Appendix Test Data

Report No.:	18220WC20131001	Test Sample No.:	1-2-2
Start Test Date:	2022.6.20	Finish Test Date:	2022.6.28
Test Engineer:	Tony.He	Auditor:	Edward.Pan
Temperature:	24.3℃	Relative Humidity:	57.2 %
Pressure:	1012 hPa		

Appendix A: DTS Bandwidth

Test Result

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.728	2401.664	2402.392	≥0.5	PASS
		2440	0.712	2439.640	2440.352	≥0.5	PASS
		2480	0.708	2479.644	2480.352	≥0.5	PASS
BLE_2M	Ant1	2402	0.996	2401.504	2402.500	≥0.5	PASS
		2440	1.012	2439.496	2440.508	≥0.5	PASS
		2480	1.004	2479.480	2480.484	≥0.5	PASS

Test Graphs

BLE_1M_Ant1_2402

BLE_1M_Ant1_2440

BLE_1M_Ant1_2480

BLE_2M_Ant1_2402

BLE_2M_Ant1_2440

BLE_2M_Ant1_2480

Appendix B: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.7300	2401.074	2402.804	---	PASS
		2440	1.5159	2439.221	2440.736	---	PASS
		2480	1.1513	2479.421	2480.573	---	PASS
BLE_2M	Ant1	2402	2.2415	2400.897	2403.138	---	PASS
		2440	2.2597	2438.879	2441.139	---	PASS
		2480	2.2554	2478.878	2481.133	---	PASS

Test Graphs

BLE_1M_Ant1_2402

BLE_1M_Ant1_2440

BLE_1M_Ant1_2480

BLE_2M_Ant1_2402

BLE_2M_Ant1_2440

BLE_2M_Ant1_2480

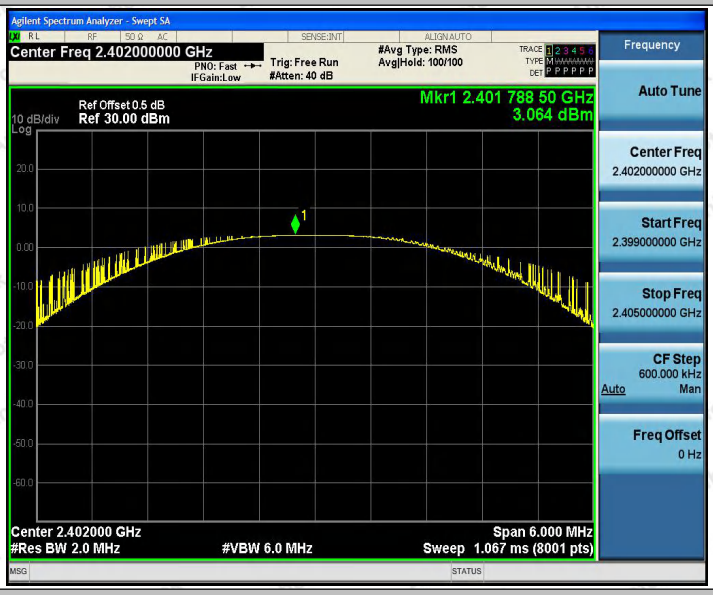
Appendix C: Maximum conducted output power

Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	3.06	≤30	PASS
		2440	2.92	≤30	PASS
		2480	4.54	≤30	PASS
BLE_2M	Ant1	2402	3.12	≤30	PASS
		2440	3.01	≤30	PASS
		2480	4.6	≤30	PASS

