

Appendix A

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

Product Name: Bluetooth Headphones

Trade Mark: N/A

Test Model: EV7665

FCC ID: 2AQBE-EV7665

Environmental Conditions

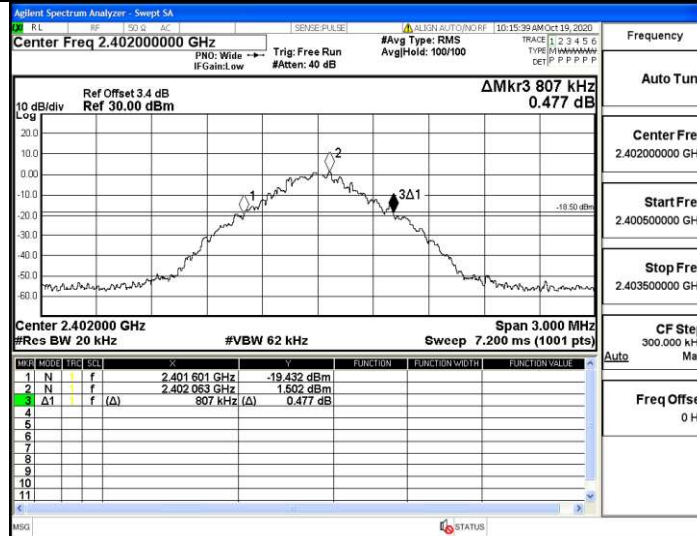
Temperature:	22.8° C
Relative Humidity:	56%
ATM Pressure:	100.0 kPa
Test Engineer:	Nancy Li
Supervised by:	Hugo Chen

A.1 20 dB Bandwidth

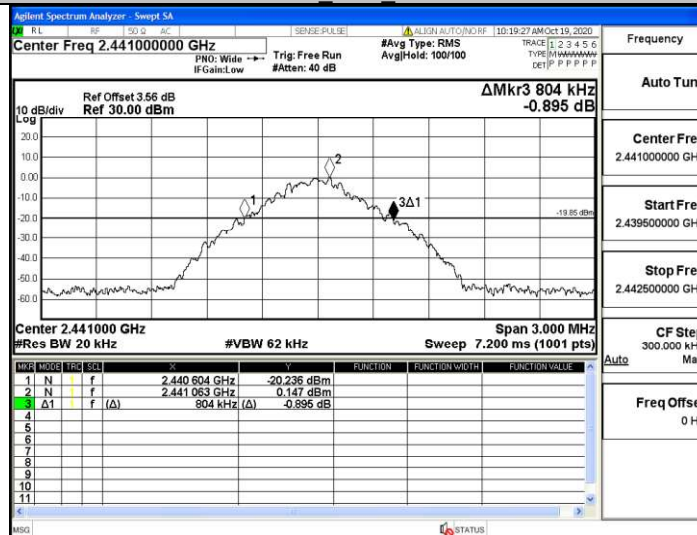
TestMode	Antenna	Channel	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.807	2401.601	2402.408	---	PASS
		2441	0.804	2440.604	2441.408	---	PASS
		2480	0.804	2479.601	2480.405	---	PASS
2DH5	Ant1	2402	1.218	2401.394	2402.612	---	PASS
		2441	1.266	2440.370	2441.636	---	PASS
		2480	1.326	2479.340	2480.666	---	PASS
3DH5	Ant1	2402	1.281	2401.355	2402.636	---	PASS
		2441	1.278	2440.355	2441.633	---	PASS
		2480	1.269	2479.364	2480.633	---	PASS

