

Appendix A

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

Product Name: Bluetooth receiver controller

Trade Mark: Wet Sounds

Test Model: WWX-DZ-BT

FCC ID: 2AMCZ-VWT

Environmental Conditions

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

A.1 20 dB Bandwidth

TestMode	Antenna	Channel	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.936	2401.541	2402.477	---	PASS
		2441	0.945	2440.529	2441.474	---	PASS
		2480	0.945	2479.529	2480.474	---	PASS
2DH5	Ant1	2402	1.347	2401.319	2402.666	---	PASS
		2441	1.314	2440.334	2441.648	---	PASS
		2480	1.233	2479.367	2480.600	---	PASS
3DH5	Ant1	2402	1.275	2401.343	2402.618	---	PASS
		2441	1.272	2440.349	2441.621	---	PASS
		2480	1.248	2479.358	2480.606	---	PASS

Test Graph



DH5_Ant1_2402



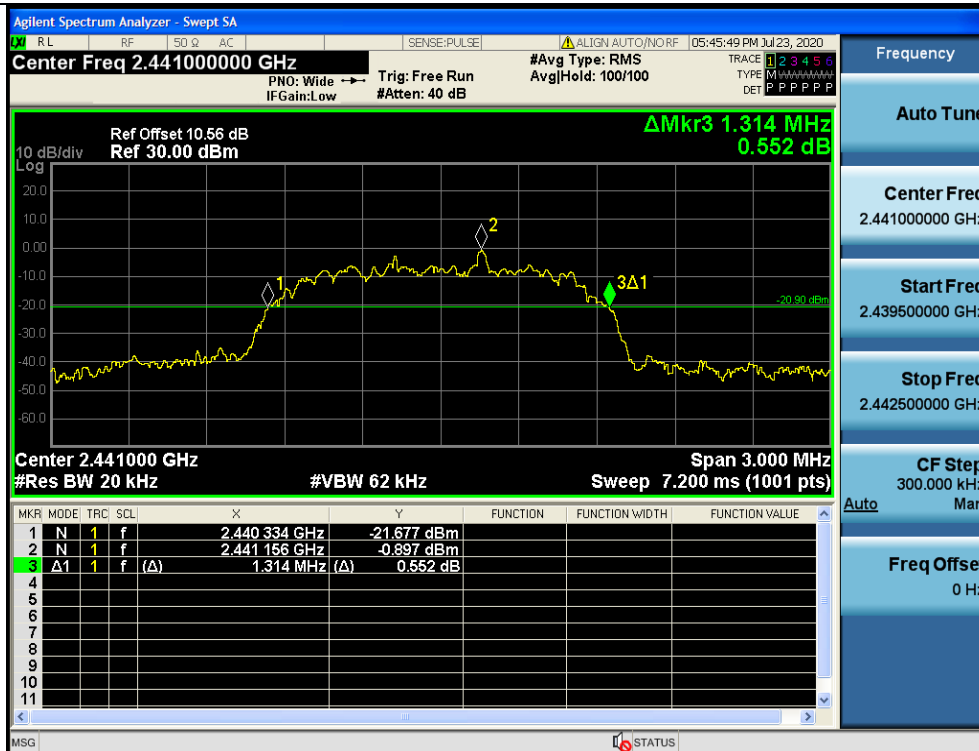
DH5_Ant1_2441



DH5_Ant1_2480



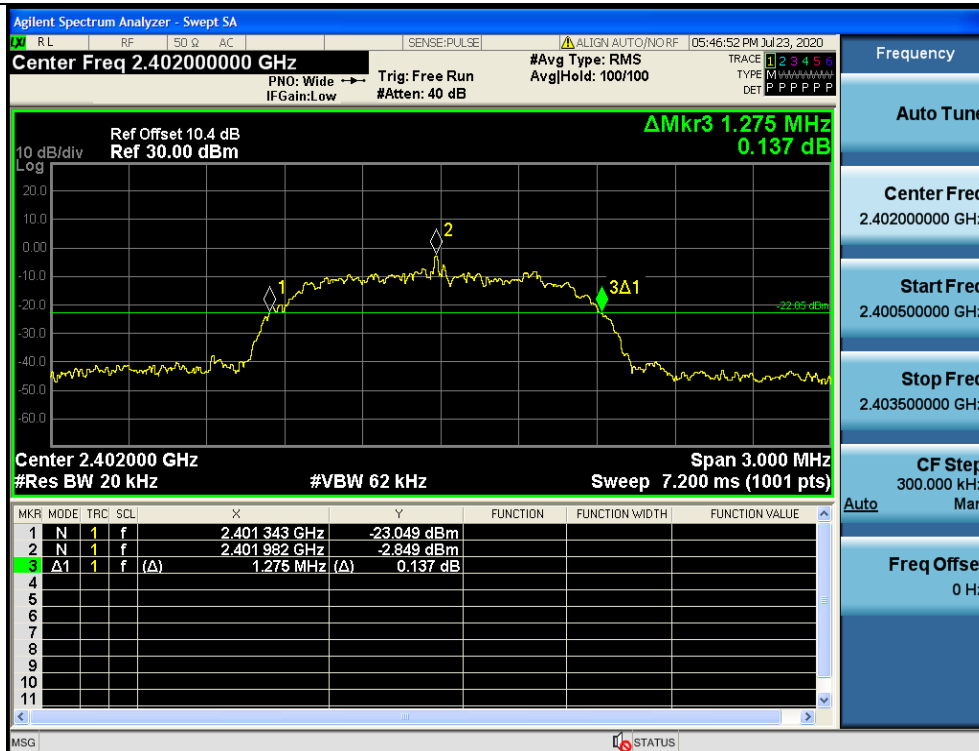
2DH5_Ant1_2402



2DH5_Ant1_2441



2DH5_Ant1_2480



3DH5_Ant1_2402



3DH5_Ant1_2441

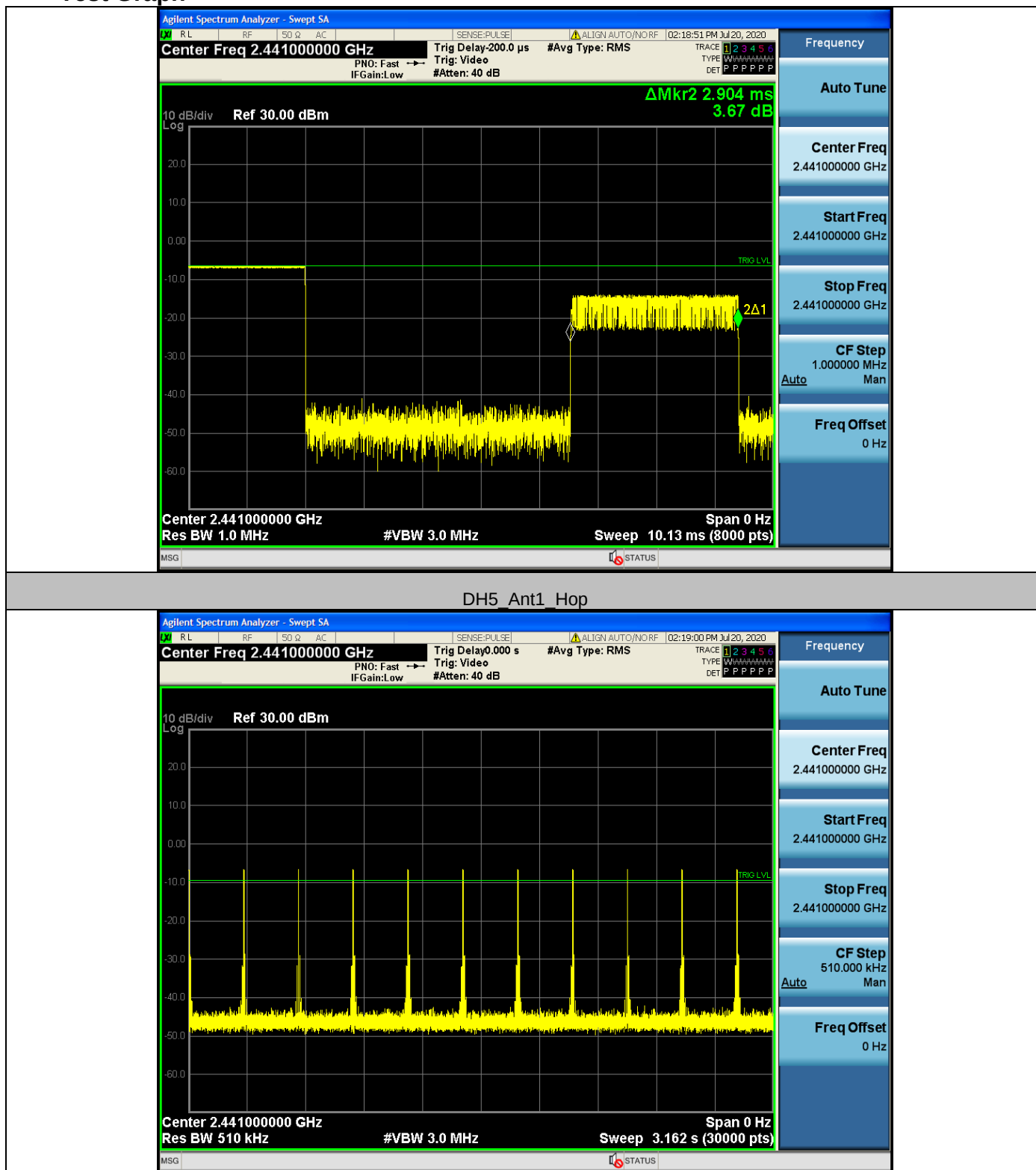


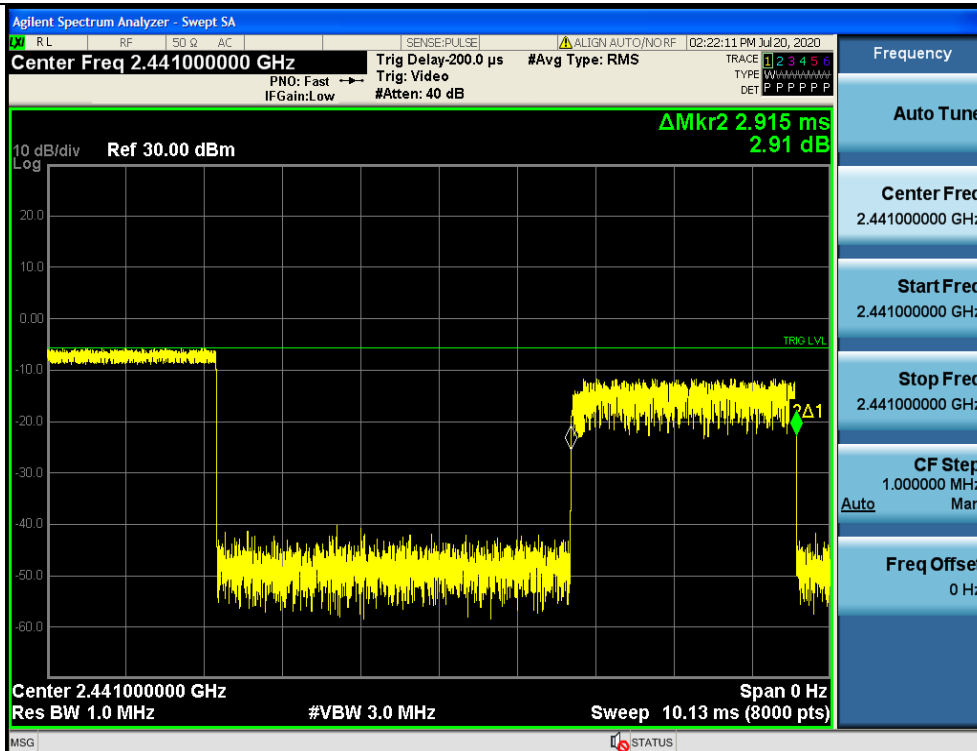
3DH5_Ant1_2480

A.2 Dwell Time

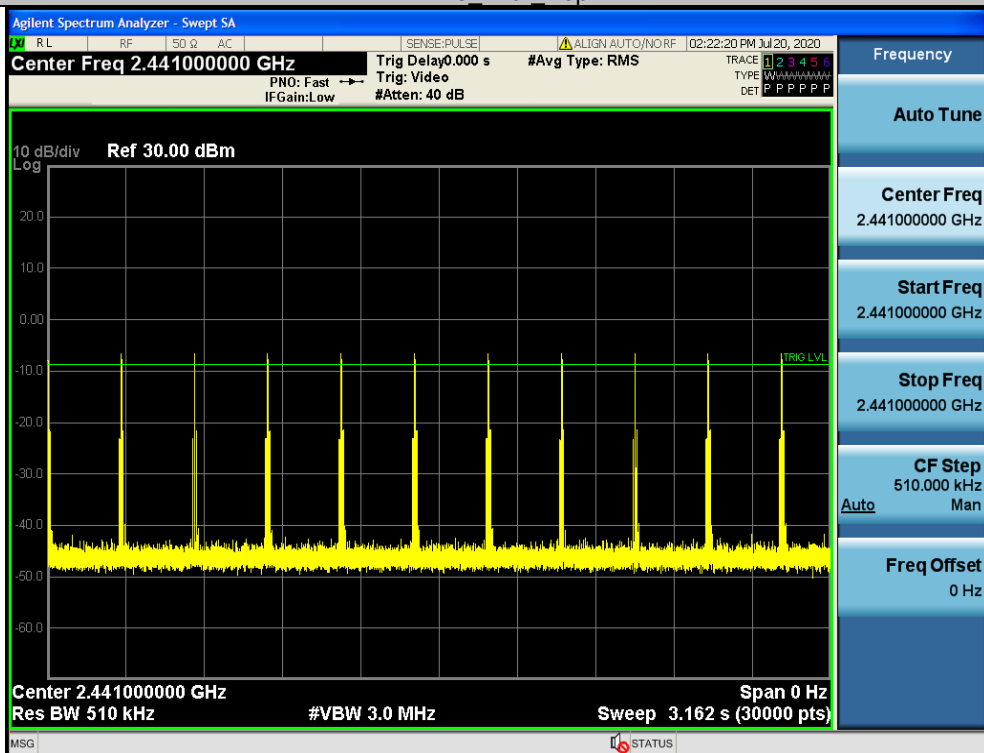
TestMode	Antenna	Channel	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH5	Ant1	Hop	2.90	110	0.319	<=0.4	PASS
2DH5	Ant1	Hop	2.92	110	0.321	<=0.4	PASS
3DH5	Ant1	Hop	2.92	110	0.321	<=0.4	PASS

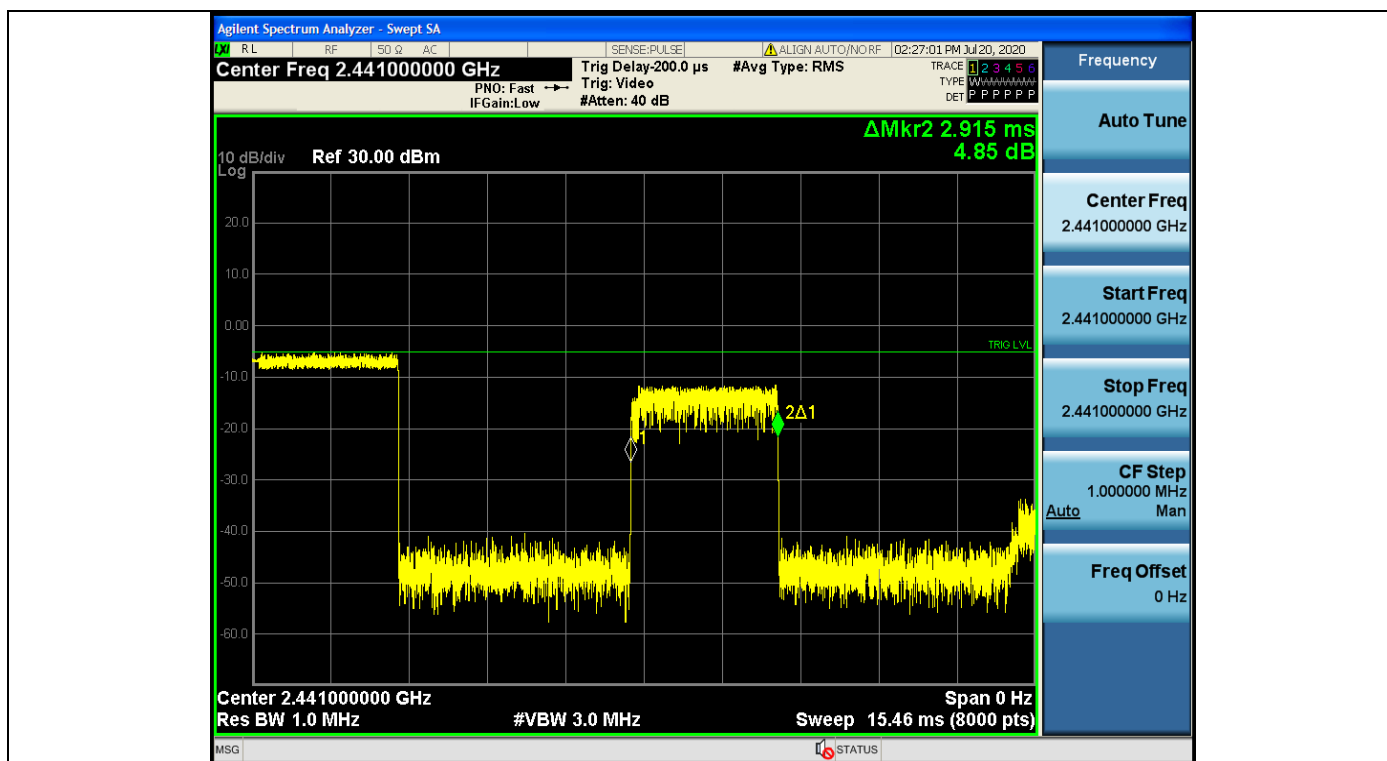
Test Graph



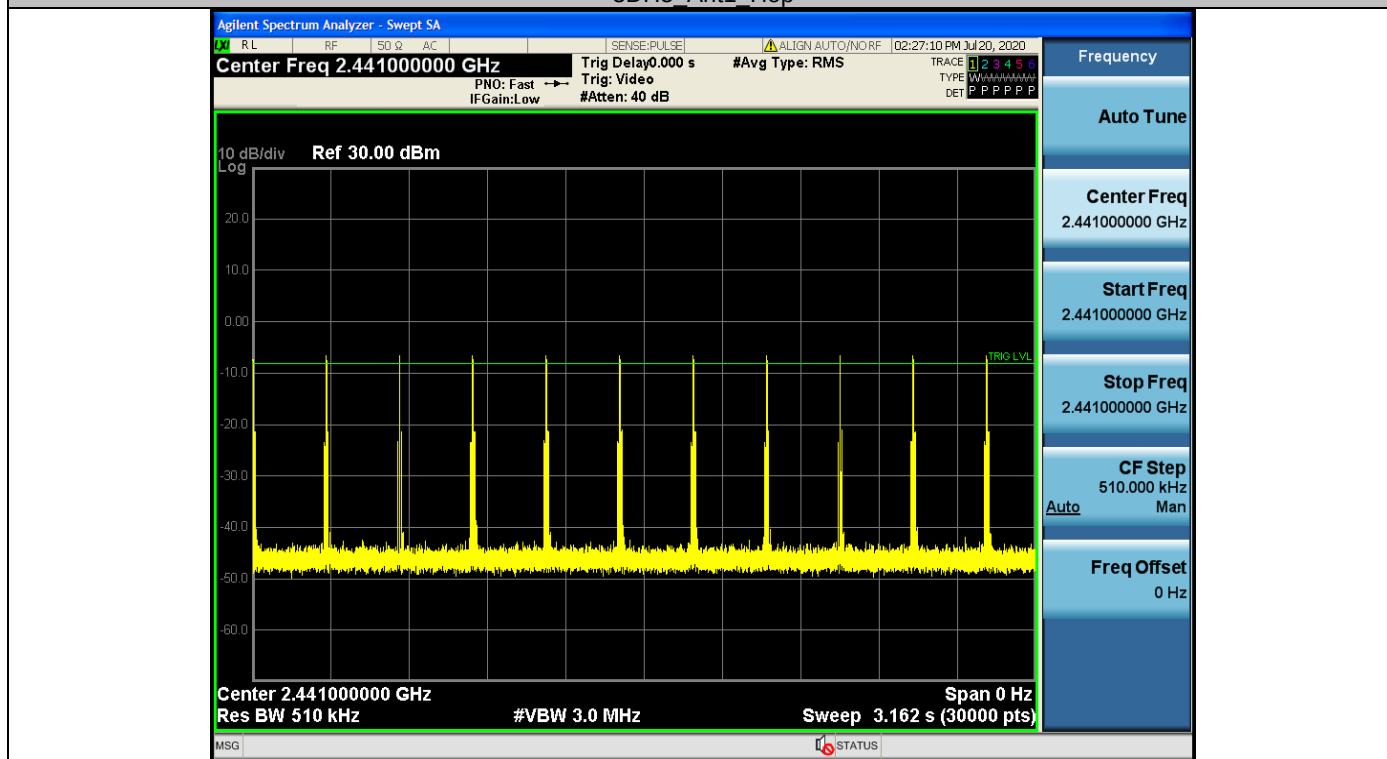


2DH5 Ant1 Hop





3DH5 Ant1 Hop



A.3 Carrier Frequency Separation

TestMode	Antenna	Channel	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	1.048	≥ 0.738	PASS
2DH5	Ant1	Hop	0.994	≥ 0.926	PASS
3DH5	Ant1	Hop	1.040	≥ 0.912	PASS

