

Appendix A

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

Product Name: Mobile Phone

Trade Mark: CROWN

Test Model: CR-MP3019

FCC ID: 2A2KFCR-MP3019

Environmental Conditions

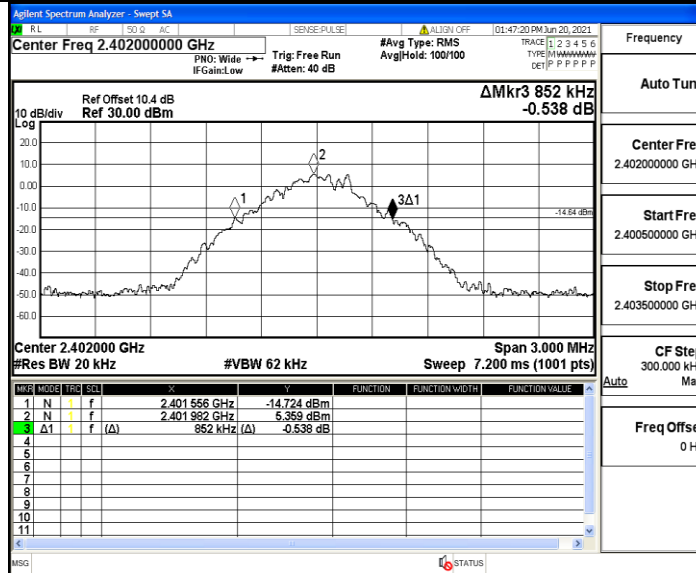
Temperature:	23.8℃
Relative Humidity:	51%
ATM Pressure:	100.0 kPa
Test Engineer:	Anna Hu
Supervised by:	Hugo Chen
NOTE	N/A

A.1 20 dB Bandwidth

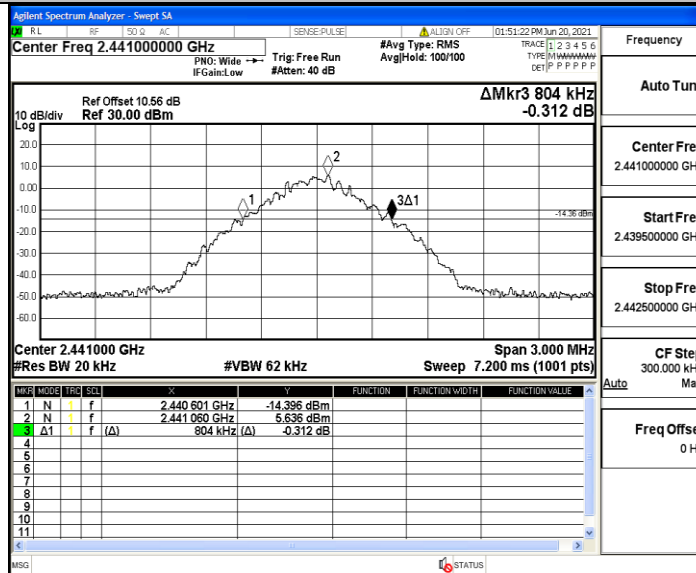
TestMode	Antenna	Channel	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.852	2401.556	2402.408	Not Specified	PASS
		2441	0.804	2440.601	2441.405	Not Specified	PASS
		2480	0.810	2479.598	2480.408	Not Specified	PASS
2DH5	Ant1	2402	1.275	2401.364	2402.639	Not Specified	PASS
		2441	1.269	2440.364	2441.633	Not Specified	PASS
		2480	1.233	2479.379	2480.612	Not Specified	PASS
3DH5	Ant1	2402	1.251	2401.364	2402.615	Not Specified	PASS
		2441	1.281	2440.352	2441.633	Not Specified	PASS
		2480	1.257	2479.361	2480.618	Not Specified	PASS

Test Graph

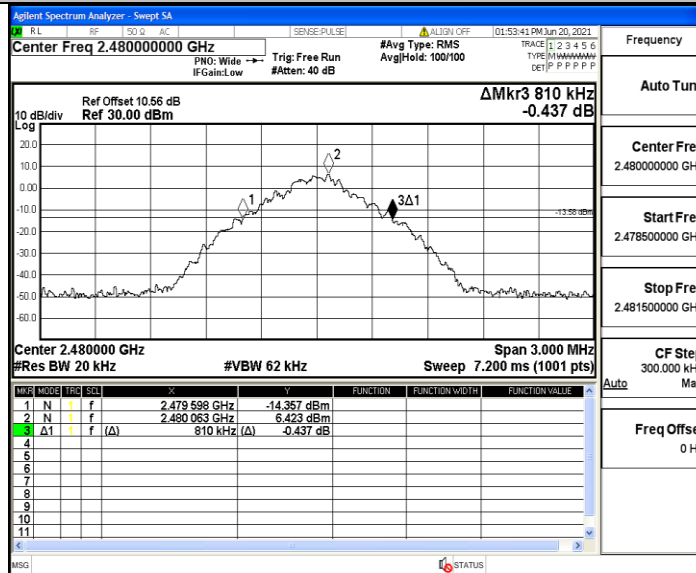
DH5_Ant1_2402



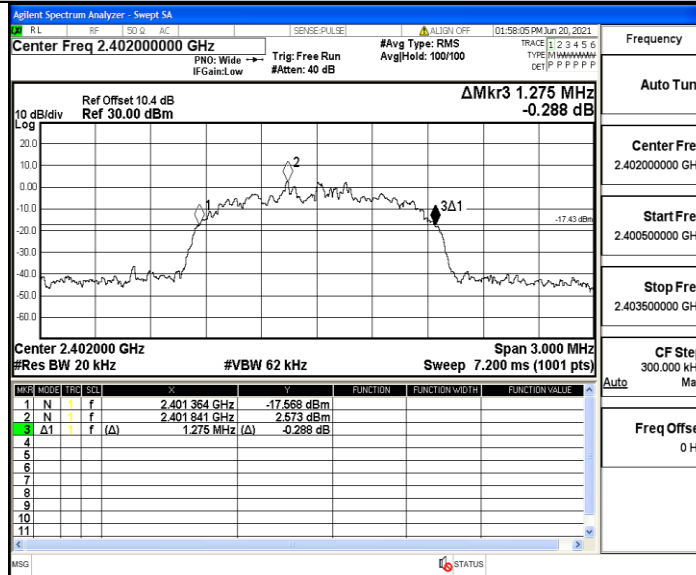
DH5_Ant1_2441



DH5_Ant1_2480

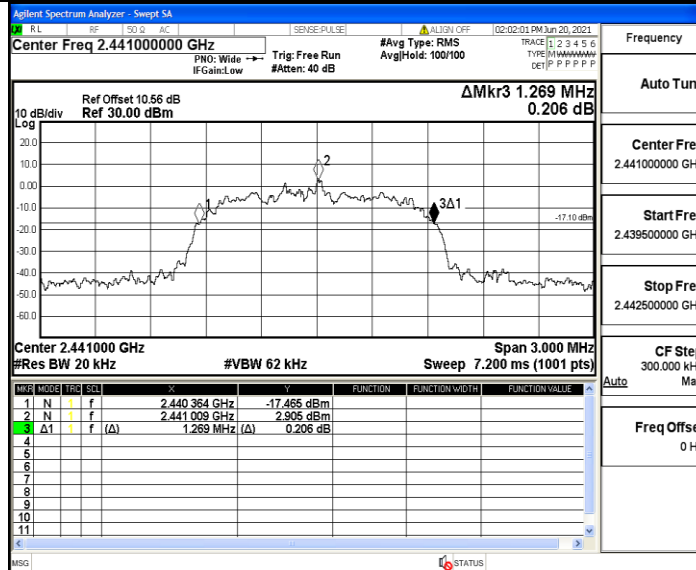


2DH5_Ant1_2402



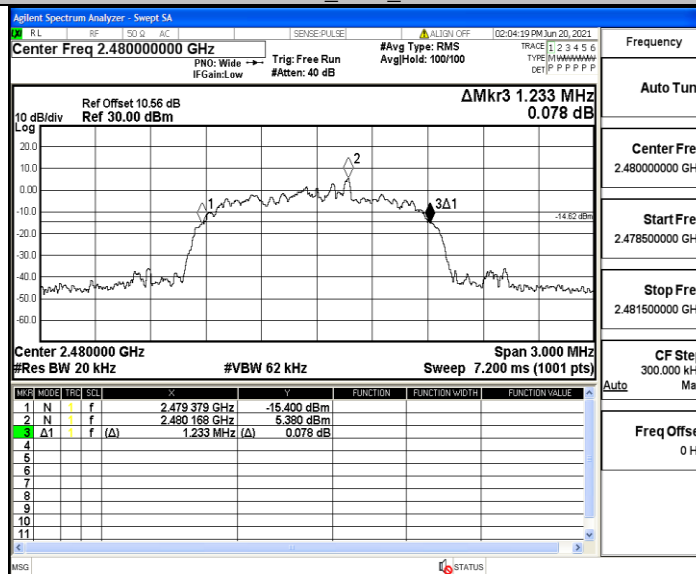
Frequency
Auto Tune
Center Freq 2.40200000 GHz
Start Freq 2.400500000 GHz
Stop Freq 2.403500000 GHz
CF Step 300.000 kHz
Freq Offset 0 Hz

2DH5_Ant1_2441



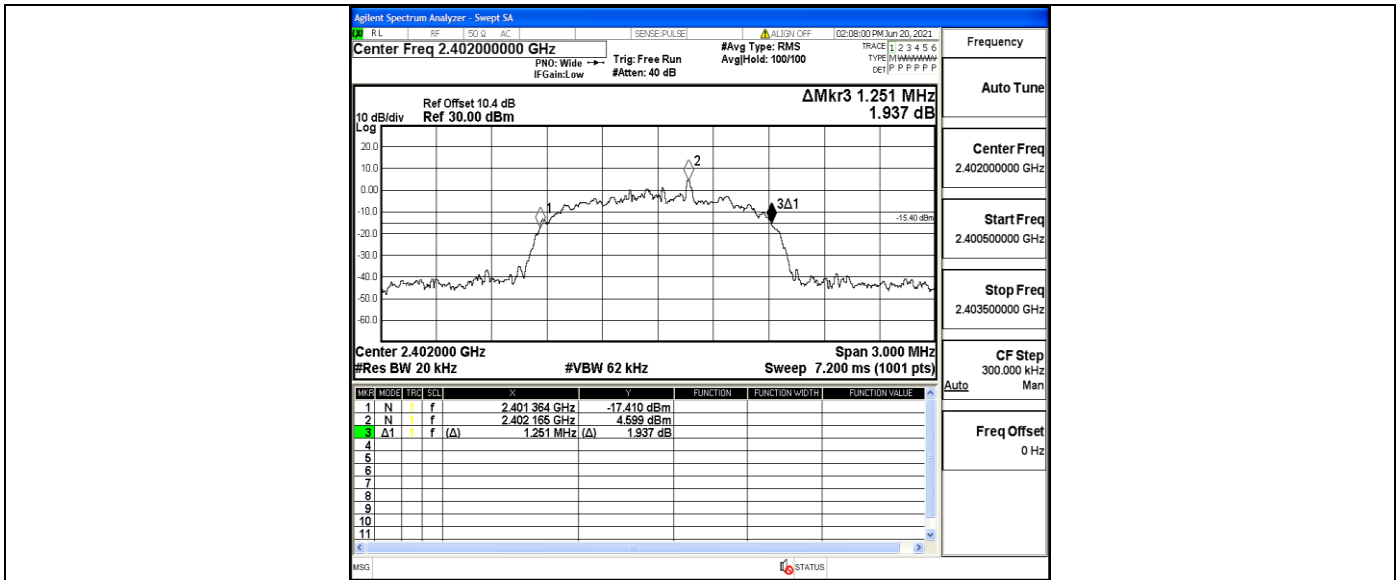
Frequency
Auto Tune
Center Freq 2.441000000 GHz
Start Freq 2.439500000 GHz
Stop Freq 2.442500000 GHz
CF Step 300.000 kHz
Freq Offset 0 Hz

2DH5_Ant1_2480

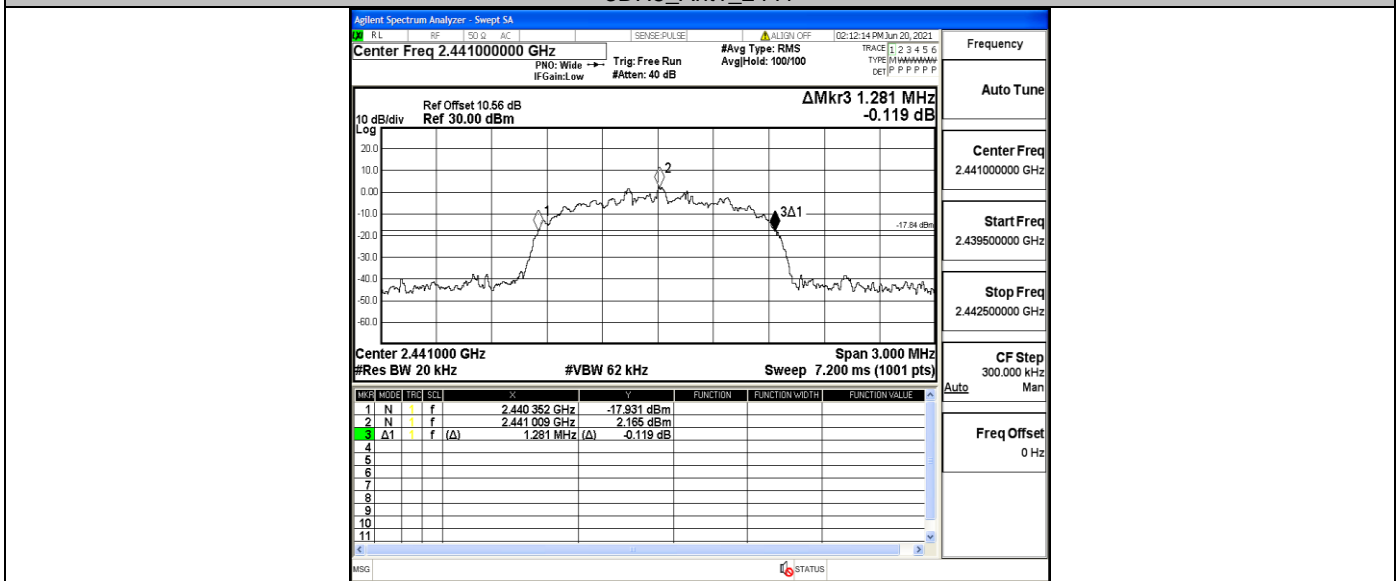


Frequency
Auto Tune
Center Freq 2.480000000 GHz
Start Freq 2.478500000 GHz
Stop Freq 2.481500000 GHz
CF Step 300.000 kHz
Freq Offset 0 Hz

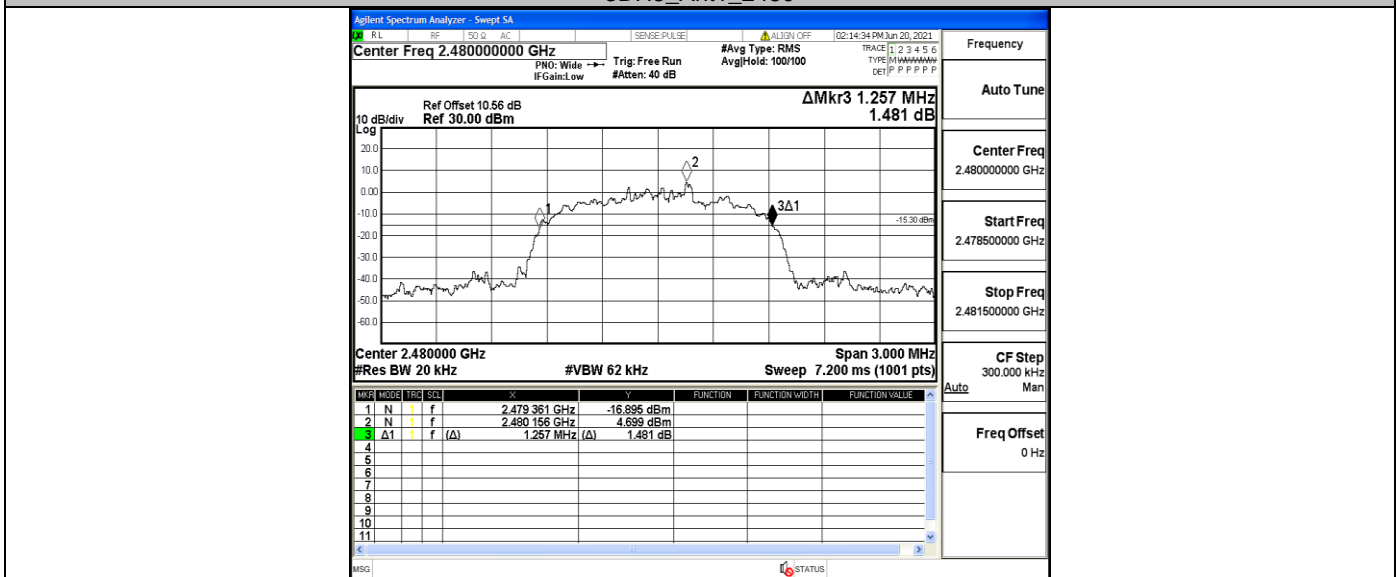
3DH5_Ant1_2402



3DH5_Ant1_2441



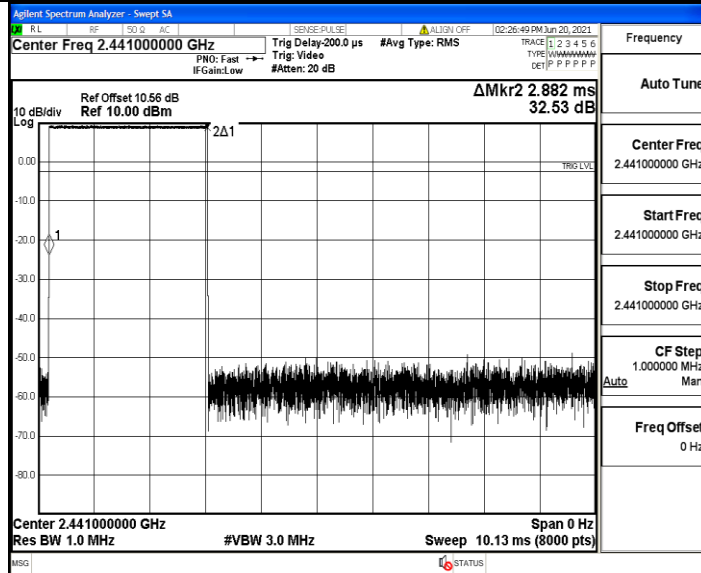
3DH5_Ant1_2480



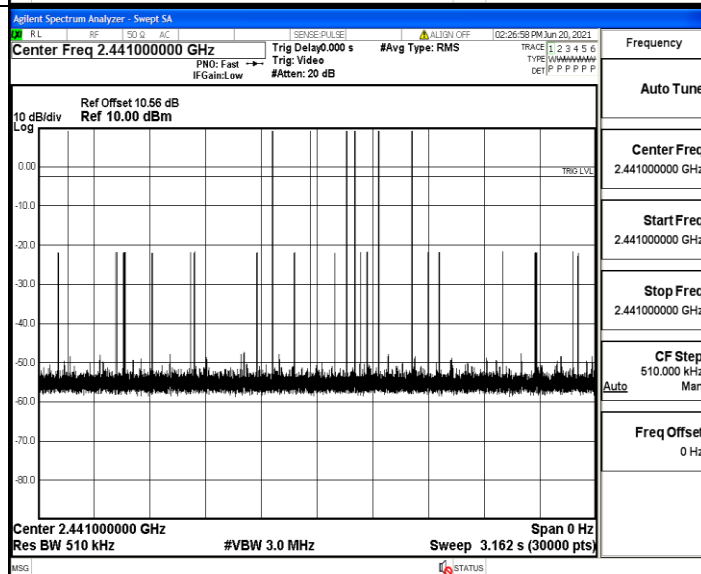
A.2 Dwell Time

TestMode	Antenna	Channel	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH5	Ant1	Hop	2.88	80	0.231	<=0.4	PASS
2DH5	Ant1	Hop	2.88	100	0.288	<=0.4	PASS
3DH5	Ant1	Hop	2.89	120	0.346	<=0.4	PASS

DH5_Ant1_Hop

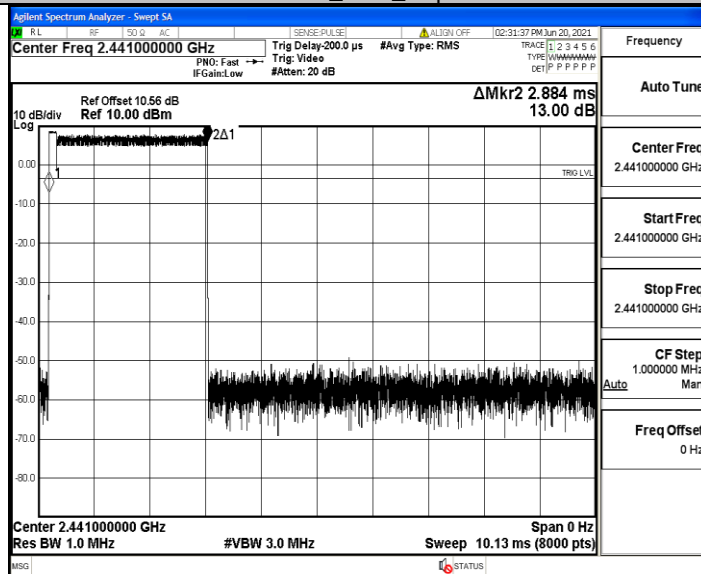


Frequency	Auto Tune
Center Freq	2.441000000 GHz
Start Freq	2.441000000 GHz
Stop Freq	2.441000000 GHz
CF Step	1.000000 MHz Auto Man
Freq Offset	0 Hz

