

Appendix A

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

Product Name: Bluetooth Speaker
Trade Mark: Realtree, MUZE, Vivitar

Test Model: RLT5005
FCC ID: 2AL9B-RLT5005

Environmental Conditions

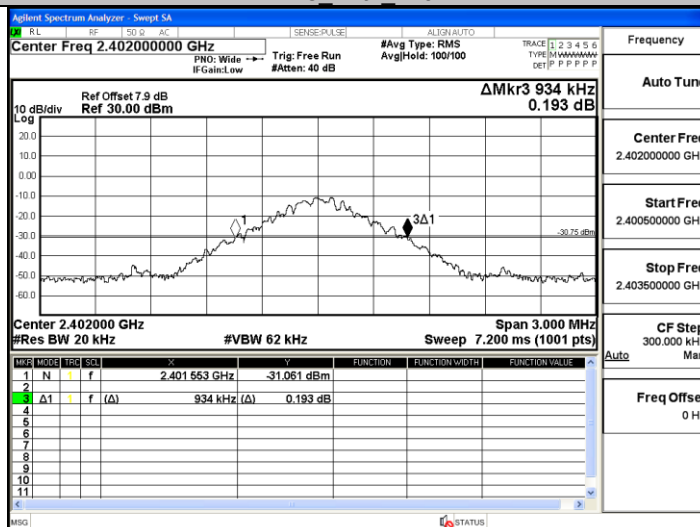
Temperature:	22.8° C
Relative Humidity:	56%
ATM Pressure:	100.0 kPa
Test Engineer:	Anna Hu
Supervised by:	Hugo Chen

A.1 20 dB Bandwidth

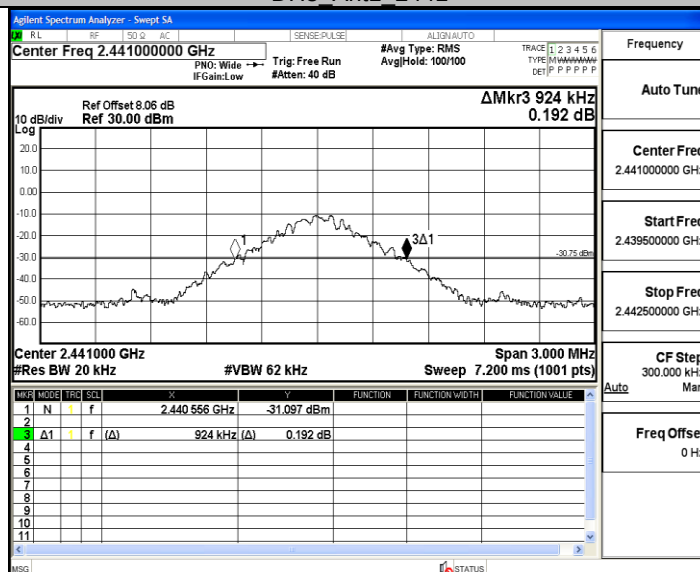
TestMode	Antenna	Channel	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.934	2401.553	2402.489	---	PASS
		2441	0.924	2440.556	2441.480	---	PASS
		2480	0.927	2479.562	2480.489	---	PASS
2DH5	Ant1	2402	1.278	2401.358	2402.636	---	PASS
		2441	1.338	2440.346	2441.684	---	PASS
		2480	1.287	2479.358	2480.645	---	PASS

