

Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: 100W Solid-state linear power amplifier

Test Model: GPA100

Environmental Conditions

Temperature:	23.7° C
Relative Humidity:	52.4%
ATM Pressure:	100.0 kPa
Test Engineer:	Suichao Lai
Supervised by:	Yan Chen

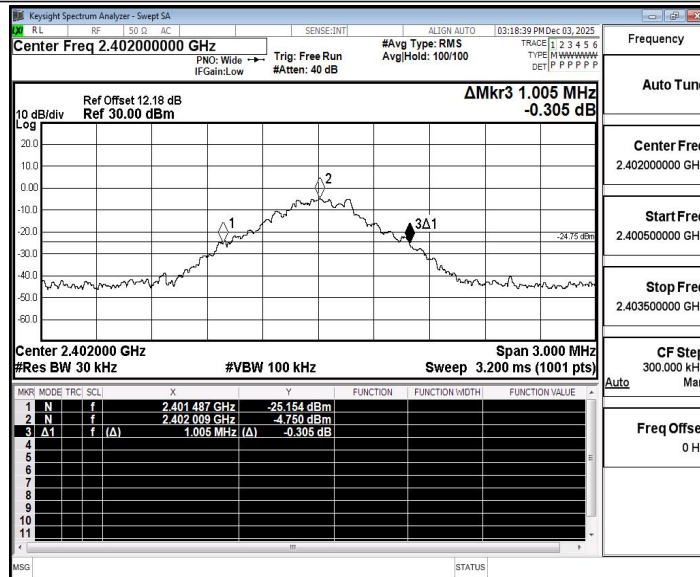
A.1 20dB Bandwidth

Test Result

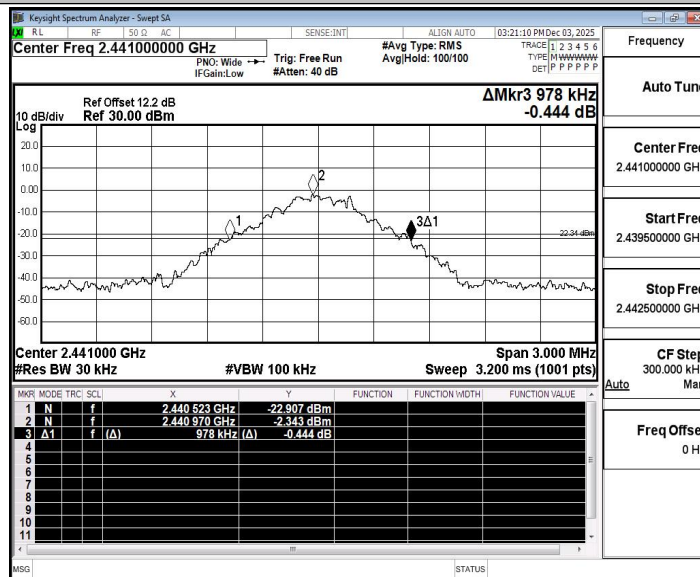
TestMode	Antenna	Freq(MHz)	20dB EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	1.005	2401.487	2402.492	---	---
		2441	0.978	2440.523	2441.501	---	---
		2480	0.957	2479.529	2480.486	---	---

Test Graphs

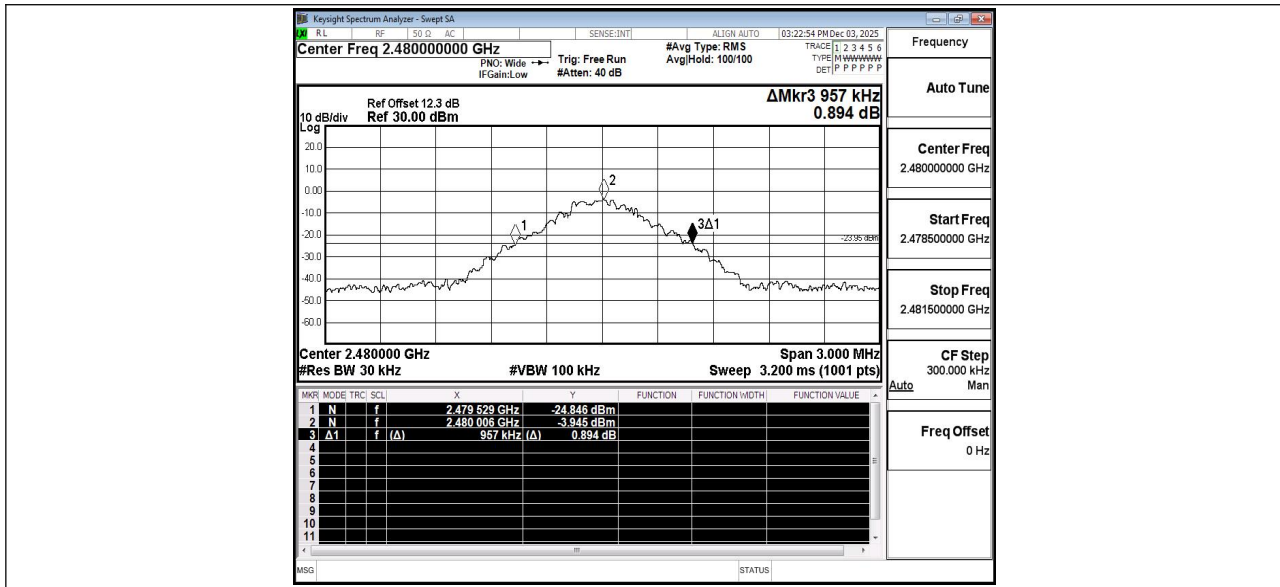
DH5_Ant1_2402



DH5_Ant1_2441



DH5_Ant1_2480

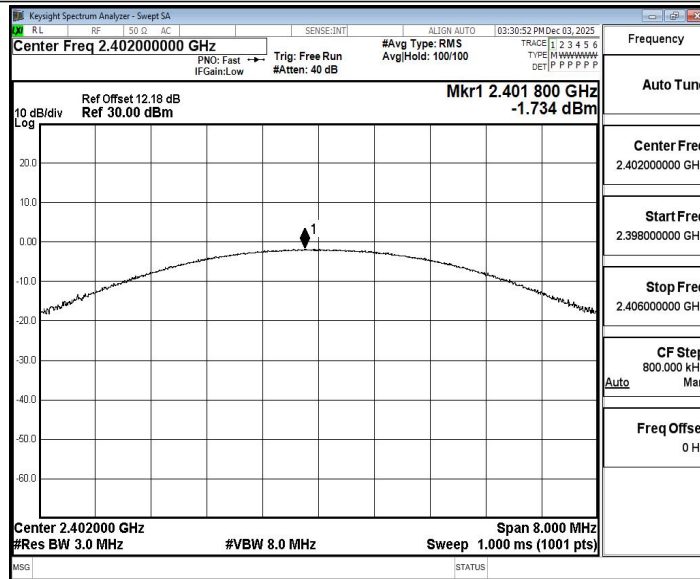


A.2 Maximum Peak Conducted Output Power

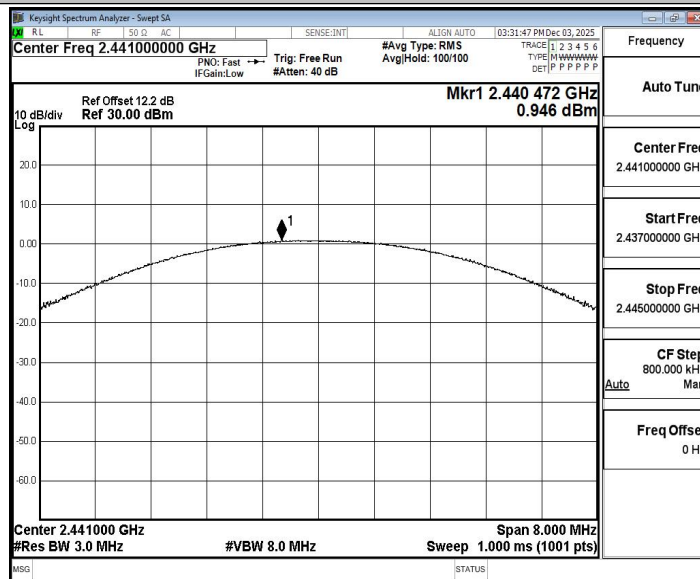
Condition	Mode	Frequency (MHz)	Antenna	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH5	2402	Ant1	-1.73	21	Pass
NVNT	1-DH5	2441	Ant1	0.95	21	Pass
NVNT	1-DH5	2480	Ant1	-0.16	21	Pass