Test Graph



DH5 Ant1 Hop



2DH5 Ant1 Hop

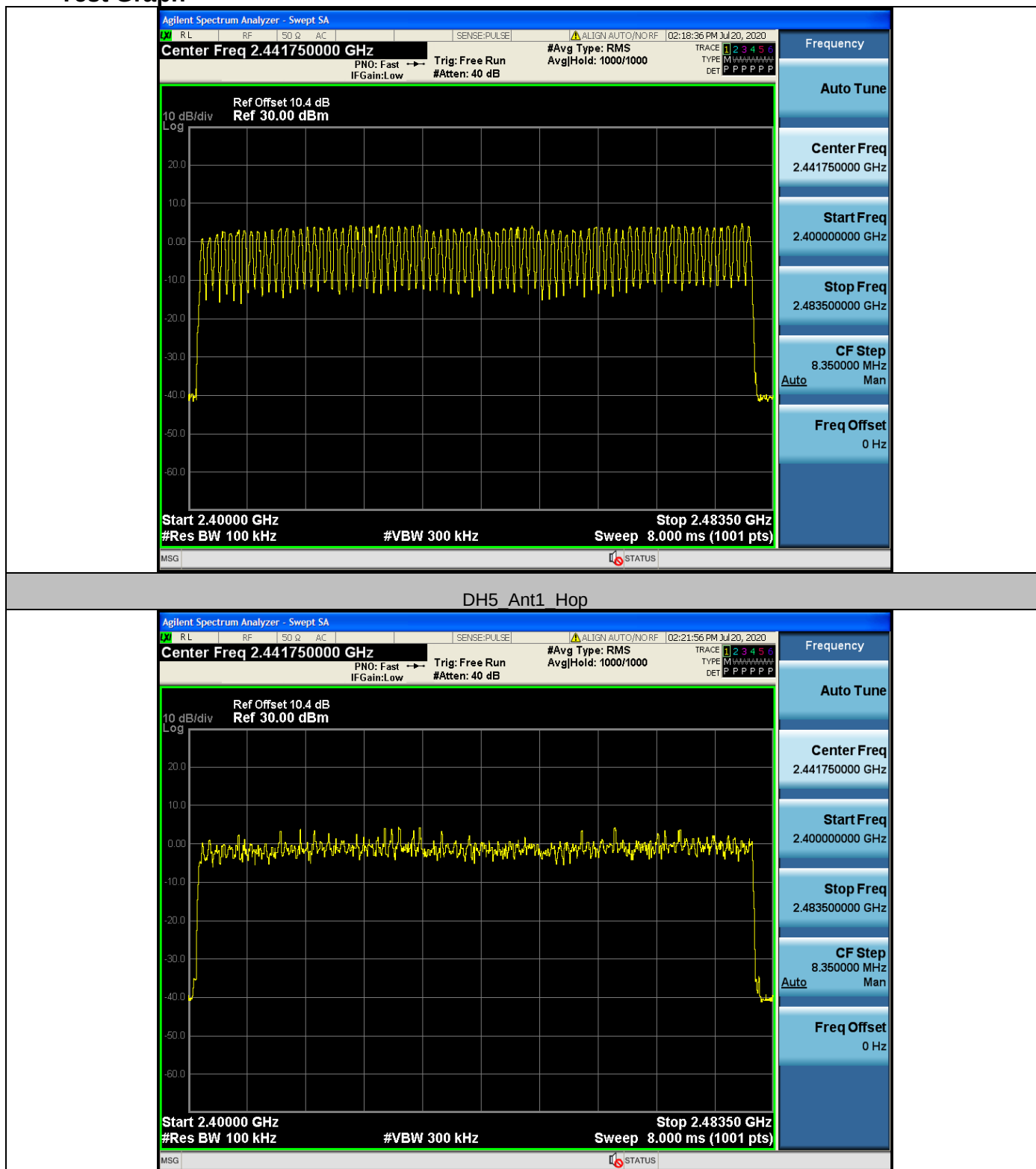


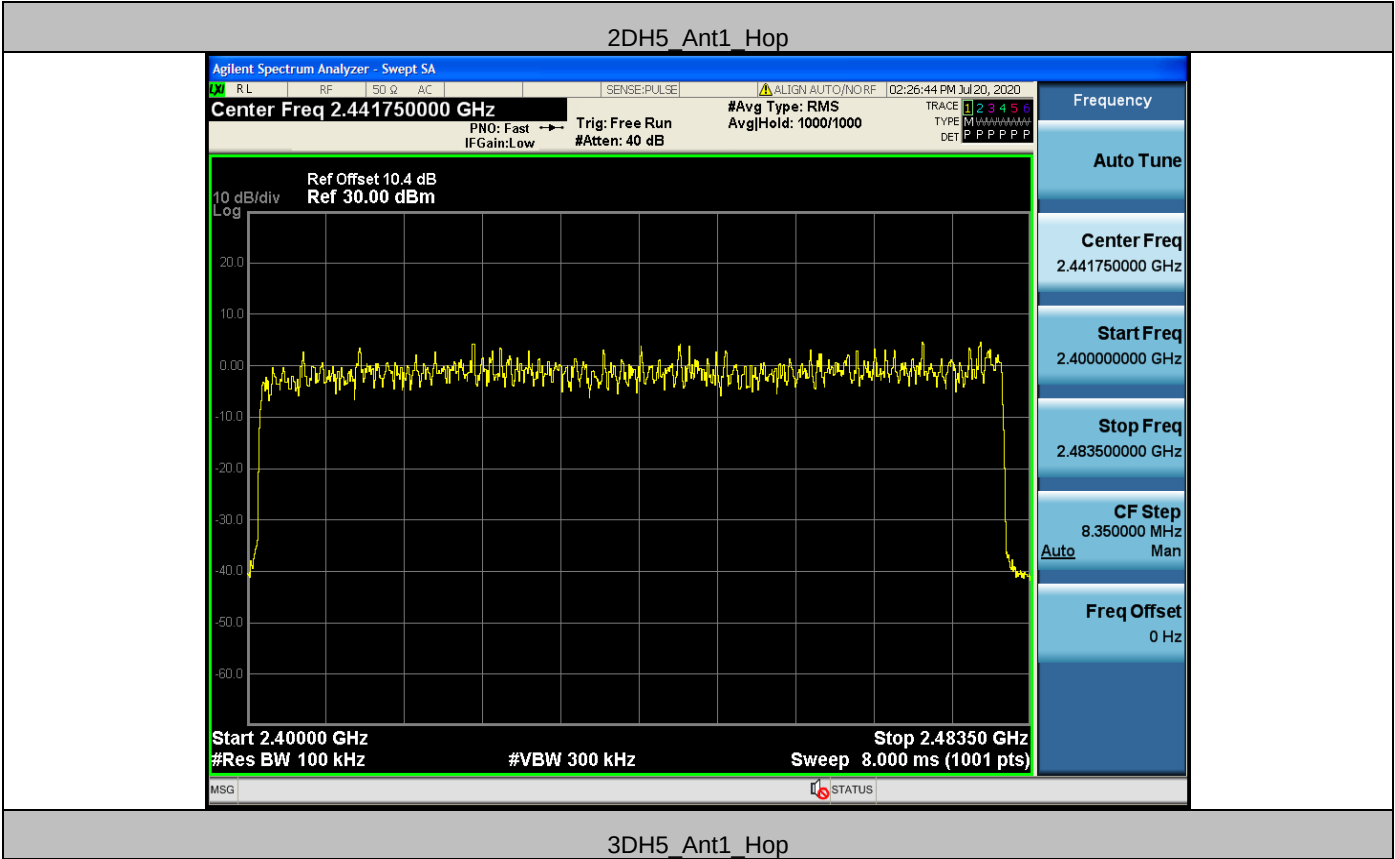
3DH5_Ant1_Hop

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

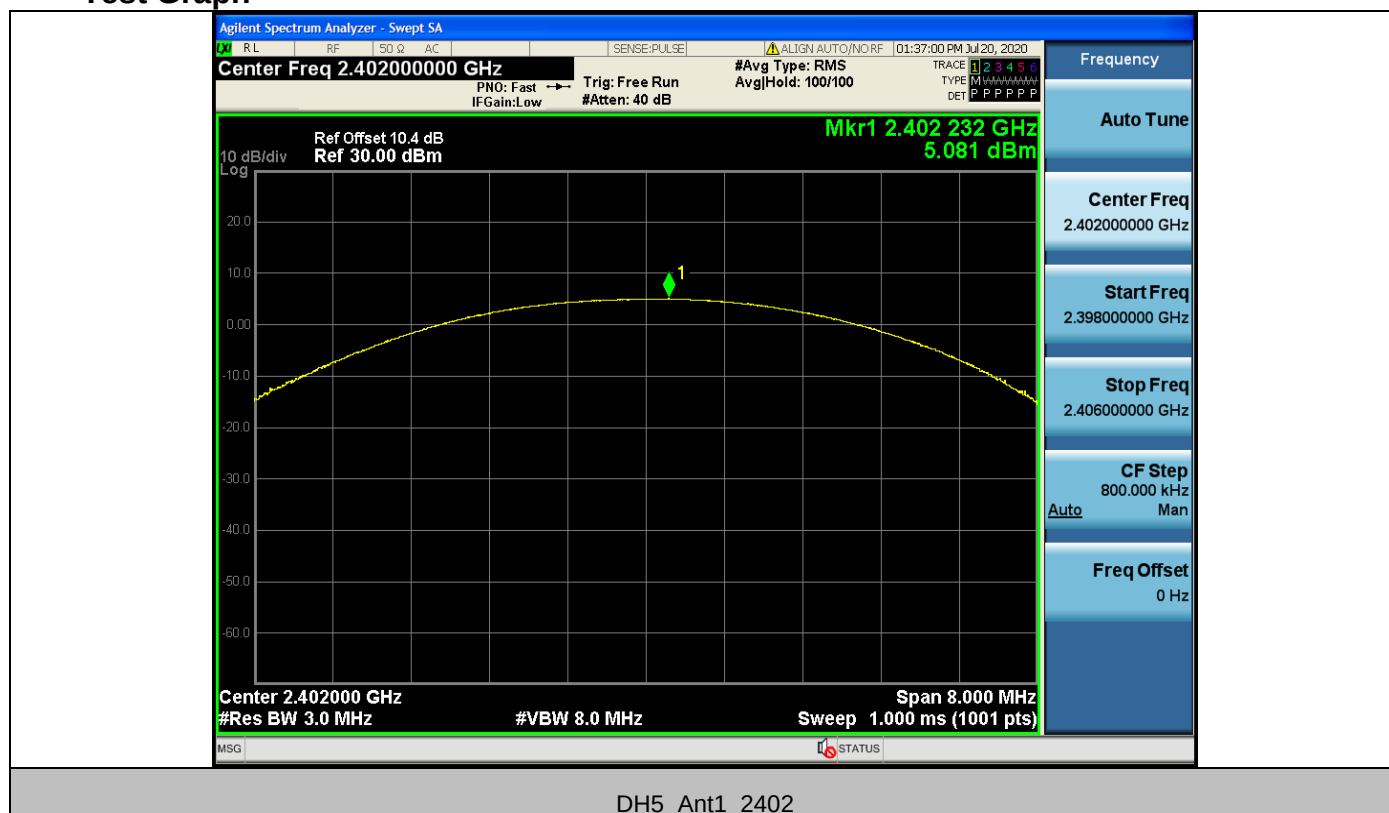


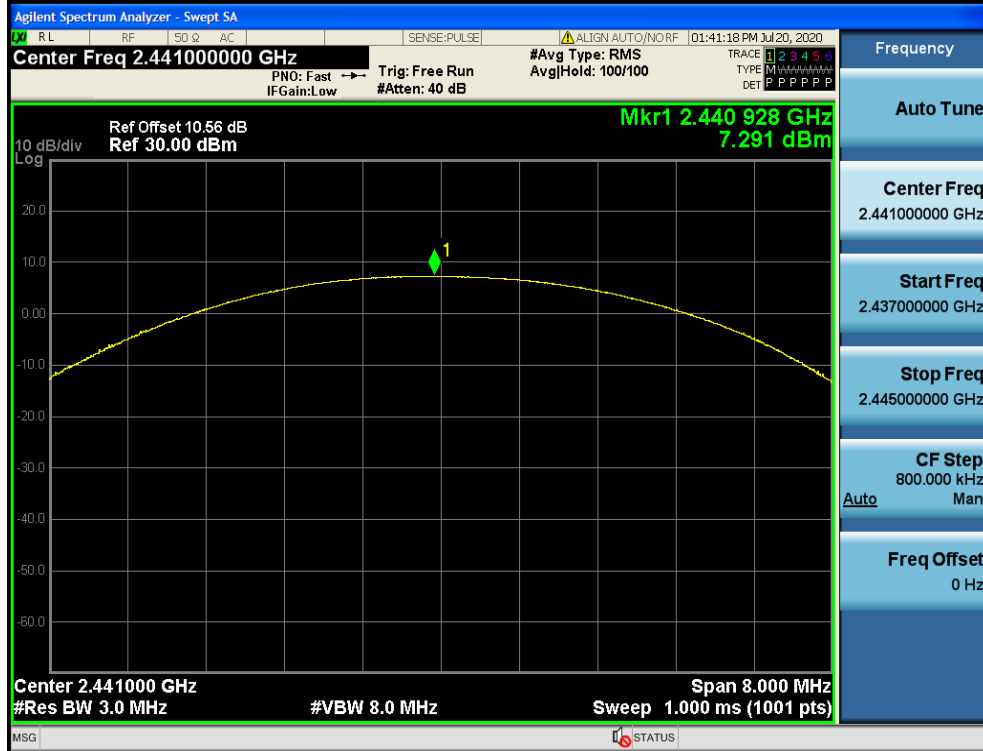


A.5 Conducted Peak Output Power

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
DH5	Ant1	2402	5.09	<=20.97	PASS
		2441	7.30	<=20.97	PASS
		2480	8.30	<=20.97	PASS
2DH5	Ant1	2402	2.80	<=20.97	PASS
		2441	5.48	<=20.97	PASS
		2480	6.49	<=20.97	PASS
3DH5	Ant1	2402	3.26	<=20.97	PASS
		2441	5.88	<=20.97	PASS
		2480	6.93	<=20.97	PASS

