



## Appendix A

### RF Test Data for BT (Conducted Measurement)

Product Name: Magnetic Bluetooth headphone amplifier

Test Model: Tea

#### Environmental Conditions

Temperature:	21.1° C
Relative Humidity:	52.2%
ATM Pressure:	100.0 kPa
Test Engineer:	
Supervised by:	



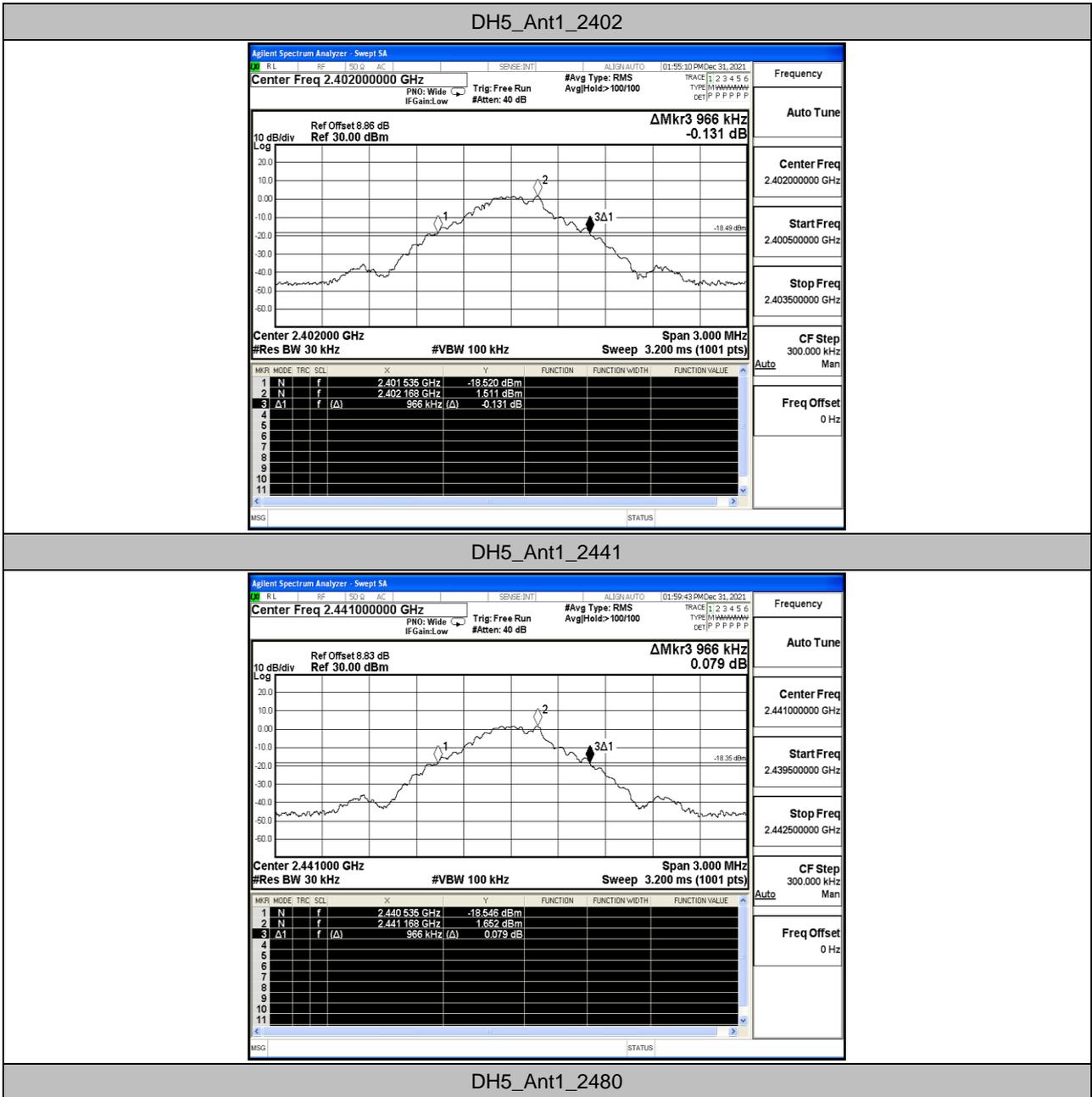
## A.1 20dB Emission Bandwidth

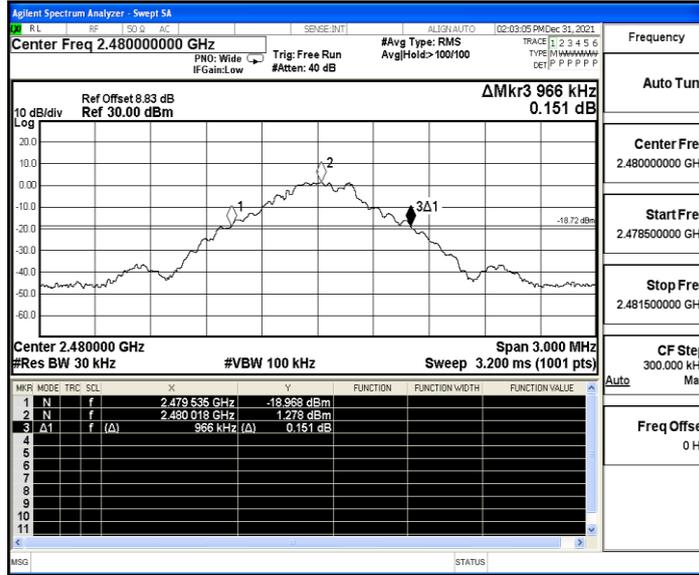
### Test Result

TestMode	Antenna	Channel	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.966	2401.535	2402.501	---	PASS
		2441	0.966	2440.535	2441.501	---	PASS
		2480	0.966	2479.535	2480.501	---	PASS
2DH5	Ant1	2402	1.359	2401.328	2402.687	---	PASS
		2441	1.356	2440.328	2441.684	---	PASS
		2480	1.350	2479.331	2480.681	---	PASS
3DH5	Ant1	2402	1.314	2401.355	2402.669	---	PASS
		2441	1.317	2440.352	2441.669	---	PASS
		2480	1.314	2479.355	2480.669	---	PASS

