



Appendix A

RF Test Data for BLE (Conducted Measurement)

Product Name: bluetooth remote control

Trade Mark: N/A

Test Model: Notus M1 Evoca

Environmental Conditions

Temperature:	25 ° C
Relative Humidity:	50%
ATM Pressure:	100.0 kPa
Test Engineer:	Kay Hu
Supervised by:	Li Huan

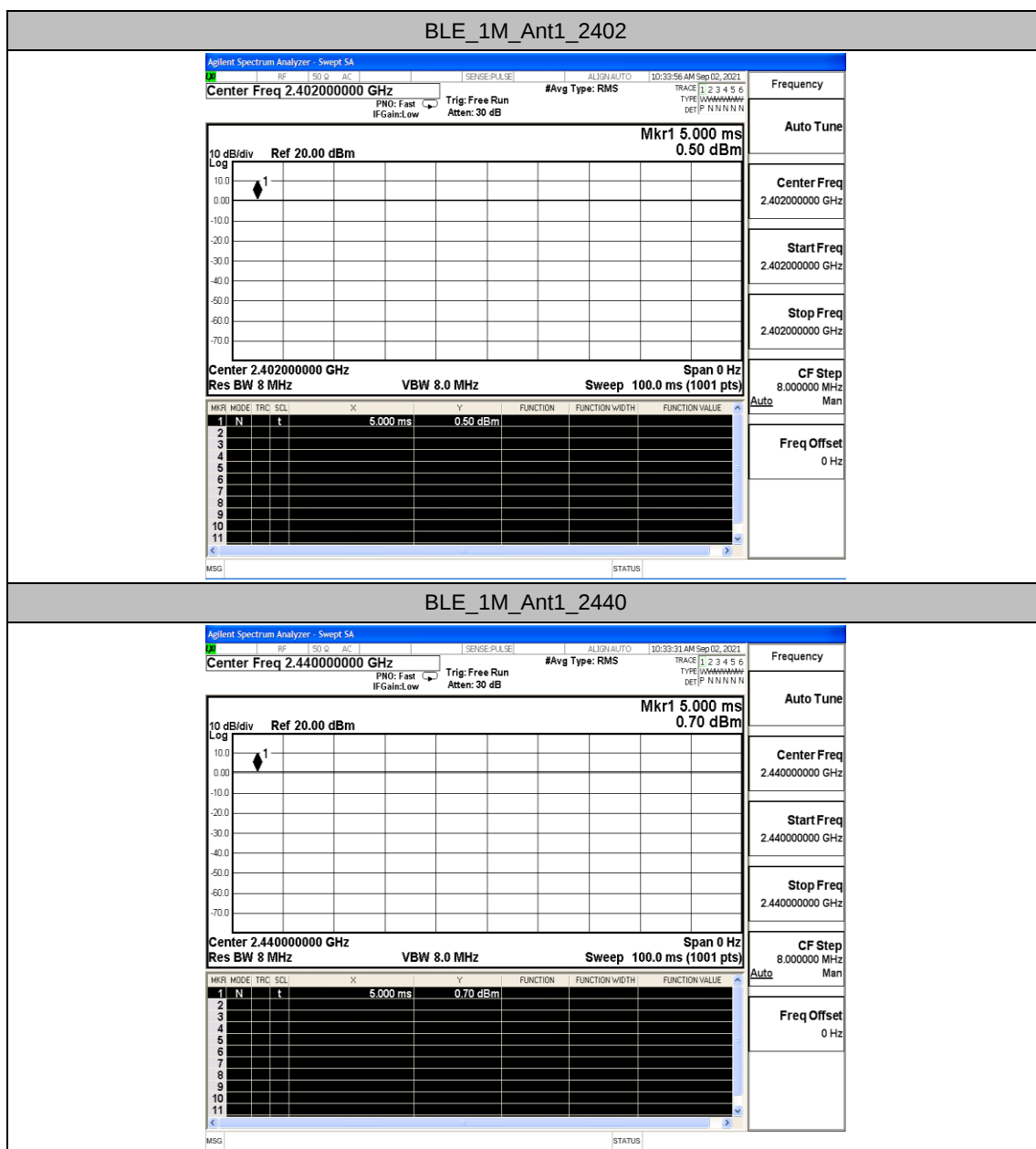


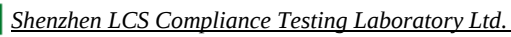
Appendix A.1: Duty Cycle

Test Result

TestMode	Antenna	Channel	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	Limit	Verdict
BLE_1M	Ant1	2402	100	100	1.0	100	0	---	PASS
		2440	100	100	1.0	100	0	---	PASS
		2480	100	100	1.0	100	0	---	PASS