Test Graph

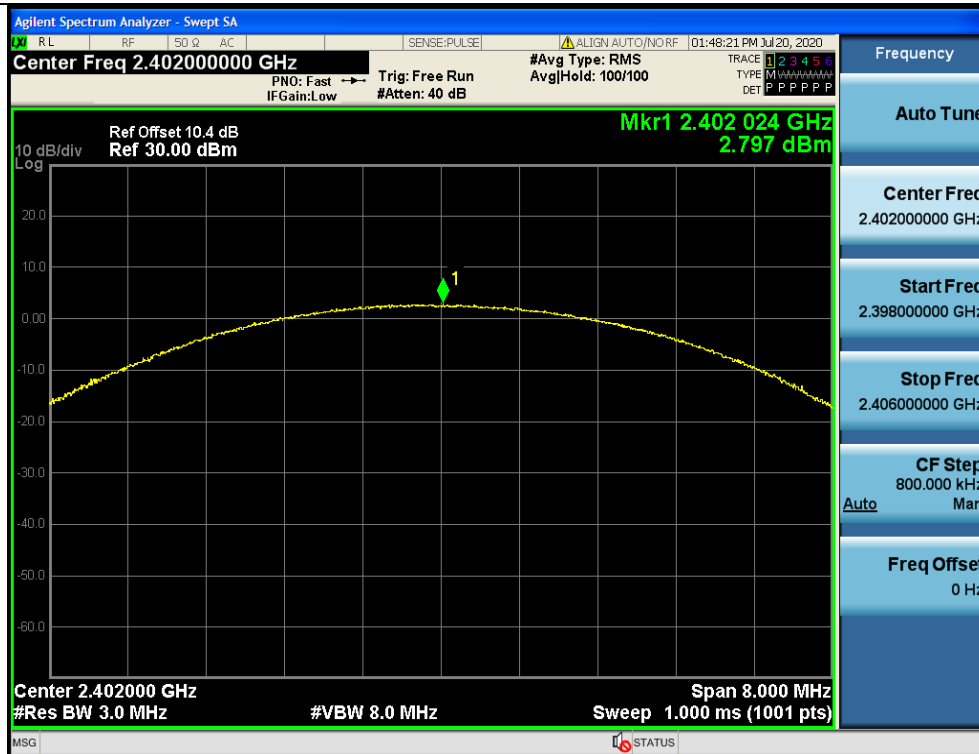




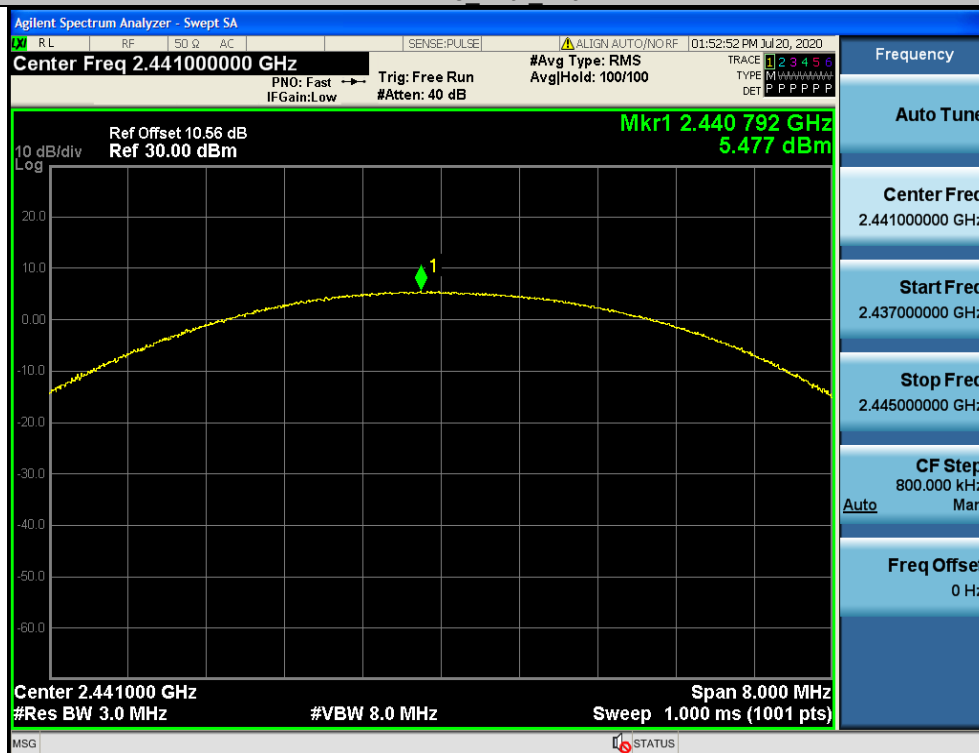
DH5_Ant1_2441



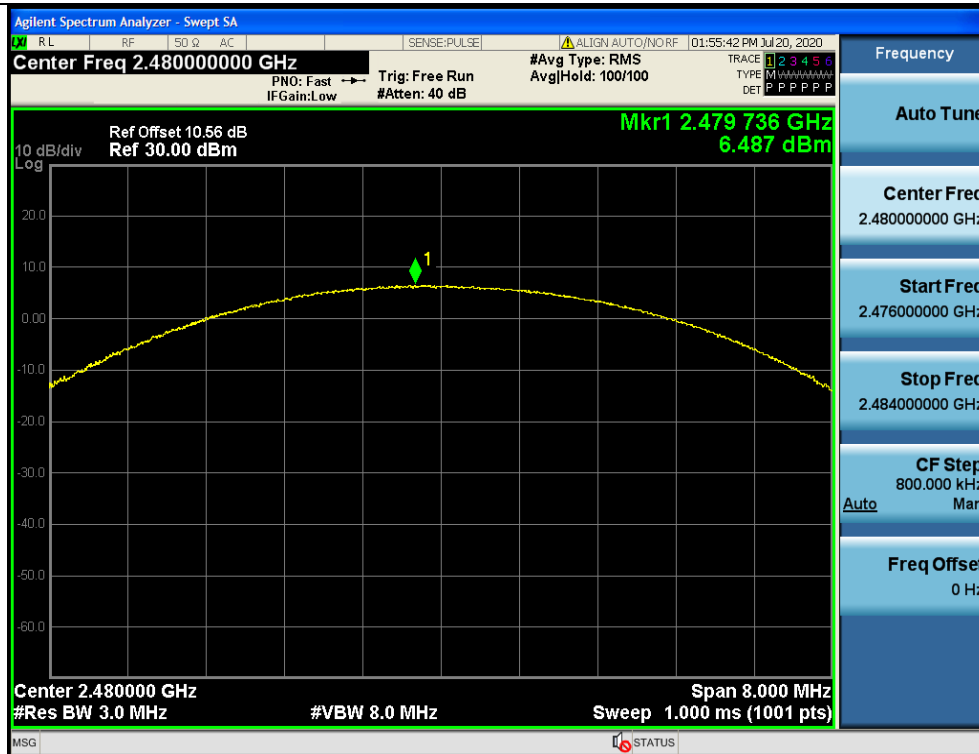
DH5_Ant1_2480



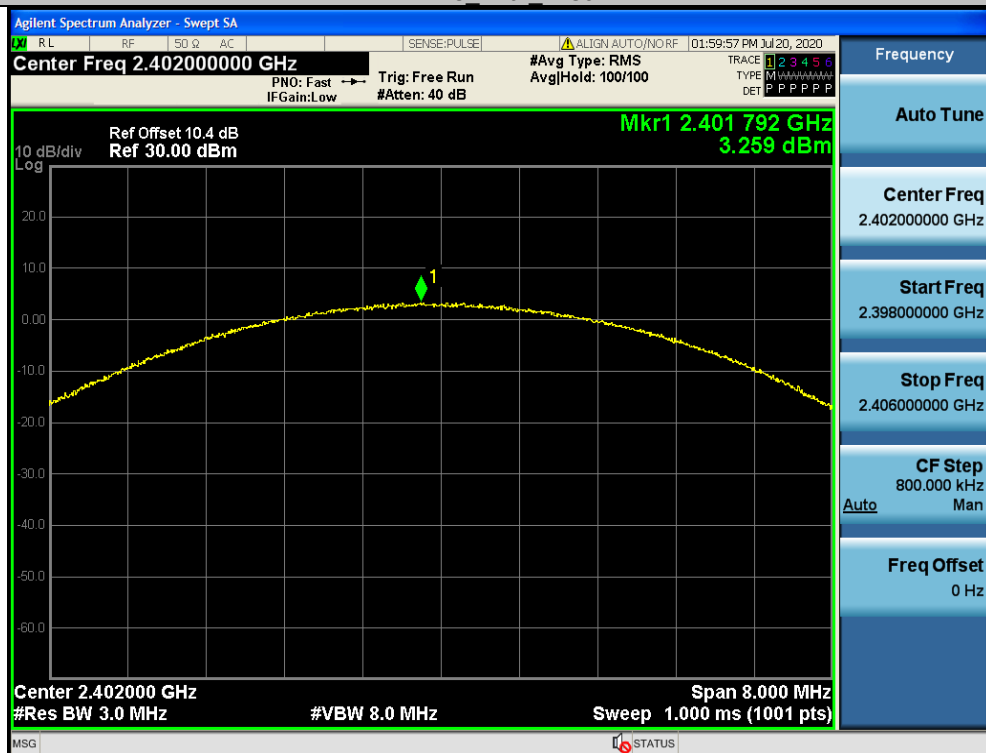
2DH5_Ant1_2402



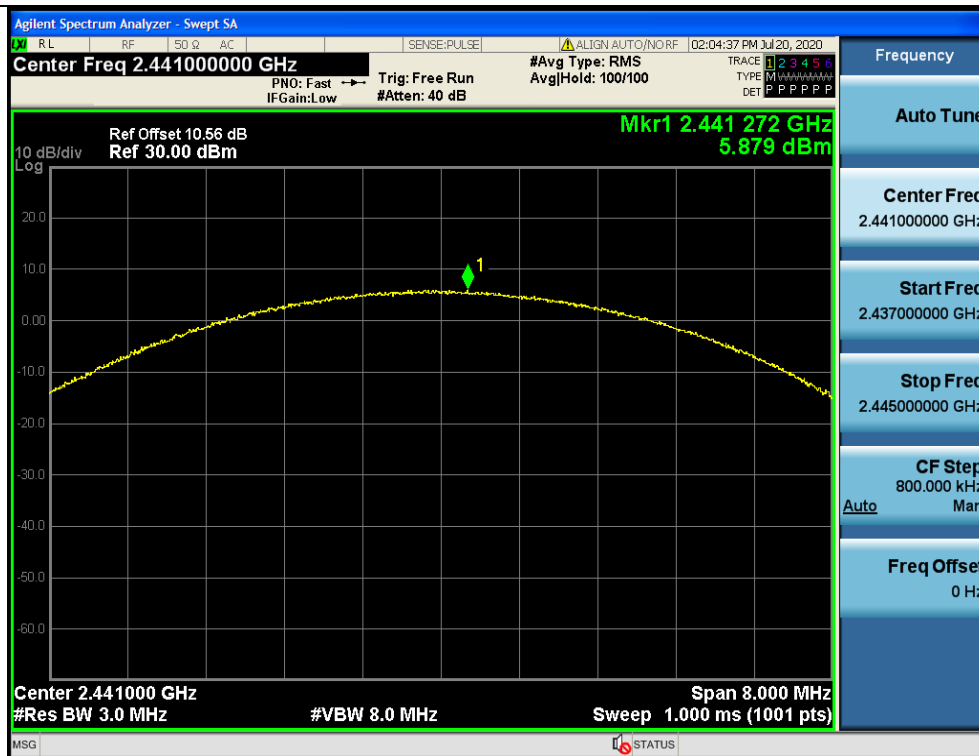
2DH5_Ant1_2441



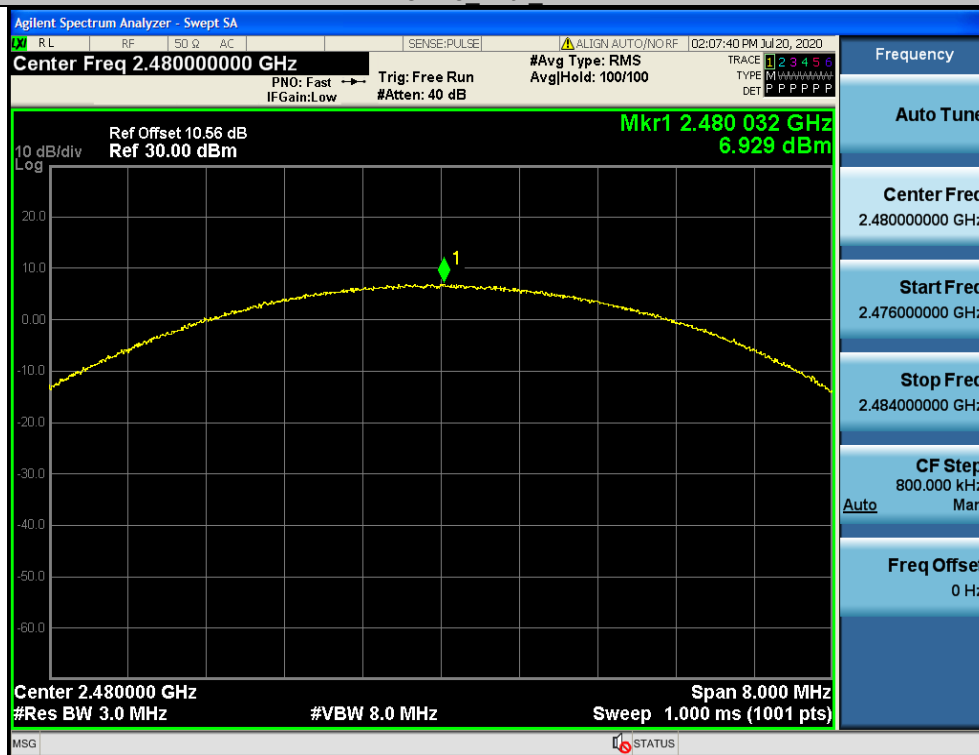
2DH5_Ant1_2480



3DH5_Ant1_2402



3DH5_Ant1_2441

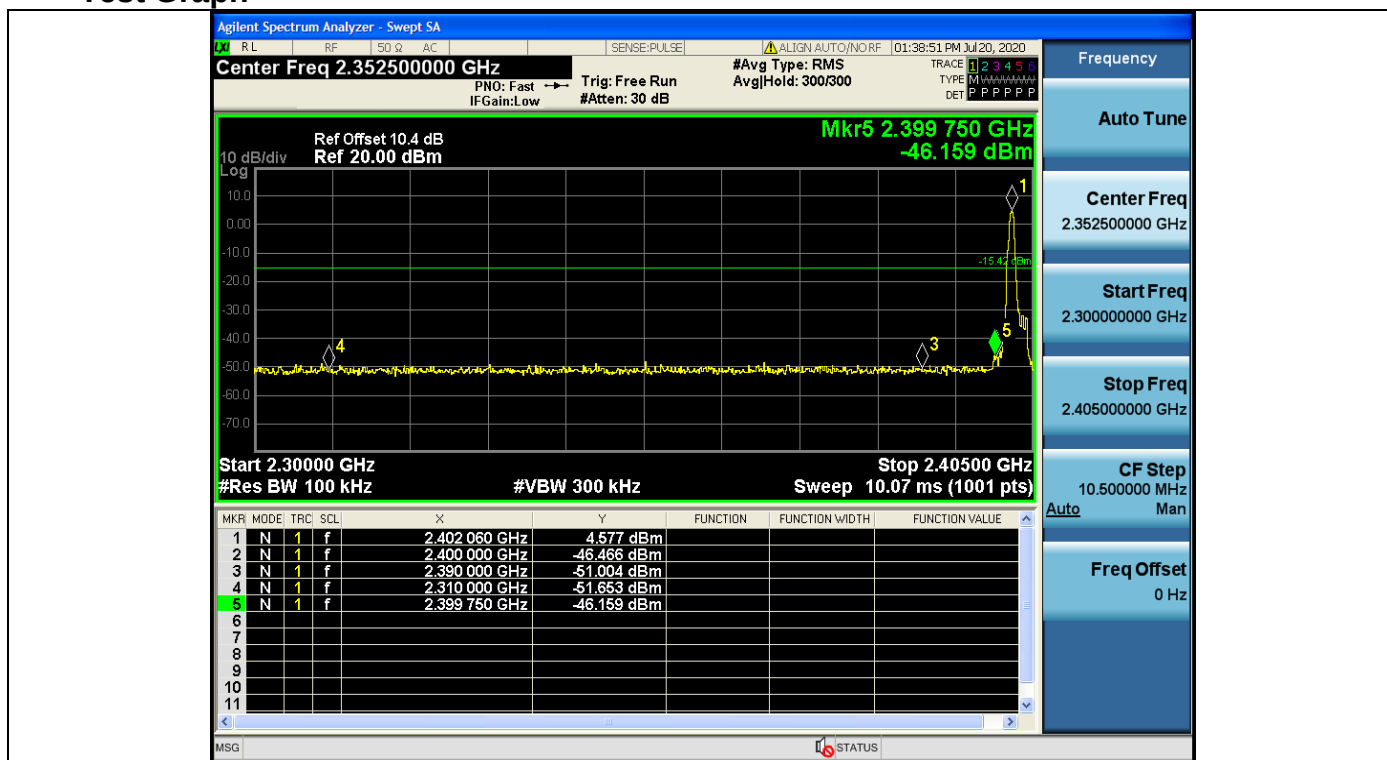


3DH5_Ant1_2480

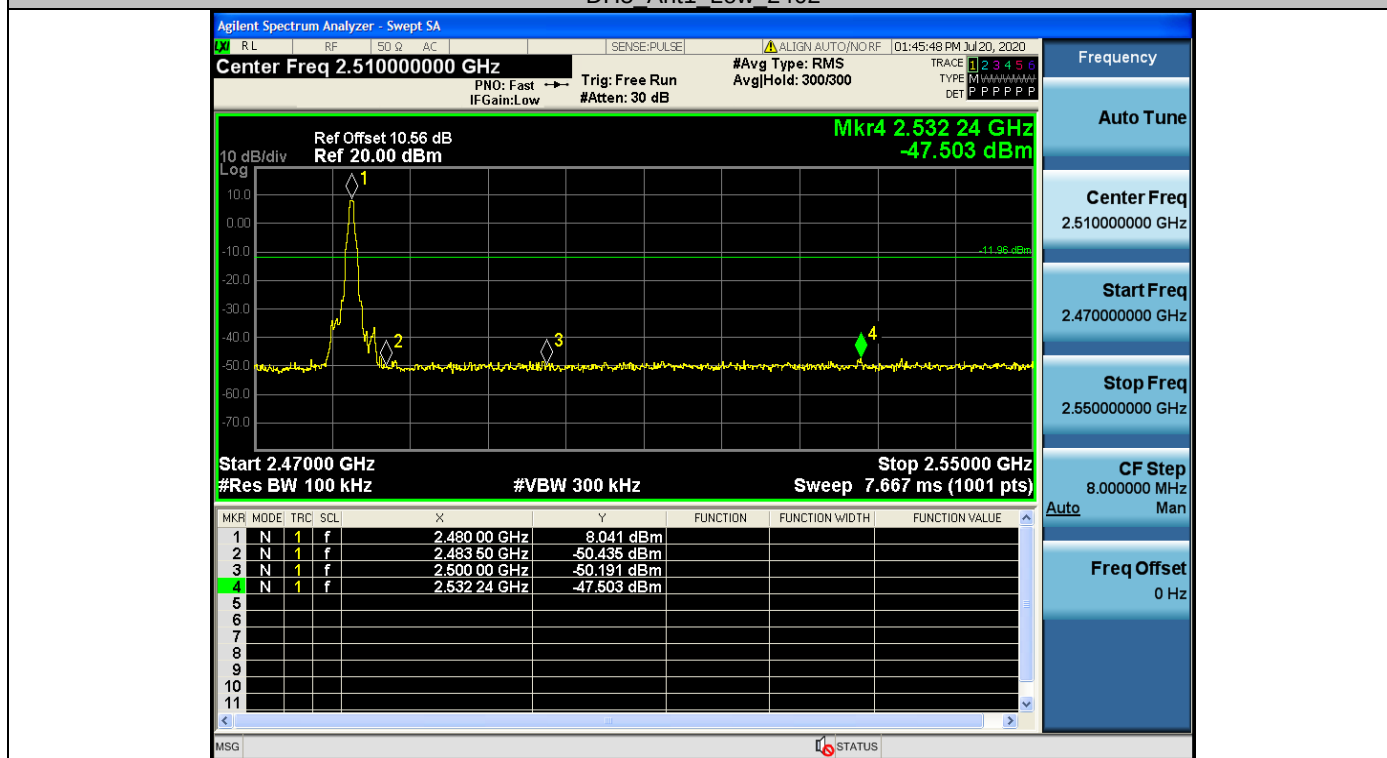
A.6 Band-edge for RF Conducted Emissions

TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	4.58	-46.16	<=-15.42	PASS
		High	2480	8.05	-47.5	<=-11.96	PASS
		Low	Hop_2402	2.67	-48.93	<=-17.33	PASS
		High	Hop_2480	4.83	-41.81	<=-15.17	PASS
2DH5	Ant1	Low	2402	1.37	-38.99	<=-18.64	PASS
		High	2480	4.26	-47.49	<=-15.74	PASS
		Low	Hop_2402	1.11	-49.1	<=-18.89	PASS
		High	Hop_2480	3.46	-42.52	<=-16.55	PASS
3DH5	Ant1	Low	2402	1.32	-38.53	<=-18.69	PASS
		High	2480	5.19	-47.86	<=-14.81	PASS
		Low	Hop_2402	-0.40	-48.74	<=-20.4	PASS
		High	Hop_2480	3.67	-43.8	<=-16.33	PASS