Test Graph

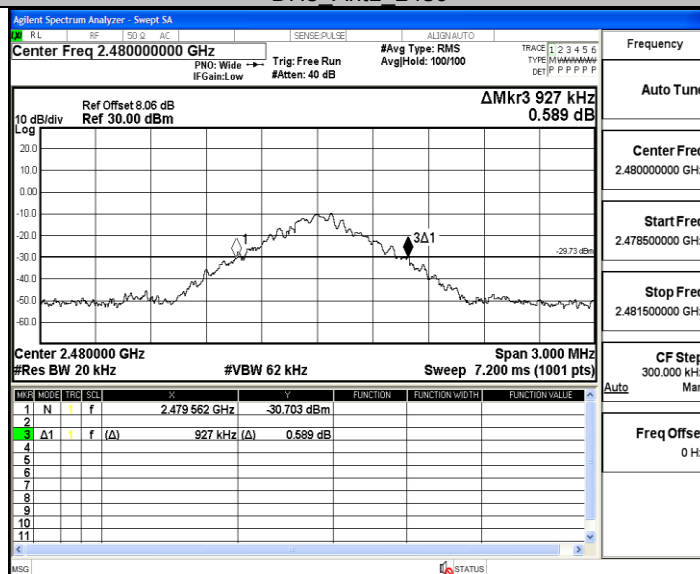
DH5_Ant1_2402



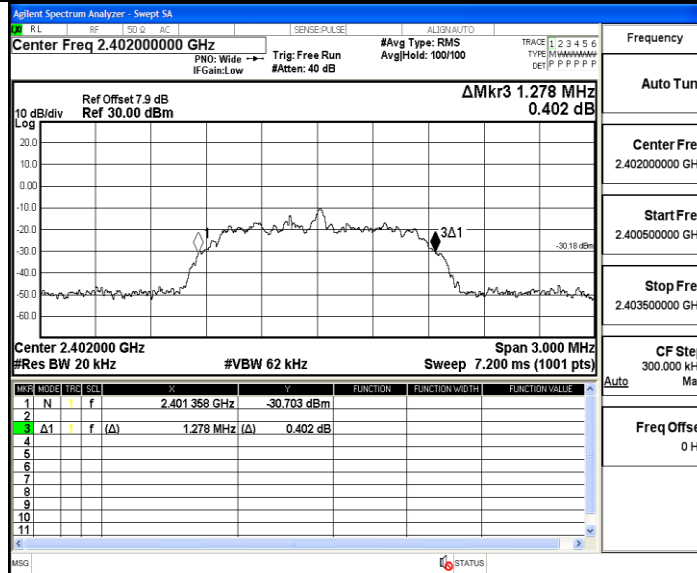
DH5_Ant1_2441



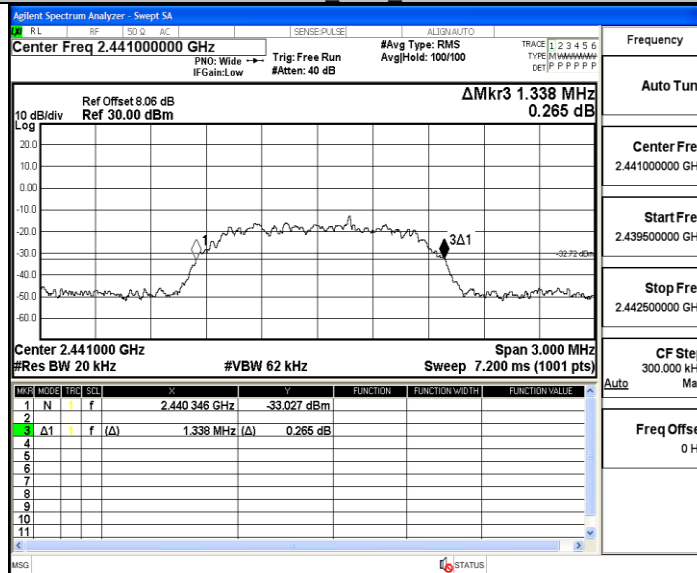
DH5_Ant1_2480



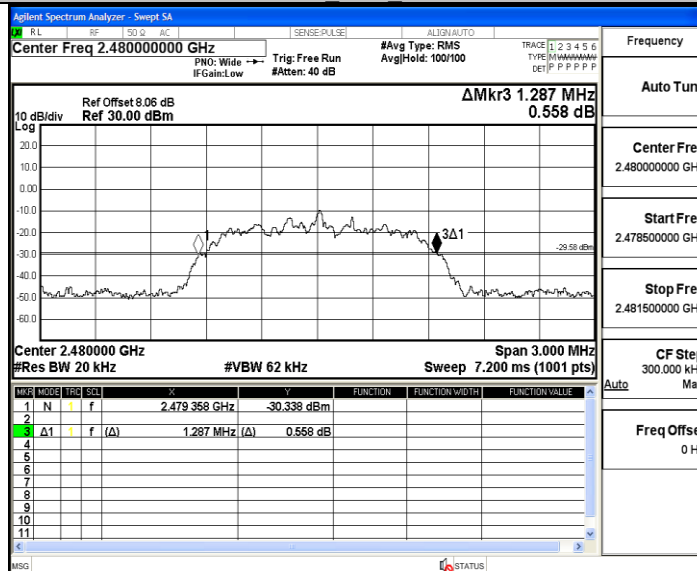
2DH5 Ant1_2402



2DH5 Ant1_2441



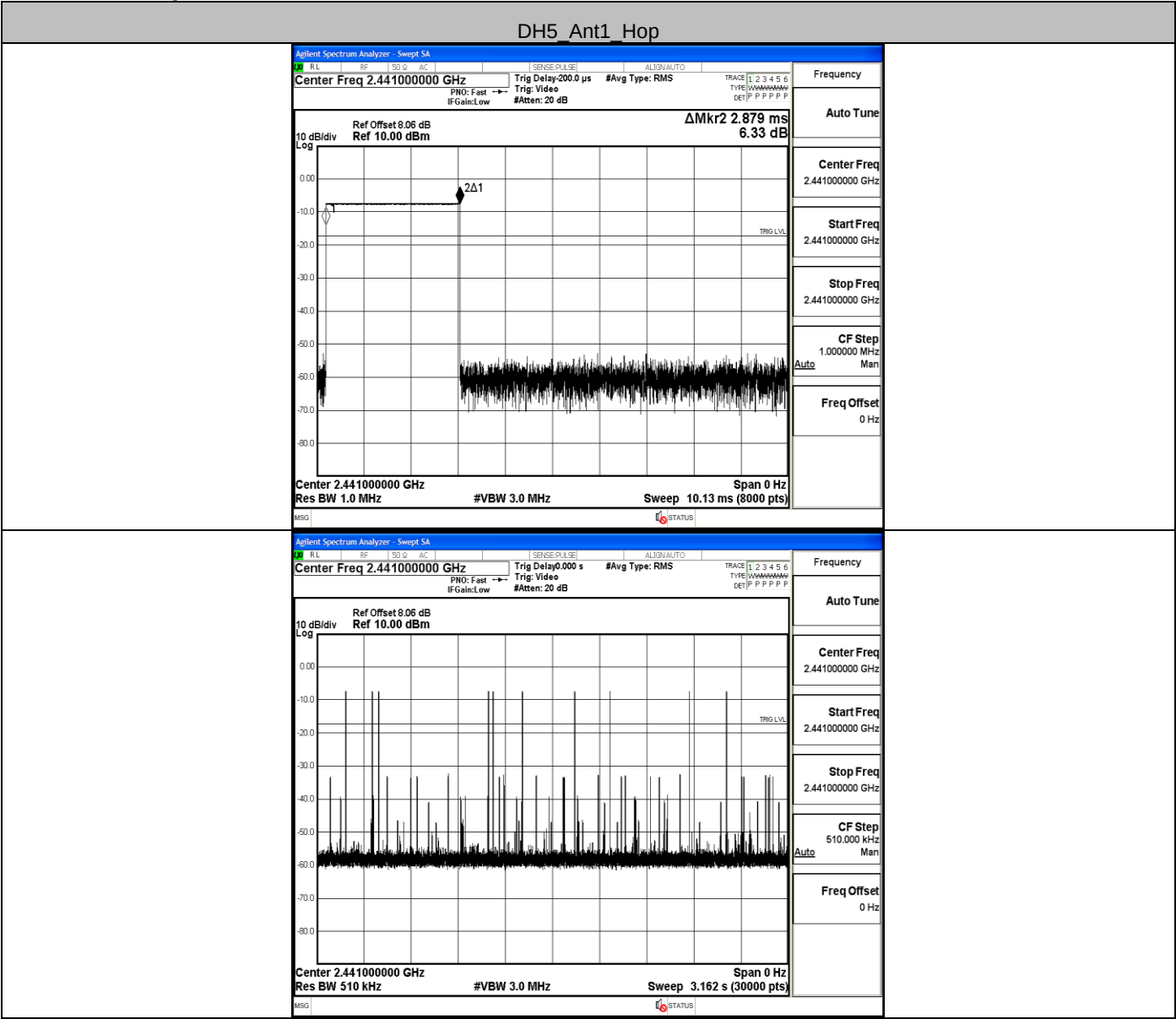
2DH5 Ant1_2480



A.2 Dwell Time

TestMode	Antenna	Channel	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH5	Ant1	Hop	2.88	110	0.317	≤0.4	PASS
2DH5	Ant1	Hop	2.88	70	0.202	≤0.4	PASS

Test Graph



Agilent Spectrum Analyzer - Sweep SA

RL

RF

SD

AC

SENSE:PULSE

ALIGN:AUTO

TRIGGER:1 2 3 4 5 6

TYPE:WMMWWMMW

DET:P P P P P P

Center Freq 2.441000000 GHz

Trig Delay:0.000 s

#Avg Type: RMS

PNO: Fast

IFGain:Low

Trig: Video

#Atten: 20 dB

Ref Offset:8.06 dB

Ref 10.00 dBm

TRIG LVL

10 dB/div

Log

0.00

-10.0

-20.0

-30.0

-40.0

-50.0

-60.0

-70.0

-80.0

Center 2.441000000 GHz

Res BW 510 kHz

#VBW 3.0 MHz

Sweep 3.162 s (30000 pts)

Span 0 Hz

MSG

STATUS

Frequency

Auto Tune

Center Freq
2.441000000 GHz

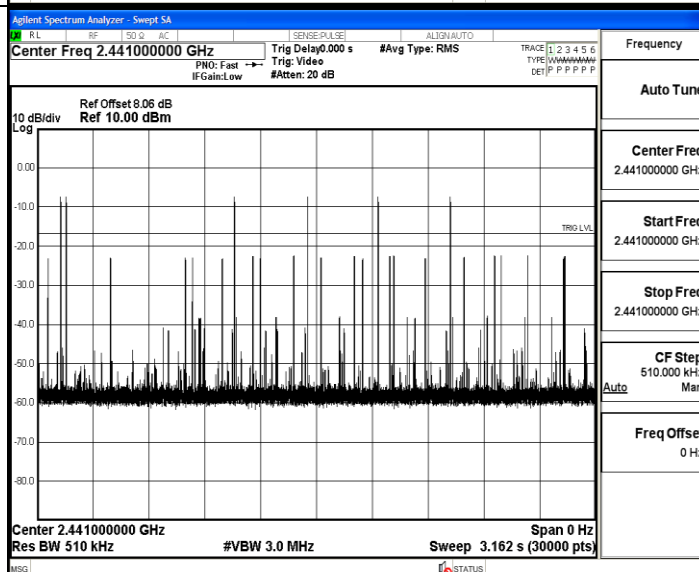
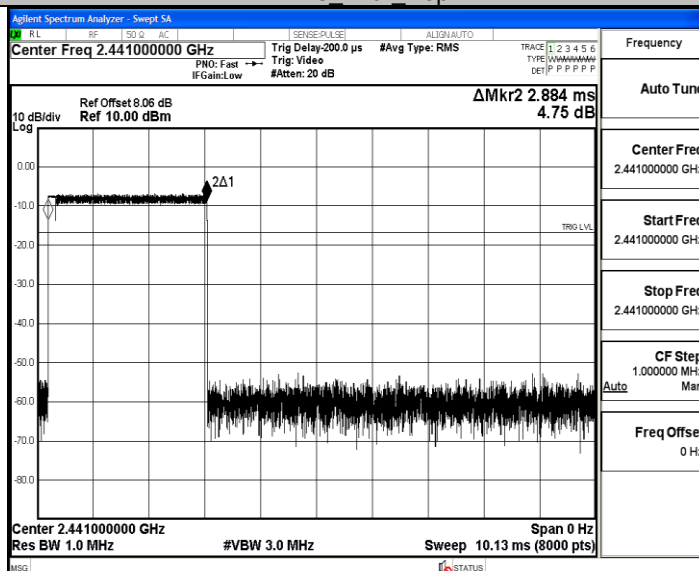
Start Freq
2.441000000 GHz

Stop Freq
2.441000000 GHz

CF Step
510.000 kHz
Man

Freq Offset
0 Hz

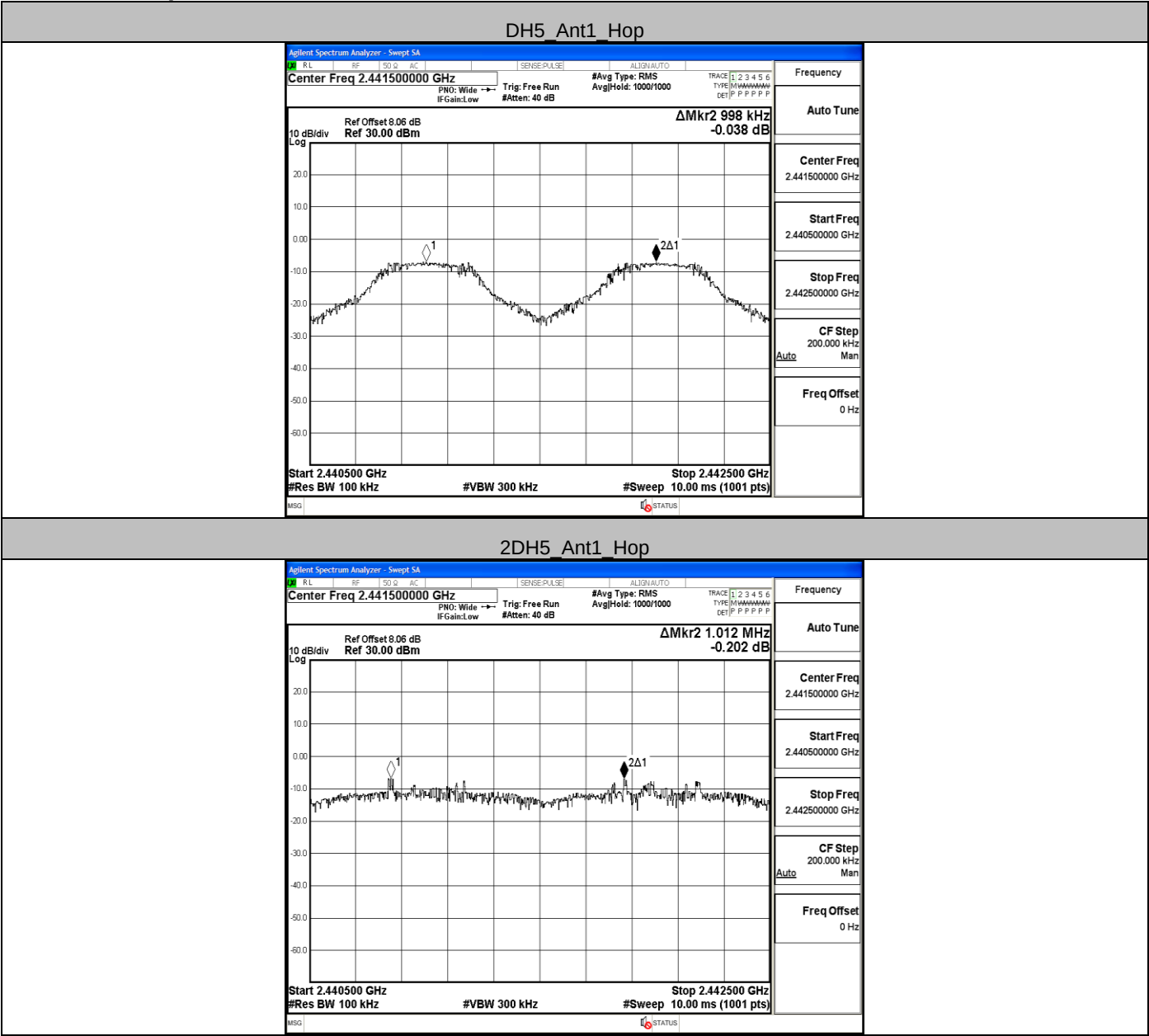
2DH5_Ant1_Hop



A.3 Carrier Frequency Separation

TestMode	Antenna	Channel	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	0.998	≥ 0.936	PASS
2DH5	Ant1	Hop	1.012	≥ 0.892	PASS

