

## Appendix A

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

Product Name: NucBox

Trade Mark: GMK

Test Model: KB1

FCC ID: 2AXUD-KB1

### Environmental Conditions

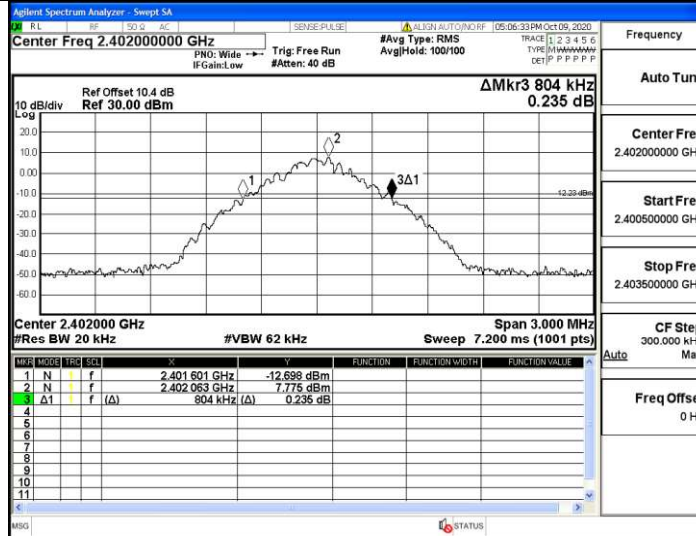
Temperature:	22.8° C
Relative Humidity:	50%
ATM Pressure:	100.0 kPa
Test Engineer:	Anna Hu
Supervised by:	Hugo Chen
NOTE	N/A

#### A.1 20 dB Bandwidth

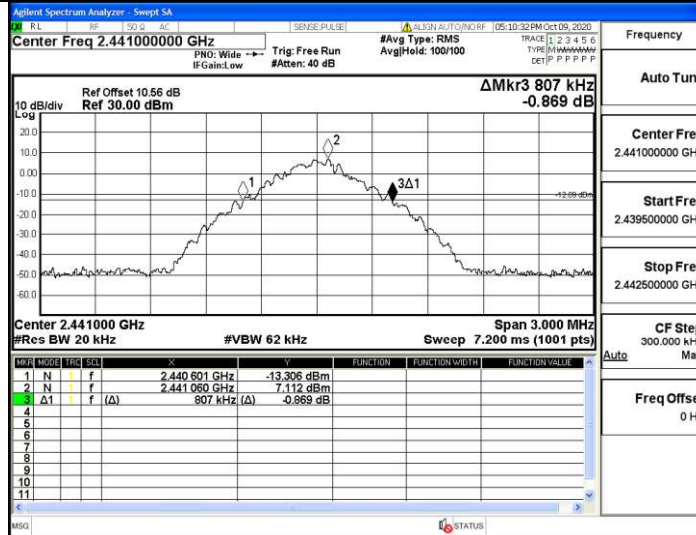
TestMode	Antenna	Channel	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.804	2401.601	2402.405	---	PASS
		2441	0.807	2440.601	2441.408	---	PASS
		2480	0.804	2479.604	2480.408	---	PASS
2DH5	Ant1	2402	1.302	2401.349	2402.651	---	PASS
		2441	1.251	2440.382	2441.633	---	PASS
		2480	1.260	2479.379	2480.639	---	PASS
3DH5	Ant1	2402	1.278	2401.355	2402.633	---	PASS
		2441	1.296	2440.352	2441.648	---	PASS
		2480	1.275	2479.355	2480.630	---	PASS

### Test Graph

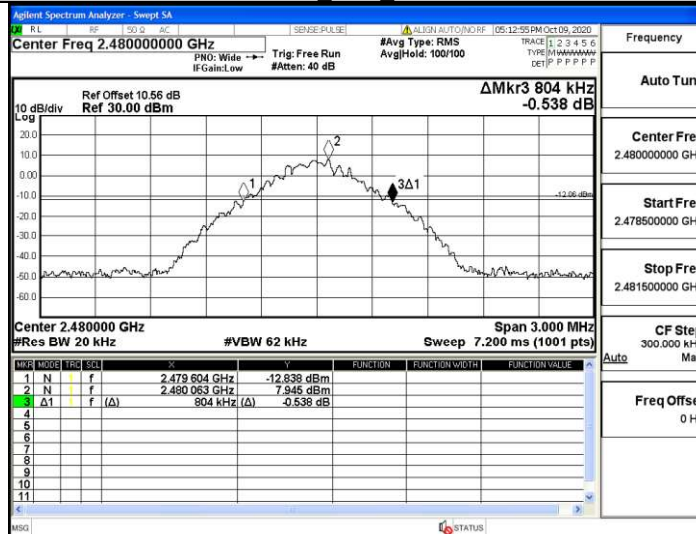
#### DH5 Ant1 2402



#### DH5 Ant1 2441



#### DH5 Ant1 2480

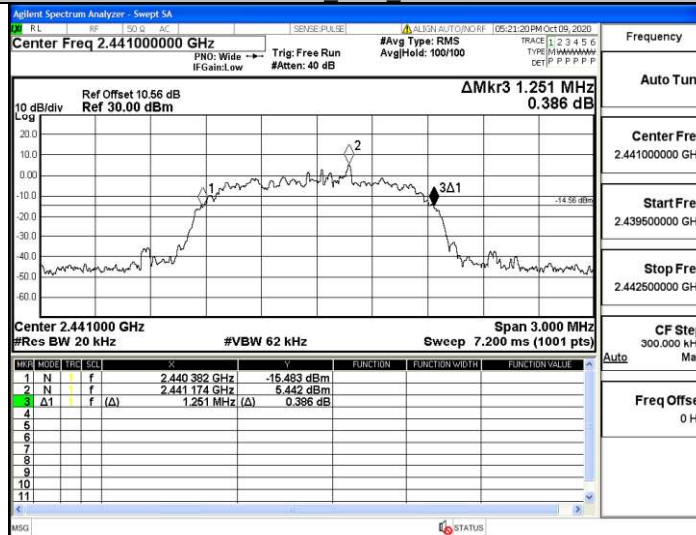


2DH5 Ant1\_2402



Frequency	Auto Tune
Center Freq	2.402000000 GHz
Start Freq	2.400500000 GHz
Stop Freq	2.403500000 GHz
CF Step	300.000 kHz
Freq Offset	0 Hz

2DH5 Ant1\_2441



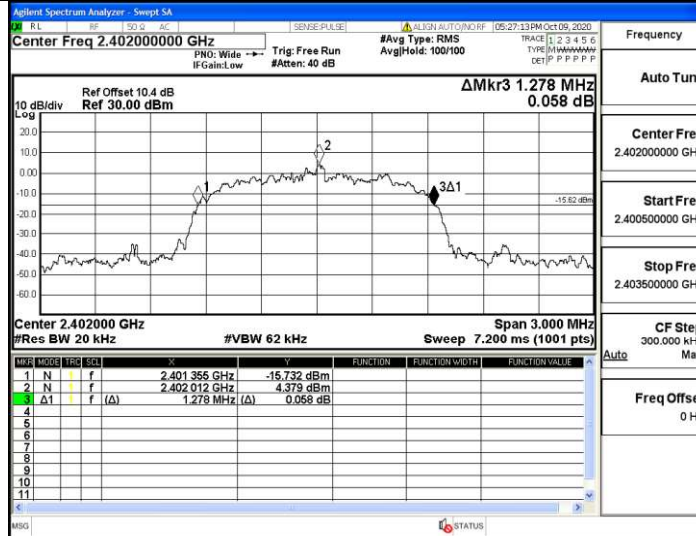
Frequency	Auto Tune
Center Freq	2.441000000 GHz
Start Freq	2.439500000 GHz
Stop Freq	2.442500000 GHz
CF Step	300.000 kHz
Freq Offset	0 Hz

2DH5 Ant1\_2480



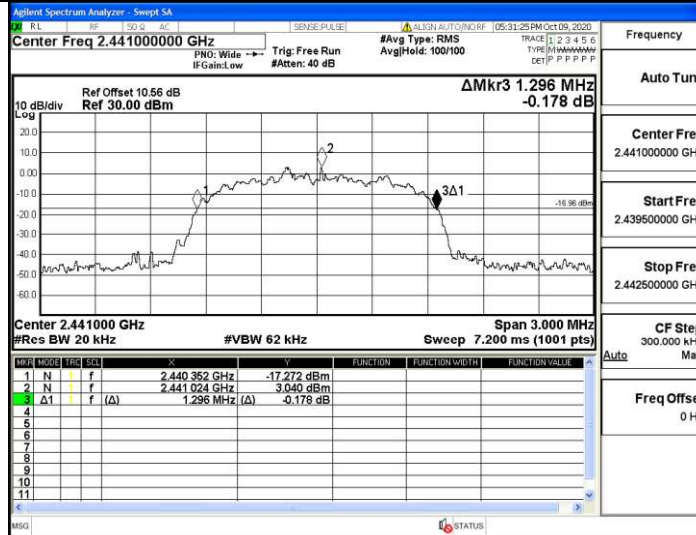
Frequency	Auto Tune
Center Freq	2.480000000 GHz
Start Freq	2.478500000 GHz
Stop Freq	2.481500000 GHz
CF Step	300.000 kHz
Freq Offset	0 Hz

3DH5 Ant1\_2402



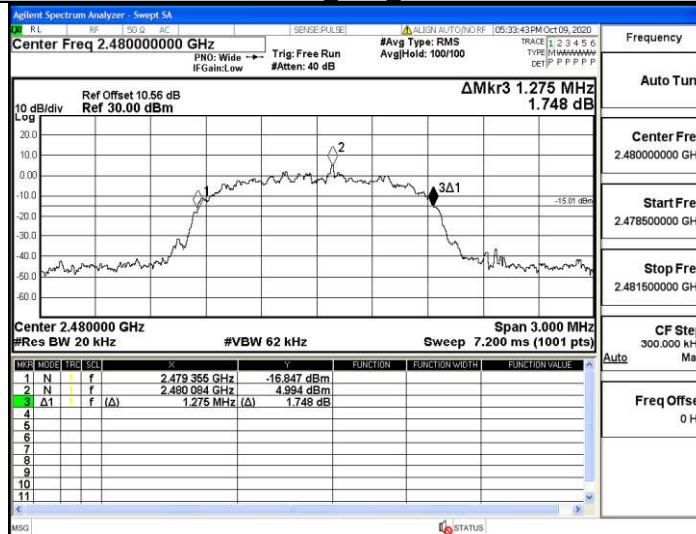
Frequency	Auto Tune
Center Freq	2.402000000 GHz
Start Freq	2.400500000 GHz
Stop Freq	2.403500000 GHz
CF Step	300.000 kHz
Freq Offset	0 Hz

3DH5 Ant1\_2441



Frequency	Auto Tune
Center Freq	2.441000000 GHz
Start Freq	2.439500000 GHz
Stop Freq	2.442500000 GHz
CF Step	300.000 kHz
Freq Offset	0 Hz

3DH5 Ant1\_2480

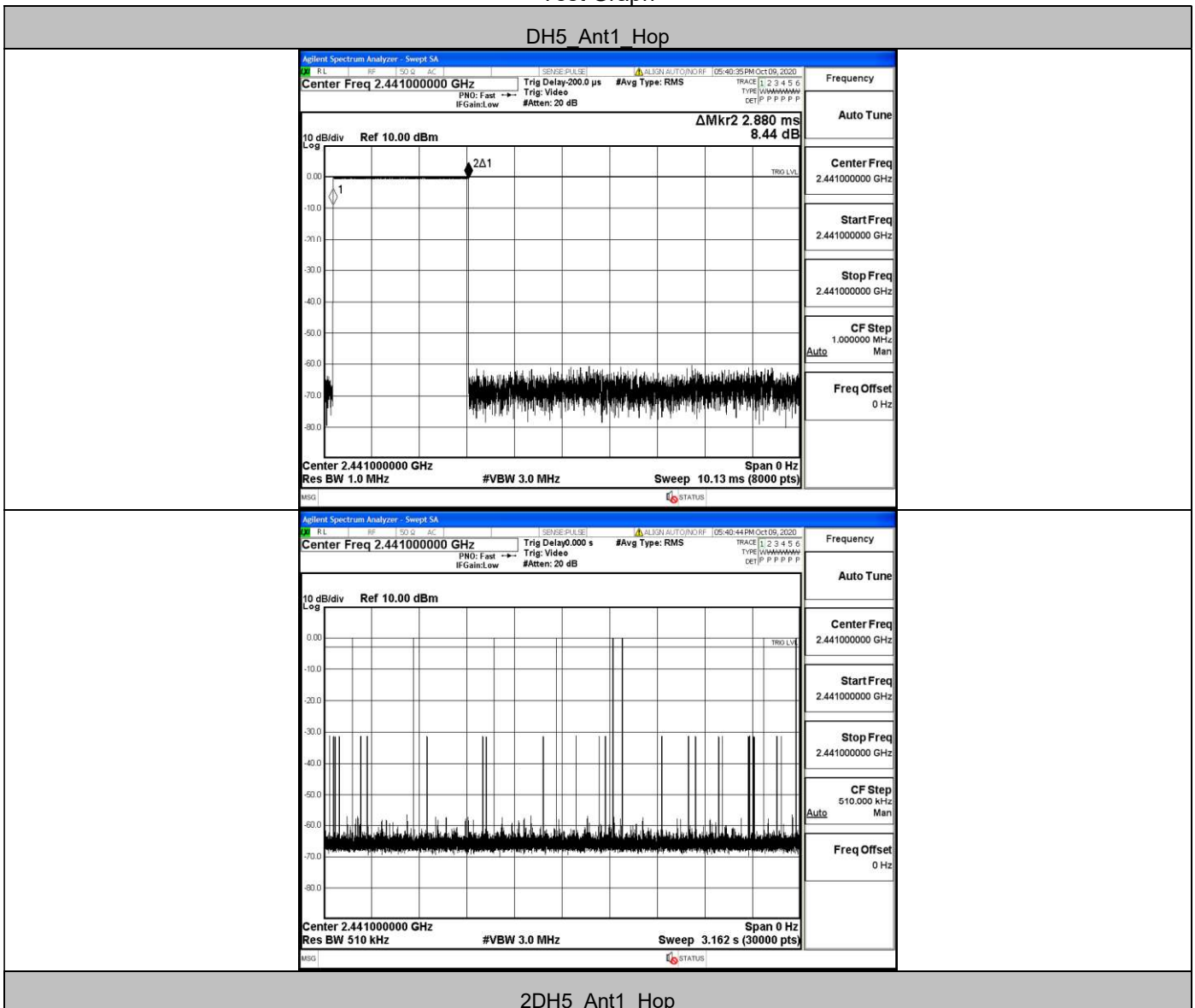


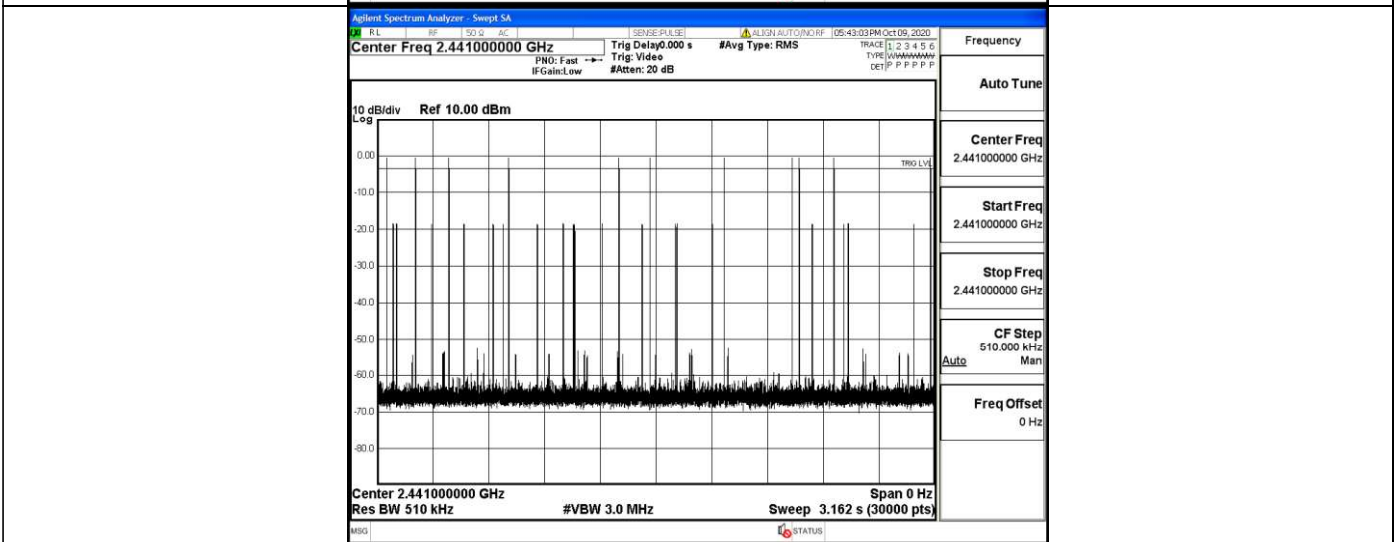
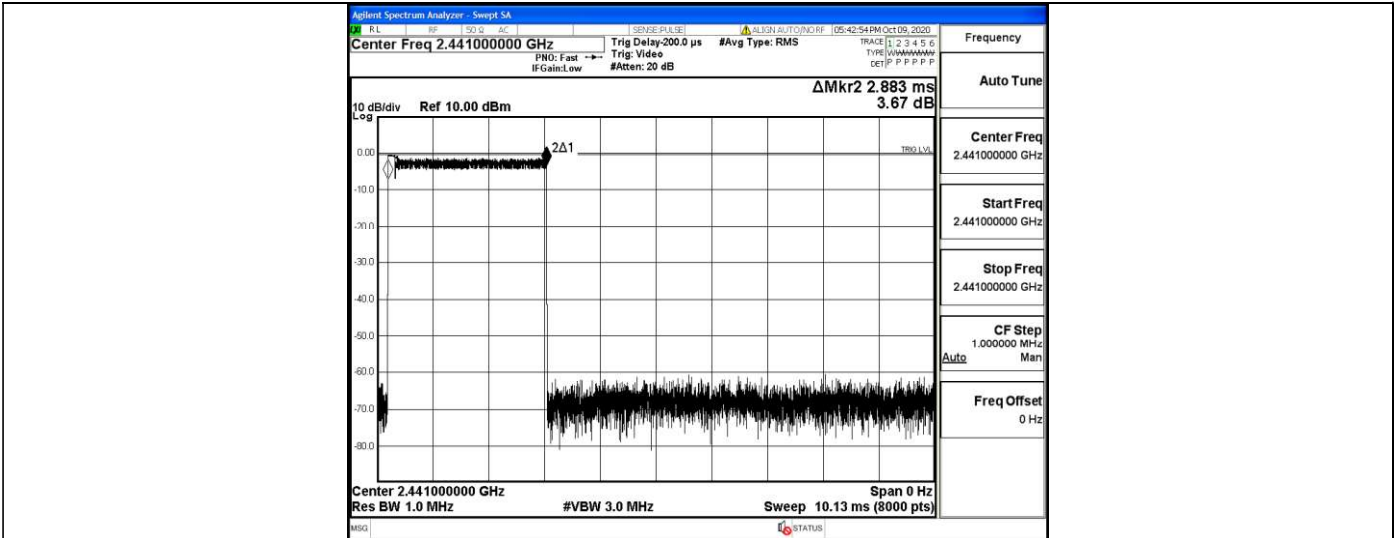
Frequency	Auto Tune
Center Freq	2.480000000 GHz
Start Freq	2.478500000 GHz
Stop Freq	2.481500000 GHz
CF Step	300.000 kHz
Freq Offset	0 Hz

