



Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: Personal Mobile Alarm System

Test Model: PAL 4

Environmental Conditions

Temperature:	23.9° C
Relative Humidity:	52.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Ling Zhu
Supervised by:	Li huan



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A.1 20dB Emission Bandwidth

Test Result

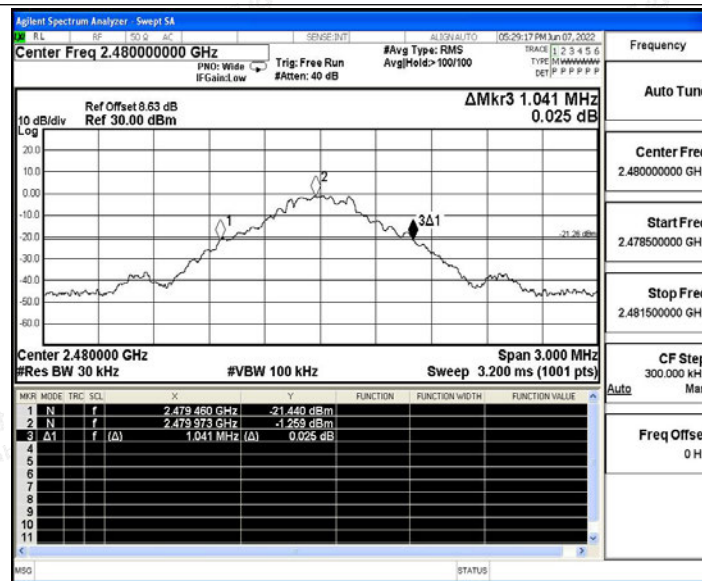
TestMode	Antenna	Channel	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.969	2401.529	2402.498	---	---
		2441	1.035	2440.466	2441.501	---	---
		2480	1.041	2479.460	2480.501	---	---
2DH5	Ant1	2402	1.293	2401.361	2402.654	---	---
		2441	1.293	2440.361	2441.654	---	---
		2480	1.317	2479.340	2480.657	---	---
3DH5	Ant1	2402	1.317	2401.343	2402.660	---	---
		2441	1.299	2440.349	2441.648	---	---
		2480	1.299	2479.349	2480.648	---	---



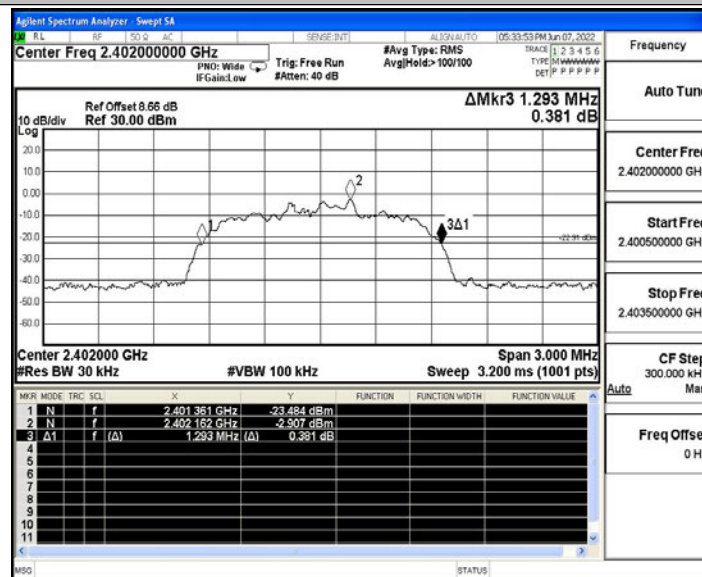


Test Graphs



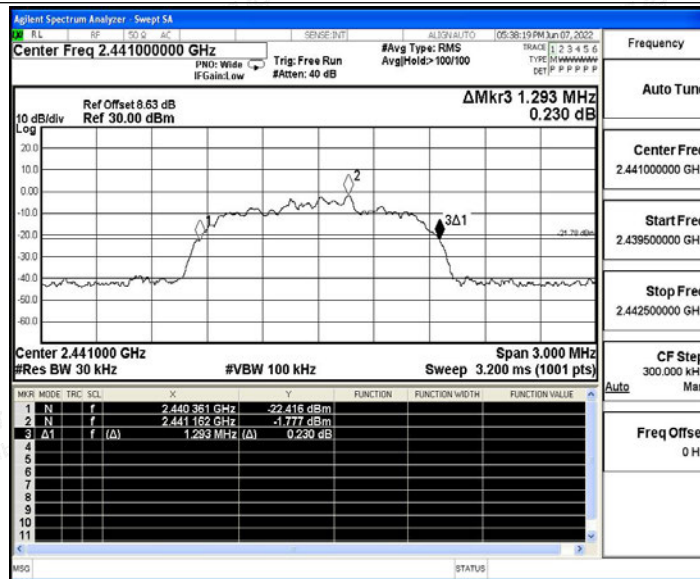


2DH5_Ant1_2402

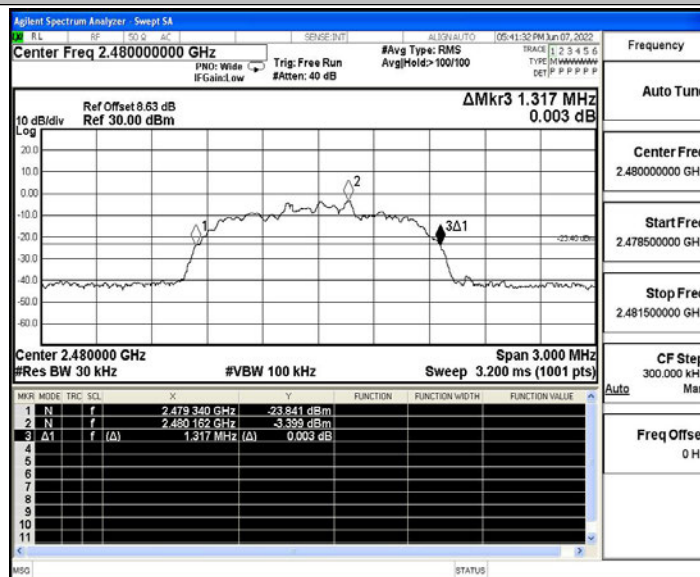


2DH5_Ant1_2441





2DH5_Ant1_2480



3DH5_Ant1_2402

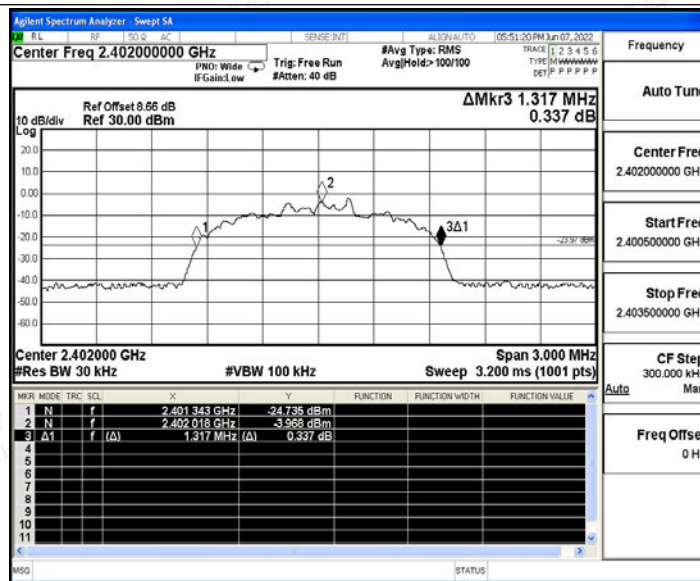


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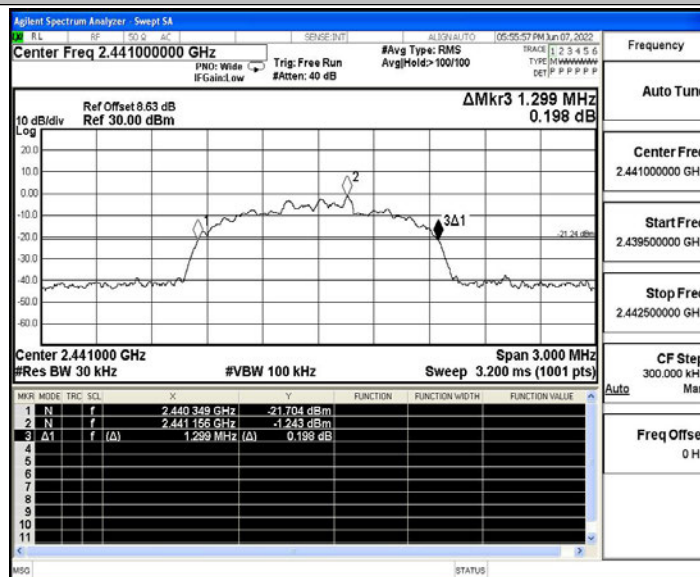
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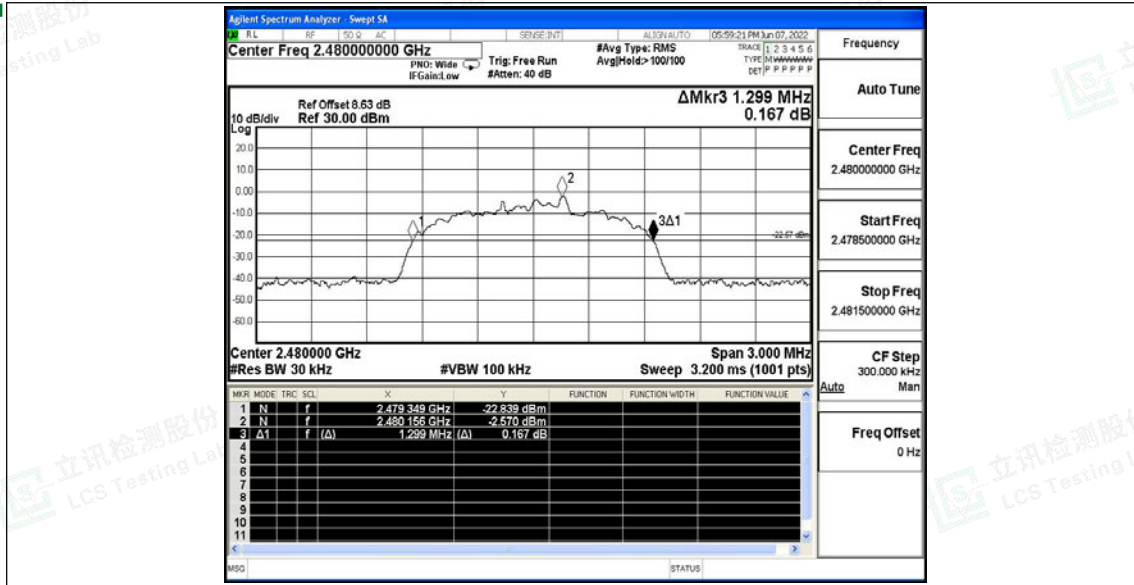