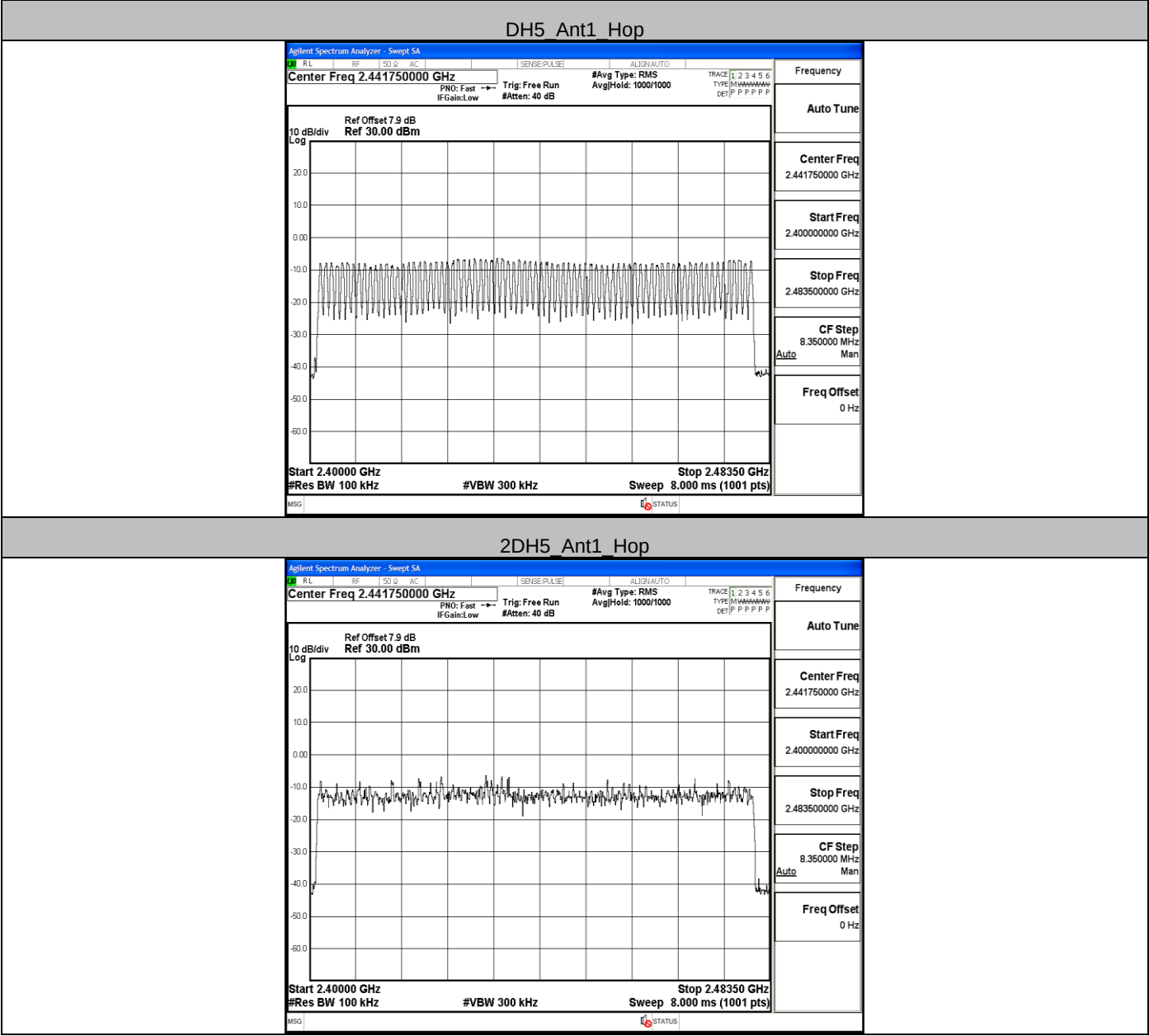
Test Graph



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

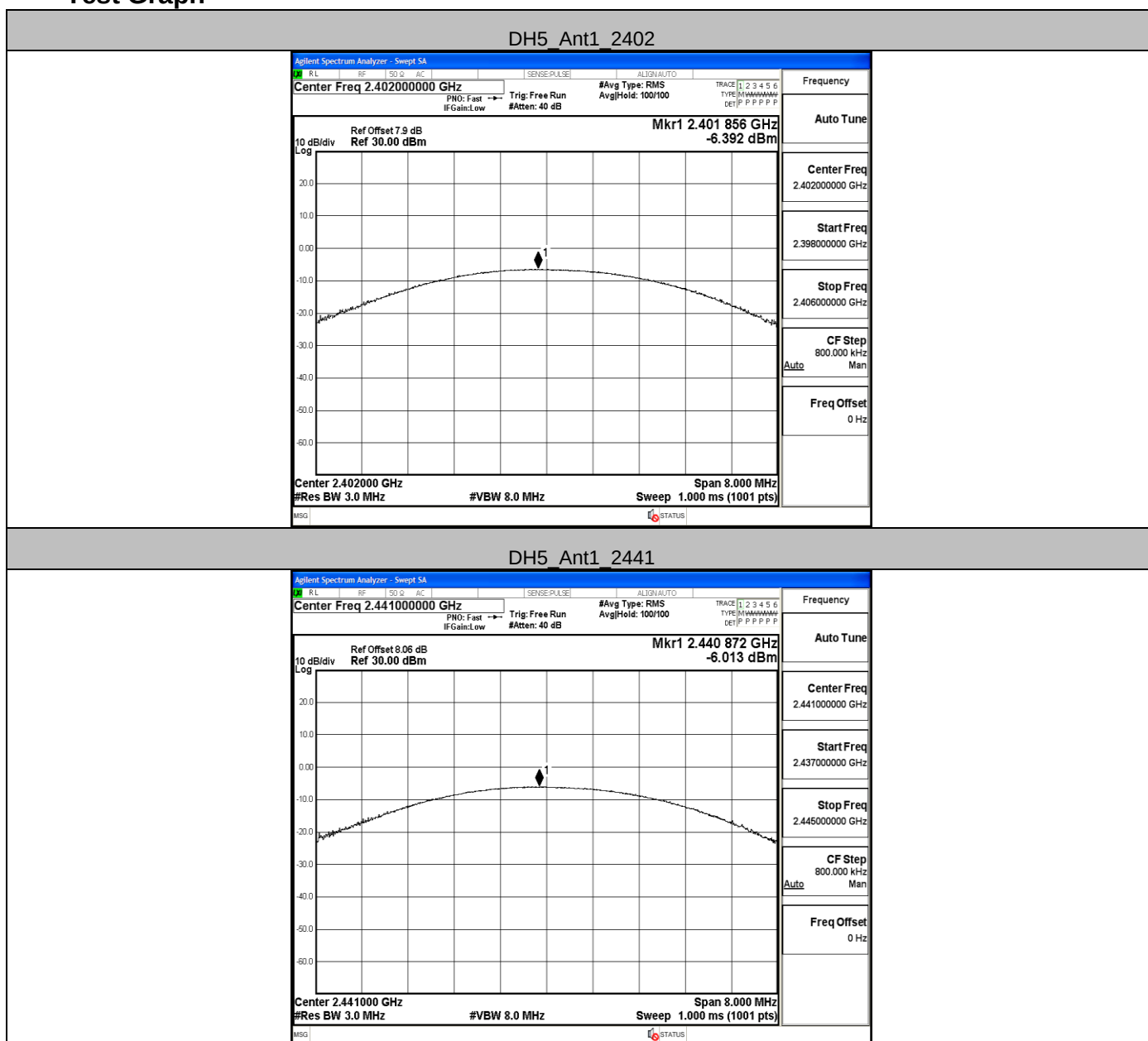
Test Graph



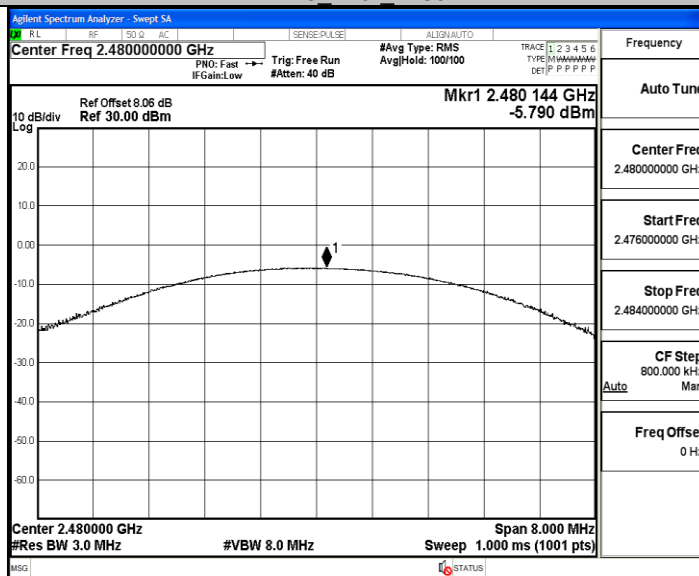
A.5 Conducted Peak Output Power

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
DH5	Ant1	2402	-6.39	≤30	PASS
		2441	-6.01	≤30	PASS
		2480	-5.79	≤30	PASS
2DH5	Ant1	2402	-5.85	≤20.97	PASS
		2441	-5.54	≤20.97	PASS
		2480	-5.12	≤20.97	PASS