**A.2 Dwell Time**

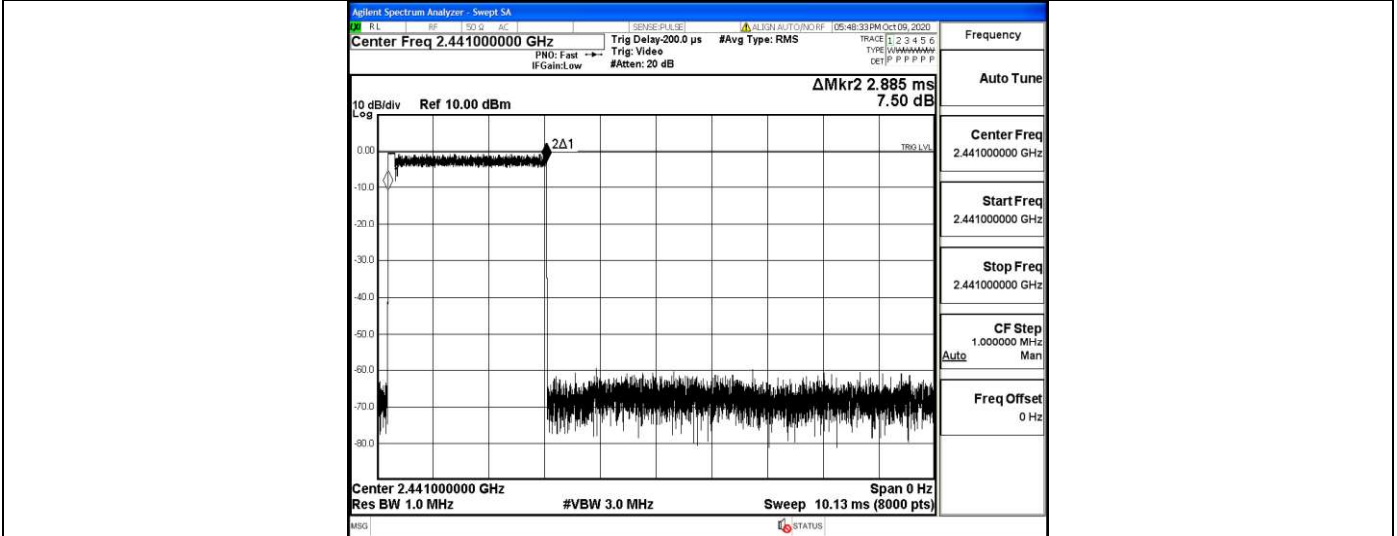
TestMode	Antenna	Channel	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH5	Ant1	Hop	2.88	90	0.259	<=0.4	PASS
2DH5	Ant1	Hop	2.88	120	0.346	<=0.4	PASS
3DH5	Ant1	Hop	2.89	100	0.289	<=0.4	PASS

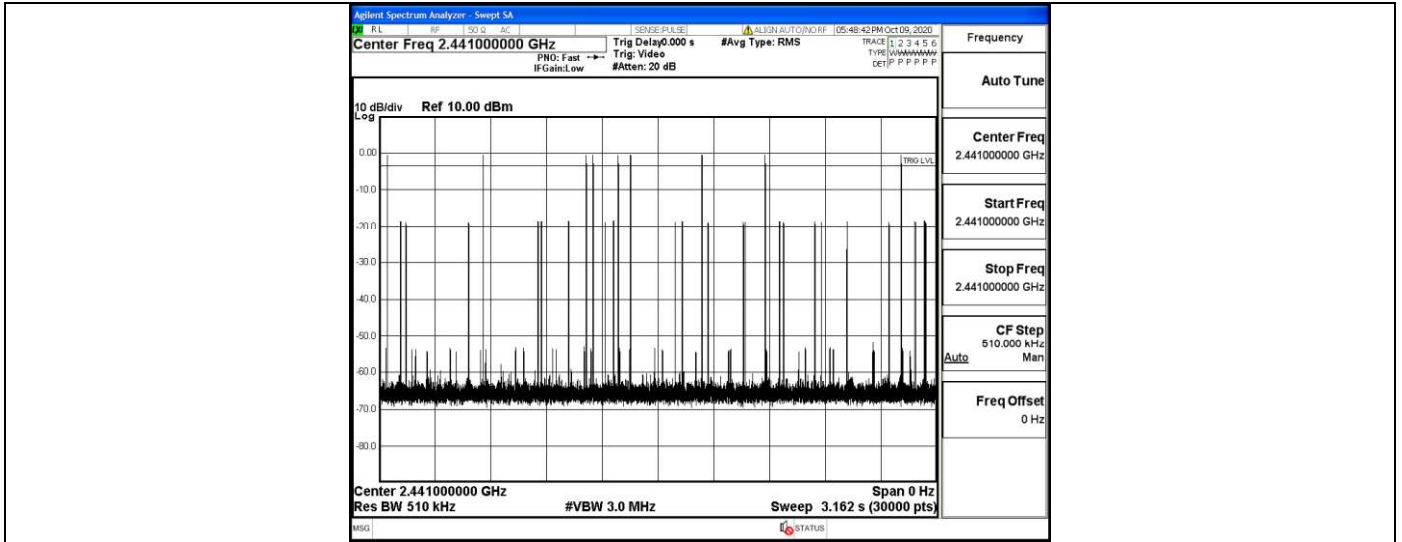
Test Graph





3DH5 Ant1 Hop





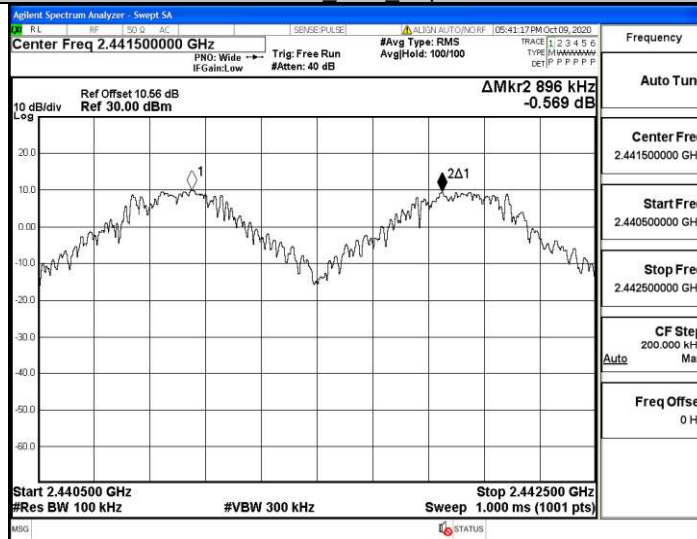
### A.3 Carrier Frequency Separation

TestMode	Antenna	Channel	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	0.896	$\geq 0.807$	PASS
2DH5	Ant1	Hop	1.006	$\geq 0.868$	PASS
3DH5	Ant1	Hop	1.148	$\geq 0.864$	PASS

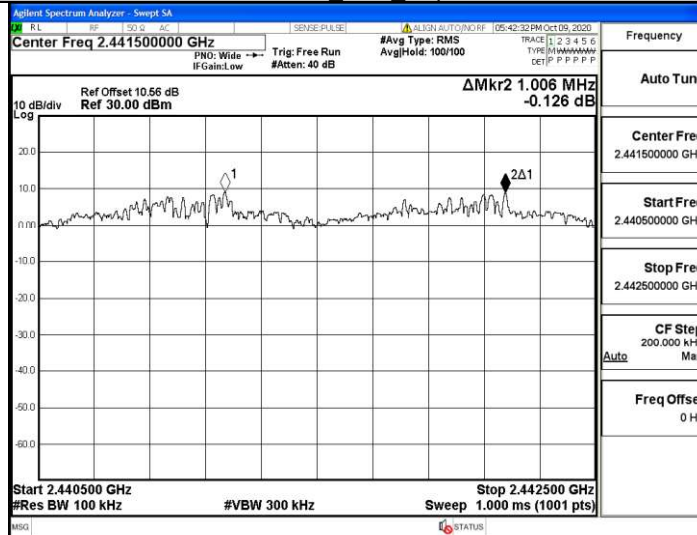


### Test Graph

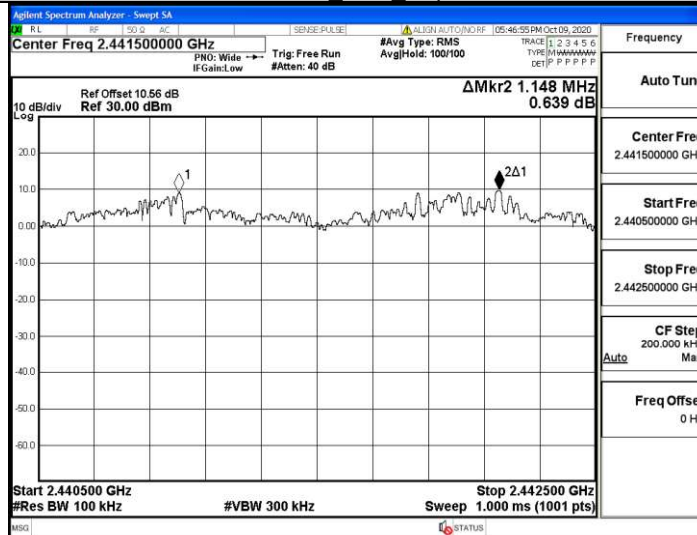
DH5\_Ant1\_Hop



2DH5\_Ant1\_Hop



3DH5\_Ant1\_Hop

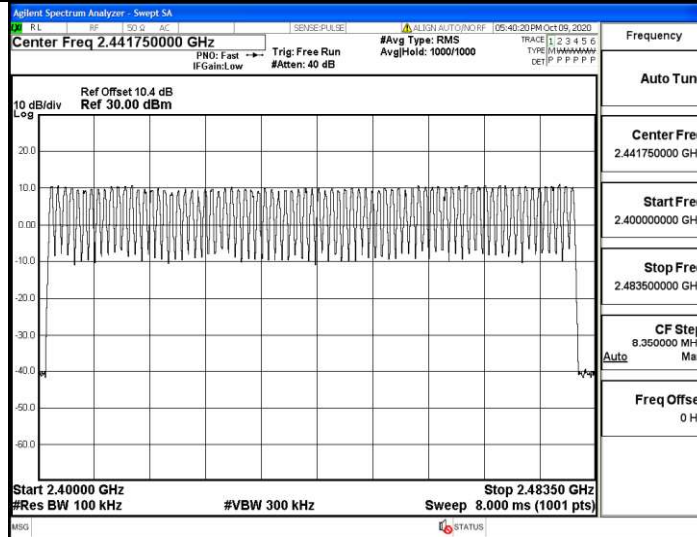


**A.4 Hopping Channel Number**

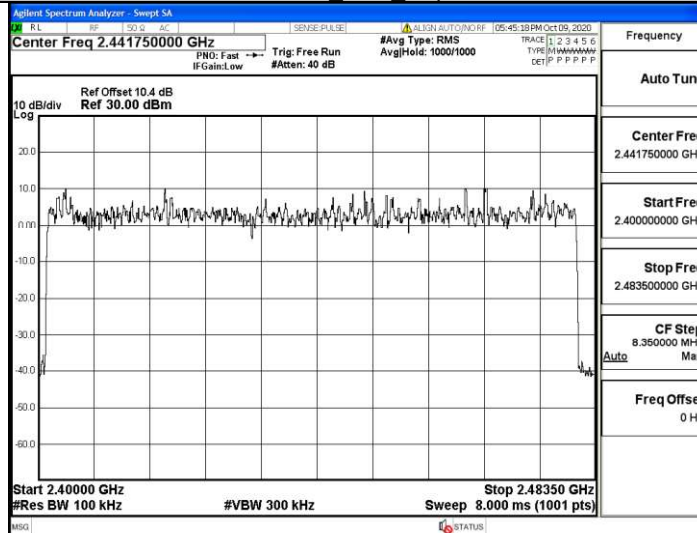
TestMode	Antenna	Channel	Result[Num]	Limit[Num]	Verdict
DH5	Ant1	Hop	79	>=15	PASS
2DH5	Ant1	Hop	79	>=15	PASS
3DH5	Ant1	Hop	79	>=15	PASS

Test Graph

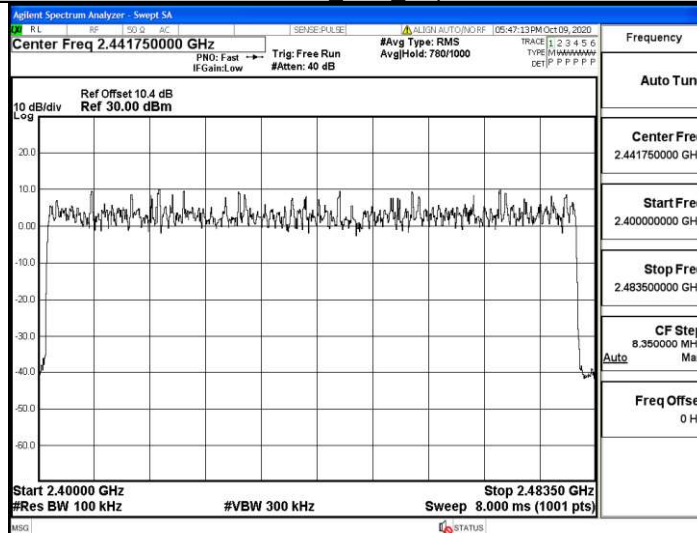
DH5\_Ant1\_Hop



2DH5\_Ant1\_Hop



3DH5\_Ant1\_Hop

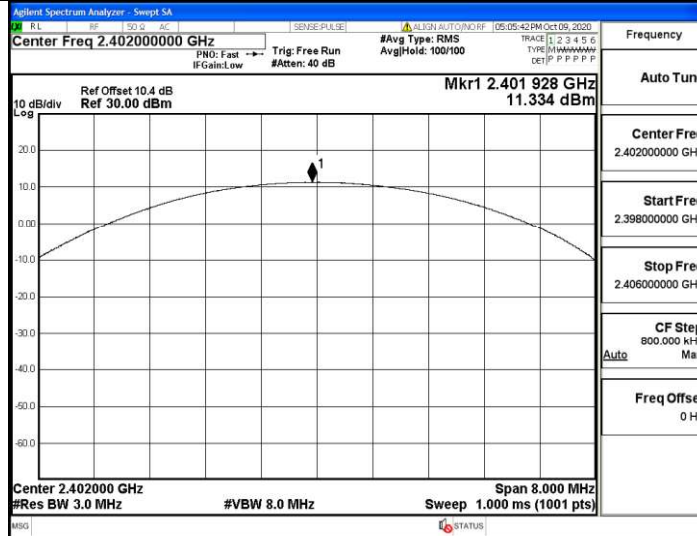


**A.5 Conducted Peak Output Power**

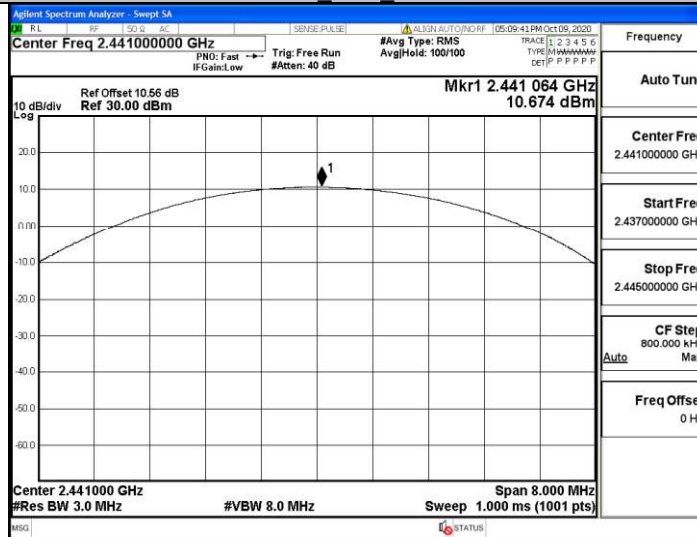
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
DH5	Ant1	2402	11.33	<=30	PASS
		2441	10.67	<=30	PASS
		2480	11.54	<=30	PASS
2DH5	Ant1	2402	10.62	<=30	PASS
		2441	10.1	<=30	PASS
		2480	11.26	<=30	PASS
3DH5	Ant1	2402	10.64	<=30	PASS
		2441	10.12	<=30	PASS
		2480	11.25	<=30	PASS