Test Graphs

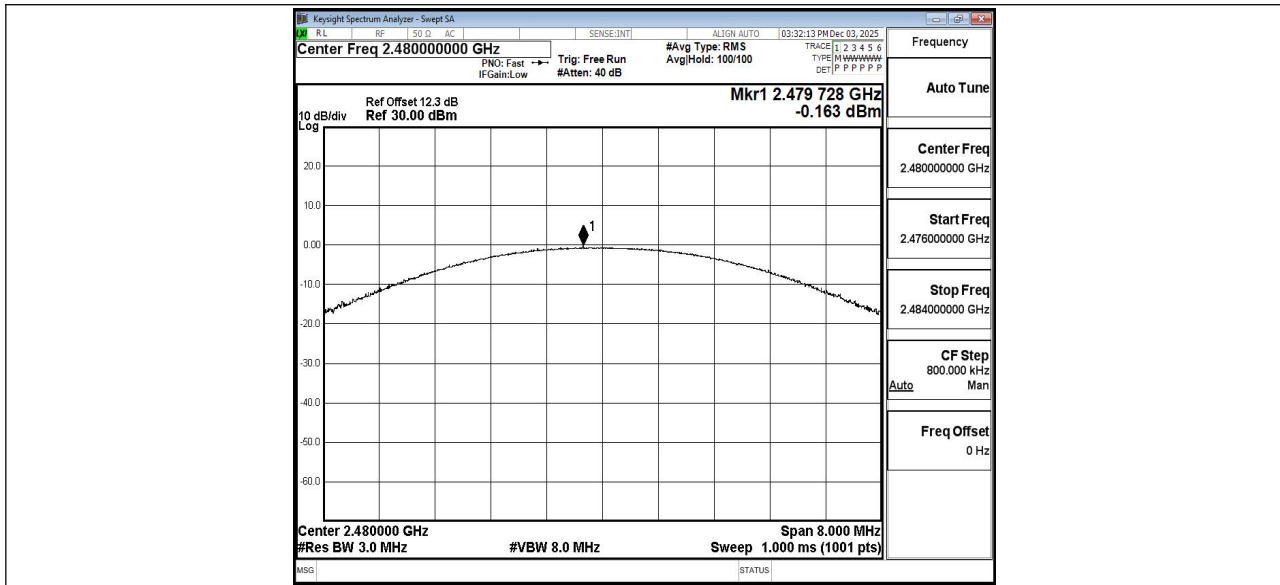
DH5_Ant1_2402



DH5_Ant1_2441



DH5_Ant1_2480

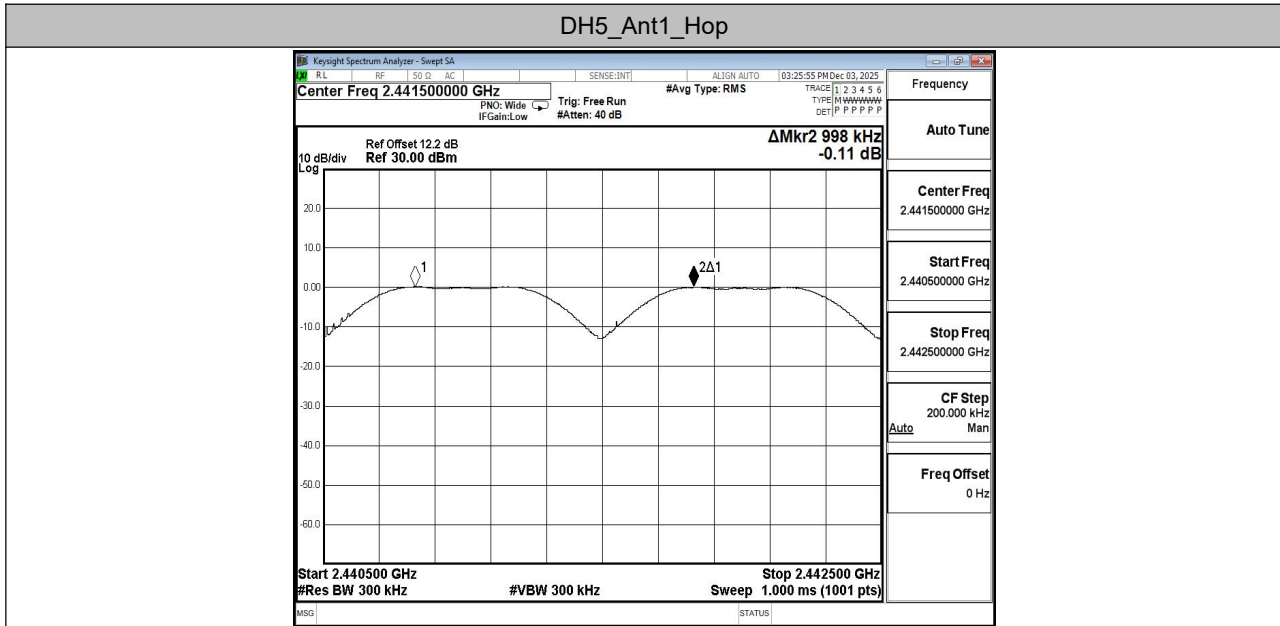


A.3 Carrier Frequencies Separation

Test Result

TestMode	Antenna	Freq(MHz)	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	0.998	≥0.670	PASS