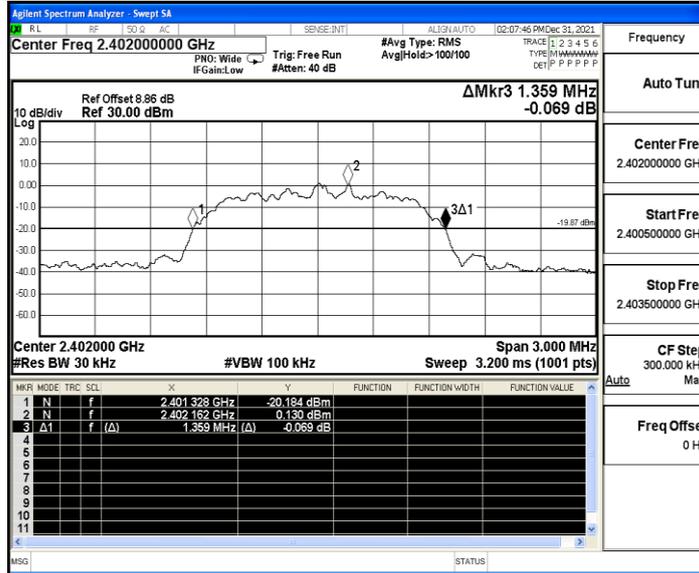


### Test Graphs

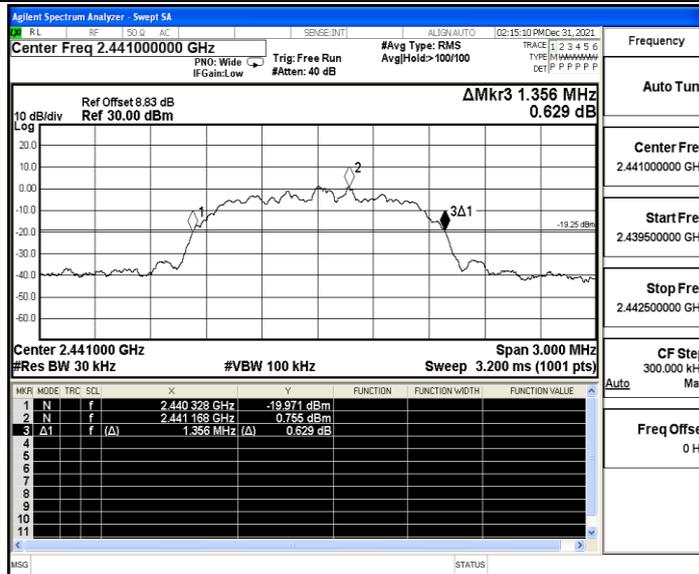




2DH5\_Ant1\_2402

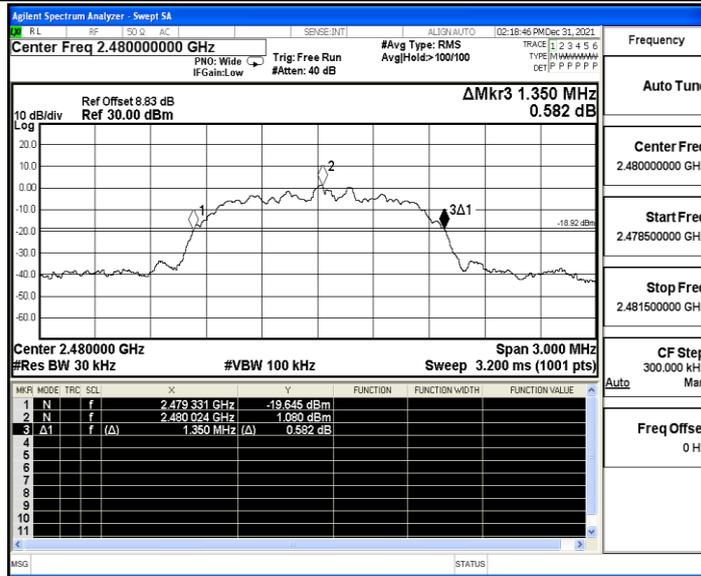


2DH5\_Ant1\_2441

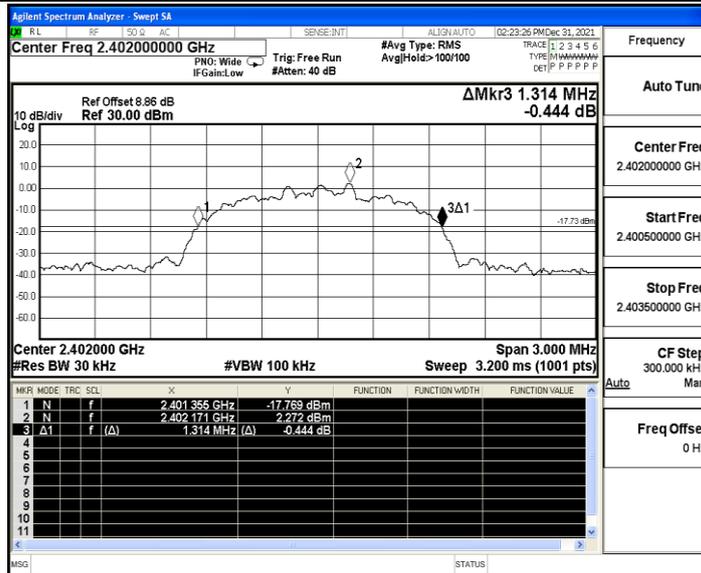




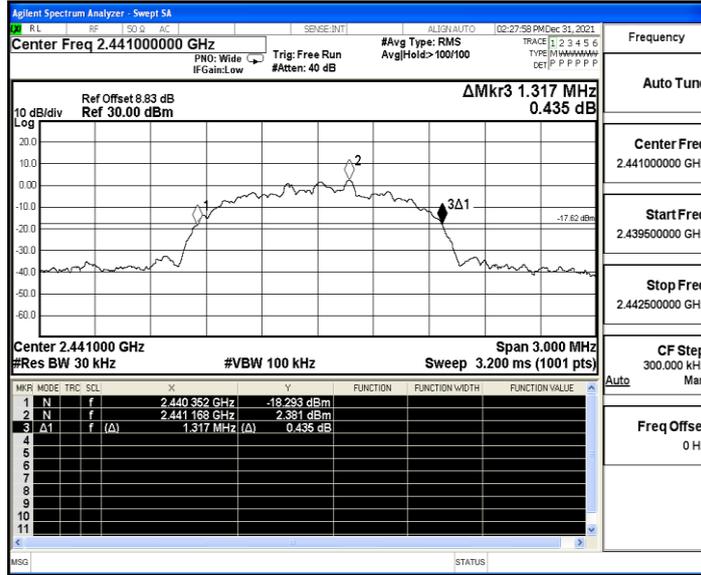
### 2DH5\_Ant1\_2480



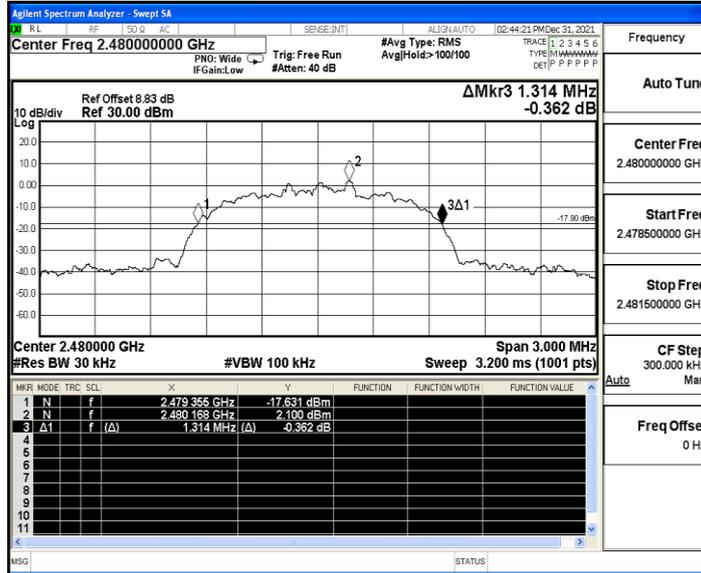
### 3DH5\_Ant1\_2402



### 3DH5\_Ant1\_2441



3DH5\_Ant1\_2480





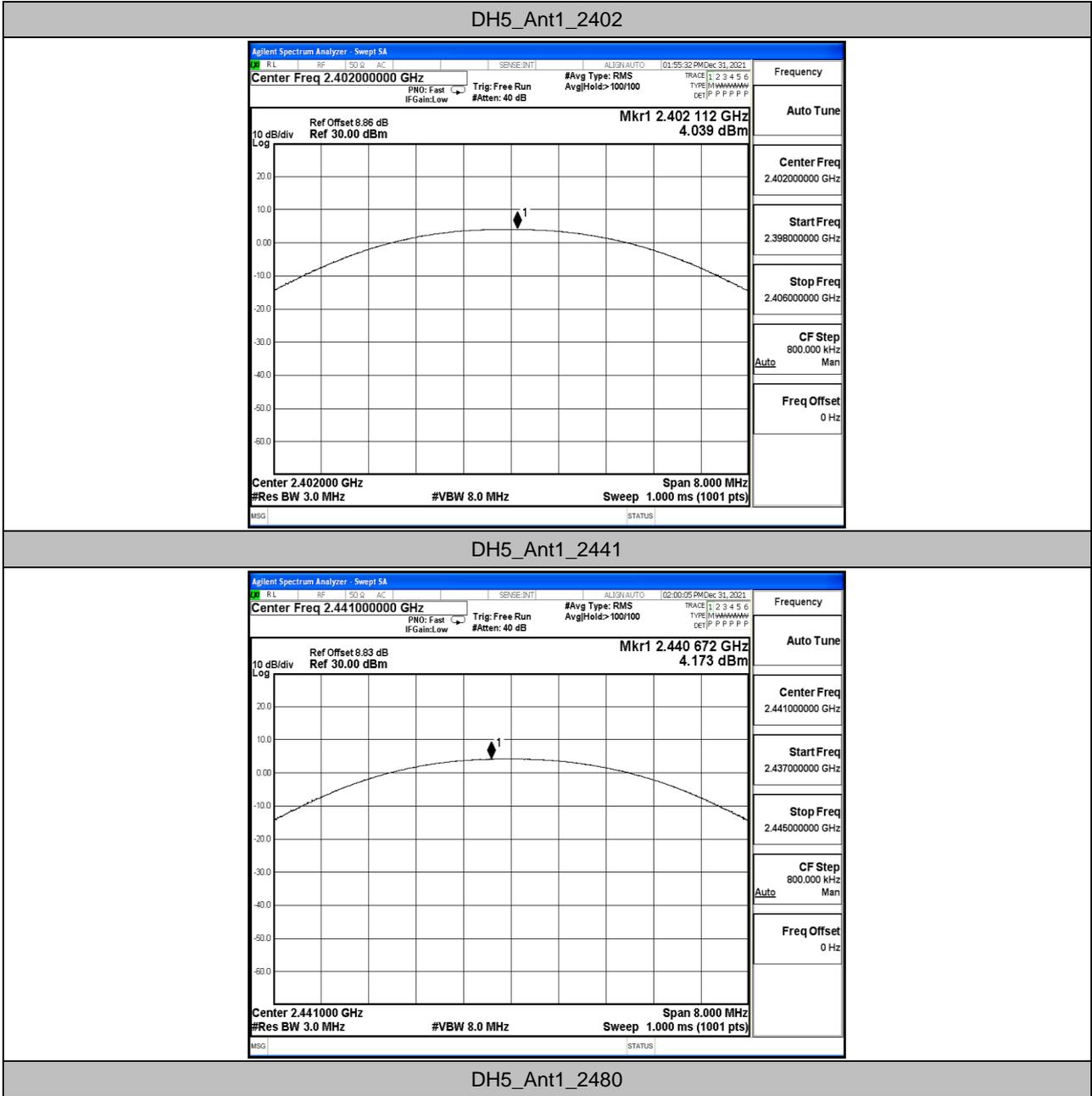
## A.2 Maximum conducted output power

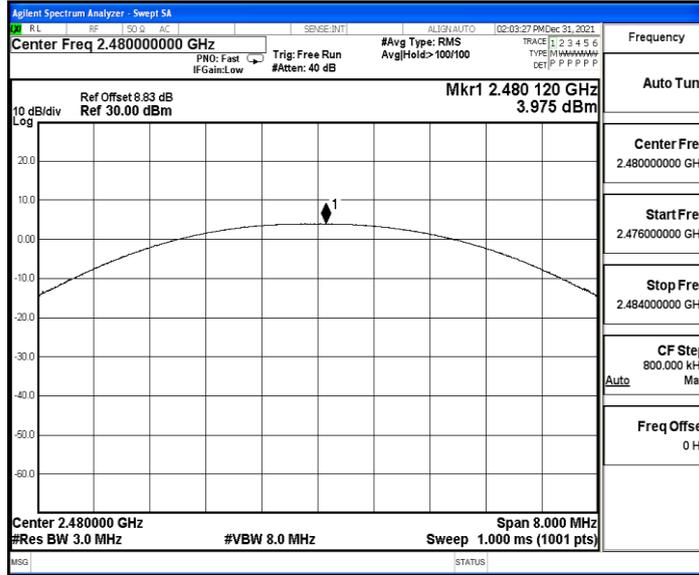
### Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
DH5	Ant1	2402	4.04	≤20.97	PASS
		2441	4.17	≤20.97	PASS
		2480	3.98	≤20.97	PASS
2DH5	Ant1	2402	6.15	≤20.97	PASS
		2441	6.24	≤20.97	PASS
		2480	5.86	≤20.97	PASS
3DH5	Ant1	2402	6.68	≤20.97	PASS
		2441	6.77	≤20.97	PASS
		2480	6.44	≤20.97	PASS

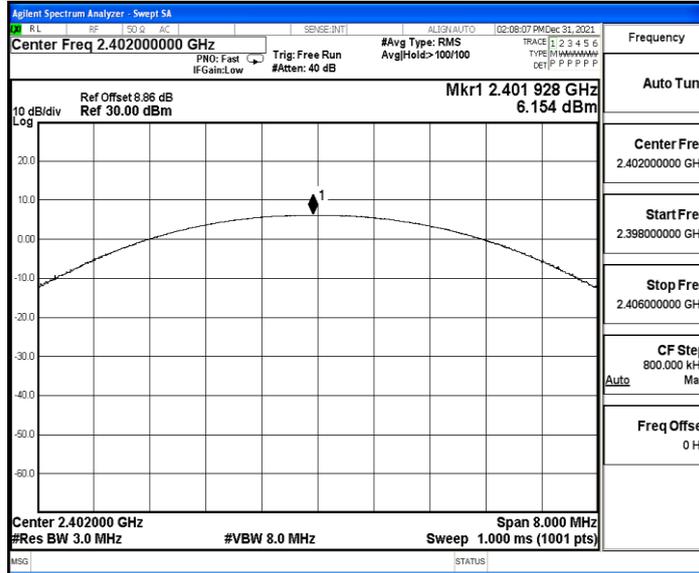


### Test Graphs

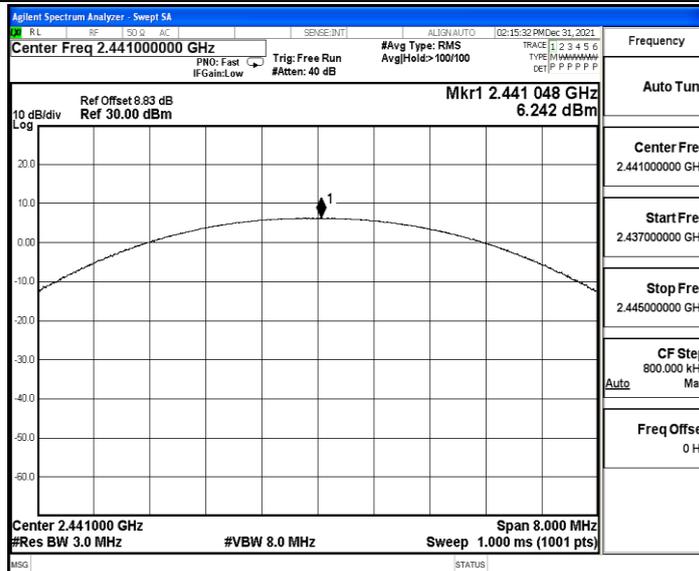




2DH5\_Ant1\_2402

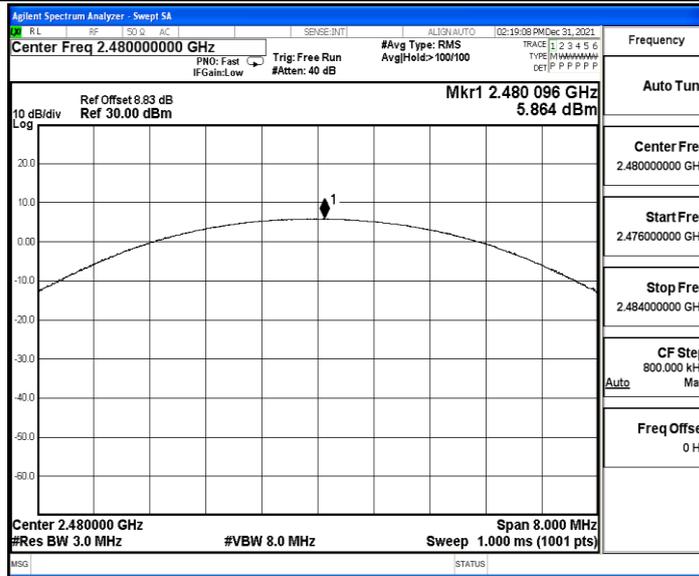


2DH5\_Ant1\_2441

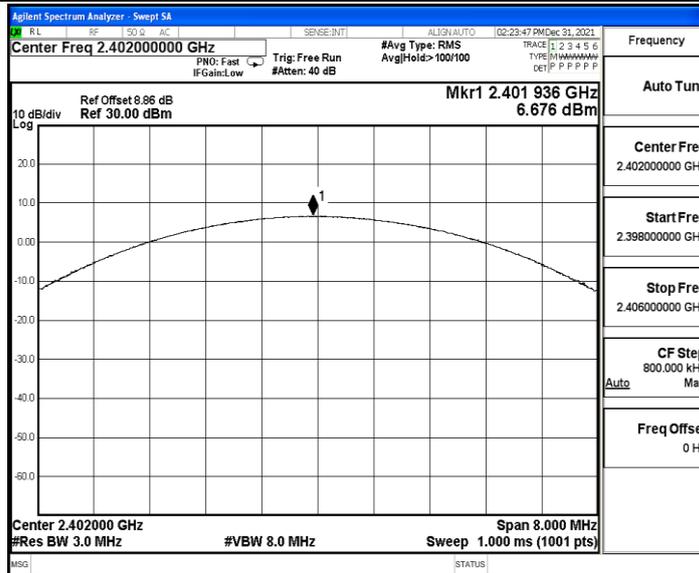




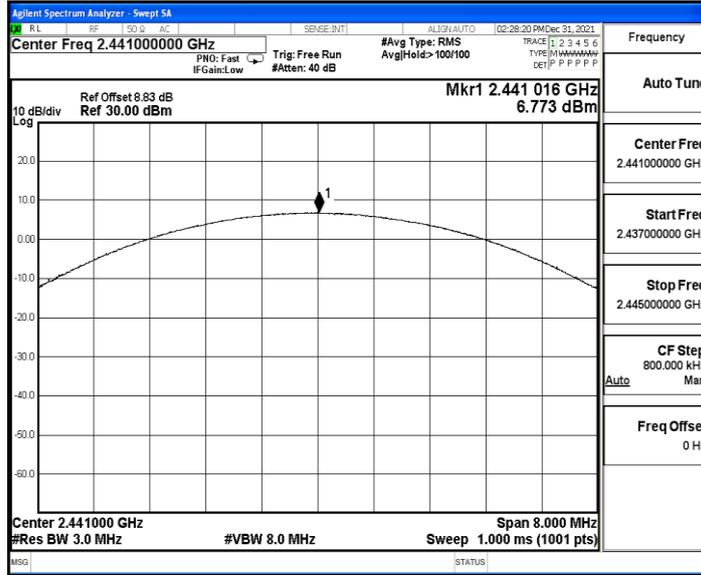
2DH5\_Ant1\_2480



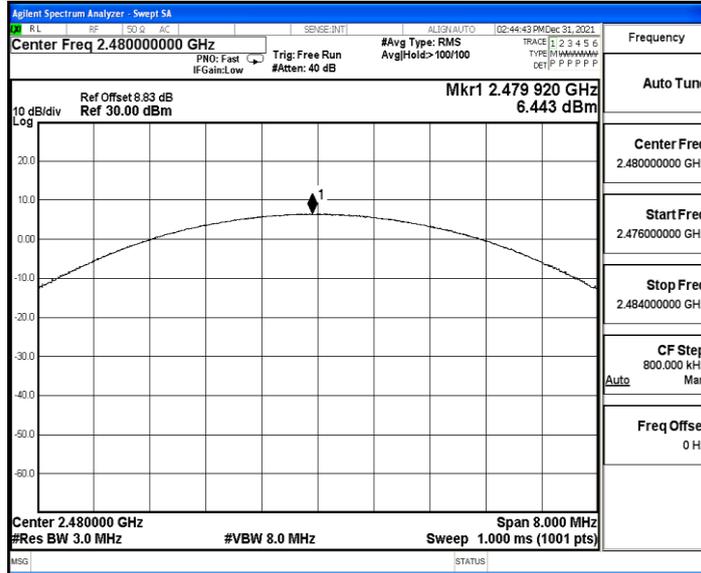
3DH5\_Ant1\_2402



3DH5\_Ant1\_2441



3DH5\_Ant1\_2480



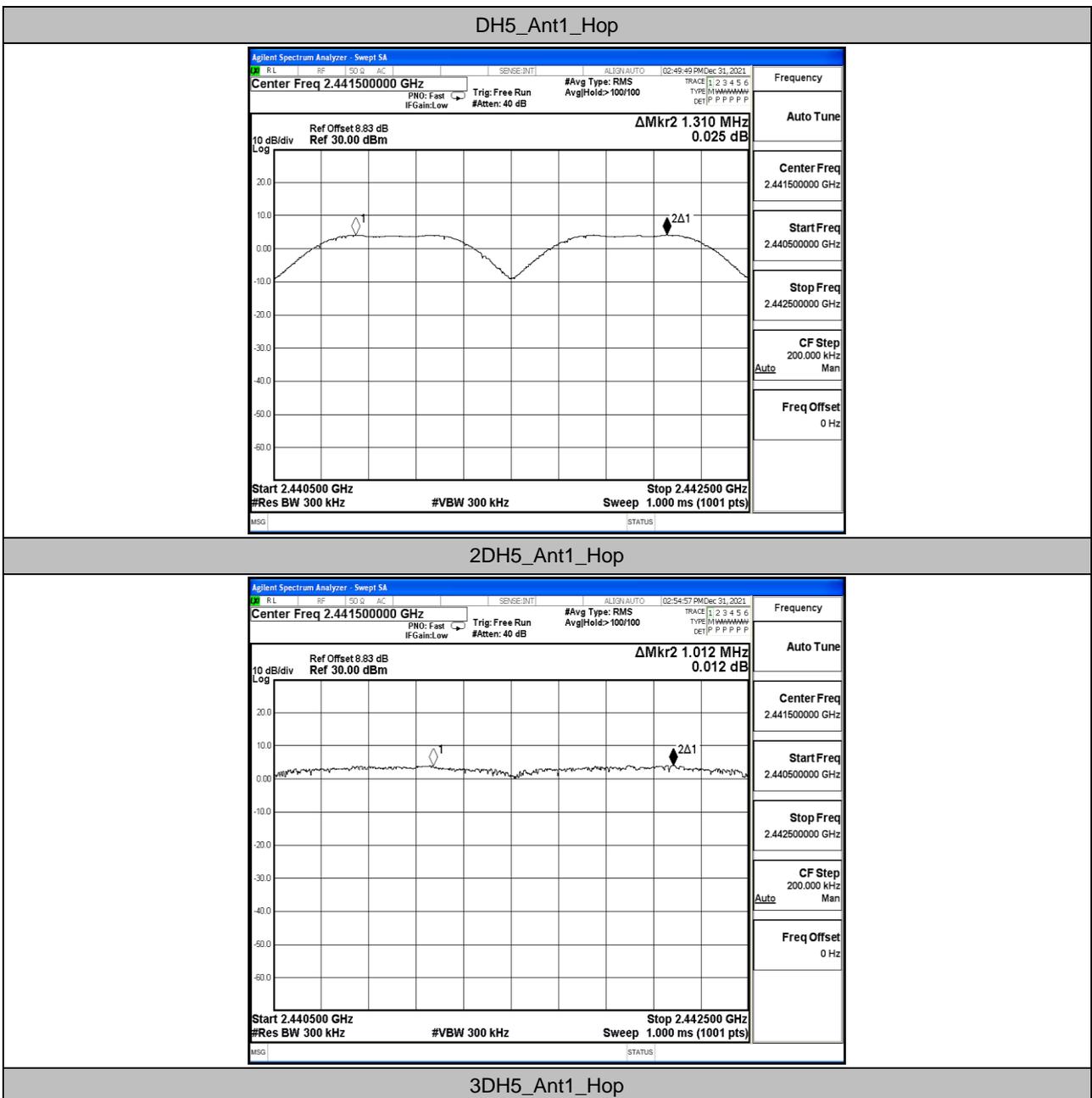


### A.3 Carrier frequency separation

#### Test Result

TestMode	Antenna	Channel	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	1.31	≥0.966	PASS
2DH5	Ant1	Hop	1.012	≥0.906	PASS
3DH5	Ant1	Hop	1.188	≥0.878	PASS

