Appendix Test Data

Report No.:	18220WC20173402	Test Sample No.:	1-2-2
Start Test Date:	2022.8.2	Finish Test Date:	2022.8.5
Test Engineer:	Tony.He	Auditor:	Edward.Pan
Temperature:	27.3℃	Relative Humidity:	45 %
Pressure:	1012 hPa		

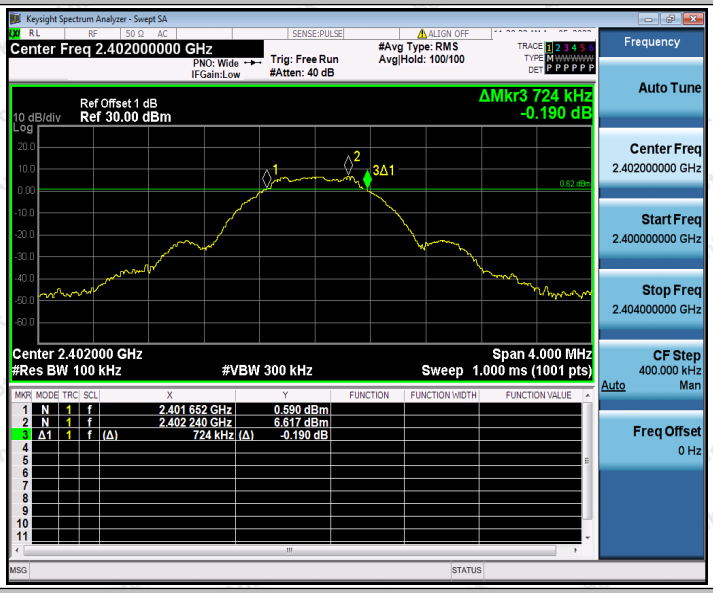
Appendix A: DTS Bandwidth

Test Result

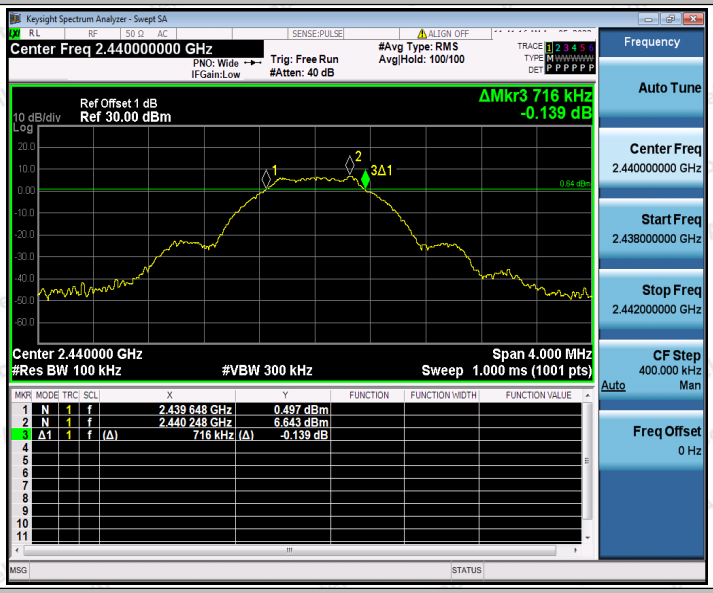
TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.724	2401.652	2402.376	≥0.5	PASS
		2440	0.716	2439.648	2440.364	≥0.5	PASS
		2480	0.716	2479.644	2480.360	≥0.5	PASS
BLE_2M	Ant1	2402	1.320	2401.360	2402.680	≥0.5	PASS
		2440	1.188	2439.420	2440.608	≥0.5	PASS
		2480	1.144	2479.440	2480.584	≥0.5	PASS