Test Graphs

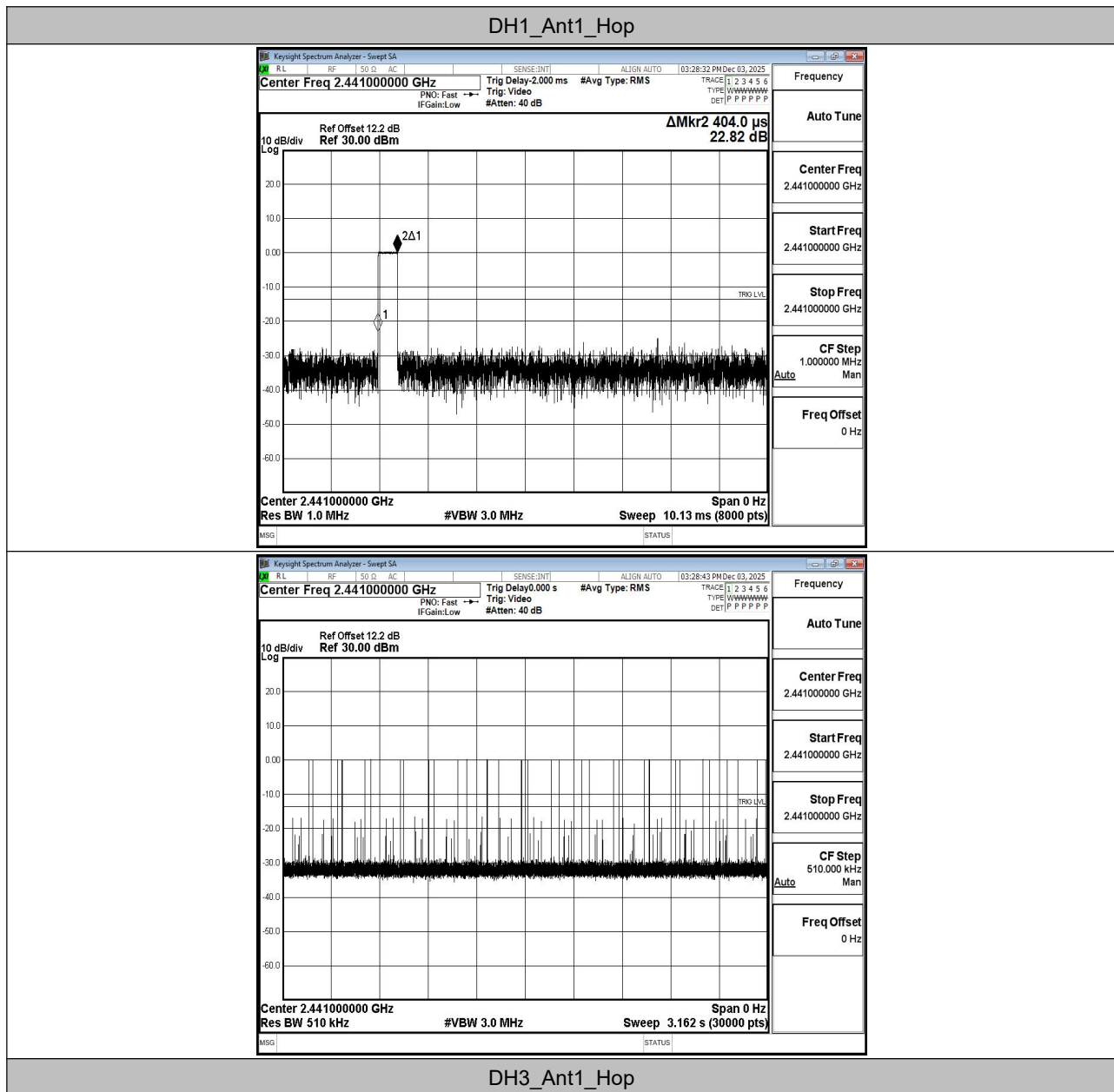


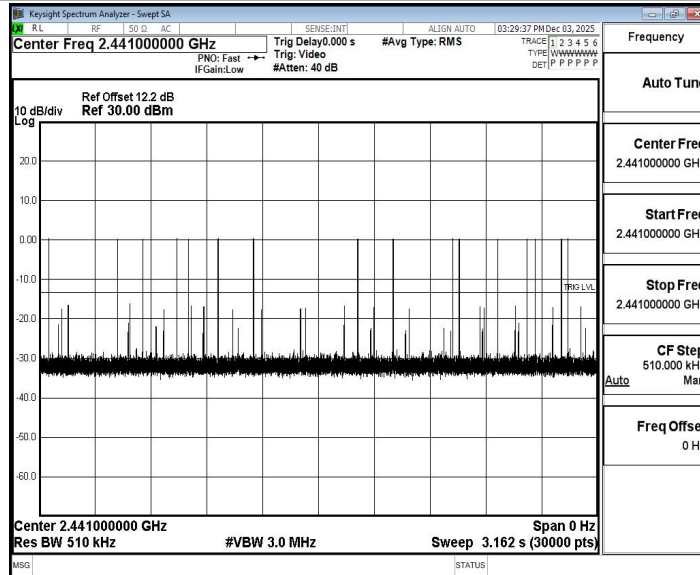
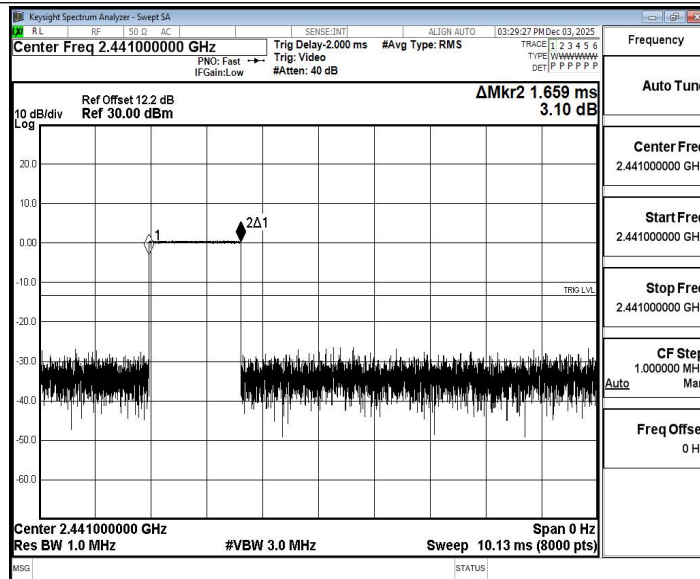
A.4 Dwell Time

Test Result

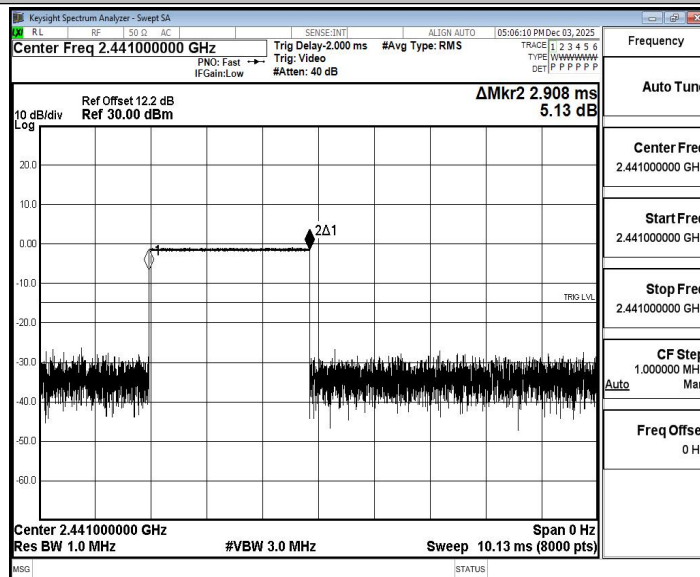
TestMode	Antenna	Freq(MHz)	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.404	330	0.133	≤0.4	PASS
DH3	Ant1	Hop	1.659	170	0.282	≤0.4	PASS
DH5	Ant1	Hop	2.908	90	0.262	≤0.4	PASS