Test Graph

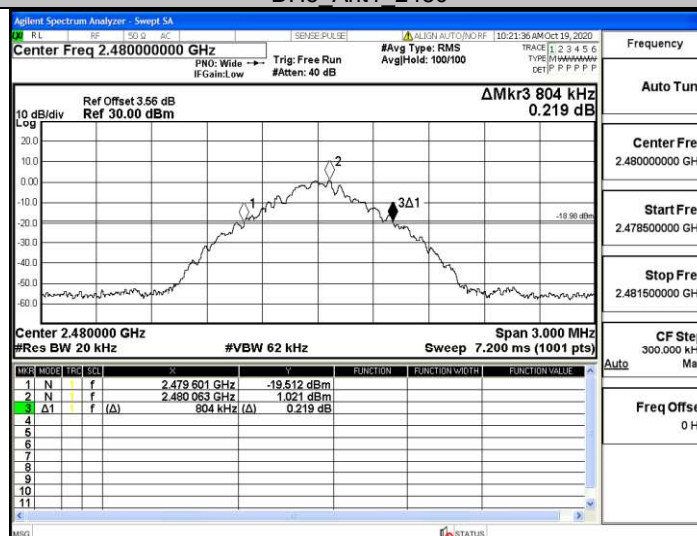
DH5_Ant1_2402



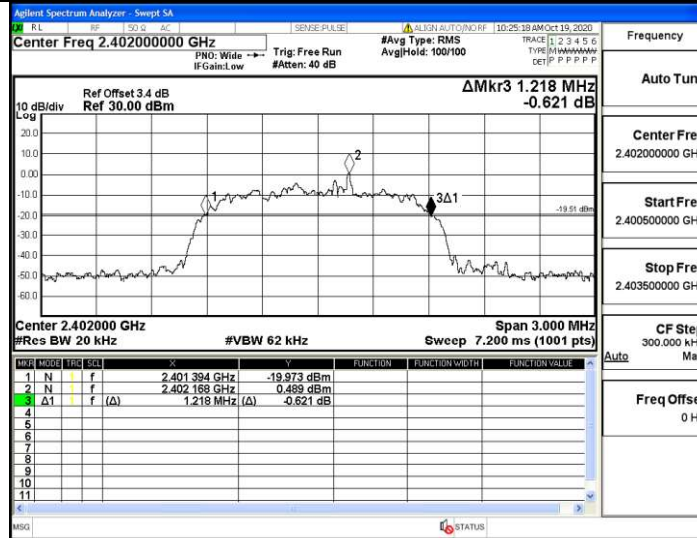
DH5_Ant1_2441



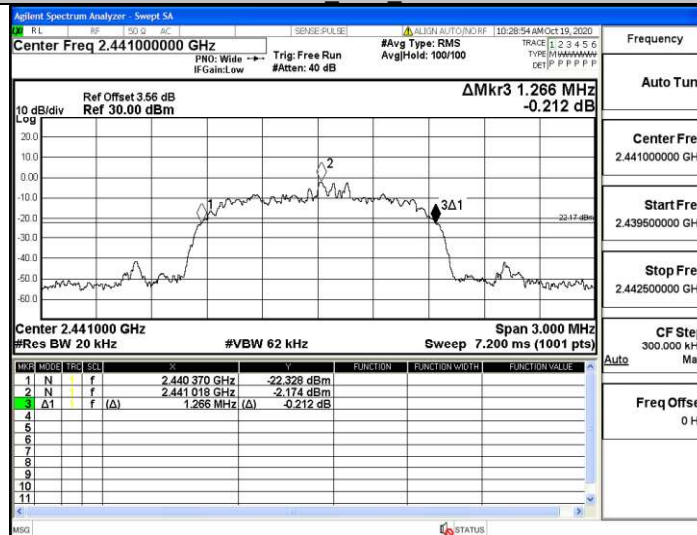
DH5_Ant1_2480



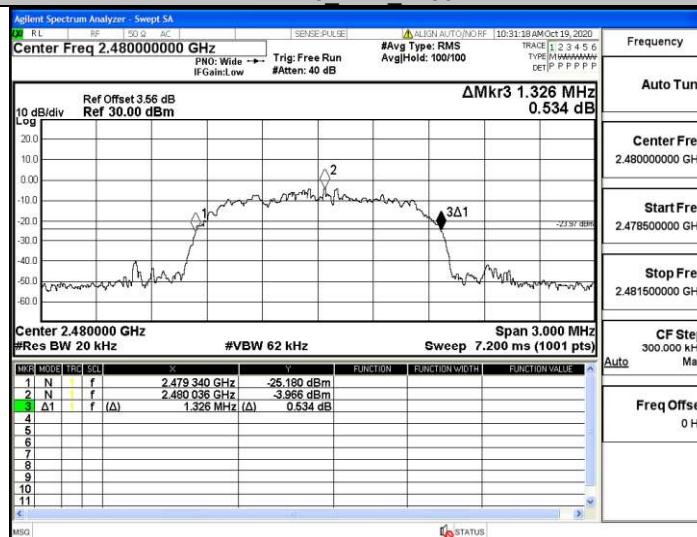
2DH5 Ant1 2402



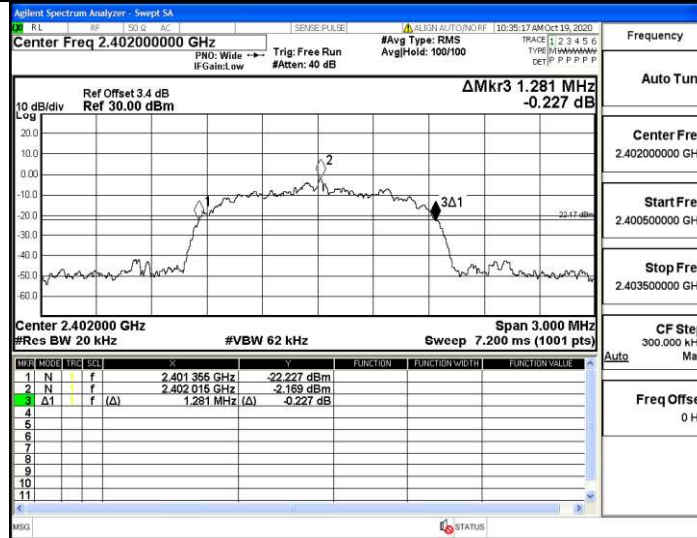
2DH5 Ant1 2441



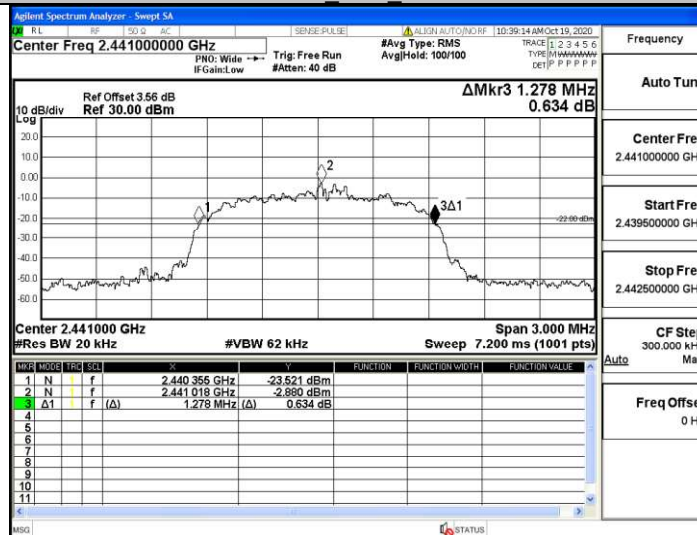
2DH5 Ant1 2480



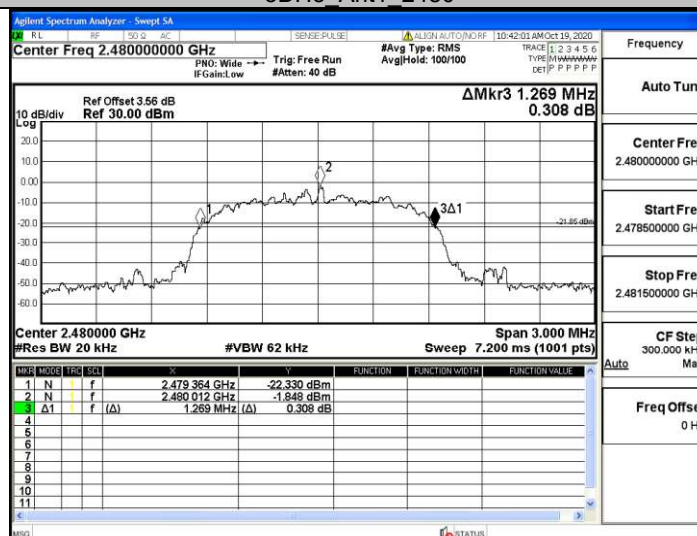
3DH5 Ant1_2402



3DH5 Ant1_2441



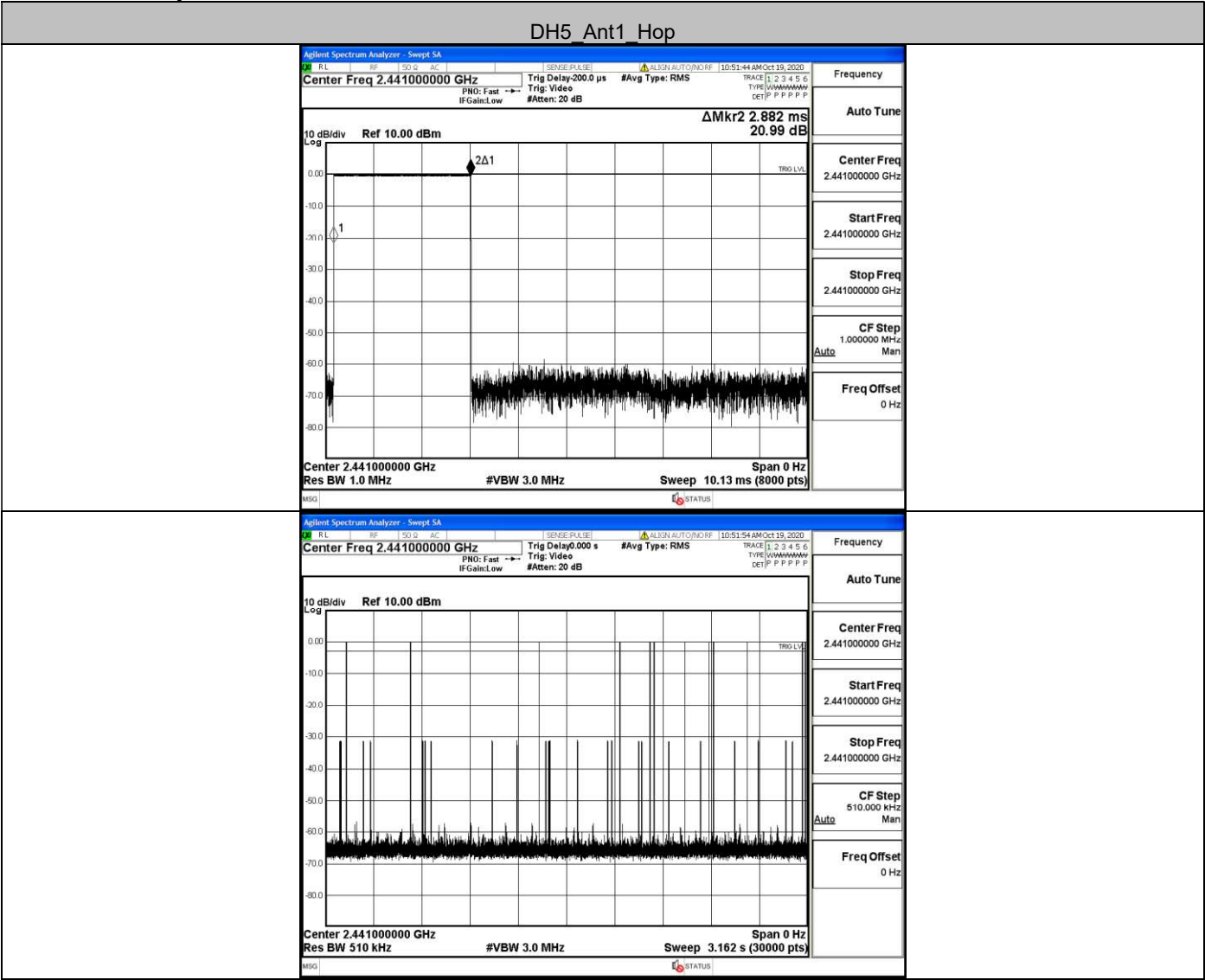
3DH5 Ant1_2480



A.2 Dwell Time

TestMode	Antenna	Channel	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH5	Ant1	Hop	2.88	130	0.375	<=0.4	PASS
2DH5	Ant1	Hop	2.88	110	0.317	<=0.4	PASS
3DH5	Ant1	Hop	2.89	130	0.375	<=0.4	PASS

Test Graph



Agilent Spectrum Analyzer - Sweep SA

RL

RF

50 Ω

AC

SENSE: PULSE

ALIGN: AUTO (NO RF)

10:51:54 AM Oct 19, 2020

Center Freq 2.441000000 GHz

Trig Delay: 0.000 s

#Avg Type: RMS

TRACE 1 2 3 4 5 6

TYPE: WWWWWW

DET: P P P P P P

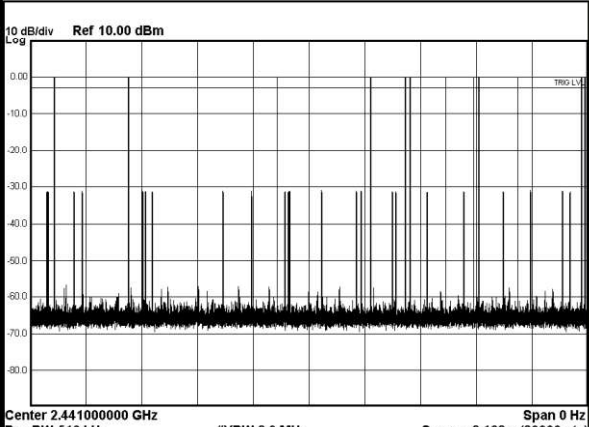
PN0: Fast

IF Gain: Low

#Atten: 20 dB

10 dB/div

Ref 10.00 dBm



Center 2.441000000 GHz

Res BW 510 kHz

#VBW 3.0 MHz

Sweep 3.162 s (30000 pts)

Span 0 Hz

MISC

STATUS

Frequency

Auto Tune

Center Freq 2.441000000 GHz

Start Freq 2.441000000 GHz

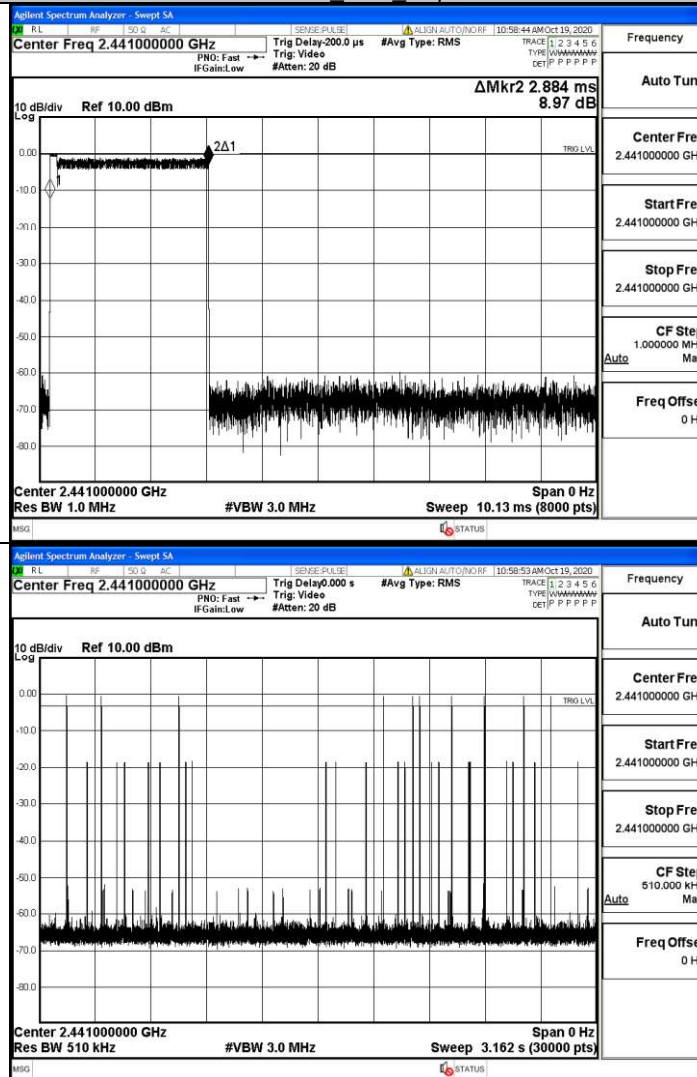
Stop Freq 2.441000000 GHz

CF Step 510.000 kHz

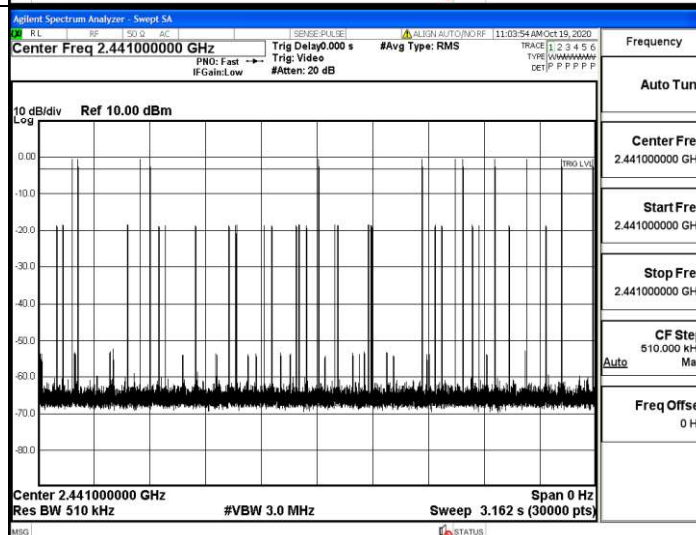
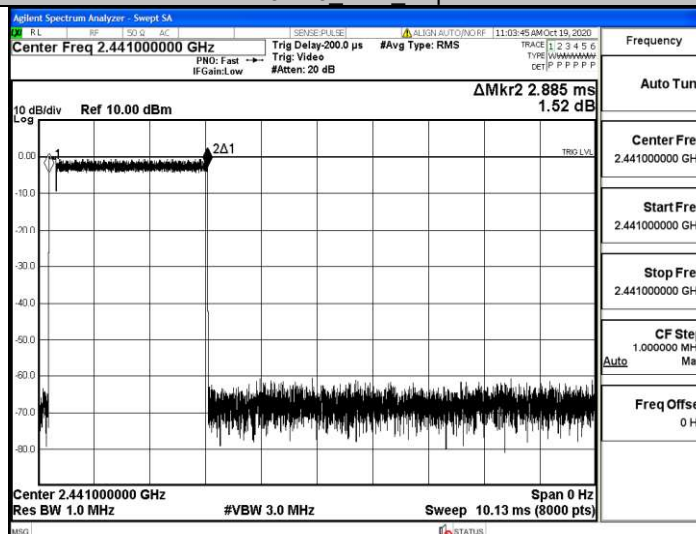
Auto

Freq Offset 0 Hz

2DH5_Ant1_Hop



3DH5_Ant1_Hop

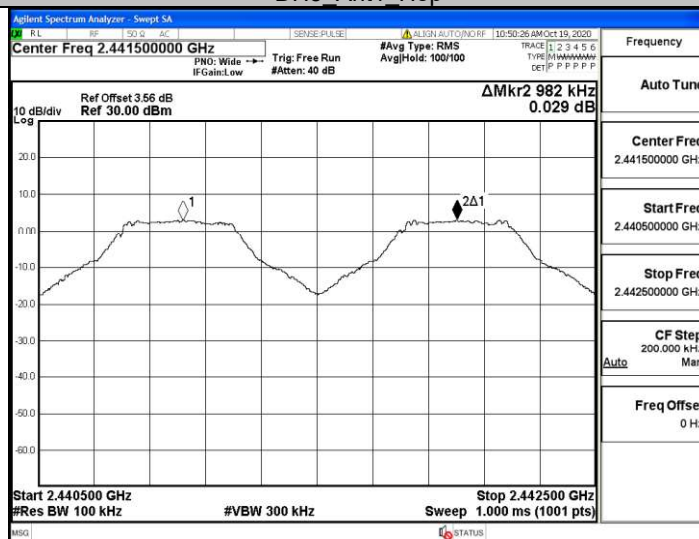


A.3 Carrier Frequency Separation

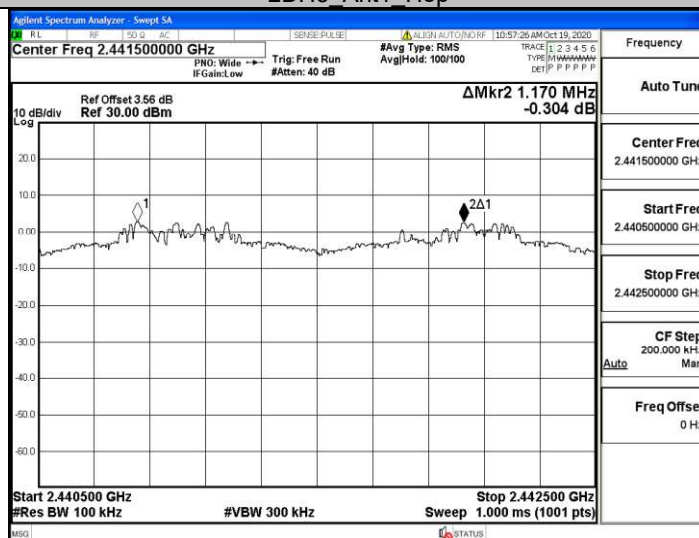
TestMode	Antenna	Channel	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	0.982	≥ 0.807	PASS
2DH5	Ant1	Hop	1.170	≥ 0.884	PASS
3DH5	Ant1	Hop	1.136	≥ 0.854	PASS

Test Graph

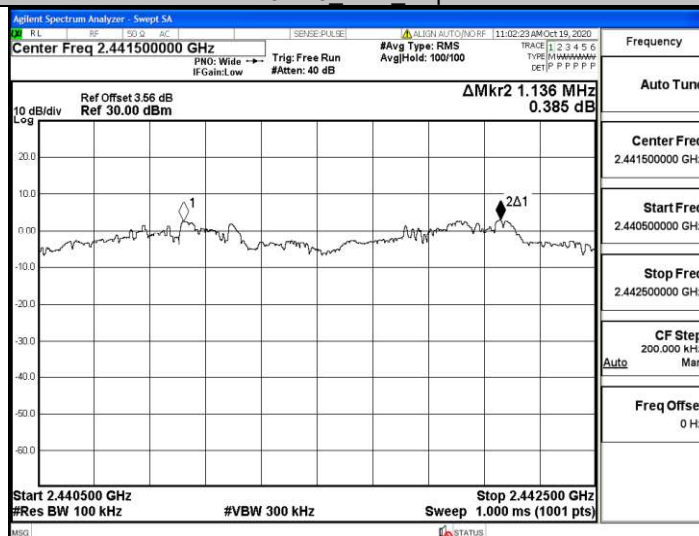
DH5_Ant1_Hop



2DH5_Ant1_Hop



3DH5_Ant1_Hop

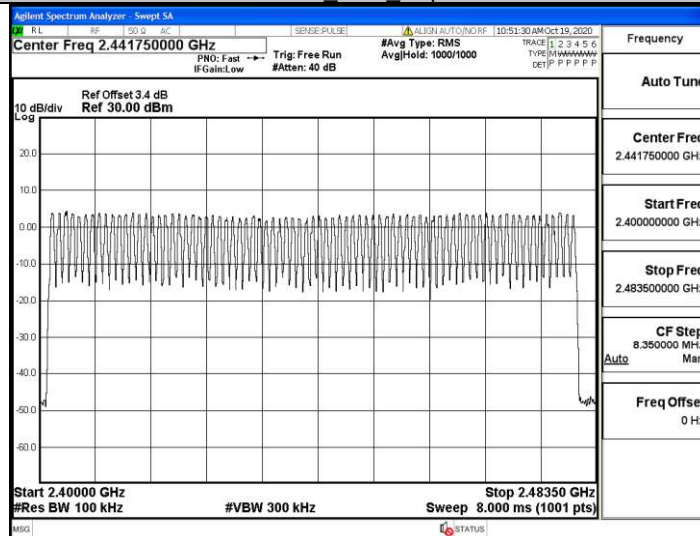


A.4 Hopping Channel Number

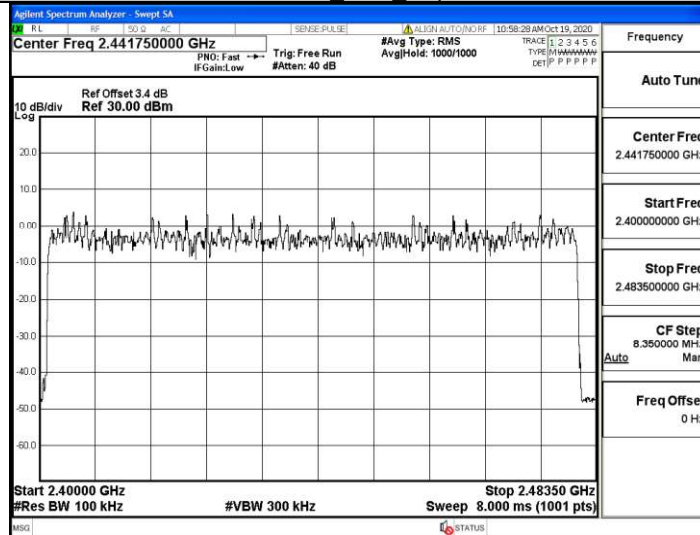
TestMode	Antenna	Channel	Result[Num]	Limit[Num]	Verdict
DH5	Ant1	Hop	79	≥ 15	PASS
2DH5	Ant1	Hop	79	≥ 15	PASS
3DH5	Ant1	Hop	79	≥ 15	PASS

