



Appendix A

RF Test Data for BT V5.2(DSS) (Conducted Measurement)

Product Name: Neckband Earphone

Test Model: JX33

Environmental Conditions

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



A.1 20dB Emission Bandwidth

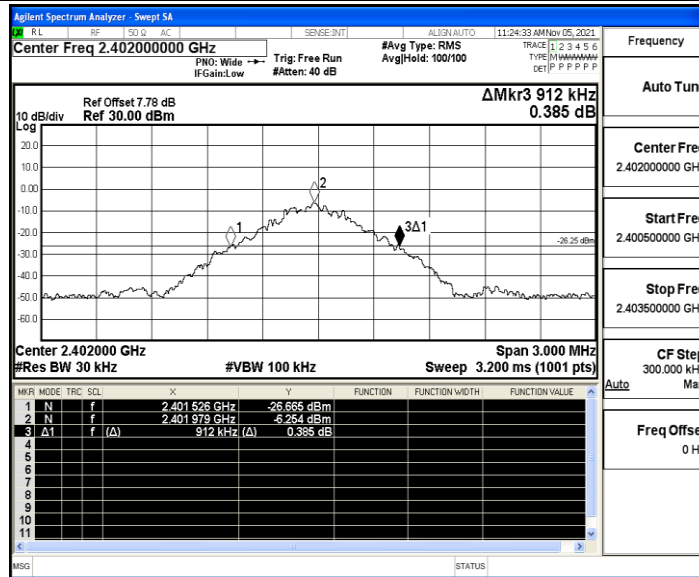
Test Result

TestMode	Antenna	Channel	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.912	2401.526	2402.438	---	PASS
		2441	0.963	2440.505	2441.468	---	PASS
		2480	0.957	2479.505	2480.462	---	PASS
2DH5	Ant1	2402	1.347	2401.298	2402.645	---	PASS
		2441	1.365	2440.292	2441.657	---	PASS
		2480	1.332	2479.304	2480.636	---	PASS

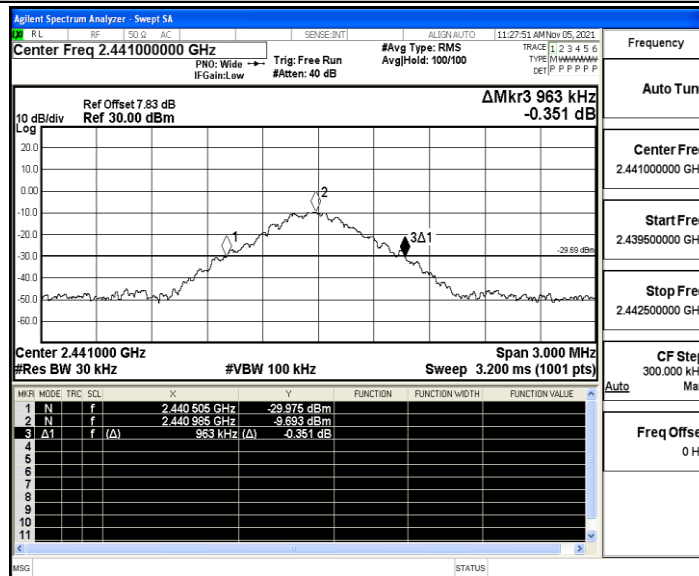


Test Graphs

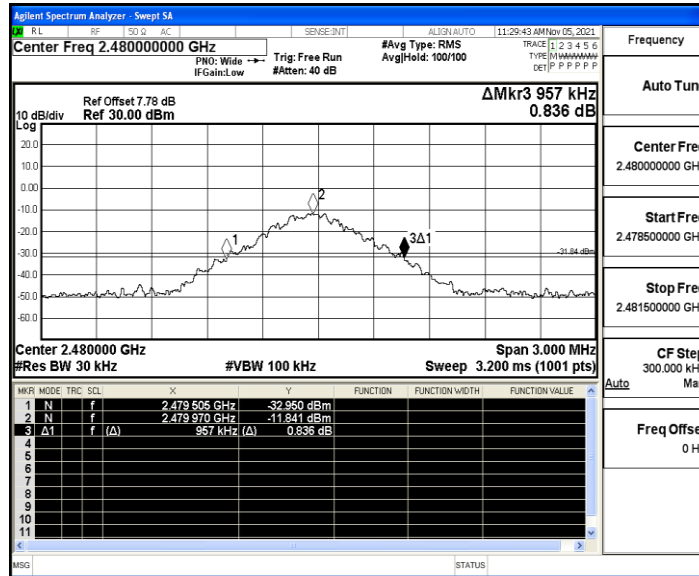
DH5_Ant1_2402



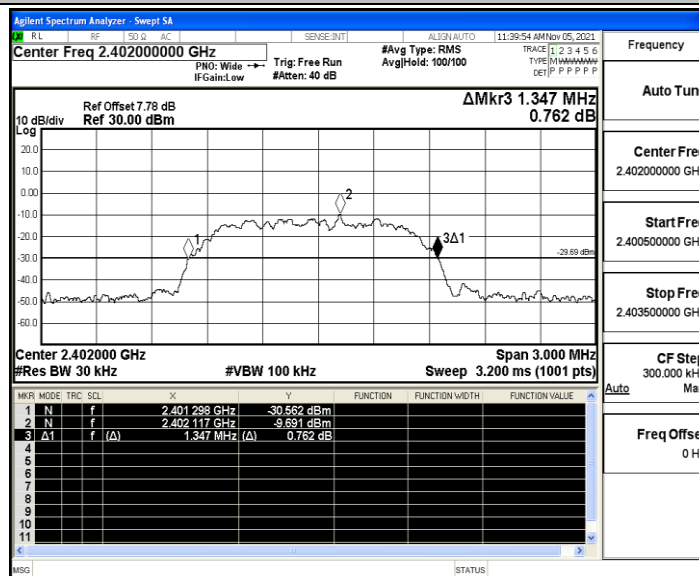
DH5_Ant1_2441



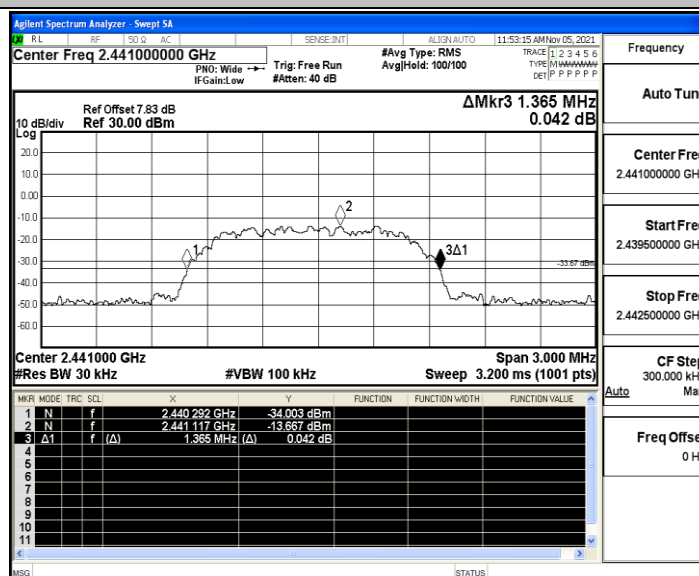
DH5_Ant1_2480



2DH5_Ant1_2402

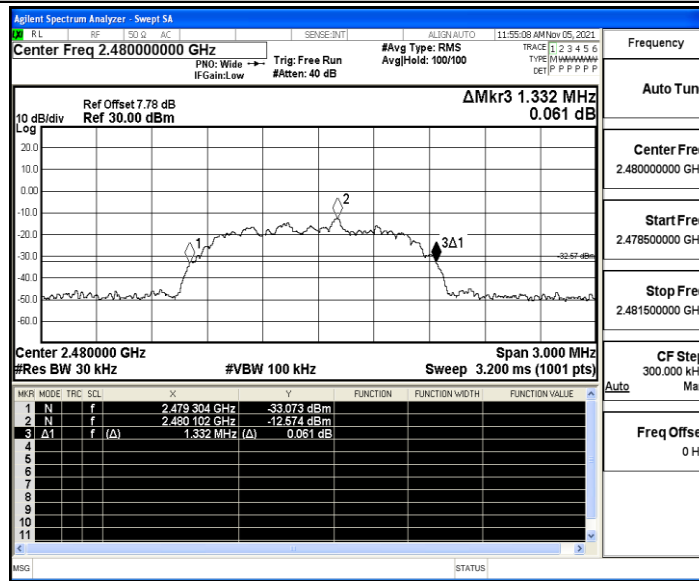


2DH5_Ant1_2441





2DH5_Ant1_2480





A.2 Maximum conducted output power

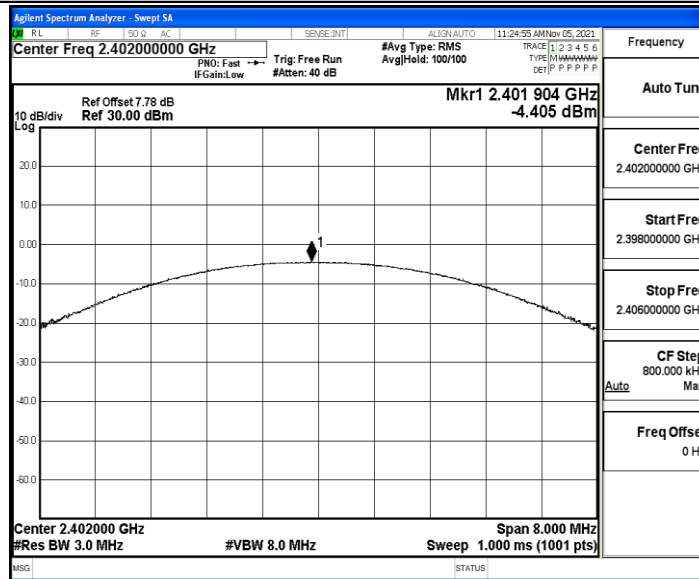
Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
DH5	Ant1	2402	-4.41	≤ 20.97	PASS
		2441	-6.1	≤ 20.97	PASS
		2480	-8.14	≤ 20.97	PASS
2DH5	Ant1	2402	-2.27	≤ 20.97	PASS
		2441	-4.21	≤ 20.97	PASS
		2480	-6.26	≤ 20.97	PASS