Test Graph

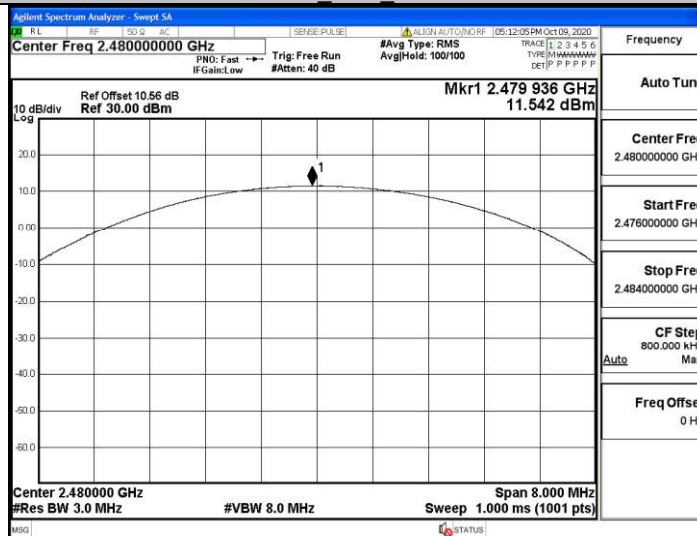
DH5 Ant1 2402



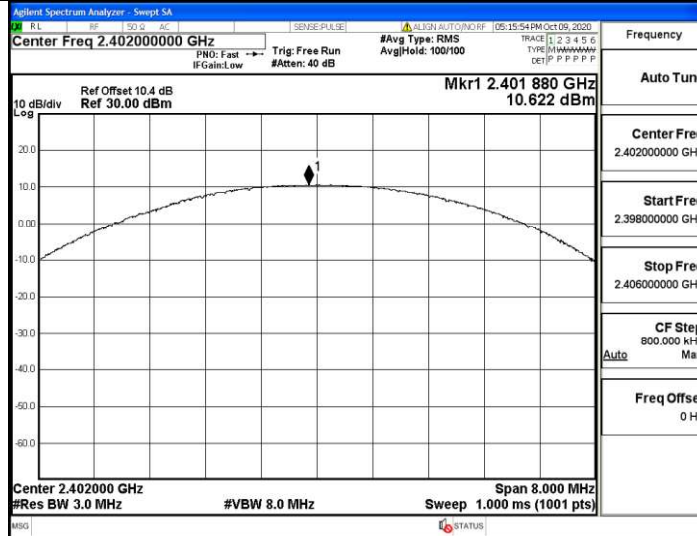
DH5 Ant1 2441



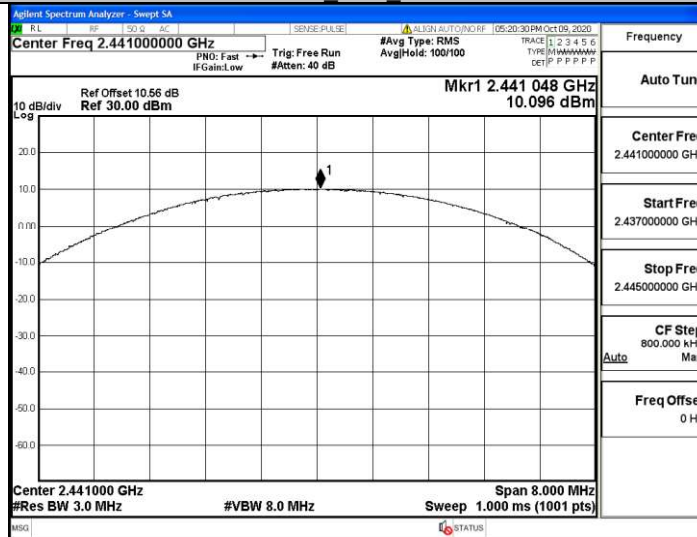
DH5 Ant1 2480



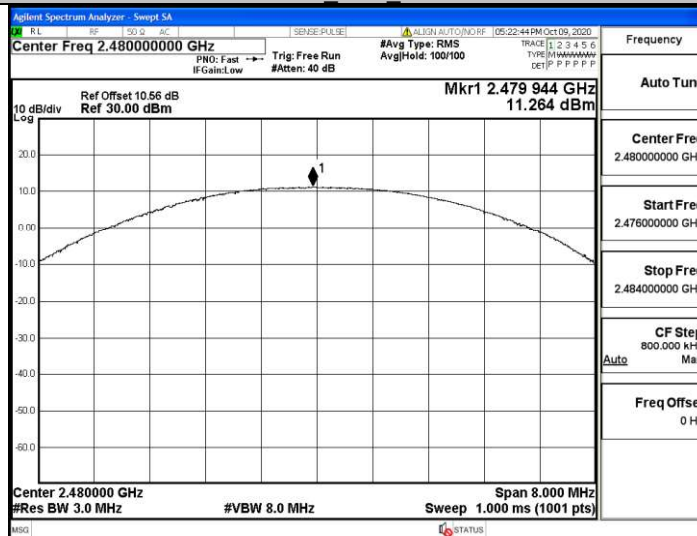
2DH5 Ant1\_2402



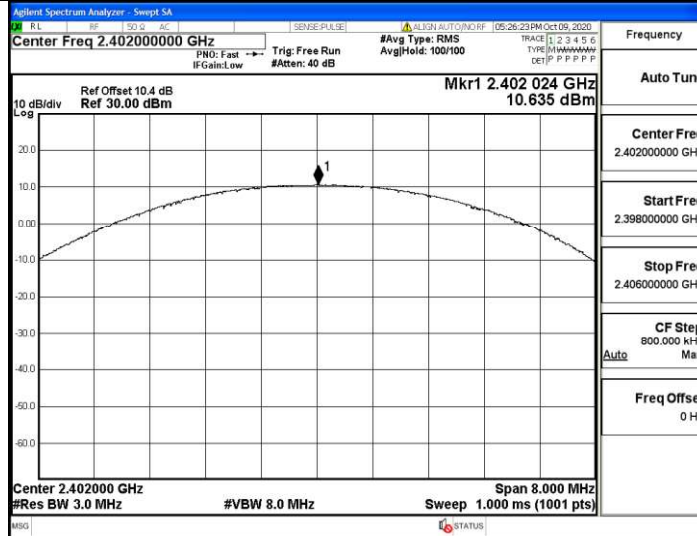
2DH5 Ant1\_2441



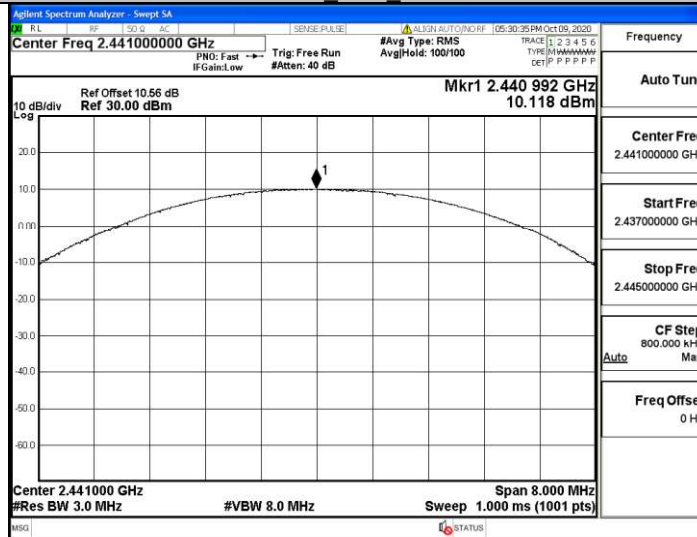
2DH5 Ant1\_2480



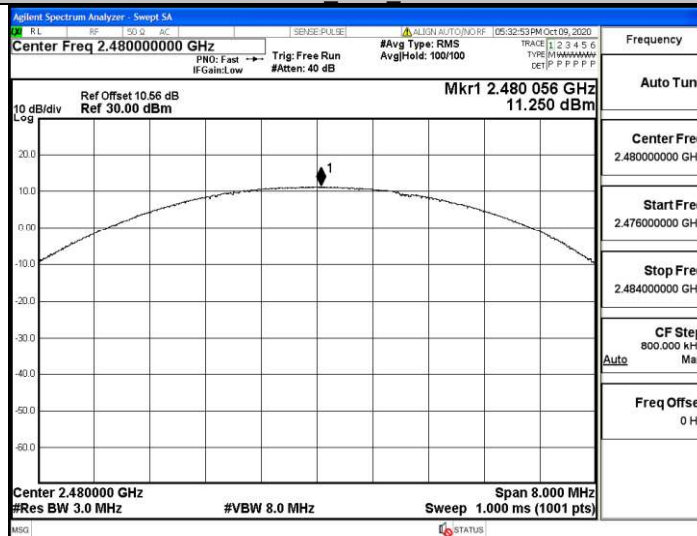
3DH5 Ant1\_2402



3DH5 Ant1\_2441



3DH5 Ant1\_2480



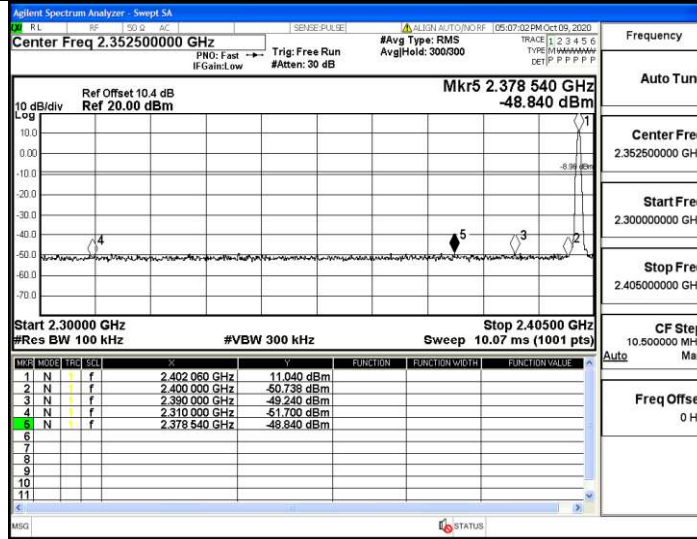
**A.6 Band-edge for RF Conducted Emissions**

TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	11.04	-48.84	<=-8.96	PASS
		High	2480	11.14	-47.74	<=-8.86	PASS
		Low	Hop_2402	10.98	-49.35	<=-9.02	PASS
		High	Hop_2480	11.18	-47.4	<=-8.82	PASS
2DH5	Ant1	Low	2402	9.86	-48.08	<=-10.14	PASS
		High	2480	10.83	-47.81	<=-9.18	PASS
		Low	Hop_2402	4.79	-48.99	<=-15.21	PASS
		High	Hop_2480	6.01	-47.61	<=-13.99	PASS
3DH5	Ant1	Low	2402	10.02	-48.27	<=-9.98	PASS
		High	2480	10.97	-47.01	<=-9.03	PASS
		Low	Hop_2402	5.44	-48.14	<=-14.56	PASS
		High	Hop_2480	10.01	-47.86	<=-9.99	PASS