#### Test Graphs





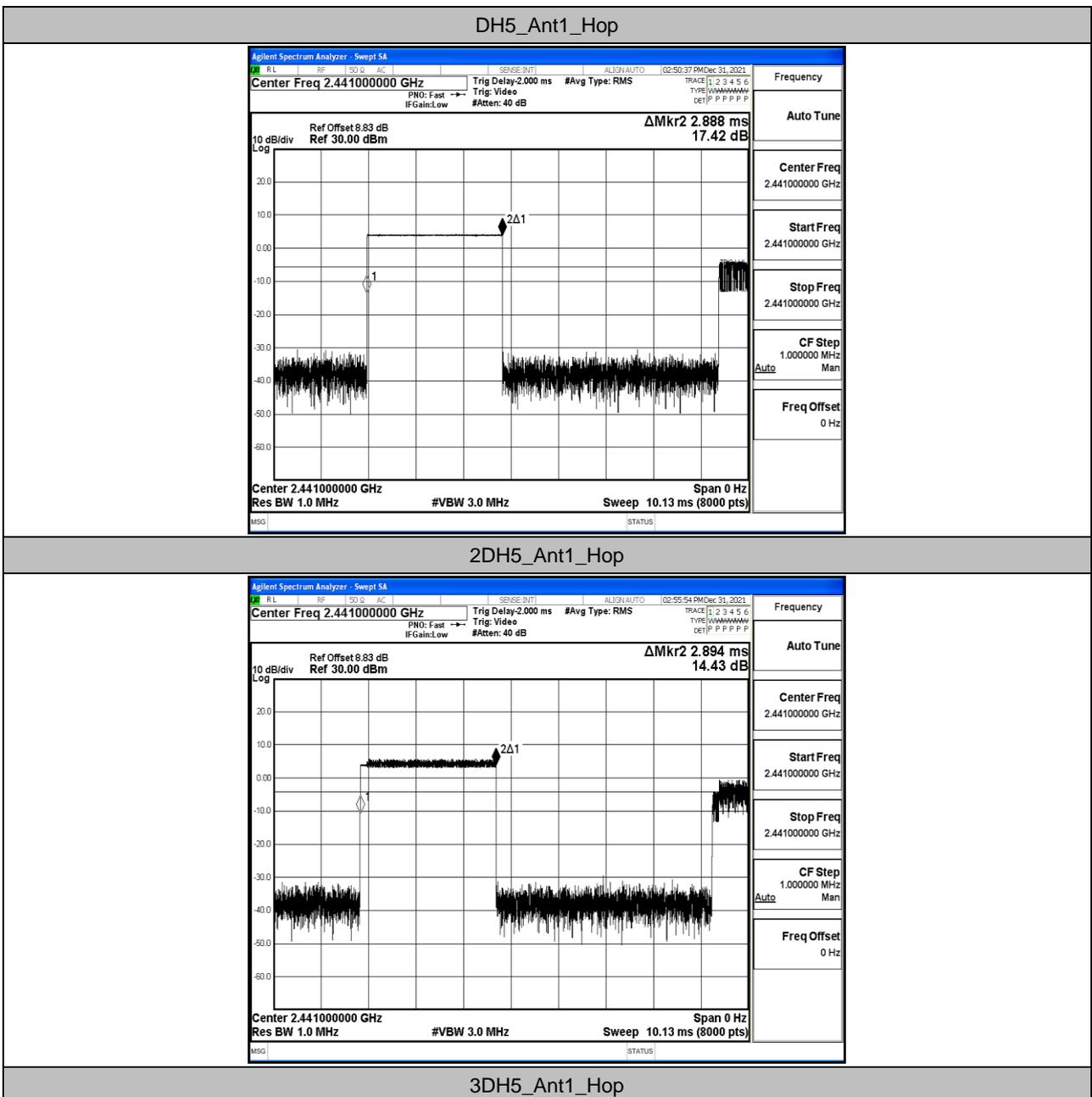


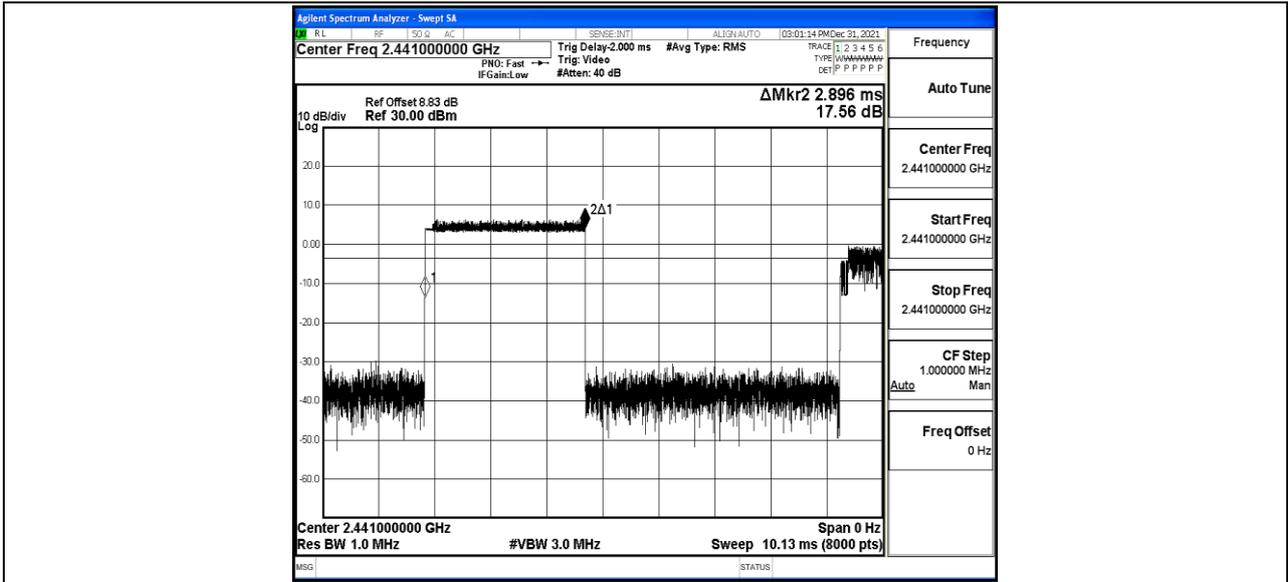
### A.4 Time of occupancy

#### Test Result

TestMode	Antenna	Channel	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH5	Ant1	Hop	2.89	106.67	0.308	≤0.4	PASS
2DH5	Ant1	Hop	2.89	106.67	0.309	≤0.4	PASS
3DH5	Ant1	Hop	2.90	106.67	0.309	≤0.4	PASS

#### Test Graphs







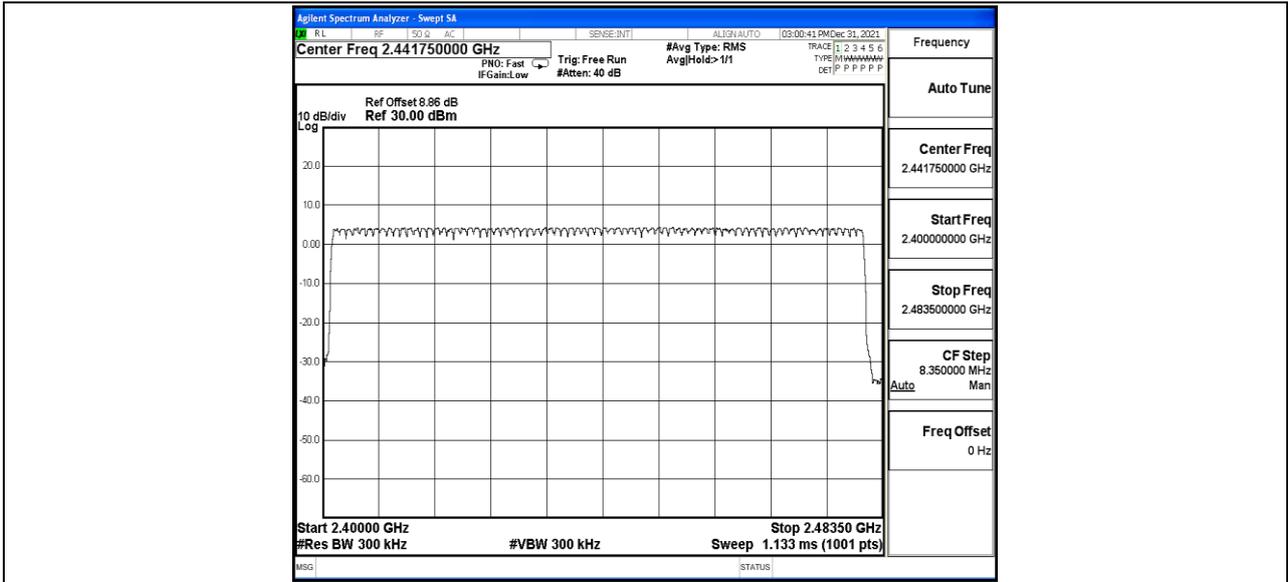
## A.5 Number of hopping channels

### Test Result

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 Graphs







## A.6 Band edge measurements

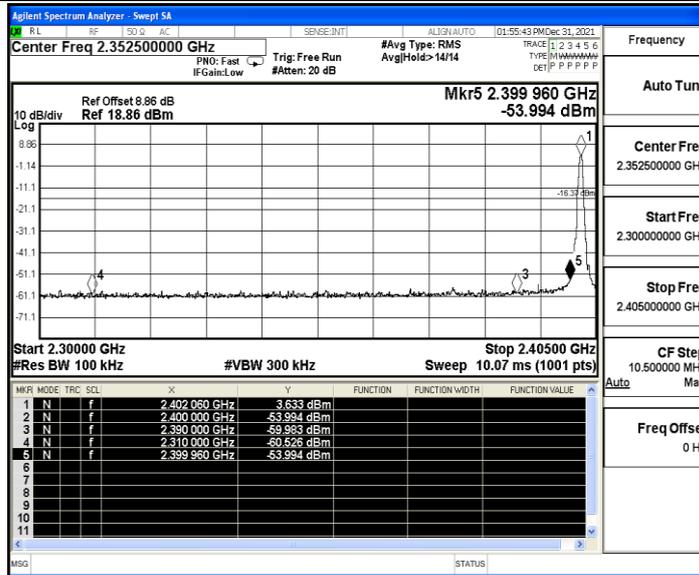
### Test Result

TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	3.63	-53.99	$\leq -16.37$	PASS
		High	2480	3.41	-56	$\leq -16.59$	PASS
		Low	Hop_2402	3.05	-58.04	$\leq -16.95$	PASS
		High	Hop_2480	4.01	-56.69	$\leq -15.99$	PASS
2DH5	Ant1	Low	2402	1.72	-47.48	$\leq -18.28$	PASS
		High	2480	3.34	-52.03	$\leq -16.66$	PASS
		Low	Hop_2402	2.01	-58.42	$\leq -17.99$	PASS
		High	Hop_2480	3.01	-56.93	$\leq -16.99$	PASS
3DH5	Ant1	Low	2402	2.74	-44.44	$\leq -17.26$	PASS
		High	2480	3.74	-52.14	$\leq -16.26$	PASS
		Low	Hop_2402	1.32	-57.91	$\leq -18.68$	PASS
		High	Hop_2480	3.94	-56.78	$\leq -16.06$	PASS