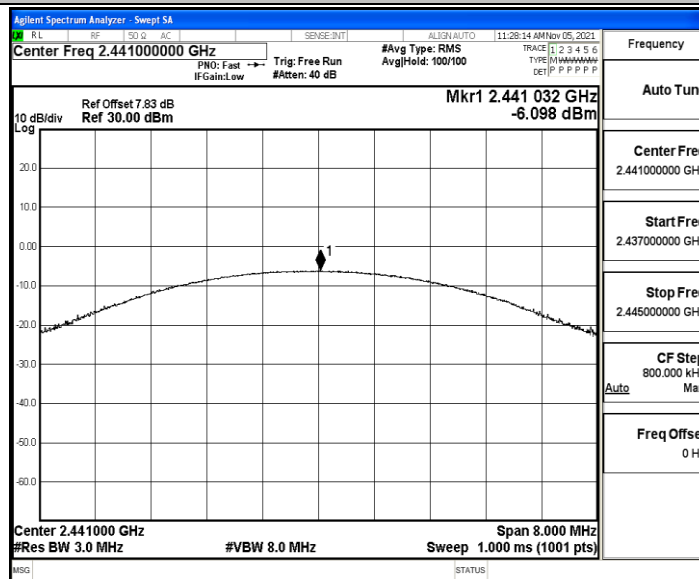


Test Graphs

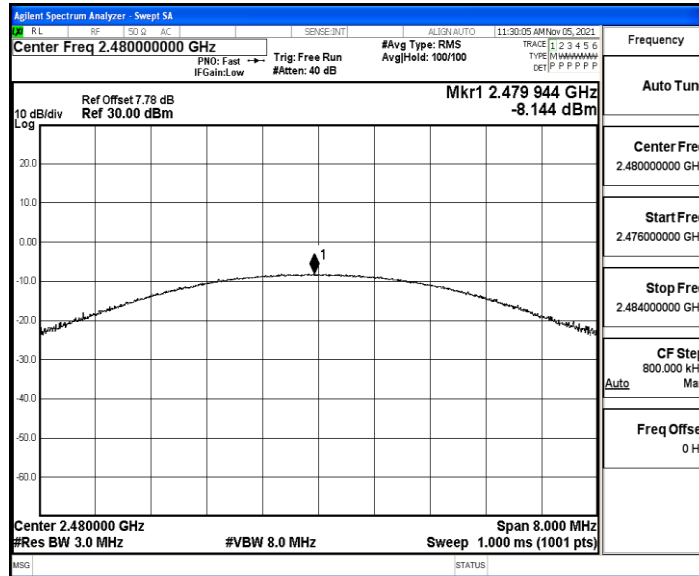
DH5_Ant1_2402



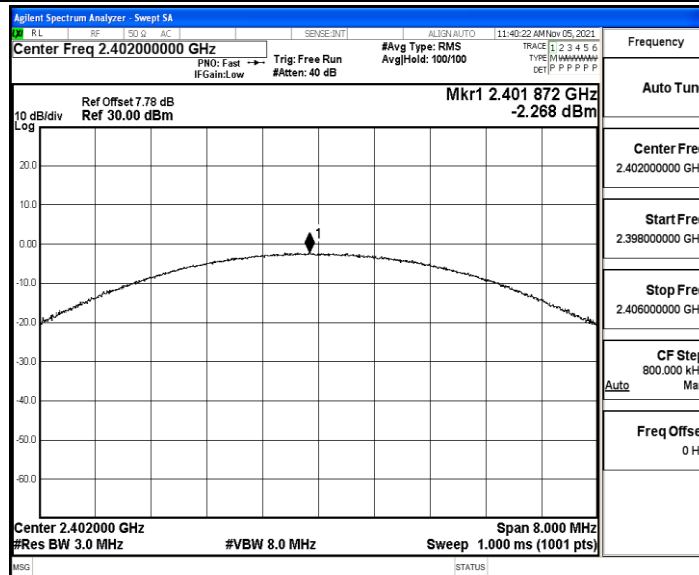
DH5_Ant1_2441



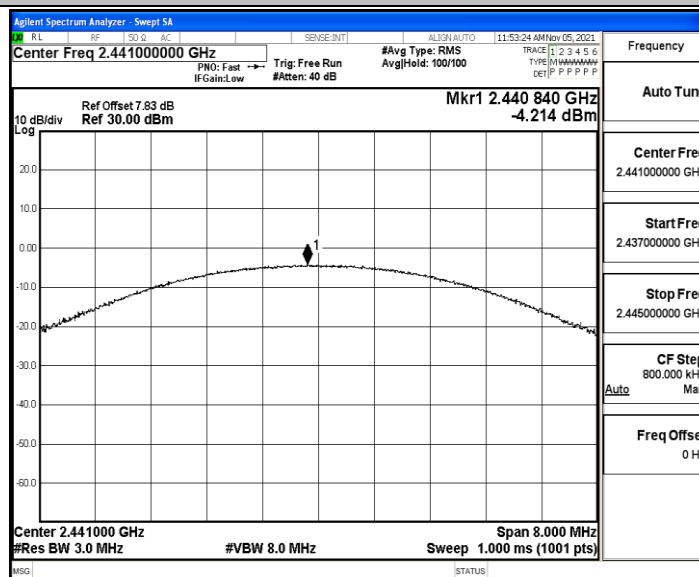
DH5_Ant1_2480



2DH5_Ant1_2402

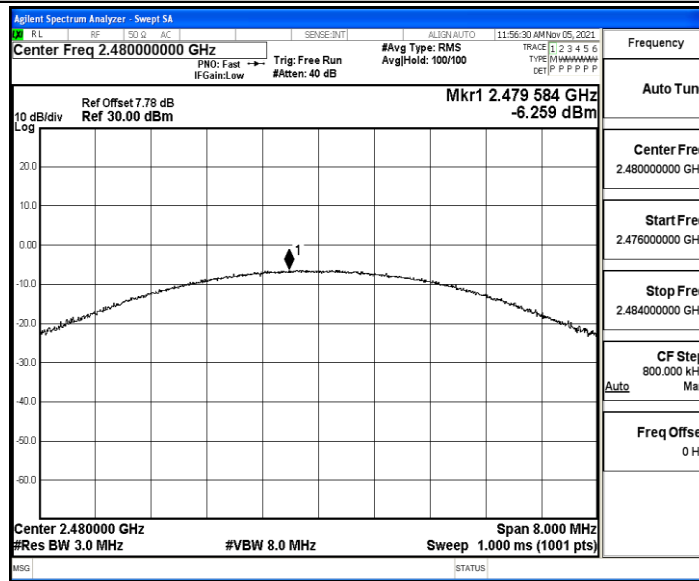


2DH5_Ant1_2441





2DH5_Ant1_2480



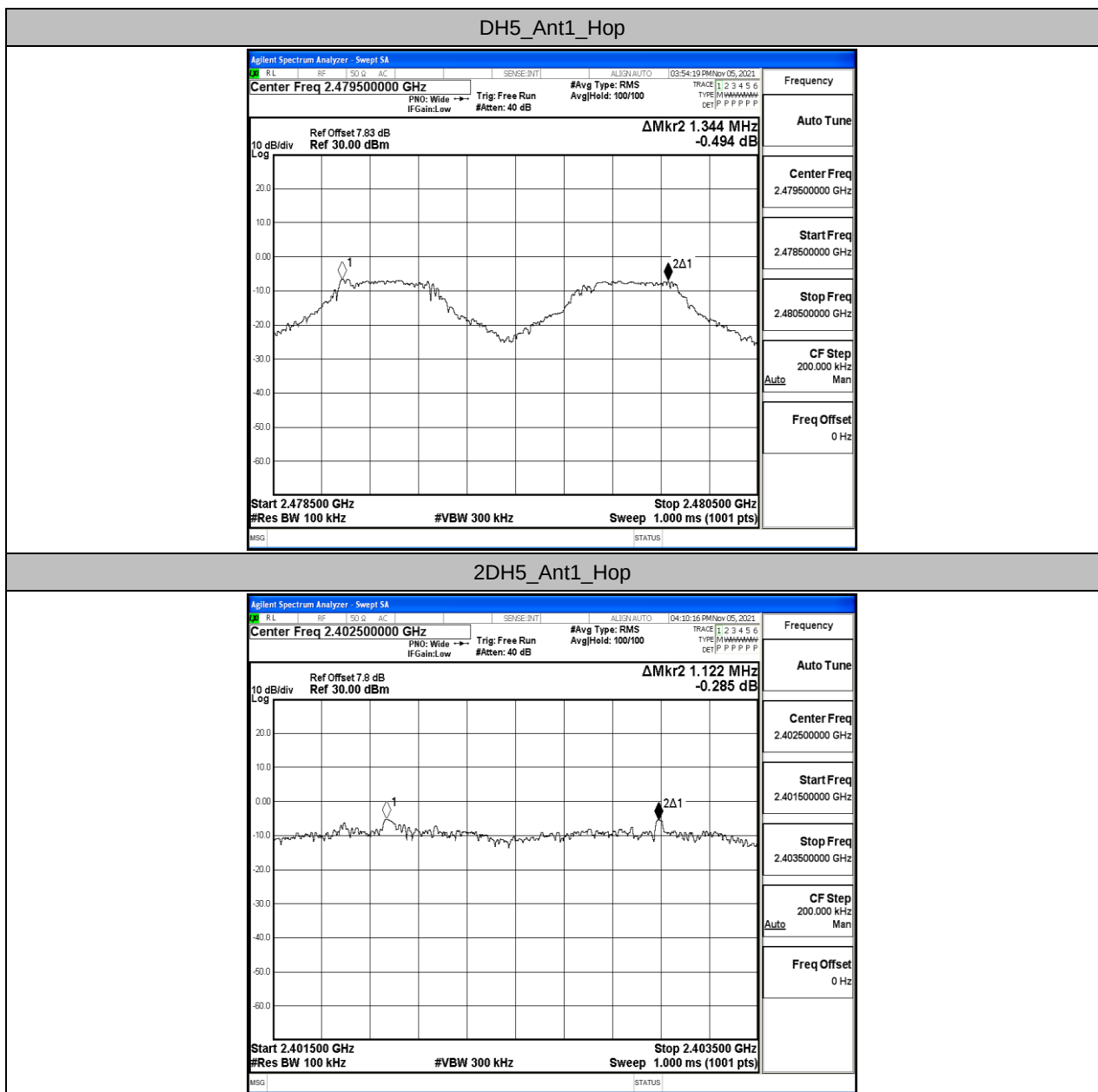


A.3 Carrier frequency separation

Test Result

TestMode	Antenna	Channel	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	1.344	≥ 0.642	PASS
2DH5	Ant1	Hop	1.122	≥ 0.910	PASS

