



Appendix A

RF Test Data for BT V5.2(BDR/EDR) (Conducted Measurement)

Product Name: Urbanista Lisbon

Test Model: Urbanista Lisbon

Environmental Conditions

Temperature:	21.6 ° C
Relative Humidity:	52.7%
ATM Pressure:	100.0 kPa
Test Engineer:	Kay Hu
Supervised by:	Li Huan

A.1 20dB Emission Bandwidth

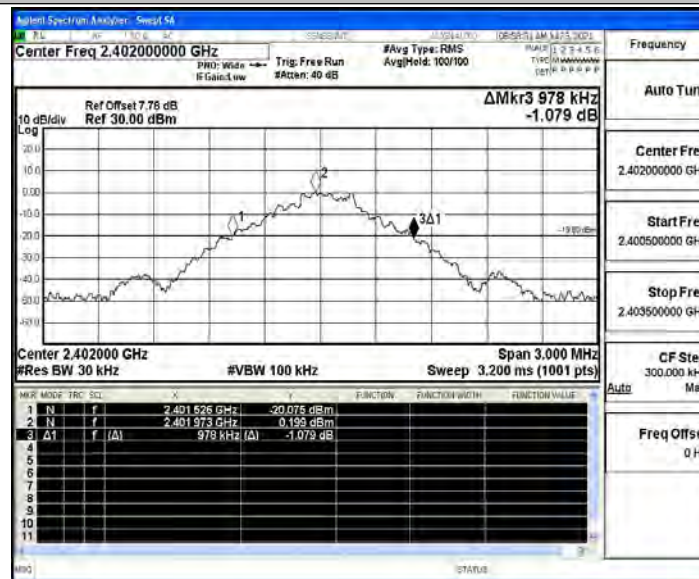
Test Result

Test Mode	Antenna	Channel	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.978	2401.526	2402.504	---	PASS
		2441	1.029	2440.475	2441.504	---	PASS
		2480	0.954	2479.535	2480.489	---	PASS
2DH5	Ant1	2402	1.287	2401.364	2402.651	---	PASS
		2441	1.290	2440.364	2441.654	---	PASS
		2480	1.314	2479.340	2480.654	---	PASS
3DH5	Ant1	2402	1.317	2401.343	2402.660	---	PASS
		2441	1.326	2440.340	2441.666	---	PASS
		2480	1.287	2479.355	2480.642	---	PASS

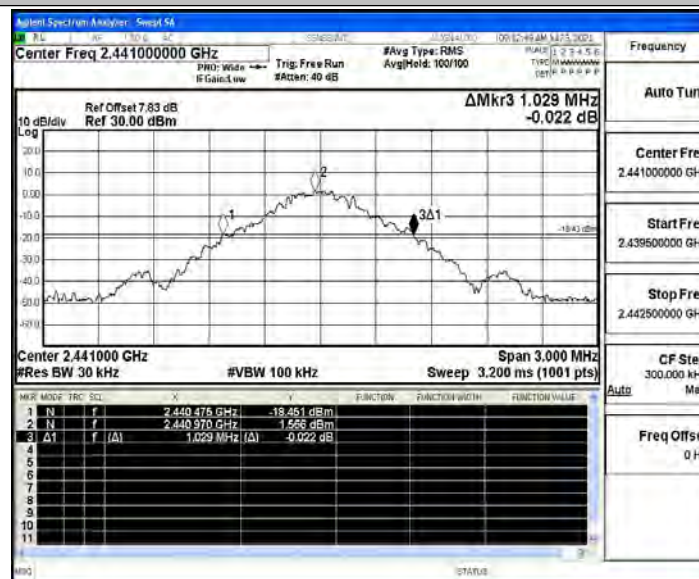


Test Graphs

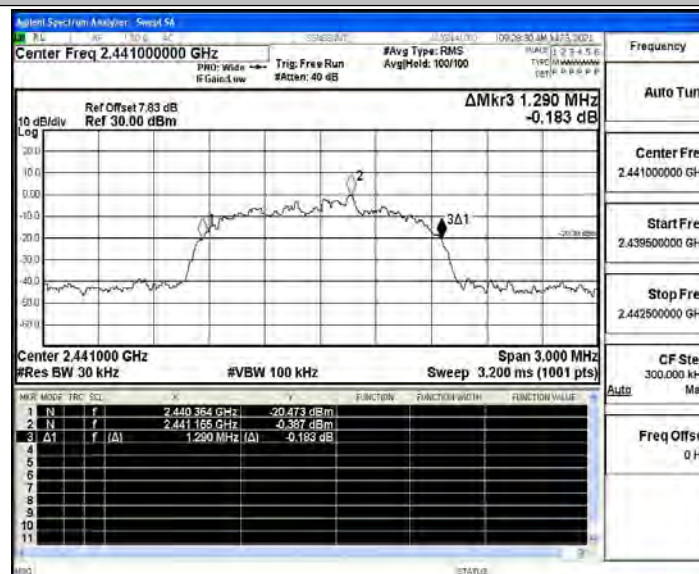
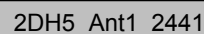
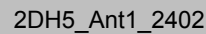
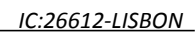
DH5_Ant1_2402



DH5_Ant1_2441

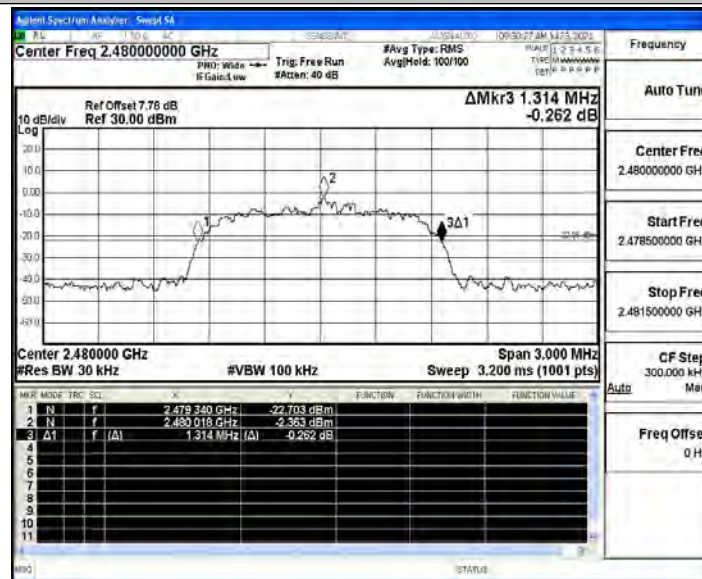


DH5_Ant1_2480

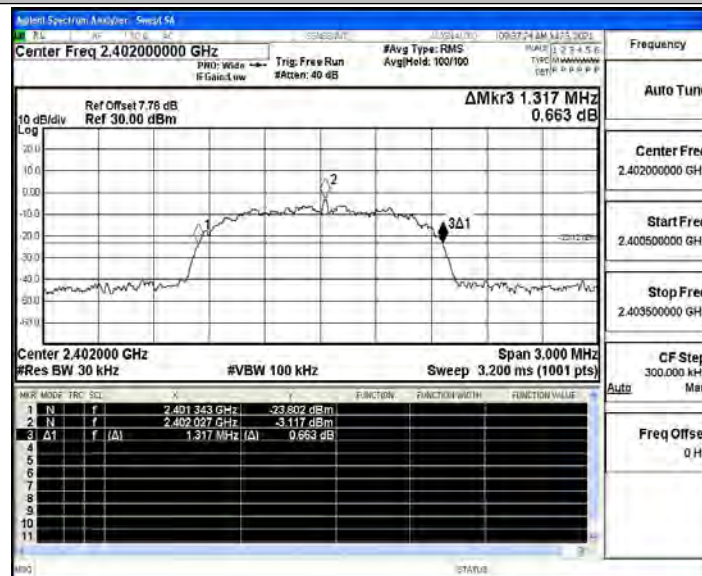




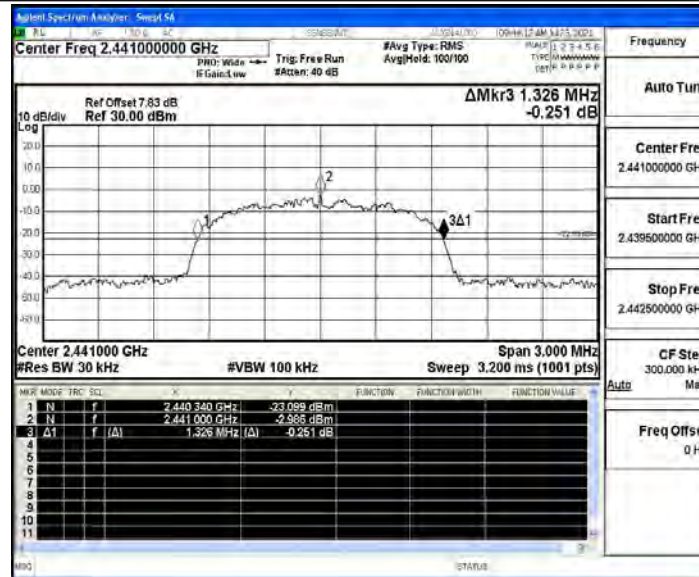
2DH5_Ant1_2480



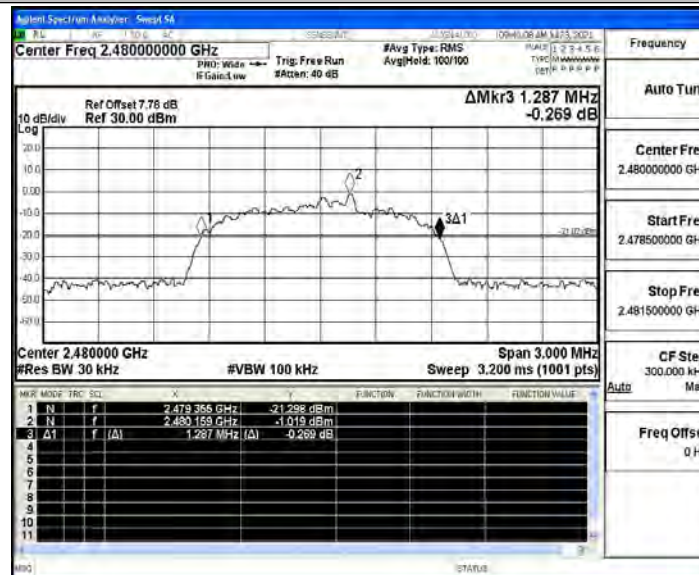
3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480





A.2 Occupied Channel Bandwidth

Test Result

Test Mode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.90340	2401.554	2402.457	---	PASS
		2441	0.90074	2440.548	2441.449	---	PASS
		2480	0.90866	2479.549	2480.458	---	PASS
2DH5	Ant1	2402	1.1933	2401.405	2402.598	---	PASS
		2441	1.1844	2440.407	2441.591	---	PASS
		2480	1.1835	2479.409	2480.592	---	PASS
3DH5	Ant1	2402	1.1956	2401.403	2402.599	---	PASS
		2441	1.2016	2440.398	2441.600	---	PASS
		2480	1.2016	2479.396	2480.598	---	PASS