Test Graphs

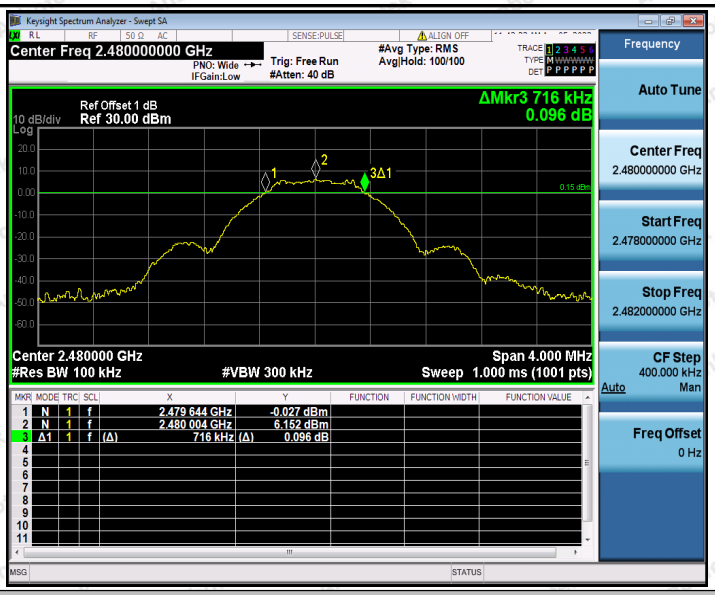
BLE_1M_Ant1_2402



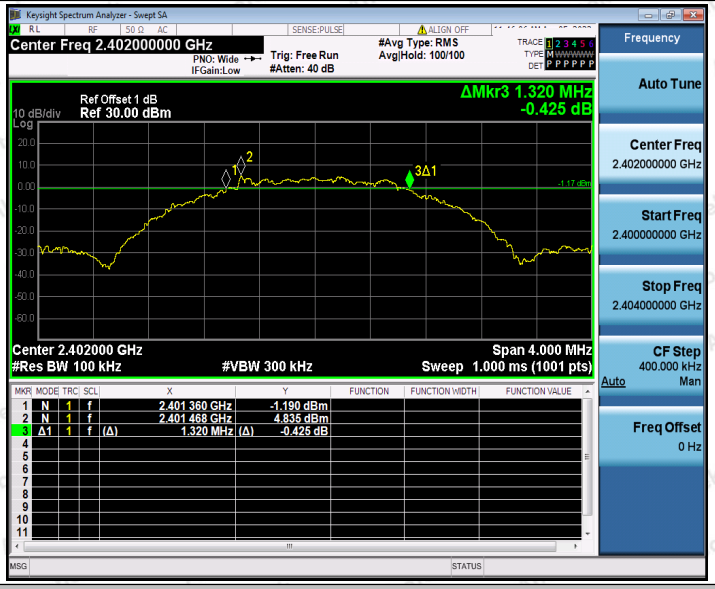
BLE_1M_Ant1_2440



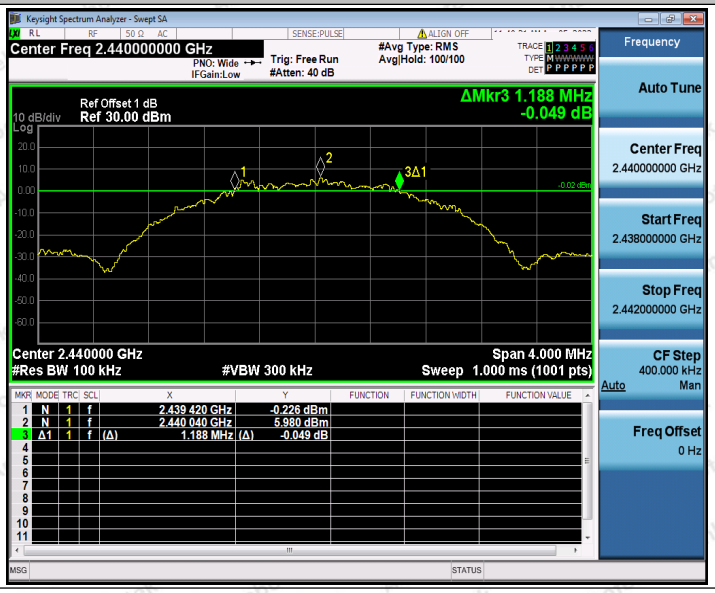
BLE_1M_Ant1_2480



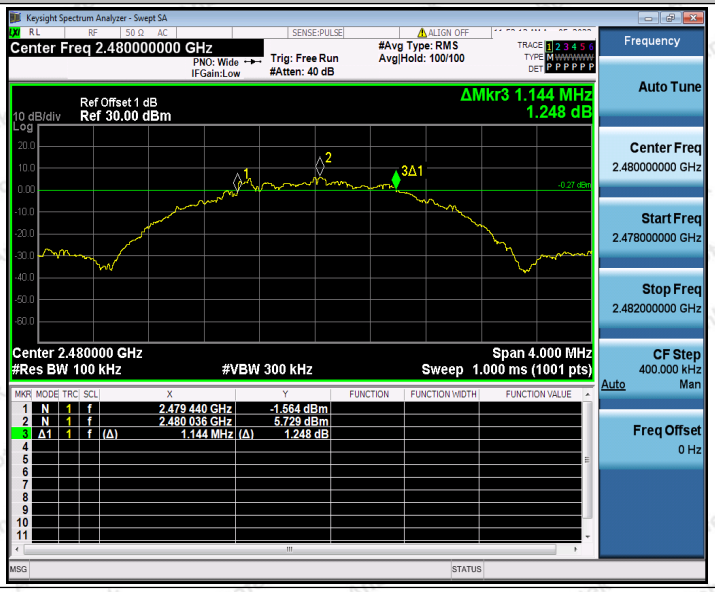
BLE_2M_Ant1_2402



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	1.0565	2401.480	2402.537	---	PASS
		2440	1.0498	2439.484	2440.534	---	PASS
		2480	1.0528	2479.479	2480.531	---	PASS
BLE_2M	Ant1	2402	2.0730	2400.984	2403.057	---	PASS
		2440	2.0666	2438.990	2441.057	---	PASS
		2480	2.0715	2478.982	2481.053	---	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

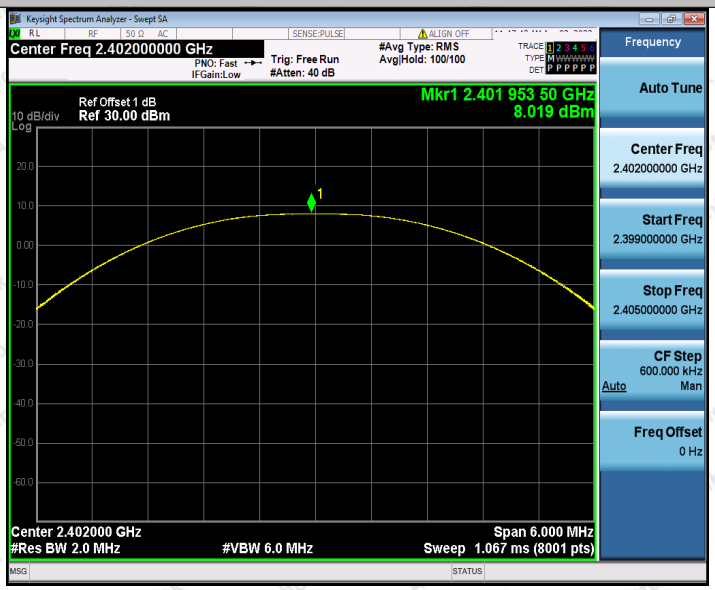
Appendix C: Maximum conducted output power

Test Result

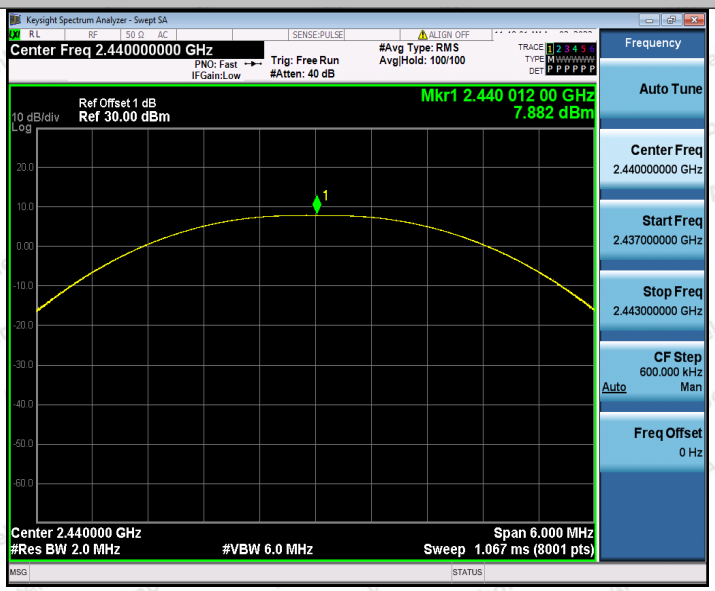
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	8.02	≤30	PASS
		2440	7.88	≤30	PASS
		2480	7.52	≤30	PASS
BLE_2M	Ant1	2402	7.98	≤30	PASS
		2440	7.83	≤30	PASS
		2480	7.45	≤30	PASS