3DH5_Ant1_2441



3DH5_Ant1_2480







A.2 Occupied Channel Bandwidth

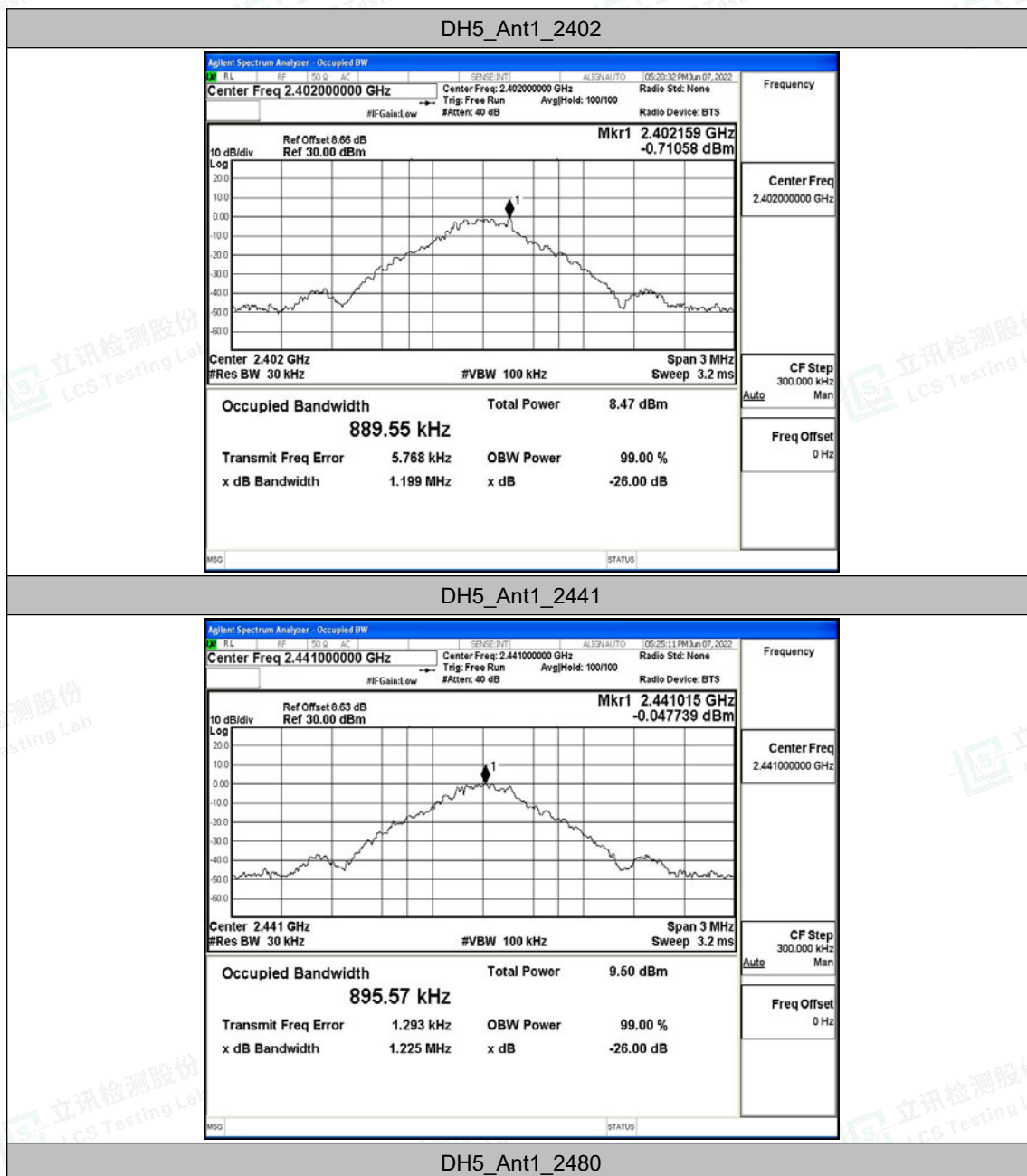
Test Result

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.88955	2401.561	2402.451	---	---
		2441	0.89557	2440.554	2441.449	---	---
		2480	0.89345	2479.551	2480.444	---	---
2DH5	Ant1	2402	1.1871	2401.405	2402.592	---	---
		2441	1.1911	2440.403	2441.594	---	---
		2480	1.1929	2479.401	2480.594	---	---
3DH5	Ant1	2402	1.1937	2401.403	2402.597	---	---
		2441	1.1962	2440.401	2441.597	---	---
		2480	1.1902	2479.402	2480.592	---	---





Test Graphs

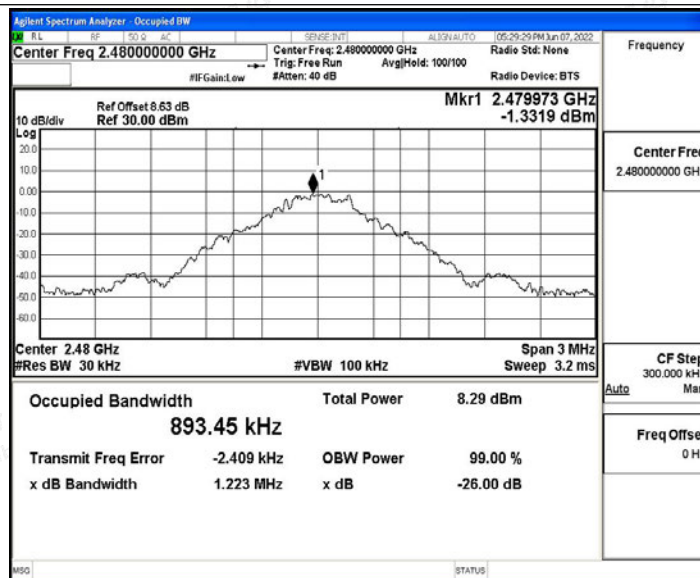


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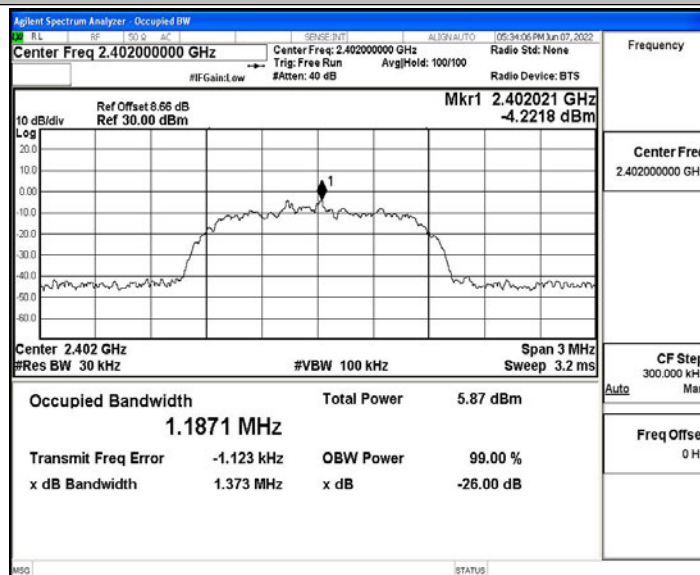
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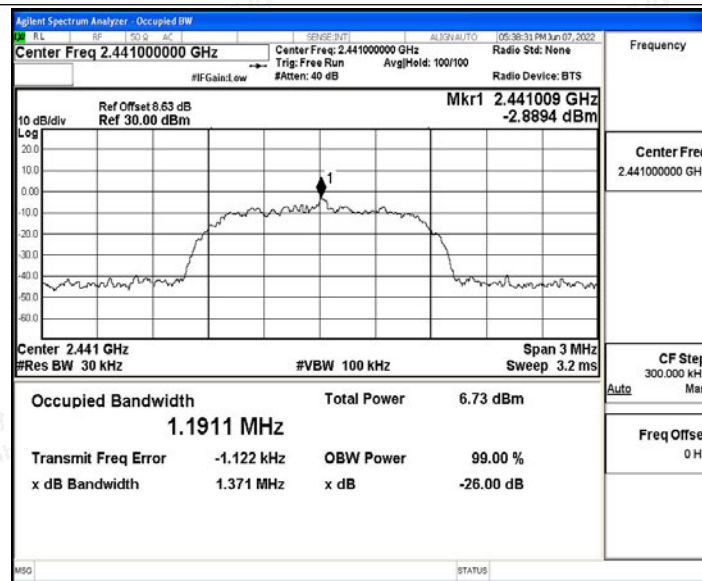