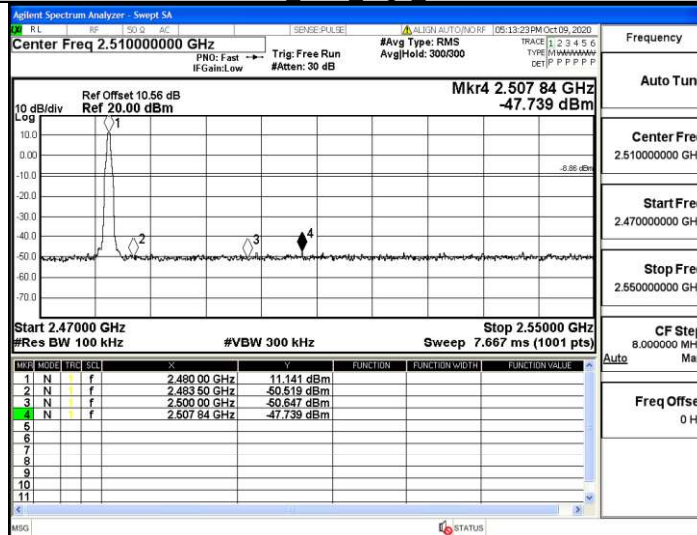


### Test Graph

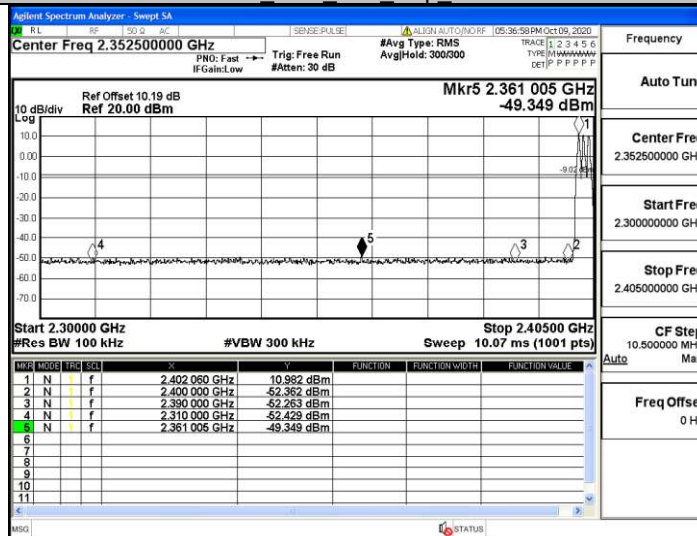
#### DH5\_Ant1\_Low\_2402



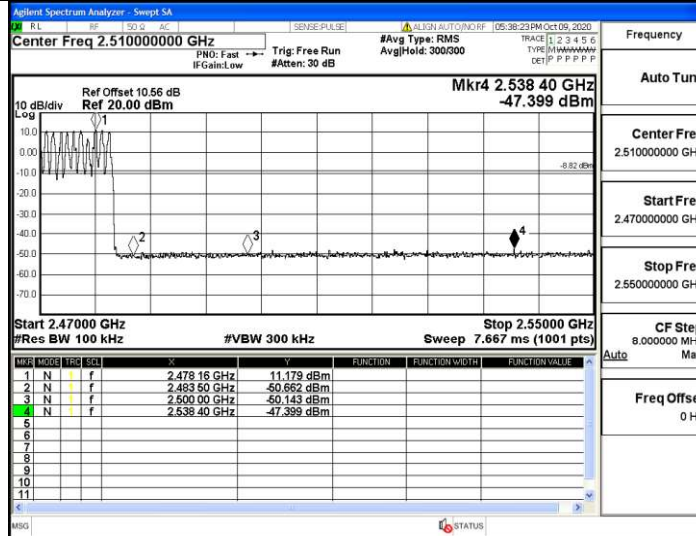
#### DH5\_Ant1\_High\_2480



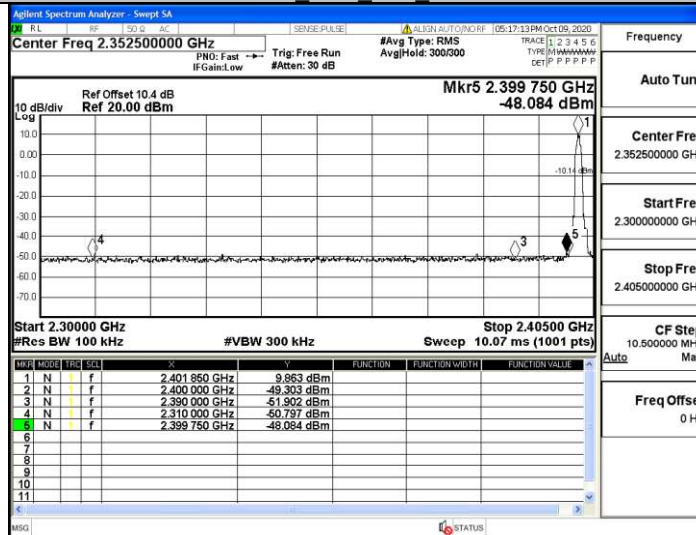
#### DH5\_Ant1\_Low\_Hop\_2402



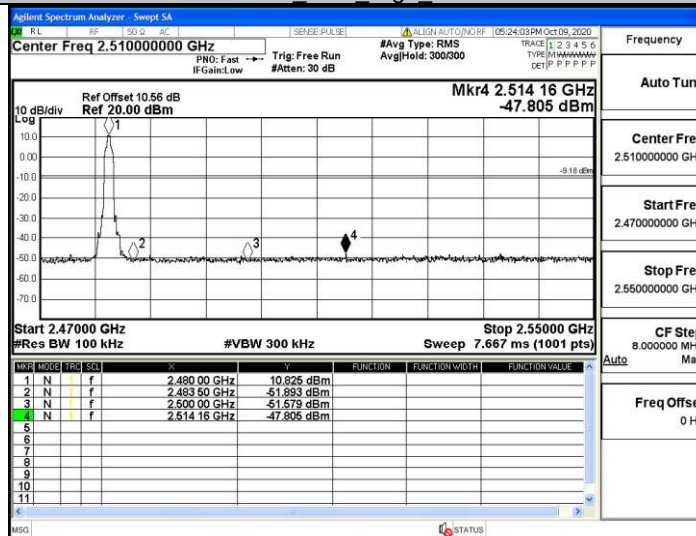
DH5 Ant1 High Hop 2480



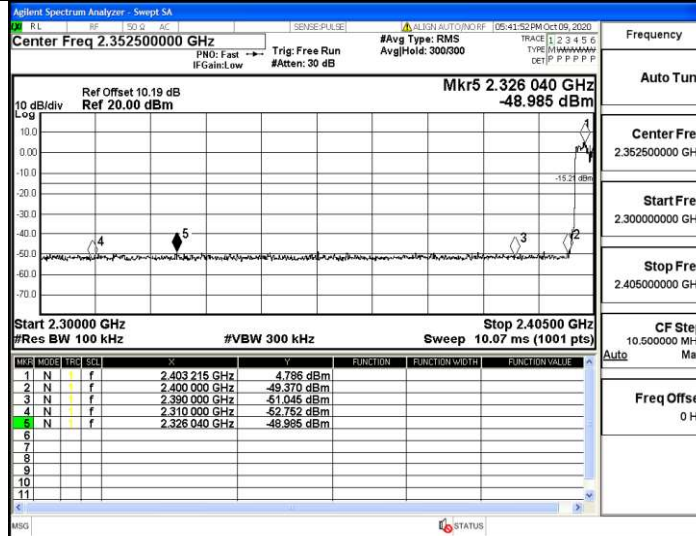
2DH5 Ant1 Low 2402



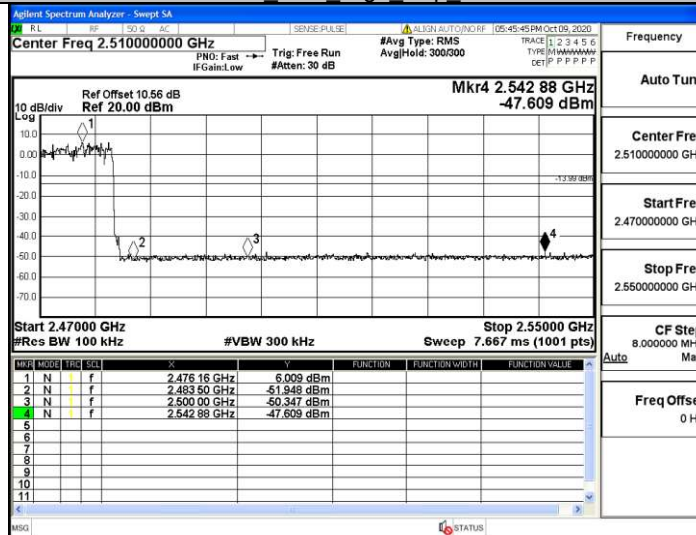
2DH5 Ant1 High 2480



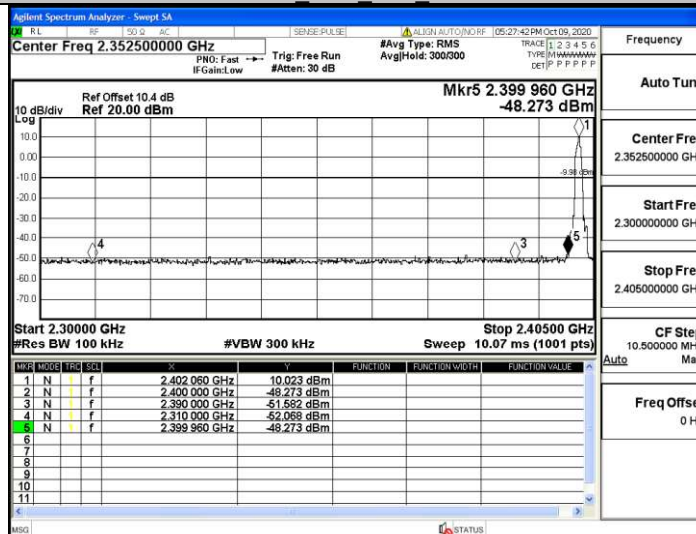
2DH5 Ant1 Low Hop 2402



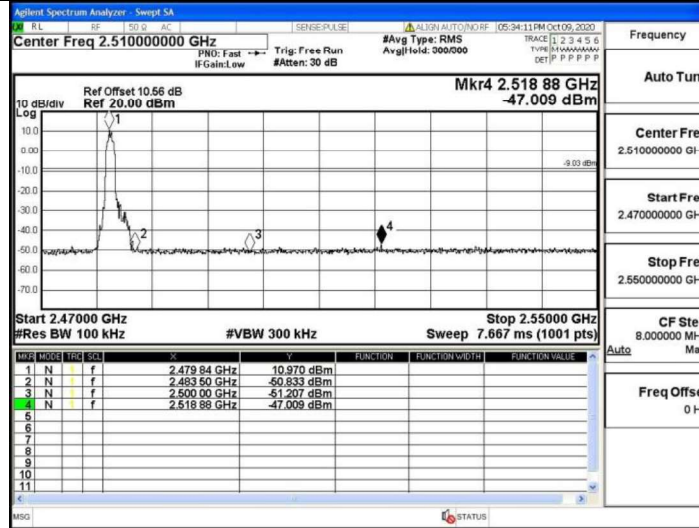
2DH5 Ant1 High Hop 2480



3DH5 Ant1 Low 2402

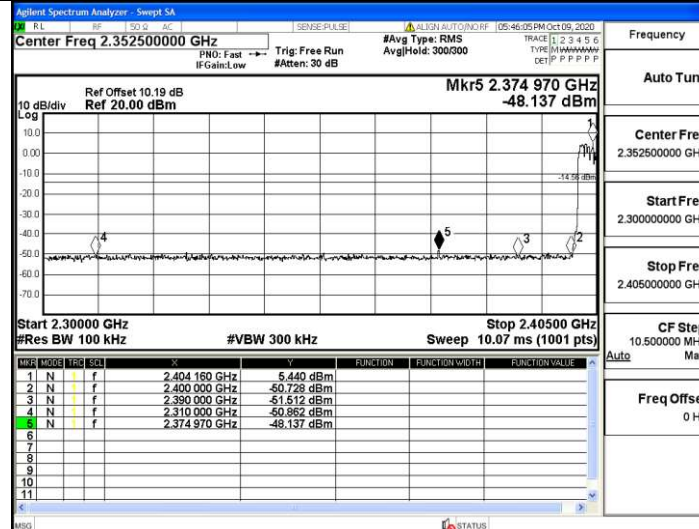


3DH5 Ant1 High 2480



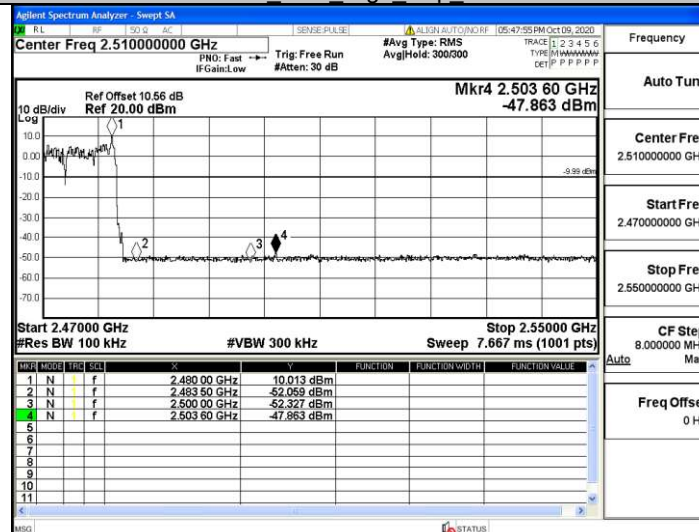
Frequency	Auto Tune
Center Freq	2.51000000 GHz
Start Freq	2.47000000 GHz
Stop Freq	2.55000000 GHz
CF Step	8.000000 MHz
Freq Offset	0 Hz

3DH5 Ant1 Low Hop 2402



Frequency	Auto Tune
Center Freq	2.35250000 GHz
Start Freq	2.30000000 GHz
Stop Freq	2.40500000 GHz
CF Step	10.500000 MHz
Freq Offset	0 Hz

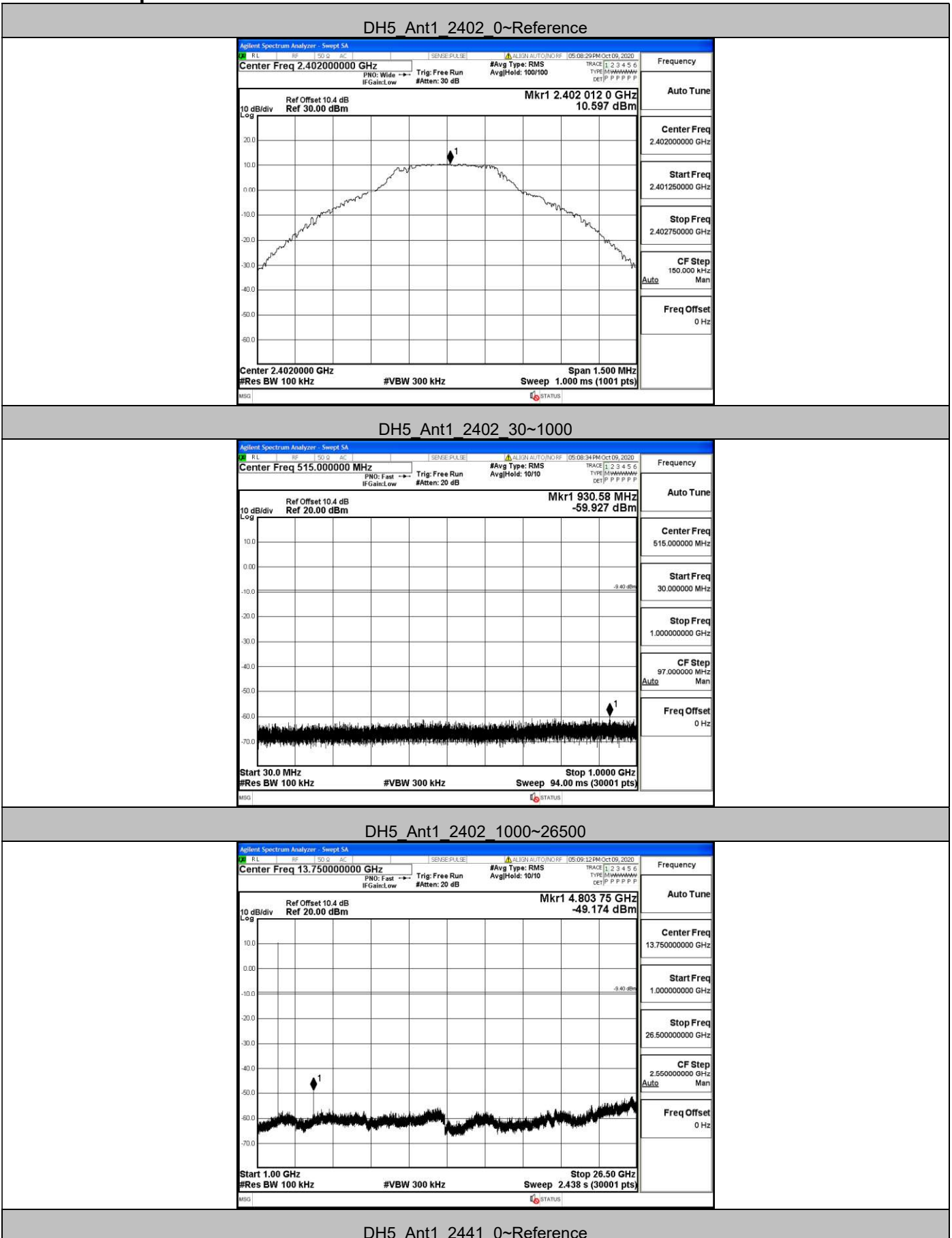
3DH5 Ant1 High Hop 2480



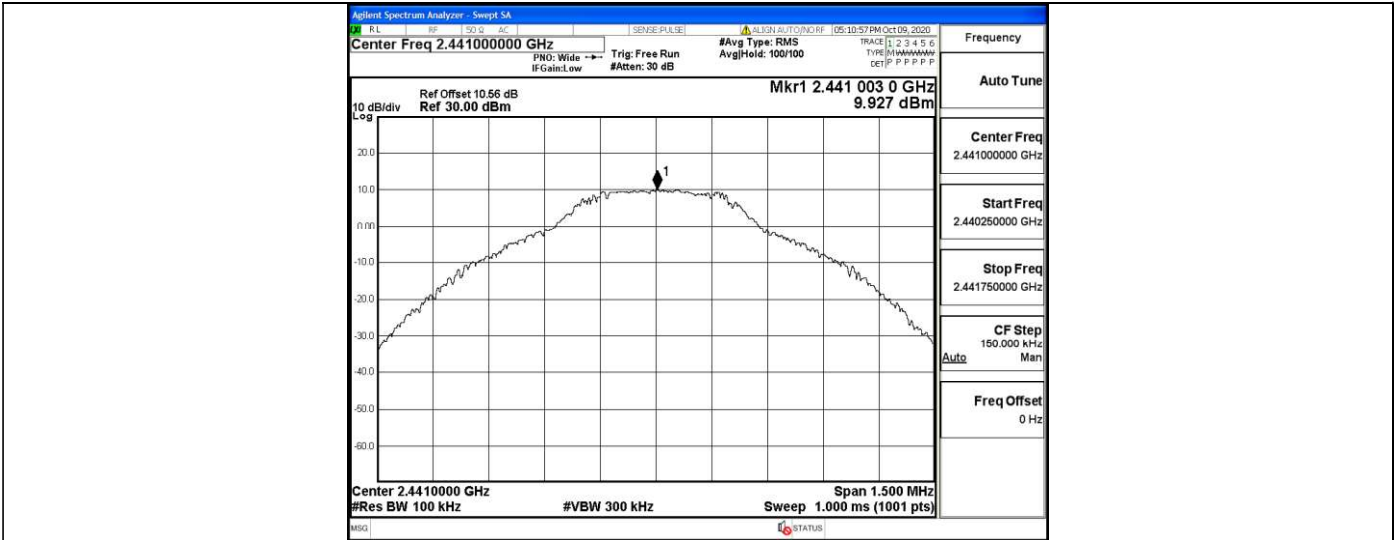
Frequency	Auto Tune
Center Freq	2.51000000 GHz
Start Freq	2.47000000 GHz
Stop Freq	2.55000000 GHz
CF Step	8.000000 MHz
Freq Offset	0 Hz

