

Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: Hearing aid

Test Model: JH-A36D

Environmental Conditions

Temperature:	24.2°C
Relative Humidity:	53.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Zhang hai
Supervised by:	Fengliu Tang

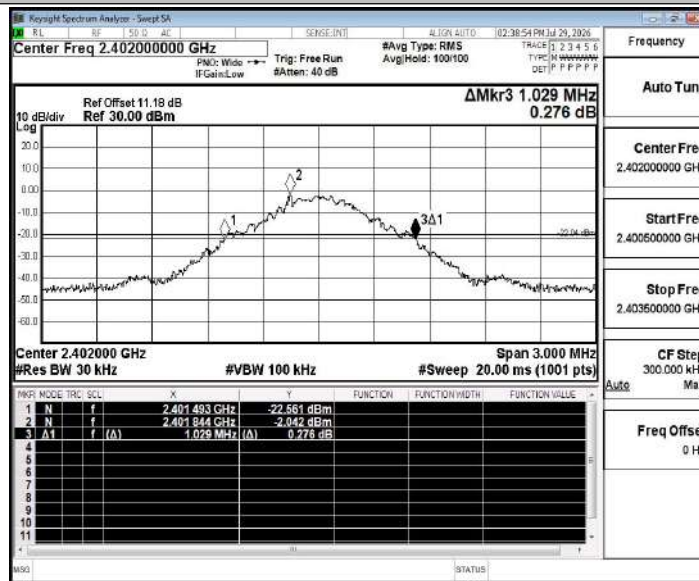
A.1 20dB Emission Bandwidth

Test Result

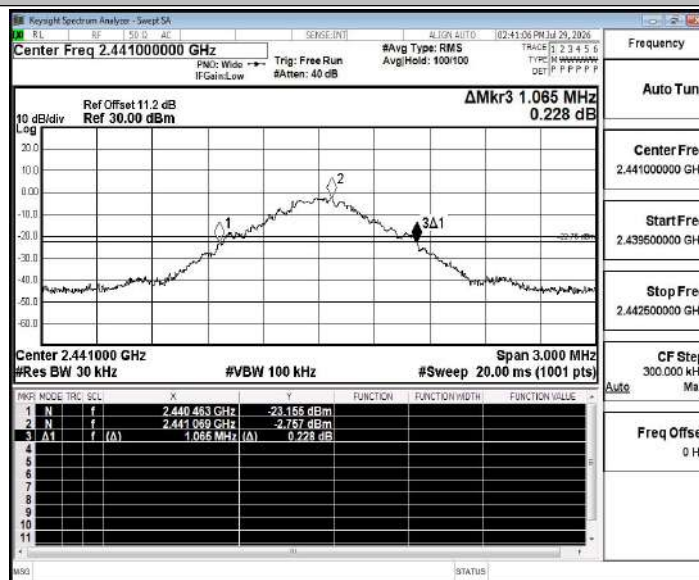
TestMode	Antenna	Freq(MHz)	20dB EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	1.029	2401.493	2402.522	---	---
		2441	1.065	2440.463	2441.528	---	---
		2480	1.044	2479.484	2480.528	---	---
2DH5	Ant1	2402	1.326	2401.346	2402.672	---	---
		2441	1.329	2440.343	2441.672	---	---
		2480	1.335	2479.343	2480.678	---	---