Test Graphs



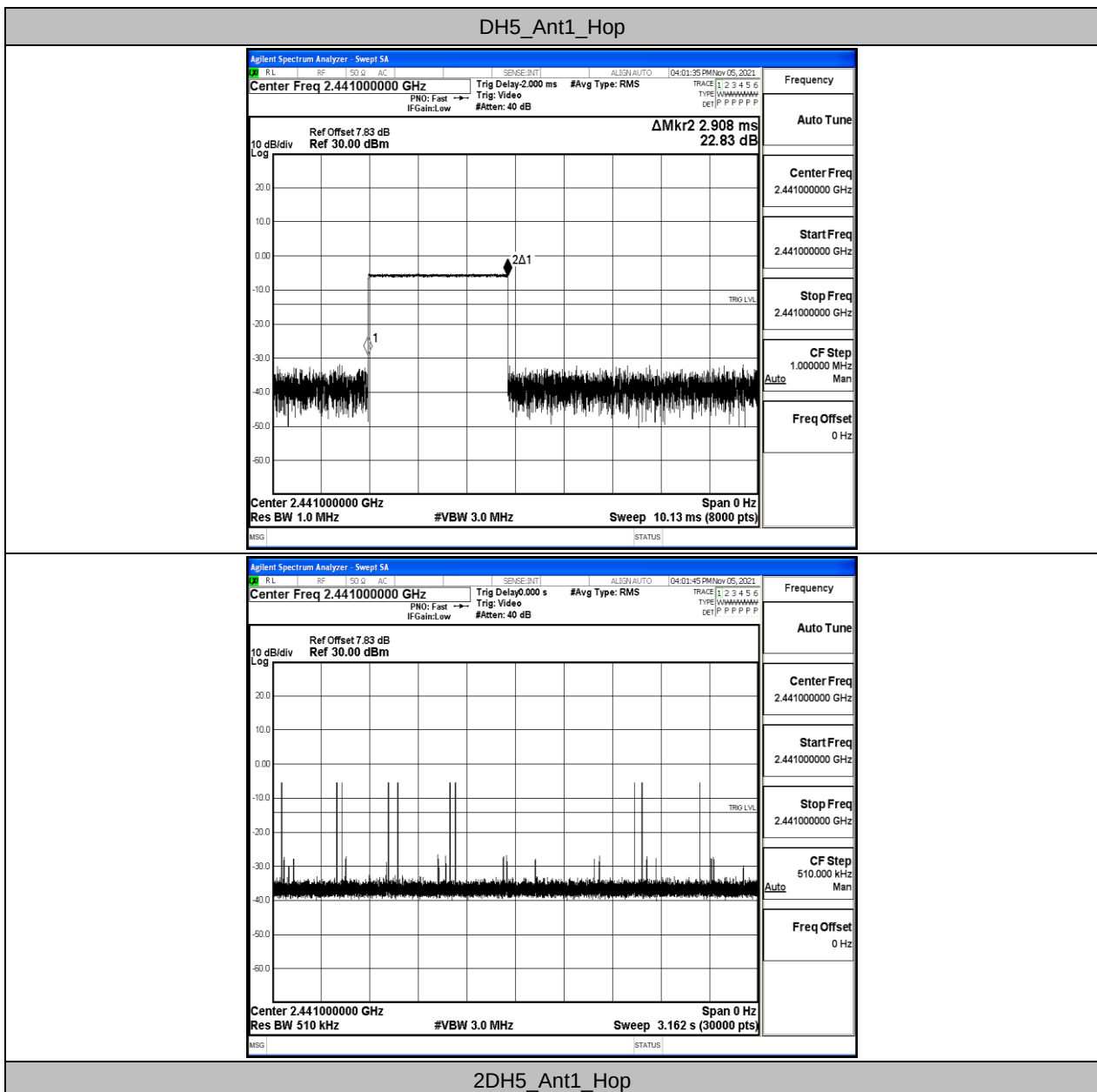


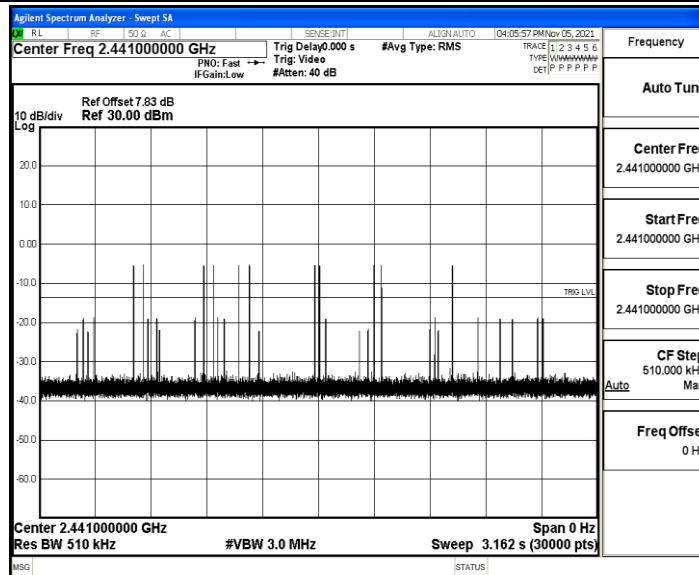
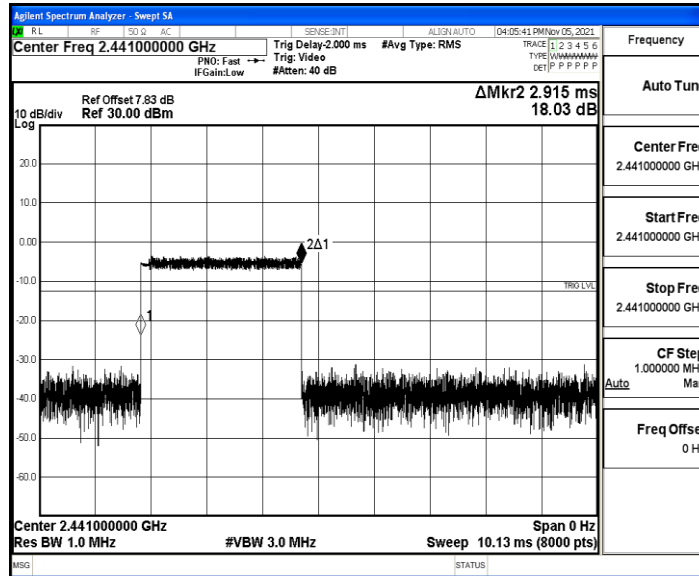
A.4 Time of occupancy

Test Result

TestMode	Antenna	Channel	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH5	Ant1	Hop	2.91	110	0.32	≤0.4	PASS
2DH5	Ant1	Hop	2.91	120	0.35	≤0.4	PASS