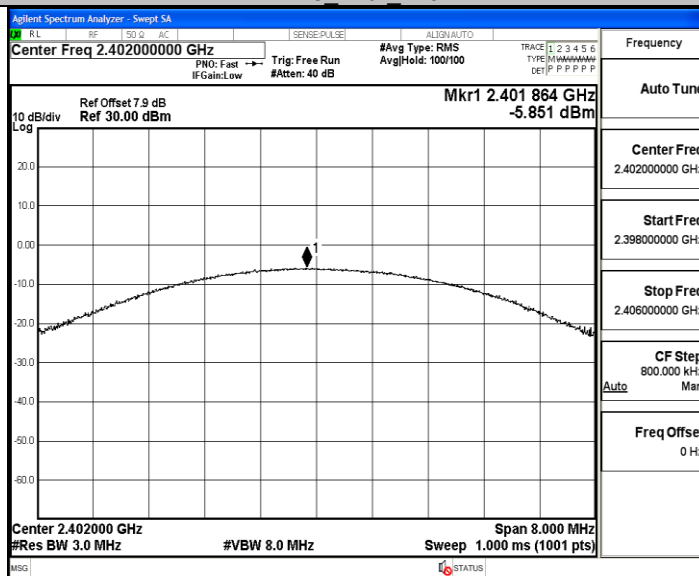
Test Graph



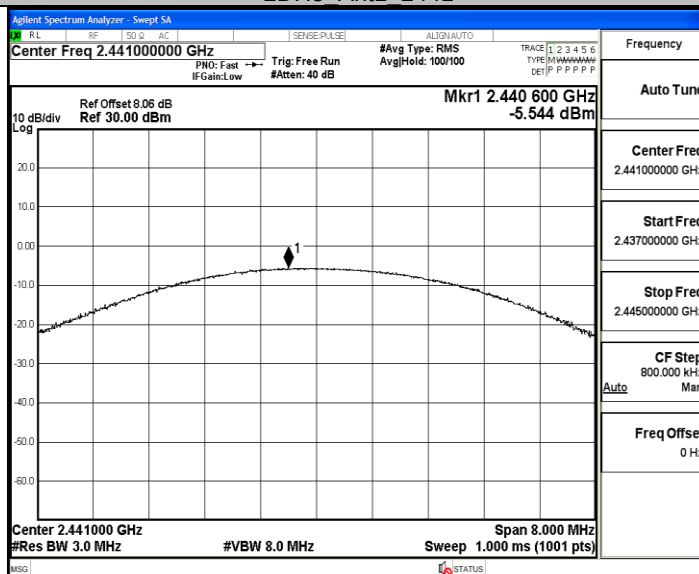
DH5 Ant1 2480

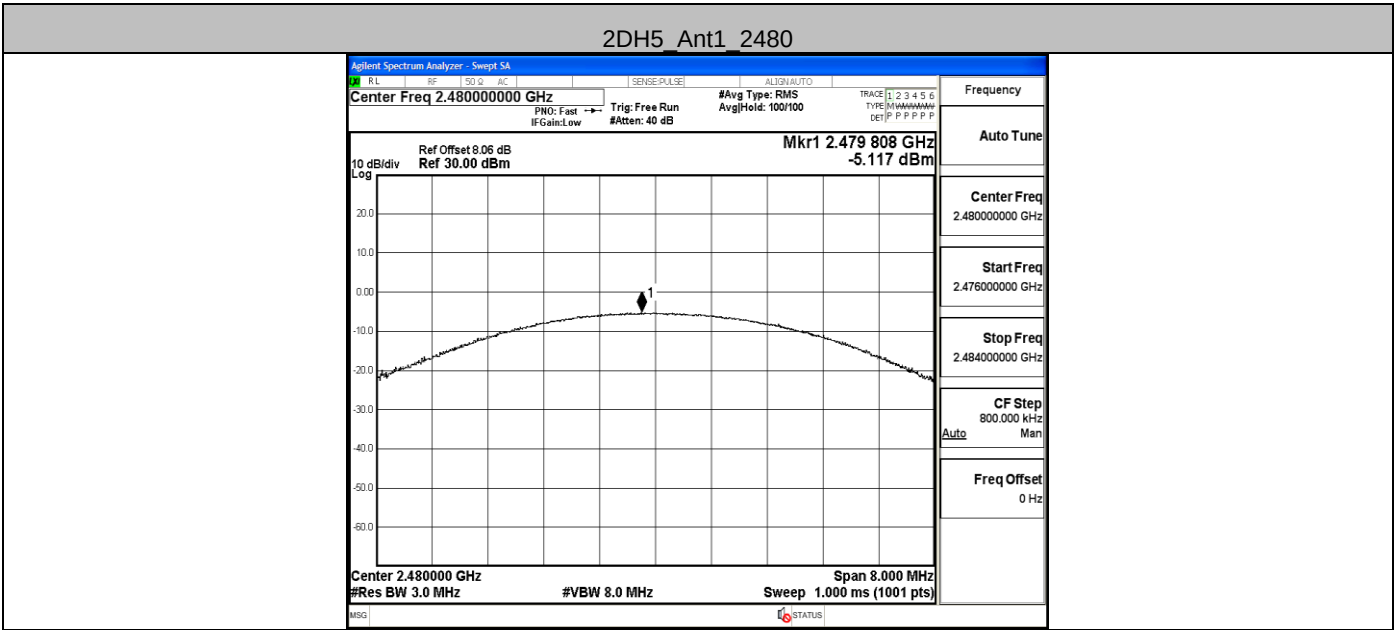


2DH5 Ant1 2402



2DH5 Ant1 2441



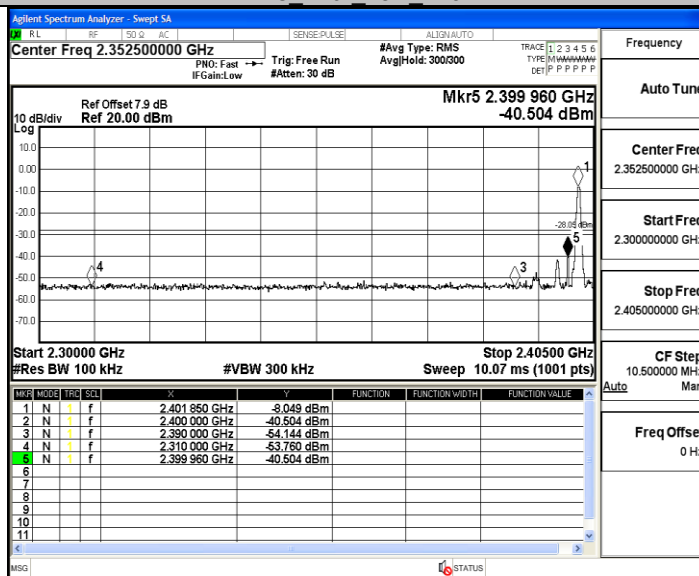


A.6 Band-edge for RF Conducted Emissions

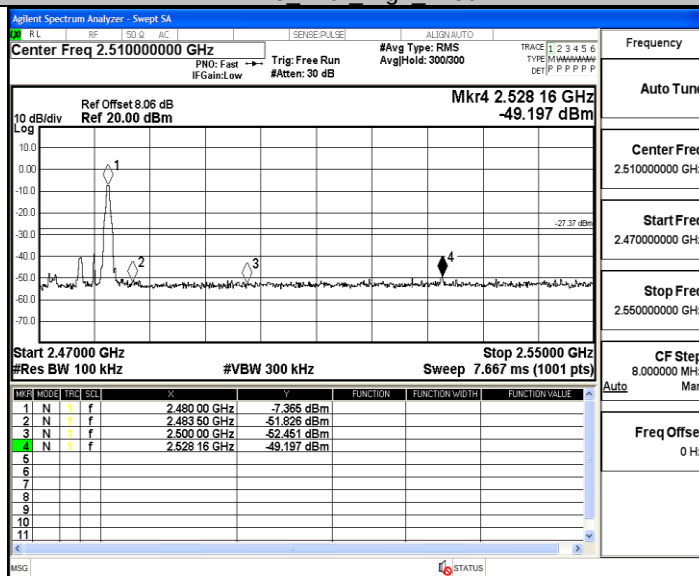
TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-8.05	-40.5	≤ -28.05	PASS
		High	2480	-7.37	-49.2	≤ -27.37	PASS
		Low	Hop_2402	-9.26	-51.64	≤ -29.26	PASS
		High	Hop_2480	-7.83	-49.87	≤ -27.83	PASS
2DH5	Ant1	Low	2402	-7.82	-40.21	≤ -27.82	PASS
		High	2480	-7.12	-50.25	≤ -27.12	PASS
		Low	Hop_2402	-10.92	-51.83	≤ -30.92	PASS
		High	Hop_2480	-10.83	-48.55	≤ -30.83	PASS