Test Graph

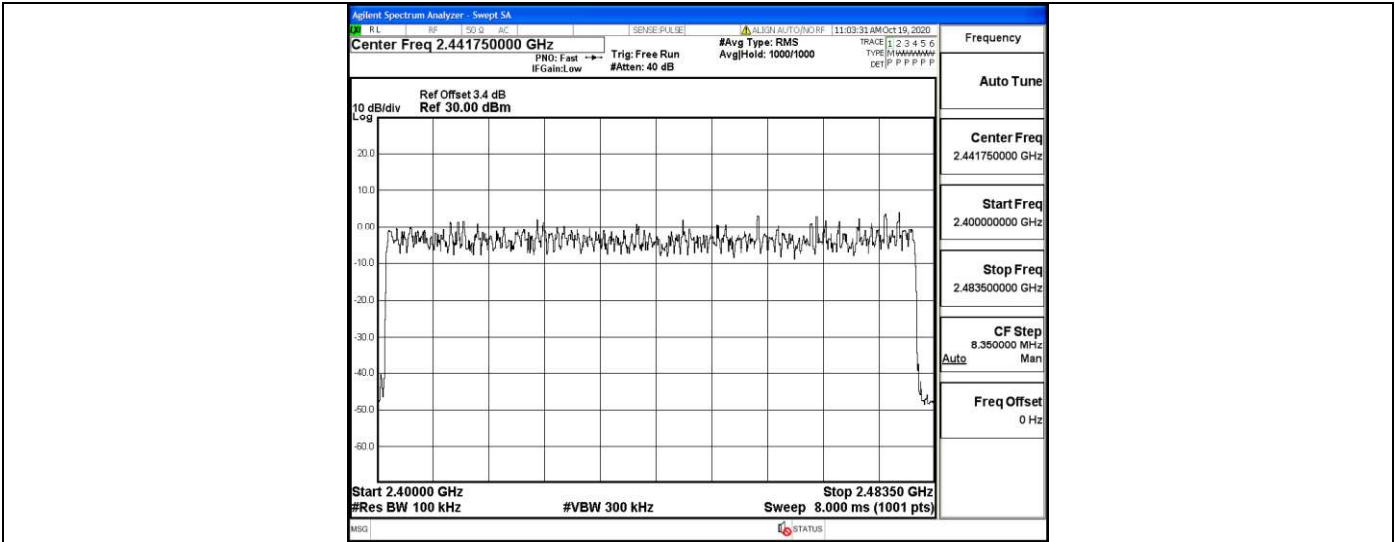
DH5_Ant1_Hop



2DH5_Ant1_Hop



3DH5_Ant1_Hop

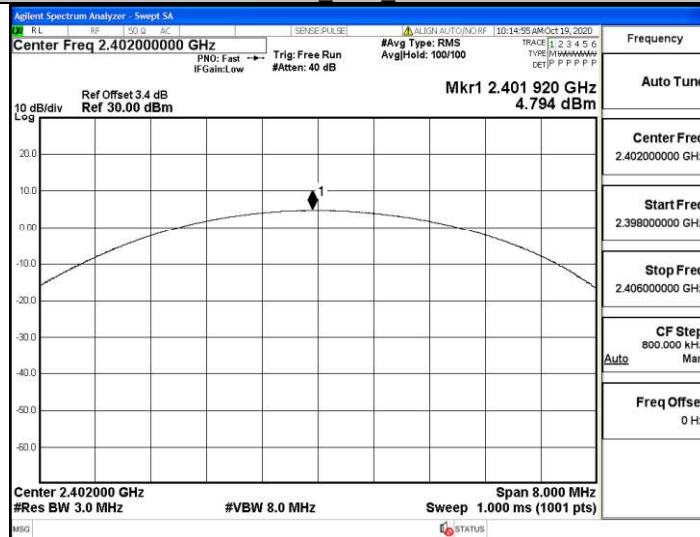


A.5 Conducted Peak Output Power

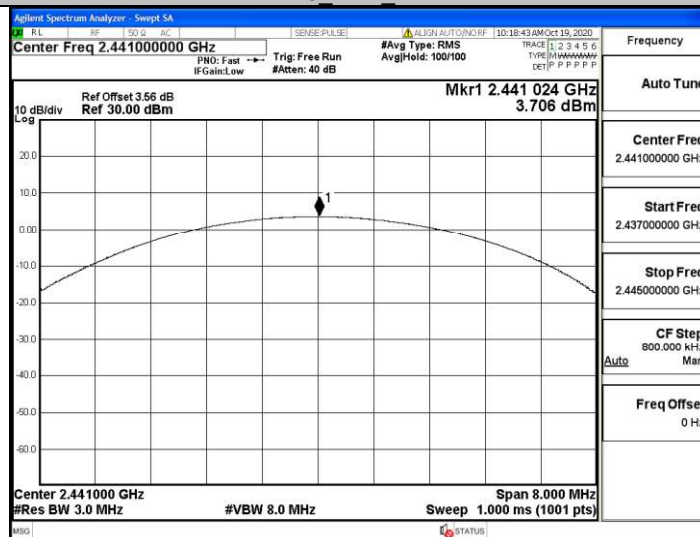
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
DH5	Ant1	2402	4.79	<=20.97	PASS
		2441	3.70	<=20.97	PASS
		2480	4.56	<=20.97	PASS
2DH5	Ant1	2402	4.09	<=20.97	PASS
		2441	3.31	<=20.97	PASS
		2480	4.39	<=20.97	PASS
3DH5	Ant1	2402	4.09	<=20.97	PASS
		2441	3.38	<=20.97	PASS
		2480	4.47	<=20.97	PASS