2DH5_Ant1_2402

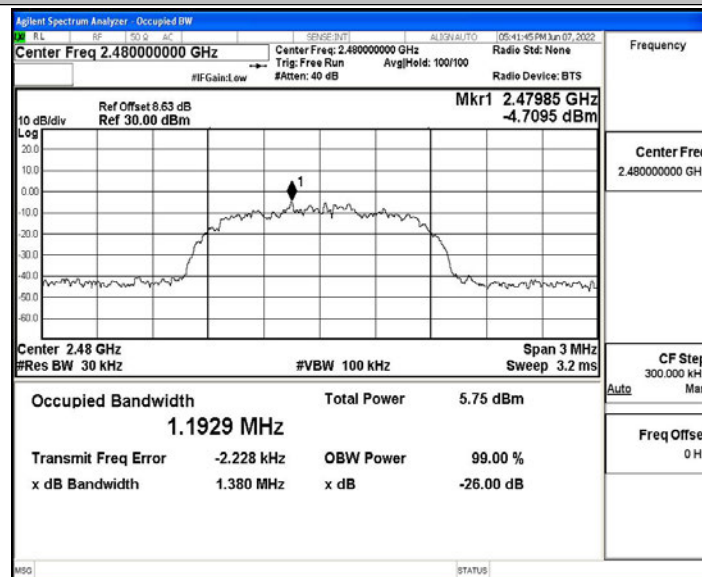


2DH5_Ant1_2441



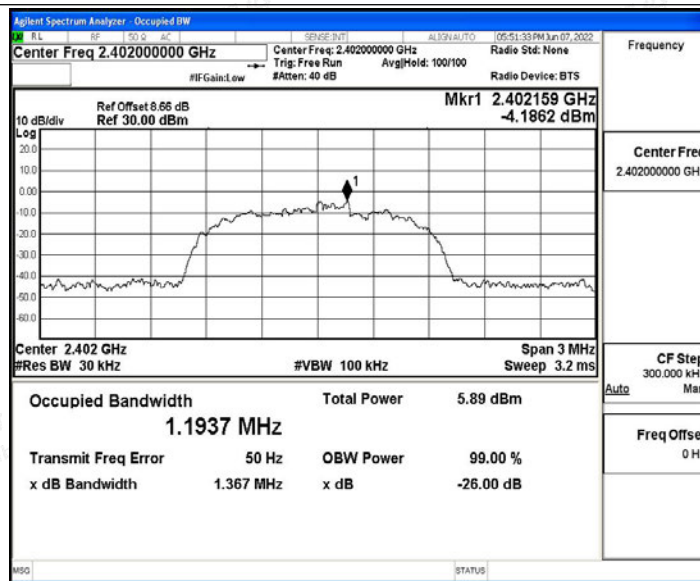


2DH5_Ant1_2480

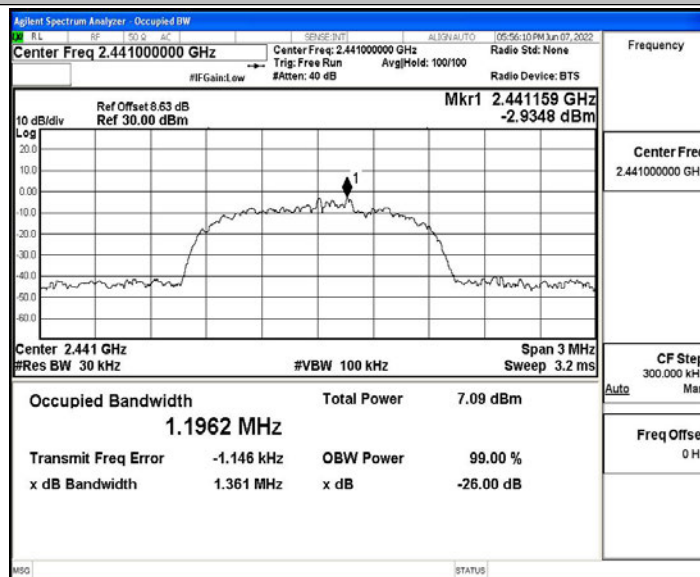


3DH5_Ant1_2402



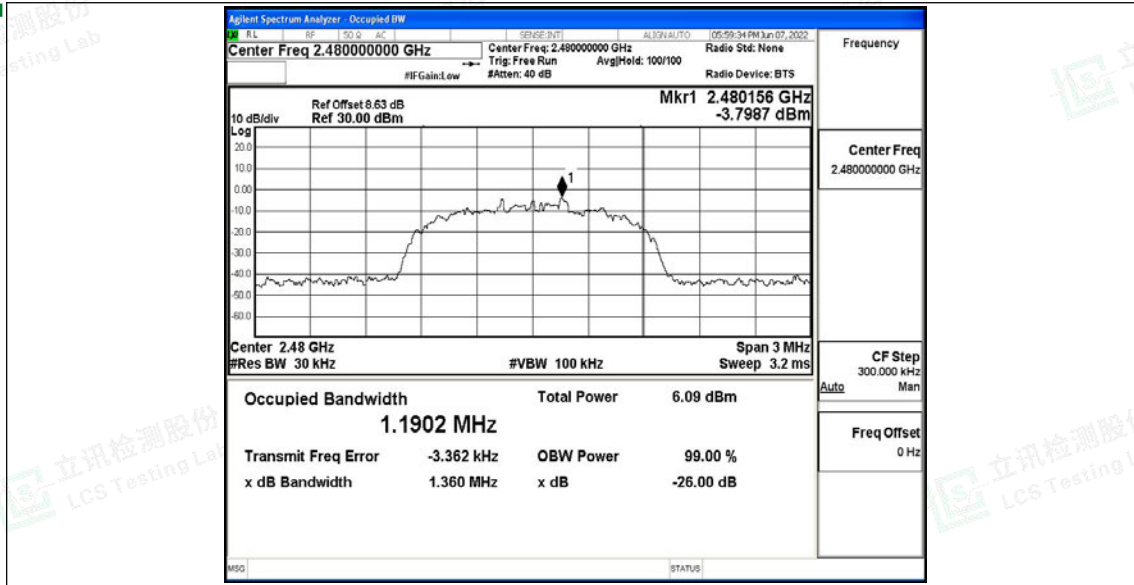


3DH5_Ant1_2441



3DH5_Ant1_2480







A.3 Maximum conducted output power

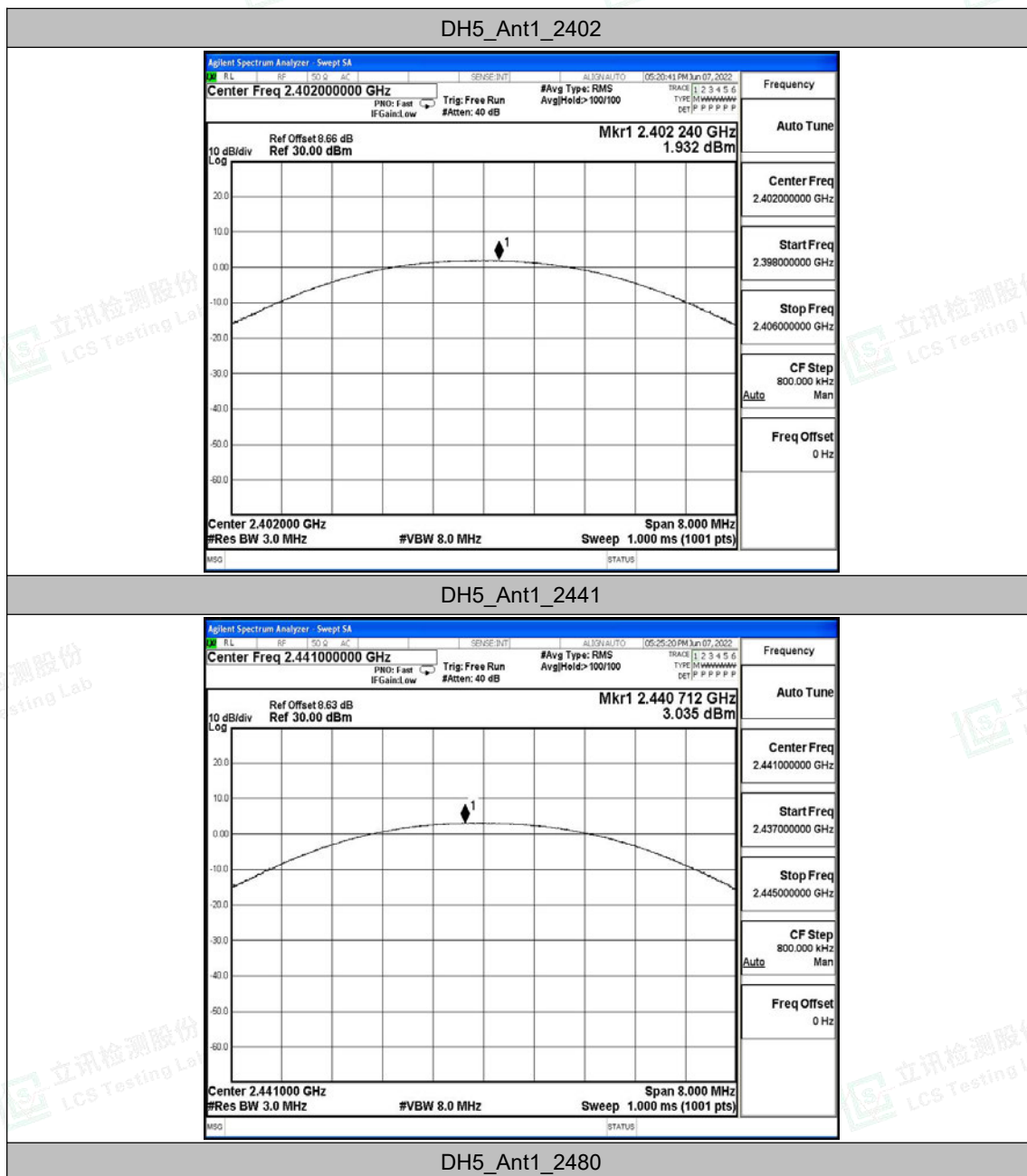
Test Result

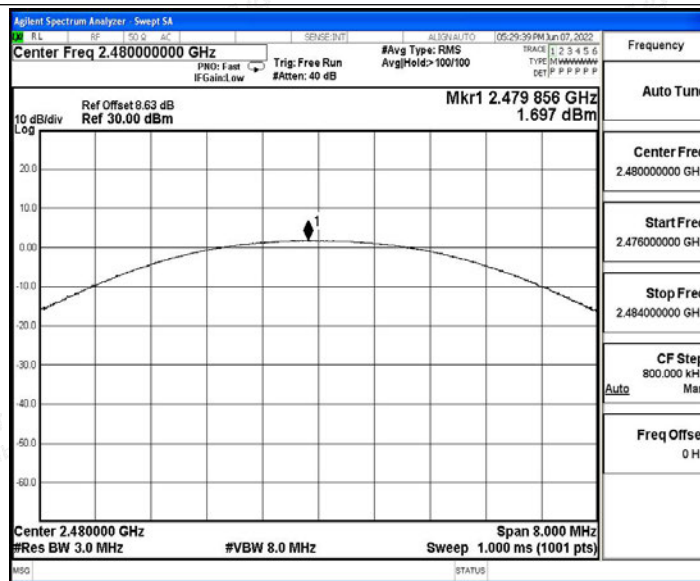
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
DH5	Ant1	2402	1.93	≤20.97	PASS
		2441	3.04	≤20.97	PASS
		2480	1.7	≤20.97	PASS
2DH5	Ant1	2402	0.94	≤20.97	PASS
		2441	2.18	≤20.97	PASS
		2480	0.86	≤20.97	PASS
3DH5	Ant1	2402	1.1	≤20.97	PASS
		2441	2.36	≤20.97	PASS
		2480	1.09	≤20.97	PASS