Test Graph

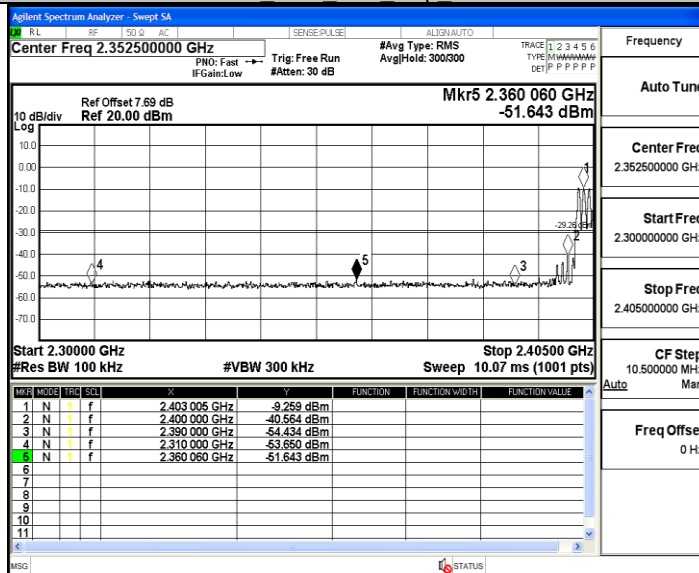
DH5_Ant1_Low_2402



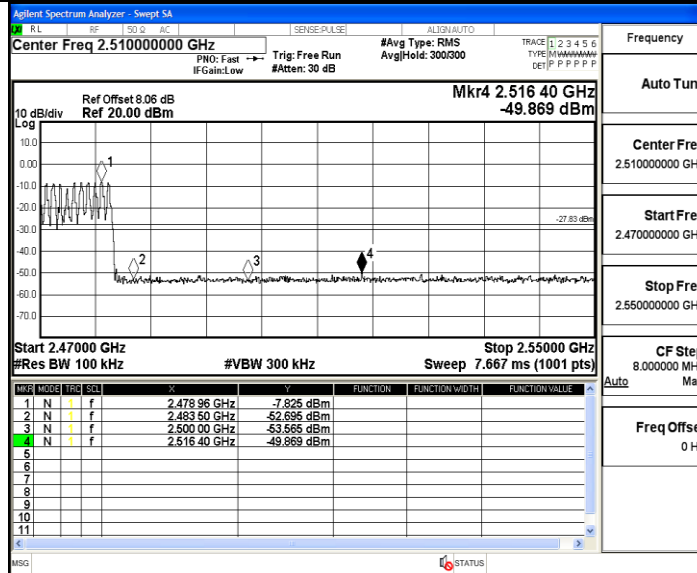
DH5_Ant1_High_2480



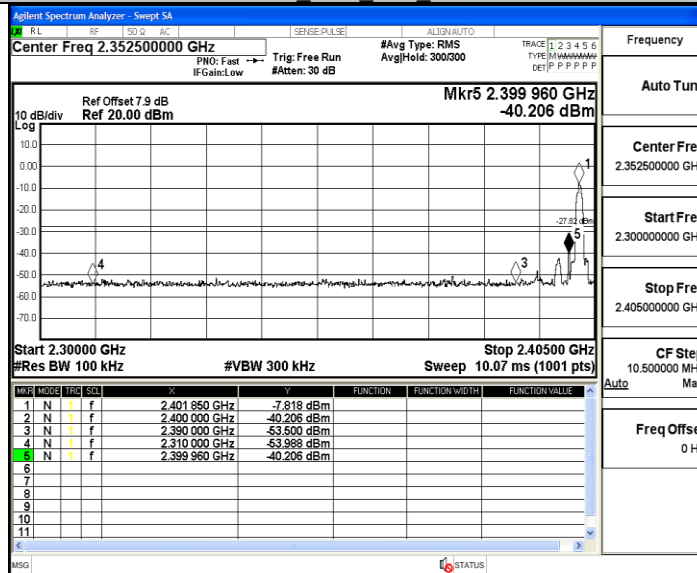
DH5_Ant1_Low_Hop_2402



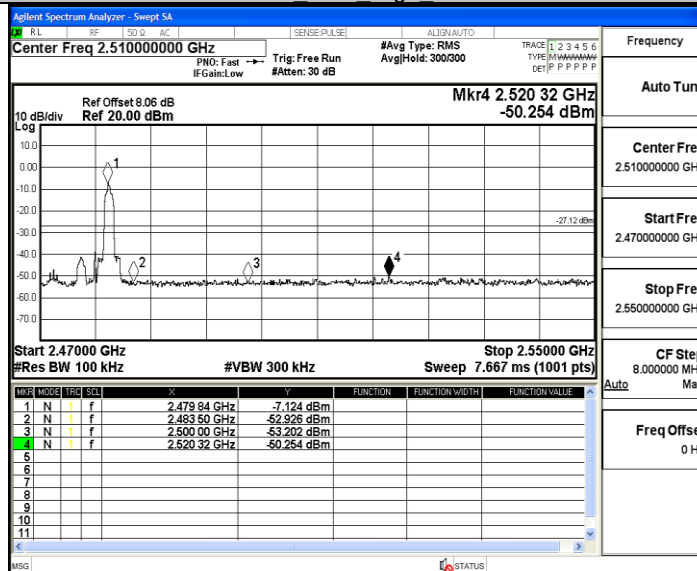
DH5 Ant1_High_Hop_2480

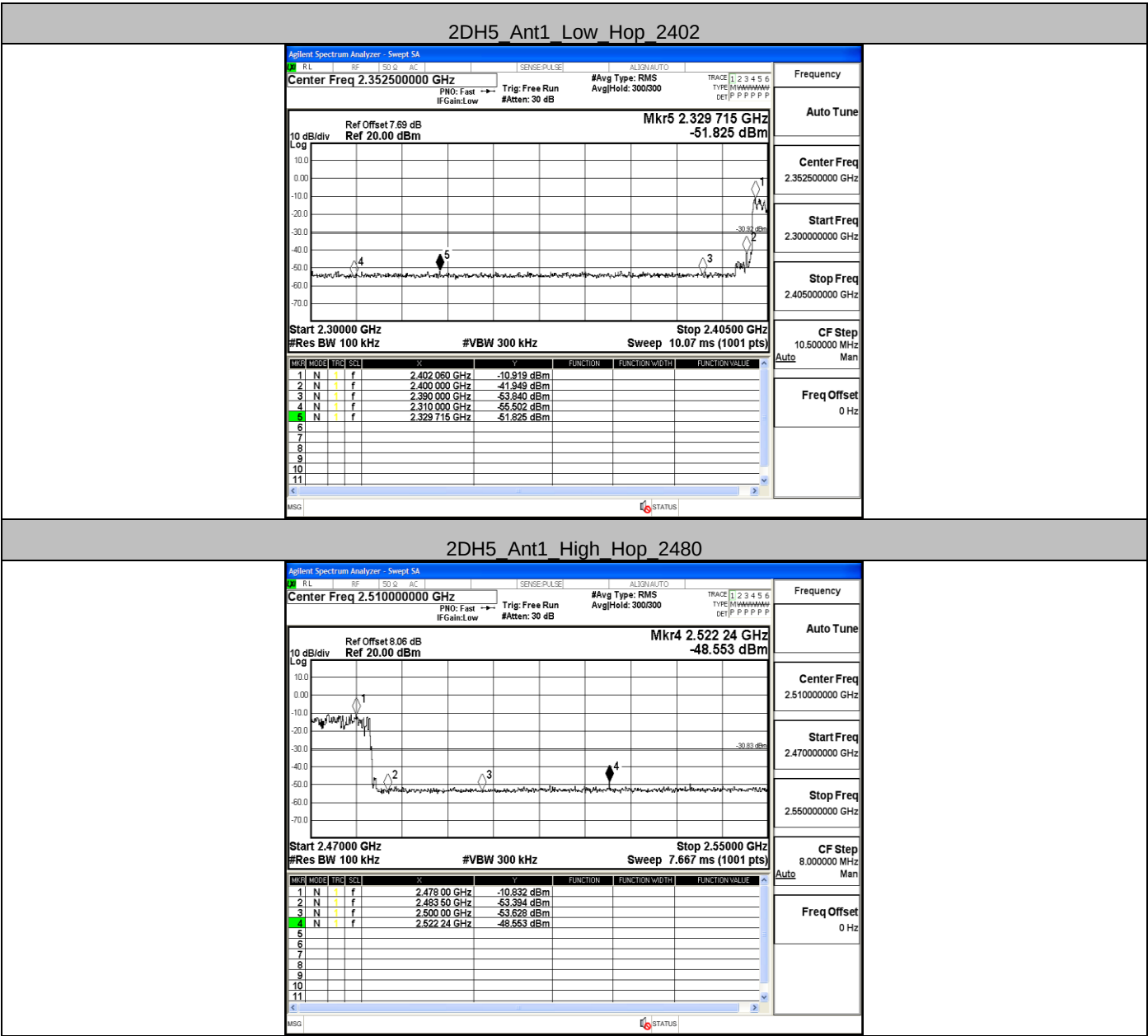


2DH5 Ant1_Low_2402

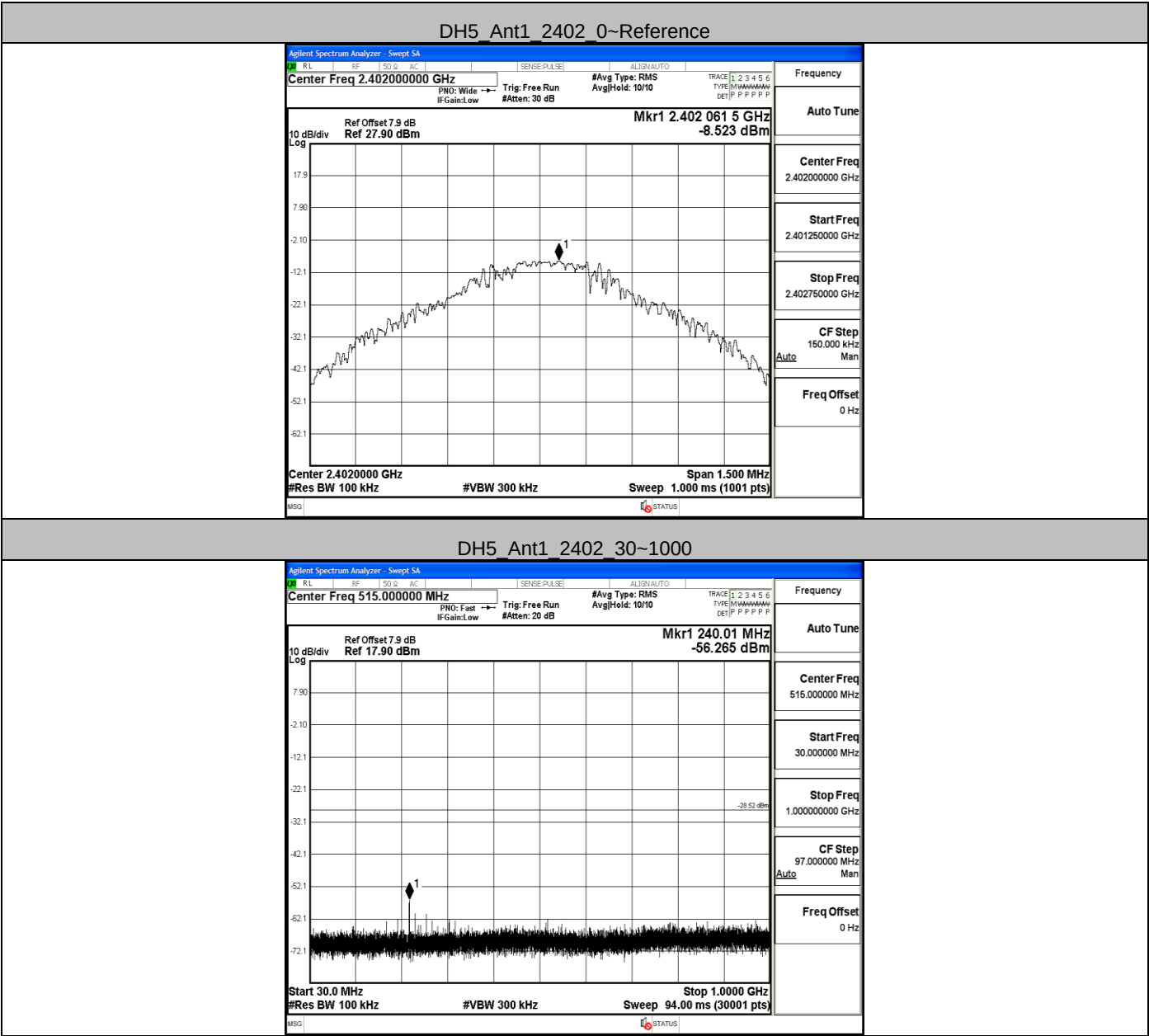


2DH5 Ant1_High_2480

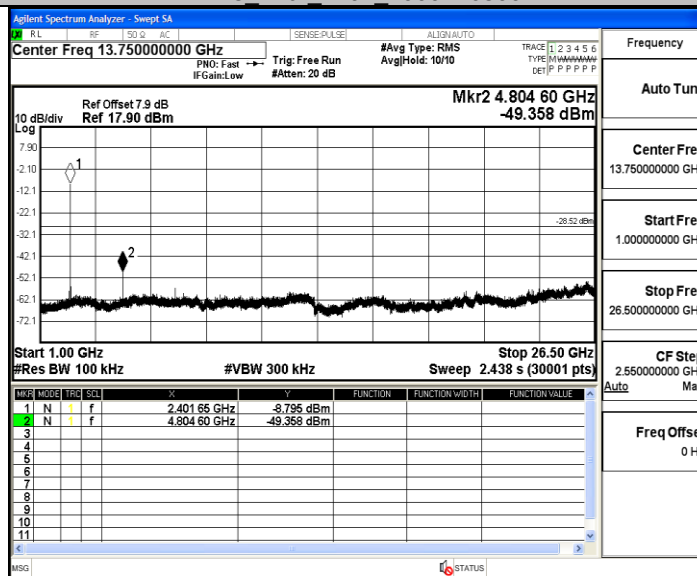




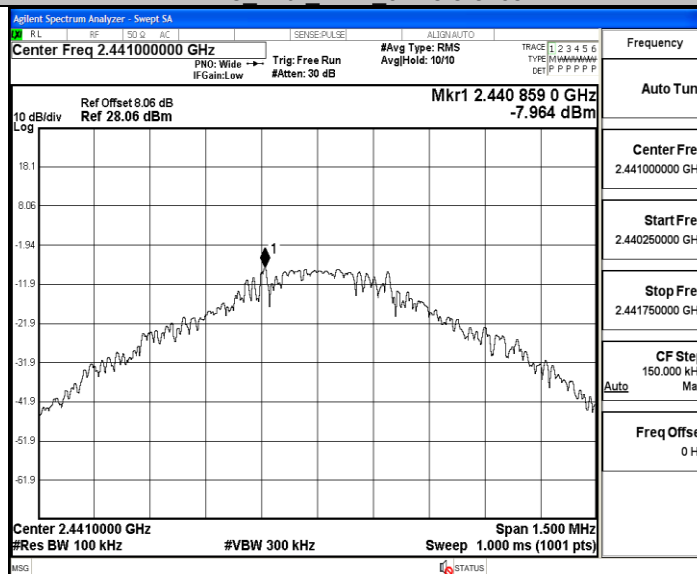
A.7 RF Conducted Spurious Emissions
Test Graph