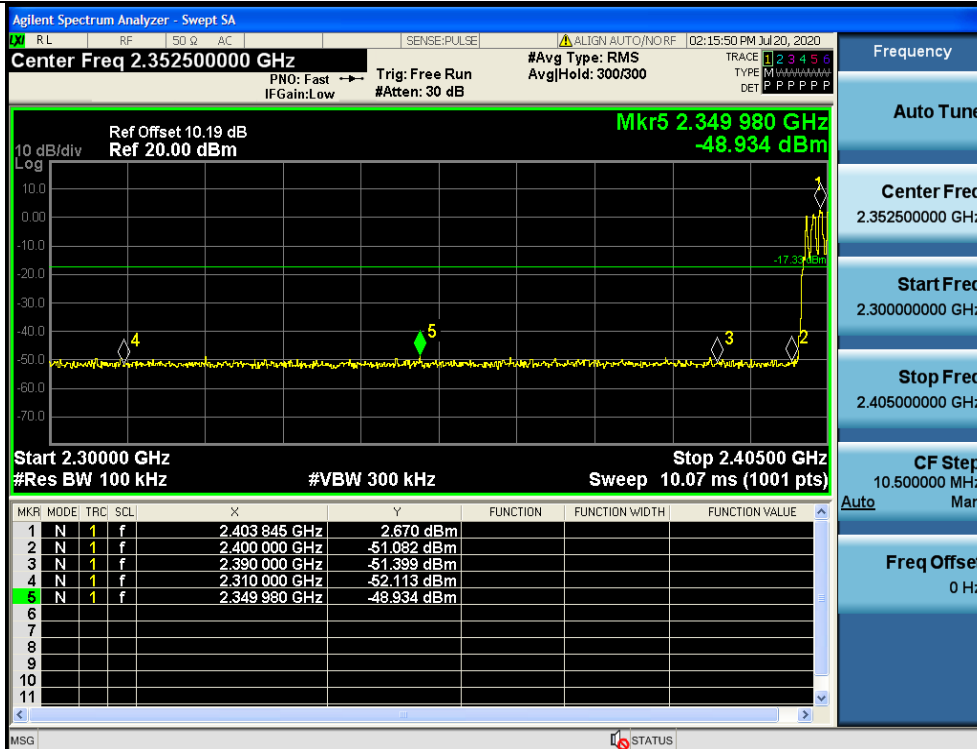
Test Graph



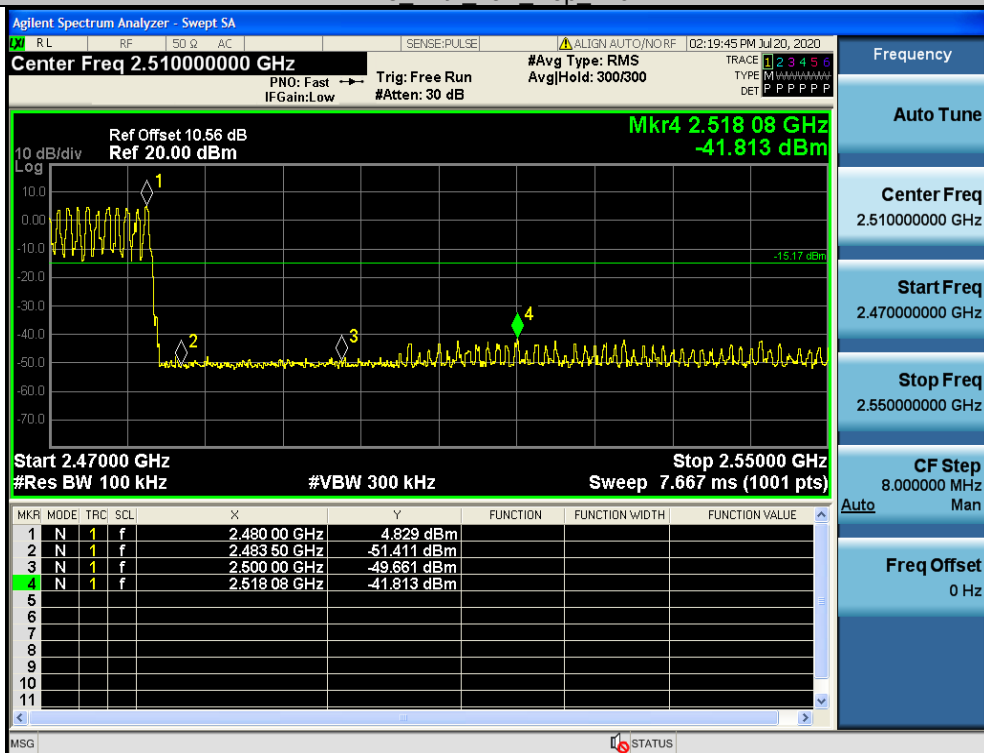
DH5_Ant1_Low_2402



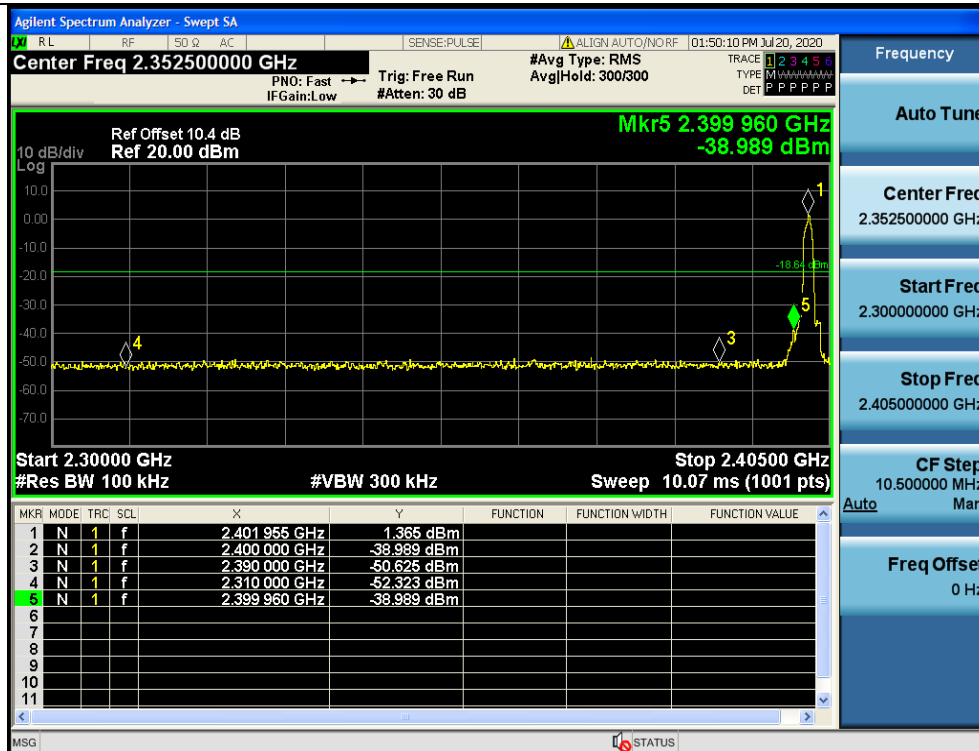
DH5_Ant1_High_2480



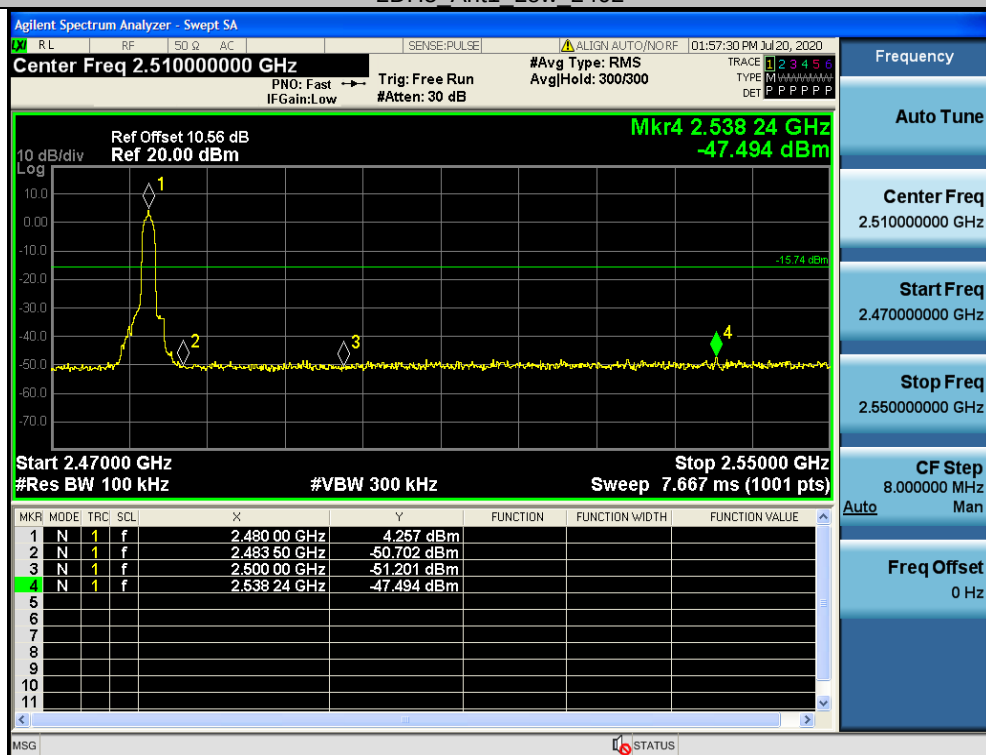
DH5_Ant1_Low_Hop_2402



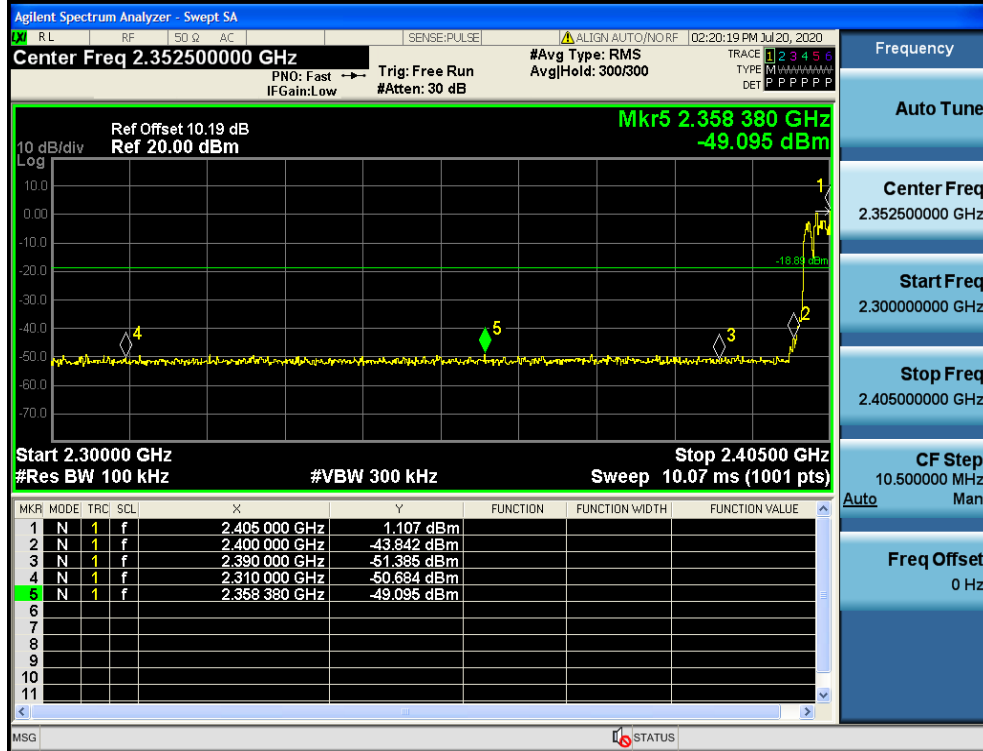
DH5_Ant1_High_Hop_2480



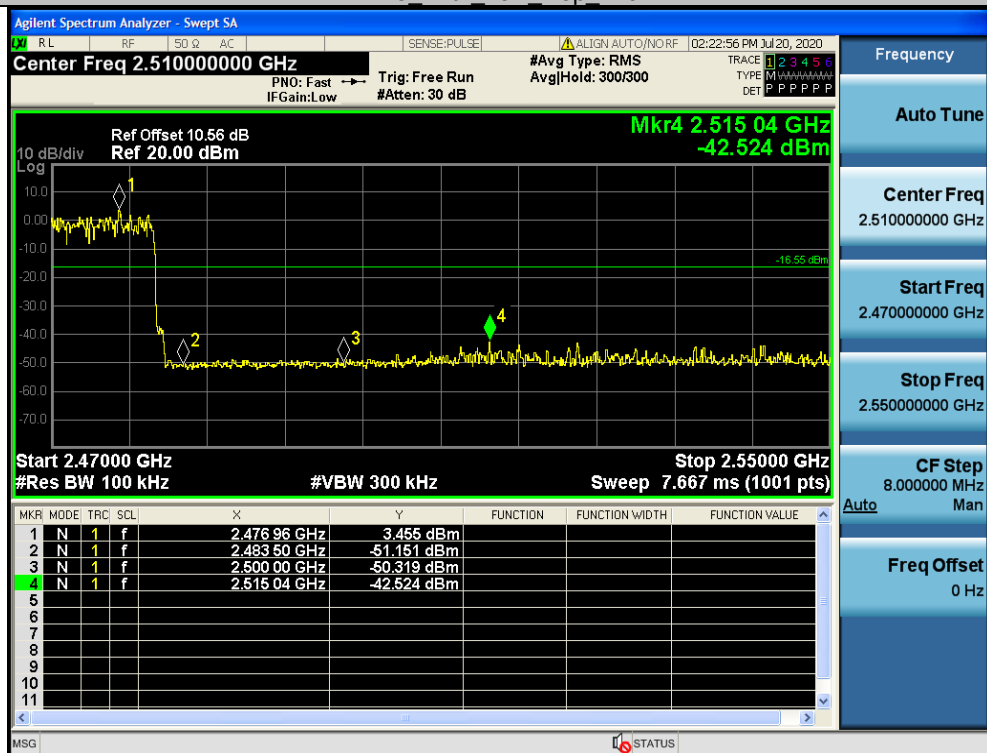
2DH5_Ant1_Low_2402



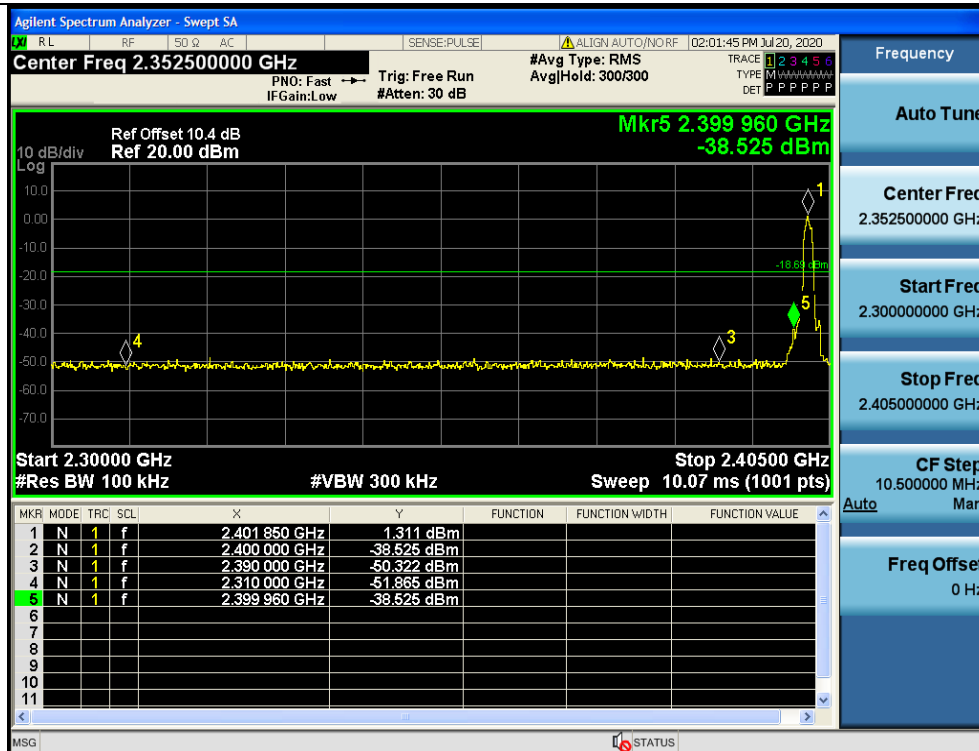
2DH5_Ant1_High_2480



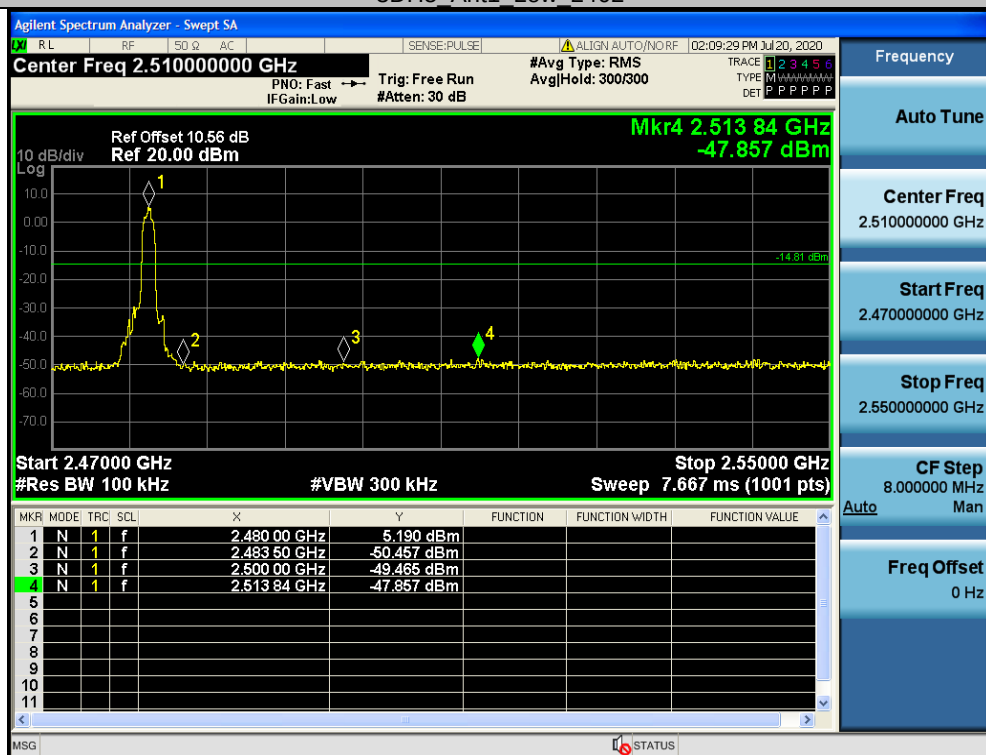
2DH5_Ant1_Low_Hop_2402



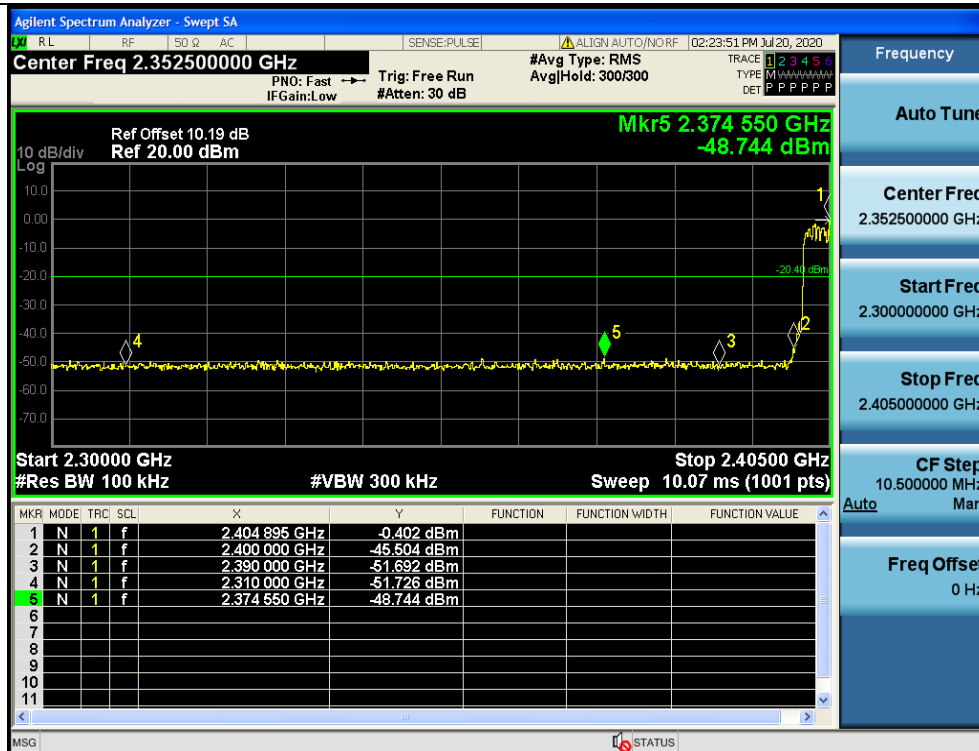
2DH5_Ant1_High_Hop_2480



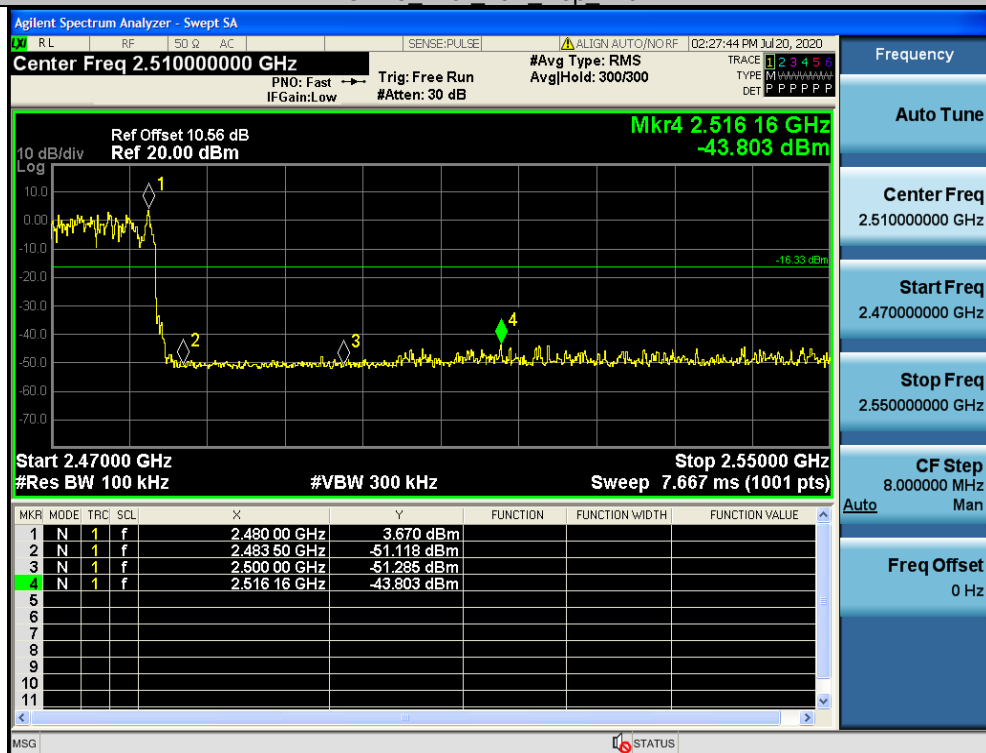
3DH5_Ant1_Low_2402



3DH5_Ant1_High_2480



3DH5_Ant1_Low_Hop_2402



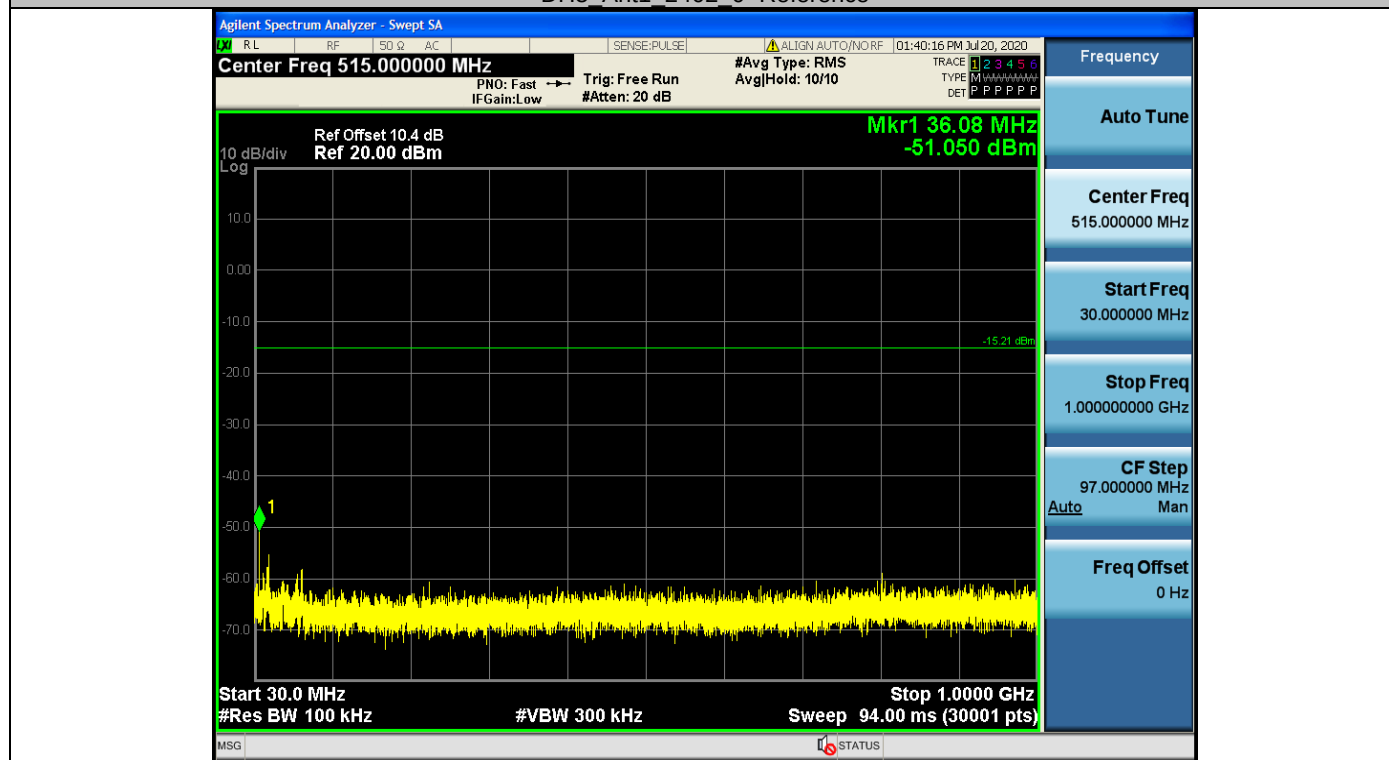
3DH5_Ant1_High_Hop_2480

A.7 RF Conducted Spurious Emissions

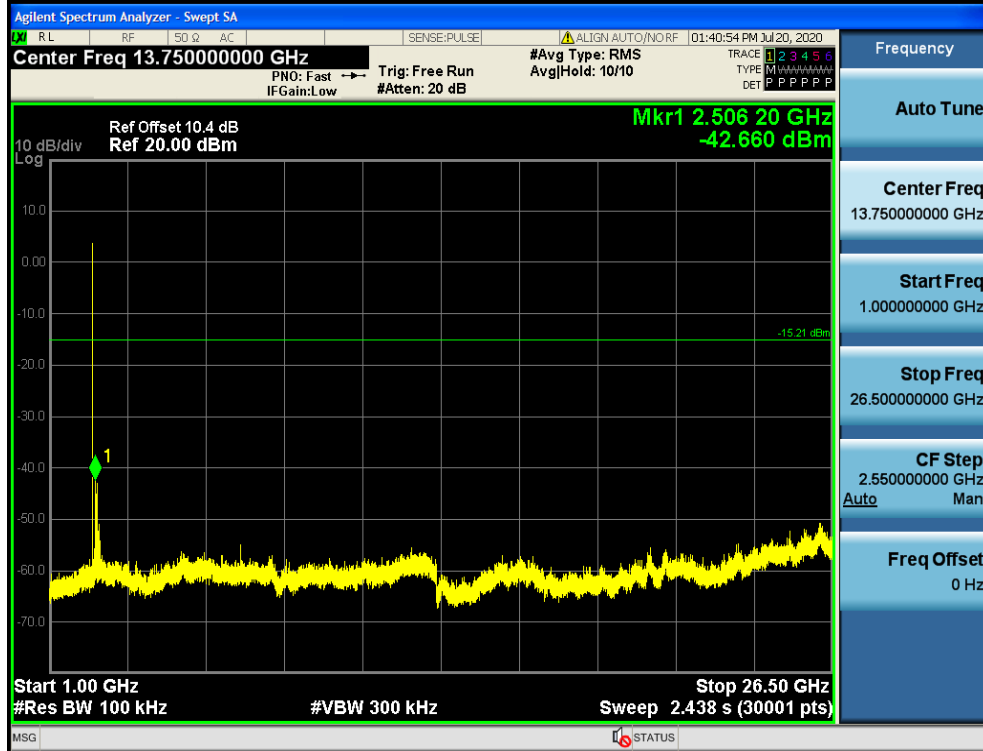
Test Graph



DH5 Ant1 2402 0~Reference