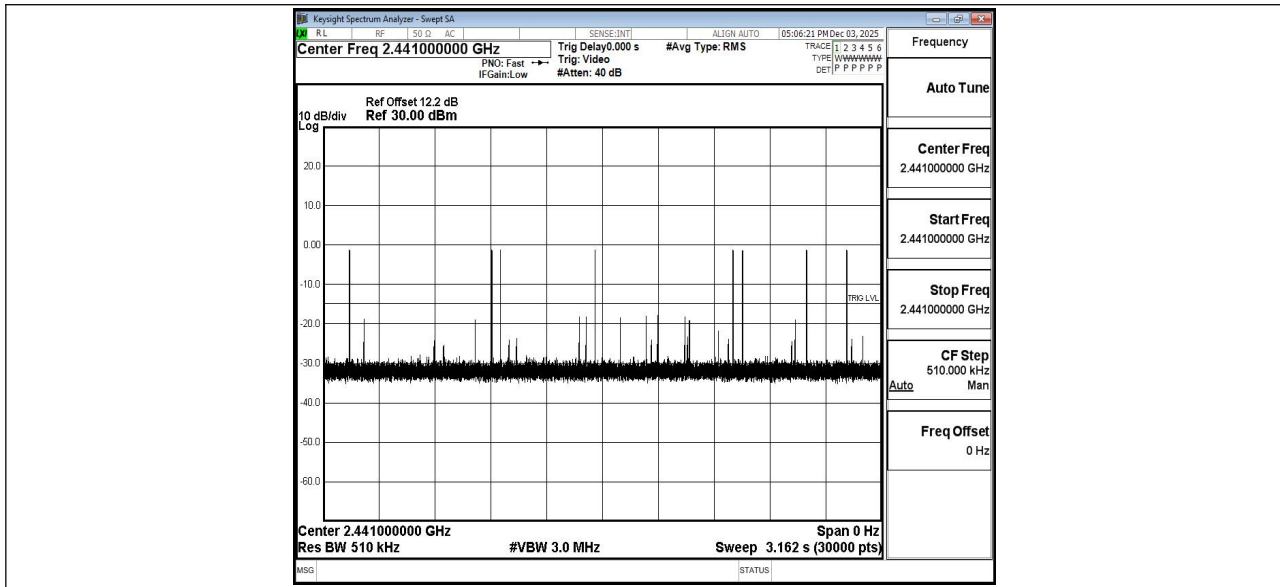
Test Graphs





DH5_Ant1_Hop



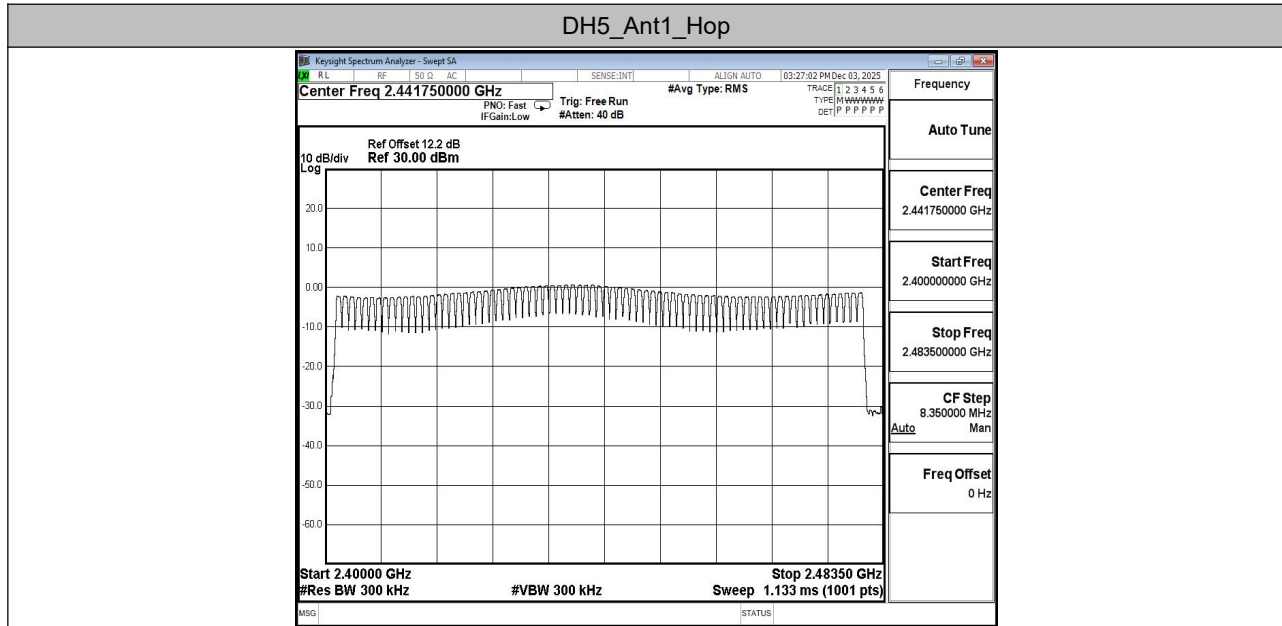


A.5 Number of Hopping Channel

Test Result

TestMode	Antenna	Freq(MHz)	Result[Num]	Limit[Num]	Verdict
DH5	Ant1	Hop	79	≥15	PASS

Test Graphs



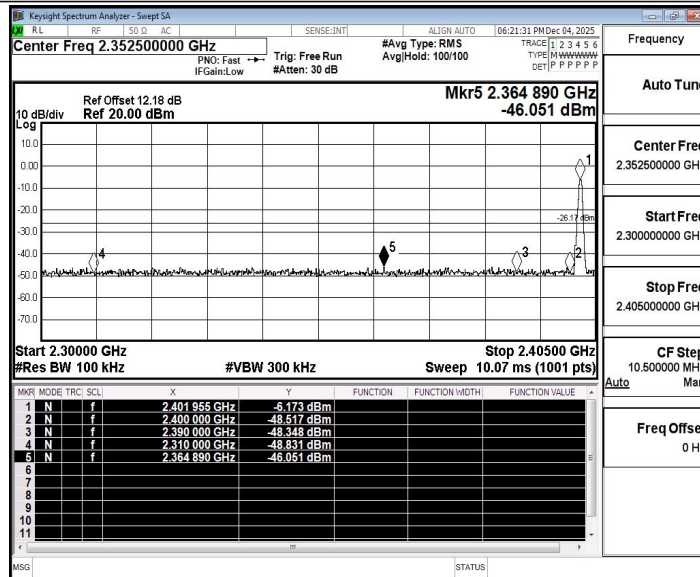
A.6 Band edge measurements

Test Result

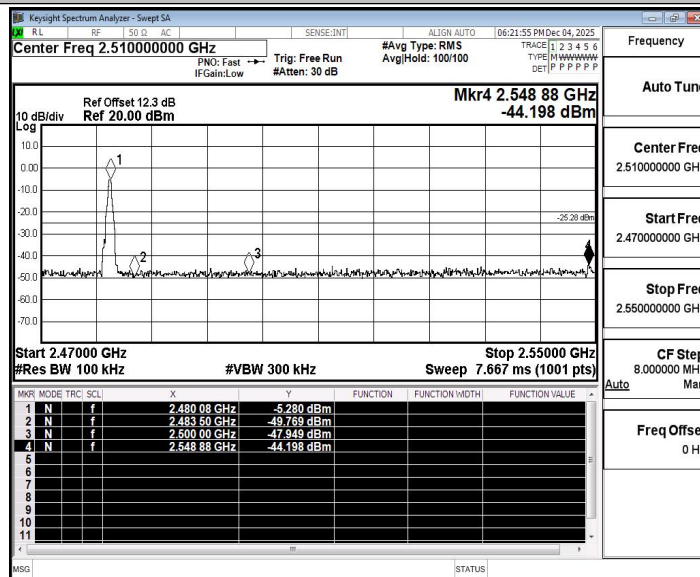
TestMode	Antenna	ChName	Freq(MHz)	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-6.17	-46.05	≤-26.17	PASS
		High	2480	-5.28	-44.2	≤-25.28	PASS
		Low	Hop_2402	-6.45	-45.08	≤-26.45	PASS
		High	Hop_2480	-5.64	-44.76	≤-25.64	PASS