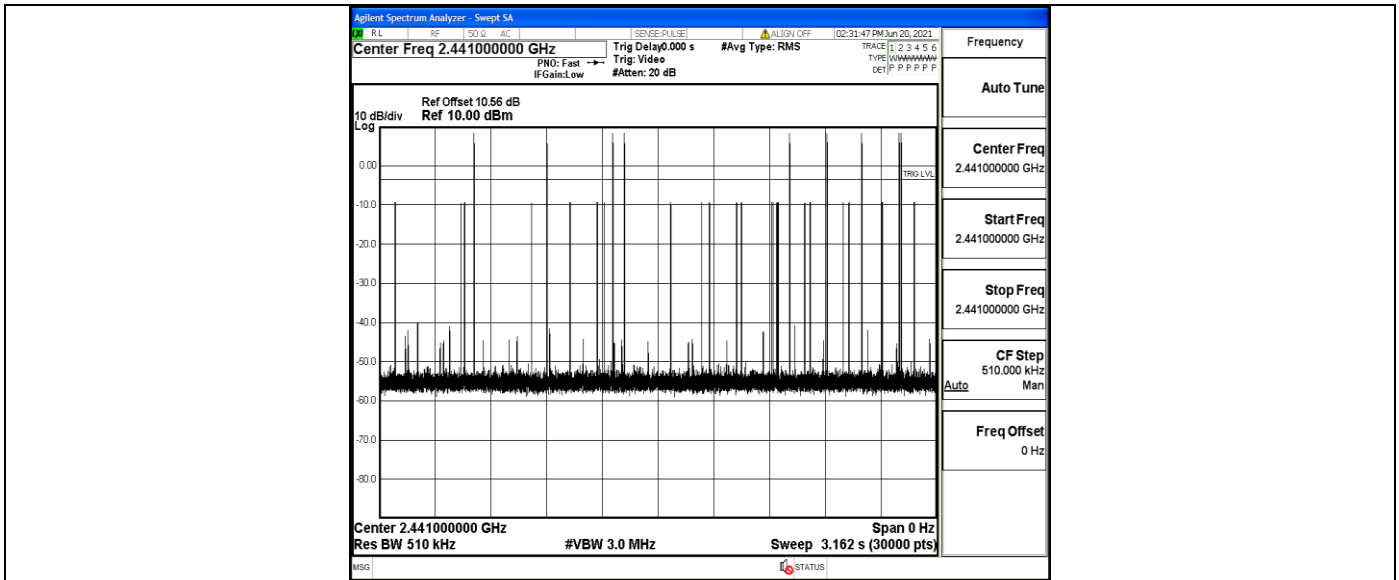


Frequency	Auto Tune
Center Freq	2.441000000 GHz
Start Freq	2.441000000 GHz
Stop Freq	2.441000000 GHz
CF Step	510.000 kHz Auto Man
Freq Offset	0 Hz

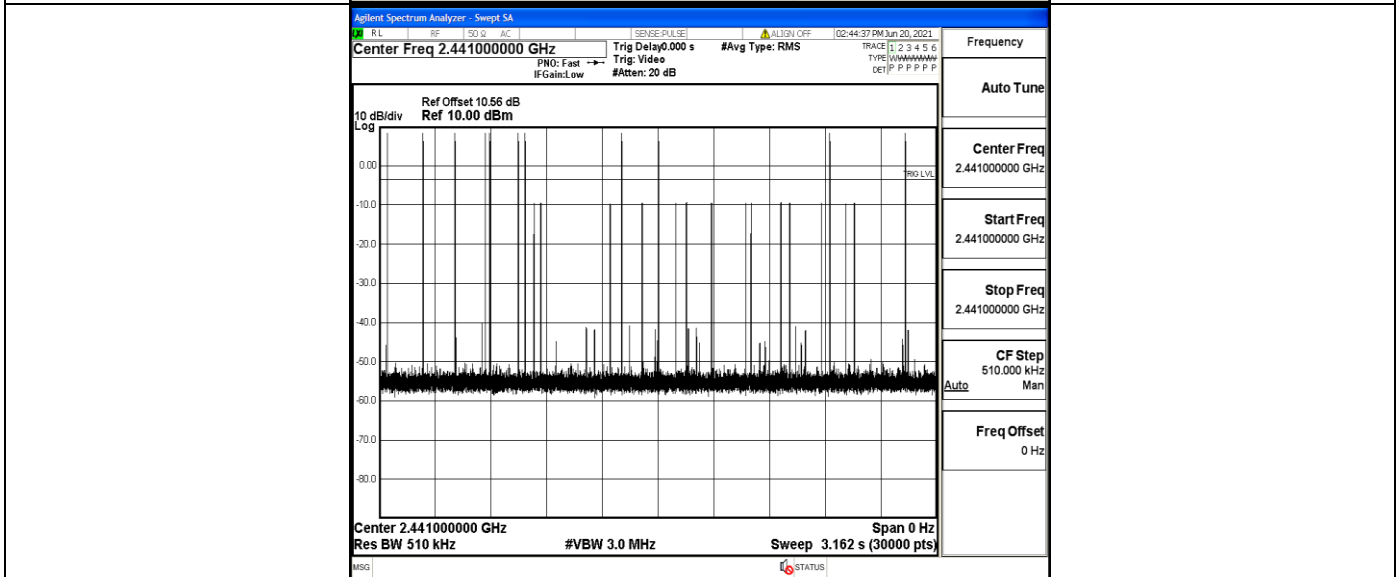
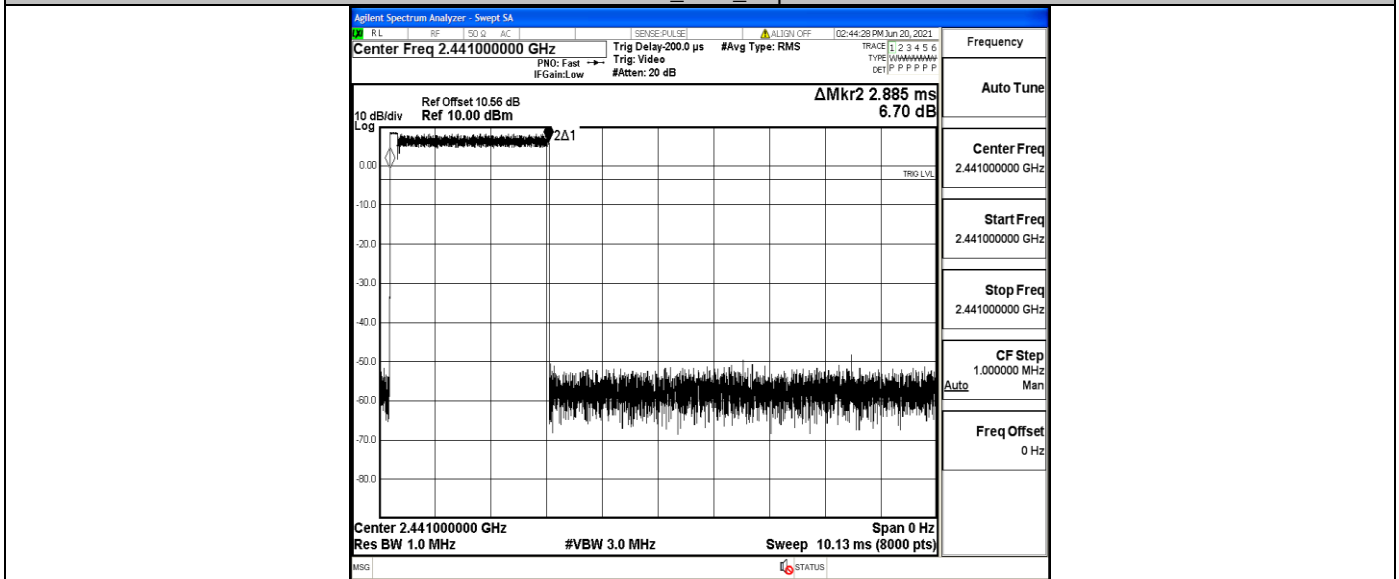
2DH5_Ant1_Hop



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



3DH5_Ant1_Hop



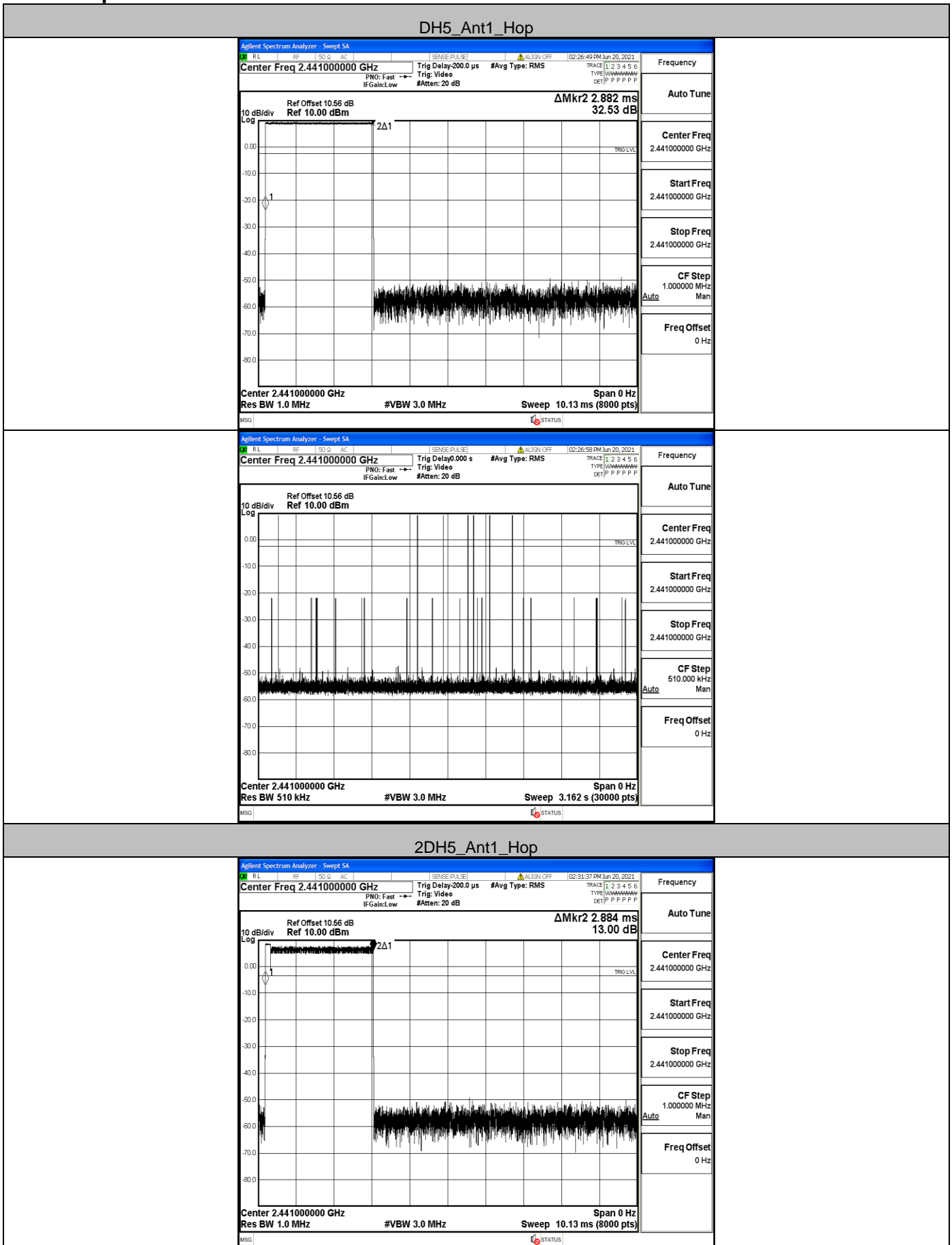
A.3 Carrier Frequency Separation

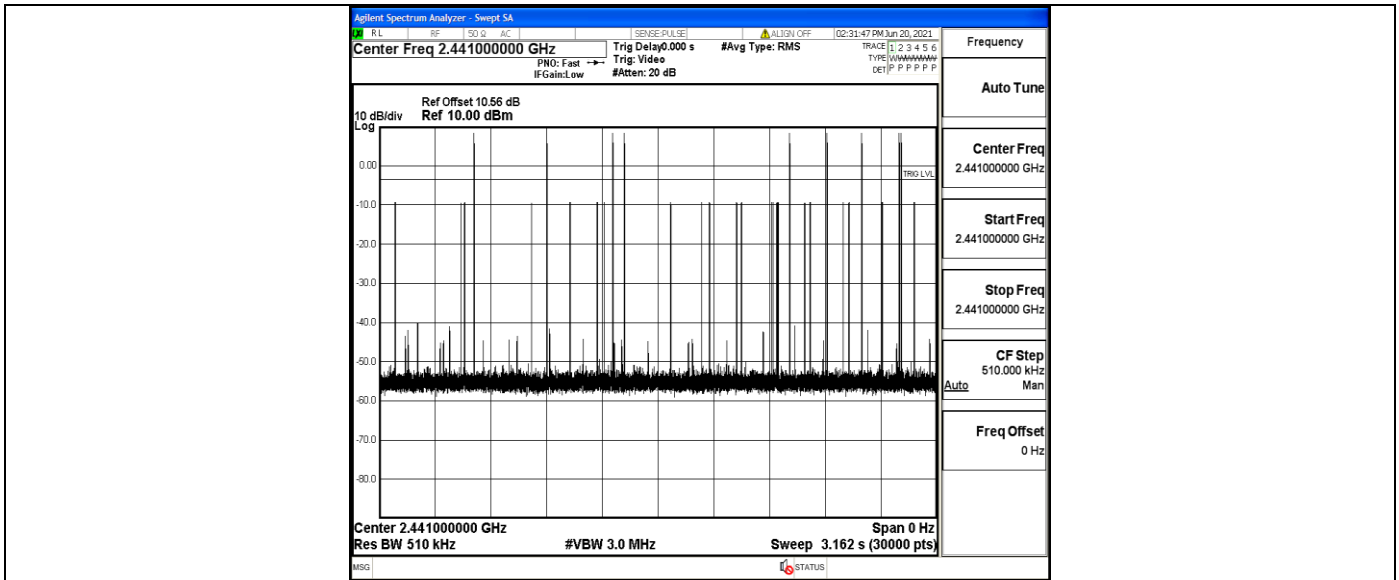
TestMode	Antenna	Channel	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	0.978	≥ 0.852	PASS
2DH5	Ant1	Hop	1.02	≥ 0.850	PASS
3DH5	Ant1	Hop	0.998	≥ 0.854	PASS

A.4 Hopping Channel Number

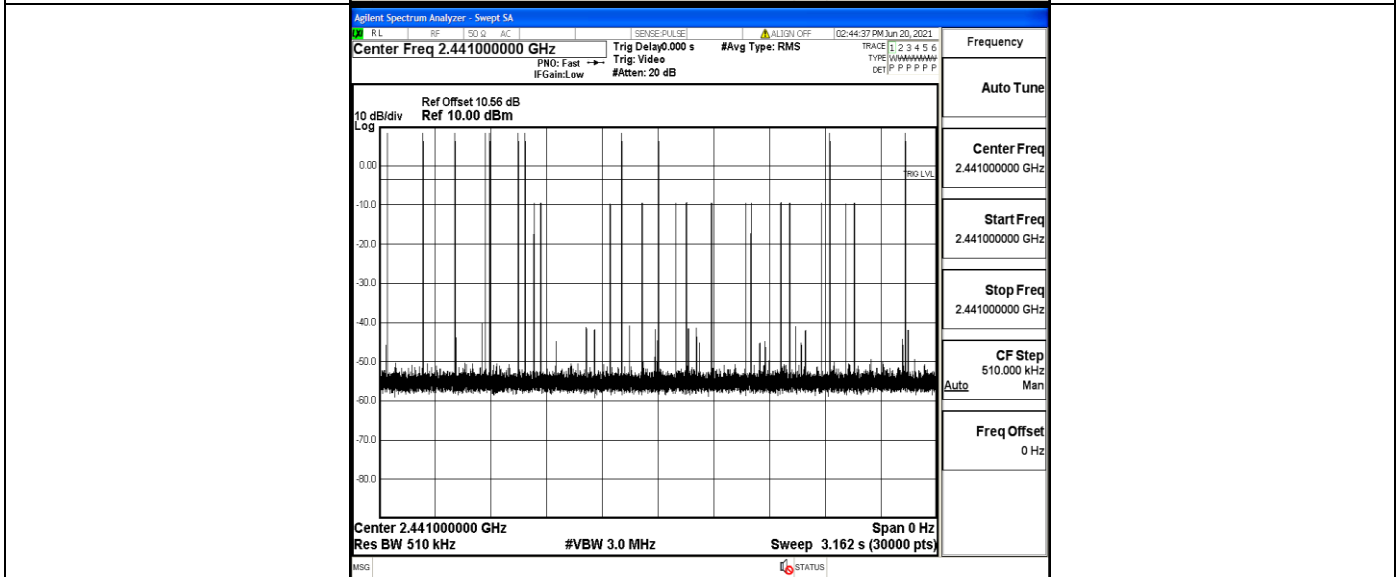
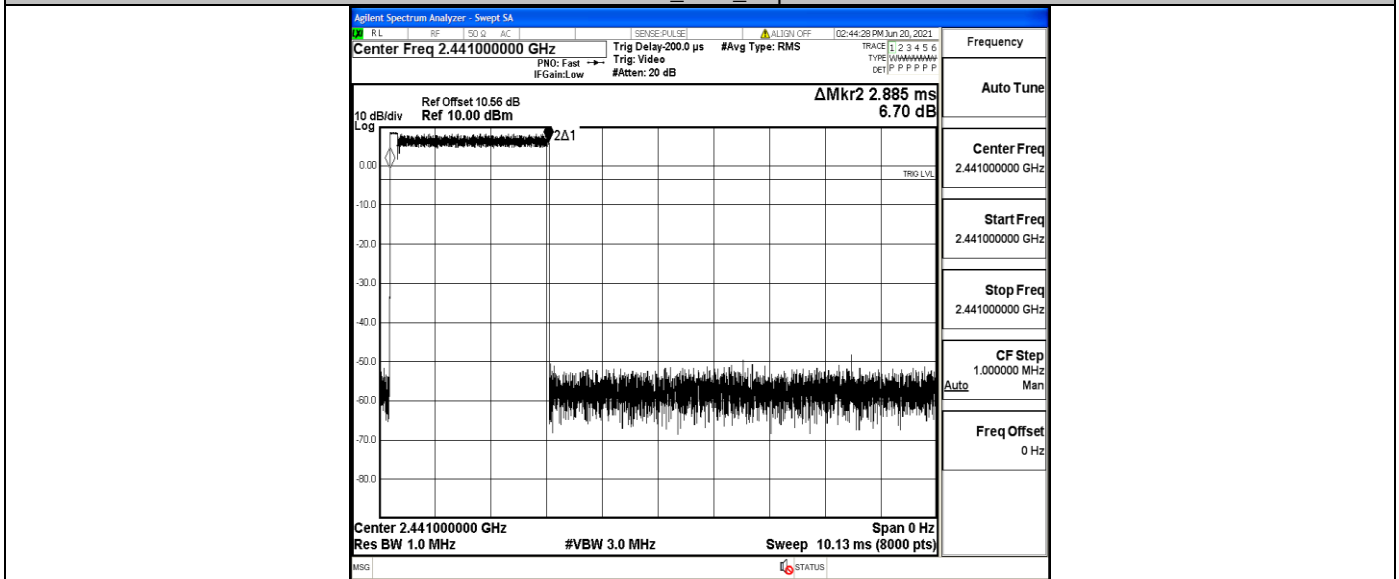
Mode	Channel.	Number of Hopping Channel[N]	Limit[N]	Verdict
GFSK	Hop	79	≥ 15	PASS
$\pi/4$ DQPSK	Hop	79	≥ 15	PASS
8DPSK	Hop	79	≥ 15	PASS

Test Graph





3DH5_Ant1_Hop

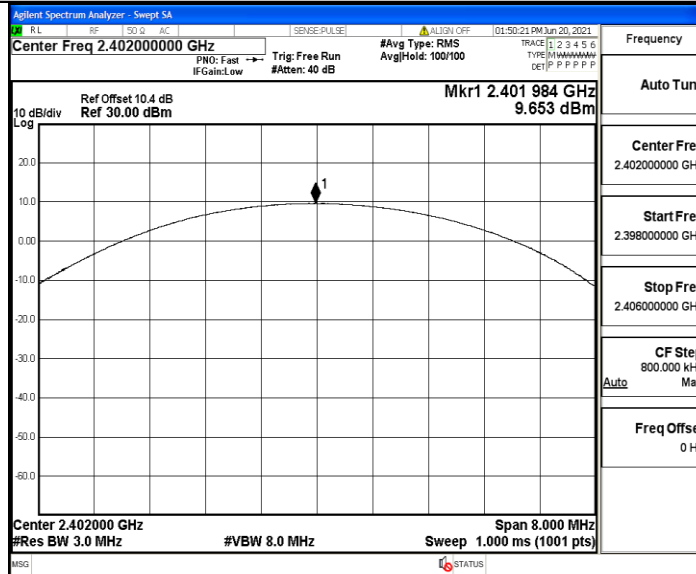


A.5 Conducted Peak Output Power

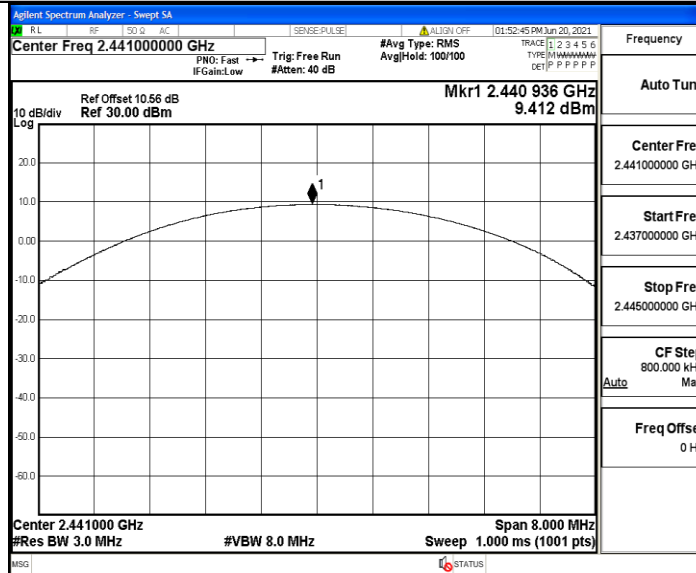
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
DH5	Ant1	2402	9.65	<=30.00	PASS
		2441	9.41	<=30.00	PASS
		2480	9.36	<=30.00	PASS
2DH5	Ant1	2402	8.45	<=20.97	PASS
		2441	8.65	<=20.97	PASS
		2480	9.33	<=20.97	PASS
3DH5	Ant1	2402	8.43	<=20.97	PASS
		2441	8.59	<=20.97	PASS
		2480	9.3	<=20.97	PASS