Test Graphs

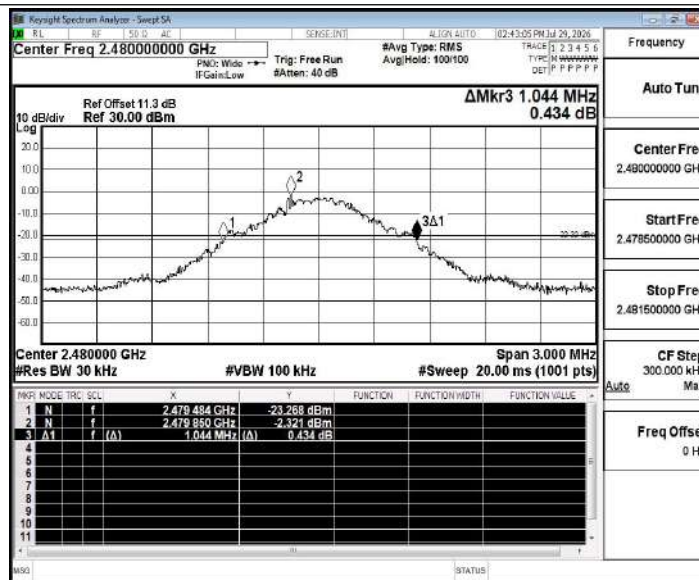
DH5_Ant1_2402



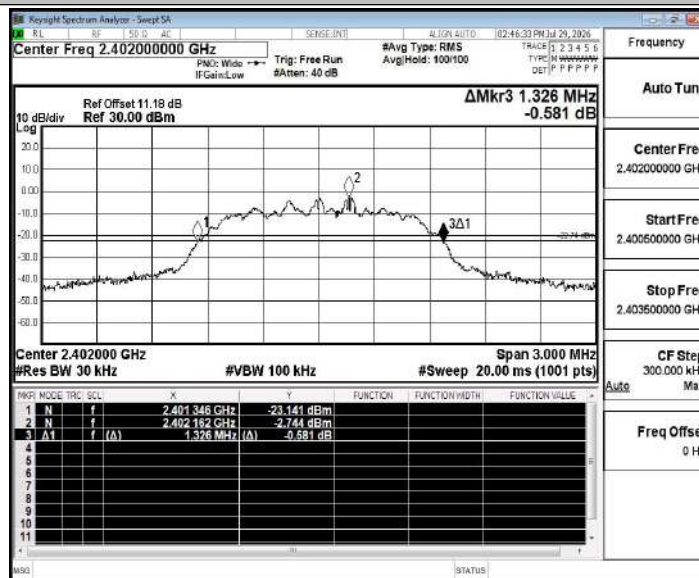
DH5_Ant1_2441



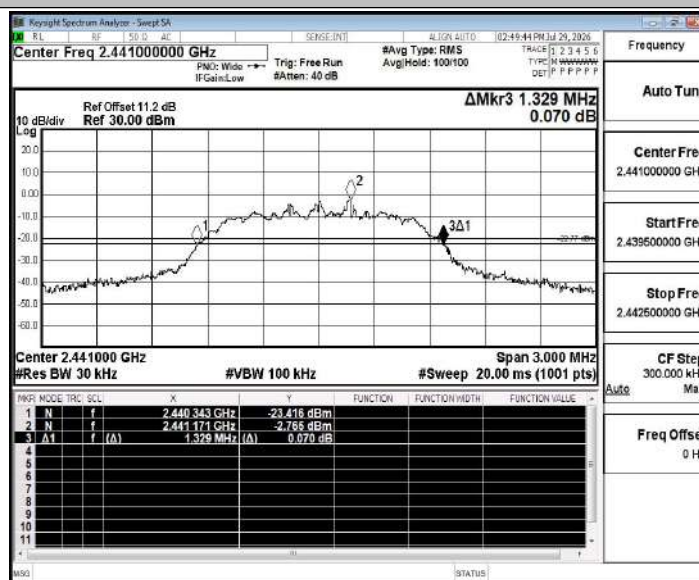
DH5_Ant1_2480



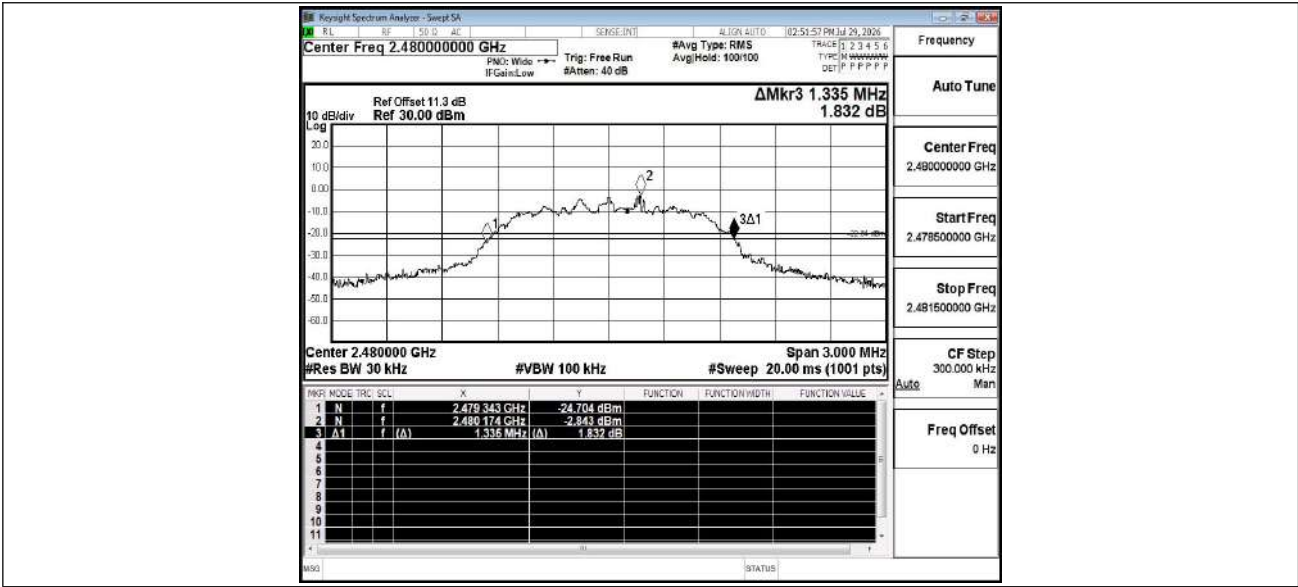
2DH5_Ant1_2402



2DH5_Ant1_2441



2DH5_Ant1_2480

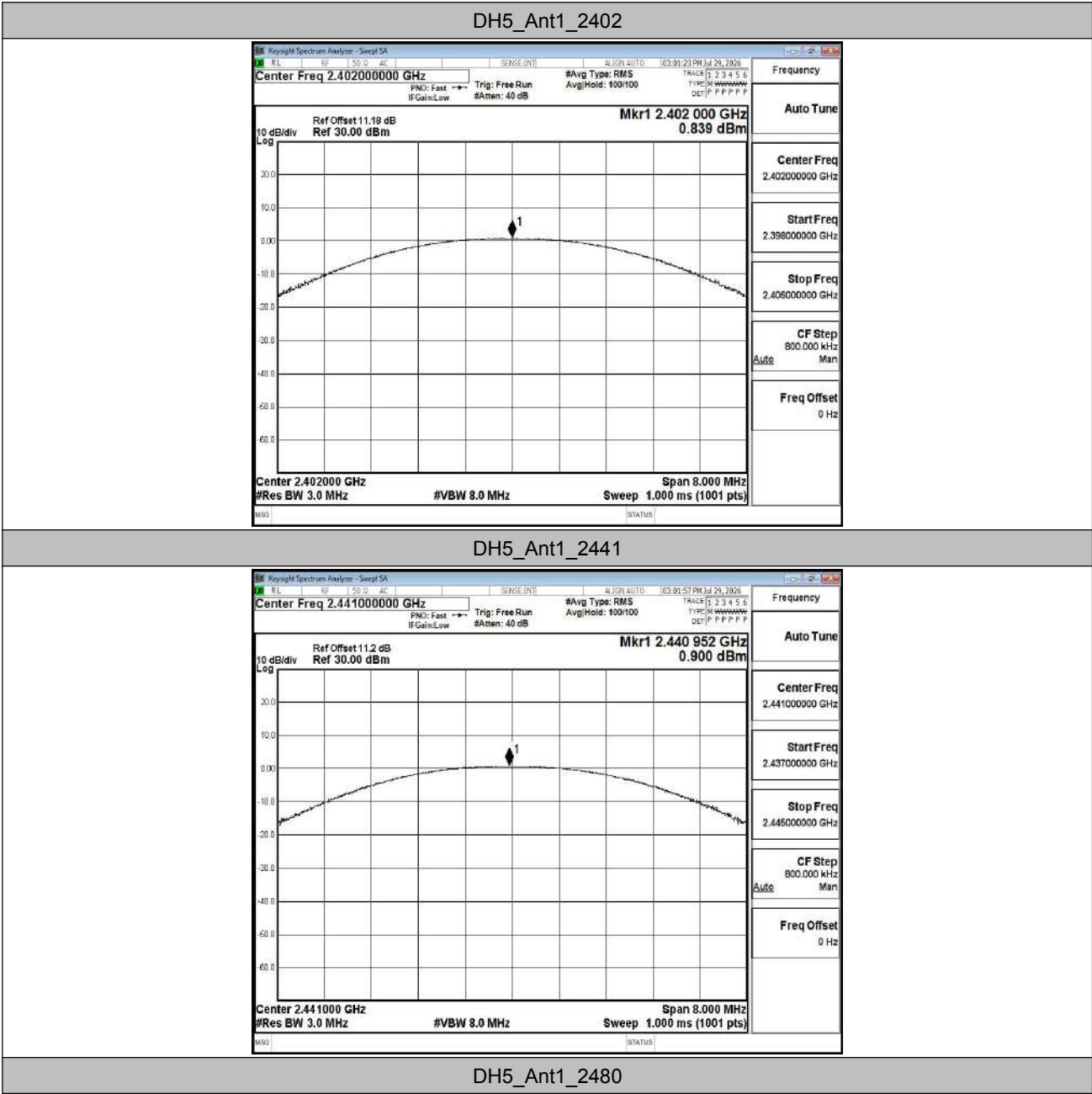


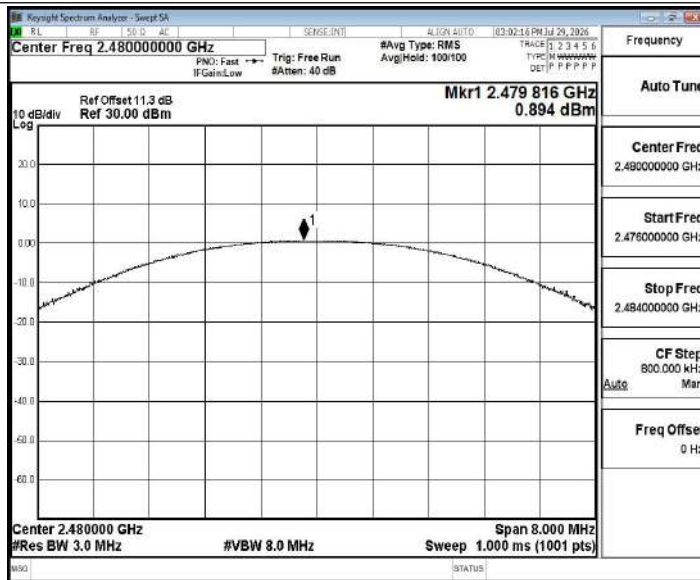
A.2 Maximum Peak conducted output power

Test Result Peak

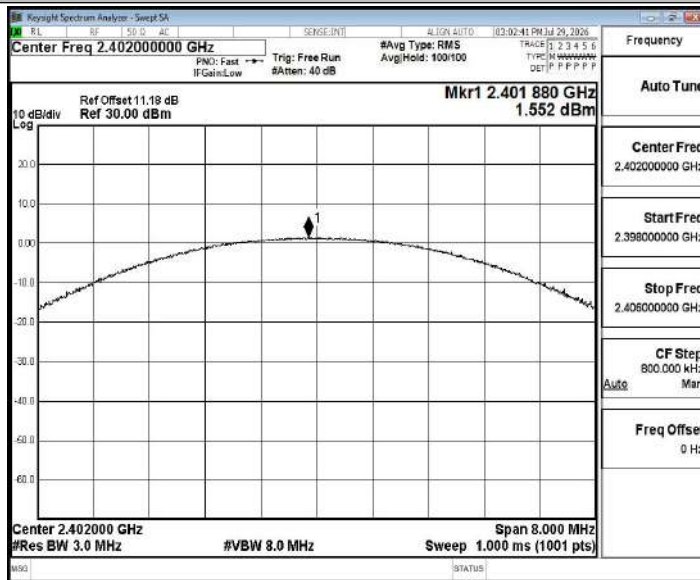
Test Mode	Antenna	Freq(MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
DH5	Ant1	2402	0.84	≤20.97	PASS
		2441	0.90	≤20.97	PASS
		2480	0.89	≤20.97	PASS
2DH5	Ant1	2402	1.55	≤20.97	PASS
		2441	1.36	≤20.97	PASS
		2480	1.35	≤20.97	PASS

Test Graphs

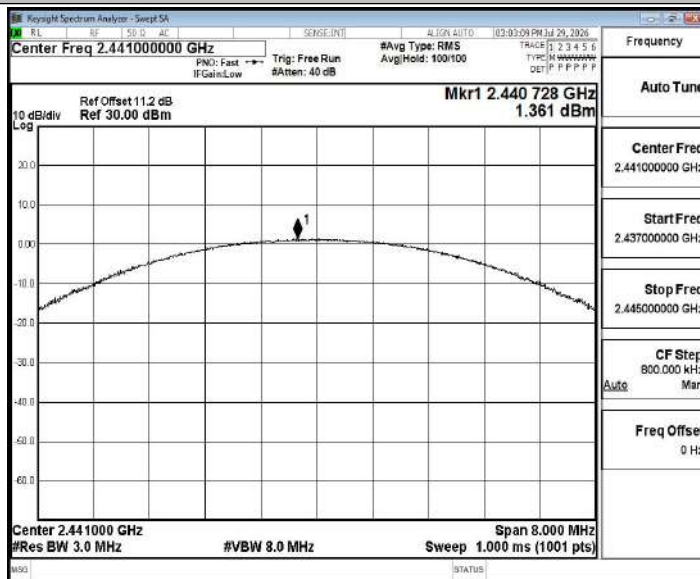




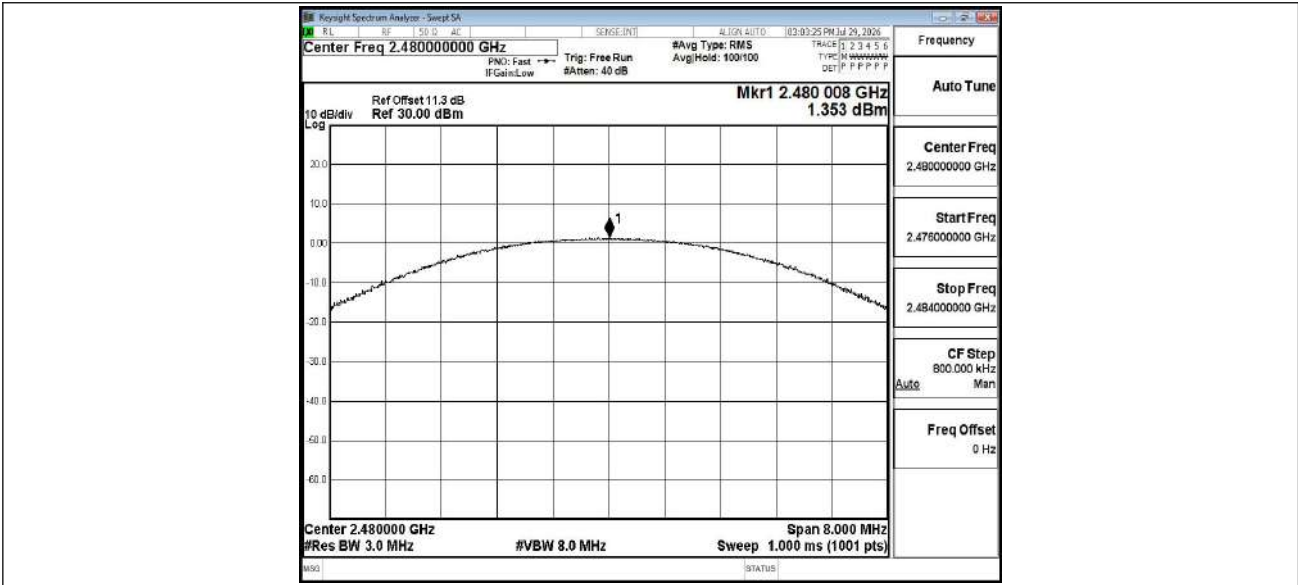
2DH5_Ant1_2402



2DH5_Ant1_2441



2DH5_Ant1_2480



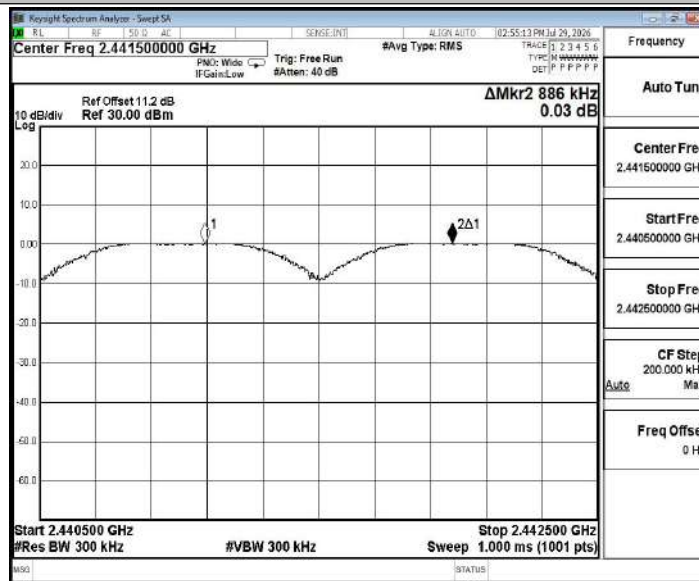
A.3 Carrier frequency separation

Test Result

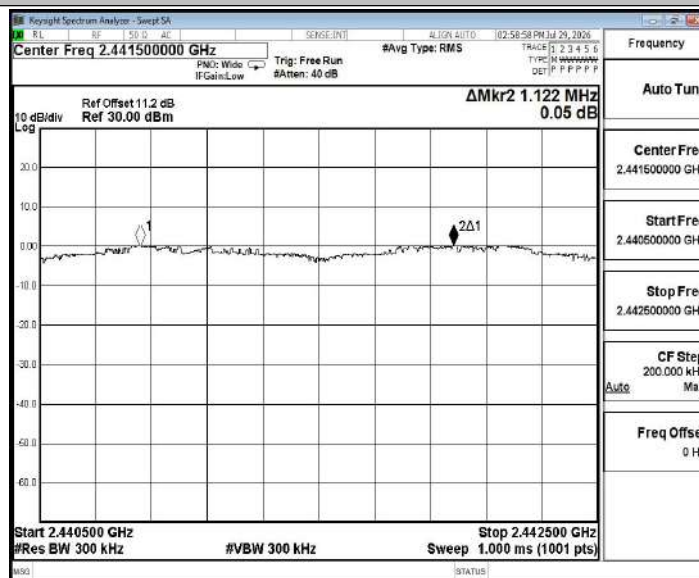
TestMode	Antenna	Freq(MHz)	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	0.886	≥0.710	PASS
2DH5	Ant1	Hop	1.122	≥0.890	PASS