Test Graphs

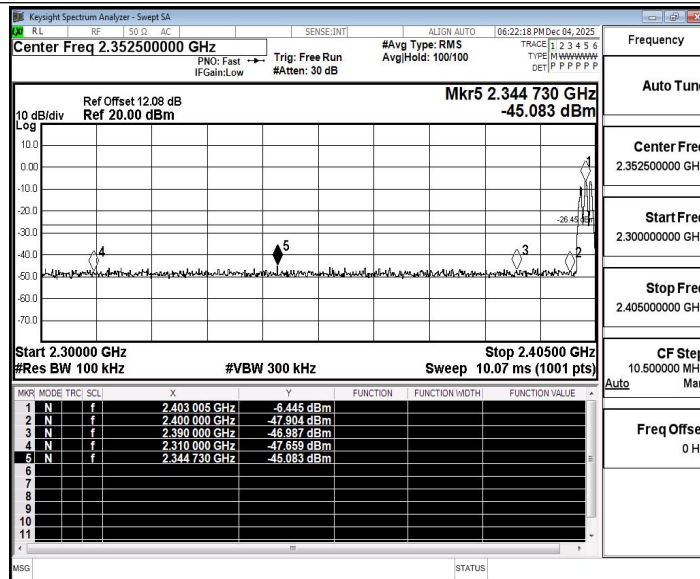
DH5_Ant1_Low_2402



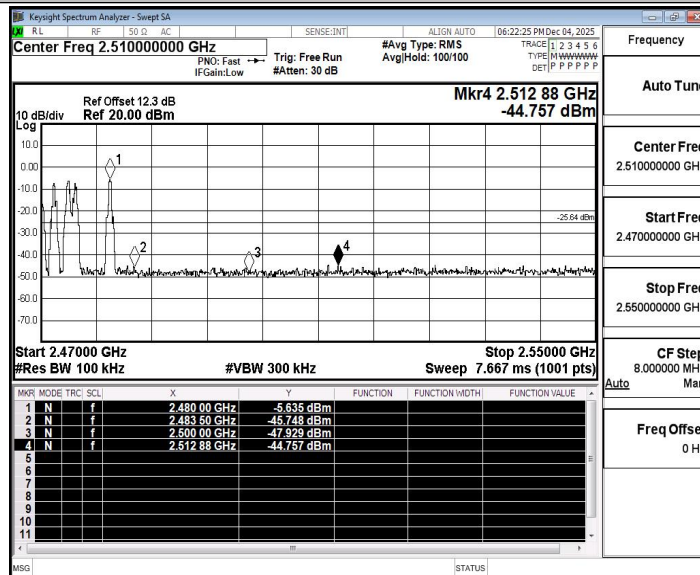
DH5_Ant1_High_2480



DH5_Ant1_Low_Hop_2402



DH5_Ant1_High_Hop_2480



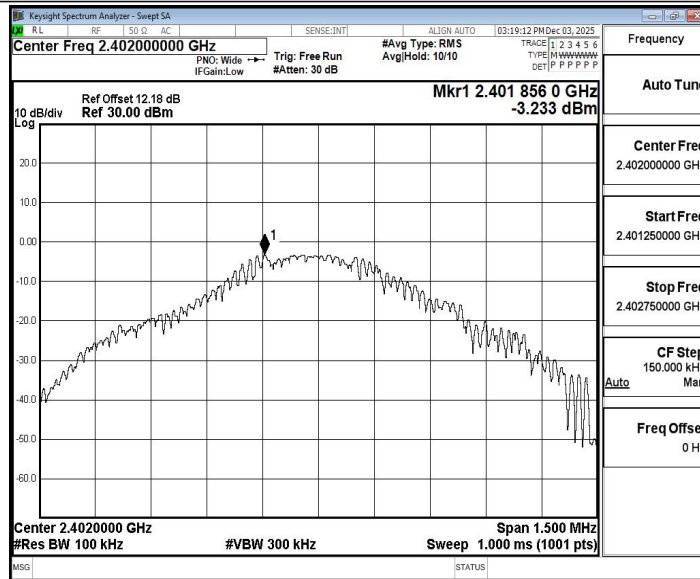
A.7 Conducted RF Spurious Emission

Test Result

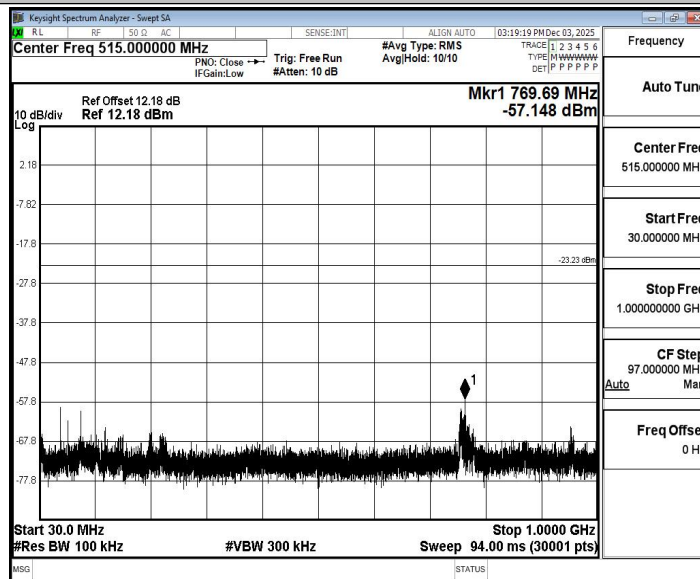
TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	-3.23	-3.23	---	PASS
			30~1000	-3.23	-57.15	≤ -23.23	PASS
			1000~26500	-3.23	-48.75	≤ -23.23	PASS
		2441	Reference	-0.50	-0.50	---	PASS
			30~1000	-0.50	-58.53	≤ -20.5	PASS
			1000~26500	-0.50	-51.4	≤ -20.5	PASS
		2480	Reference	-2.38	-2.38	---	PASS
			30~1000	-2.38	-47.59	≤ -22.38	PASS
			1000~26500	-2.38	-38.94	≤ -22.38	PASS