Test Graph

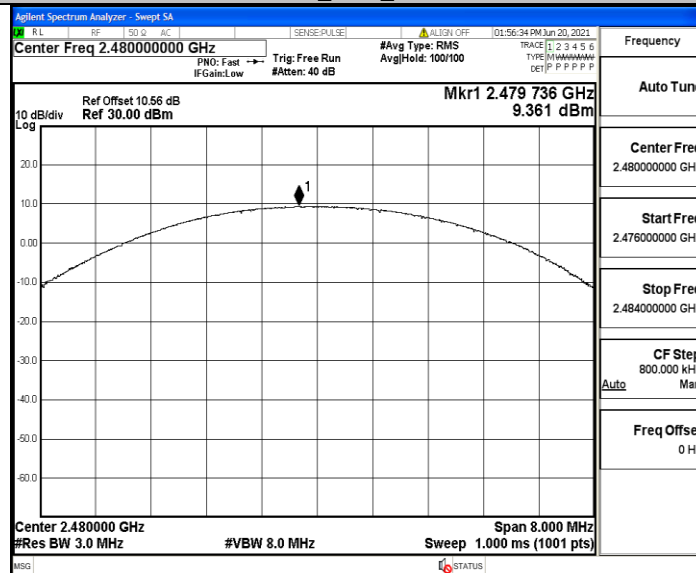
DH5_Ant1_2402



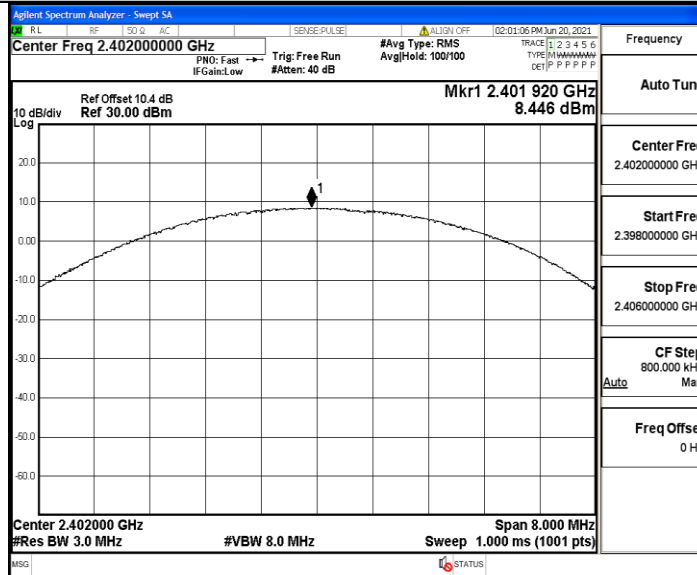
DH5_Ant1_2441



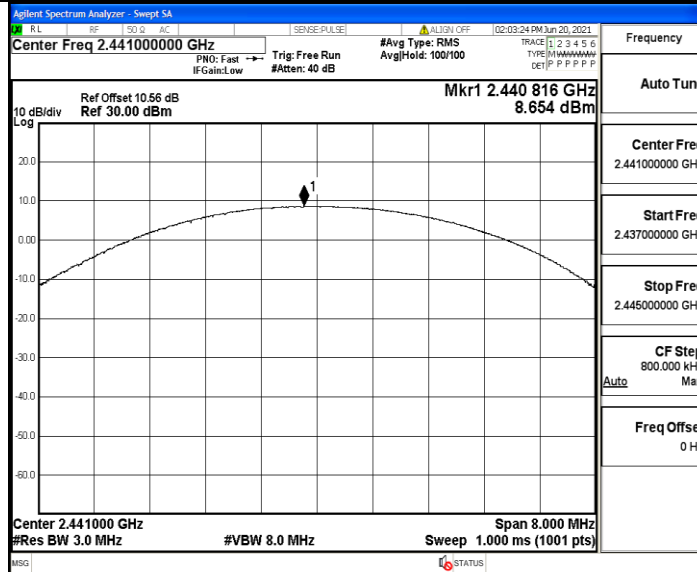
DH5_Ant1_2480



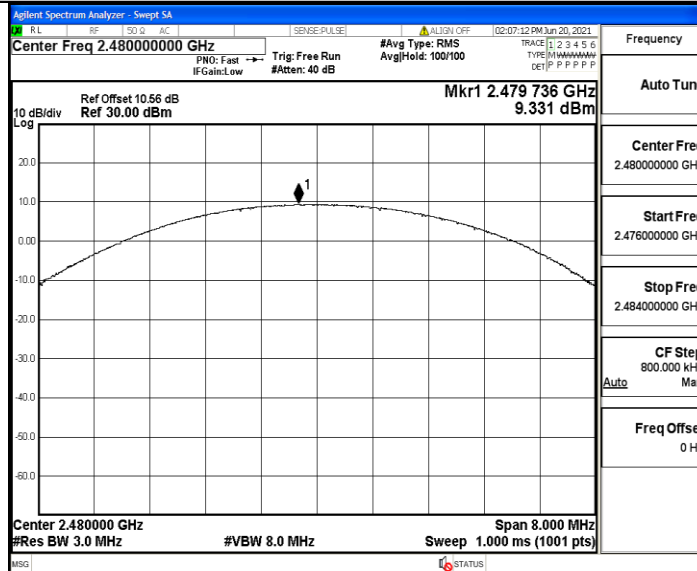
2DH5_Ant1_2402



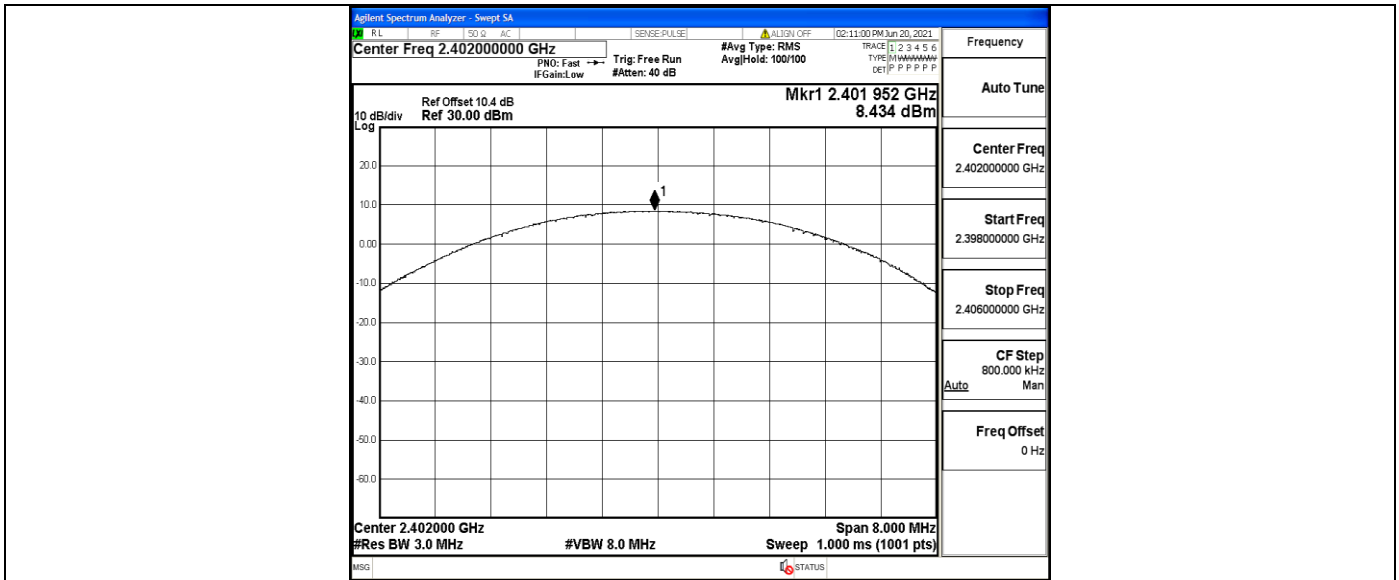
2DH5_Ant1_2441



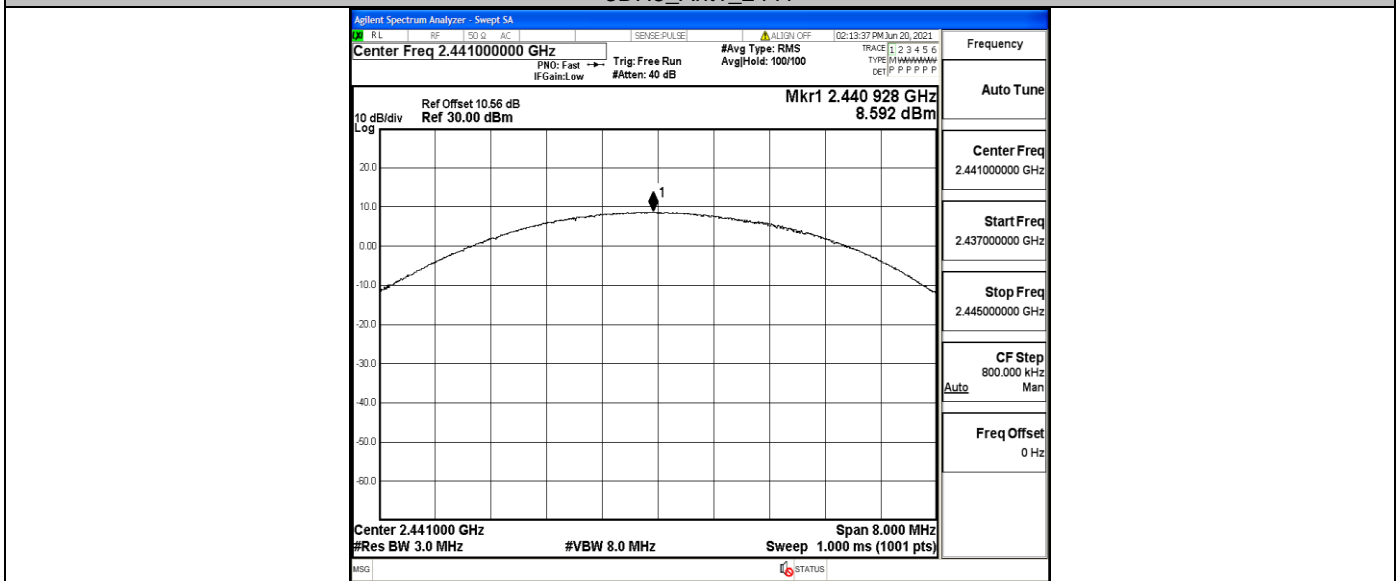
2DH5_Ant1_2480



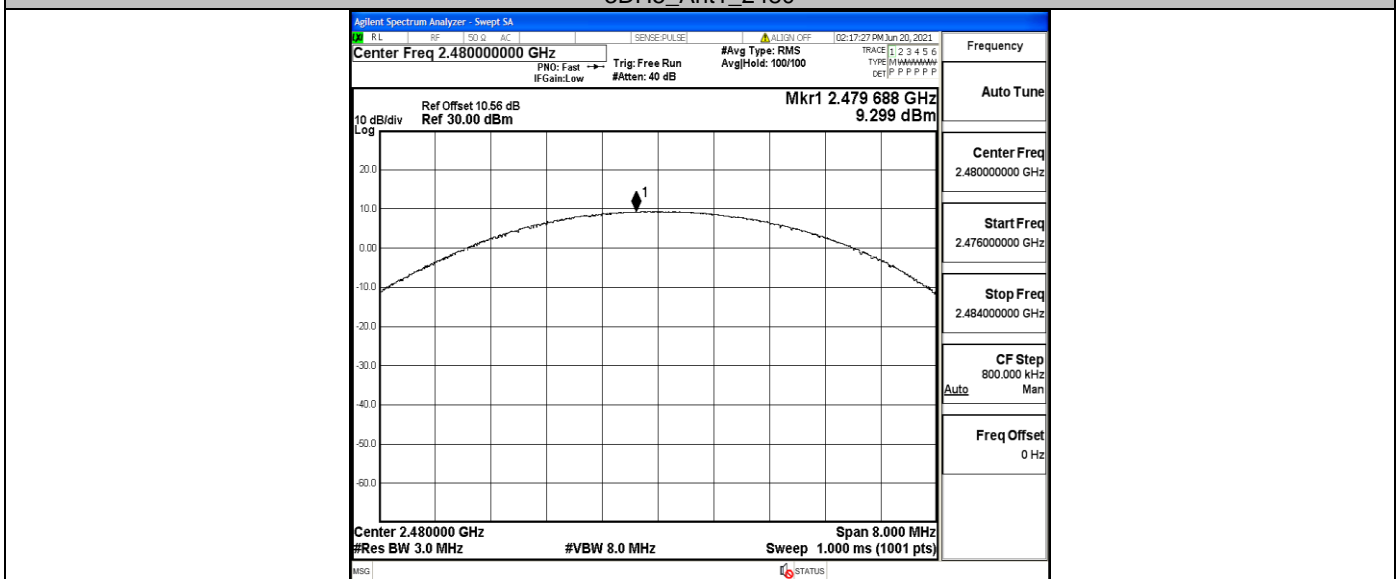
3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480

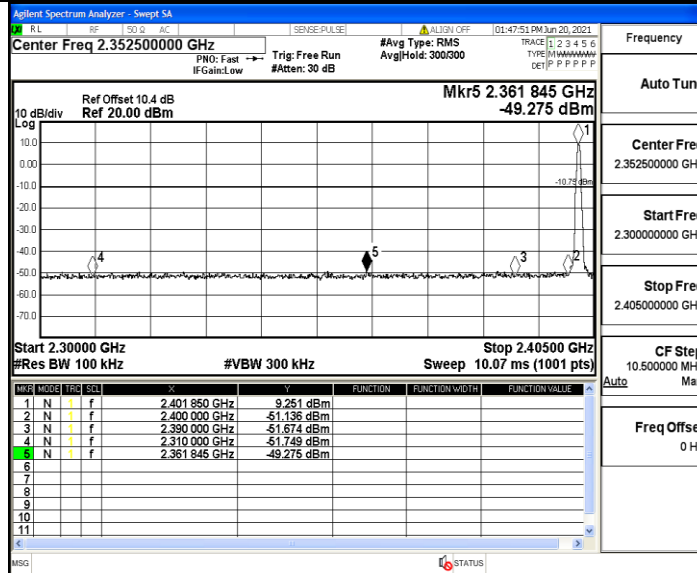


A.6 Band-edge for RF Conducted Emissions

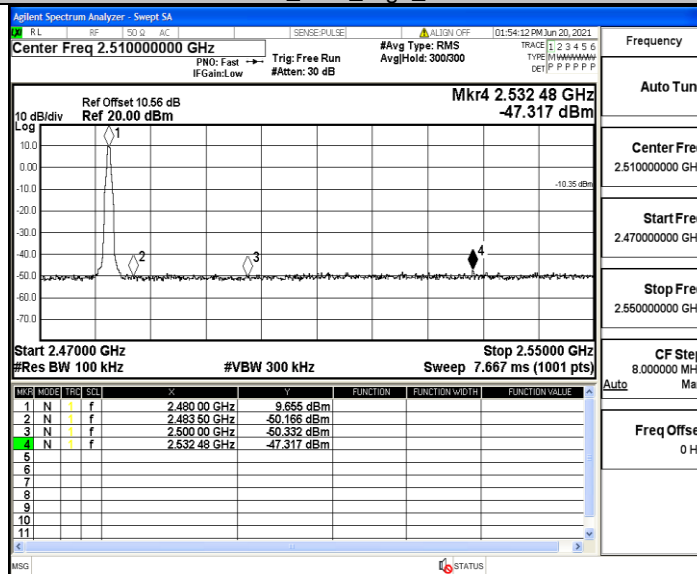
TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	9.25	-49.28	<=-10.75	PASS
		High	2480	9.65	-47.32	<=-10.35	PASS
		Low	Hop_2402	8.07	-48.94	<=-11.93	PASS
		High	Hop_2480	9.66	-48.1	<=-10.34	PASS
2DH5	Ant1	Low	2402	7.79	-48.64	<=-12.22	PASS
		High	2480	8.75	-47.87	<=-11.25	PASS
		Low	Hop_2402	2.03	-48.25	<=-17.97	PASS
		High	Hop_2480	4.41	-47.51	<=-15.6	PASS
3DH5	Ant1	Low	2402	7.51	-47.51	<=-12.49	PASS
		High	2480	9.16	-48.2	<=-10.84	PASS
		Low	Hop_2402	2.27	-49.03	<=-17.73	PASS
		High	Hop_2480	9.04	-48.02	<=-10.96	PASS

