



Appendix A

RF Test Data for BT LE (Conducted Measurement)

Product Name: BOOST

Test Model: BOOST(Dusty Blue)

Environmental Conditions

Temperature:	23.5℃
Relative Humidity:	52.2%
ATM Pressure:	100.0 kPa
Test Engineer:	 Monkey Li
Supervised by:	 Li Huan



A.1 DTS Bandwidth

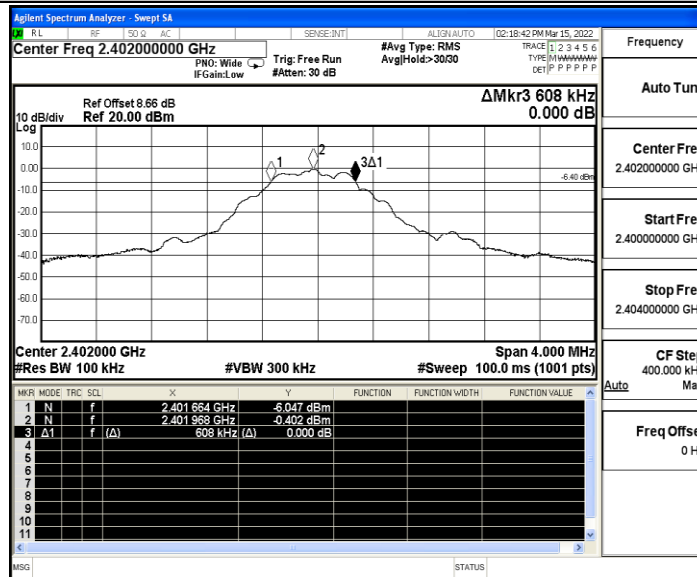
Test Result

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.608	2401.664	2402.272	0.5	PASS
		2440	0.612	2439.660	2440.272	0.5	PASS
		2480	0.612	2479.660	2480.272	0.5	PASS

