



Appendix A

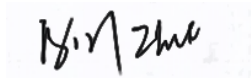
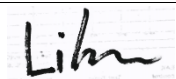
RF Test Data for BT V5.0(DSS) (Conducted Measurement)

Product Name: Digital media reciever

Trade Mark: NAKAMICHI

Test Model: NQ723BD

Environmental Conditions

Temperature:	21.1℃
Relative Humidity:	52.2%
ATM Pressure:	100.0 kPa
Test Engineer:	
Supervised by:	



A.1 20dB Emission Bandwidth

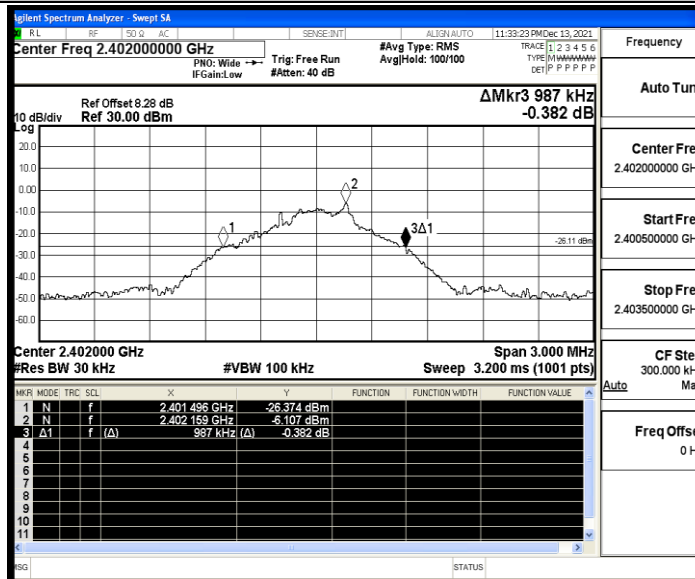
Test Result

TestMode	Antenna	Channel	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.987	2401.496	2402.483	---	PASS
		2441	1.059	2440.460	2441.519	---	PASS
		2480	1.050	2479.457	2480.507	---	PASS
2DH5	Ant1	2402	1.290	2401.355	2402.645	---	PASS
		2441	1.299	2440.346	2441.645	---	PASS
		2480	1.299	2479.349	2480.648	---	PASS
3DH5	Ant1	2402	1.296	2401.340	2402.636	---	PASS
		2441	1.302	2440.331	2441.633	---	PASS
		2480	1.308	2479.325	2480.633	---	PASS

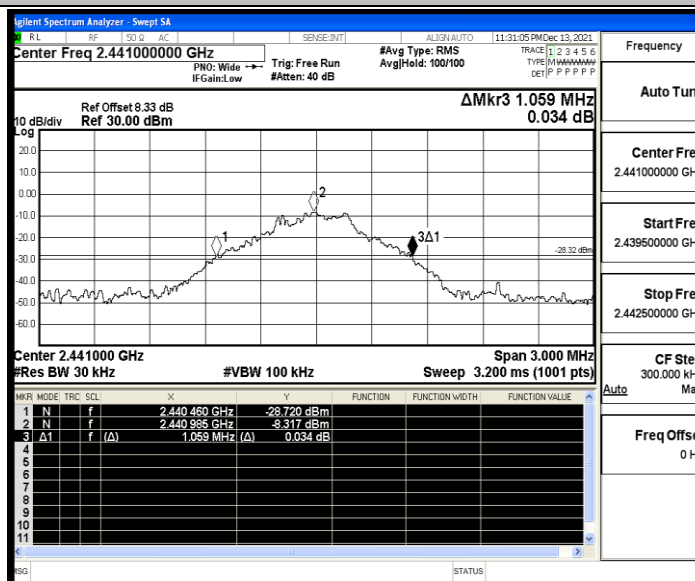


Test Graphs

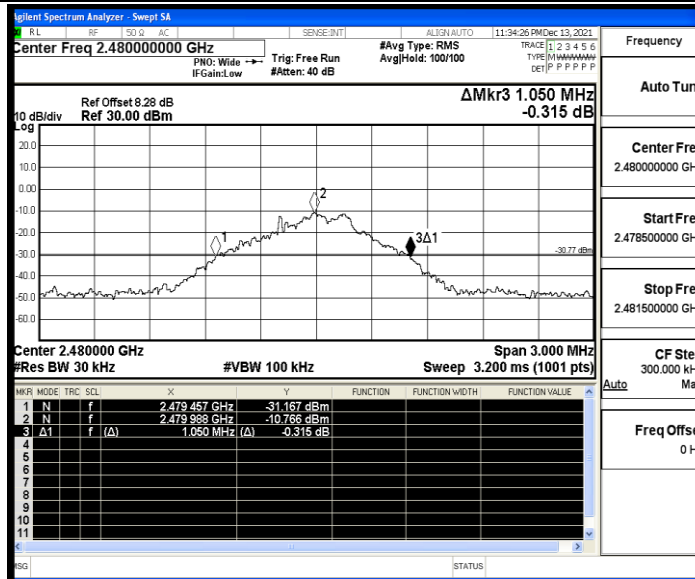
DH5_Ant1_2402



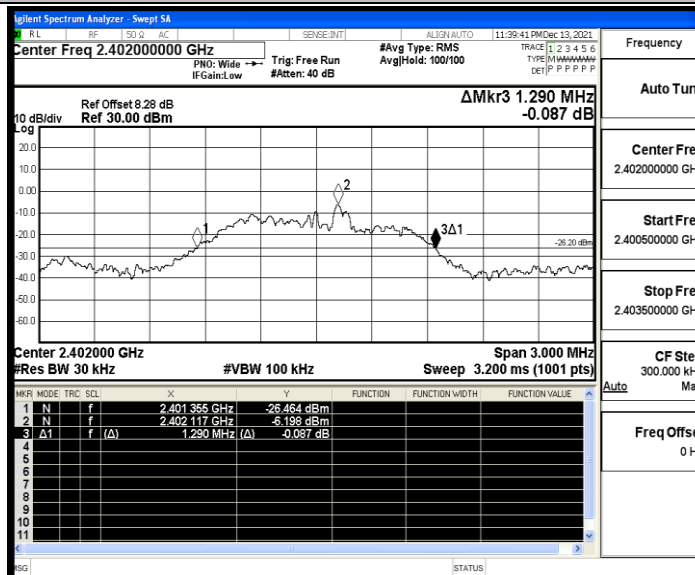
DH5_Ant1_2441



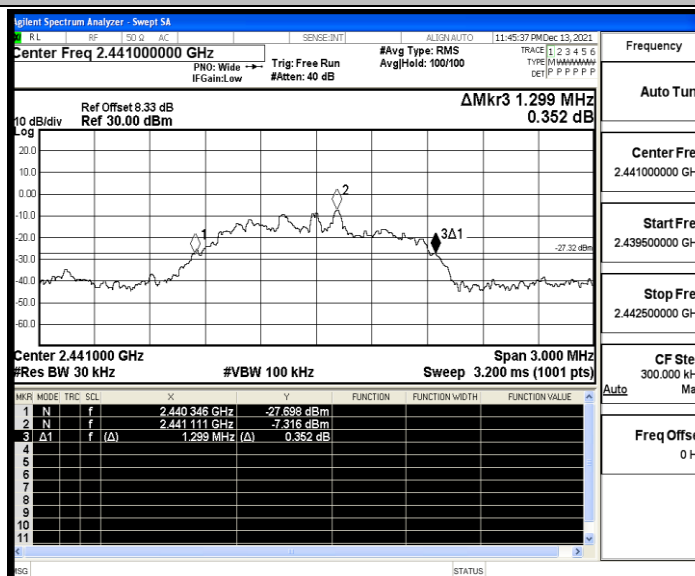
DH5_Ant1_2480



2DH5_Ant1_2402

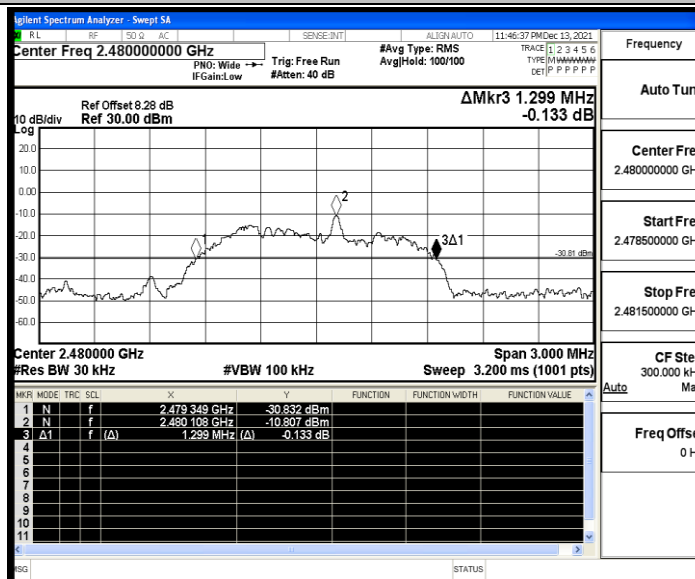


2DH5_Ant1_2441

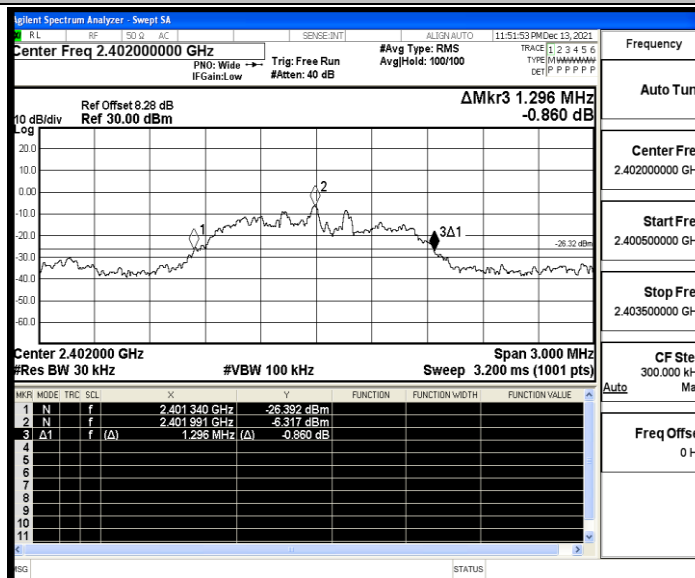




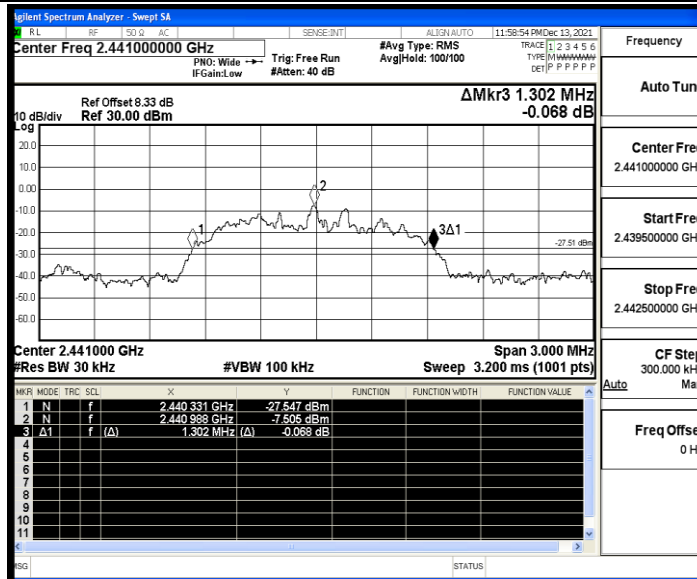
2DH5_Ant1_2480



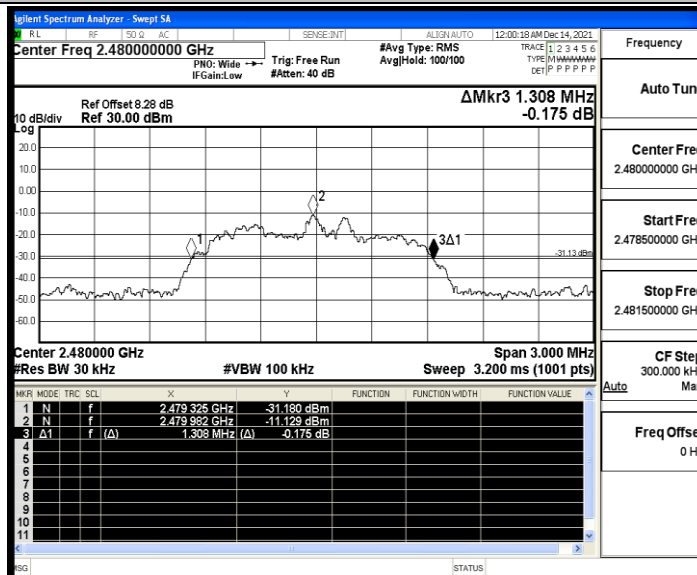
3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480





A.2 Maximum conducted output power

Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
DH5	Ant1	2402	-6.21	≤20.97	PASS
		2441	-5.15	≤20.97	PASS
		2480	-7.35	≤20.97	PASS
2DH5	Ant1	2402	-4.99	≤20.97	PASS
		2441	-5.17	≤20.97	PASS
		2480	-7.63	≤20.97	PASS
3DH5	Ant1	2402	-4.95	≤20.97	PASS
		2441	-5.33	≤20.97	PASS
		2480	-7.65	≤20.97	PASS