Test Graph

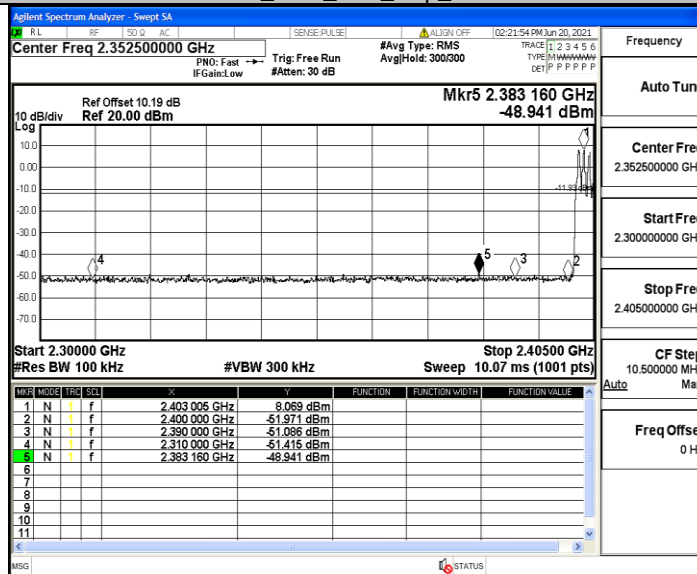
DH5_Ant1_Low_2402



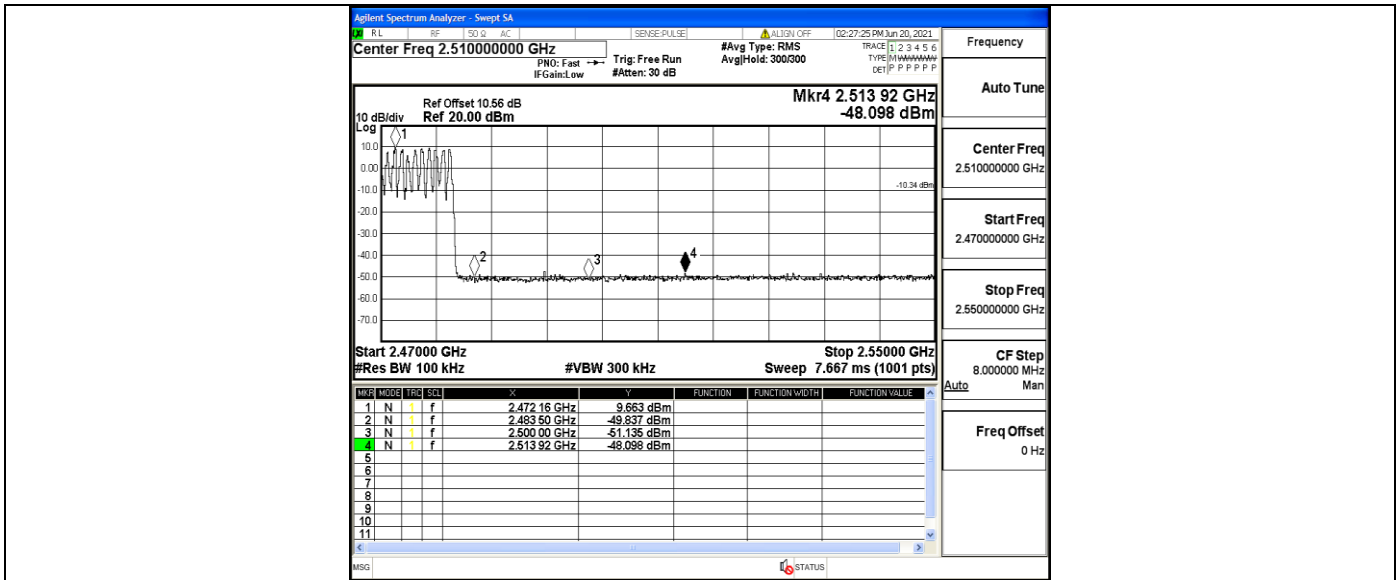
DH5_Ant1_High_2480



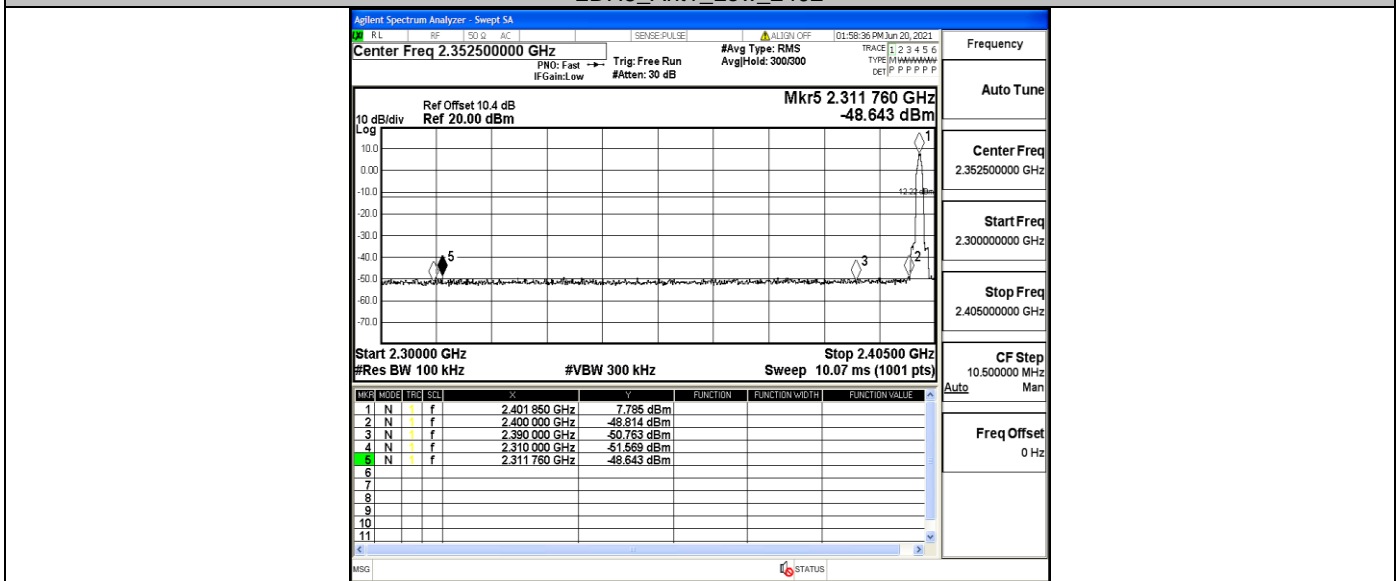
DH5_Ant1_Low_Hop_2402



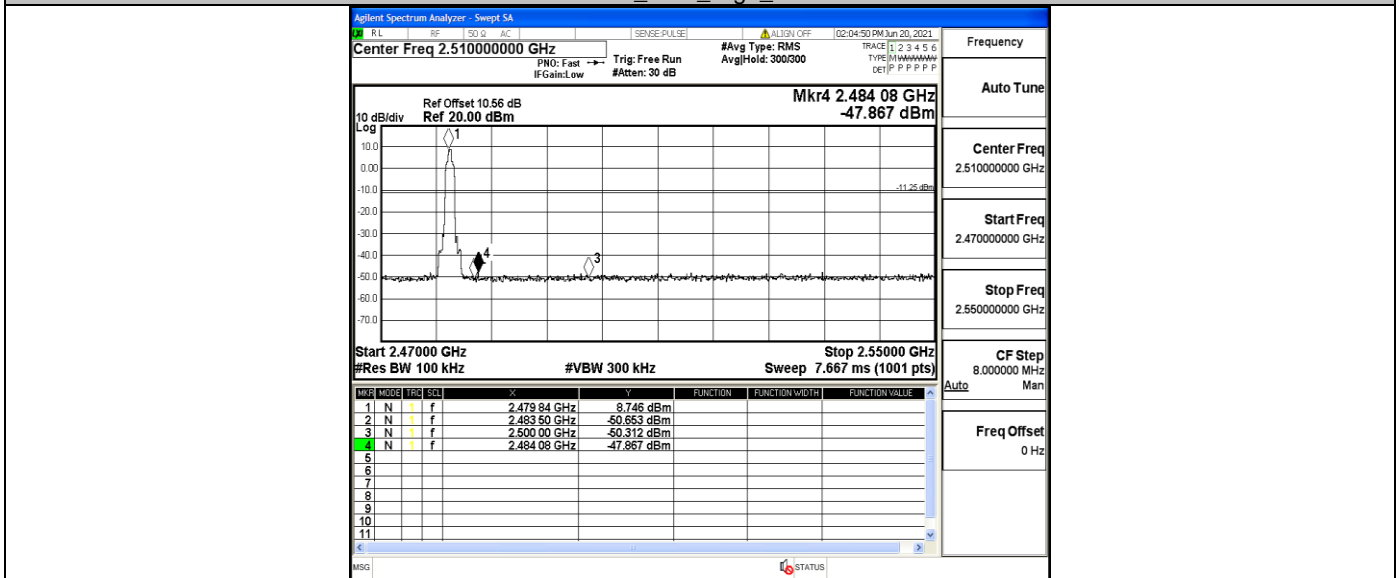
DH5_Ant1_High_Hop_2480



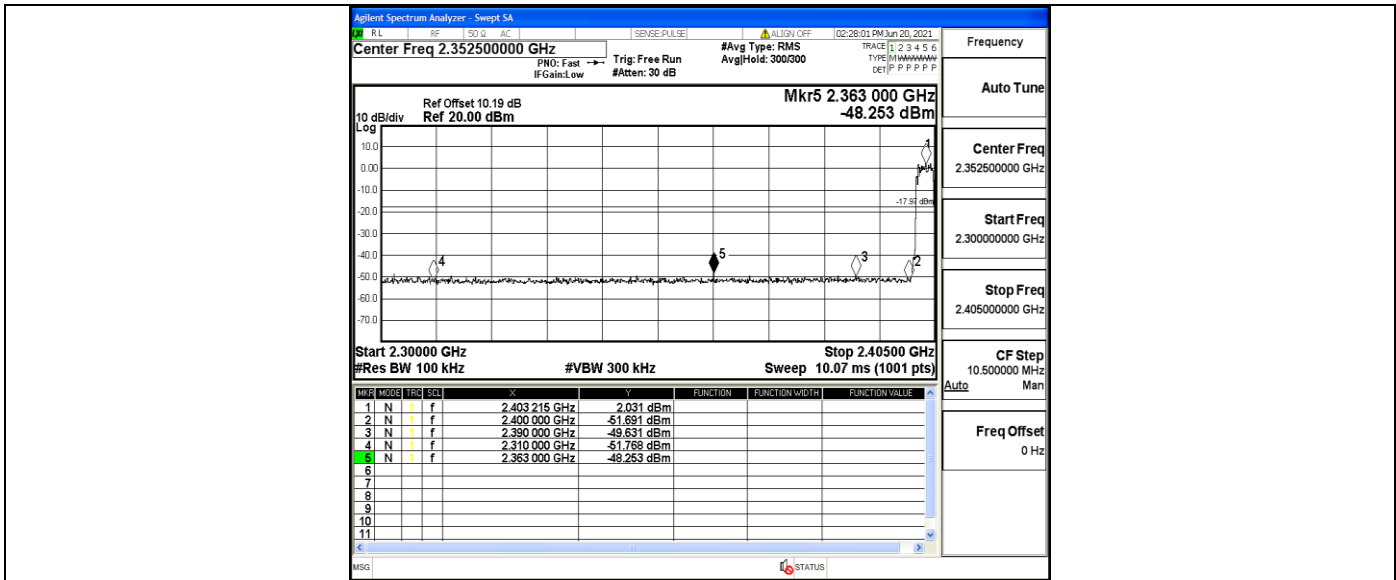
2D5_Ant1_Low_2402



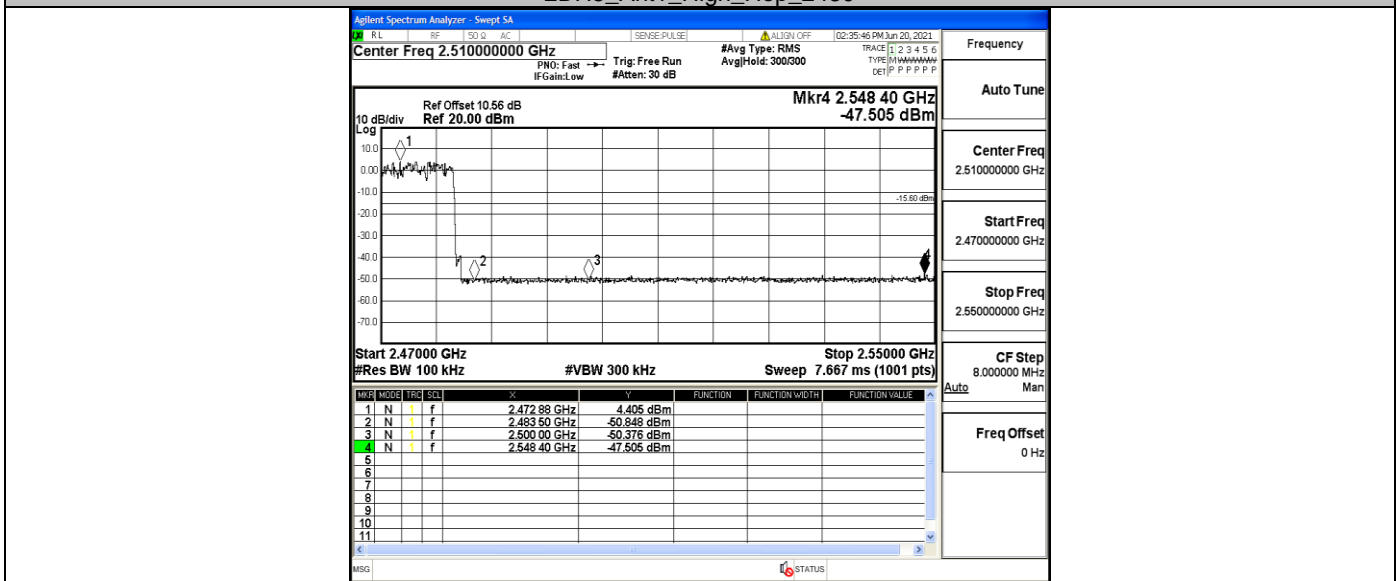
2D5_Ant1_High_2480



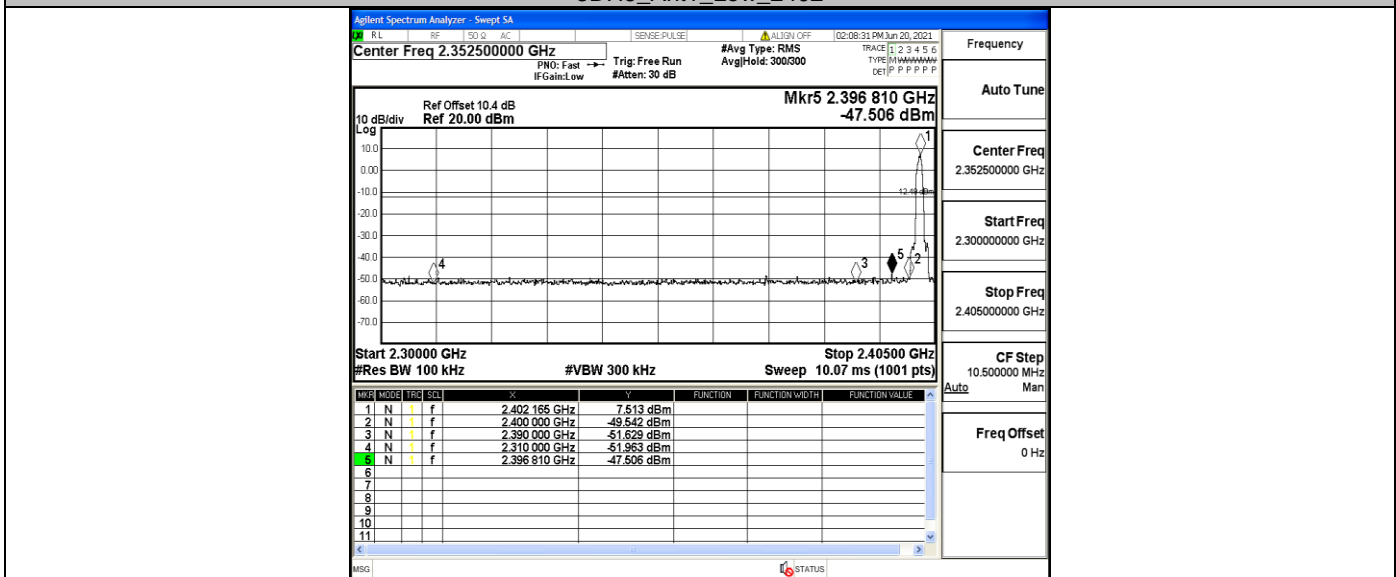
2D5_Ant1_Low_Hop_2402



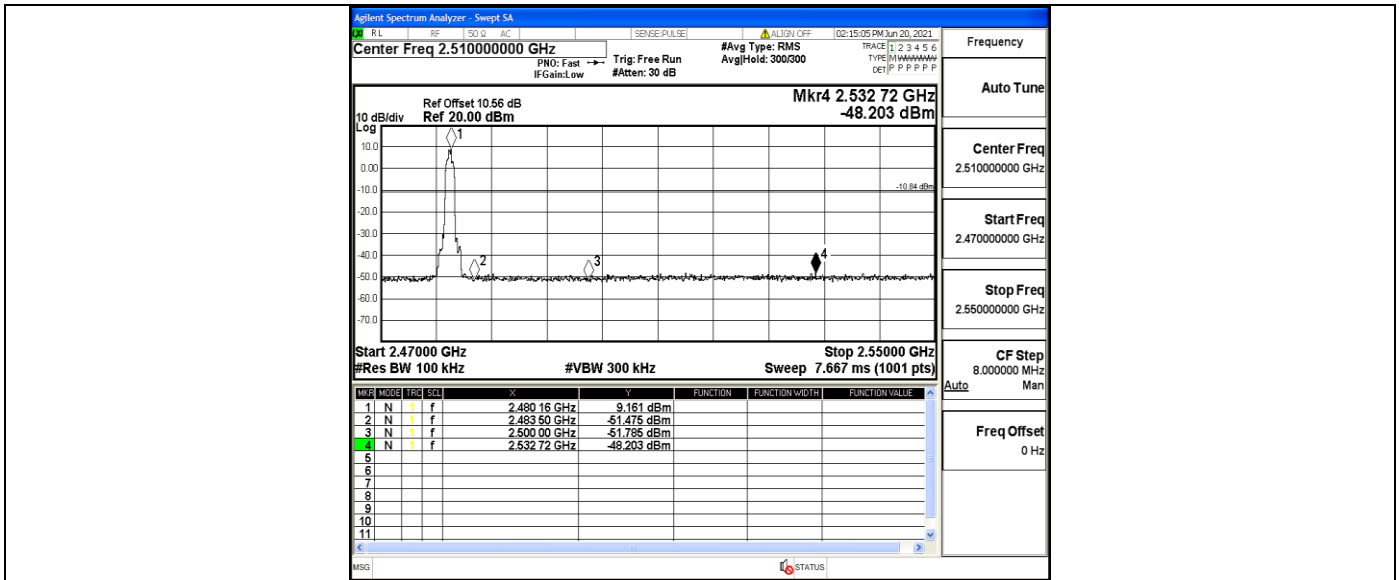
2DH5_Ant1_High_Hop_2480



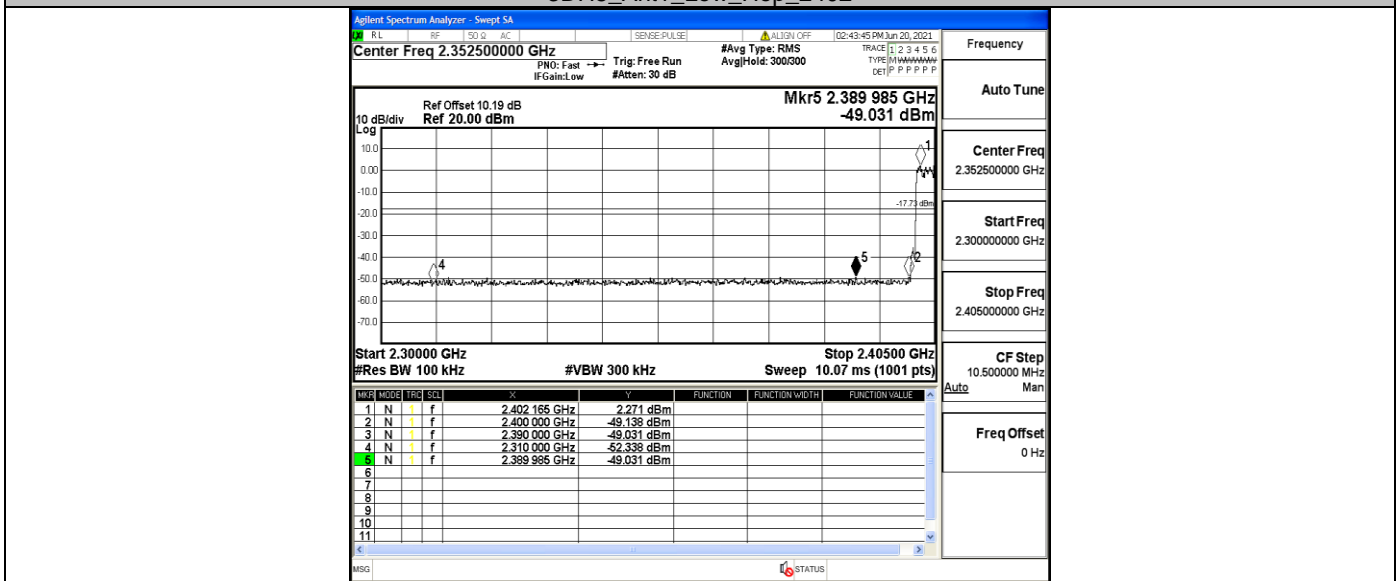
3DH5_Ant1_Low_2402



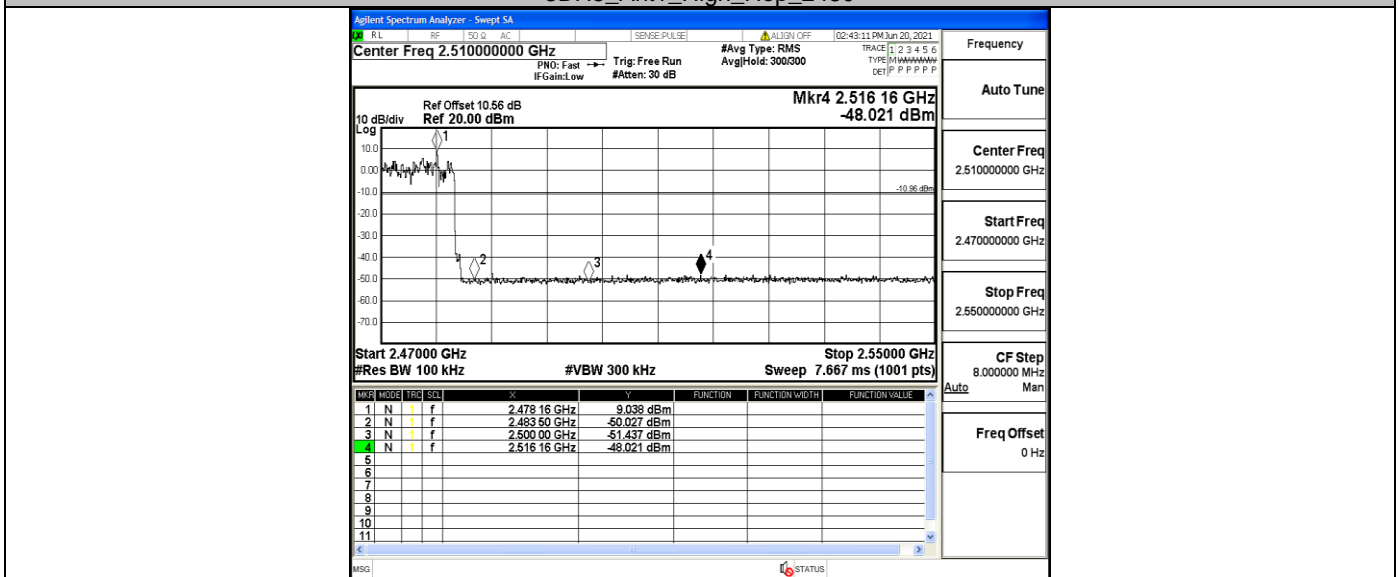
3DH5_Ant1_High_2480



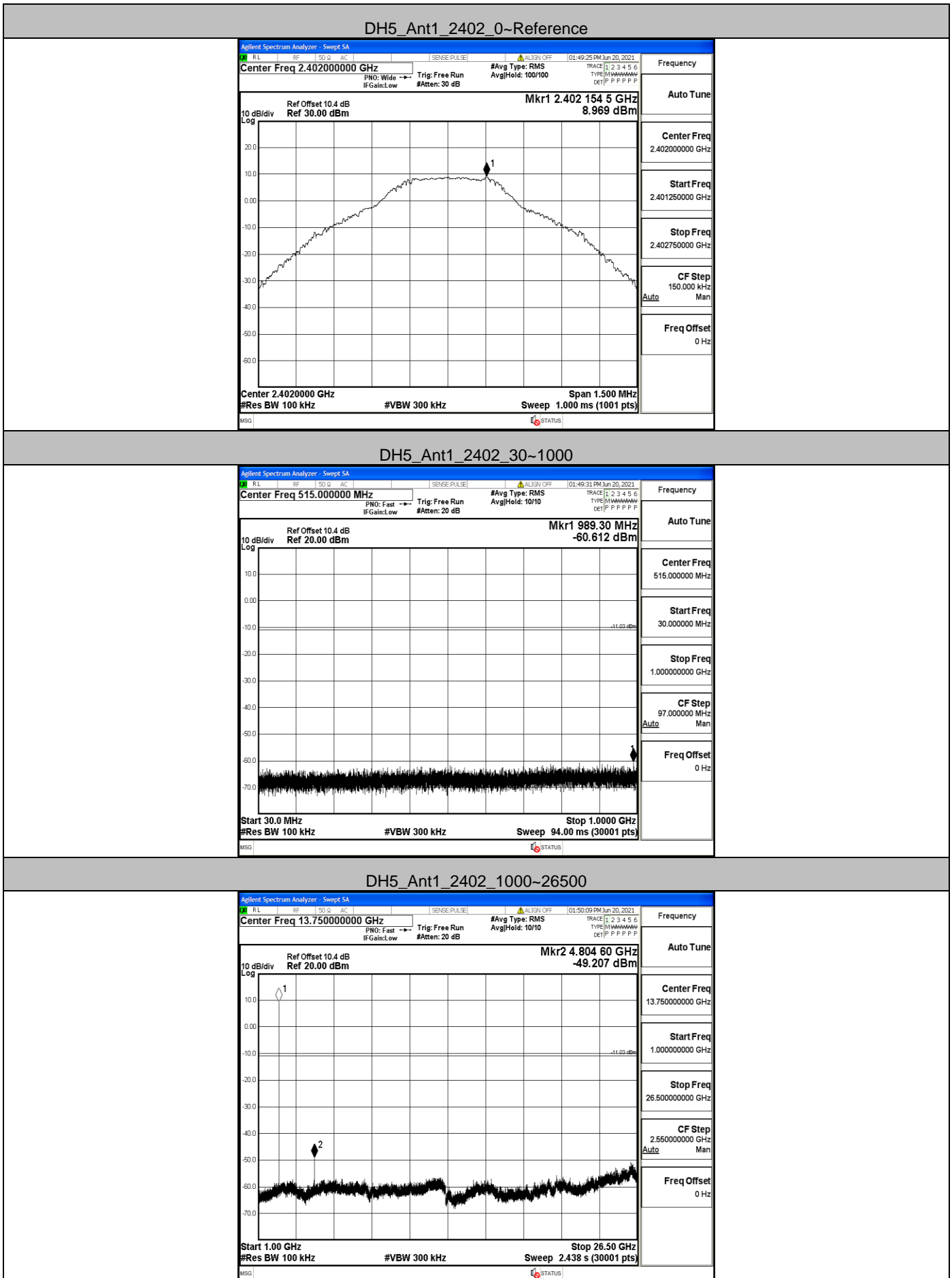
3DH5_Ant1_Low_Hop_2402



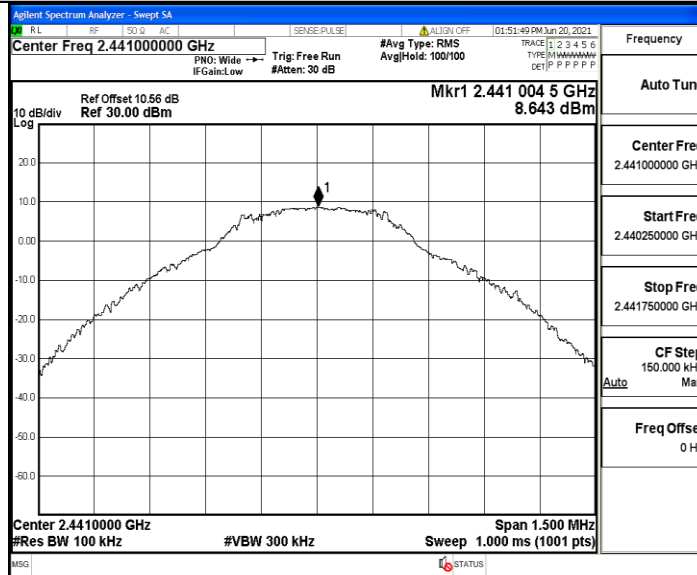
3DH5_Ant1_High_Hop_2480



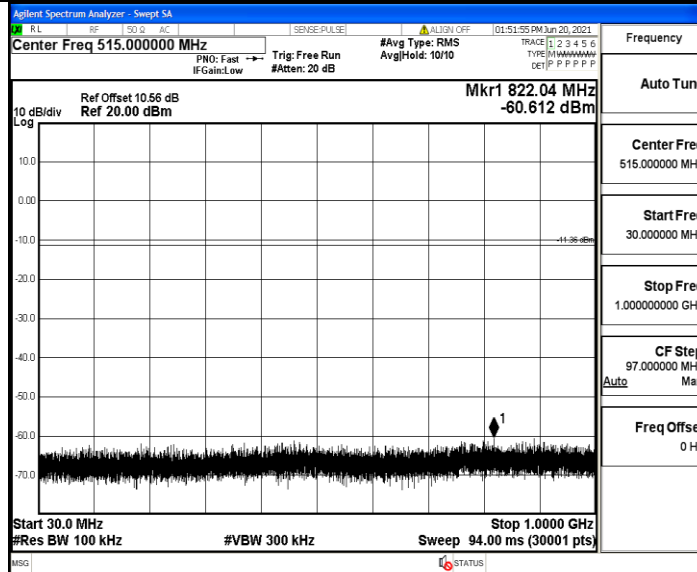
A.7 RF Conducted Spurious Emissions



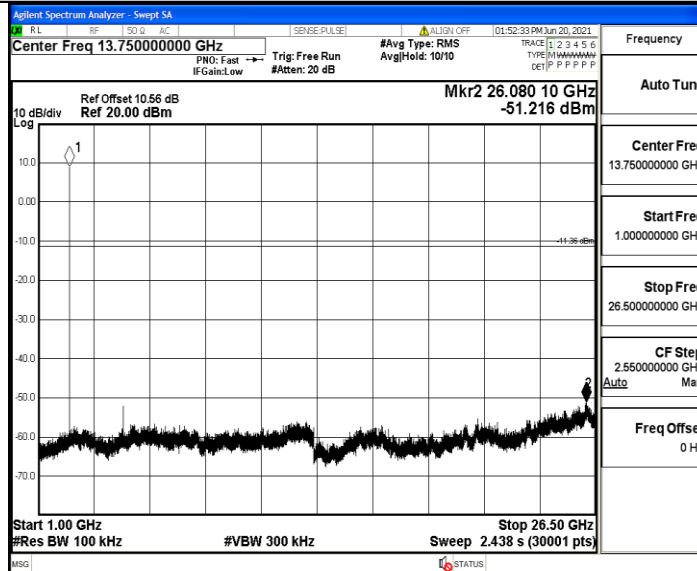
DH5_Ant1_2441_0~Reference



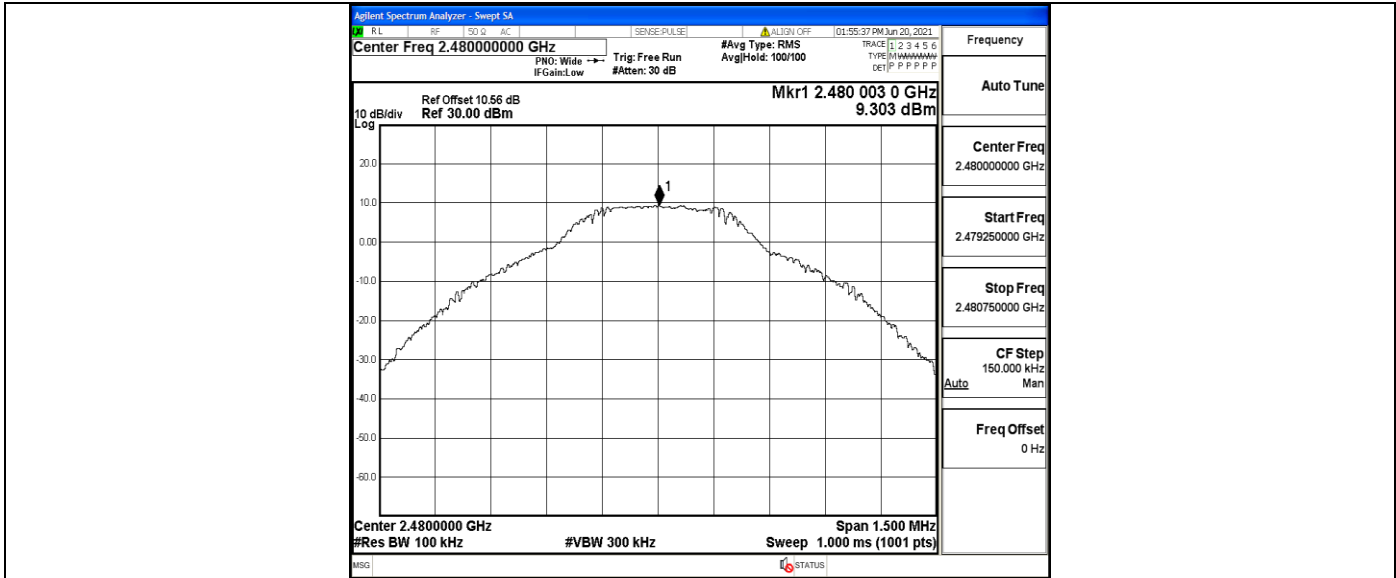