Test Graphs





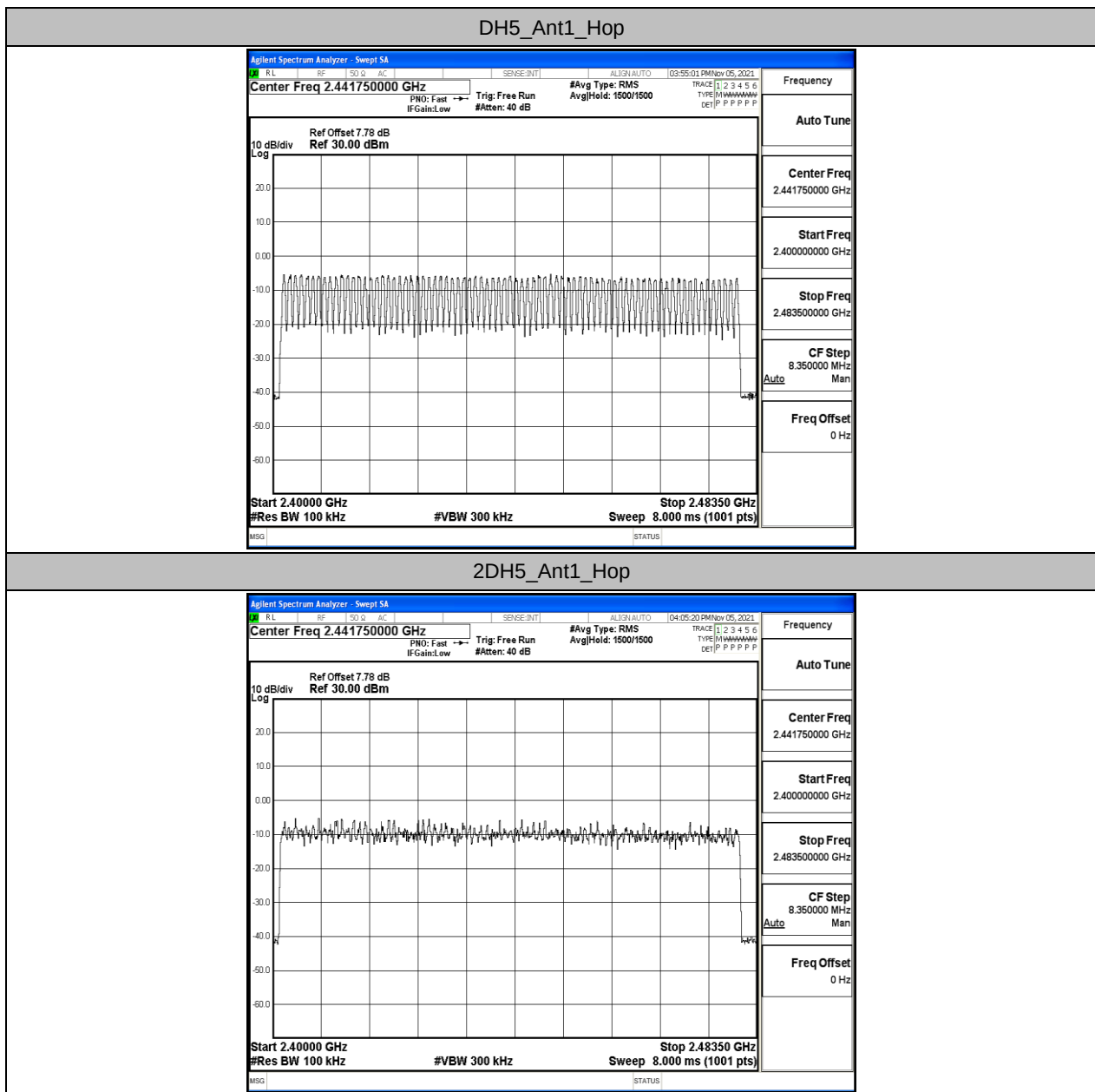


A.5 Number of hopping channels

Test Result

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

Test Graphs



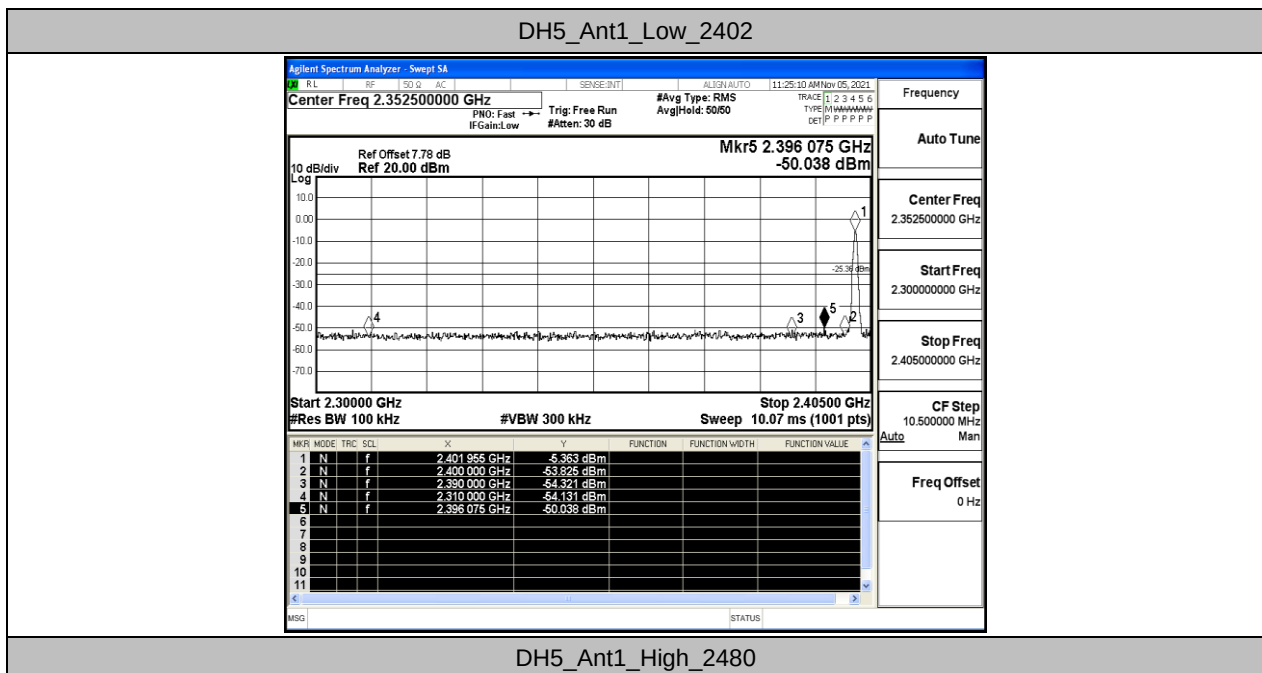


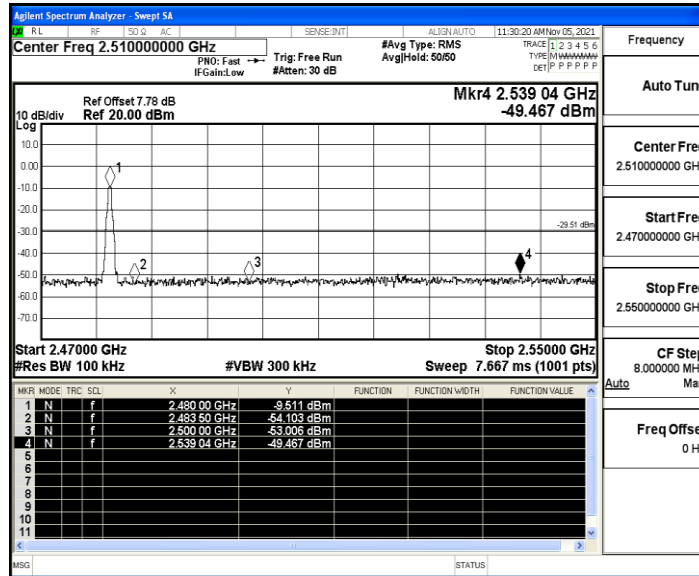
A.6 Band edge measurements

Test Result

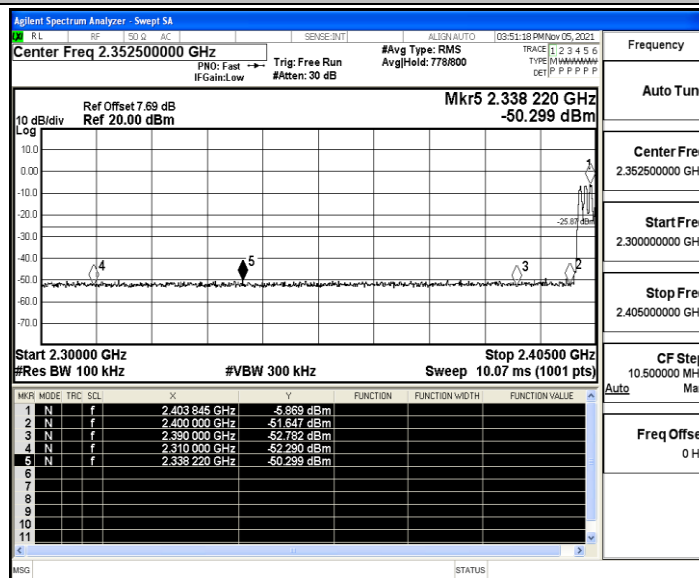
TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-5.36	-50.04	≤-25.36	PASS
		High	2480	-9.51	-49.47	≤-29.51	PASS
		Low	Hop_2402	-5.87	-50.3	≤-25.87	PASS
		High	Hop_2480	-6.46	-48.27	≤-26.46	PASS
2DH5	Ant1	Low	2402	-6.91	-49.79	≤-26.91	PASS
		High	2480	-10.87	-48.73	≤-30.87	PASS
		Low	Hop_2402	-5.59	-49.85	≤-25.59	PASS
		High	Hop_2480	-9.00	-48.49	≤-29	PASS