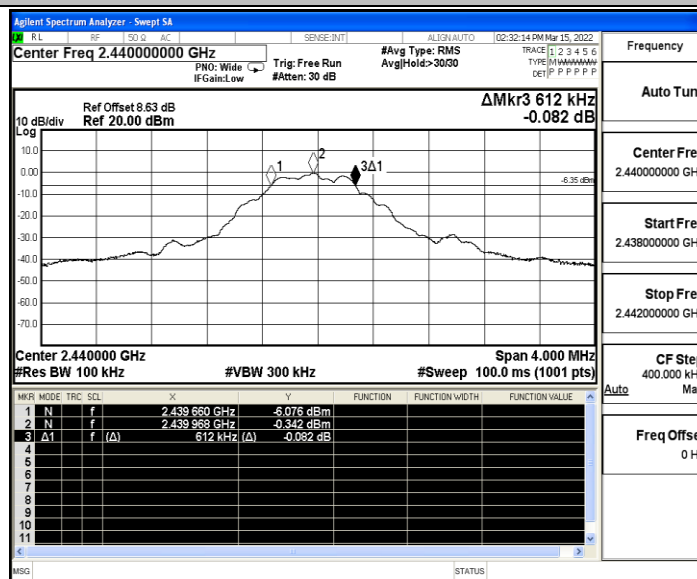


Test Graphs

BLE_1M_Ant1_2402

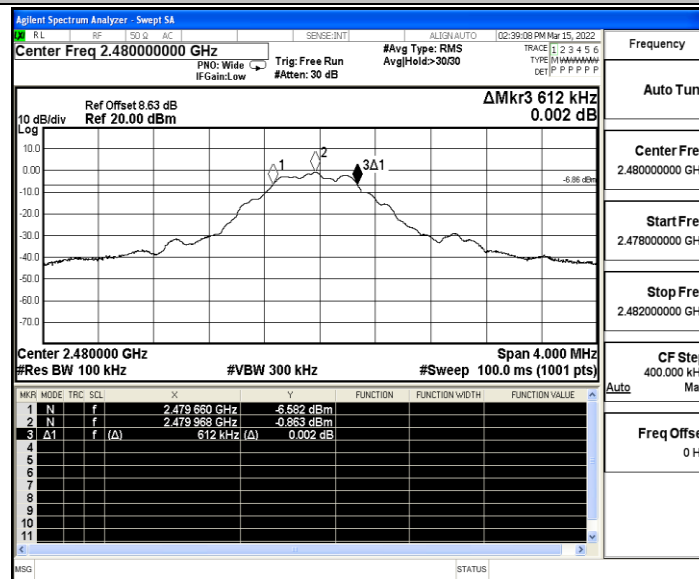


BLE_1M_Ant1_2440





BLE_1M_Ant1_2480





A.2 Maximum peak conducted output power

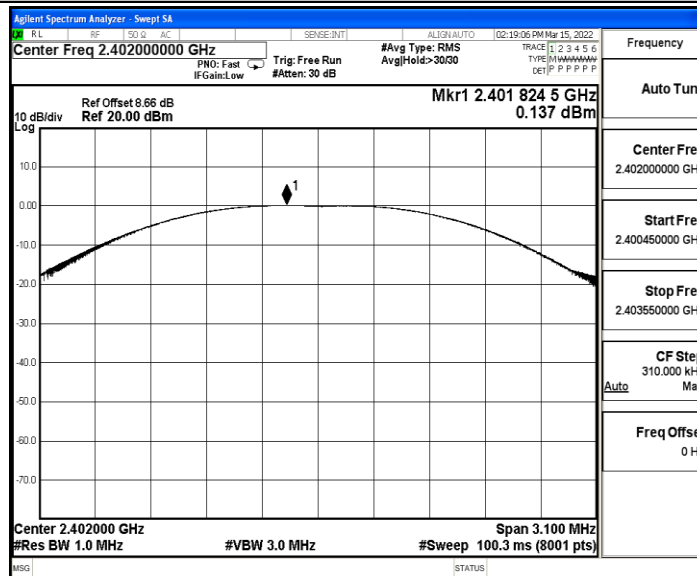
Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	0.14	≤30	PASS
		2440	0.19	≤30	PASS
		2480	-0.32	≤30	PASS