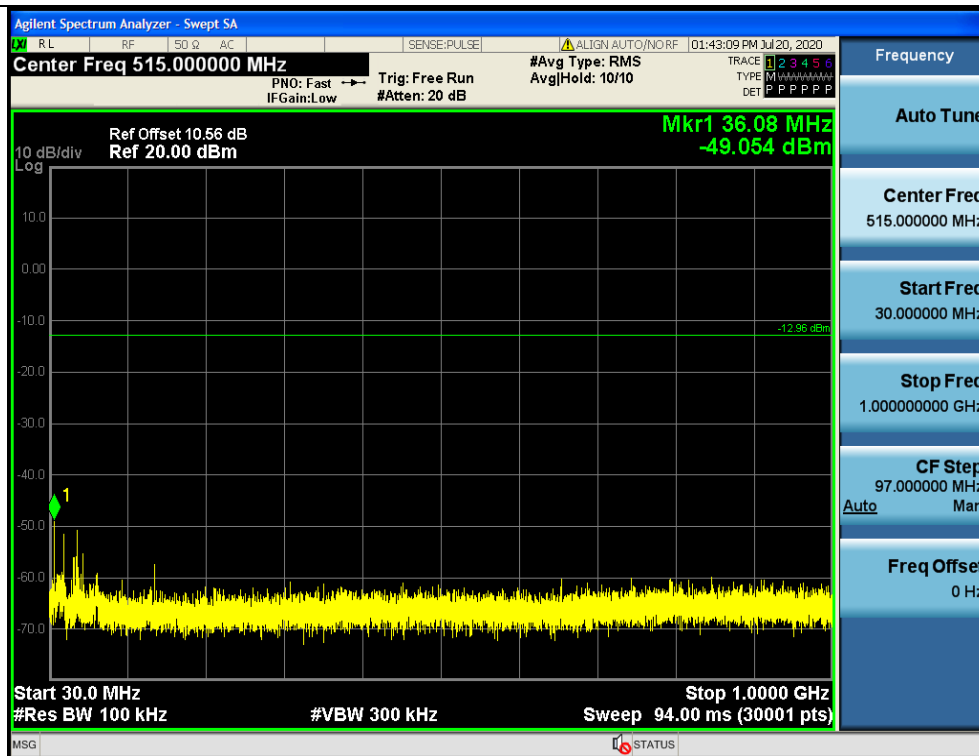
DH5 Ant1 2402 30~1000



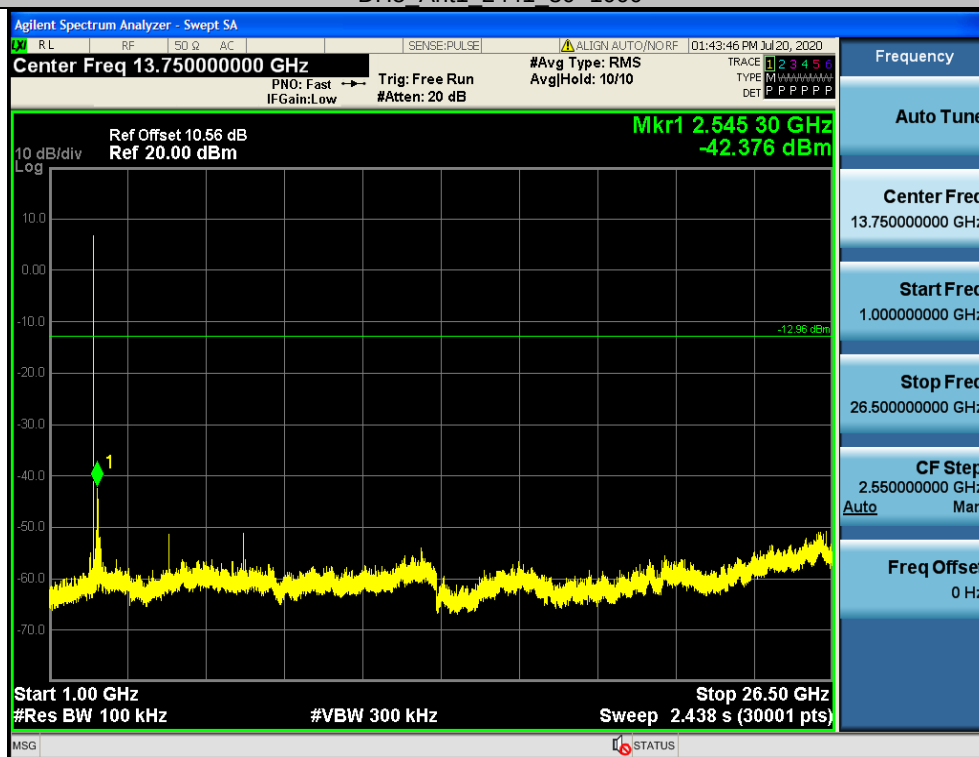
DH5_Ant1_2402_1000~26500



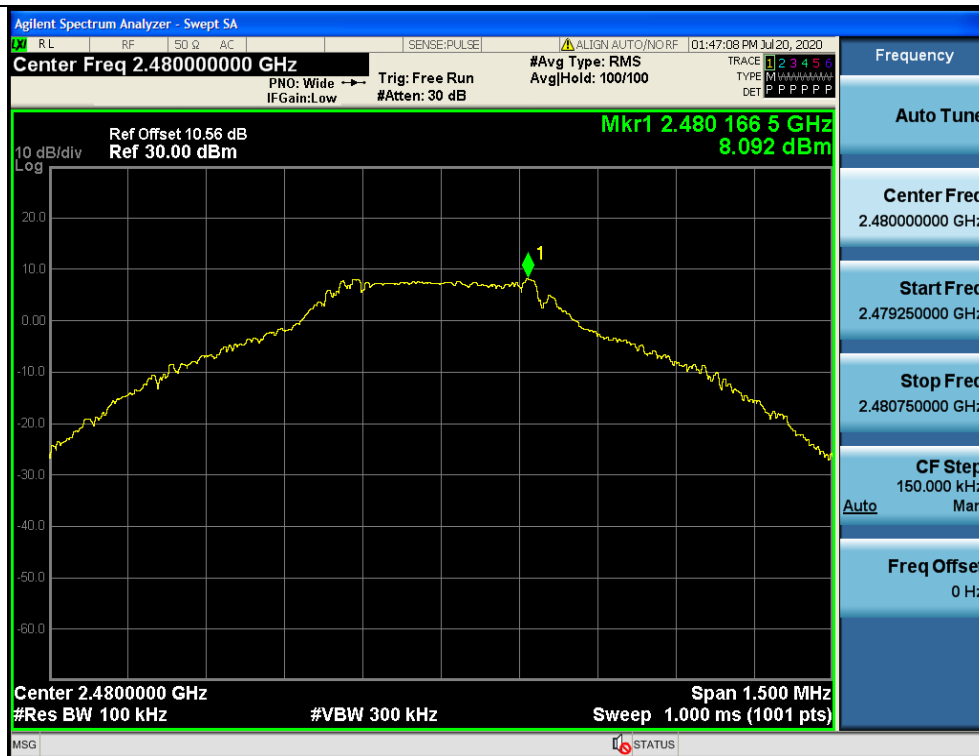
DH5_Ant1_2441_0-Reference



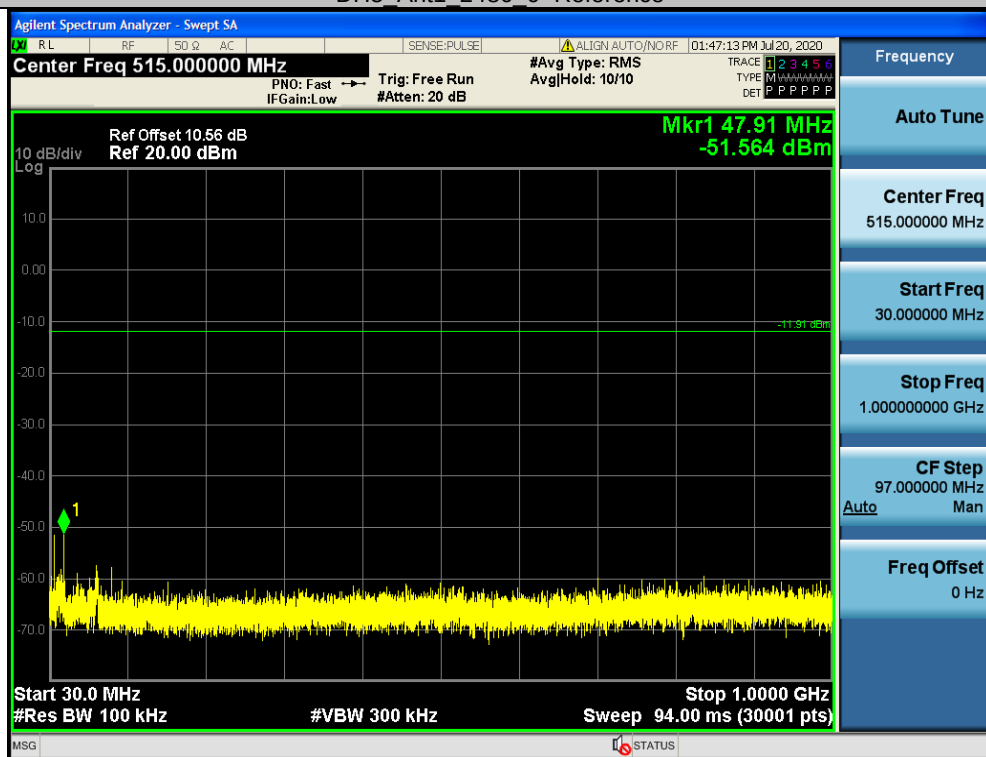
DH5_Ant1_2441_30~1000



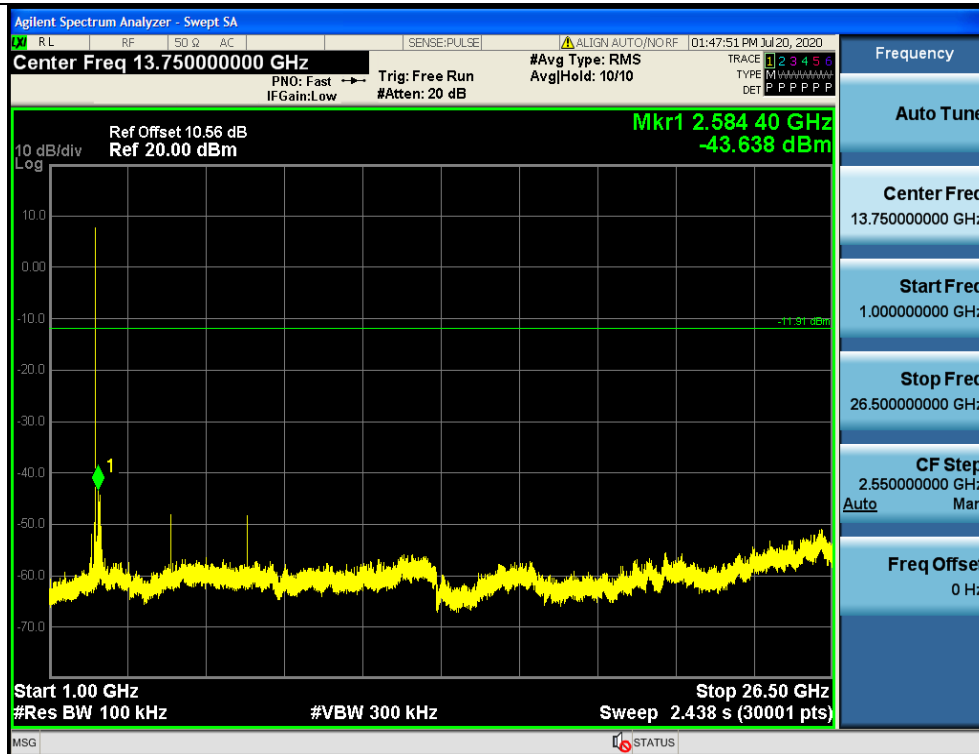
DH5_Ant1_2441_1000~26500



DH5_Ant1_2480_0-Reference



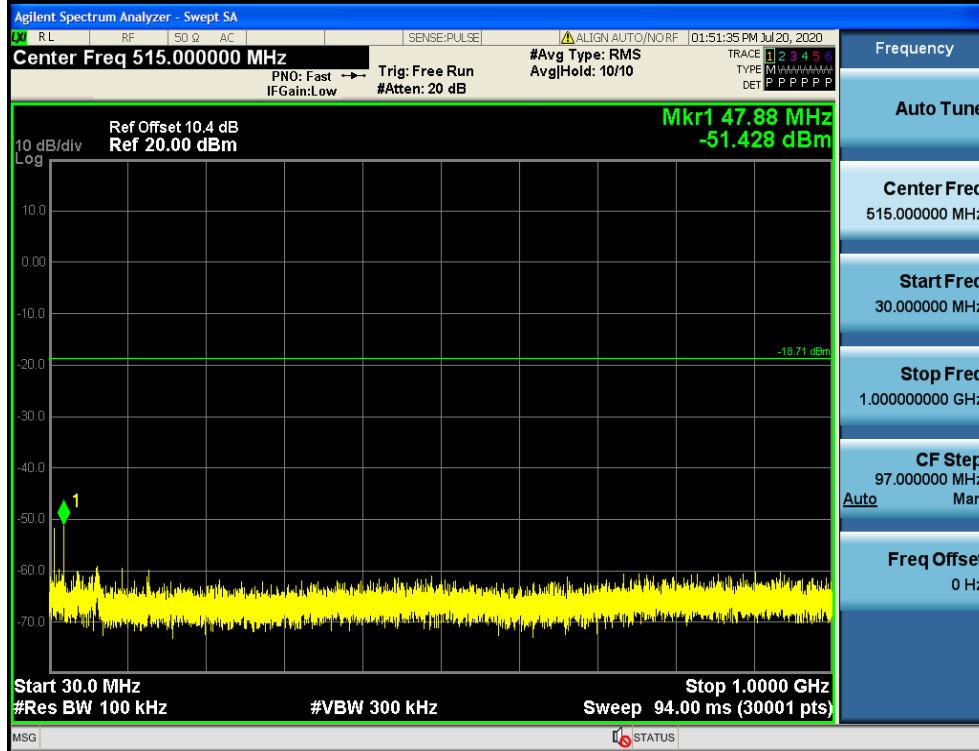
DH5_Ant1_2480_30-1000



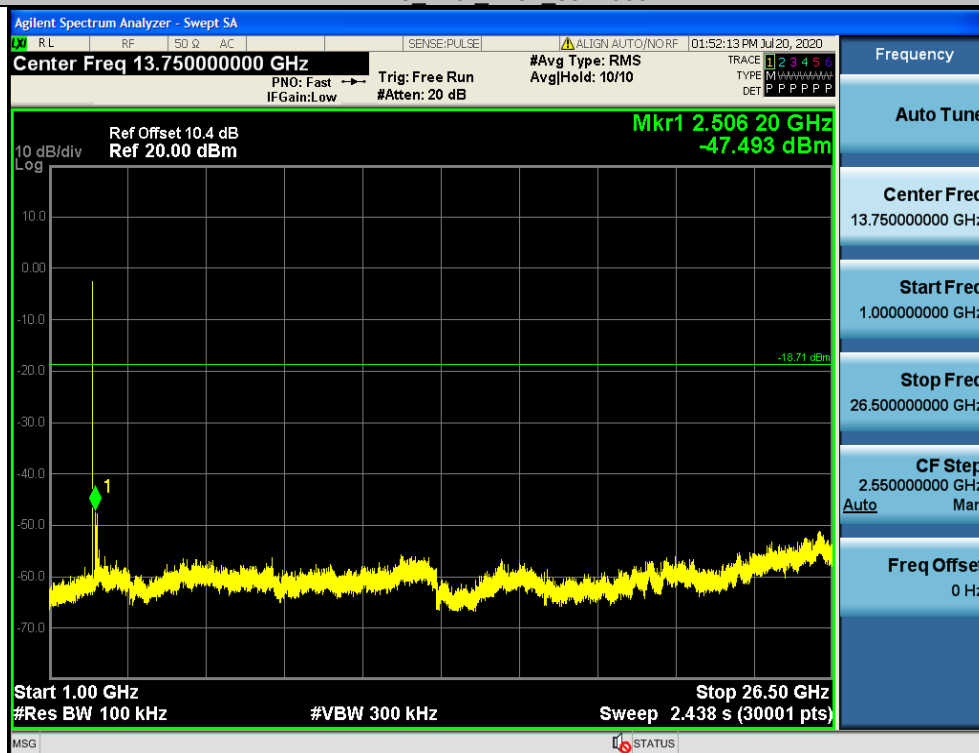
DH5_Ant1_2480_1000~26500



2DH5_Ant1_2402_0~Reference



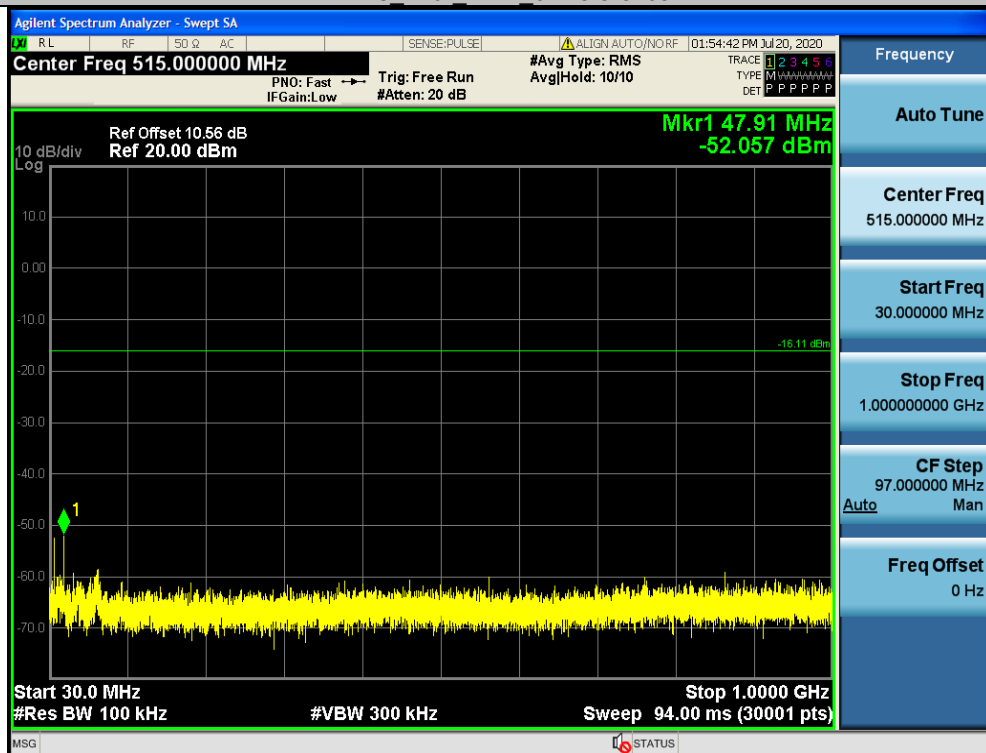
2DH5_Ant1_2402_30~1000



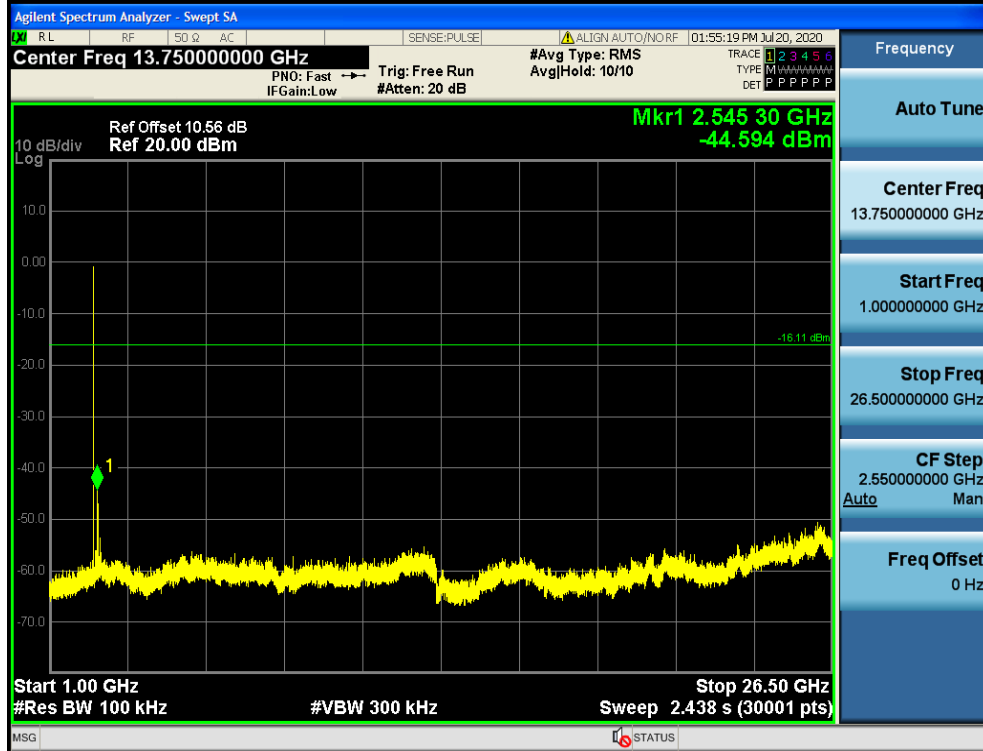
2DH5_Ant1_2402_1000~26500



2DH5_Ant1_2441_0~Reference



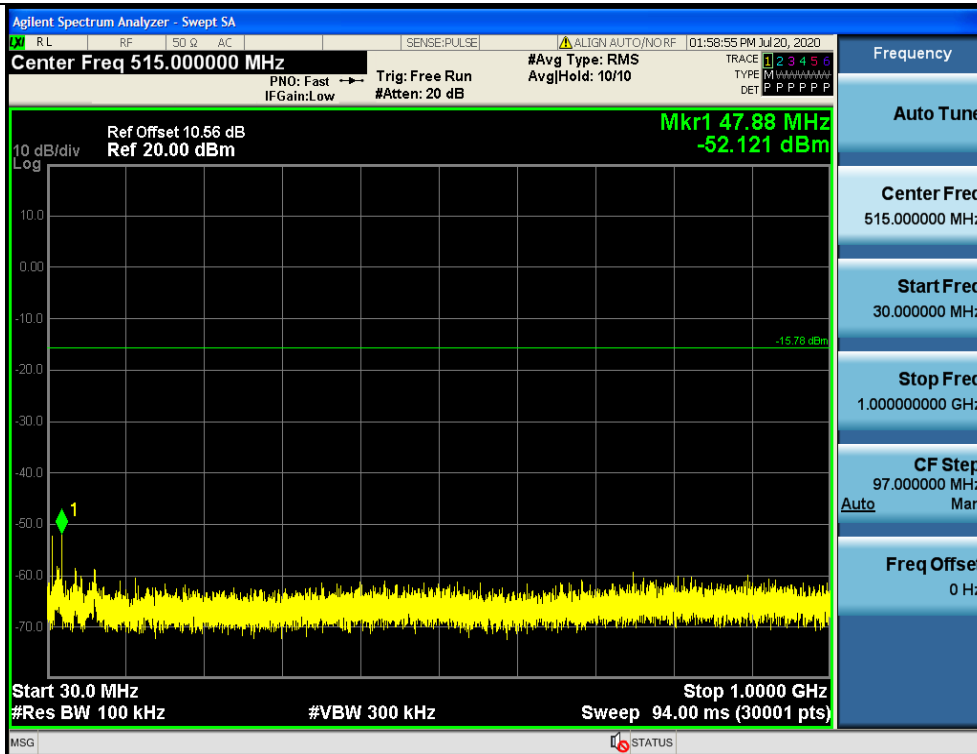
2DH5_Ant1_2441_30~1000



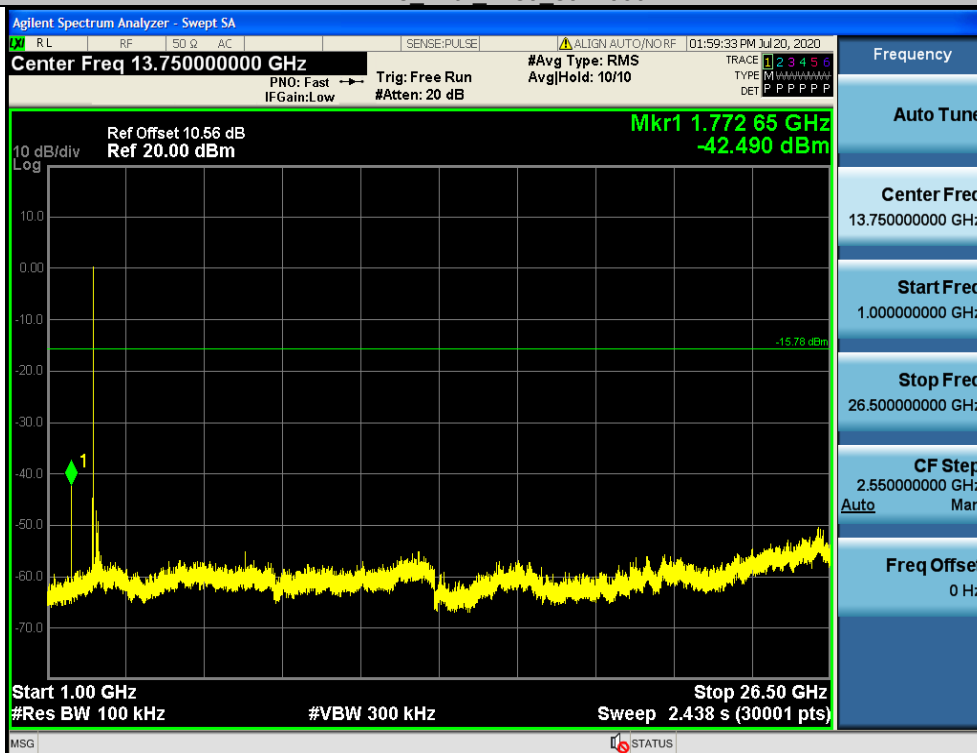
2DH5_Ant1_2441_1000~26500



2DH5_Ant1_2480_0~Reference