Test Graphs

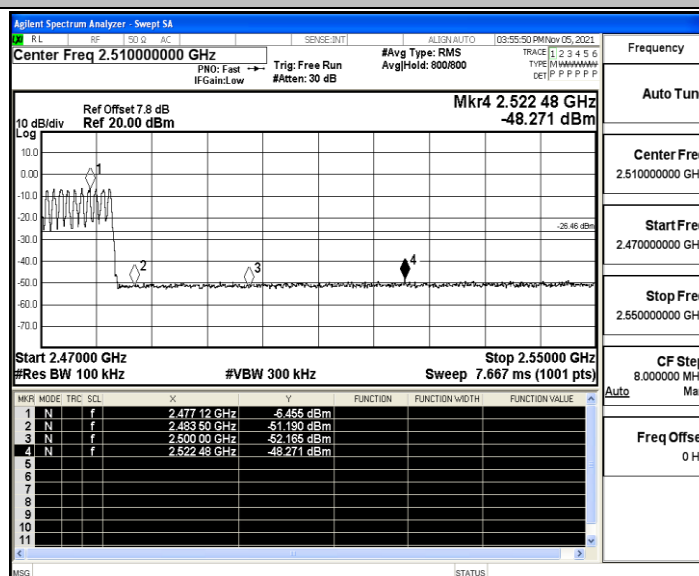




DH5_Ant1_Low_Hop_2402

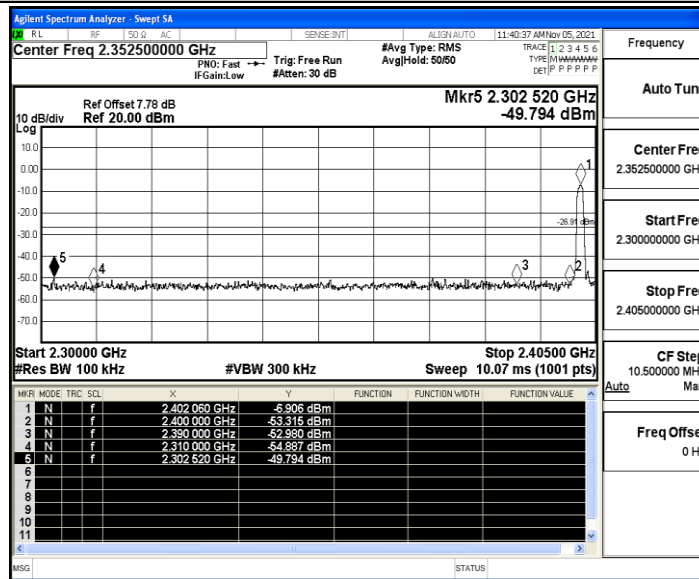


DH5_Ant1_High_Hop_2480

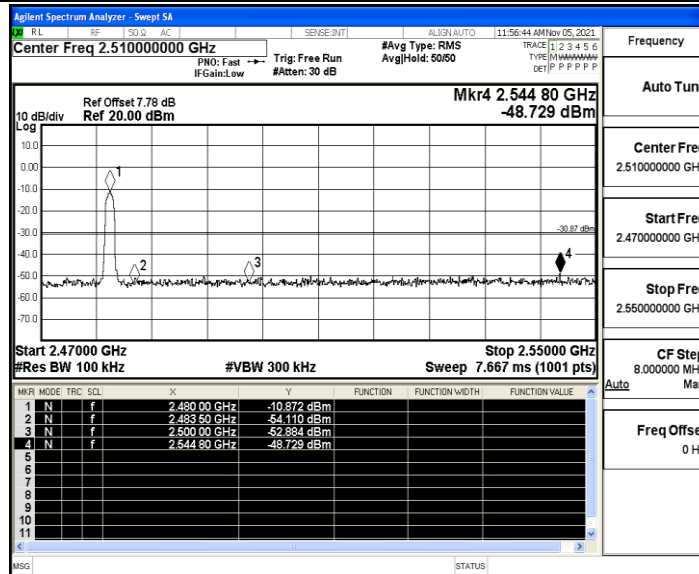




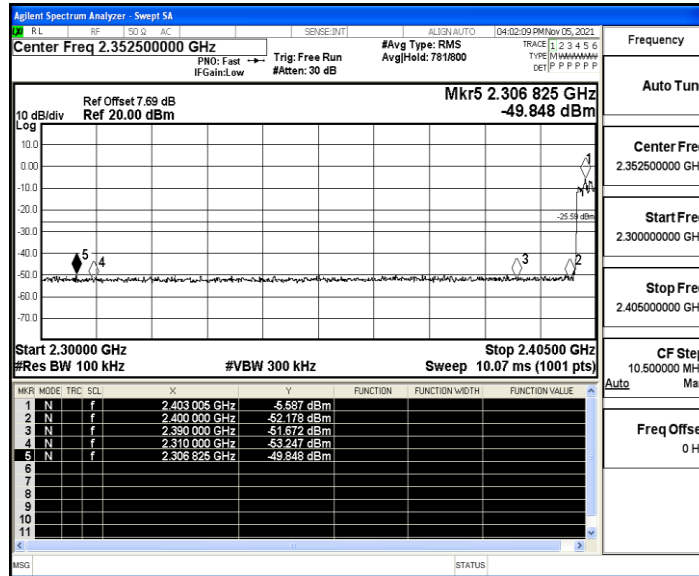
2DH5_Ant1_Low_2402



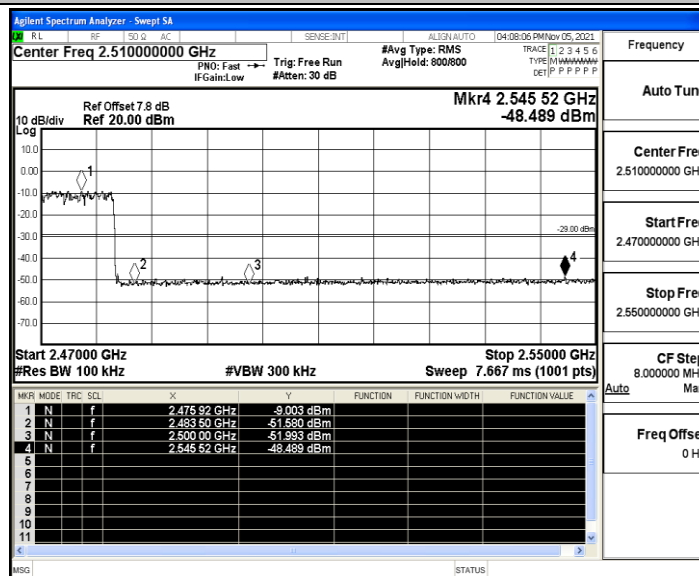
2DH5_Ant1_High_2480



2DH5_Ant1_Low_Hop_2402



2DH5_Ant1_High_Hop_2480





A.7 Conducted Spurious Emission

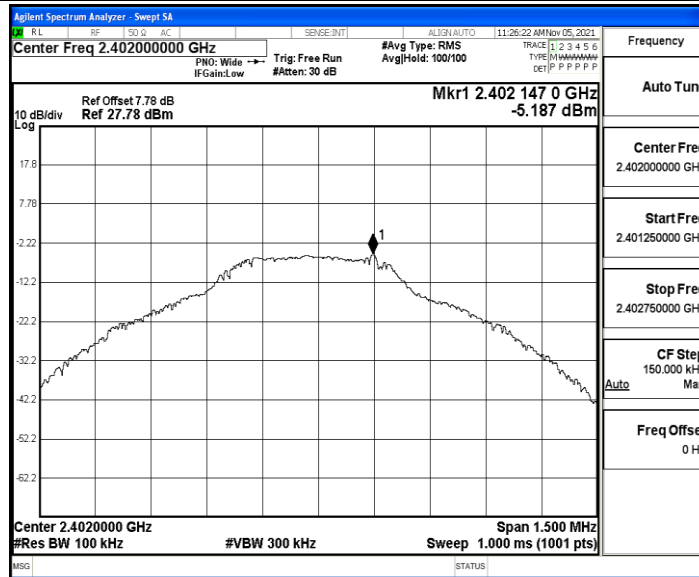
Test Result

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	-5.19	-5.19	---	PASS
			30~1000	-5.19	-61.58	≤ -25.19	PASS
			1000~26500	-5.19	-28.77	≤ -25.19	PASS
		2441	Reference	-7.22	-7.22	---	PASS
			30~1000	-7.22	-61.35	≤ -27.22	PASS
			1000~26500	-7.22	-31.26	≤ -27.22	PASS
		2480	Reference	-9.80	-9.80	---	PASS
			30~1000	-9.80	-61.52	≤ -29.8	PASS
			1000~26500	-9.80	-34.11	≤ -29.8	PASS
2DH5	Ant1	2402	Reference	-6.02	-6.02	---	PASS
			30~1000	-6.02	-61.05	≤ -26.02	PASS
			1000~26500	-6.02	-32.72	≤ -26.02	PASS
		2441	Reference	-7.81	-7.81	---	PASS
			30~1000	-7.81	-61.64	≤ -27.81	PASS
			1000~26500	-7.81	-35.46	≤ -27.81	PASS
		2480	Reference	-9.45	-9.45	---	PASS
			30~1000	-9.45	-61.07	≤ -29.45	PASS
			1000~26500	-9.45	-36.65	≤ -29.45	PASS

