

Appendix A

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

Product Name: 2.1 Channel Soundbar with Active Subwoofer

Trade Mark: bomaker

Test Model: Njord II

FCC ID: 2AS9D-NJORDS

Environmental Conditions

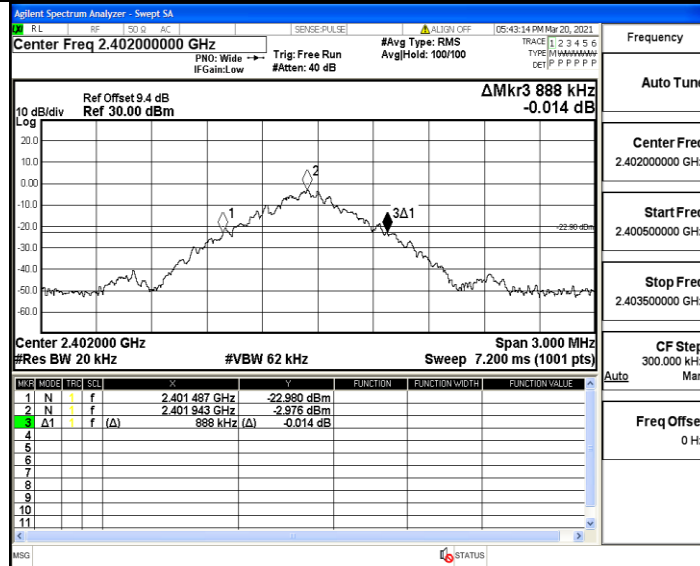
Temperature:	22.8° C
Relative Humidity:	56%
ATM Pressure:	100.0 kPa
Test Engineer:	Nancy Li
Supervised by:	Hugo Chen

A.1 20 dB Bandwidth

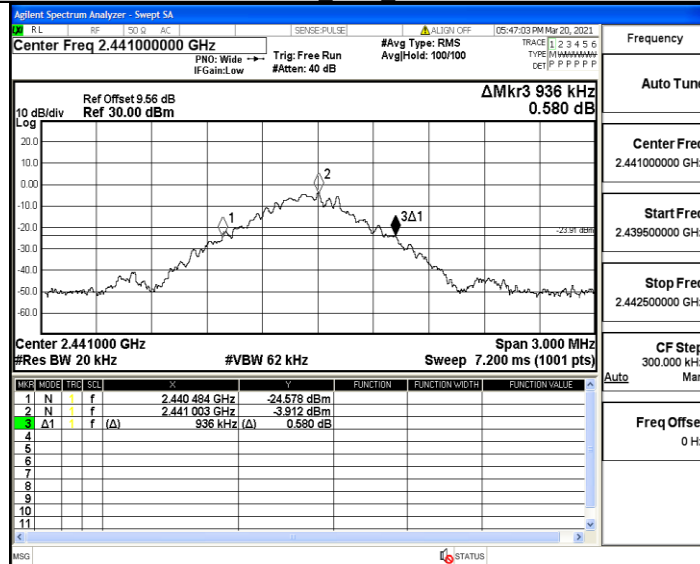
TestMode	Antenna	Channel	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.888	2401.487	2402.375	---	PASS
		2441	0.936	2440.484	2441.420	---	PASS
		2480	0.891	2479.484	2480.375	---	PASS
2DH5	Ant1	2402	1.329	2401.277	2402.606	---	PASS
		2441	1.278	2440.286	2441.564	---	PASS
		2480	1.287	2479.286	2480.573	---	PASS