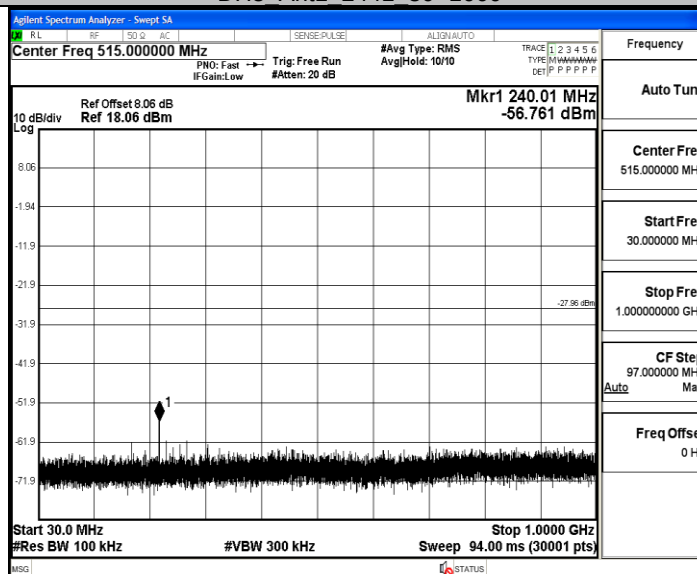
DH5 Ant1 2402 1000~26500



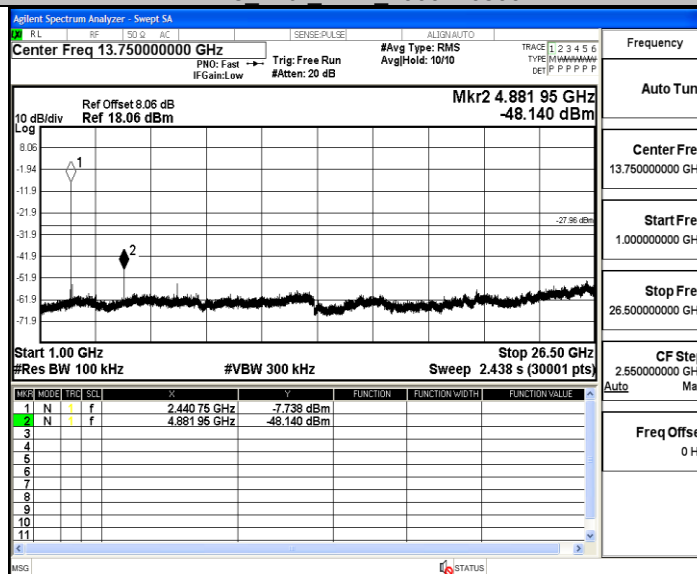
DH5 Ant1 2441 0~Reference



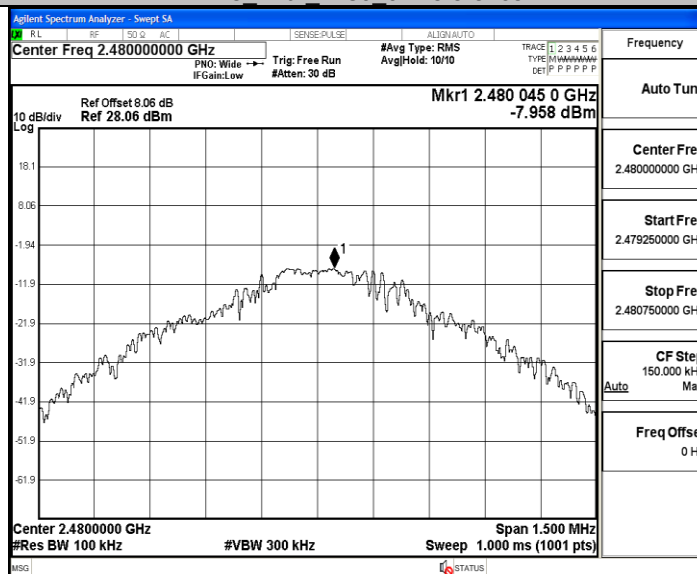
DH5 Ant1 2441 30~1000



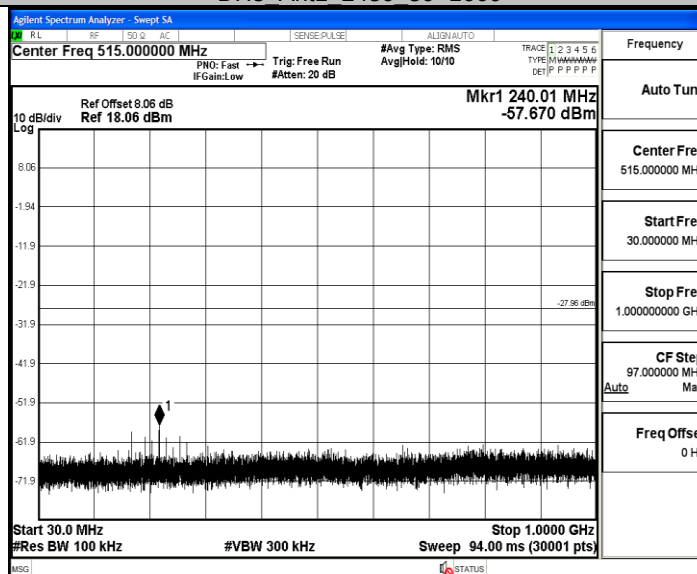
DH5 Ant1 2441 1000~26500



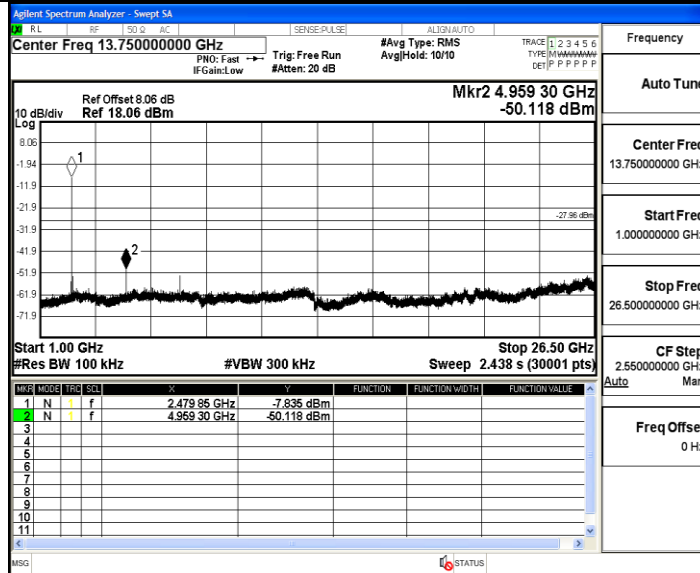
DH5 Ant1 2480 0~Reference



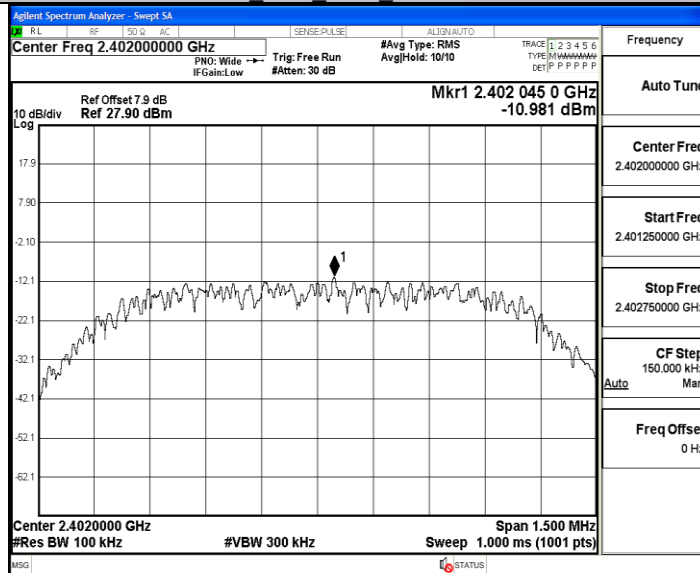
DH5 Ant1 2480 30~1000



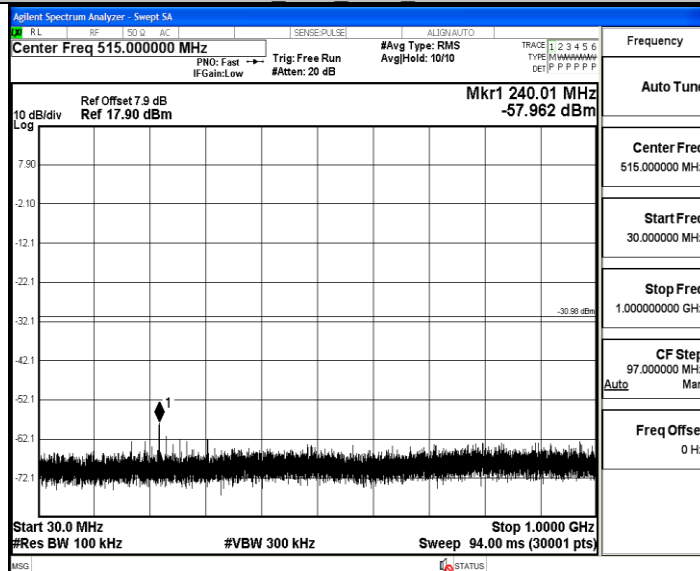
DH5 Ant1 2480 1000~26500



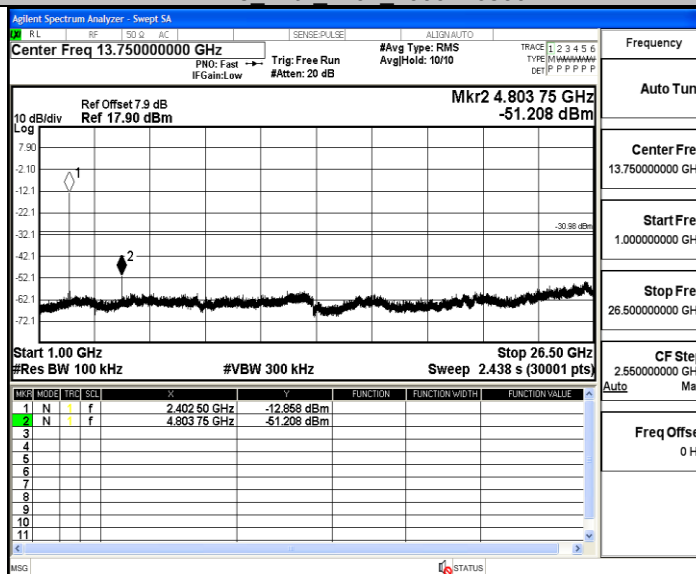
2DH5_Ant1_2402_0~Reference



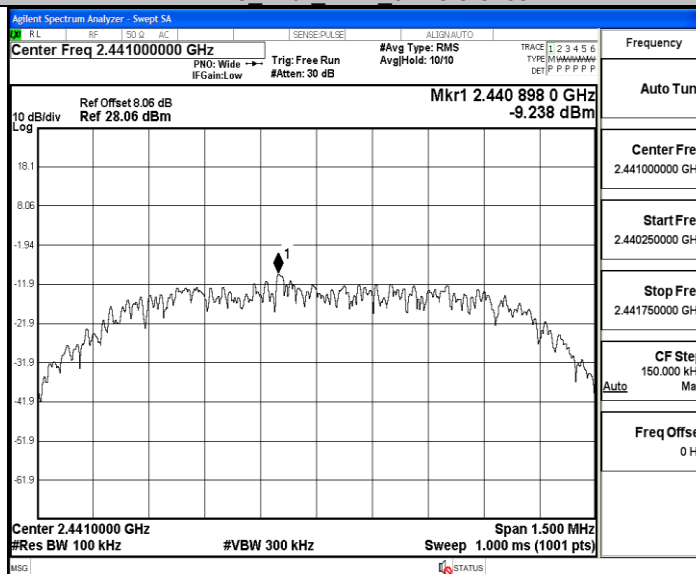
2DH5 Ant1 2402 30~1000



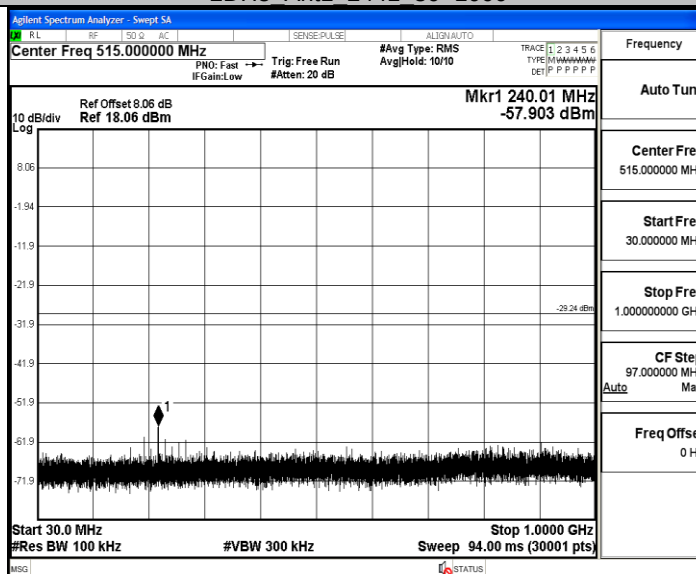
2DH5 Ant1 2402 1000~26500

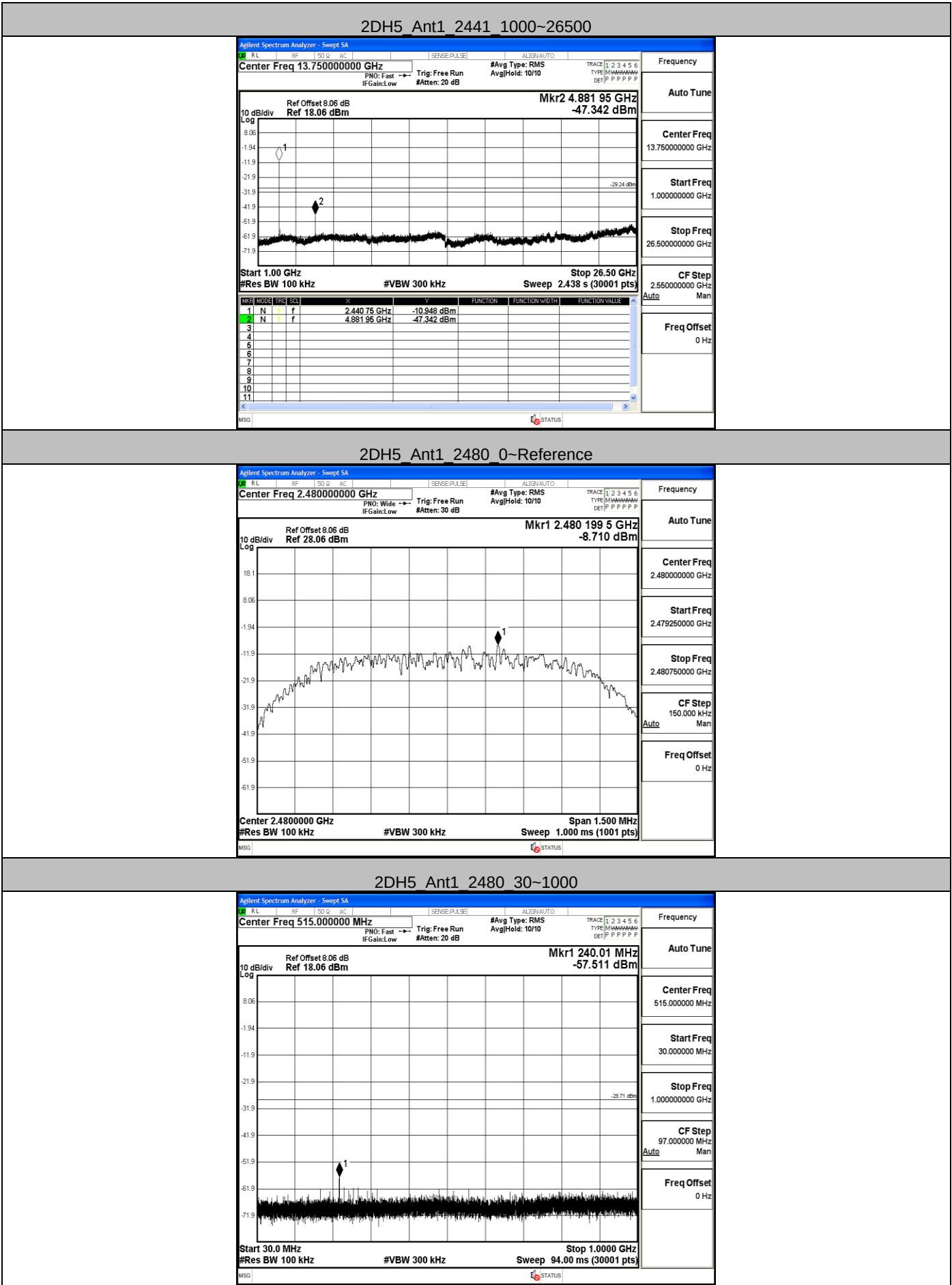


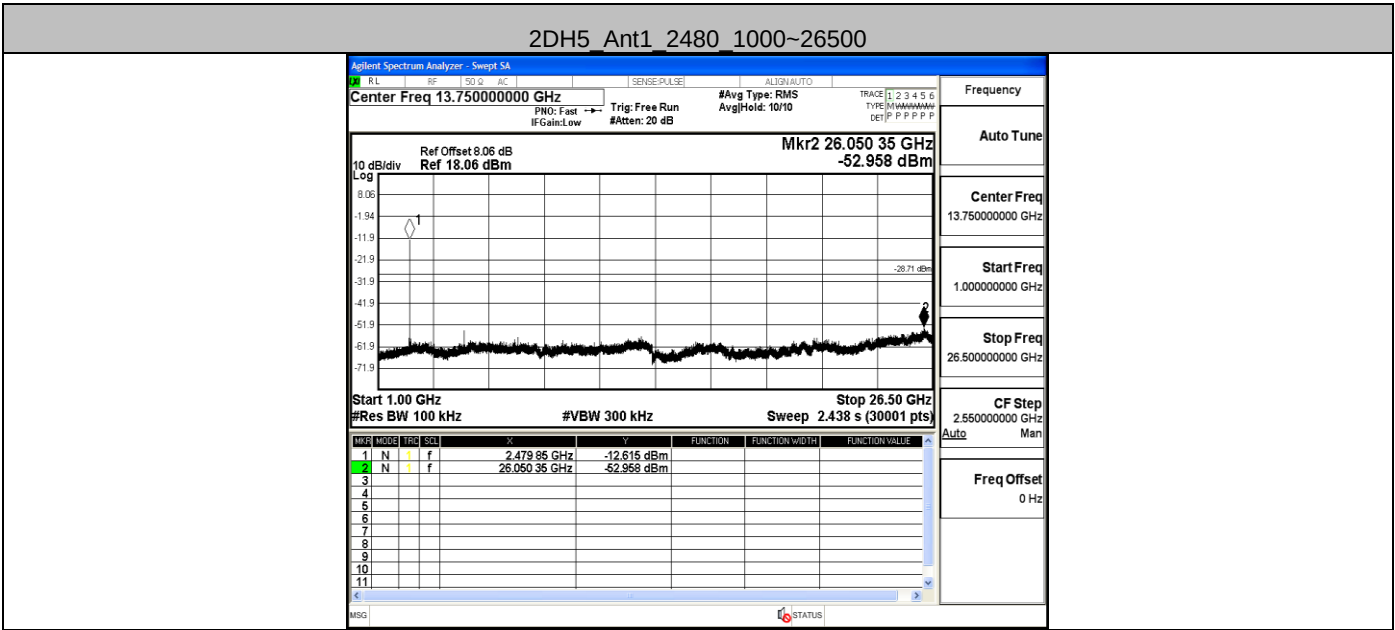
