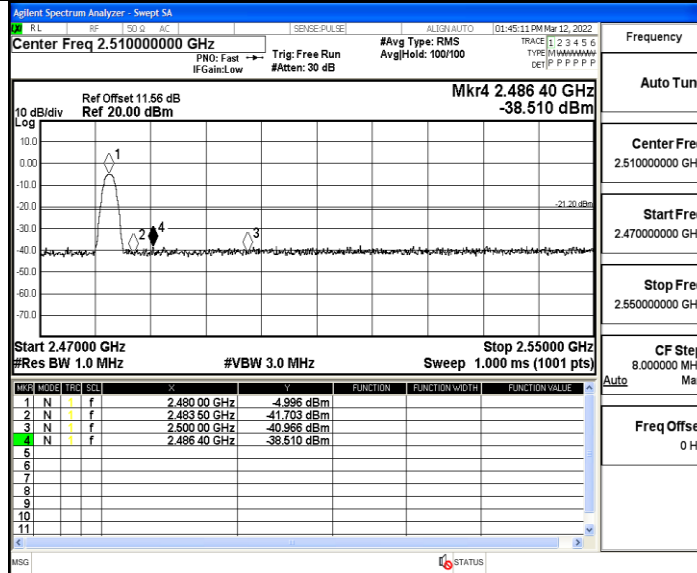
DH5\_Ant1\_Low\_2402\_Peak



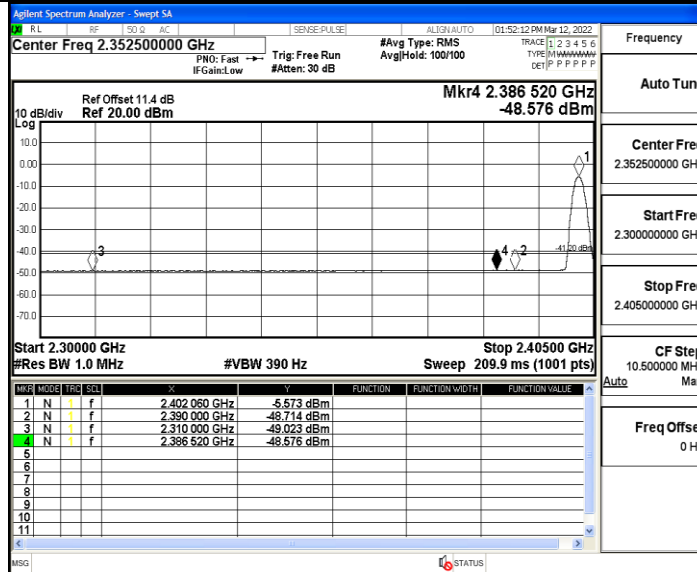
DH5\_Ant1\_High\_2480\_AV



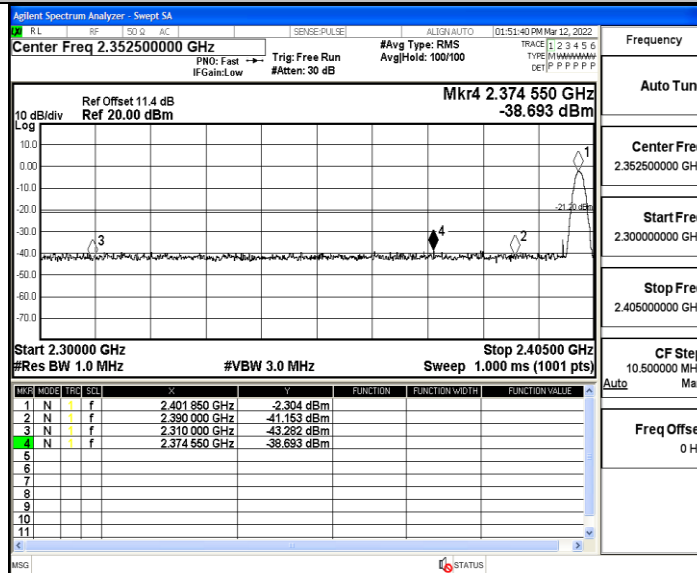
DH5\_Ant1\_High\_2480\_Peak



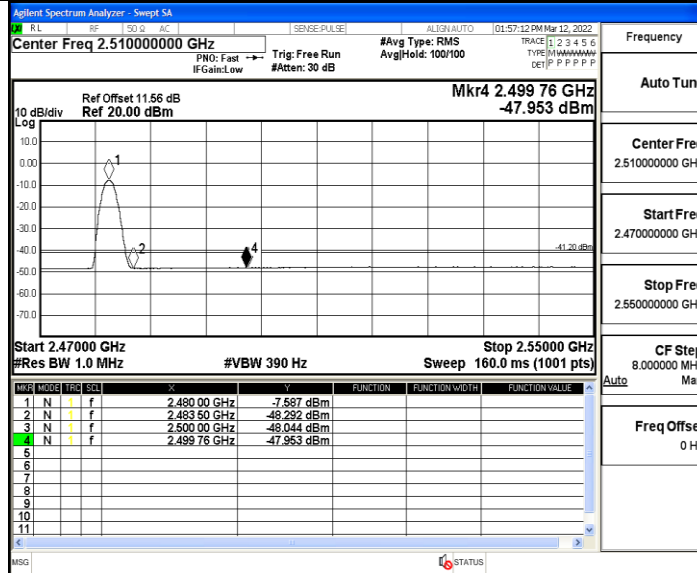
2DH5\_Ant1\_Low\_2402\_AV



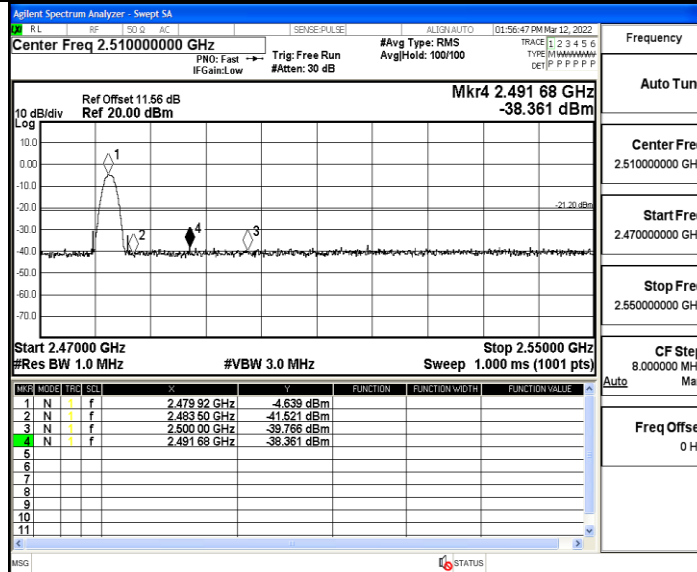