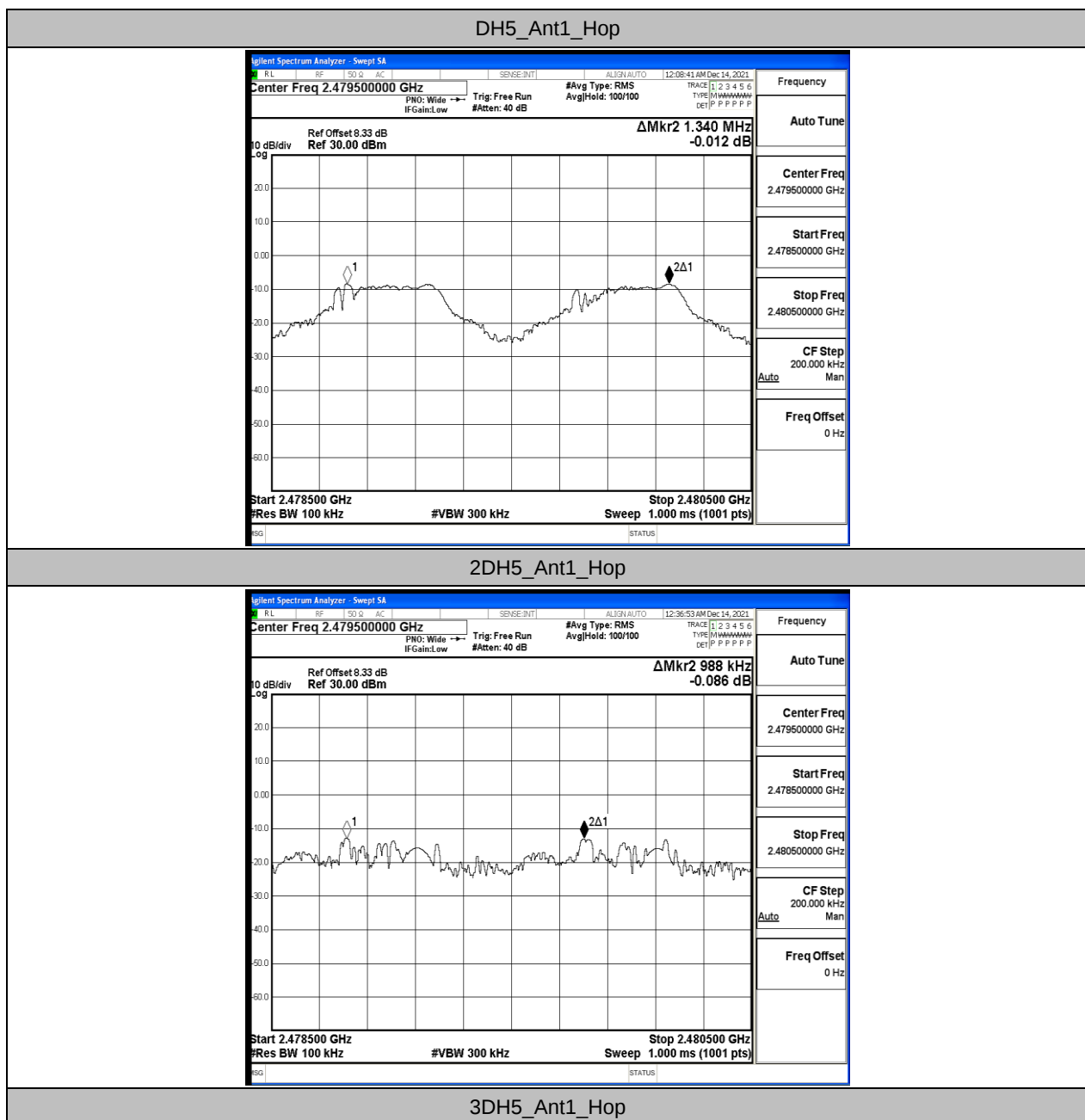


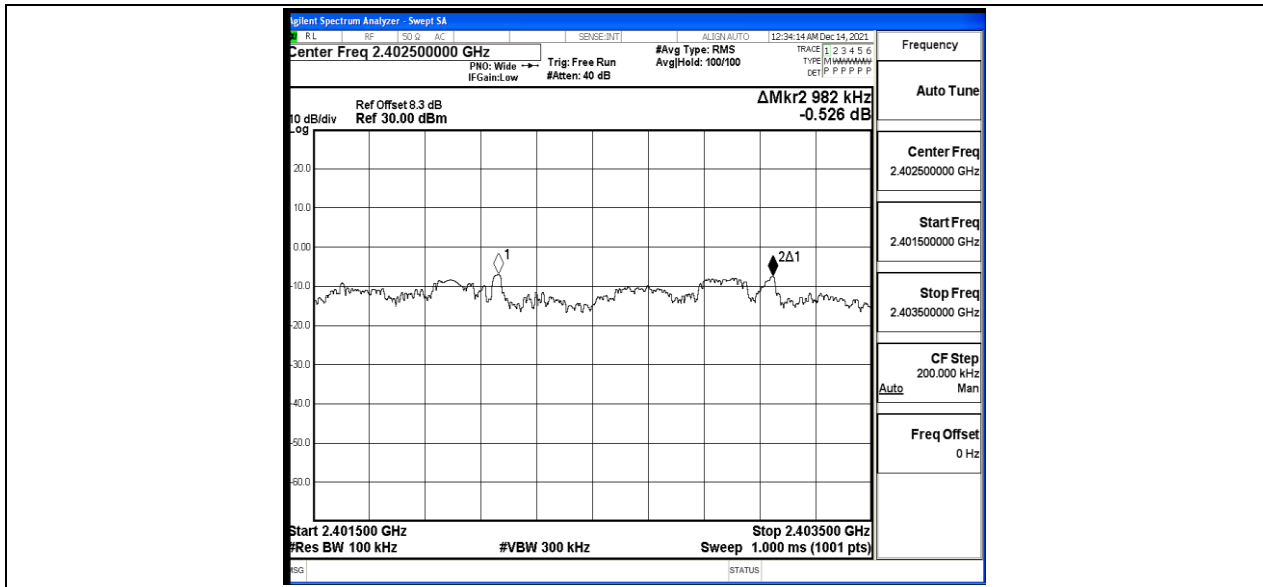
A.3 Carrier frequency separation

Test Result

TestMode	Antenna	Channel	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	1.34	≥ 0.706	PASS
2DH5	Ant1	Hop	0.988	≥ 0.866	PASS
3DH5	Ant1	Hop	0.982	≥ 0.872	PASS

Test Graphs





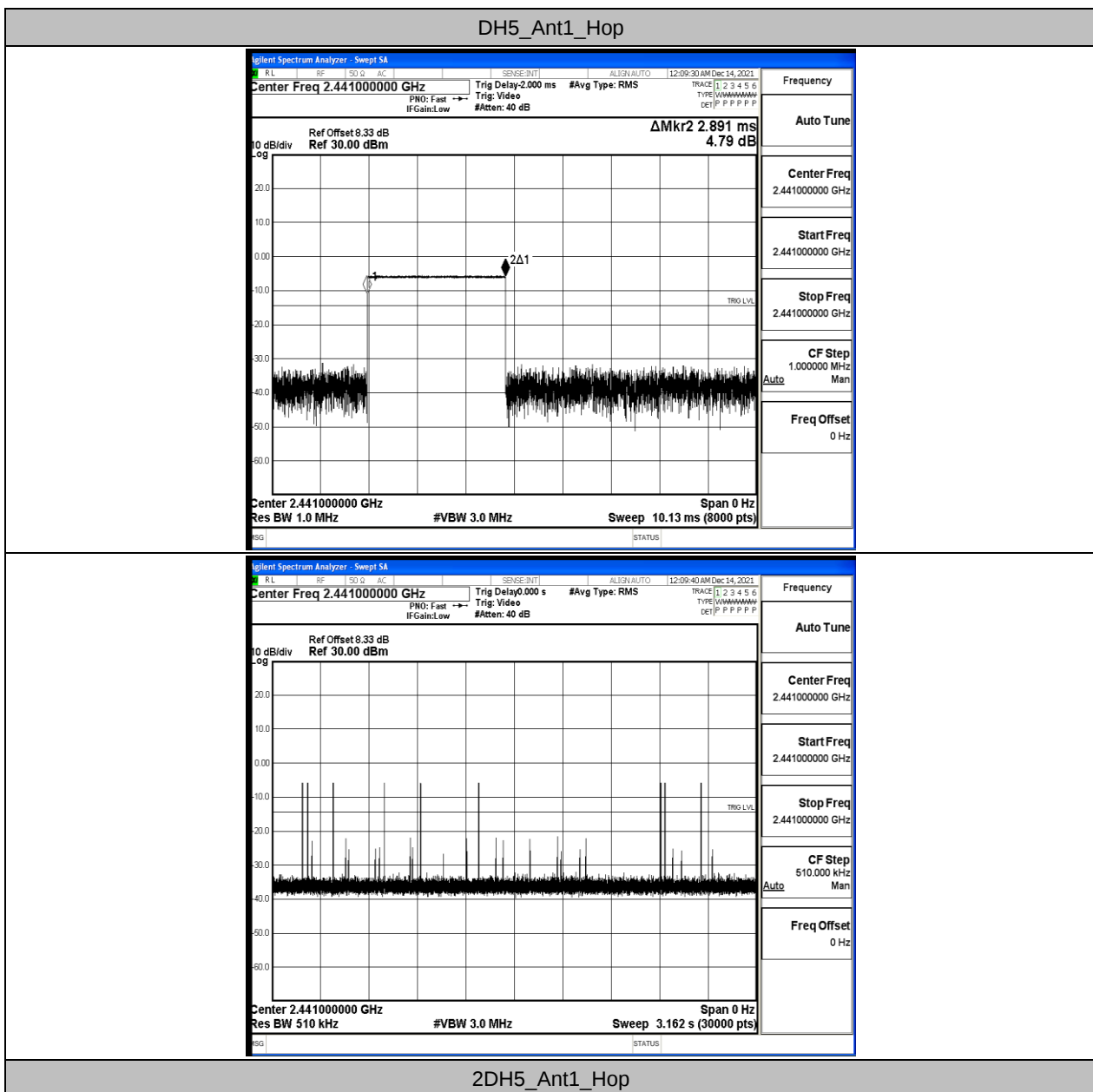


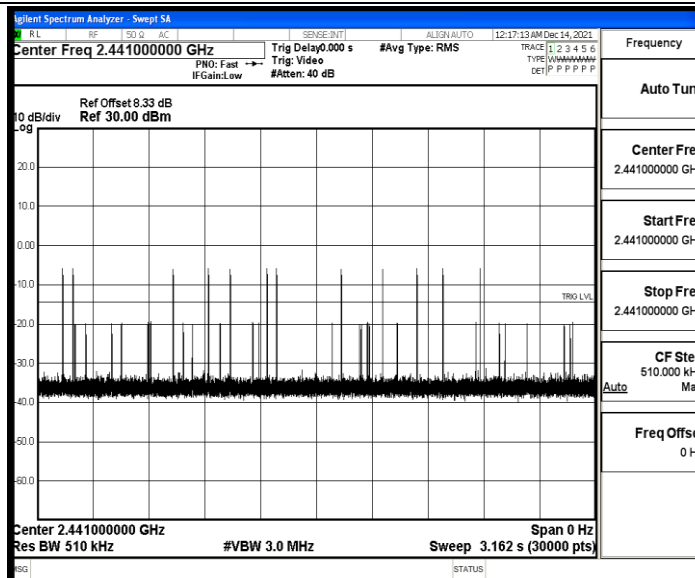
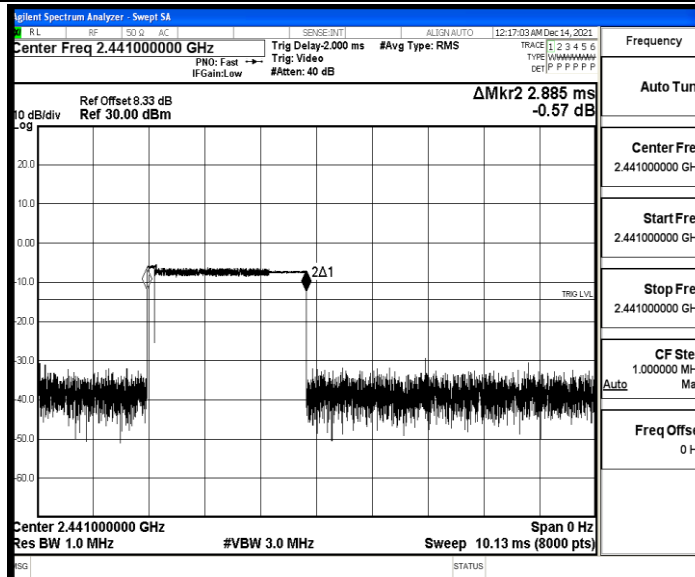
A.4 Time of occupancy

Test Result

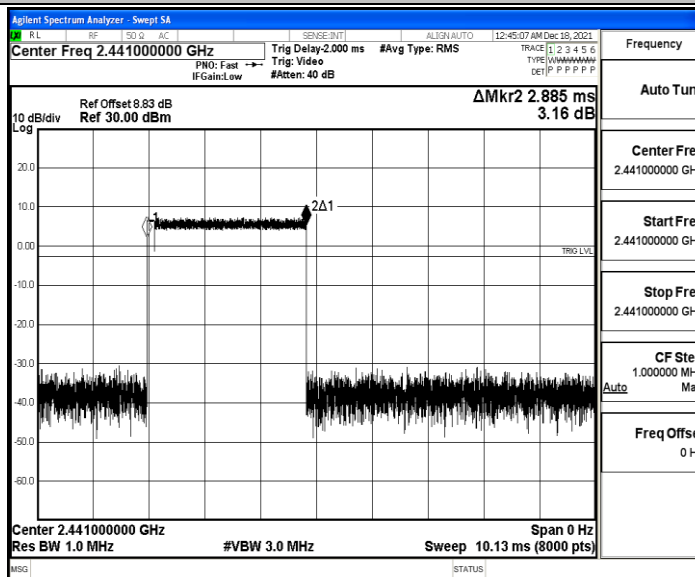
TestMode	Antenna	Channel	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH5	Ant1	Hop	2.89	100	0.289	≤0.4	PASS
2DH5	Ant1	Hop	2.89	130	0.375	≤0.4	PASS
3DH5	Ant1	Hop	2.89	100	0.289	≤0.4	PASS