Test Graph

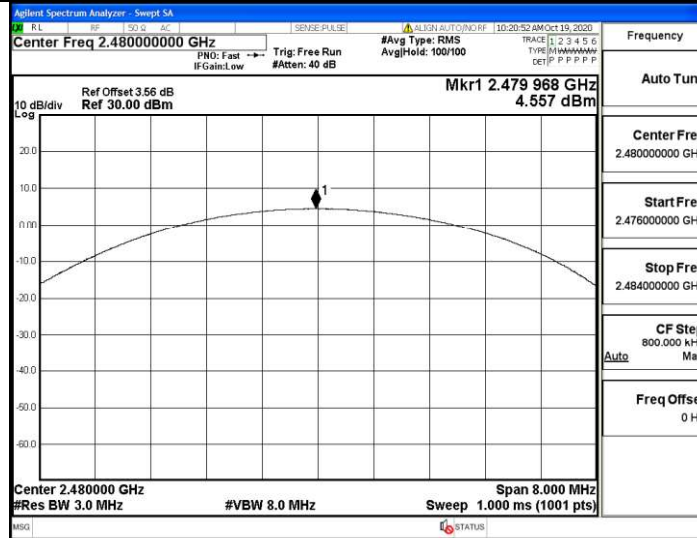
DH5 Ant1 2402



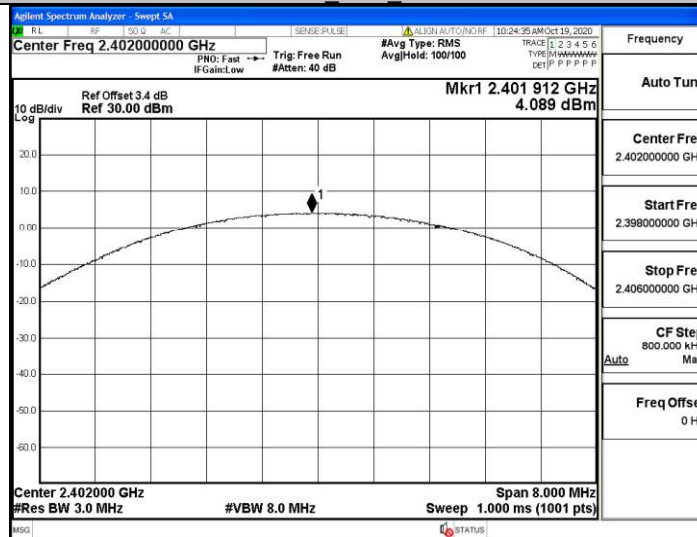
DH5 Ant1 2441



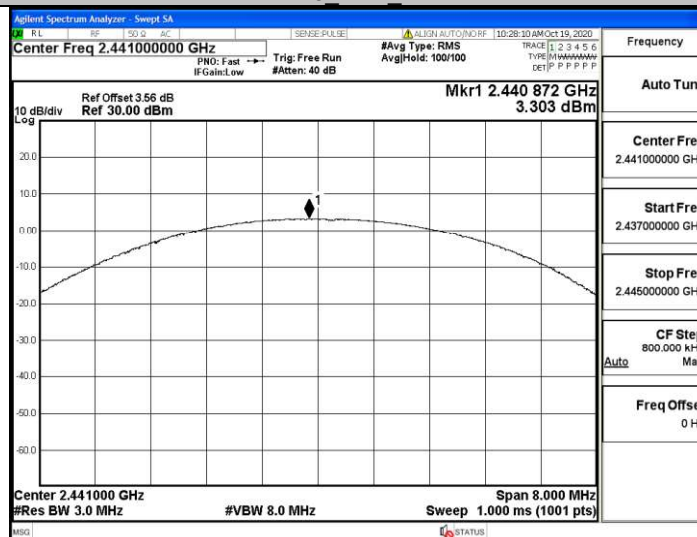
DH5 Ant1 2480



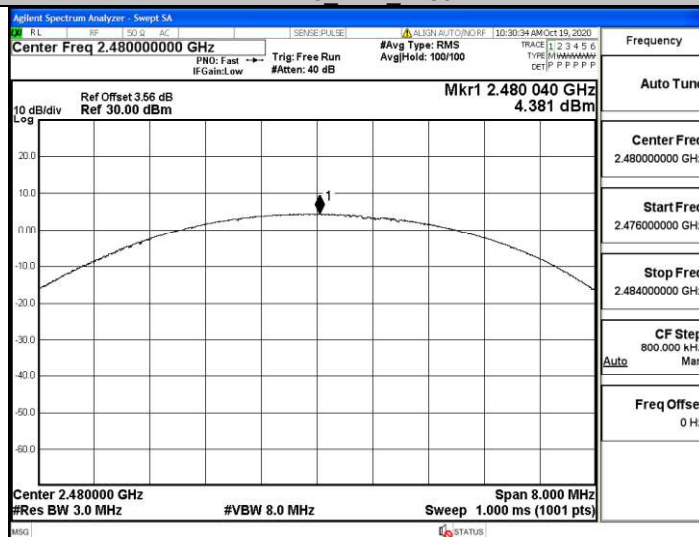
2DH5 Ant1 2402



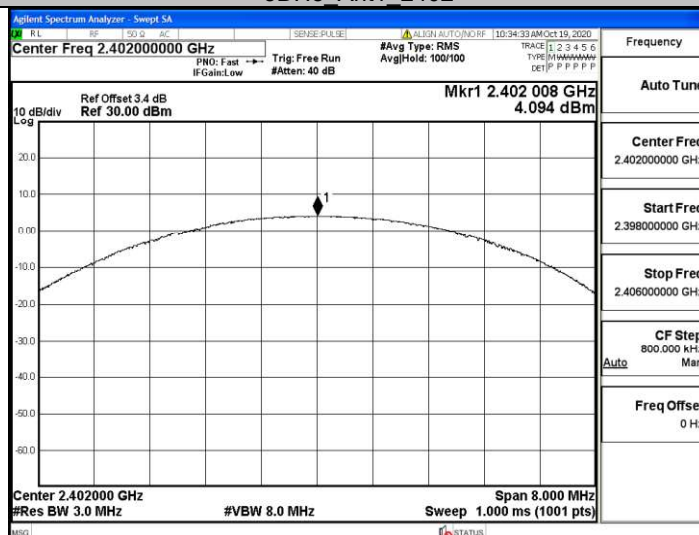
2DH5 Ant1 2441



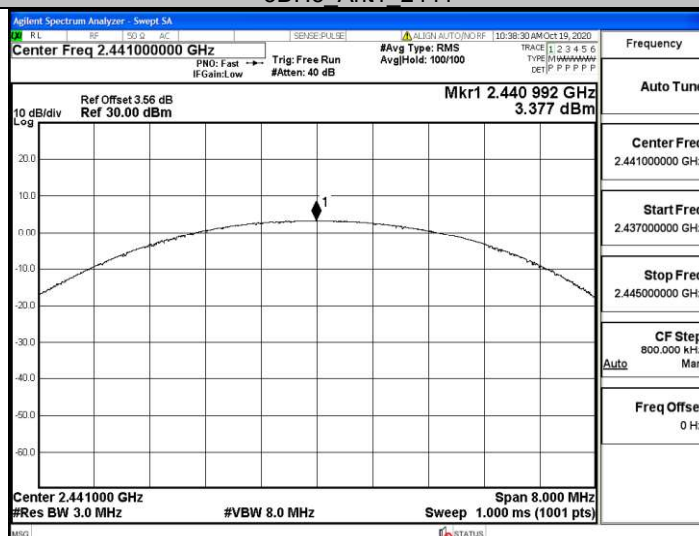
2DH5 Ant1 2480

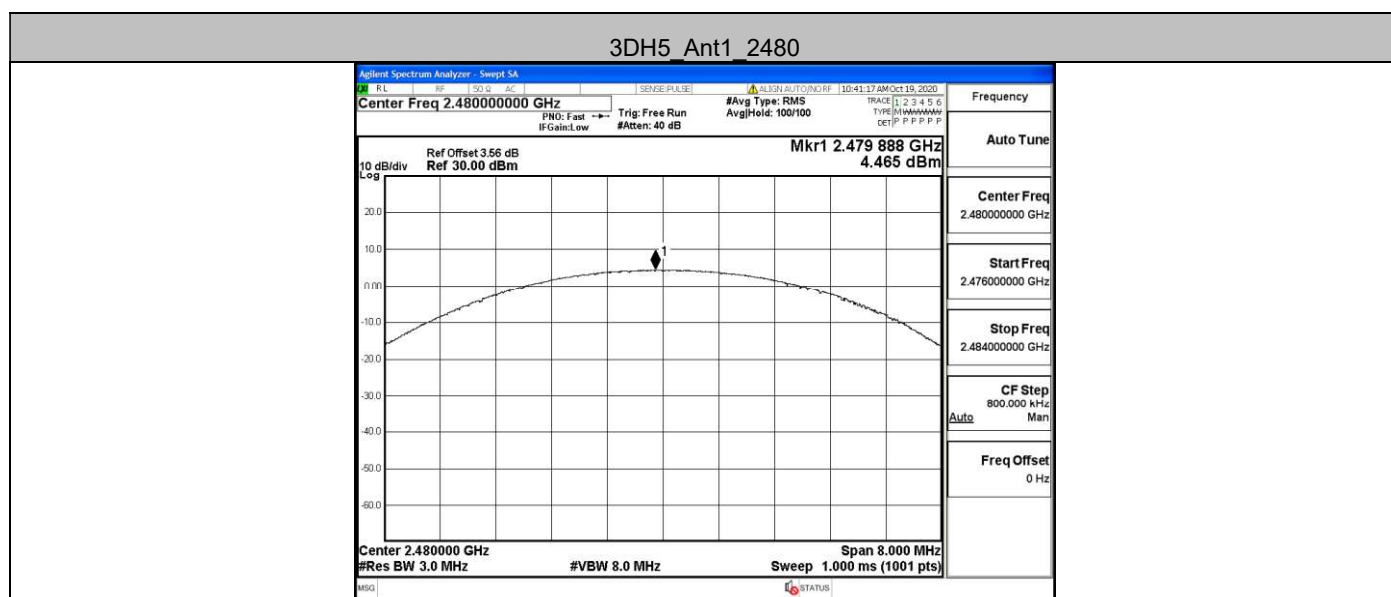


3DH5 Ant1 2402



3DH5 Ant1 2441



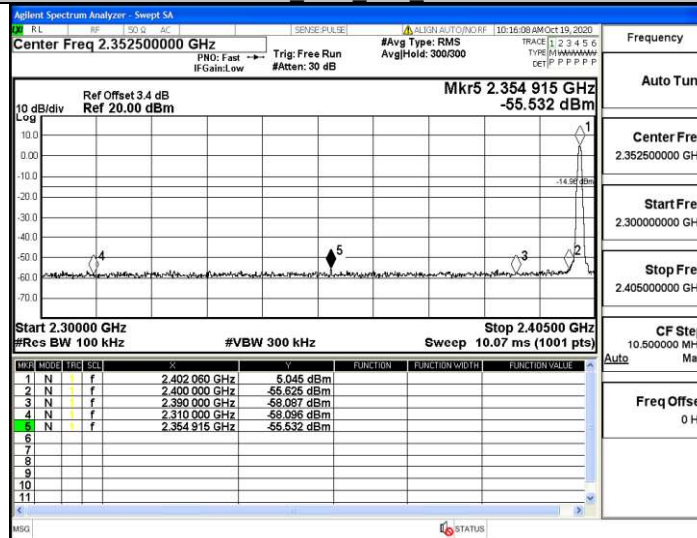


A.6 Band-edge for RF Conducted Emissions

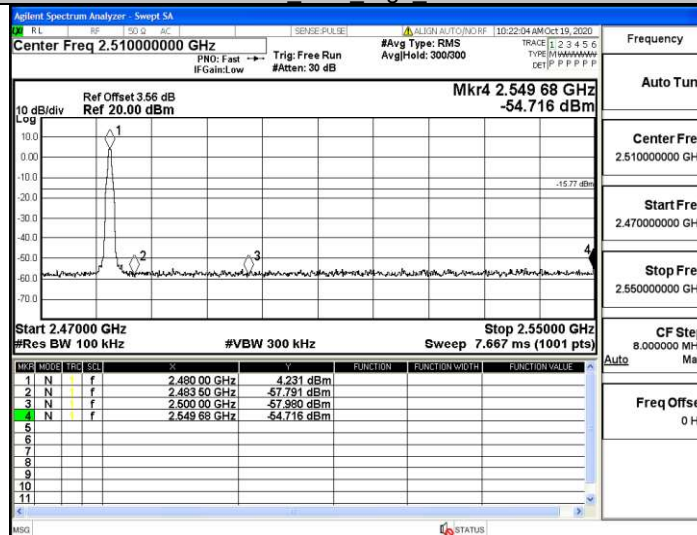
TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	5.05	-55.53	<=-14.96	PASS
		High	2480	4.24	-54.72	<=-15.77	PASS
		Low	Hop_2402	4.03	-56.09	<=-15.96	PASS
		High	Hop_2480	4.05	-54.99	<=-15.94	PASS
2DH5	Ant1	Low	2402	3.57	-55.68	<=-16.42	PASS
		High	2480	4.29	-54.88	<=-15.72	PASS
		Low	Hop_2402	-1.94	-55.69	<=-21.94	PASS
		High	Hop_2480	4.26	-54.35	<=-15.74	PASS
3DH5	Ant1	Low	2402	3.56	-54.54	<=-16.44	PASS
		High	2480	3.36	-54.44	<=-16.64	PASS
		Low	Hop_2402	0.63	-56.42	<=-19.36	PASS
		High	Hop_2480	-0.80	-53.93	<=-20.8	PASS