Test Graph

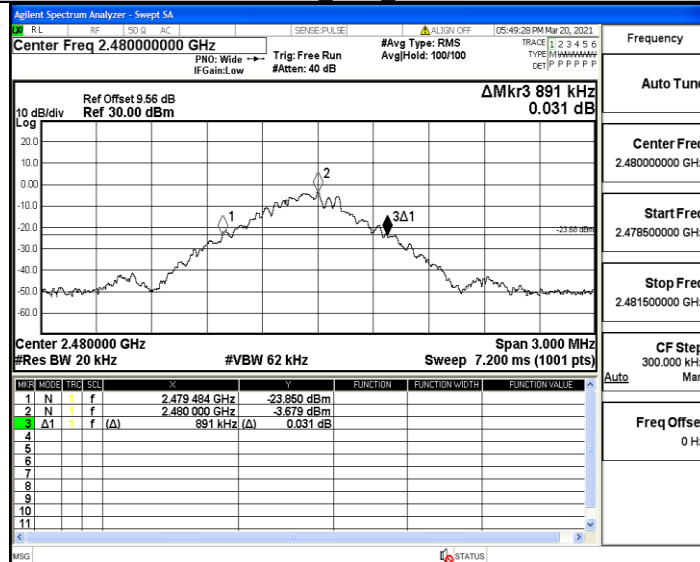
DH5_Ant1_2402



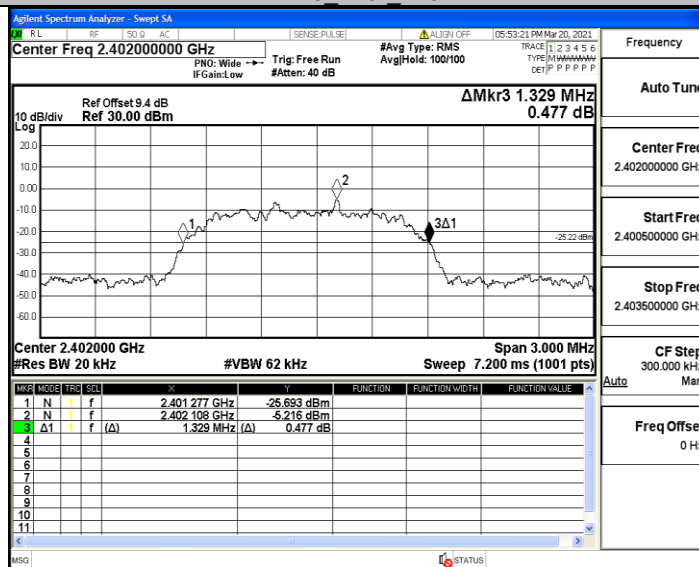
DH5_Ant1_2441



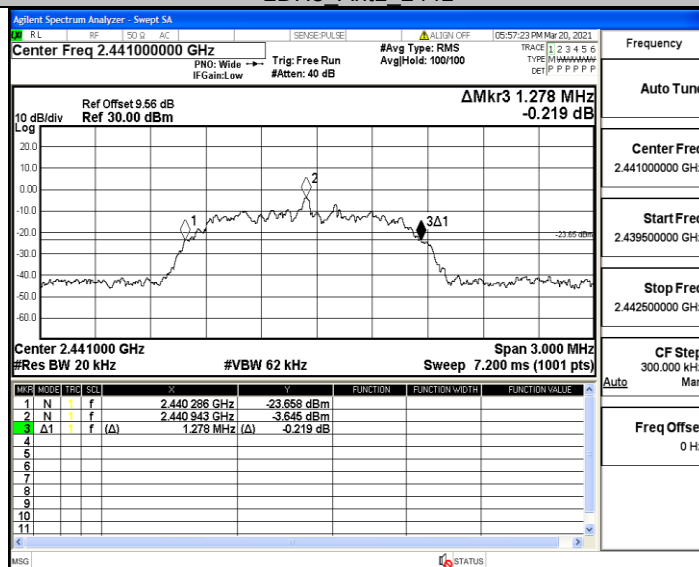
DH5_Ant1_2480



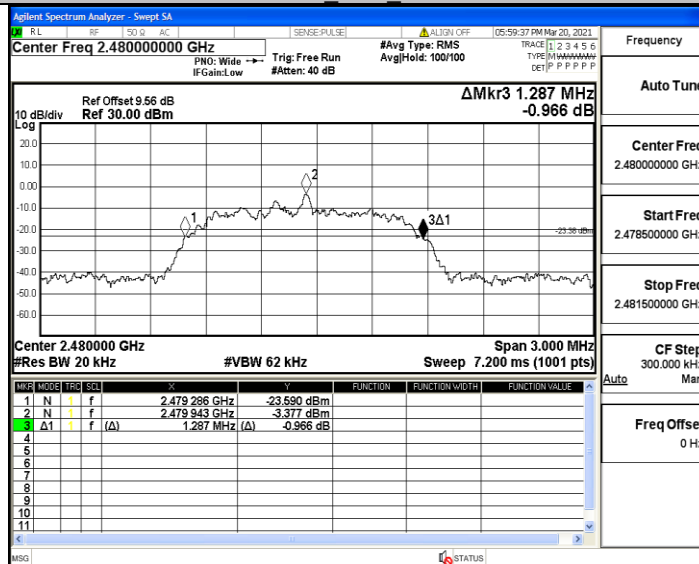
2DH5_Ant1_2402



2DH5_Ant1_2441



2DH5_Ant1_2480

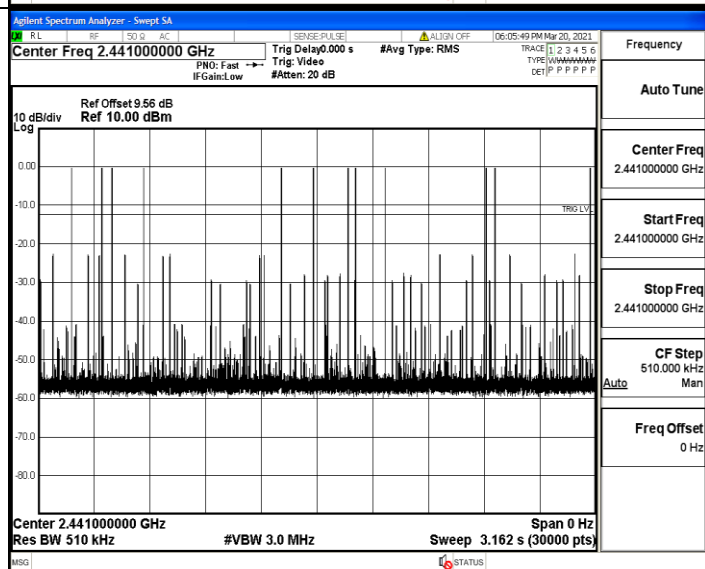
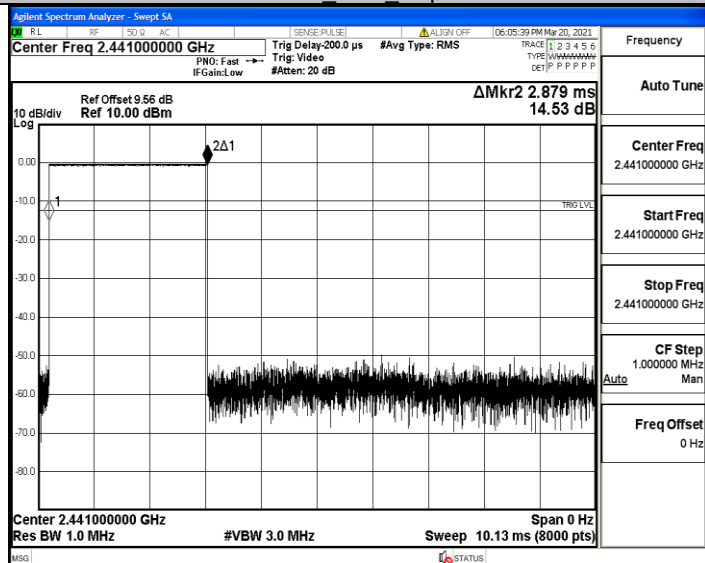


A.2 Dwell Time

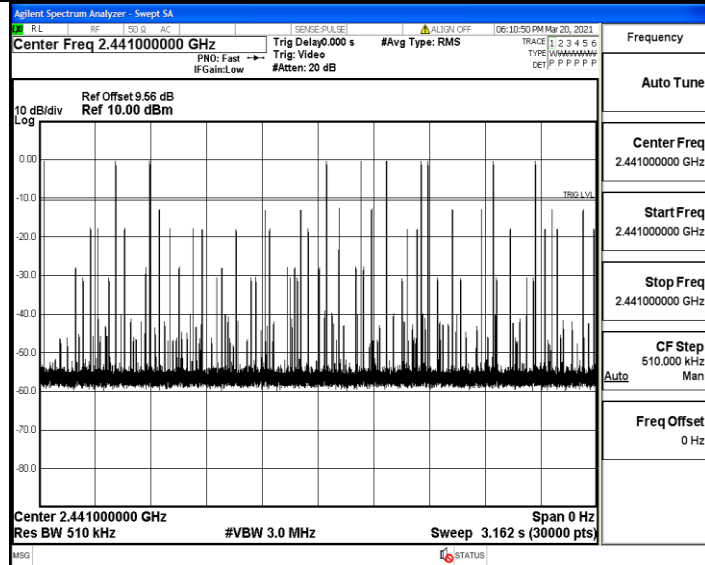
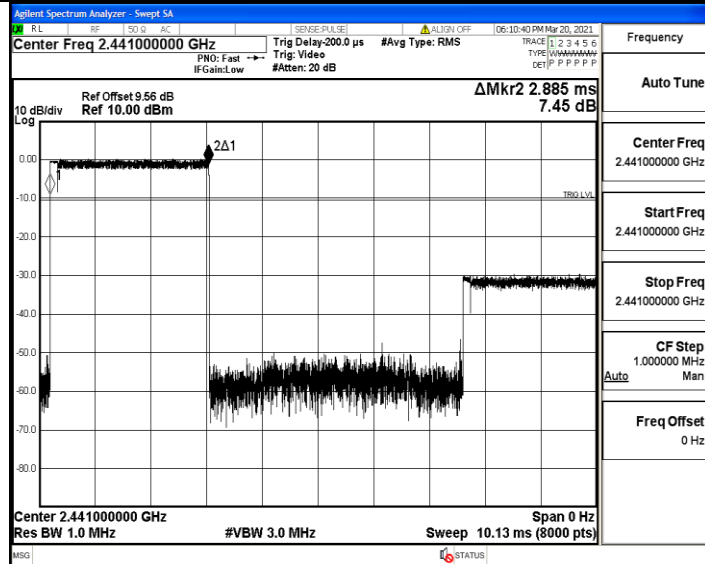
TestMode	Antenna	Channel	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH5	Ant1	Hop	2.88	130	0.374	<=0.4	PASS
2DH5	Ant1	Hop	2.89	110	0.317	<=0.4	PASS

Test Graph

DH5_Ant1_Hop



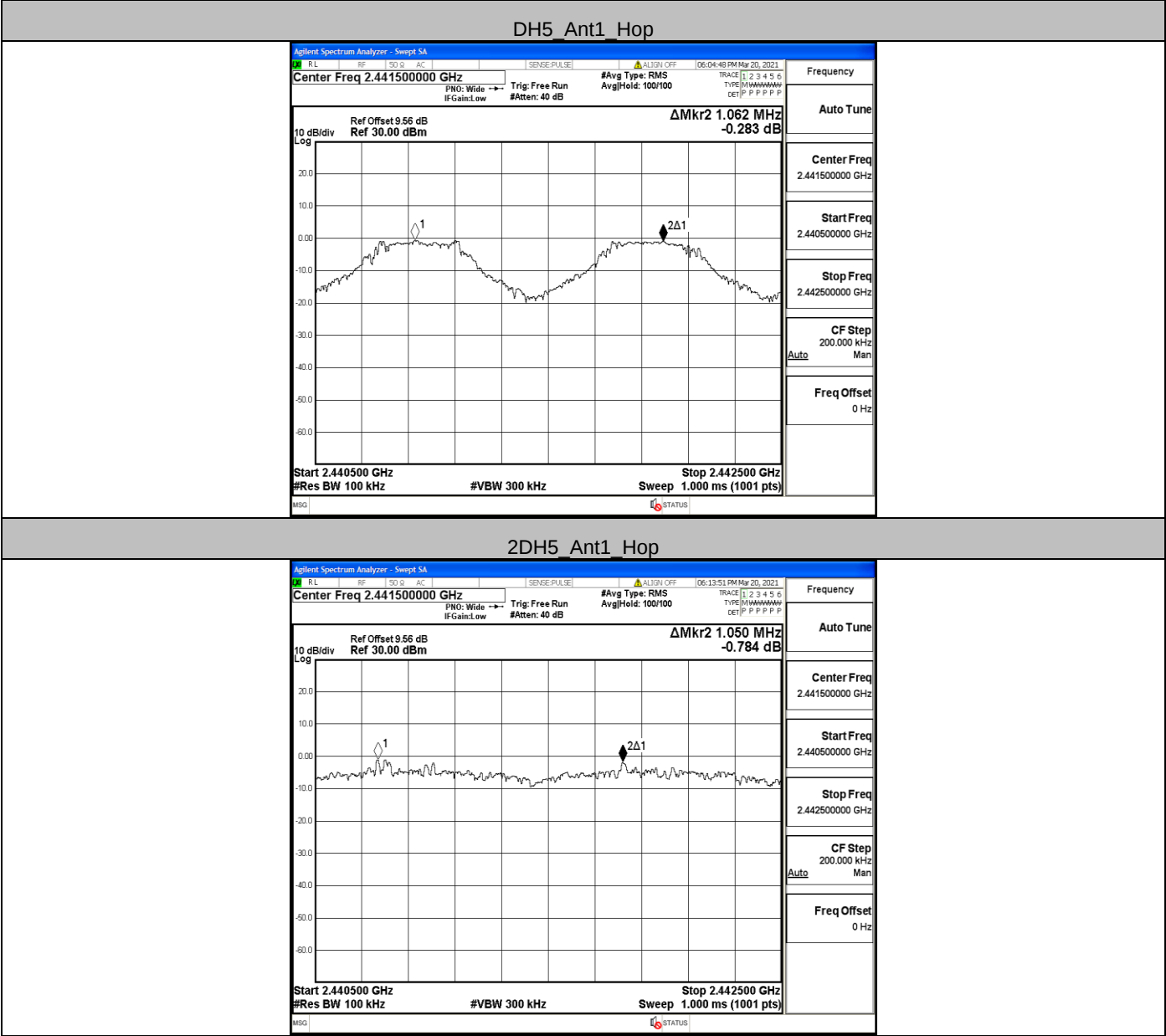
2DH5 Ant1 Hop



A.3 Carrier Frequency Separation

TestMode	Antenna	Channel	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	1.062	≥ 0.936	PASS
2DH5	Ant1	Hop	1.05	≥ 0.886	PASS

Test Graph



2DH5_Ant1_Hop

Agilent Spectrum Analyzer - Swept SA

RL

RF

50 Ω

AC

SENSE: PULSE

ALIGN: OFF

06:13:51 PM Mar 20, 2021

Center Freq 2.441500000 GHz

PN0: Wide

IF Gain: Low

Trig: Free Run

#Atten: 40 dB

#Avg Type: RMS

Avg/Hold: 100/100

TRACE 1 2 3 4 5 6

TYPE: [HAWAIIAN]

DET: [P P P P P P]