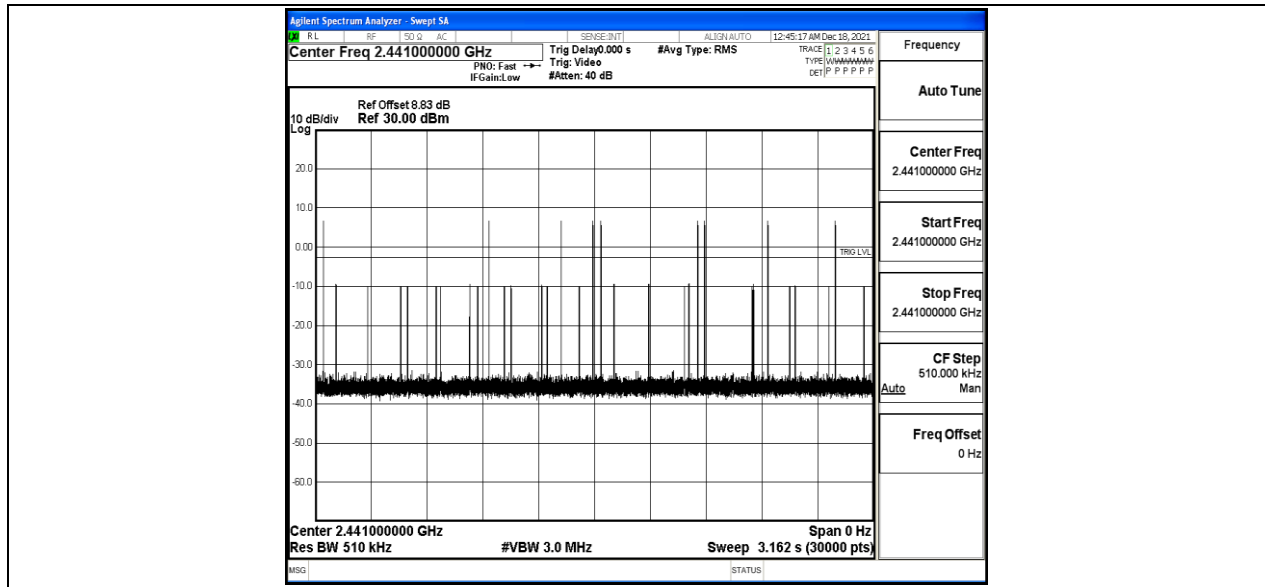
Test Graphs





3DH5_Ant1_Hop





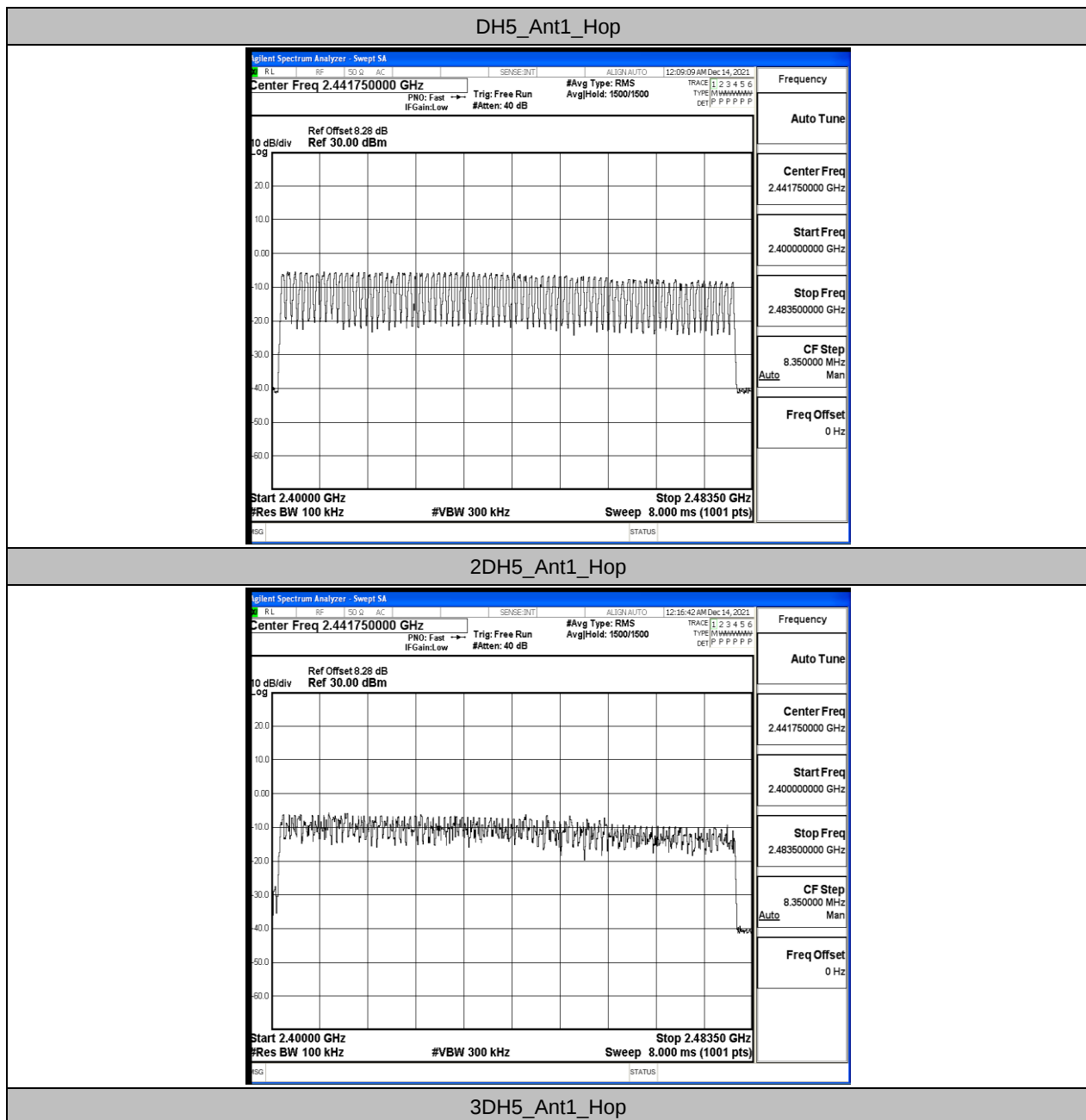


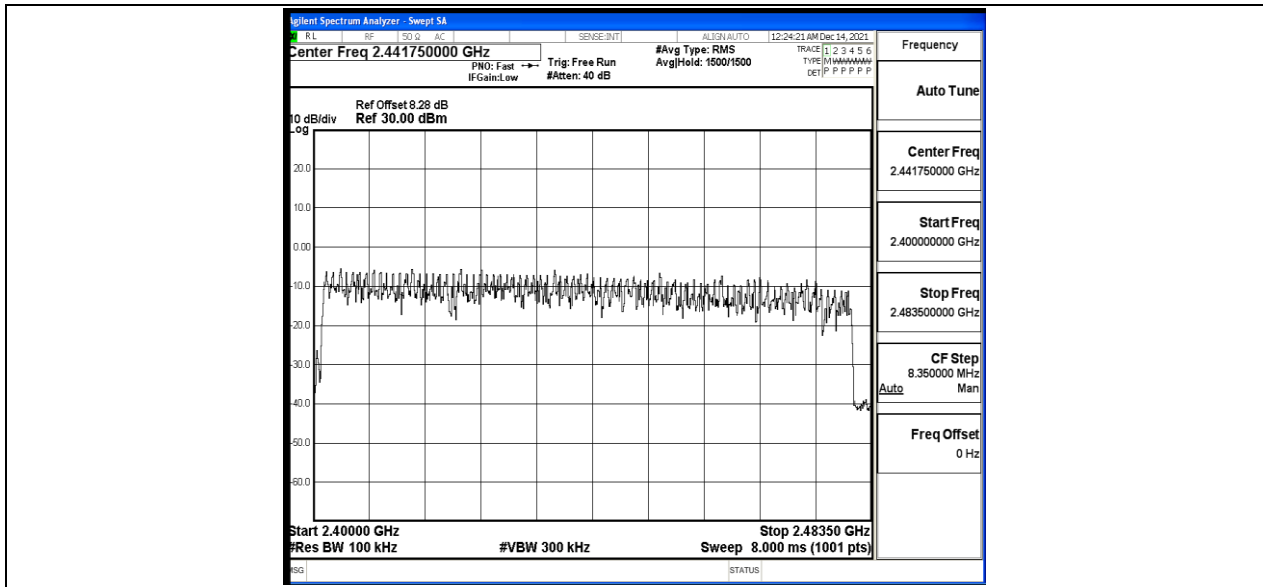
A.5 Number of hopping channels

Test Result

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 Graphs







A.6 Band edge measurements

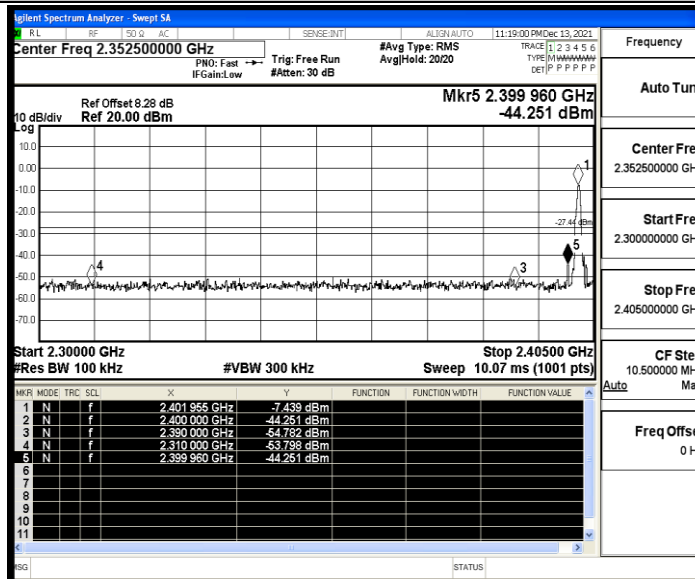
Test Result

TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-7.44	-44.25	≤-27.44	PASS
		High	2480	-8.63	-49.76	≤-28.63	PASS
		Low	Hop_2402	-5.64	-48.9	≤-25.64	PASS
		High	Hop_2480	-7.89	-47.41	≤-27.89	PASS
2DH5	Ant1	Low	2402	-6.21	-39.03	≤-26.21	PASS
		High	2480	-10.79	-48.8	≤-30.79	PASS
		Low	Hop_2402	-6.37	-49.58	≤-26.37	PASS
		High	Hop_2480	-8.41	-48.22	≤-28.41	PASS
3DH5	Ant1	Low	2402	-6.03	-36.99	≤-26.03	PASS
		High	2480	-11.18	-48.52	≤-31.18	PASS
		Low	Hop_2402	-6.45	-48.81	≤-26.45	PASS
		High	Hop_2480	-8.41	-48.06	≤-28.41	PASS

