

Appendix A

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

Product Name: Game controllers

Trade Mark: Techken

Test Model: TK105

FCC ID: 2AYY2-TK105

Environmental Conditions

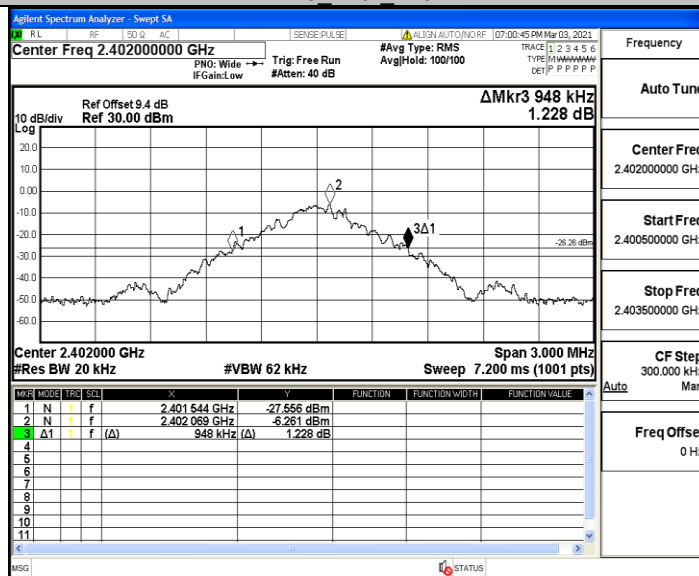
Temperature:	22.8° C
Relative Humidity:	56%
ATM Pressure:	100.0 kPa
Test Engineer:	Nancy Li
Supervised by:	Hugo Chen

A.1 20 dB Bandwidth

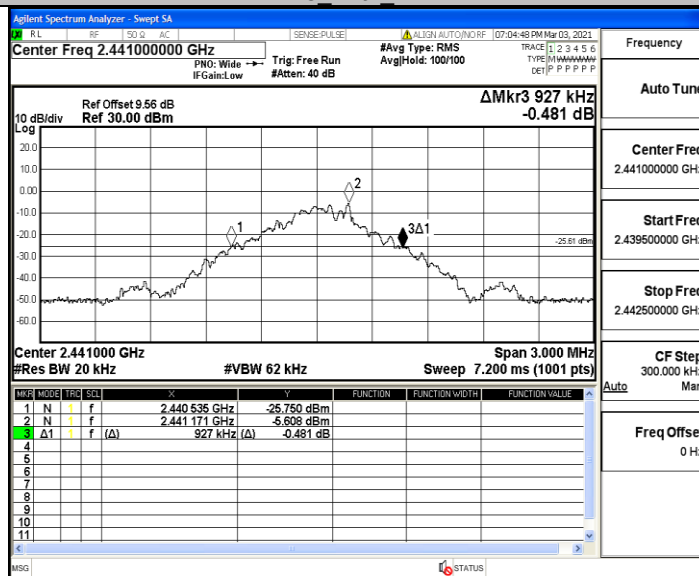
TestMode	Antenna	Channel	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.948	2401.544	2402.492	---	PASS
		2441	0.927	2440.535	2441.462	---	PASS
		2480	0.948	2479.556	2480.504	---	PASS
2DH5	Ant1	2402	1.344	2401.340	2402.684	---	PASS
		2441	1.353	2440.340	2441.693	---	PASS
		2480	1.356	2479.343	2480.699	---	PASS
3DH5	Ant1	2402	1.347	2401.331	2402.678	---	PASS
		2441	1.326	2440.343	2441.669	---	PASS
		2480	1.356	2479.337	2480.693	---	PASS

Test Graph

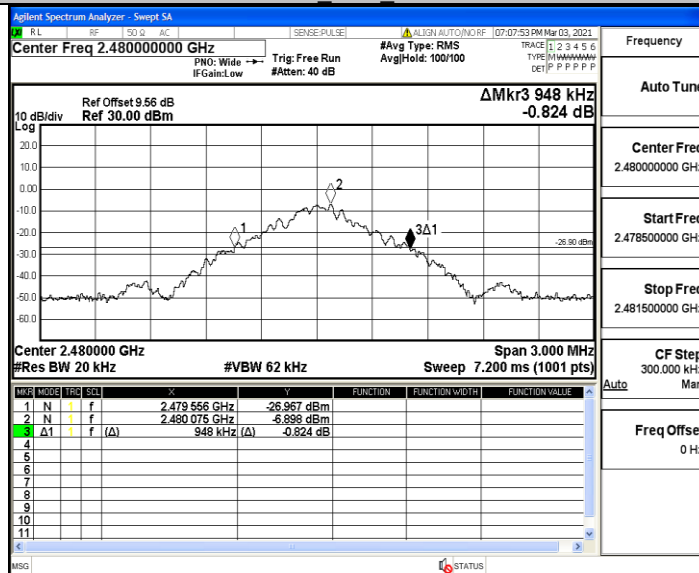
DH5_Ant1_2402



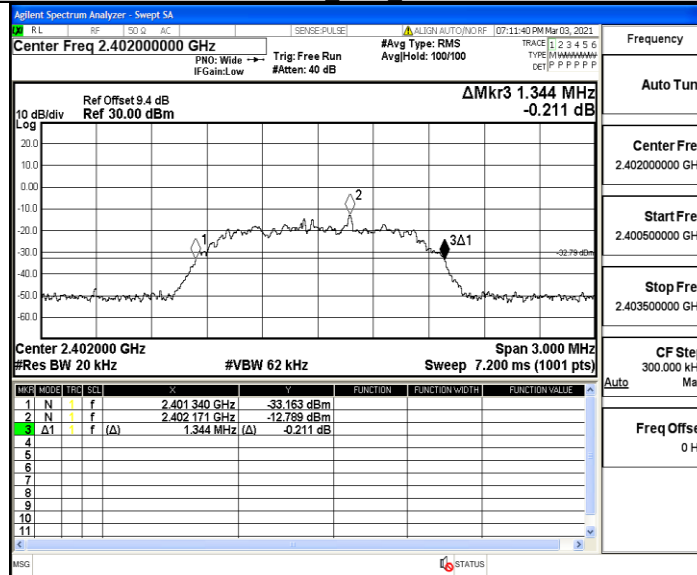
DH5_Ant1_2441



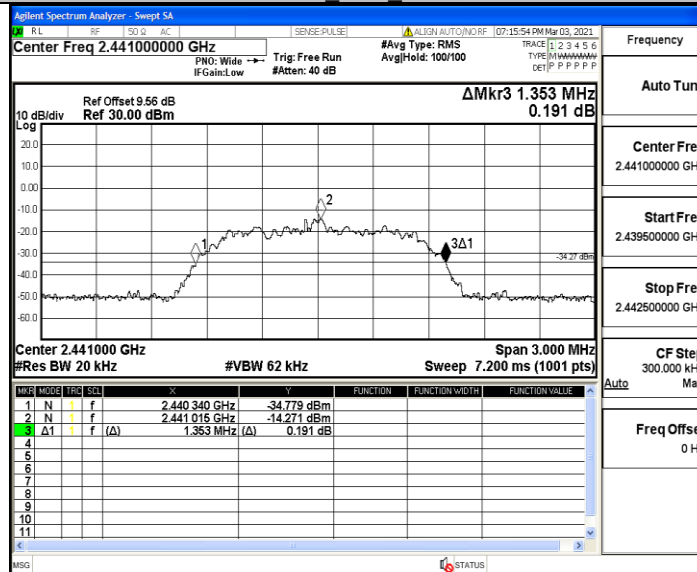
DH5_Ant1_2480



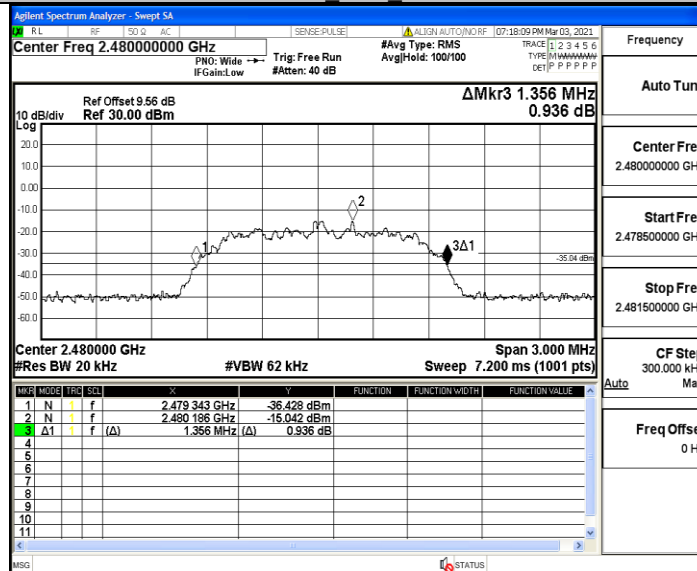
2DH5_Ant1_2402



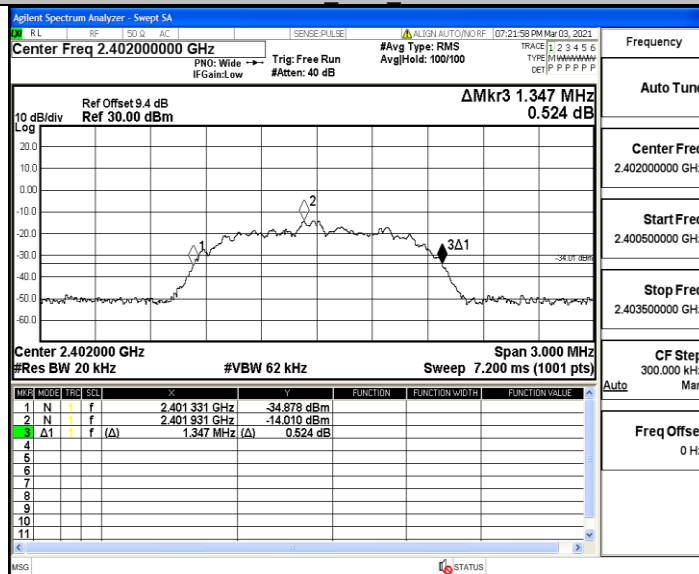
2DH5_Ant1_2441



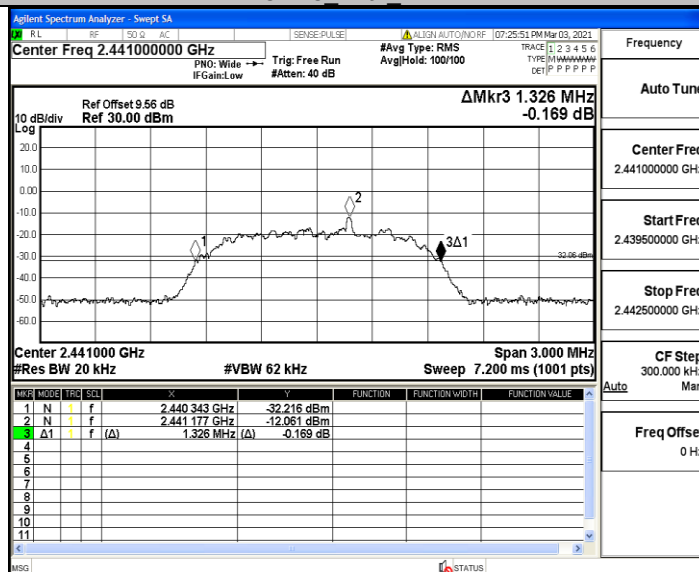
2DH5_Ant1_2480



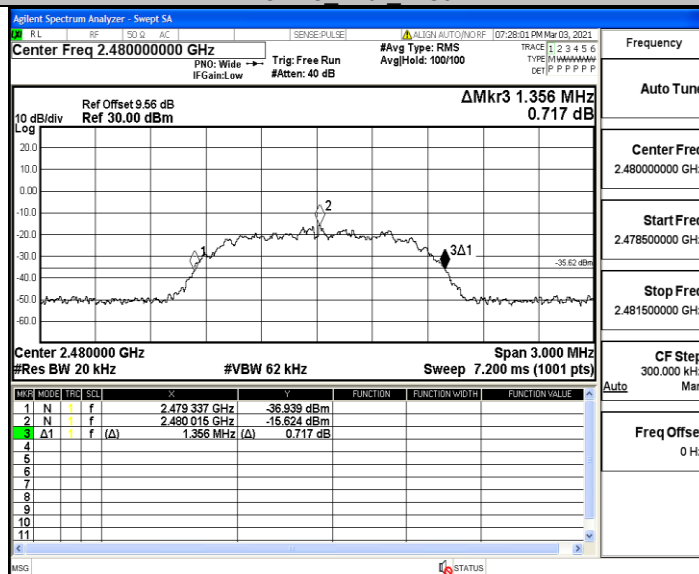
3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480

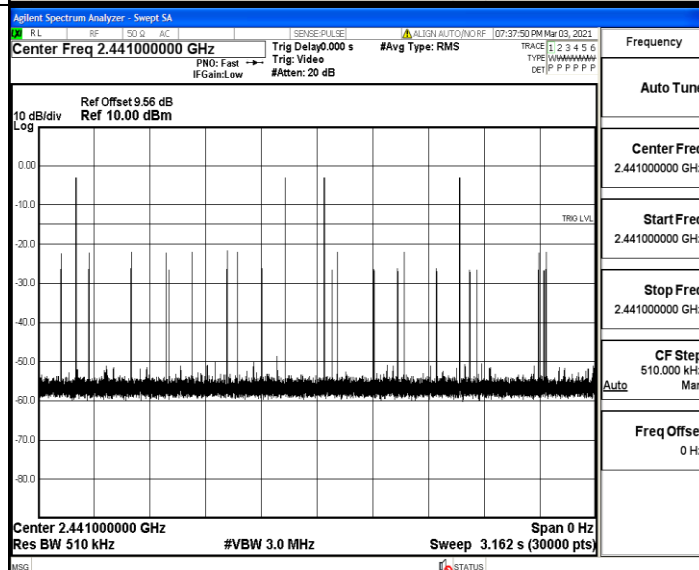
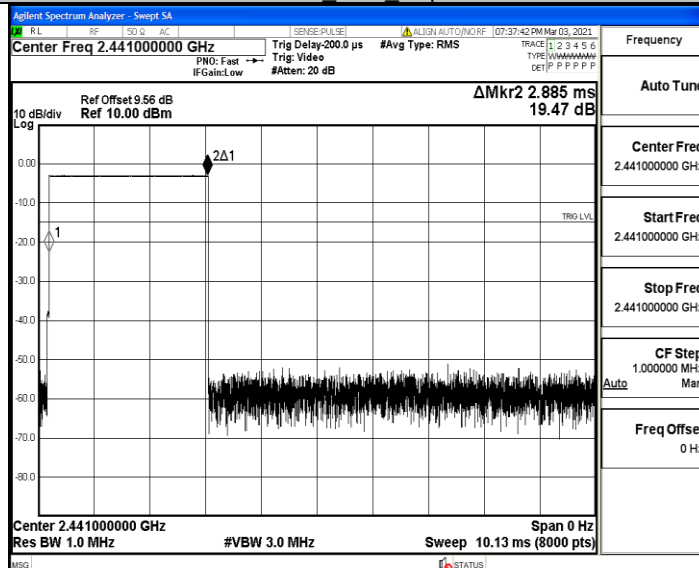