### A.7 RF Conducted Spurious Emissions

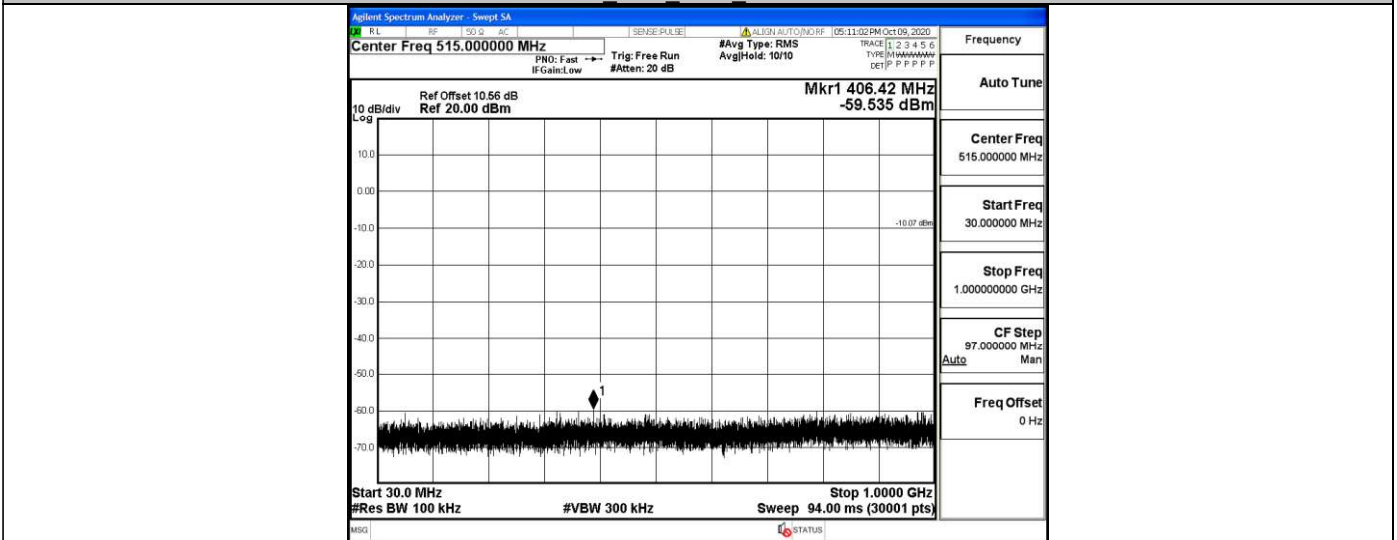
#### Test Graph



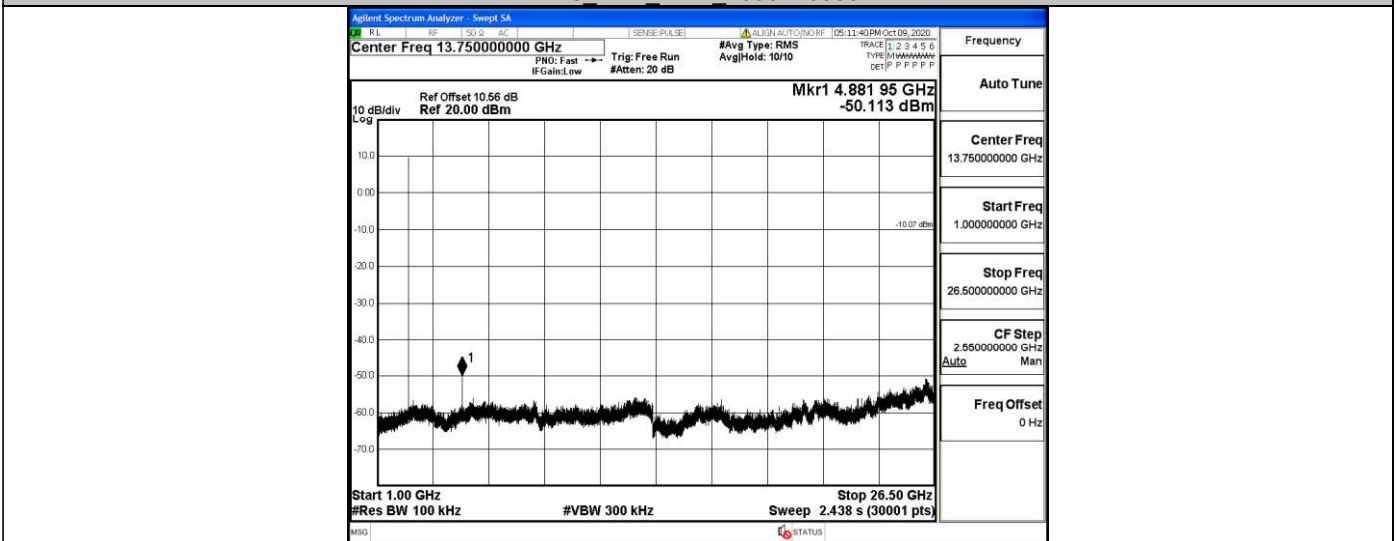
DH5 Ant1 2441 0~Reference



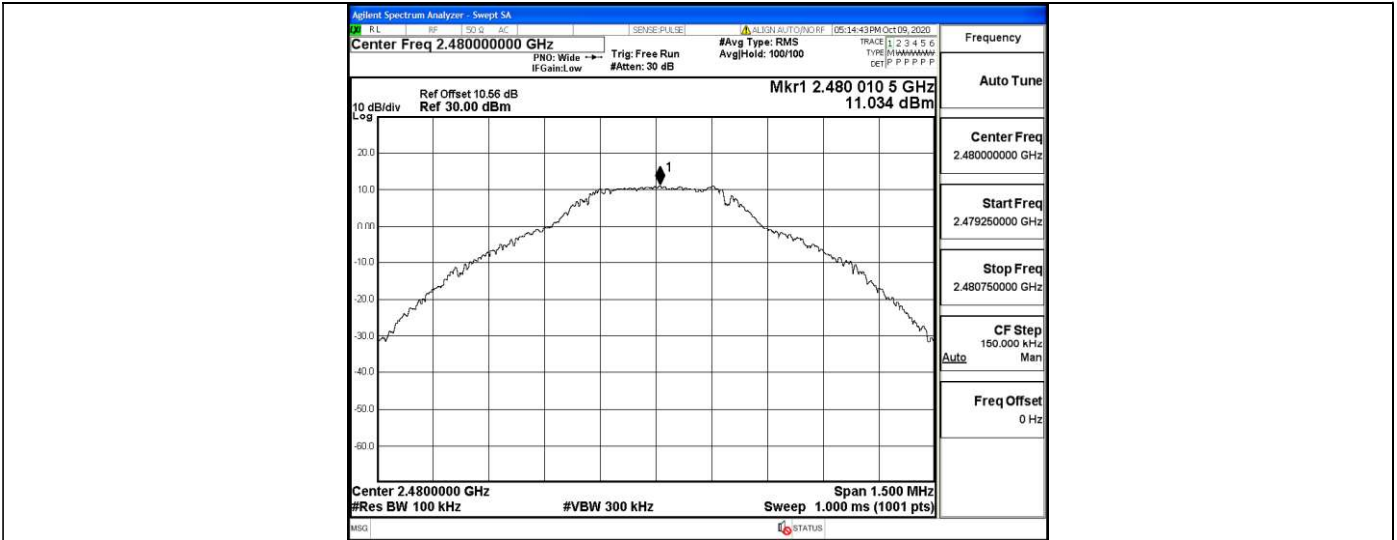
DH5 Ant1 2441 30~1000



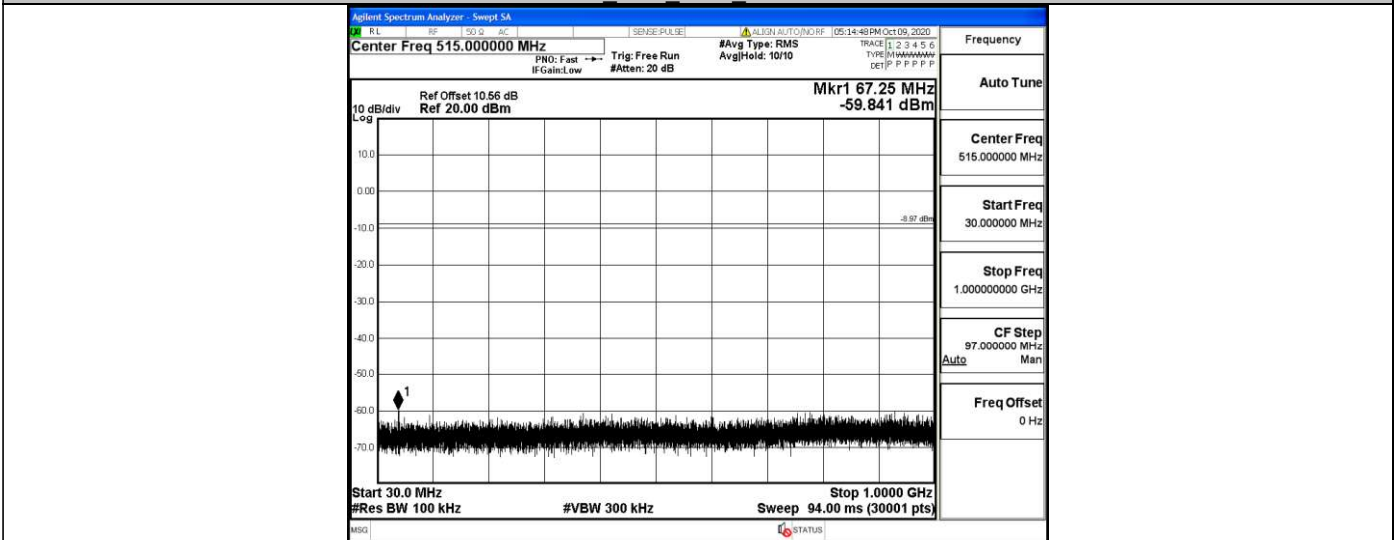
DH5 Ant1 2441 1000~26500



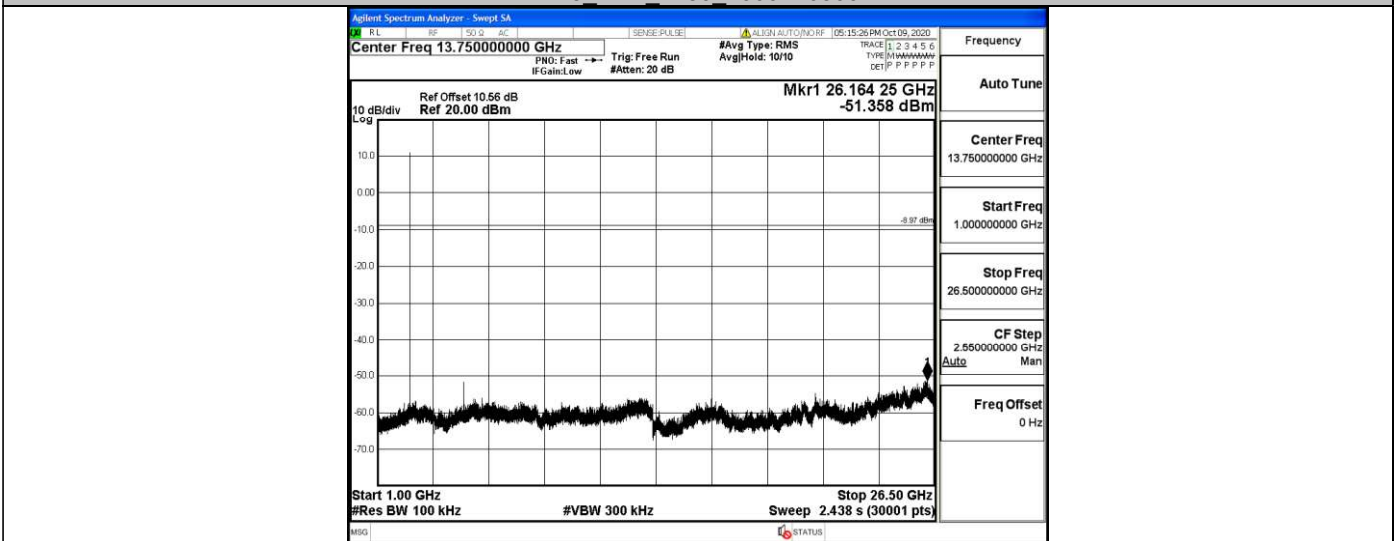
DH5 Ant1 2480 0~Reference



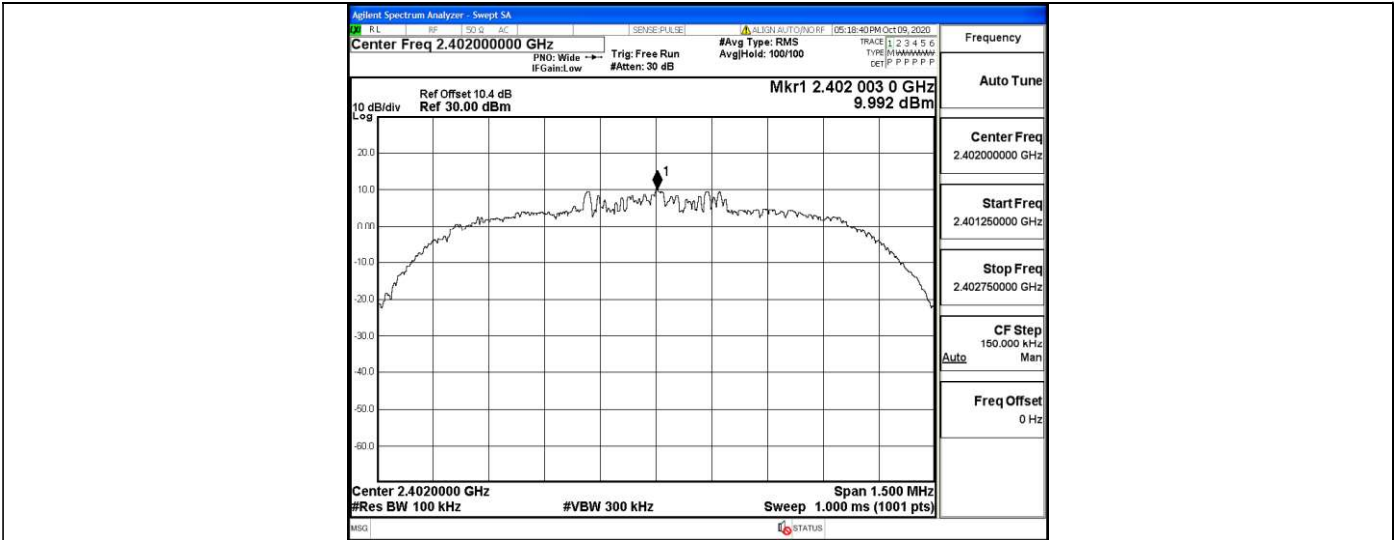
DH5 Ant1 2480 30~1000



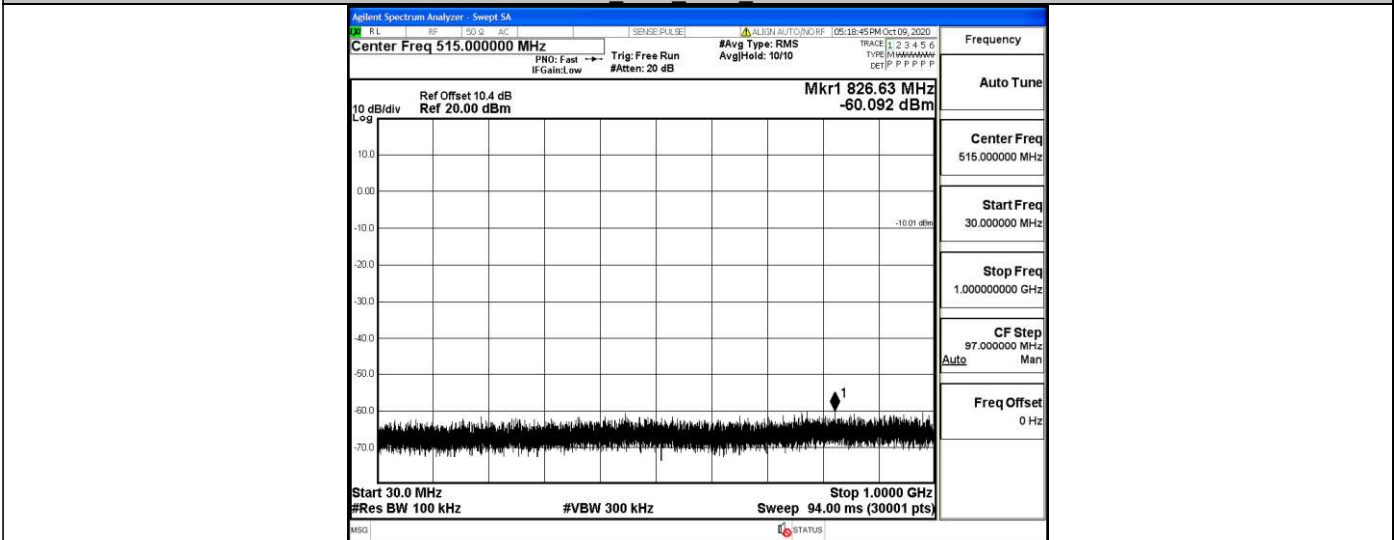
DH5 Ant1 2480 1000~26500



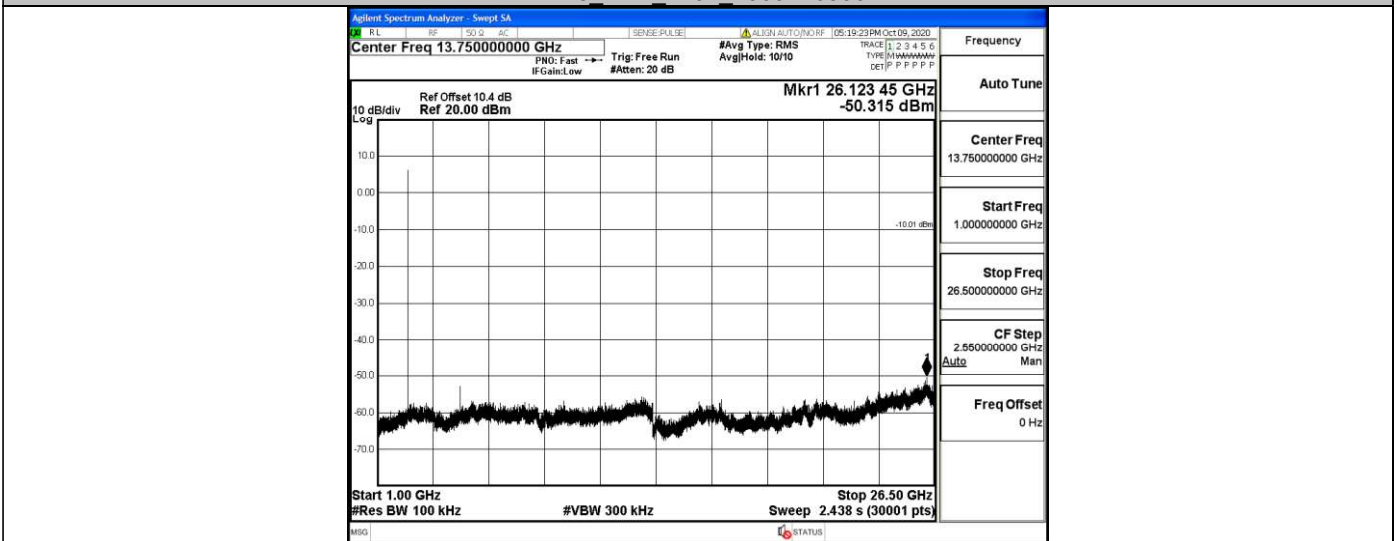
2DH5 Ant1 2402 0~Reference