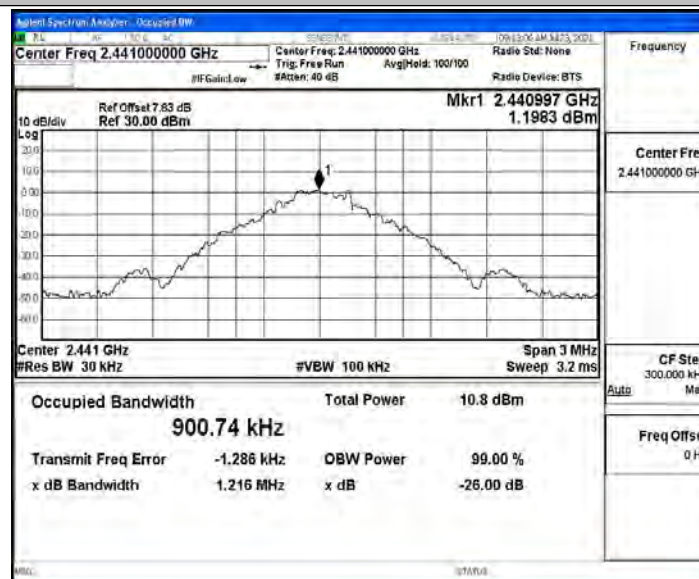


Test Graphs

DH5_Ant1_2402



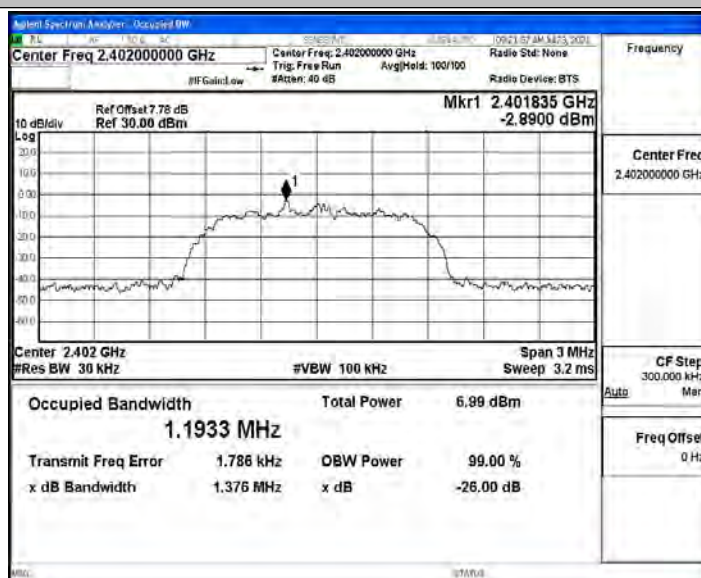
DH5_Ant1_2441



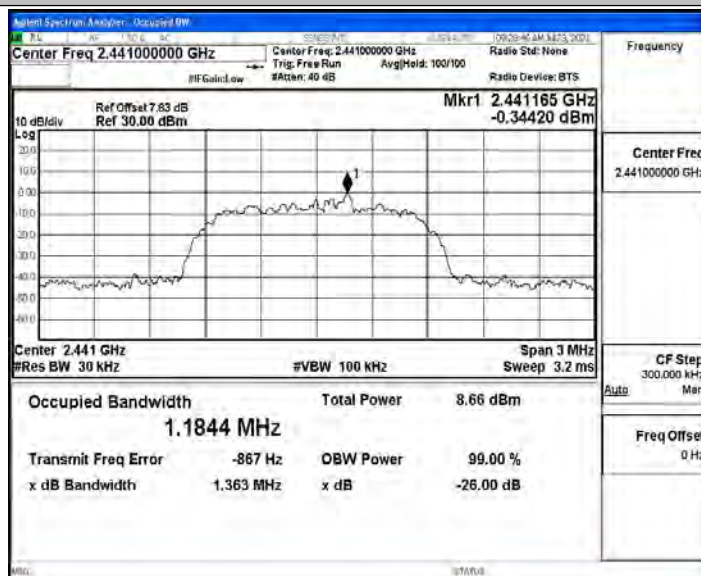
DH5_Ant1_2480



2DH5_Ant1_2402



2DH5_Ant1_2441

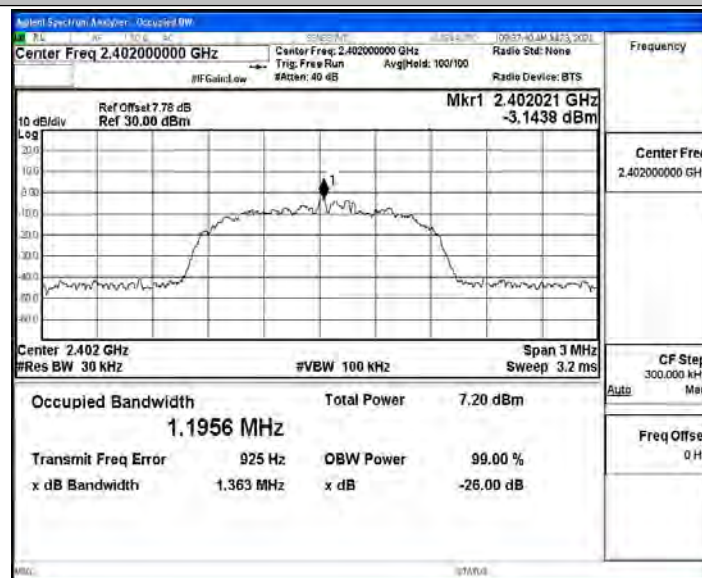




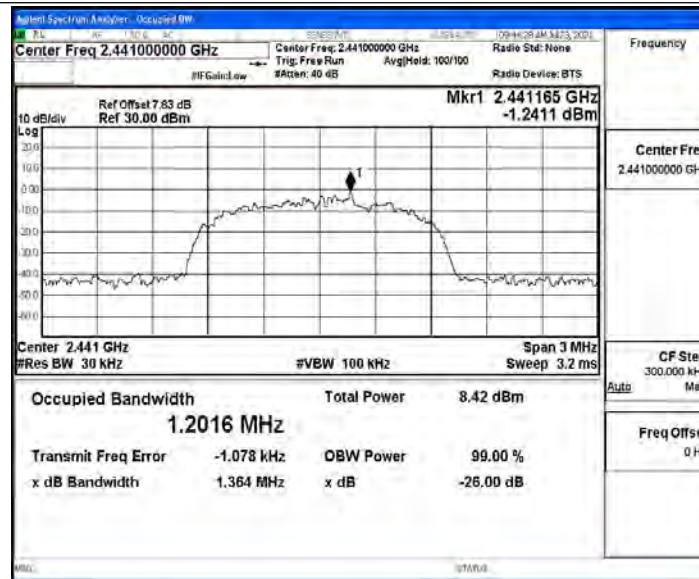
2DH5_Ant1_2480



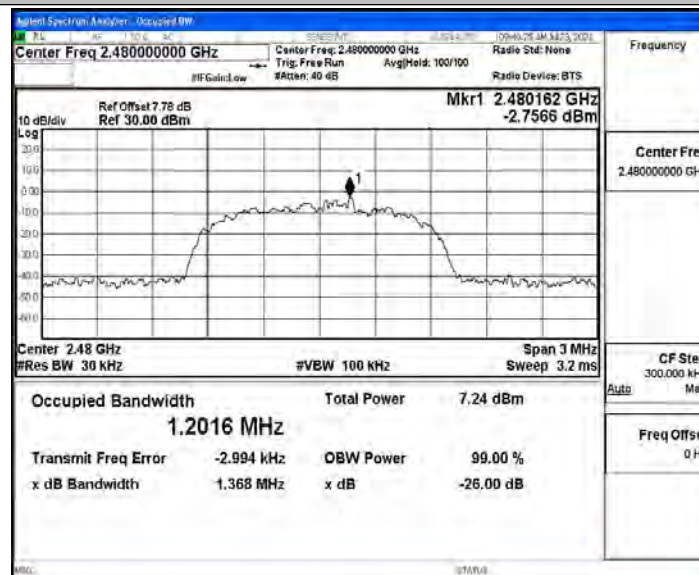
3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480





A.3 Maximum conducted output power

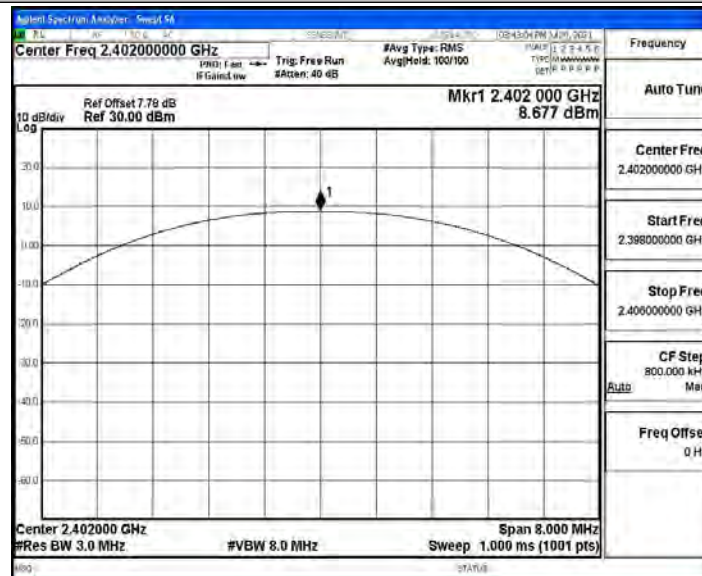
Test Result

Test Mode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
DH5	Ant1	2402	8.68	≤20.97	PASS
		2441	8.98	≤20.97	PASS
		2480	9.27	≤20.97	PASS
2DH5	Ant1	2402	8.69	≤20.97	PASS
		2441	9.09	≤20.97	PASS
		2480	9.26	≤20.97	PASS
3DH5	Ant1	2402	8.64	≤20.97	PASS
		2441	9.1	≤20.97	PASS
		2480	9.28	≤20.97	PASS