A.2 Dwell Time

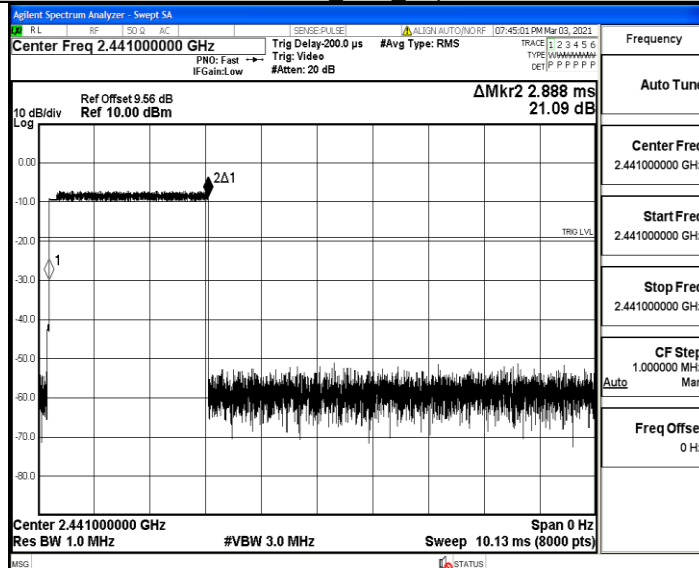
TestMode	Antenna	Channel	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH5	Ant1	Hop	2.89	50	0.144	<=0.4	PASS
2DH5	Ant1	Hop	2.89	120	0.347	<=0.4	PASS
3DH5	Ant1	Hop	2.89	110	0.318	<=0.4	PASS

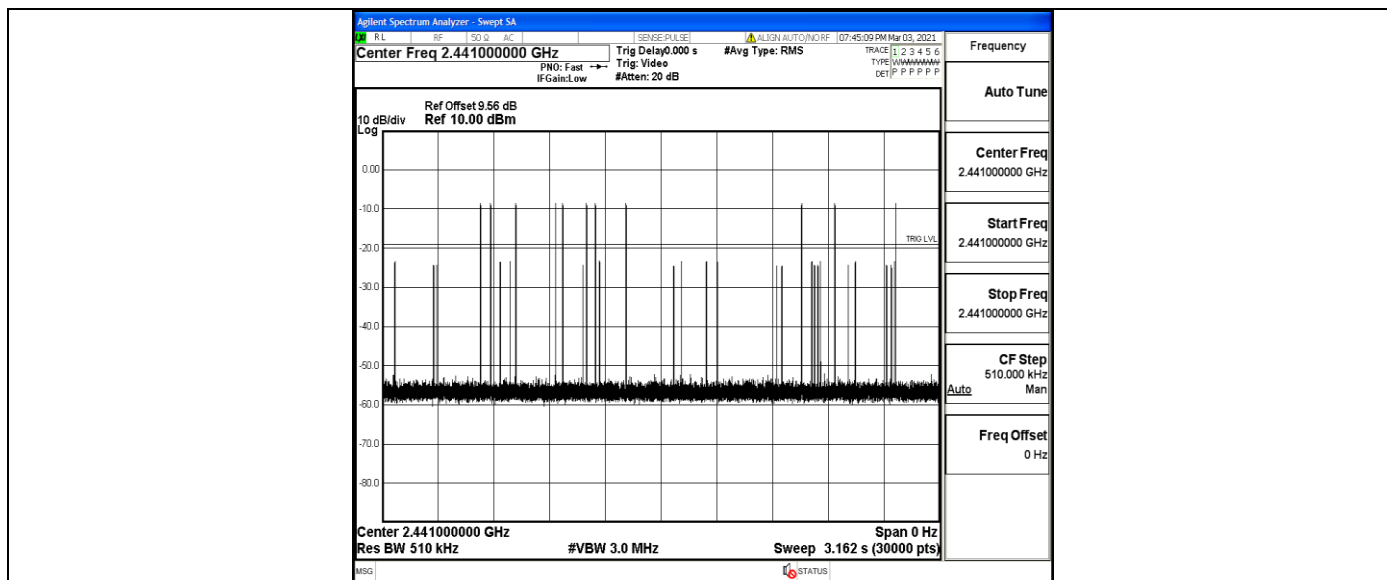
Test Graph

DH5_Ant1_Hop

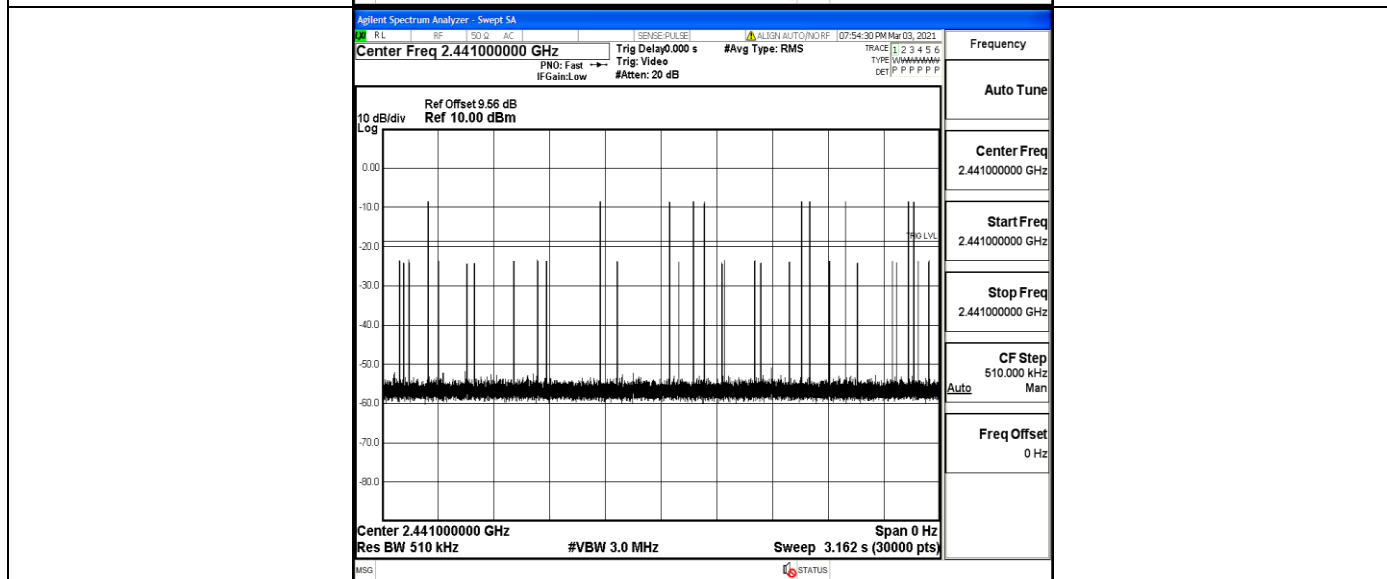
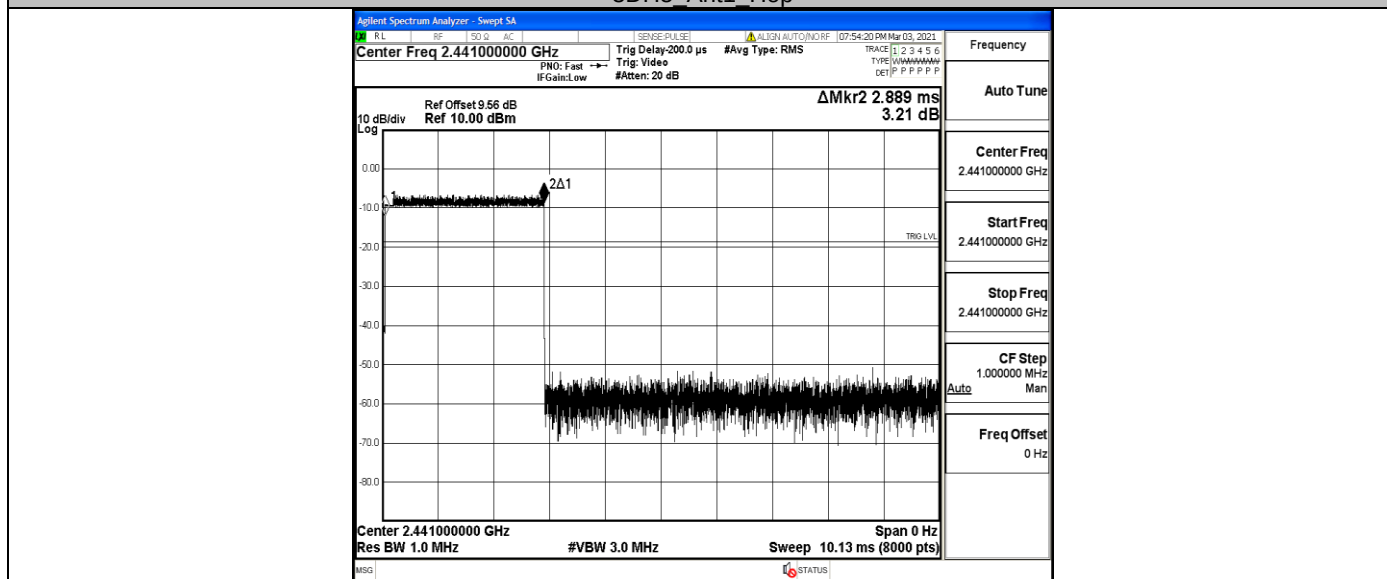


2DH5_Ant1_Hop





3DH5 Ant1 Hop

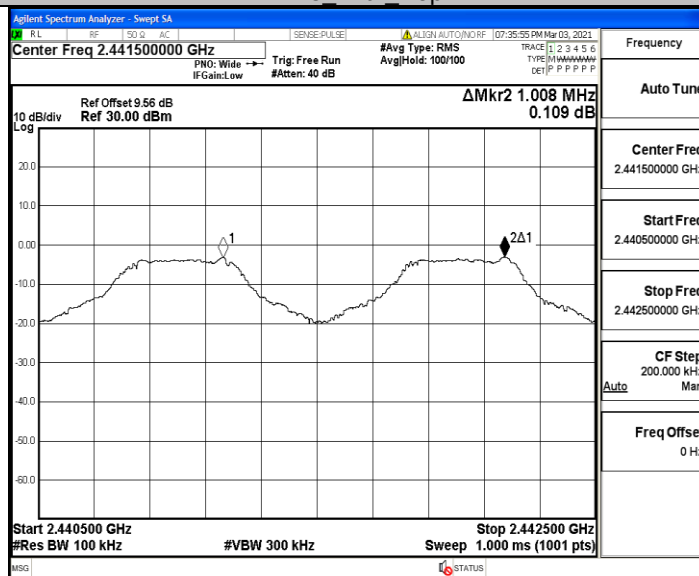


A.3 Carrier Frequency Separation

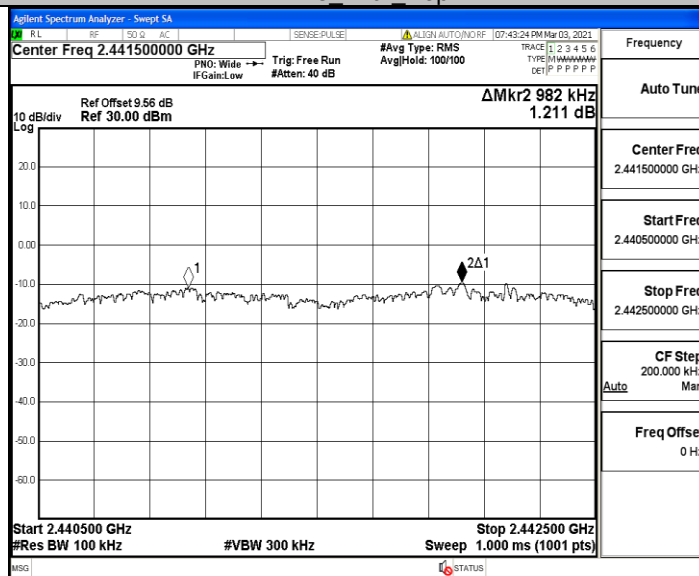
TestMode	Antenna	Channel	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	1.008	≥ 0.948	PASS
2DH5	Ant1	Hop	0.982	≥ 0.904	PASS
3DH5	Ant1	Hop	1.000	≥ 0.904	PASS