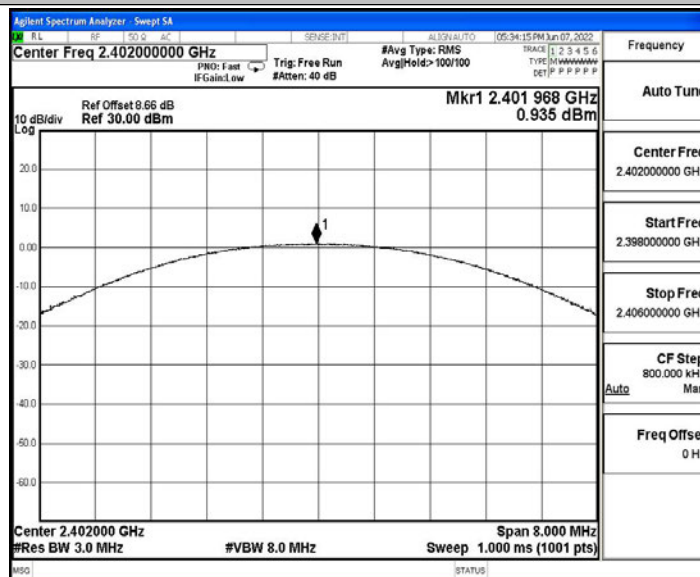


Test Graphs



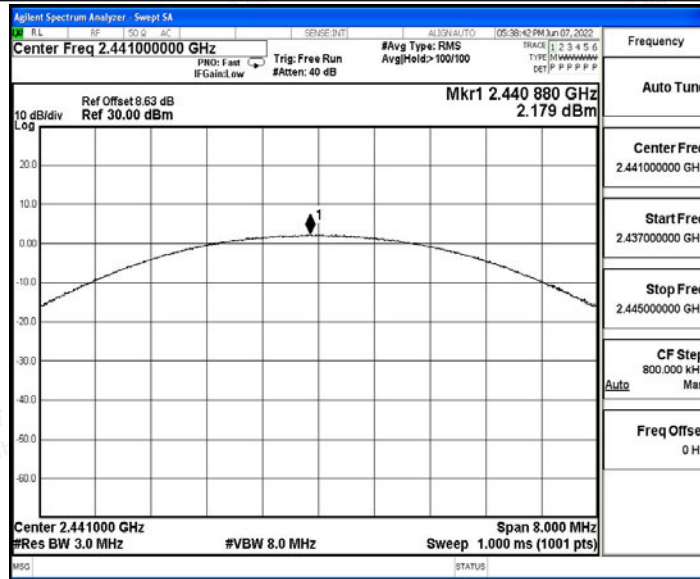


2DH5_Ant1_2402

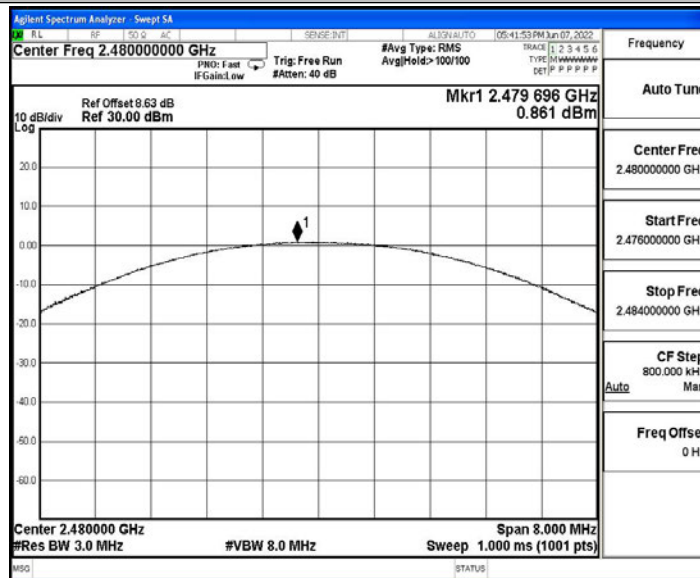


2DH5_Ant1_2441



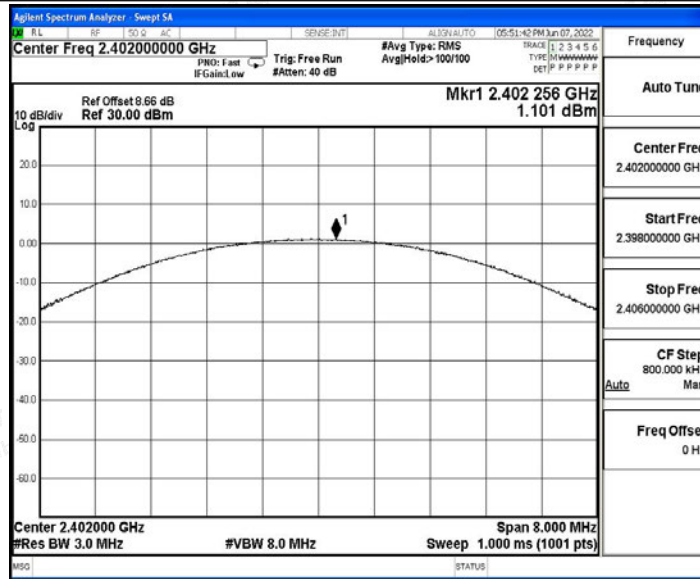


2DH5_Ant1_2480

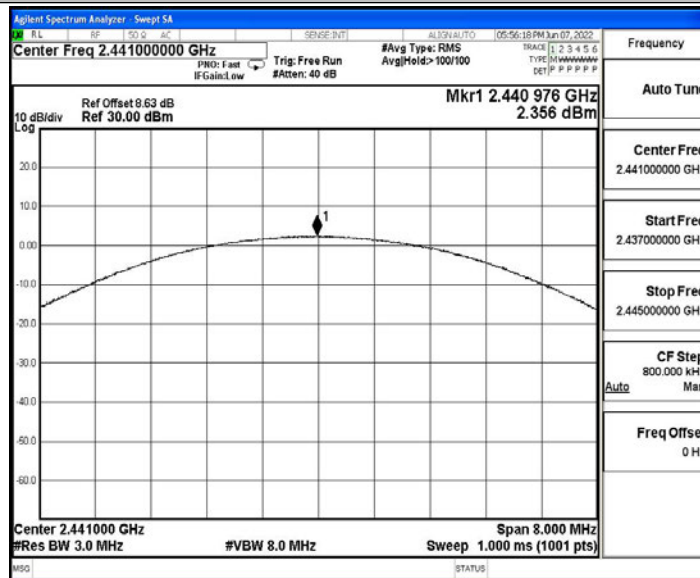


3DH5_Ant1_2402



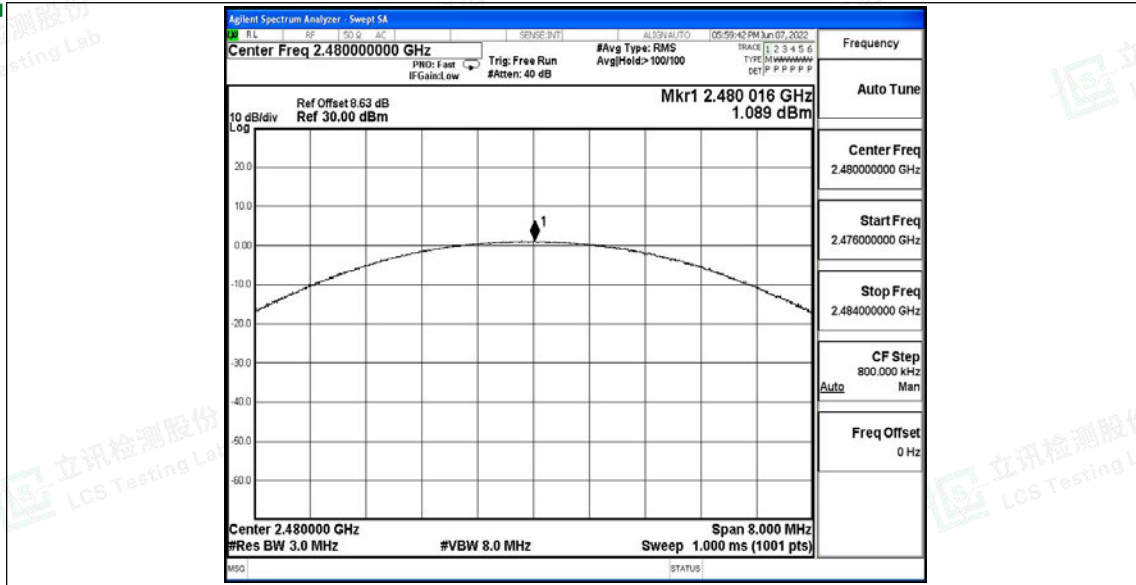


3DH5_Ant1_2441



3DH5_Ant1_2480







A.4 Carrier frequency separation

Test Result

TestMode	Antenna	Channel	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	0.88	≥ 0.694	PASS
2DH5	Ant1	Hop	1.172	≥ 0.878	PASS
3DH5	Ant1	Hop	0.958	≥ 0.878	PASS





Test Graphs

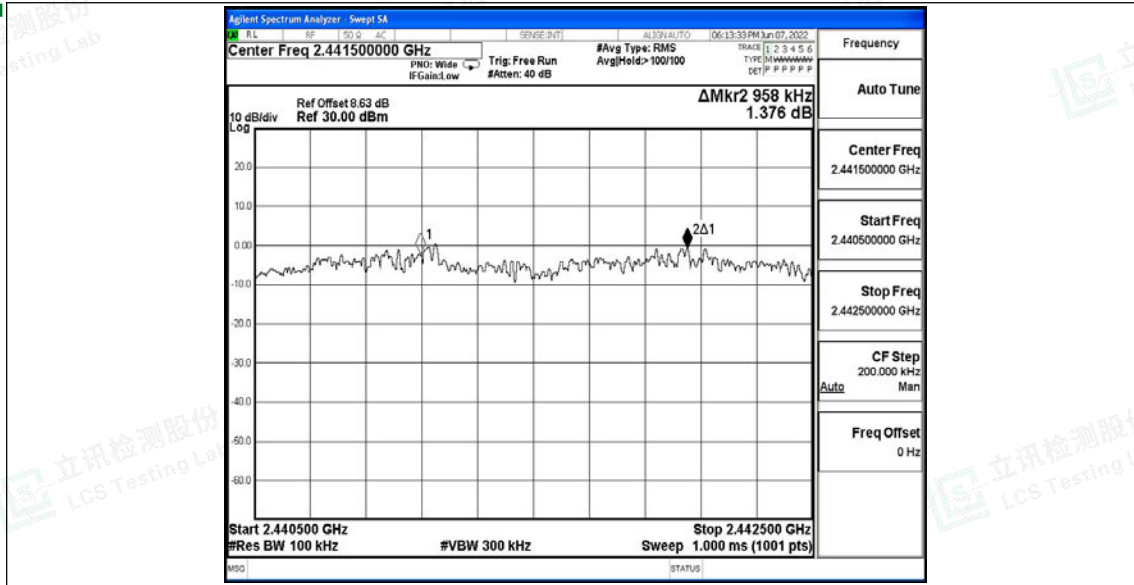


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A.5 Time of occupancy

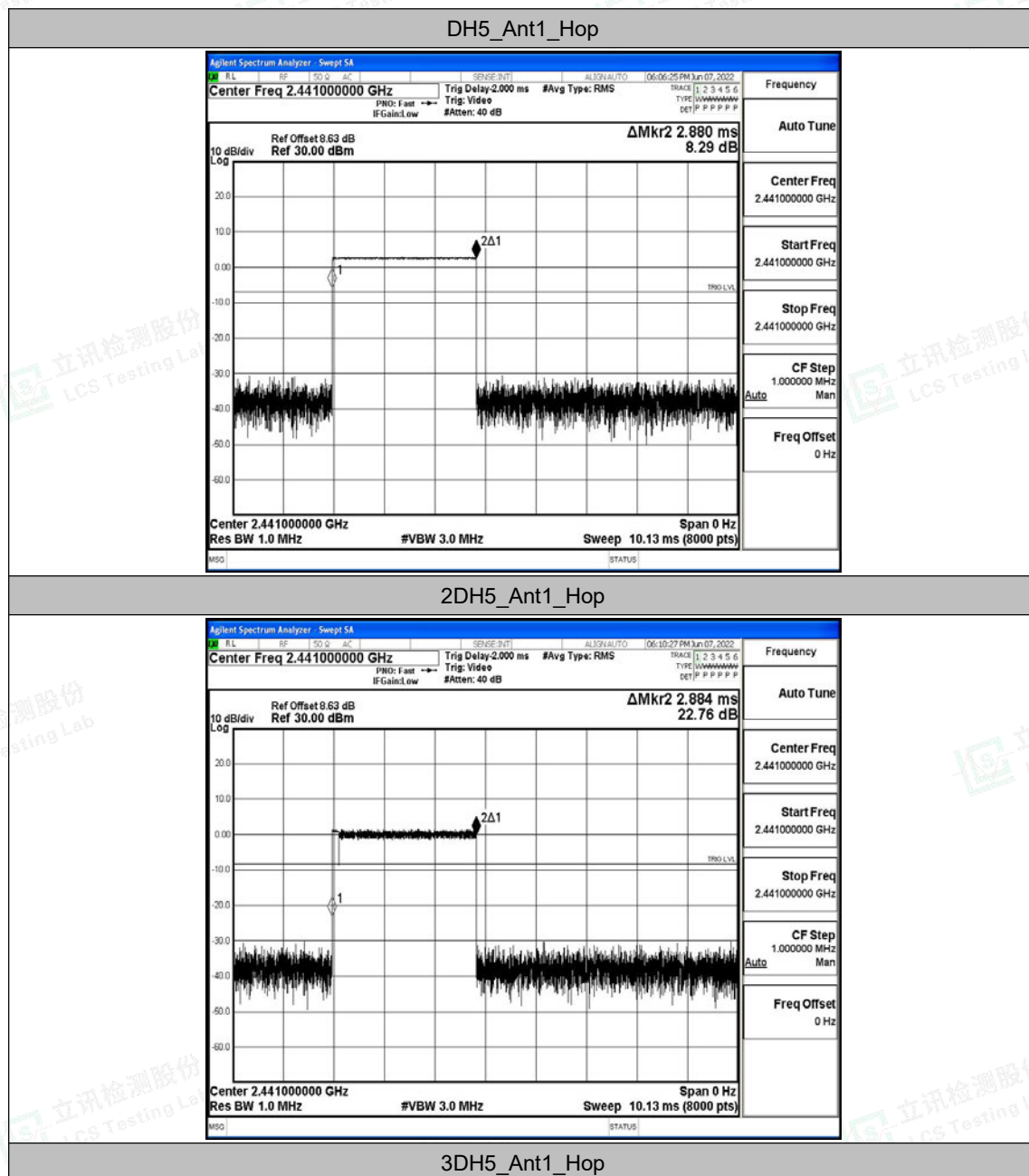
Test Result

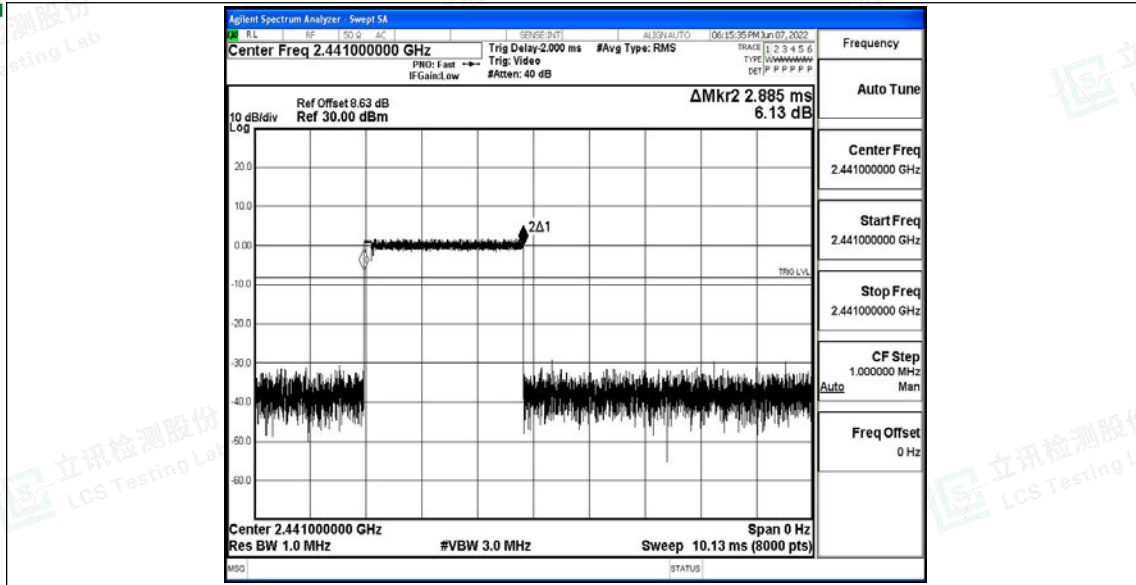
TestMode	Antenna	Channel	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH5	Ant1	Hop	2.88	106.67	0.307	≤0.4	PASS
2DH5	Ant1	Hop	2.88	106.67	0.308	≤0.4	PASS
3DH5	Ant1	Hop	2.89	106.67	0.308	≤0.4	PASS