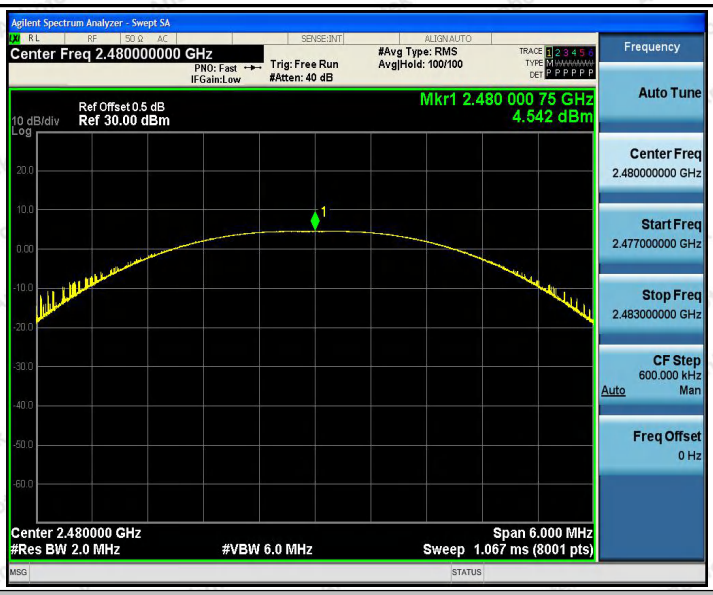
Test Graphs

BLE_1M_Ant1_2402

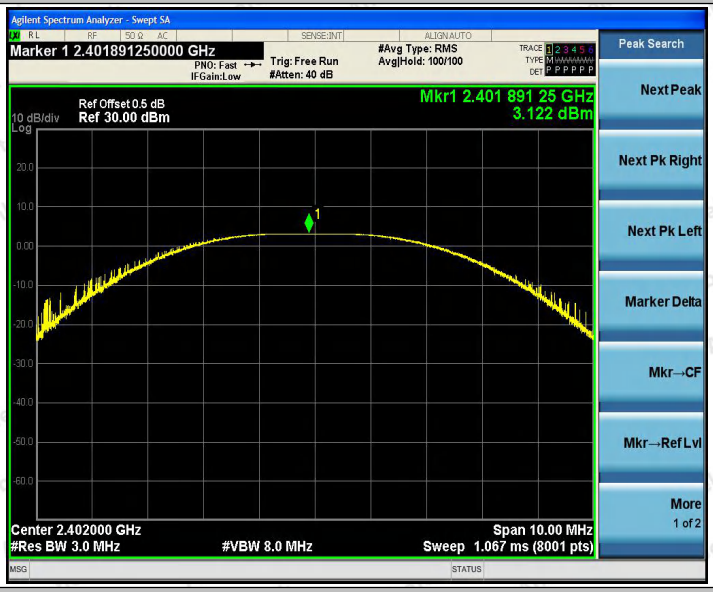


BLE_1M_Ant1_2440

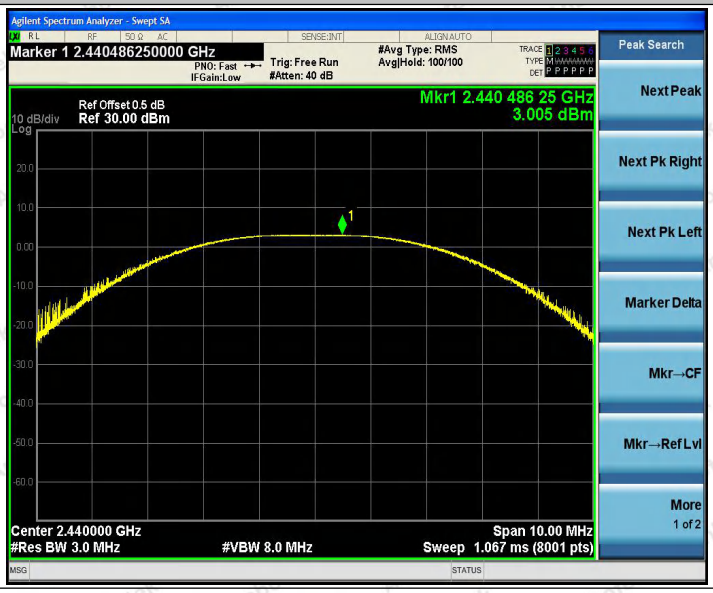
BLE_1M_Ant1_2480



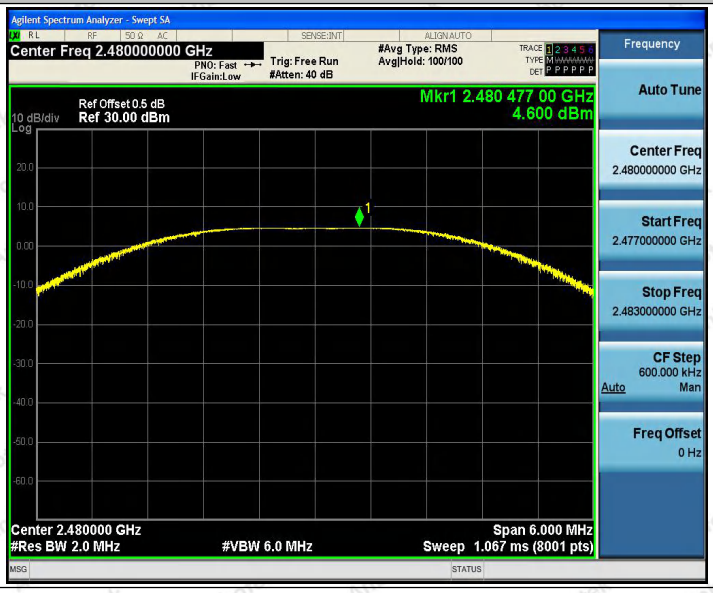
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480



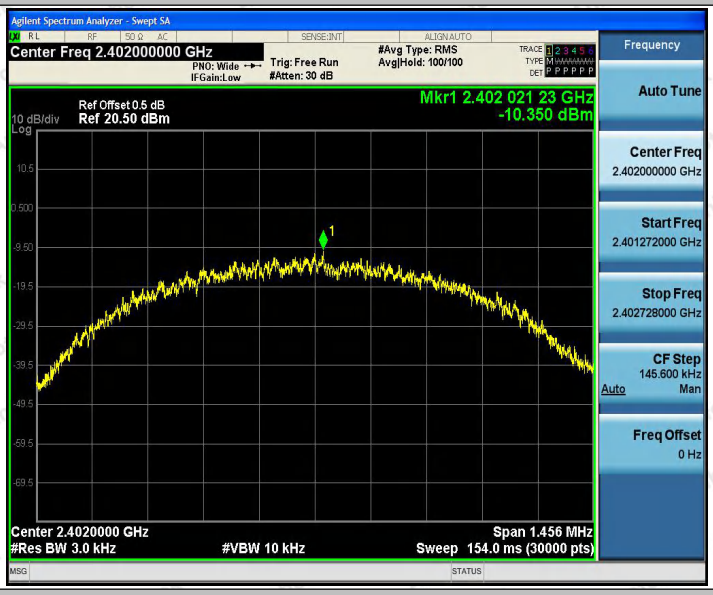
Appendix D: Maximum power spectral density

Test Result

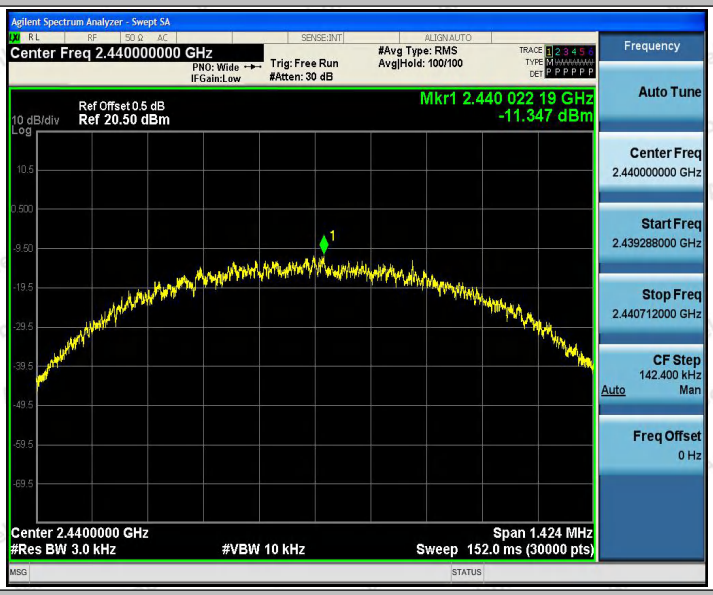
TestMode	Antenna	Channel	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-10.35	≤8	PASS
		2440	-11.35	≤8	PASS
		2480	-9.78	≤8	PASS
BLE_2M	Ant1	2402	-12.15	≤8	PASS
		2440	-12.69	≤8	PASS
		2480	-11.2	≤8	PASS