Test Graph

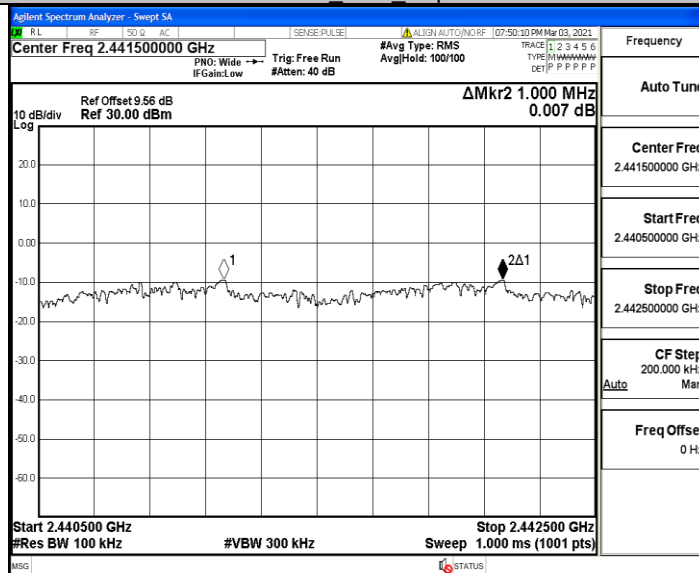
DH5_Ant1_Hop



2DH5_Ant1_Hop



3DH5_Ant1_Hop

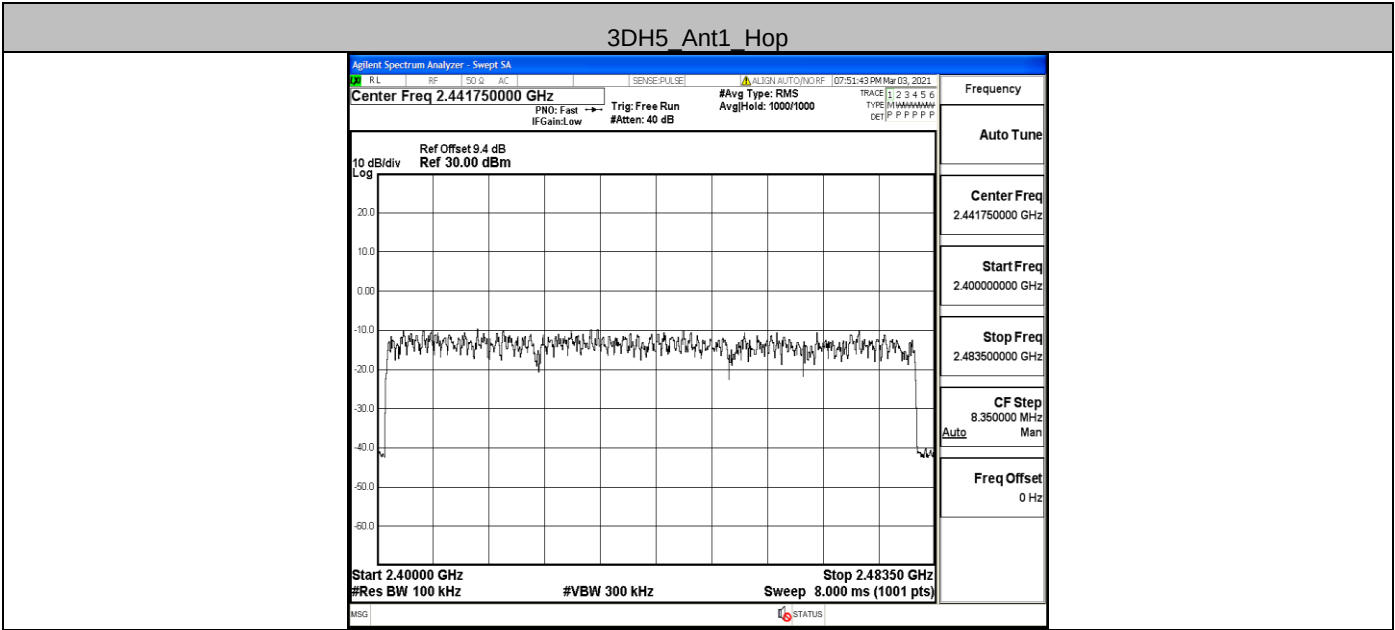


A.4 Hopping Channel Number

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



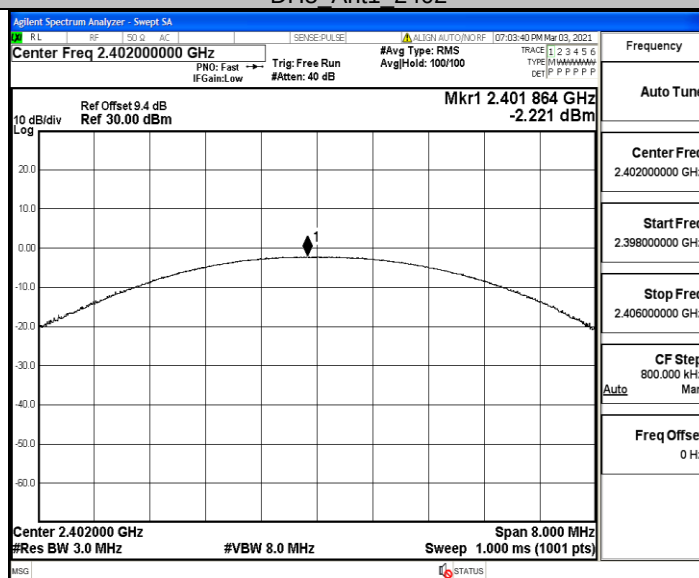


A.5 Conducted Peak Output Power

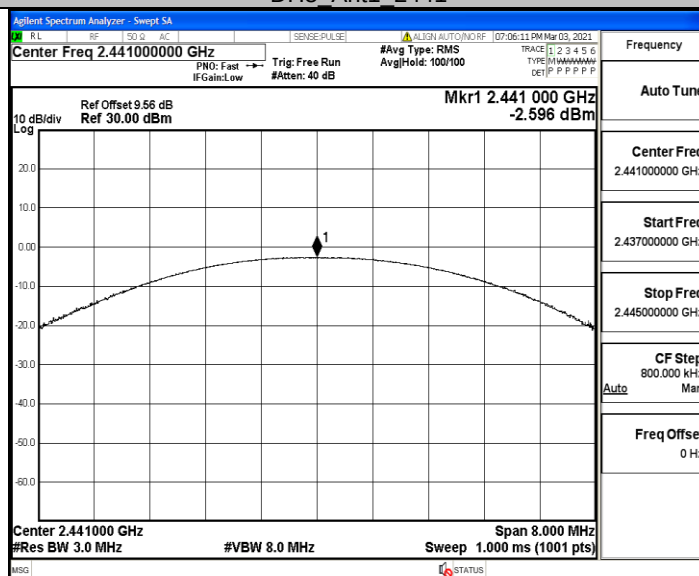
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
DH5	Ant1	2402	-2.22	<=30	PASS
		2441	-2.6	<=30	PASS
		2480	-2.84	<=30	PASS
2DH5	Ant1	2402	-6.31	<=20.97	PASS
		2441	-6.42	<=20.97	PASS
		2480	-7.23	<=20.97	PASS
3DH5	Ant1	2402	-5.95	<=20.97	PASS
		2441	-6.21	<=20.97	PASS
		2480	-6.91	<=20.97	PASS