Test Graphs

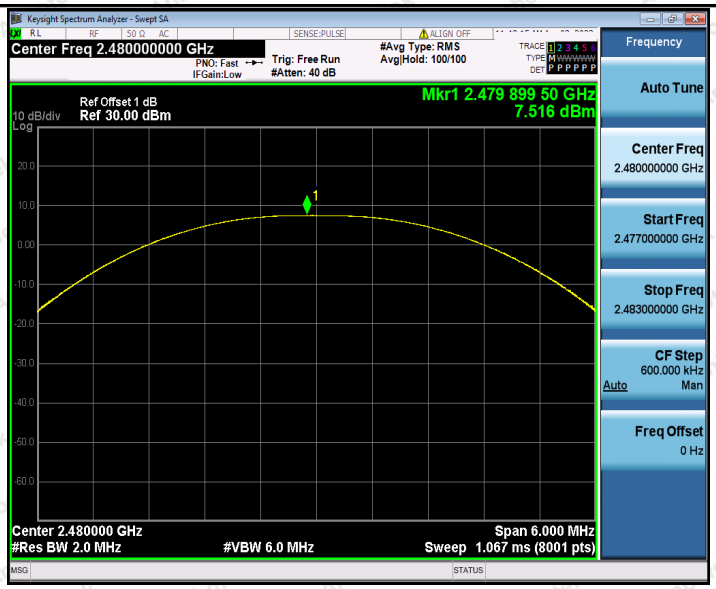
BLE_1M_Ant1_2402



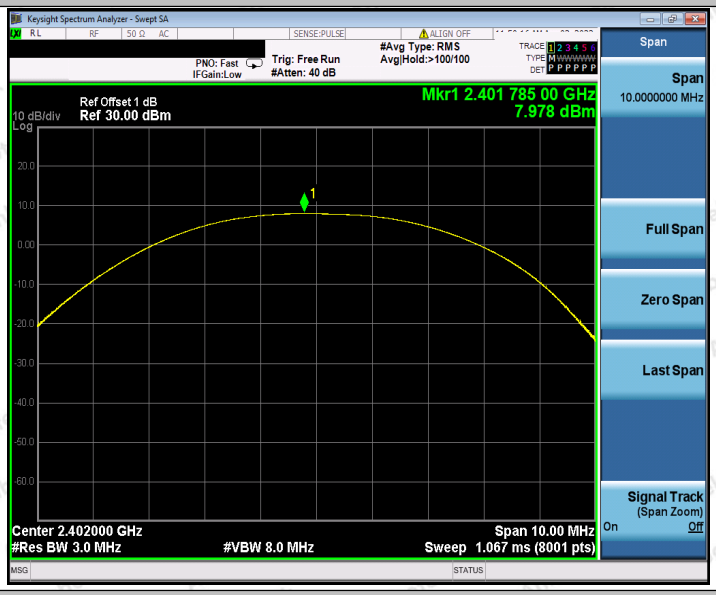
BLE_1M_Ant1_2440



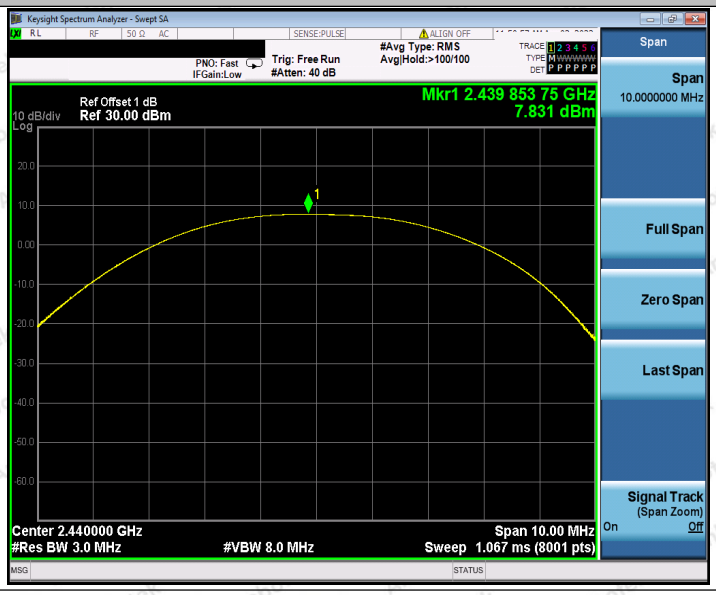
BLE_1M_Ant1_2480



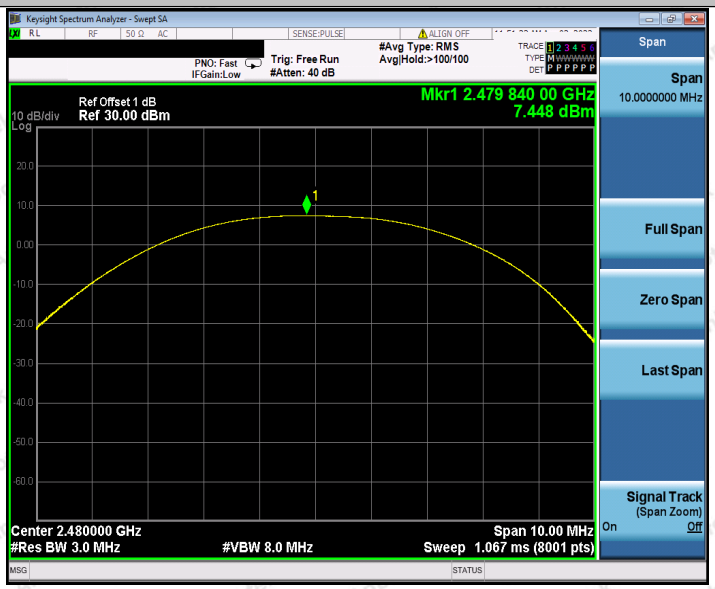
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480



Appendix D: Maximum power spectral density

Test Result

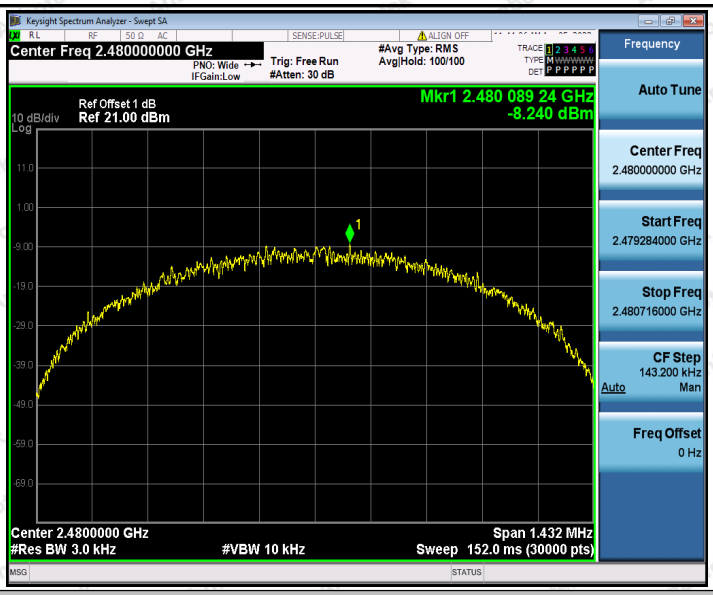
TestMode	Antenna	Channel	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-7.83	≤8	PASS
		2440	-8.02	≤8	PASS
		2480	-8.24	≤8	PASS
BLE_2M	Ant1	2402	-11.19	≤8	PASS
		2440	-11.36	≤8	PASS
		2480	-11.7	≤8	PASS