Test Graphs

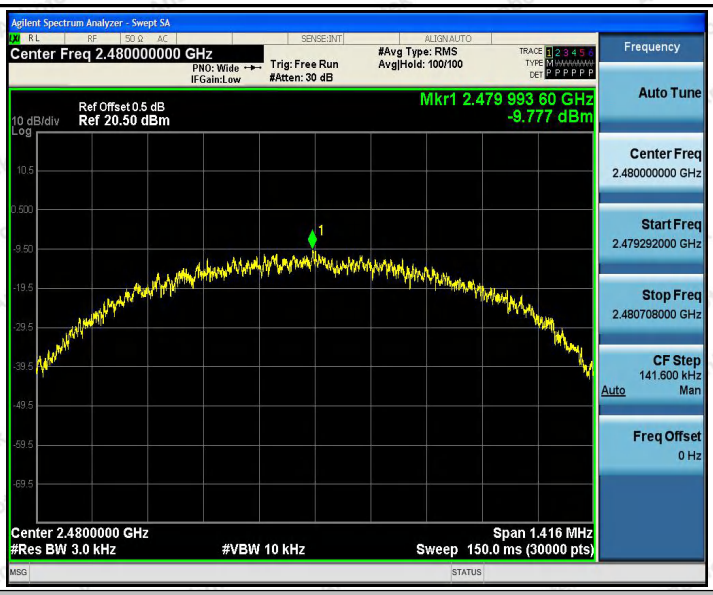
BLE_1M_Ant1_2402



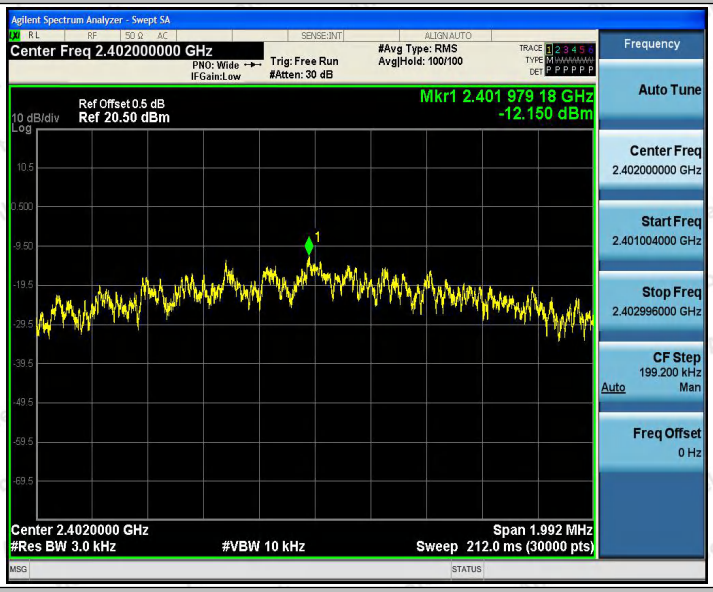
BLE_1M_Ant1_2440



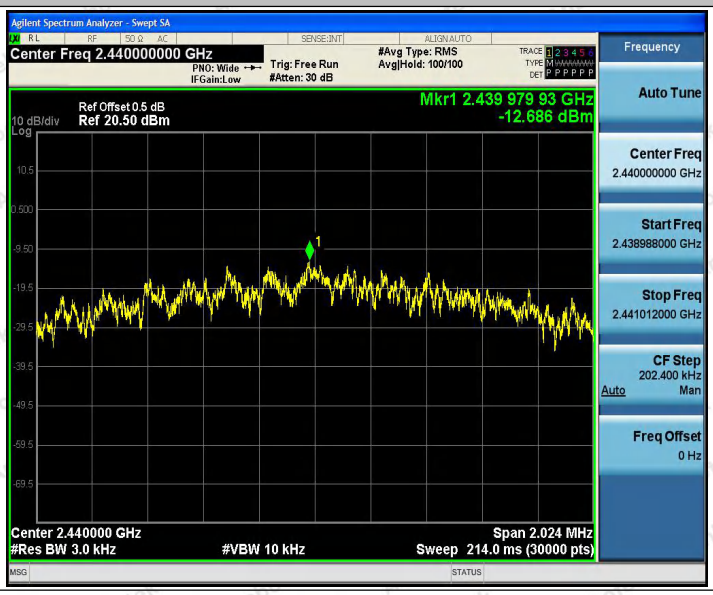
BLE_1M_Ant1_2480



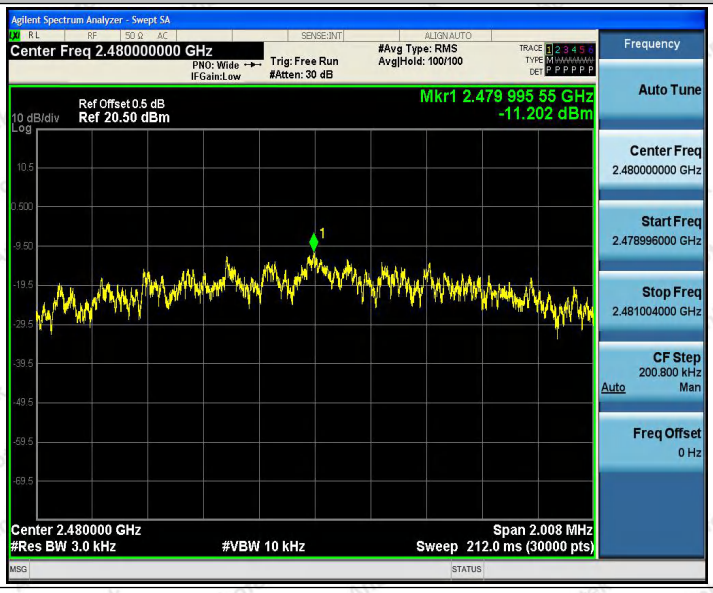
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480



Appendix E: Band edge measurements

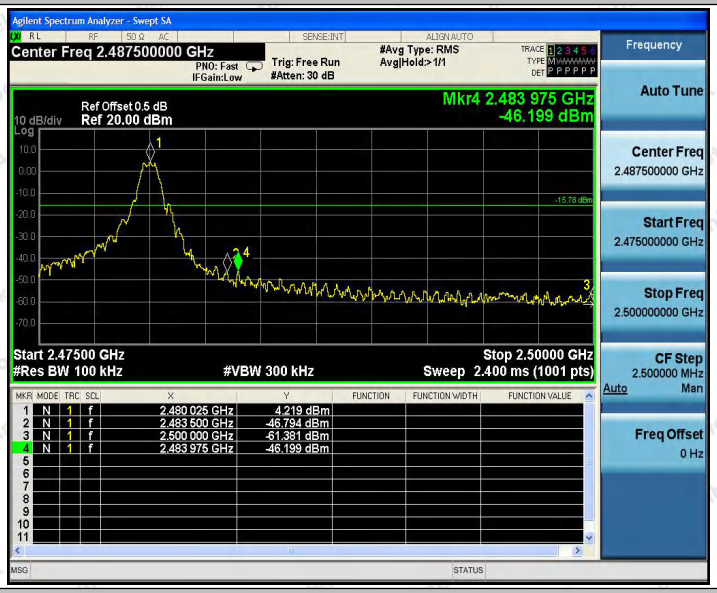
Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	2.43	-26.34	≤-17.57	PASS
		High	2480	4.22	-46.2	≤-15.78	PASS
BLE_2M	Ant1	Low	2402	2.46	-26.07	≤-17.54	PASS
		High	2480	4.11	-48.43	≤-15.89	PASS