Test Graphs

DH5_Ant1_Hop



2DH5_Ant1_Hop

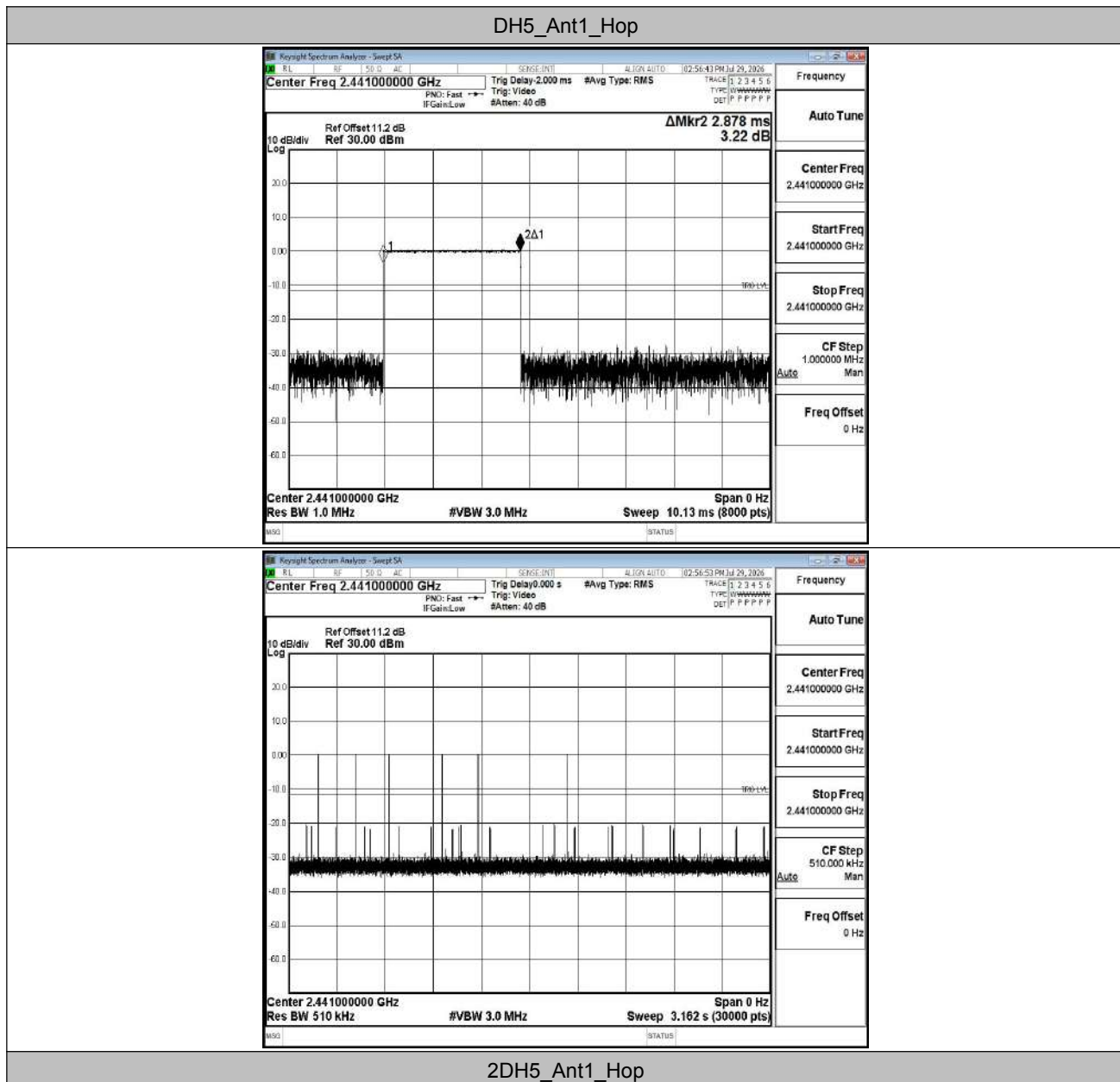


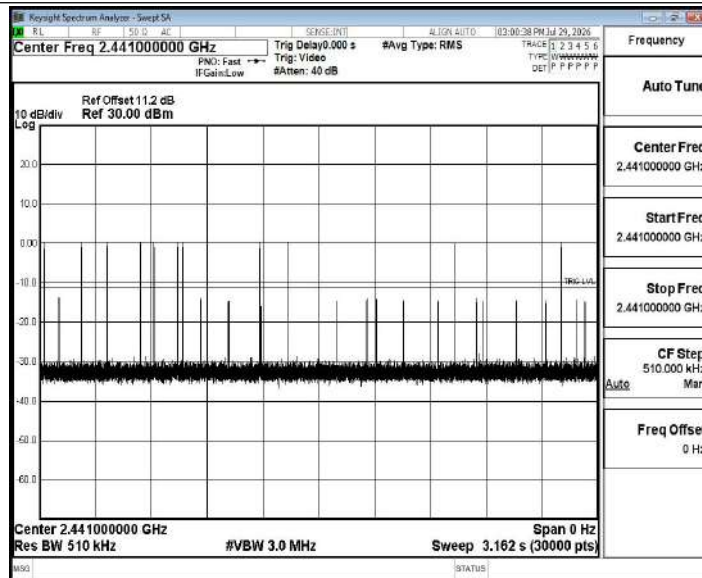
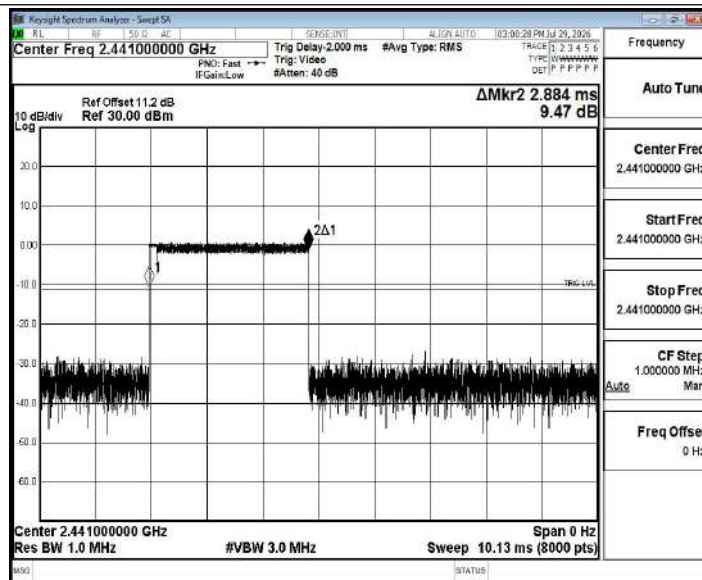
A.4 Time of occupancy

Test Result

TestMode	Antenna	Freq(MHz)	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH5	Ant1	Hop	2.878	70	0.201	≤0.4	PASS
2DH5	Ant1	Hop	2.884	120	0.346	≤0.4	PASS

Test Graphs





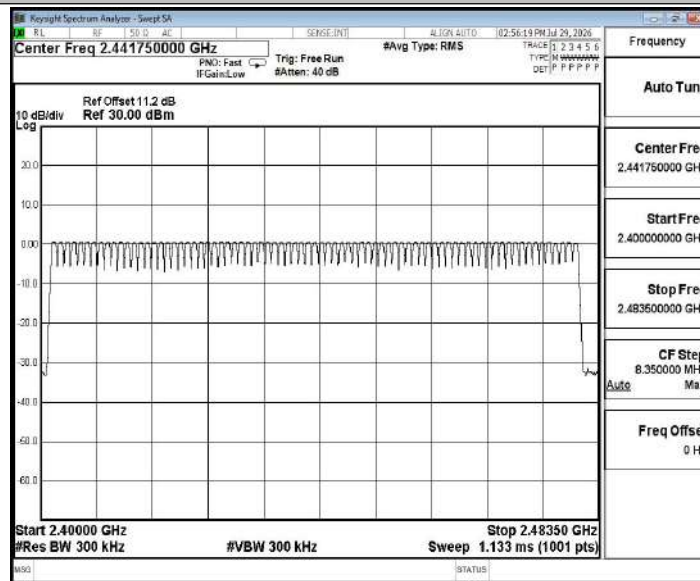
A.5 Number of hopping channels

Test Result

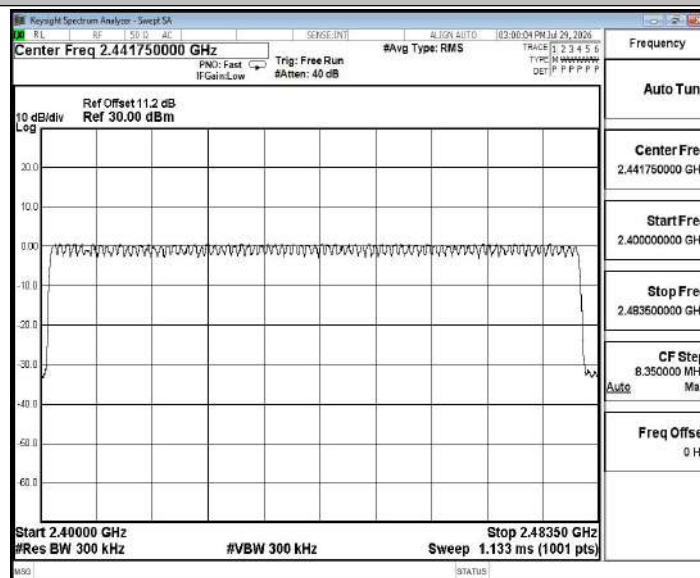
TestMode	Antenna	Freq(MHz)	Result[Num]	Limit[Num]	Verdict
DH5	Ant1	Hop	79	≥15	PASS
2DH5	Ant1	Hop	79	≥15	PASS

Test Graphs

DH5_Ant1_Hop



2DH5_Ant1_Hop



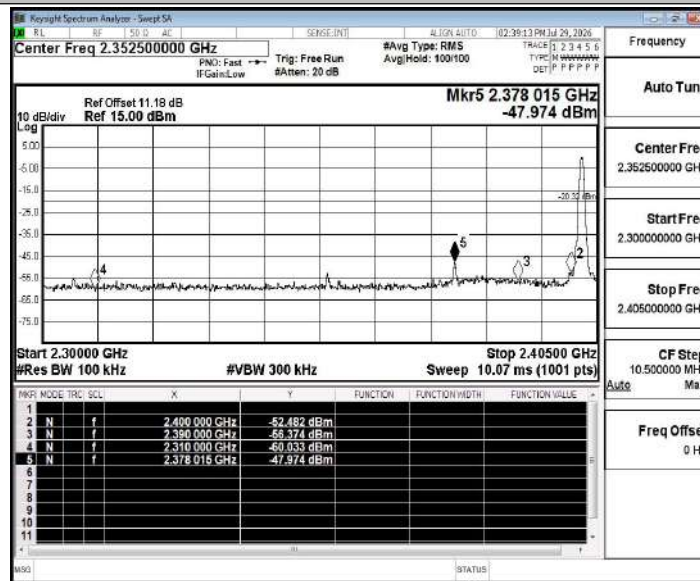
A.6 Band edge measurements

Test Result

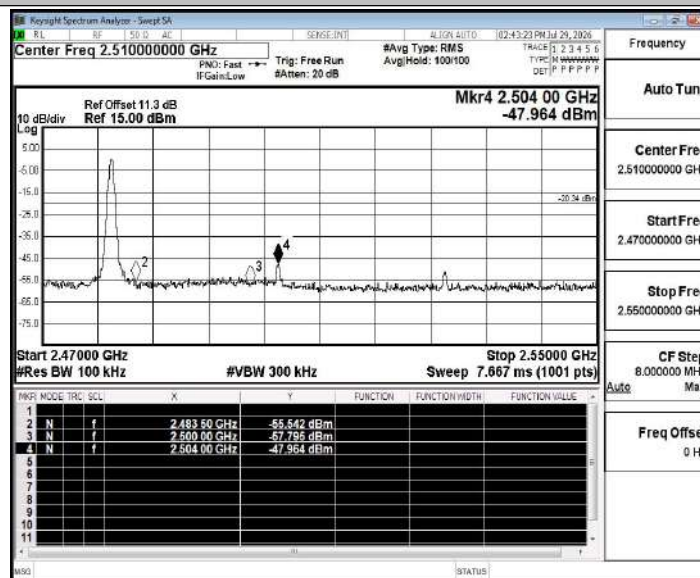
TestMode	Antenna	ChName	Freq(MHz)	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-0.32	-47.97	≤-20.32	PASS
		High	2480	-0.34	-47.96	≤-20.34	PASS
		Low	Hop_2402	-0.45	-48.18	≤-20.45	PASS
		High	Hop_2480	-0.84	-48.41	≤-20.84	PASS
2DH5	Ant1	Low	2402	0.14	-49.55	≤-19.86	PASS
		High	2480	-0.21	-48.76	≤-20.21	PASS
		Low	Hop_2402	-3.48	-50.93	≤-23.48	PASS
		High	Hop_2480	-3.77	-50.4	≤-23.77	PASS