Test Graphs

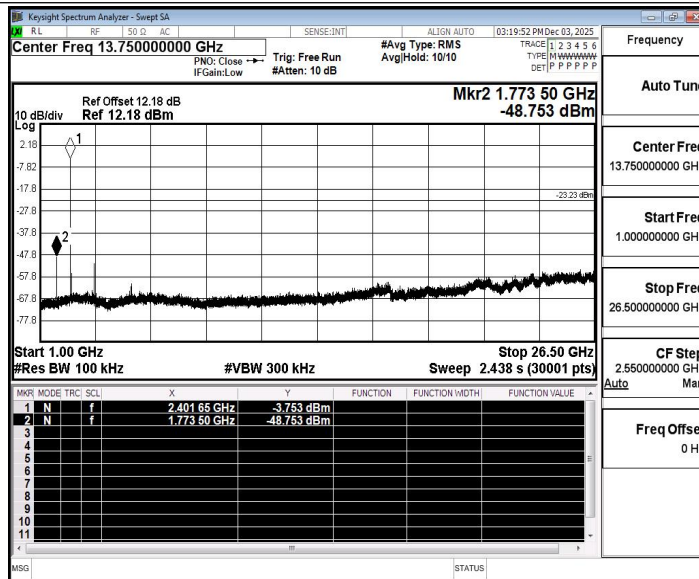
DH5_Ant1_2402_0~Reference



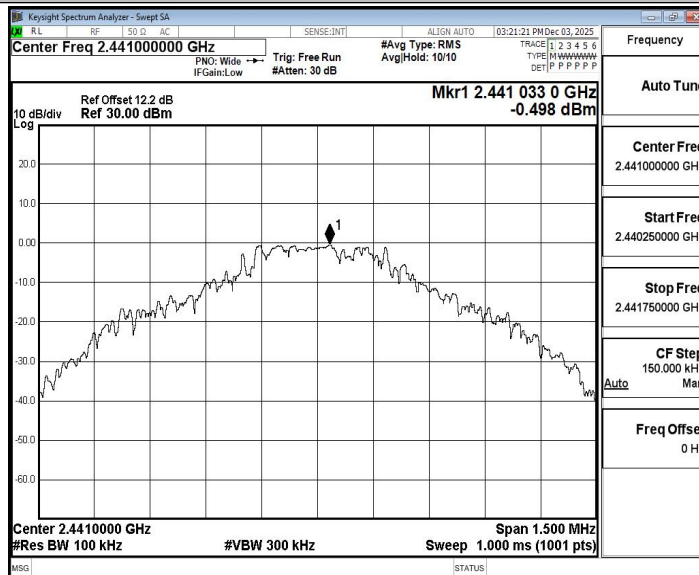
DH5_Ant1_2402_30~1000



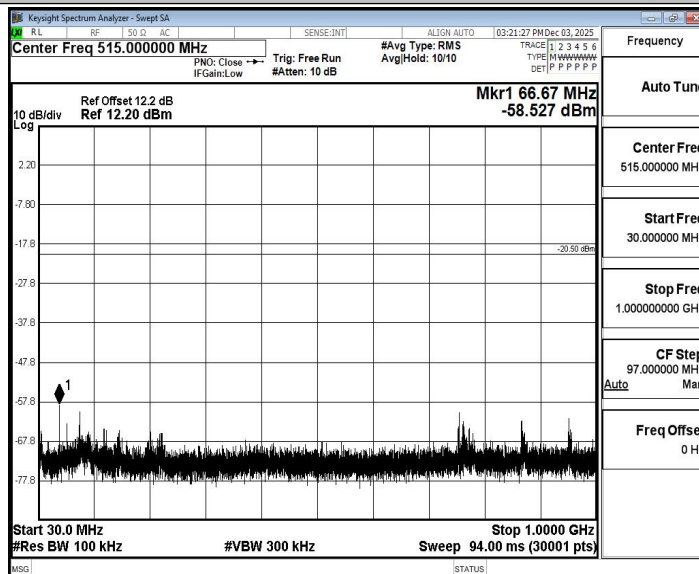
DH5_Ant1_2402_1000~26500



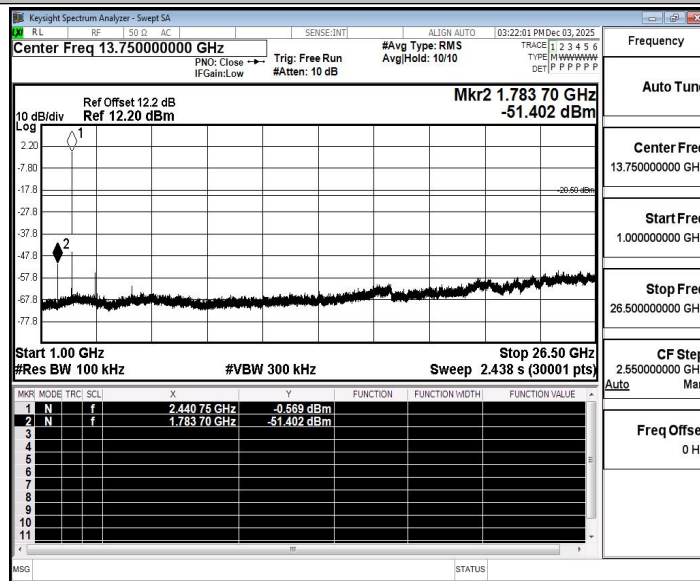
DH5_Ant1_2441_0~Reference



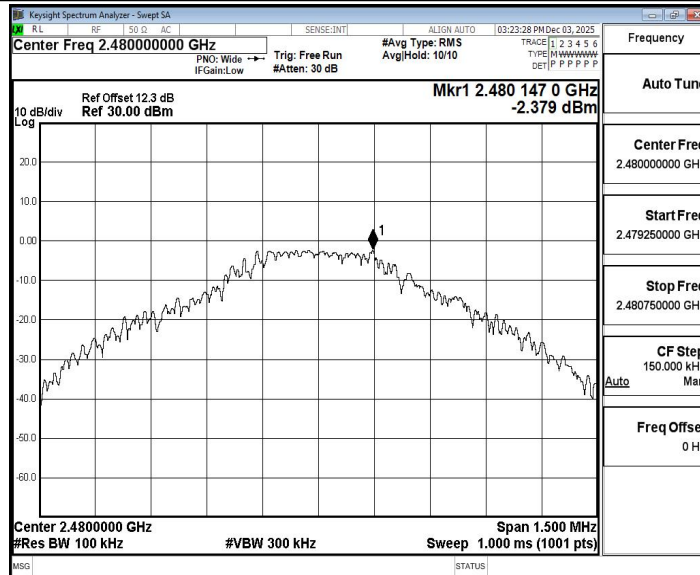
DH5_Ant1_2441_30~1000



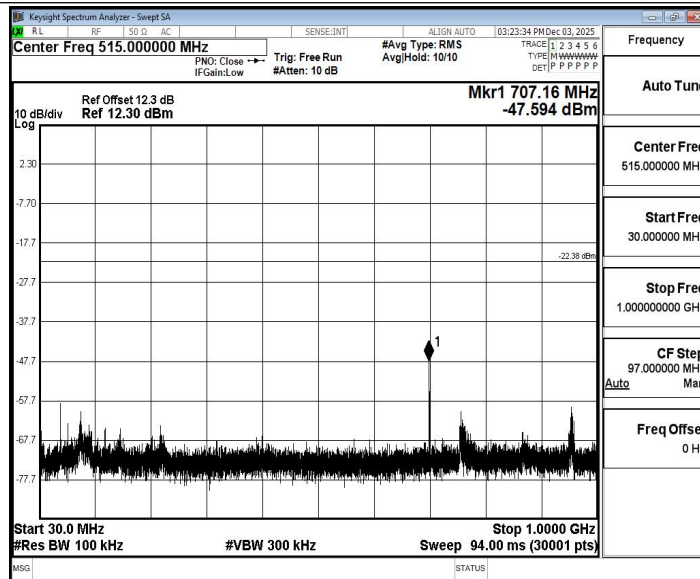
DH5_Ant1_2441_1000~26500