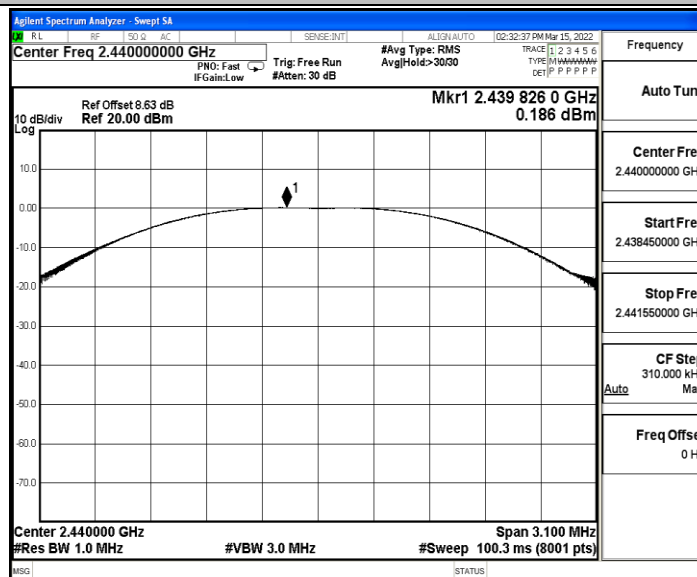


Test Graphs

BLE_1M_Ant1_2402

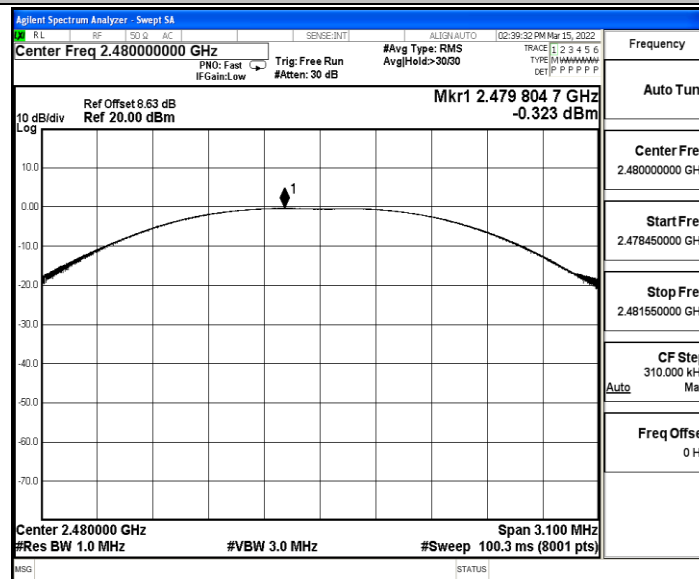


BLE_1M_Ant1_2440





BLE_1M_Ant1_2480





A.3 Maximum power spectral density

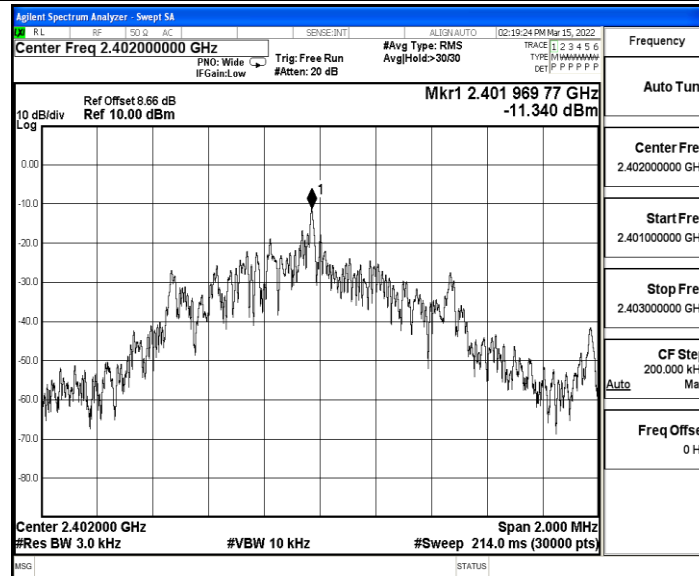
Test Result

TestMode	Antenna	Channel	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-11.34	≤8.00	PASS
		2440	-11.25	≤8.00	PASS
		2480	-11.86	≤8.00	PASS

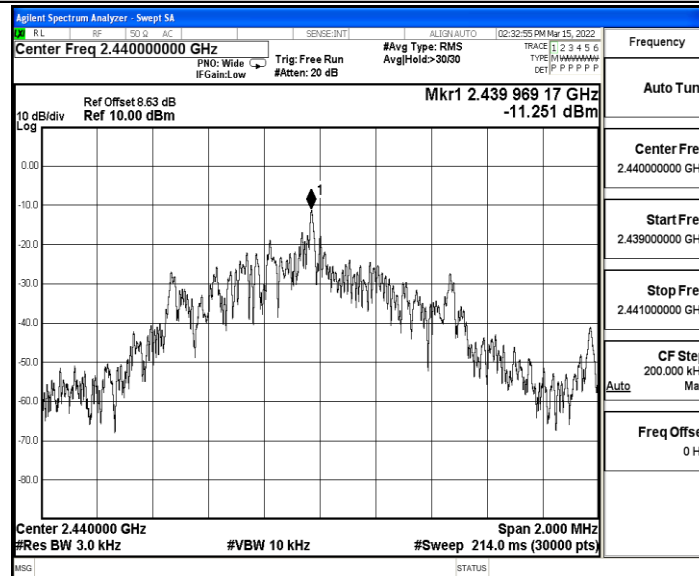


Test Graphs

BLE_1M_Ant1_2402

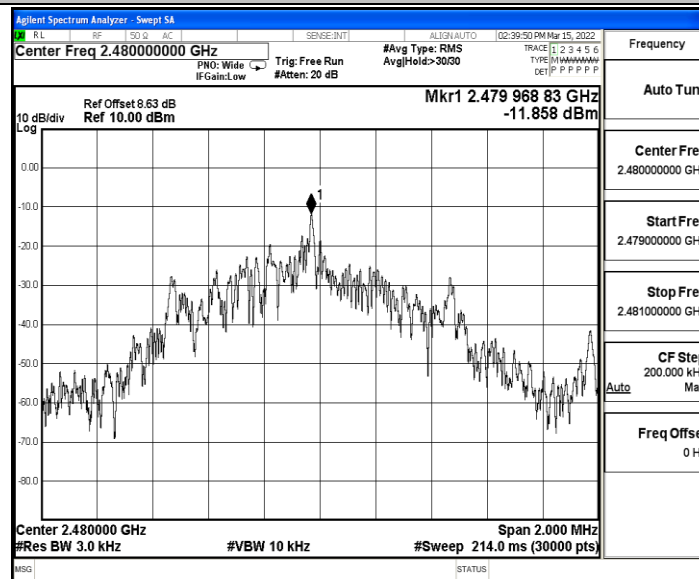


BLE_1M_Ant1_2440





BLE_1M_Ant1_2480





A.4 Band edge measurements

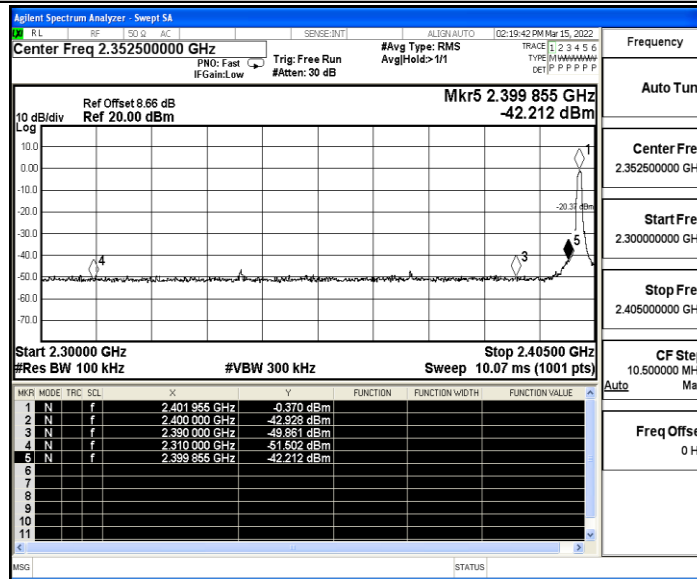
Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-0.37	-42.21	≤ -20.37	PASS
		High	2480	-0.81	-46.5	≤ -20.81	PASS