Test Graphs

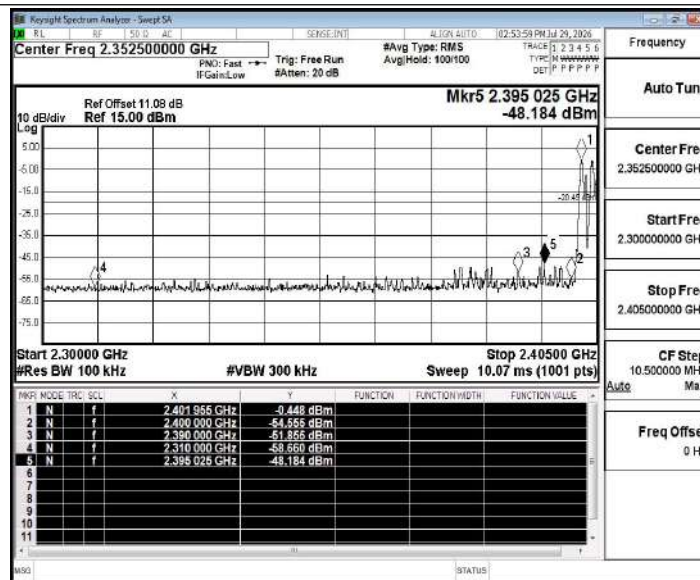
DH5_Ant1_Low_2402



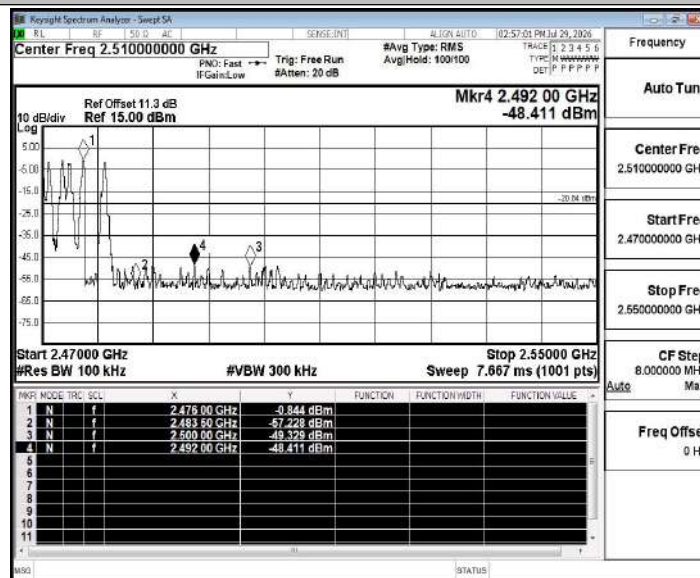
DH5_Ant1_High_2480



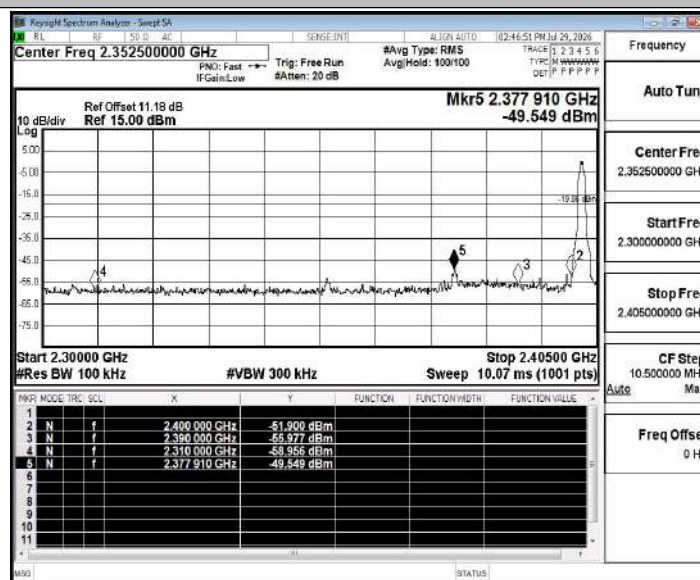
DH5_Ant1_Low_Hop_2402



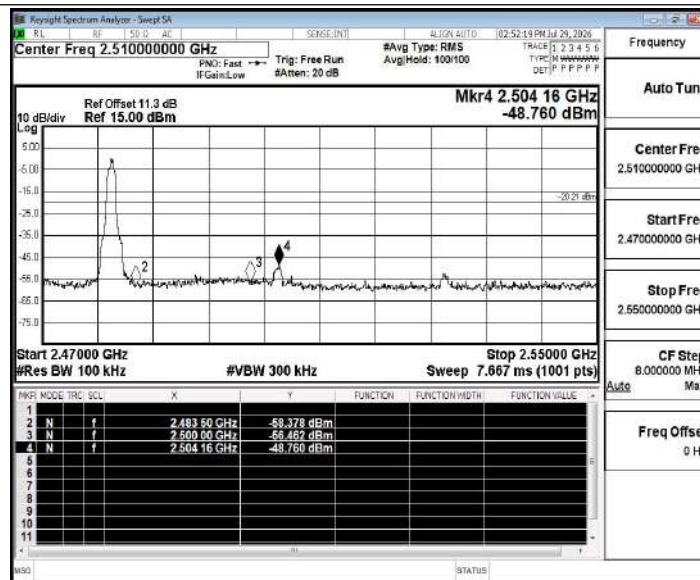
DH5_Ant1_High_Hop_2480



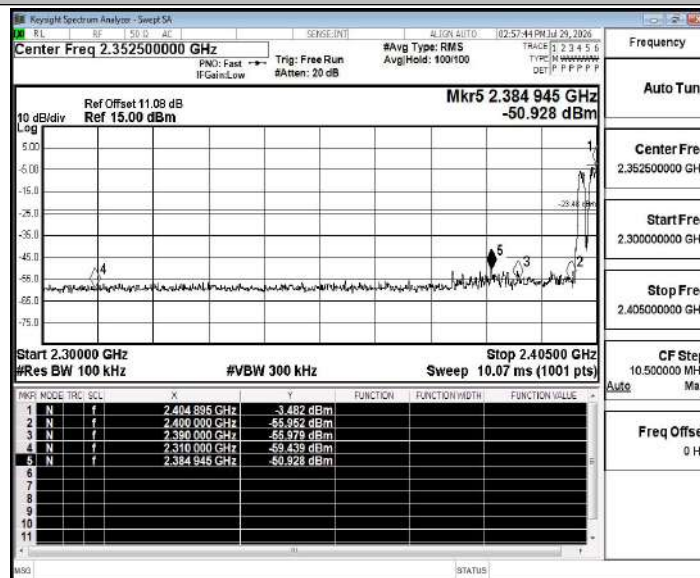
2DH5_Ant1_Low_2402



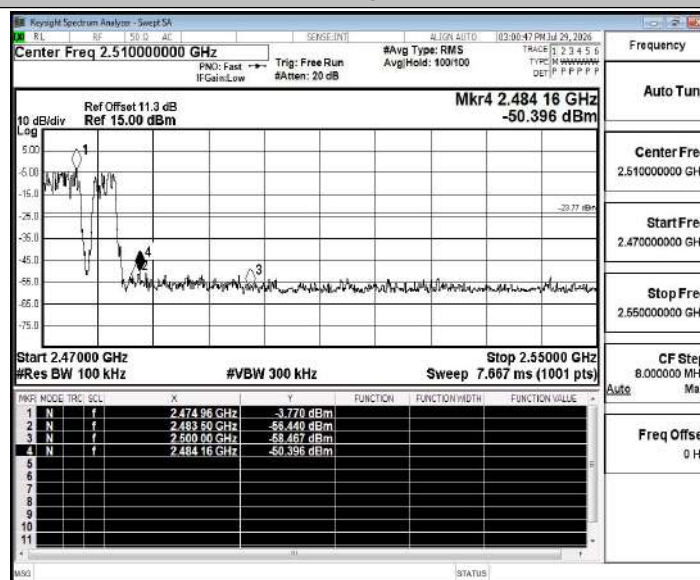
2DH5_Ant1_High_2480



2DH5_Ant1_Low_Hop_2402



2DH5_Ant1_High_Hop_2480



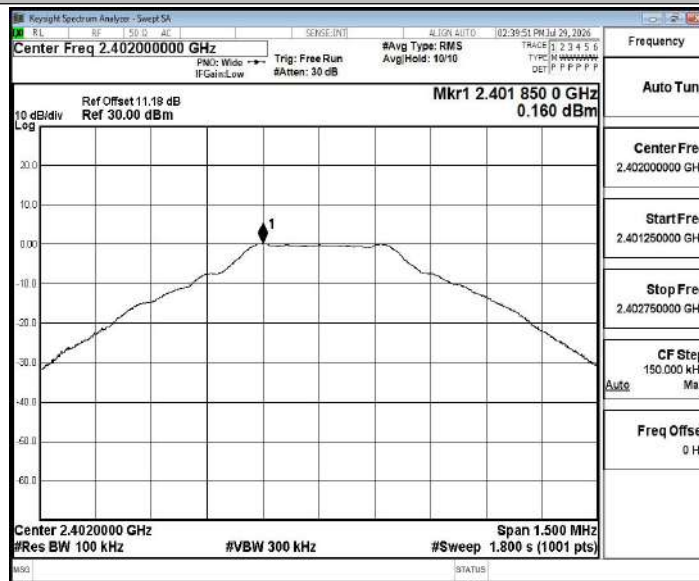
A.7 Conducted Spurious Emission

Test Result

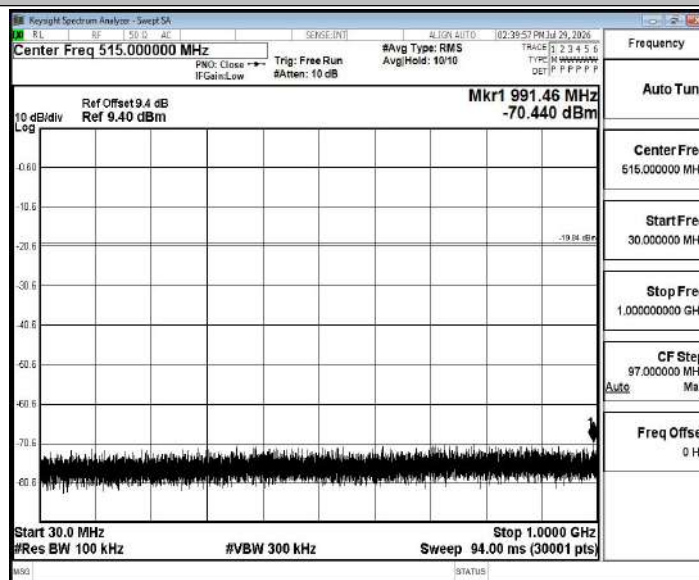
TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	0.16	0.16	---	PASS
			30~1000	0.16	-70.44	≤-19.84	PASS
			1000~26500	0.16	-35.68	≤-19.84	PASS
		2441	Reference	-0.03	-0.03	---	PASS
			30~1000	-0.03	-68.93	≤-20.03	PASS
			1000~26500	-0.03	-33.12	≤-20.03	PASS
		2480	Reference	-0.05	-0.05	---	PASS
			30~1000	-0.05	-70.35	≤-20.05	PASS
			1000~26500	-0.05	-30.83	≤-20.05	PASS
2DH5	Ant1	2402	Reference	0.15	0.15	---	PASS
			30~1000	0.15	-69.73	≤-19.85	PASS
			1000~26500	0.15	-38.1	≤-19.85	PASS
		2441	Reference	-0.05	-0.05	---	PASS
			30~1000	-0.05	-70.4	≤-20.05	PASS
			1000~26500	-0.05	-34.83	≤-20.05	PASS
		2480	Reference	-0.07	-0.07	---	PASS
			30~1000	-0.07	-70.23	≤-20.07	PASS
			1000~26500	-0.07	-33.98	≤-20.07	PASS