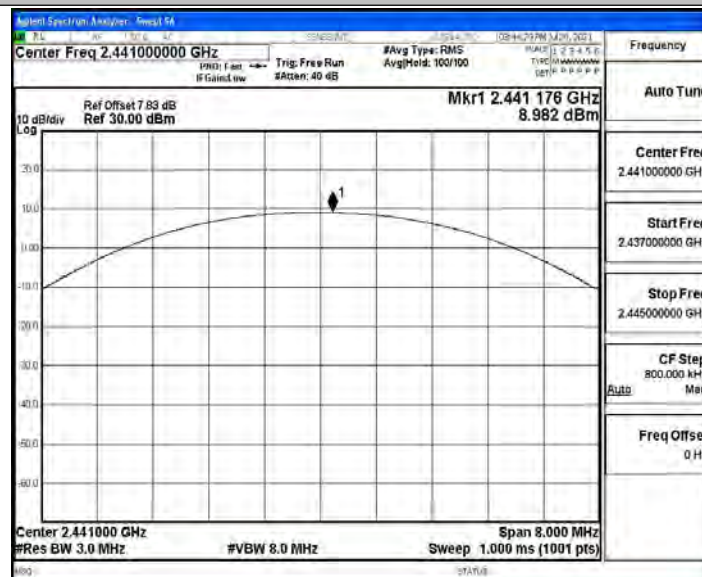


Test Graphs

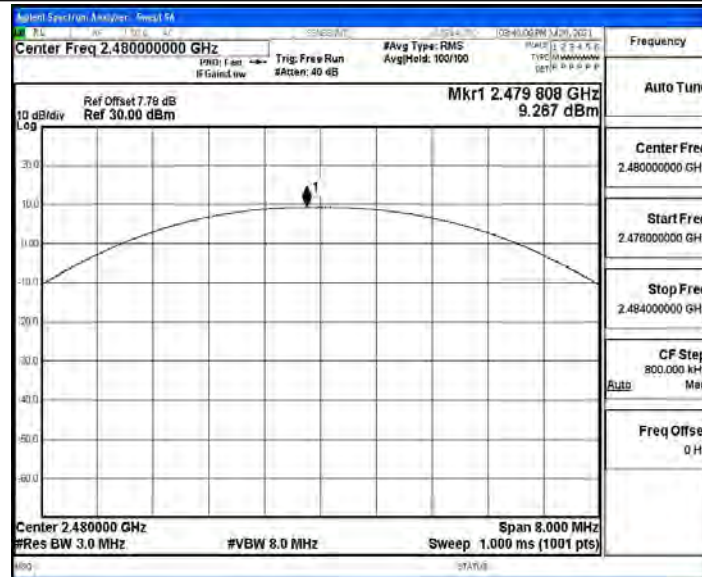
DH5_Ant1_2402



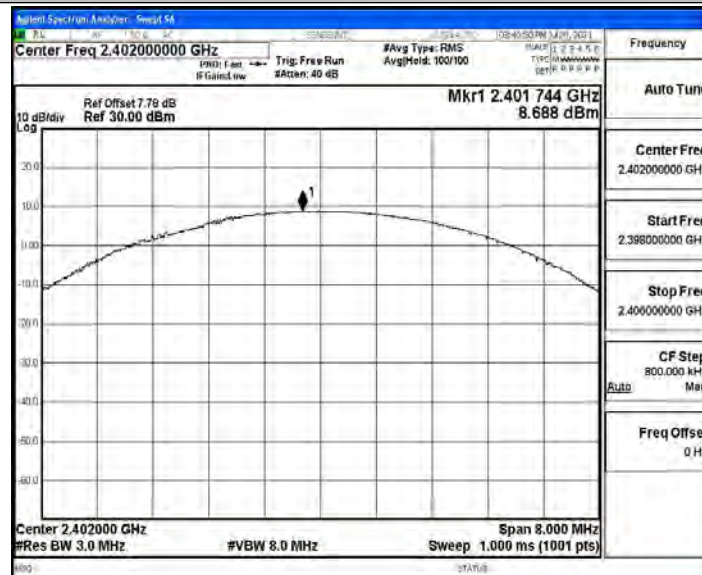
DH5_Ant1_2441



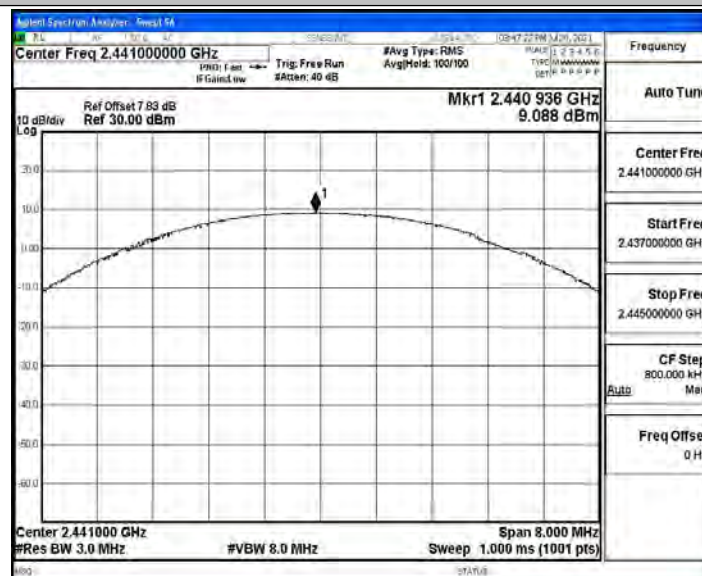
DH5_Ant1_2480



2DH5_Ant1_2402

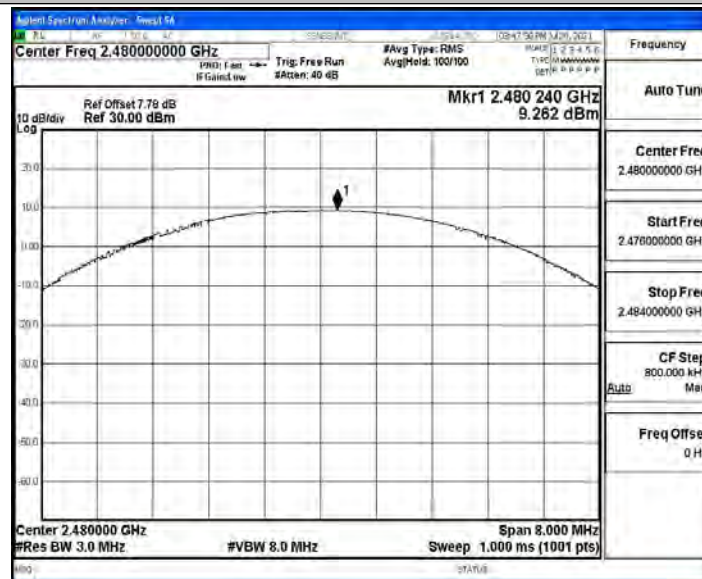


2DH5_Ant1_2441

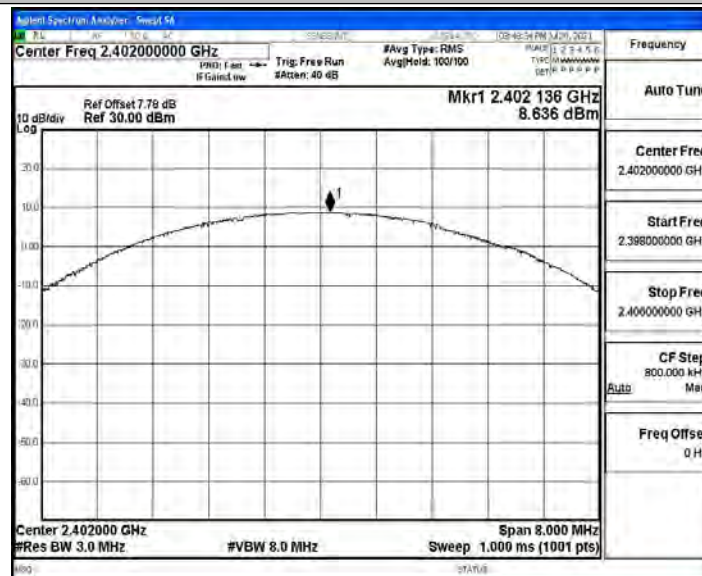




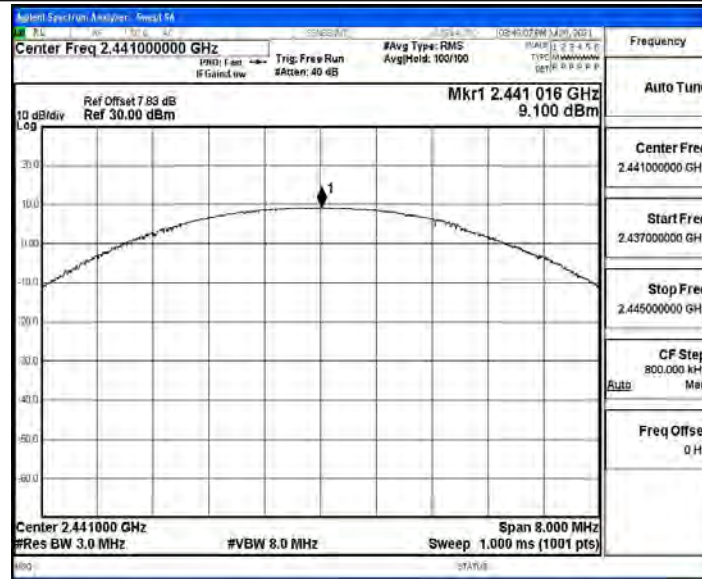
2DH5_Ant1_2480



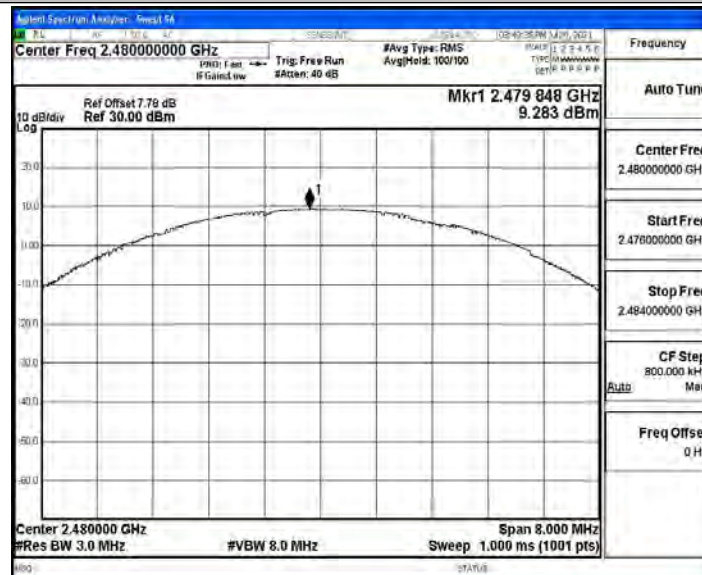
3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480





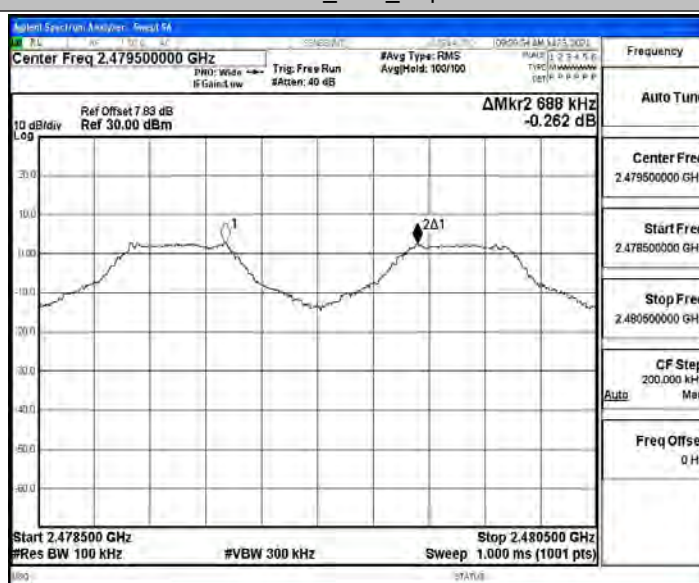
A.4 Carrier frequency separation

Test Result

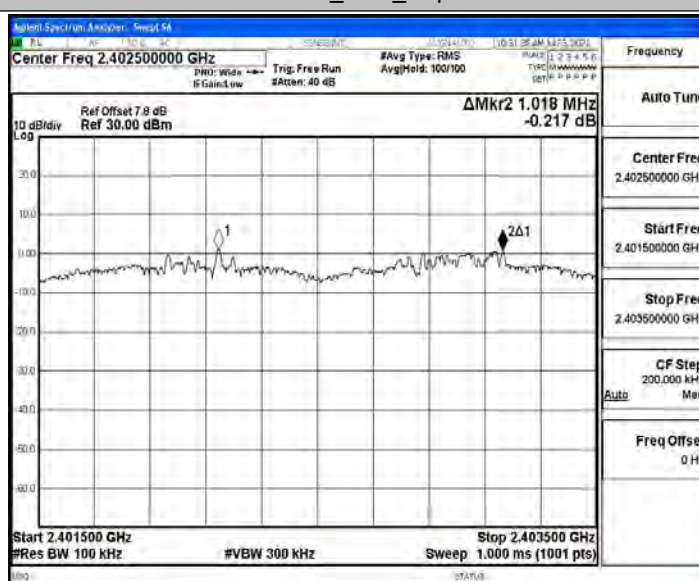
Test Mode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
DH5	Ant1	Hop	0.688	≥ 0.686	PASS
2DH5	Ant1	Hop	1.018	≥ 0.876	PASS
3DH5	Ant1	Hop	1.006	≥ 0.884	PASS

Test Graphs

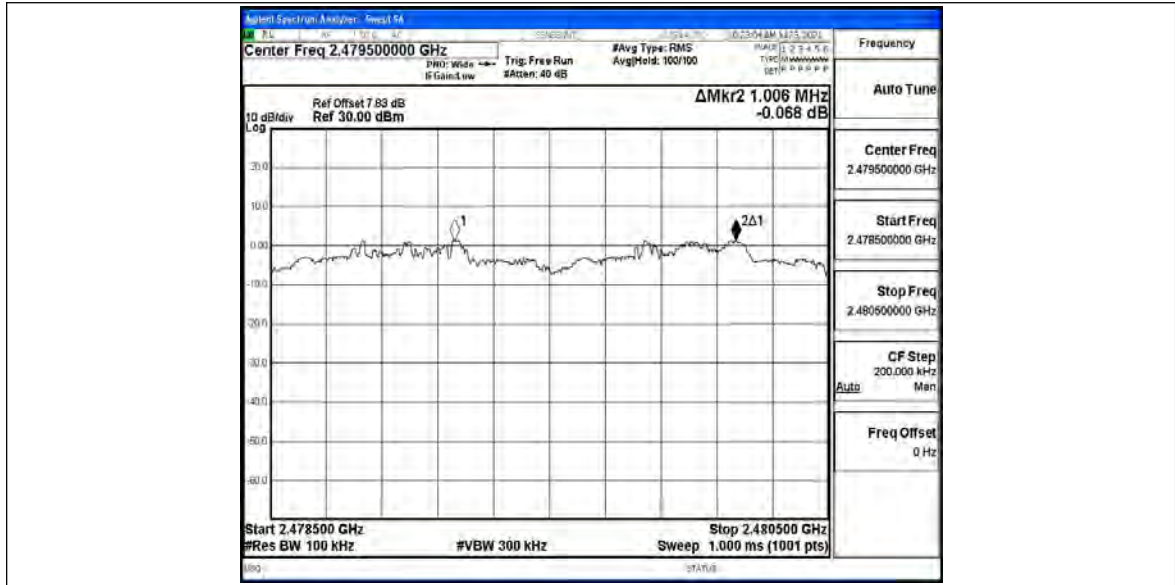
DH5_Ant1_Hop



2DH5_Ant1_Hop



3DH5_Ant1_Hop





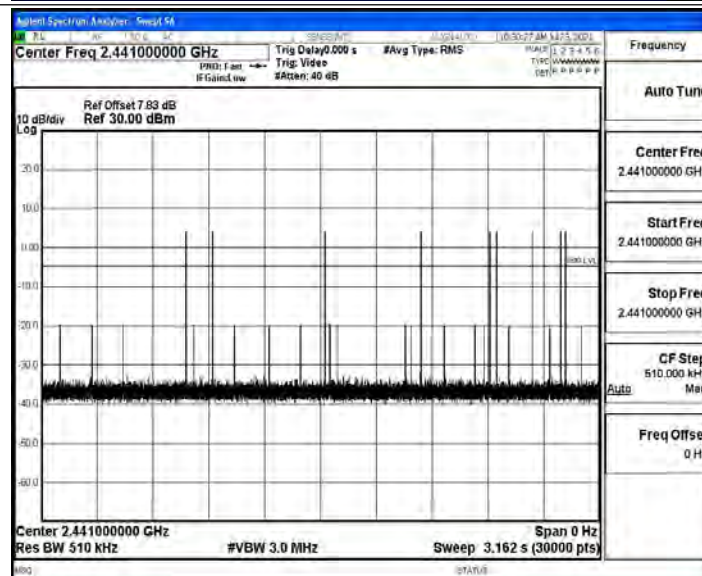
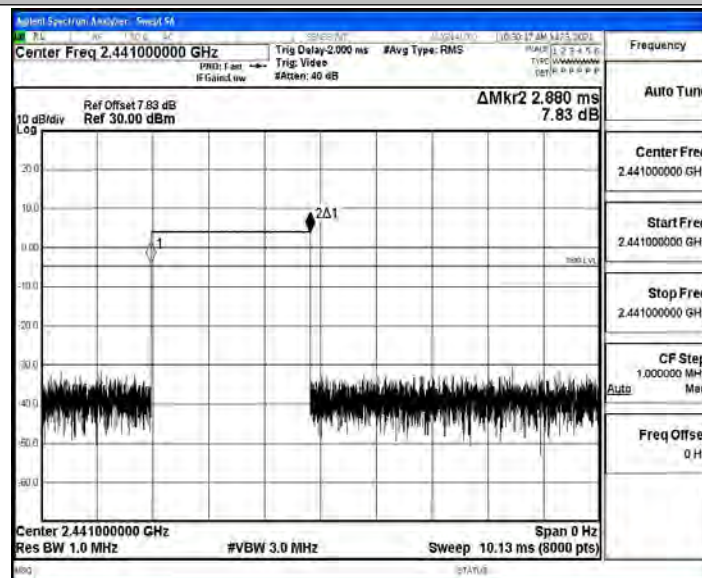
A.5 Time of occupancy

Test Result

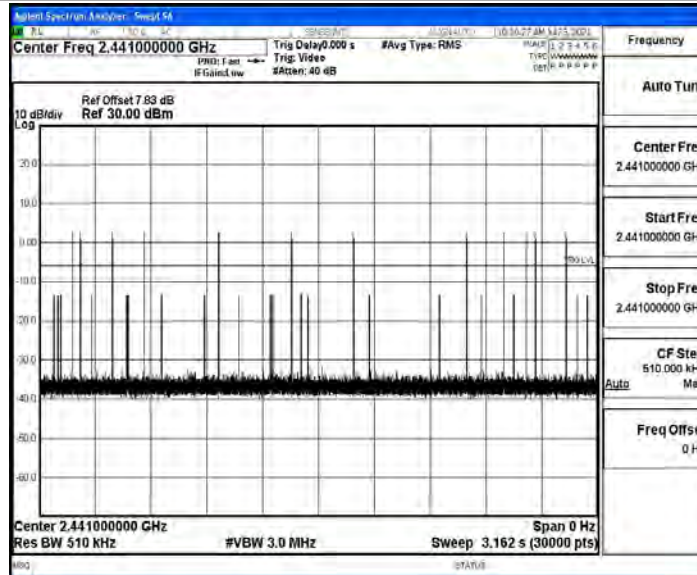
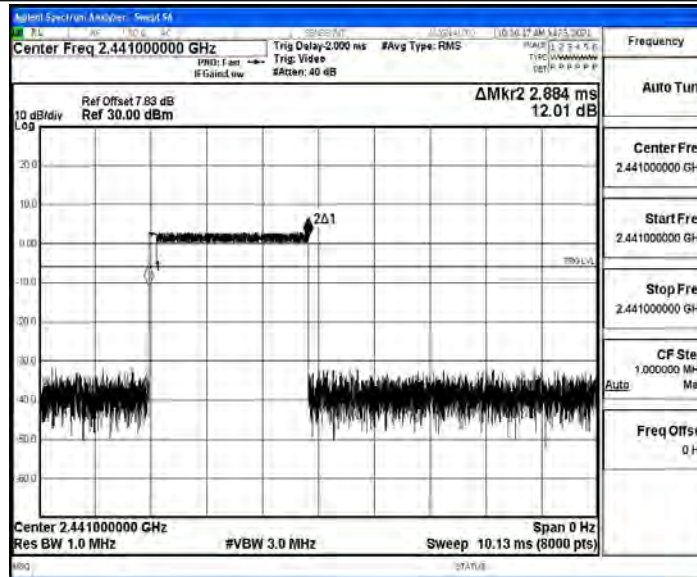
Test Mode	Antenna	Channel	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH5	Ant1	Hop	2.88	100	0.288	≤0.4	PASS
2DH5	Ant1	Hop	2.88	130	0.375	≤0.4	PASS
3DH5	Ant1	Hop	2.89	100	0.289	≤0.4	PASS