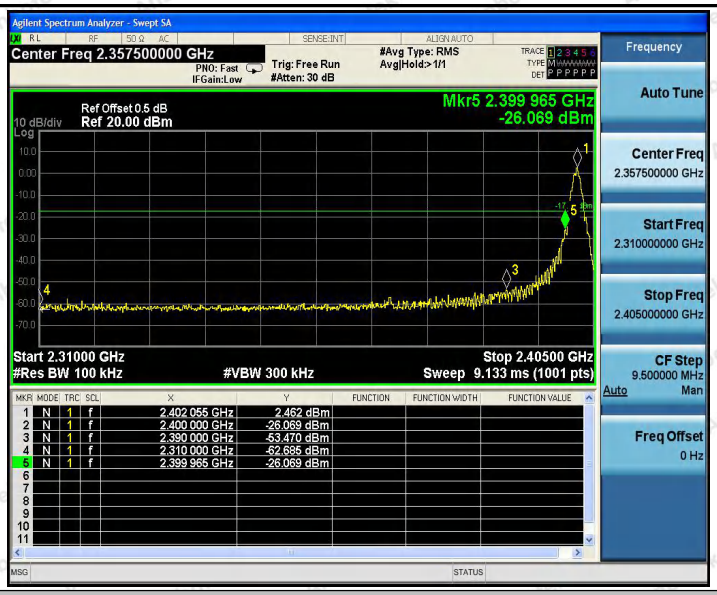
Test Graphs

BLE_1M_Ant1_Low_2402

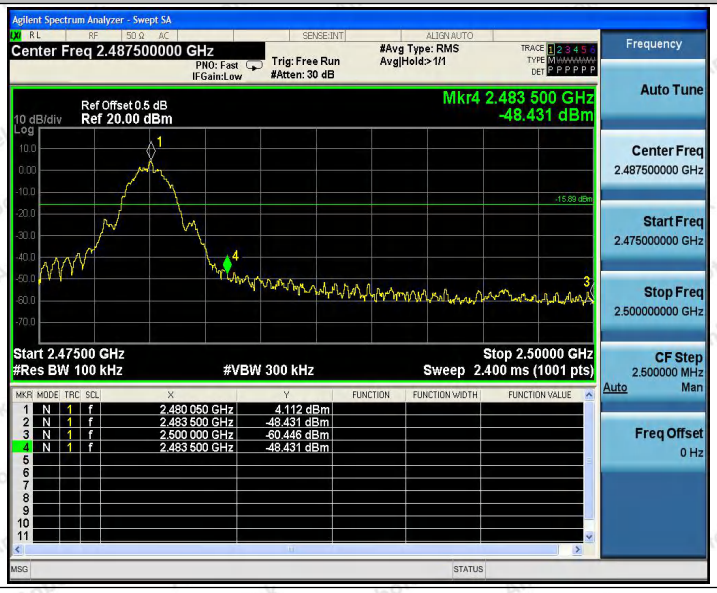
BLE_1M_Ant1_High_2480



BLE_2M_Ant1_Low_2402



BLE_2M_Ant1_High_2480



Appendix F: Conducted Spurious Emission

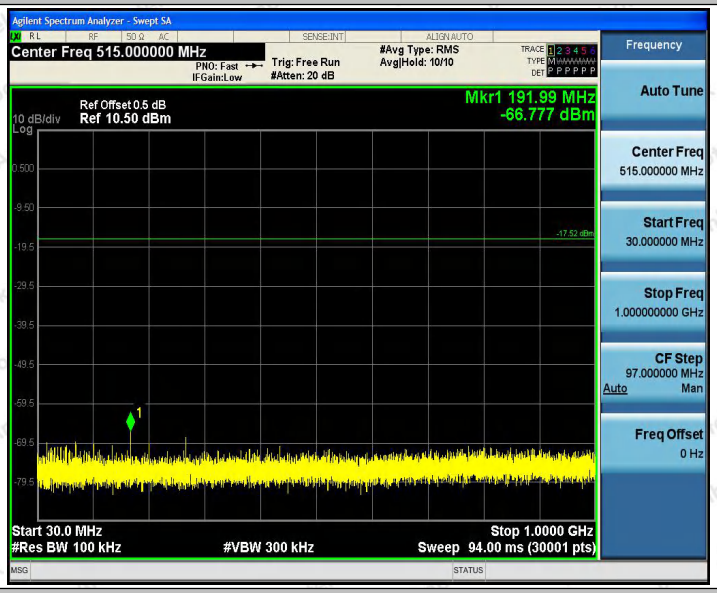
Test Result

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	2.48	2.48	---	PASS
			30~1000	2.48	-66.78	≤-17.52	PASS
			1000~26500	2.48	-23.73	≤-17.52	PASS
		2440	Reference	2.59	2.59	---	PASS
			30~1000	2.59	-66.82	≤-17.41	PASS
			1000~26500	2.59	-23.47	≤-17.41	PASS
		2480	Reference	4.27	4.27	---	PASS
			30~1000	4.27	-67.87	≤-15.73	PASS
			1000~26500	4.27	-23.94	≤-15.73	PASS
BLE_2M	Ant1	2402	Reference	2.68	2.68	---	PASS
			30~1000	2.68	-68.39	≤-17.32	PASS
			1000~26500	2.68	-23.68	≤-17.32	PASS
		2440	Reference	2.59	2.59	---	PASS
			30~1000	2.59	-67.59	≤-17.41	PASS
			1000~26500	2.59	-26.94	≤-17.41	PASS
		2480	Reference	4.35	4.35	---	PASS
			30~1000	4.35	-67.13	≤-15.65	PASS
			1000~26500	4.35	-22.88	≤-15.65	PASS