Test Graph

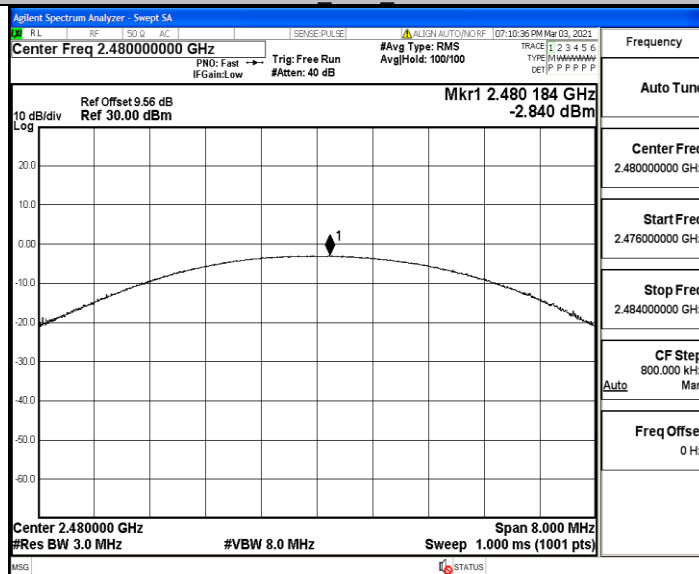
DH5_Ant1_2402



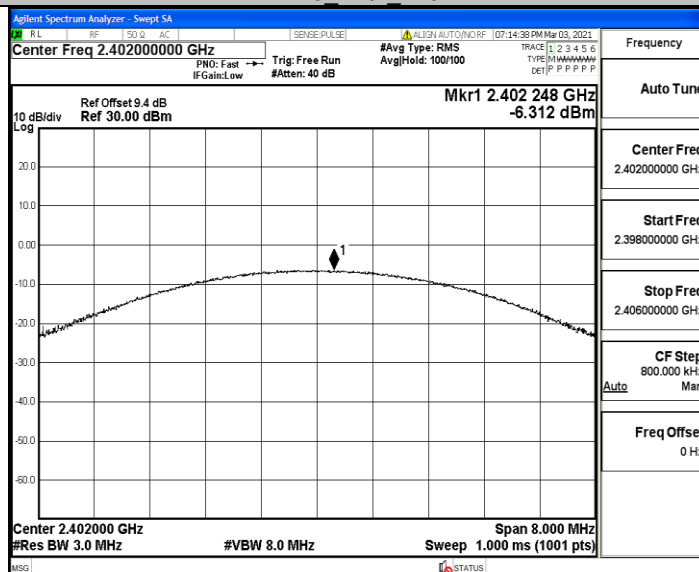
DH5_Ant1_2441



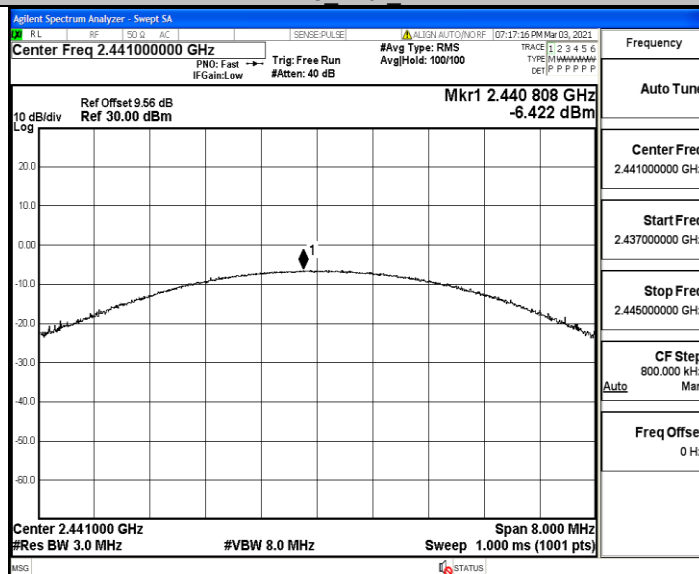
DH5 Ant1_2480



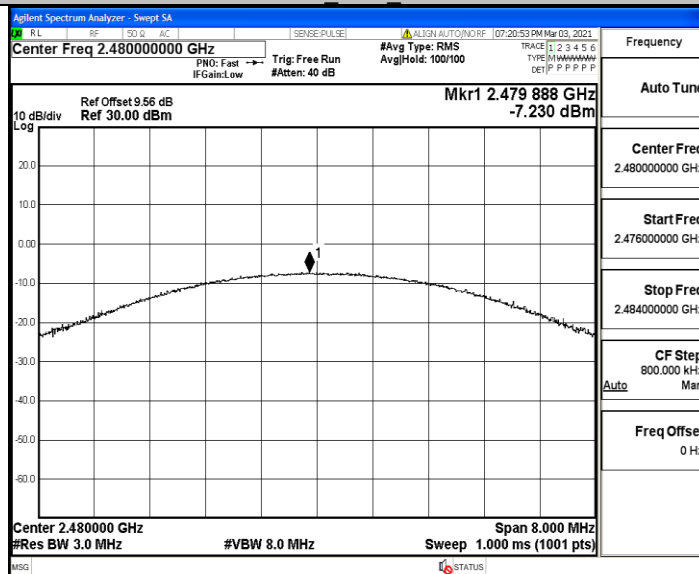
2DH5 Ant1_2402



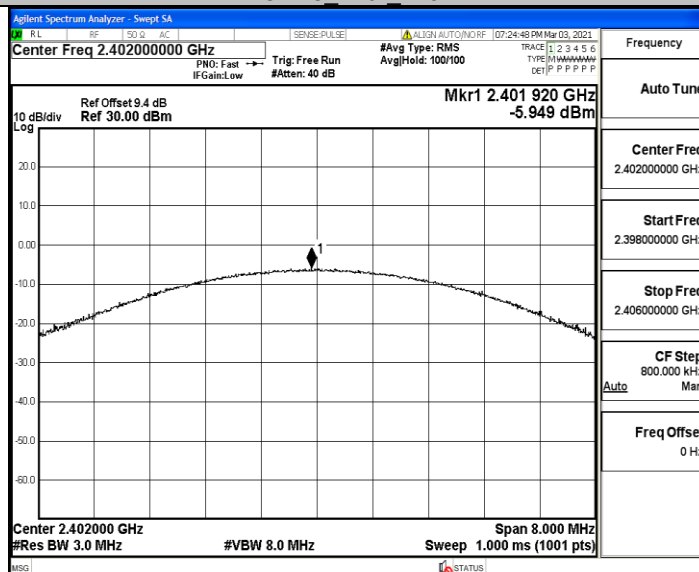
2DH5 Ant1_2441



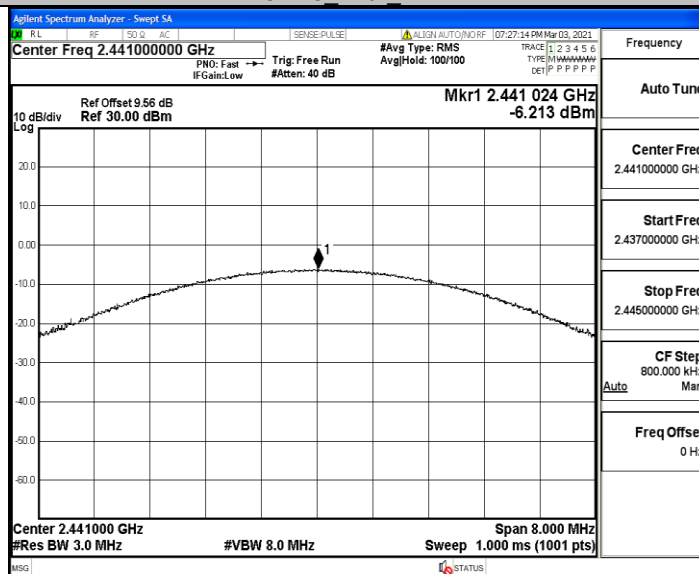
2DH5 Ant1 2480

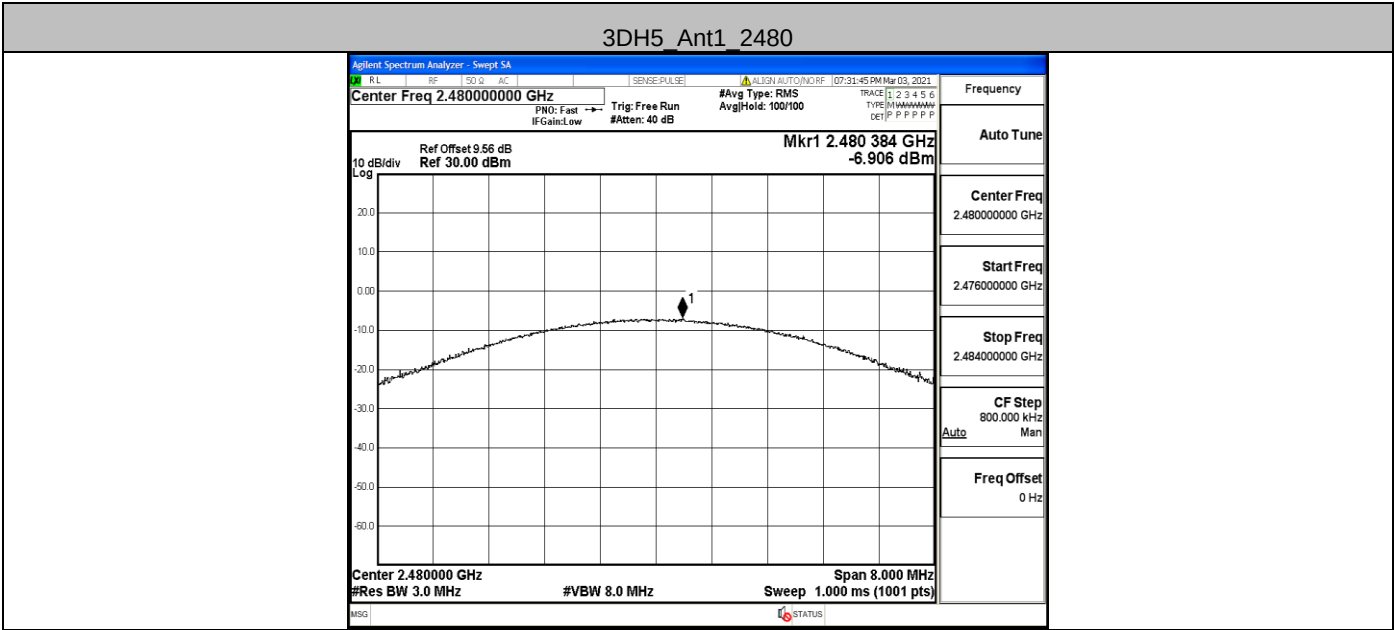


3DH5 Ant1 2402



3DH5 Ant1 2441



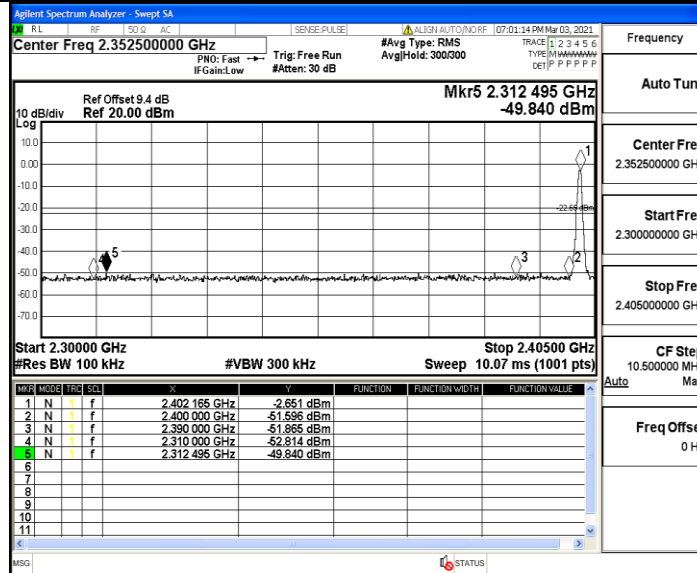


A.6 Band-edge for RF Conducted Emissions

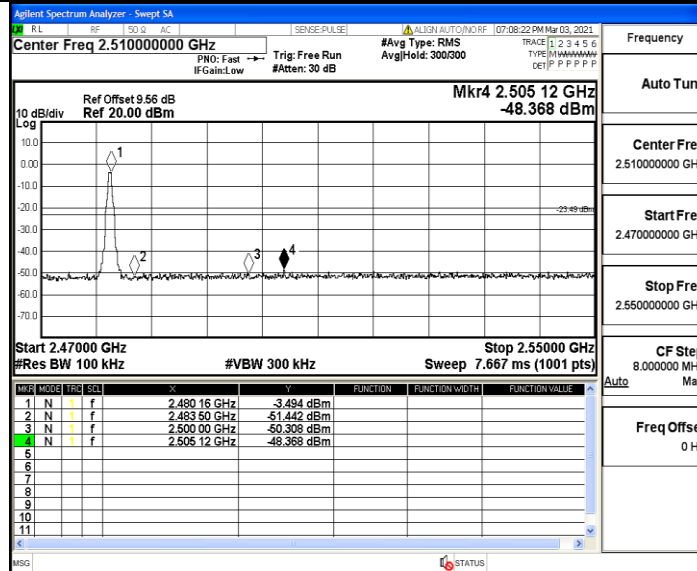
TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-2.65	-49.84	<=-22.65	PASS
		High	2480	-3.49	-48.37	<=-23.49	PASS
		Low	Hop_2402	-4.72	-49.62	<=-24.72	PASS
		High	Hop_2480	-4.13	-48.74	<=-24.13	PASS
2DH5	Ant1	Low	2402	-9.96	-48.83	<=-29.96	PASS
		High	2480	-10.57	-49.02	<=-30.57	PASS
		Low	Hop_2402	-11.81	-49.34	<=-31.81	PASS
		High	Hop_2480	-12.61	-49.19	<=-32.61	PASS
3DH5	Ant1	Low	2402	-9.87	-50.24	<=-29.87	PASS
		High	2480	-10.29	-48.95	<=-30.29	PASS
		Low	Hop_2402	-12.20	-49.89	<=-32.2	PASS
		High	Hop_2480	-11.91	-49.39	<=-31.91	PASS