Test Graph

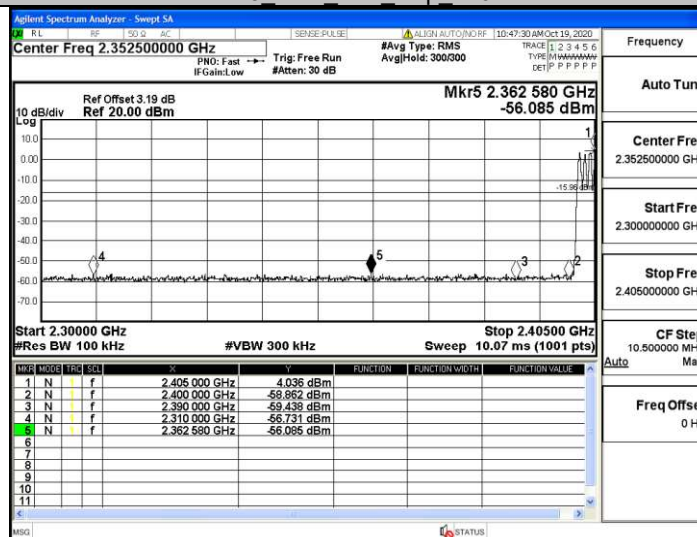
DH5 Ant1 Low 2402



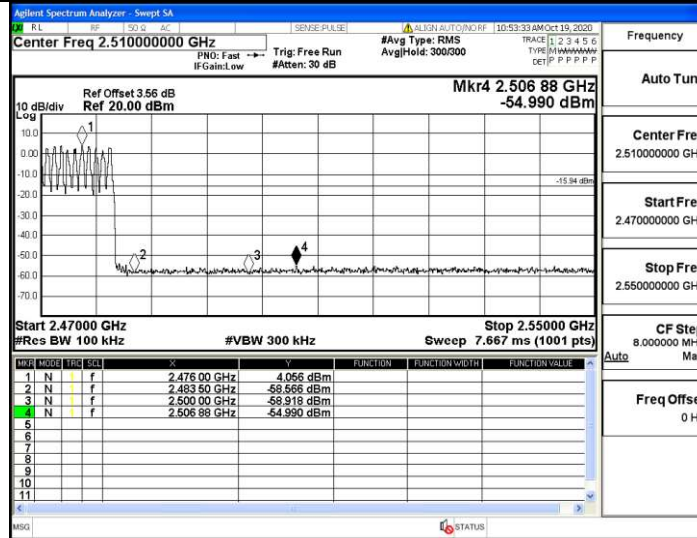
DH5 Ant1 High 2480



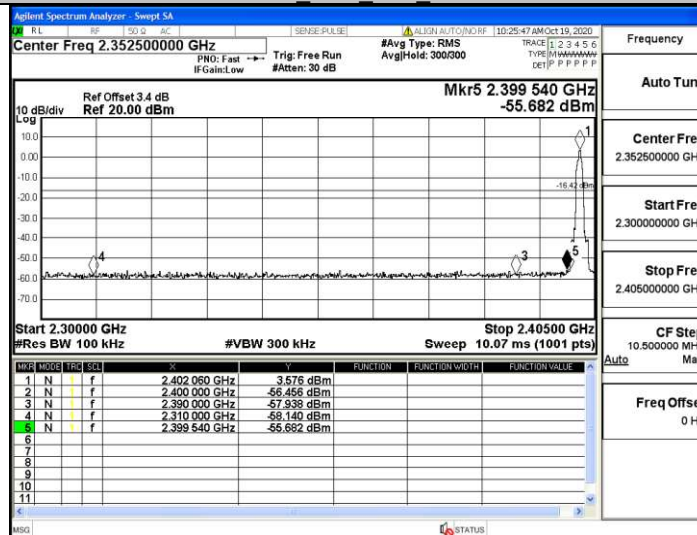
DH5 Ant1 Low Hop 2402



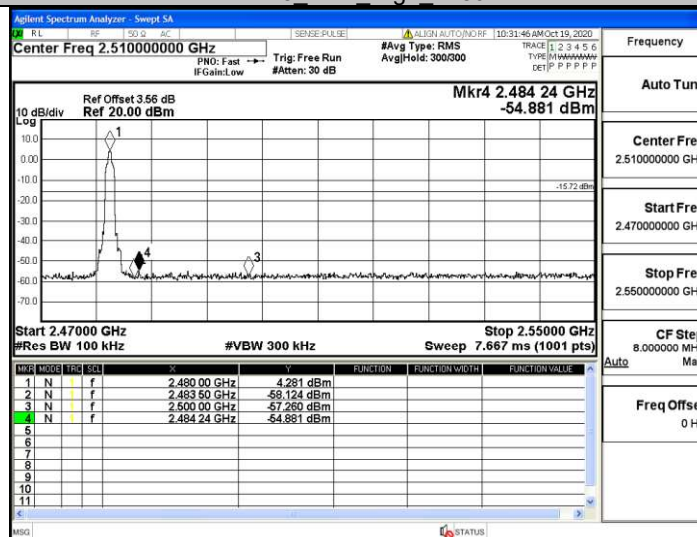
DH5 Ant1_High_Hop_2480



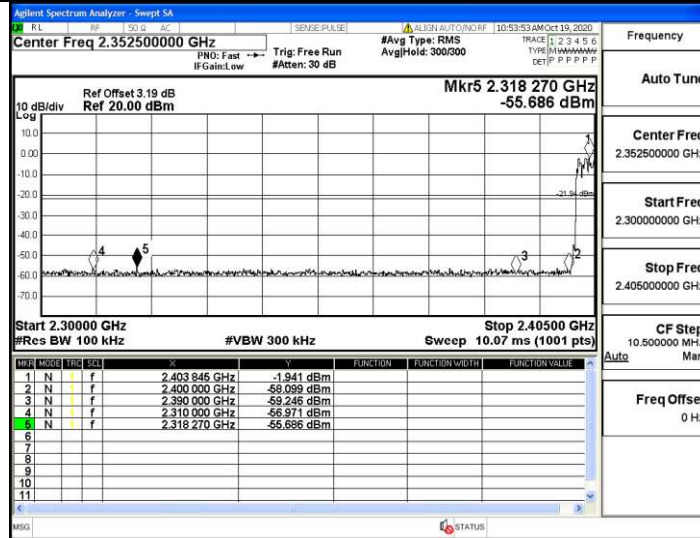
2DH5 Ant1_Low_2402



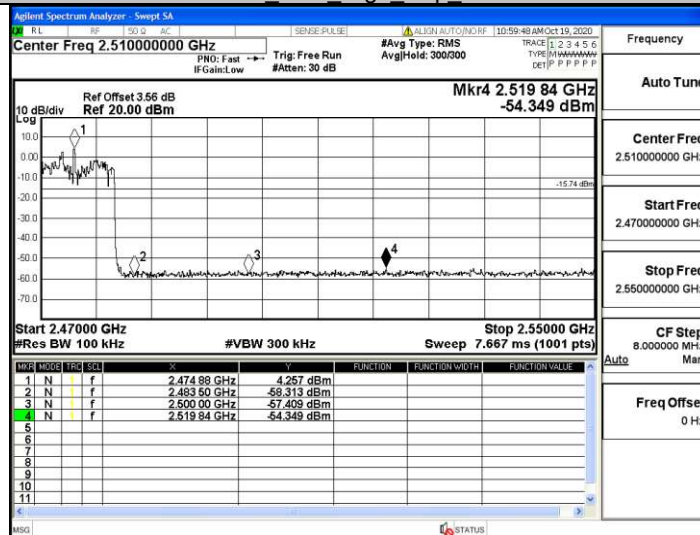
2DH5 Ant1_High_2480



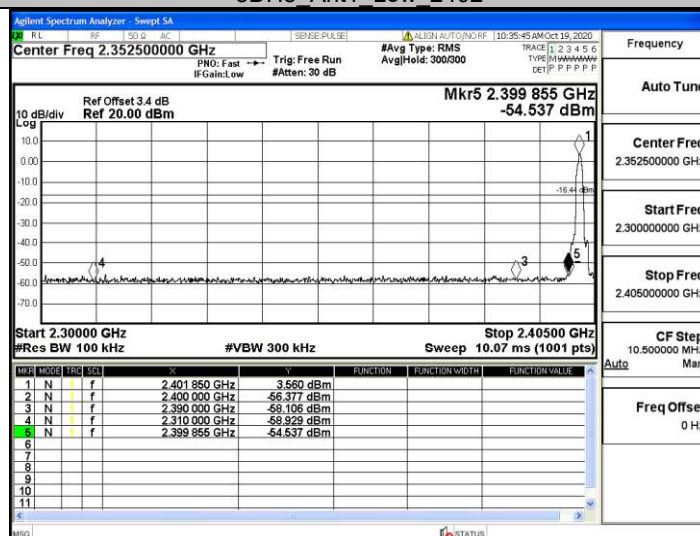
2DH5 Ant1 Low Hop 2402



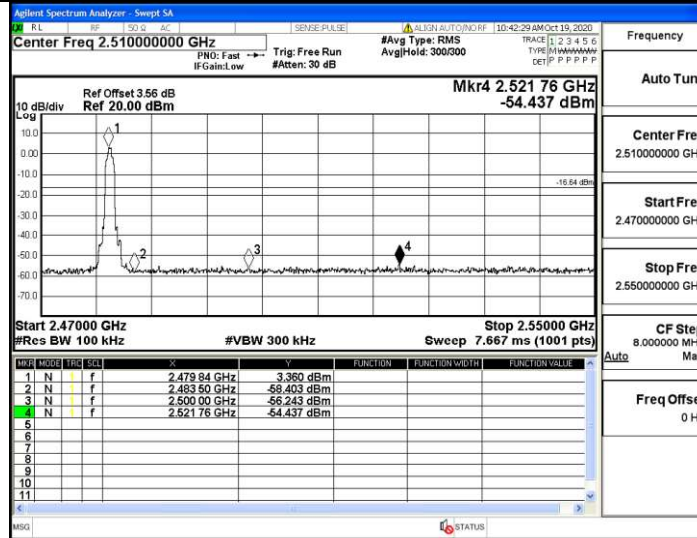
2DH5 Ant1 High Hop 2480



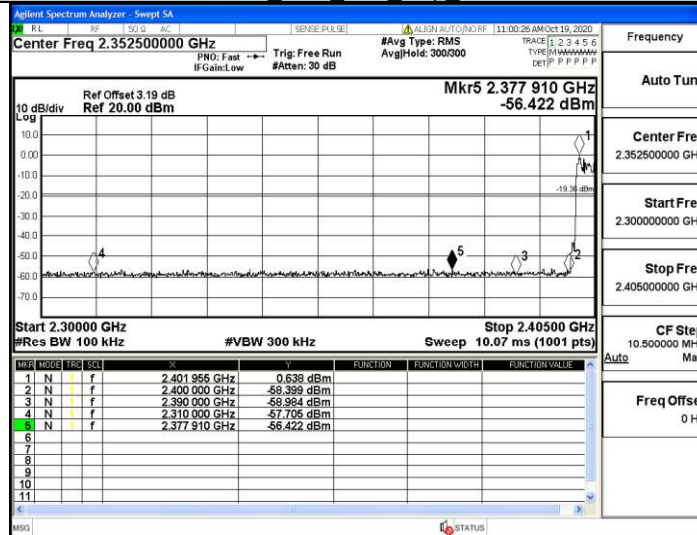
3DH5 Ant1 Low 2402



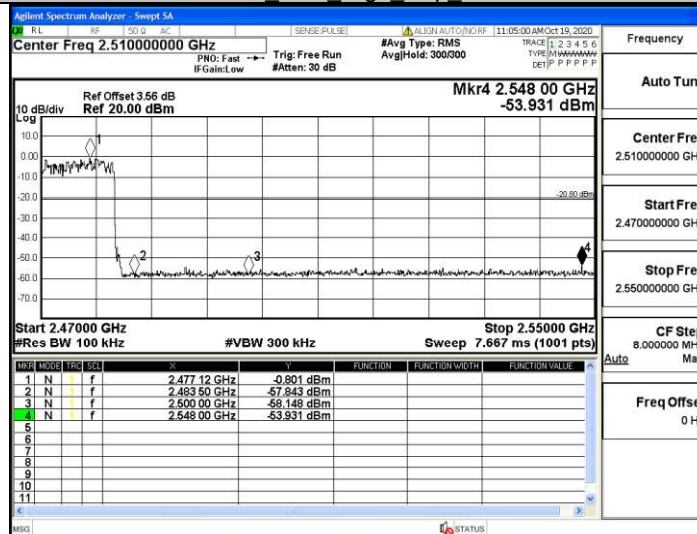
3DH5 Ant1 High 2480



3DH5 Ant1 Low Hop 2402



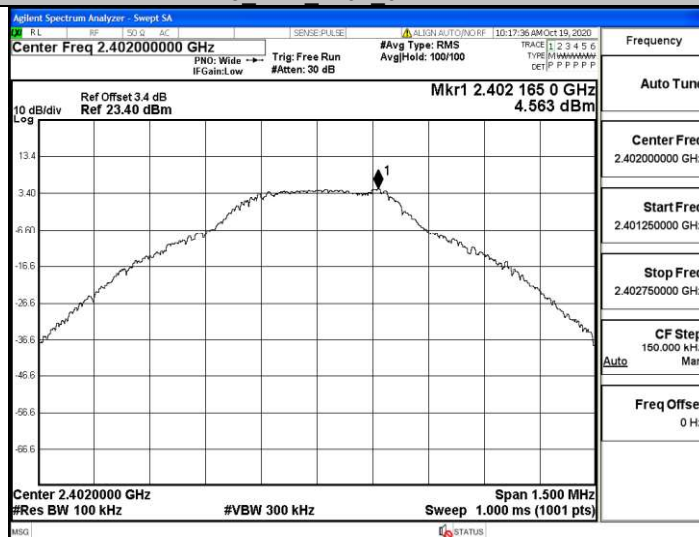
3DH5 Ant1 High Hop 2480



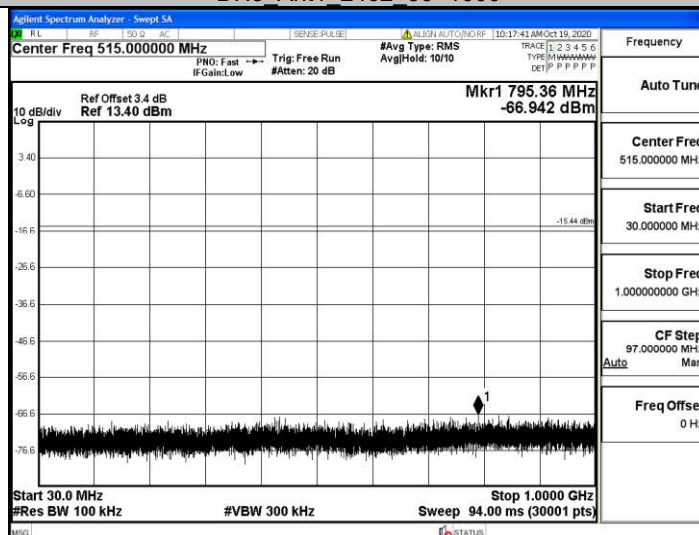
A.7 RF Conducted Spurious Emissions**Test Graph**

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	4.56	4.56	---	PASS
			30~1000	30~1000	-66.942	<=-15.437	PASS
			1000~26500	1000~26500	-55.153	<=-15.437	PASS
		2441	Reference	3.11	3.11	---	PASS
			30~1000	30~1000	-66.151	<=-16.888	PASS
			1000~26500	1000~26500	-54.787	<=-16.888	PASS
		2480	Reference	3.85	3.85	---	PASS
			30~1000	30~1000	-67.056	<=-16.148	PASS
			1000~26500	1000~26500	-57.227	<=-16.148	PASS
2DH5	Ant1	2402	Reference	3.80	3.80	---	PASS
			30~1000	30~1000	-66.802	<=-16.199	PASS
			1000~26500	1000~26500	-56.877	<=-16.199	PASS
		2441	Reference	3.11	3.11	---	PASS
			30~1000	30~1000	-65.809	<=-16.895	PASS
			1000~26500	1000~26500	-57.933	<=-16.895	PASS
		2480	Reference	4.08	4.08	---	PASS
			30~1000	30~1000	-66.912	<=-15.925	PASS
			1000~26500	1000~26500	-57.384	<=-15.925	PASS
3DH5	Ant1	2402	Reference	3.78	3.78	---	PASS
			30~1000	30~1000	-67.206	<=-16.221	PASS
			1000~26500	1000~26500	-58.299	<=-16.221	PASS
		2441	Reference	2.59	2.59	---	PASS
			30~1000	30~1000	-66.028	<=-17.409	PASS
			1000~26500	1000~26500	-57.843	<=-17.409	PASS
		2480	Reference	3.93	3.93	---	PASS
			30~1000	30~1000	-66.862	<=-16.071	PASS
			1000~26500	1000~26500	-57.852	<=-16.071	PASS