2DH5 Ant1 2441 0~Reference



2DH5 Ant1 2441 30~1000







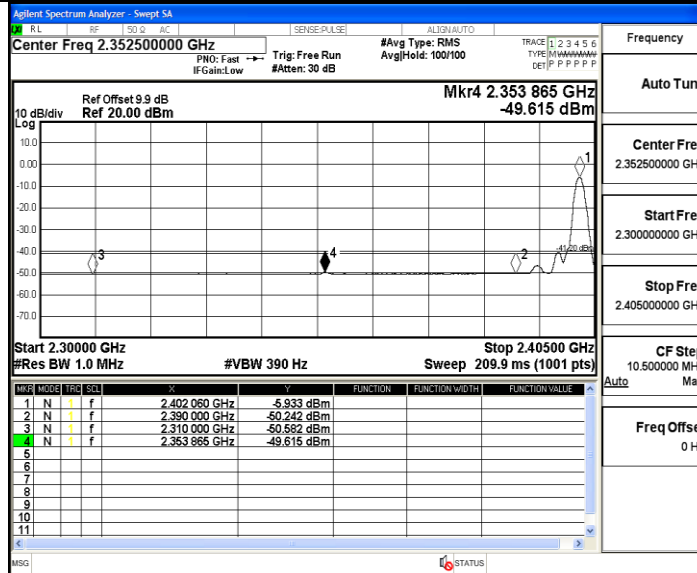
A.8 Restrict-band band-edge measurements

TestMode	Antenna	ChName	Channel	Detector	Freq(MHz)	Result(dBm)	Limit(dBm)	Verdict
DH5	Ant1	Low	2402	AV	2310.000	-50.58	≤-41.20	PASS
				AV	2353.865	-49.61	≤-41.20	PASS
				AV	2390.000	-50.24	≤-41.20	PASS
				Peak	2310.000	-43.15	≤-21.20	PASS
				Peak	2361.635	-40.18	≤-21.20	PASS
				Peak	2390.000	-42.97	≤-21.20	PASS
		High	2480	AV	2483.500	-48.73	≤-41.20	PASS
				AV	2483.920	-48.64	≤-41.20	PASS
				AV	2500.000	-49.55	≤-41.20	PASS
				Peak	2483.500	-41	≤-21.20	PASS
				Peak	2483.680	-40.19	≤-21.20	PASS
				Peak	2500.000	-42.57	≤-21.20	PASS
2DH5	Ant1	Low	2402	AV	2310.000	-50.49	≤-41.20	PASS
				AV	2353.970	-49.85	≤-41.20	PASS