DH5_Ant1_2441_30~1000



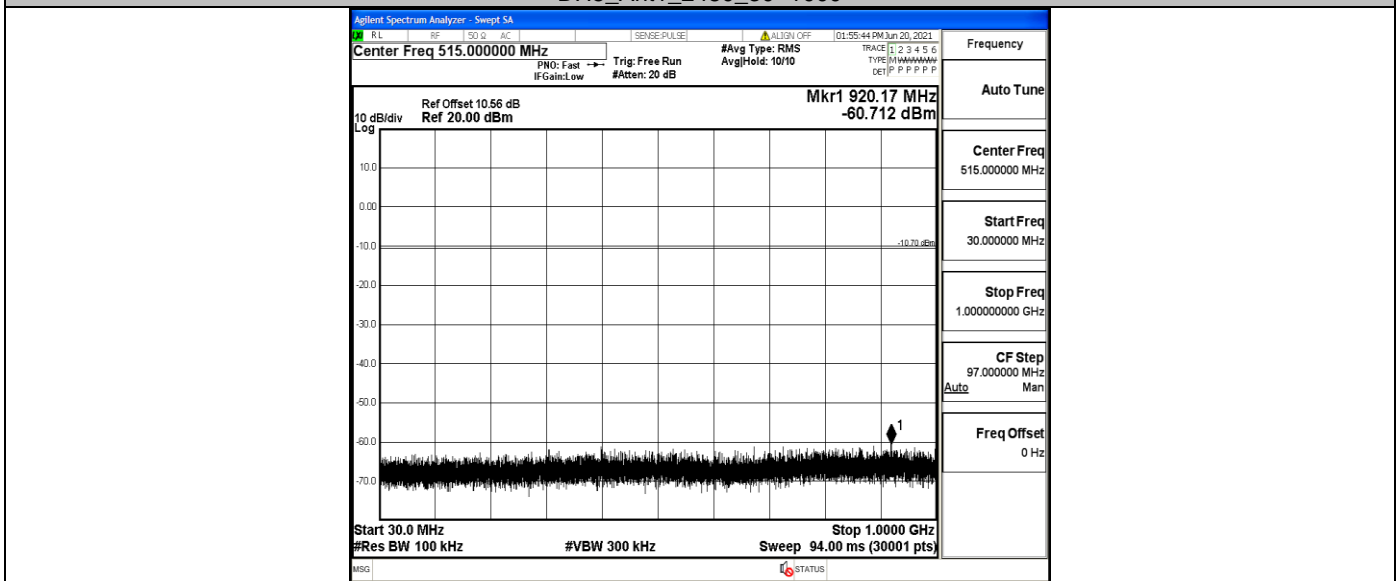
DH5_Ant1_2441_1000~26500



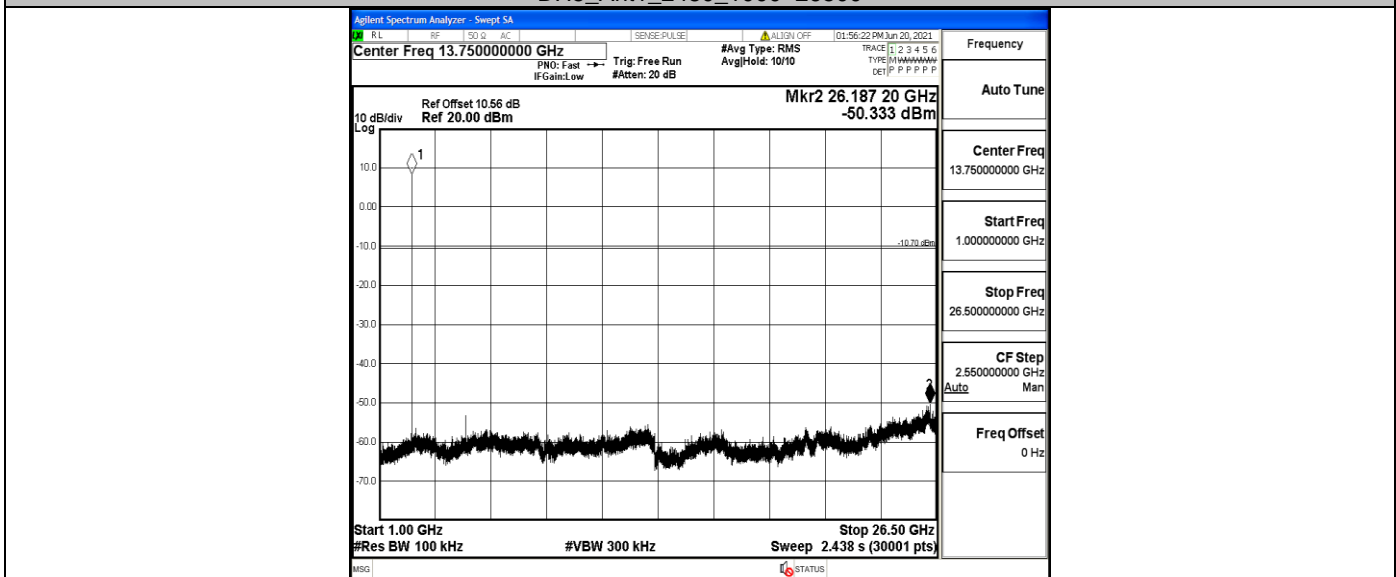
DH5_Ant1_2480_0~Reference



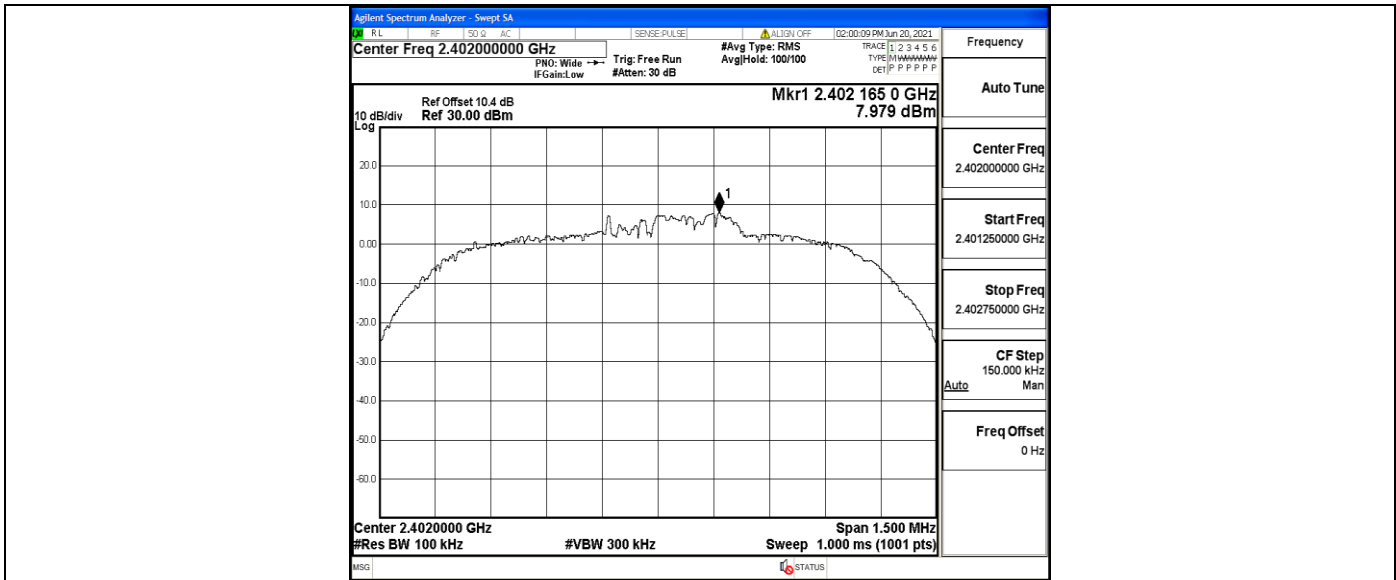
DH5_Ant1_2480_30~1000



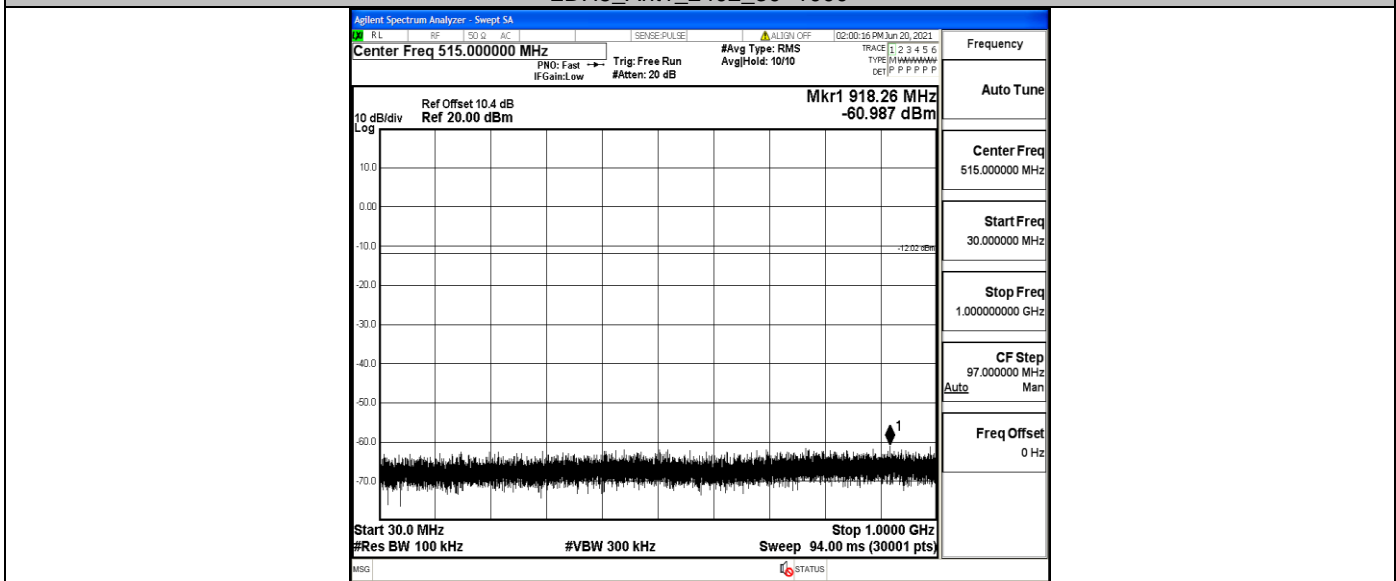
DH5_Ant1_2480_1000~26500



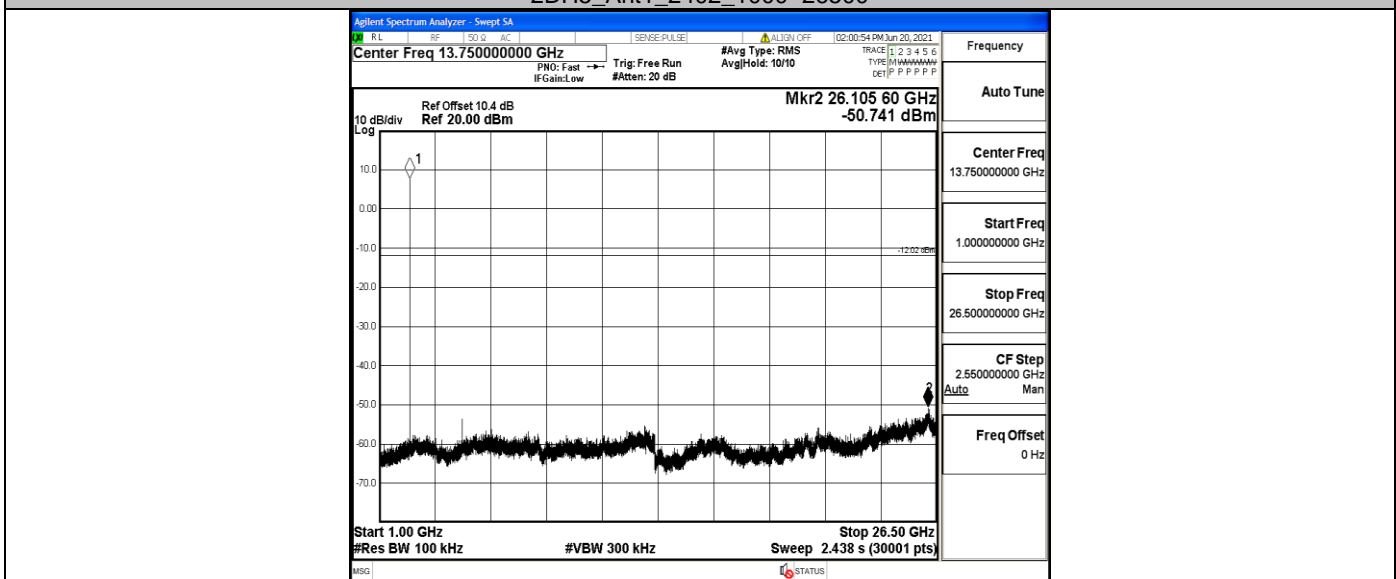
2DH5_Ant1_2402_0~Reference



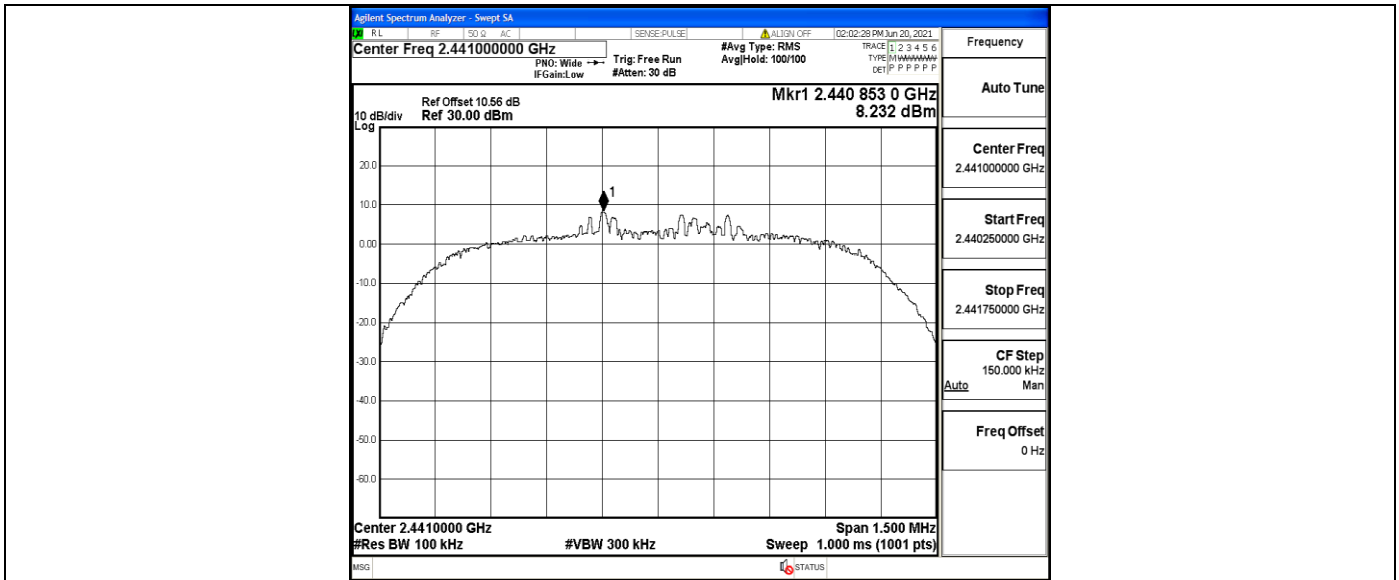
2DH5_Ant1_2402_30~1000



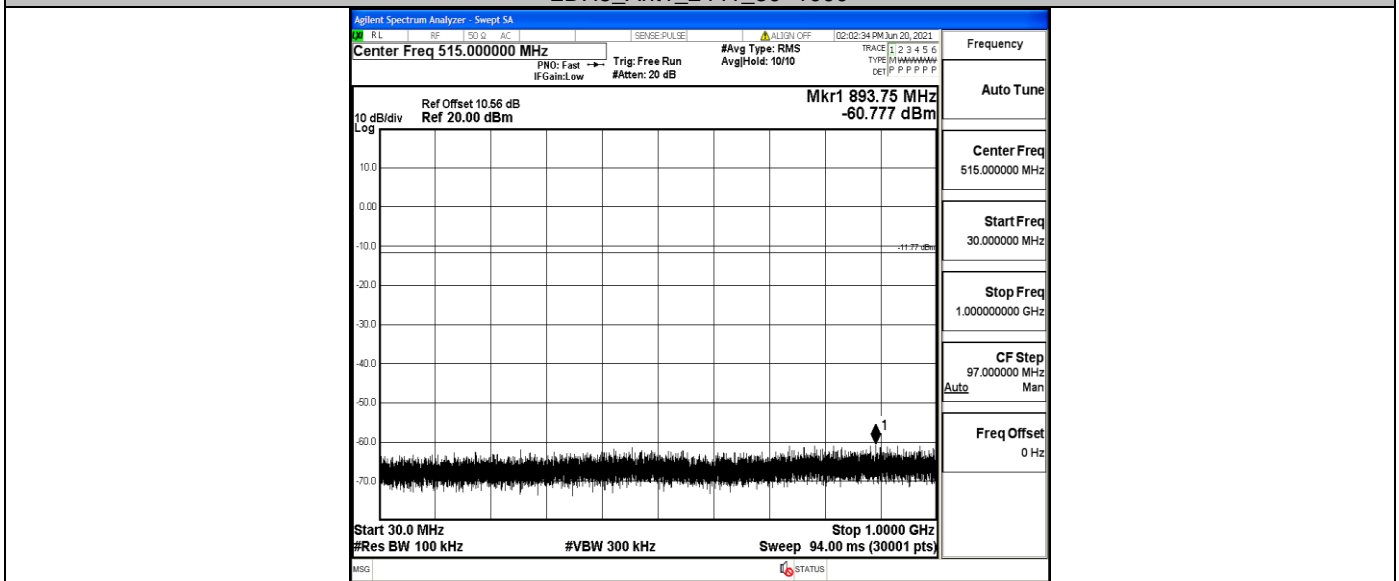
2DH5_Ant1_2402_1000~26500



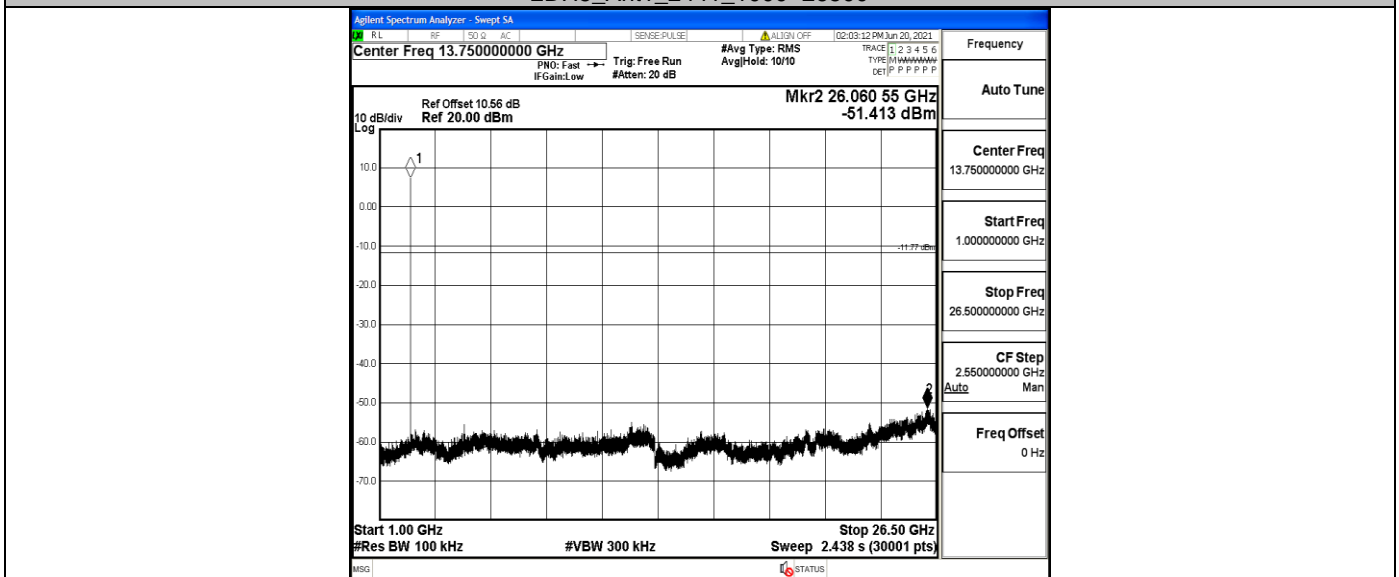
2DH5_Ant1_2441_0~Reference



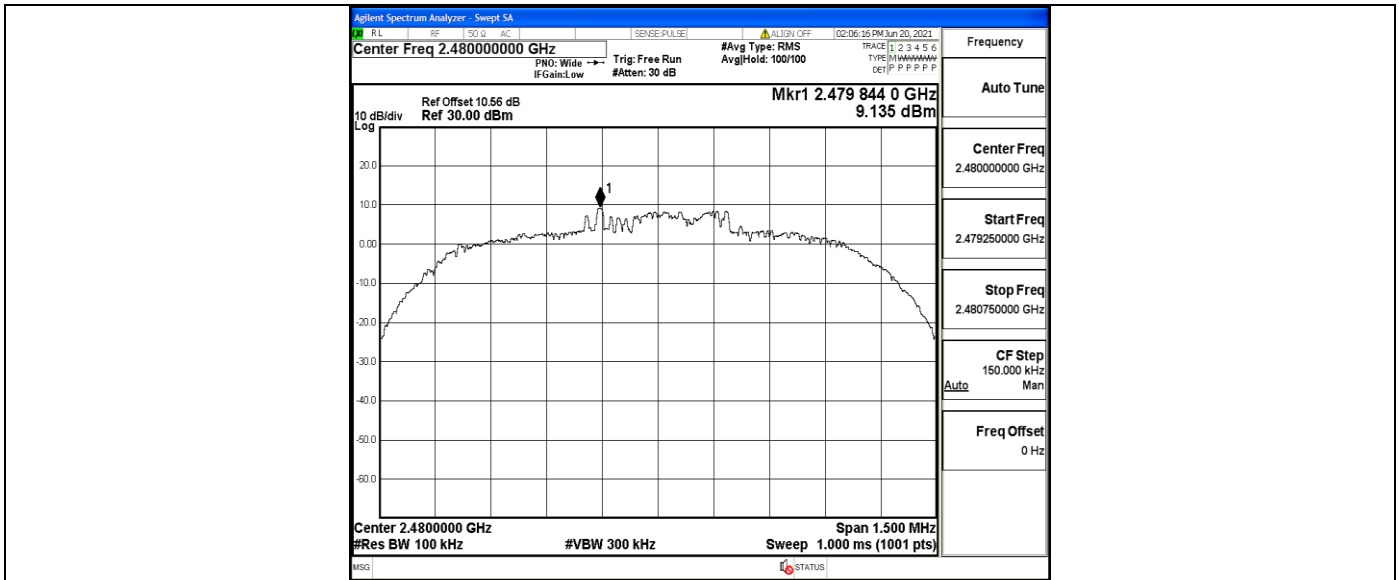
2DH5_Ant1_2441_30~1000



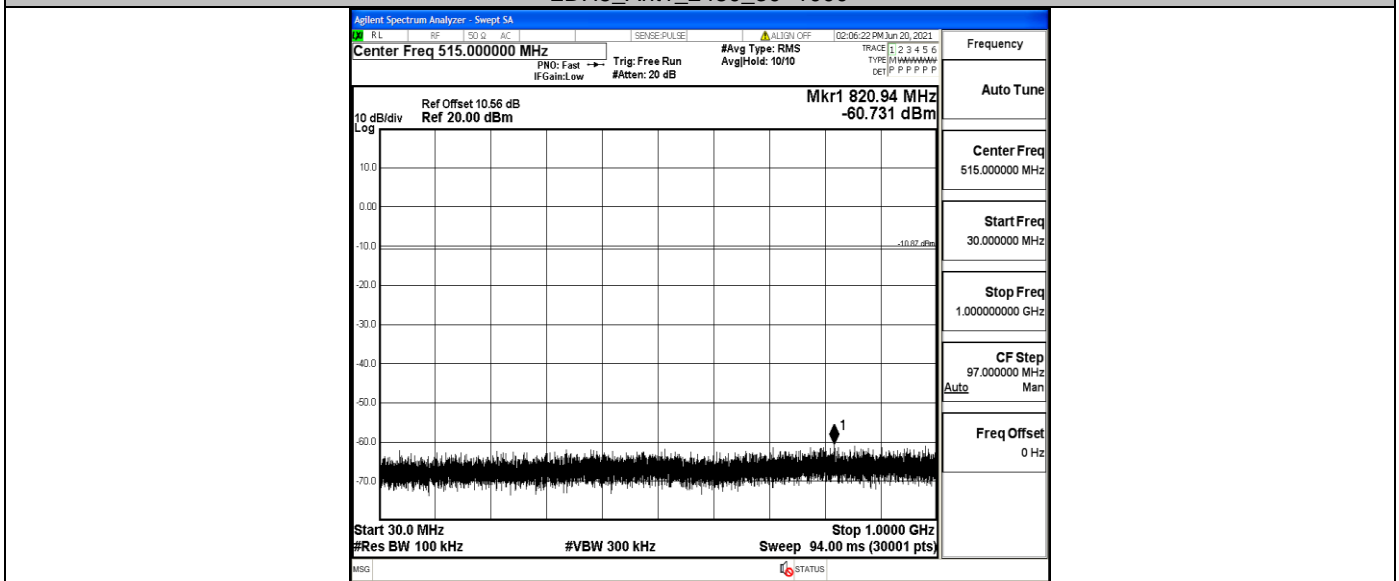
2DH5_Ant1_2441_1000~26500



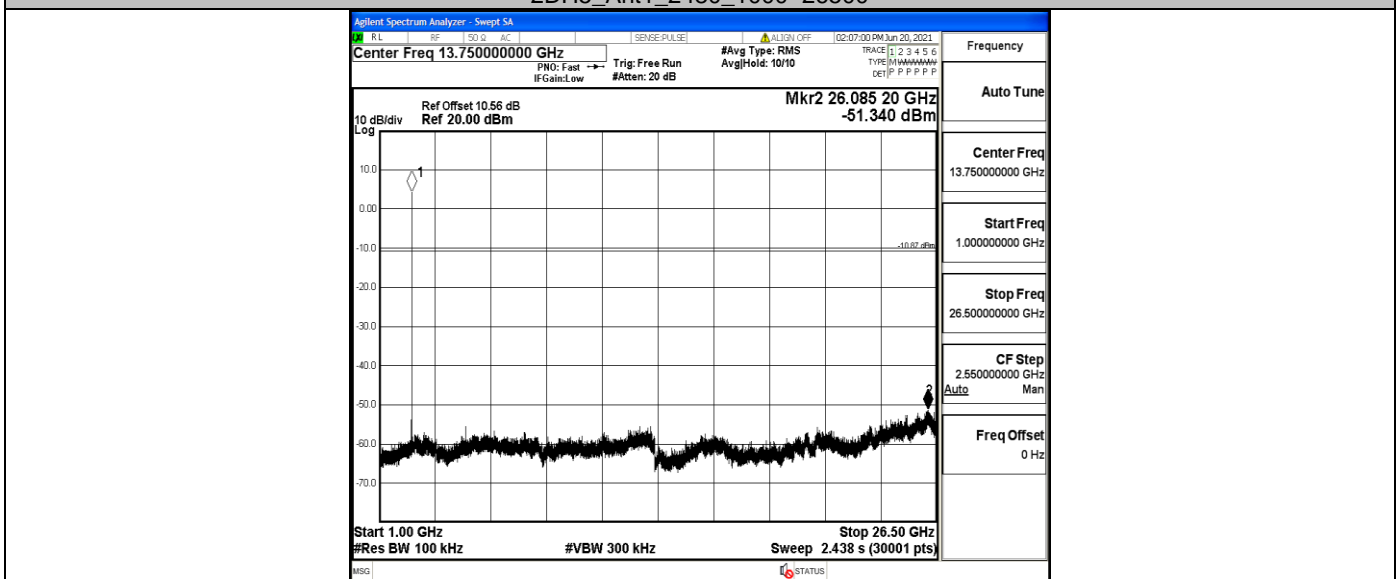
2DH5_Ant1_2480_0~Reference



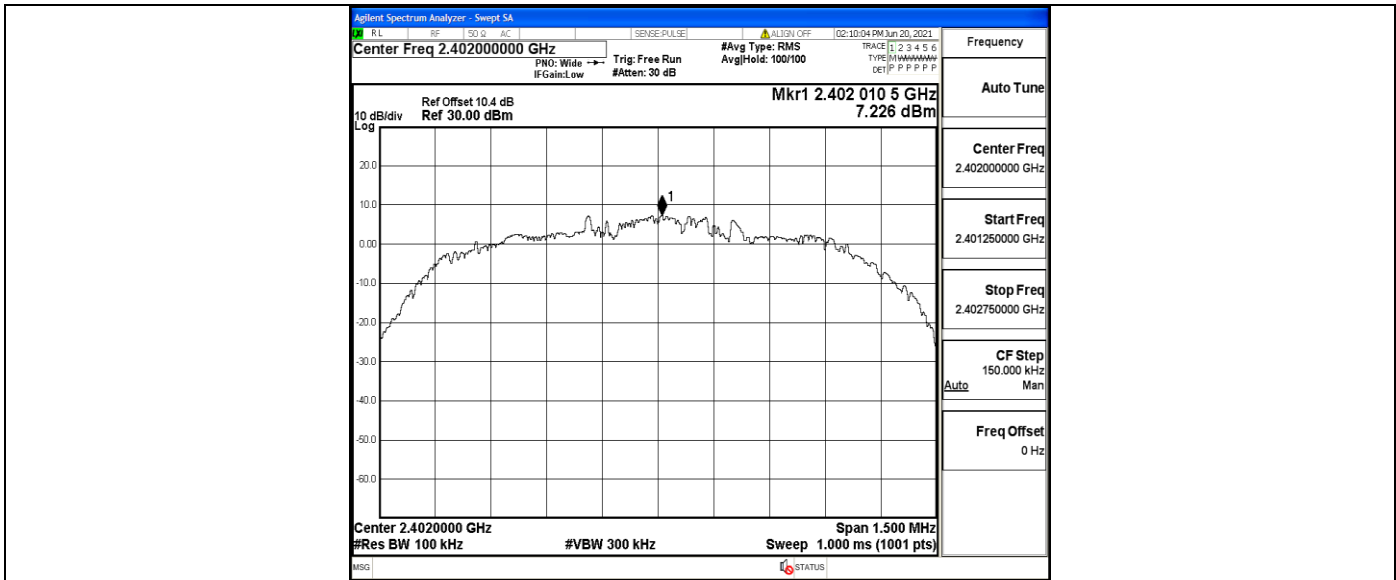
2DH5_Ant1_2480_30~1000



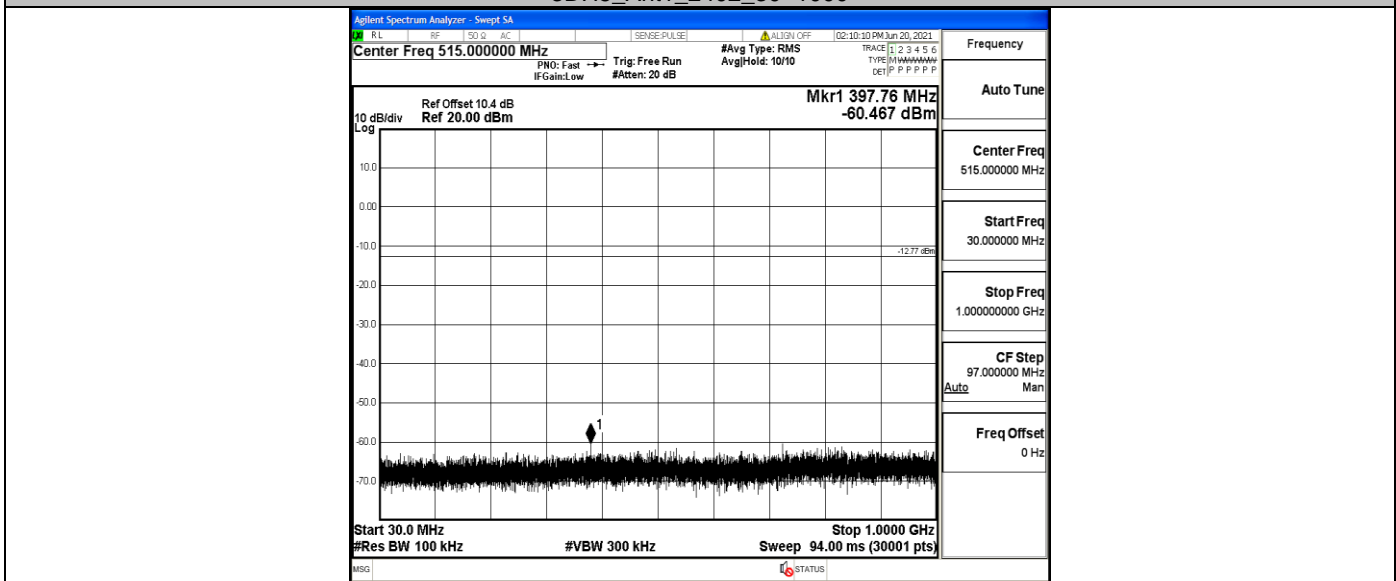
2DH5_Ant1_2480_1000~26500



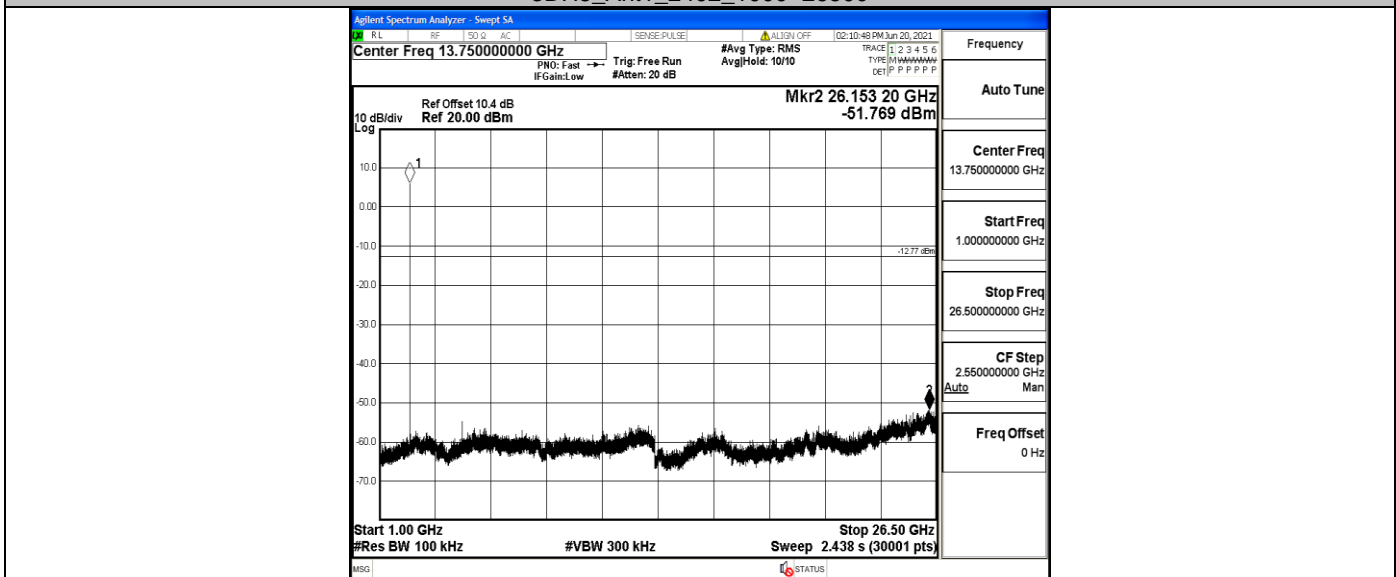
3DH5_Ant1_2402_0~Reference