Ref Offset 9.56 dB

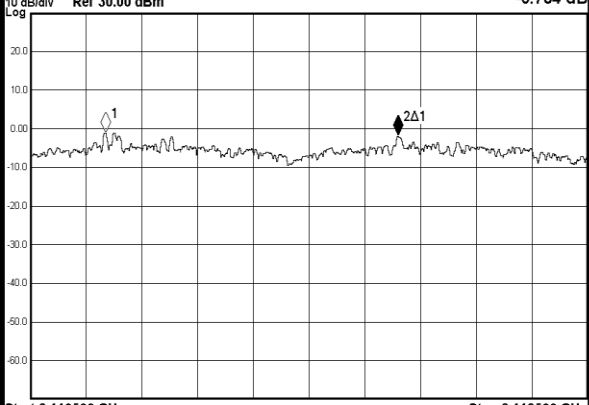
Ref 30.00 dBm

ΔMkr2 1.050 MHz

-0.784 dB

10 dB/div

Log



Start 2.440500 GHz

#Res BW 100 kHz

#VBW 300 kHz

Stop 2.442500 GHz

Sweep 1.000 ms (1001 pts)

MSG STATUS

Frequency

Auto Tune

Center Freq 2.441500000 GHz

Start Freq 2.440500000 GHz

Stop Freq 2.442500000 GHz

CF Step 200.000 kHz

Auto Man

Freq Offset 0 Hz

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

Test Graph

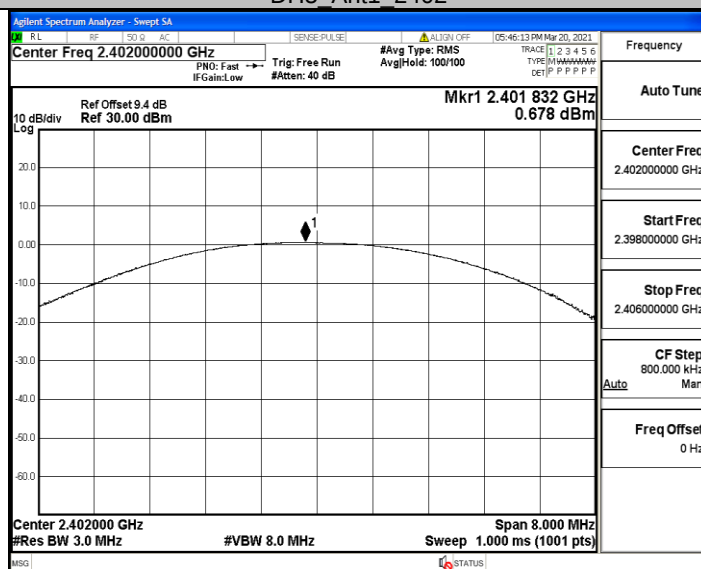


A.5 Conducted Peak Output Power

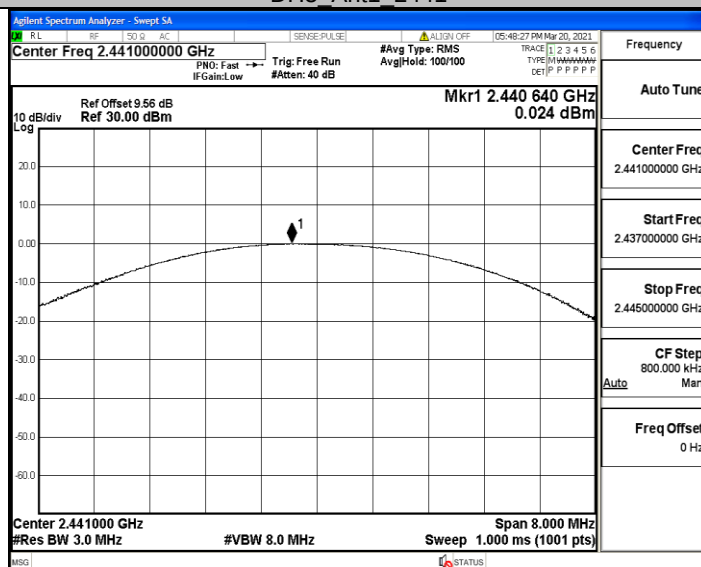
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
DH5	Ant1	2402	0.68	<=20.97	PASS
		2441	0.02	<=20.97	PASS
		2480	0.33	<=20.97	PASS
2DH5	Ant1	2402	1.25	<=20.97	PASS
		2441	0.56	<=20.97	PASS
		2480	0.8	<=20.97	PASS