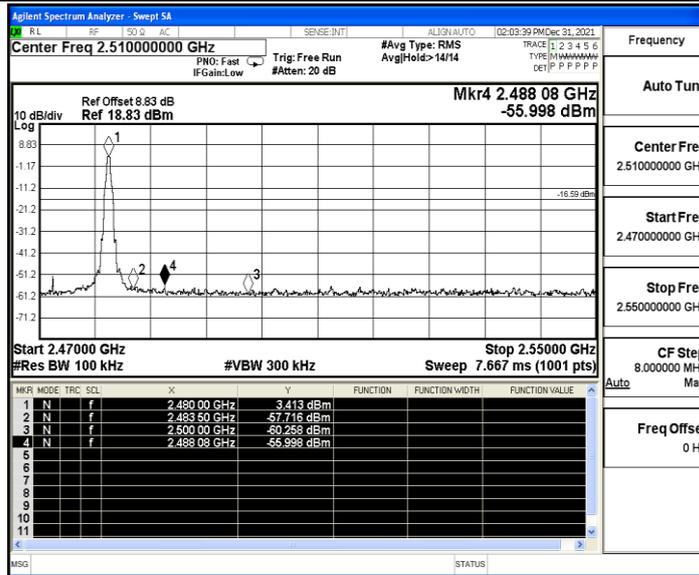


### Test Graphs

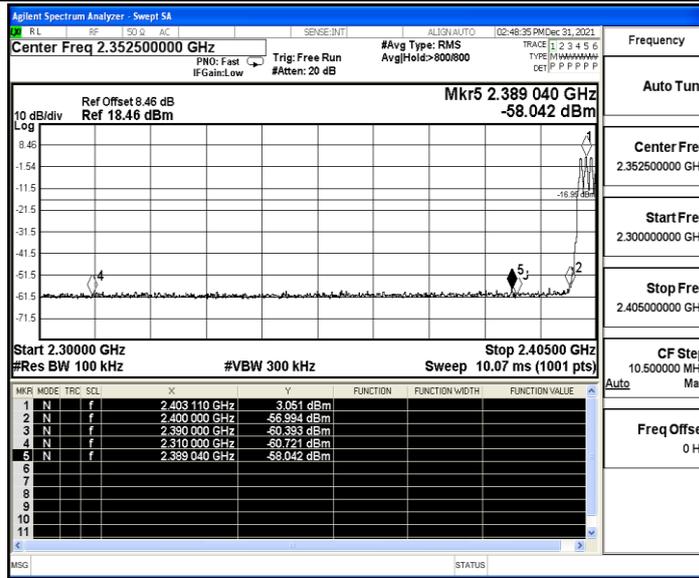
DH5\_Ant1\_Low\_2402



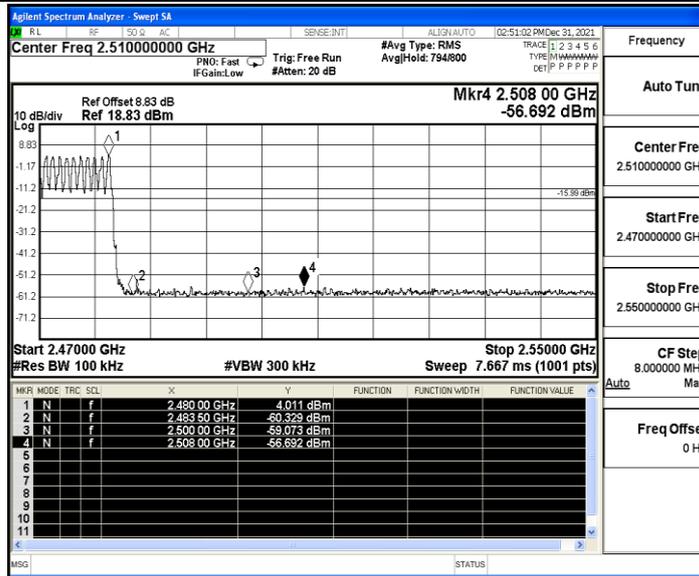
DH5\_Ant1\_High\_2480



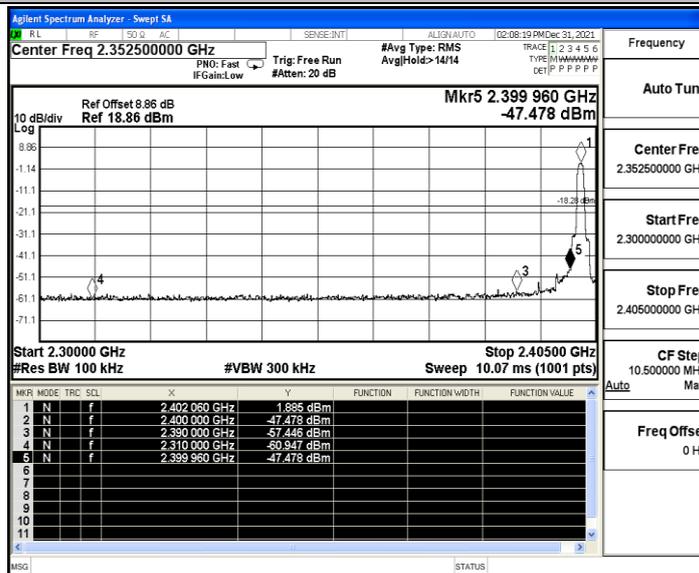
DH5\_Ant1\_Low\_Hop\_2402



DH5\_Ant1\_High\_Hop\_2480

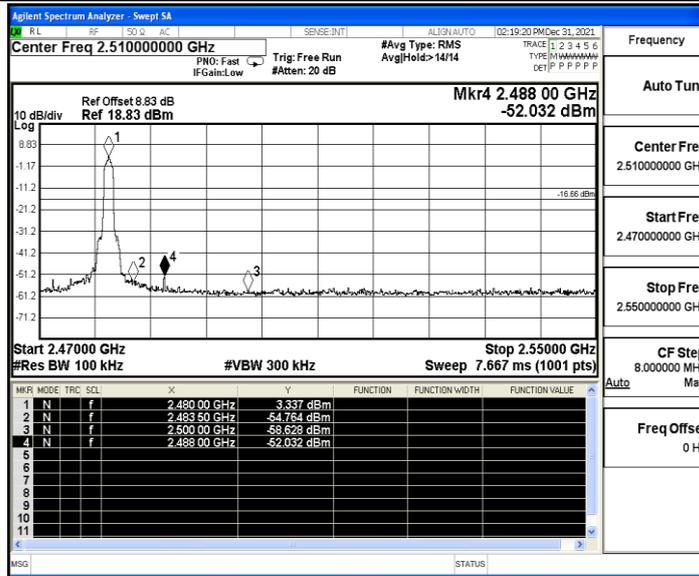


2DH5\_Ant1\_Low\_2402

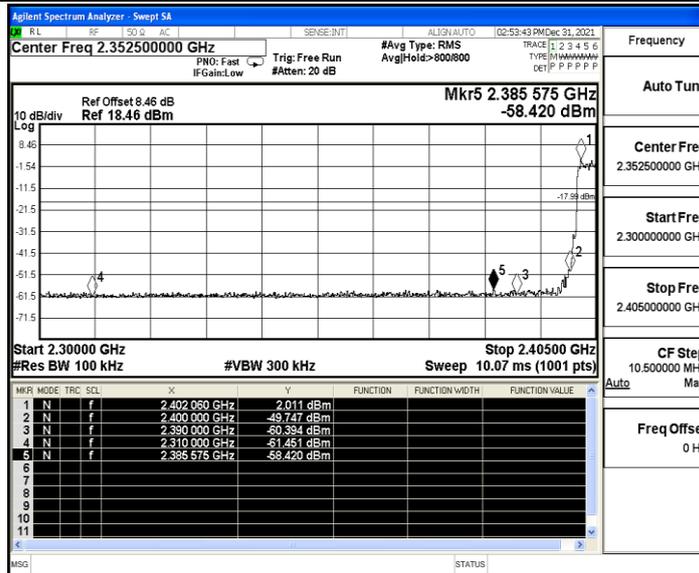




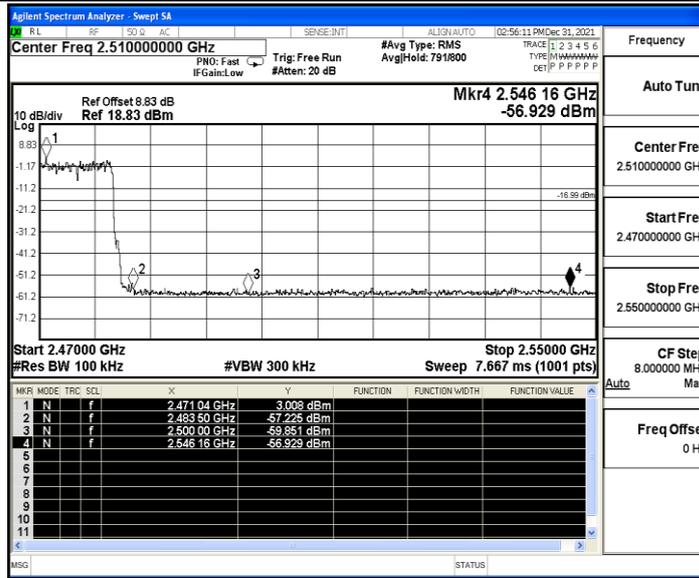
### 2DH5\_Ant1\_High\_2480



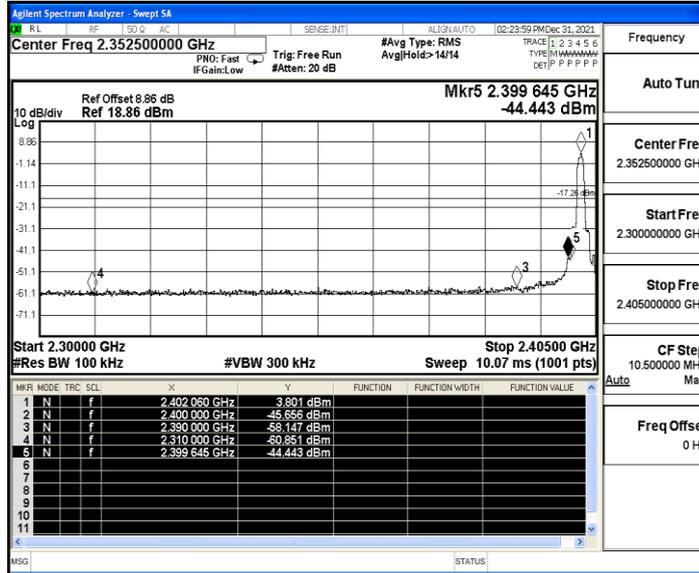
### 2DH5\_Ant1\_Low\_Hop\_2402



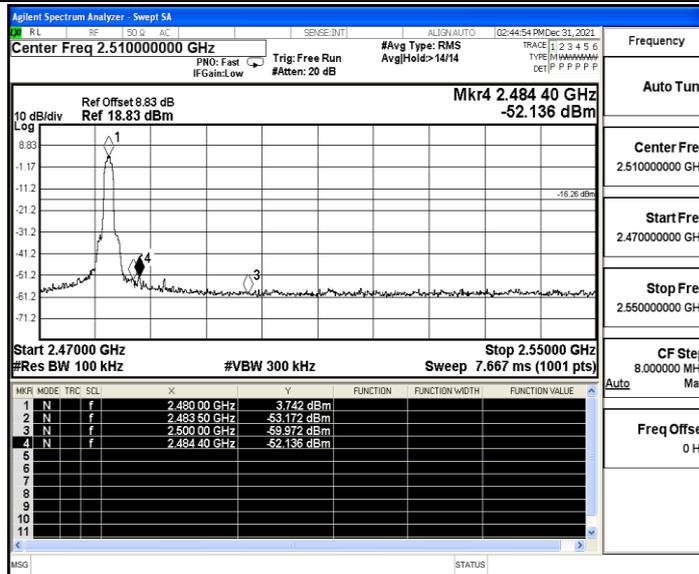
### 2DH5\_Ant1\_High\_Hop\_2480



3DH5\_Ant1\_Low\_2402

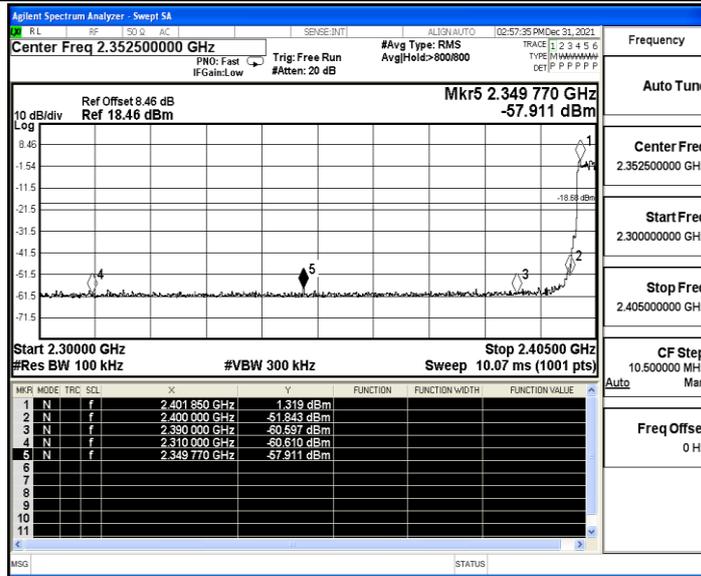


3DH5\_Ant1\_High\_2480

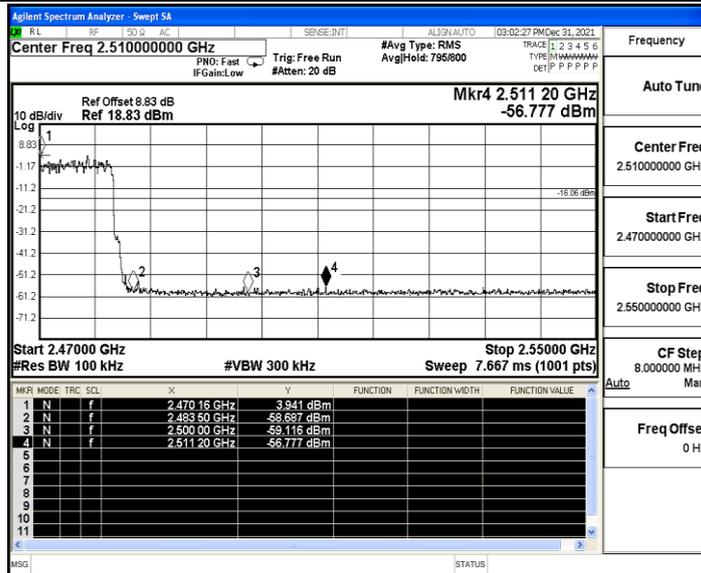




### 3DH5\_Ant1\_Low\_Hop\_2402



### 3DH5\_Ant1\_High\_Hop\_2480





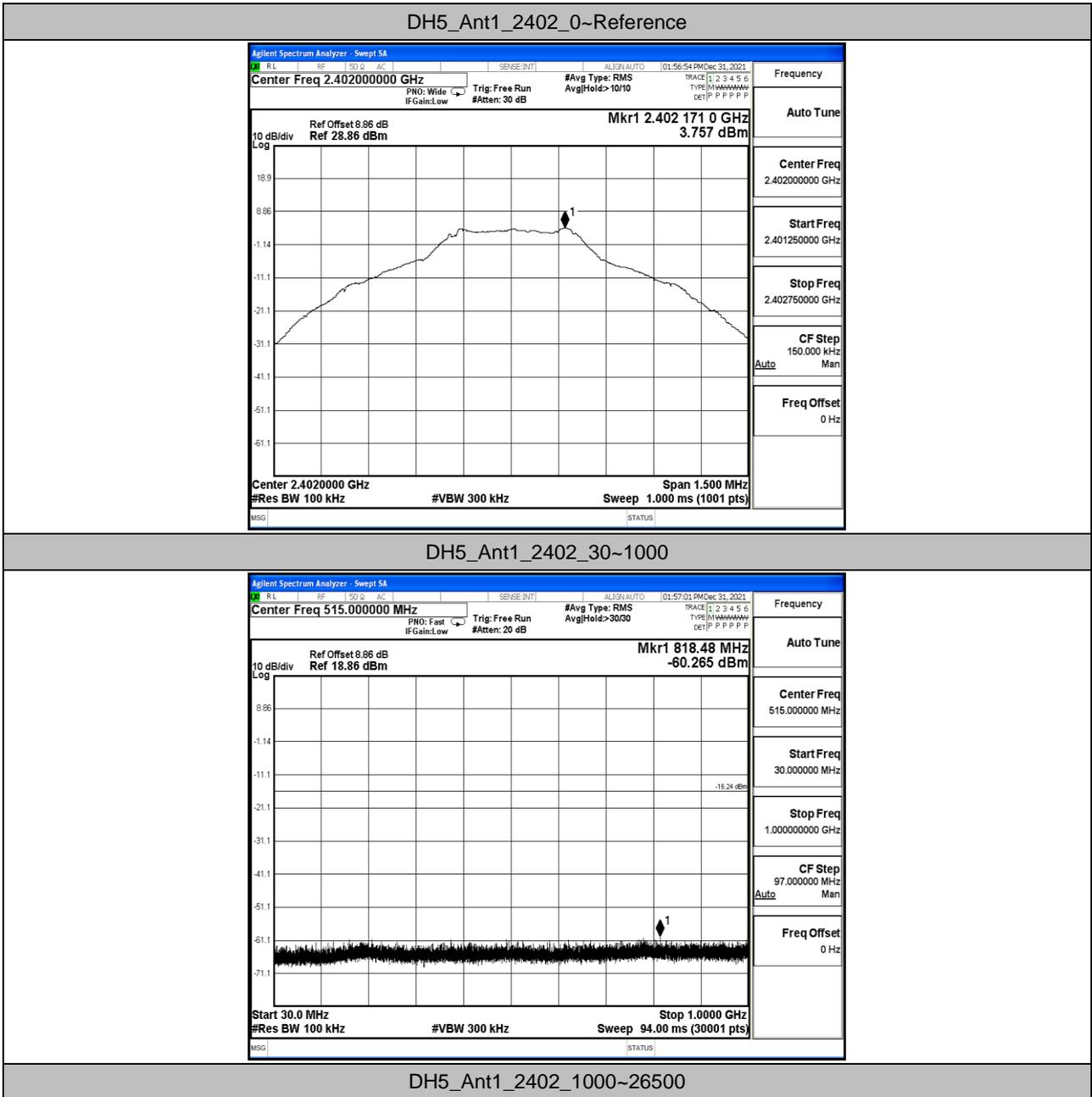
## A.7 Conducted Spurious Emission

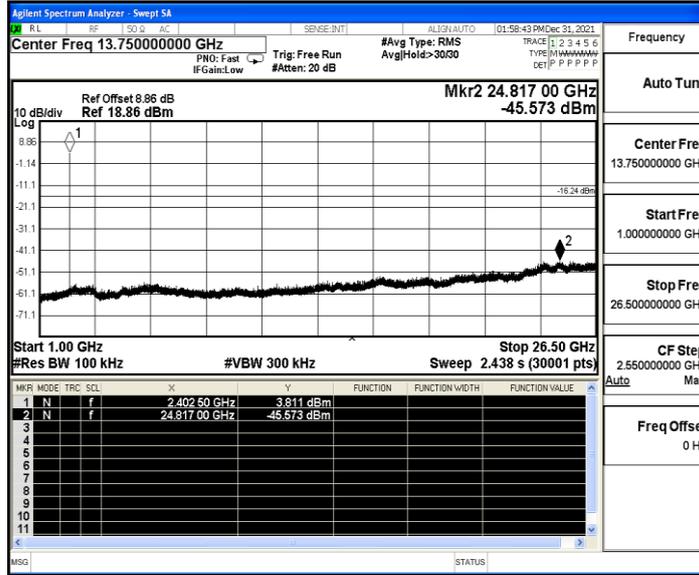
### Test Result

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	3.76	3.76	---	PASS
			30~1000	3.76	-60.27	≤-16.24	PASS
			1000~26500	3.76	-45.57	≤-16.24	PASS
		2441	Reference	3.88	3.88	---	PASS
			30~1000	3.88	-60.35	≤-16.12	PASS
			1000~26500	3.88	-45.54	≤-16.12	PASS
		2480	Reference	3.65	3.65	---	PASS
			30~1000	3.65	-60.21	≤-16.35	PASS
			1000~26500	3.65	-45.26	≤-16.35	PASS
2DH5	Ant1	2402	Reference	3.54	3.54	---	PASS
			30~1000	3.54	-59.56	≤-16.46	PASS
			1000~26500	3.54	-45.73	≤-16.46	PASS
		2441	Reference	3.83	3.83	---	PASS
			30~1000	3.83	-60.38	≤-16.17	PASS
			1000~26500	3.83	-44.99	≤-16.17	PASS
		2480	Reference	3.57	3.57	---	PASS
			30~1000	3.57	-59.4	≤-16.43	PASS
			1000~26500	3.57	-45.5	≤-16.43	PASS
3DH5	Ant1	2402	Reference	3.79	3.79	---	PASS
			30~1000	3.79	-60.27	≤-16.21	PASS
			1000~26500	3.79	-45.76	≤-16.21	PASS
		2441	Reference	3.89	3.89	---	PASS
			30~1000	3.89	-59.88	≤-16.11	PASS
			1000~26500	3.89	-46.14	≤-16.11	PASS
		2480	Reference	3.69	3.69	---	PASS
			30~1000	3.69	-60.62	≤-16.31	PASS
			1000~26500	3.69	-46.28	≤-16.31	PASS