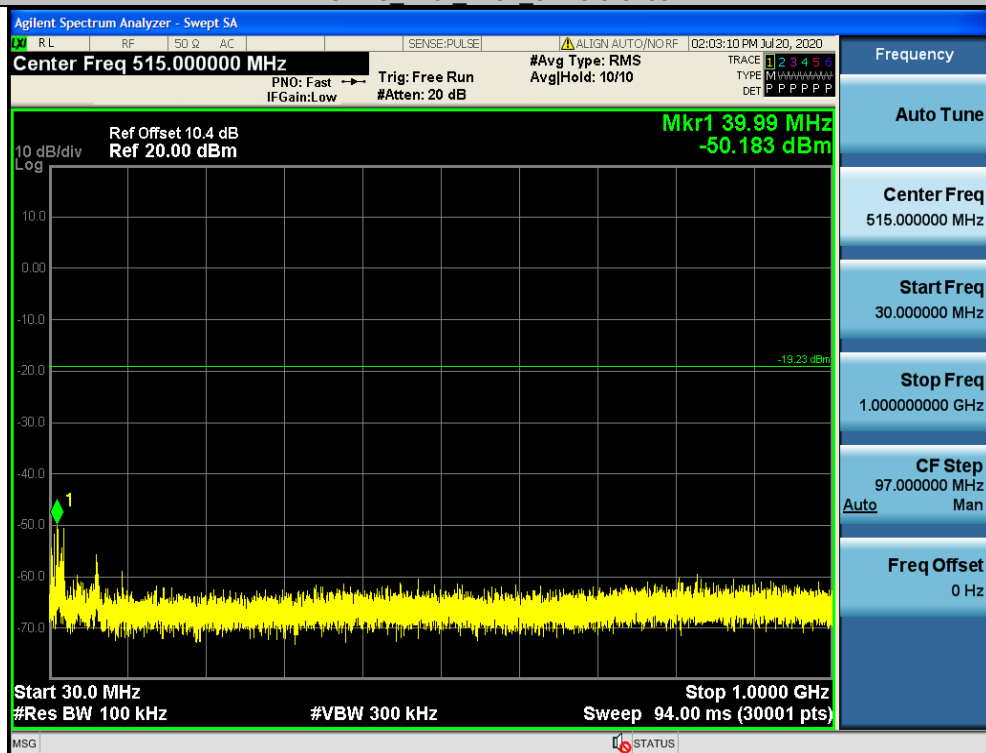
2DH5_Ant1_2480_30~1000



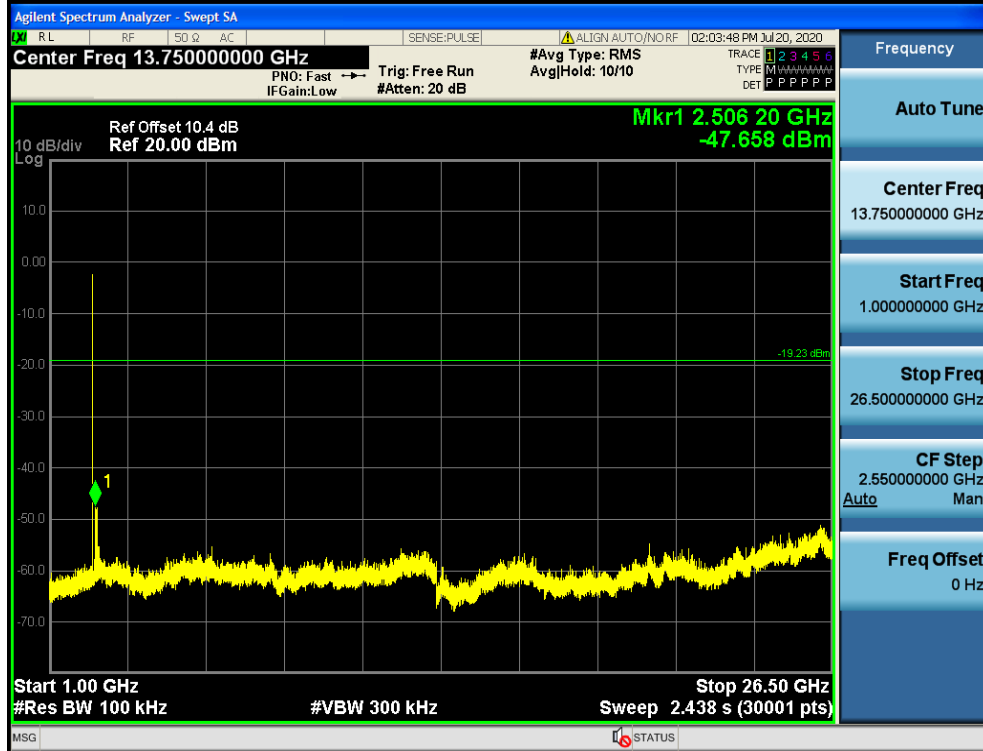
2DH5_Ant1_2480_1000~26500



3DH5_Ant1_2402_0~Reference



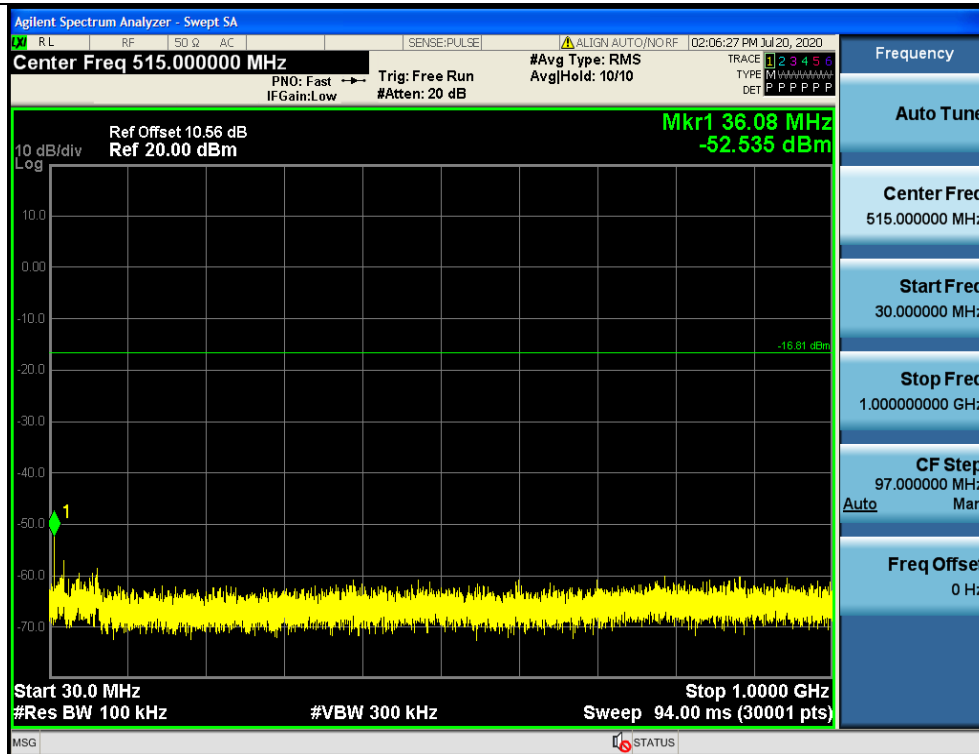
3DH5_Ant1_2402_30~1000



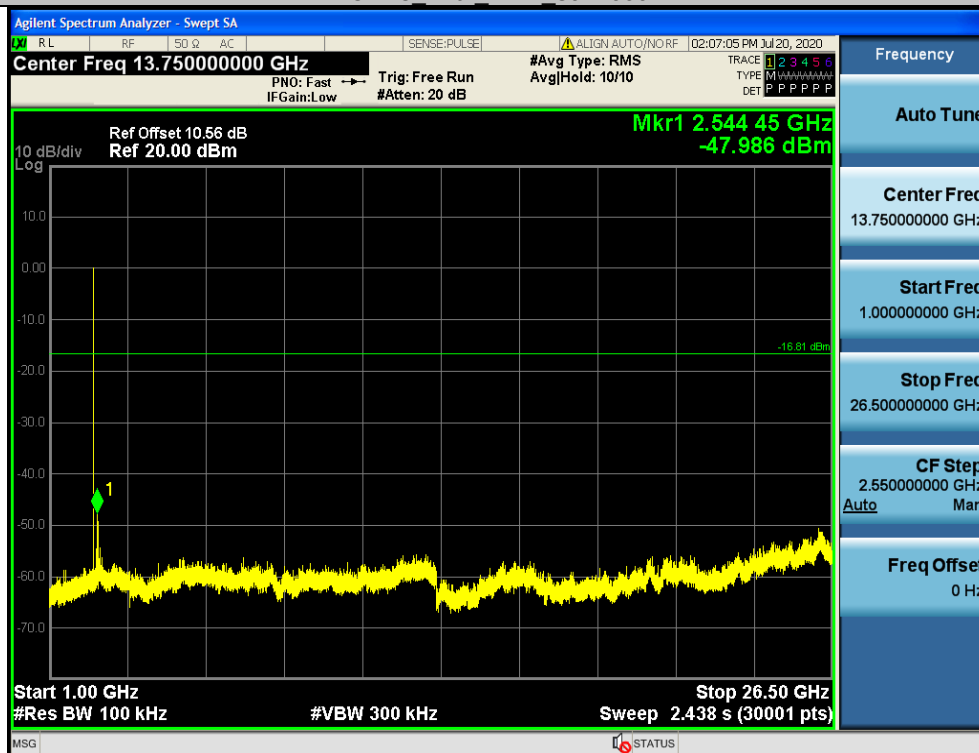
3DH5_Ant1_2402_1000~26500



3DH5_Ant1_2441_0~Reference



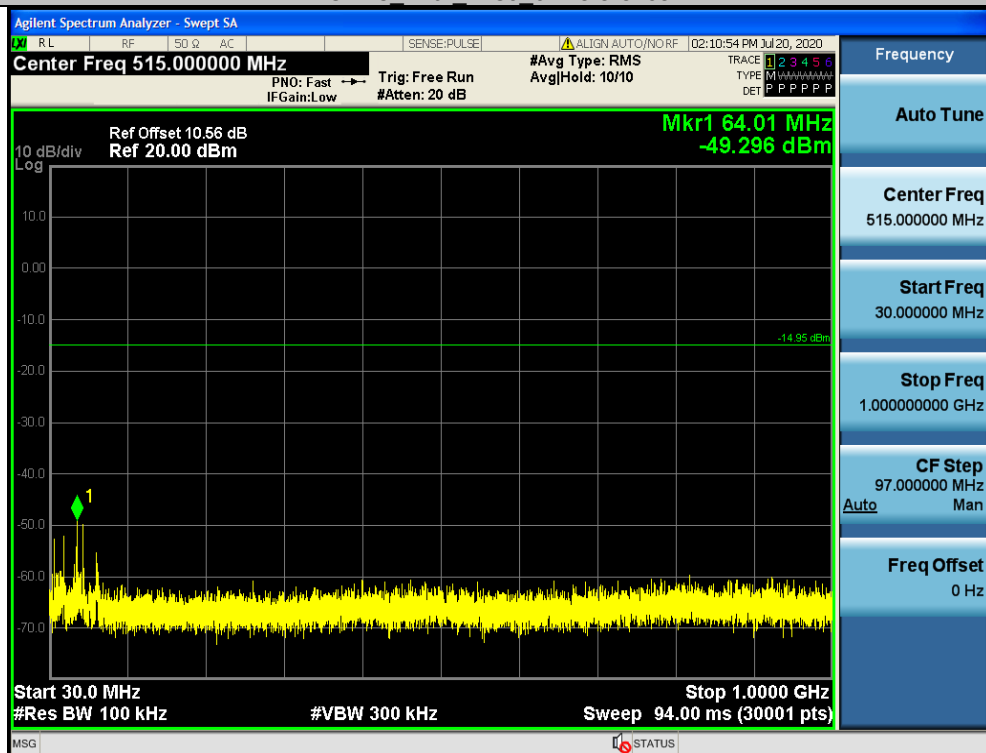
3DH5_Ant1_2441_30~1000



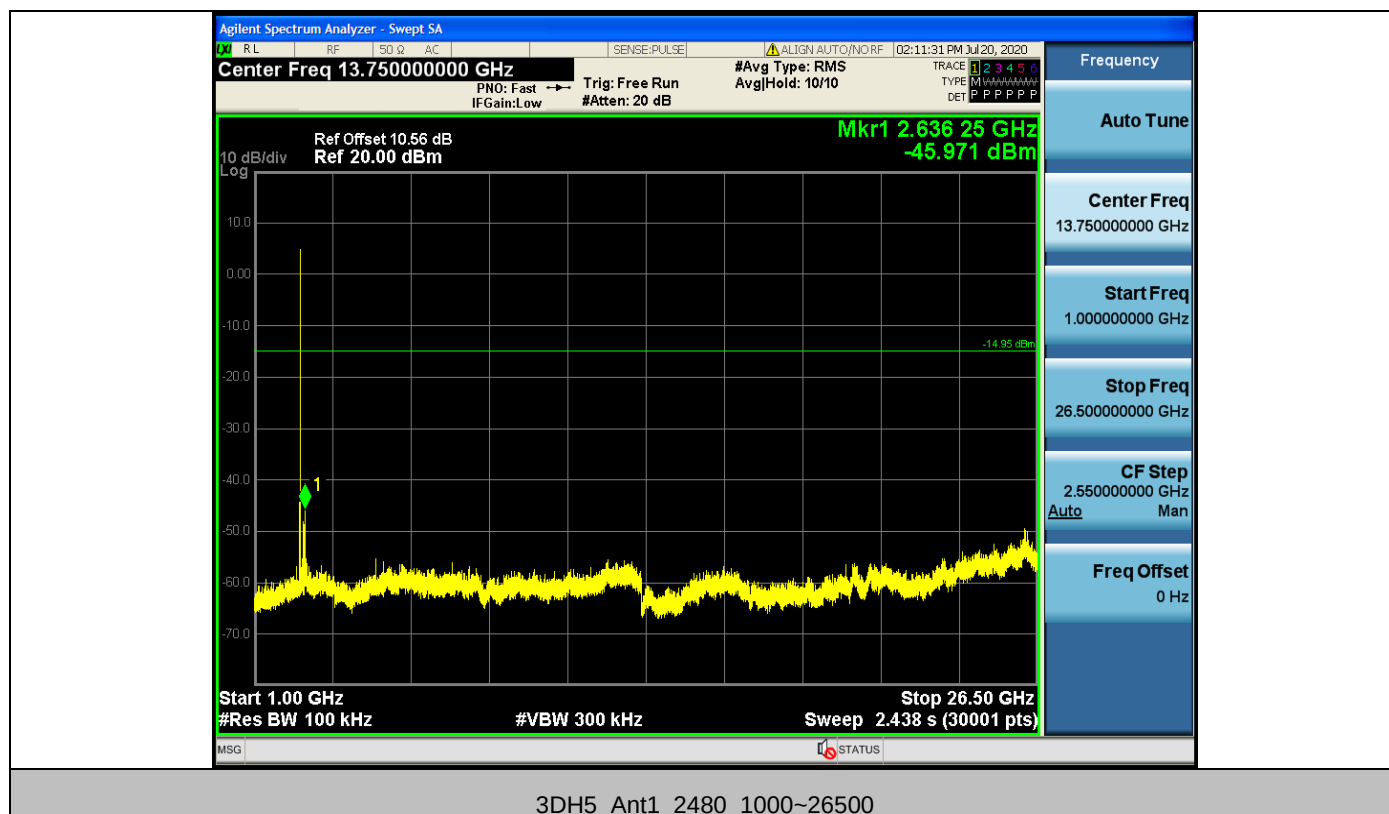
3DH5_Ant1_2441_1000~26500



3DH5_Ant1_2480_0~Reference



3DH5_Ant1_2480_30~1000



A.8 Restrict-band band-edge measurements

TestMode	Antenna	ChName	Channel	Detector	Freq	Result	Limit	Verdict
DH5	Ant1	Low	2402	AV	2310.000	-47.55	<=-41.20	PASS
				AV	2390.000	-47.45	<=-41.20	PASS
				Peak	2310.000	-41.32	<=-21.20	PASS
				Peak	2390.000	-41.28	<=-21.20	PASS
		High	2480	AV	2483.500	-44.43	<=-41.20	PASS