Test Graph

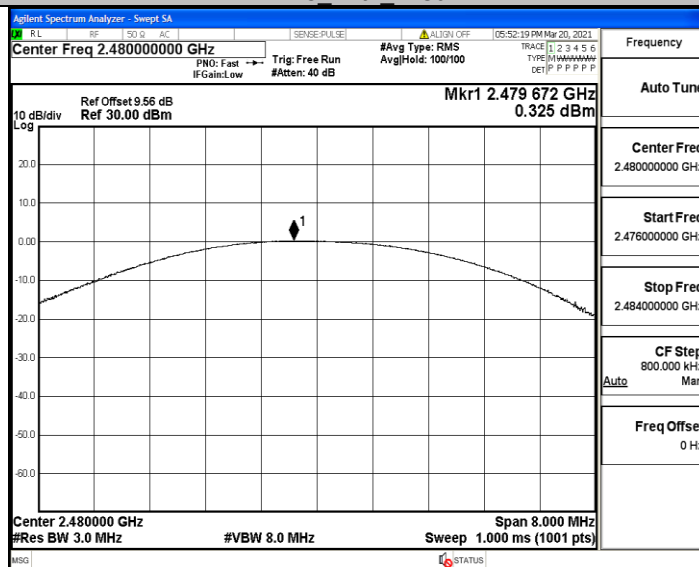
DH5_Ant1_2402



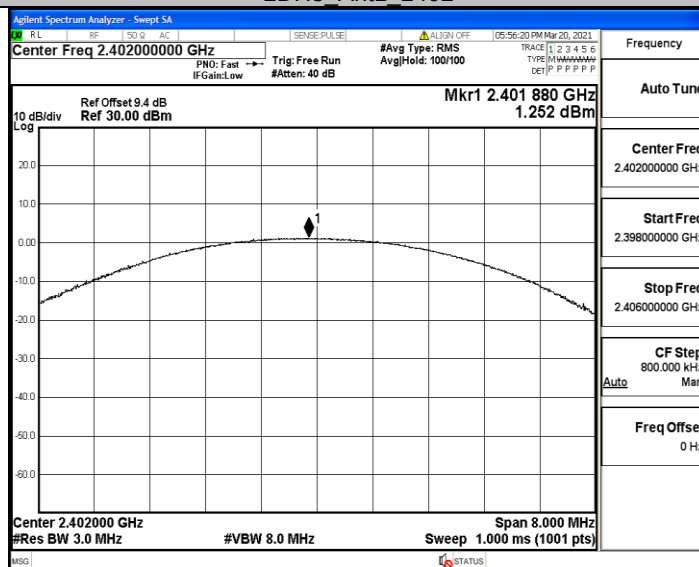
DH5_Ant1_2441



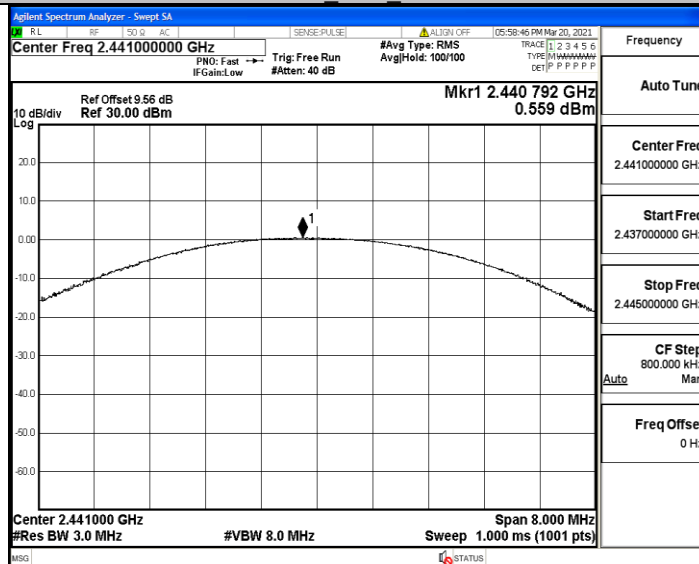
DH5_Ant1_2480

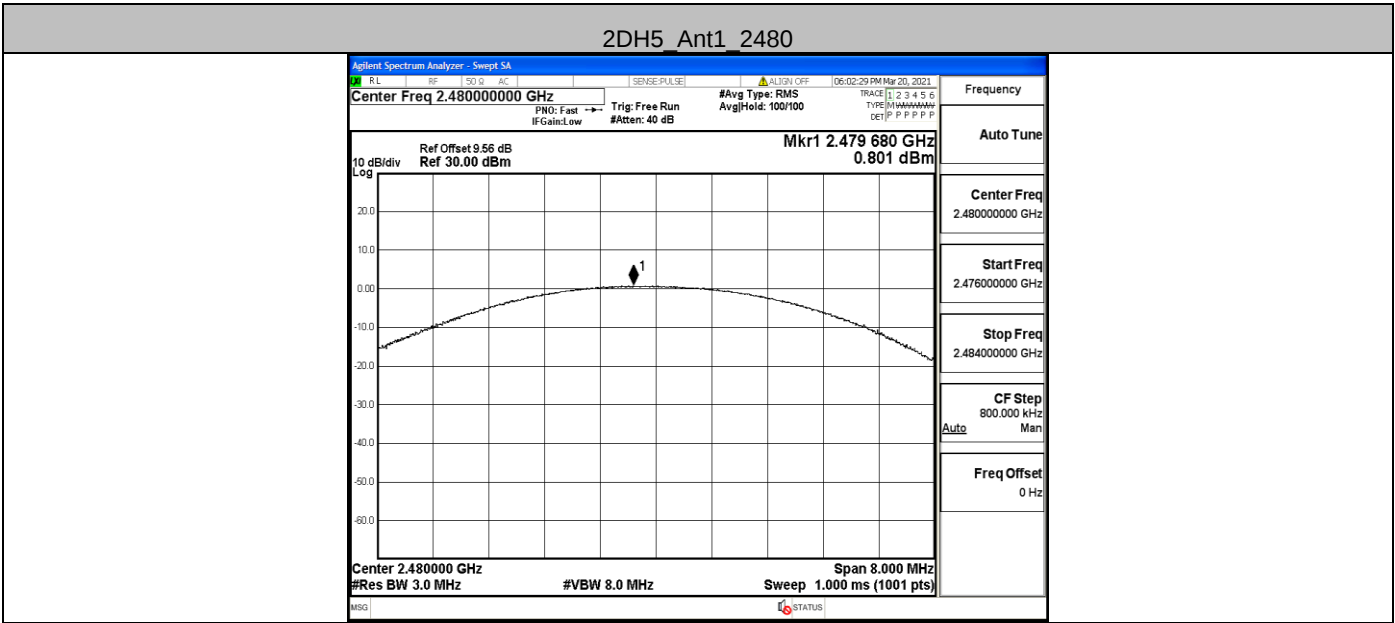


2DH5_Ant1_2402



2DH5_Ant1_2441



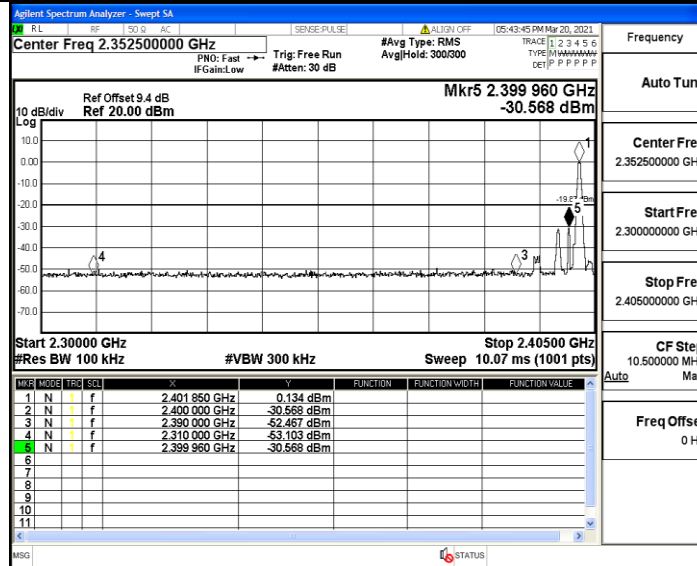


A.6 Band-edge for RF Conducted Emissions

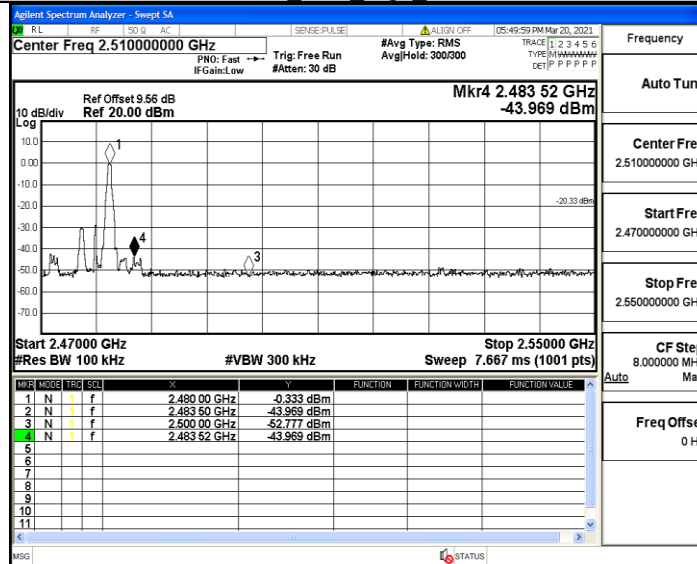
TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	0.13	-30.57	<=-19.87	PASS
		High	2480	-0.33	-43.97	<=-20.33	PASS
		Low	Hop_2402	-0.49	-50.35	<=-20.49	PASS
		High	Hop_2480	-0.40	-48.75	<=-20.4	PASS
2DH5	Ant1	Low	2402	0.33	-29.4	<=-19.67	PASS
		High	2480	-0.37	-45.4	<=-20.37	PASS
		Low	Hop_2402	-3.51	-50.25	<=-23.51	PASS
		High	Hop_2480	-2.25	-48.97	<=-22.25	PASS