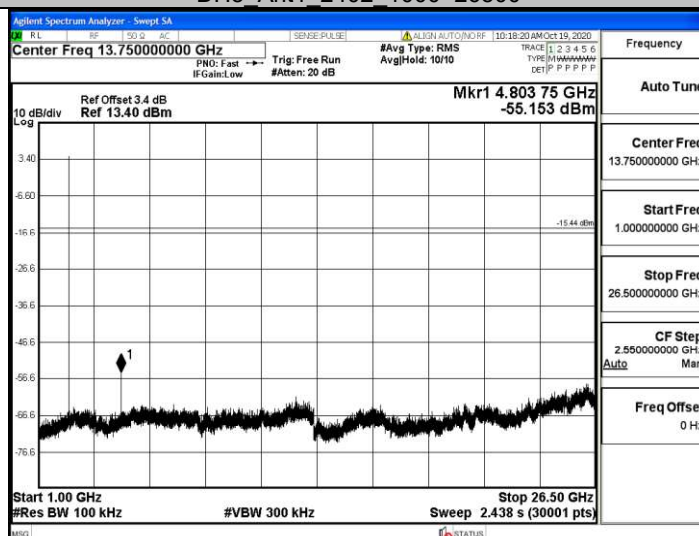
DH5_Ant1_2402_0~Reference



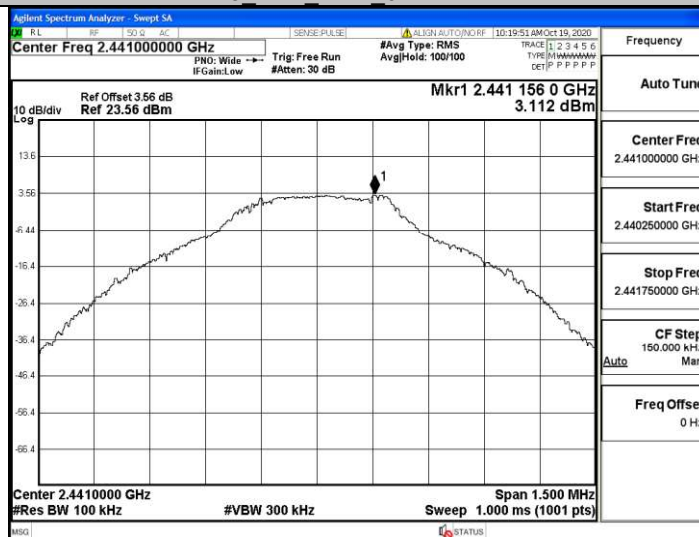
DH5_Ant1_2402_30~1000



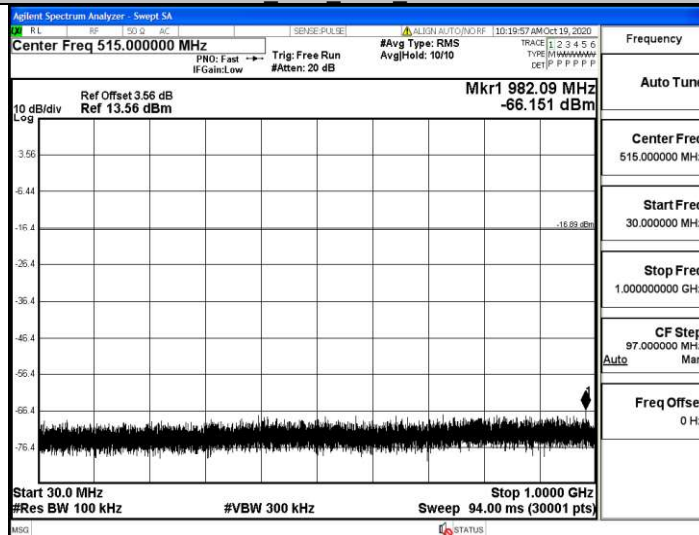
DH5_Ant1_2402_1000~26500



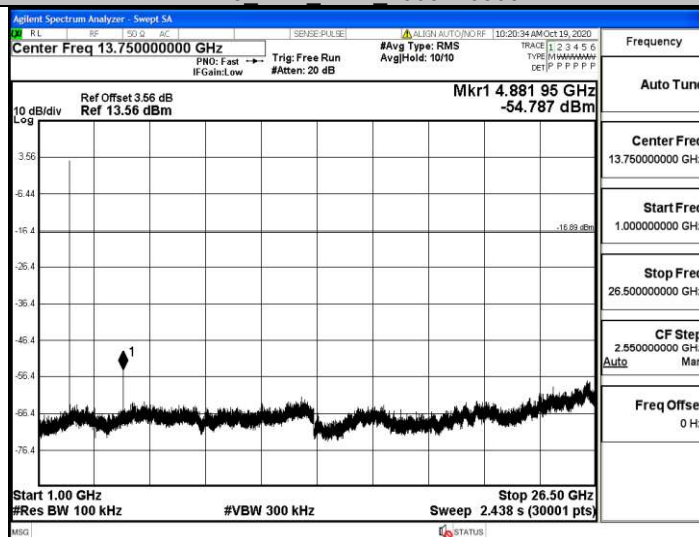
DH5_Ant1_2441_0~Reference



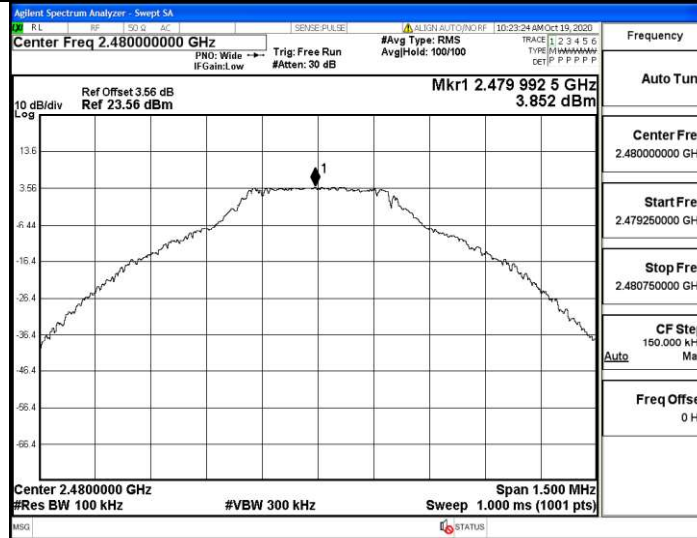
DH5_Ant1_2441_30~1000



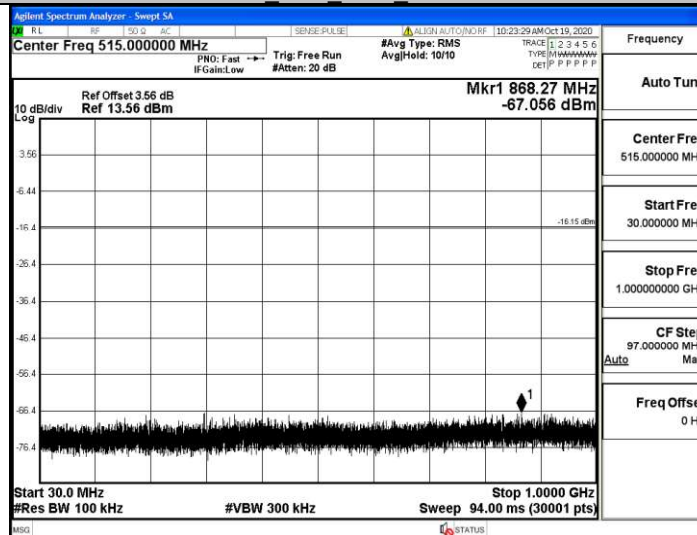
DH5_Ant1_2441_1000~26500



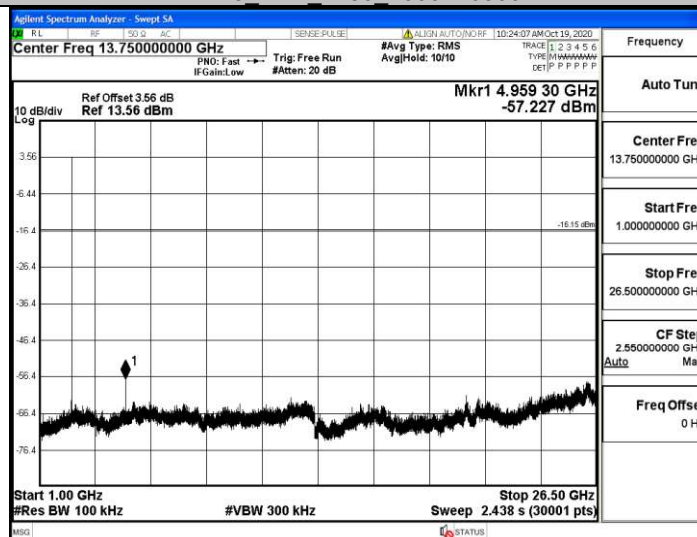
DH5_Ant1_2480_0~Reference



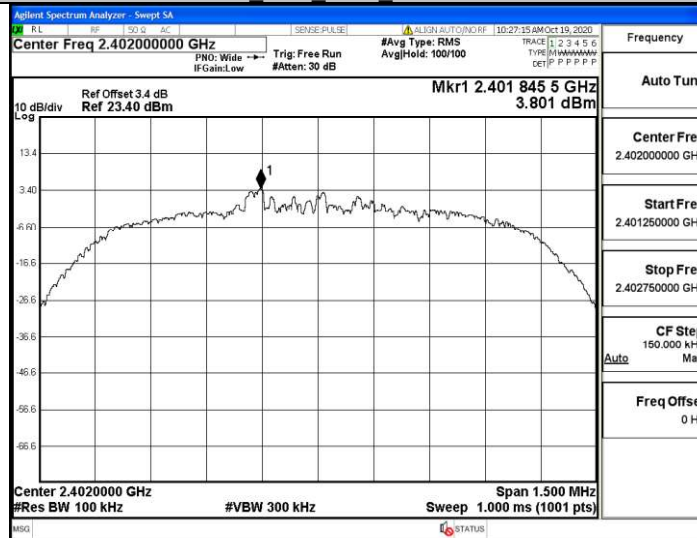
DH5_Ant1_2480_30~1000



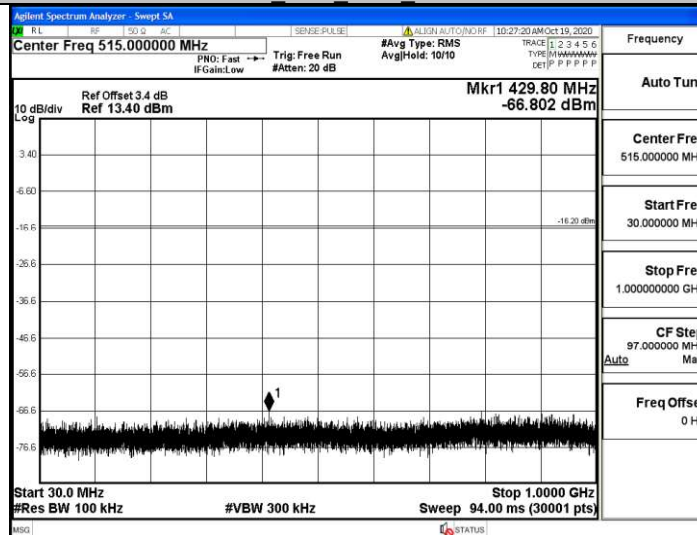
DH5_Ant1_2480_1000~26500



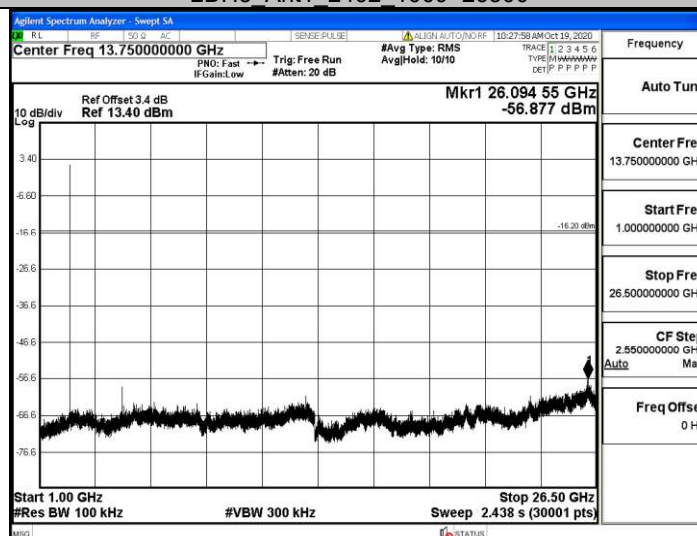
2DH5_Ant1_2402_0~Reference



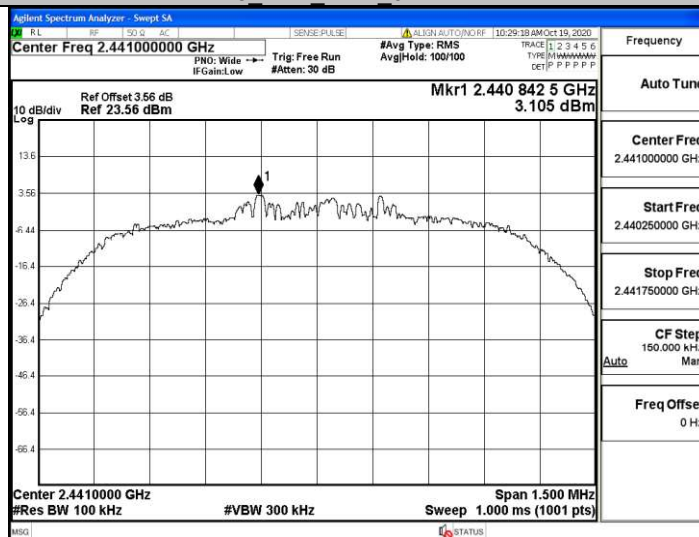
2DH5_Ant1_2402_30~1000



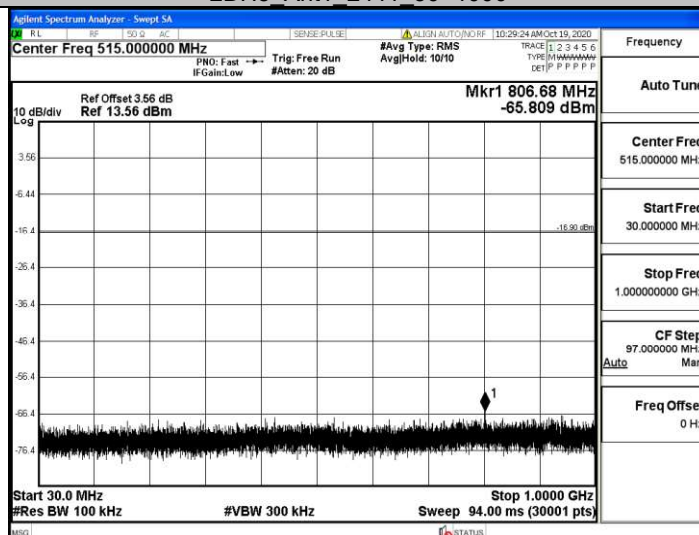
2DH5_Ant1_2402_1000~26500



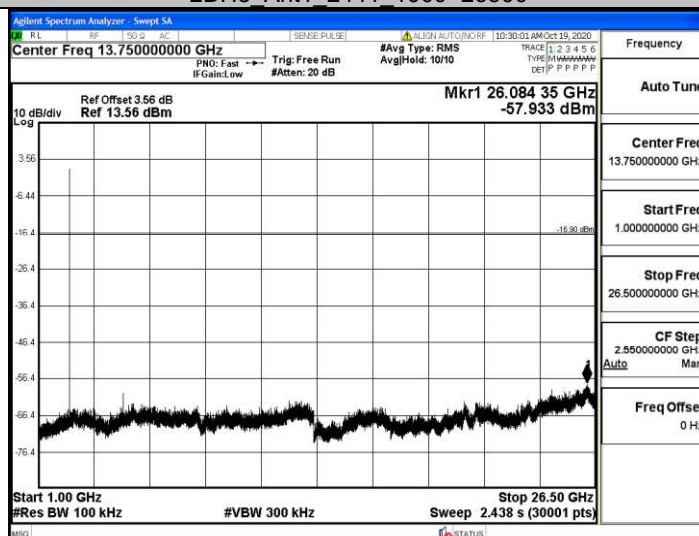
2DH5_Ant1_2441_0~Reference



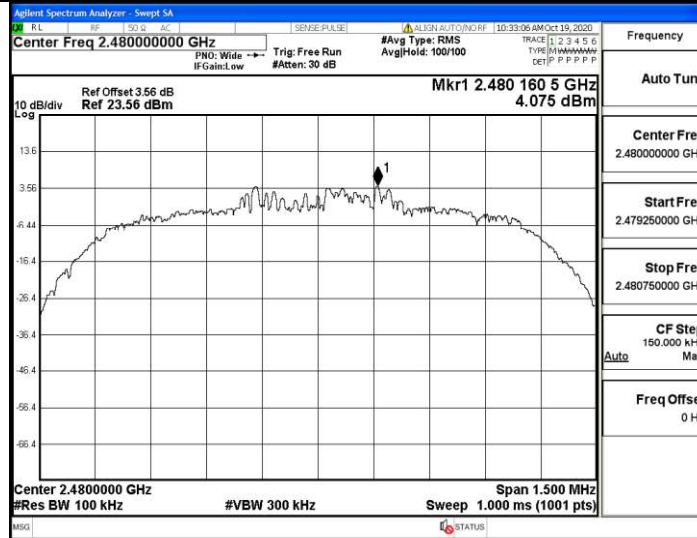