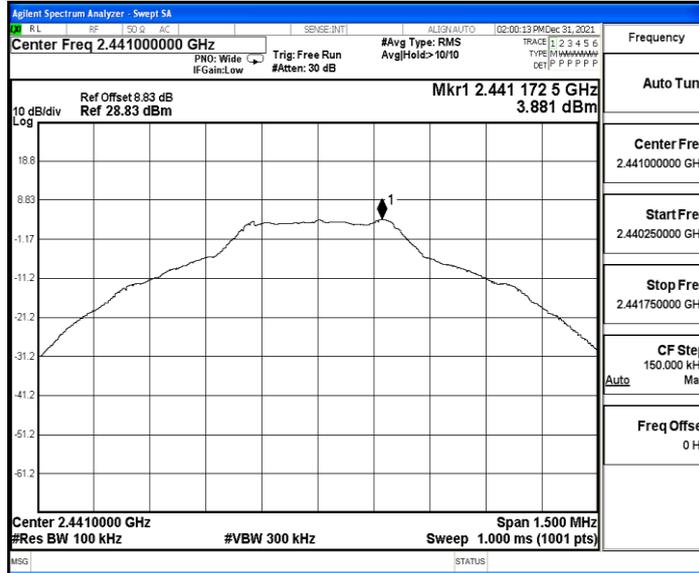


### Test Graphs

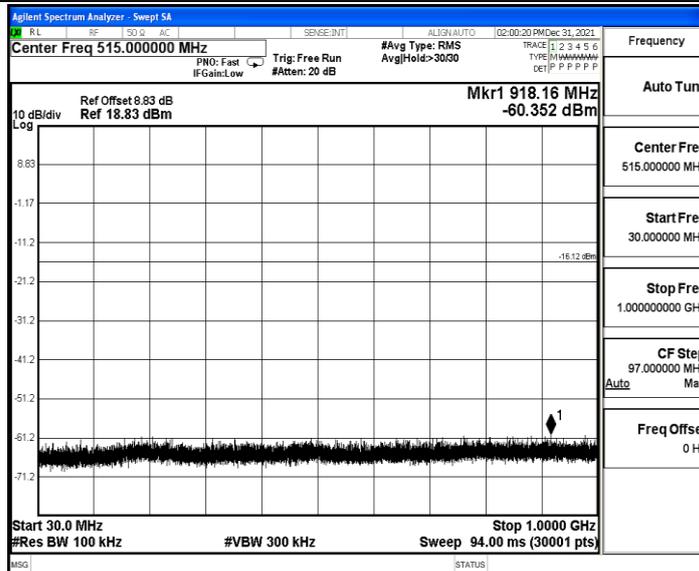




DH5\_Ant1\_2441\_0~Reference

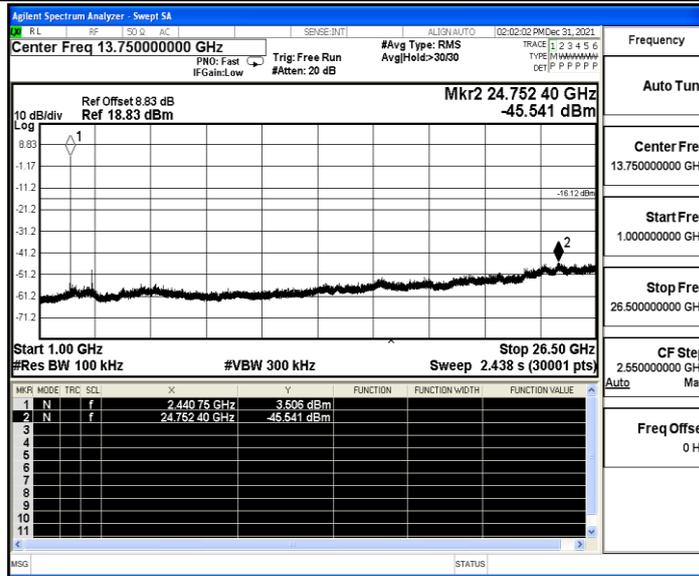


DH5\_Ant1\_2441\_30~1000

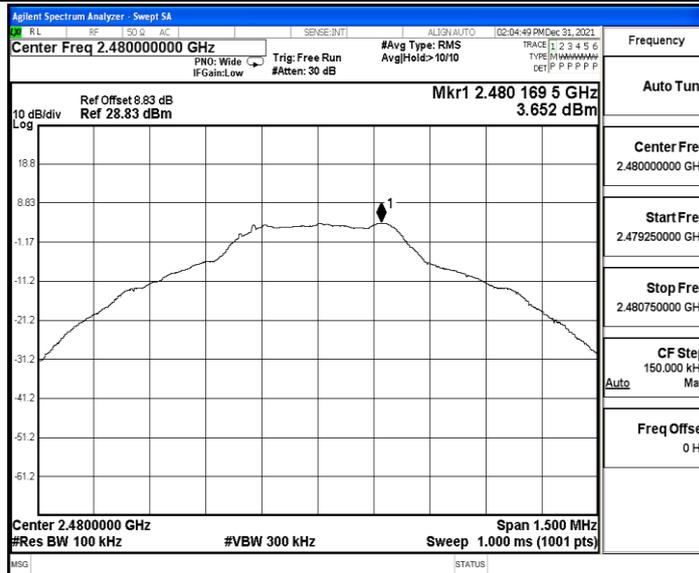




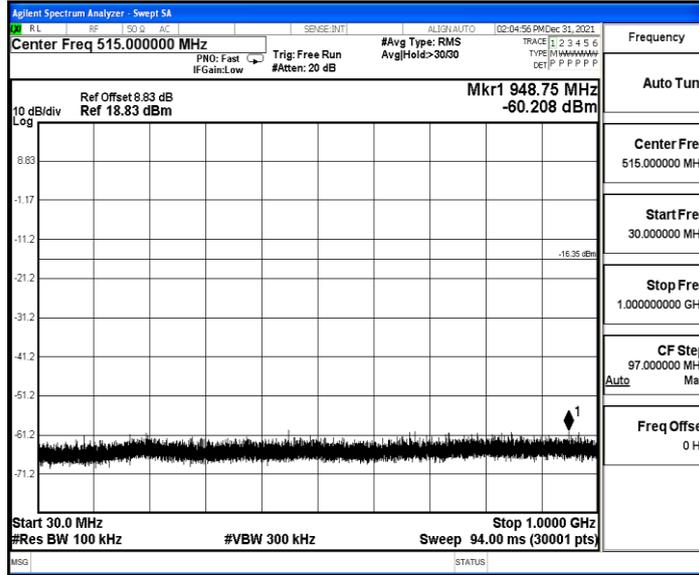
DH5\_Ant1\_2441\_1000~26500



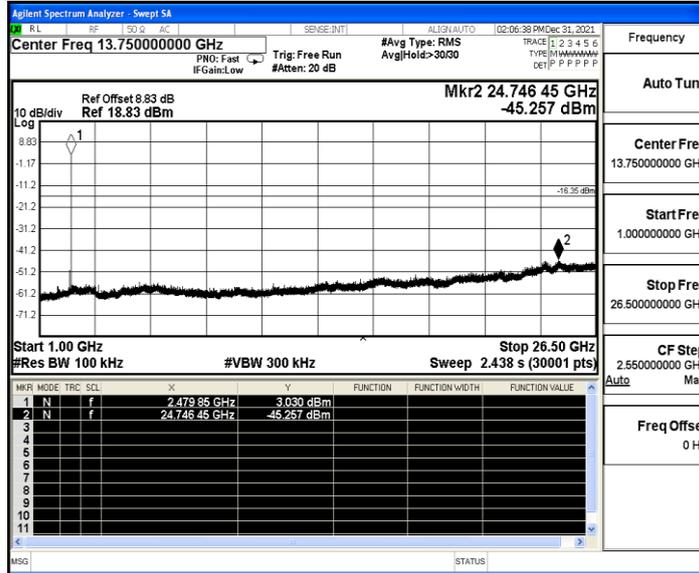
DH5\_Ant1\_2480\_0~Reference



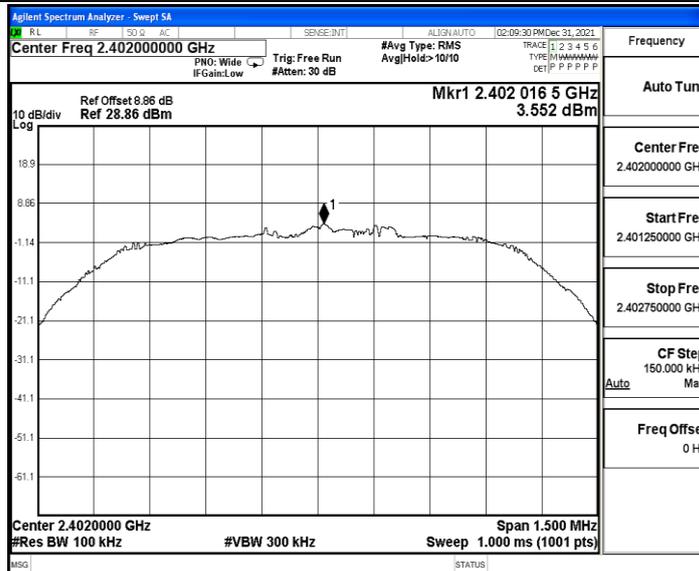
DH5\_Ant1\_2480\_30~1000



DH5\_Ant1\_2480\_1000~26500

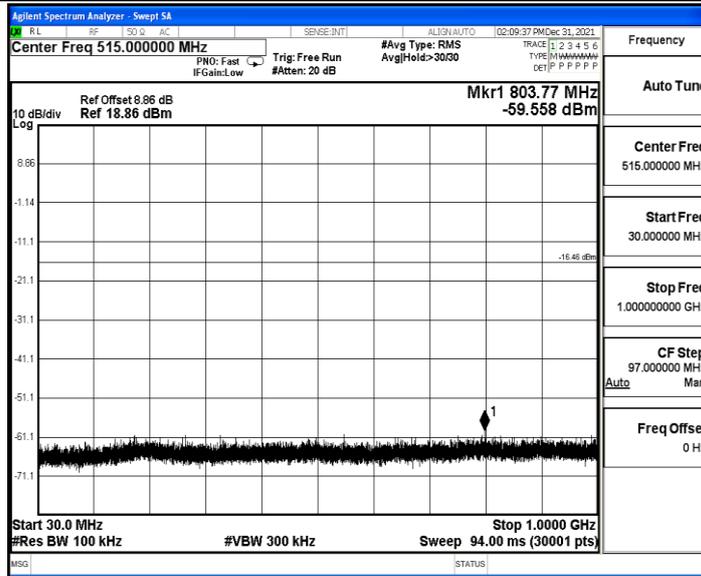


2DH5\_Ant1\_2402\_0~Reference

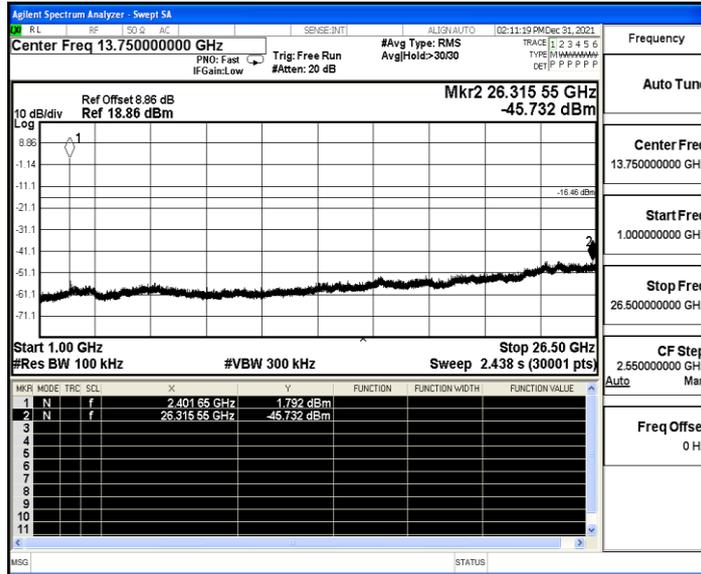




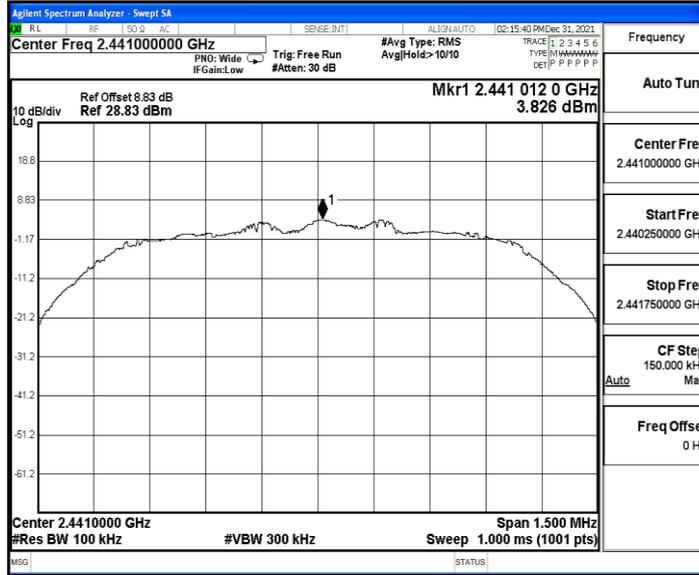
2DH5\_Ant1\_2402\_30~1000



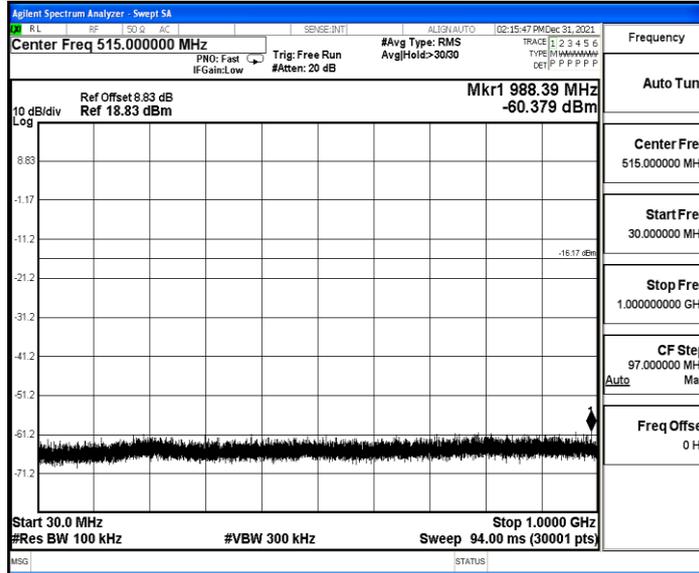
2DH5\_Ant1\_2402\_1000~26500



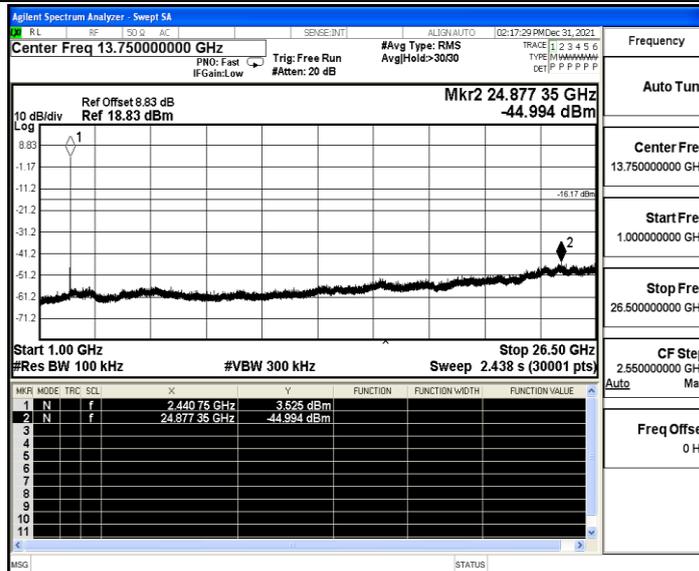
2DH5\_Ant1\_2441\_0~Reference



2DH5\_Ant1\_2441\_30~1000

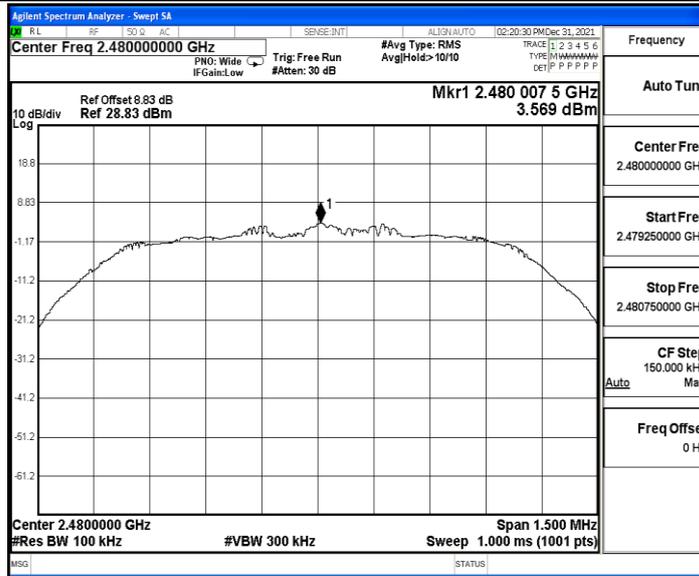


2DH5\_Ant1\_2441\_1000~26500

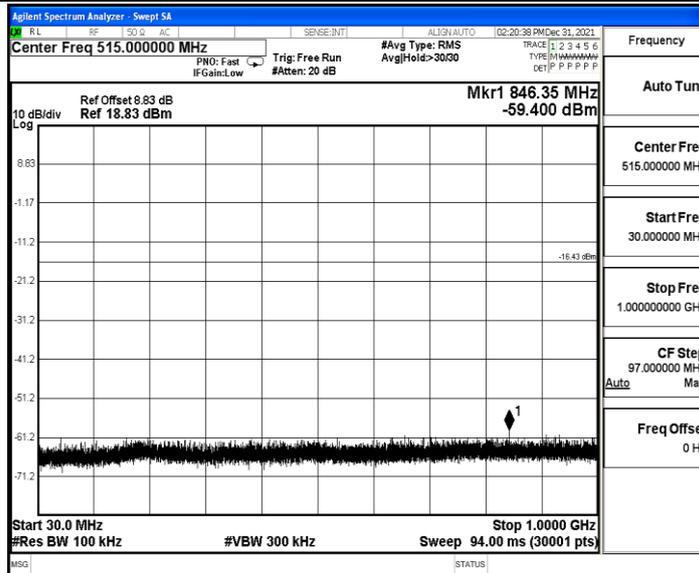




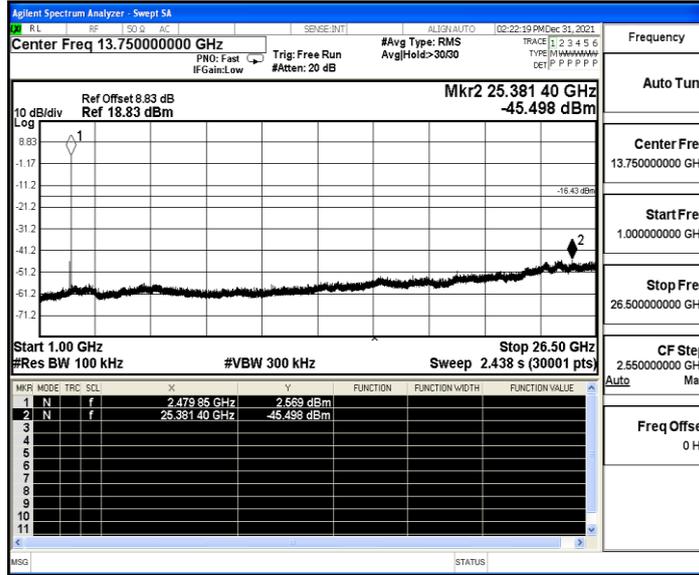
2DH5\_Ant1\_2480\_0~Reference



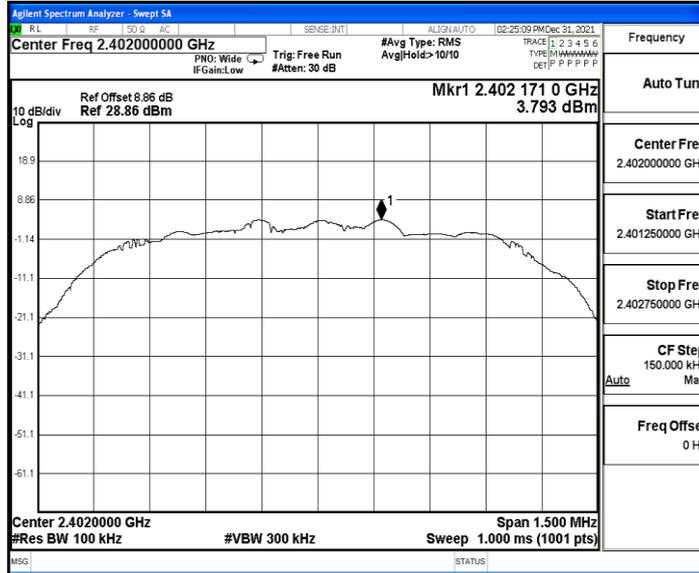
2DH5\_Ant1\_2480\_30~1000



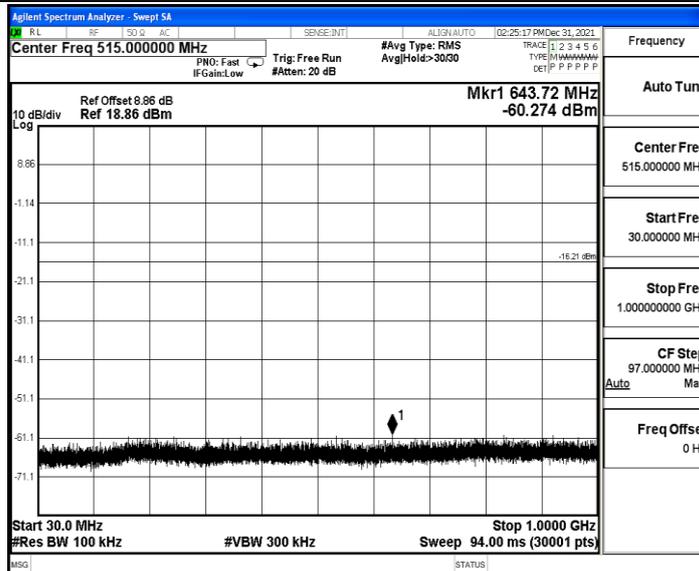
2DH5\_Ant1\_2480\_1000~26500



3DH5\_Ant1\_2402\_0~Reference

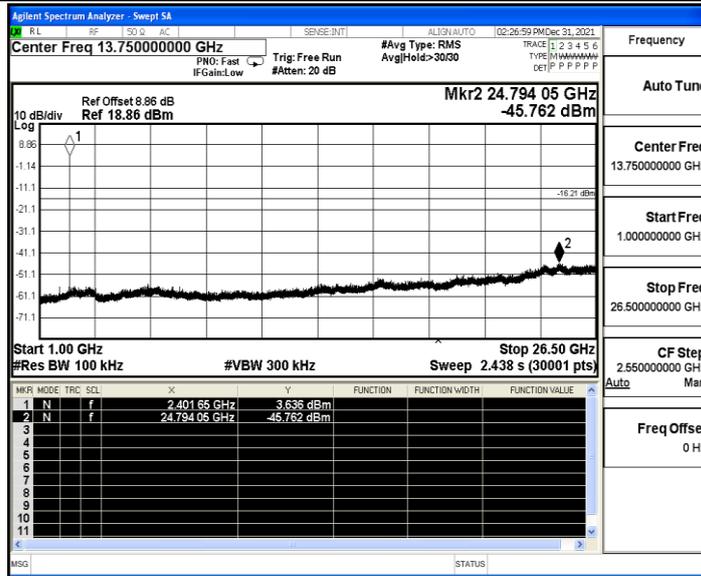


3DH5\_Ant1\_2402\_30~1000

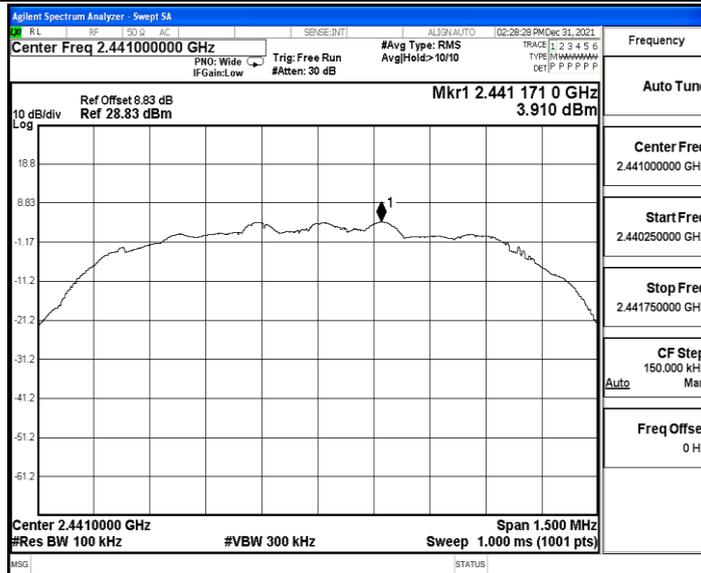




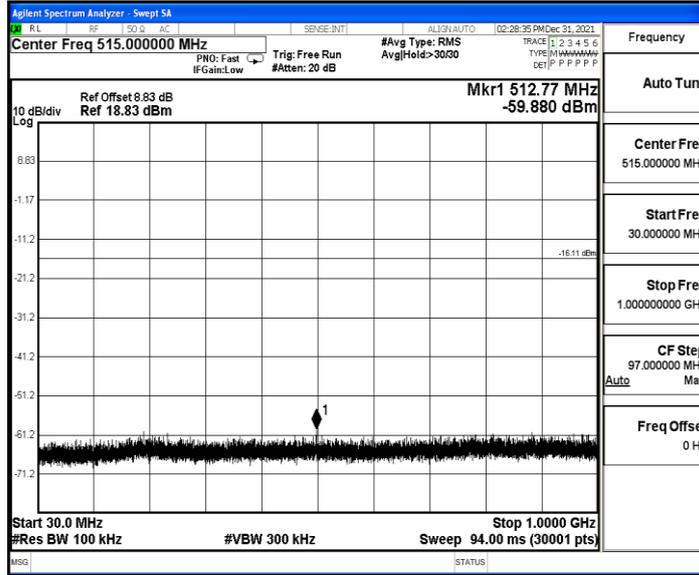
3DH5\_Ant1\_2402\_1000~26500



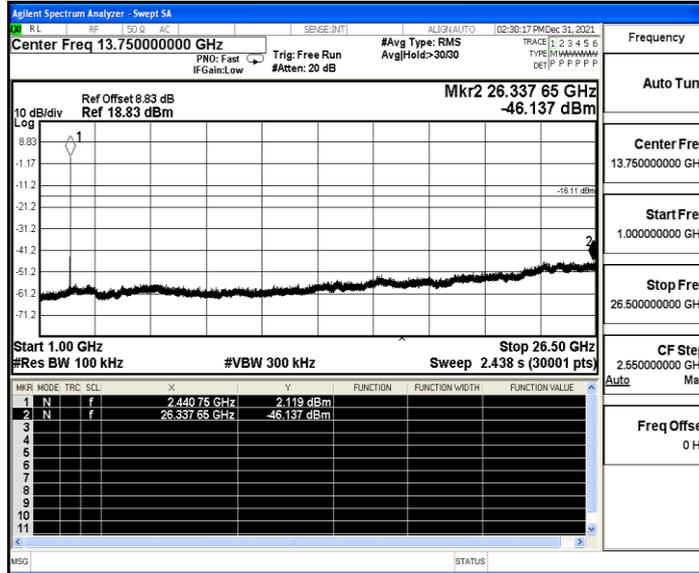
3DH5\_Ant1\_2441\_0~Reference



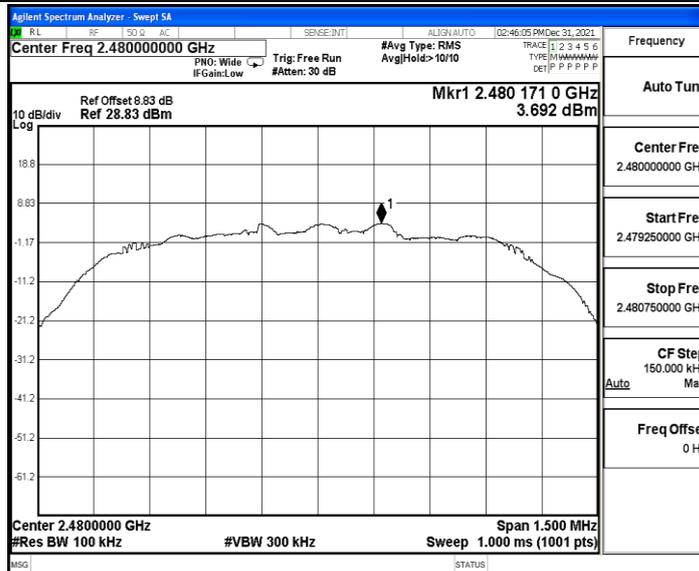