Test Graph

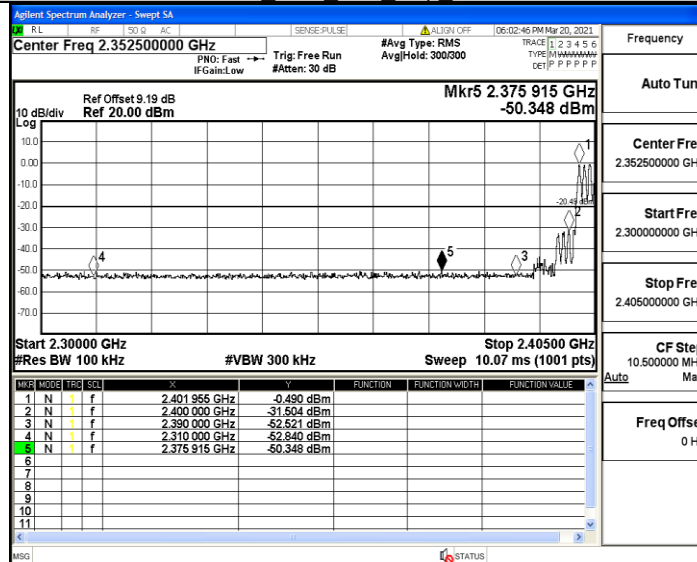
DH5_Ant1_Low_2402



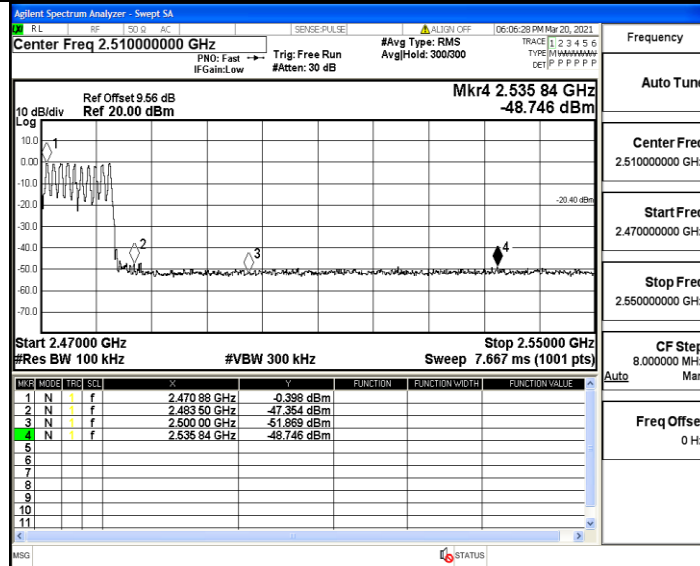
DH5_Ant1_High_2480



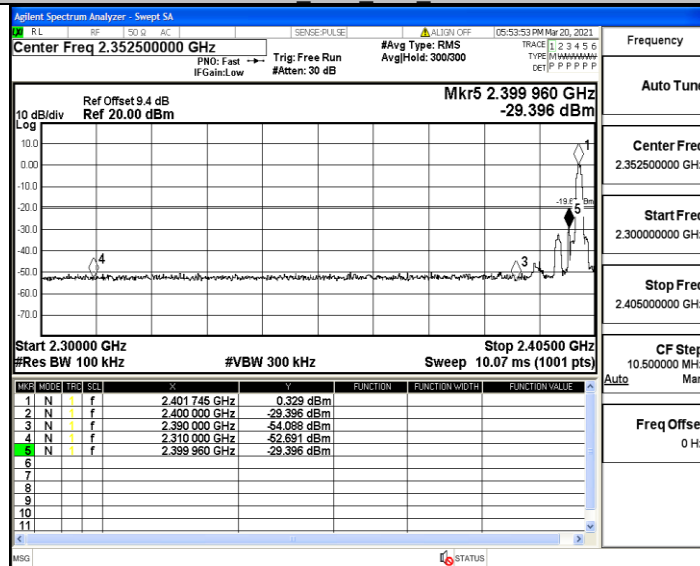
DH5_Ant1_Low_Hop_2402



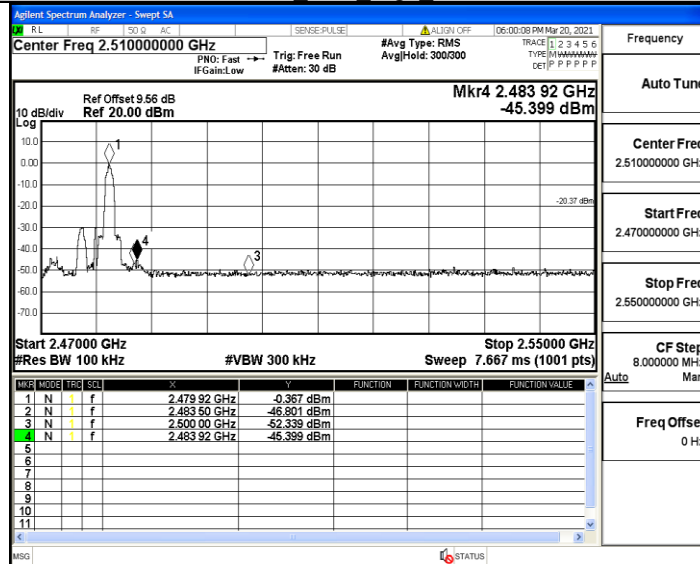
DH5 Ant1_High_Hop_2480



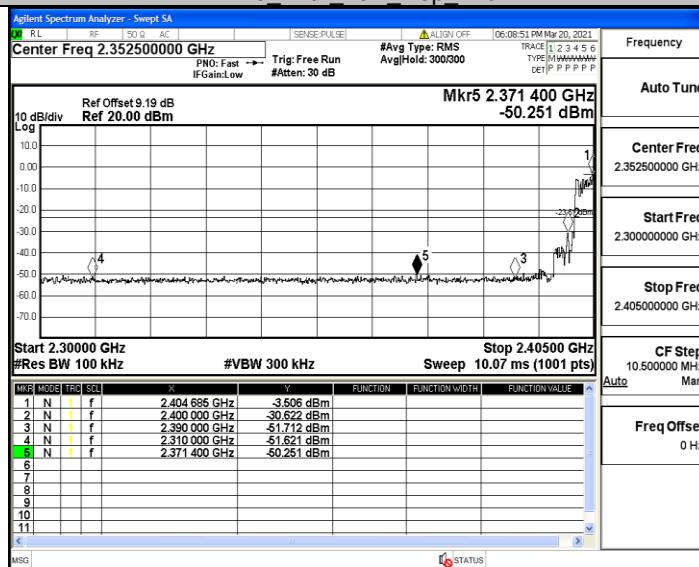
2DH5 Ant1_Low_2402



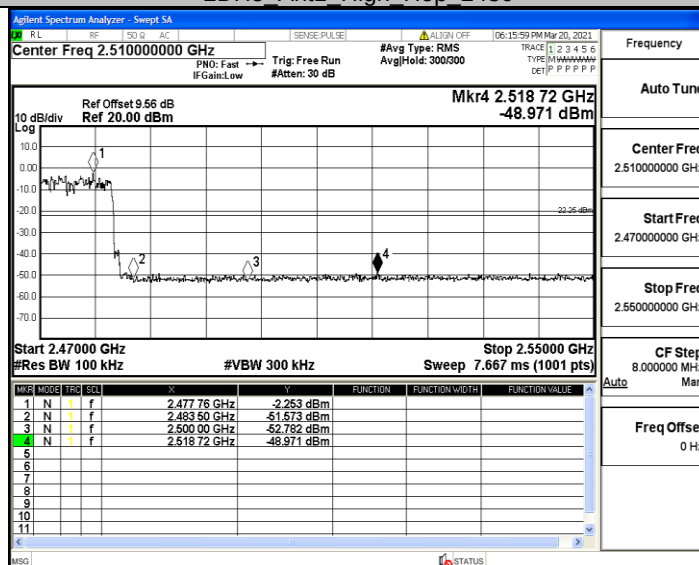
2DH5 Ant1_High_2480



2DH5_Ant1_Low_Hop_2402

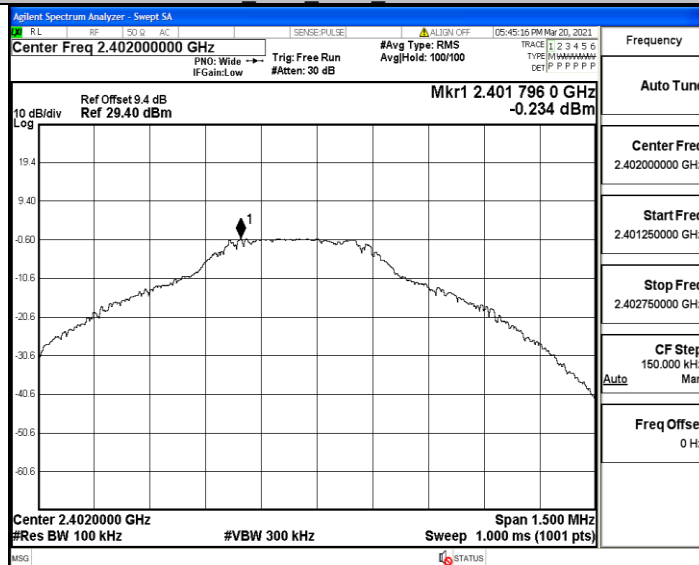


2DH5_Ant1_High_Hop_2480

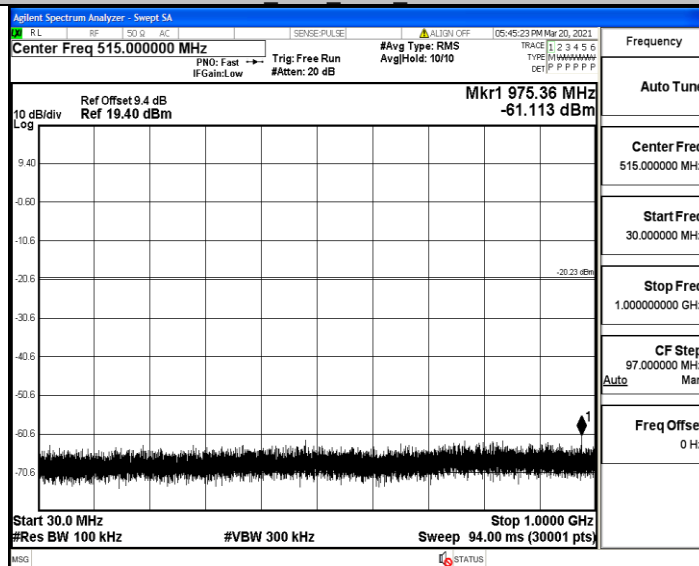


A.7 RF Conducted Spurious Emissions Test Graph

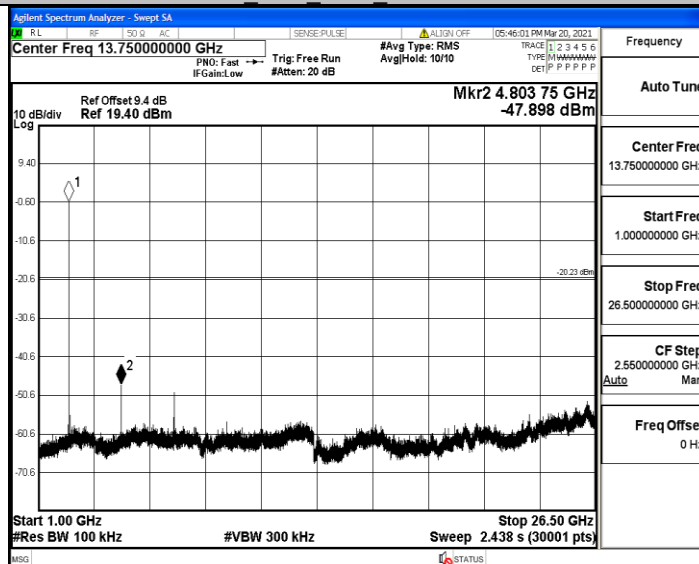