Test Graph

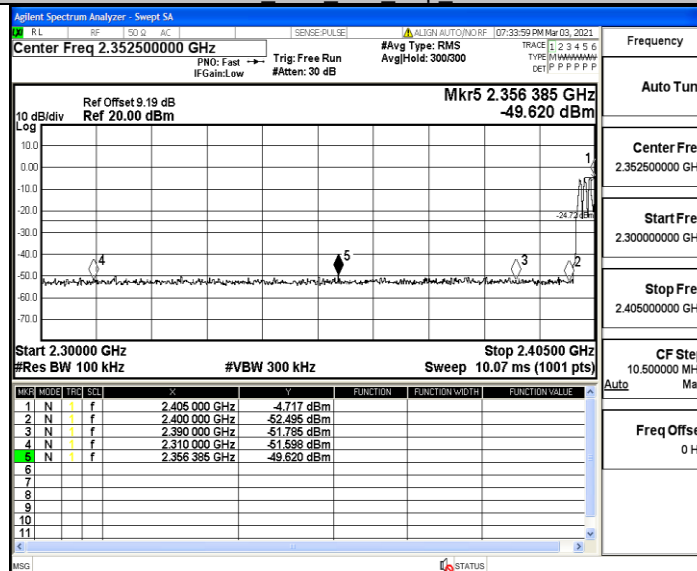
DH5_Ant1_Low_2402



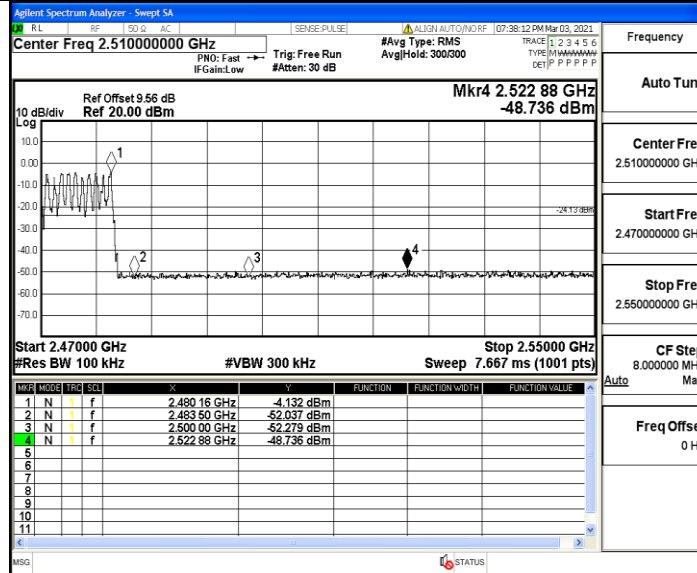
DH5_Ant1_High_2480



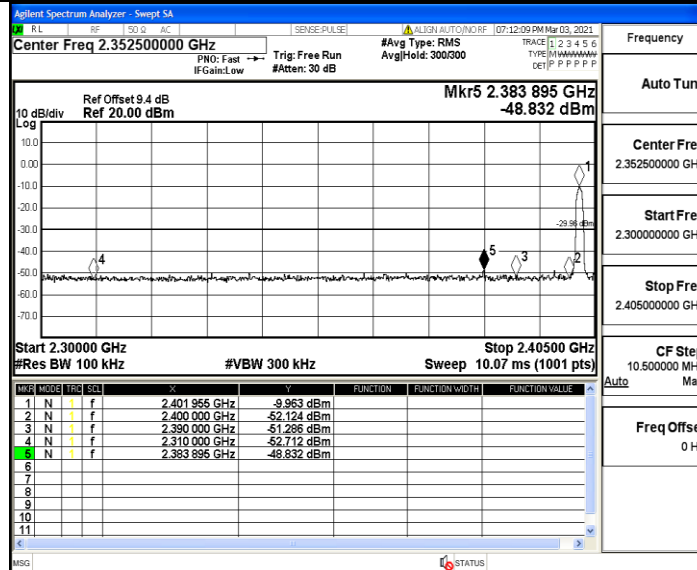
DH5_Ant1_Low_Hop_2402



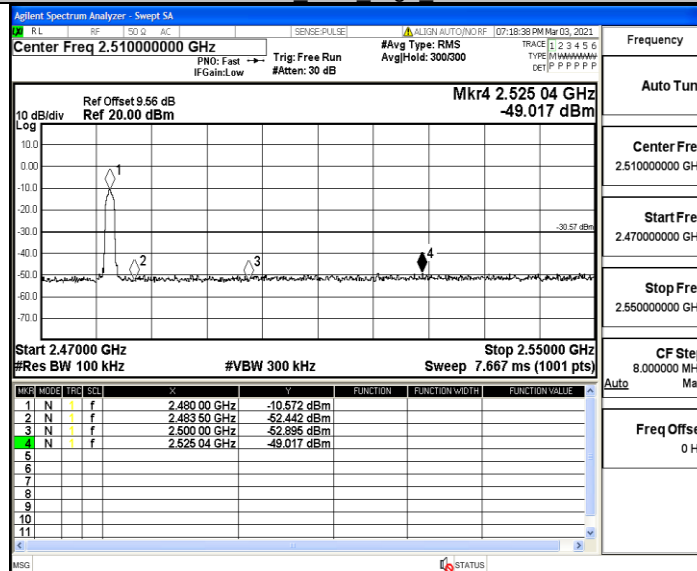
DH5_Ant1_High_Hop_2480



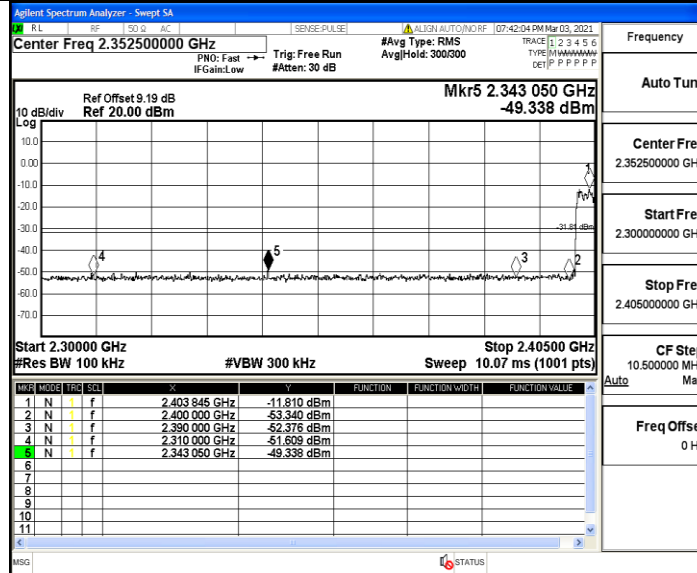
2DH5_Ant1_Low_2402



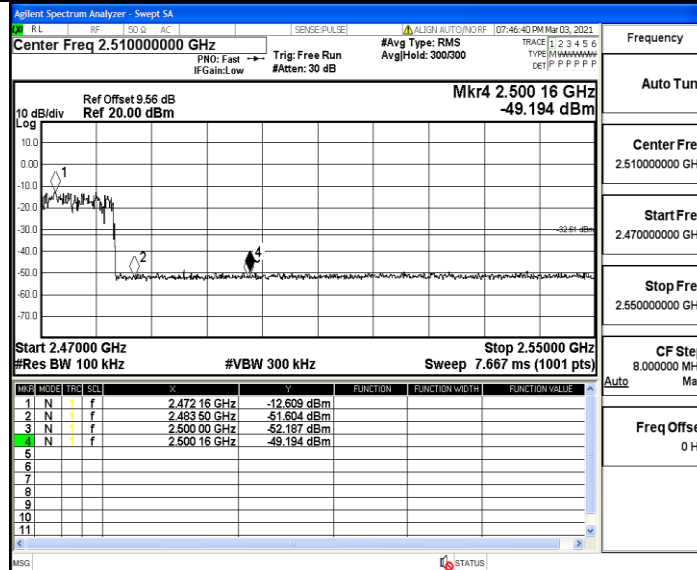
2DH5_Ant1_High_2480



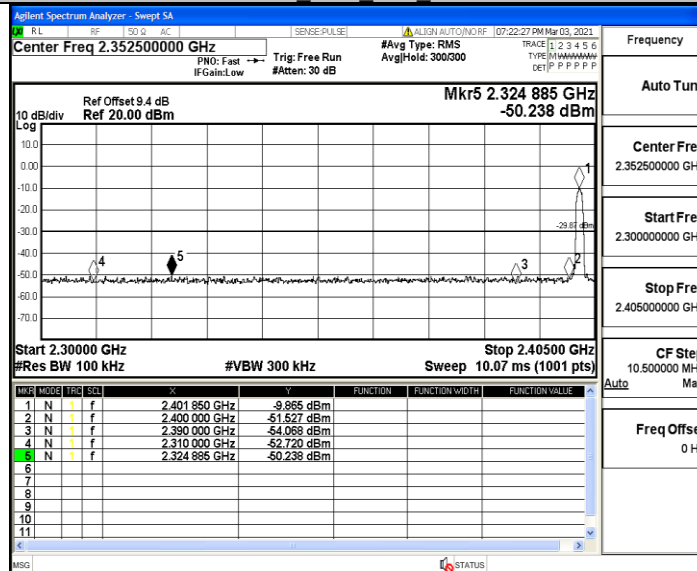
2DH5 Ant1 Low Hop 2402



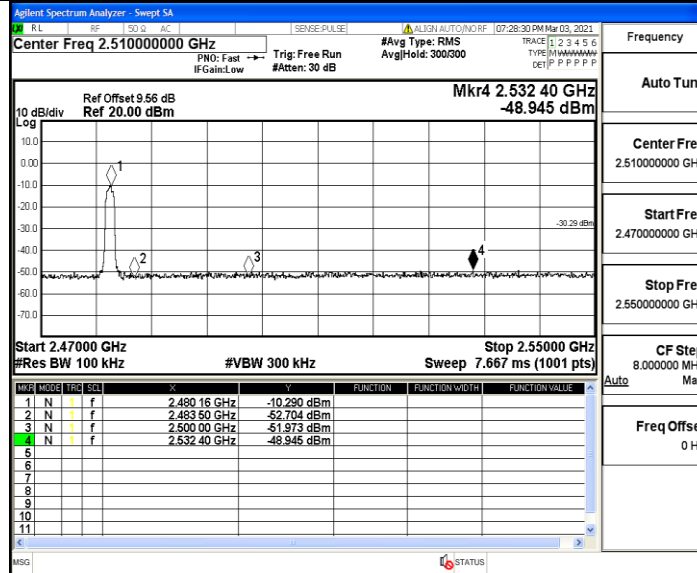
2DH5 Ant1 High Hop 2480



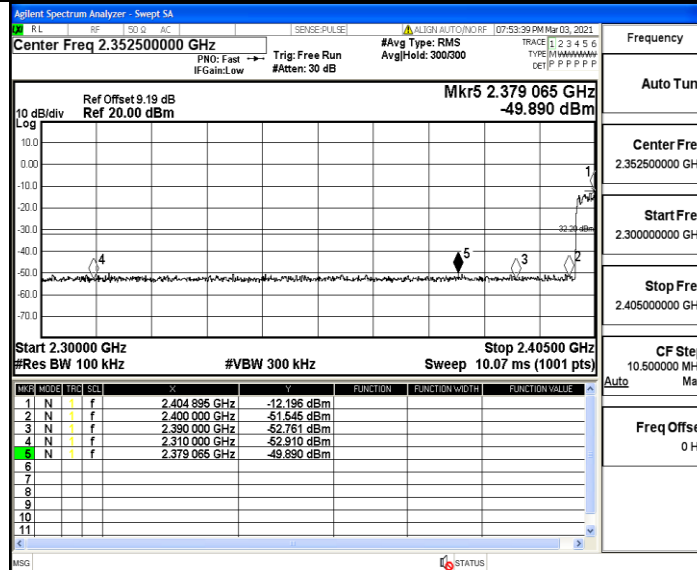
3DH5 Ant1 Low 2402



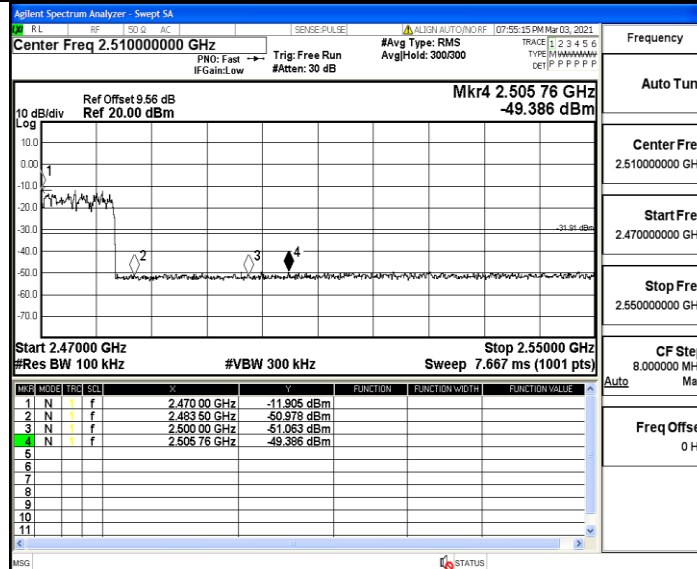
3DH5 Ant1 High 2480



3DH5 Ant1 Low Hop 2402



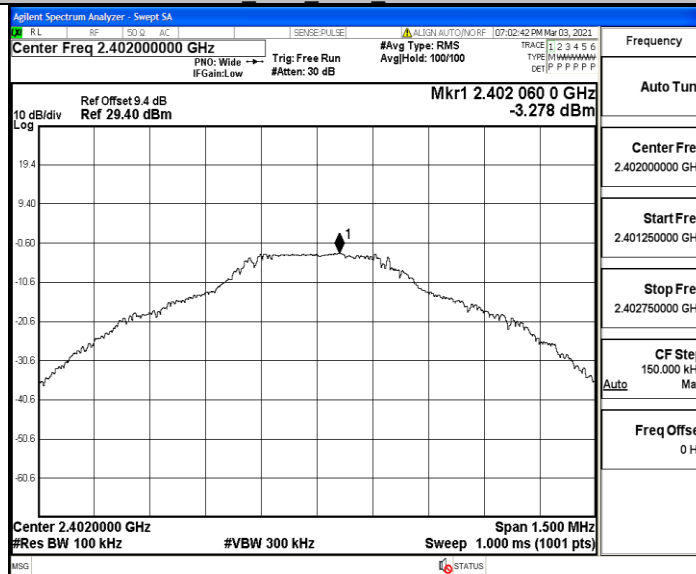
3DH5 Ant1 High Hop 2480



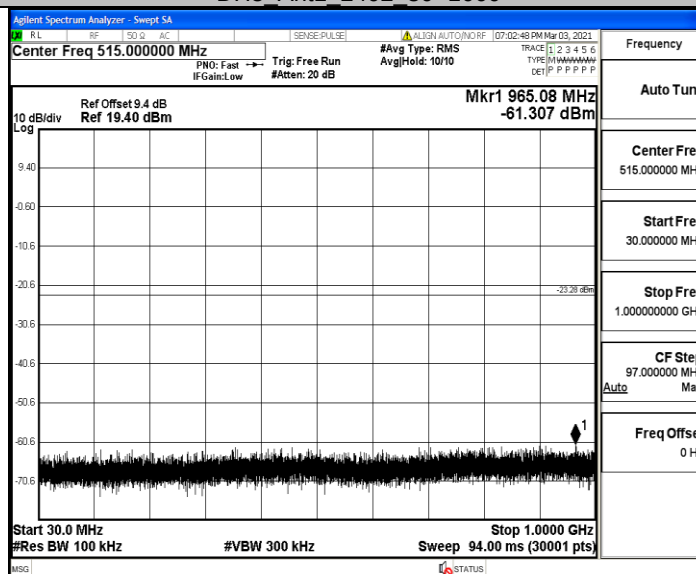
A.7 RF Conducted Spurious Emissions

Test Graph

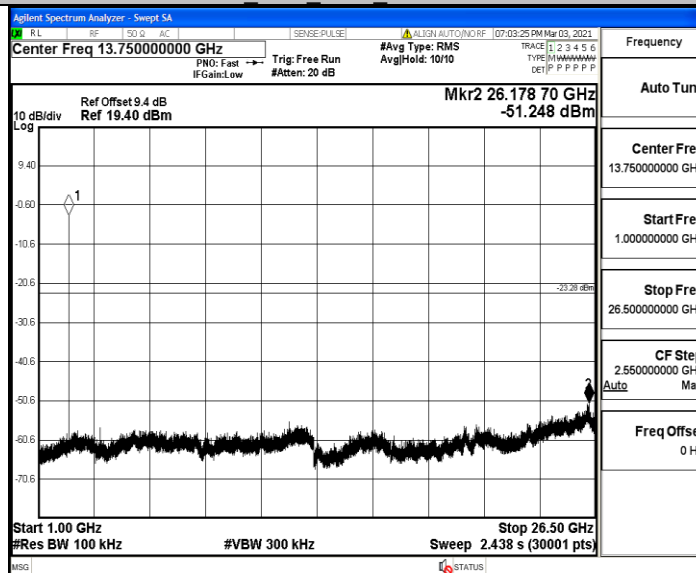
DH5_Ant1_2402_0-Reference