3DH5\_Ant1\_2441\_30~1000

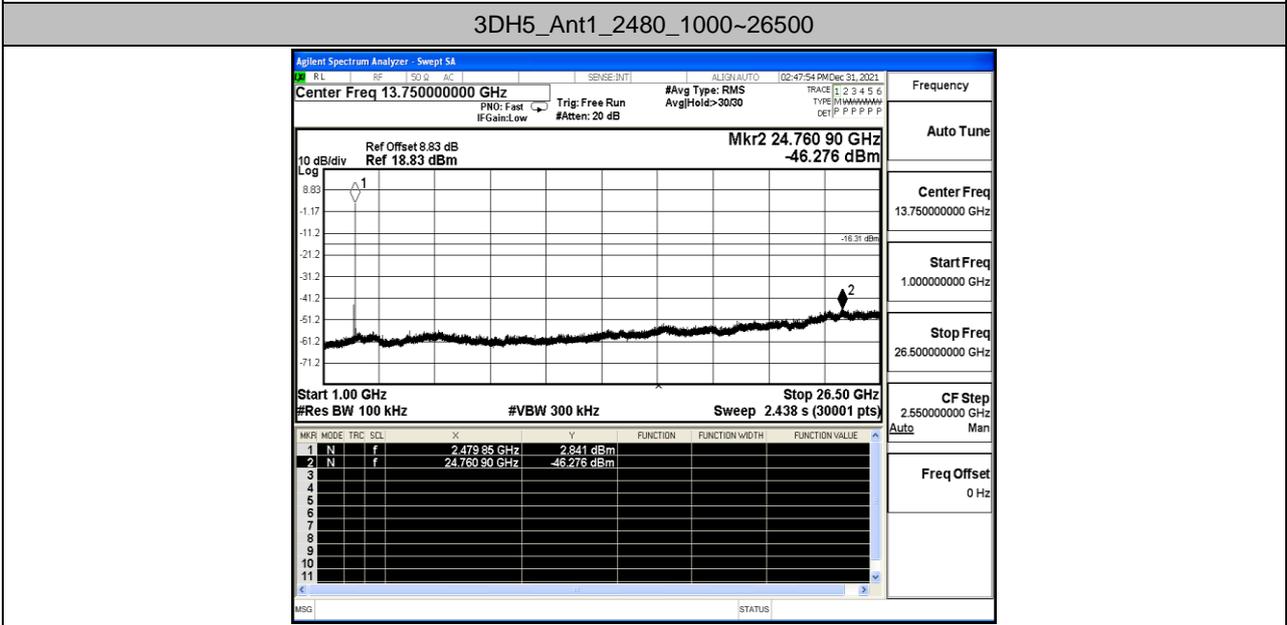
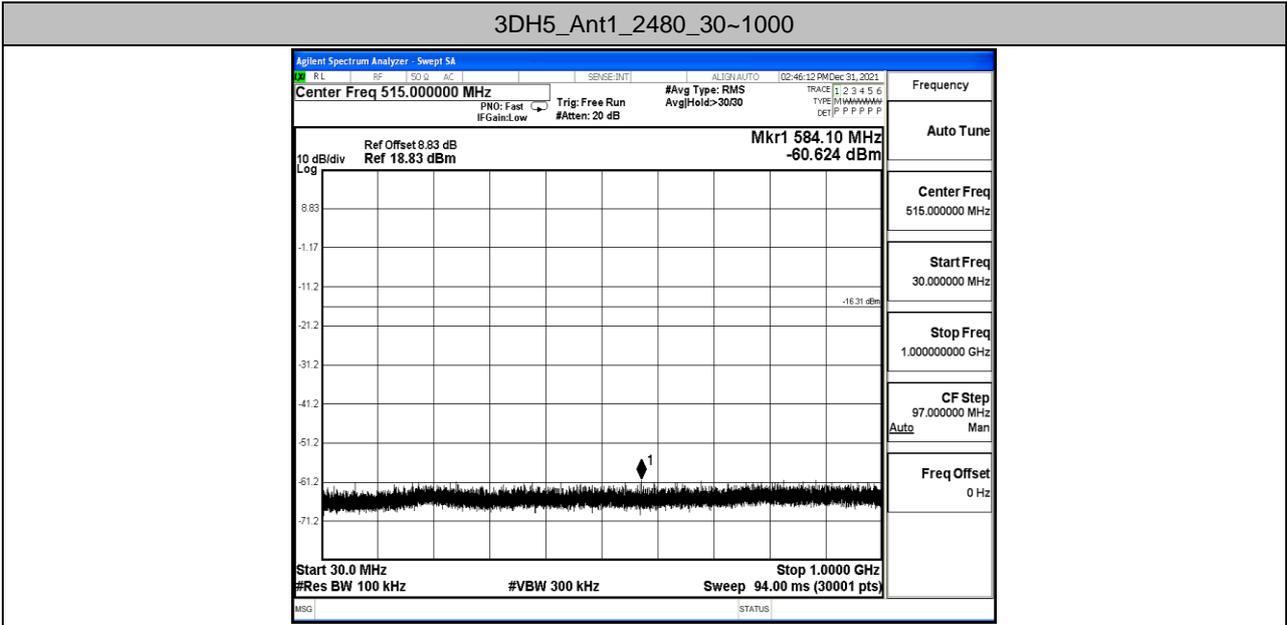


3DH5\_Ant1\_2441\_1000~26500



3DH5\_Ant1\_2480\_0~Reference







## A.8 Emissions in Restricted Bands

### Test Result

TestMode	Antenna	ChName	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
DH5	Ant1	Low	2402	AV	2310.000	-57.62	≤-41.20	37.58	≤54	PASS
				AV	2378.015	-55.72	≤-41.20	39.48	≤54	PASS
				AV	2390.000	-55.95	≤-41.20	39.25	≤54	PASS
				Peak	2310.000	-47.39	≤-21.20	47.81	≤74	PASS
				Peak	2377.490	-44.31	≤-21.20	50.89	≤74	PASS
				Peak	2390.000	-45.4	≤-21.20	49.80	≤74	PASS
		High	2480	AV	2483.500	-52.16	≤-41.20	43.04	≤54	PASS
				AV	2483.520	-52.16	≤-41.20	43.04	≤54	PASS
				AV	2500.000	-56.38	≤-41.20	38.82	≤54	PASS
				Peak	2483.500	-43.72	≤-21.20	51.48	≤74	PASS
				Peak	2483.600	-43.56	≤-21.20	51.64	≤74	PASS
				Peak	2500.000	-47.27	≤-21.20	47.93	≤74	PASS
		Low	Hop_2402	Peak	2310.000	-48.61	≤-21.20	46.59	≤74	PASS
				Peak	2379.485	-44.94	≤-21.20	50.26	≤74	PASS
				Peak	2390.000	-47.74	≤-21.20	47.46	≤74	PASS
		High	Hop_2480	Peak	2483.500	-46.49	≤-21.20	48.71	≤74	PASS
				Peak	2483.840	-44.2	≤-21.20	51.00	≤74	PASS
				Peak	2500.000	-46.92	≤-21.20	48.28	≤74	PASS
2DH5	Ant1	Low	2402	AV	2310.000	-57.59	≤-41.20	37.61	≤54	PASS
				AV	2389.670	-55.4	≤-41.20	39.80	≤54	PASS
				AV	2390.000	-55.58	≤-41.20	39.62	≤54	PASS
				Peak	2310.000	-47.48	≤-21.20	47.72	≤74	PASS
				Peak	2389.565	-45	≤-21.20	50.20	≤74	PASS
				Peak	2390.000	-46.32	≤-21.20	48.88	≤74	PASS