DH5_Ant1_2402_0-Reference



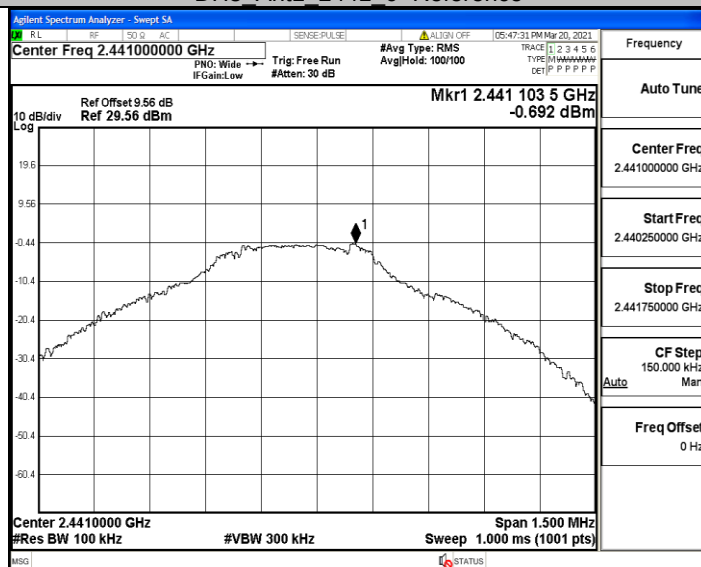
DH5_Ant1_2402_30~1000



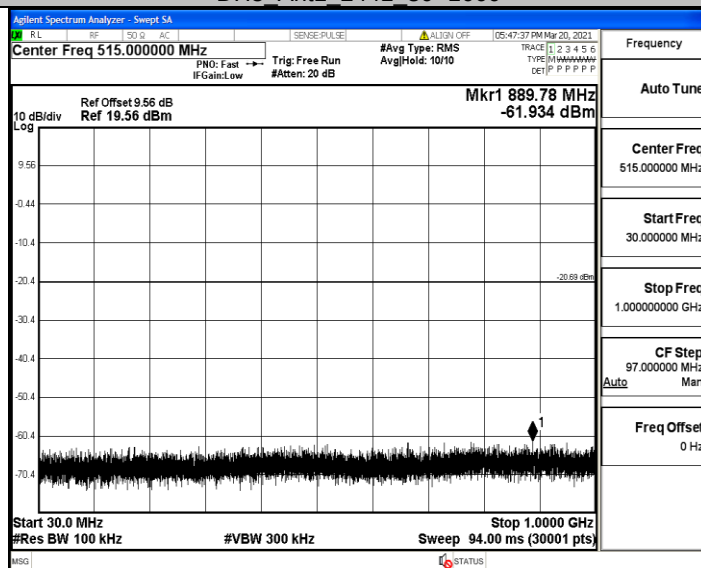
DH5_Ant1_2402_1000~26500



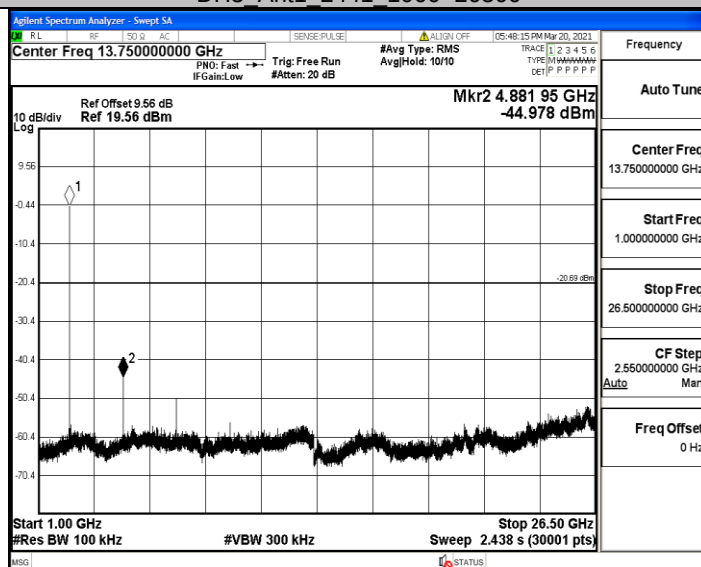
DH5_Ant1_2441_0-Reference



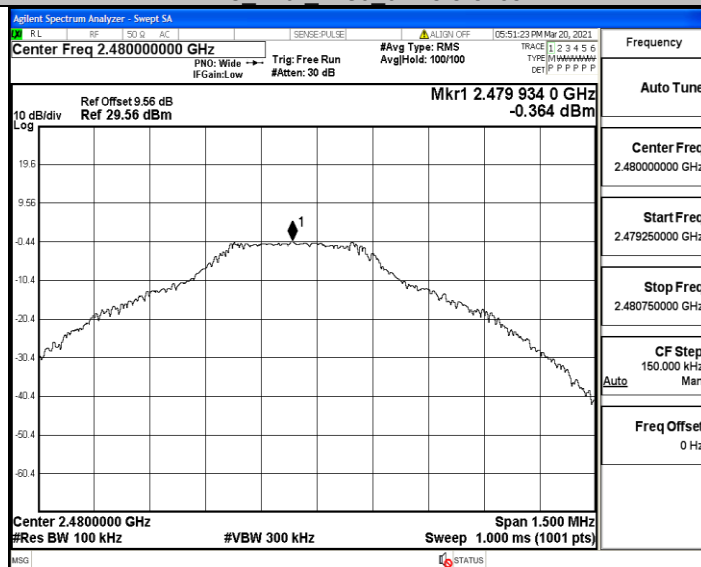
DH5_Ant1_2441_30~1000



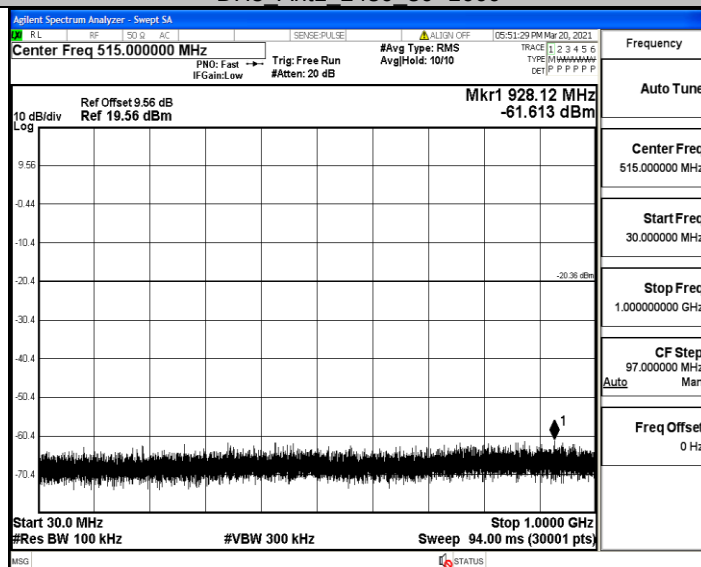
DH5_Ant1_2441_1000~26500



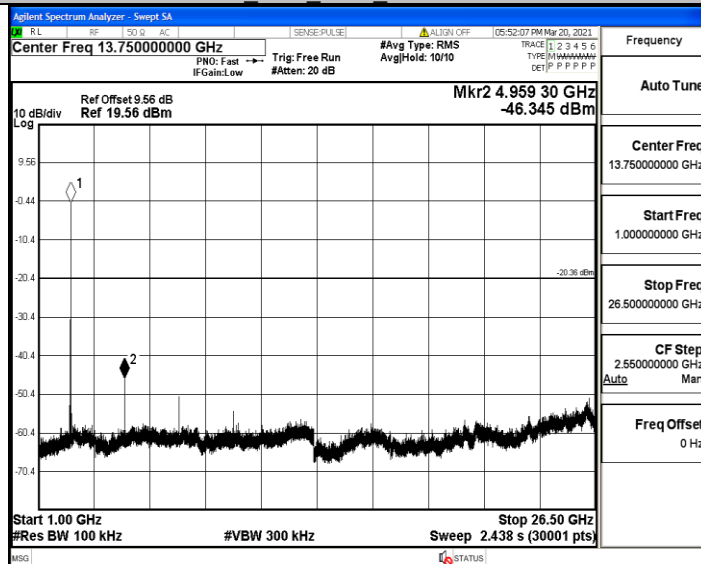
DH5_Ant1_2480_0-Reference



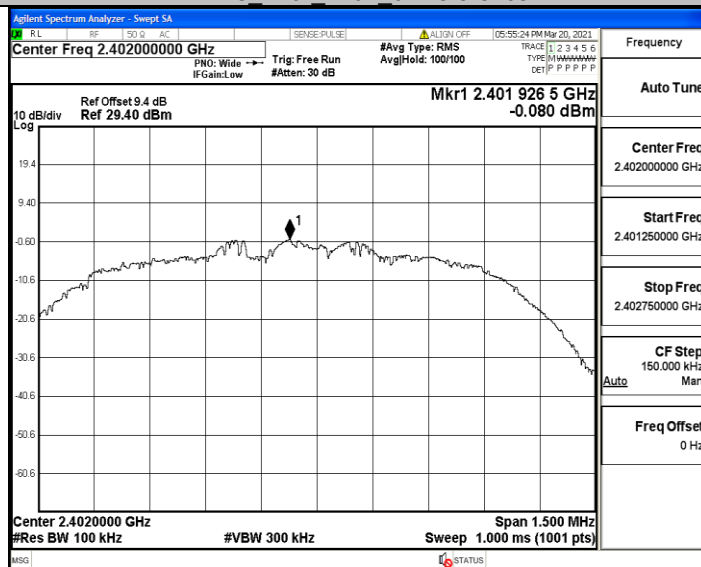
DH5_Ant1_2480_30~1000



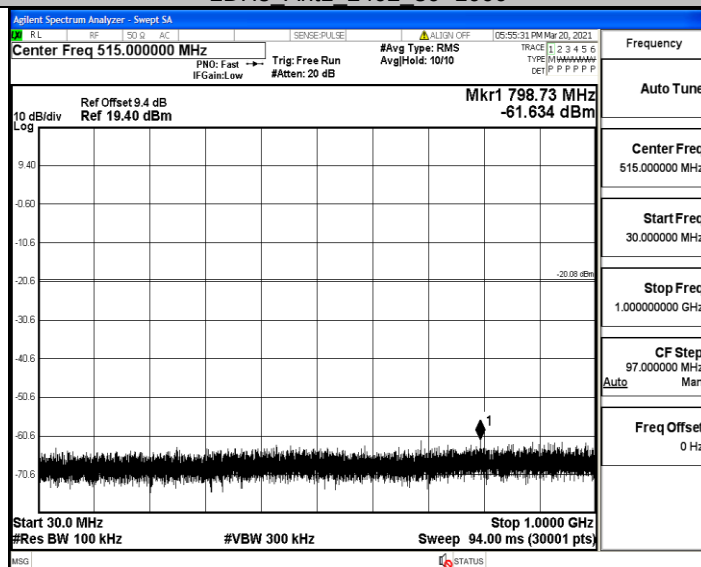
DH5_Ant1_2480_1000~26500