Test Graphs

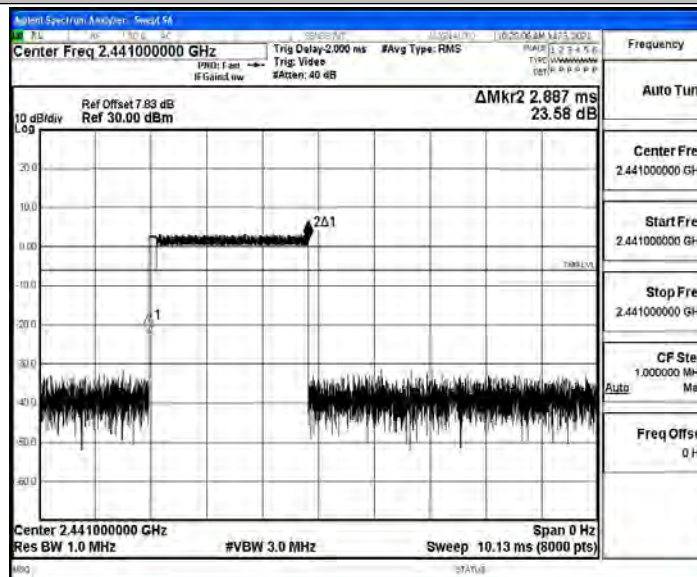
DH5_Ant1_Hop

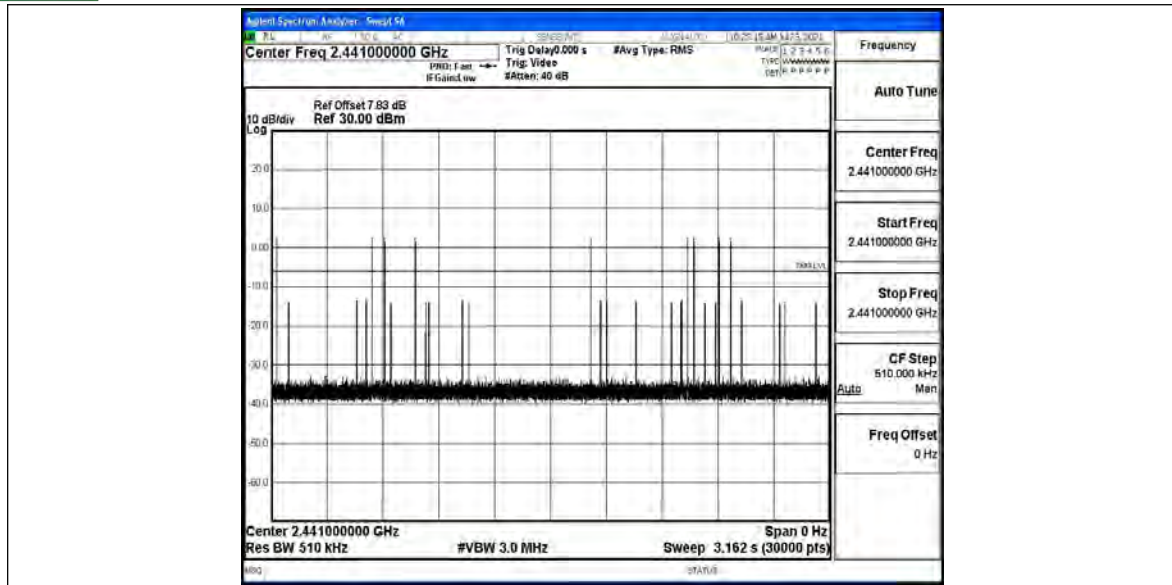
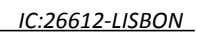


2DH5_Ant1_Hop



3DH5_Ant1_Hop







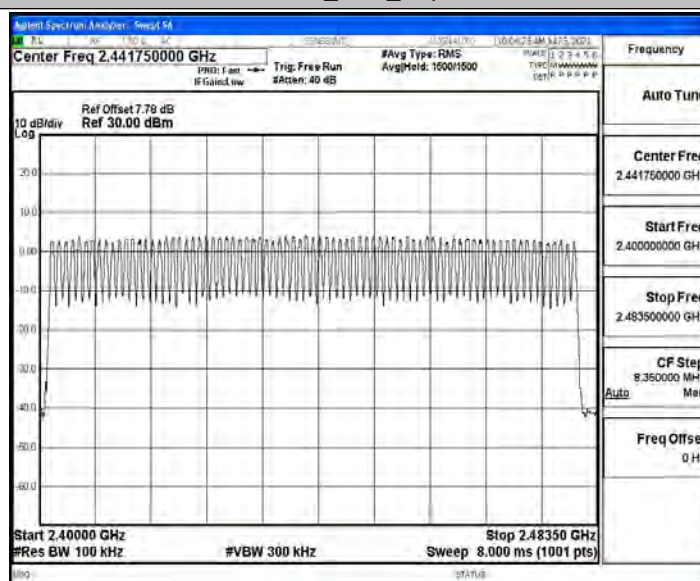
A.6 Number of hopping channels

Test Result

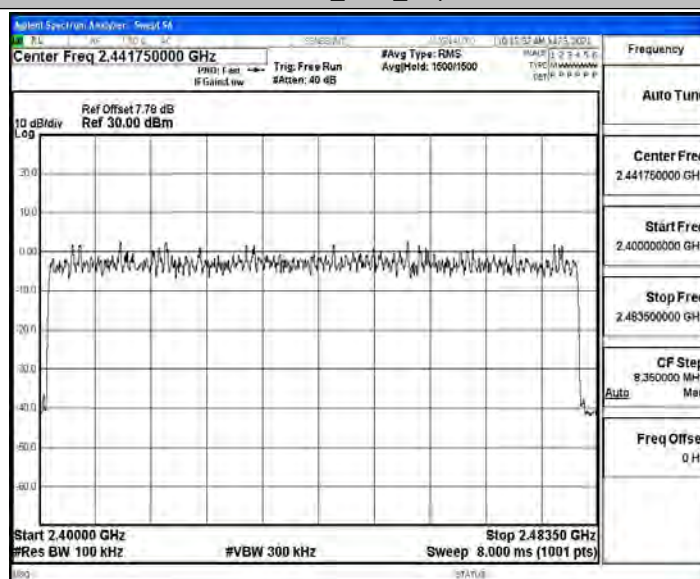
Test Mode	Antenna	Channel	Result[Num]	Limit[Num]	Verdict
DH5	Ant1	Hop	79	≥15	PASS
2DH5	Ant1	Hop	79	≥15	PASS
3DH5	Ant1	Hop	79	≥15	PASS

Test Graphs

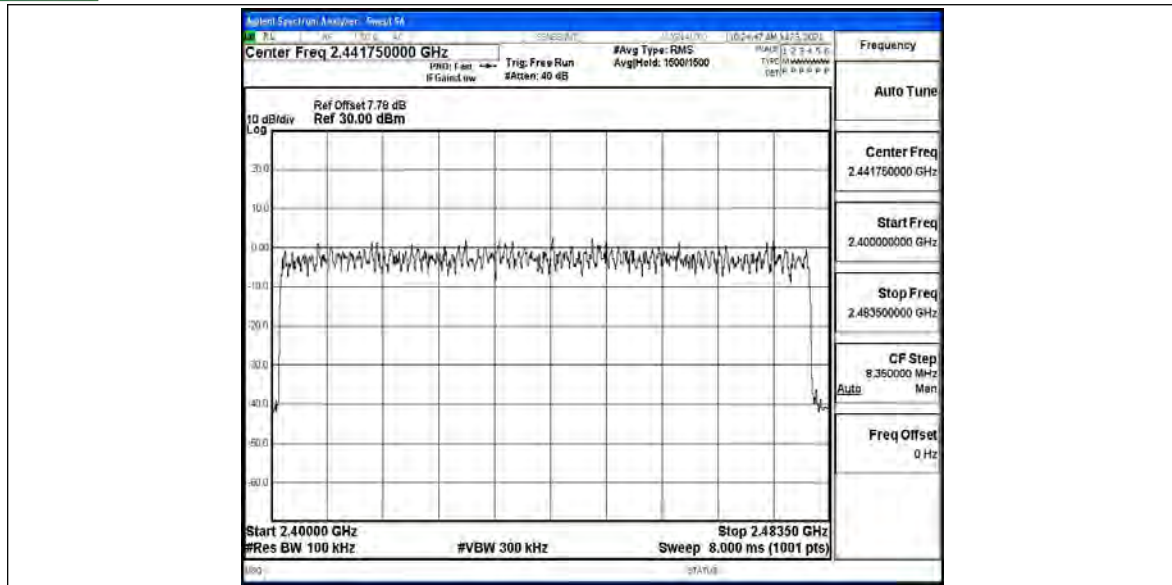
DH5_Ant1_Hop



2DH5_Ant1_Hop



3DH5_Ant1_Hop





A.7 Band edge measurements

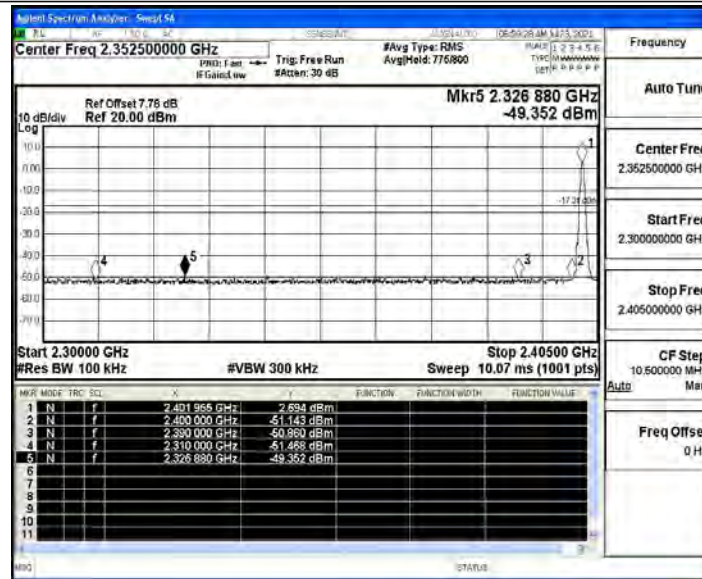
Test Result

Test Mode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	2.69	-49.35	≤ -17.31	PASS
		High	2480	2.73	-48.33	≤ -17.27	PASS
		Low	Hop_2402	2.17	-49.9	≤ -17.83	PASS
		High	Hop_2480	2.89	-48.85	≤ -17.11	PASS
2DH5	Ant1	Low	2402	1.51	-49.51	≤ -18.49	PASS
		High	2480	1.35	-48.73	≤ -18.65	PASS
		Low	Hop_2402	0.65	-49.51	≤ -19.35	PASS
		High	Hop_2480	-1.57	-48.6	≤ -21.57	PASS
3DH5	Ant1	Low	2402	0.98	-48.99	≤ -19.03	PASS
		High	2480	1.35	-48.99	≤ -18.65	PASS
		Low	Hop_2402	-1.17	-49.83	≤ -21.17	PASS
		High	Hop_2480	1.31	-48.68	≤ -18.69	PASS