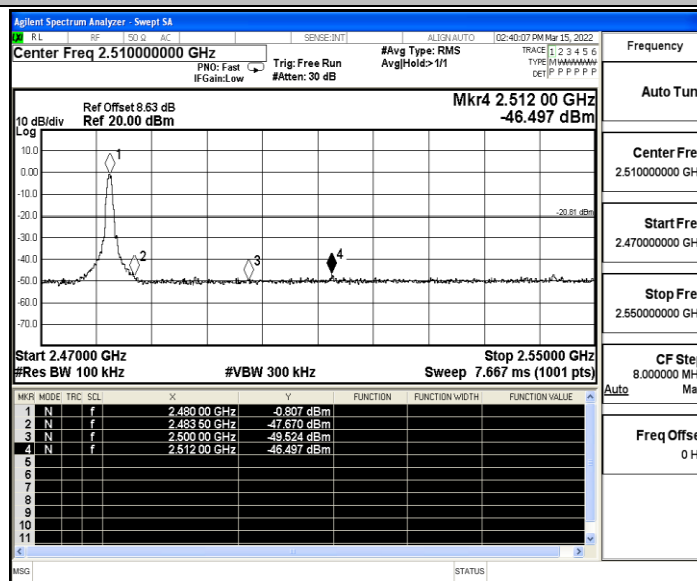


Test Graphs

BLE_1M_Ant1_Low_2402



BLE_1M_Ant1_High_2480





A.5 Conducted Spurious Emission

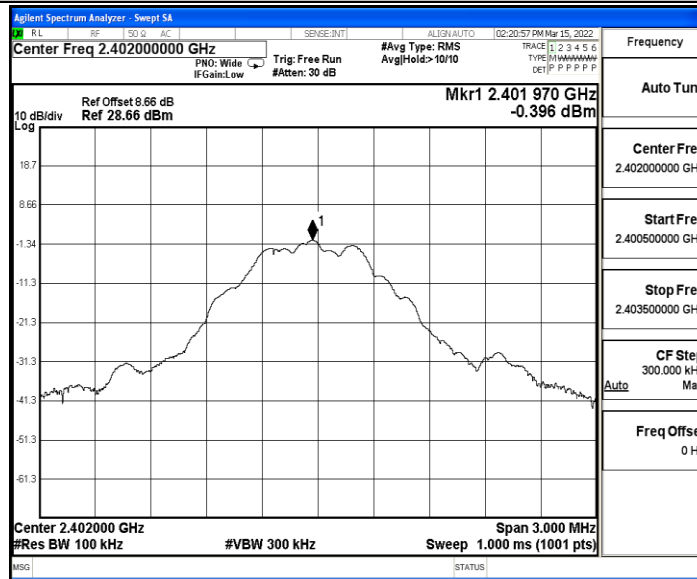
Test Result

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-0.40	-0.40	---	PASS
			30~1000	-0.40	-59.72	≤ -20.4	PASS
			1000~26500	-0.40	-42.61	≤ -20.4	PASS
		2440	Reference	-0.34	-0.34	---	PASS
			30~1000	-0.34	-59.39	≤ -20.34	PASS
			1000~26500	-0.34	-41.36	≤ -20.34	PASS
		2480	Reference	-0.88	-0.88	---	PASS
			30~1000	-0.88	-60.34	≤ -20.88	PASS
			1000~26500	-0.88	-41.98	≤ -20.88	PASS