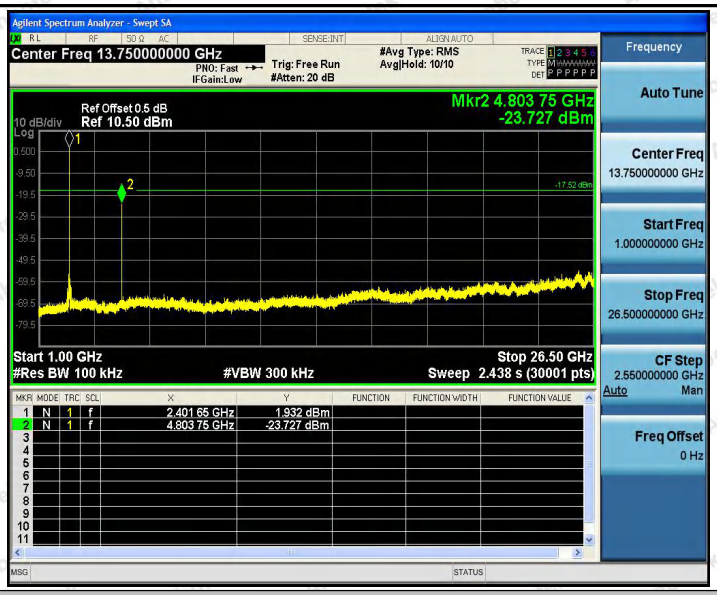
Test Graphs

BLE_1M_Ant1_2402_0~Reference

BLE_1M_Ant1_2402_30~1000

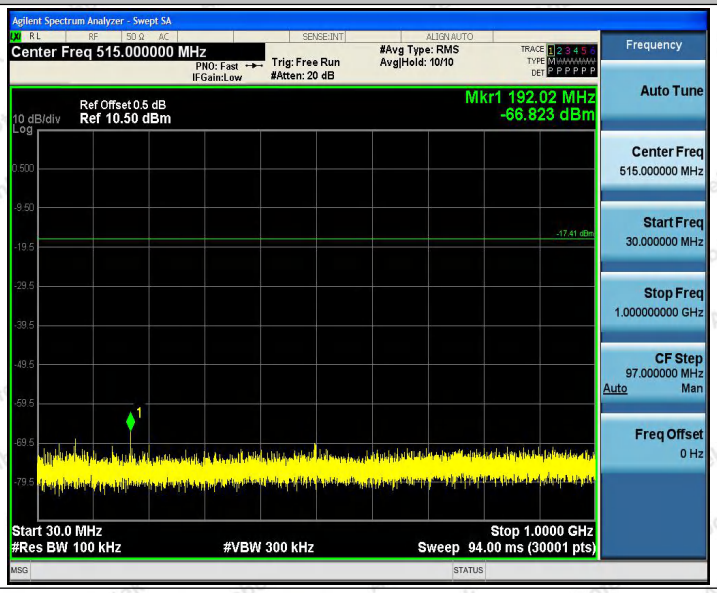


BLE_1M_Ant1_2402_1000~26500

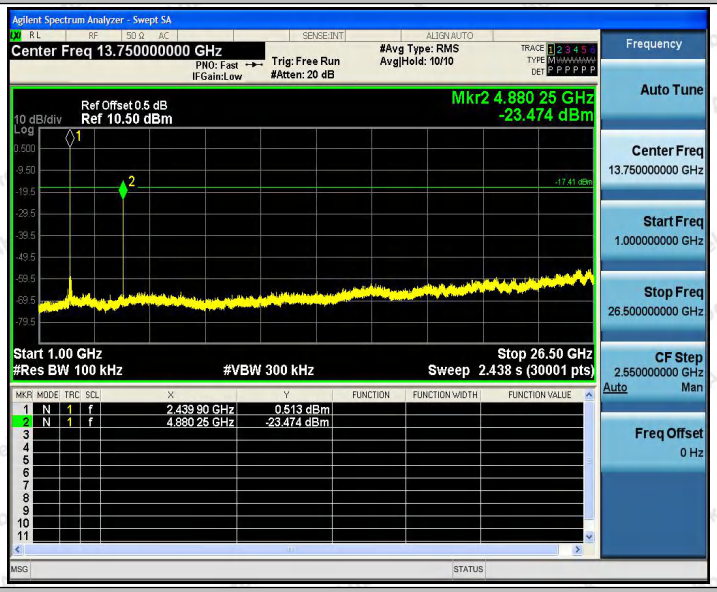


BLE_1M_Ant1_2440_0~Reference

BLE_1M_Ant1_2440_30~1000

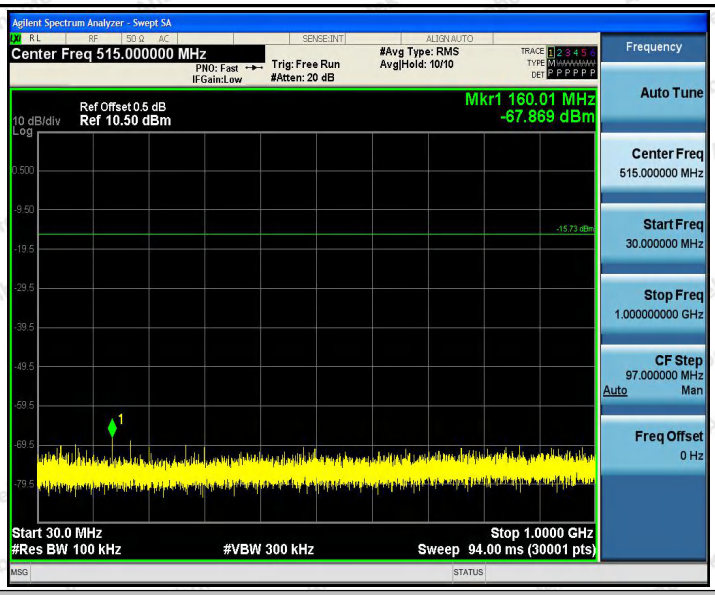


BLE_1M_Ant1_2440_1000~26500

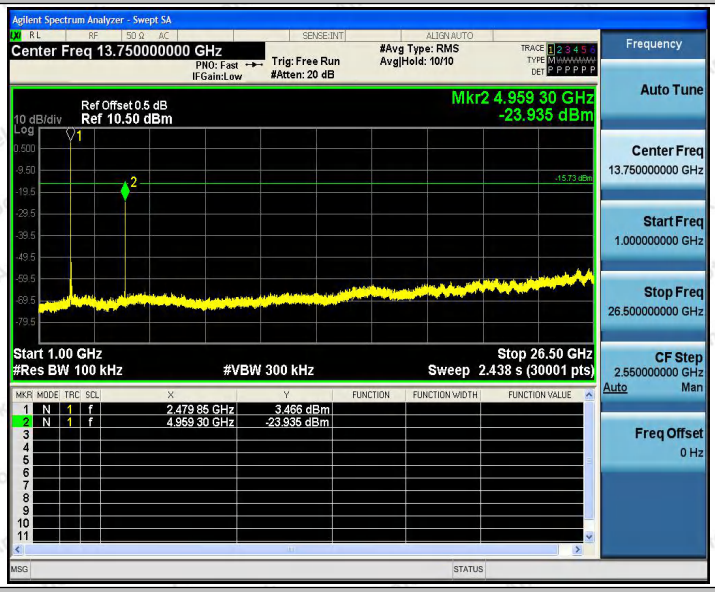


BLE_1M_Ant1_2480_0~Reference

BLE_1M_Ant1_2480_30~1000

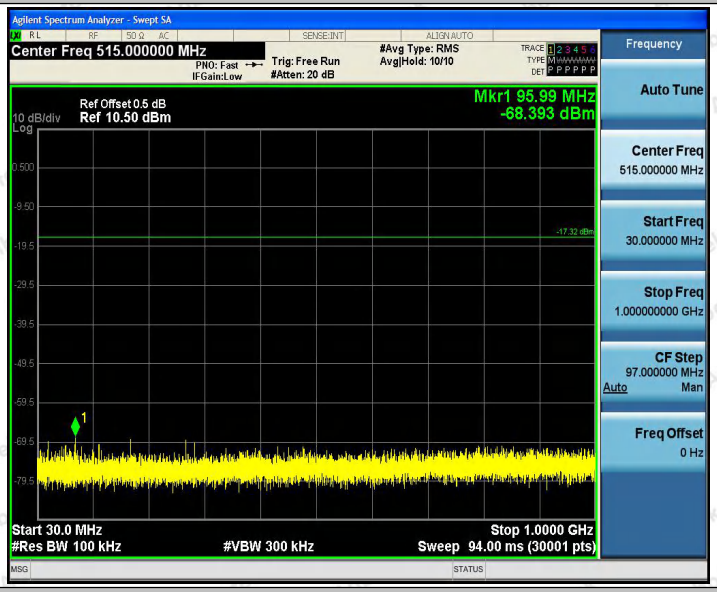


BLE_1M_Ant1_2480_1000~26500

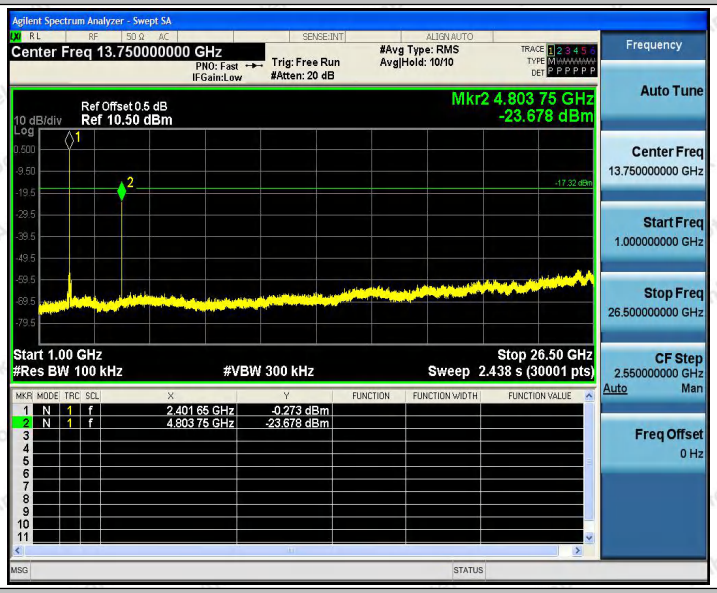


BLE_2M_Ant1_2402_0~Reference

BLE_2M_Ant1_2402_30~1000

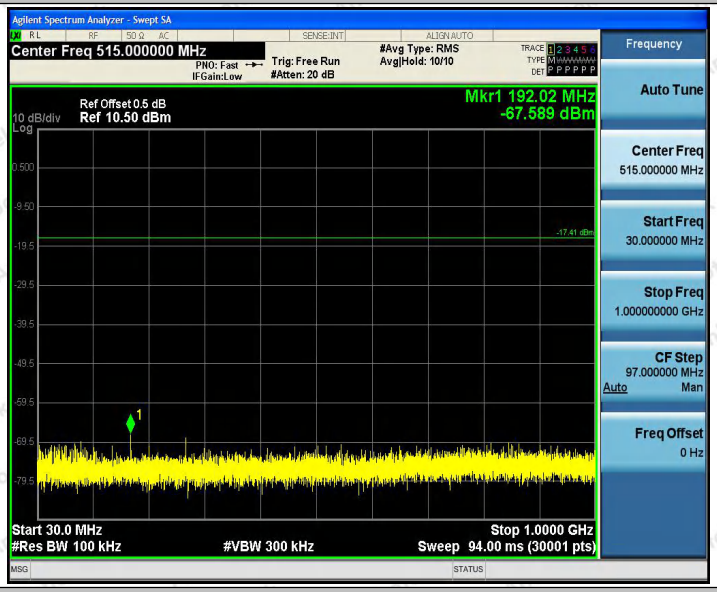