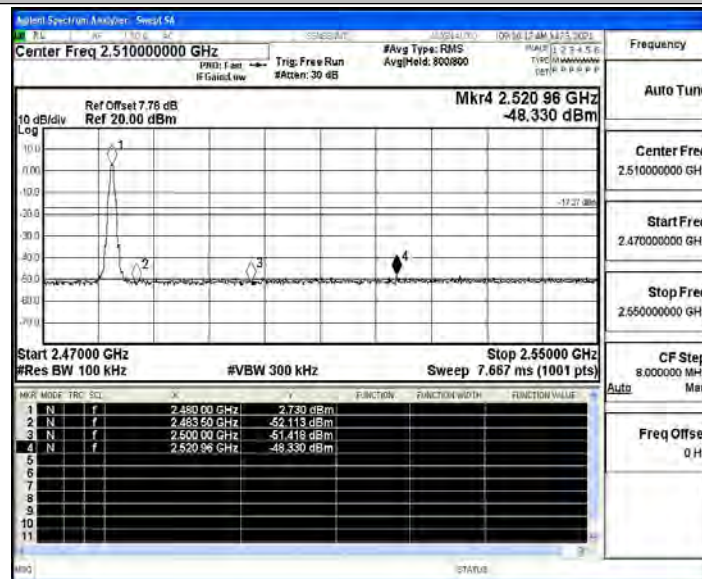


Test Graphs

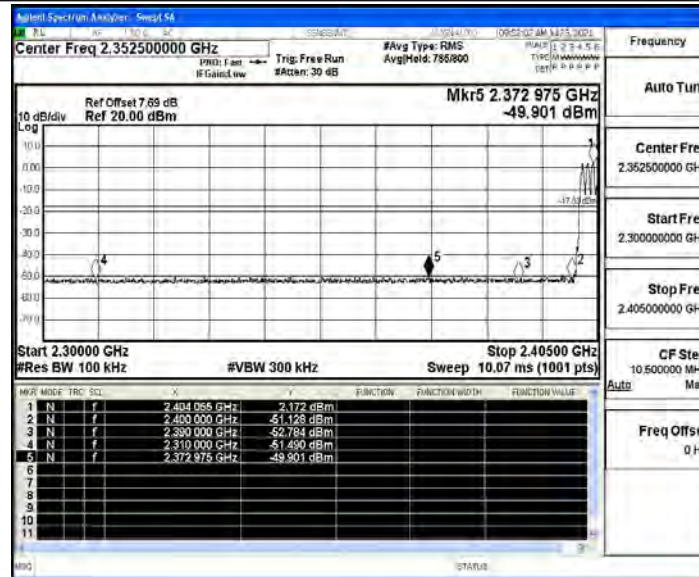
DH5_Ant1_Low_2402



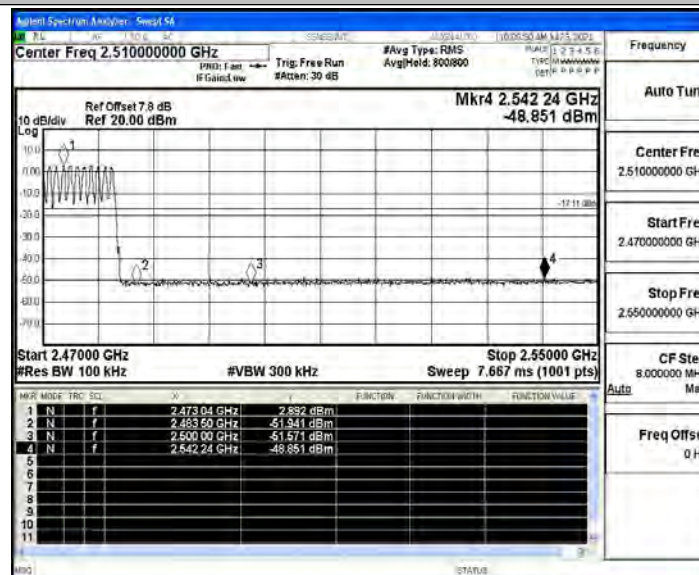
DH5_Ant1_High_2480



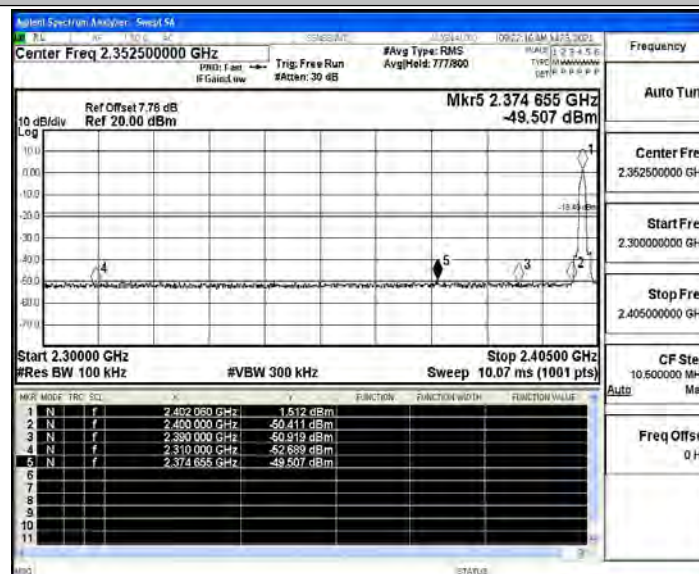
DH5_Ant1_Low_Hop_2402



DH5_Ant1_High_Hop_2480

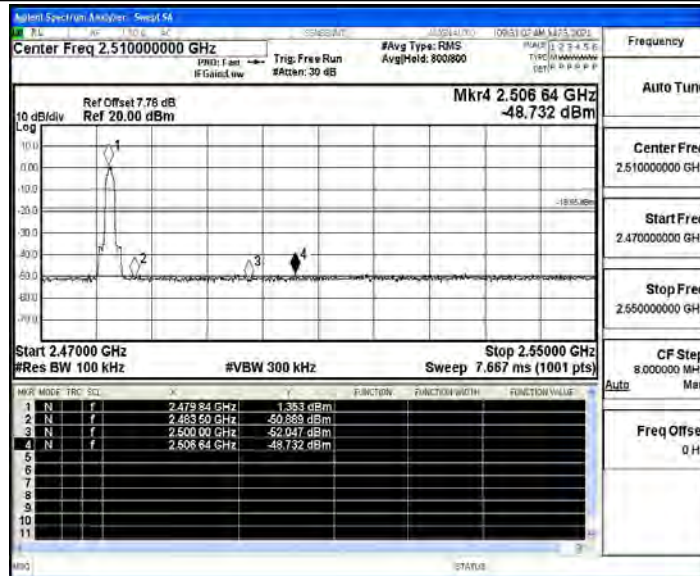


2DH5_Ant1_Low_2402

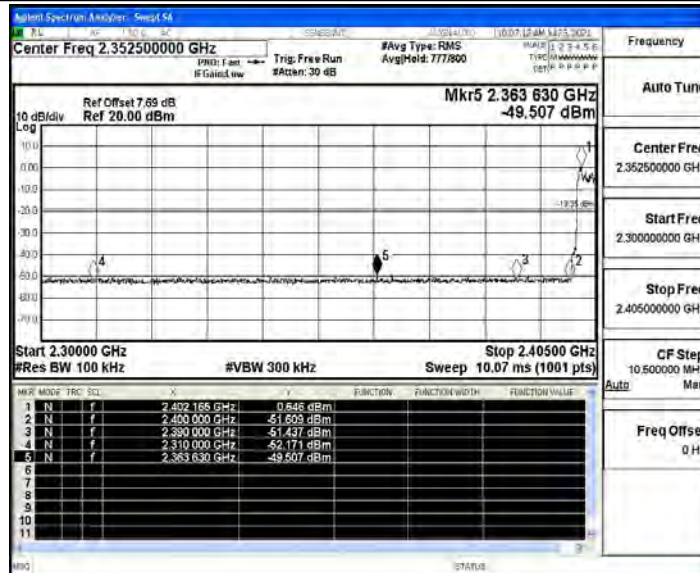




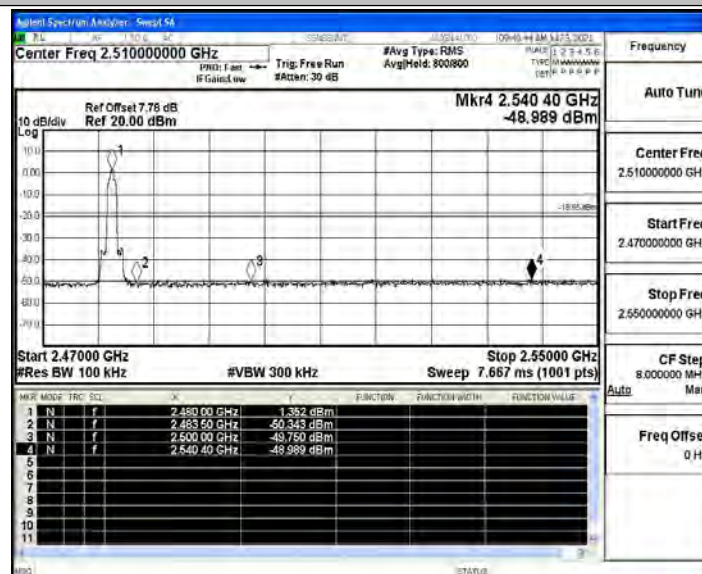
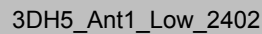
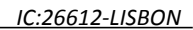
2DH5_Ant1_High_2480



2DH5_Ant1_Low_Hop_2402

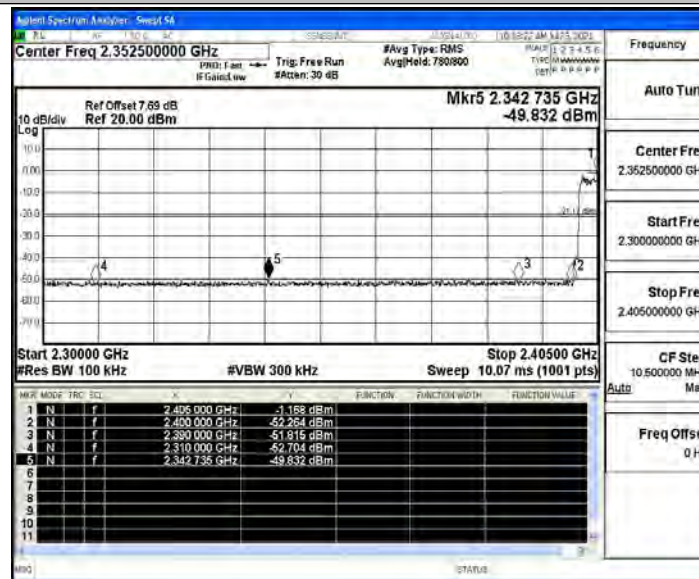


2DH5_Ant1_High_Hop_2480

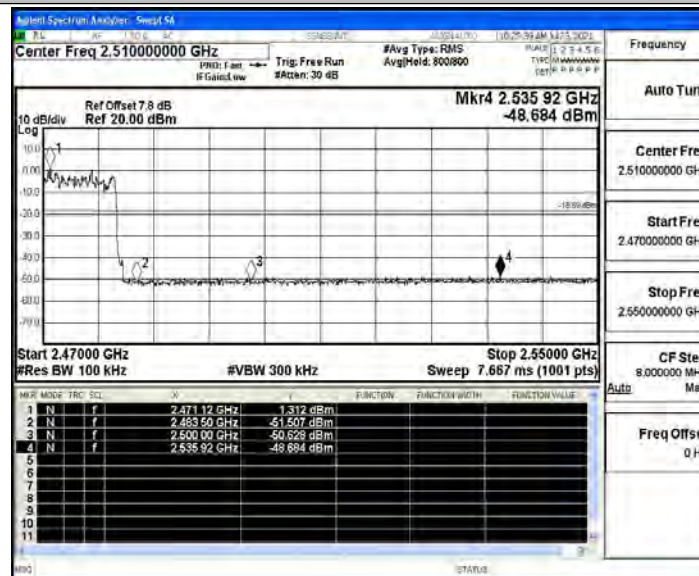




3DH5_Ant1_Low_Hop_2402



3DH5_Ant1_High_Hop_2480





A.8 Conducted Spurious Emission

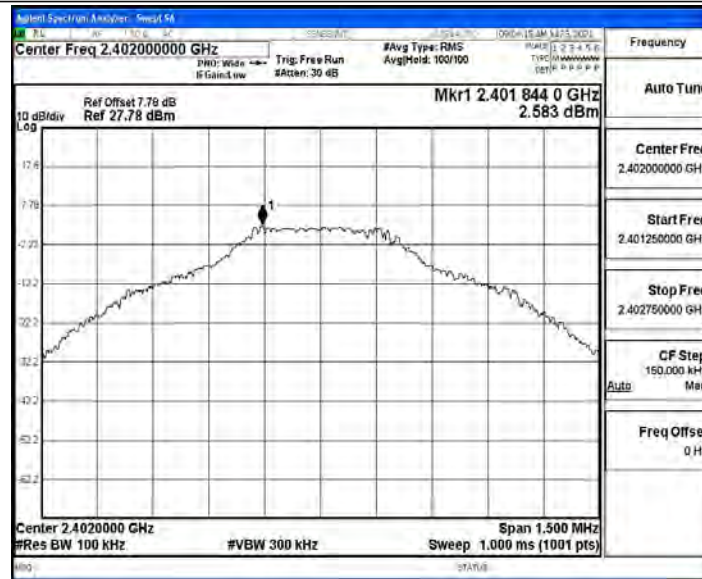
Test Result

Test Mode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	2.58	2.58	---	PASS
			30~1000	2.58	-57.17	≤ -17.42	PASS
			1000~26500	2.58	-47.26	≤ -17.42	PASS
		2441	Reference	3.97	3.97	---	PASS
			30~1000	3.97	-57.02	≤ -16.03	PASS
			1000~26500	3.97	-47.85	≤ -16.03	PASS
		2480	Reference	2.61	2.61	---	PASS
			30~1000	2.61	-56.57	≤ -17.39	PASS
			1000~26500	2.61	-47.6	≤ -17.39	PASS
2DH5	Ant1	2402	Reference	0.72	0.72	---	PASS
			30~1000	0.72	-58.67	≤ -19.28	PASS
			1000~26500	0.72	-47.2	≤ -19.28	PASS
		2441	Reference	1.80	1.80	---	PASS
			30~1000	1.80	-58.2	≤ -18.21	PASS
			1000~26500	1.80	-47.52	≤ -18.21	PASS
		2480	Reference	1.13	1.13	---	PASS
			30~1000	1.13	-57.91	≤ -18.87	PASS
			1000~26500	1.13	-47.63	≤ -18.87	PASS
3DH5	Ant1	2402	Reference	-0.13	-0.13	---	PASS
			30~1000	-0.13	-57.25	≤ -20.13	PASS
			1000~26500	-0.13	-47.53	≤ -20.13	PASS
		2441	Reference	-0.82	-0.82	---	PASS
			30~1000	-0.82	-57.22	≤ -20.82	PASS
			1000~26500	-0.82	-47.8	≤ -20.82	PASS
		2480	Reference	1.17	1.17	---	PASS
			30~1000	1.17	-56.99	≤ -18.83	PASS
			1000~26500	1.17	-47.56	≤ -18.83	PASS