2DH5 Ant1 2402 30~1000

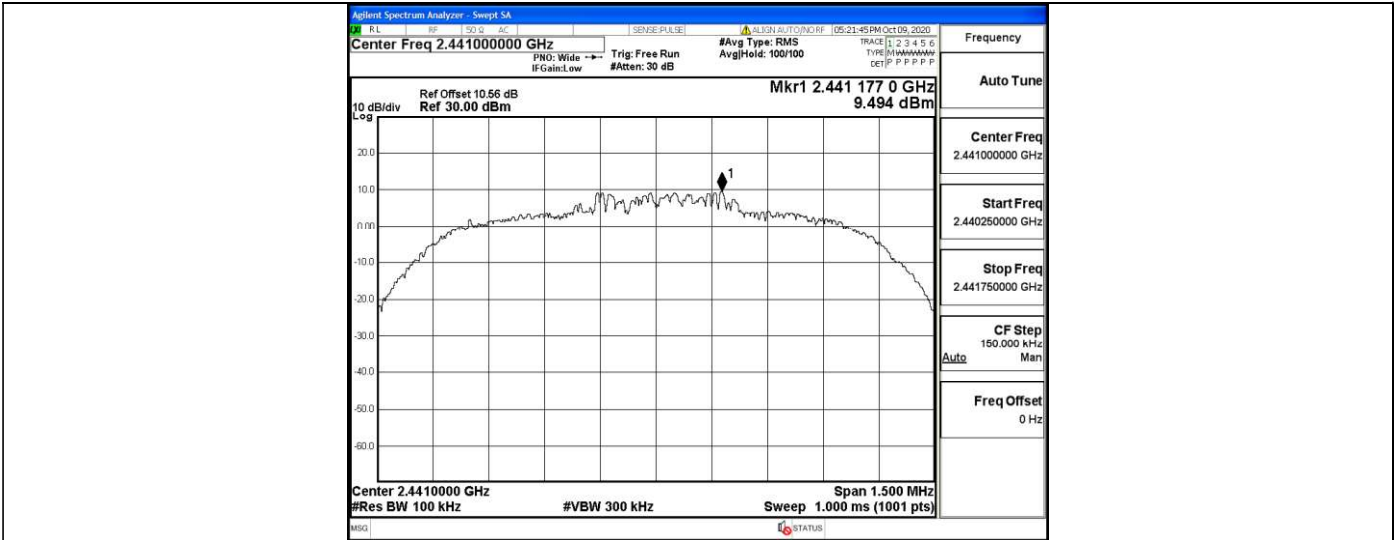


2DH5 Ant1 2402 1000~26500

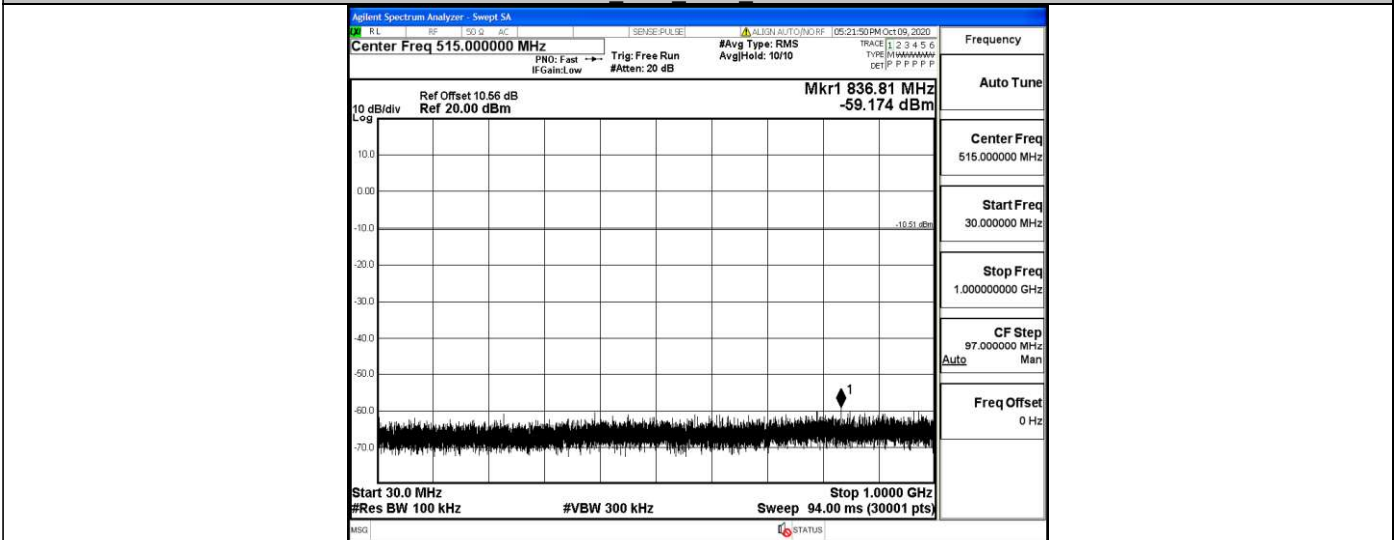


2DH5 Ant1 2441 0~Reference

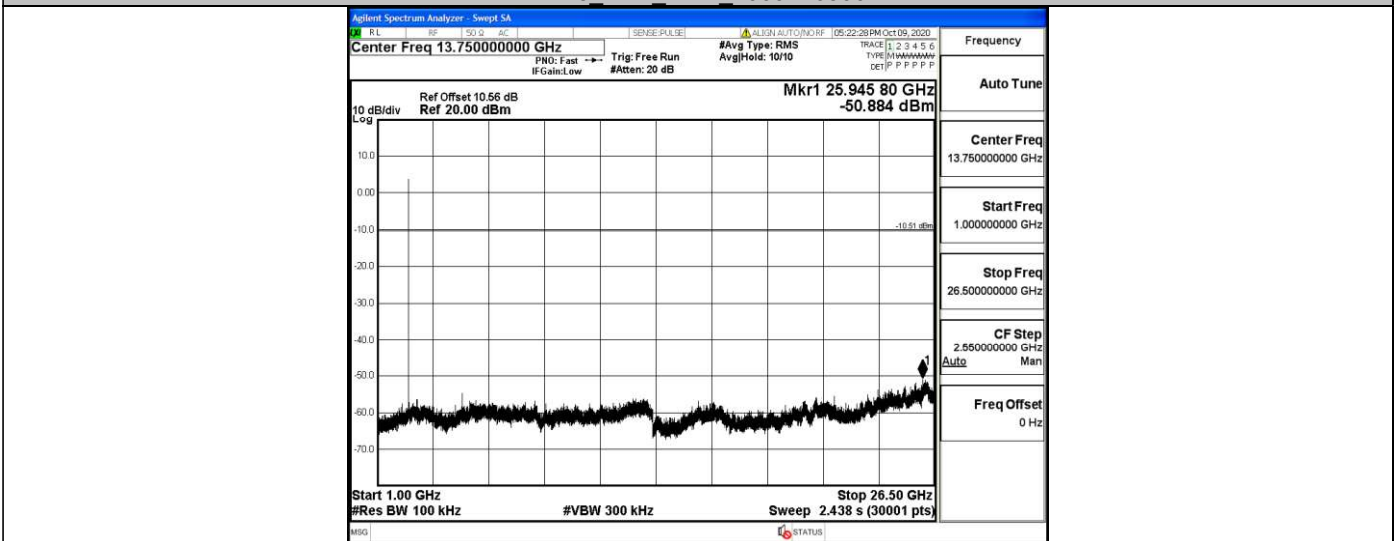




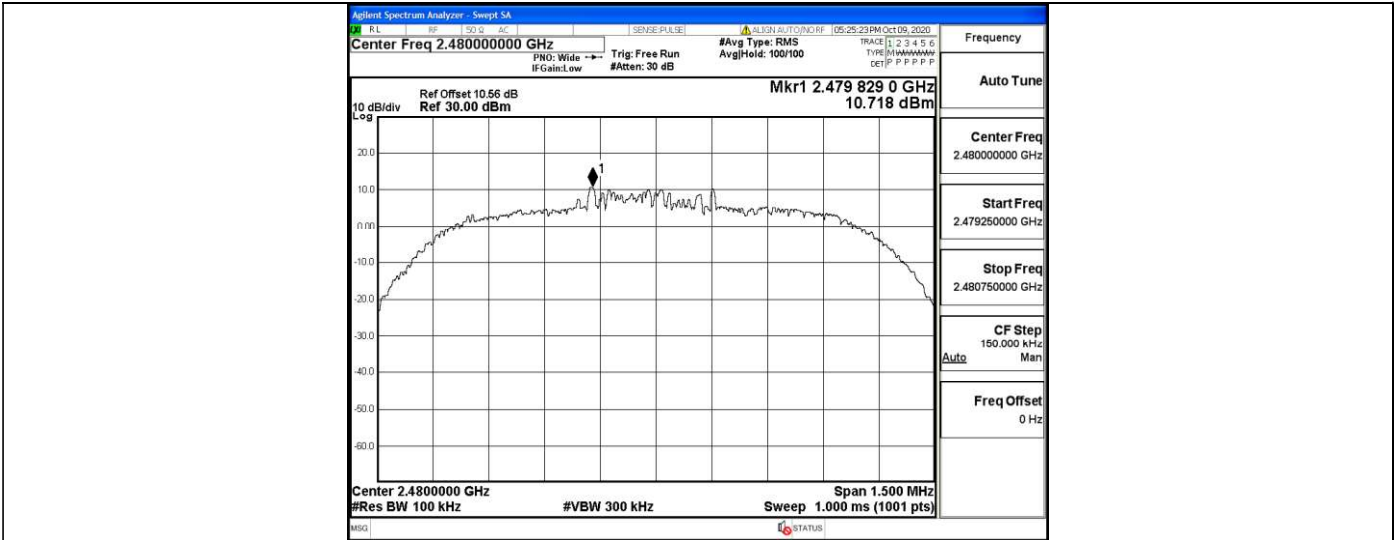
2DH5 Ant1 2441 30~1000



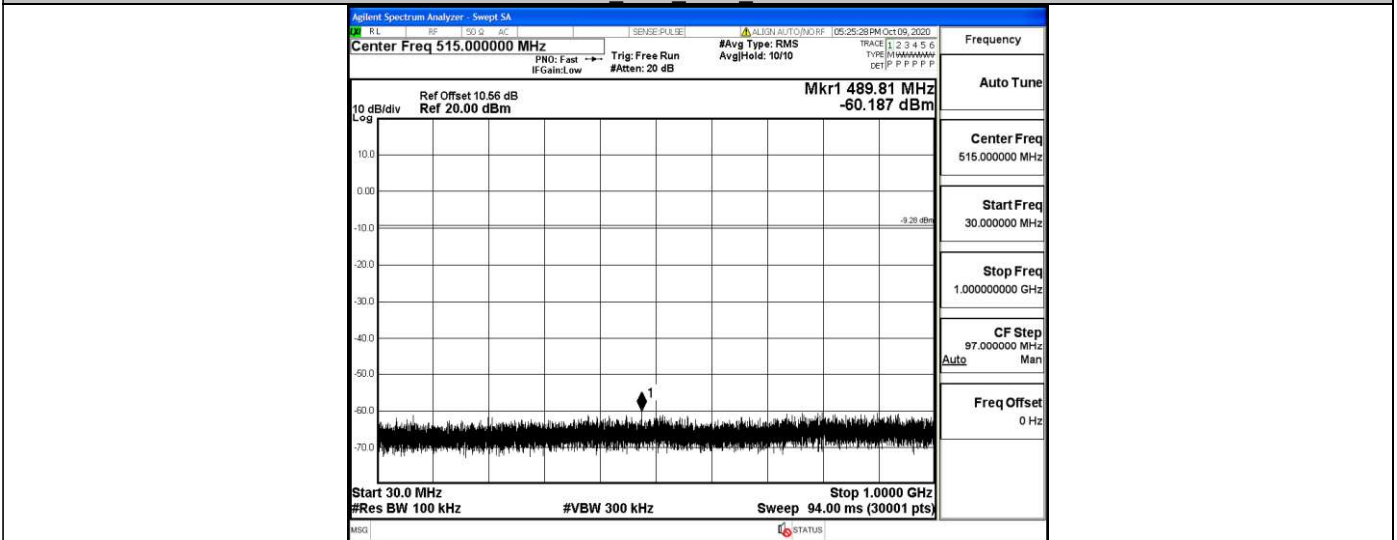
2DH5 Ant1 2441 1000~26500



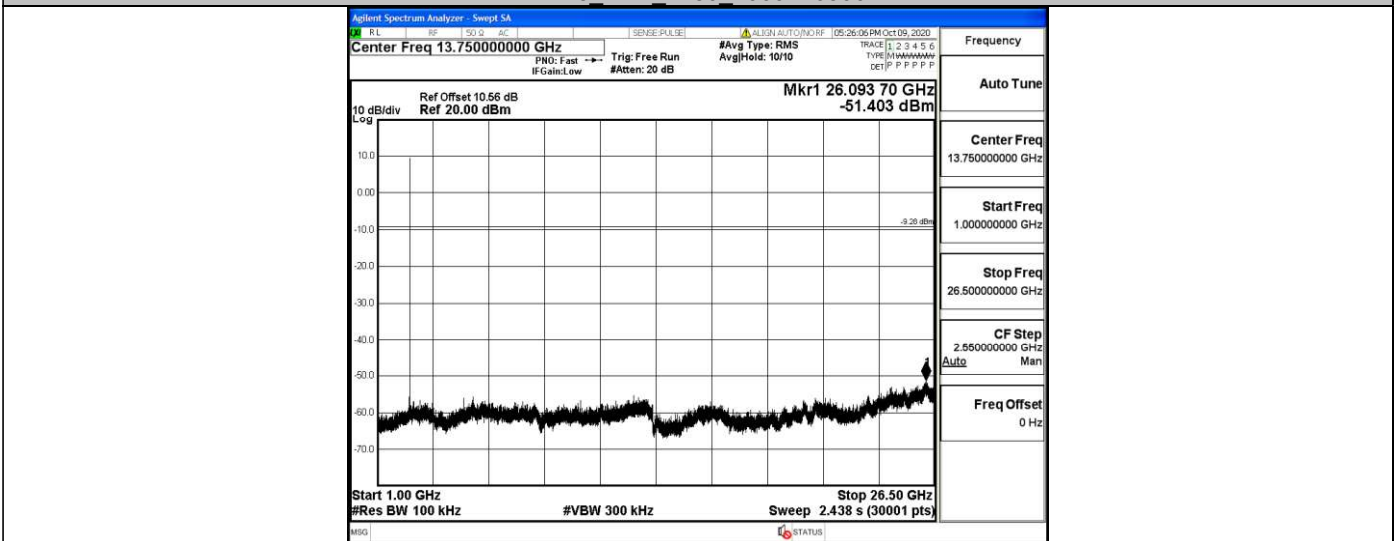
2DH5 Ant1 2480 0~Reference



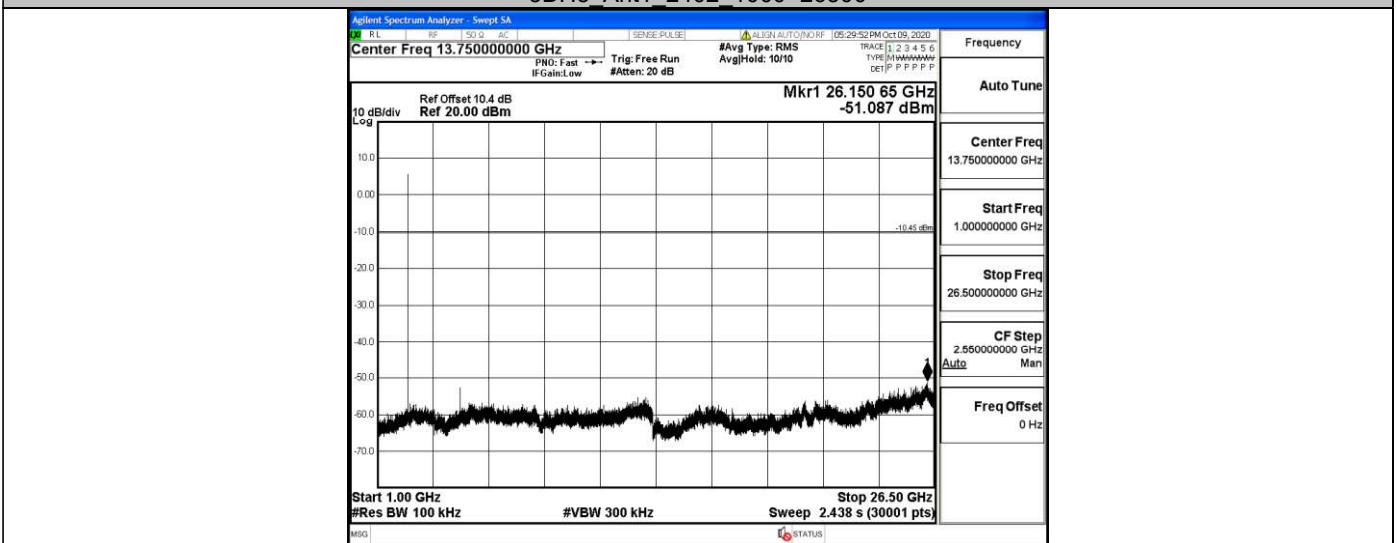
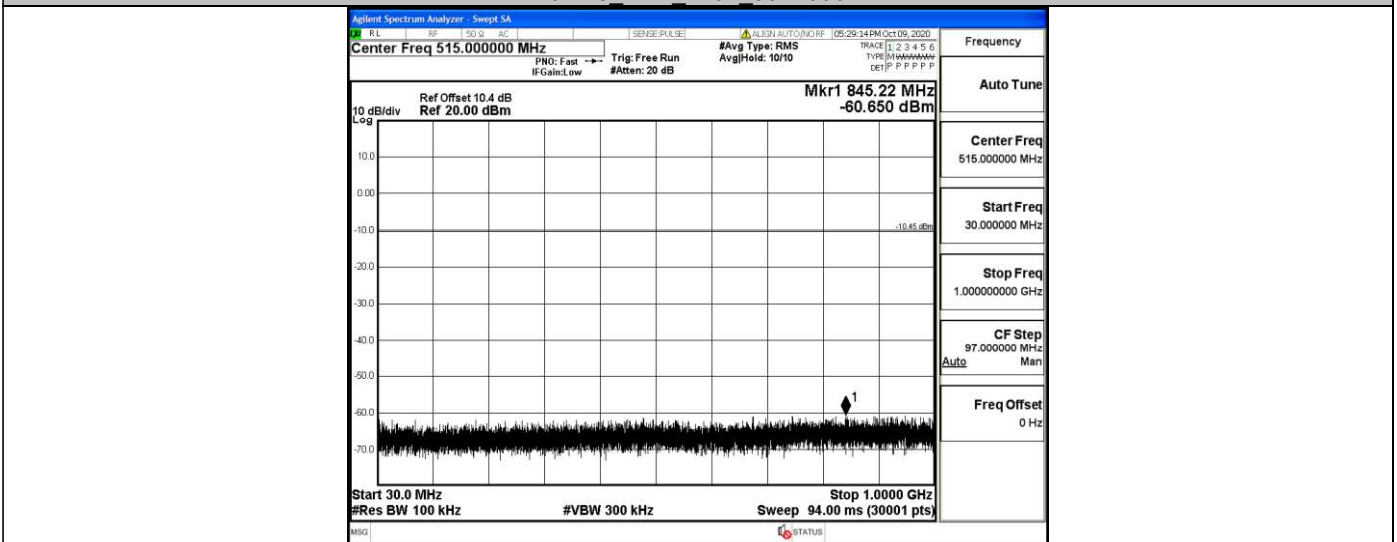
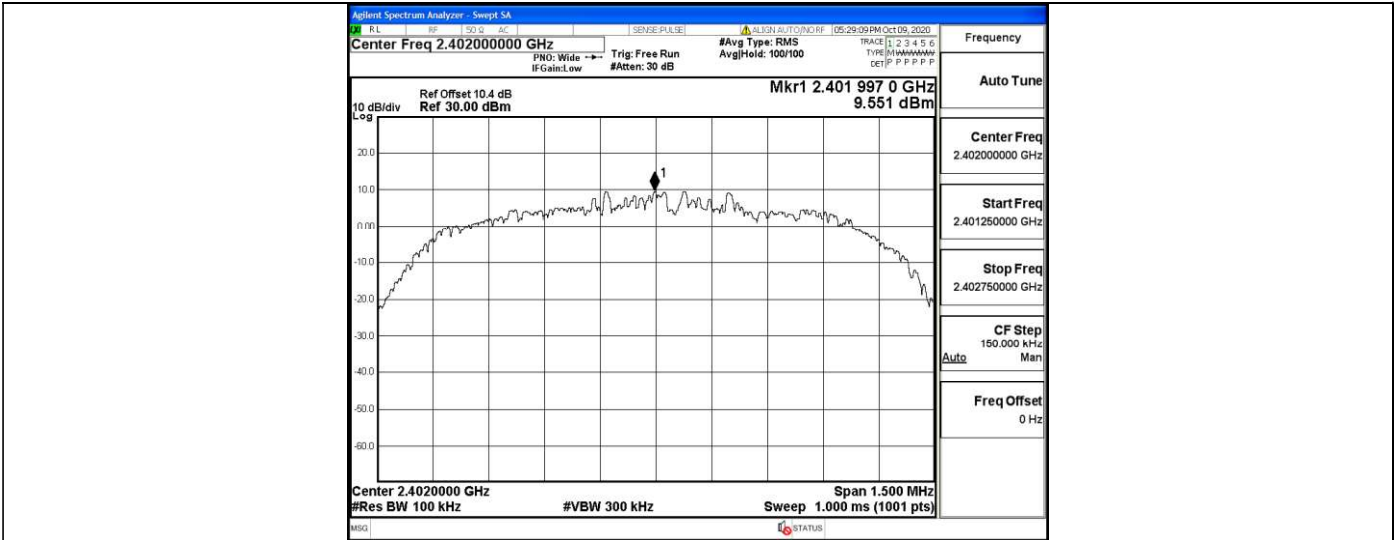
2DH5 Ant1 2480 30~1000