				AV	2500.000	-46.68	<=-41.20	PASS
				Peak	2483.500	-39.43	<=-21.20	PASS
				Peak	2500.000	-41.06	<=-21.20	PASS
2DH5	Ant1	Low	2402	AV	2310.000	-47.67	<=-41.20	PASS
				AV	2390.000	-47.25	<=-41.20	PASS
				Peak	2310.000	-40.91	<=-21.20	PASS
				Peak	2390.000	-40.06	<=-21.20	PASS
		High	2480	AV	2483.500	-45.44	<=-41.20	PASS
				AV	2500.000	-46.53	<=-41.20	PASS
				Peak	2483.500	-37.65	<=-21.20	PASS
				Peak	2500.000	-40.18	<=-21.20	PASS
3DH5	Ant1	Low	2402	AV	2310.000	-47.40	<=-41.20	PASS
				AV	2390.000	-47.24	<=-41.20	PASS
				Peak	2310.000	-41.78	<=-21.20	PASS
				Peak	2390.000	-40.08	<=-21.20	PASS
		High	2480	AV	2483.500	-45.27	<=-41.20	PASS
				AV	2500.000	-46.55	<=-41.20	PASS
				Peak	2483.500	-39.43	<=-21.20	PASS
				Peak	2500.000	-40.99	<=-21.20	PASS

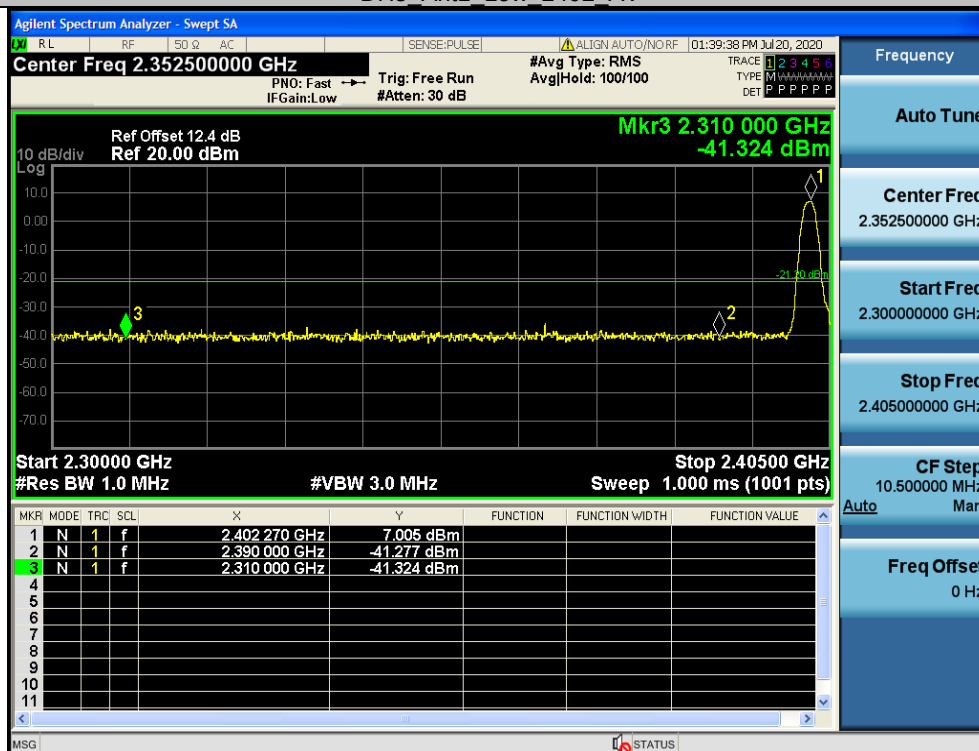
Note :

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.