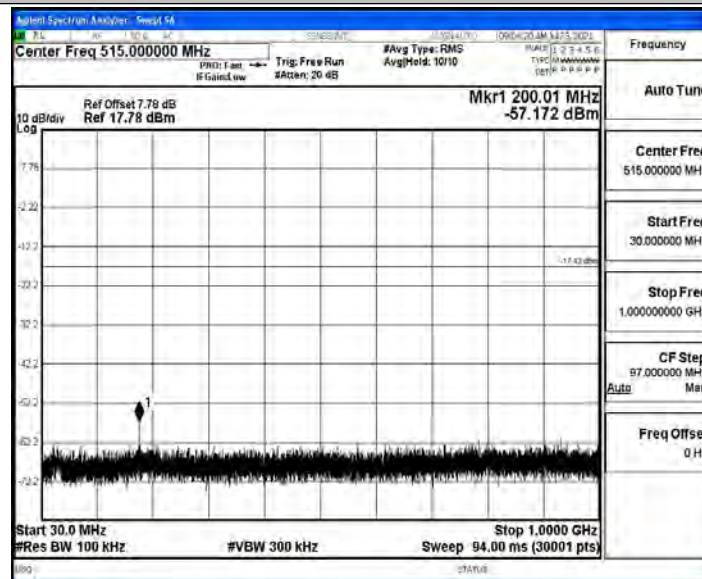


Test Graphs

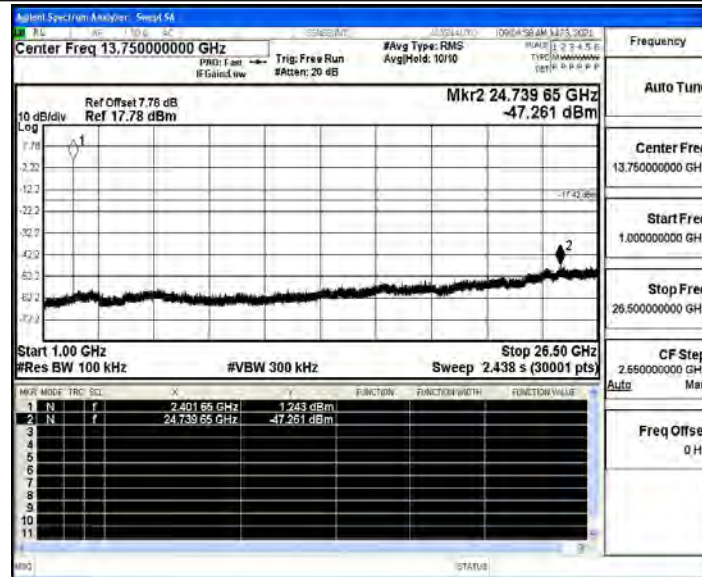
DH5_Ant1_2402_0~Reference



DH5_Ant1_2402_30~1000



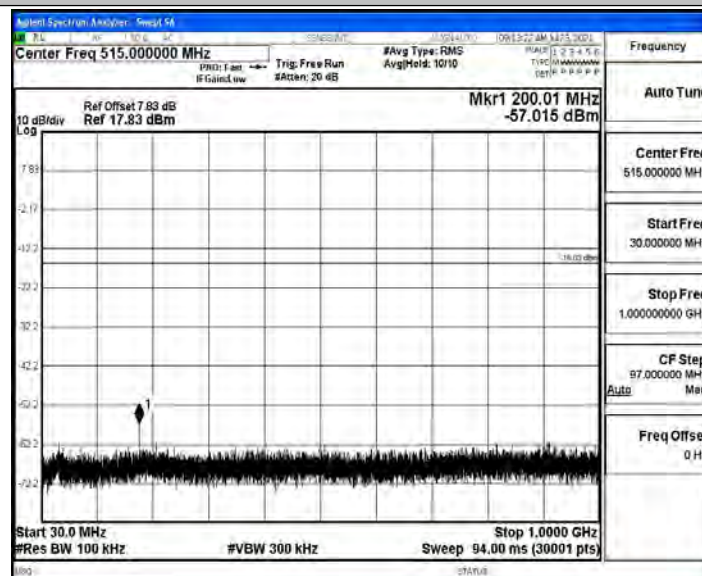
DH5_Ant1_2402_1000~26500



DH5_Ant1_2441_0~Reference

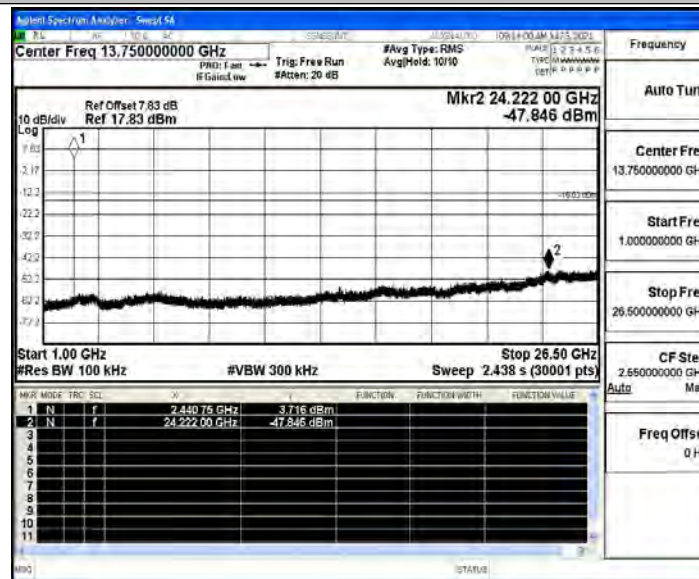


DH5_Ant1_2441_30~1000

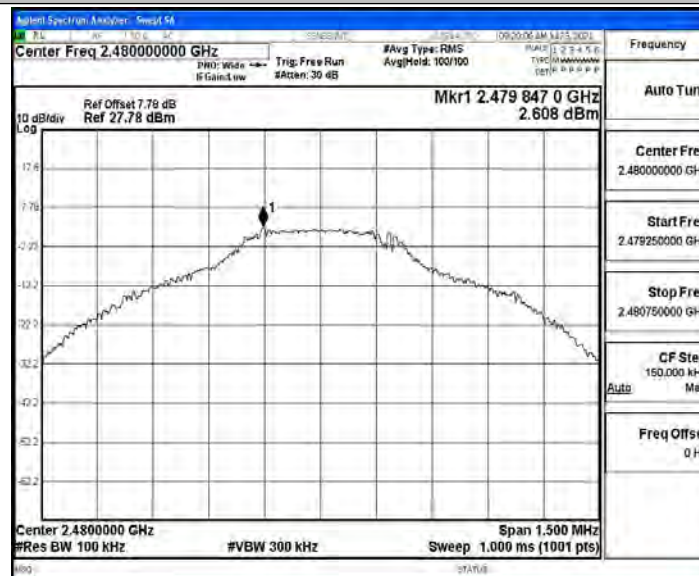




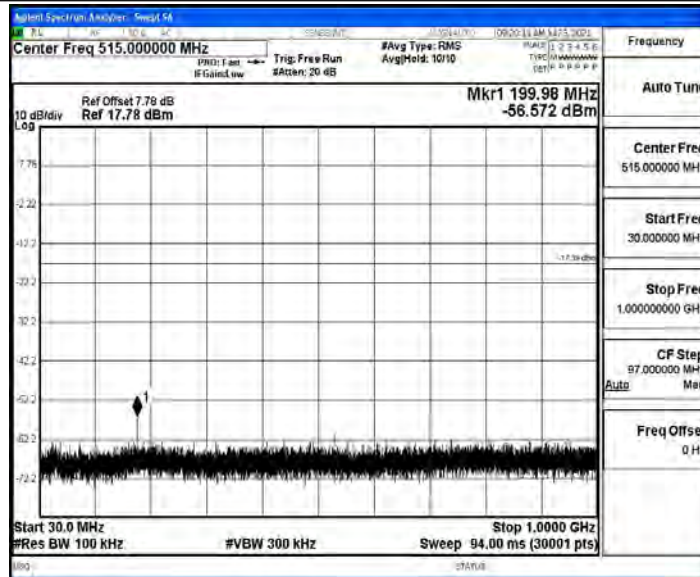
DH5_Ant1_2441_1000~26500



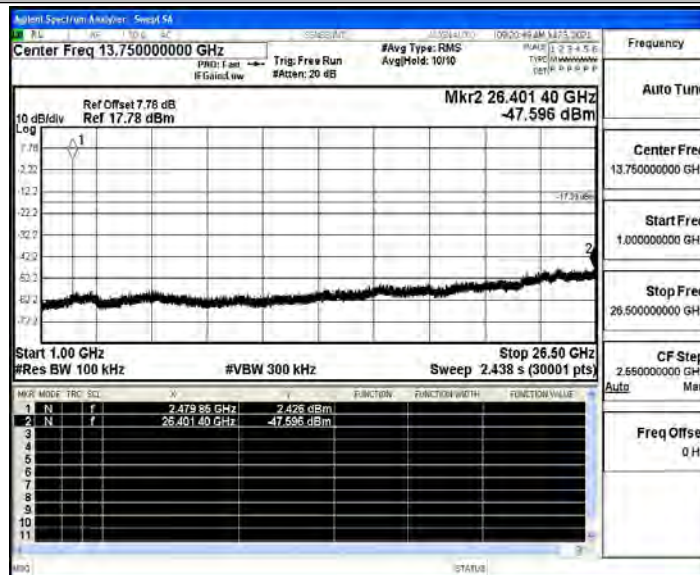
DH5_Ant1_2480_0~Reference



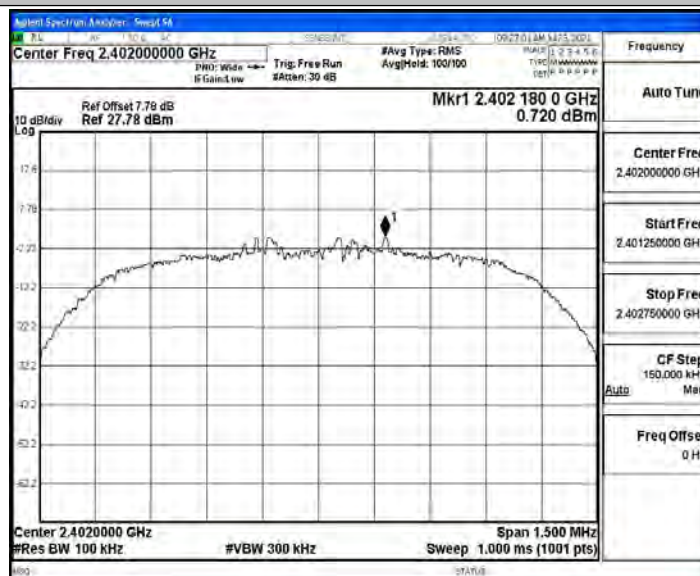
DH5_Ant1_2480_30~1000



DH5_Ant1_2480_1000~26500

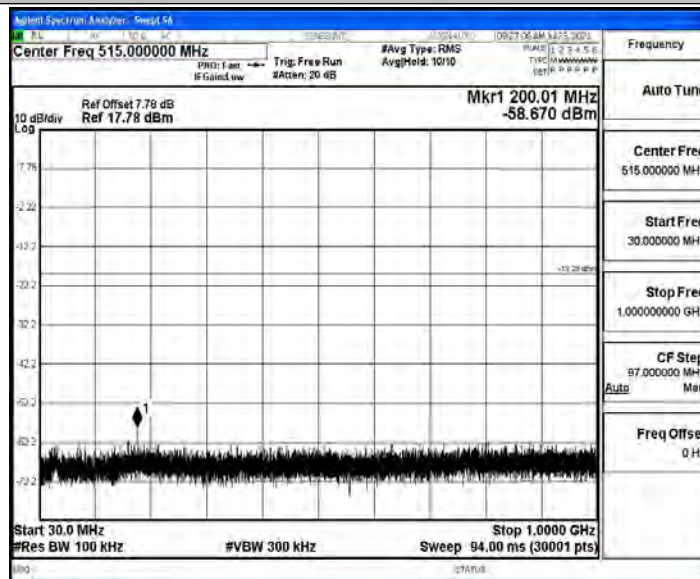


2DH5_Ant1_2402_0~Reference

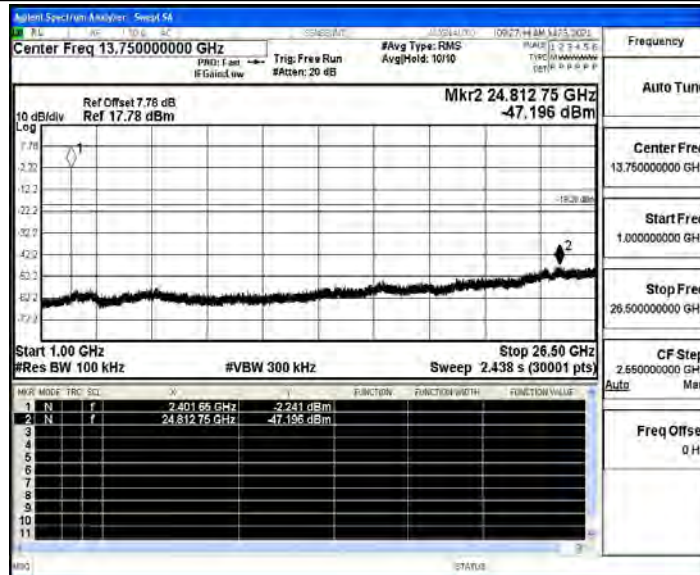




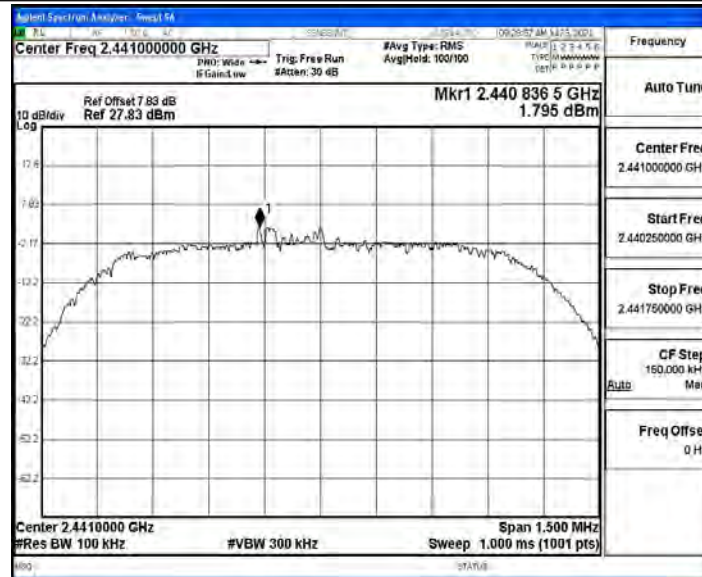
2DH5_Ant1_2402_30~1000



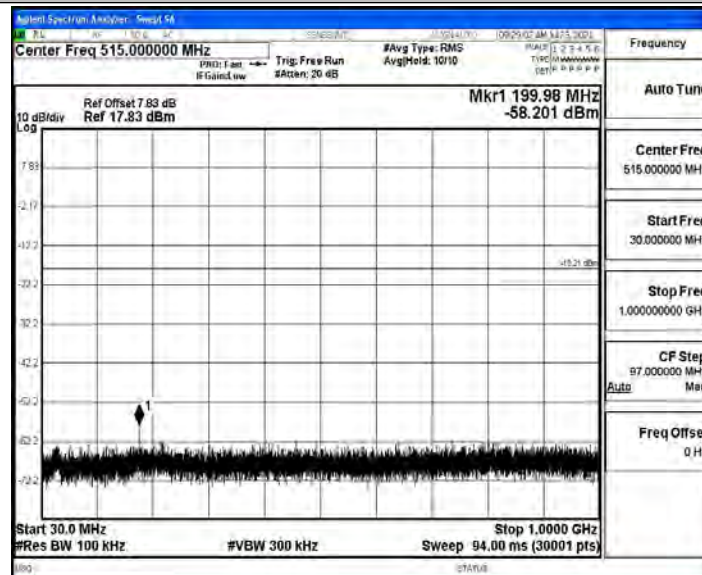
2DH5_Ant1_2402_1000~26500



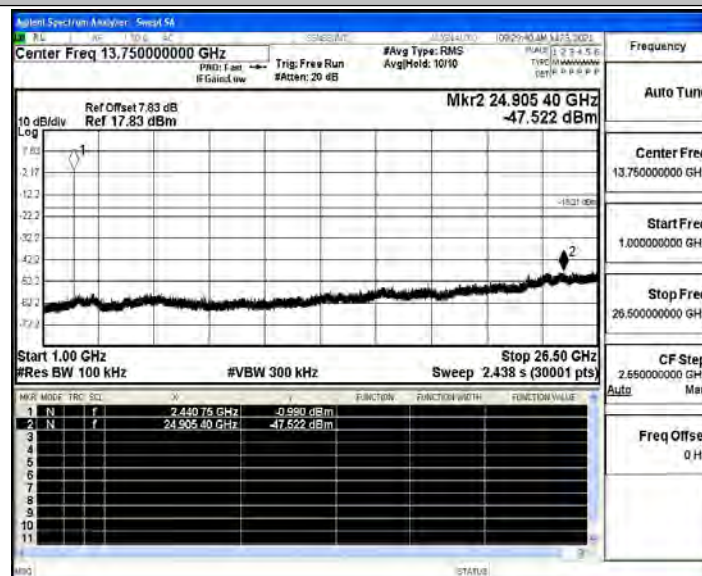
2DH5_Ant1_2441_0~Reference



2DH5_Ant1_2441_30~1000

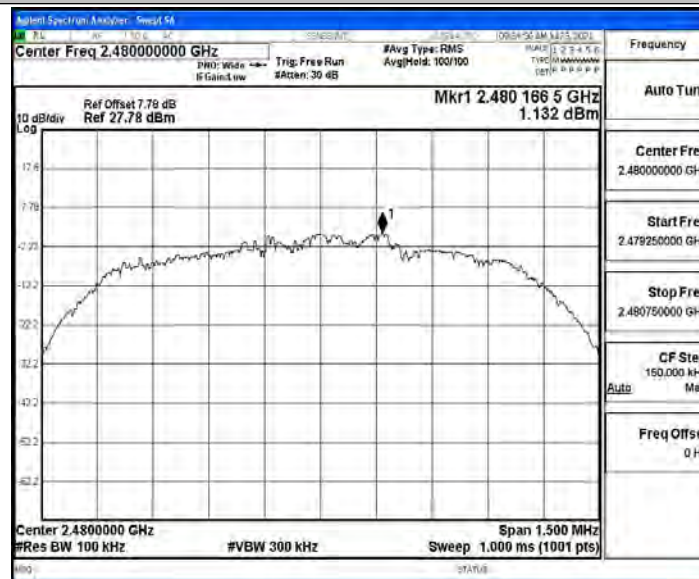


2DH5_Ant1_2441_1000~26500

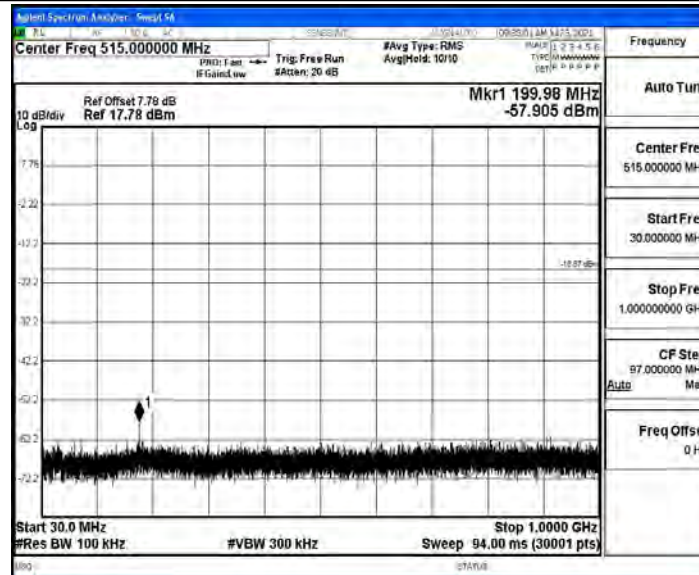




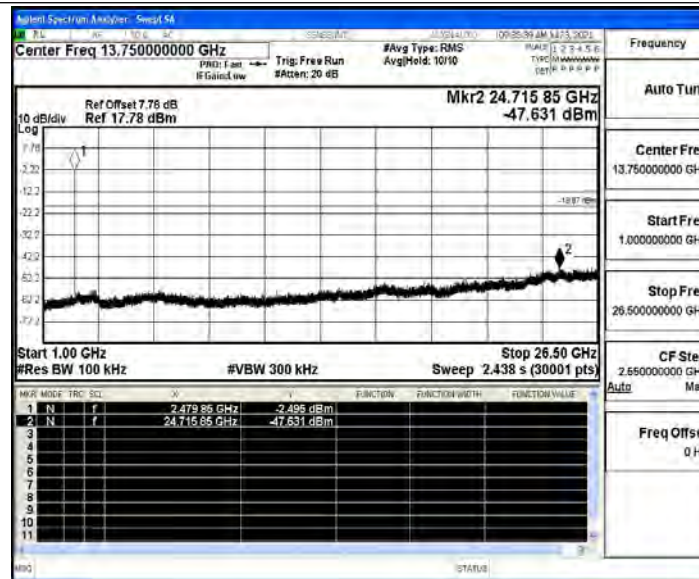
2DH5_Ant1_2480_0~Reference



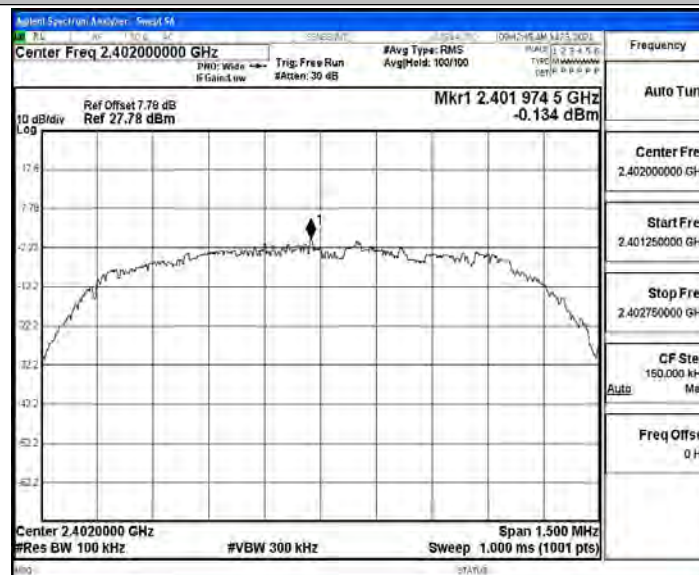
2DH5_Ant1_2480_30~1000



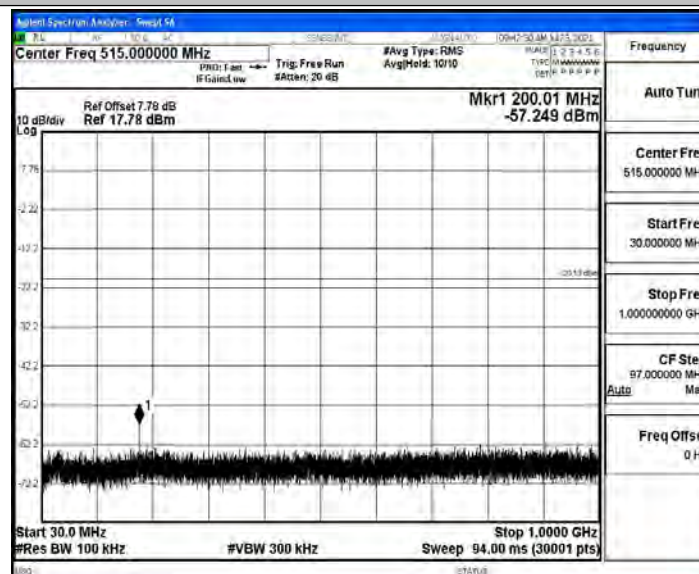
2DH5_Ant1_2480_1000~26500



3DH5_Ant1_2402_0~Reference

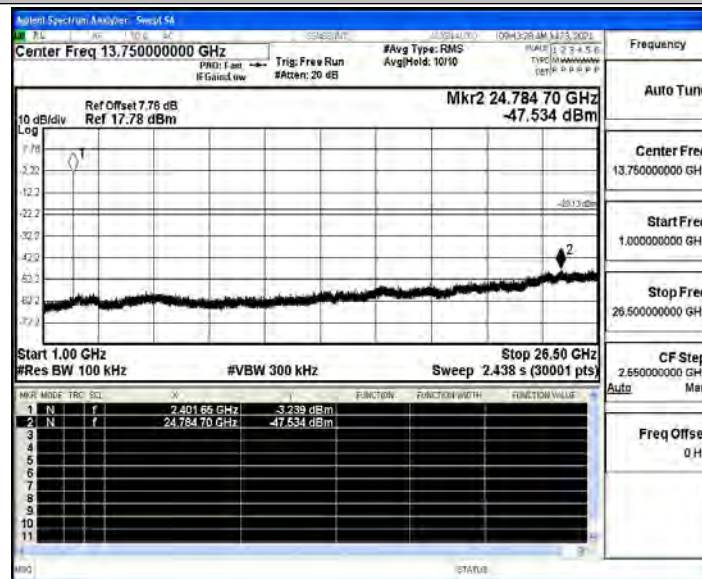


3DH5_Ant1_2402_30~1000

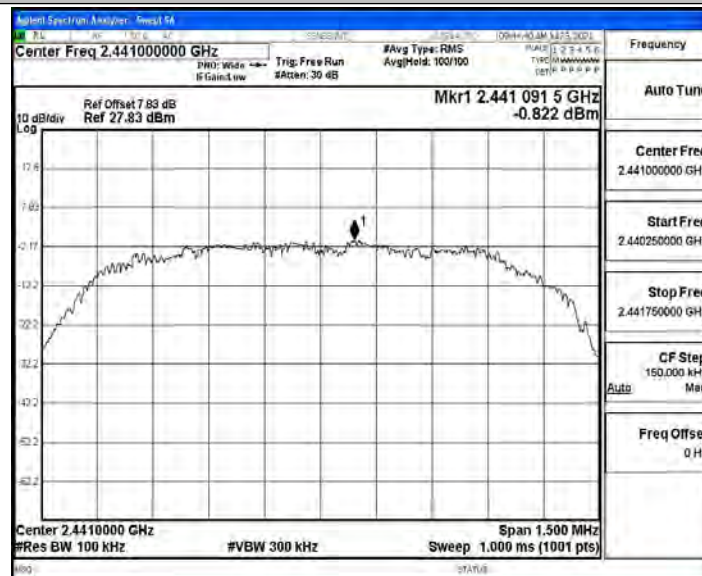




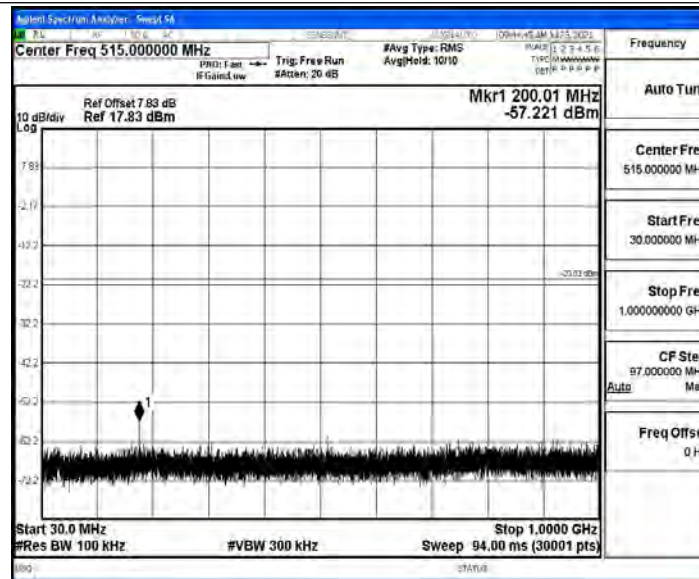