Test Graphs







A.6 Number of hopping channels

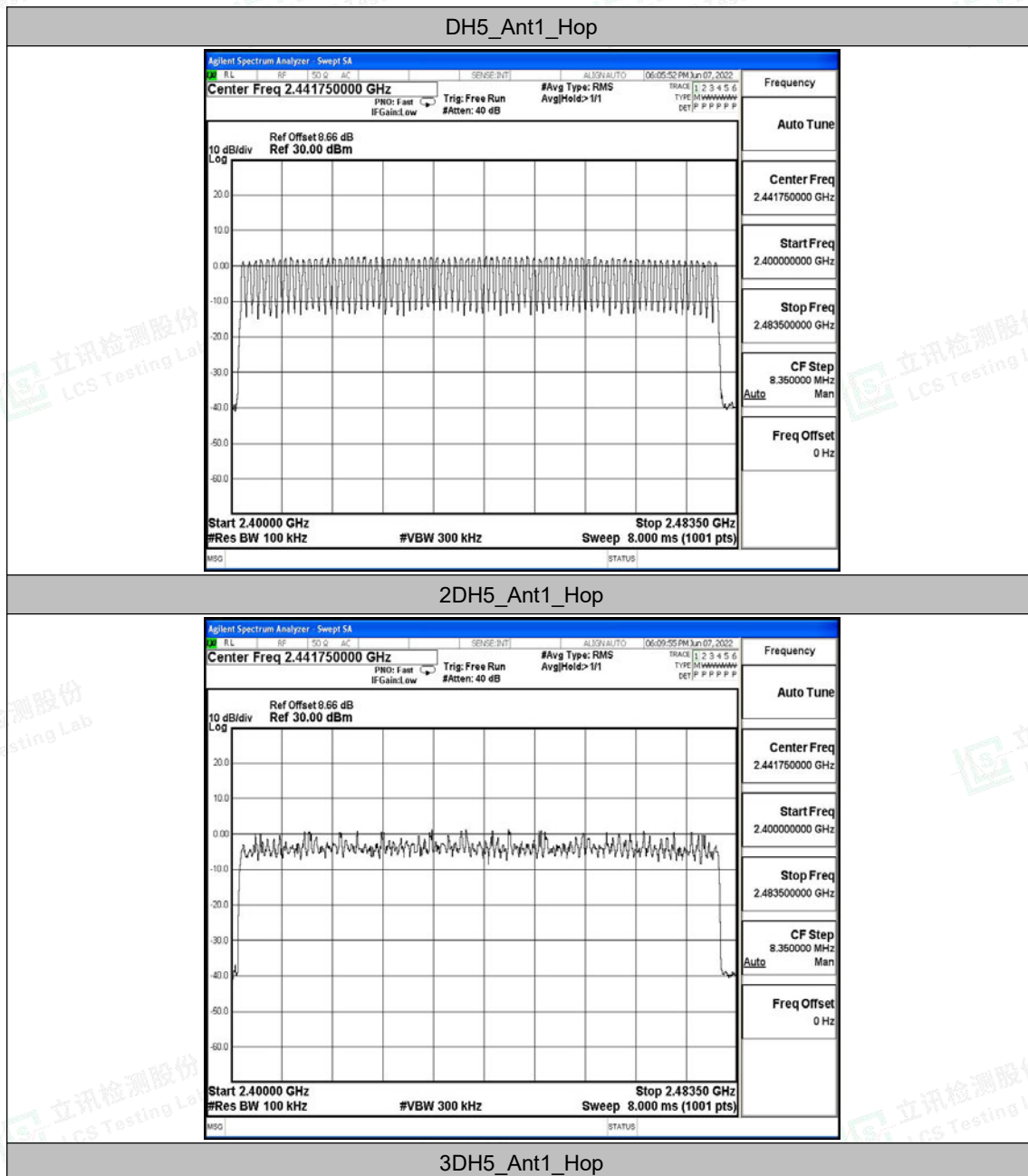
Test Result

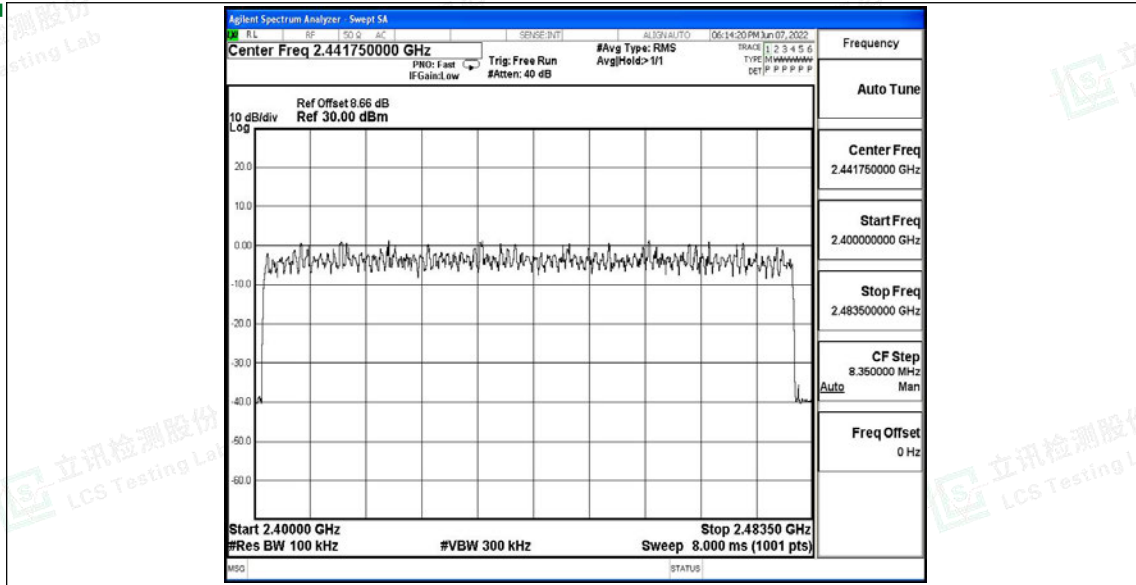
TestMode	Antenna	Channel	Result[Num]	Limit[Num]	Verdict
DH5	Ant1	Hop	79	≥15	PASS
2DH5	Ant1	Hop	79	≥15	PASS
3DH5	Ant1	Hop	79	≥15	PASS





Test Graphs







A.7 Band edge measurements

Test Result

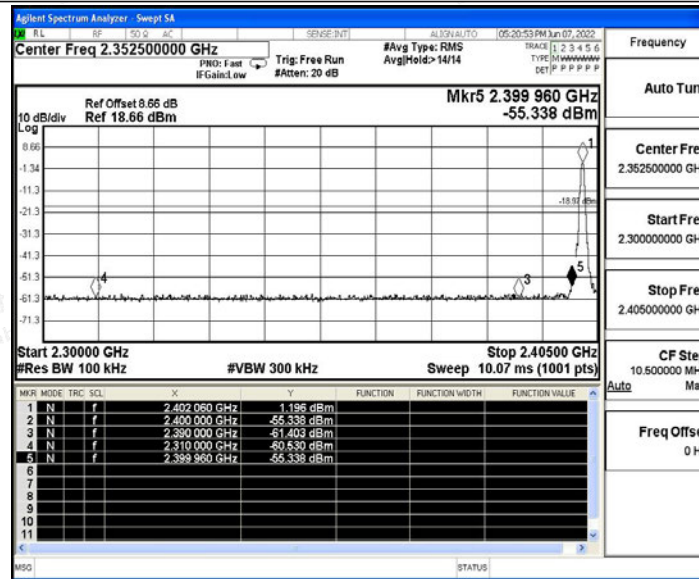
TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	1.03	-55.34	≤-18.97	PASS
		High	2480	1.07	-56.85	≤-18.93	PASS
		Low	Hop_2402	0.75	-58.38	≤-19.25	PASS
		High	Hop_2480	1.27	-57.78	≤-18.73	PASS
2DH5	Ant1	Low	2402	-1.25	-56.04	≤-21.25	PASS
		High	2480	-0.17	-56.74	≤-20.17	PASS
		Low	Hop_2402	-0.21	-58.77	≤-20.21	PASS
		High	Hop_2480	-3.30	-57.46	≤-23.3	PASS
3DH5	Ant1	Low	2402	-0.12	-55.47	≤-20.12	PASS
		High	2480	-0.62	-57.23	≤-20.62	PASS
		Low	Hop_2402	-2.44	-58.66	≤-22.44	PASS
		High	Hop_2480	0.04	-57.48	≤-19.96	PASS