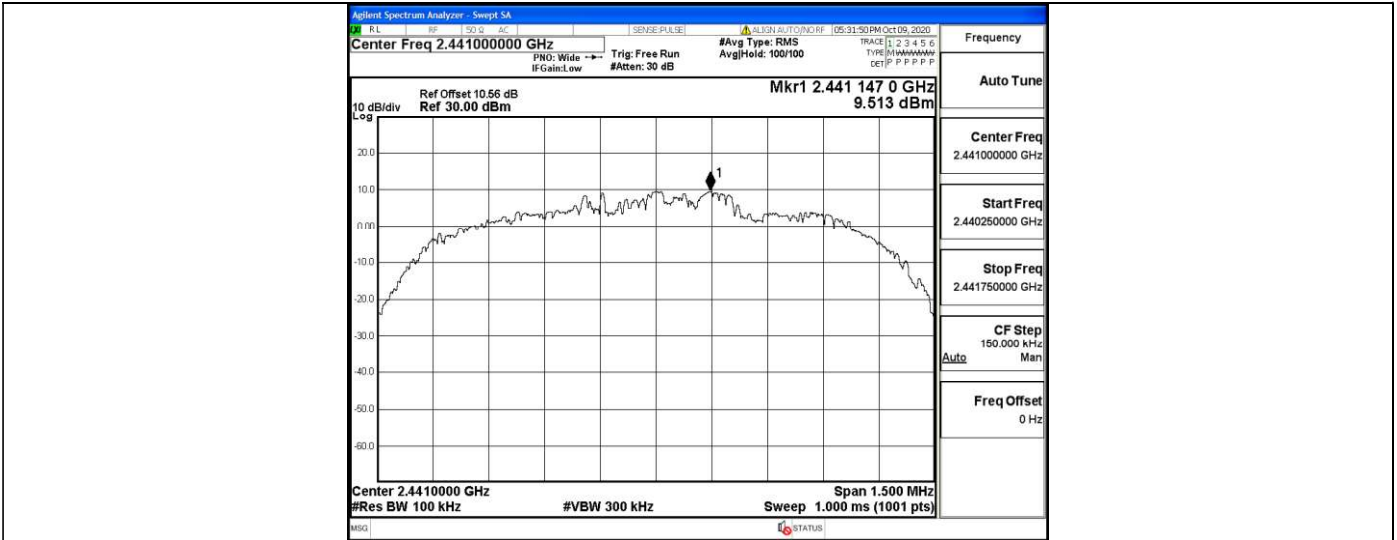


2DH5 Ant1 2480 1000~26500

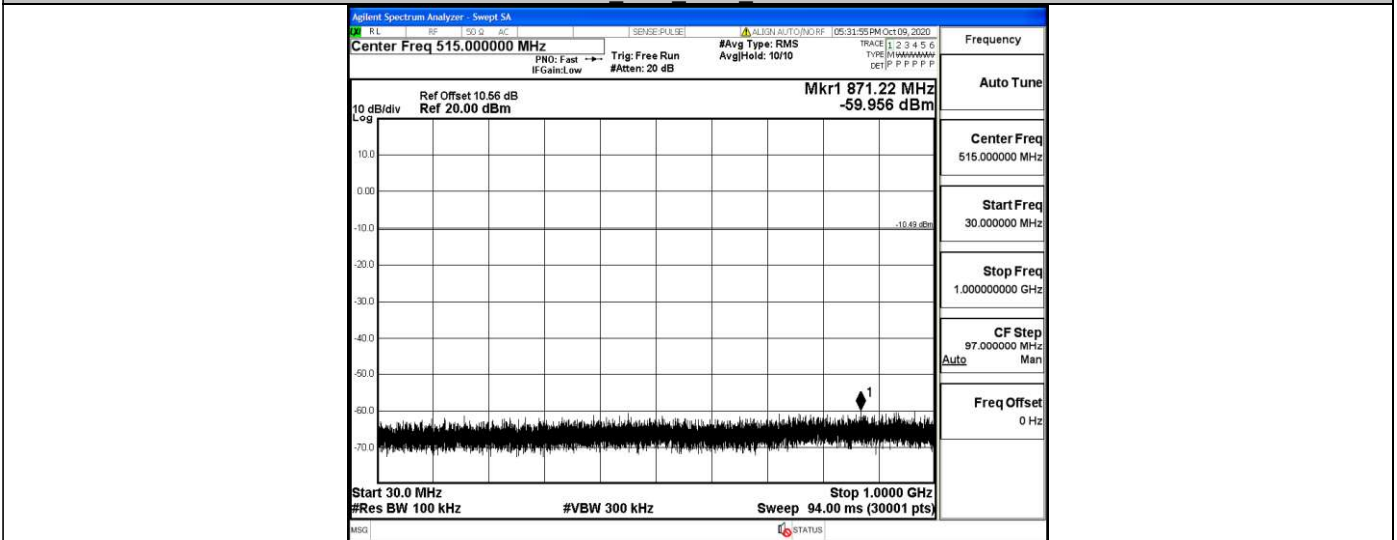


3DH5 Ant1 2402 0~Reference

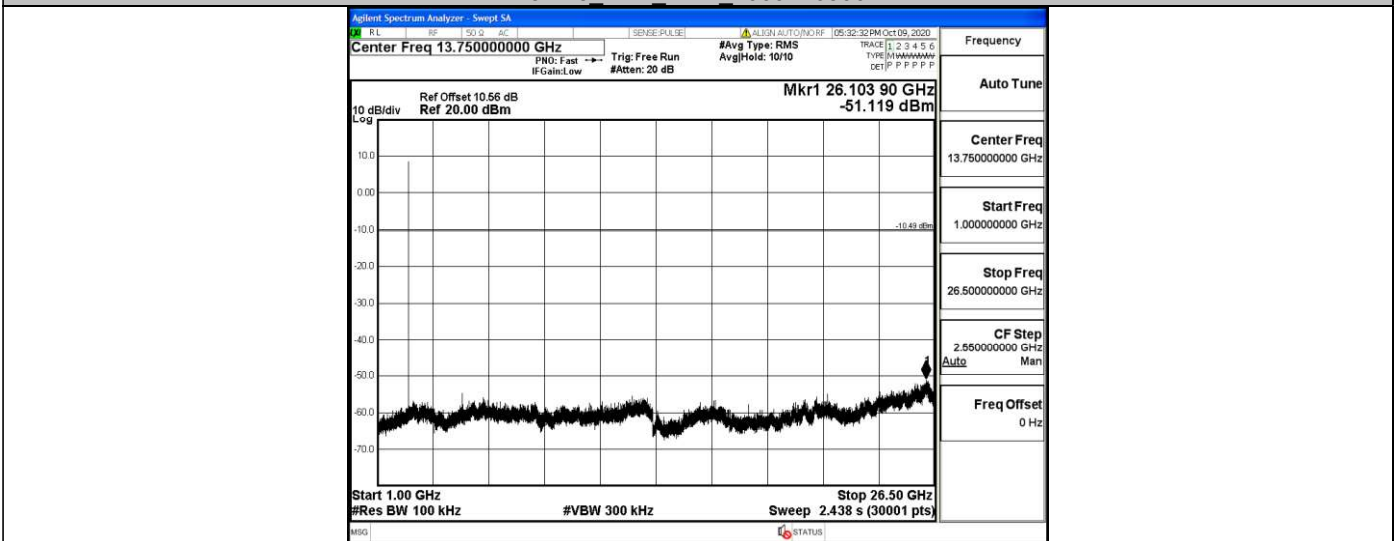




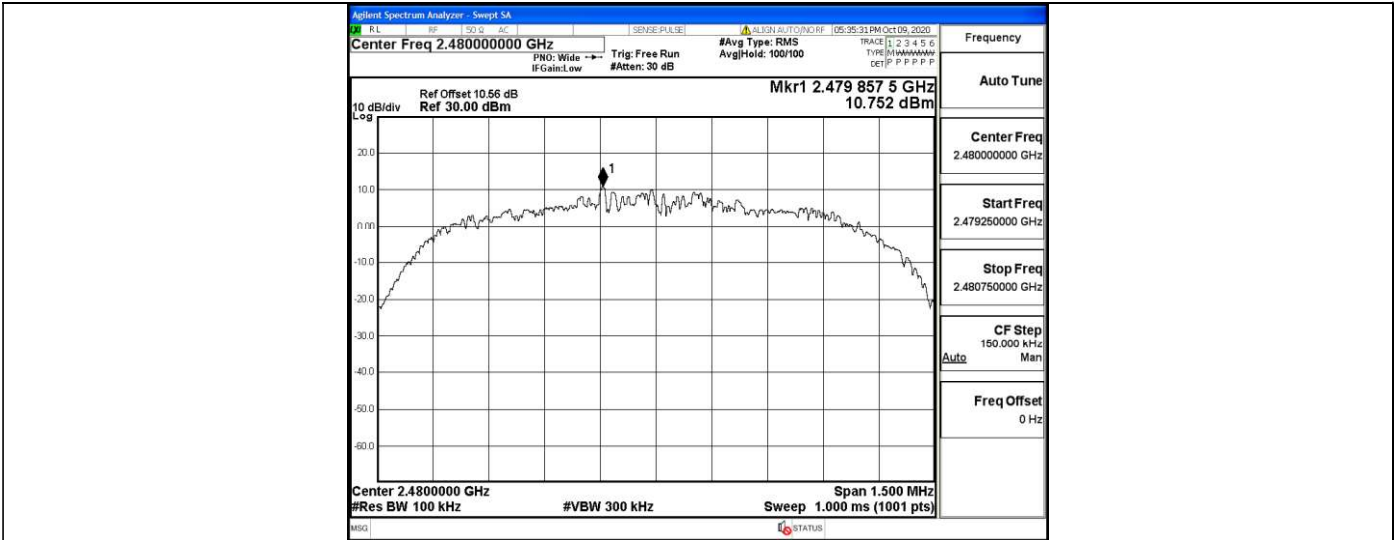
3DH5 Ant1 2441 30~1000



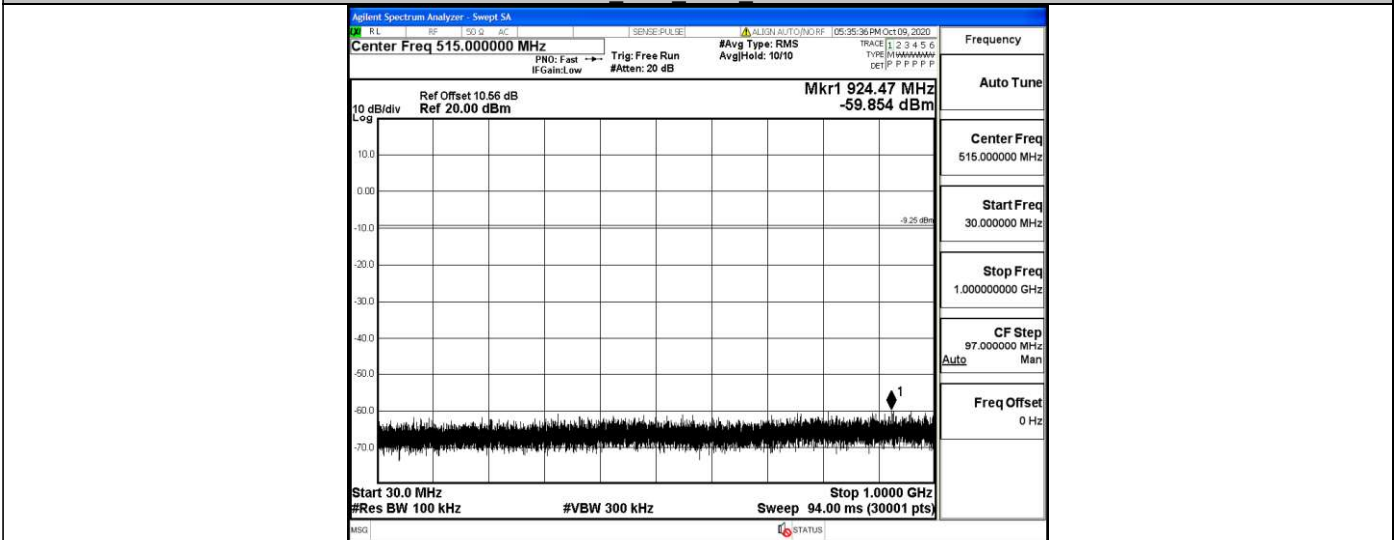
3DH5 Ant1 2441 1000~26500



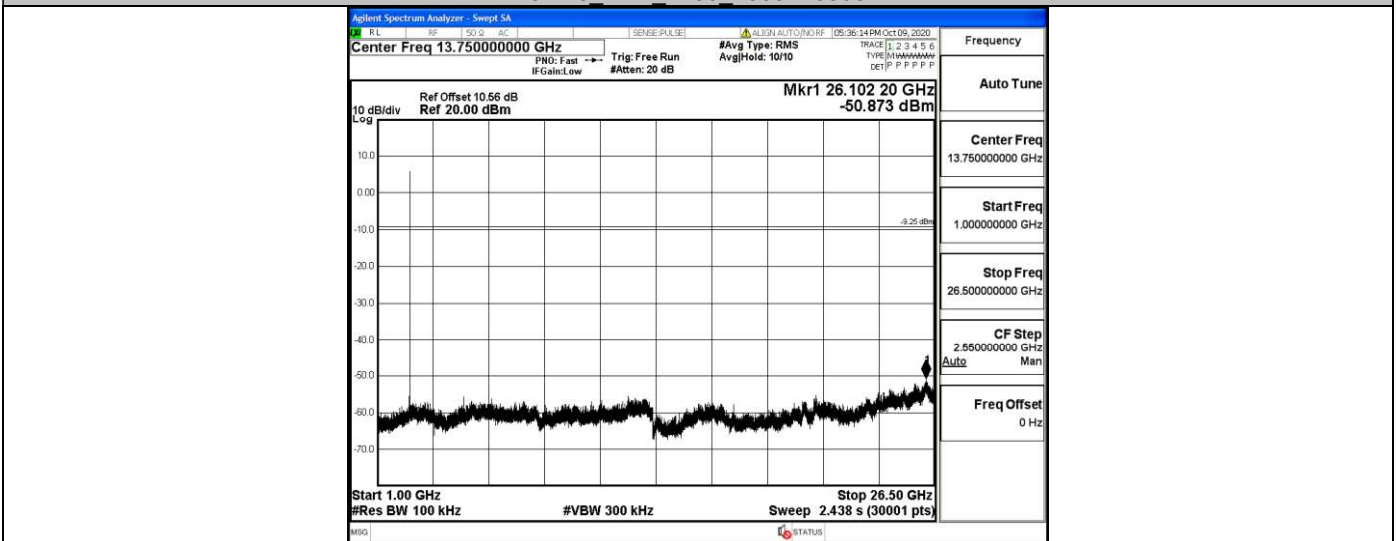
3DH5 Ant1 2480 0~Reference



3DH5 Ant1 2480 30~1000



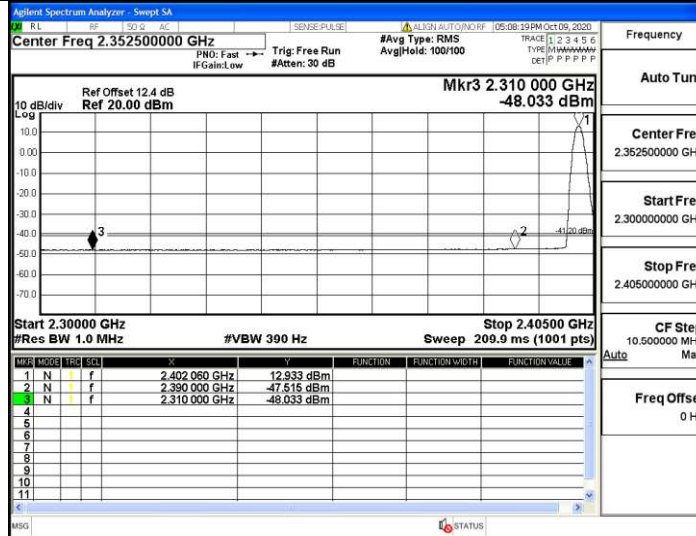
3DH5 Ant1 2480 1000~26500



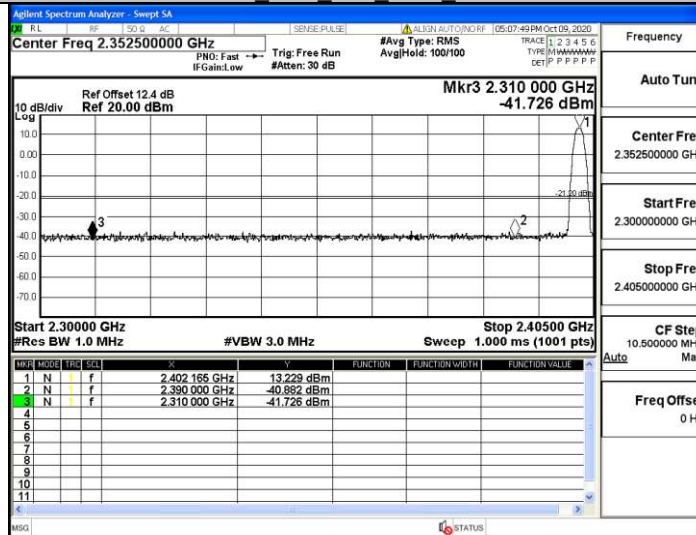
**A.8 Restrict-band band-edge measurements**

TestMode	Antenna	ChName	Channel	Detector	Freq	Result	Limit	Verdict
DH5	Ant1	Low	2402	AV	2310.000	-48.03	<=-41.20	PASS
				AV	2390.000	-47.52	<=-41.20	PASS
				Peak	2310.000	-41.73	<=-21.20	PASS
				Peak	2390.000	-40.88	<=-21.20	PASS
		High	2480	AV	2483.500	-44.67	<=-41.20	PASS
				AV	2500.000	-46.84	<=-41.20	PASS
				Peak	2483.500	-38.4	<=-21.20	PASS
				Peak	2500.000	-39.91	<=-21.20	PASS
2DH5	Ant1	Low	2402	AV	2310.000	-48.06	<=-41.20	PASS
				AV	2390.000	-47.56	<=-41.20	PASS
				Peak	2310.000	-40.98	<=-21.20	PASS
				Peak	2390.000	-40.21	<=-21.20	PASS
		High	2480	AV	2483.500	-44.64	<=-41.20	PASS
				AV	2500.000	-46.84	<=-41.20	PASS