Test Graphs

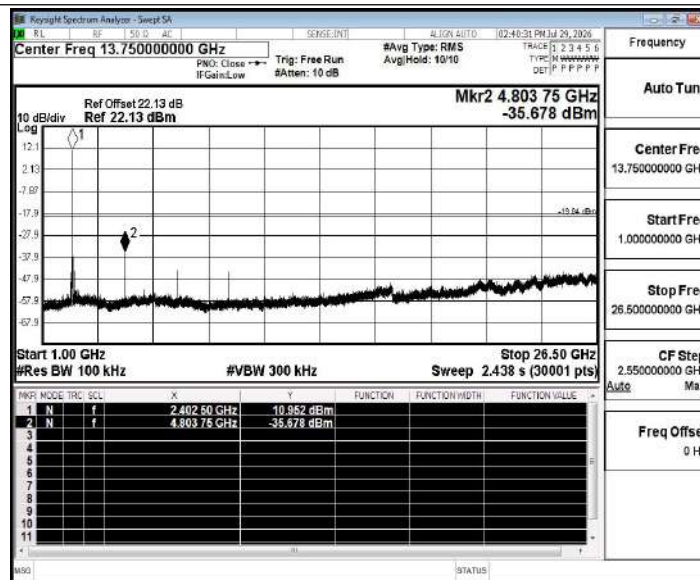
DH5_Ant1_2402_0~Reference



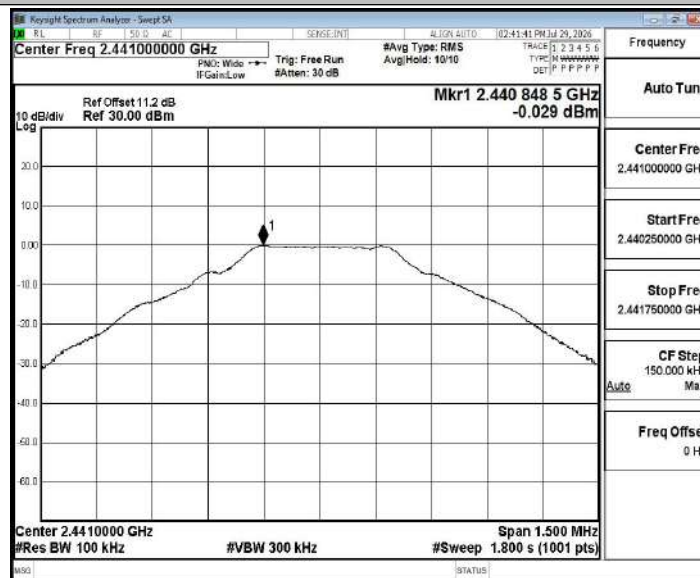
DH5_Ant1_2402_30~1000



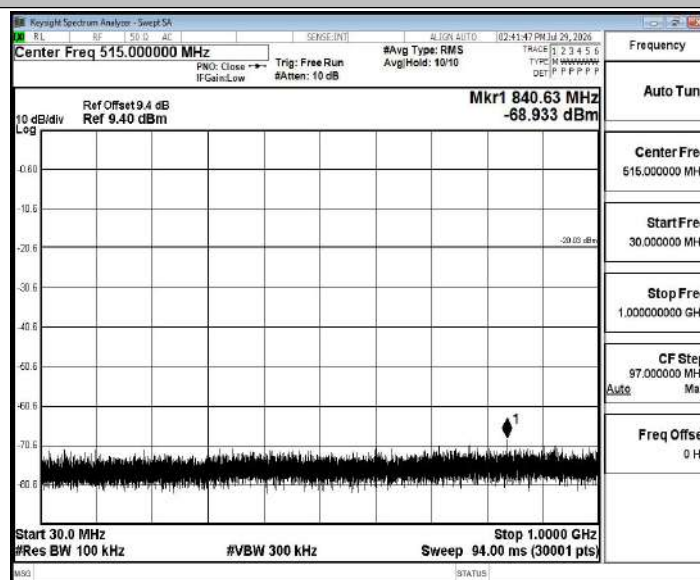
DH5_Ant1_2402_1000~26500



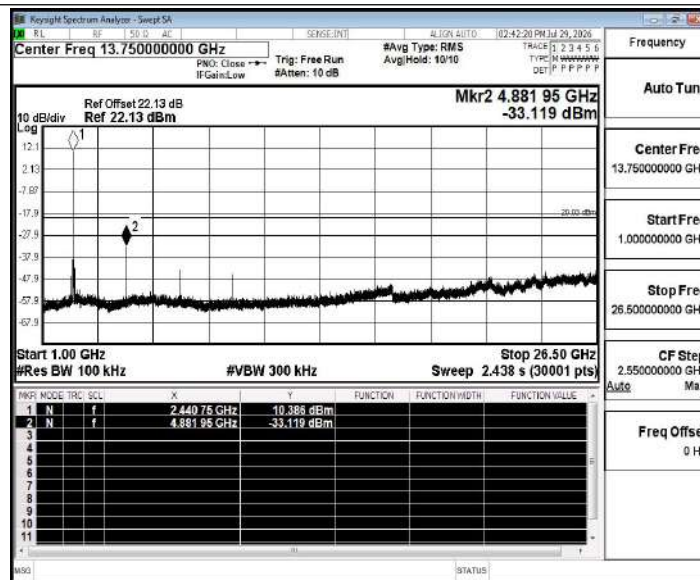
DH5_Ant1_2441_0~Reference



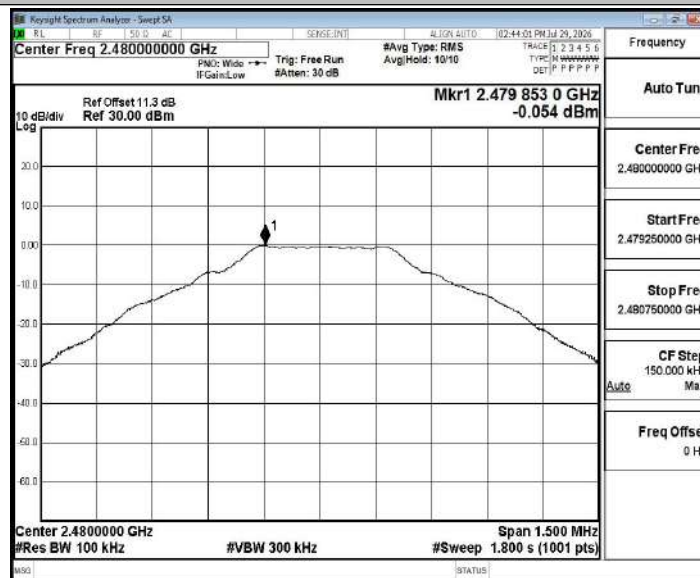
DH5_Ant1_2441_30~1000



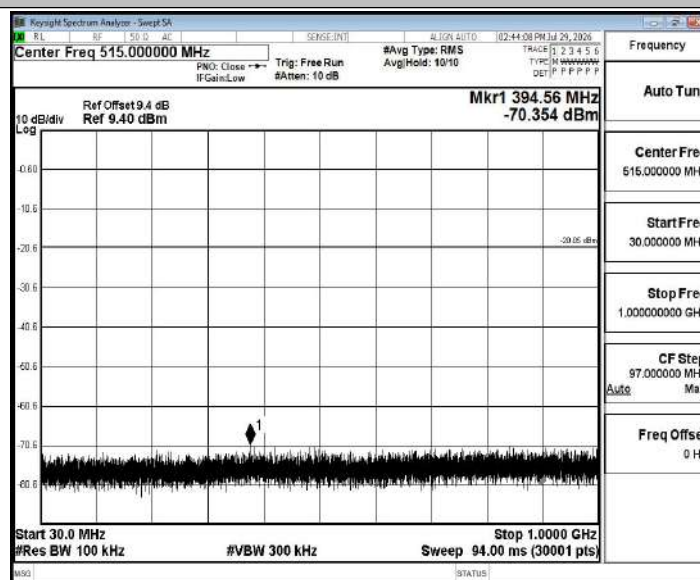
DH5_Ant1_2441_1000~26500



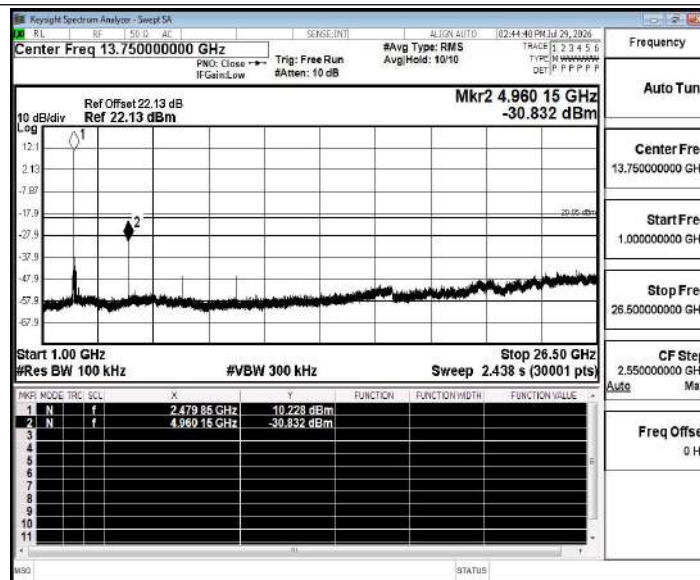
DH5_Ant1_2480_0~Reference



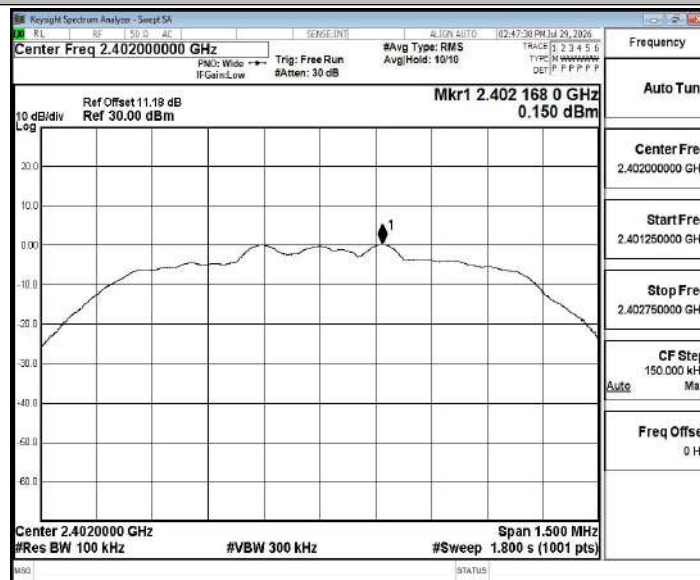
DH5_Ant1_2480_30~1000



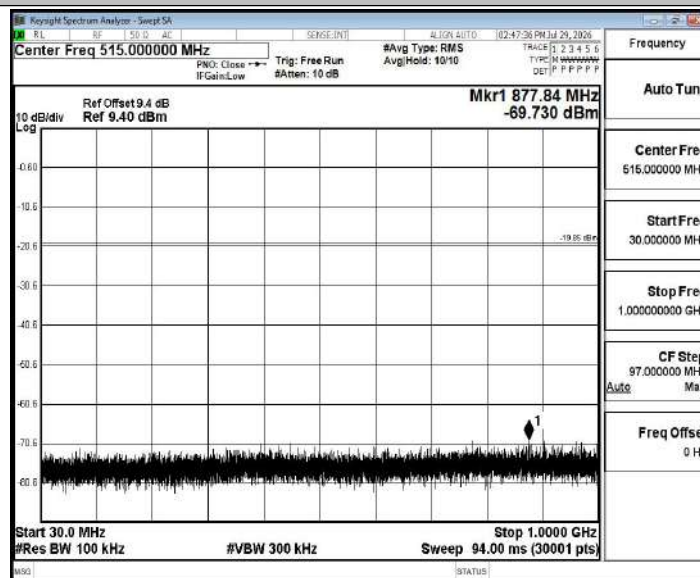
DH5_Ant1_2480_1000~26500



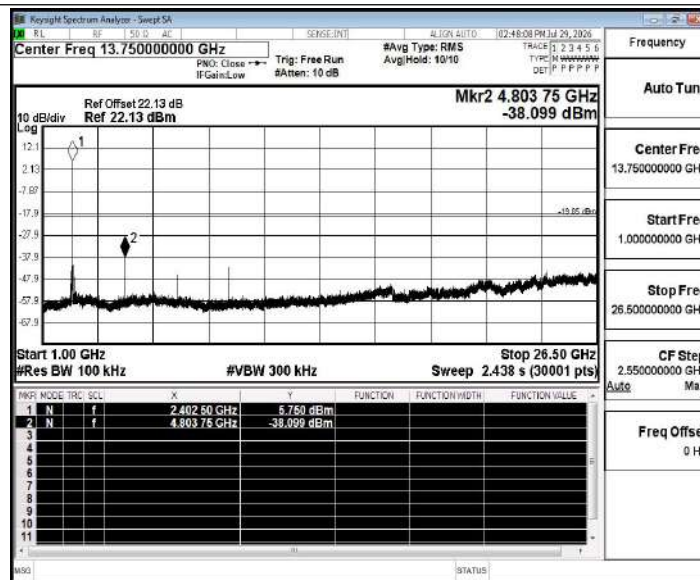
2DH5_Ant1_2402_0~Reference



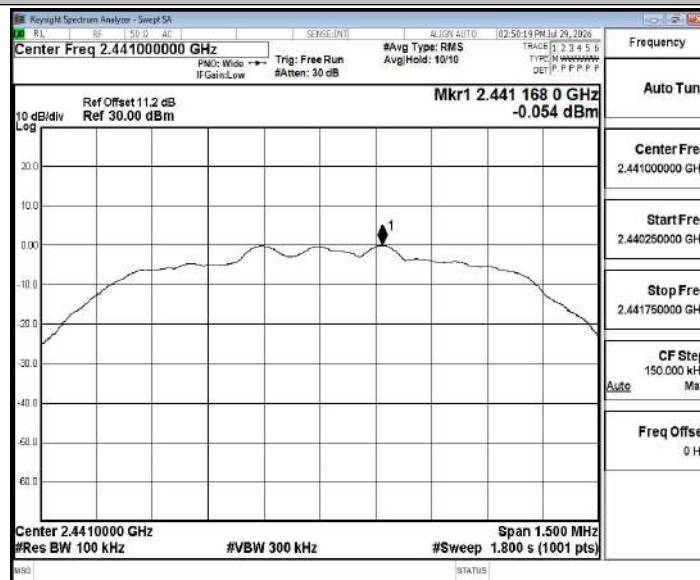
2DH5_Ant1_2402_30~1000



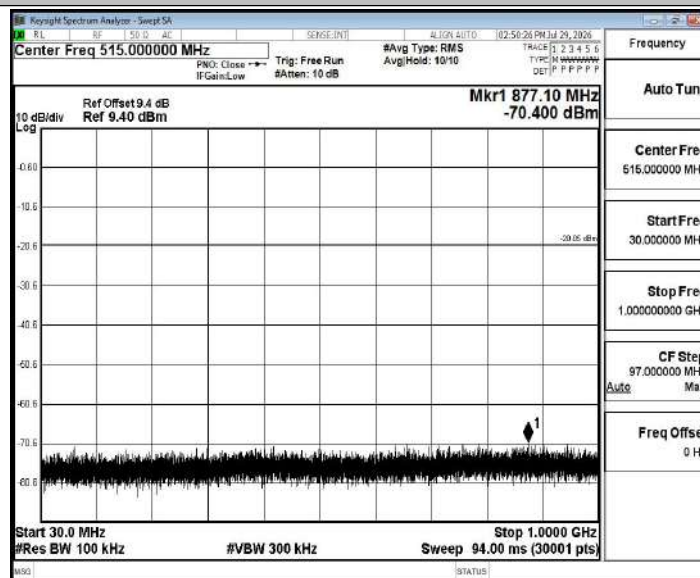