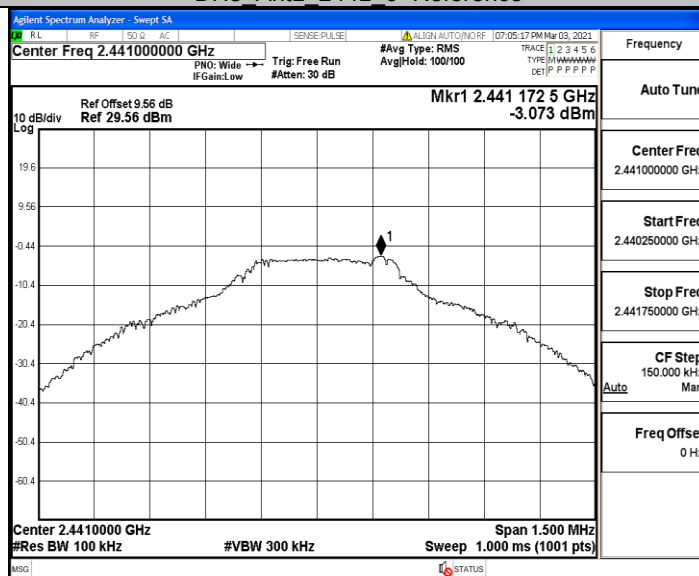
DH5_Ant1_2402_30~1000



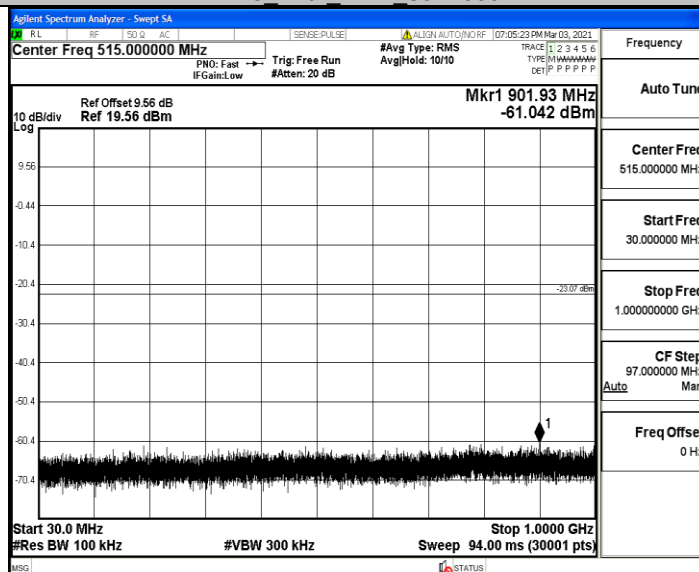
DH5_Ant1_2402_1000~26500



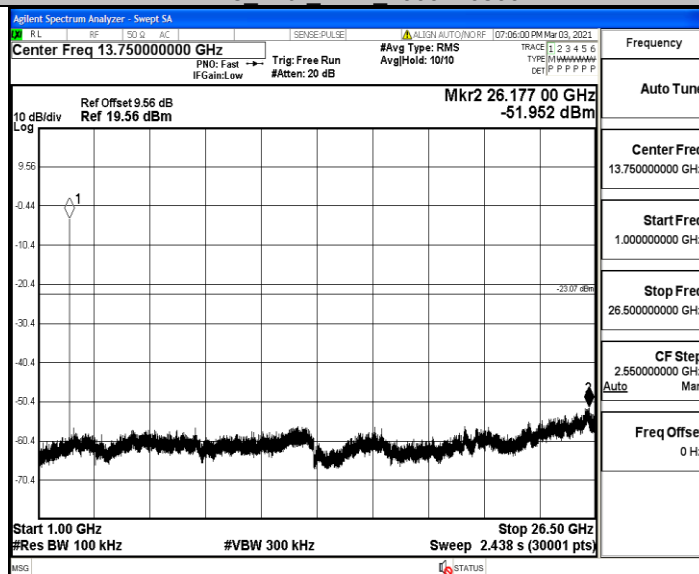
DH5_Ant1_2441_0-Reference



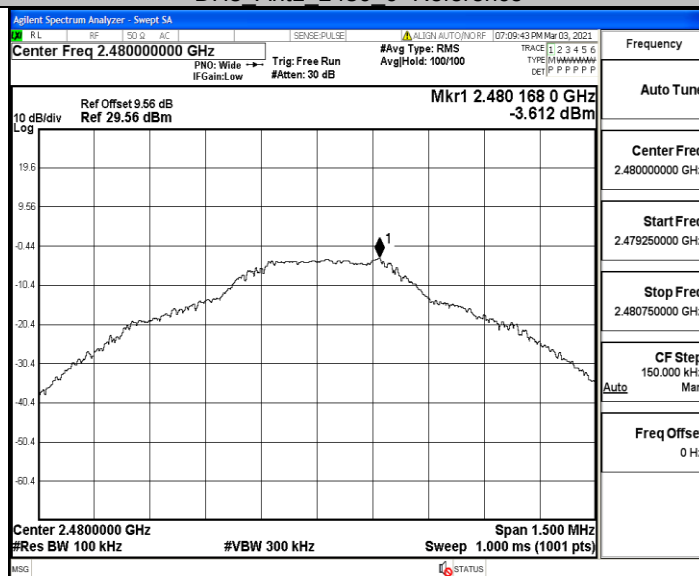
DH5_Ant1_2441_30~1000



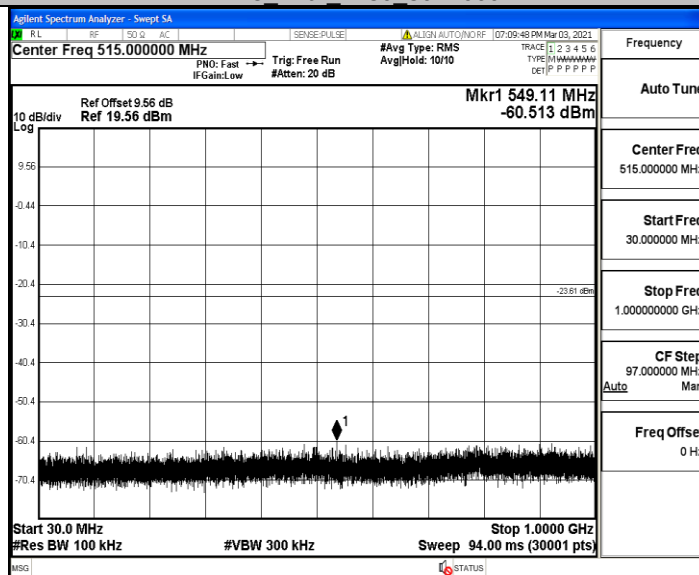
DH5_Ant1_2441_1000~26500



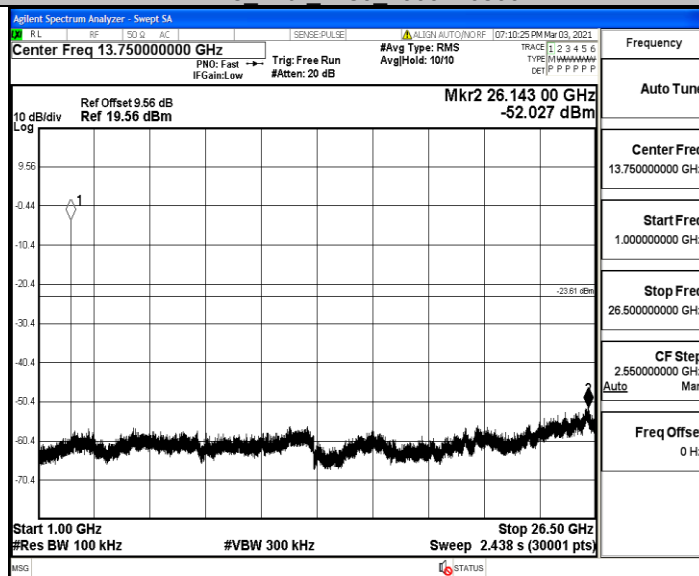
DH5_Ant1_2480_0-Reference



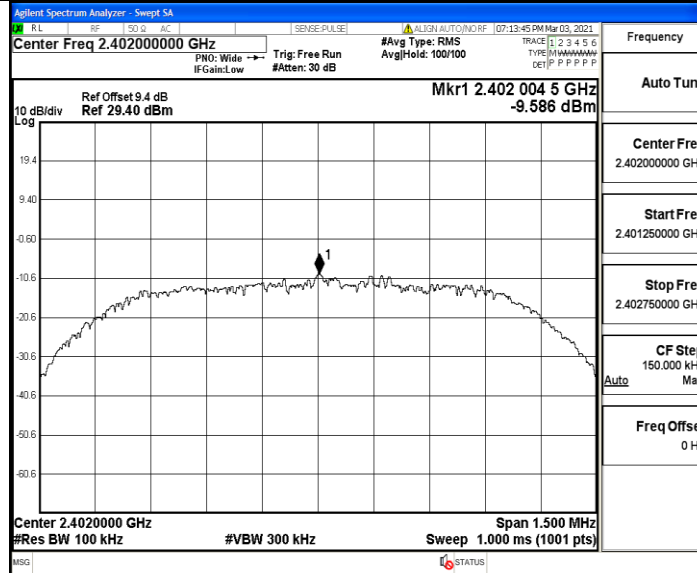
DH5_Ant1_2480_30~1000



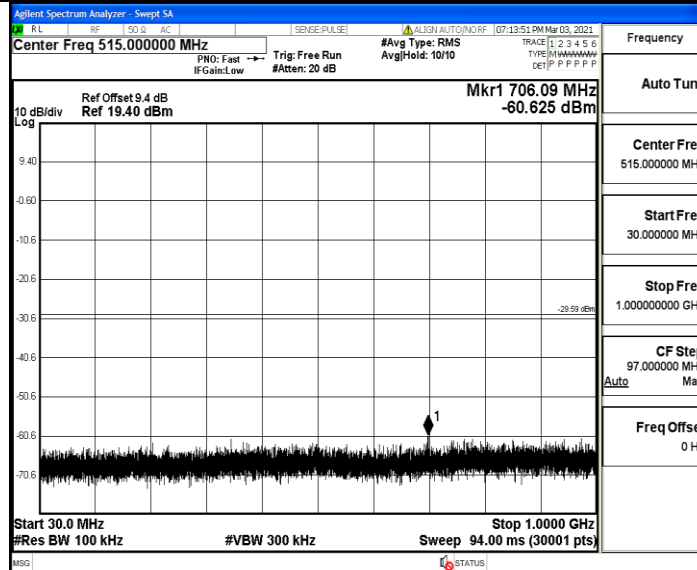
DH5_Ant1_2480_1000~26500



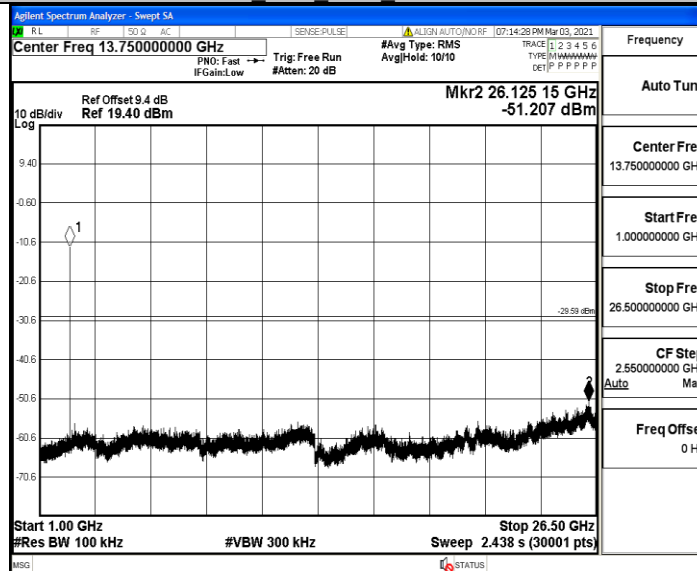
2DH5_Ant1_2402_0~Reference



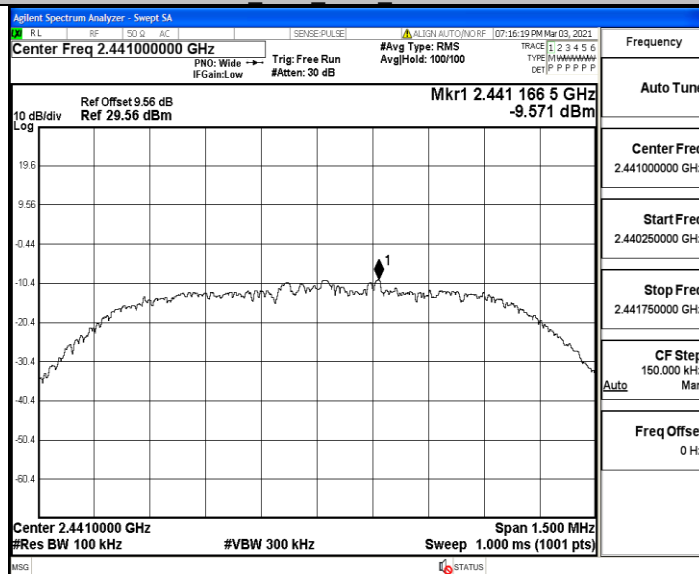
2DH5_Ant1_2402_30~1000



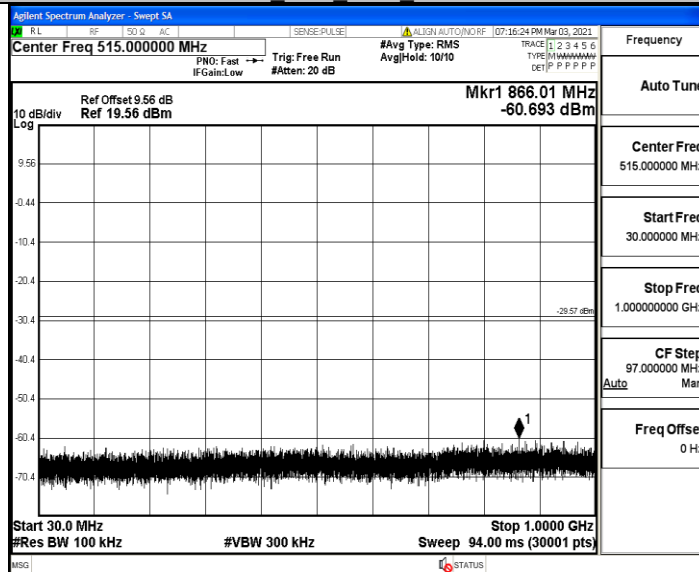
2DH5_Ant1_2402_1000~26500



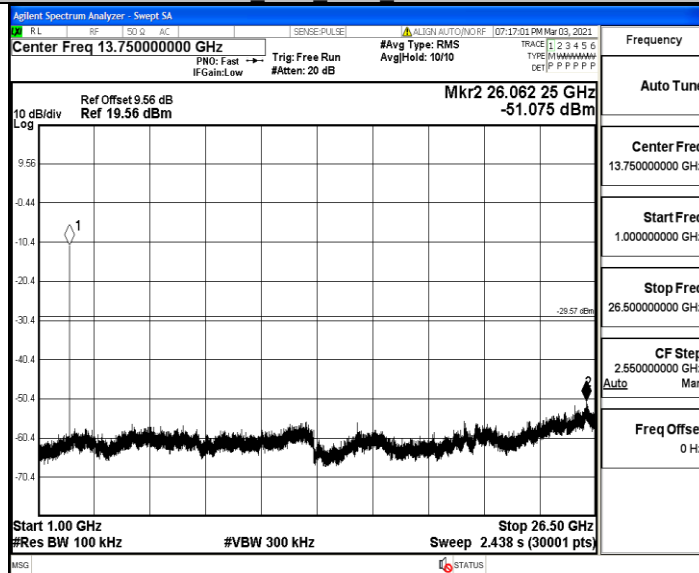
2DH5_Ant1_2441_0~Reference



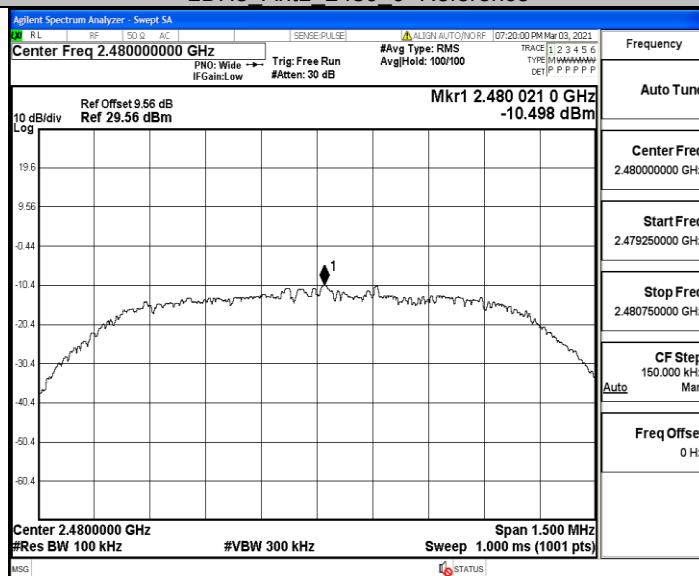
2DH5_Ant1_2441_30~1000