Test Graphs

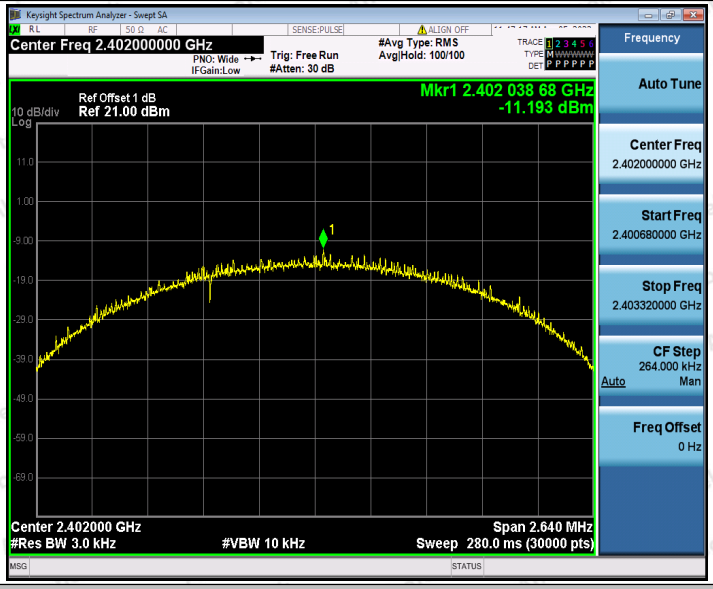
BLE_1M_Ant1_2402

BLE_1M_Ant1_2440

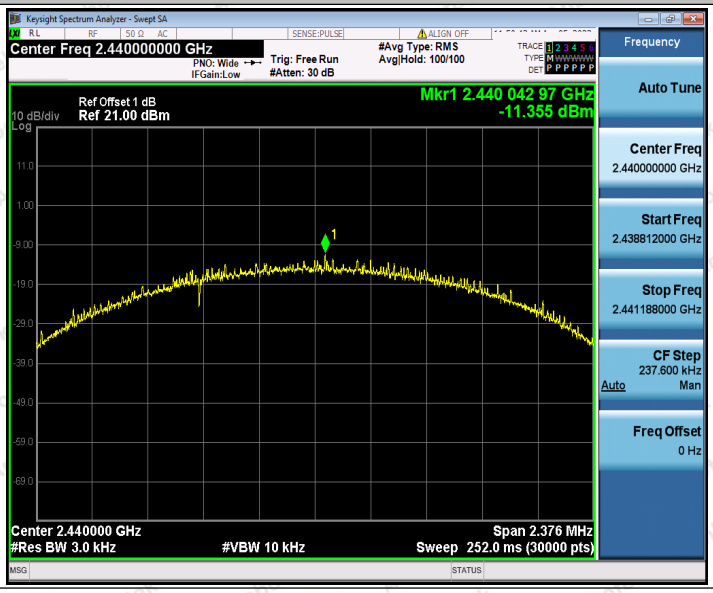
BLE_1M_Ant1_2480



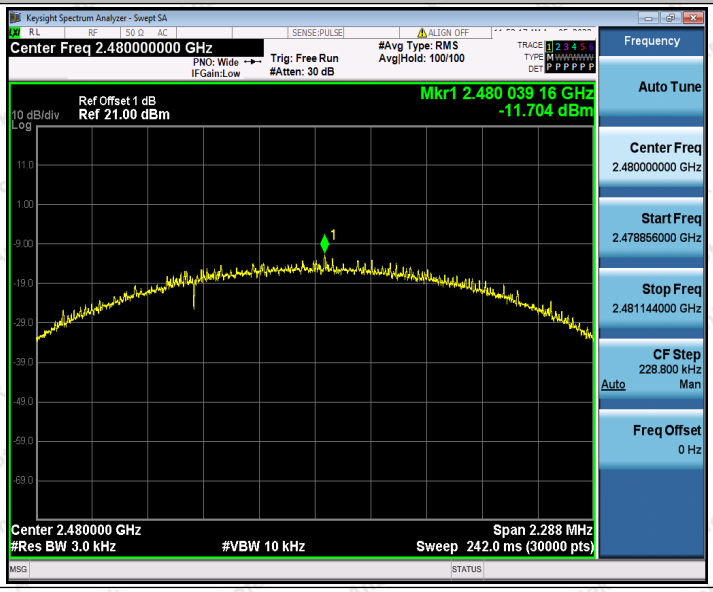
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480



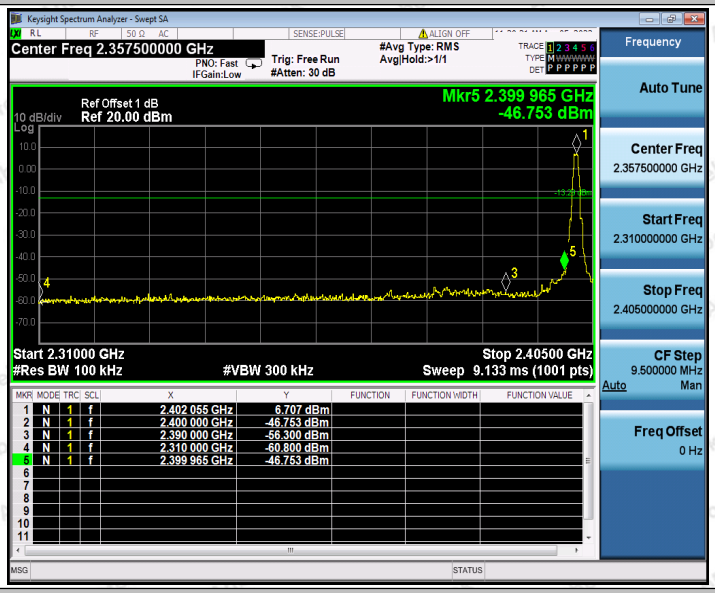
Appendix E: Band edge measurements

Test Result

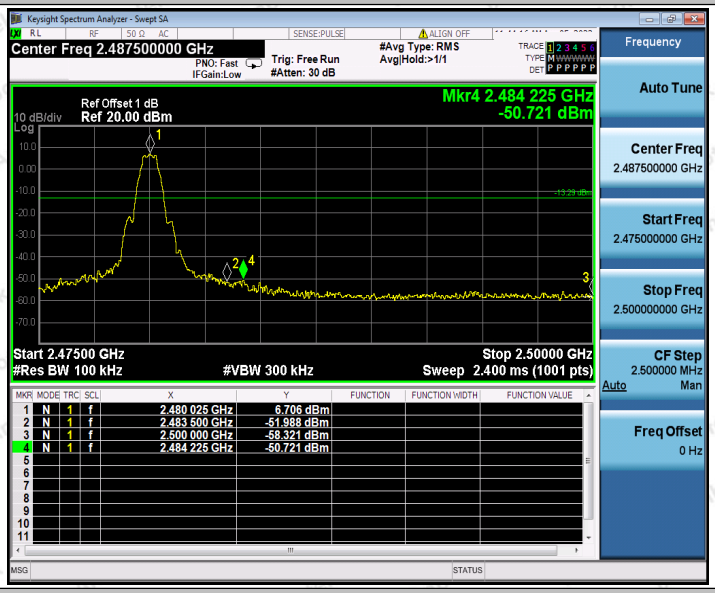
TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	6.71	-46.75	≤-13.29	PASS
		High	2480	6.71	-50.72	≤-13.29	PASS
BLE_2M	Ant1	Low	2402	5.99	-27.07	≤-14.01	PASS
		High	2480	5.73	-52.07	≤-14.27	PASS