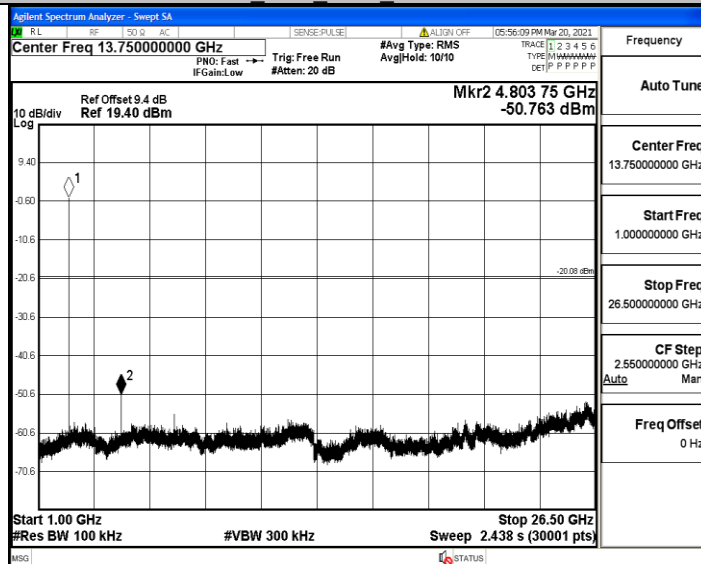
2DH5_Ant1_2402_0~Reference



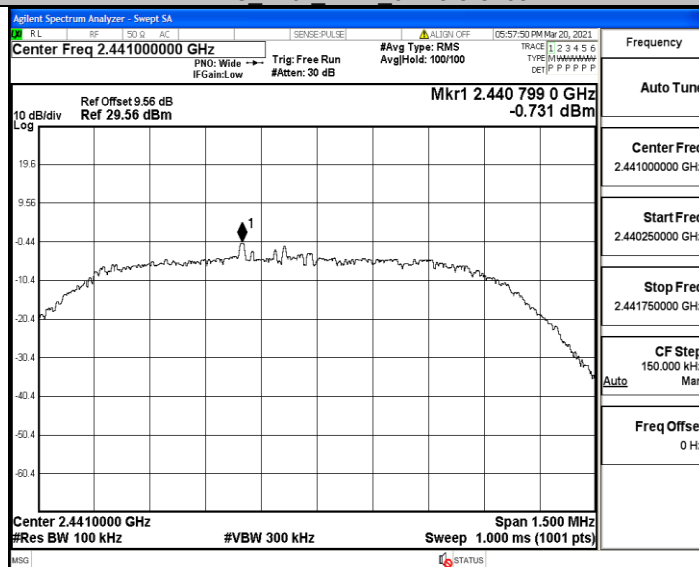
2DH5_Ant1_2402_30~1000



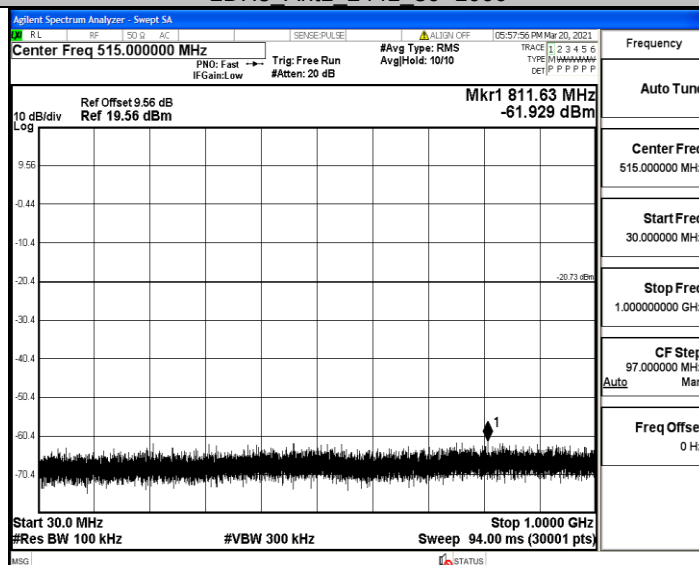
2DH5_Ant1_2402_1000~26500



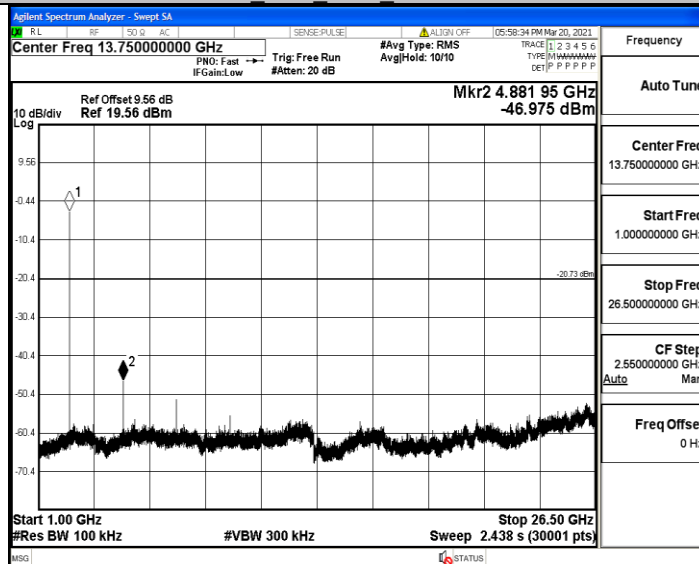
2DH5_Ant1_2441_0~Reference



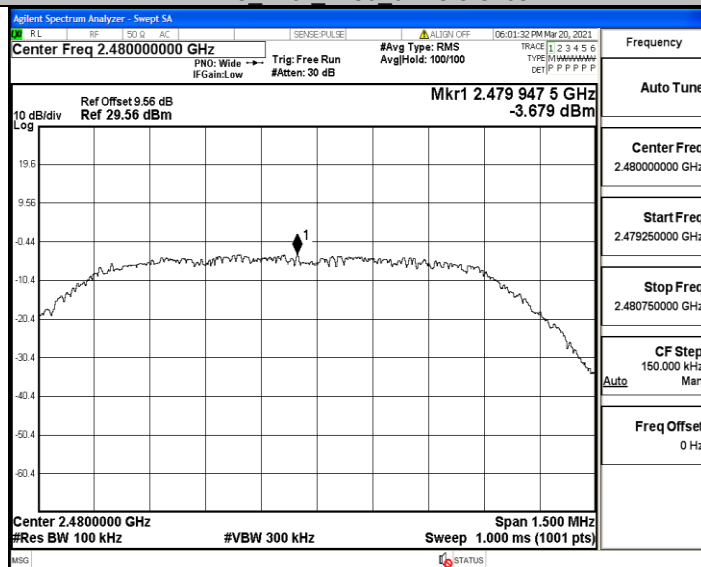
2DH5_Ant1_2441_30~1000



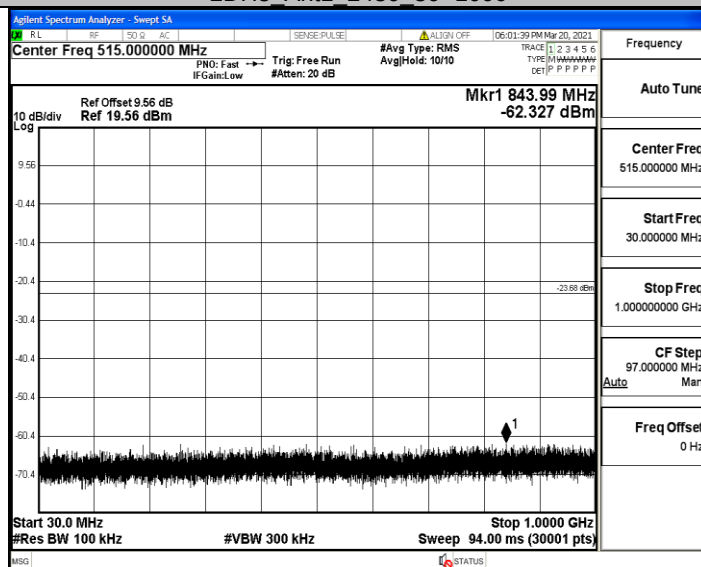
2DH5_Ant1_2441_1000~26500



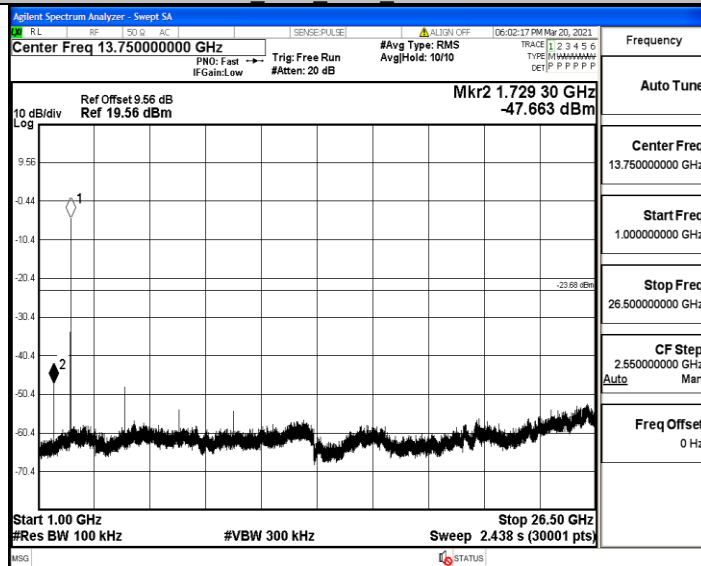
2DH5_Ant1_2480_0~Reference



2DH5_Ant1_2480_30~1000



2DH5_Ant1_2480_1000~26500



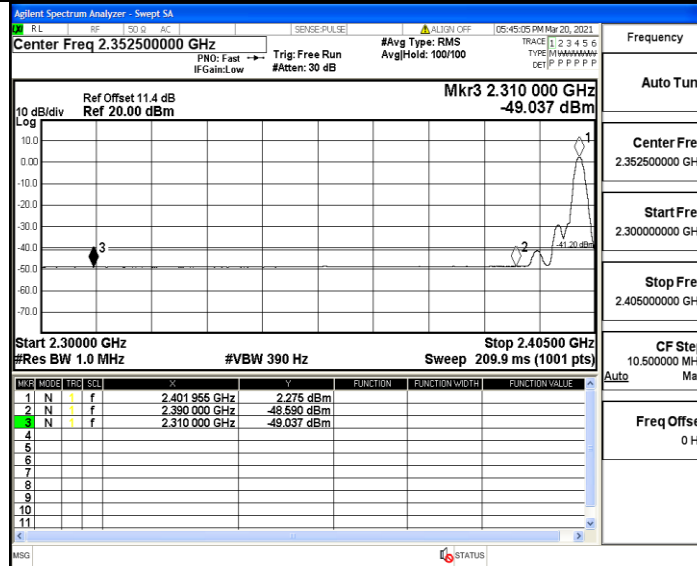
A.8 Restrict-band band-edge measurements