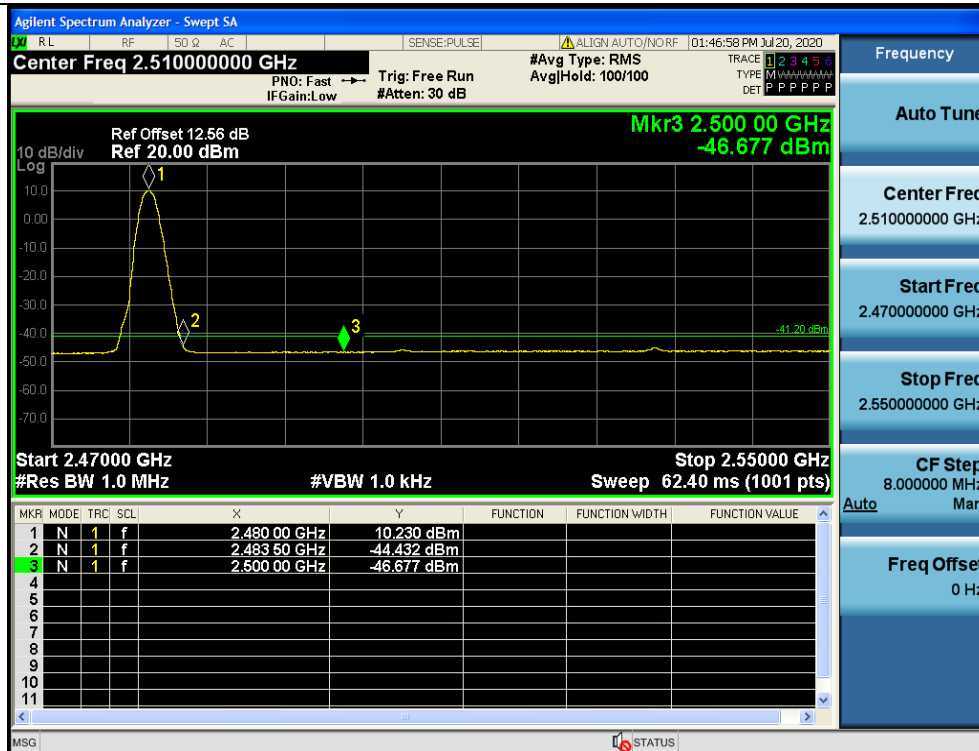
Test Graphs



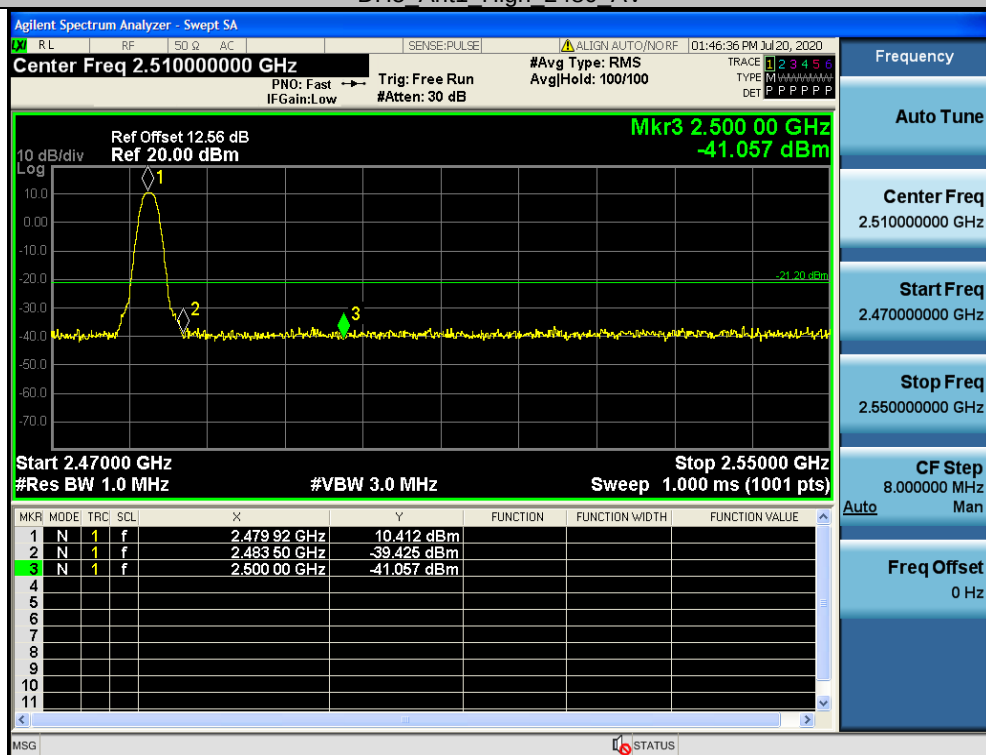
DH5_Ant1_Low_2402_AV



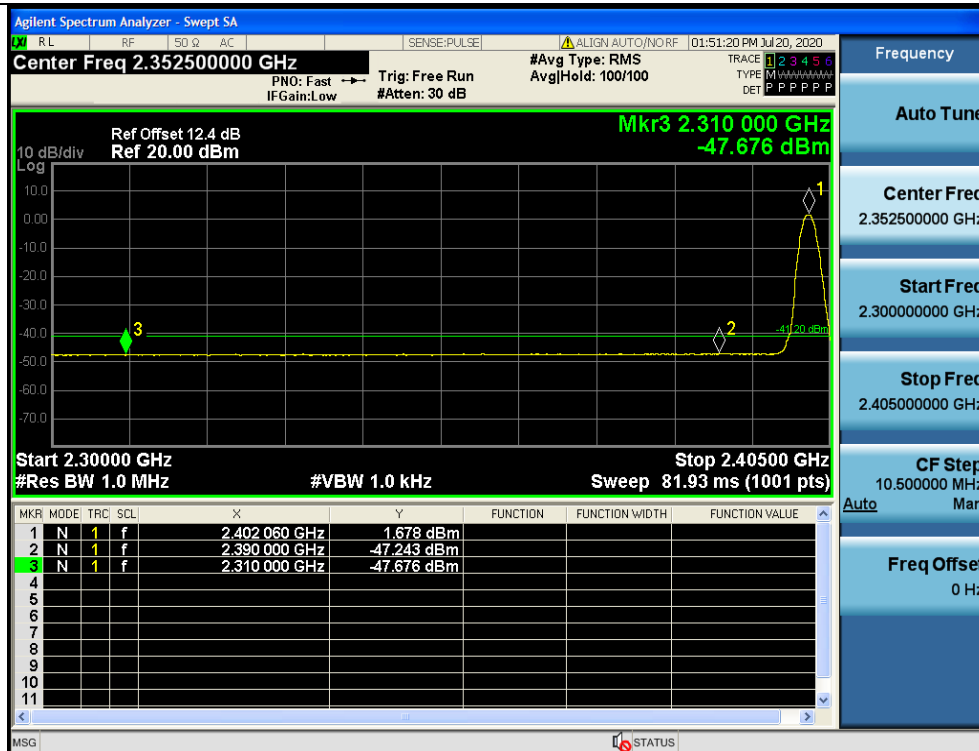
DH5_Ant1_Low_2402_Peak



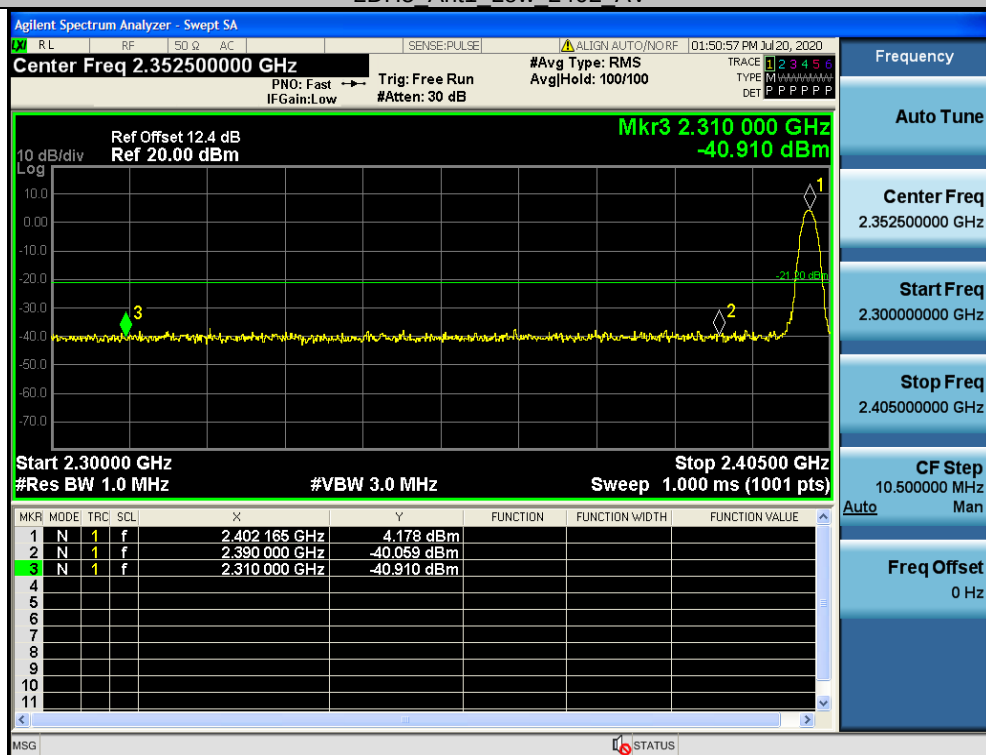
DH5 Ant1 High 2480 AV



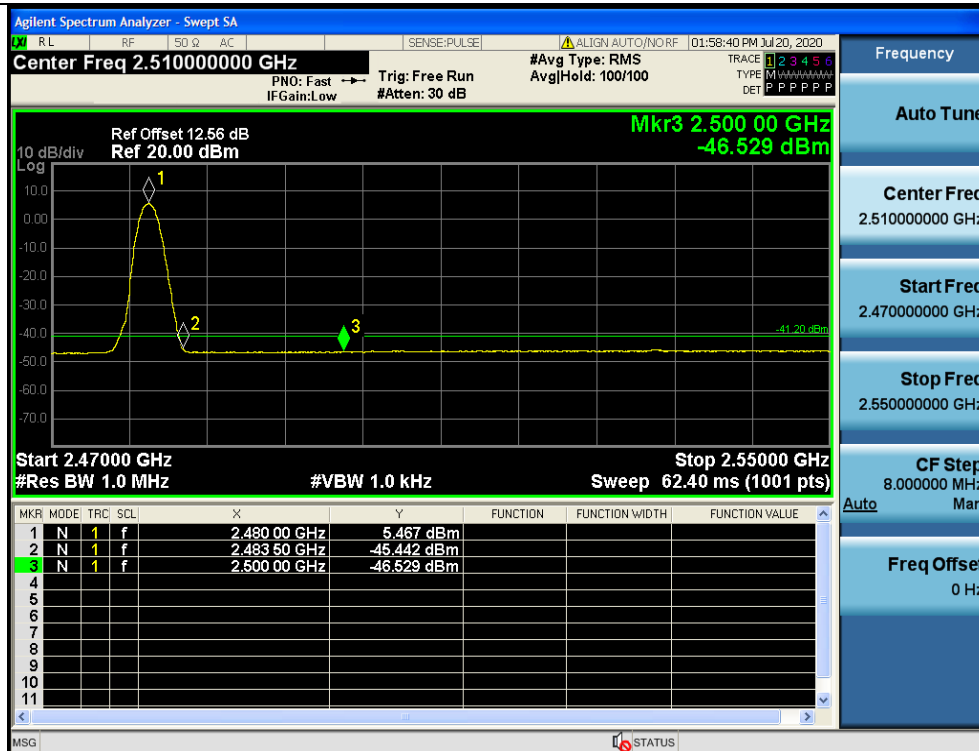
DH5 Ant1 High 2480 Peak



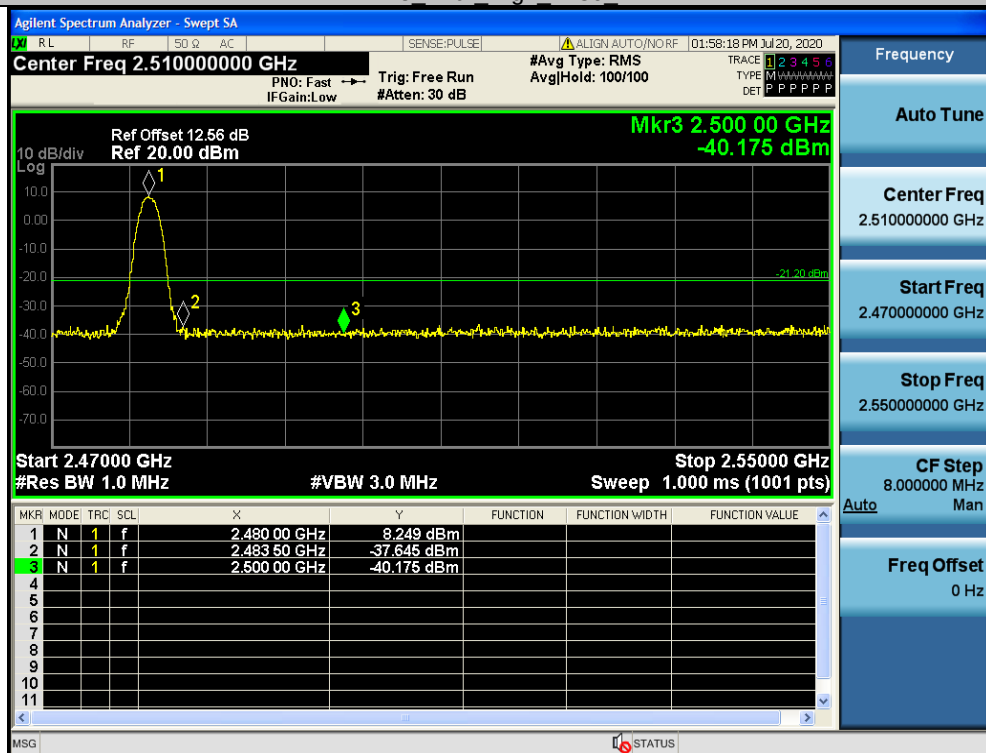
2DH5 Ant1 Low 2402 AV



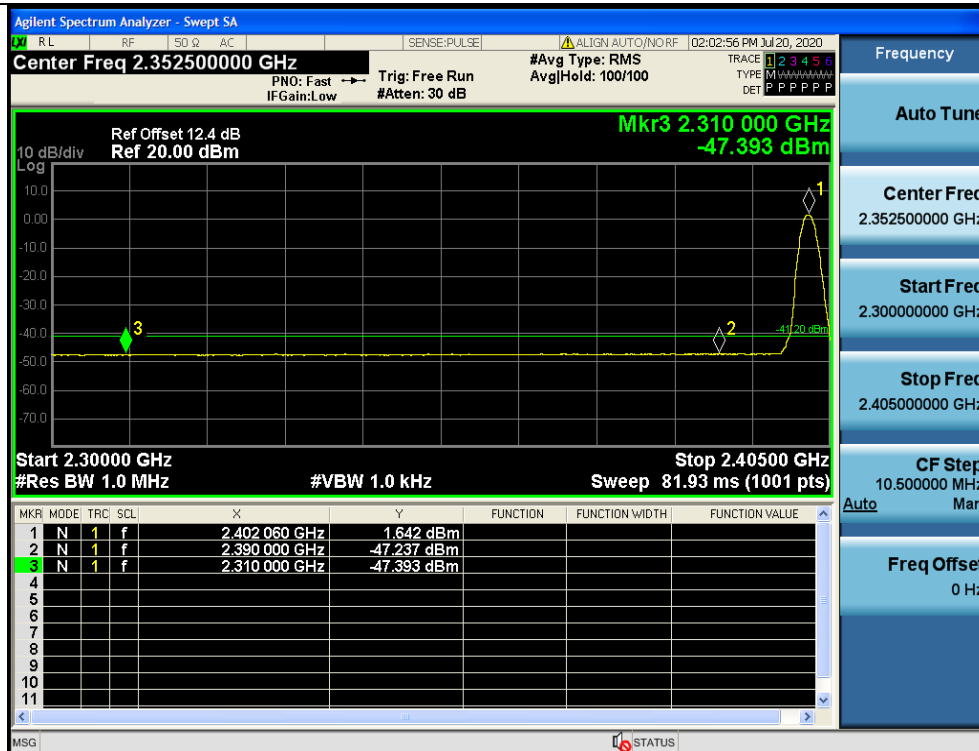
2DH5 Ant1 Low 2402 Peak



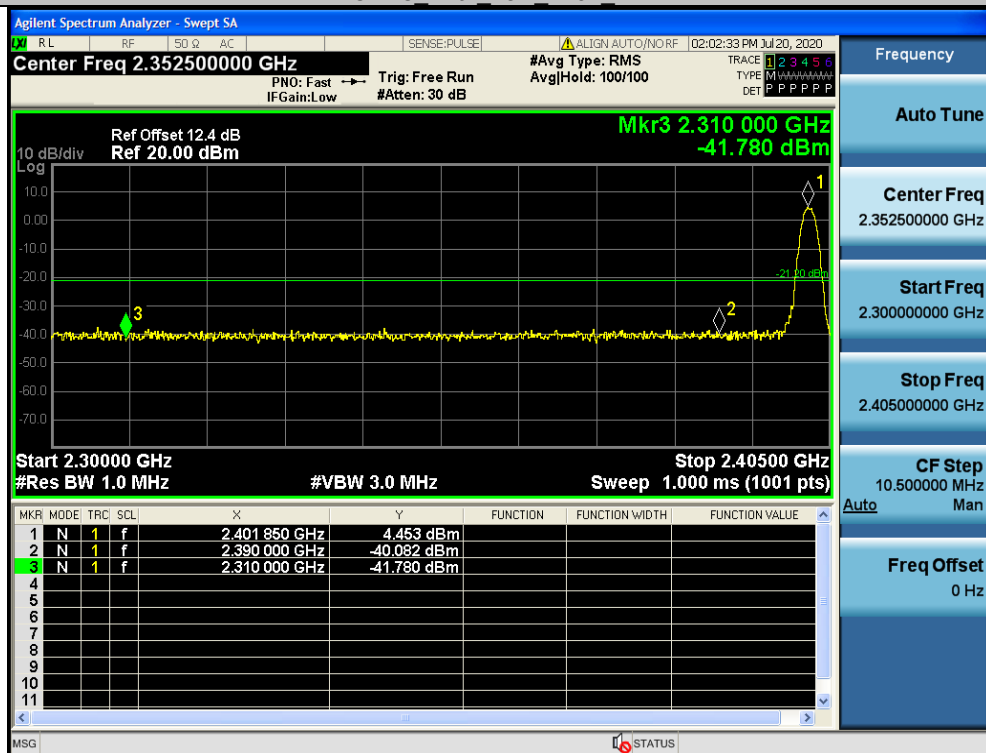
2DH5_Ant1_High_2480_AV



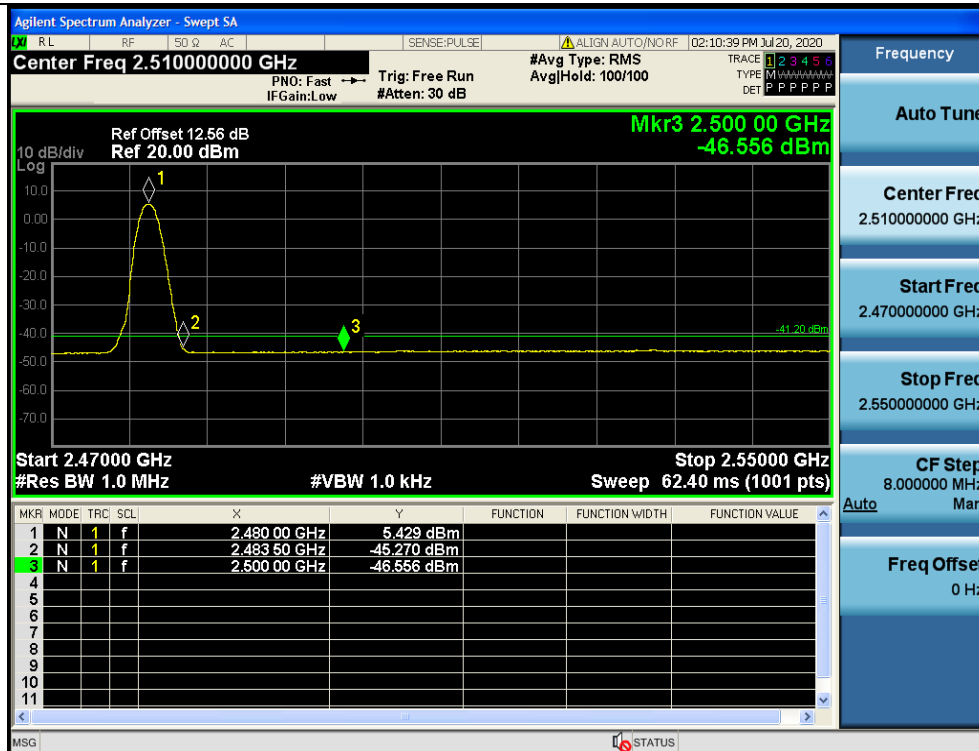
2DH5_Ant1_High_2480_Peak



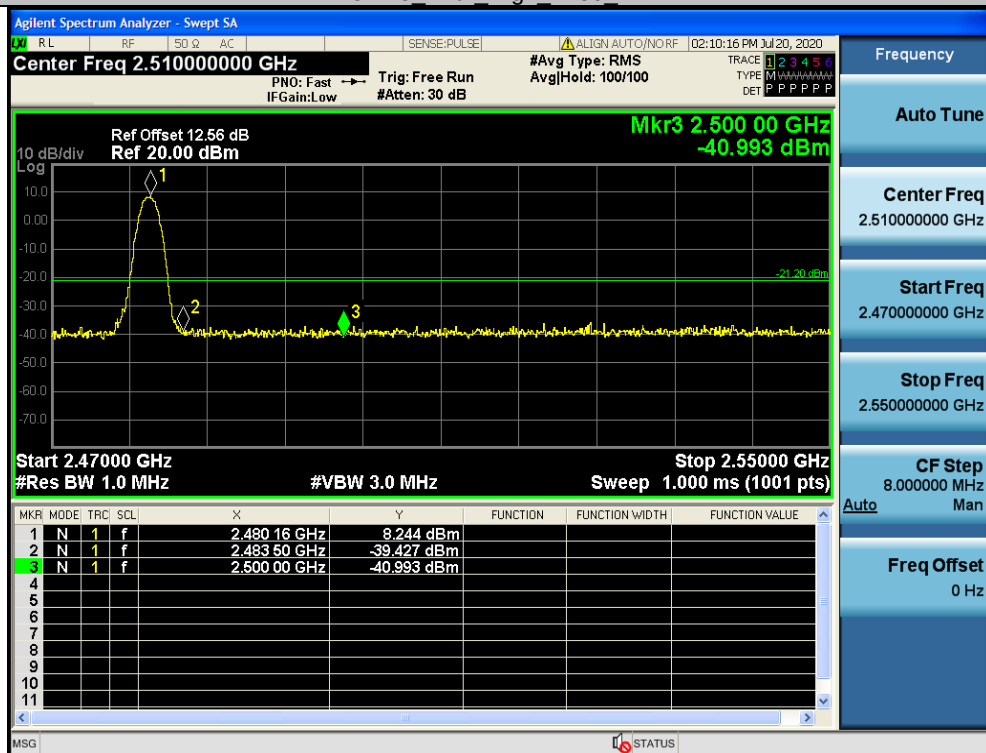
3DH5 Ant1 Low 2402 AV



3DH5 Ant1 Low 2402 Peak



3DH5_Ant1_High_2480_AV



3DH5_Ant1_High_2480_Peak