				AV	2390.000	-50.38	≤-41.20	PASS
				Peak	2310.000	-42.39	≤-21.20	PASS
				Peak	2334.230	-39.6	≤-21.20	PASS
				Peak	2390.000	-44.67	≤-21.20	PASS
		High	2480	AV	2483.500	-49.06	≤-41.20	PASS
				AV	2484.000	-49	≤-41.20	PASS
				AV	2500.000	-49.58	≤-41.20	PASS
				Peak	2483.500	-41.56	≤-21.20	PASS
				Peak	2492.960	-40.07	≤-21.20	PASS
				Peak	2500.000	-43.24	≤-21.20	PASS

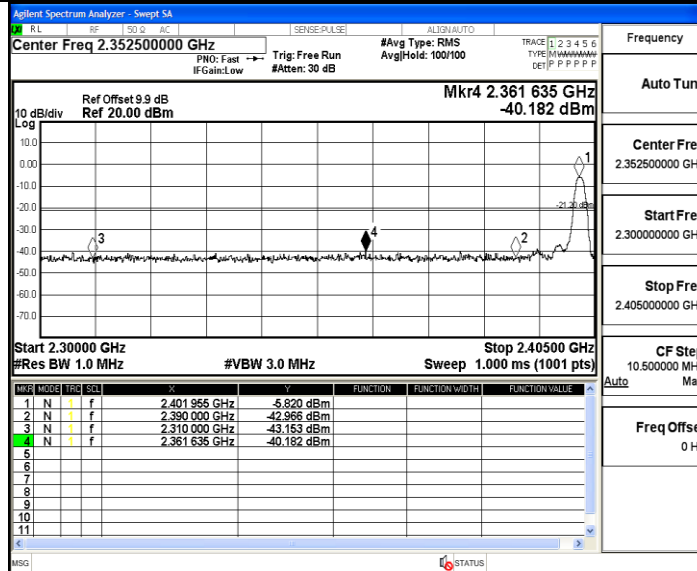
Note:

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.

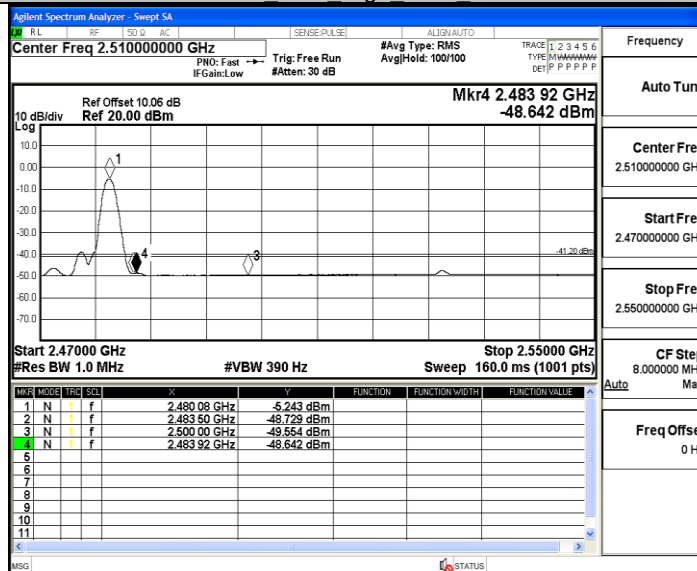
DH5 Ant1 Low 2402 AV



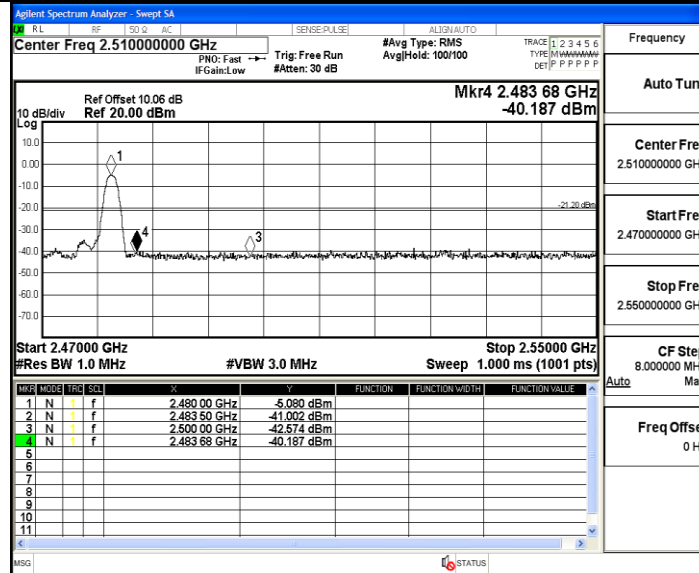
DH5 Ant1 Low 2402 Peak



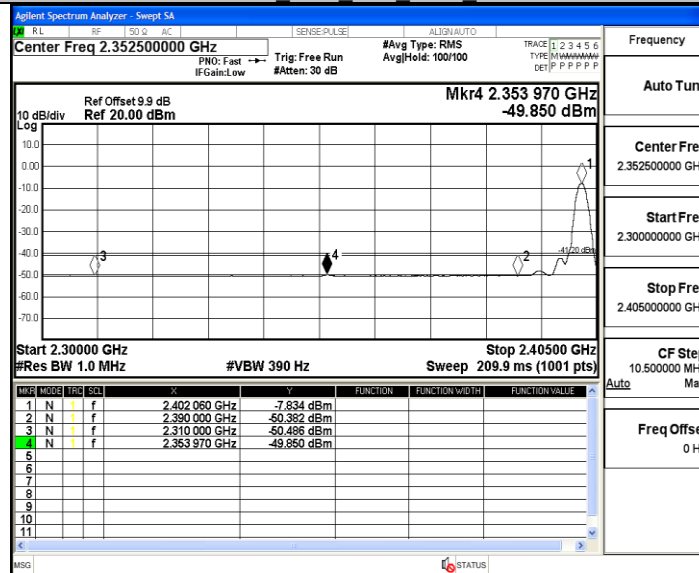
DH5 Ant1 High 2480 AV



DH5_Ant1_High_2480_Peak



2DH5_Ant1_Low_2402_AV



2DH5_Ant1_Low_2402_Peak