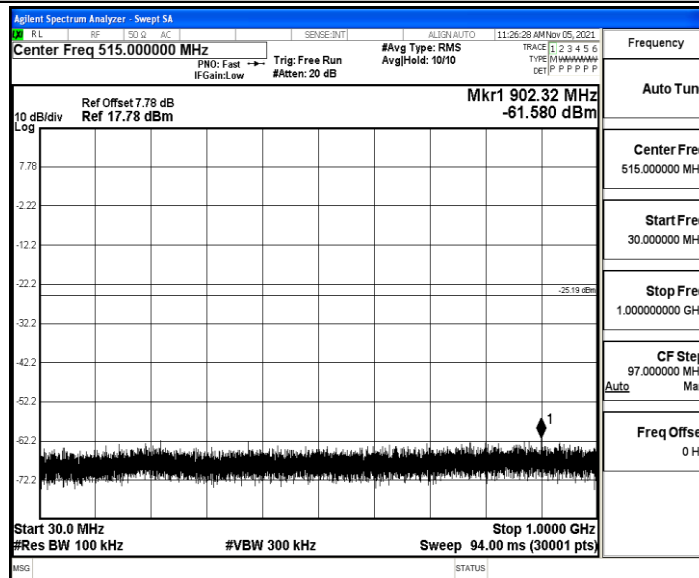


Test Graphs

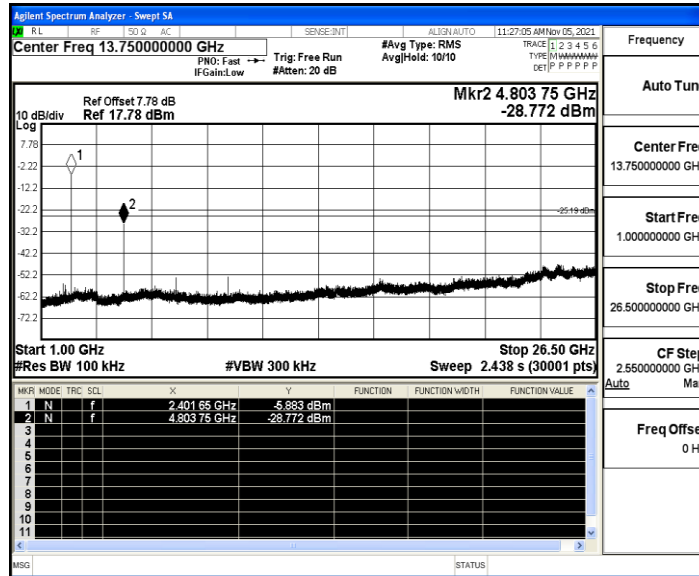
DH5_Ant1_2402_0~Reference



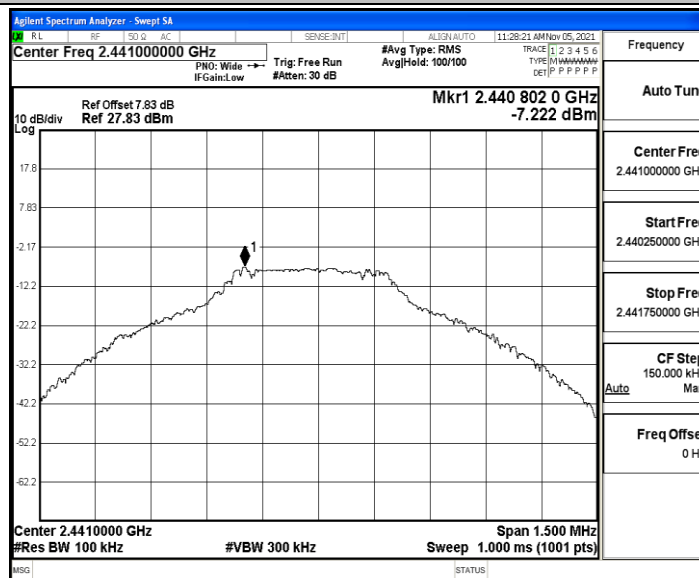
DH5_Ant1_2402_30~1000



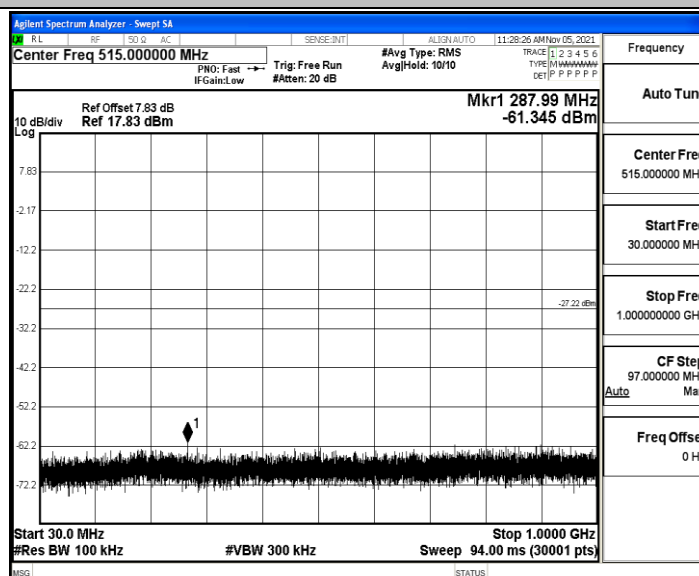
DH5_Ant1_2402_1000~26500



DH5_Ant1_2441_0~Reference

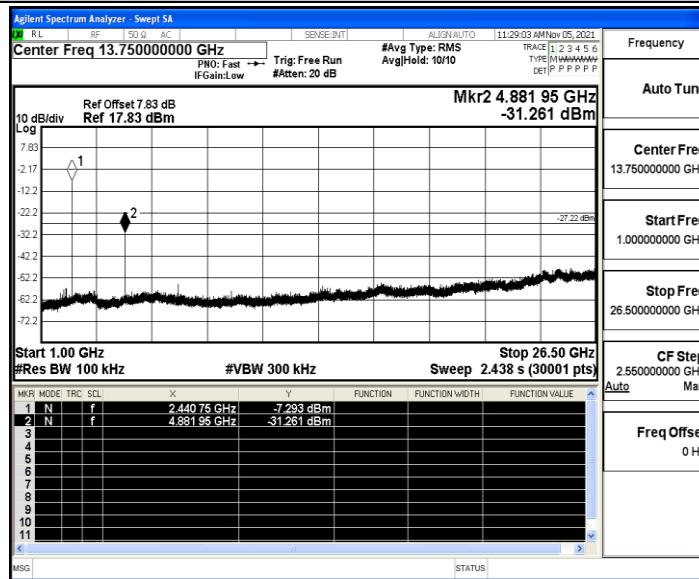


DH5_Ant1_2441_30~1000

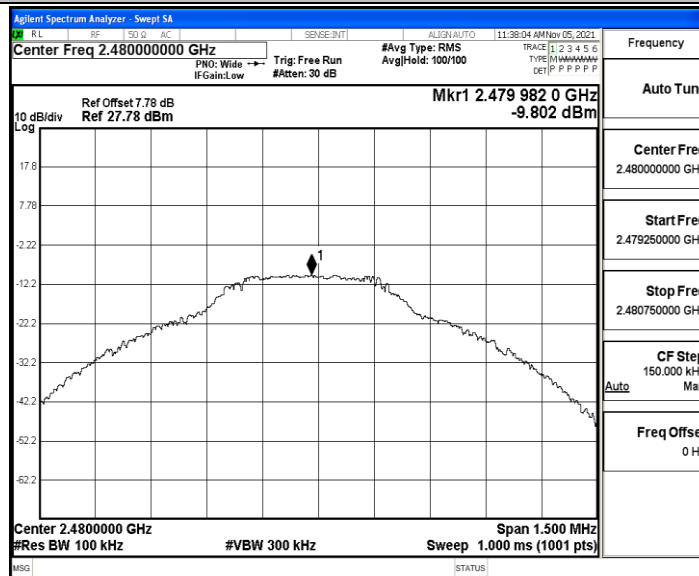




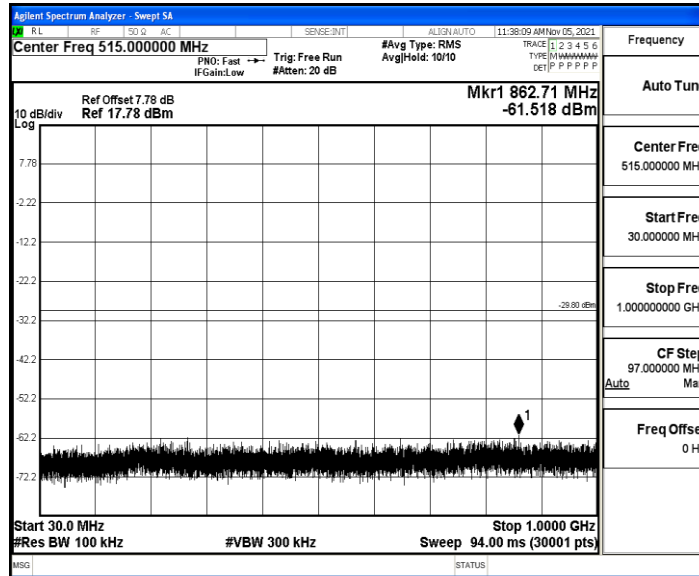
DH5_Ant1_2441_1000~26500



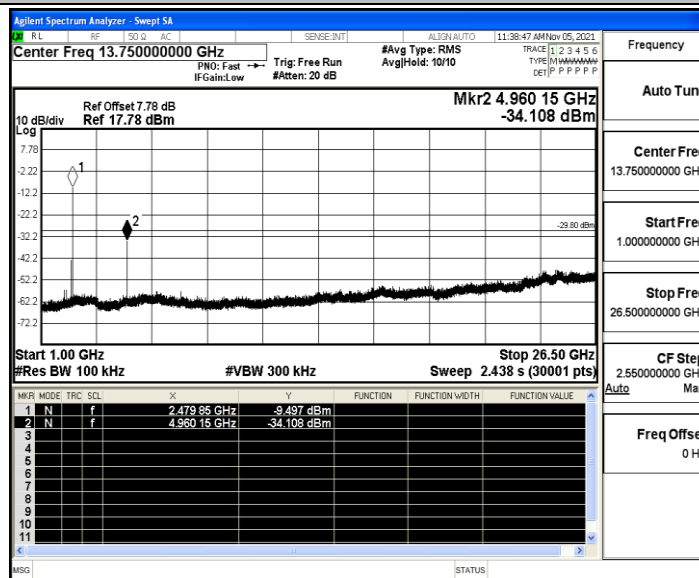
DH5_Ant1_2480_0~Reference



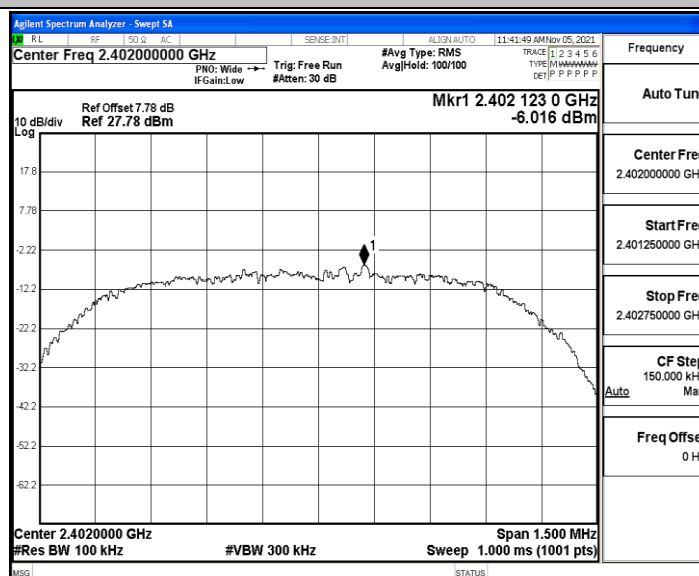
DH5_Ant1_2480_30~1000



DH5_Ant1_2480_1000~26500

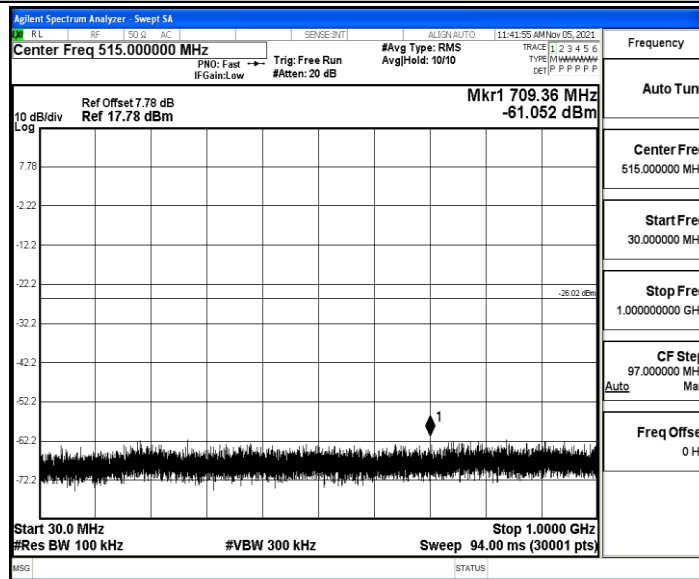


2DH5_Ant1_2402_0~Reference

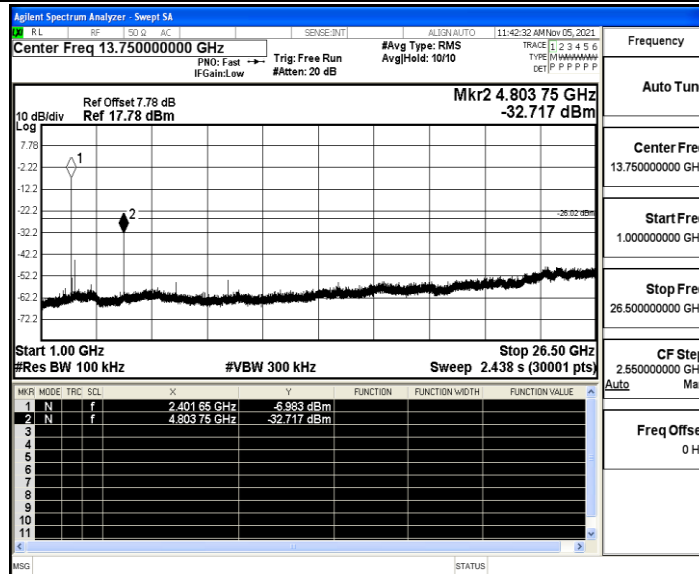




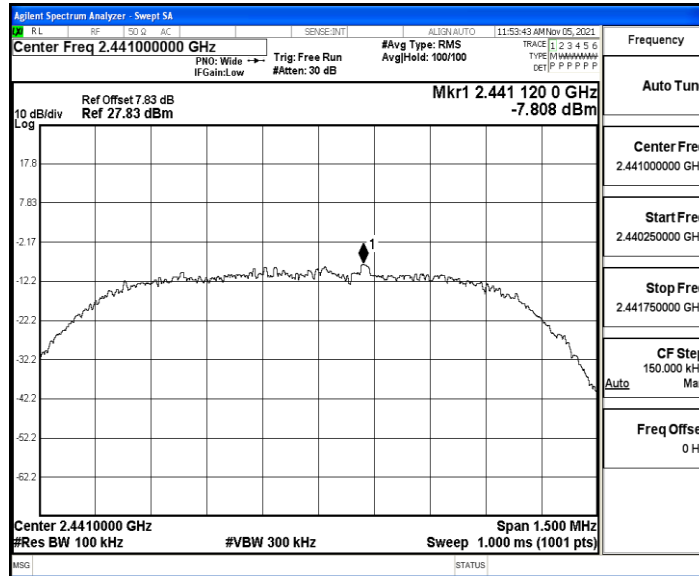
2DH5_Ant1_2402_30~1000



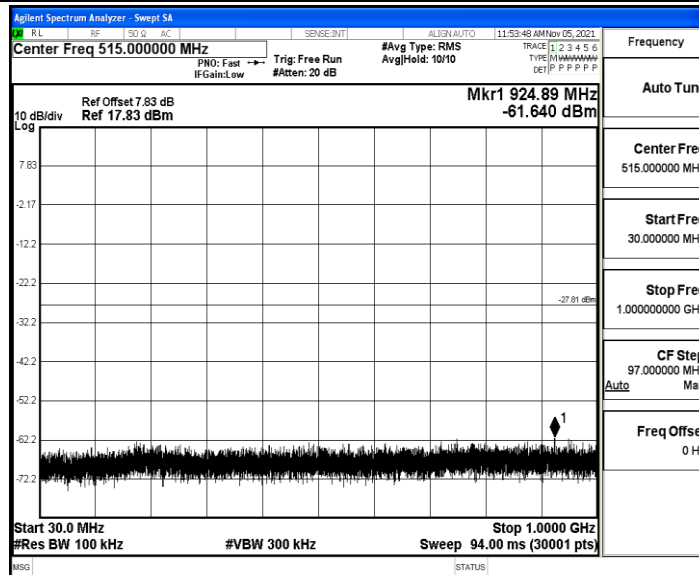
2DH5_Ant1_2402_1000~26500



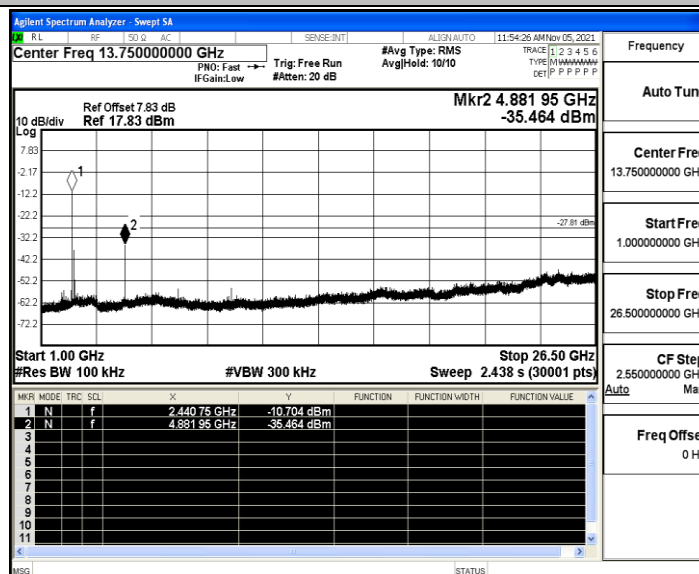
2DH5_Ant1_2441_0~Reference



2DH5_Ant1_2441_30~1000

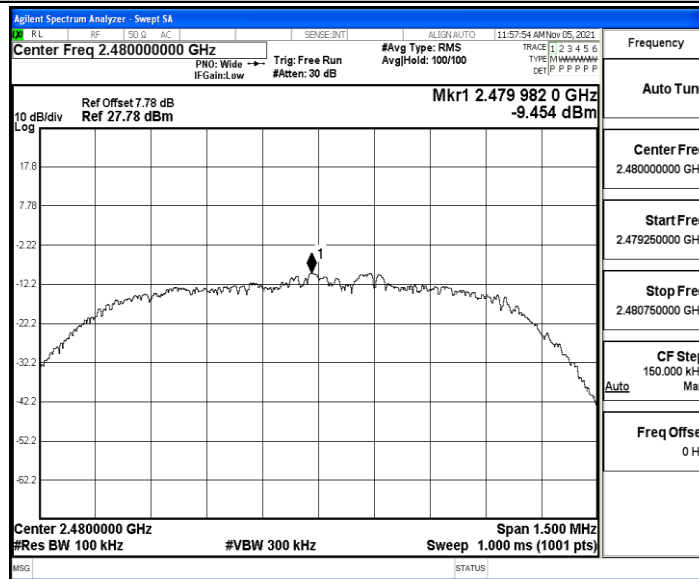


2DH5_Ant1_2441_1000~26500

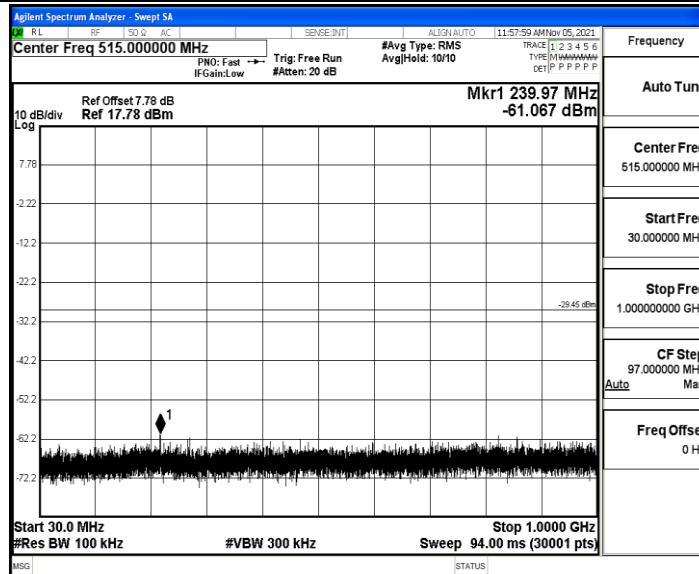




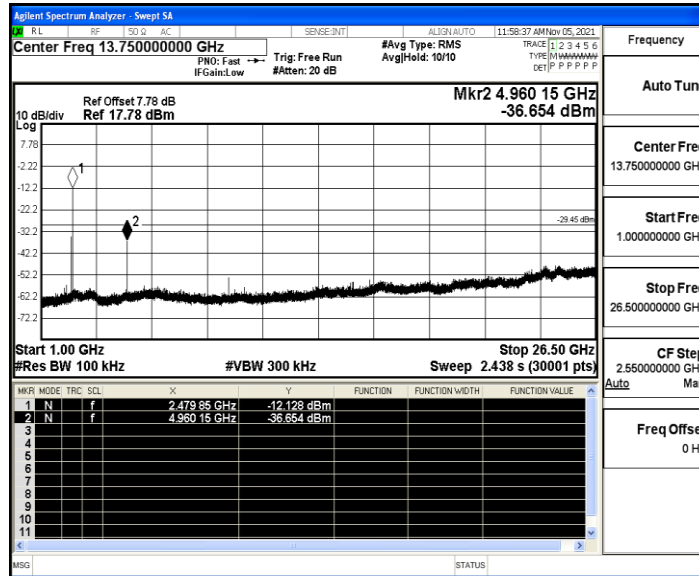
2DH5_Ant1_2480_0~Reference



2DH5_Ant1_2480_30~1000



2DH5_Ant1_2480_1000~26500





A.8 Emissions in Restricted Bands

Test Result

TestMode	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
DH5	2402	AV	2310.000	-49.11	≤-41.20	46.09	≤54	PASS
		AV	2380.325	-48.53	≤-41.20	46.67	≤54	PASS
		AV	2390.000	-48.75	≤-41.20	46.45	≤54	PASS
		Peak	2310.000	-41.89	≤-21.20	53.31	≤74	PASS
		Peak	2339.375	-39.68	≤-21.20	55.52	≤74	PASS