3DH5_Ant1_2402_1000~26500



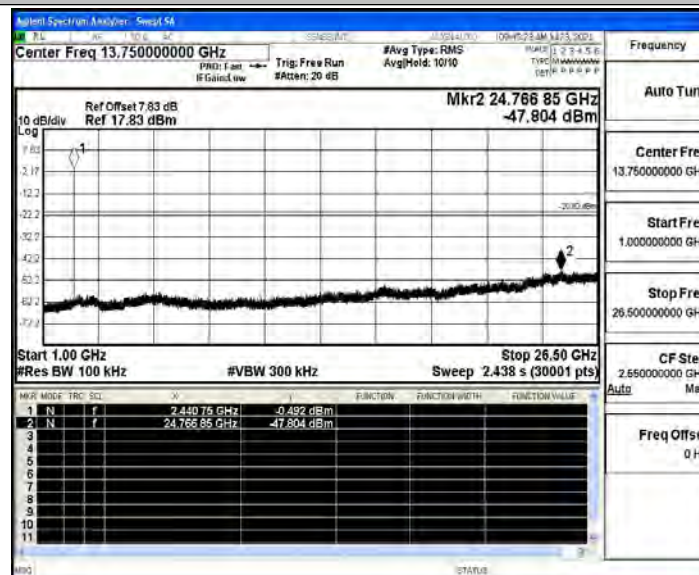
3DH5_Ant1_2441_0~Reference



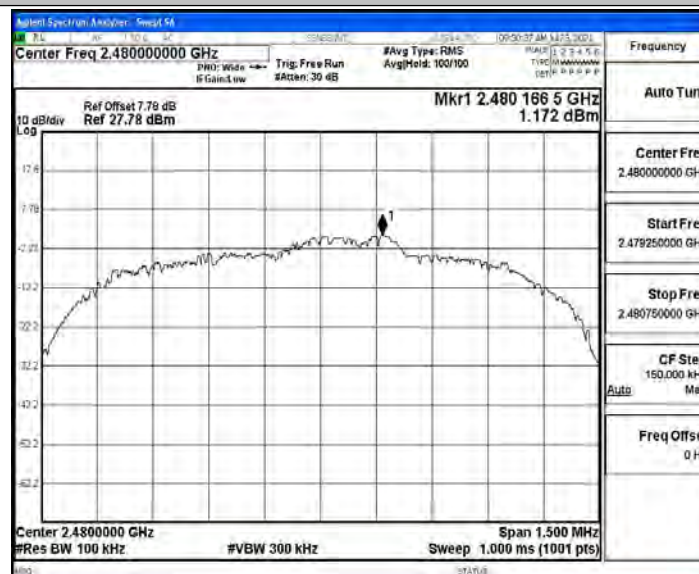
3DH5_Ant1_2441_30~1000



3DH5_Ant1_2441_1000~26500

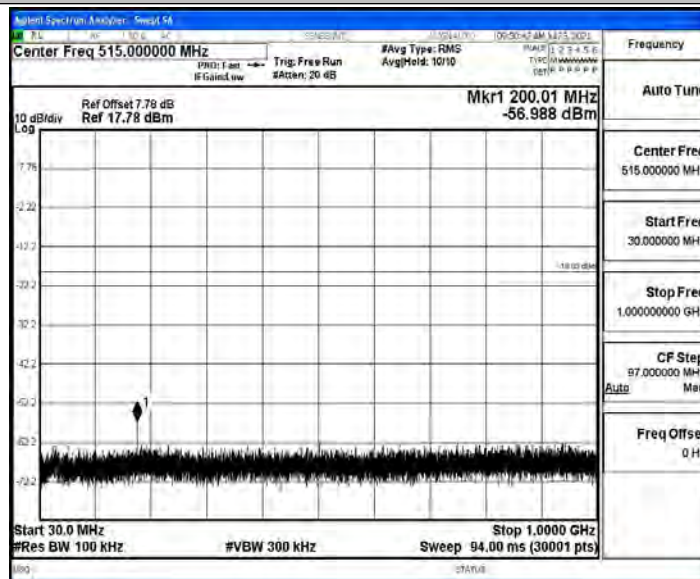


3DH5_Ant1_2480_0~Reference

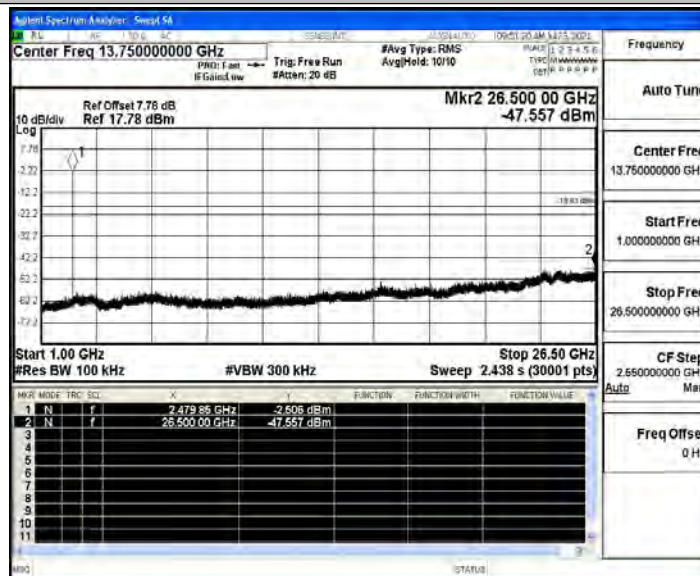




3DH5_Ant1_2480_30~1000



3DH5_Ant1_2480_1000~26500





A.10 Emissions in Restricted Bands

Test Result

Test Mode	Antenna	ChName	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
DH5	Ant1	Low	2402	AV	2310.000	-48.89	≤-41.20	46.31	≤54	PASS
				AV	2389.565	-48.44	≤-41.20	46.76	≤54	PASS
				AV	2390.000	-48.49	≤-41.20	46.71	≤54	PASS
				Peak	2310.000	-40.72	≤-21.20	54.48	≤74	PASS
				Peak	2371.190	-37.89	≤-21.20	57.31	≤74	PASS
				Peak	2390.000	-40.31	≤-21.20	54.89	≤74	PASS
		High	2480	AV	2483.500	-47.59	≤-41.20	47.61	≤54	PASS
				AV	2483.520	-47.59	≤-41.20	47.61	≤54	PASS
				AV	2500.000	-47.91	≤-41.20	47.29	≤54	PASS
				Peak	2483.500	-40.14	≤-21.20	55.06	≤74	PASS
				Peak	2495.200	-36.98	≤-21.20	58.22	≤74	PASS
				Peak	2500.000	-40.11	≤-21.20	55.09	≤74	PASS
2DH5	Ant1	Low	2402	AV	2310.000	-48.83	≤-41.20	46.37	≤54	PASS
				AV	2388.935	-48.34	≤-41.20	46.86	≤54	PASS
				AV	2390.000	-48.44	≤-41.20	46.76	≤54	PASS
				Peak	2310.000	-40.55	≤-21.20	54.65	≤74	PASS
				Peak	2322.995	-37.1	≤-21.20	58.10	≤74	PASS
				Peak	2390.000	-41.39	≤-21.20	53.81	≤74	PASS
		High	2480	AV	2483.500	-47.54	≤-41.20	47.66	≤54	PASS
				AV	2483.520	-47.54	≤-41.20	47.66	≤54	PASS