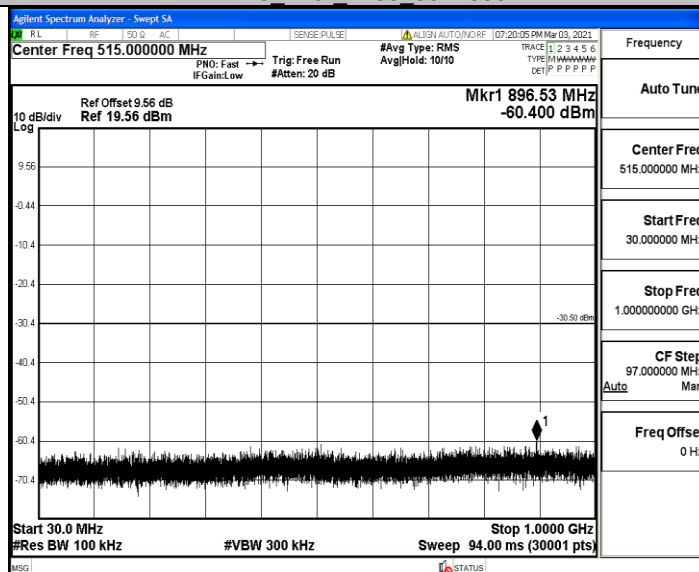
2DH5_Ant1_2441_1000~26500



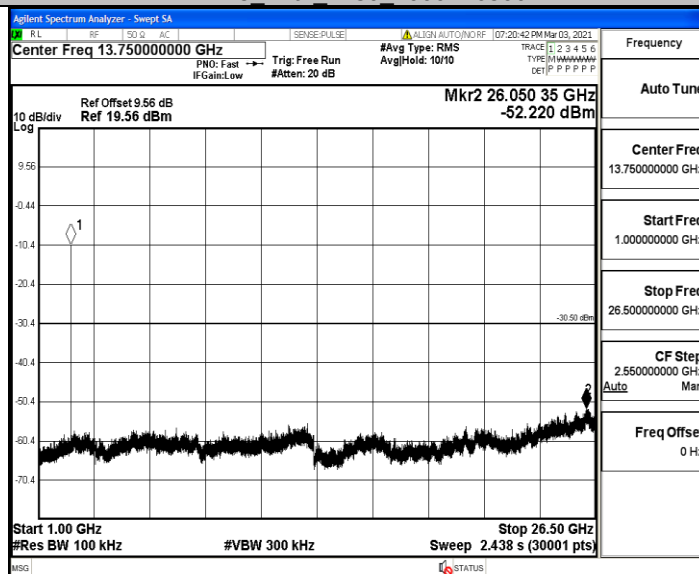
2DH5_Ant1_2480_0~Reference



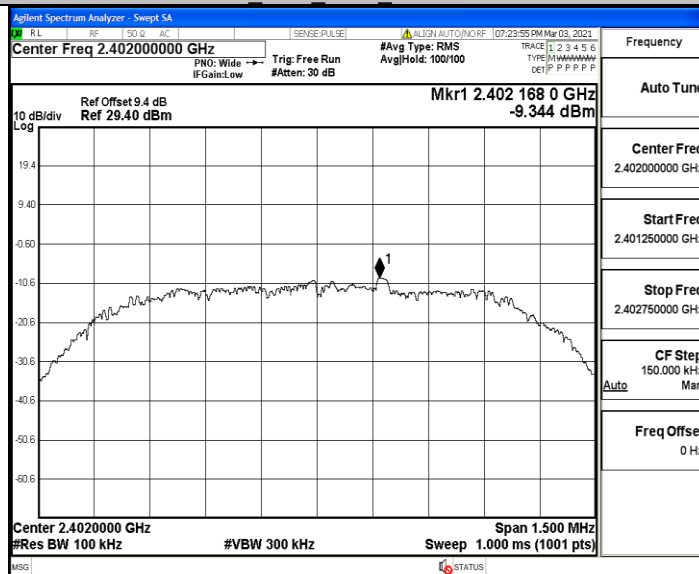
2DH5_Ant1_2480_30~1000



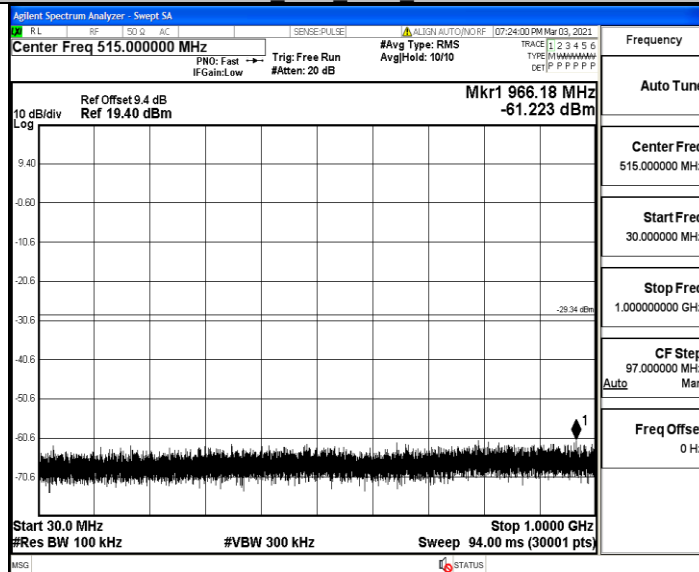
2DH5_Ant1_2480_1000~26500



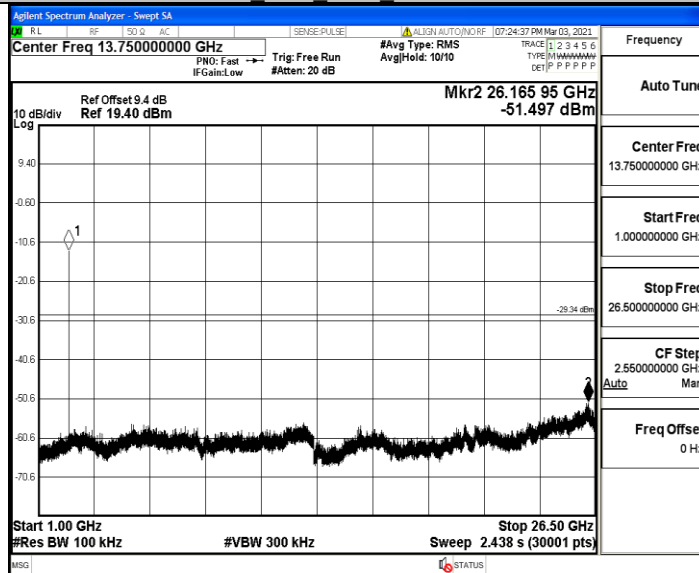
3DH5_Ant1_2402_0~Reference



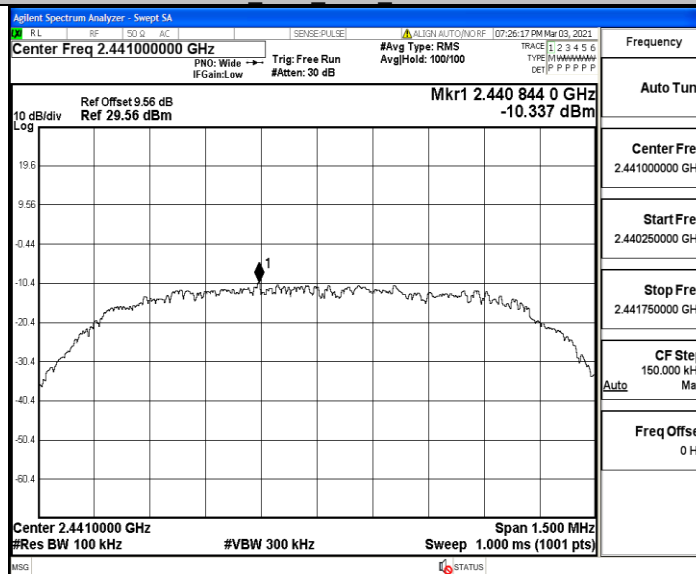
3DH5_Ant1_2402_30~1000



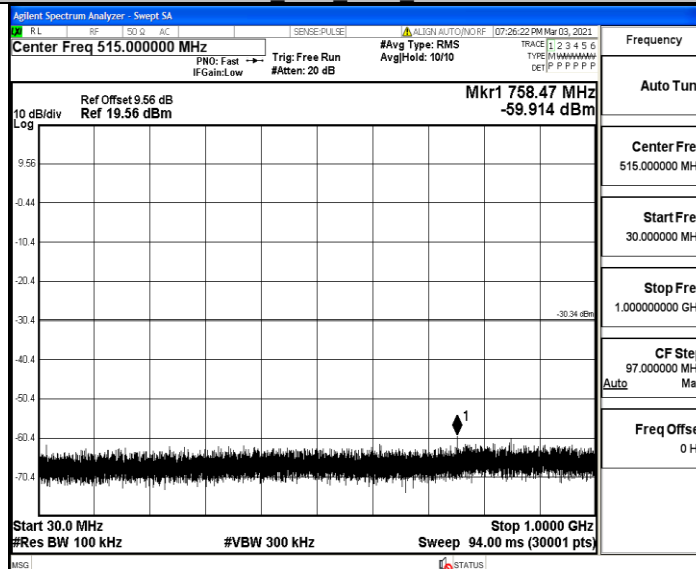
3DH5_Ant1_2402_1000~26500



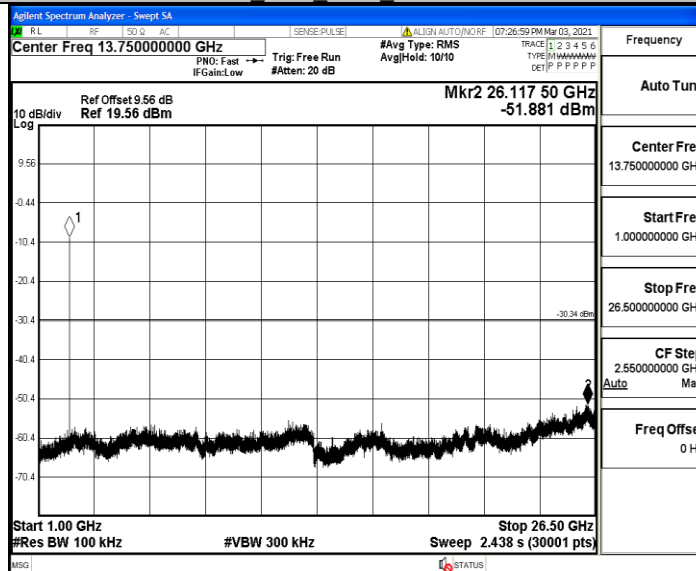
3DH5_Ant1_2441_0~Reference



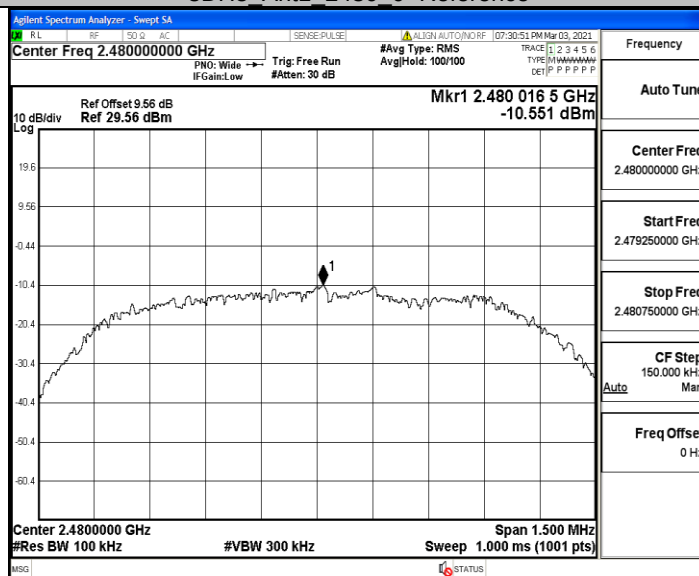
3DH5_Ant1_2441_30~1000



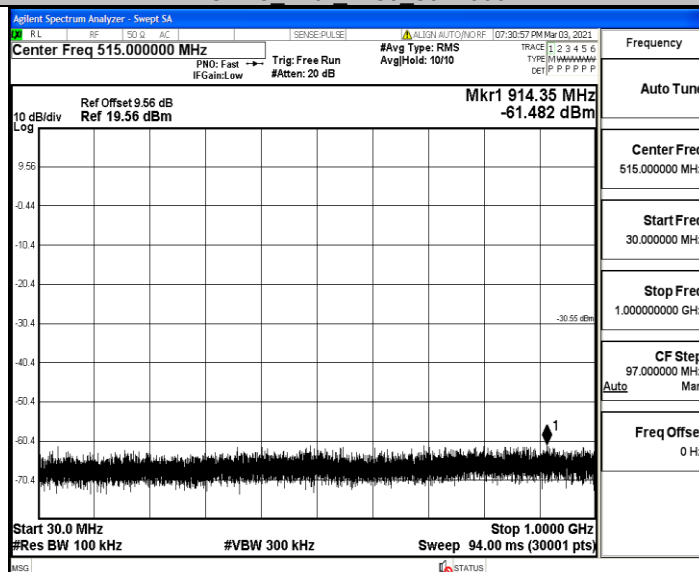
3DH5_Ant1_2441_1000~26500



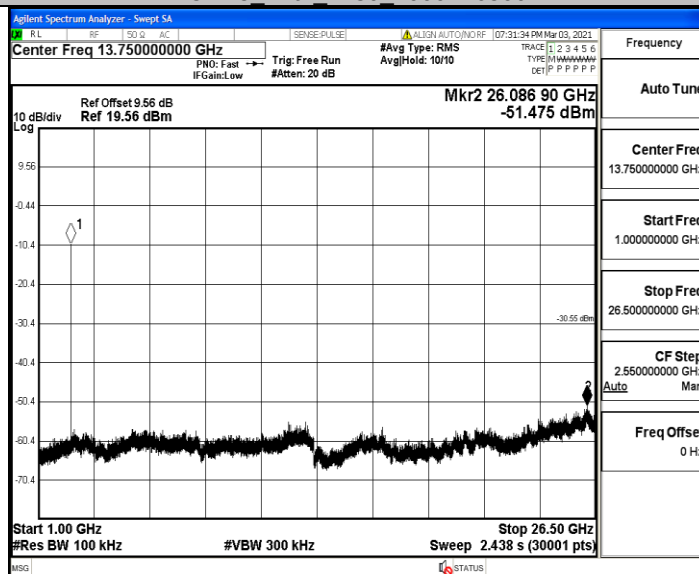
3DH5_Ant1_2480_0~Reference



3DH5_Ant1_2480_30~1000



3DH5_Ant1_2480_1000~26500



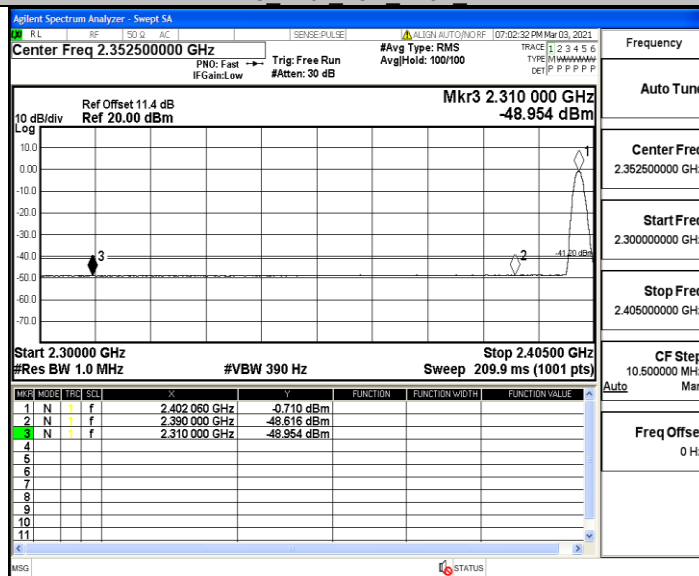
A.8 Restrict-band band-edge measurements