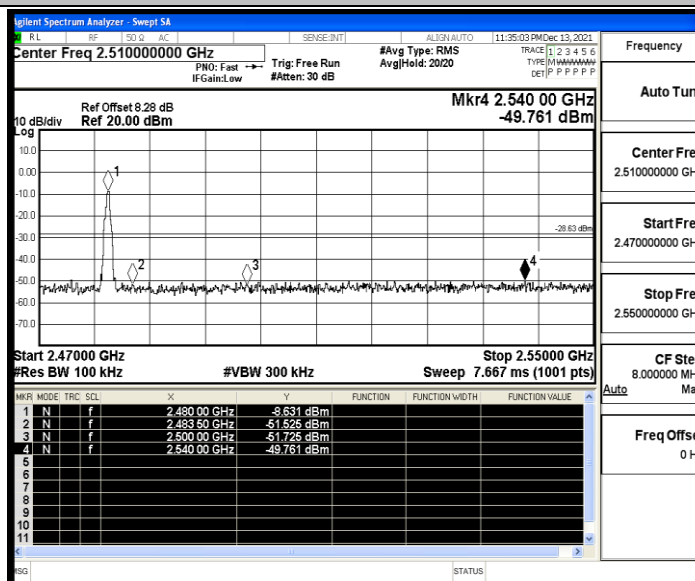


Test Graphs

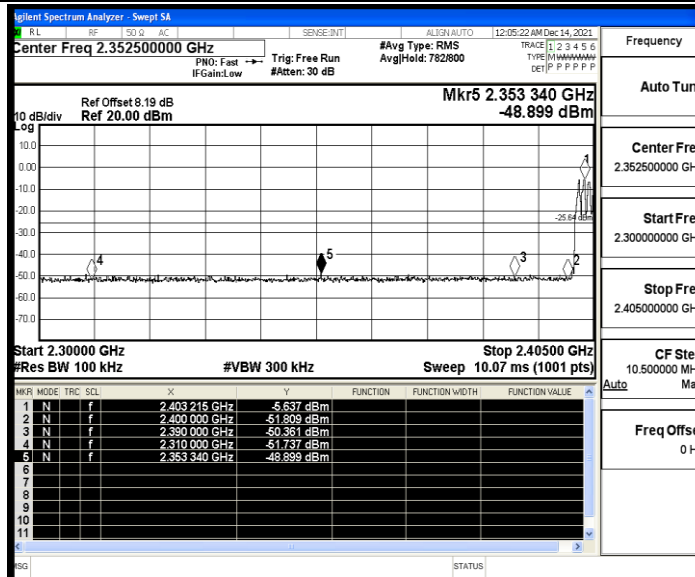
DH5_Ant1_Low_2402



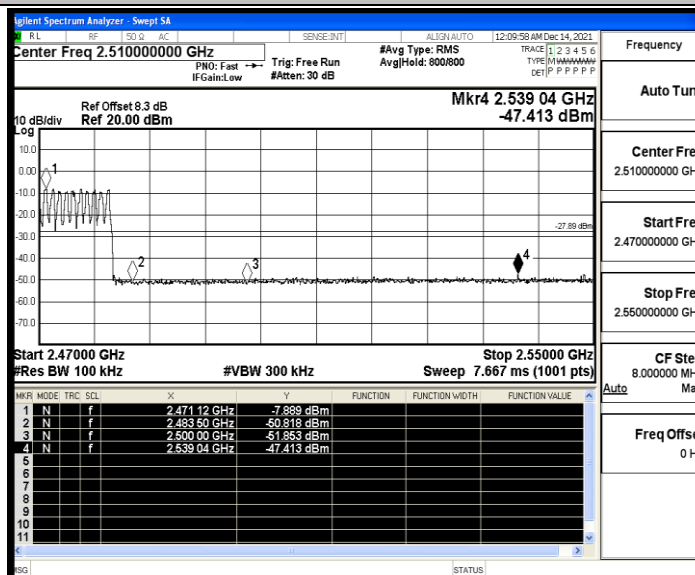
DH5_Ant1_High_2480



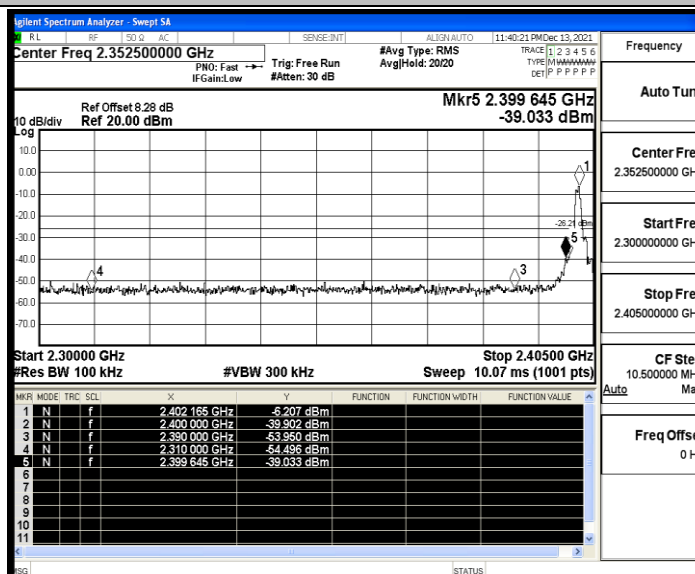
DH5_Ant1_Low_Hop_2402



DH5_Ant1_High_Hop_2480

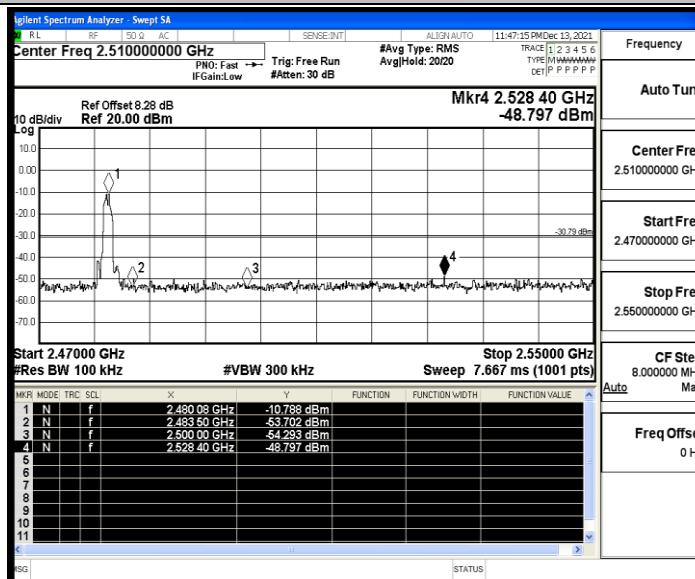


2DH5_Ant1_Low_2402

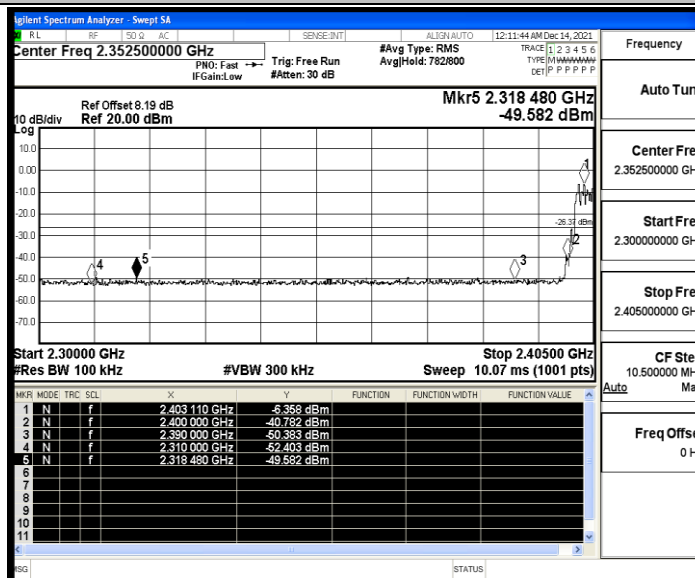




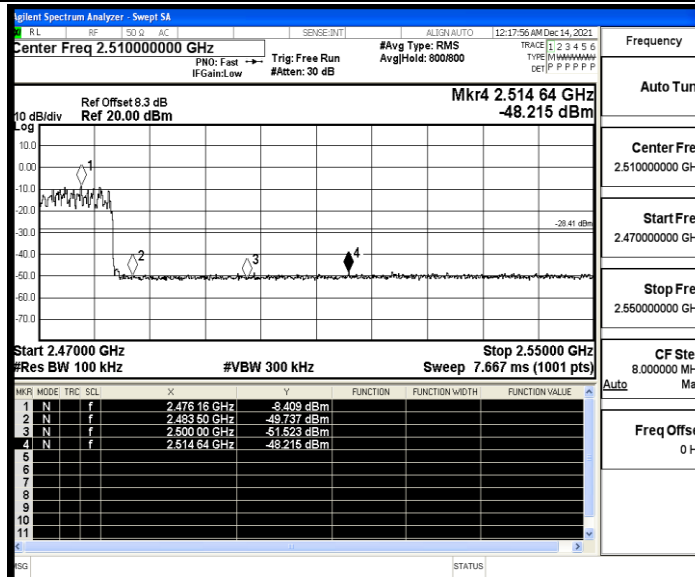
2DH5_Ant1_High_2480



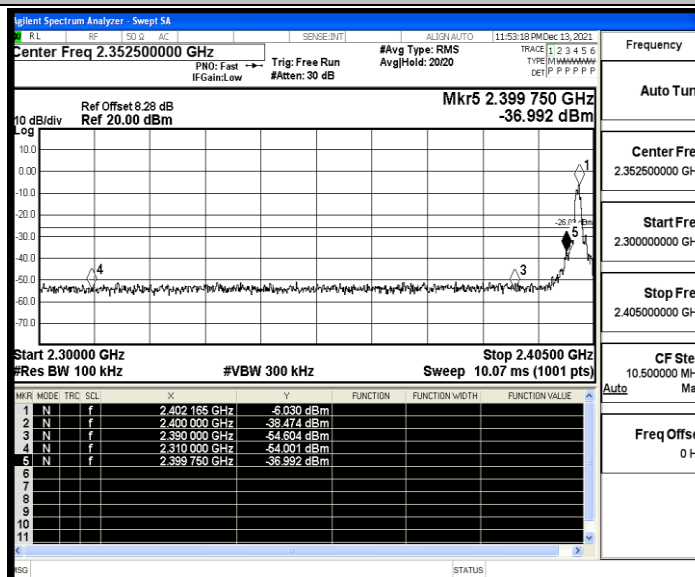
2DH5_Ant1_Low_Hop_2402



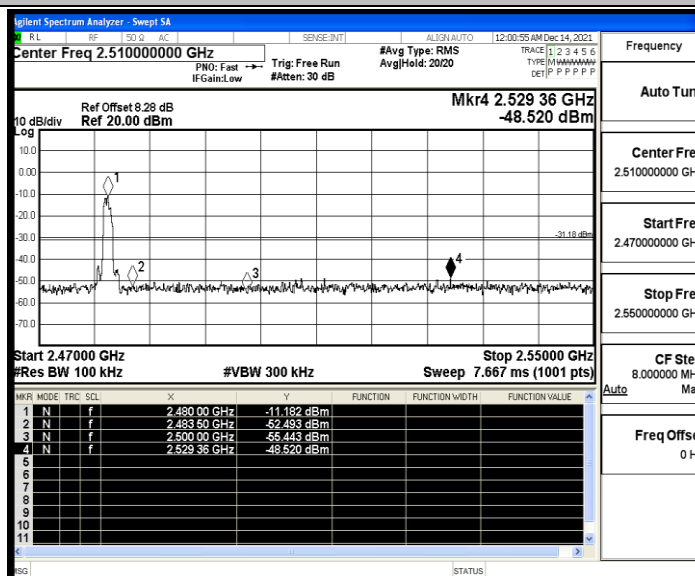
2DH5_Ant1_High_Hop_2480



3DH5_Ant1_Low_2402

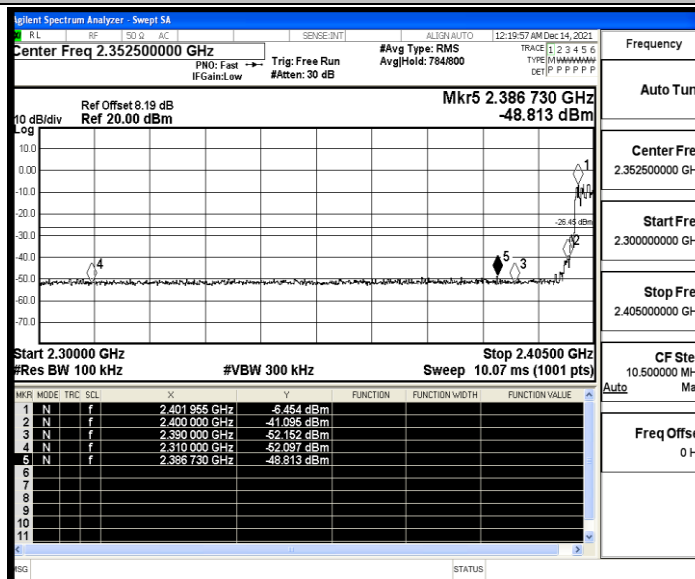


3DH5_Ant1_High_2480

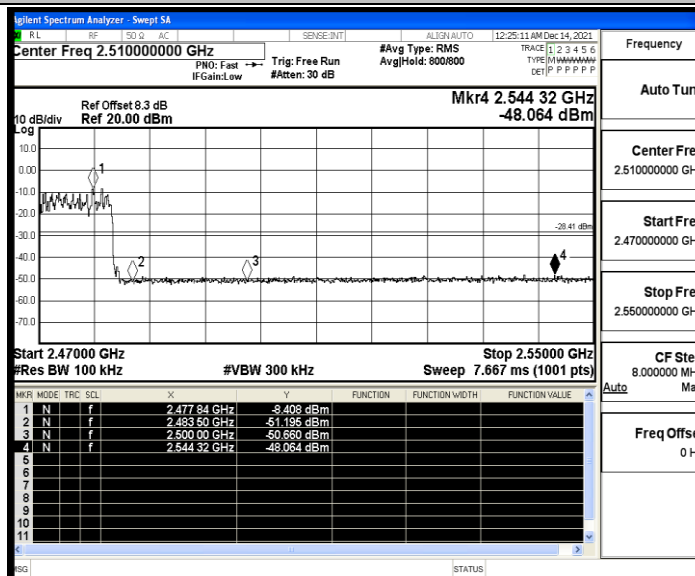




3DH5_Ant1_Low_Hop_2402



3DH5_Ant1_High_Hop_2480





A.7 Conducted Spurious Emission

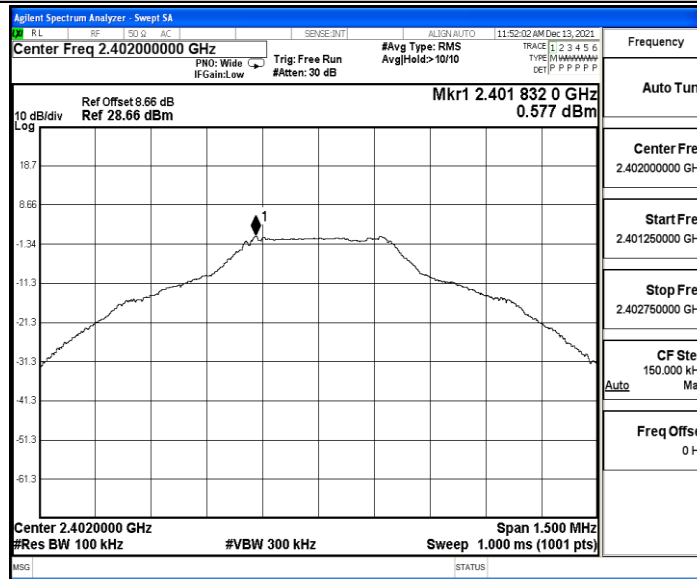
Test Result

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	0.58	0.58	---	PASS
			30~1000	0.58	-60.01	≤-19.42	PASS
			1000~26500	0.58	-45.42	≤-19.42	PASS
		2441	Reference	2.05	2.05	---	PASS
			30~1000	2.05	-58.62	≤-17.95	PASS
			1000~26500	2.05	-45.86	≤-17.95	PASS
		2480	Reference	0.51	0.51	---	PASS
			30~1000	0.51	-59.03	≤-19.49	PASS
			1000~26500	0.51	-45.8	≤-19.49	PASS
2DH5	Ant1	2402	Reference	-0.95	-0.95	---	PASS
			30~1000	-0.95	-60.38	≤-20.95	PASS
			1000~26500	-0.95	-45.78	≤-20.95	PASS
		2441	Reference	0.48	0.48	---	PASS
			30~1000	0.48	-60.5	≤-19.52	PASS
			1000~26500	0.48	-46.28	≤-19.52	PASS
		2480	Reference	-1.03	-1.03	---	PASS
			30~1000	-1.03	-60.54	≤-21.03	PASS
			1000~26500	-1.03	-46.23	≤-21.03	PASS
3DH5	Ant1	2402	Reference	-0.93	-0.93	---	PASS
			30~1000	-0.93	-60.3	≤-20.93	PASS
			1000~26500	-0.93	-45.51	≤-20.93	PASS
		2441	Reference	0.53	0.53	---	PASS
			30~1000	0.53	-55.08	≤-19.47	PASS
			1000~26500	0.53	-46.12	≤-19.47	PASS
		2480	Reference	-1.04	-1.04	---	PASS
			30~1000	-1.04	-50.24	≤-21.04	PASS
			1000~26500	-1.04	-46.07	≤-21.04	PASS