Test Graphs

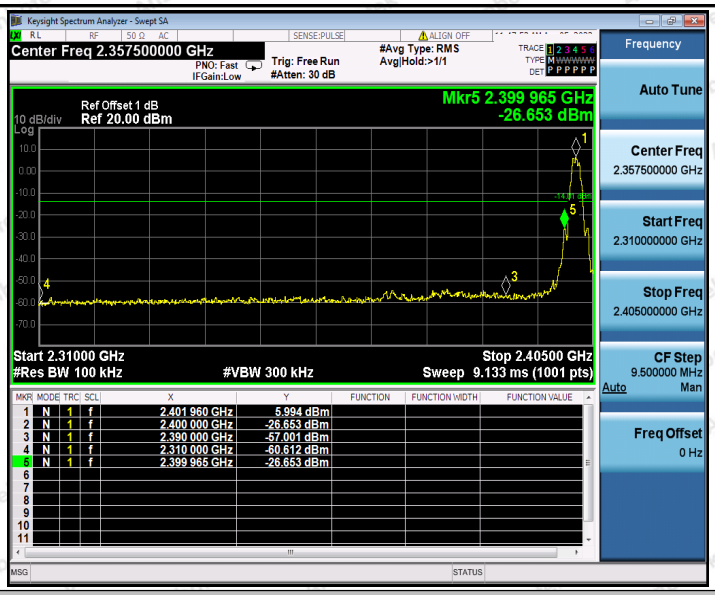
BLE_1M_Ant1_Low_2402



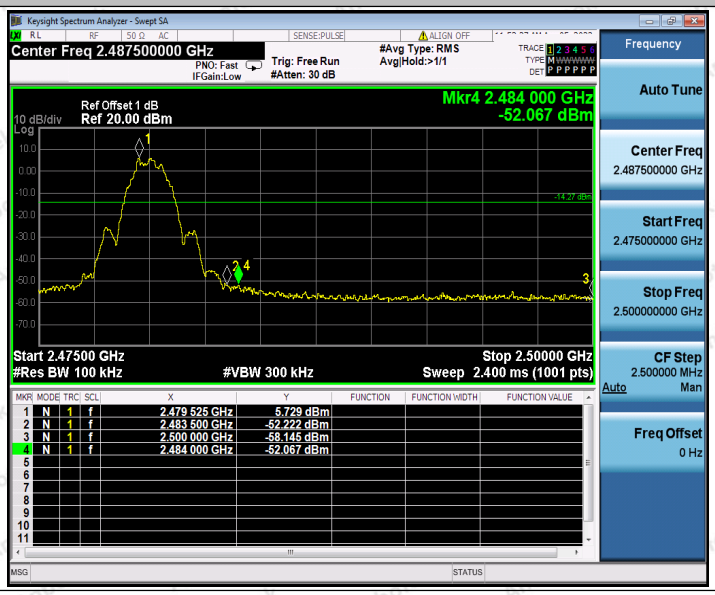
BLE_1M_Ant1_High_2480



BLE_2M_Ant1_Low_2402



BLE_2M_Ant1_High_2480



Appendix F: Conducted Spurious Emission

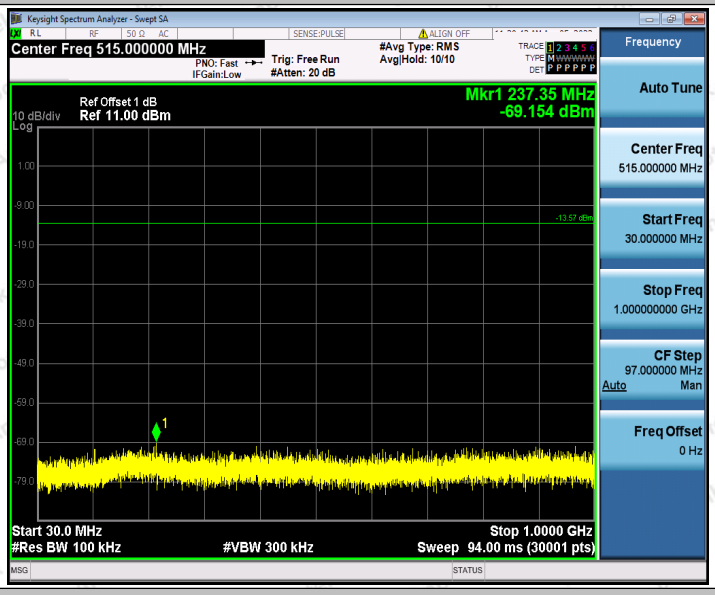
Test Result

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	6.43	6.43	---	PASS
			30~1000	6.43	-69.15	≤-13.57	PASS
			1000~26500	6.43	-54.16	≤-13.57	PASS
		2440	Reference	6.54	6.54	---	PASS
			30~1000	6.54	-69.83	≤-13.46	PASS
			1000~26500	6.54	-53.11	≤-13.46	PASS
		2480	Reference	6.29	6.29	---	PASS
			30~1000	6.29	-69.43	≤-13.71	PASS
			1000~26500	6.29	-53.5	≤-13.71	PASS
BLE_2M	Ant1	2402	Reference	6.07	6.07	---	PASS
			30~1000	6.07	-69.65	≤-13.93	PASS
			1000~26500	6.07	-53.3	≤-13.93	PASS
		2440	Reference	4.50	4.50	---	PASS
			30~1000	4.50	-69.18	≤-15.51	PASS
			1000~26500	4.50	-54.03	≤-15.51	PASS
		2480	Reference	5.58	5.58	---	PASS
			30~1000	5.58	-68.77	≤-14.42	PASS
			1000~26500	5.58	-54.01	≤-14.42	PASS