TestMode	Antenna	ChName	Channel(MHz)	Detector	Freq(MHz)	Result(dBm)	Limit(dBm)	Verdict
DH5	Ant1	Low	2402	AV	2310.000	-48.95	<=-41.20	PASS
				AV	2390.000	-48.61	<=-41.20	PASS
				Peak	2310.000	-42.81	<=-21.20	PASS
				Peak	2390.000	-42.57	<=-21.20	PASS
		High	2480	AV	2483.500	-48.10	<=-41.20	PASS
				AV	2500.000	-48.09	<=-41.20	PASS
				Peak	2483.500	-41.20	<=-21.20	PASS
				Peak	2500.000	-41.40	<=-21.20	PASS
2DH5	Ant1	Low	2402	AV	2310.000	-48.92	<=-41.20	PASS
				AV	2390.000	-48.68	<=-41.20	PASS
				Peak	2310.000	-42.28	<=-21.20	PASS
				Peak	2390.000	-41.75	<=-21.20	PASS
		High	2480	AV	2483.500	-48.24	<=-41.20	PASS
				AV	2500.000	-48.07	<=-41.20	PASS
				Peak	2483.500	-41.40	<=-21.20	PASS
				Peak	2500.000	-39.67	<=-21.20	PASS
3DH5	Ant1	Low	2402	AV	2310.000	-48.96	<=-41.20	PASS
				AV	2390.000	-48.66	<=-41.20	PASS
				Peak	2310.000	-42.32	<=-21.20	PASS
				Peak	2390.000	-41.88	<=-21.20	PASS
		High	2480	AV	2483.500	-48.57	<=-41.20	PASS
				AV	2500.000	-48.35	<=-41.20	PASS
				Peak	2483.500	-42.52	<=-21.20	PASS
				Peak	2500.000	-43.26	<=-21.20	PASS

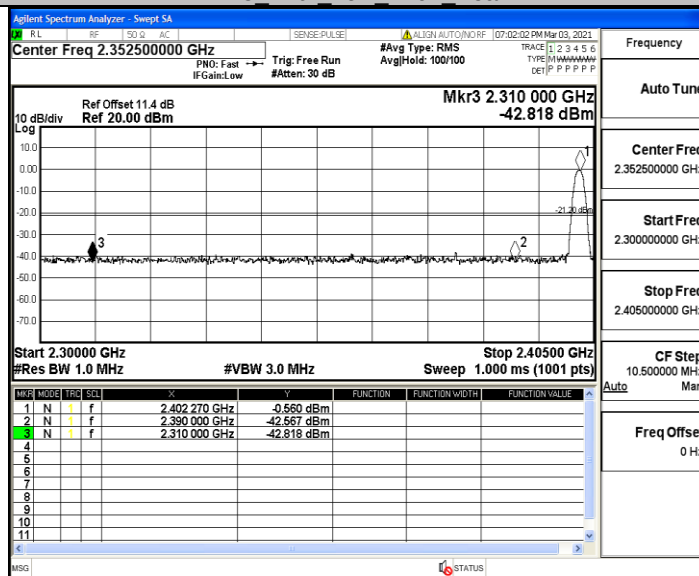
1. The Antenna Gain is compensated in the graph with 2dBi and Antenna Gain which is Higher.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs

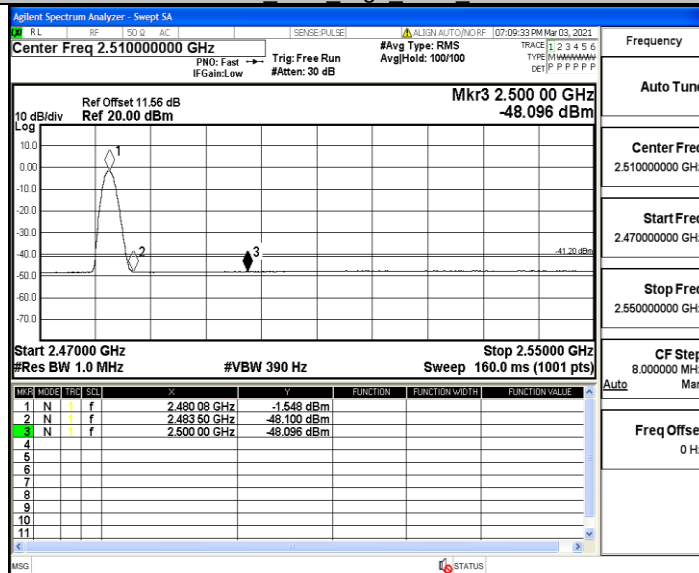
DH5 Ant1 Low 2402 AV



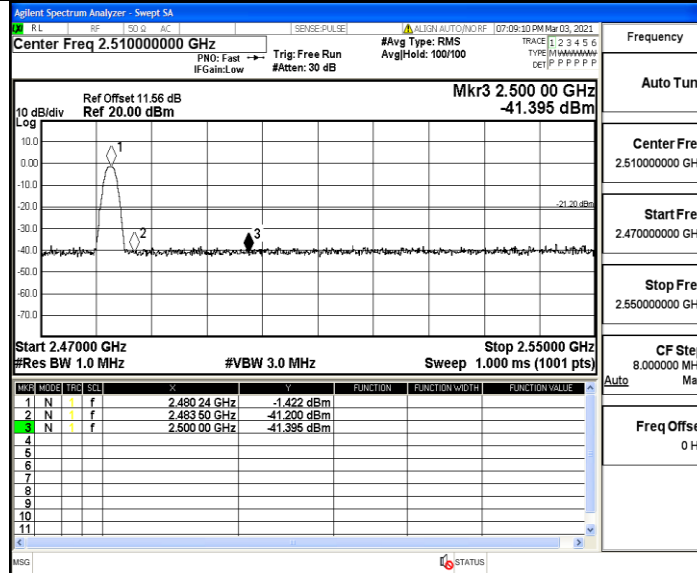
DH5 Ant1 Low 2402 Peak



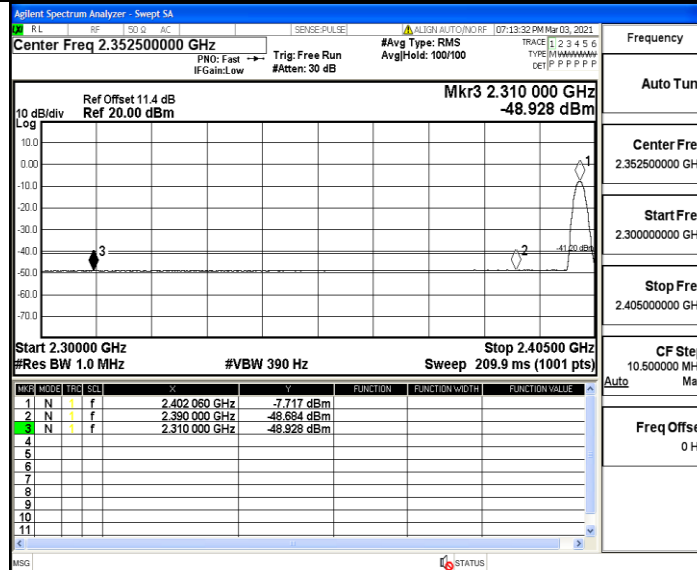
DH5 Ant1 High 2480 AV



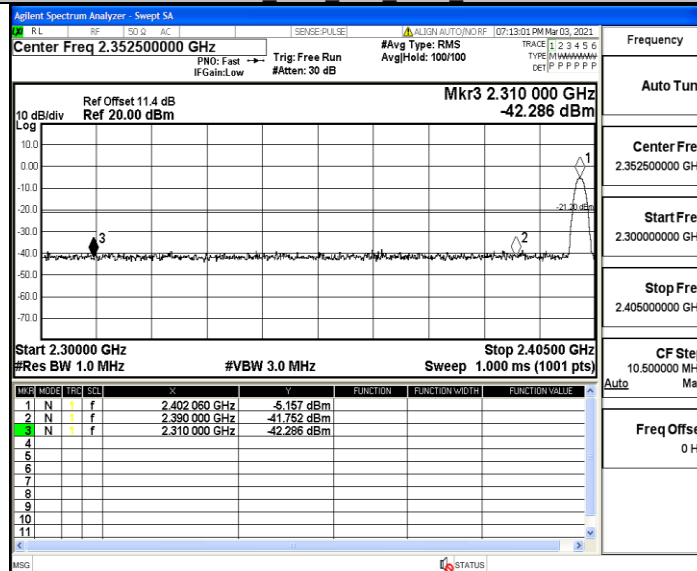
DH5 Ant1 High 2480 Peak



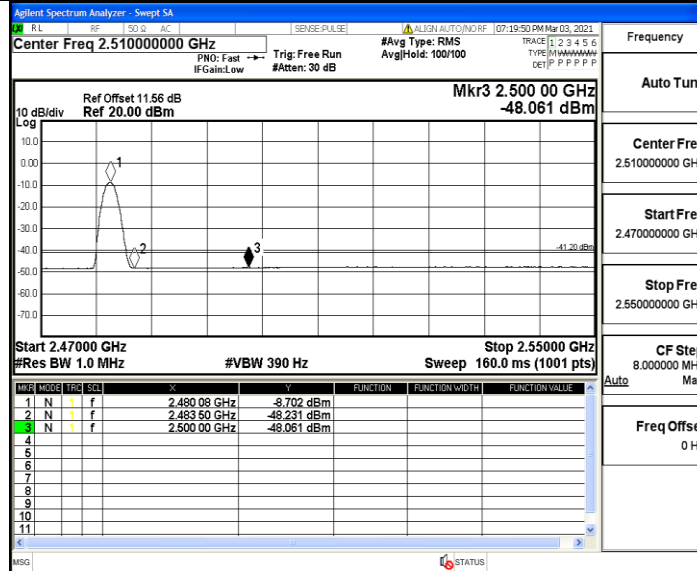
2DH5 Ant1 Low 2402 AV



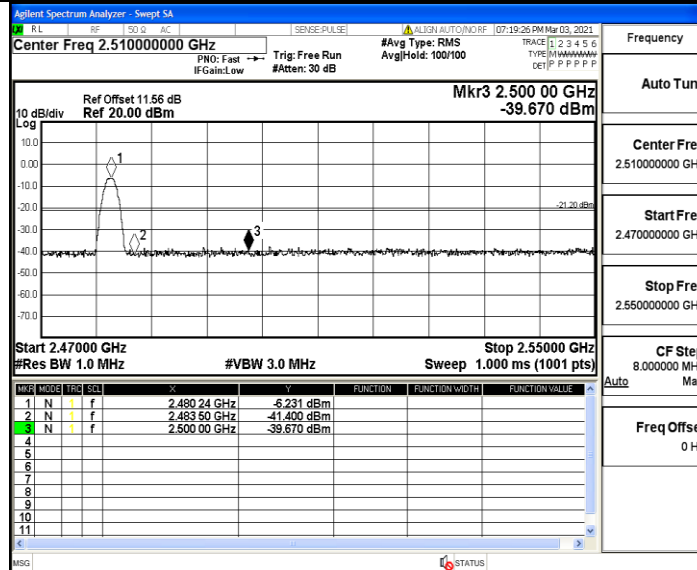
2DH5 Ant1 Low 2402 Peak



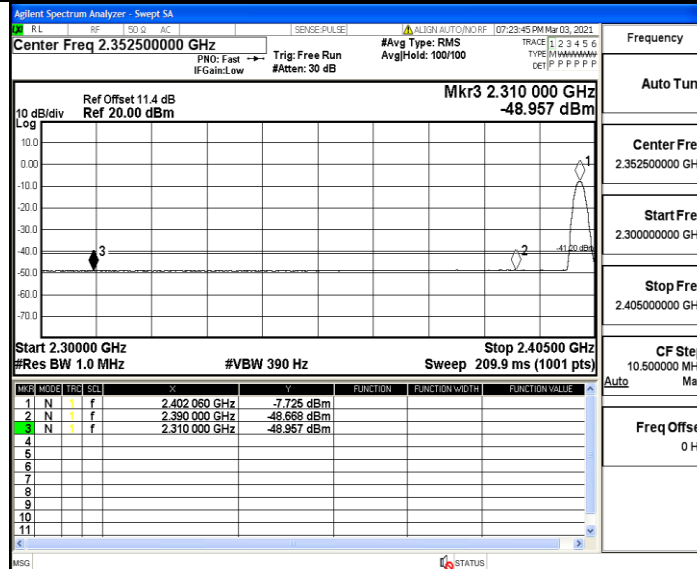
2DH5 Ant1_High_2480_AV



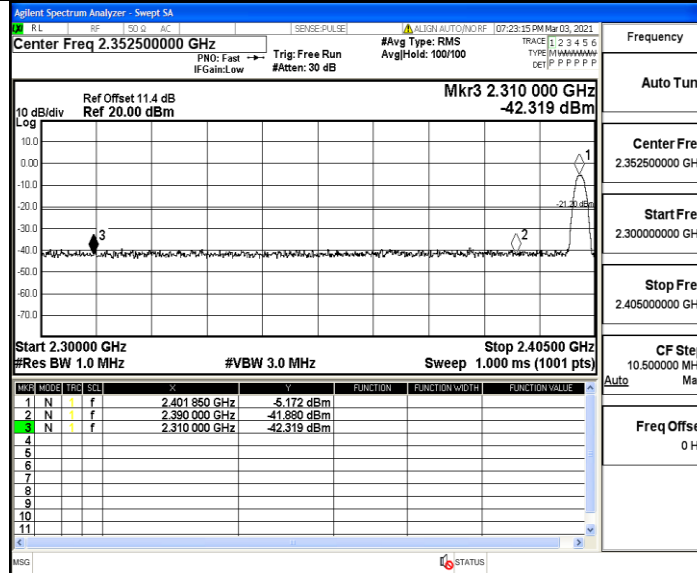
2DH5 Ant1_High_2480_Peak



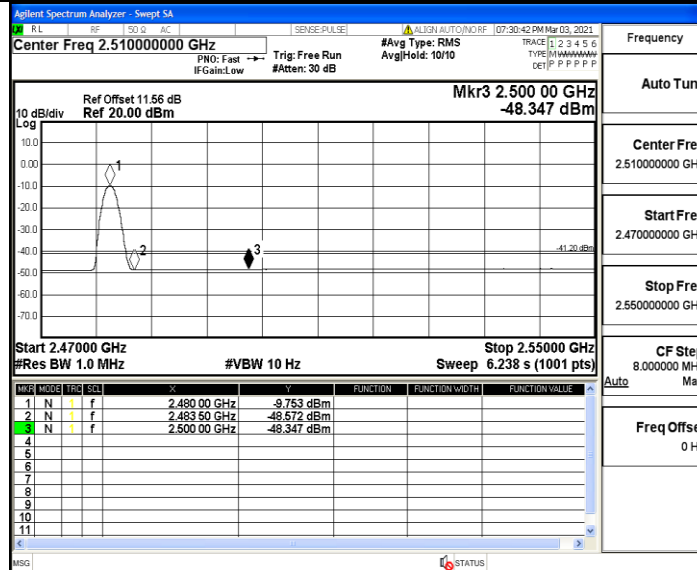
3DH5 Ant1_Low_2402_AV



3DH5_Ant1_Low_2402_Peak



3DH5_Ant1_High_2480_AV



3DH5_Ant1_High_2480_Peak