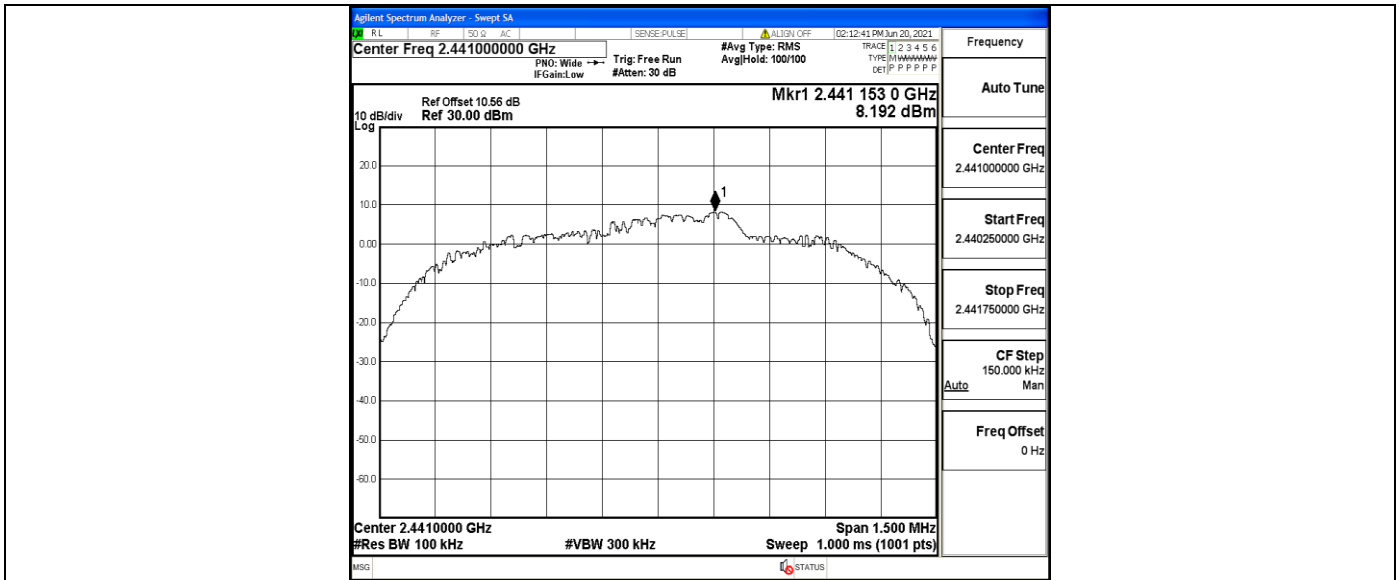
3DH5_Ant1_2402_30~1000



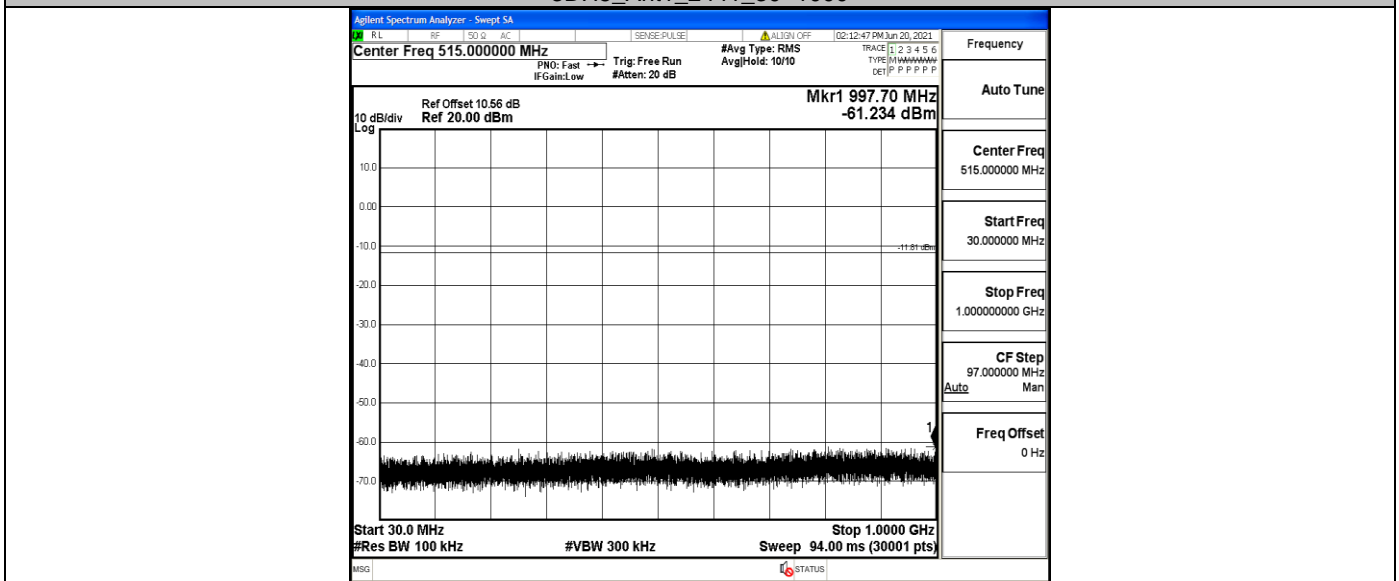
3DH5_Ant1_2402_1000~26500



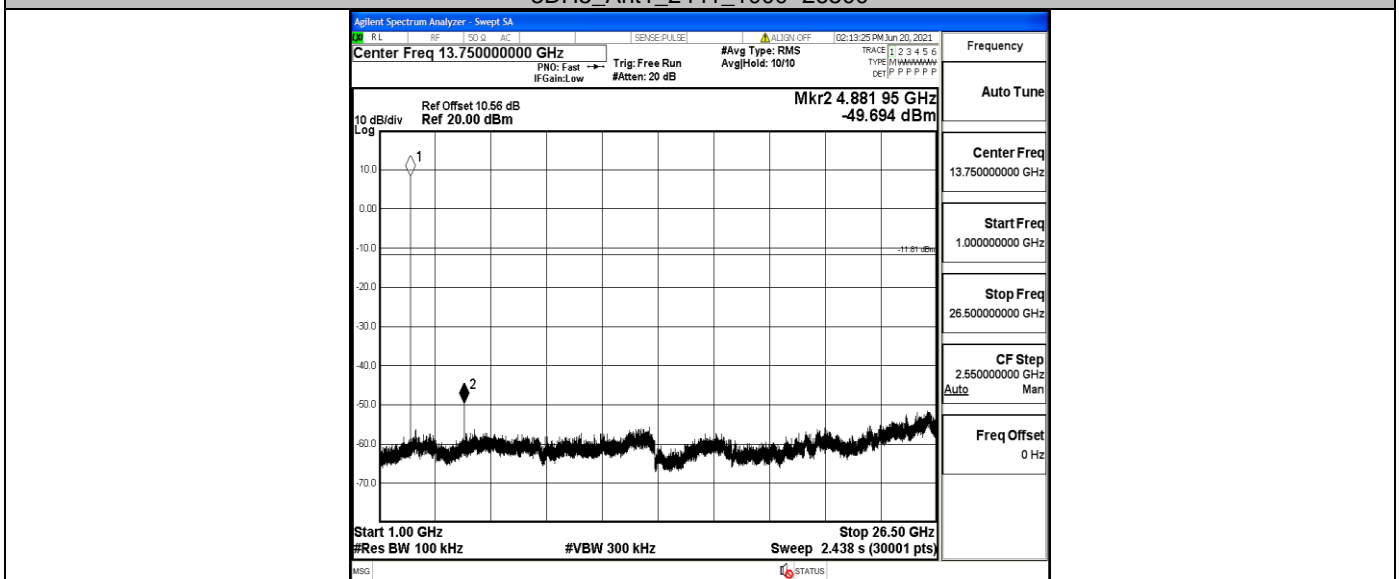
3DH5_Ant1_2441_0~Reference



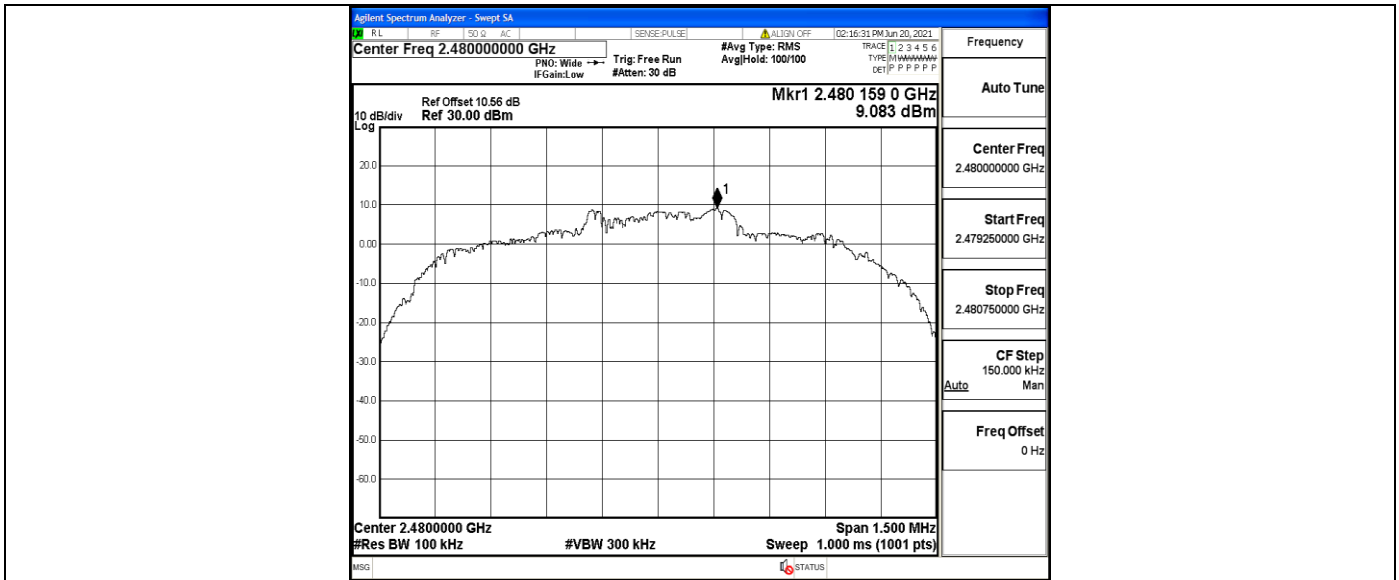
3DH5_Ant1_2441_30~1000



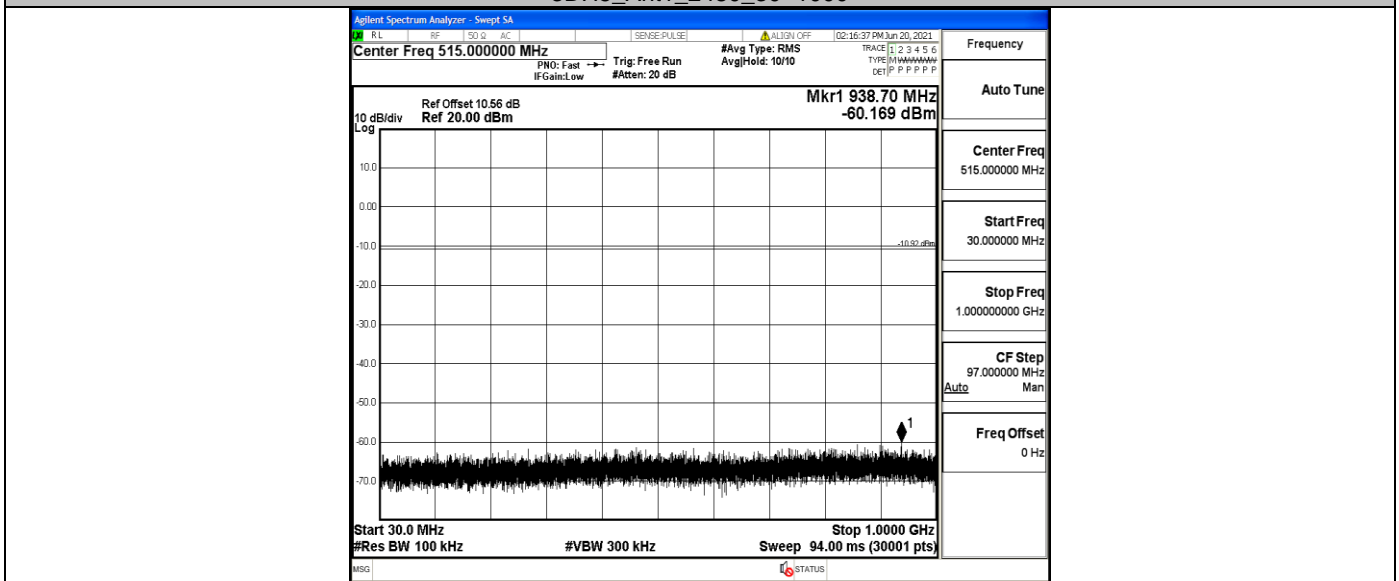
3DH5_Ant1_2441_1000~26500



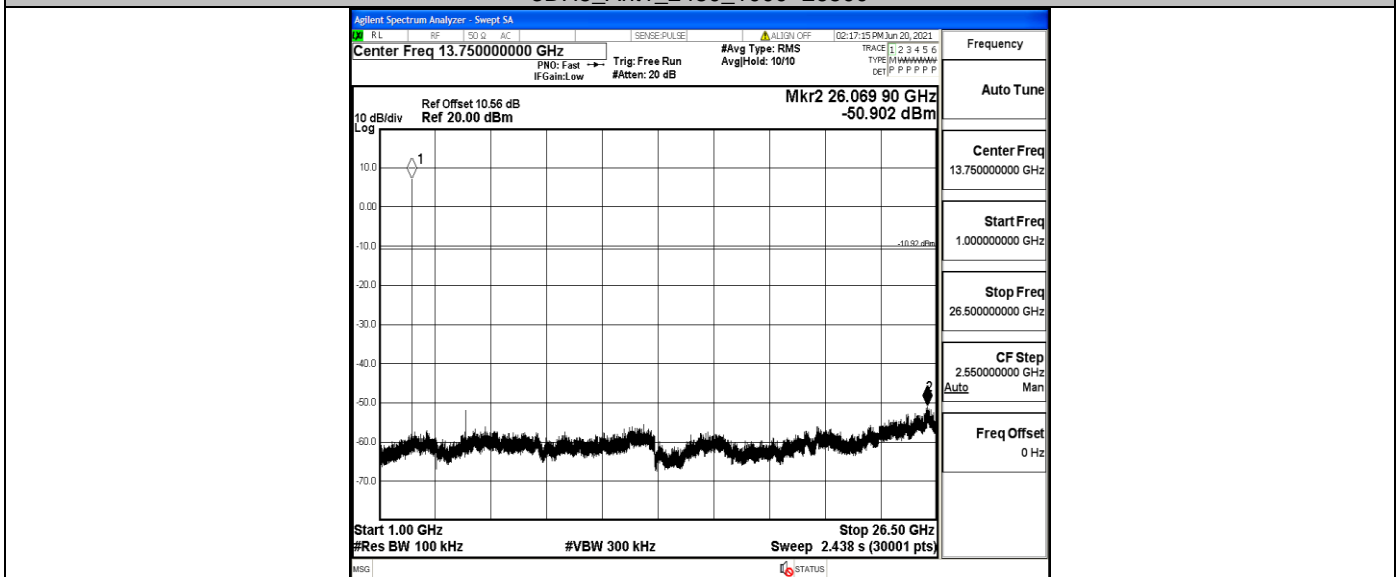
3DH5_Ant1_2480_0~Reference



3DH5_Ant1_2480_30~1000



3DH5_Ant1_2480_1000~26500

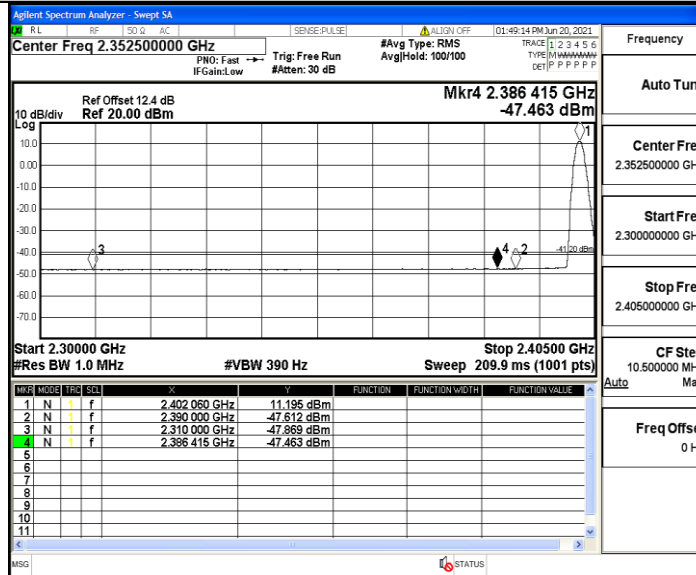


A.8 Restrict-band band-edge measurements

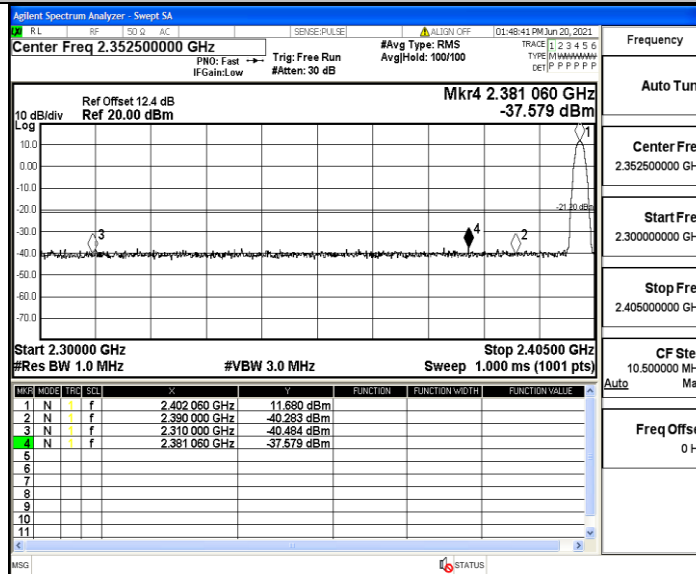
TestMode	Antenna	ChName	Channel	Detector	Freq (MHz)	Result(dBm)	Limit(dBm)	Verdict
DH5	Ant1	Low	2402	AV	2310.000	-47.87	<=-41.20	PASS
				AV	2386.415	-47.46	<=-41.20	PASS
				AV	2390.000	-47.61	<=-41.20	PASS
				Peak	2310.000	-40.48	<=-21.20	PASS
				Peak	2381.060	-37.58	<=-21.20	PASS
				Peak	2390.000	-40.28	<=-21.20	PASS
		High	2480	AV	2483.500	-45.46	<=-41.20	PASS