TestMode	Antenna	ChName	Channel	Detector	Freq(MHz)	Result(dBm)	Limit(dBm)	Verdict
DH5	Ant1	Low	2402	AV	2310.000	-49.04	<=-41.20	PASS
				AV	2390.000	-48.59	<=-41.20	PASS
				Peak	2310.000	-41.57	<=-21.20	PASS
				Peak	2390.000	-42.24	<=-21.20	PASS
		High	2480	AV	2483.500	-42.70	<=-41.20	PASS
				AV	2500.000	-47.94	<=-41.20	PASS
				Peak	2483.500	-37.22	<=-21.20	PASS
				Peak	2500.000	-39.80	<=-21.20	PASS
2DH5	Ant1	Low	2402	AV	2310.000	-48.96	<=-41.20	PASS
				AV	2390.000	-48.59	<=-41.20	PASS
				Peak	2310.000	-40.41	<=-21.20	PASS
				Peak	2390.000	-39.97	<=-21.20	PASS
		High	2480	AV	2483.500	-44.26	<=-41.20	PASS
				AV	2500.000	-48.01	<=-41.20	PASS
				Peak	2483.500	-36.20	<=-21.20	PASS
				Peak	2500.000	-40.21	<=-21.20	PASS

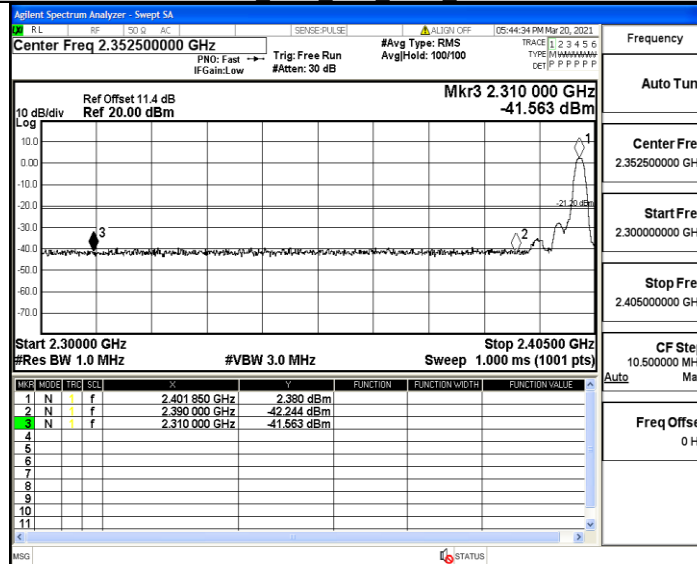
Note:

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.

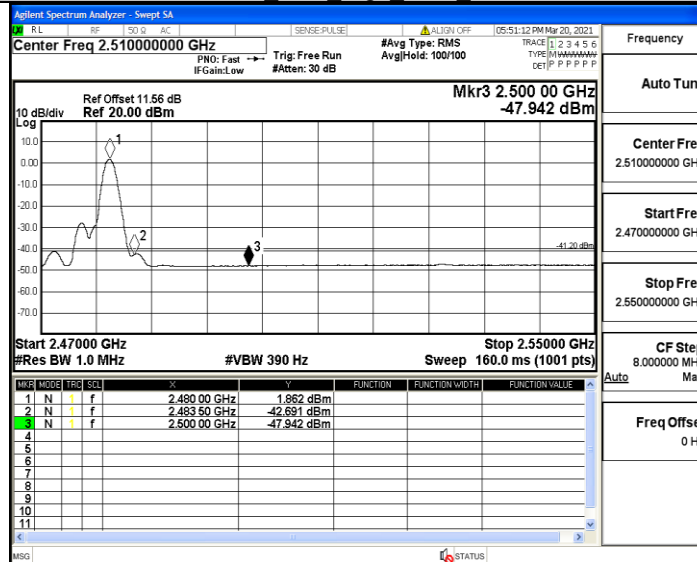
DH5 Ant1 Low 2402 AV



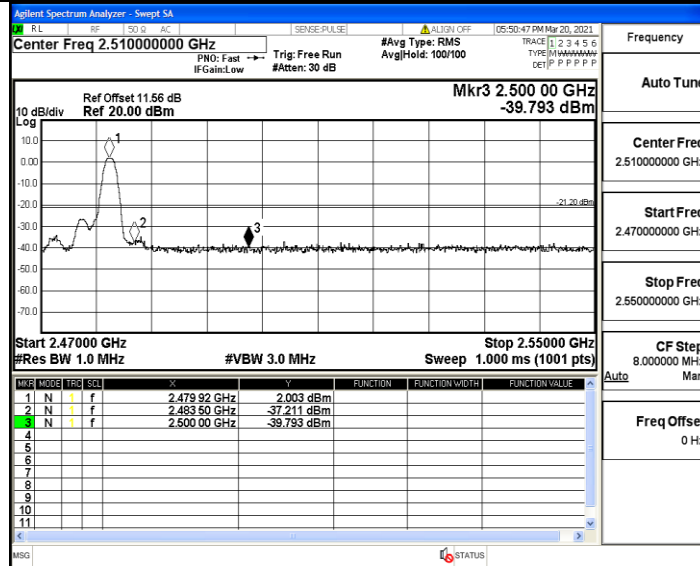
DH5 Ant1 Low 2402 Peak



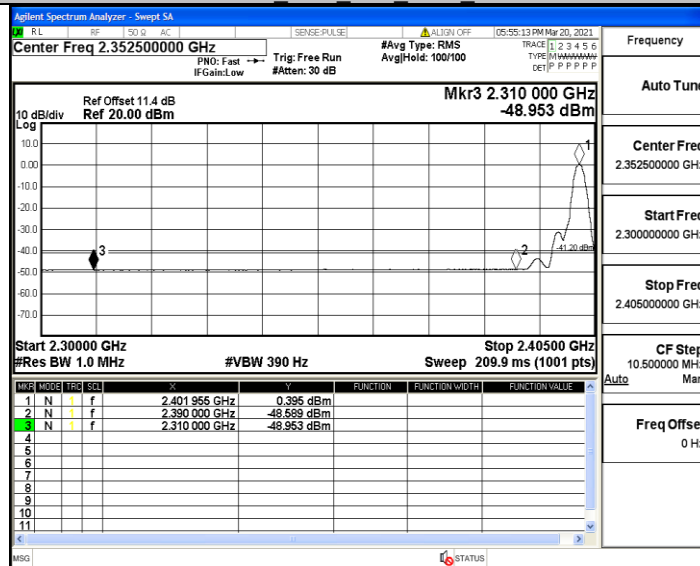
DH5 Ant1 High 2480 AV



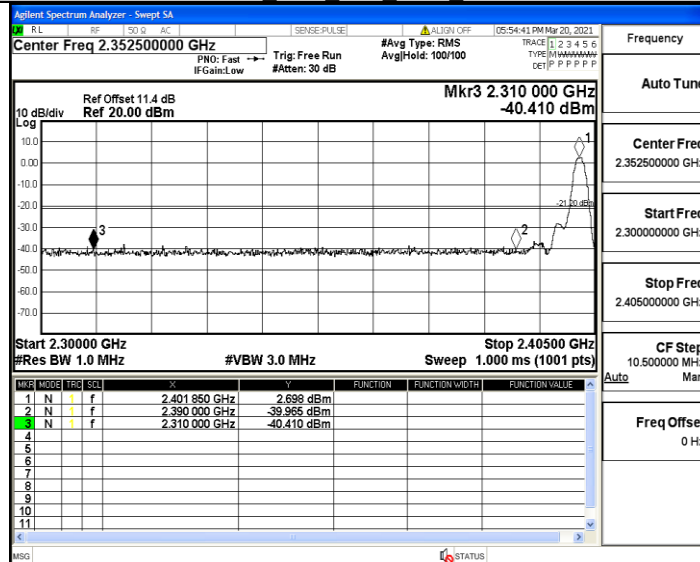
DH5 Ant1 High 2480 Peak



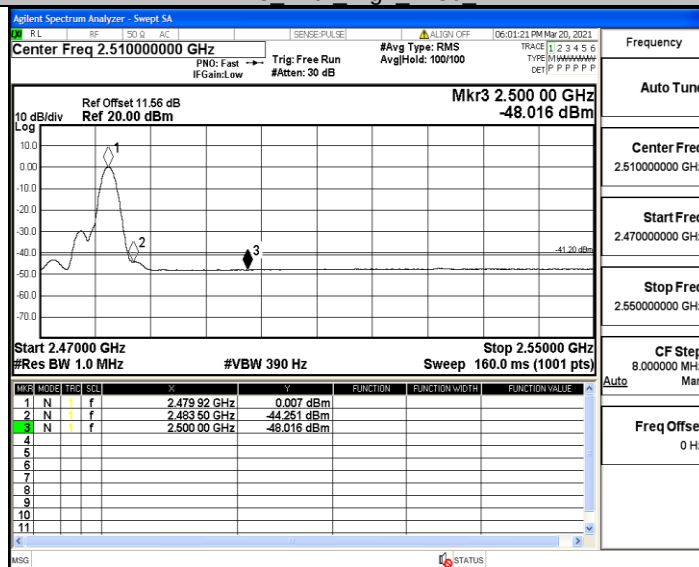
2DH5 Ant1 Low 2402 AV



2DH5 Ant1 Low 2402 Peak



2DH5_Ant1_High_2480_AV



2DH5_Ant1_High_2480_Peak