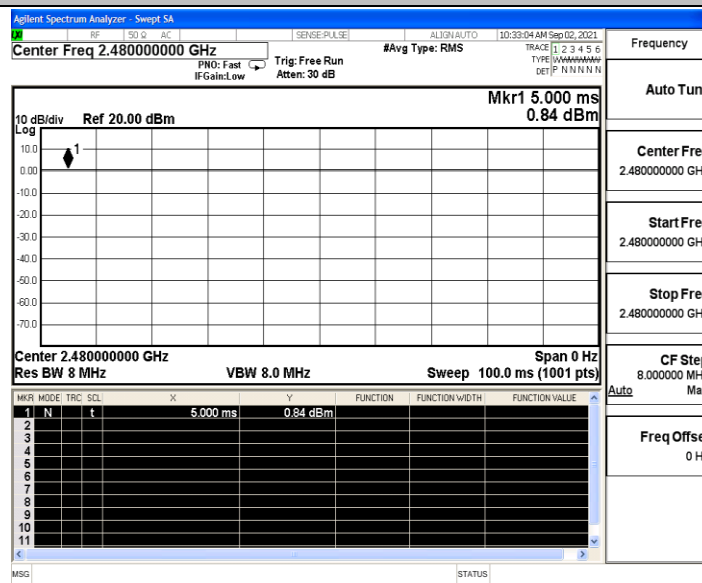
Test Graphs





FCC ID: 2ALB6-NTSMBLE01

BLE_1M_Ant1_2480





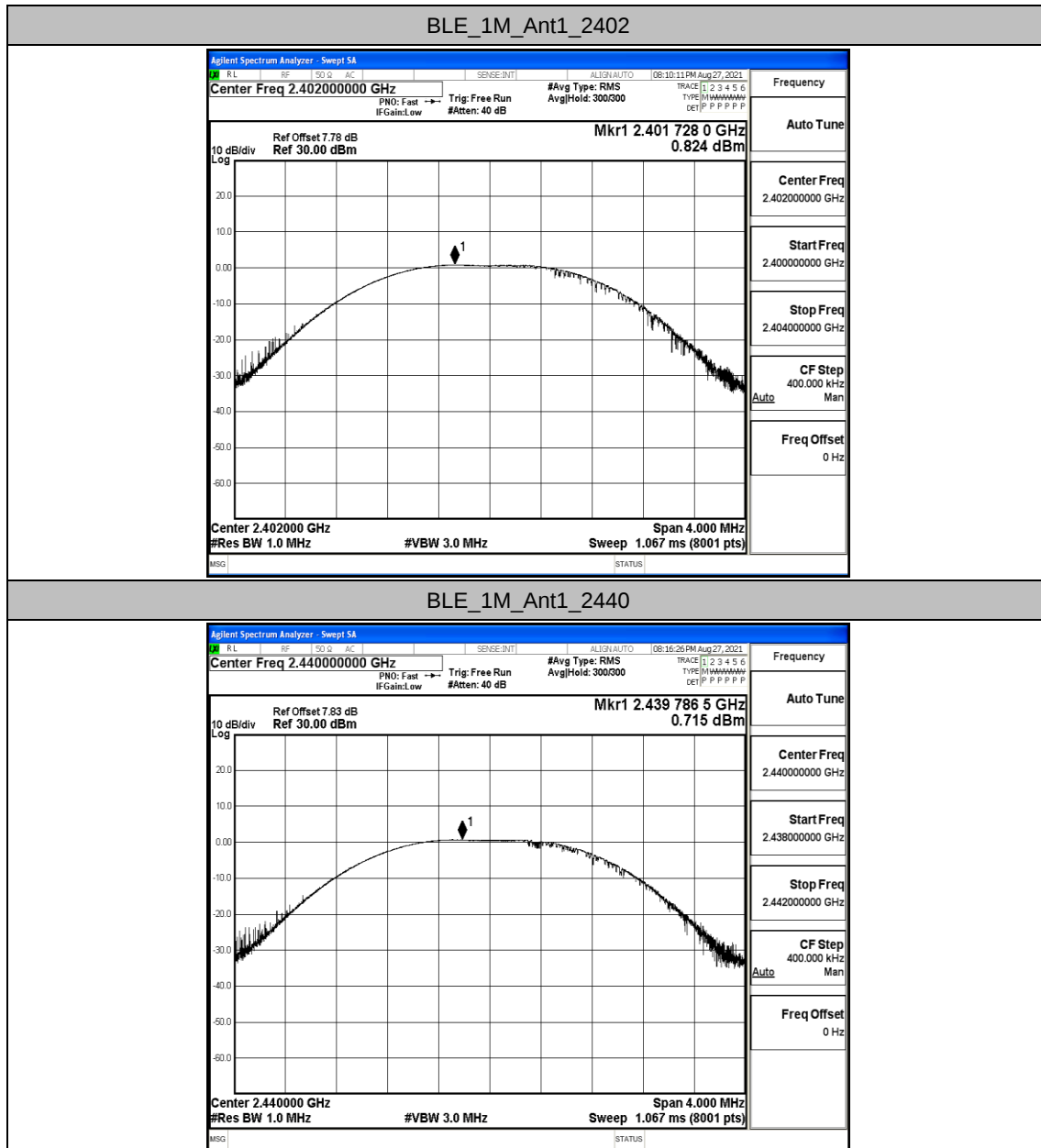
Appendix A.2: Maximum conducted output power

Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	0.82	≤30	PASS
		2440	0.72	≤30	PASS
		2480	0.54	≤30	PASS