2DH5_Ant1_2402_1000~26500



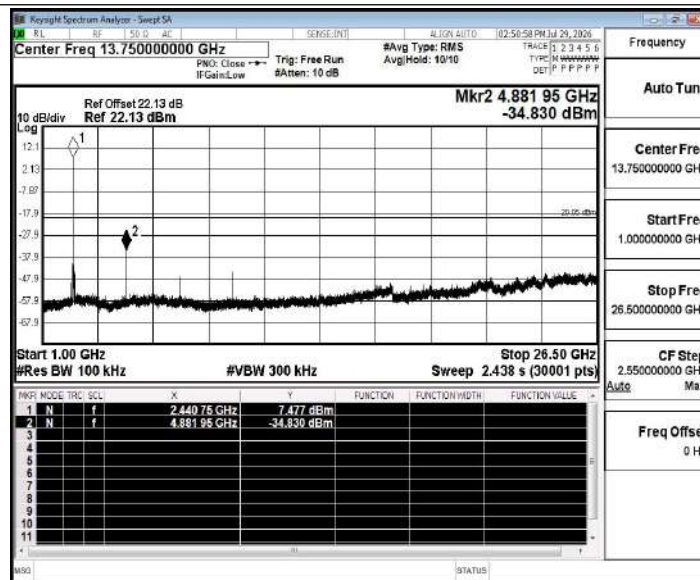
2DH5_Ant1_2441_0~Reference



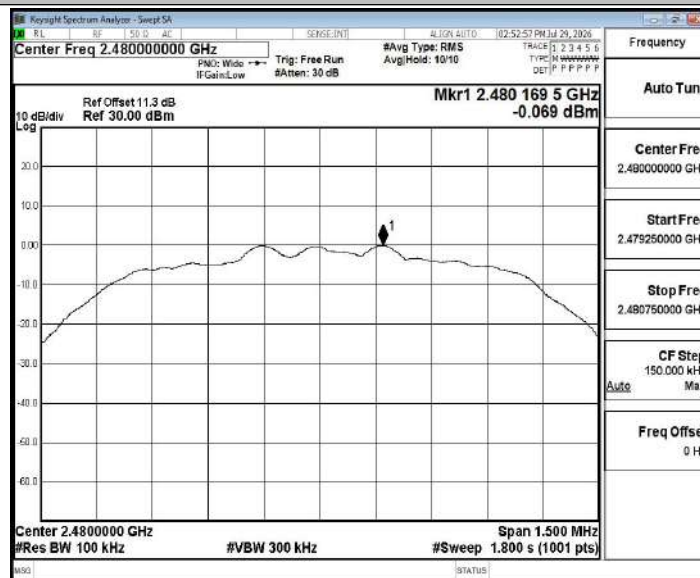
2DH5_Ant1_2441_30~1000



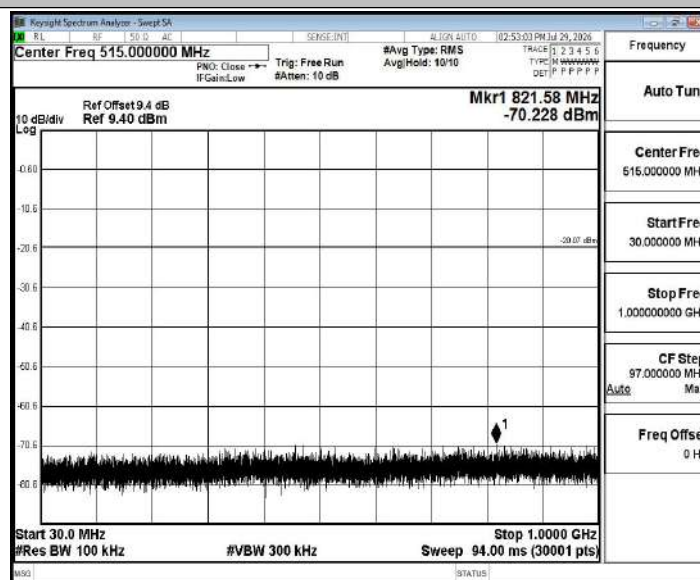
2DH5_Ant1_2441_1000~26500



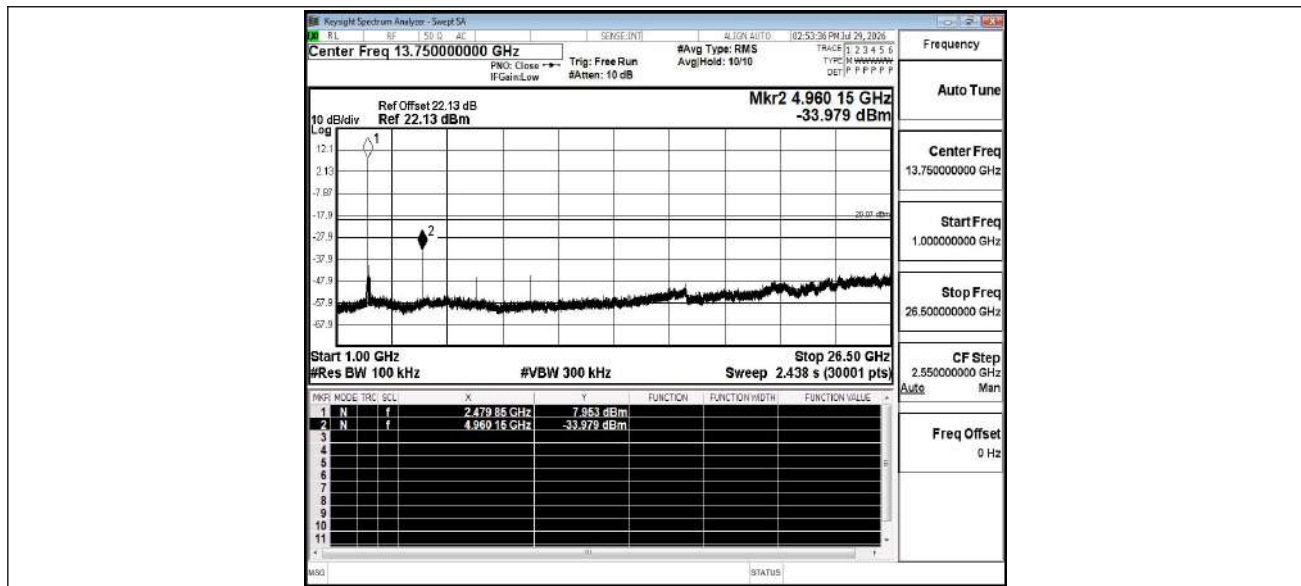
2DH5_Ant1_2480_0~Reference



2DH5_Ant1_2480_30~1000



2DH5_Ant1_2480_1000~26500



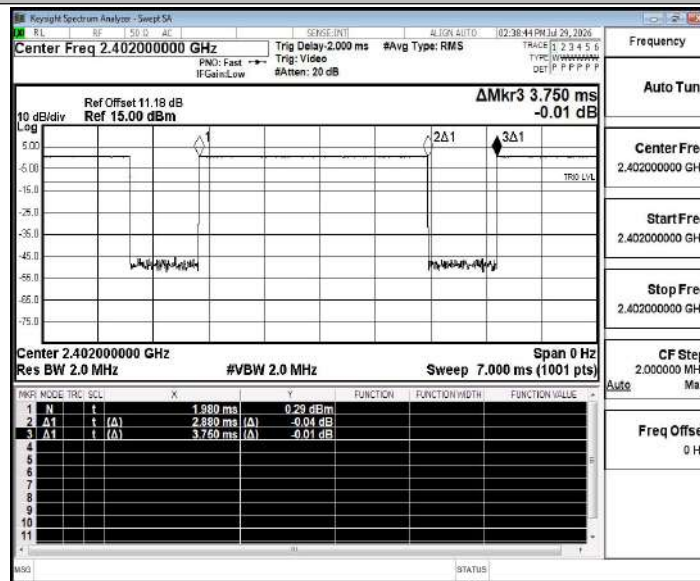
A.8 Duty Cycle

Test Result

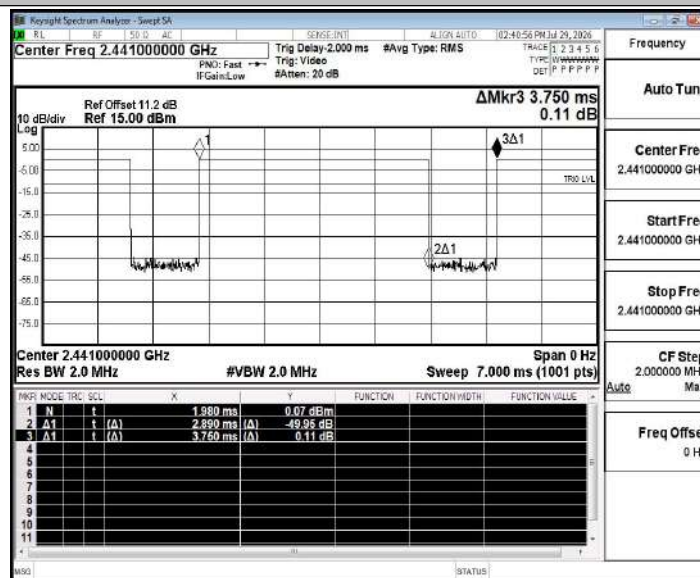
TestMode	Antenna	Freq(MHz)	ON Time [ms]	Period [ms]	DC [%]	xFactor	Limit	Verdict
DH5	Ant1	2402	2.88	3.75	76.80	1.15	---	---
		2441	2.89	3.75	77.07	1.13	---	---
		2480	2.88	3.75	76.80	1.15	---	---
2DH5	Ant1	2402	2.88	3.74	77.01	1.13	---	---
		2441	2.88	3.74	77.01	1.13	---	---
		2480	2.89	3.75	77.07	1.13	---	---