2DH5_Ant1_2441_30~1000



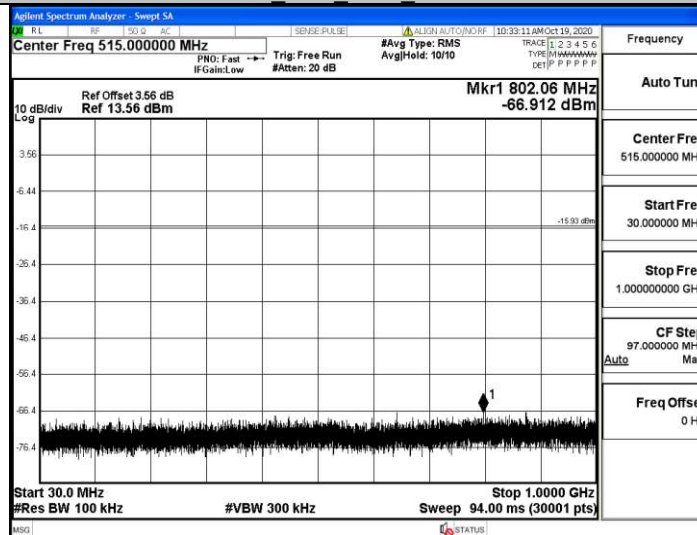
2DH5_Ant1_2441_1000~26500



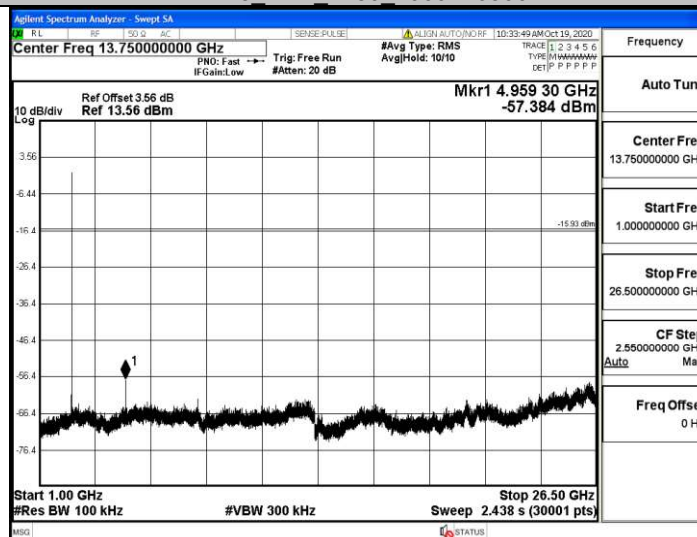
2DH5 Ant1 2480 0~Reference



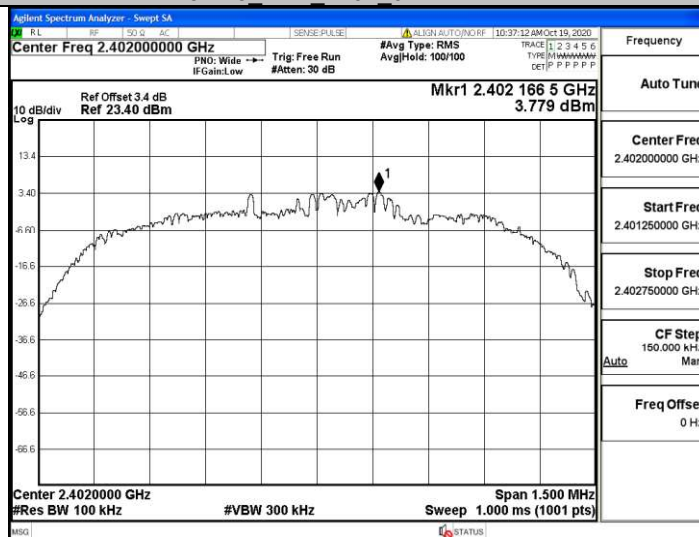
2DH5 Ant1 2480 30~1000



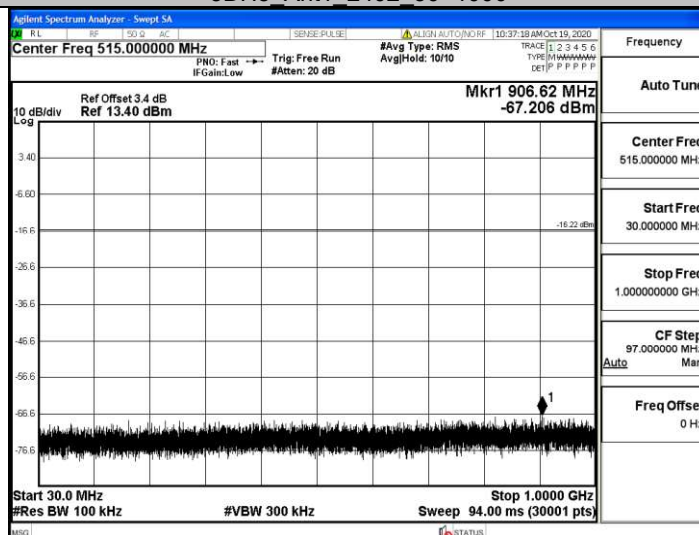
2DH5 Ant1 2480 1000~26500



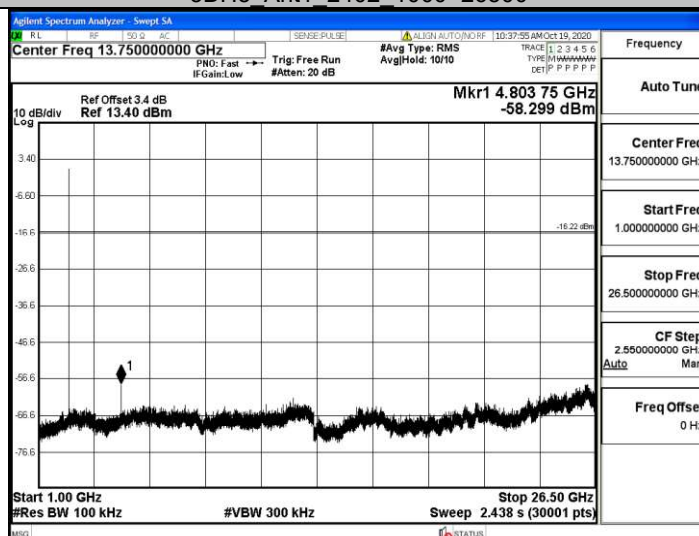
3DH5_Ant1_2402_0~Reference



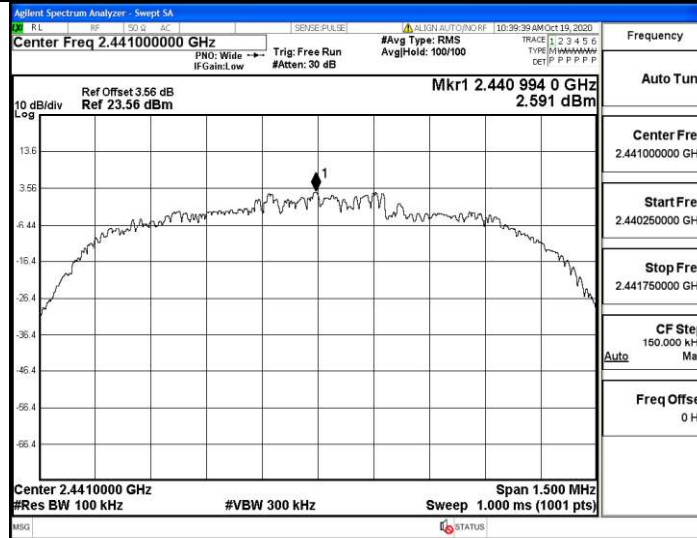
3DH5_Ant1_2402_30~1000



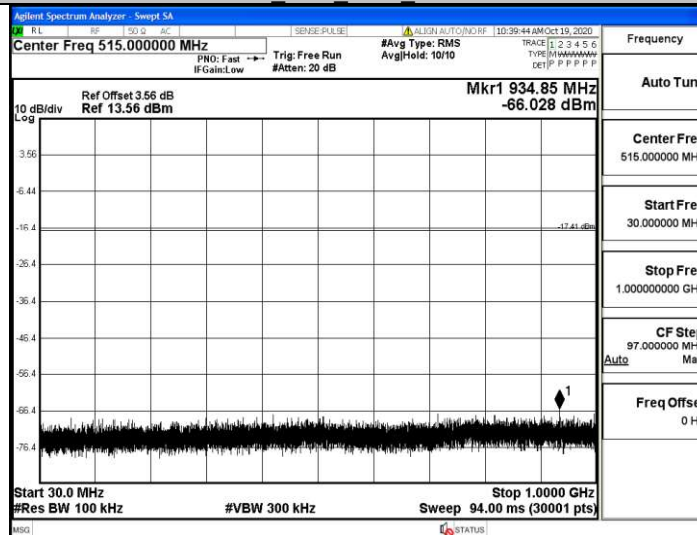
3DH5_Ant1_2402_1000~26500



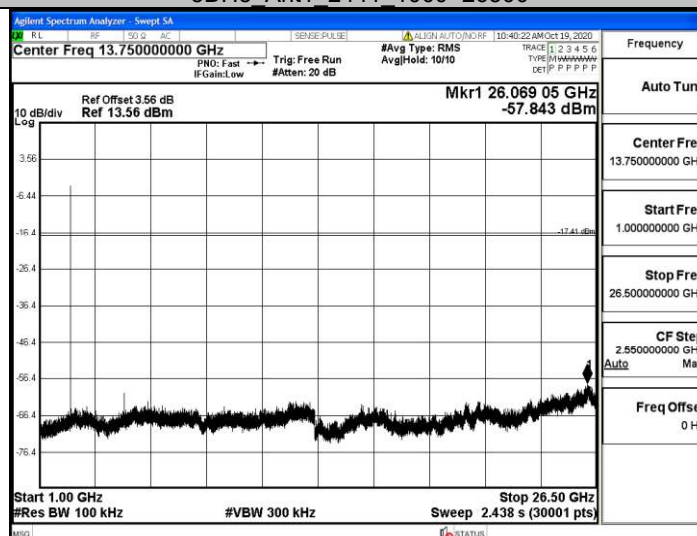
3DH5_Ant1_2441_0~Reference



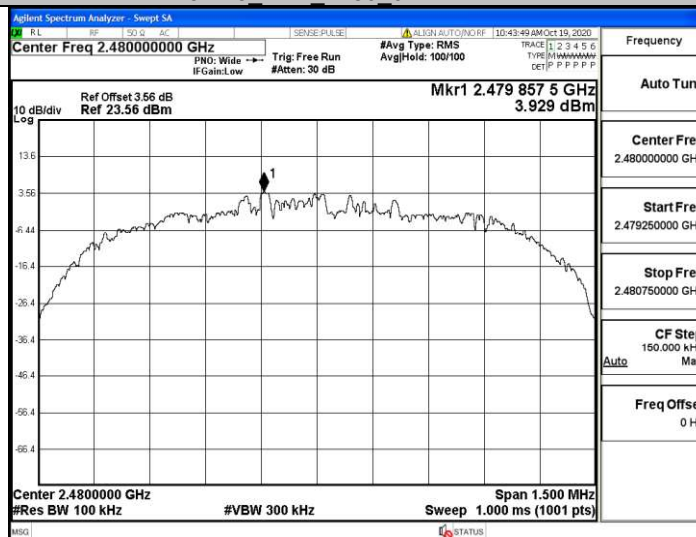
3DH5_Ant1_2441_30~1000



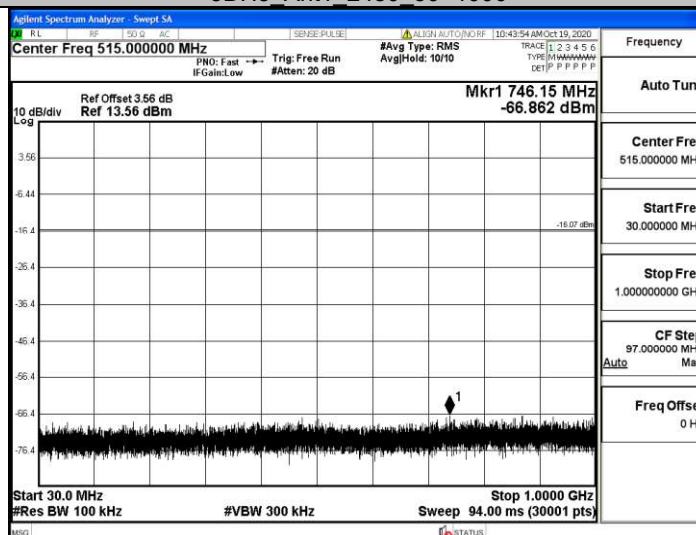
3DH5_Ant1_2441_1000~26500



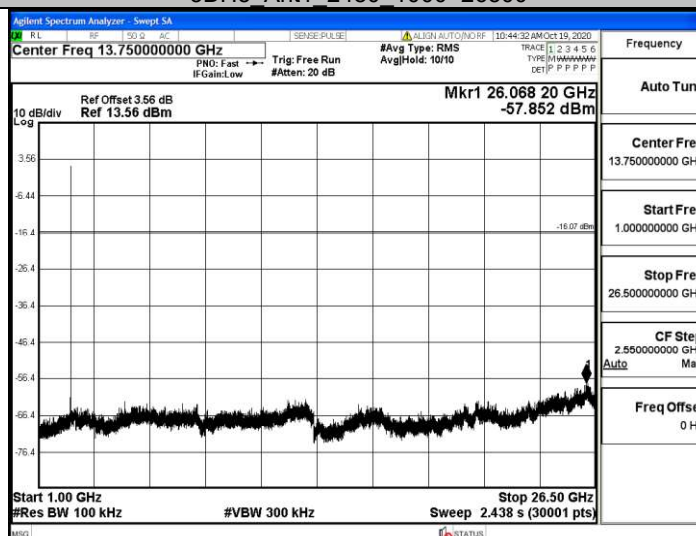
3DH5_Ant1_2480_0~Reference



3DH5_Ant1_2480_30~1000



3DH5_Ant1_2480_1000~26500



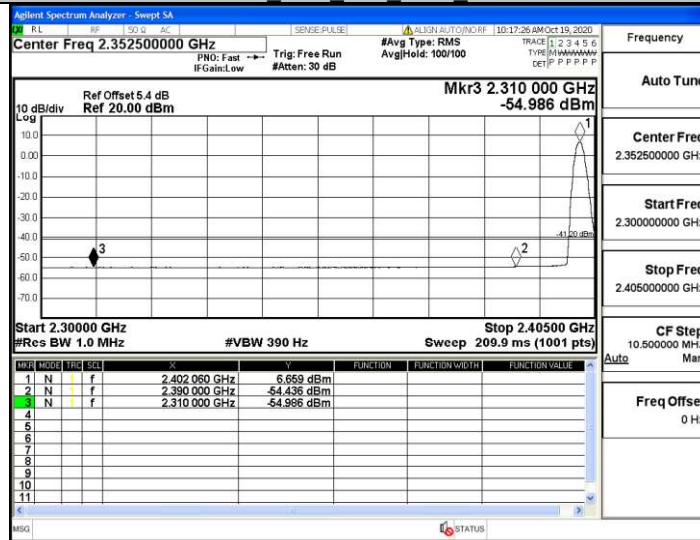
A.8 Restrict-band band-edge measurements