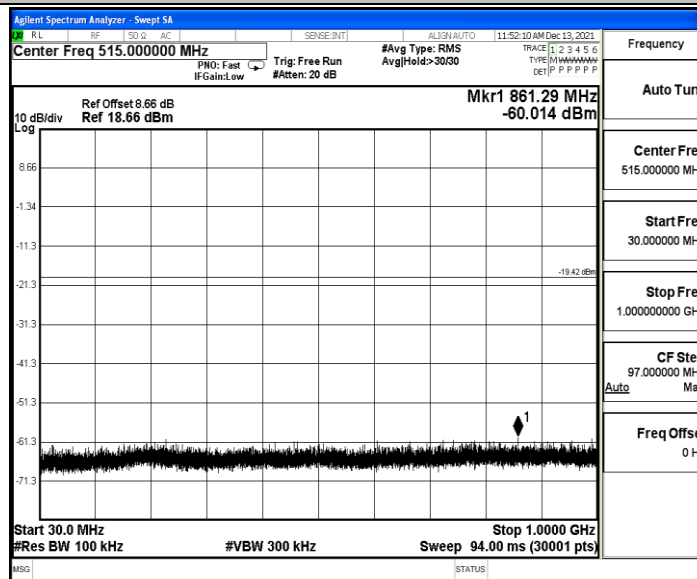


Test Graphs

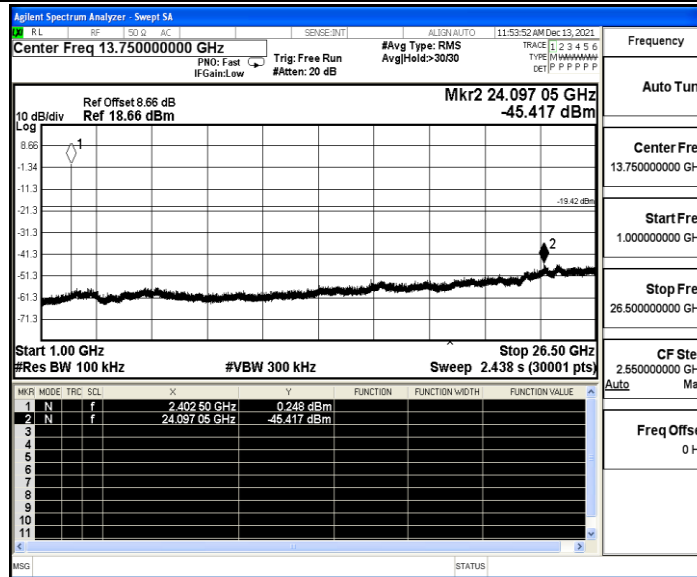
DH5_Ant1_2402_0~Reference



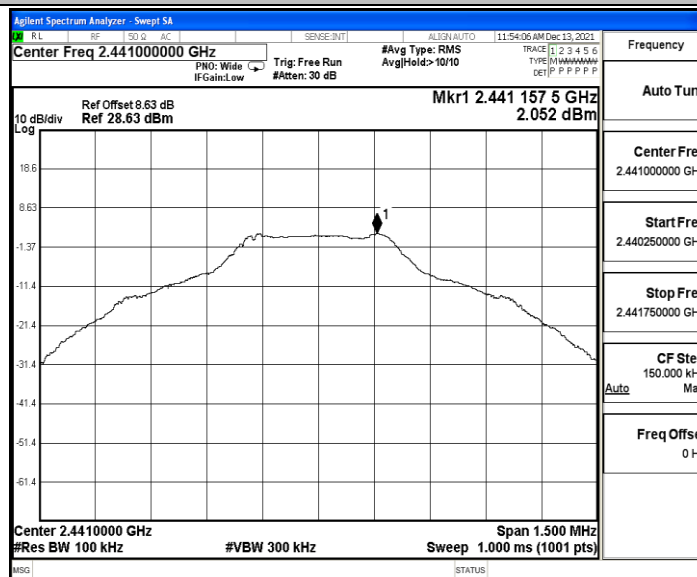
DH5_Ant1_2402_30~1000



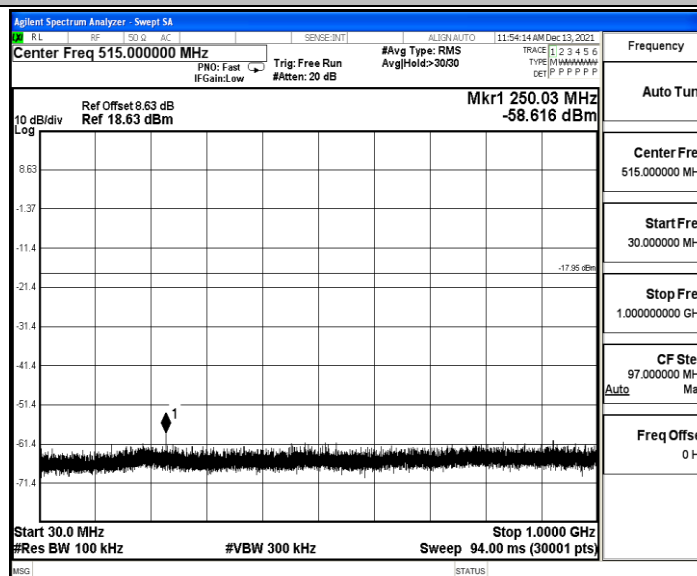
DH5_Ant1_2402_1000~26500



DH5_Ant1_2441_0~Reference

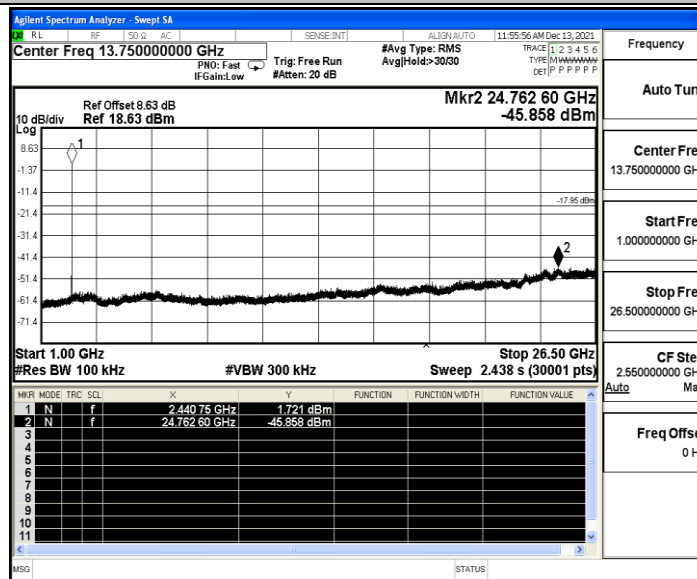


DH5_Ant1_2441_30~1000

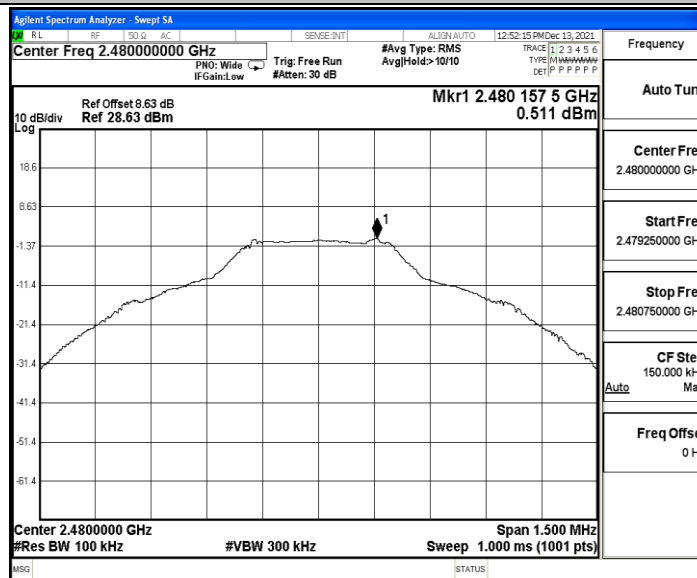




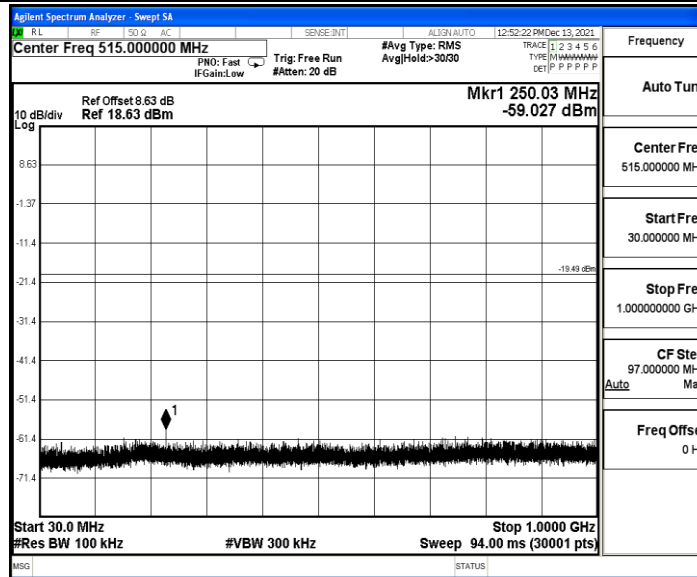
DH5_Ant1_2441_1000~26500



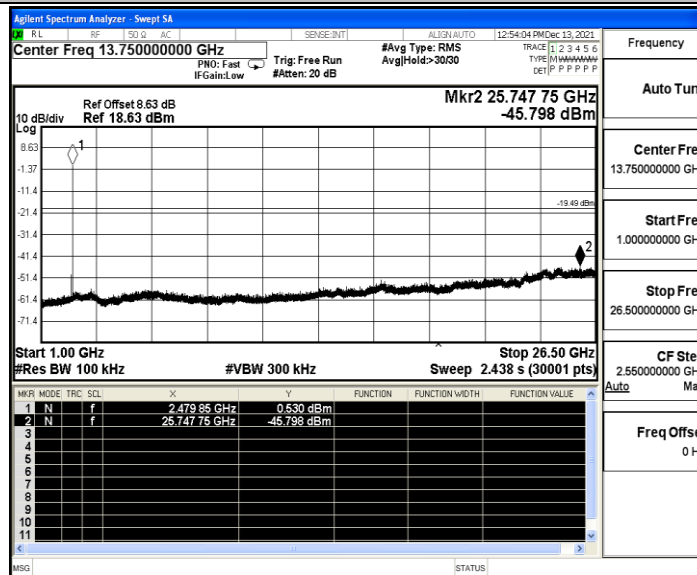
DH5_Ant1_2480_0~Reference



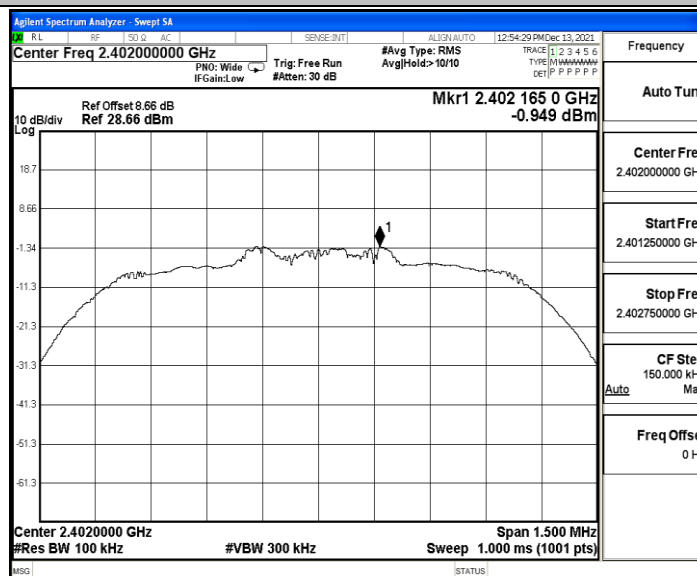
DH5_Ant1_2480_30~1000



DH5_Ant1_2480_1000~26500

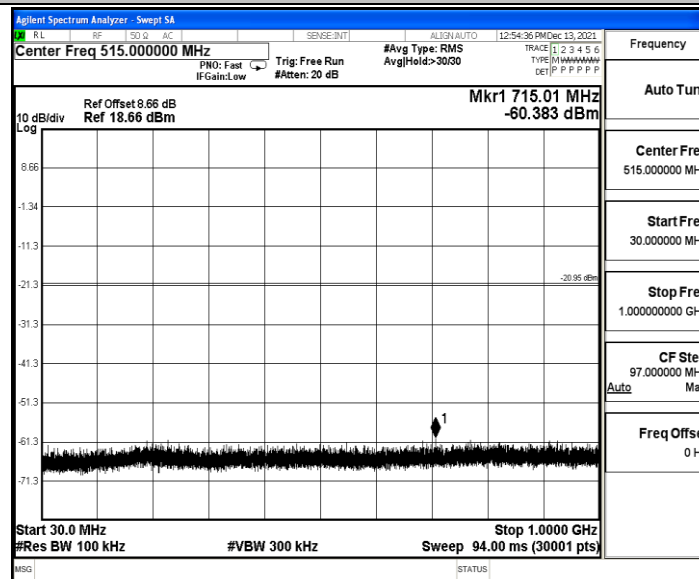


2DH5_Ant1_2402_0~Reference

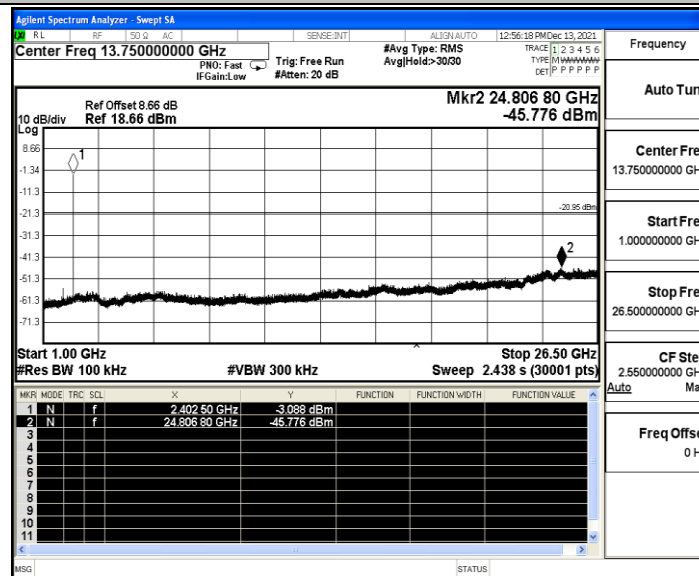




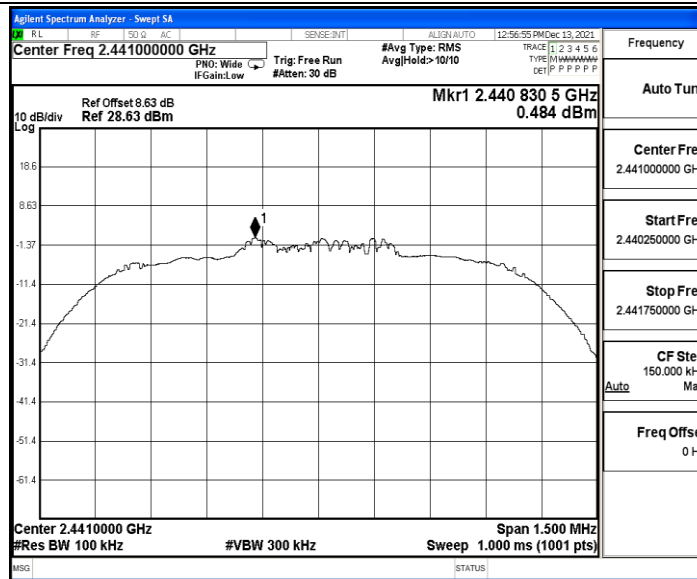
2DH5_Ant1_2402_30~1000



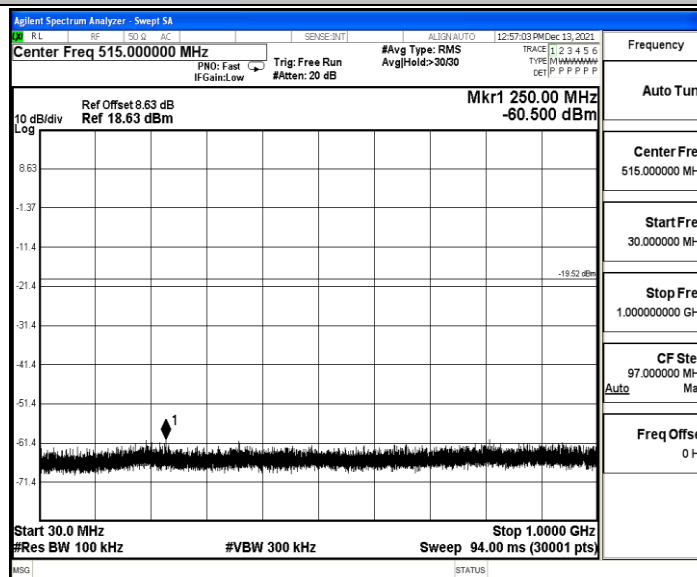
2DH5_Ant1_2402_1000~26500



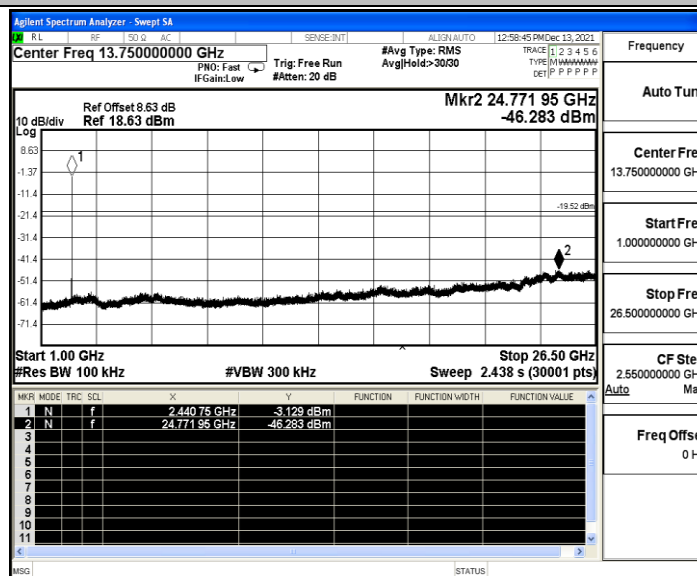
2DH5_Ant1_2441_0~Reference



2DH5_Ant1_2441_30~1000

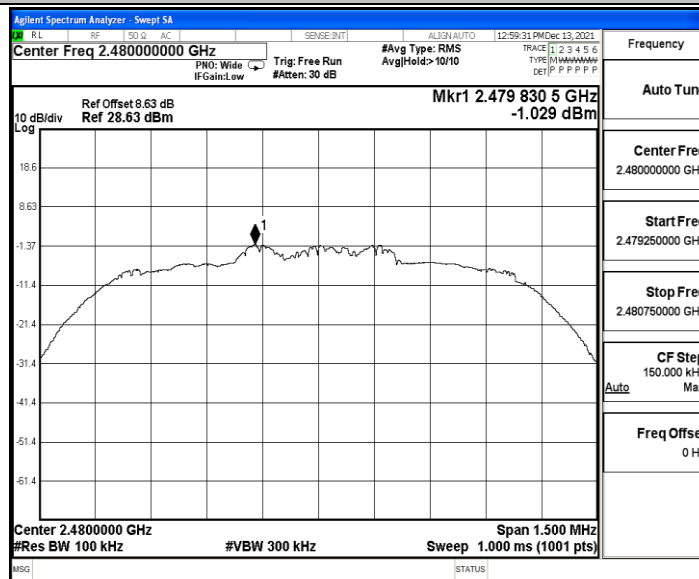


2DH5_Ant1_2441_1000~26500

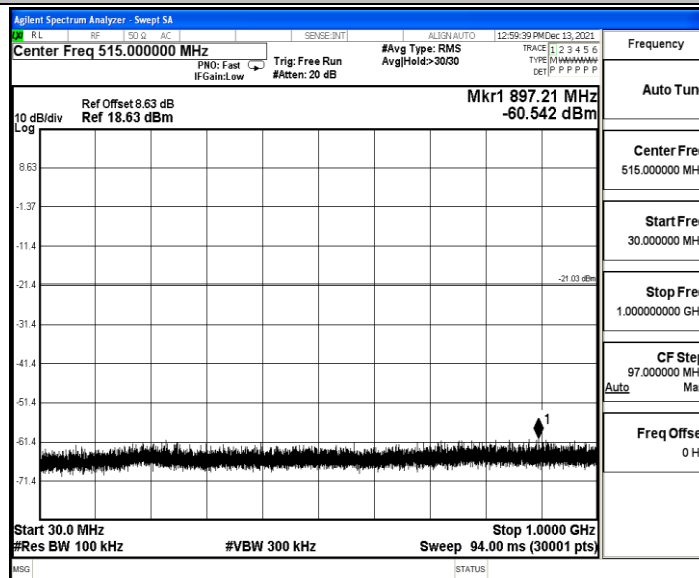




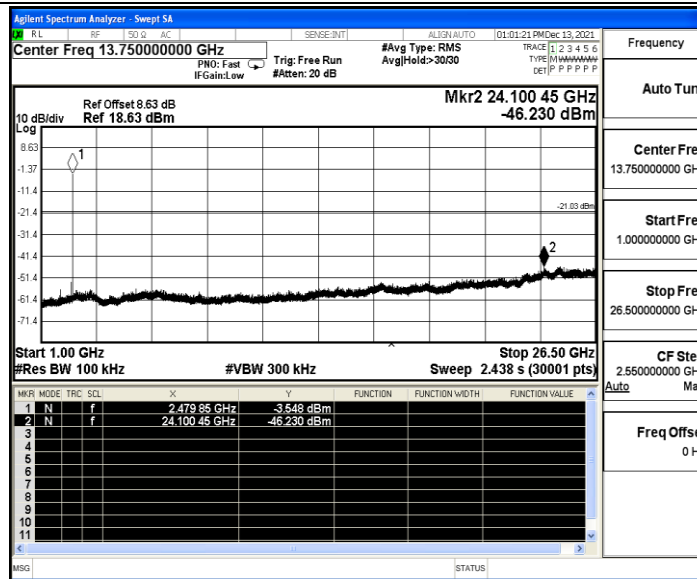
2DH5_Ant1_2480_0~Reference



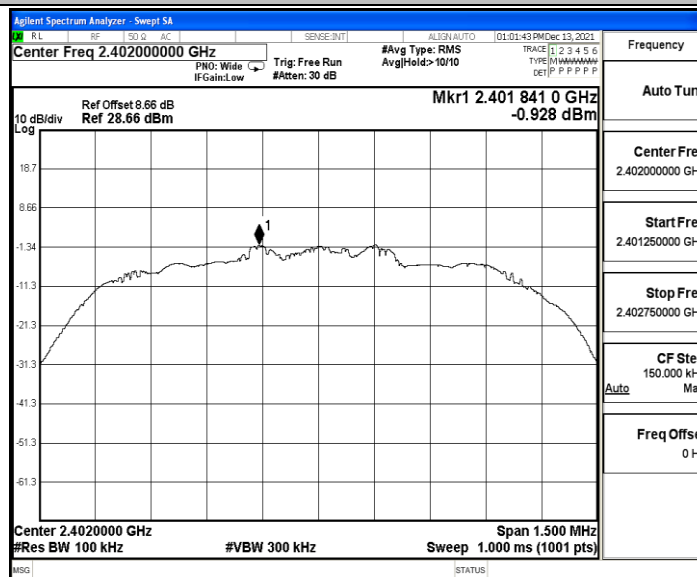
2DH5_Ant1_2480_30~1000



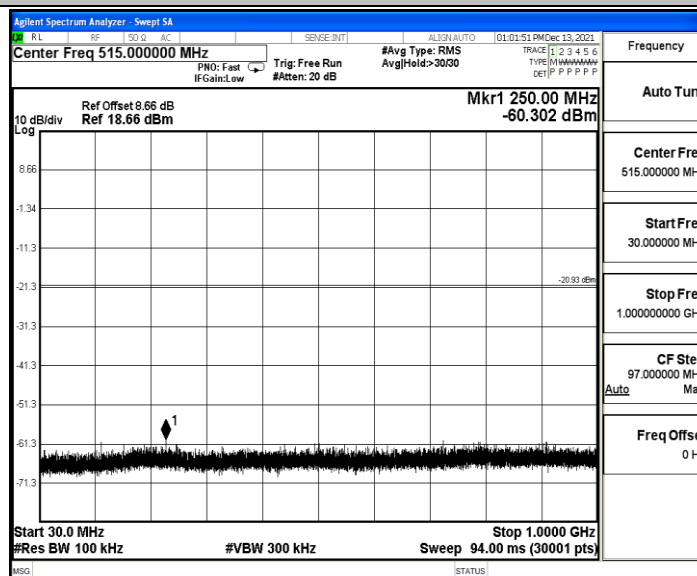