		High	2480	AV	2483.500	-49.42	≤-41.20	45.78	≤54	PASS
				AV	2483.520	-49.42	≤-41.20	45.78	≤54	PASS
				AV	2500.000	-56.39	≤-41.20	38.81	≤54	PASS
				Peak	2483.500	-39.77	≤-21.20	55.43	≤74	PASS
				Peak	2484.000	-39.51	≤-21.20	55.69	≤74	PASS
				Peak	2500.000	-46.47	≤-21.20	48.73	≤74	PASS
		Low	Hop_2402	Peak	2310.000	-47.71	≤-21.20	47.49	≤74	PASS
				Peak	2380.535	-45.9	≤-21.20	49.30	≤74	PASS
				Peak	2390.000	-48.03	≤-21.20	47.17	≤74	PASS
		High	Hop_2480	Peak	2483.500	-42.3	≤-21.20	52.90	≤74	PASS
				Peak	2500.000	-45.41	≤-21.20	49.79	≤74	PASS



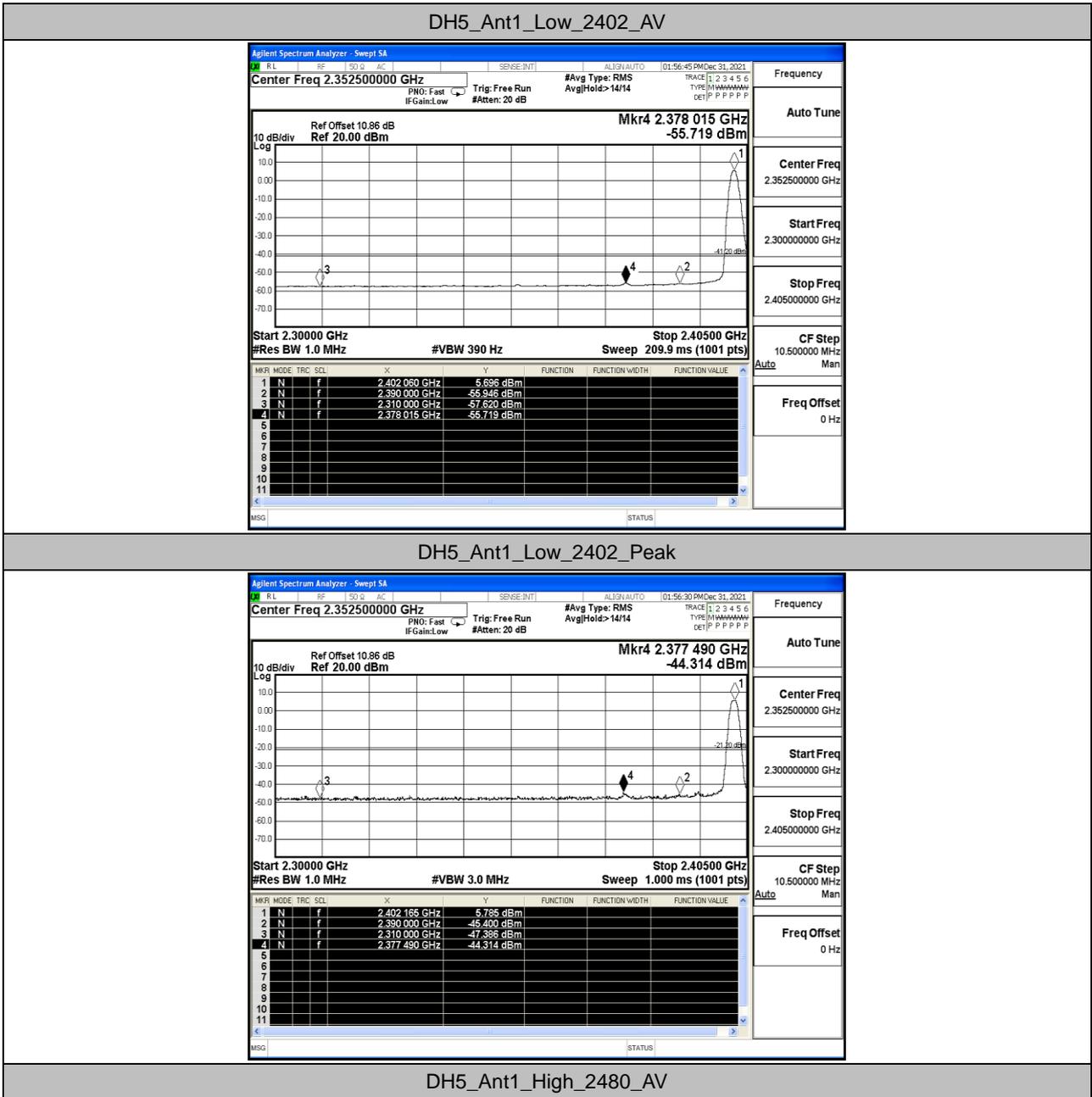
3DH5	Ant1	Low	2402	AV	2310.000	-57.6	≤-41.20	37.60	≤54	PASS
				AV	2389.985	-55.56	≤-41.20	39.64	≤54	PASS
				AV	2390.000	-55.56	≤-41.20	39.64	≤54	PASS
				Peak	2310.000	-48.73	≤-21.20	46.47	≤74	PASS
				Peak	2378.120	-45.38	≤-21.20	49.82	≤74	PASS
				Peak	2390.000	-45.63	≤-21.20	49.57	≤74	PASS
		High	2480	AV	2483.500	-48.84	≤-41.20	46.36	≤54	PASS
				AV	2483.520	-49.07	≤-41.20	46.13	≤54	PASS
				AV	2500.000	-56.25	≤-41.20	38.95	≤54	PASS
				Peak	2483.500	-38.7	≤-21.20	56.50	≤74	PASS
				Peak	2484.400	-38.54	≤-21.20	56.66	≤74	PASS
				Peak	2500.000	-47.1	≤-21.20	48.10	≤74	PASS
		Low	Hop_24 02	Peak	2310.000	-48.92	≤-21.20	46.28	≤74	PASS
				Peak	2377.595	-46.19	≤-21.20	49.01	≤74	PASS
				Peak	2390.000	-47.11	≤-21.20	48.09	≤74	PASS
		High	Hop_24 80	Peak	2483.500	-43.33	≤-21.20	51.87	≤74	PASS
				Peak	2483.680	-41.77	≤-21.20	53.43	≤74	PASS
				Peak	2500.000	-47.12	≤-21.20	48.08	≤74	PASS

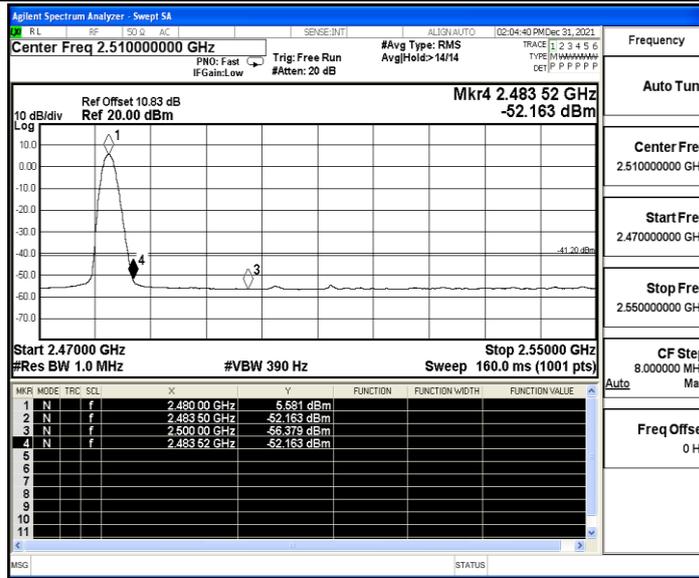
Note:

1. The Antenna Gain is compensated in the graph.
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.

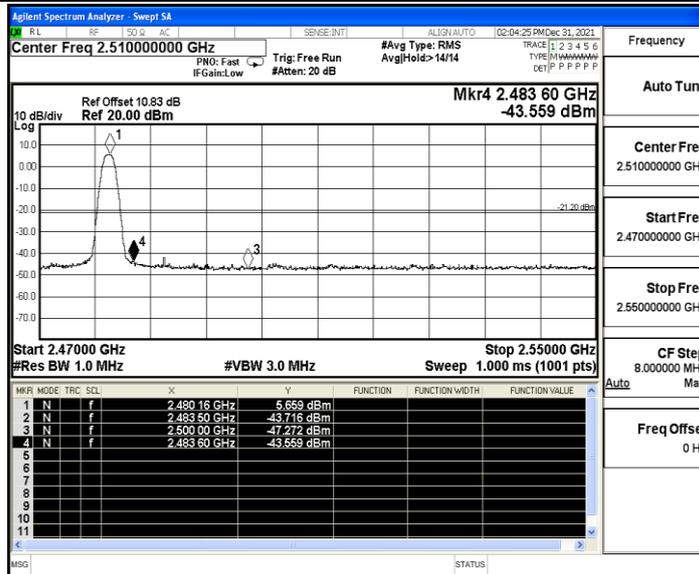


### Test Graphs

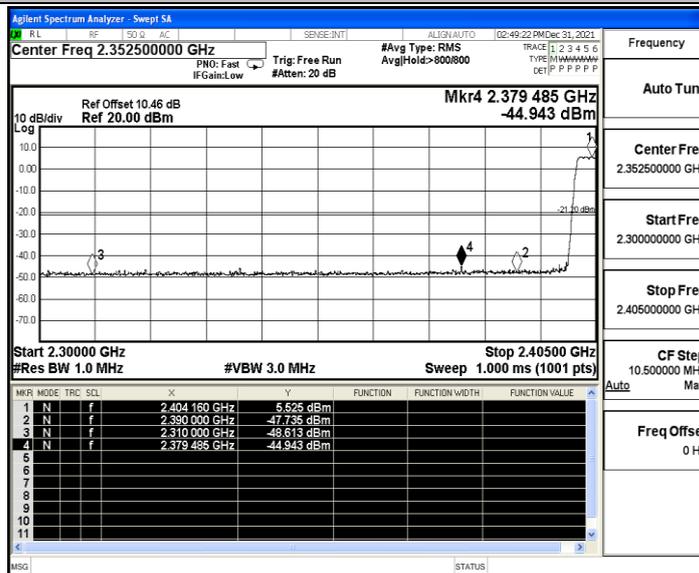




DH5\_Ant1\_High\_2480\_Peak

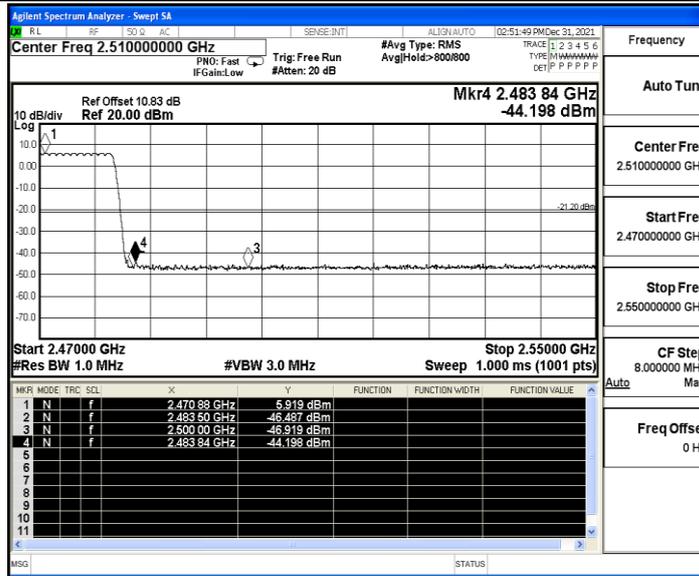


DH5\_Ant1\_Low\_Hop\_2402\_Peak

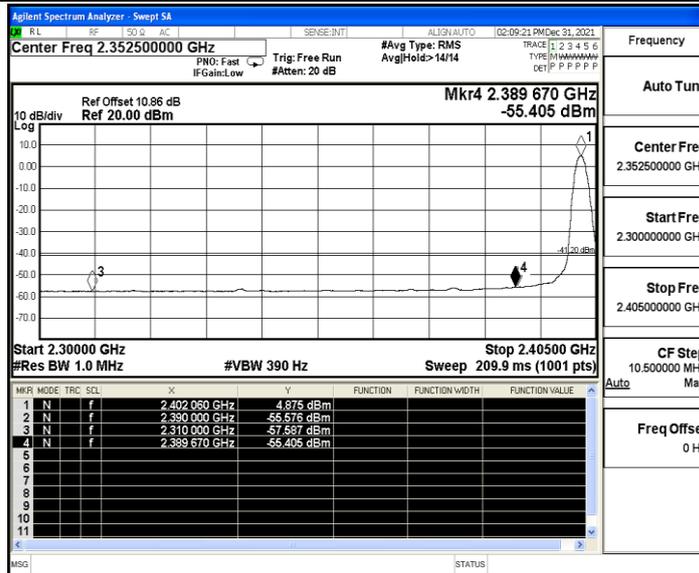




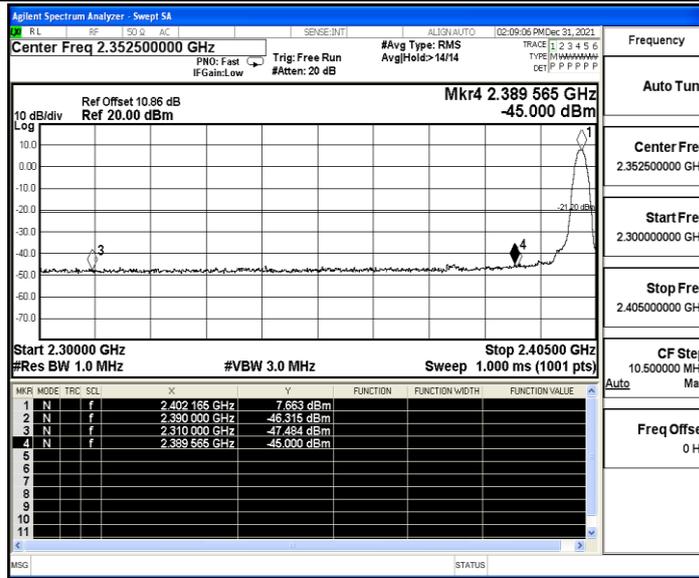
### DH5\_Ant1\_High\_Hop\_2480\_Peak



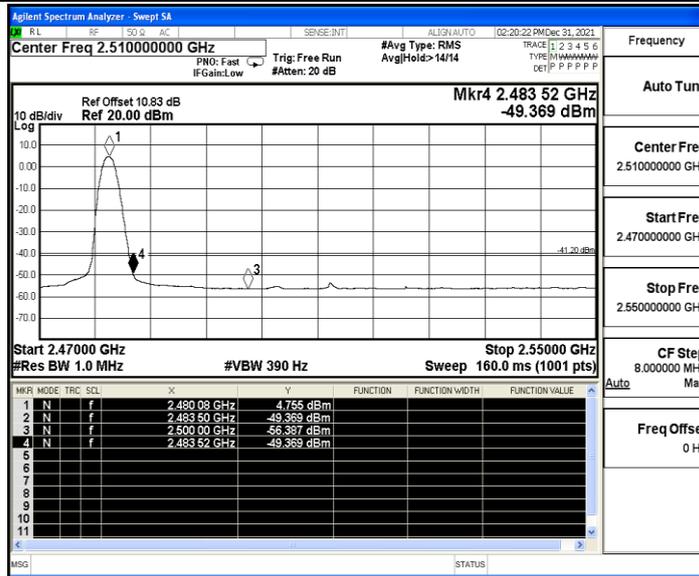
### 2DH5\_Ant1\_Low\_2402\_AV



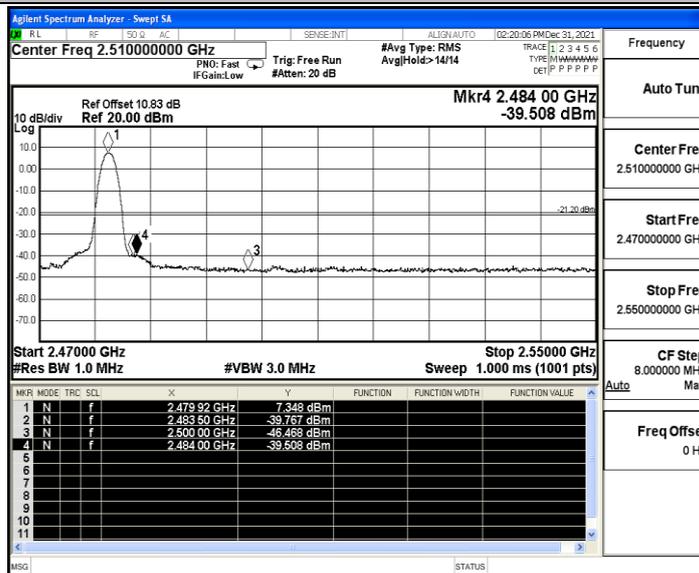
### 2DH5\_Ant1\_Low\_2402\_Peak



2DH5\_Ant1\_High\_2480\_AV

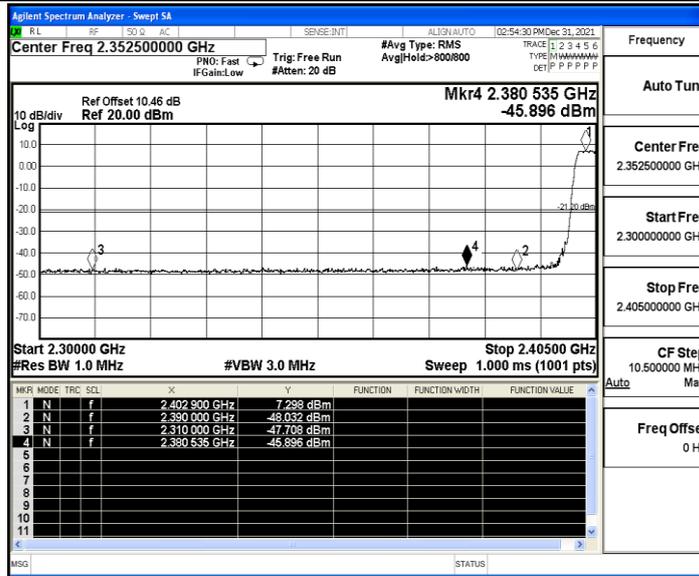


2DH5\_Ant1\_High\_2480\_Peak

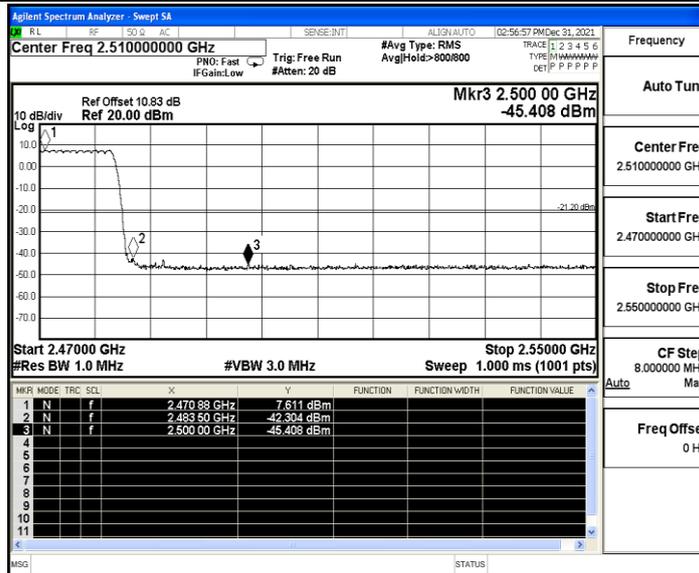




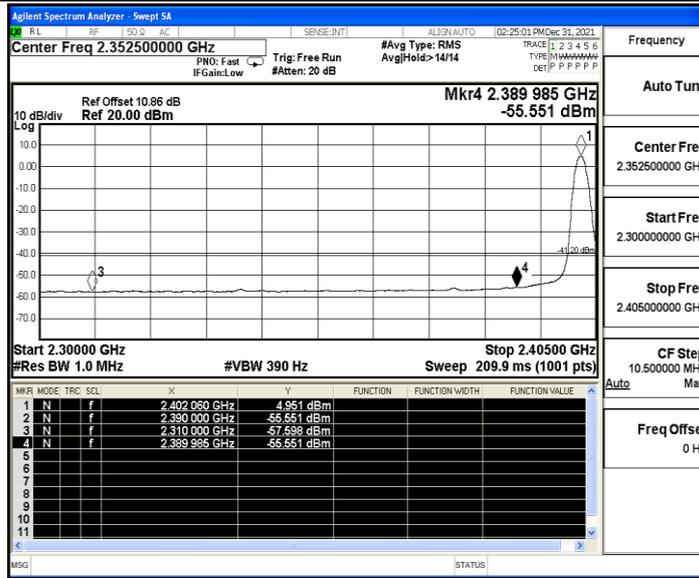
2DH5\_Ant1\_Low\_Hop\_2402\_Peak



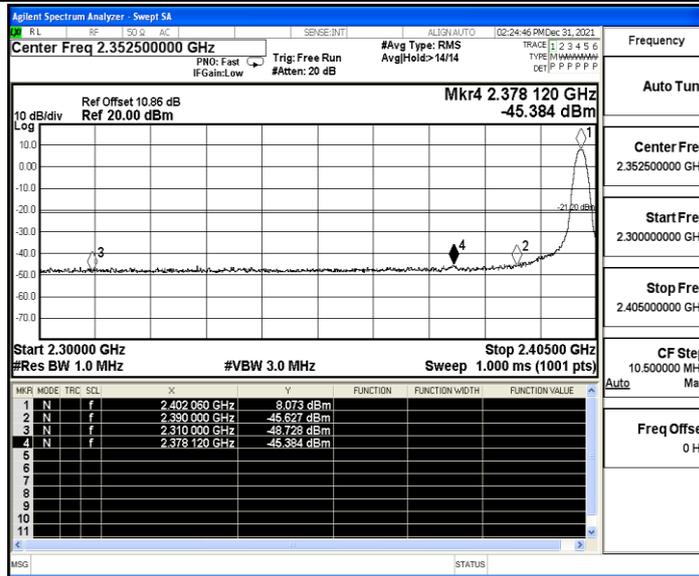
2DH5\_Ant1\_High\_Hop\_2480\_Peak



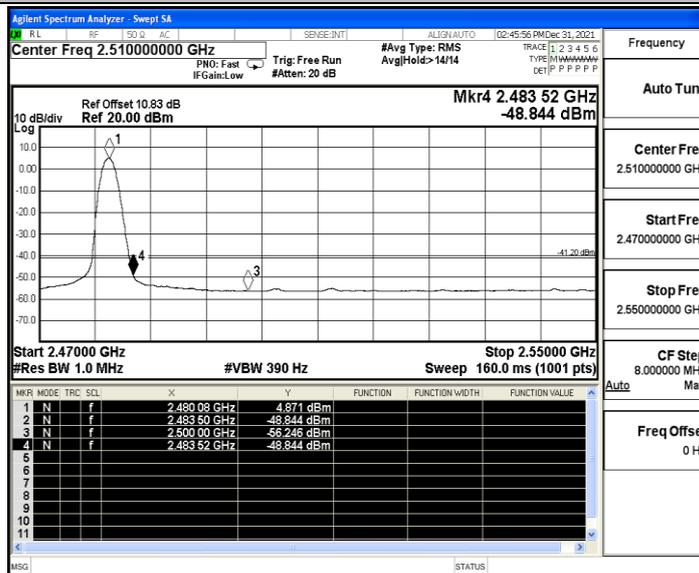
3DH5\_Ant1\_Low\_2402\_AV



3DH5\_Ant1\_Low\_2402\_Peak

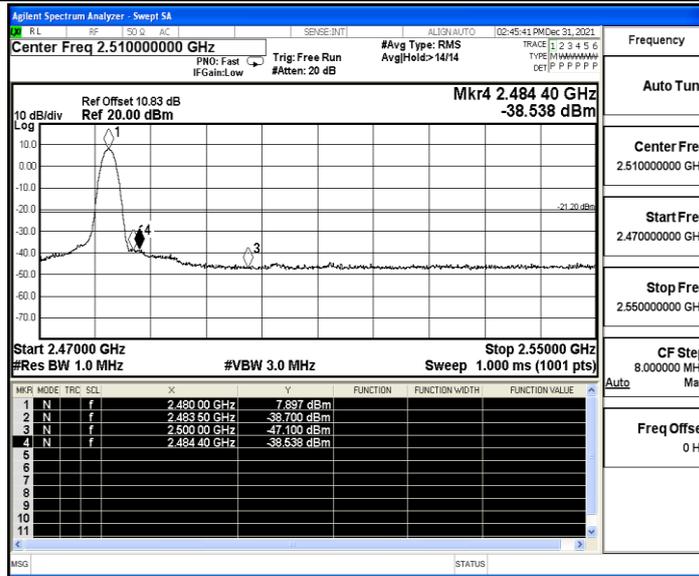


3DH5\_Ant1\_High\_2480\_AV

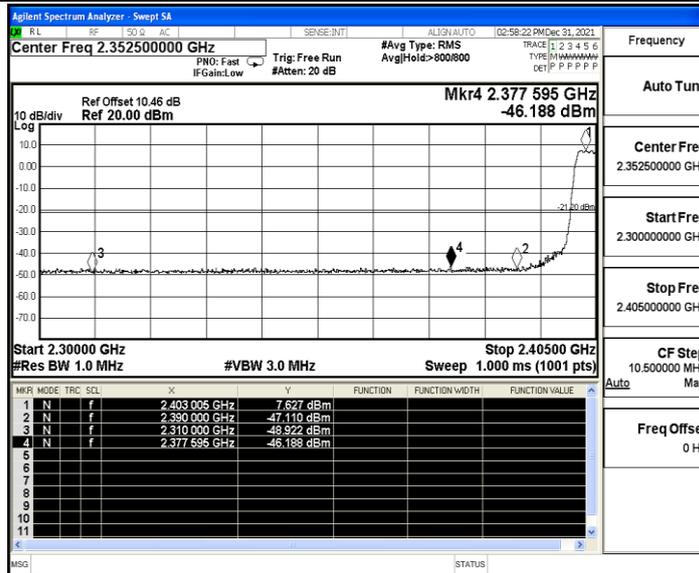




### 3DH5\_Ant1\_High\_2480\_Peak



### 3DH5\_Ant1\_Low\_Hop\_2402\_Peak



### 3DH5\_Ant1\_High\_Hop\_2480\_Peak