TestMode	Antenna	ChName	Channel	Detector	Freq	Result	Limit	Verdict
DH5	Ant1	Low	2402	AV	2310.000	-54.98	<=-41.20	PASS
				AV	2390.000	-54.43	<=-41.20	PASS
				Peak	2310.000	-48.13	<=-21.20	PASS
				Peak	2390.000	-46.37	<=-21.20	PASS
		High	2480	AV	2483.500	-51.95	<=-41.20	PASS
				AV	2500.000	-53.96	<=-41.20	PASS
				Peak	2483.500	-46.56	<=-21.20	PASS
				Peak	2500.000	-46.33	<=-21.20	PASS
2DH5	Ant1	Low	2402	AV	2310.000	-54.86	<=-41.20	PASS
				AV	2390.000	-54.55	<=-41.20	PASS
				Peak	2310.000	-47.31	<=-21.20	PASS
				Peak	2390.000	-47.35	<=-21.20	PASS
		High	2480	AV	2483.500	-51.51	<=-41.20	PASS
				AV	2500.000	-53.83	<=-41.20	PASS
				Peak	2483.500	-46.44	<=-21.20	PASS
				Peak	2500.000	-45.75	<=-21.20	PASS
3DH5	Ant1	Low	2402	AV	2310.000	-54.50	<=-41.20	PASS
				AV	2390.000	-54.48	<=-41.20	PASS
				Peak	2310.000	-48.94	<=-21.20	PASS
				Peak	2390.000	-47.49	<=-21.20	PASS
		High	2480	AV	2483.500	-51.37	<=-41.20	PASS
				AV	2500.000	-53.84	<=-41.20	PASS
				Peak	2483.500	-46.04	<=-21.20	PASS
				Peak	2500.000	-44.58	<=-21.20	PASS

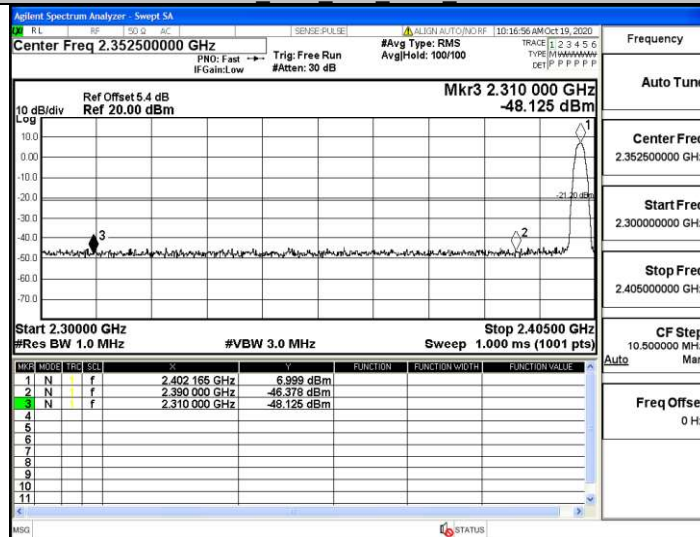
1. The Antenna Gain is compensated in the graph with 2dBi and Antenna Gain which is Higher.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs

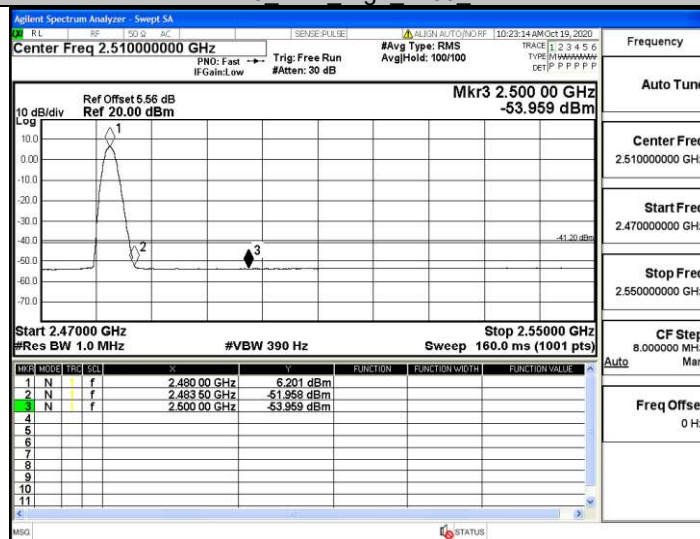
DH5 Ant1 Low 2402 AV



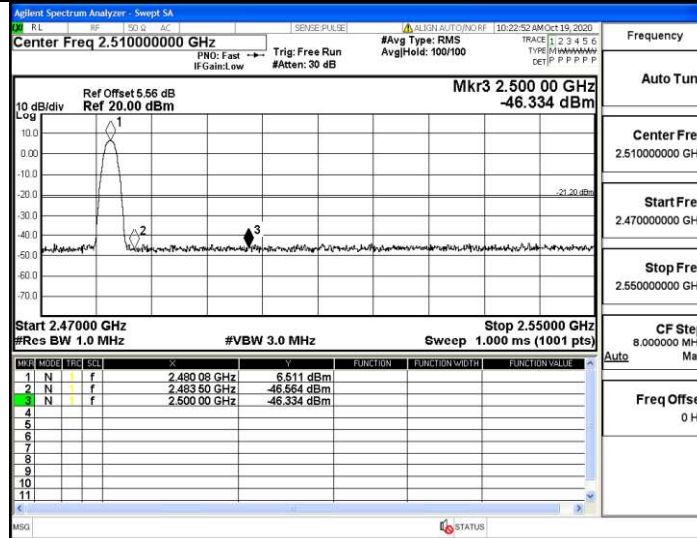
DH5 Ant1 Low 2402 Peak



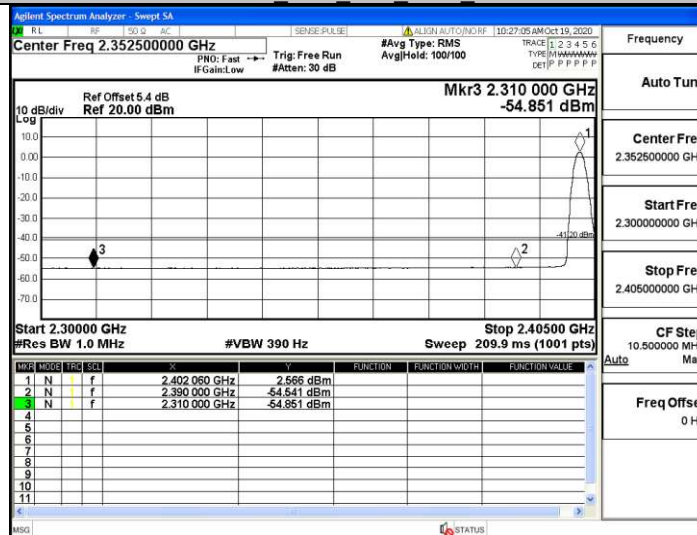
DH5 Ant1 High 2480 AV



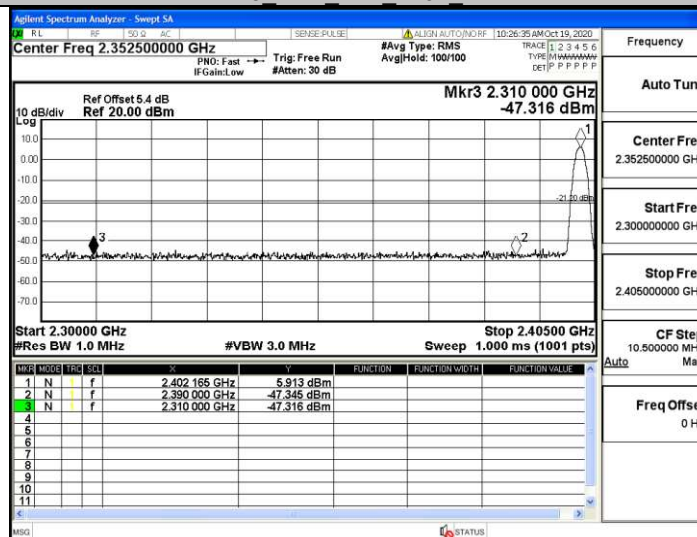
DH5 Ant1 High 2480 Peak



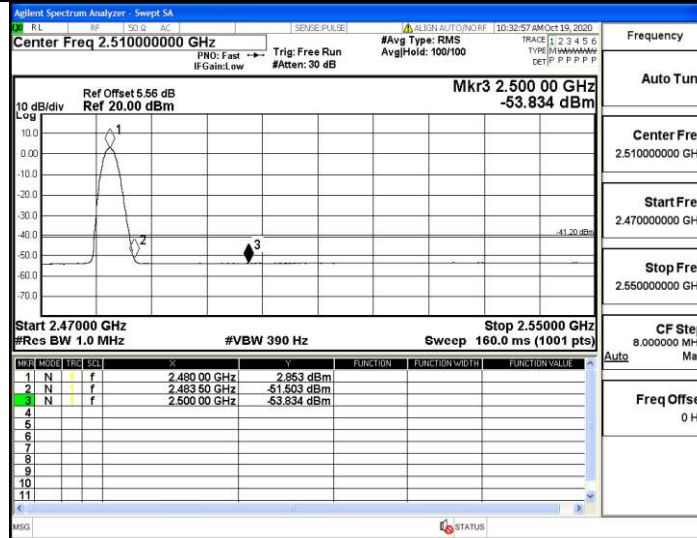
2DH5 Ant1 Low 2402 AV



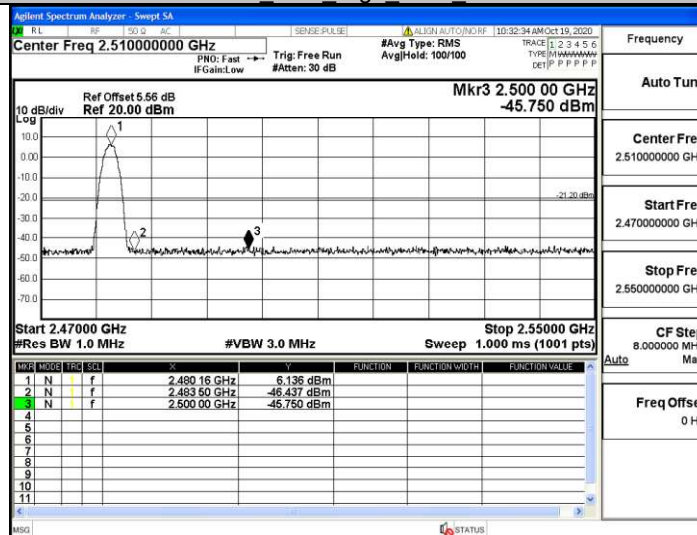
2DH5 Ant1 Low 2402 Peak



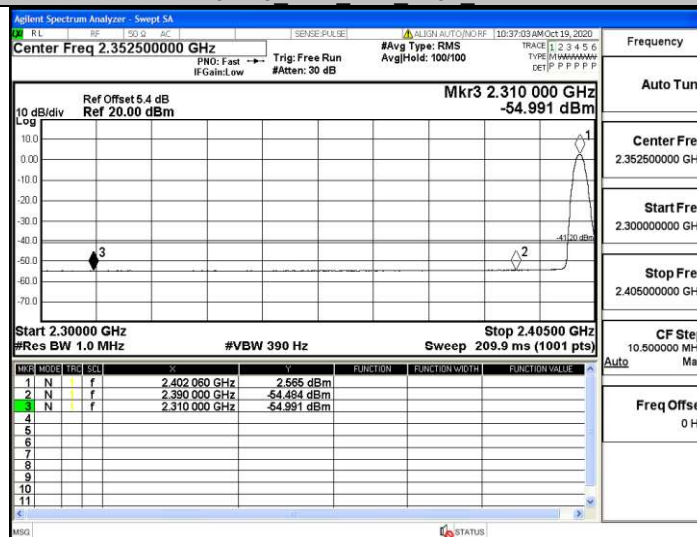
2DH5 Ant1 High 2480 AV



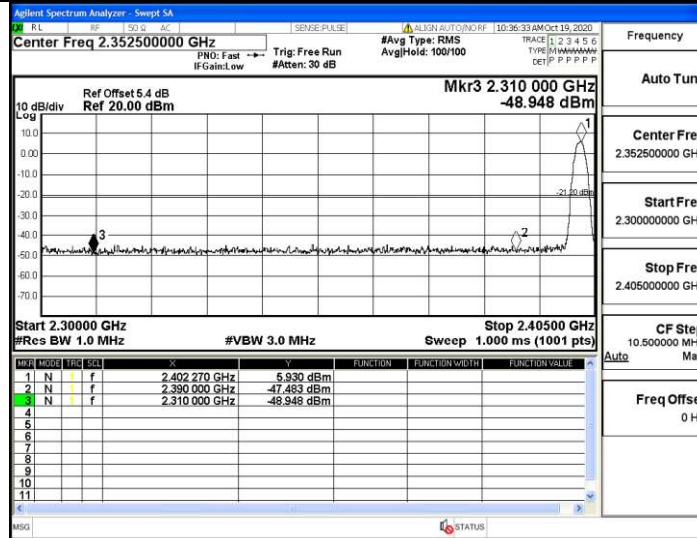
2DH5 Ant1 High 2480 Peak



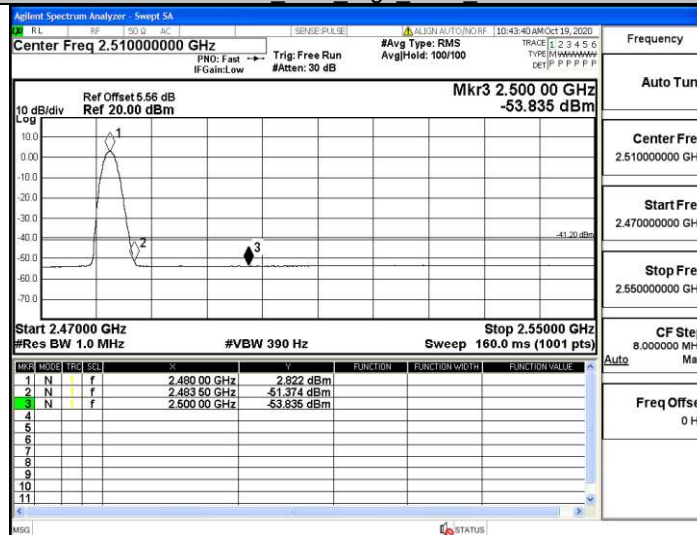
3DH5 Ant1 Low 2402 AV



3DH5 Ant1 Low 2402 Peak



3DH5 Ant1 High 2480 AV



3DH5 Ant1 High 2480 Peak