2DH5_Ant1_2480_1000~26500

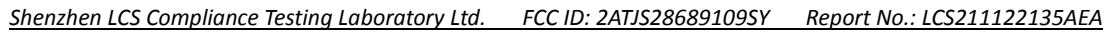


3DH5_Ant1_2402_0~Reference



3DH5_Ant1_2402_30~1000





Agilent Spectrum Analyzer - Sweep SA

RL RF SFG AGC SENSE INT ALIAS/AUTO [01:03:33 PM] Dec 13, 2021
Center Freq 13.750000000 GHz #Avg Type: RMS Avg/Hold>30G30 TYPE: [WAWWWWWW] TRACE [] 2 3 4 5 6
 PNO: Fast IF Gain: Low Trig: Free Run #Atten: 20 dB DET: P P P P P

Mkr2 26.248 40 GHz
-45.507 dBm

Ref Offset 8.66 dB
 Ref 18.66 dBm

Start 1.00 GHz Stop 26.50 GHz
 #Res BW 100 kHz #VBW 300 kHz Sweep 2.438 s (30001 pts)

MKR	MODE	FREQ	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	f		2.40166 GHz	-1.171 dBm			
2	N	f		26.248 40 GHz	-45.507 dBm			

Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω AC SENSE [INT] ALIAS AUTO 01:04:16 PM Dec 13, 2021

Center Freq 2.441000000 GHz #Avg Type: RMS Avg/Hold> 10/10 TRAC [] 2 3 4 5 6
 PWD: Wide IF Gain: Low #Trig: Free Run #Atten: 30 dB TYPE [NANANANAN] DET [P P P P P]

Mkr1 2.4411545 GHz 0.532 dBm

Ref Offset 8.63 dB
 Ref 28.63 dBm

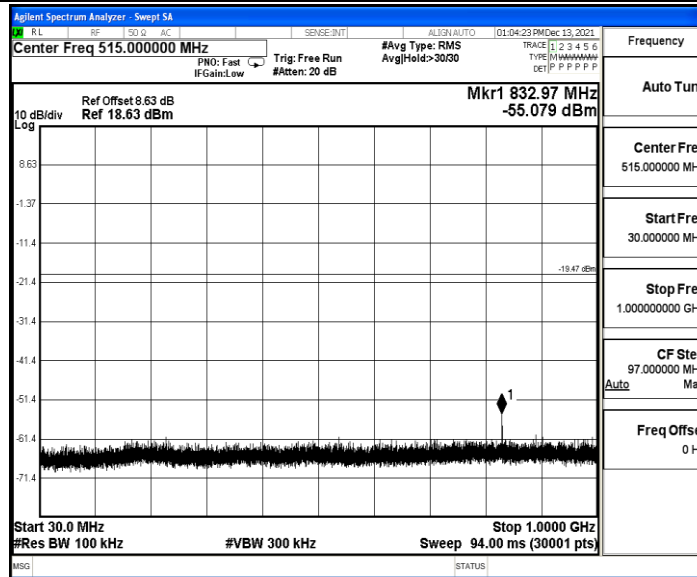
10 dB/div
 Log

18.6
 8.63
 -1.37
 -11.4
 -21.4
 -31.4
 -41.4
 -51.4
 -61.4

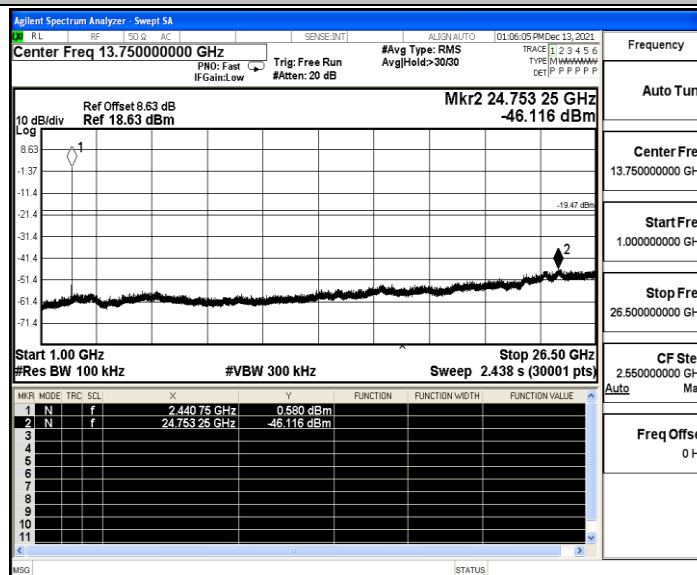
Center 2.4410000 GHz Span 1.500 MHz
 #BW 100 kHz Sweep 1.000 ms (1001 pts)
 #VBW 300 kHz