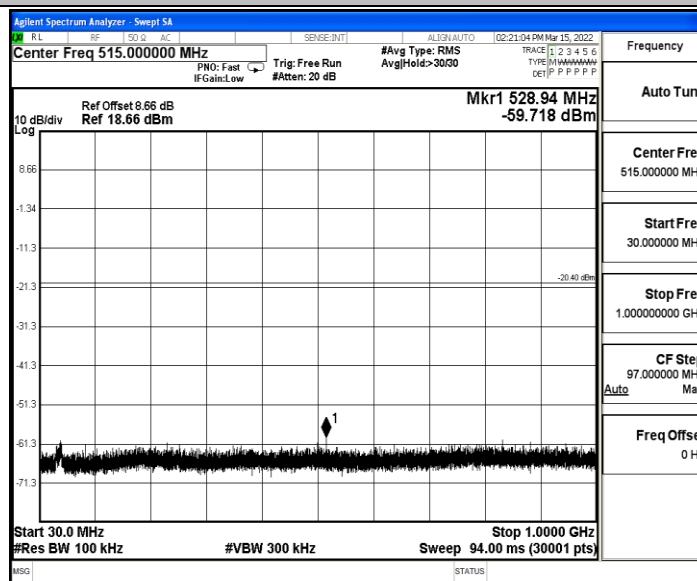


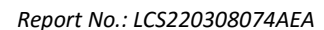
Test Graphs

BLE_1M_Ant1_2402_0~Reference



BLE_1M_Ant1_2402_30~1000





Agilent Spectrum Analyzer - Sweep SA

Center Freq 13.75000000 GHz Ref Offset 8.66 dB
 PNO: Fast IF Gain: low Trig: Free Run #Atten: 20 dB #Avg Type: RMS Avg/Hold: >30/30 TYPE: [H] WMMWMMW DET: [P] P P P P P

Mkr2 4.803 75 GHz
-42.609 dBm

MIR MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1 N		f	2.401 66 GHz	-0.487 dBm			
2 N		f	4.803 75 GHz	-42.609 dBm			
3							
4							
5							
6							
7							
8							
9							
10							
11							

Start 1.00 GHz Stop 26.50 GHz
 #Res BW 100 kHz #VBW 300 kHz Sweep 2.438 s (30001 pts)

Agilent Spectrum Analyzer - Sweep SA

RL RF SO D AC SENSE: INT ALIS: AUTO 02:33:03 PM Mar 15, 2022

Center Freq 2.44000000 GHz Trg: Free Run #Avg Type: RMS Avg/Hold: 101/1 Type: [W] WMMMMW Det: [P] P P P P P

PRF: Wide IF Gain: Low #Atten: 30 dB

10 dB/div Ref Offset 8.63 dB Mkr1 2.439 970 GHz
Ref 28.63 dBm -0.330 dBm

Center 2.440000 GHz Span 3.000 MHz
#Res BW 100 kHz #VBW 300 kHz Sweep 1.000 ms (1001 pts)