BLE_2M_Ant1_2402_1000~26500

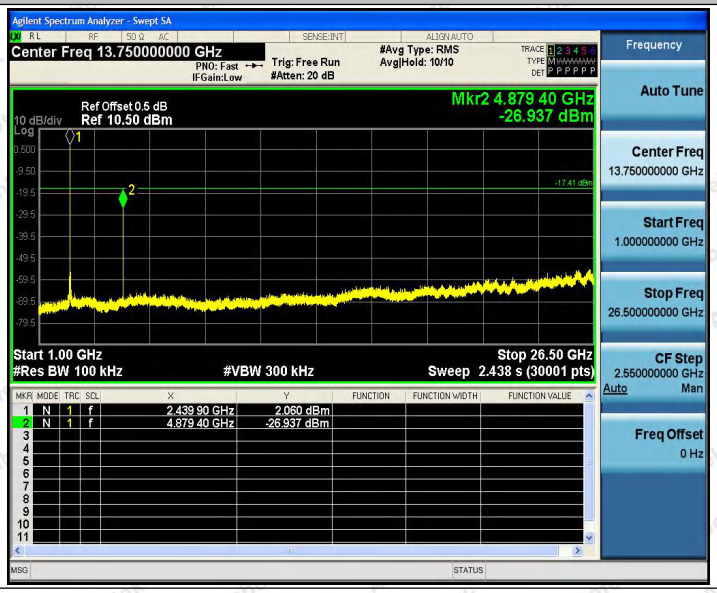


BLE_2M_Ant1_2440_0~Reference

BLE_2M_Ant1_2440_30~1000

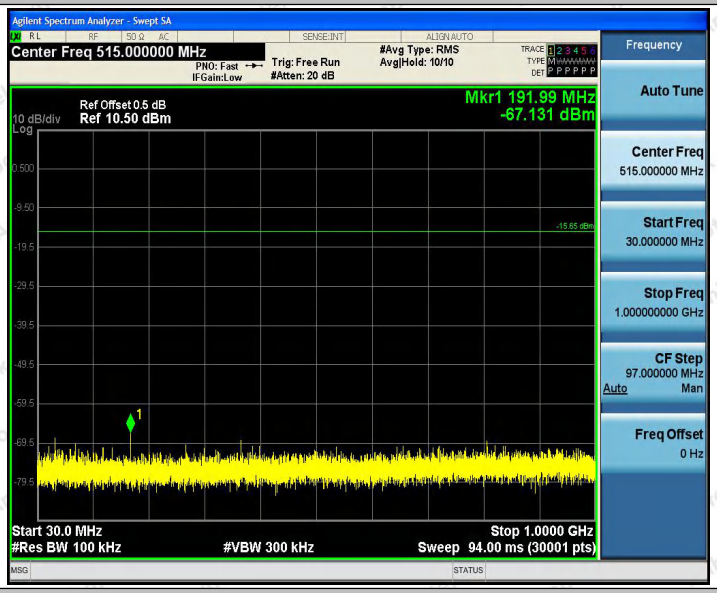


BLE_2M_Ant1_2440_1000~26500

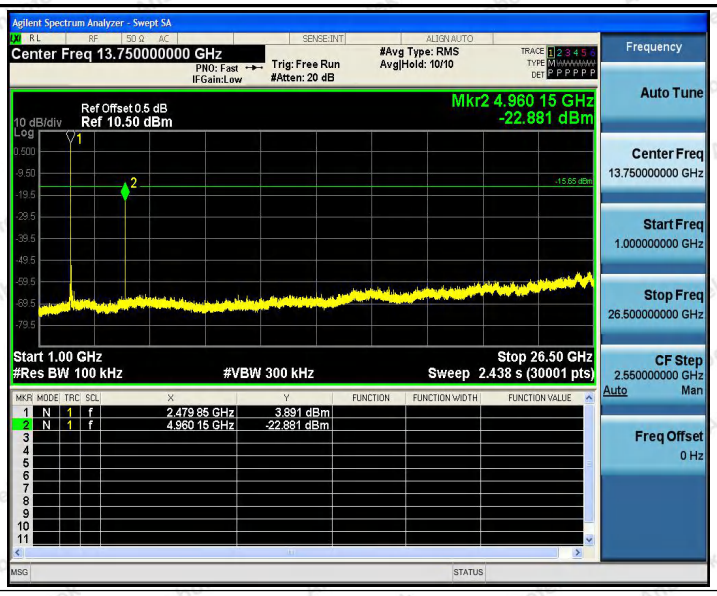


BLE_2M_Ant1_2480_0~Reference

BLE_2M_Ant1_2480_30~1000



BLE_2M_Ant1_2480_1000~26500


Agilent Spectrum Analyzer - Swept SA
Center Freq 13.750000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 20 dB
#Avg Type: RMS
Avg|Hold: 10/10
Frequency
Auto Tune
Ref Offset 0.5 dB
10 dB/div
Ref 10.50 dBm
Mkr2 4.960 15 GHz
-22.881 dBm
Center Freq
13.750000000 GHz
Start Freq
1.000000000 GHz
Stop Freq
26.500000000 GHz