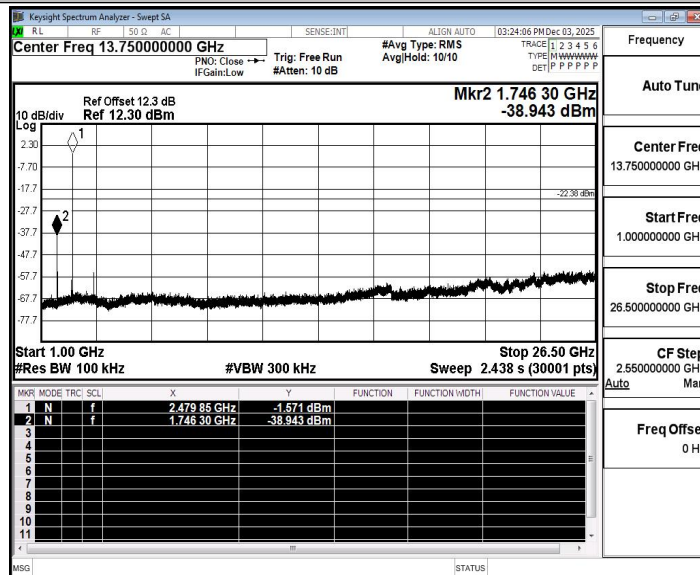
DH5_Ant1_2480_0~Reference



DH5_Ant1_2480_30~1000



DH5_Ant1_2480_1000~26500



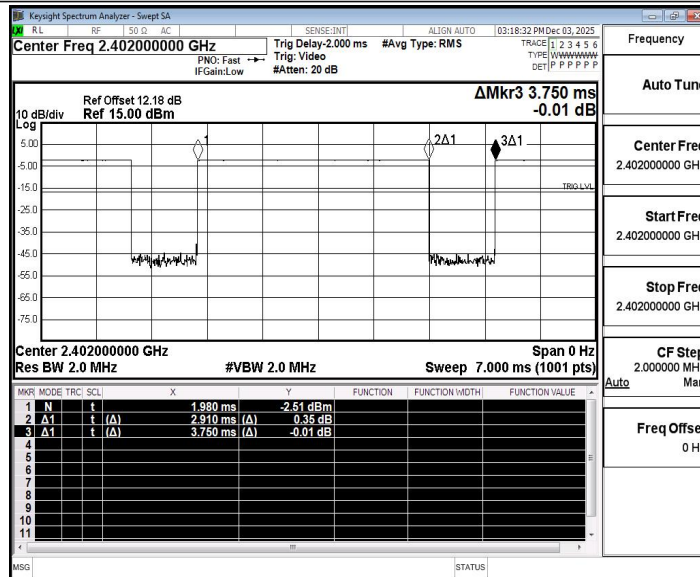
A.8 Duty Cycle

Test Result

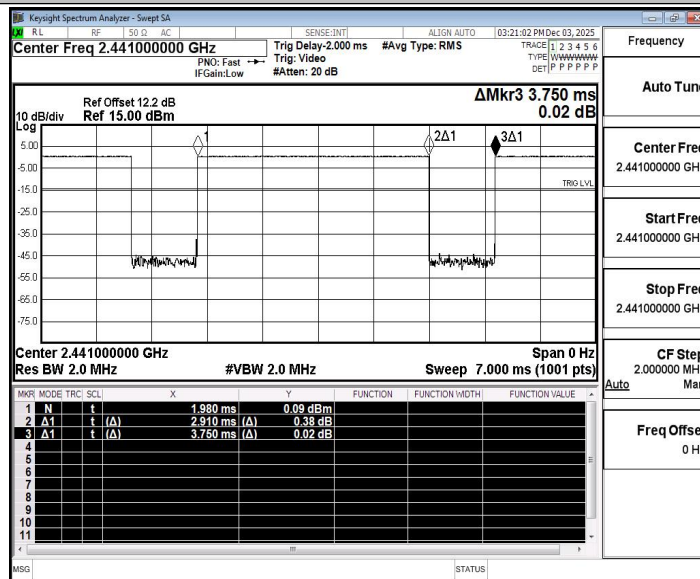
TestMode	Antenna	Freq(MHz)	ON Time [ms]	Period [ms]	DC [%]	xFactor	Limit	Verdict
DH5	Ant1	2402	2.91	3.75	77.60	1.10	---	---
		2441	2.91	3.75	77.60	1.10	---	---
		2480	2.91	3.75	77.60	1.10	---	---