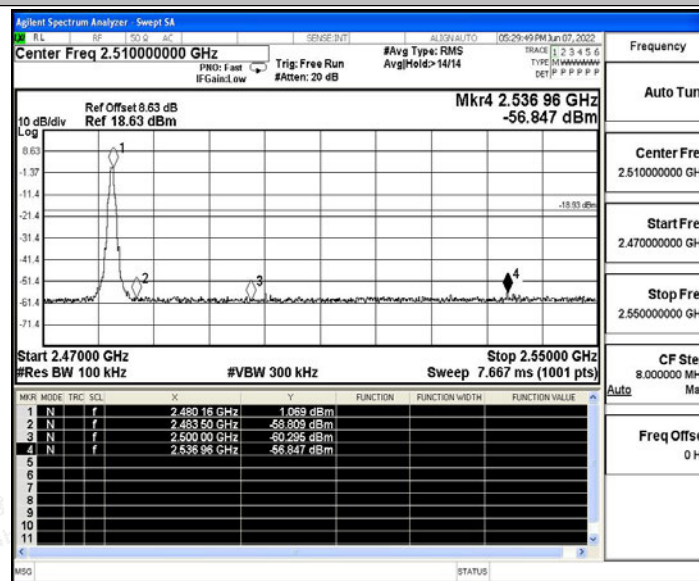


Test Graphs

DH5_Ant1_Low_2402

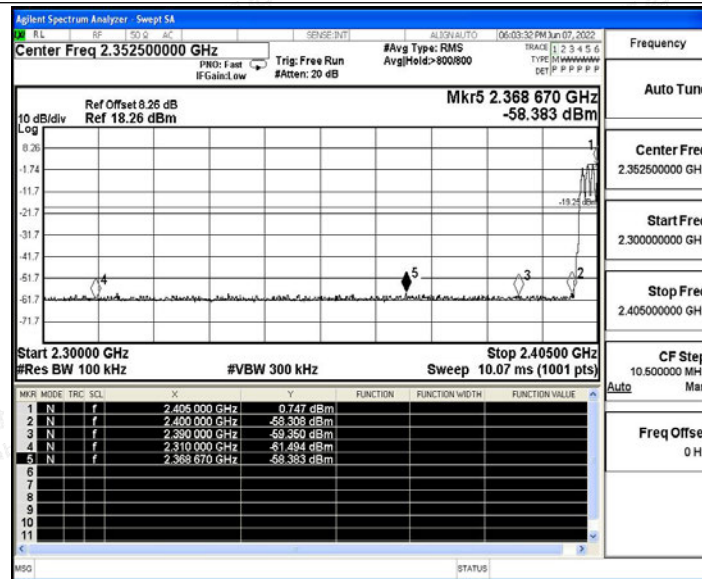


DH5_Ant1_High_2480

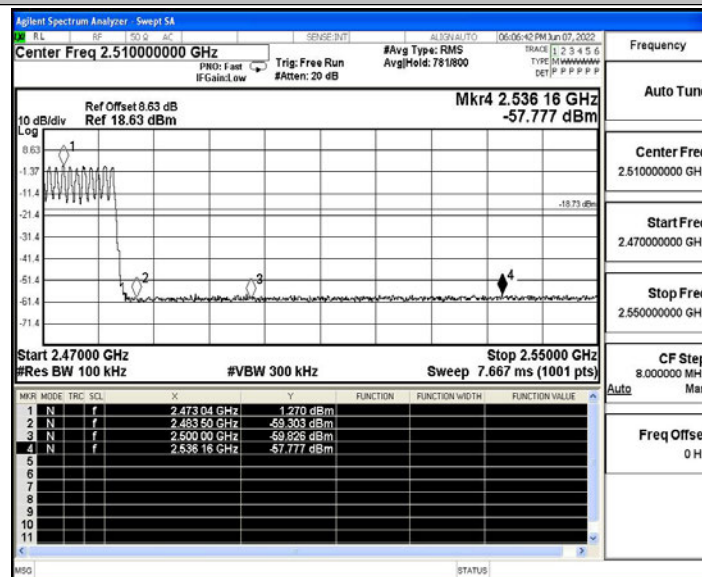


DH5_Ant1_Low_Hop_2402





DH5_Ant1_High_Hop_2480



2DH5_Ant1_Low_2402

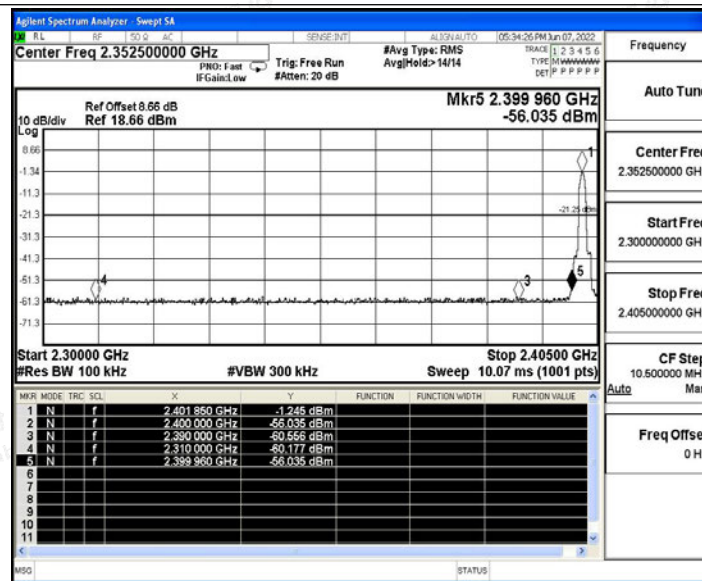


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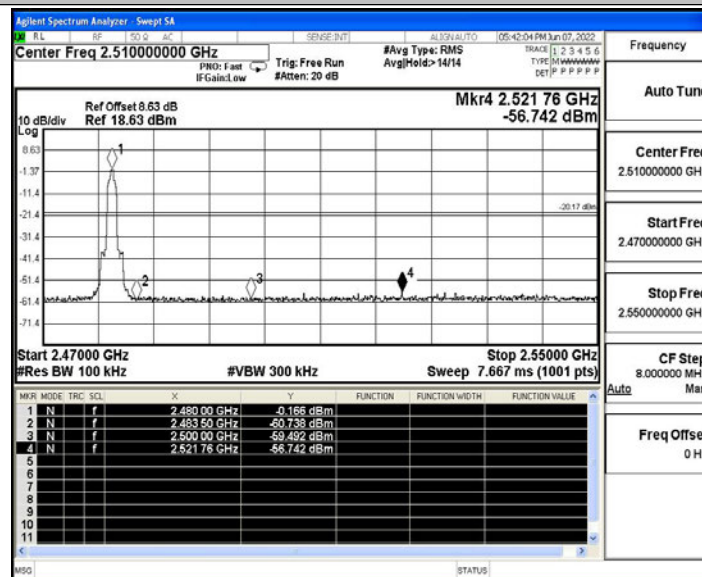
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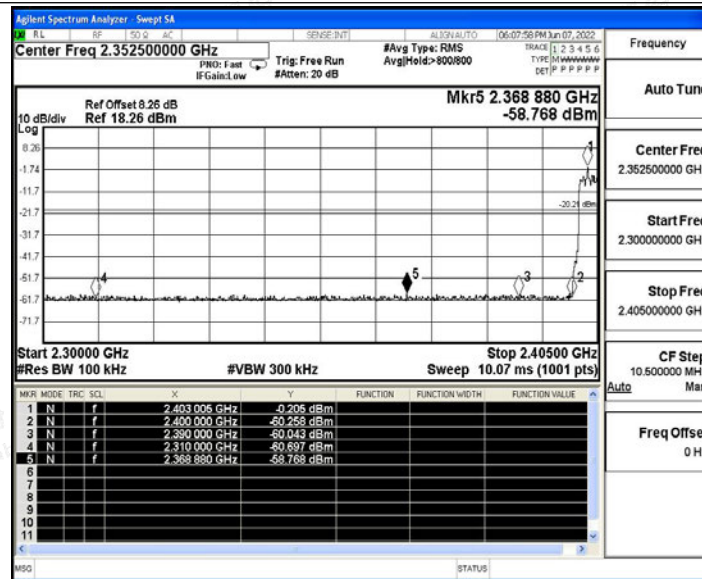


2DH5_Ant1_High_2480

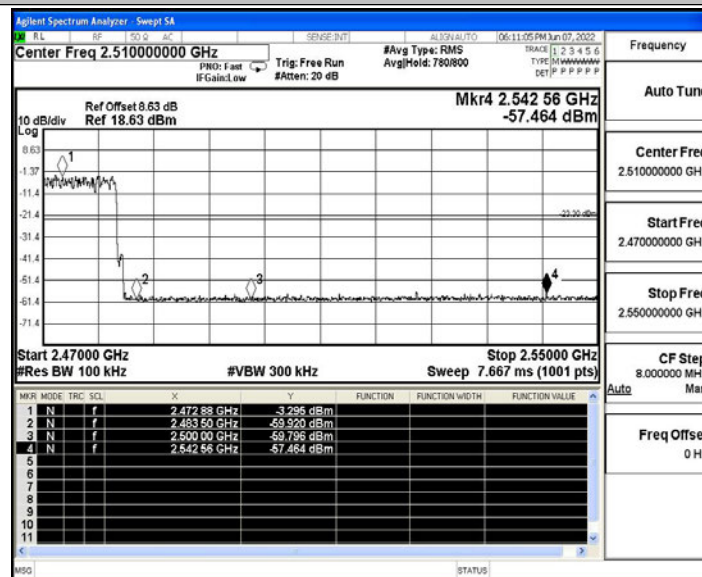


2DH5_Ant1_Low_Hop_2402





2DH5_Ant1_High_Hop_2480



3DH5_Ant1_Low_2402

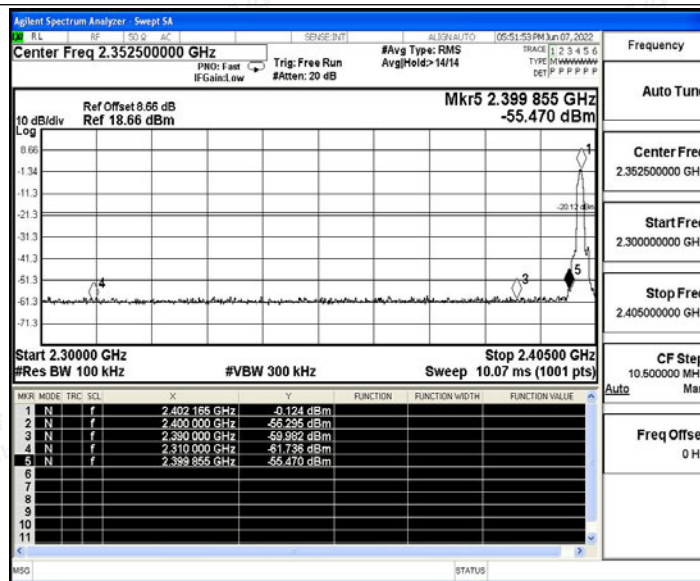


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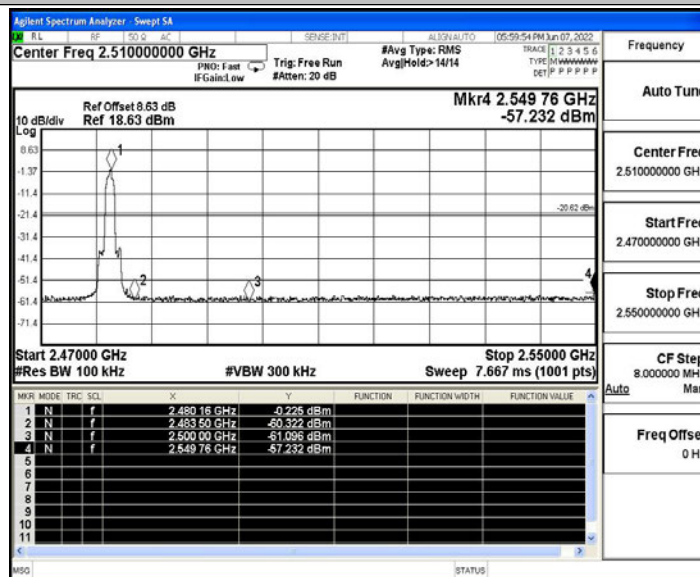
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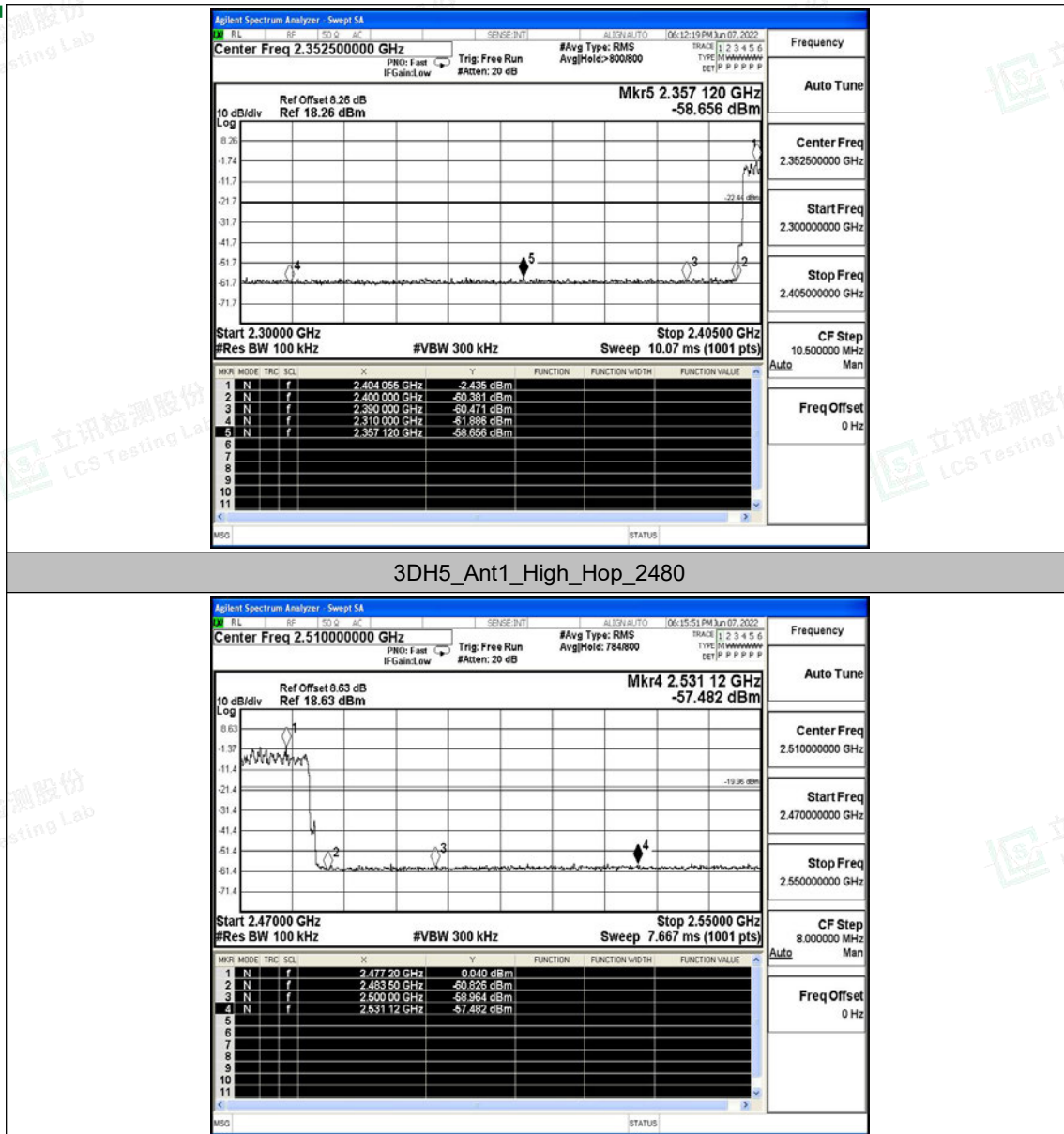


3DH5_Ant1_High_2480



3DH5_Ant1_Low_Hop_2402





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A.8 Conducted Spurious Emission