				Peak	2483.500	-38.04	<=-21.20	PASS
				Peak	2500.000	-39.83	<=-21.20	PASS
3DH5	Ant1	Low	2402	AV	2310.000	-48.03	<=-41.20	PASS
				AV	2390.000	-47.33	<=-41.20	PASS
				Peak	2310.000	-39.23	<=-21.20	PASS
				Peak	2390.000	-41.38	<=-21.20	PASS
		High	2480	AV	2483.500	-44.79	<=-41.20	PASS
				AV	2500.000	-46.96	<=-41.20	PASS
				Peak	2483.500	-39.57	<=-21.20	PASS
				Peak	2500.000	-40.37	<=-21.20	PASS

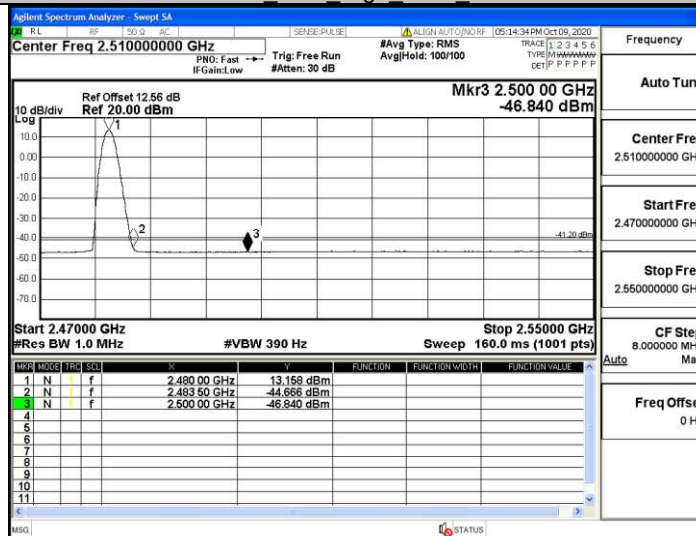
DH5 Ant1 Low 2402 AV



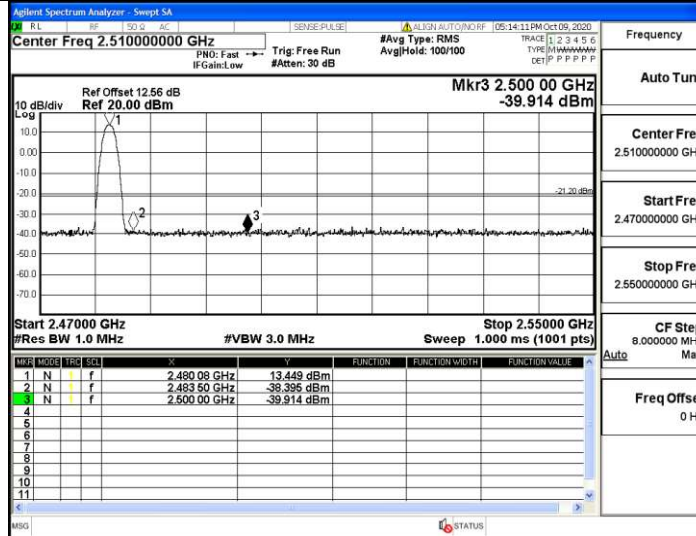
DH5 Ant1 Low 2402 Peak



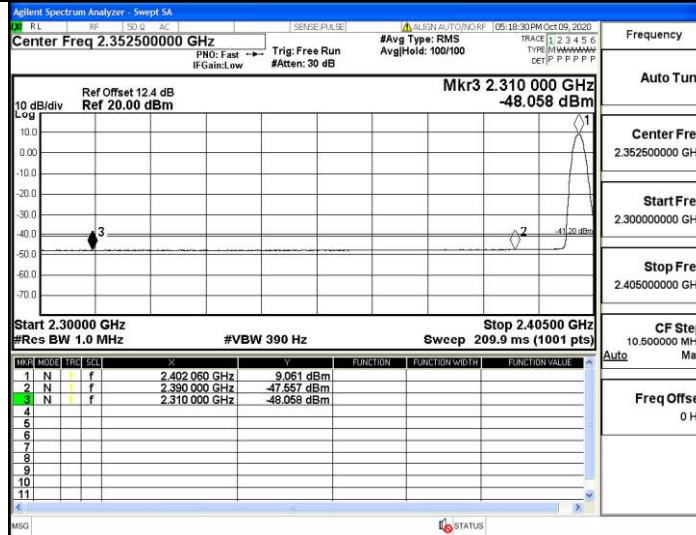
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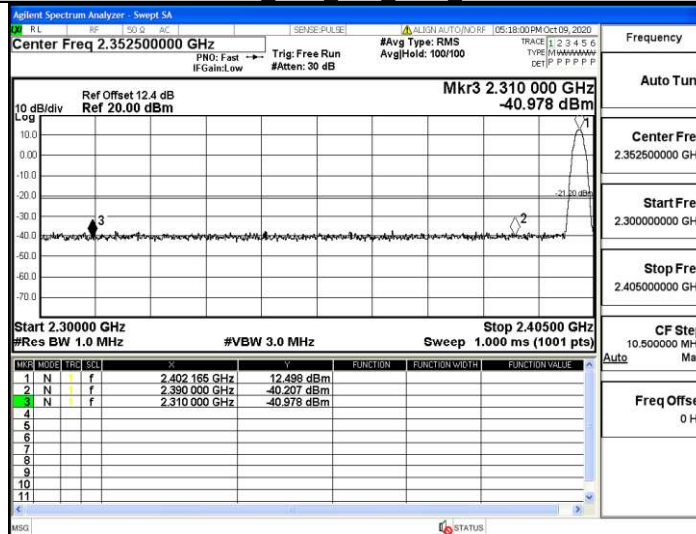
DH5 Ant1 High 2480 Peak



2DH5 Ant1 Low 2402 AV

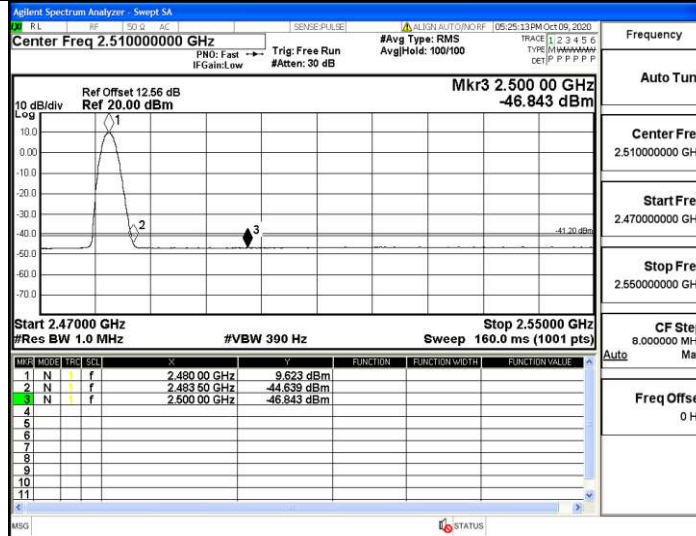


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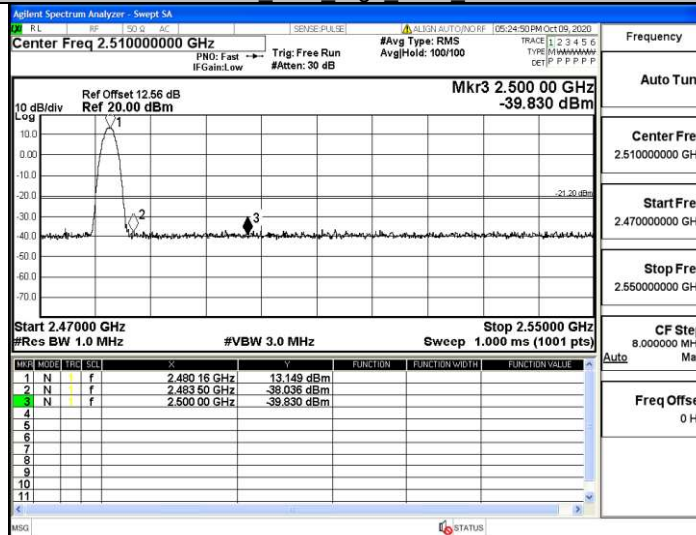




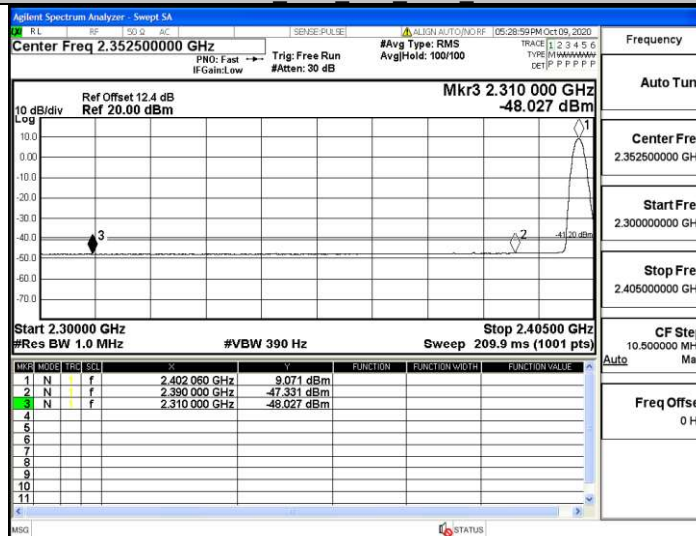
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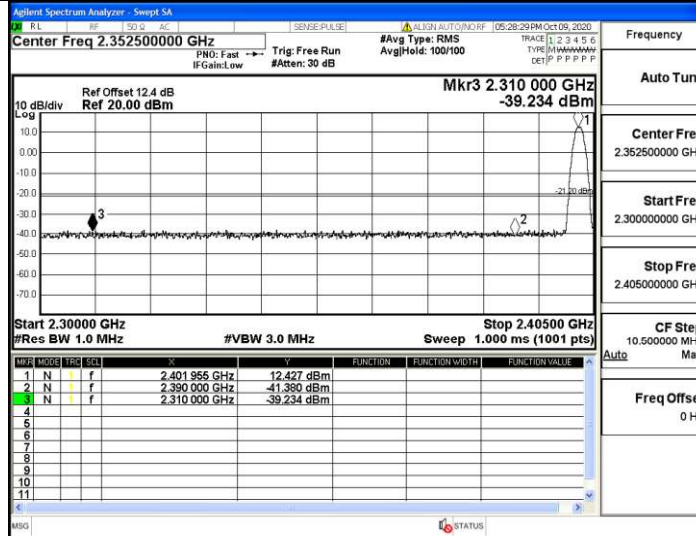
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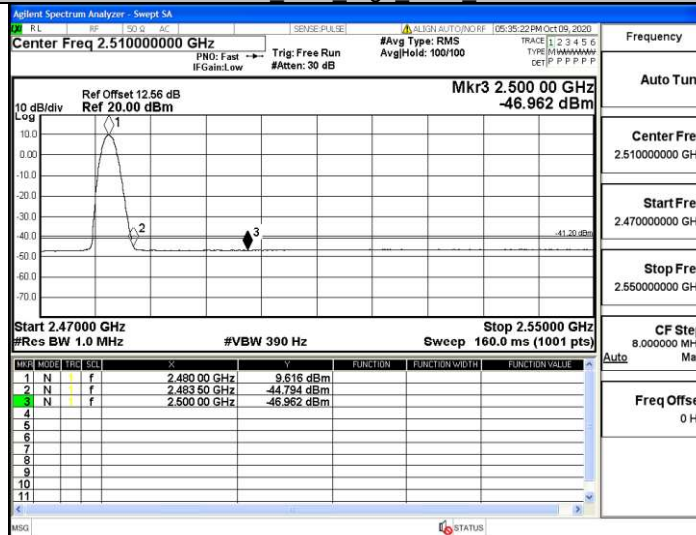
3DH5 Ant1 Low 2402 AV



3DH5 Ant1 Low 2402 Peak



3DH5 Ant1 High 2480 AV



3DH5 Ant1 High 2480 Peak