Start 1.00 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 26.50 GHz
Sweep 2.438 s (30001 pts)
CF Step
2.550000000 GHz
Auto
Man
Freq Offset
0 Hz
1 N 1 f 2.479 85 GHz 3.891 dBm
2 N 1 f 4.960 15 GHz -22.881 dBm

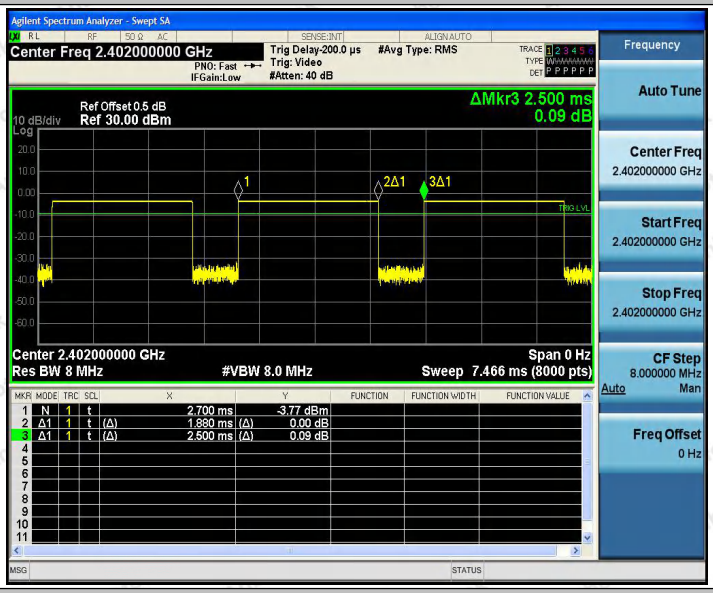
Appendix G: Duty Cycle

Test Result

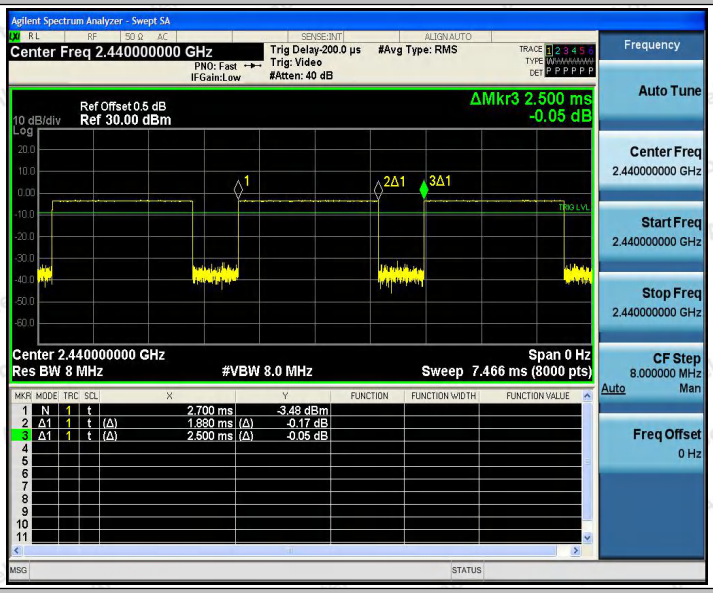
TestMode	Antenna	Channel	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	Limit	Verdict
BLE_1M	Ant1	2402	1.88	2.50	0.7520	75.20	1.24	---	PASS
		2440	1.88	2.50	0.7520	75.20	1.24	---	PASS
		2480	1.88	2.50	0.7520	75.20	1.24	---	PASS
BLE_2M	Ant1	2402	0.95	1.25	0.7600	76.00	1.19	---	PASS
		2440	0.95	1.25	0.7600	76.00	1.19	---	PASS
		2480	0.95	1.25	0.7600	76.00	1.19	---	PASS