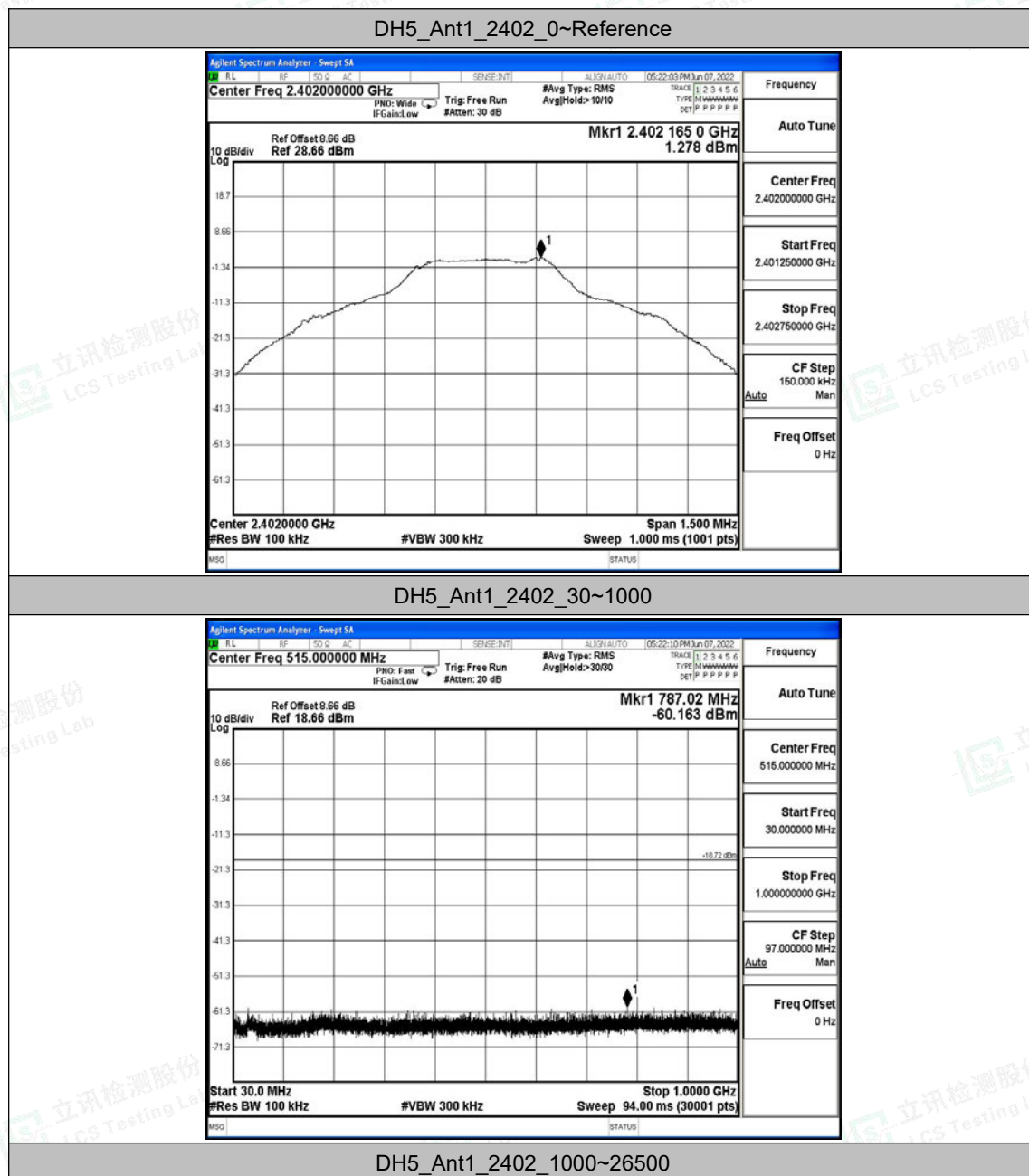
Test Result

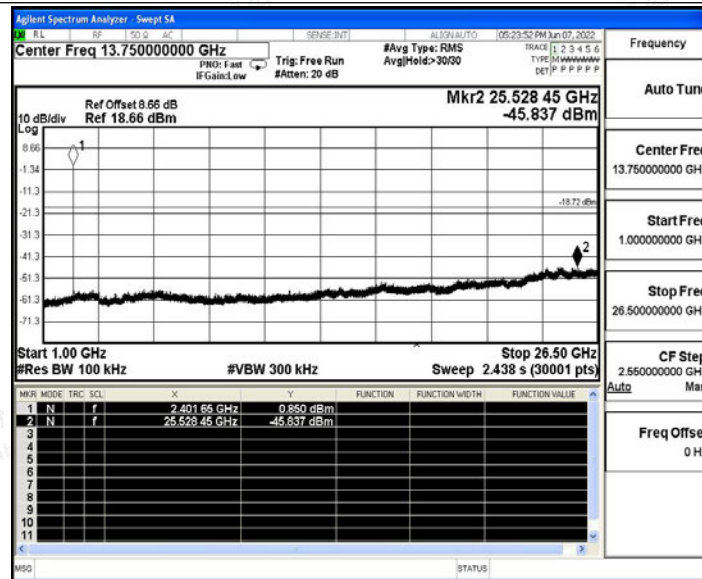
TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	1.28	1.28	---	PASS
			30~1000	1.28	-60.16	≤-18.72	PASS
			1000~26500	1.28	-45.84	≤-18.72	PASS
		2441	Reference	2.43	2.43	---	PASS
			30~1000	2.43	-60.17	≤-17.57	PASS
			1000~26500	2.43	-45.5	≤-17.57	PASS
		2480	Reference	1.15	1.15	---	PASS
			30~1000	1.15	-60.53	≤-18.85	PASS
			1000~26500	1.15	-45.94	≤-18.85	PASS
2DH5	Ant1	2402	Reference	-0.27	-0.27	---	PASS
			30~1000	-0.27	-60.4	≤-20.27	PASS
			1000~26500	-0.27	-45.95	≤-20.27	PASS
		2441	Reference	0.78	0.78	---	PASS
			30~1000	0.78	-60.47	≤-19.22	PASS
			1000~26500	0.78	-45.33	≤-19.22	PASS
		2480	Reference	-0.25	-0.25	---	PASS
			30~1000	-0.25	-60.14	≤-20.25	PASS
			1000~26500	-0.25	-45.87	≤-20.25	PASS
3DH5	Ant1	2402	Reference	-0.19	-0.19	---	PASS
			30~1000	-0.19	-59.7	≤-20.19	PASS
			1000~26500	-0.19	-45.8	≤-20.19	PASS
		2441	Reference	0.98	0.98	---	PASS
			30~1000	0.98	-59.89	≤-19.02	PASS
			1000~26500	0.98	-45.63	≤-19.02	PASS
		2480	Reference	-0.24	-0.24	---	PASS
			30~1000	-0.24	-59.74	≤-20.24	PASS
			1000~26500	-0.24	-45.34	≤-20.24	PASS



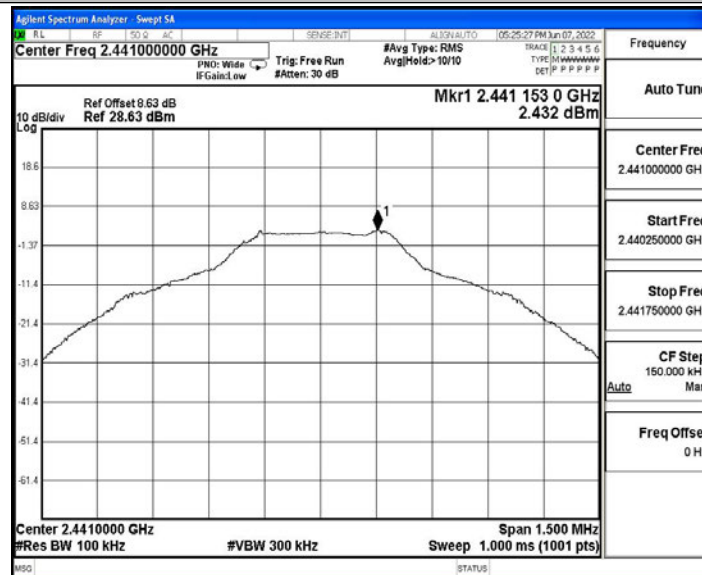


Test Graphs



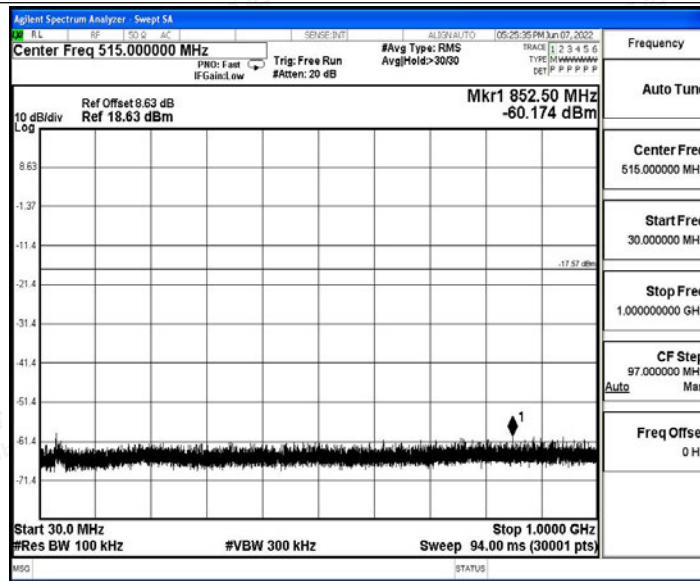


DH5_Ant1_2441_0~Reference

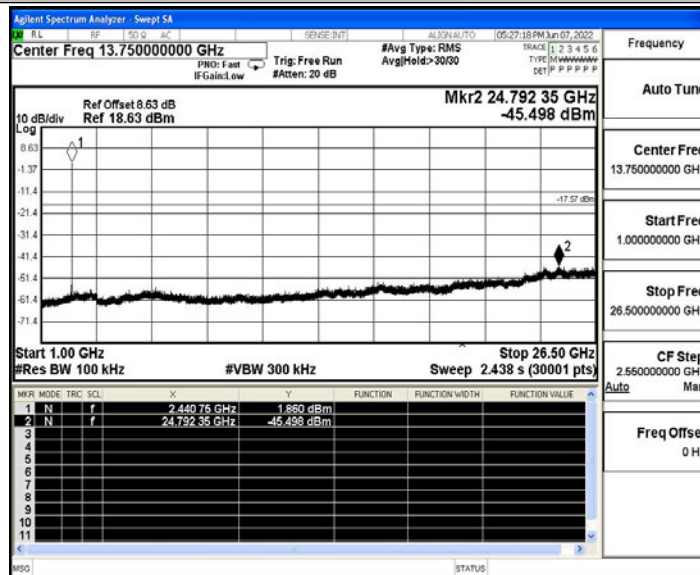


DH5_Ant1_2441_30~1000





DH5_Ant1_2441_1000~26500



DH5_Ant1_2480_0~Reference

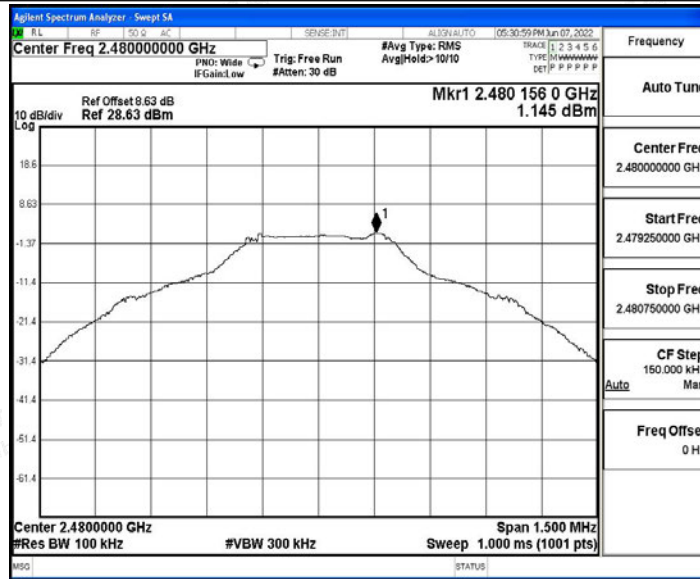


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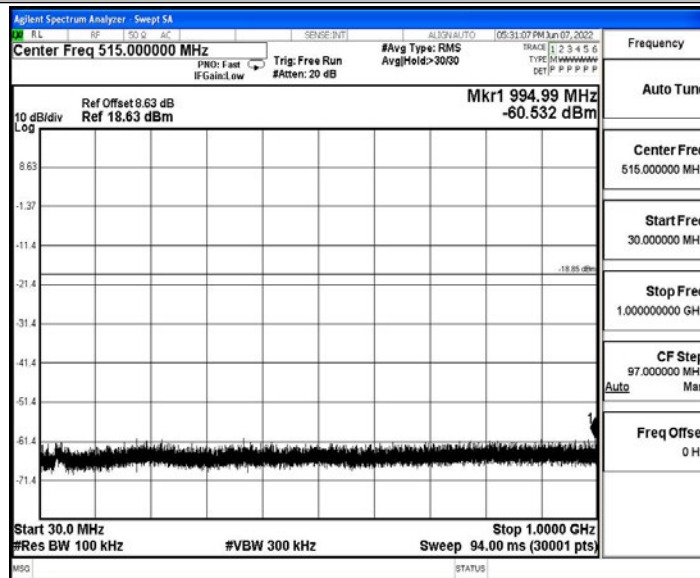
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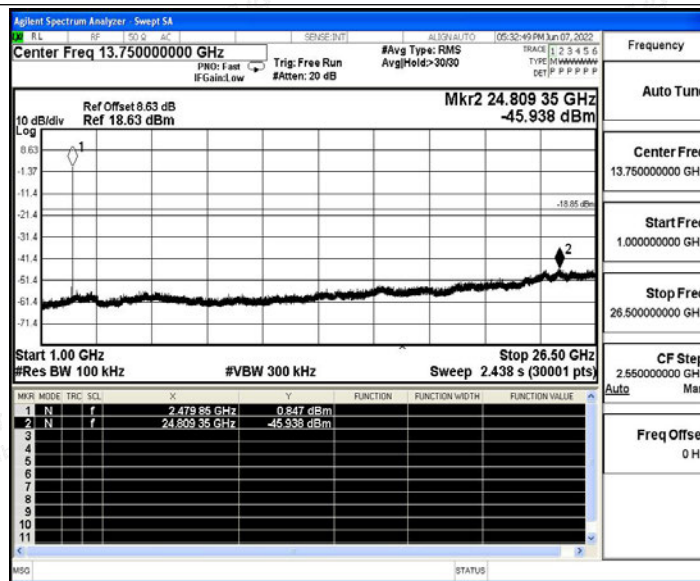