				AV	2500.000	-47.82	≤-41.20	47.38	≤54	PASS
				Peak	2483.500	-39.81	≤-21.20	55.39	≤74	PASS
				Peak	2495.840	-37.79	≤-21.20	57.41	≤74	PASS
				Peak	2500.000	-39.64	≤-21.20	55.56	≤74	PASS
3DH5	Ant1	Low	2402	AV	2310.000	-48.96	≤-41.20	46.24	≤54	PASS
				AV	2388.620	-48.5	≤-41.20	46.70	≤54	PASS
				AV	2390.000	-48.61	≤-41.20	46.59	≤54	PASS
				Peak	2310.000	-41.64	≤-21.20	53.56	≤74	PASS
				Peak	2370.350	-38.33	≤-21.20	56.87	≤74	PASS
				Peak	2390.000	-41.19	≤-21.20	54.01	≤74	PASS
		High	2480	AV	2483.500	-47.69	≤-41.20	47.51	≤54	PASS
				AV	2483.520	-47.69	≤-41.20	47.51	≤54	PASS
				AV	2500.000	-47.96	≤-41.20	47.24	≤54	PASS
				Peak	2483.500	-40.2	≤-21.20	55.00	≤74	PASS
				Peak	2488.960	-37.49	≤-21.20	57.71	≤74	PASS
				Peak	2500.000	-39.63	≤-21.20	55.57	≤74	PASS



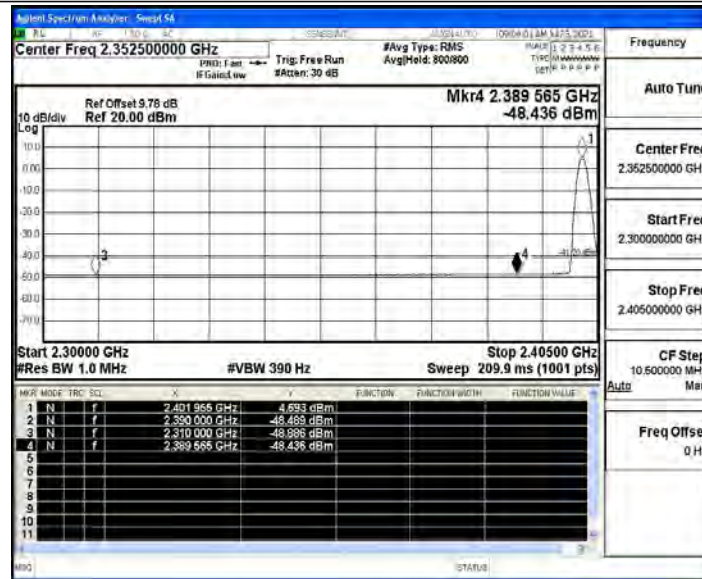
Note:

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.

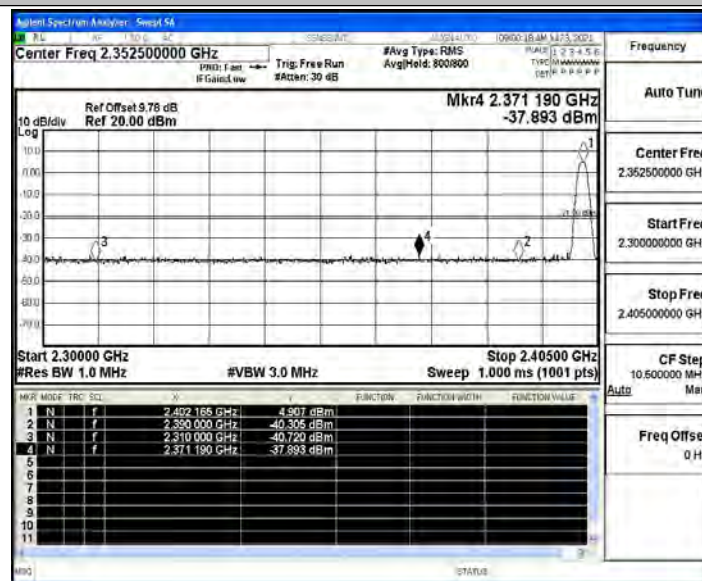


Test Graphs

DH5_Ant1_Low_2402_AV



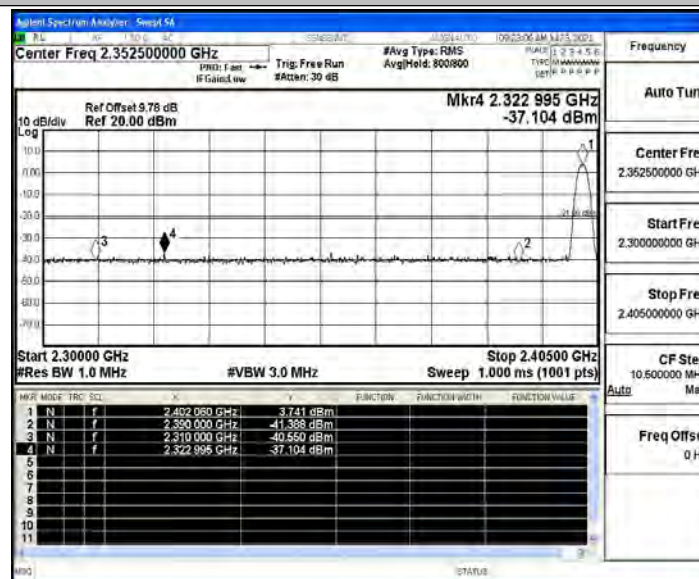
DH5_Ant1_Low_2402_Peak



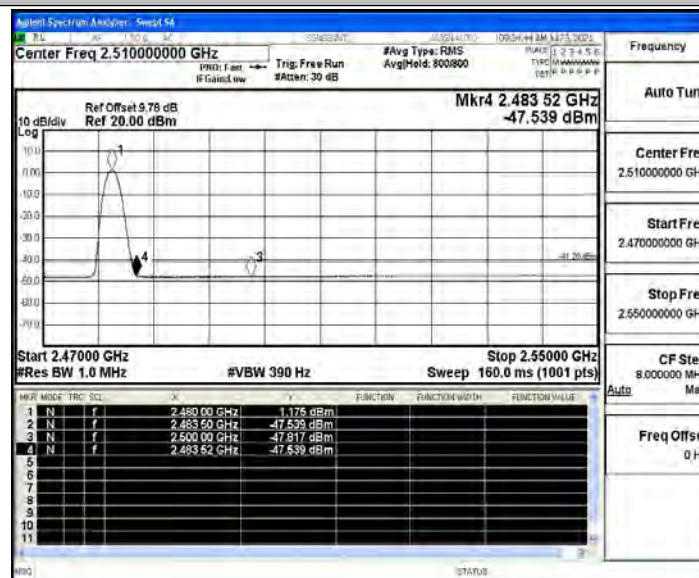
DH5_Ant1_High_2480_AV



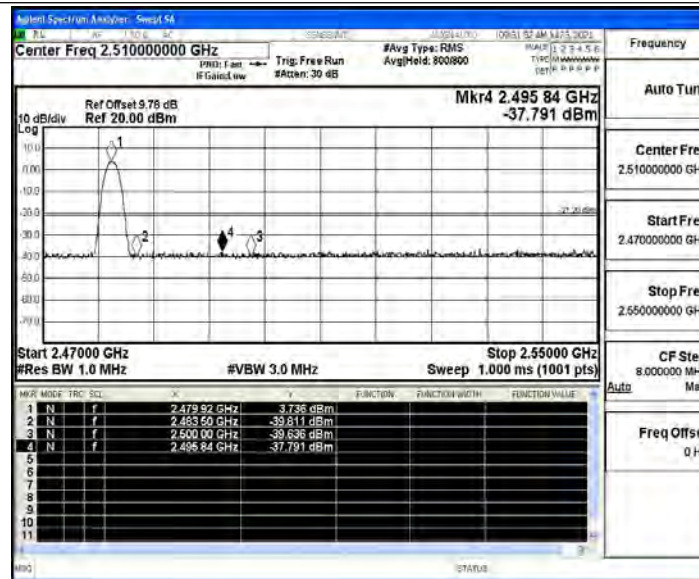
2DH5_Ant1_Low_2402_Peak



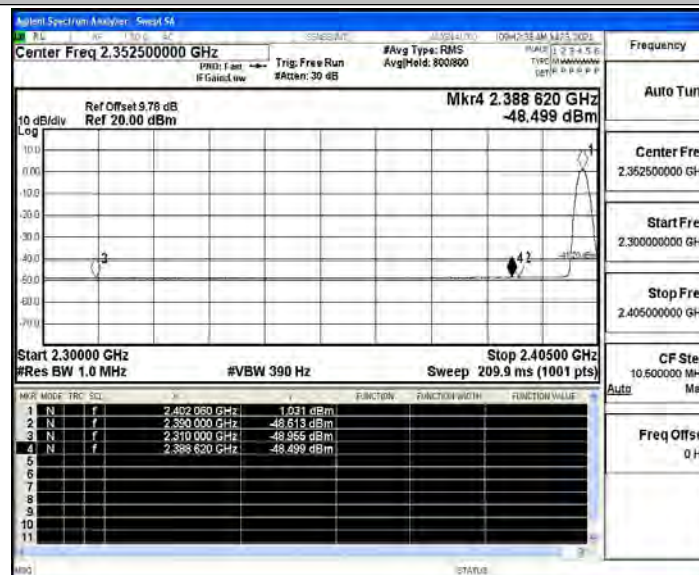
2DH5_Ant1_High_2480_AV



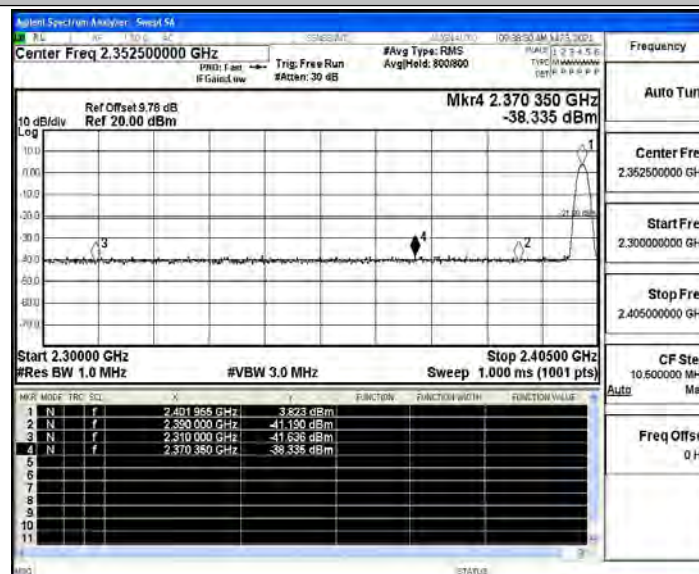
2DH5_Ant1_High_2480_Peak



3DH5_Ant1_Low_2402_AV

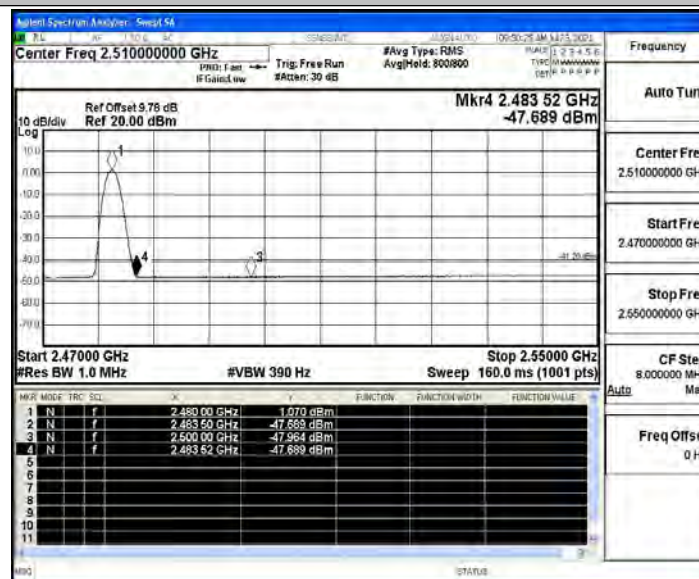


3DH5_Ant1_Low_2402_Peak





3DH5_Ant1_High_2480_AV



3DH5_Ant1_High_2480_Peak