		Peak	2390.000	-41.18	≤-21.20	54.02	≤74	PASS
	2480	AV	2483.500	-48.56	≤-41.20	46.64	≤54	PASS
		AV	2499.840	-48.43	≤-41.20	46.77	≤54	PASS
		AV	2500.000	-48.44	≤-41.20	46.76	≤54	PASS
		Peak	2483.500	-41.57	≤-21.20	53.63	≤74	PASS
		Peak	2484.480	-40.36	≤-21.20	54.84	≤74	PASS
		Peak	2500.000	-43.87	≤-21.20	51.33	≤74	PASS
	Hop_24 02	Peak	2310.000	-41.05	≤-21.20	54.15	≤74	PASS
		Peak	2330.765	-37.42	≤-21.20	57.78	≤74	PASS
		Peak	2390.000	-40.1	≤-21.20	55.10	≤74	PASS
	Hop_24 80	Peak	2483.500	-40.21	≤-21.20	54.99	≤74	PASS
		Peak	2497.360	-37.43	≤-21.20	57.77	≤74	PASS
		Peak	2500.000	-39.75	≤-21.20	55.45	≤74	PASS
2DH5	2402	AV	2310.000	-49.04	≤-41.20	46.16	≤54	PASS
		AV	2389.460	-48.58	≤-41.20	46.62	≤54	PASS
		AV	2390.000	-48.61	≤-41.20	46.59	≤54	PASS
		Peak	2310.000	-43.8	≤-21.20	51.40	≤74	PASS
		Peak	2364.785	-38.84	≤-21.20	56.36	≤74	PASS
		Peak	2390.000	-41.24	≤-21.20	53.96	≤74	PASS
	2480	AV	2483.500	-48.23	≤-41.20	46.97	≤54	PASS
		AV	2499.680	-47.96	≤-41.20	47.24	≤54	PASS
		AV	2500.000	-48.15	≤-41.20	47.05	≤54	PASS
		Peak	2483.500	-40.22	≤-21.20	54.98	≤74	PASS
		Peak	2492.800	-39.34	≤-21.20	55.86	≤74	PASS
		Peak	2500.000	-40.95	≤-21.20	54.25	≤74	PASS
	Hop_24 02	Peak	2310.000	-39.64	≤-21.20	55.56	≤74	PASS
		Peak	2321.000	-38.08	≤-21.20	57.12	≤74	PASS
		Peak	2390.000	-40.12	≤-21.20	55.08	≤74	PASS



	Hop_24 80	Peak	2483.500	-40.14	≤ -21.20	55.06	≤ 74	PASS
		Peak	2489.200	-37.74	≤ -21.20	57.46	≤ 74	PASS
		Peak	2500.000	-40.36	≤ -21.20	54.84	≤ 74	PASS

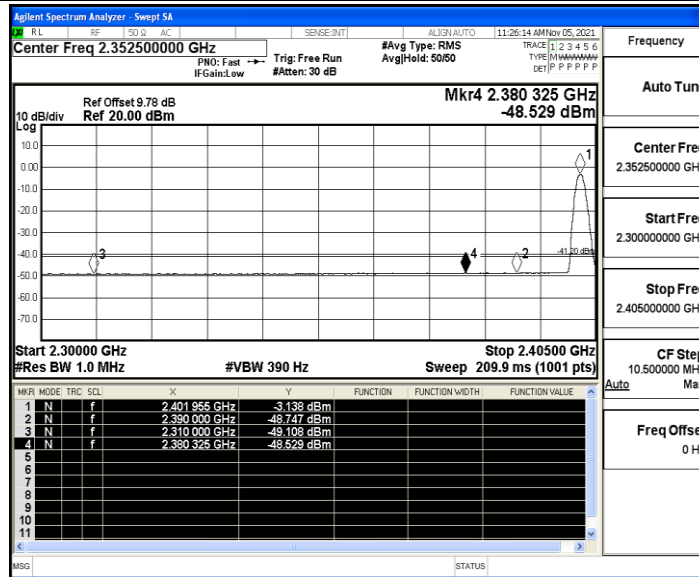
Note:

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.