				AV	2500.000	-46.94	<=-41.20	PASS
				Peak	2483.500	-40.17	<=-21.20	PASS
				Peak	2499.920	-36.3	<=-21.20	PASS
2DH5	Ant1	Low	2402	AV	2310.000	-48.02	<=-41.20	PASS
				AV	2389.670	-47.5	<=-41.20	PASS
				AV	2390.000	-47.65	<=-41.20	PASS
				Peak	2310.000	-40.25	<=-21.20	PASS
				Peak	2311.025	-38.24	<=-21.20	PASS
				Peak	2390.000	-39.84	<=-21.20	PASS
		High	2480	AV	2483.500	-45.47	<=-41.20	PASS
				AV	2500.000	-47.01	<=-41.20	PASS
				Peak	2483.500	-38.91	<=-21.20	PASS
				Peak	2496.960	-37.43	<=-21.20	PASS
3DH5	Ant1	Low	2402	AV	2310.000	-48	<=-41.20	PASS
				AV	2388.095	-47.53	<=-41.20	PASS
				AV	2390.000	-47.7	<=-41.20	PASS
				Peak	2310.000	-40.95	<=-21.20	PASS
				Peak	2371.505	-38.16	<=-21.20	PASS
				Peak	2390.000	-40.35	<=-21.20	PASS
		High	2480	AV	2483.500	-45.45	<=-41.20	PASS
				AV	2500.000	-46.94	<=-41.20	PASS
				Peak	2483.500	-37.78	<=-21.20	PASS
				Peak	2483.600	-37.15	<=-21.20	PASS
				Peak	2500.000	-38.88	<=-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.