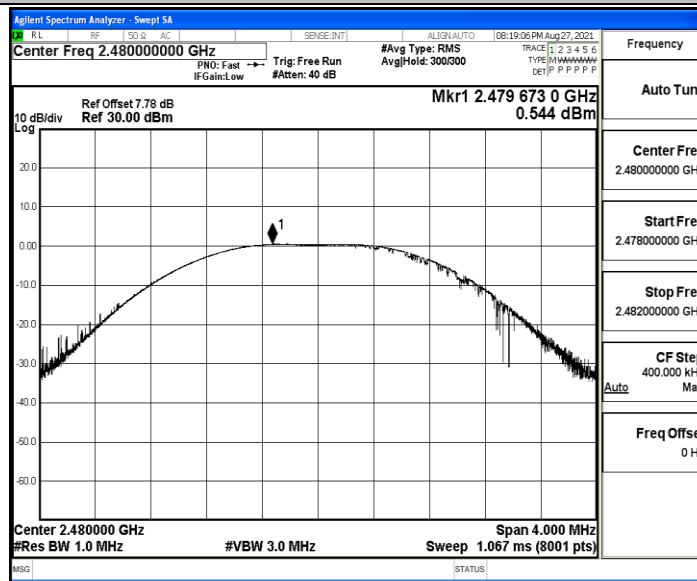


Test Graphs





BLE_1M_Ant1_2480





Appendix A.3: Maximum power spectral density

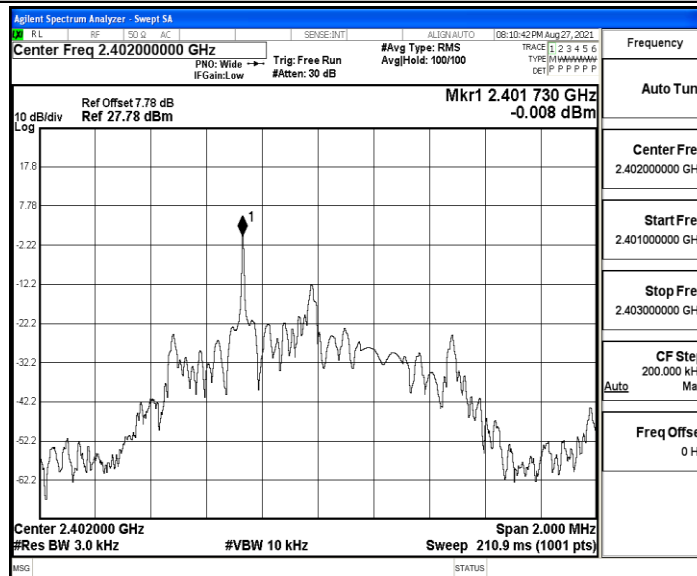
Test Result

TestMode	Antenna	Channel	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-0.01	≤8	PASS
		2440	-0.13	≤8	PASS
		2480	-0.28	≤8	PASS

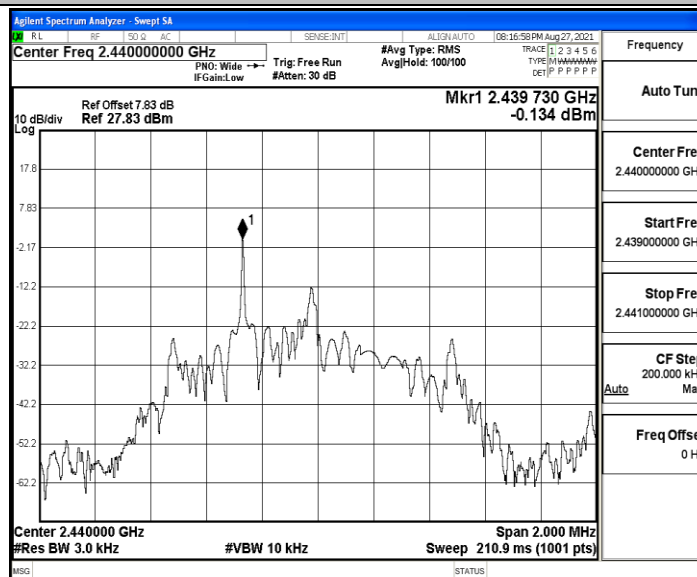


Test Graphs

BLE_1M_Ant1_2402

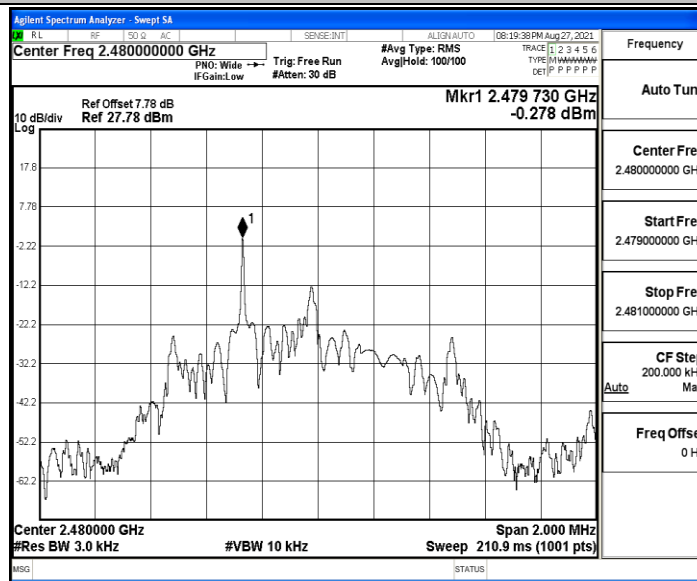


BLE_1M_Ant1_2440





BLE_1M_Ant1_2480





Appendix A.4.1: DTS Bandwidth

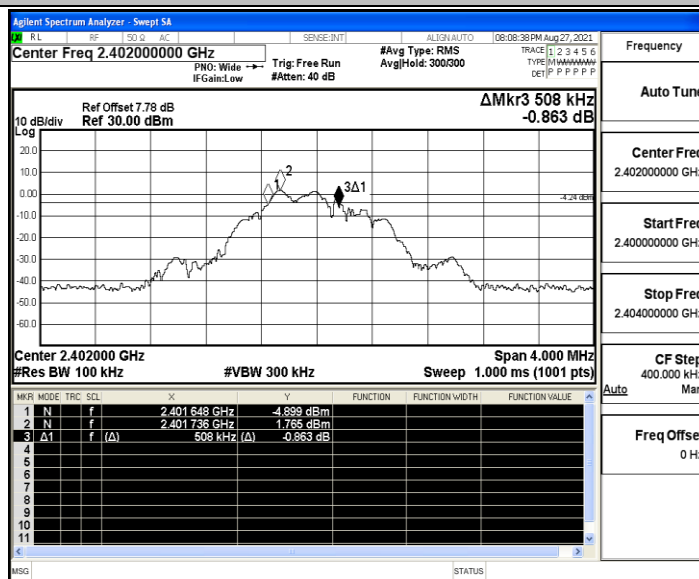
Test Result

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.508	2401.648	2402.156	≥0.5	PASS
		2440	0.628	2439.656	2440.284	≥0.5	PASS
		2480	0.644	2479.648	2480.292	≥0.5	PASS