MSG STATUS

Frequency Auto Tun

Center Freq 2.440000000 GHz

Start Freq 2.438500000 GHz

Stop Freq 2.441500000 GHz

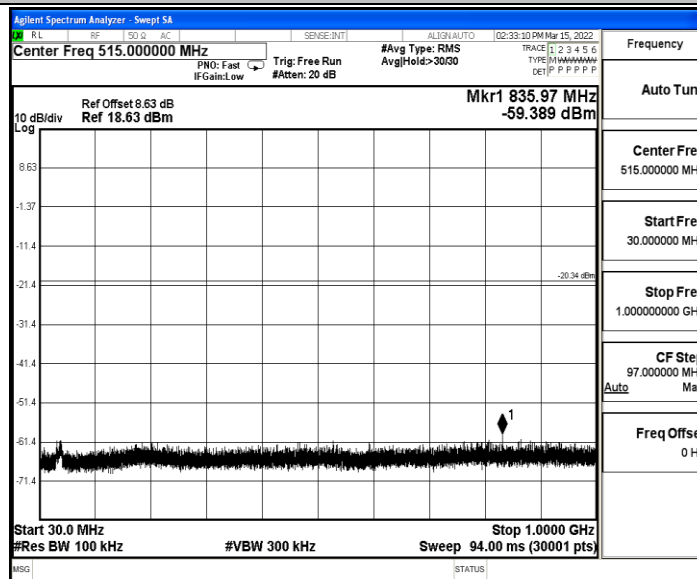
CF Stop 300.000 kHz

Auto

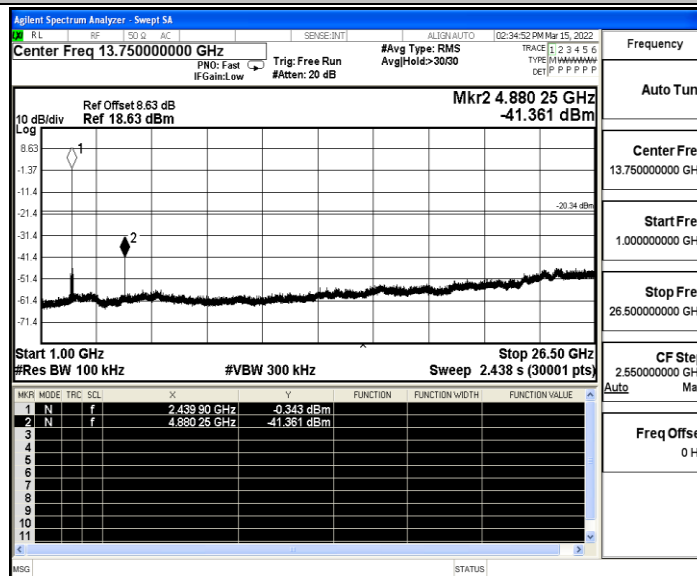
Freq Offset 0 Hz



BLE_1M_Ant1_2440_30~1000

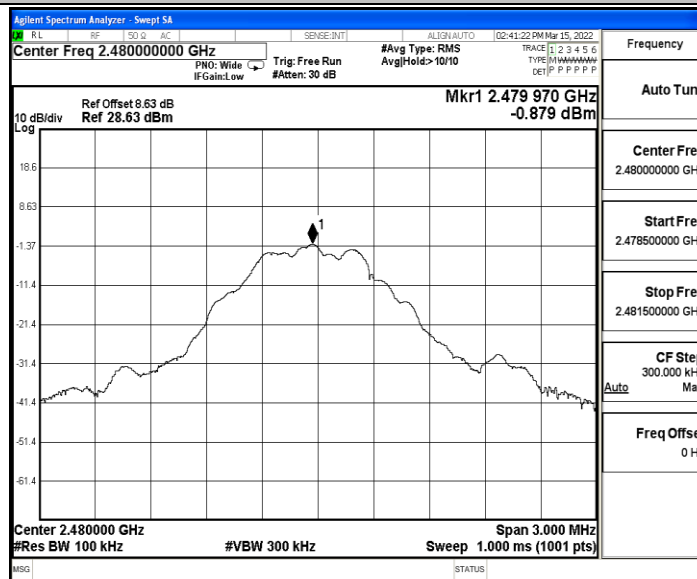


BLE_1M_Ant1_2440_1000~26500

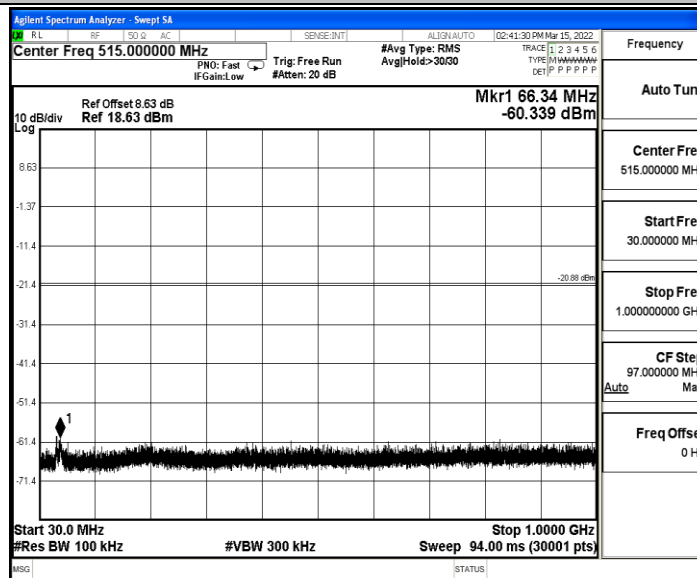




BLE_1M_Ant1_2480_0~Reference

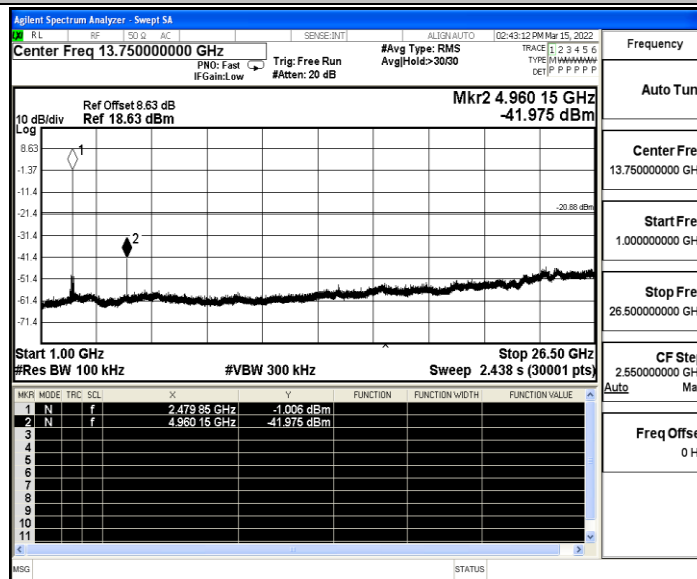


BLE_1M_Ant1_2480_30~1000





BLE_1M_Ant1_2480_1000-26500





A.6 Duty Cycle

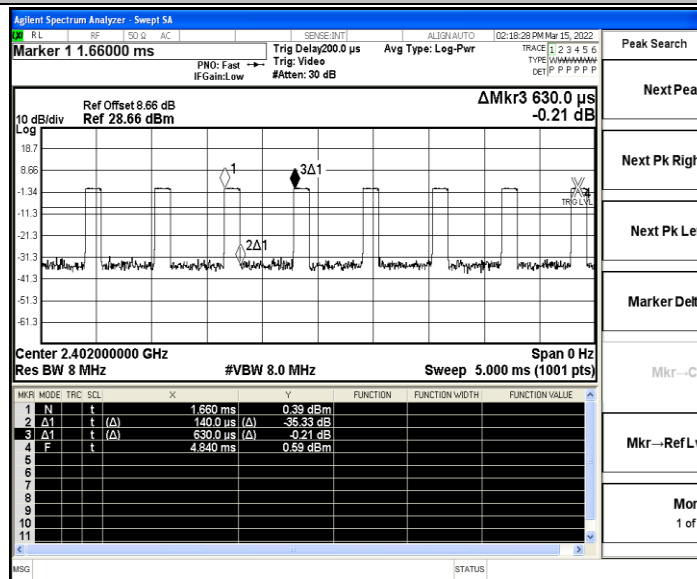
Test Result

TestMode	Antenna	Channel	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	Limit	Verdict
BLE_1M	Ant1	2402	0.14	0.63	0.2222	22.22	6.53	---	---
		2440	0.13	0.62	0.2097	20.97	6.78	---	---