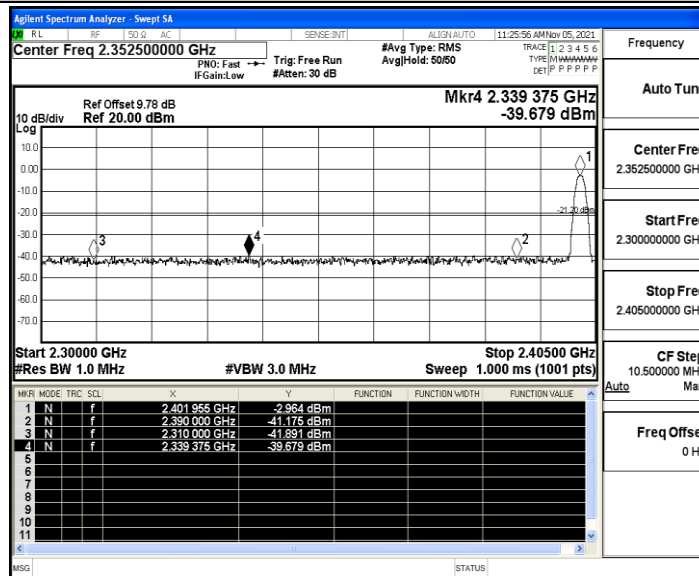


Test Graphs

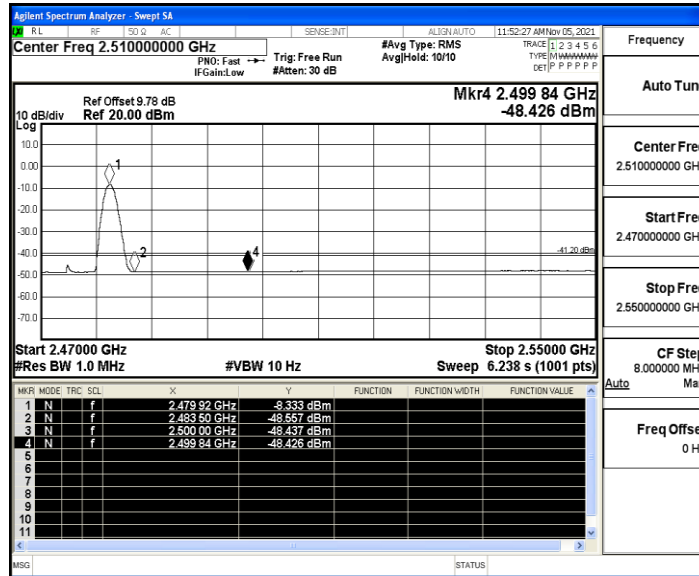
DH5_Ant1_Low_2402_AV



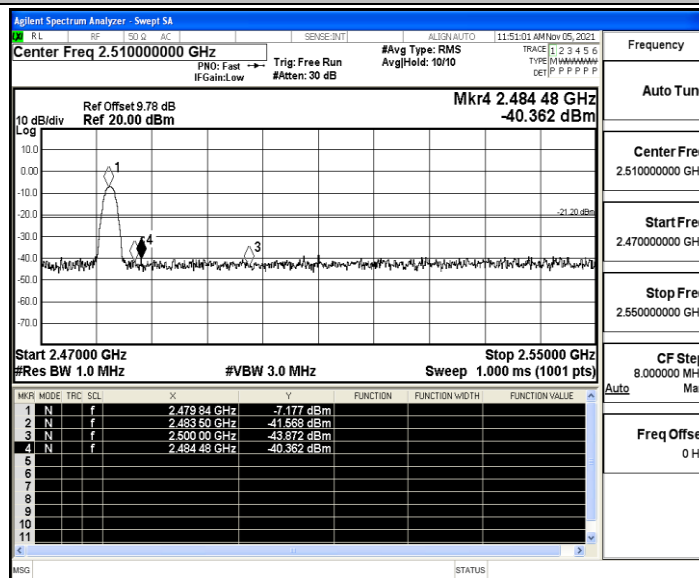
DH5_Ant1_Low_2402_Peak



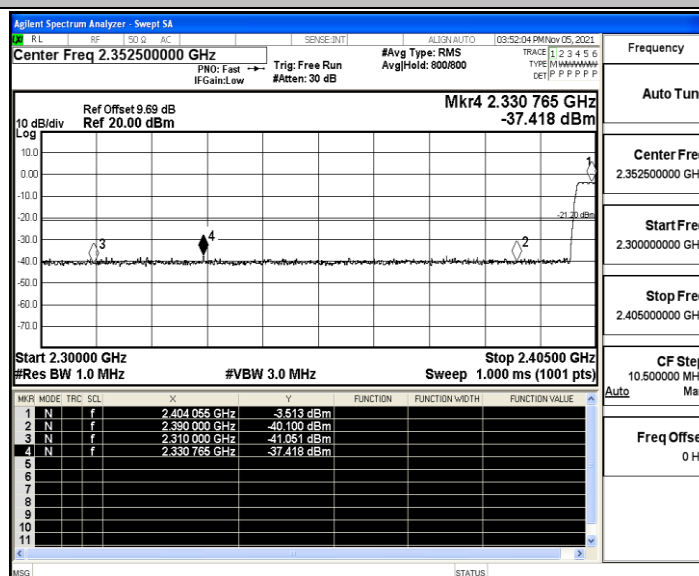
DH5_Ant1_High_2480_AV



DH5_Ant1_High_2480_Peak

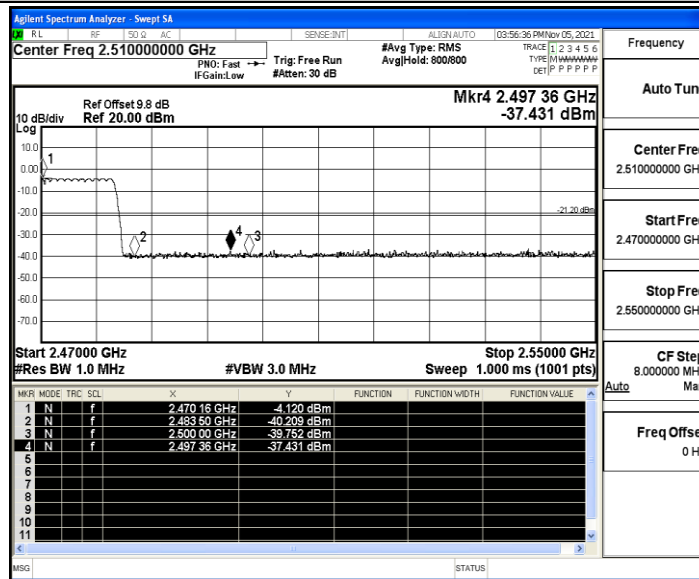


DH5_Ant1_Low_Hop_2402_Peak

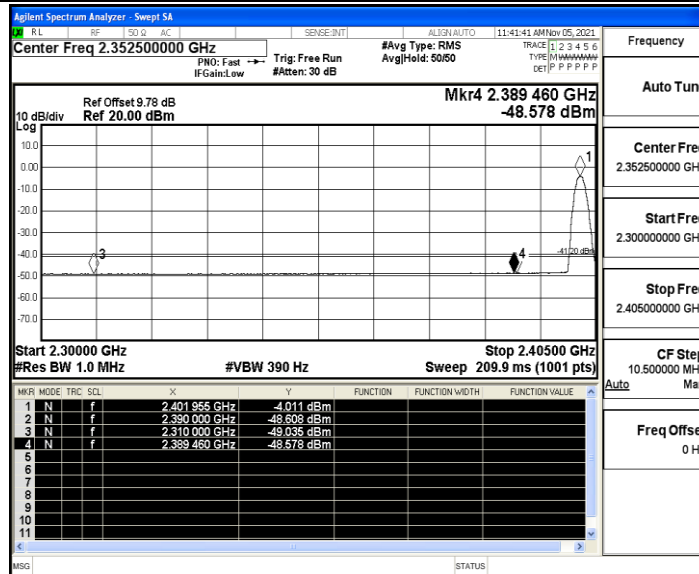




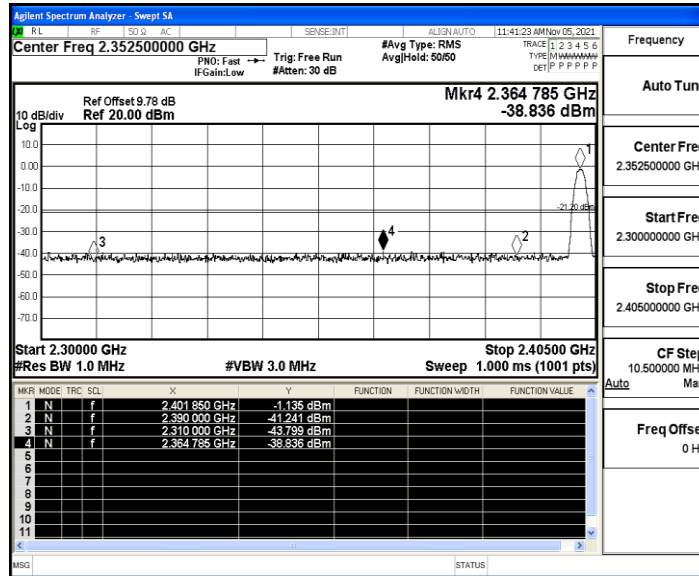
DH5_Ant1_High_Hop_2480_Peak



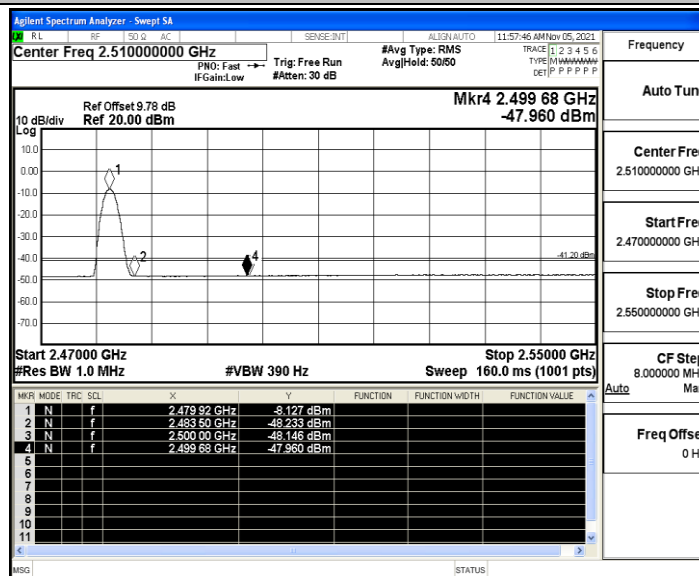
2DH5_Ant1_Low_2402_AV



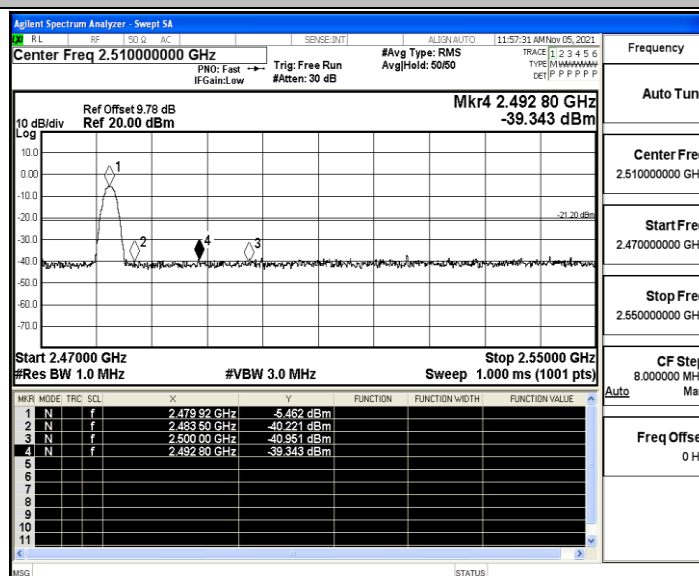
2DH5_Ant1_Low_2402_Peak



2DH5_Ant1_High_2480_AV

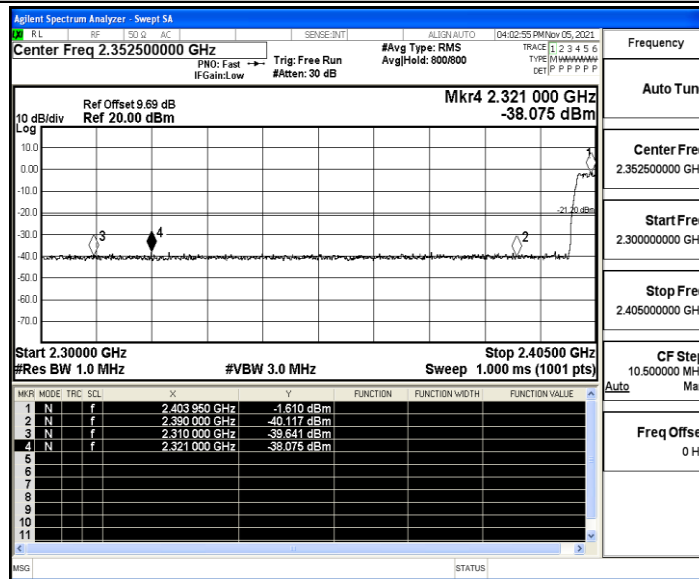


2DH5_Ant1_High_2480_Peak





2DH5_Ant1_Low_Hop_2402_Peak



2DH5_Ant1_High_Hop_2480_Peak