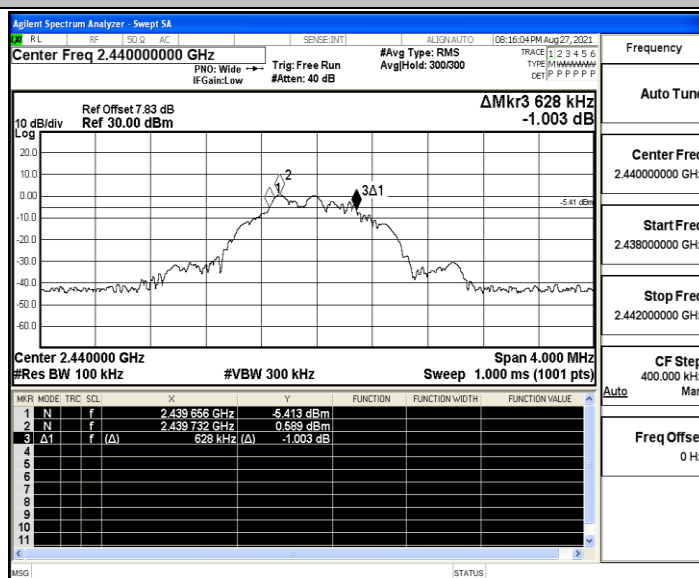


Test Graphs

BLE_1M_Ant1_2402

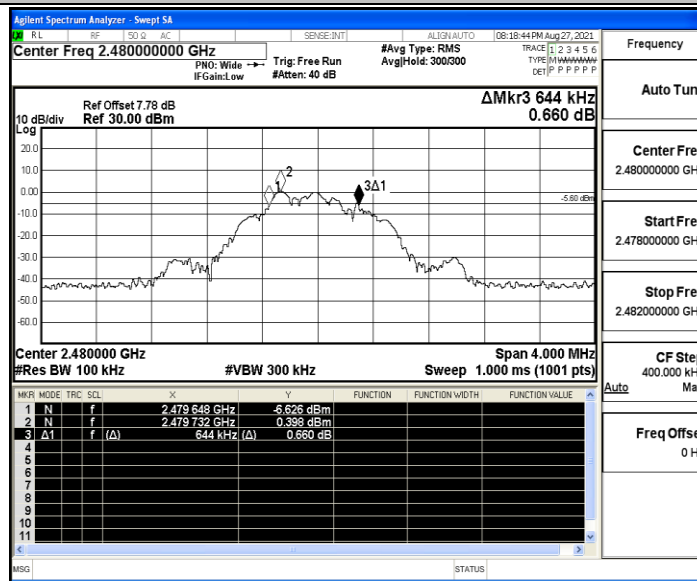


BLE_1M_Ant1_2440





BLE_1M_Ant1_2480





Appendix A.4.2: Occupied Channel Bandwidth

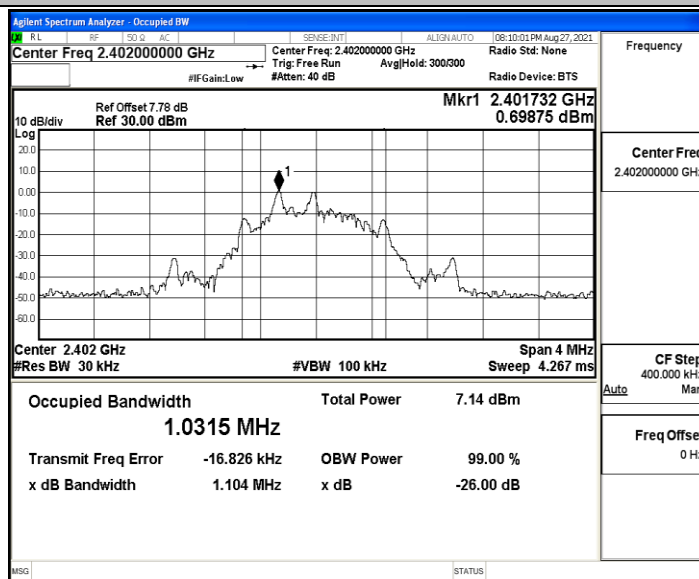
Test Result

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0315	2401.467	2402.499	---	PASS
		2440	1.0335	2439.466	2440.499	---	PASS
		2480	1.0344	2479.466	2480.500	---	PASS