Test Graphs

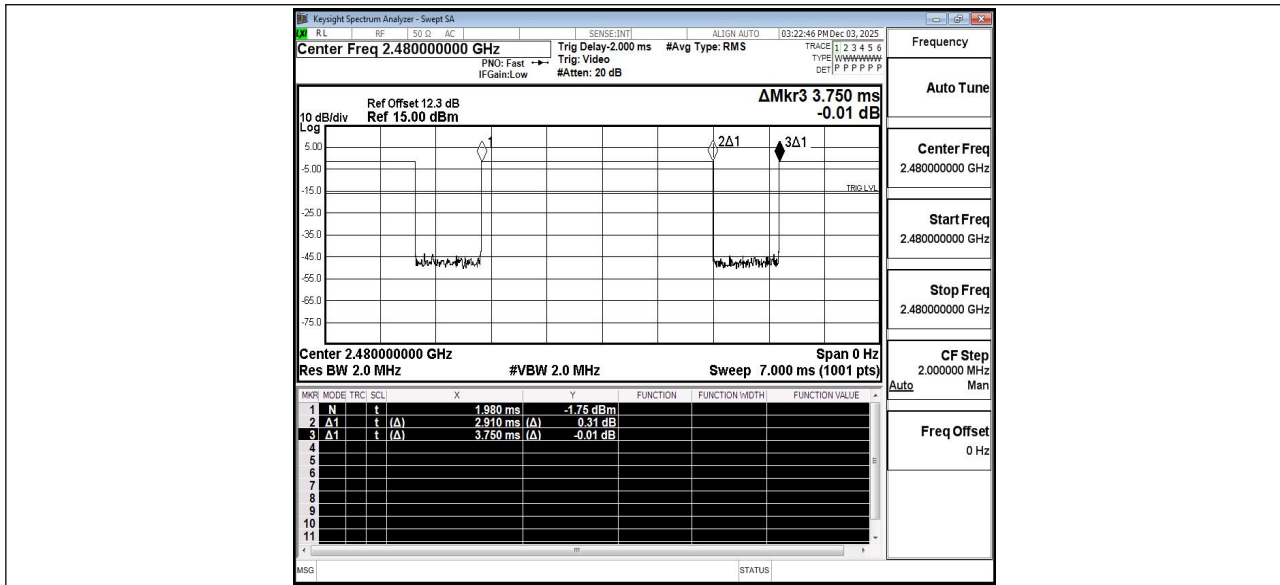
DH5_Ant1_2402



DH5_Ant1_2441



DH5_Ant1_2480



A.9 Restrict Band

Test Result

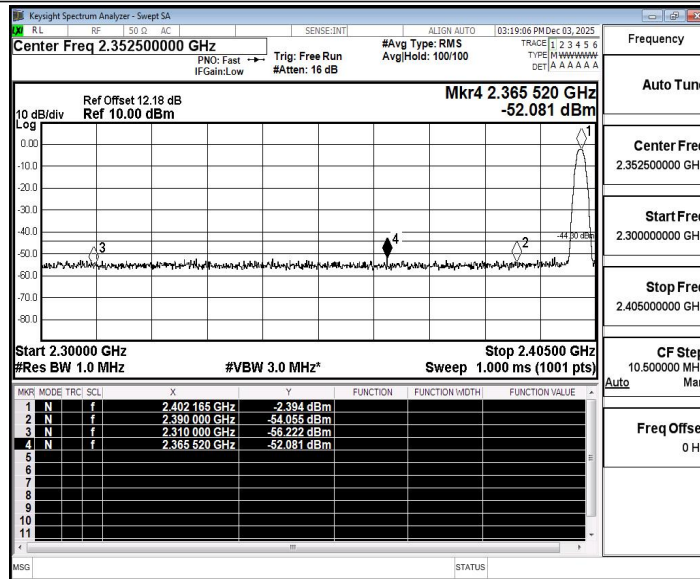
TestMode	Antenna	ChName	Freq (MHz)	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
DH5	Ant1	Low	2402	AV	2310.000	-56.22	≤-44.30	42.08	≤54	PASS
				AV	2365.520	-52.08	≤-44.30	46.22	≤54	PASS
				AV	2390.000	-54.06	≤-44.30	44.24	≤54	PASS
				Peak	2310.000	-51.38	≤-23.20	45.82	≤74	PASS
				Peak	2324.360	-49.92	≤-23.20	47.28	≤74	PASS
				Peak	2390.000	-53.77	≤-23.20	43.43	≤74	PASS
		High	2480	AV	2483.500	-53.77	≤-44.30	44.53	≤54	PASS
				AV	2486.160	-52.26	≤-44.30	46.04	≤54	PASS
				AV	2500.000	-54.7	≤-44.30	43.60	≤54	PASS
				Peak	2483.500	-52.61	≤-23.20	44.59	≤74	PASS
				Peak	2487.360	-49.06	≤-23.20	48.14	≤74	PASS
				Peak	2500.000	-50.85	≤-23.20	46.35	≤74	PASS
		Low	Hop_2402	Peak	2310.000	-53.4	≤-23.20	43.80	≤74	PASS
				Peak	2379.485	-50.39	≤-23.20	46.81	≤74	PASS
				Peak	2390.000	-53.27	≤-23.20	43.93	≤74	PASS
		High	Hop_2480	Peak	2483.500	-52.94	≤-23.20	44.26	≤74	PASS
				Peak	2491.200	-49.52	≤-23.20	47.68	≤74	PASS
				Peak	2500.000	-50.15	≤-23.20	47.05	≤74	PASS

Note:

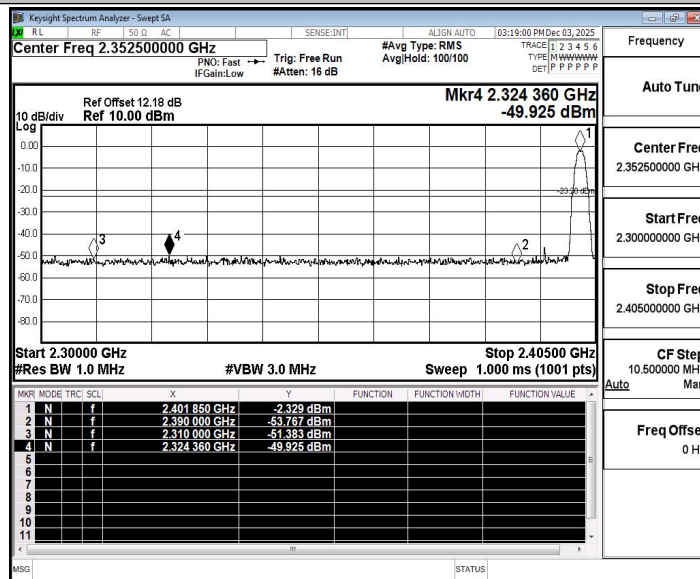
1. The Antenna Gain is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs

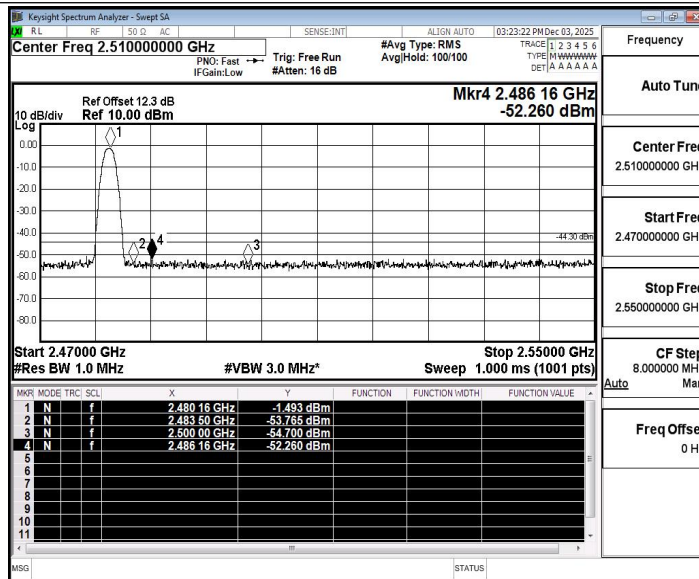
DH5_Ant1_Low_2402_AV



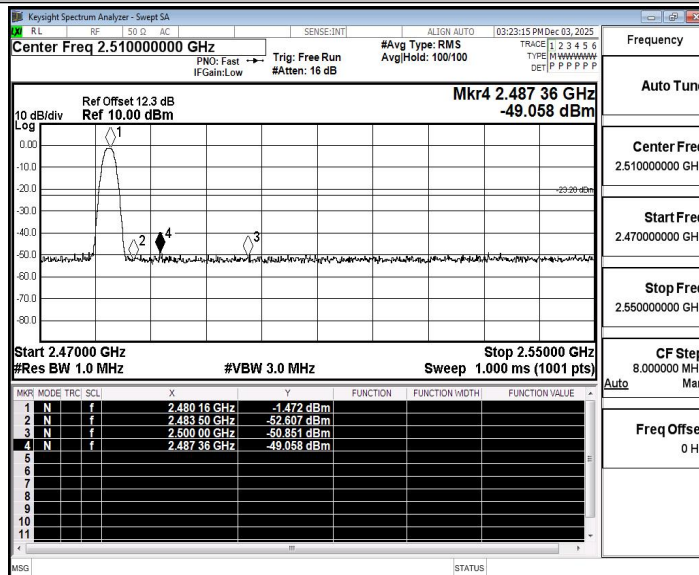
DH5_Ant1_Low_2402_Peak



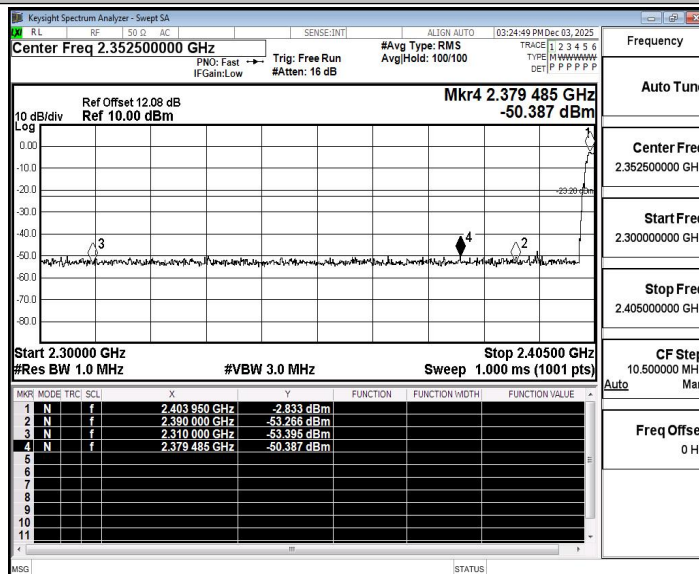
DH5_Ant1_High_2480_AV



DH5_Ant1_High_2480_Peak



DH5_Ant1_Low_Hop_2402_Peak



DH5_Ant1_High_Hop_2480_Peak