		2480	0.13	0.62	0.2097	20.97	6.78	---	---

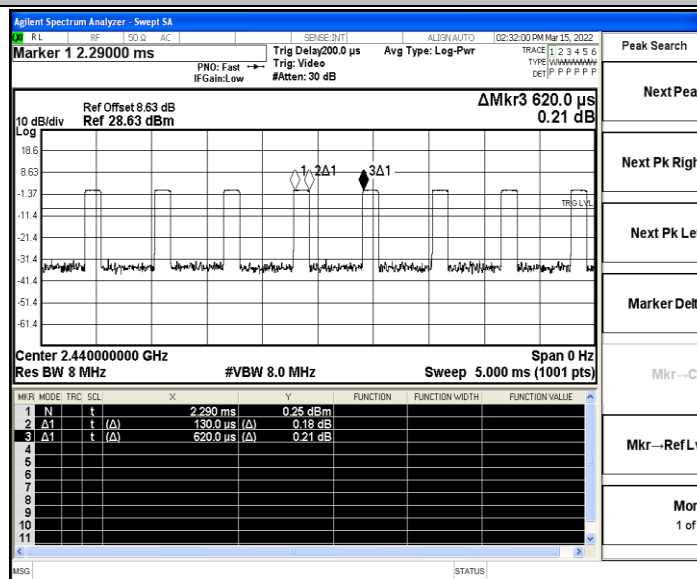


Test Graphs

BLE_1M_Ant1_2402

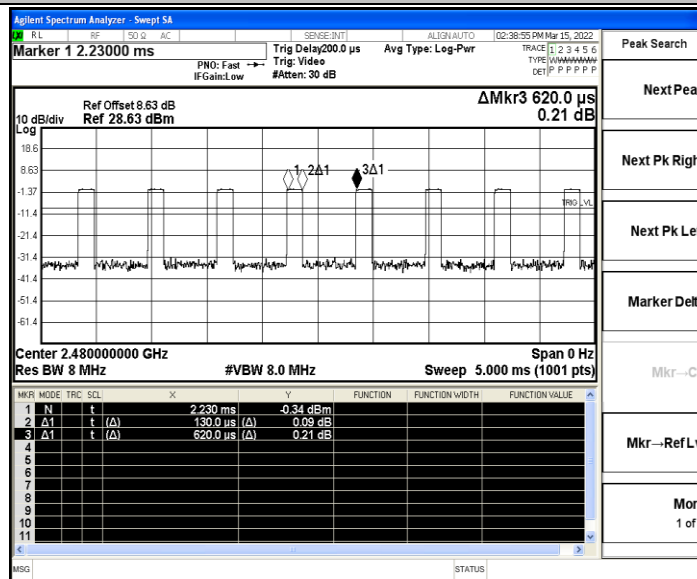


BLE_1M_Ant1_2440





BLE_1M_Ant1_2480





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	-46.77	≤-41.20	48.43	≤54	PASS
				AV	2370.035	-43.26	≤-41.20	51.94	≤54	PASS
				AV	2390.000	-46.49	≤-41.20	48.71	≤54	PASS
				Peak	2310.000	-38.87	≤-21.20	56.33	≤74	PASS
				Peak	2337.800	-36.37	≤-21.20	58.83	≤74	PASS
				Peak	2390.000	-38.42	≤-21.20	56.78	≤74	PASS
		High	2480	AV	2483.500	-43.36	≤-41.20	51.84	≤54	PASS
				AV	2483.600	-42.97	≤-41.20	52.23	≤54	PASS
				AV	2500.000	-45.5	≤-41.20	49.70	≤54	PASS
				Peak	2483.500	-28.32	≤-21.20	66.88	≤74	PASS
				Peak	2483.520	-28.32	≤-21.20	66.88	≤74	PASS
				Peak	2500.000	-37.43	≤-21.20	57.77	≤74	PASS