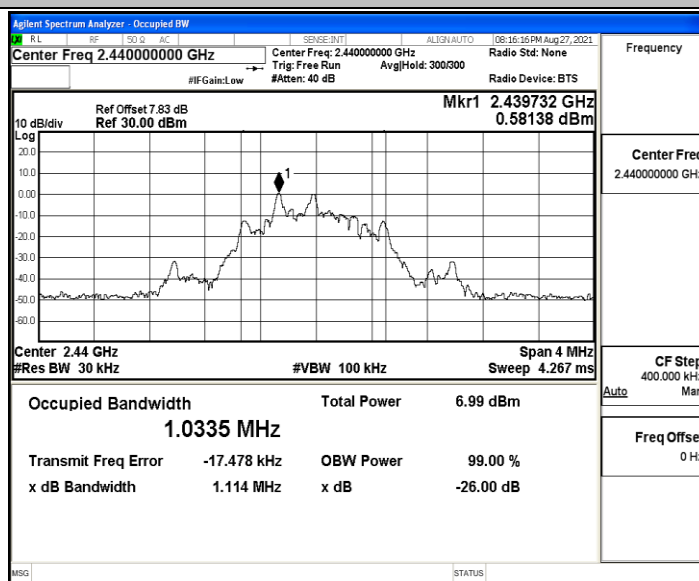


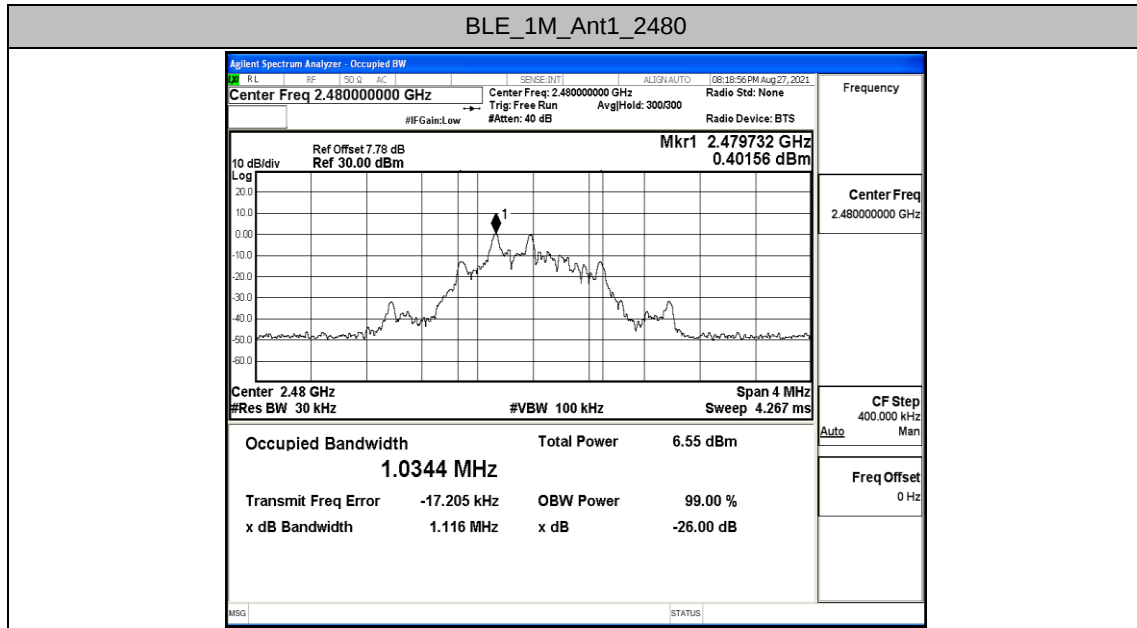
Test Graphs

BLE_1M_Ant1_2402



BLE_1M_Ant1_2440







Appendix A.5: Band edge measurements

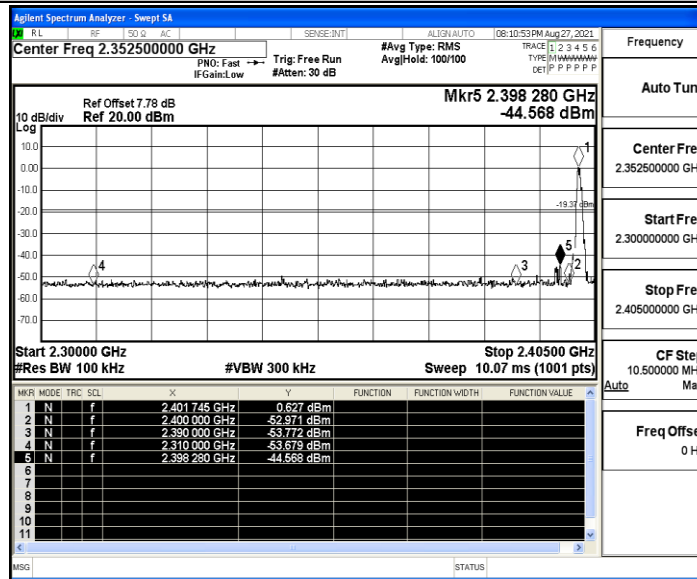
Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	0.63	-44.57	≤ -19.37	PASS
		High	2480	0.38	-43.28	≤ -19.62	PASS

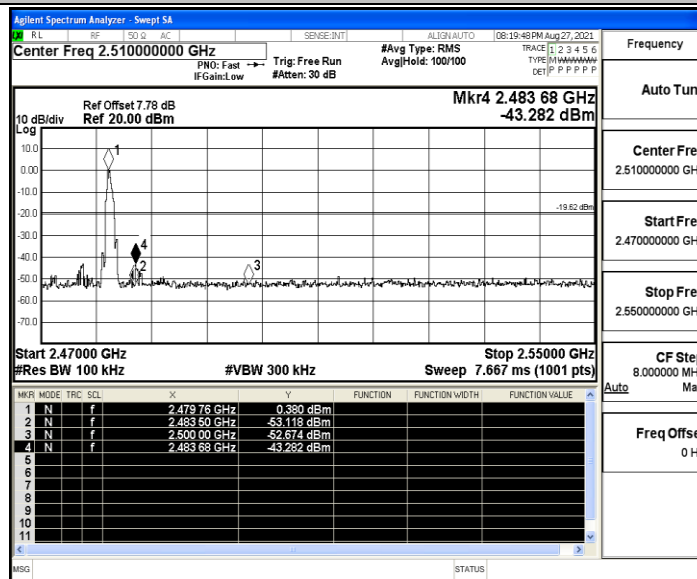


Test Graphs

BLE_1M_Ant1_Low_2402



BLE_1M_Ant1_High_2480





Appendix A.6: Conducted Spurious Emission

Test Result

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	0.65	0.65	---	PASS
			30~1000	0.65	-58.63	≤ -19.35	PASS
			1000~26500	0.65	-46.75	≤ -19.35	PASS
		2440	Reference	0.50	0.50	---	PASS
			30~1000	0.50	-56.94	≤ -19.5	PASS
			1000~26500	0.50	-47.76	≤ -19.5	PASS
		2480	Reference	0.36	0.36	---	PASS
			30~1000	0.36	-58.4	≤ -19.64	PASS
			1000~26500	0.36	-47.17	≤ -19.64	PASS