2DH5\_Ant1\_Low\_2402\_Peak



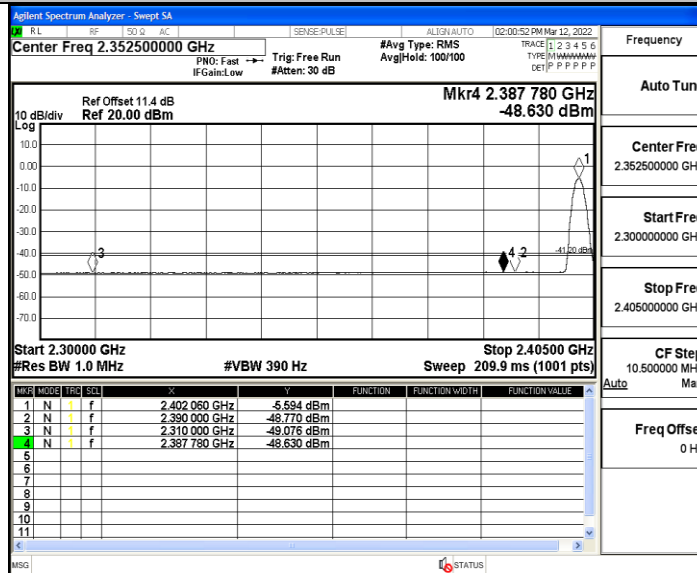
2DH5\_Ant1\_High\_2480\_AV



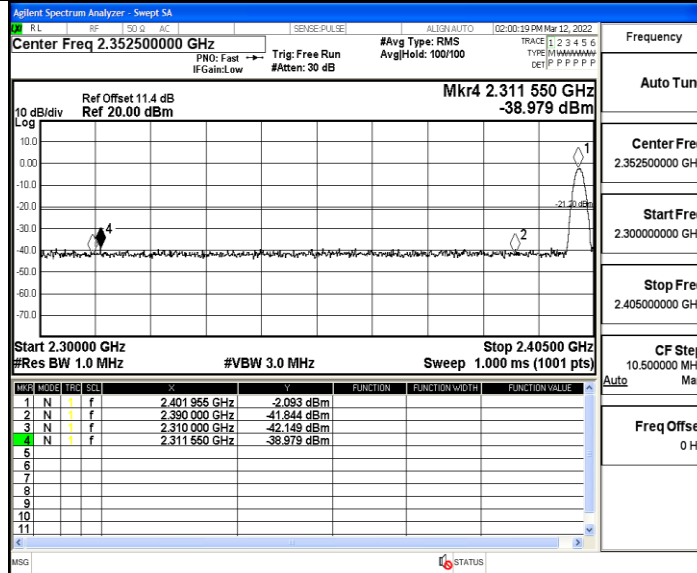
2DH5\_Ant1\_High\_2480\_Peak



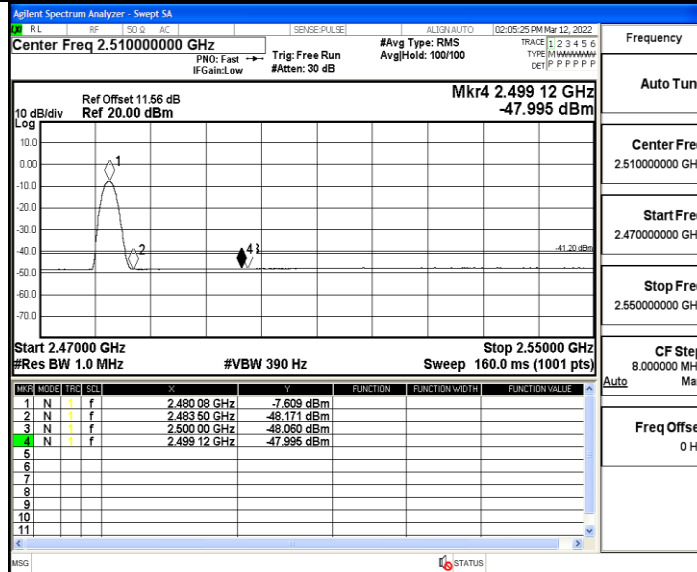
3DH5\_Ant1\_Low\_2402\_AV



3DH5\_Ant1\_Low\_2402\_Peak



3DH5\_Ant1\_High\_2480\_AV



3DH5\_Ant1\_High\_2480\_Peak