Test Graphs

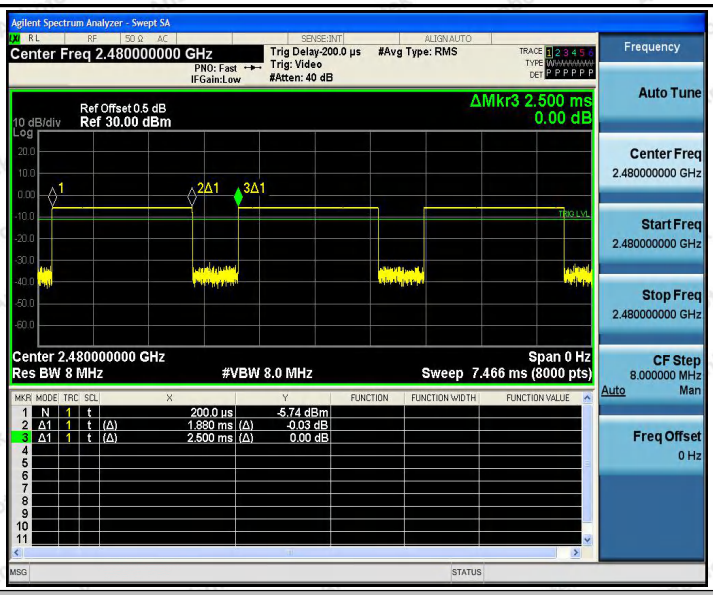
BLE_1M_Ant1_2402



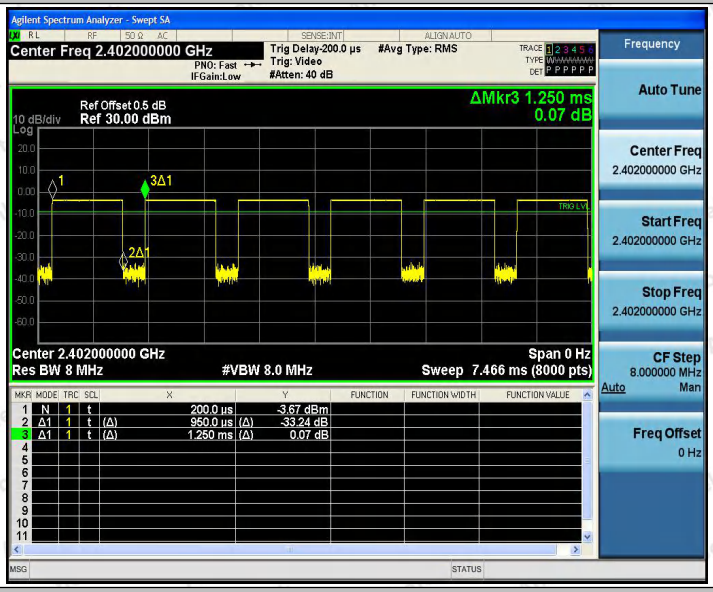
BLE_1M_Ant1_2440



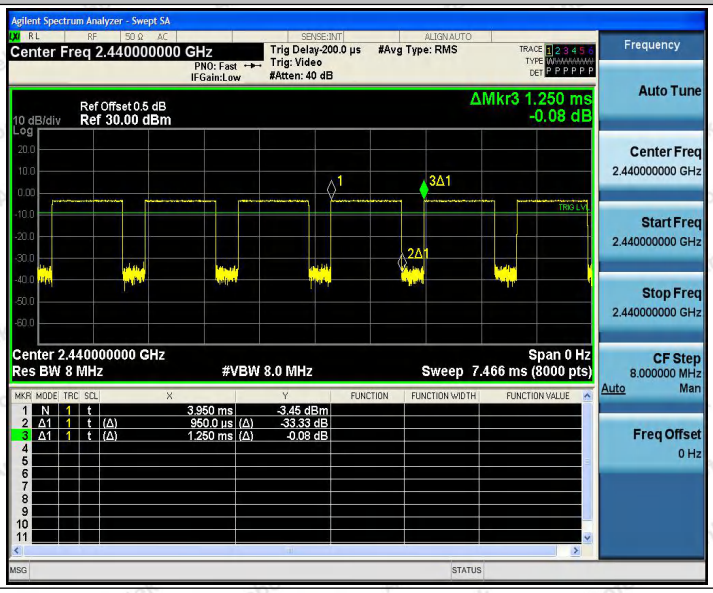
BLE_1M_Ant1_2480



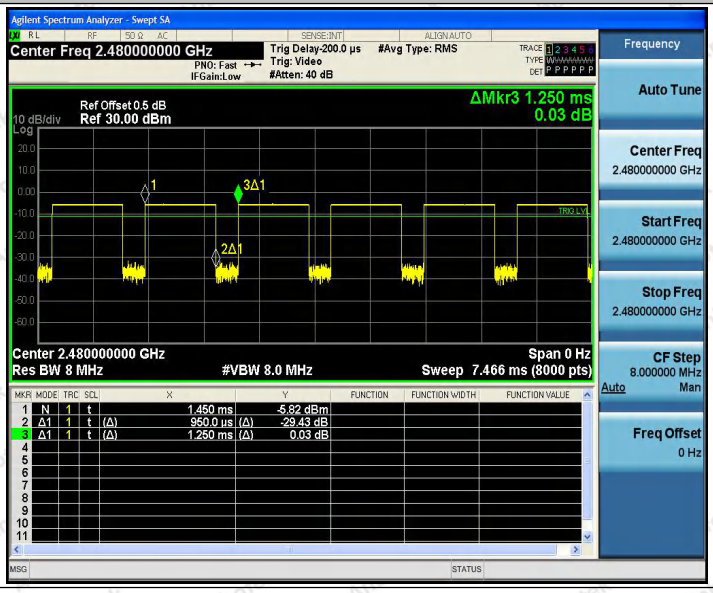
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480



---End---