Test Graphs

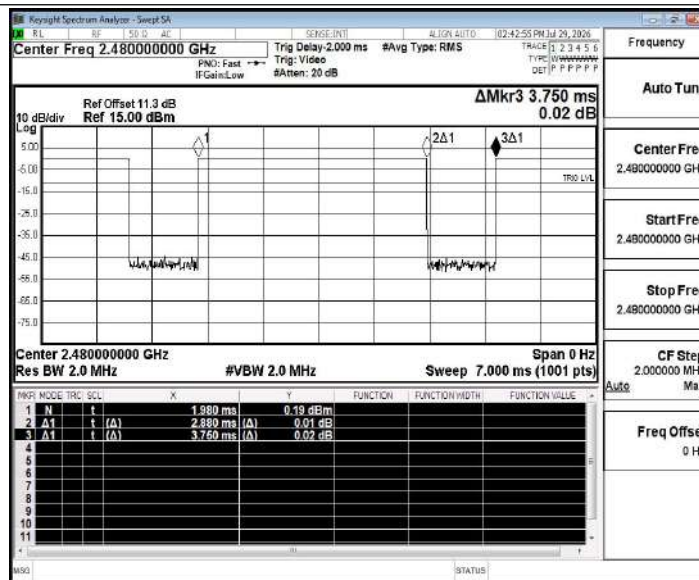
DH5_Ant1_2402



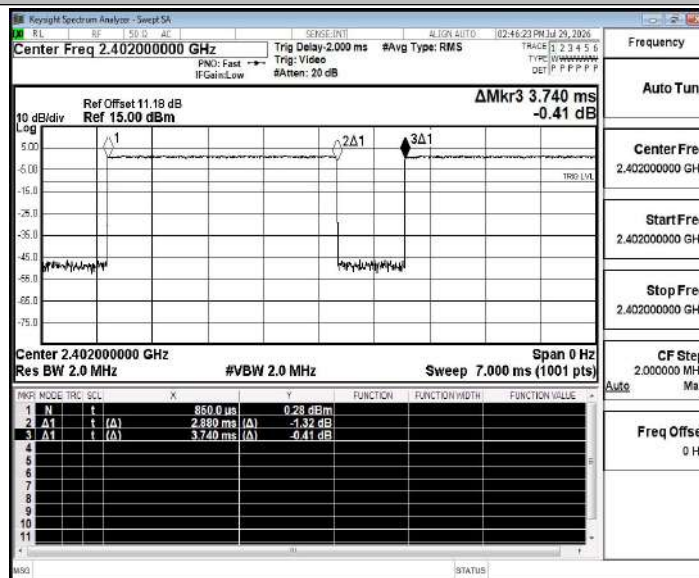
DH5_Ant1_2441



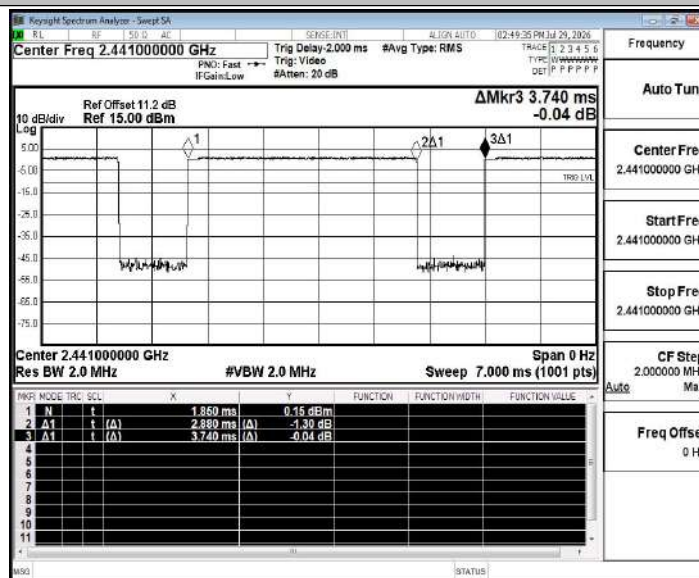
DH5_Ant1_2480



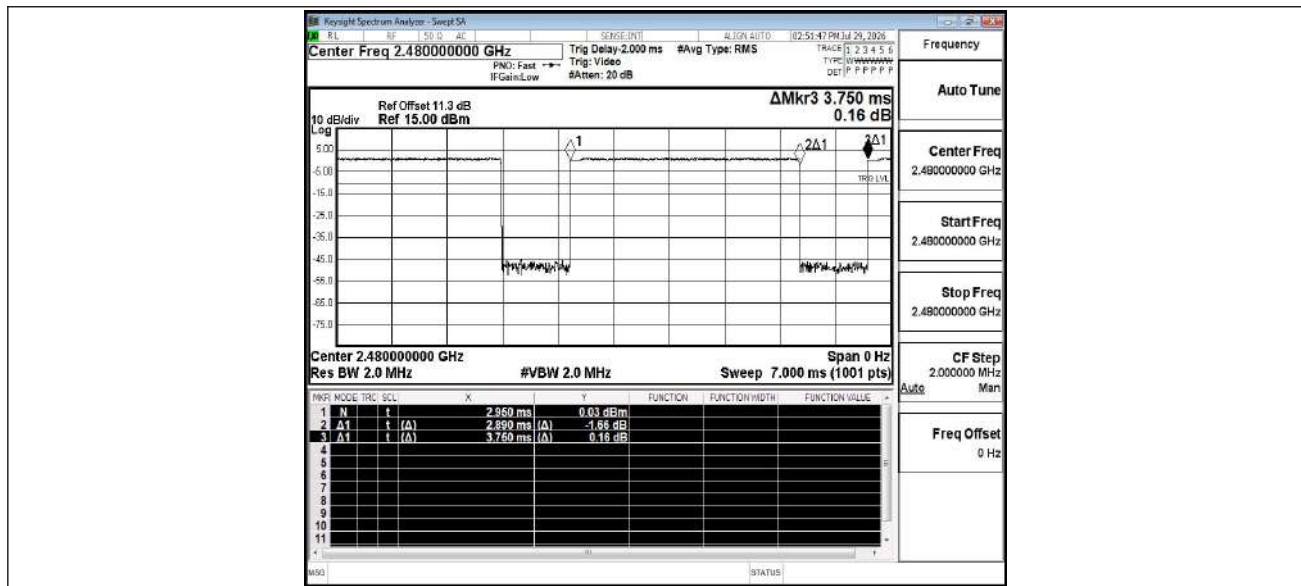
2DH5_Ant1_2402



2DH5_Ant1_2441



2DH5 Ant1 2480



A.9 Emissions in Restricted Bands

Test Result

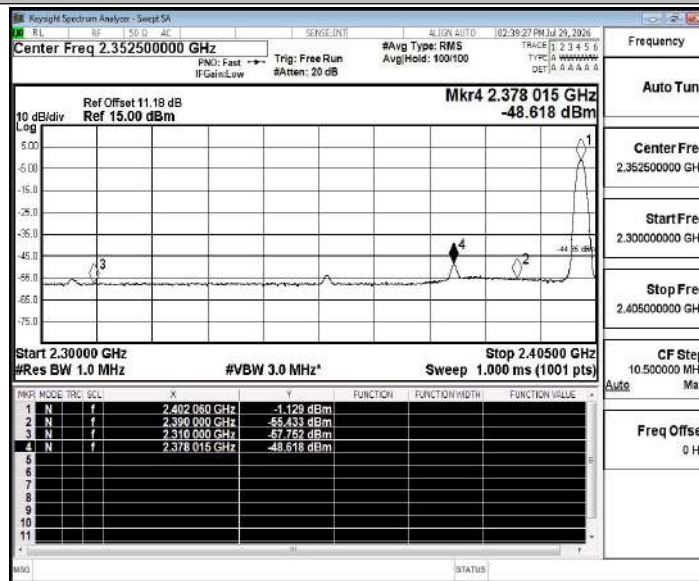
Test Mode	Antenna	Channel Name	Freq (MHz)	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Gain [dBi]	DC Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
DH5	Ant1	Low	2402	AV	2310.000	-57.75	≤-44.35	2.00	1.15	40.60	≤54	PASS
				AV	2378.015	-48.62	≤-44.35	2.00	1.15	49.73	≤54	PASS
				AV	2390.000	-55.43	≤-44.35	2.00	1.15	42.92	≤54	PASS
				Peak	2310.000	-48.15	≤-23.20	2.00	0.00	49.05	≤74	PASS
				Peak	2378.330	-42.53	≤-23.20	2.00	0.00	54.67	≤74	PASS
				Peak	2390.000	-48.56	≤-23.20	2.00	0.00	48.64	≤74	PASS
		High	2480	AV	2483.500	-55.91	≤-44.35	2.00	1.15	42.44	≤54	PASS
				AV	2499.440	-54.03	≤-44.35	2.00	1.15	44.32	≤54	PASS
				AV	2500.000	-54.92	≤-44.35	2.00	1.15	43.43	≤54	PASS
				Peak	2483.500	-45.79	≤-23.20	2.00	0.00	51.41	≤74	PASS
				Peak	2497.440	-44.31	≤-23.20	2.00	0.00	52.89	≤74	PASS
				Peak	2500.000	-45.24	≤-23.20	2.00	0.00	51.96	≤74	PASS
		Low	Hop_2402	Peak	2310.000	-49.59	≤-23.20	2.00	0.00	47.61	≤74	PASS
				Peak	2380.010	-43.04	≤-23.20	2.00	0.00	54.16	≤74	PASS
				Peak	2390.000	-46.47	≤-23.20	2.00	0.00	50.73	≤74	PASS
		High	Hop_2480	Peak	2483.500	-45.58	≤-23.20	2.00	0.00	51.62	≤74	PASS
				Peak	2490.720	-43.62	≤-23.20	2.00	0.00	53.58	≤74	PASS
				Peak	2500.000	-47.65	≤-23.20	2.00	0.00	49.55	≤74	PASS
2DH5	Ant1	Low	2402	AV	2310.000	-57.73	≤-44.33	2.00	1.13	40.60	≤54	PASS
				AV	2378.225	-50.5	≤-44.33	2.00	1.13	47.83	≤54	PASS
				AV	2390.000	-54.88	≤-44.33	2.00	1.13	43.45	≤54	PASS
				Peak	2310.000	-49.71	≤-23.20	2.00	0.00	47.49	≤74	PASS
				Peak	2377.700	-42.72	≤-23.20	2.00	0.00	54.48	≤74	PASS
				Peak	2390.000	-48.29	≤-23.20	2.00	0.00	48.91	≤74	PASS
		High	2480	AV	2483.500	-55.74	≤-44.33	2.00	1.13	42.59	≤54	PASS
				AV	2499.360	-53.9	≤-44.33	2.00	1.13	44.43	≤54	PASS
				AV	2500.000	-54.29	≤-44.33	2.00	1.13	44.04	≤54	PASS
				Peak	2483.500	-46.79	≤-23.20	2.00	0.00	50.41	≤74	PASS
				Peak	2489.200	-44.2	≤-23.20	2.00	0.00	53.00	≤74	PASS
				Peak	2500.000	-46.73	≤-23.20	2.00	0.00	50.47	≤74	PASS
		Low	Hop_2402	Peak	2310.000	-50.65	≤-23.20	2.00	0.00	46.55	≤74	PASS
				Peak	2385.680	-43.56	≤-23.20	2.00	0.00	53.64	≤74	PASS
				Peak	2390.000	-46.2	≤-23.20	2.00	0.00	51.00	≤74	PASS
		High	Hop_2480	Peak	2483.500	-47.78	≤-23.20	2.00	0.00	49.42	≤74	PASS
				Peak	2488.080	-42.49	≤-23.20	2.00	0.00	54.71	≤74	PASS
				Peak	2500.000	-45.79	≤-23.20	2.00	0.00	51.41	≤74	PASS

Note:

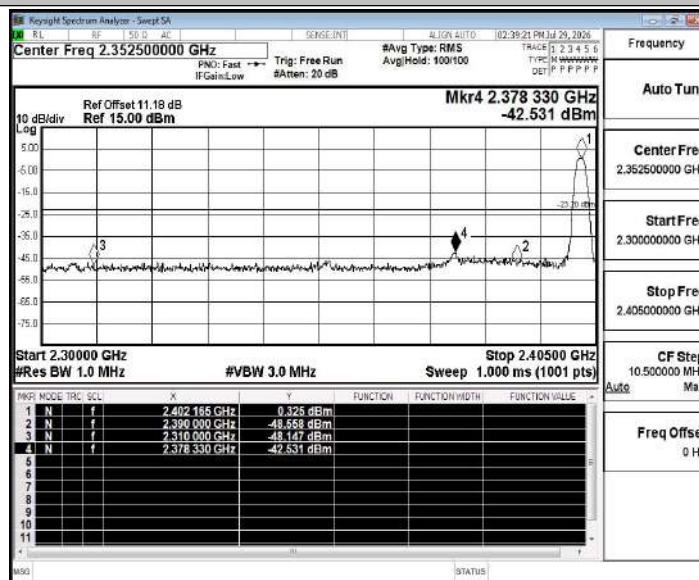
1. The Antenna Gain is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs

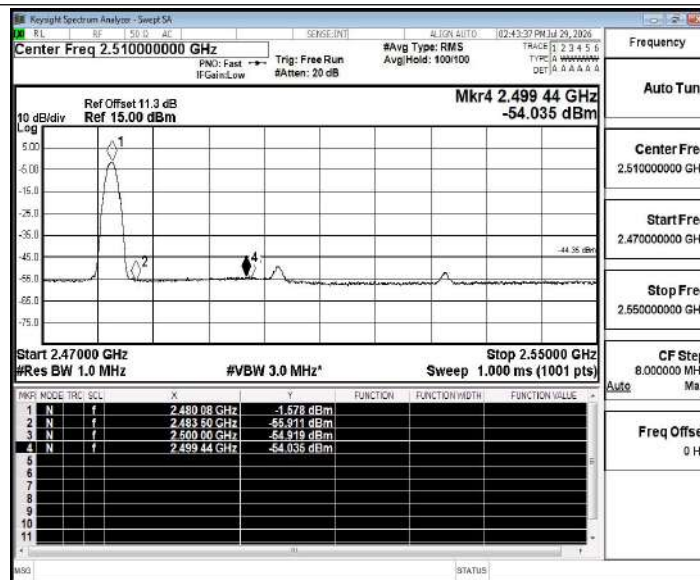
DH5_Ant1_Low_2402_AV



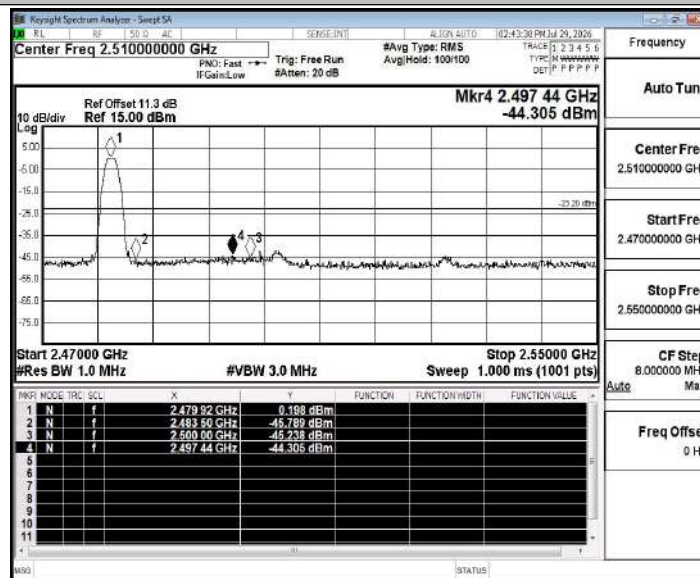
DH5_Ant1_Low_2402_Peak



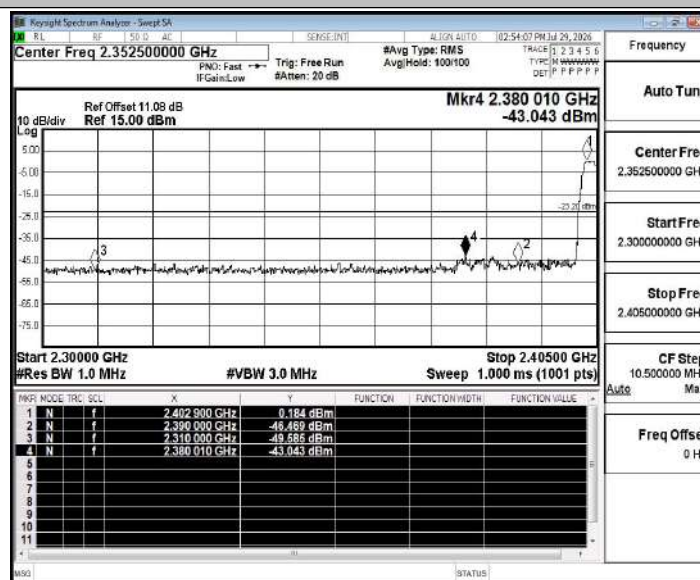
DH5_Ant1_High_2480_AV



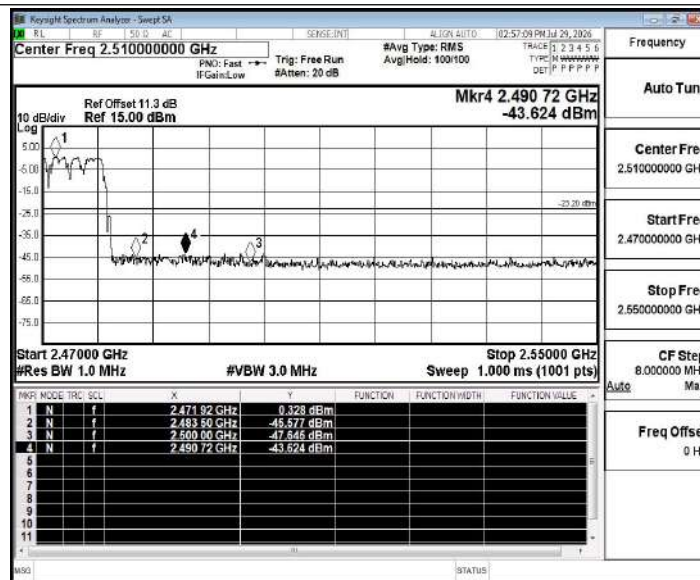
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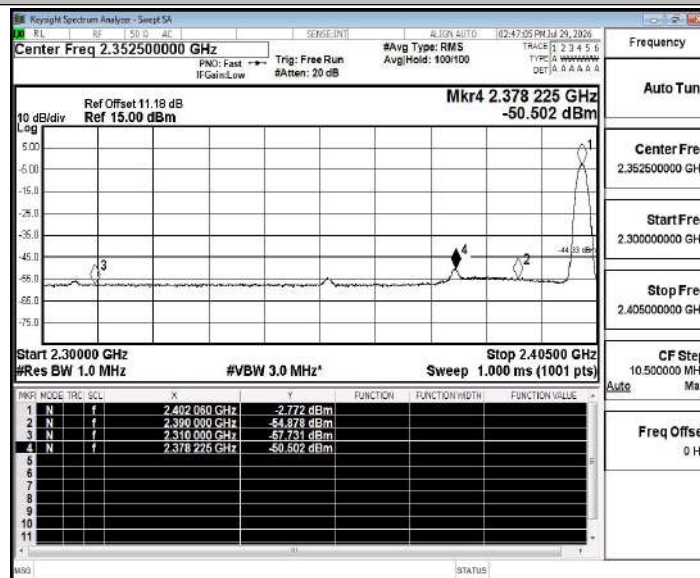
DH5_Ant1_Low_Hop_2402_Peak



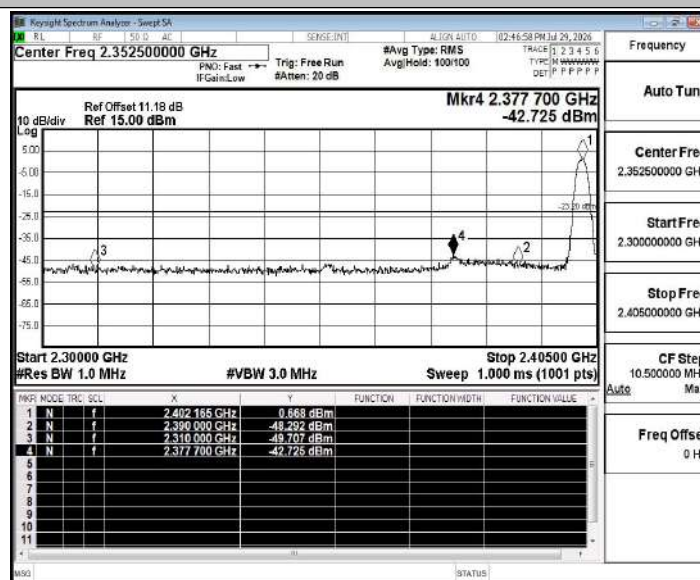
DH5_Ant1_High_Hop_2480_Peak



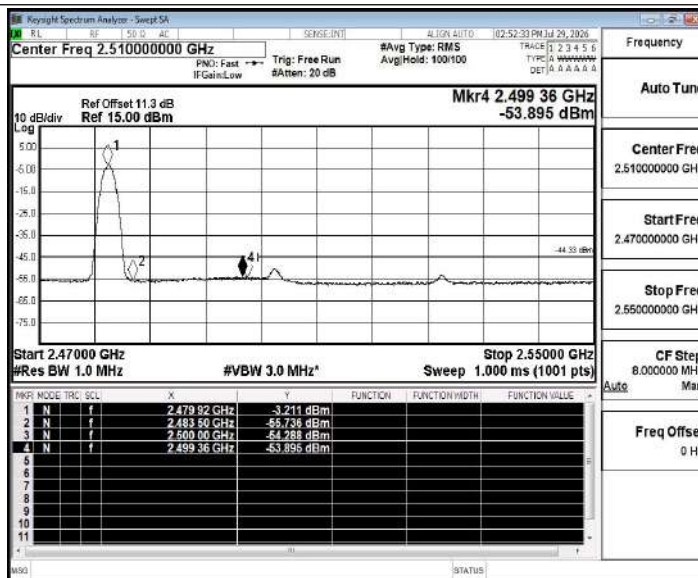
2DH5_Ant1_Low_2402_AV



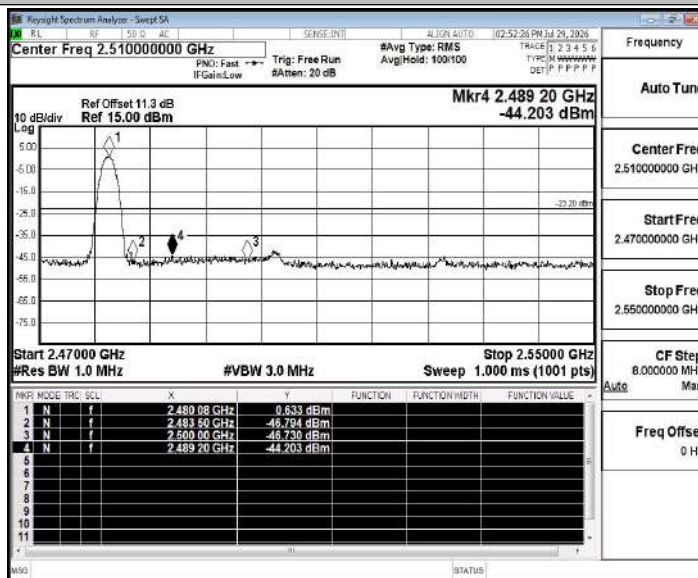
2DH5_Ant1_Low_2402_Peak



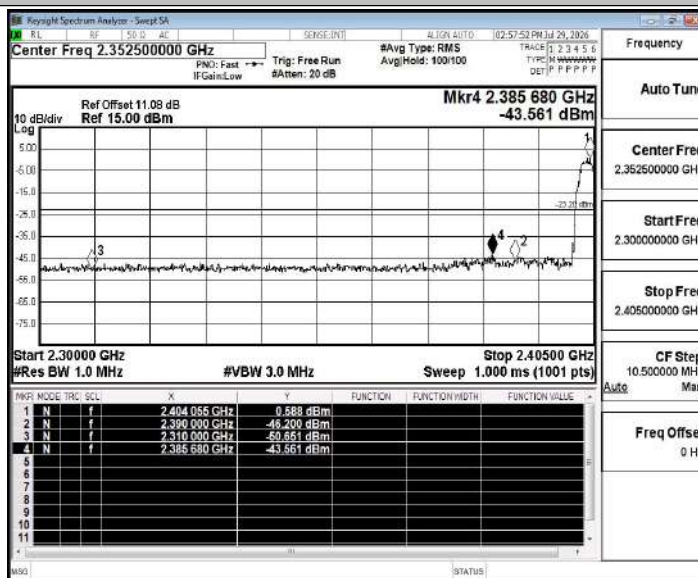
2DH5_Ant1_High_2480_AV



2DH5_Ant1_High_2480_Peak



2DH5_Ant1_Low_Hop_2402_Peak



2DH5_Ant1_High_Hop_2480_Peak