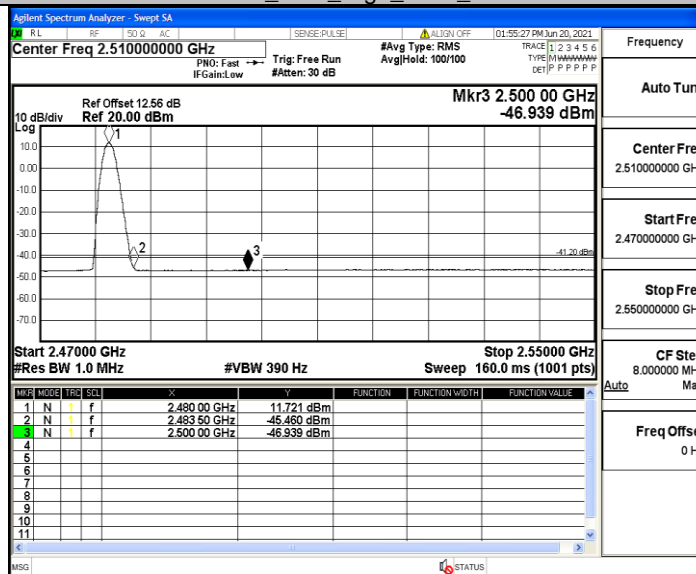
DH5_Ant1_Low_2402_AV



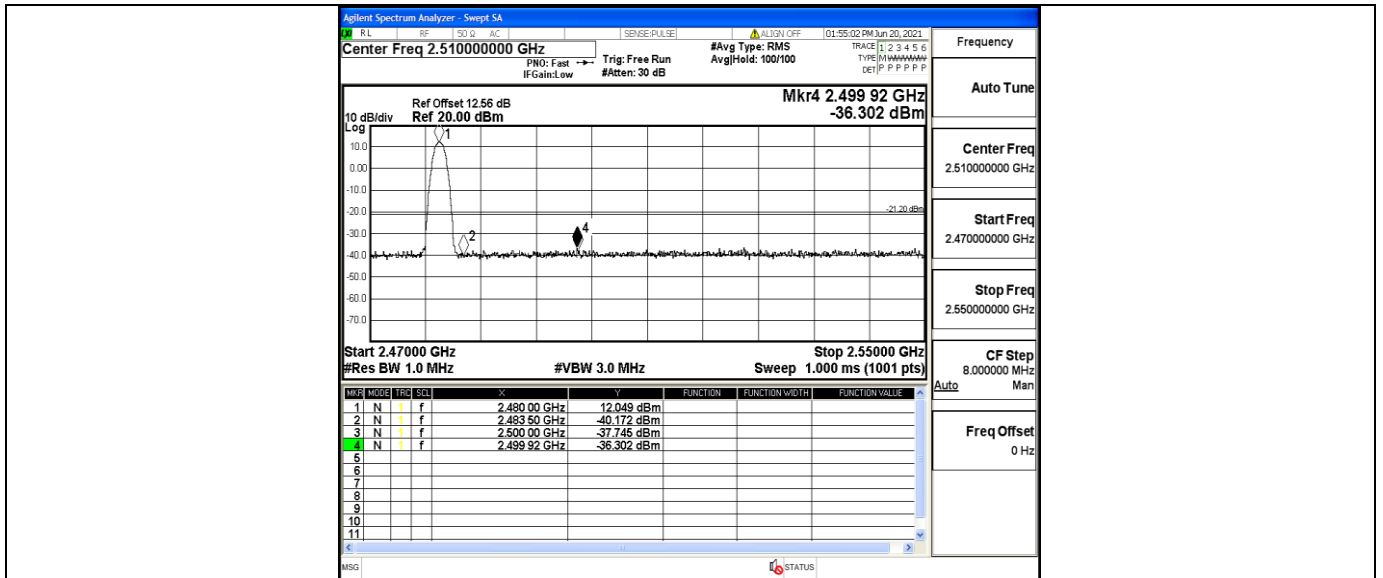
DH5_Ant1_Low_2402_Peak



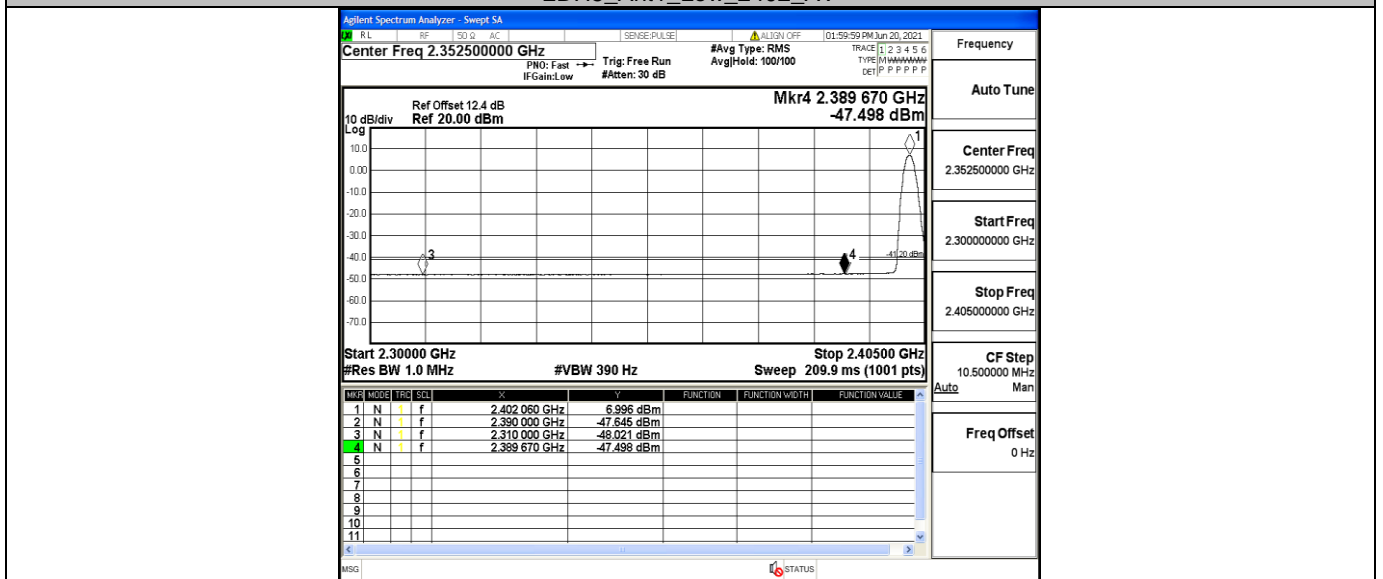
DH5_Ant1_High_2480_AV



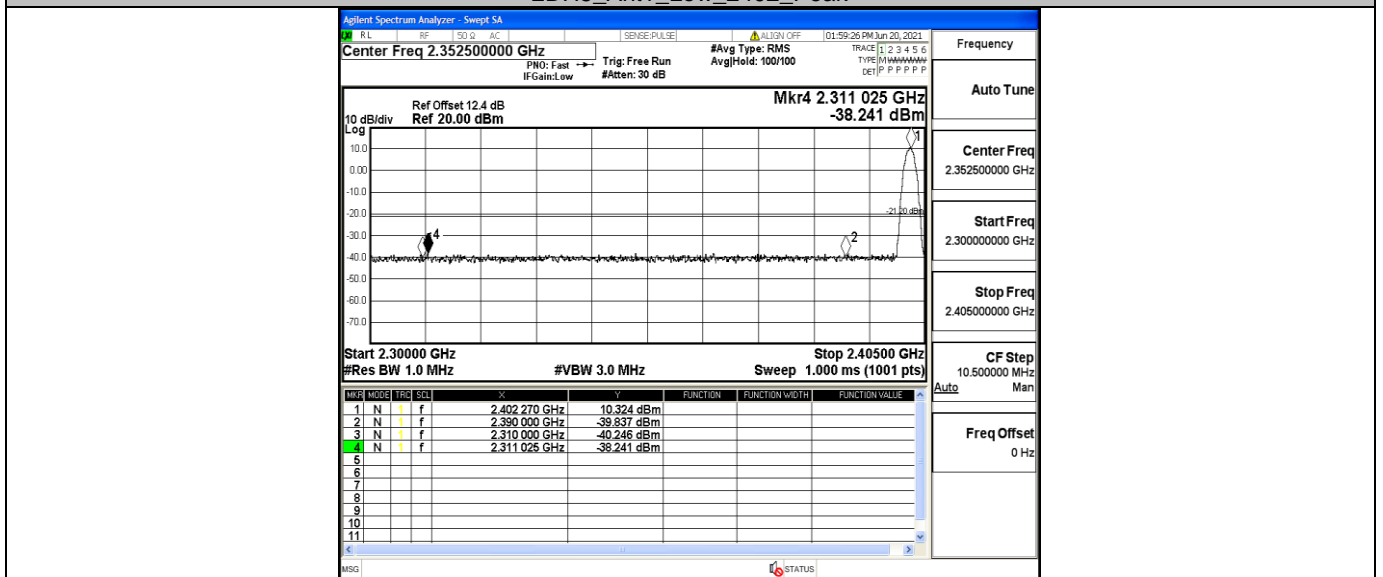
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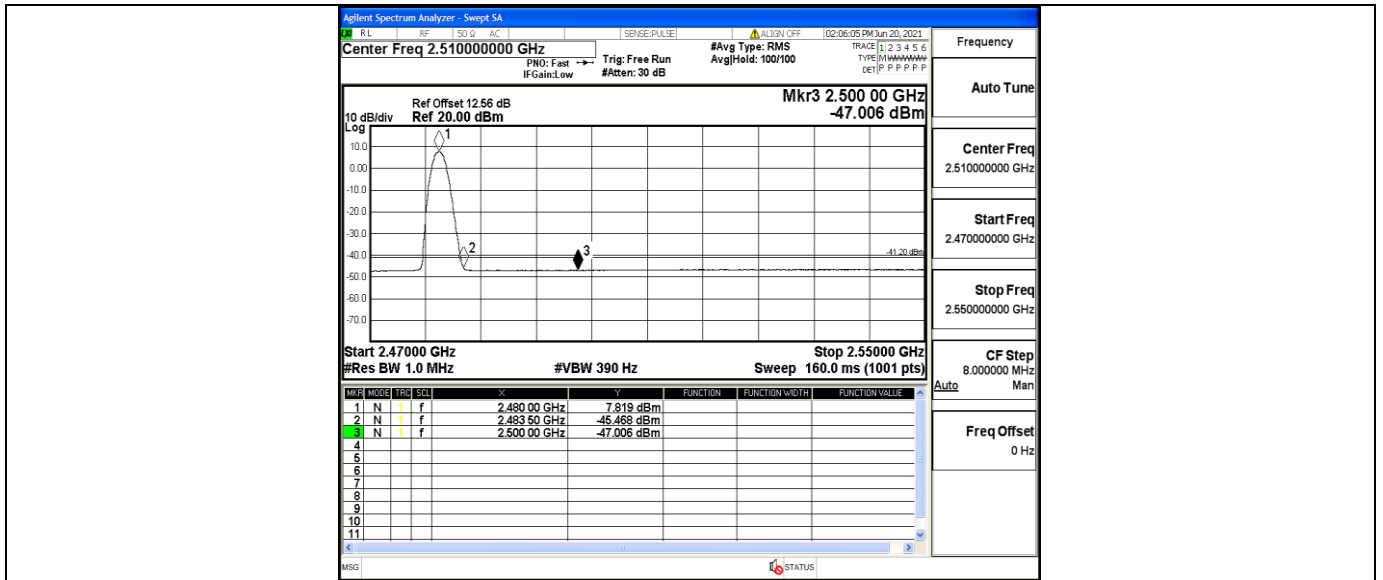
2DH5_Ant1_Low_2402_AV



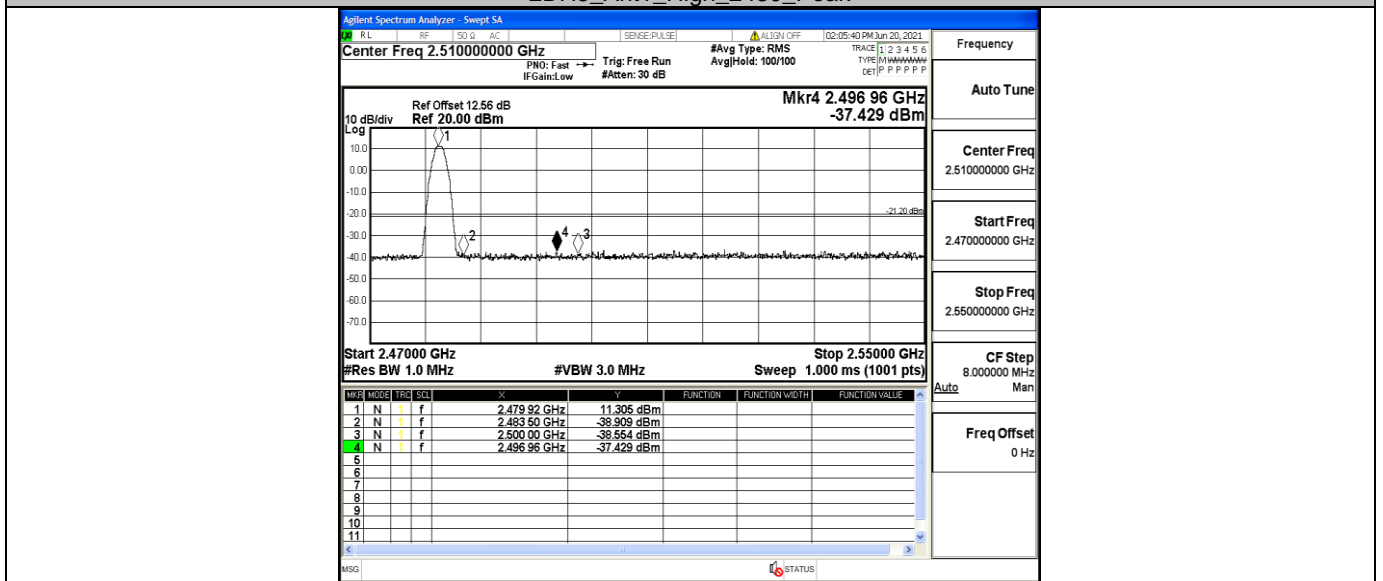
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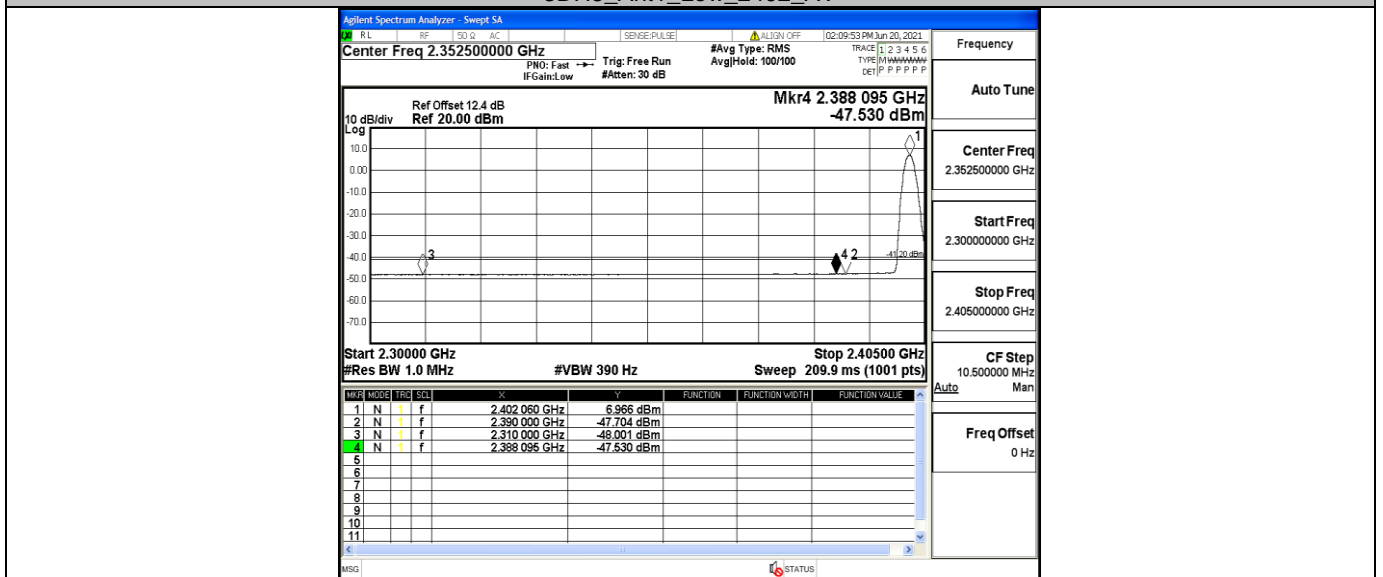
2DH5_Ant1_High_2480_AV



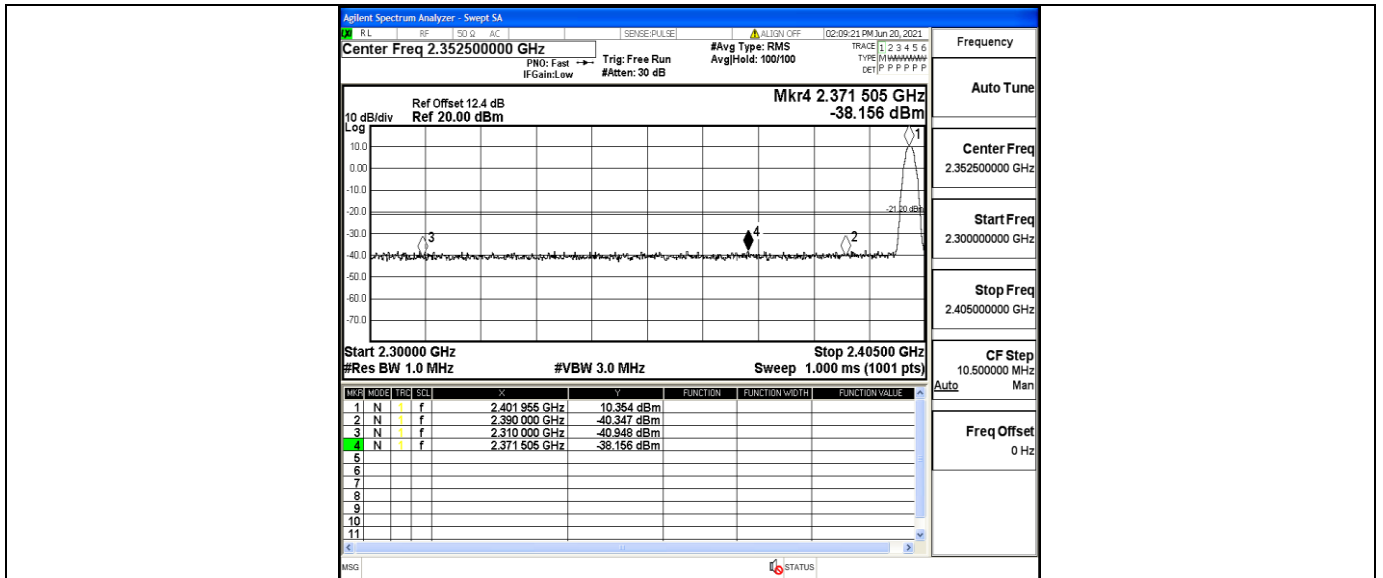
2DH5_Ant1_High_2480_Peak



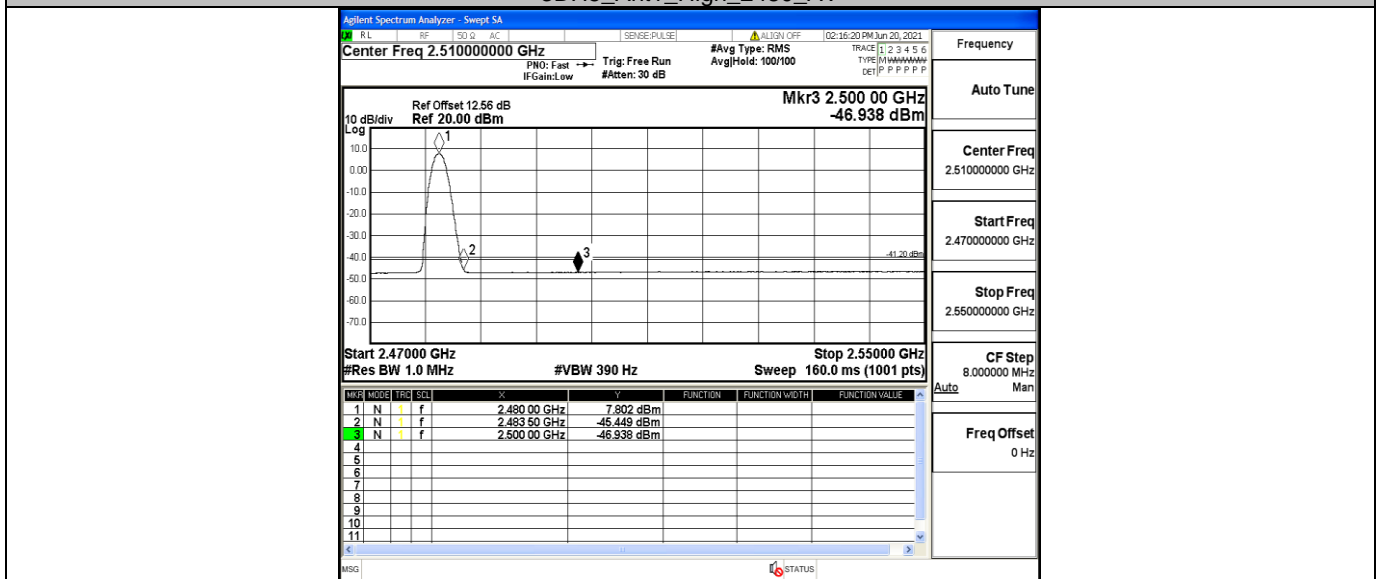
3DH5_Ant1_Low_2402_AV



3DH5_Ant1_Low_2402_Peak



3DH5_Ant1_High_2480_AV



3DH5_Ant1_High_2480_Peak