MSG STATUS

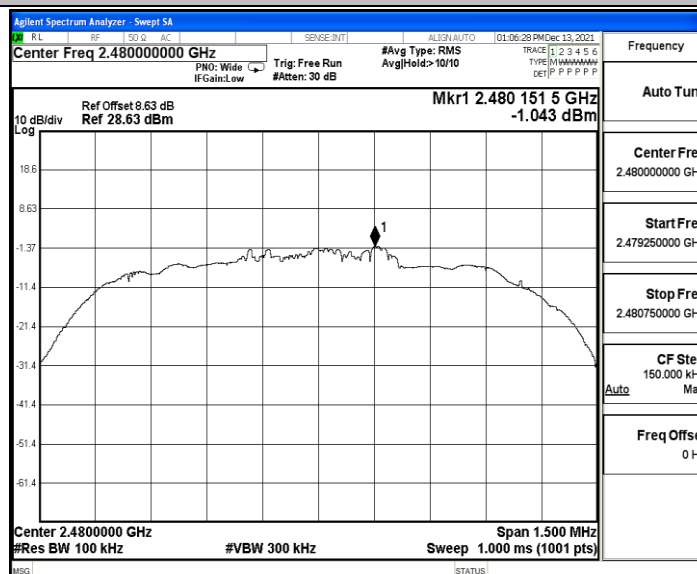
30 / 42



3DH5_Ant1_2441_1000~26500

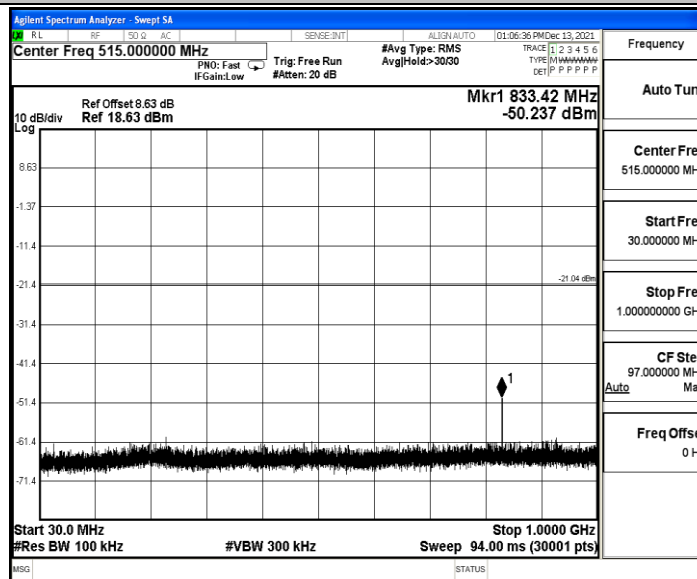


3DH5_Ant1_2480_0~Reference

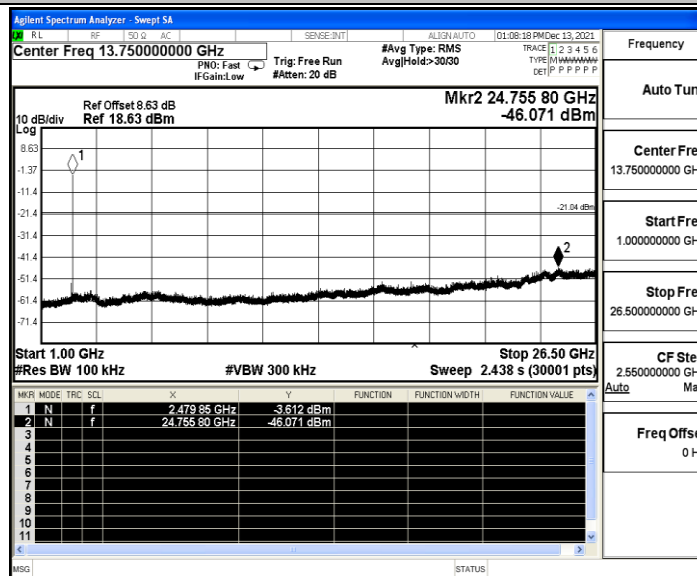




3DH5_Ant1_2480_30~1000



3DH5_Ant1_2480_1000~26500





A.8 Emissions in Restricted Bands

Test Result

TestMode	Antenna	ChName	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
DH5	Ant1	Low	2402	AV	2310.000	-48.91	≤-41.20	46.29	≤54	PASS
				AV	2353.970	-48.01	≤-41.20	47.19	≤54	PASS
				AV	2390.000	-48.45	≤-41.20	46.75	≤54	PASS
				Peak	2310.000	-41.5	≤-21.20	53.70	≤74	PASS
				Peak	2386.205	-37.83	≤-21.20	57.37	≤74	PASS
				Peak	2390.000	-42.88	≤-21.20	52.32	≤74	PASS
		High	2480	AV	2483.500	-48.08	≤-41.20	47.12	≤54	PASS
				AV	2499.600	-47.92	≤-41.20	47.28	≤54	PASS
				AV	2500.000	-47.93	≤-41.20	47.27	≤54	PASS
				Peak	2483.500	-39.7	≤-21.20	55.50	≤74	PASS
				Peak	2498.880	-38.82	≤-21.20	56.38	≤74	PASS
				Peak	2500.000	-42.54	≤-21.20	52.66	≤74	PASS
		Low	Hop_24 02	Peak	2310.000	-39.8	≤-21.20	55.40	≤74	PASS
				Peak	2384.210	-37.49	≤-21.20	57.71	≤74	PASS
				Peak	2390.000	-39.35	≤-21.20	55.85	≤74	PASS
		High	Hop_24 80	Peak	2483.500	-39.57	≤-21.20	55.63	≤74	PASS
				Peak	2498.720	-36.9	≤-21.20	58.30	≤74	PASS
				Peak	2500.000	-38.9	≤-21.20	56.30	≤74	PASS
2DH5	Ant1	Low	2402	AV	2310.000	-48.89	≤-41.20	46.31	≤54	PASS
				AV	2378.015	-48.16	≤-41.20	47.04	≤54	PASS
				AV	2390.000	-48.48	≤-41.20	46.72	≤54	PASS
				Peak	2310.000	-43.02	≤-21.20	52.18	≤74	PASS
				Peak	2333.600	-38.68	≤-21.20	56.52	≤74	PASS
				Peak	2390.000	-41.94	≤-21.20	53.26	≤74	PASS
		High	2480	AV	2483.500	-48.08	≤-41.20	47.12	≤54	PASS
				AV	2499.520	-47.89	≤-41.20	47.31	≤54	PASS
				AV	2500.000	-47.93	≤-41.20	47.27	≤54	PASS
				Peak	2483.500	-42.93	≤-21.20	52.27	≤74	PASS
				Peak	2485.680	-38.61	≤-21.20	56.59	≤74	PASS
				Peak	2500.000	-43.55	≤-21.20	51.65	≤74	PASS
		Low	Hop_24 02	Peak	2310.000	-39.13	≤-21.20	56.07	≤74	PASS
				Peak	2388.095	-37.28	≤-21.20	57.92	≤74	PASS
				Peak	2390.000	-39.56	≤-21.20	55.64	≤74	PASS
		High	Hop_24 80	Peak	2483.500	-38.97	≤-21.20	56.23	≤74	PASS
				Peak	2490.960	-37.13	≤-21.20	58.07	≤74	PASS
				Peak	2500.000	-38.87	≤-21.20	56.33	≤74	PASS
3DH5	Ant1	Low	2402	AV	2310.000	-48.87	≤-41.20	46.33	≤54	PASS



				AV	2377.910	-48.19	≤-41.20	47.01	≤54	PASS
				AV	2390.000	-48.47	≤-41.20	46.73	≤54	PASS
				Peak	2310.000	-43.32	≤-21.20	51.88	≤74	PASS
				Peak	2385.260	-39.37	≤-21.20	55.83	≤74	PASS
				Peak	2390.000	-43.56	≤-21.20	51.64	≤74	PASS
		High	2480	AV	2483.500	-48.09	≤-41.20	47.11	≤54	PASS
				AV	2499.760	-47.92	≤-41.20	47.28	≤54	PASS
				AV	2500.000	-47.92	≤-41.20	47.28	≤54	PASS
				Peak	2483.500	-38.99	≤-21.20	56.21	≤74	PASS
				Peak	2487.120	-38.89	≤-21.20	56.31	≤74	PASS
				Peak	2500.000	-41.97	≤-21.20	53.23	≤74	PASS
		Low	Hop_24 02	Peak	2310.000	-40.38	≤-21.20	54.82	≤74	PASS
				Peak	2355.650	-37.56	≤-21.20	57.64	≤74	PASS
				Peak	2390.000	-40.3	≤-21.20	54.90	≤74	PASS
		High	Hop_24 80	Peak	2483.500	-37.99	≤-21.20	57.21	≤74	PASS
				Peak	2492.560	-35.75	≤-21.20	59.45	≤74	PASS
				Peak	2500.000	-37.46	≤-21.20	57.74	≤74	PASS

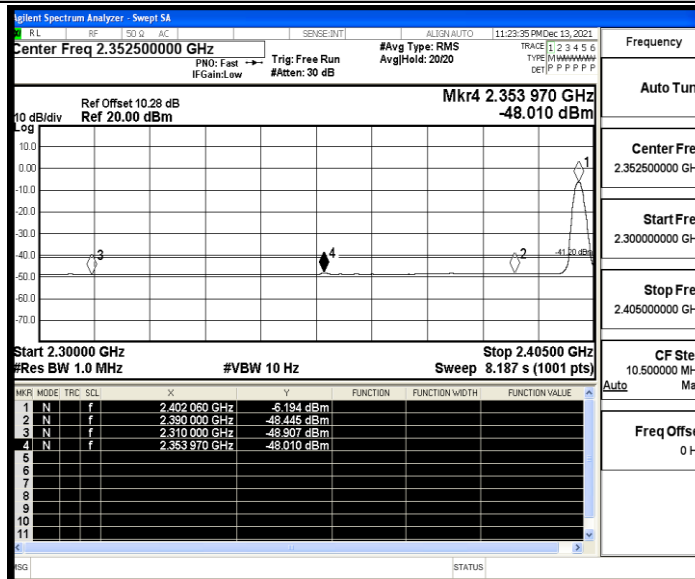
Note:

1. The Antenna Gain is compensated in the graph.
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.

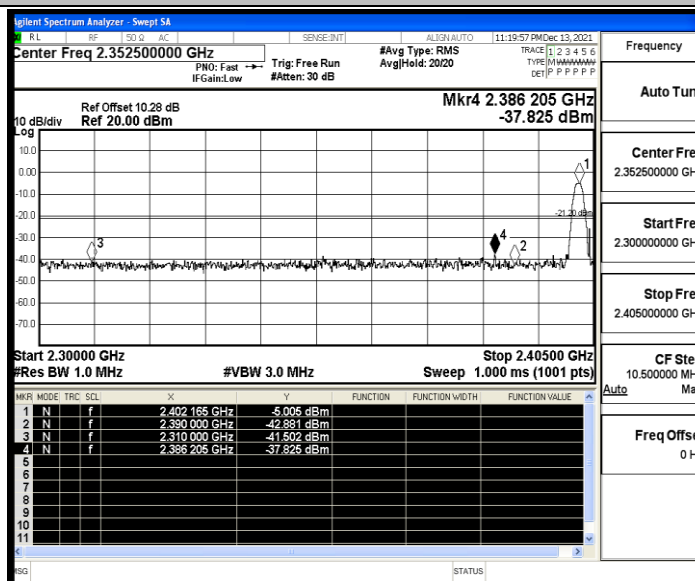


Test Graphs

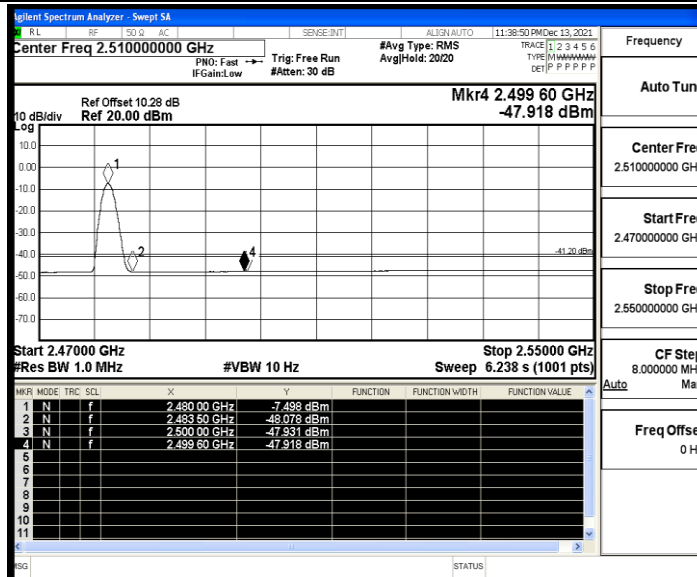
DH5_Ant1_Low_2402_AV



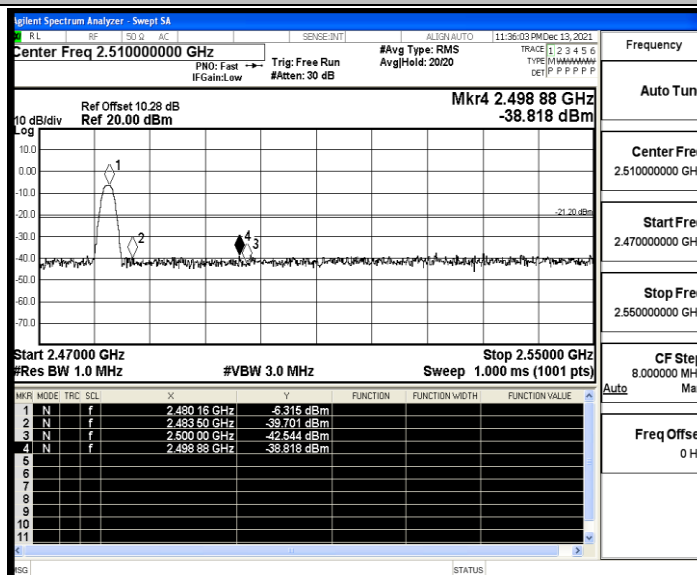
DH5_Ant1_Low_2402_Peak



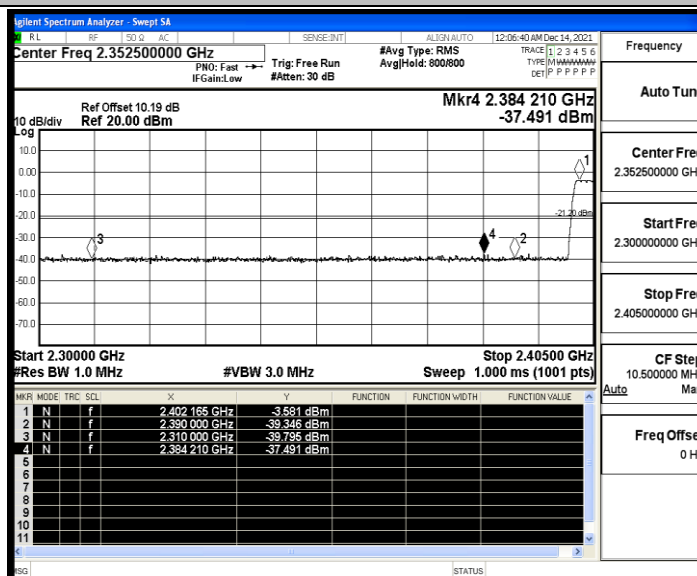
DH5_Ant1_High_2480_AV



DH5_Ant1_High_2480_Peak

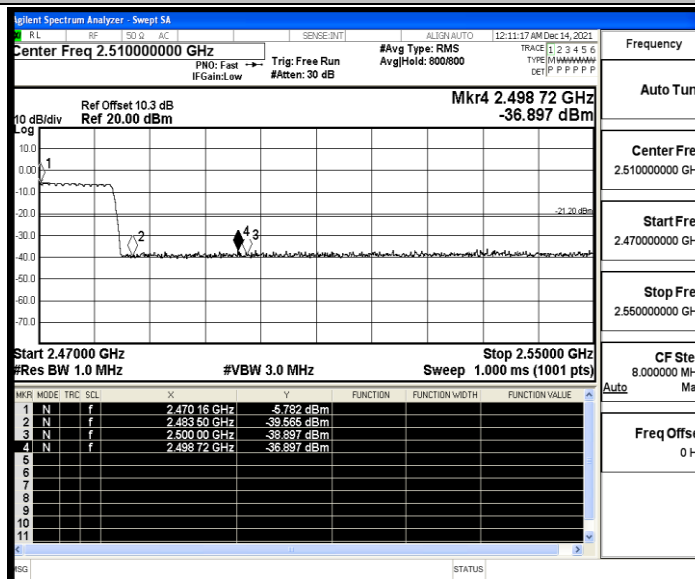


DH5_Ant1_Low_Hop_2402_Peak

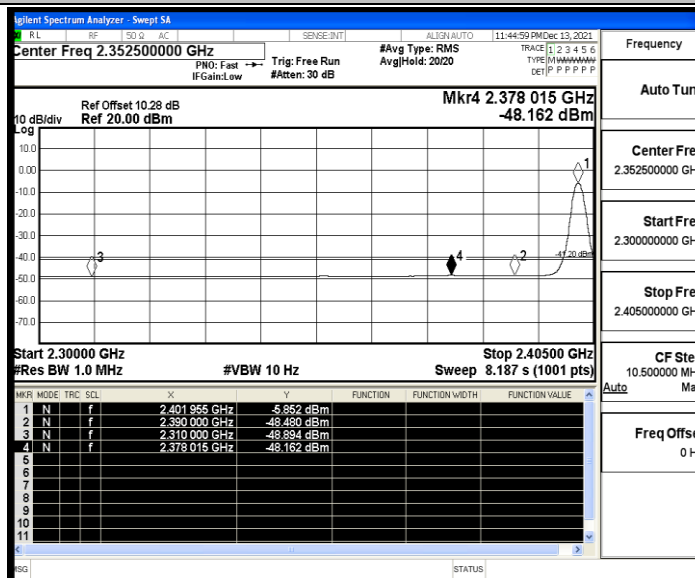




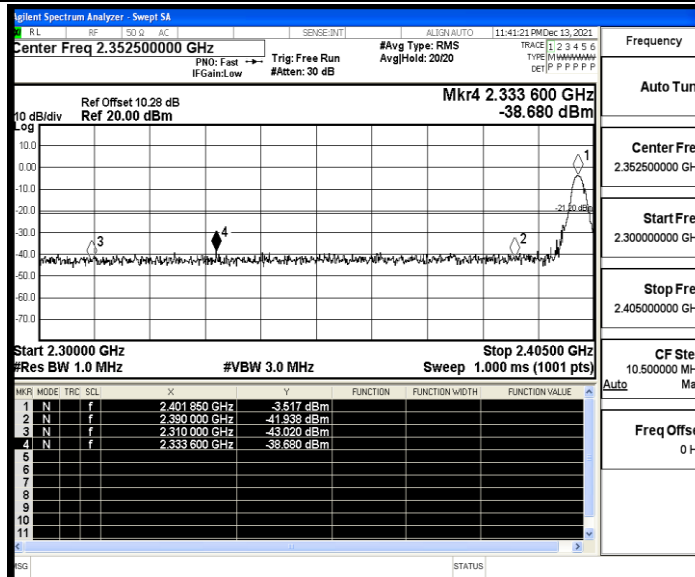
DH5_Ant1_High_Hop_2480_Peak



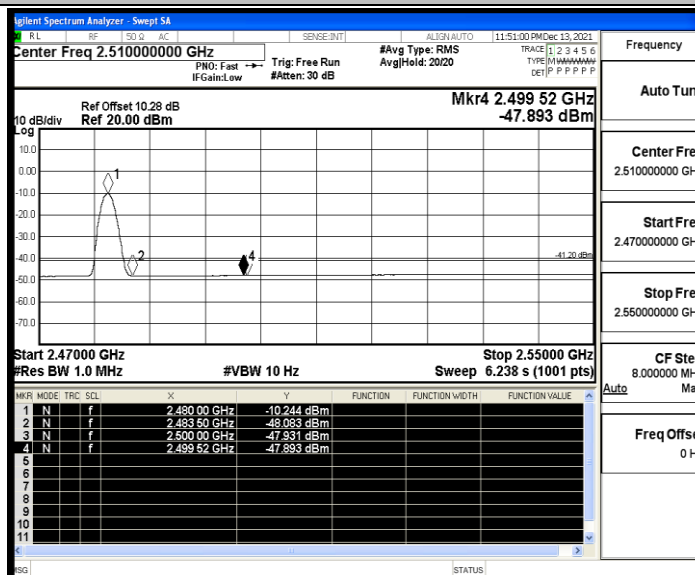
2DH5_Ant1_Low_2402_AV



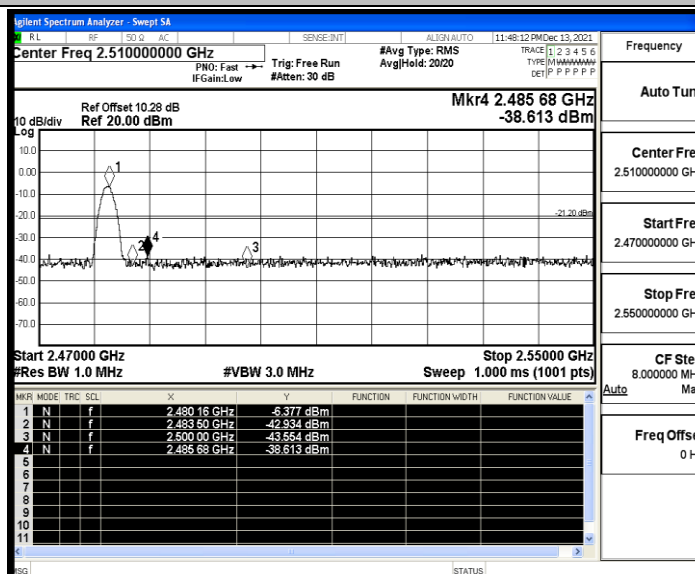
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2DH5_Ant1_High_2480_AV

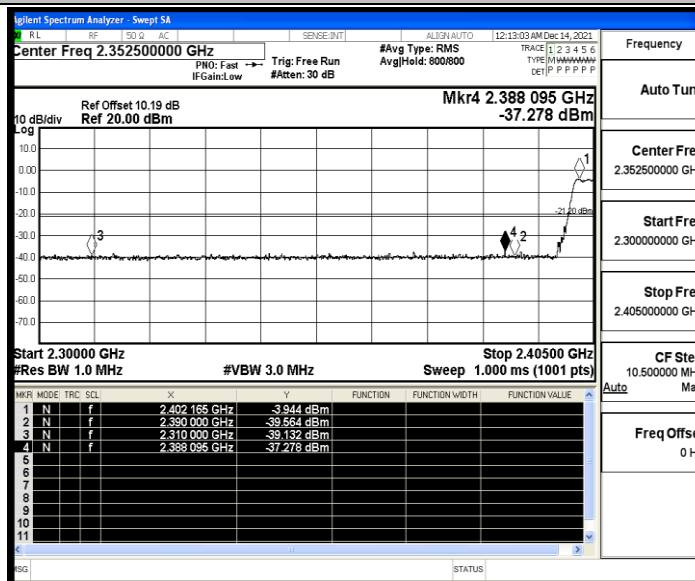


2DH5_Ant1_High_2480_Peak

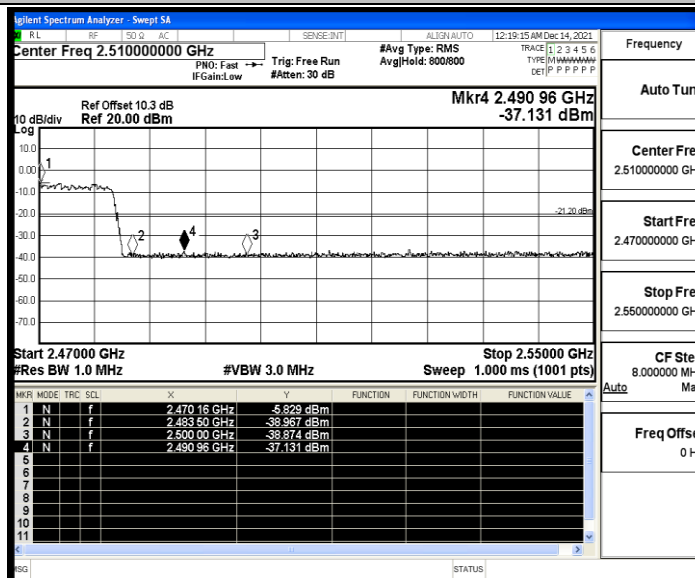




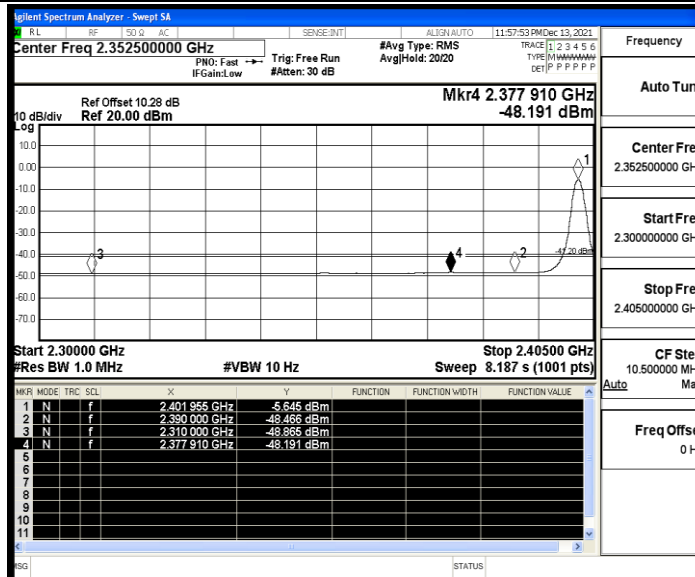
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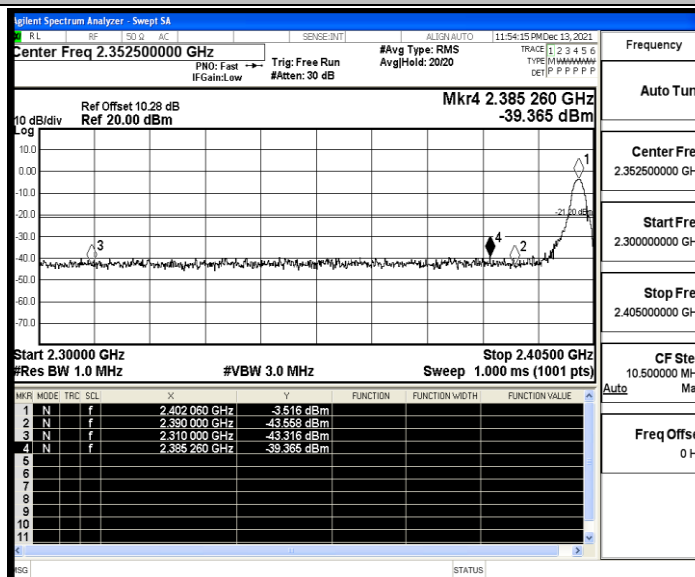
2DH5_Ant1_High_Hop_2480_Peak



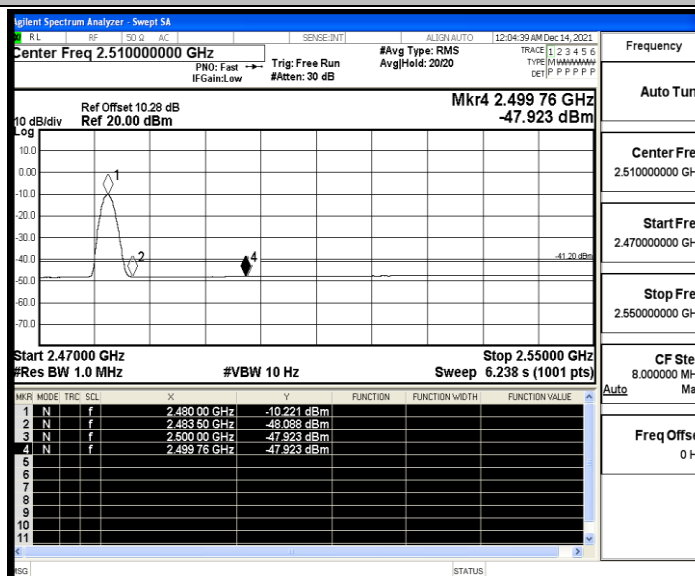
3DH5_Ant1_Low_2402_AV



3DH5_Ant1_Low_2402_Peak

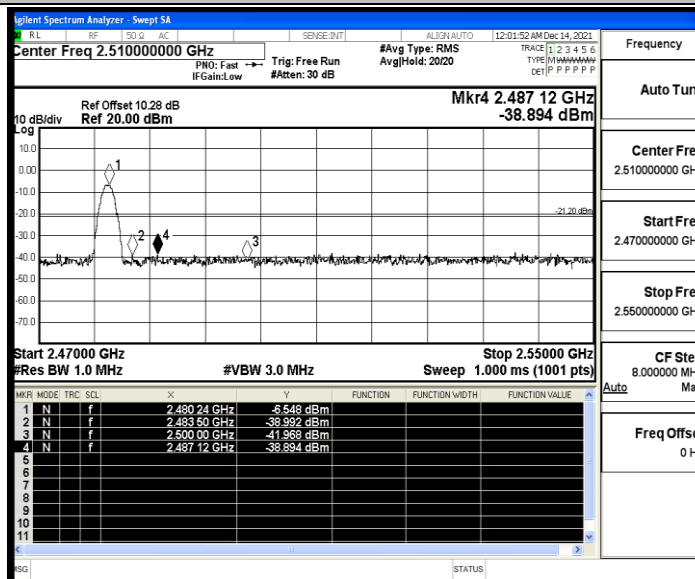


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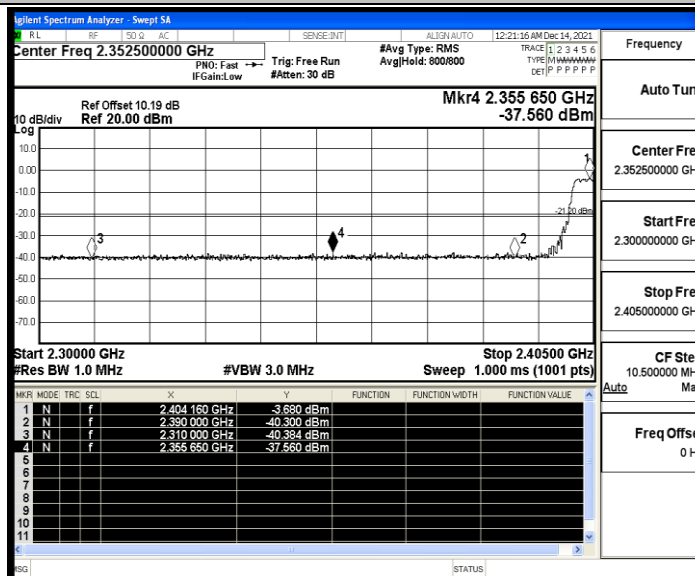




3DH5_Ant1_High_2480_Peak



3DH5_Ant1_Low_Hop_2402_Peak



3DH5_Ant1_High_Hop_2480_Peak