DH5_Ant1_2480_30~1000

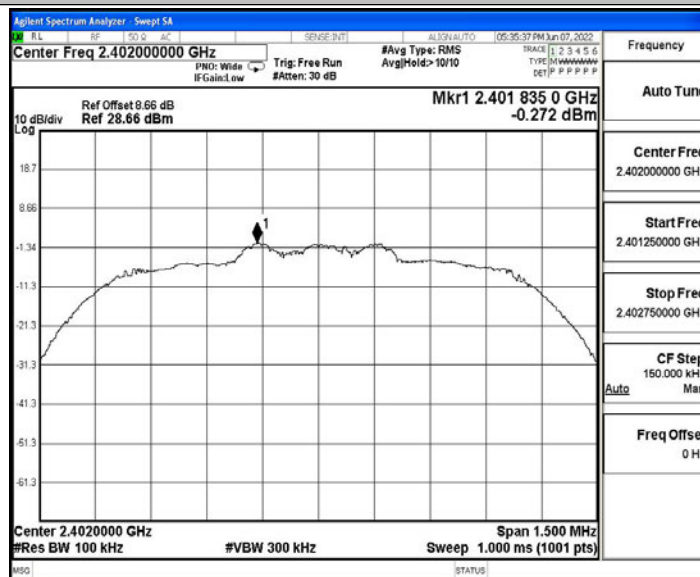


DH5_Ant1_2480_1000~26500



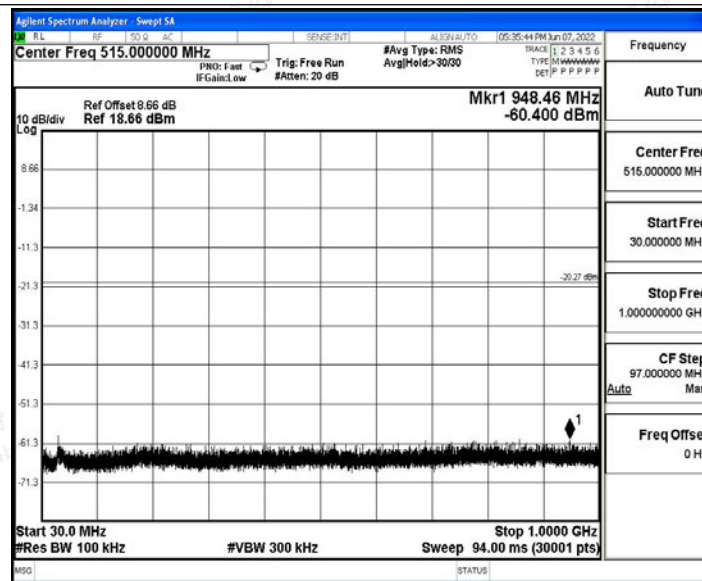


2DH5_Ant1_2402_0~Reference

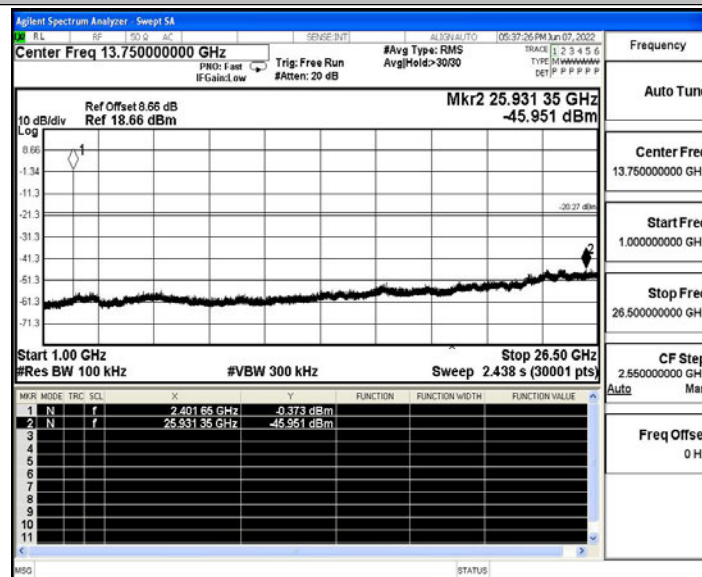


2DH5_Ant1_2402_30~1000





2DH5_Ant1_2402_1000~26500



2DH5_Ant1_2441_0~Reference

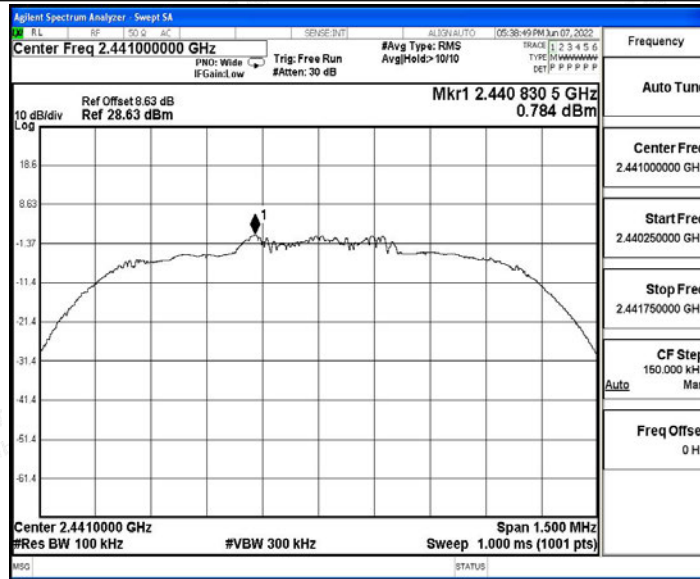


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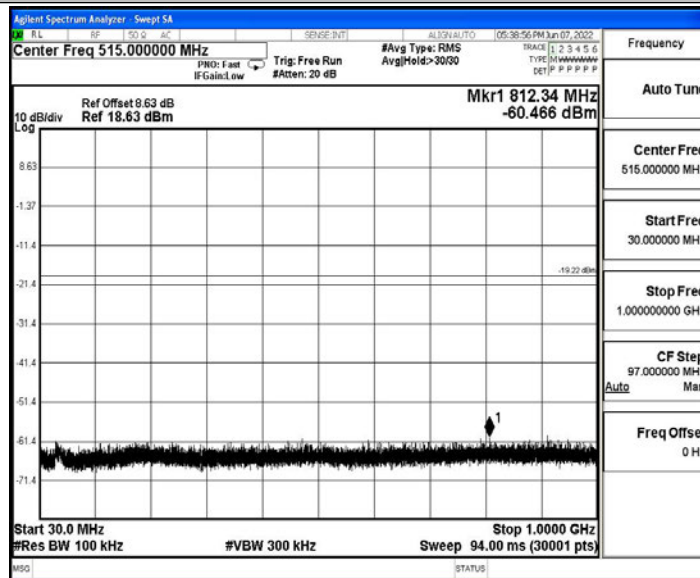
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Scan code to check authenticity

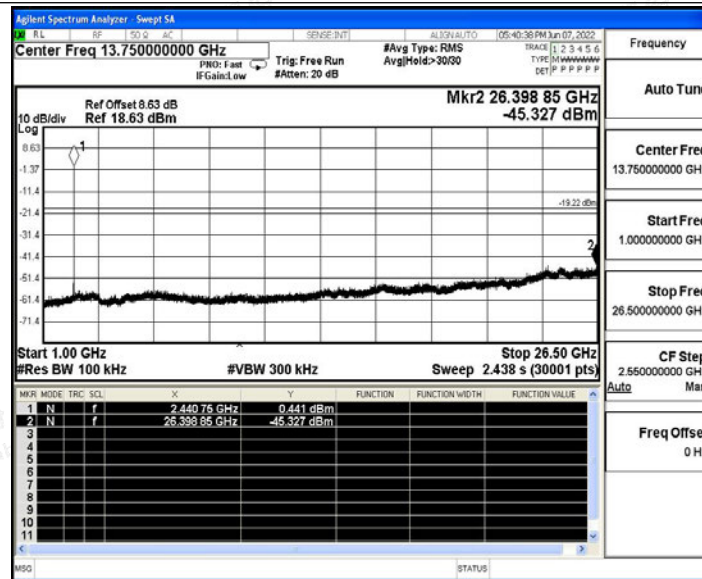


2DH5_Ant1_2441_30~1000

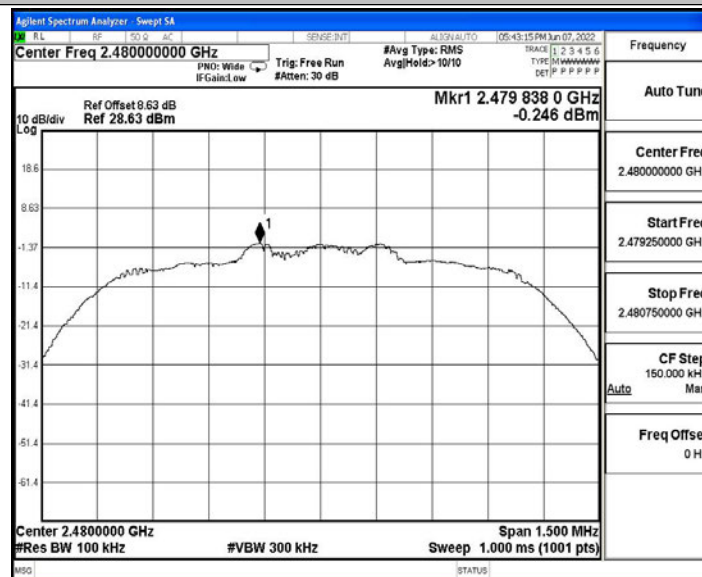


2DH5_Ant1_2441_1000~26500





2DH5_Ant1_2480_0~Reference



2DH5_Ant1_2480_30~1000

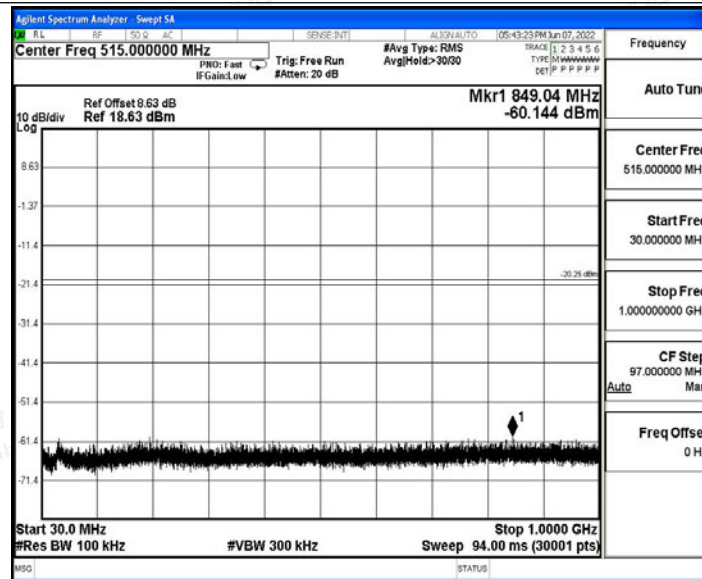


Shenzhen LCS Compliance Testing Laboratory Ltd.

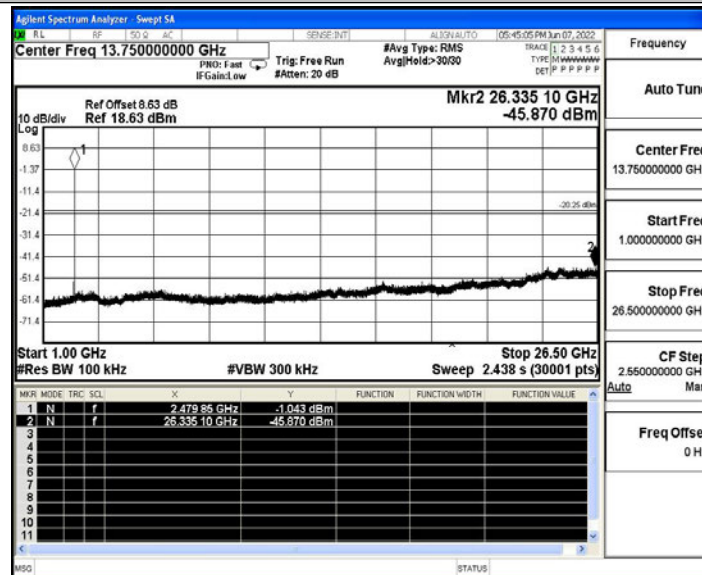
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2DH5_Ant1_2480_1000~26500



3DH5_Ant1_2402_0~Reference