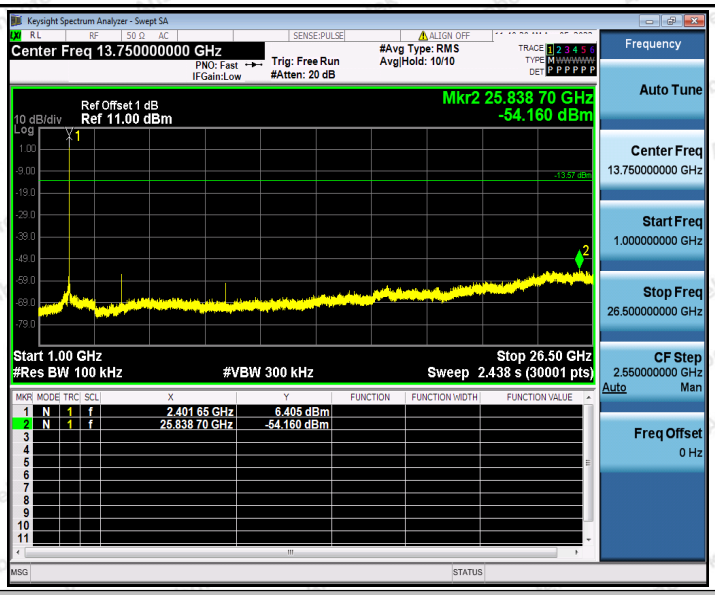
Test Graphs

BLE_1M_Ant1_2402_0~Reference

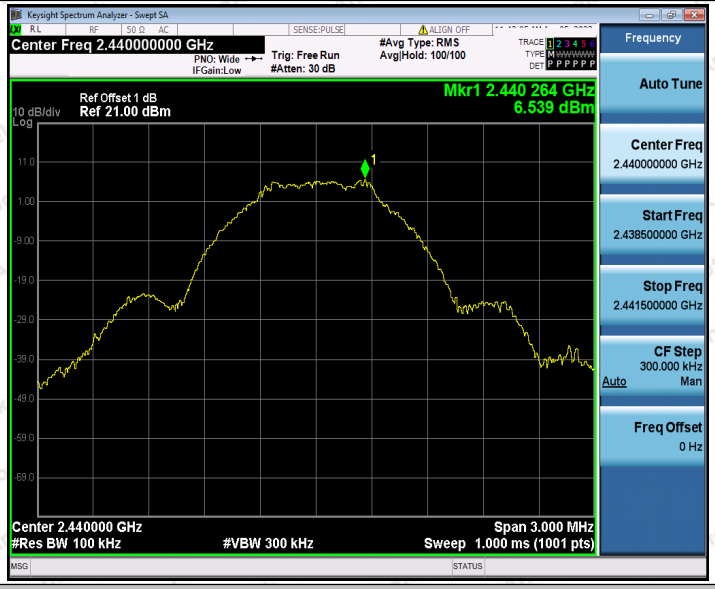
BLE_1M_Ant1_2402_30~1000



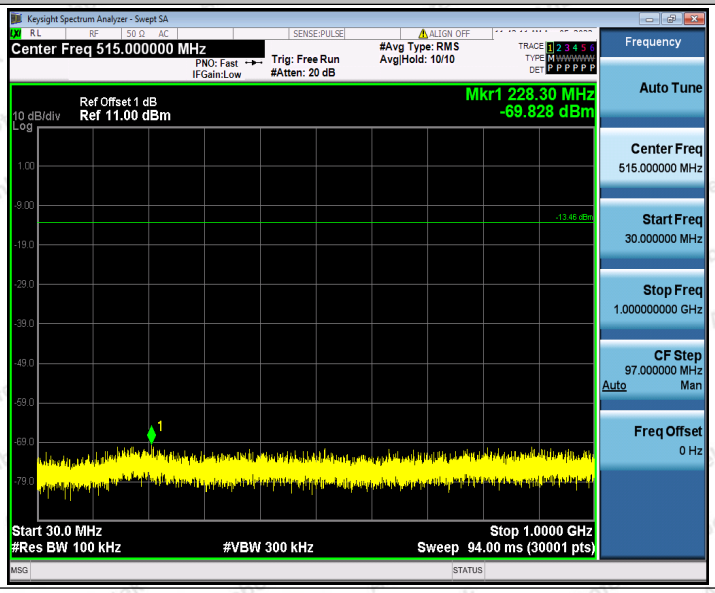
BLE_1M_Ant1_2402_1000~26500



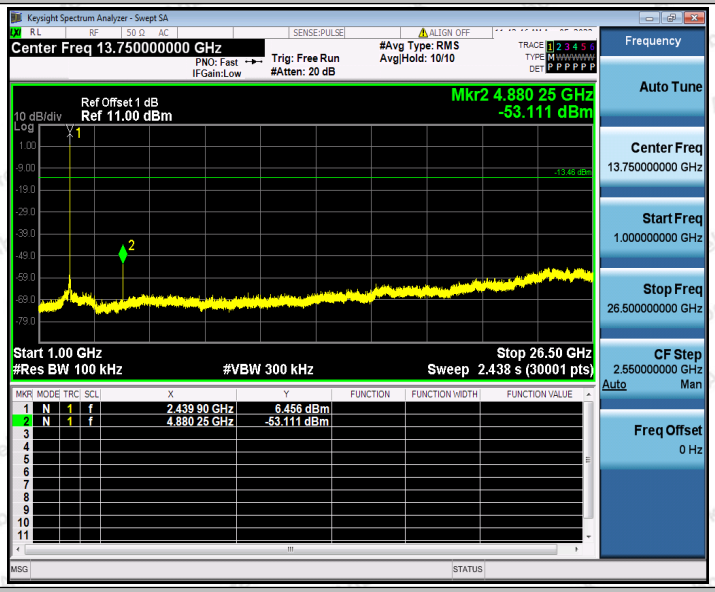
BLE_1M_Ant1_2440_0~Reference



BLE_1M_Ant1_2440_30~1000

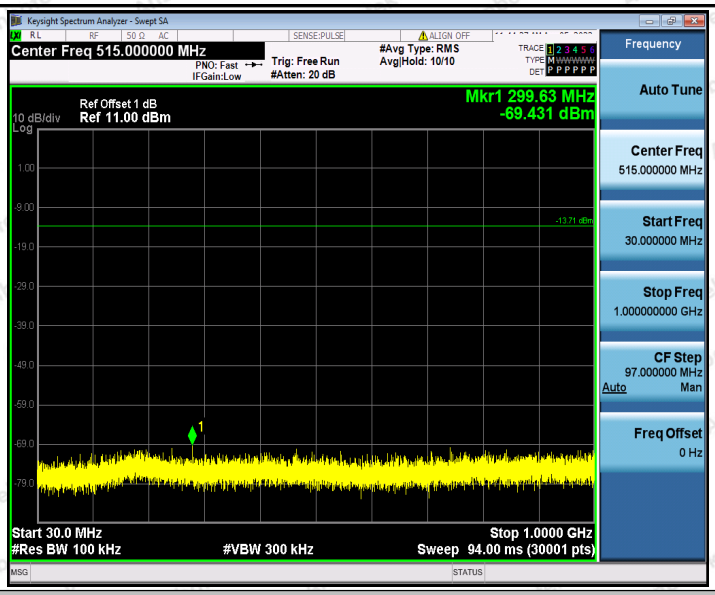


BLE_1M_Ant1_2440_1000~26500

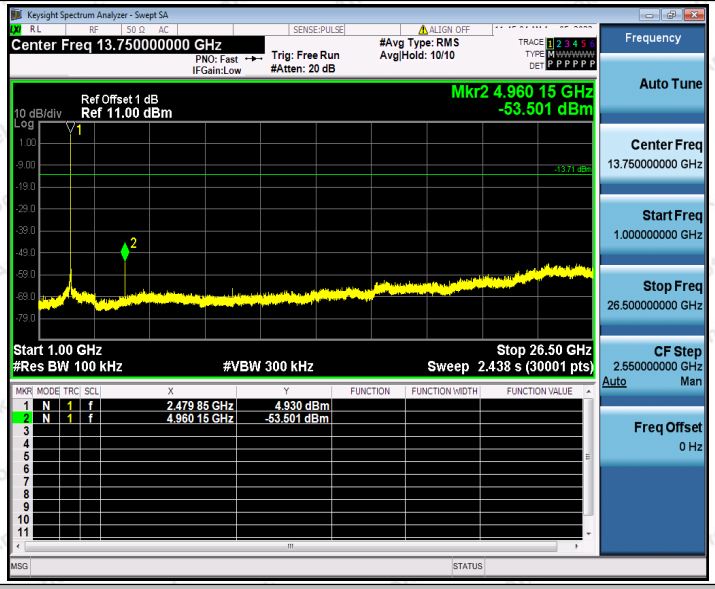


BLE_1M_Ant1_2480_0~Reference

BLE_1M_Ant1_2480_30~1000

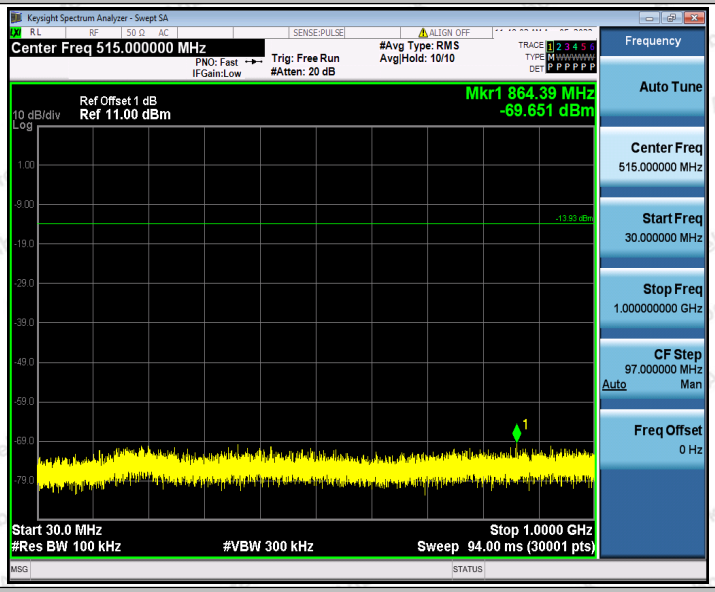


BLE_1M_Ant1_2480_1000~26500

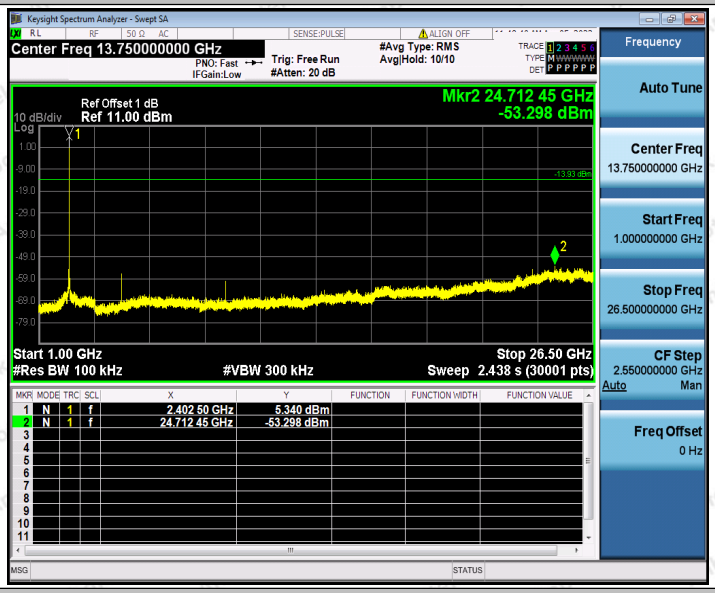


BLE_2M_Ant1_2402_0~Reference

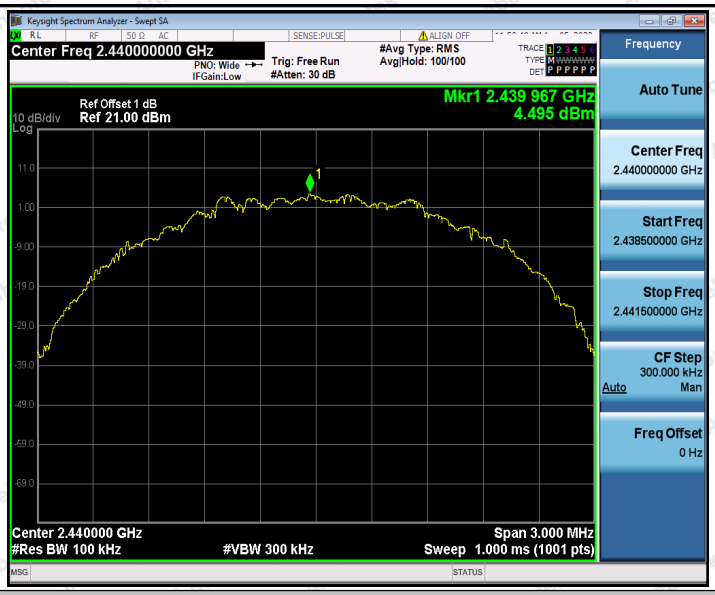
BLE_2M_Ant1_2402_30~1000



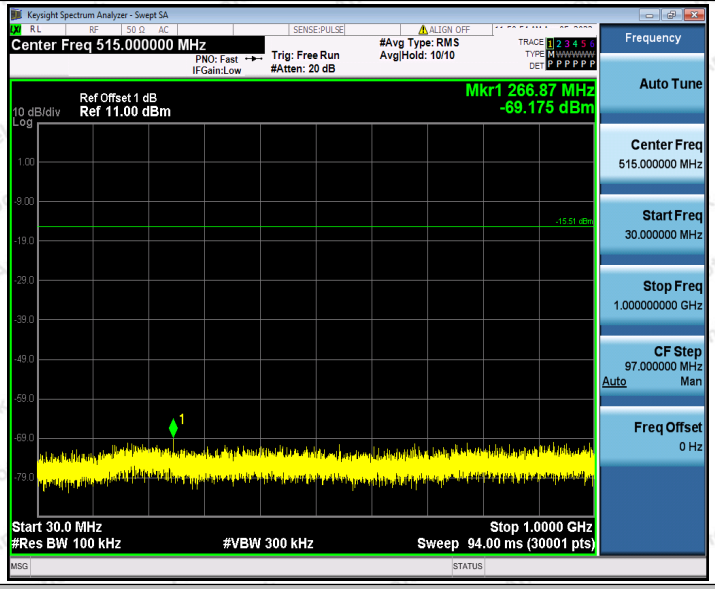