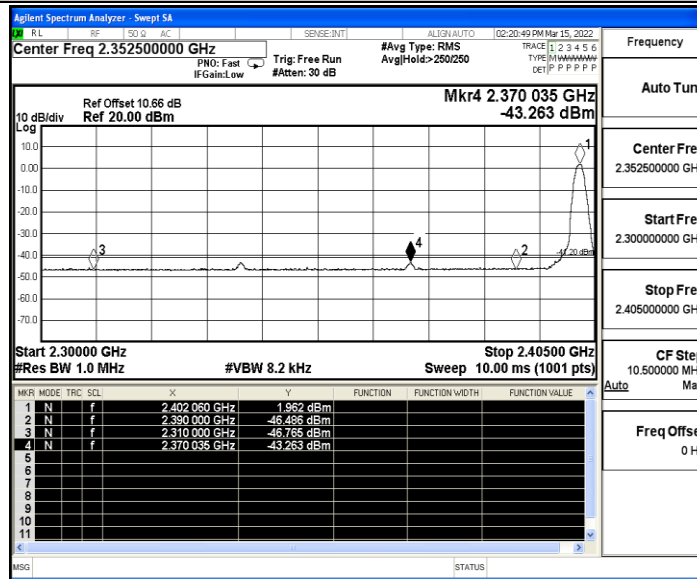
Note:

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.

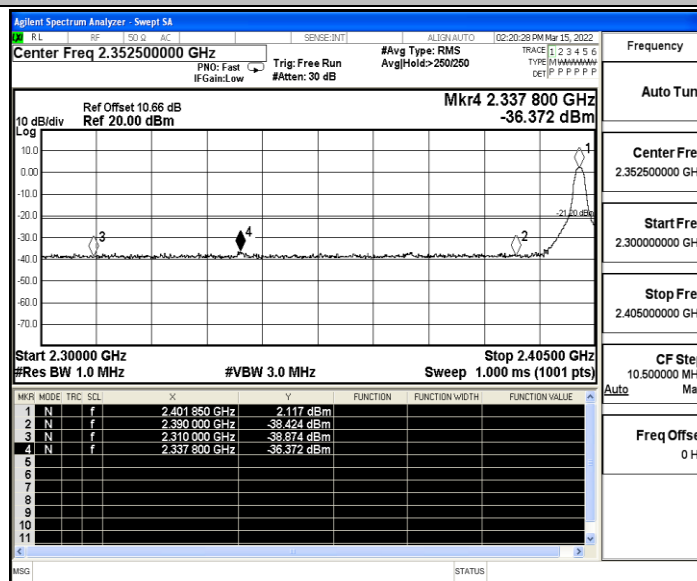


Test Graphs

BLE_1M_Ant1_Low_2402_AV

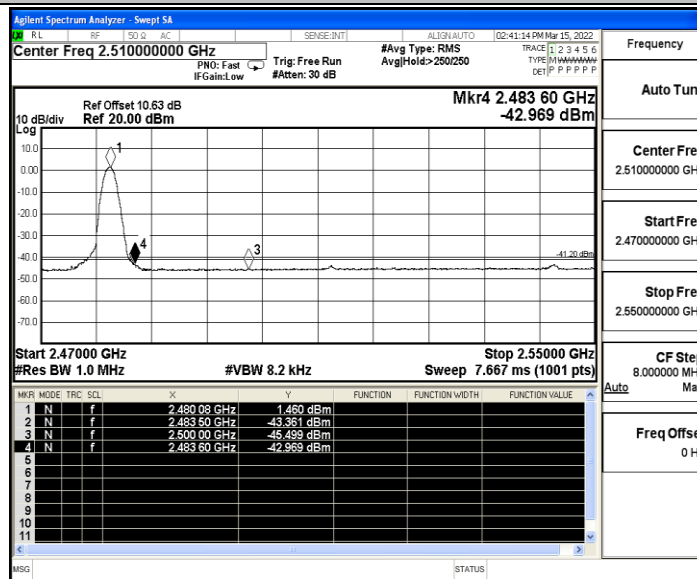


BLE_1M_Ant1_Low_2402_Peak





BLE_1M_Ant1_High_2480_AV



BLE_1M_Ant1_High_2480_Peak