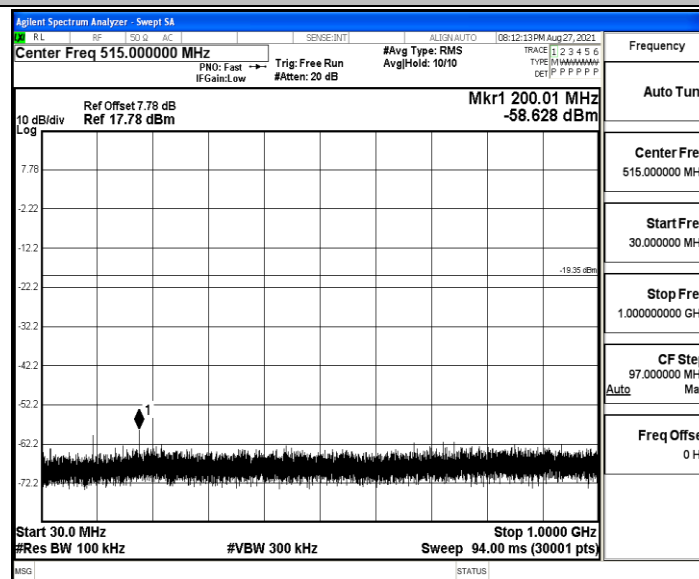


Test Graphs

BLE_1M_Ant1_2402_0~Reference

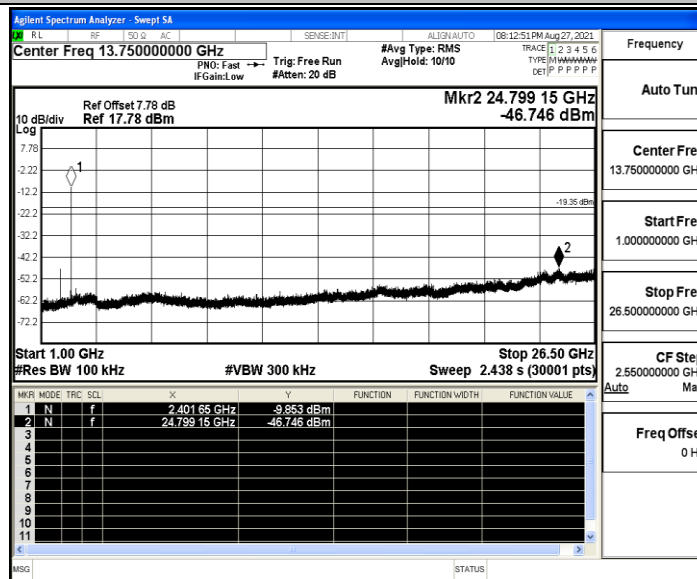


BLE_1M_Ant1_2402_30~1000

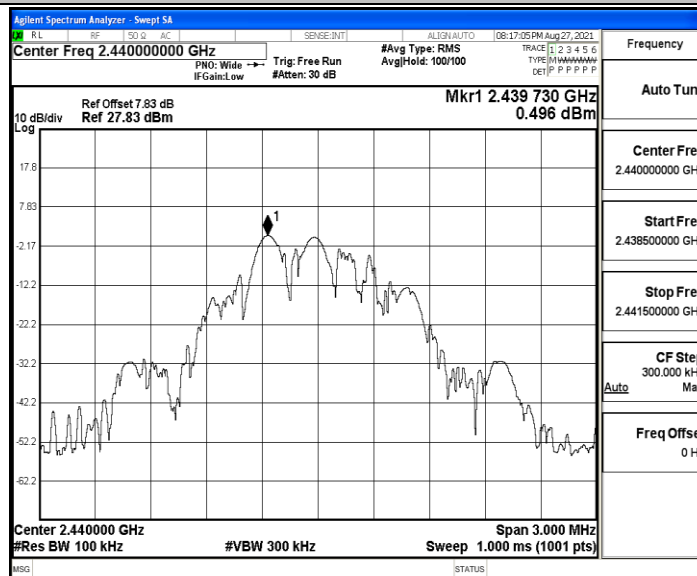




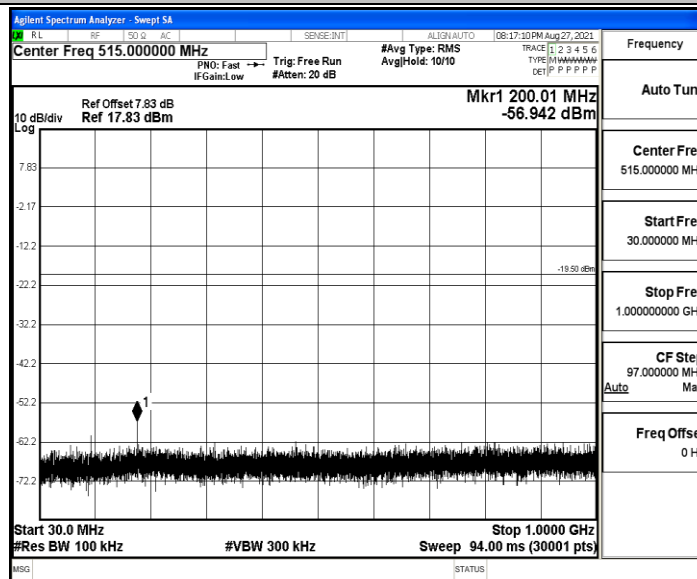
BLE_1M_Ant1_2402_1000-26500



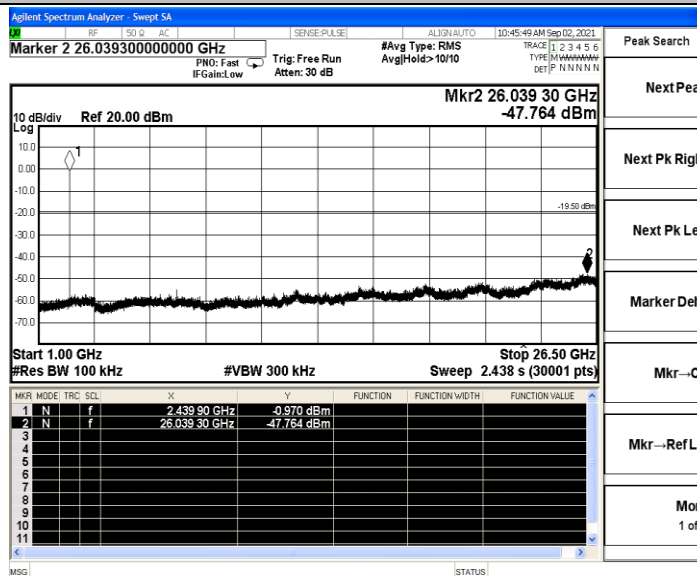
BLE_1M_Ant1_2440_0~Reference



BLE_1M_Ant1_2440_30~1000

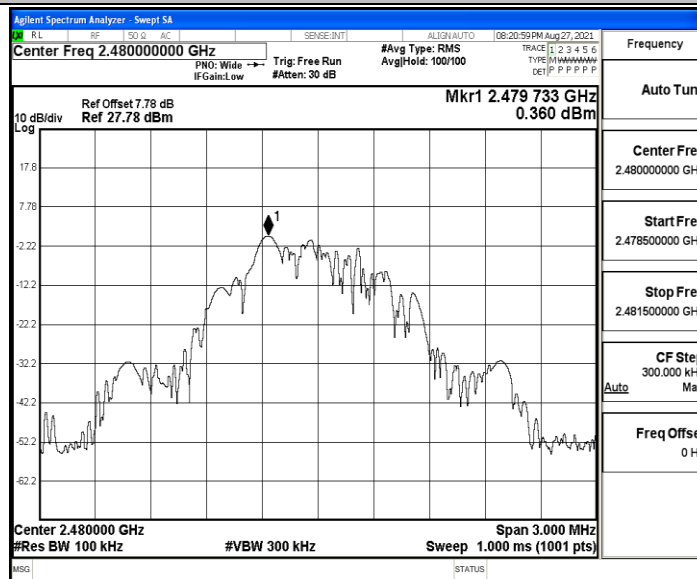


BLE_1M_Ant1_2440_1000~26500

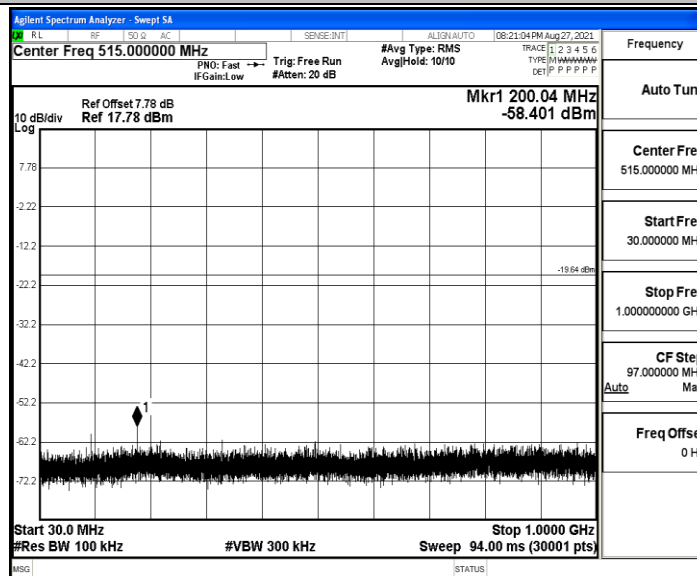


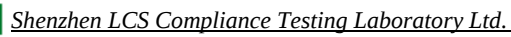


BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000





FCC ID: 2ALB6-NTSMBLE01

Report No.: LCS210823041AEA

Agilent Spectrum Analyzer - Swept SA

Center Freq 13.750000000 GHz

PNO: Fast → IF Gain: Low

Trig: Free Run #Atten: 20 dB

#Avg Type: RMS Avg/Hold: 10/10

08-21-42 PM Aug 27, 2021

TRACE [2 3 4 5 6]

TYPE [NORMAL]

DE [P P P P P]

Frequency

Auto Tun

Center Freq

13.750000000 GHz

Start Freq

1.000000000 GHz

Stop Freq

26.500000000 GHz

CF Stop

2.550000000 GHz

Auto

Max

Freq Offset

0 Hz

Mkr2 26.249 25 GHz -47.171 dBm

Ref Offset 7.78 dBm

Ref 17.78 dBm

10 dBm

Log

7.78

-2.22

-12.2

-22.2

-32.2

-42.2

-52.2

-62.2

-72.2

-19.84 dBm

Start 1.00 GHz

#Res BW 100 kHz

#VBW 300 kHz

Sweep 2.438 s (30001 pts)