BLE_2M_Ant1_2402_1000~26500



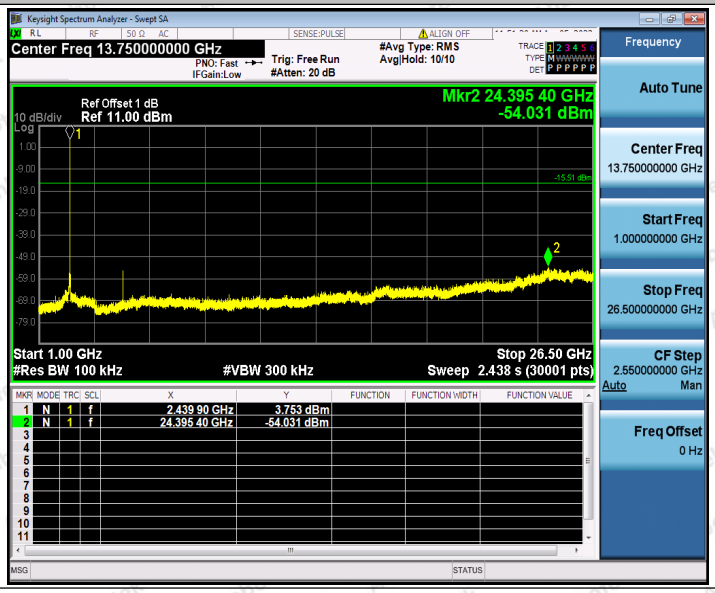
BLE_2M_Ant1_2440_0~Reference



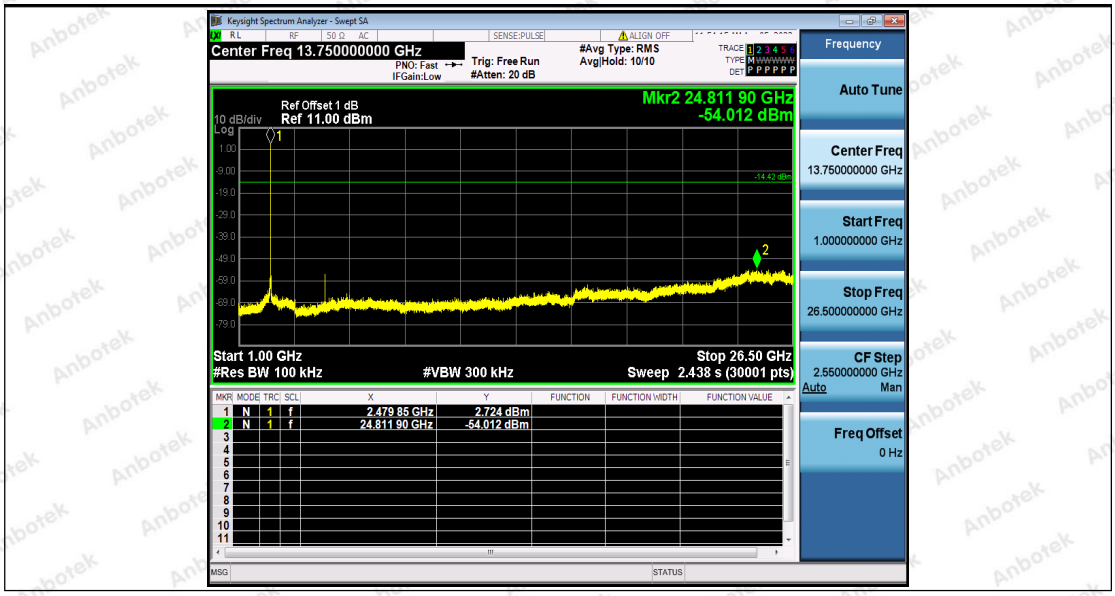
BLE_2M_Ant1_2440_30~1000



BLE_2M_Ant1_2440_1000~26500



BLE_2M_Ant1_2480_0~Reference
BLE_2M_Ant1_2480_30~1000
BLE_2M_Ant1_2480_1000~26500


Keysight 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
Ref Offset 1 dB
10 dB/div
Ref 11.00 dBm
Log
Mkr2 24.811 90 GHz
-54.012 dBm
Start 1.00 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 26.50 GHz
Sweep 2.438 s (30001 pts)
1 N 1 f 2.479 85 GHz 2.724 dBm
2 N 1 f 24.811 90 GHz -54.012 dBm
Frequency
Auto Tune
Center Freq
13.750000000 GHz
Start Freq
1.000000000 GHz
Stop Freq
26.500000000 GHz
CF Step
2.550000000 GHz
Auto
Man
Freq Offset
0 Hz

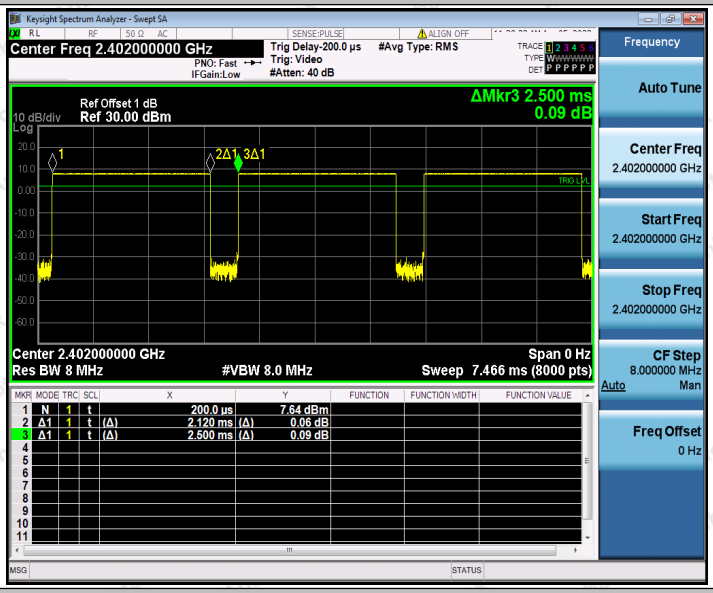
Appendix G: Duty Cycle

Test Result

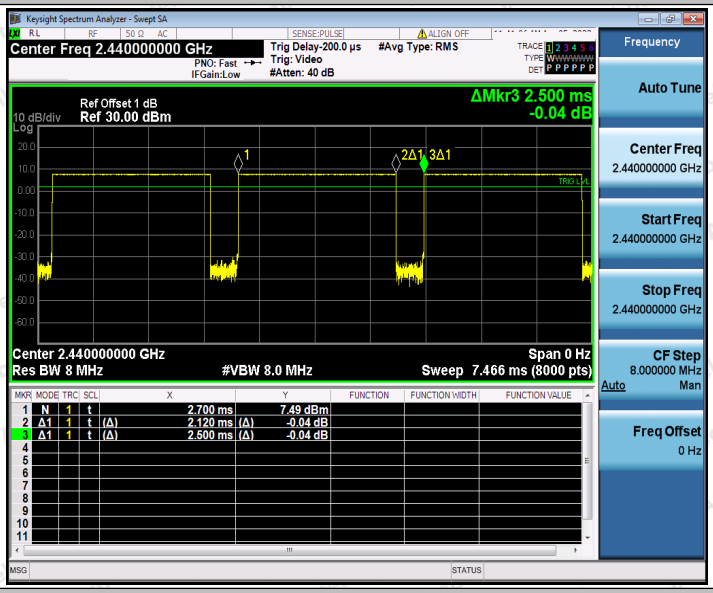
TestMode	Antenna	Channel	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	Limit	Verdict
BLE_1M	Ant1	2402	2.12	2.50	0.8480	84.80	0.72	---	PASS
		2440	2.12	2.50	0.8480	84.80	0.72	---	PASS
		2480	2.12	2.50	0.8480	84.80	0.72	---	PASS
BLE_2M	Ant1	2402	1.07	1.25	0.8560	85.60	0.68	---	PASS
		2440	1.07	1.25	0.8560	85.60	0.68	---	PASS
		2480	1.07	1.25	0.8560	85.60	0.68	---	PASS

Test Graphs

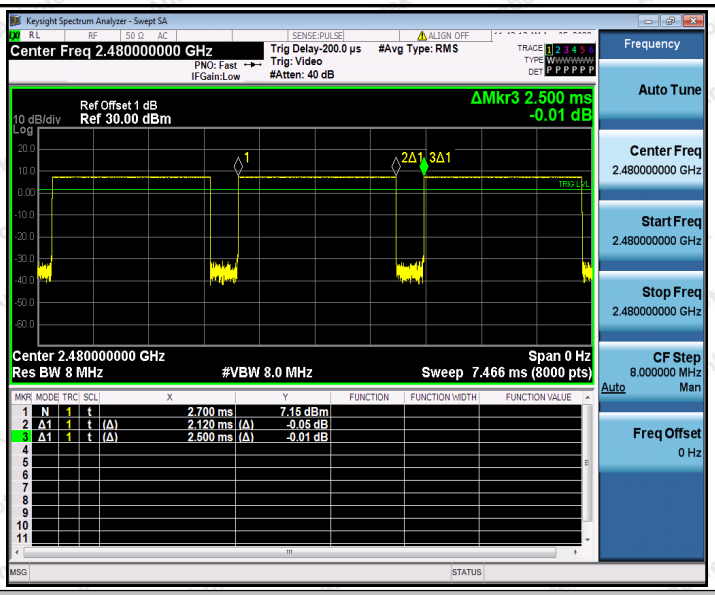
BLE_1M_Ant1_2402



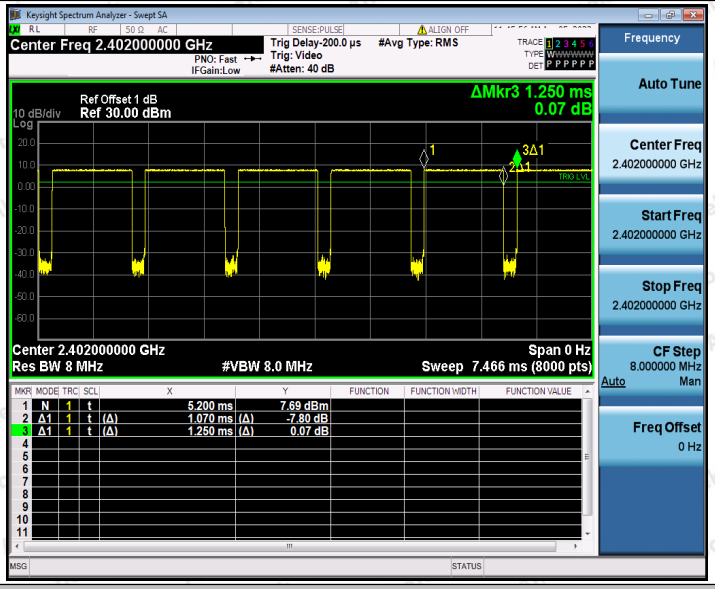
BLE_1M_Ant1_2440



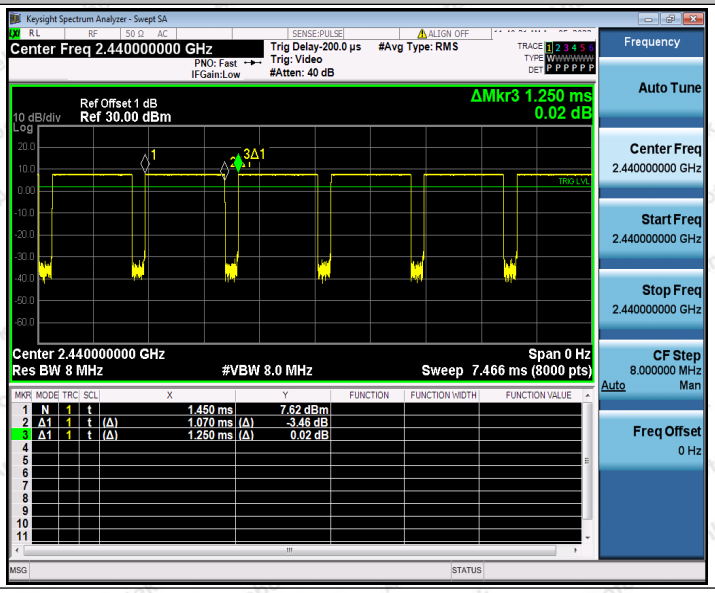
BLE_1M_Ant1_2480



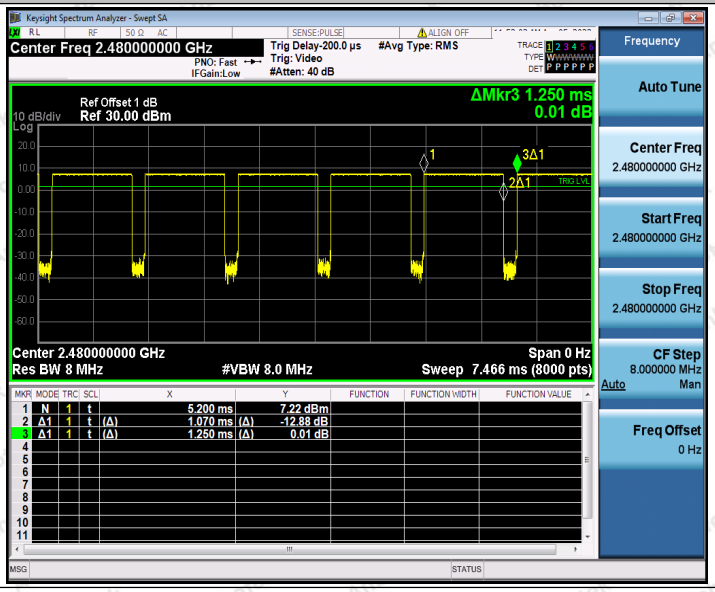
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480



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