Stop 26.50 GHz

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	f		2.479 86 GHz	0.282 dBm			
2	N	f		26.249 25 GHz	-47.171 dBm			
3								
4								
5								
6								
7								
8								
9								
10								
11								

MSG

STATUS



Appendix A.7: Emissions in Restricted Bands

Test Result

TestMode	Antenna	ChName	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-48.36	≤-41.20	46.84	≤54	PASS
				AV	2389.460	-47.35	≤-41.20	47.85	≤54	PASS
				AV	2390.000	-47.89	≤-41.20	47.31	≤54	PASS
				Peak	2310.000	-40.69	≤-21.20	54.51	≤74	PASS
				Peak	2389.880	-34.88	≤-21.20	60.32	≤74	PASS
				Peak	2390.000	-35	≤-21.20	60.20	≤74	PASS
		High	2480	AV	2483.500	-43.27	≤-41.20	51.93	≤54	PASS
				AV	2483.520	-43.27	≤-41.20	51.93	≤54	PASS
				AV	2500.000	-47.33	≤-41.20	47.87	≤54	PASS
				Peak	2483.500	-38.93	≤-21.20	56.27	≤74	PASS
				Peak	2483.840	-26.57	≤-21.20	68.63	≤74	PASS
				Peak	2500.000	-39.34	≤-21.20	55.86	≤74	PASS

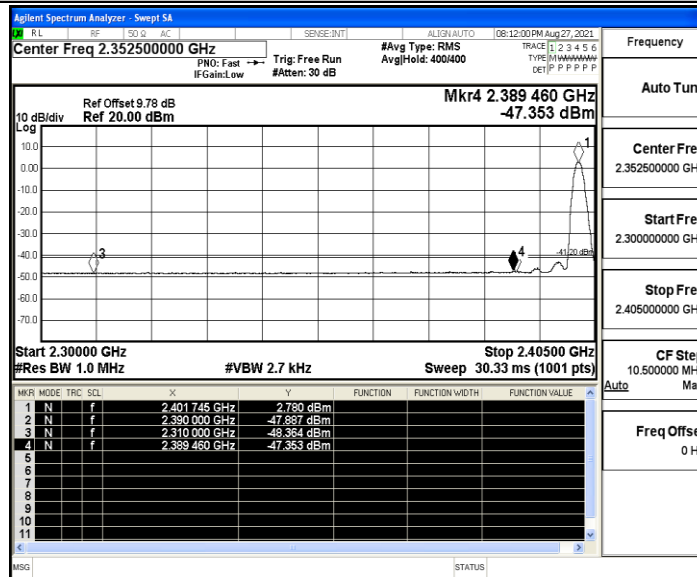
Note:

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.

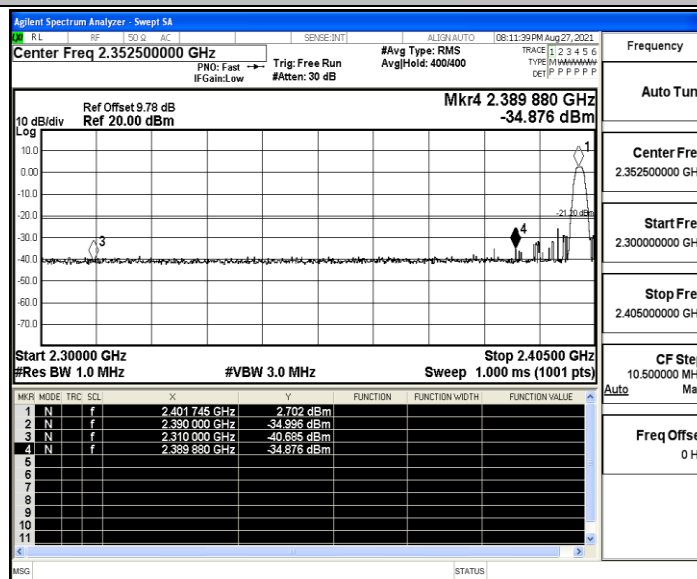


Test Graphs

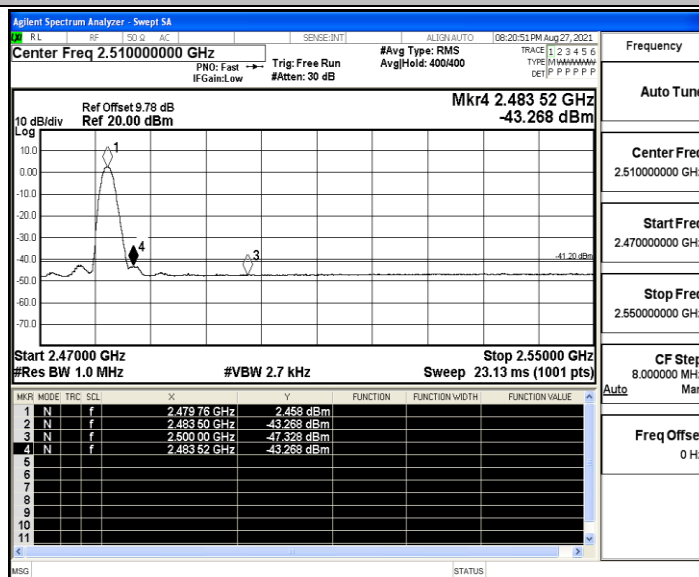
BLE_1M_Ant1_Low_2402_AV



BLE_1M_Ant1_Low_2402_Peak



BLE 1M Ant1 High 2480 AV



BLE 1M Ant1 High 2480 Peak

