Appendix B

RF Test Data for BT LE (Conducted Measurement)

Product Name: Poco X403

Test Model: Poco X403

Environmental Conditions

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

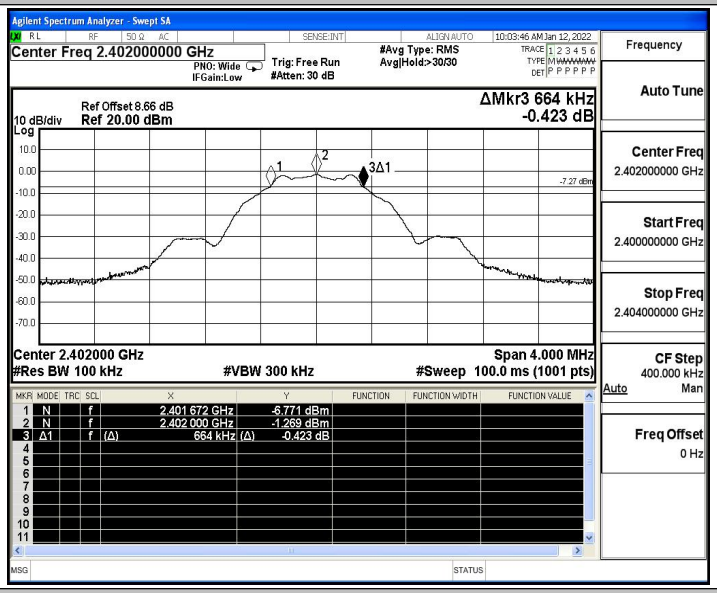
B.1 DTS Bandwidth

Test Result

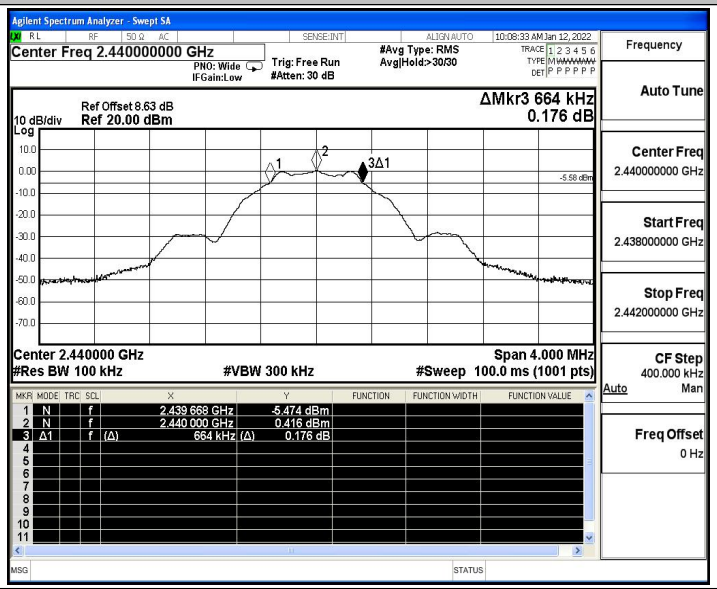
TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.664	2401.672	2402.336	0.5	PASS
		2440	0.664	2439.668	2440.332	0.5	PASS
		2480	0.668	2479.664	2480.332	0.5	PASS

Test Graphs

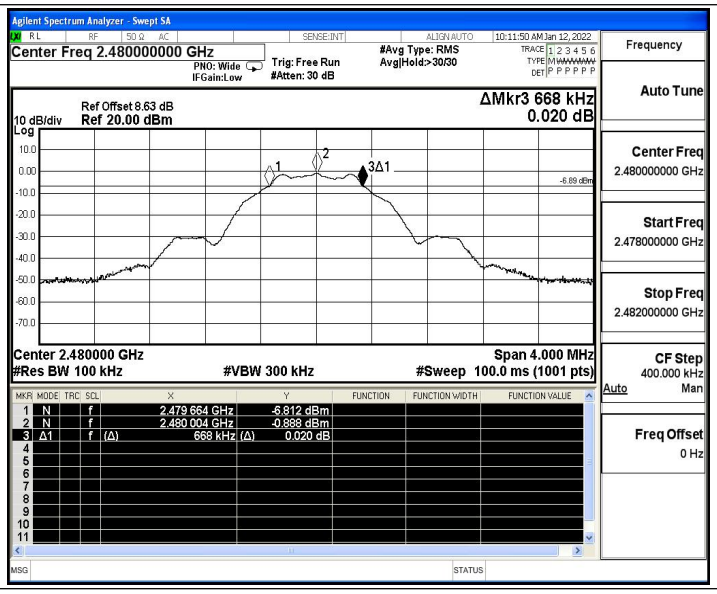
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480


Agilent Spectrum Analyzer - Swept SA
Center Freq 2.480000000 GHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
Avg|Hold:>30/30
10:11:50 AM Jan 12, 2022
Ref Offset 8.63 dB
10 dB/div Ref 20.00 dBm
Log
ΔMkr3 668 kHz
0.020 dB
-6.89 dBm
Center 2.480000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 4.000 MHz
#Sweep 100.0 ms (1001 pts)
1 N f 2.479 664 GHz -6.812 dBm
2 N f 2.480 004 GHz -0.888 dBm
3 Δ1 f (Δ) 668 kHz (Δ) 0.020 dB
Frequency
Auto Tune
Center Freq
2.480000000 GHz
Start Freq
2.478000000 GHz
Stop Freq
2.482000000 GHz
CF Step
400.000 kHz
Auto Man
Freq Offset
0 Hz

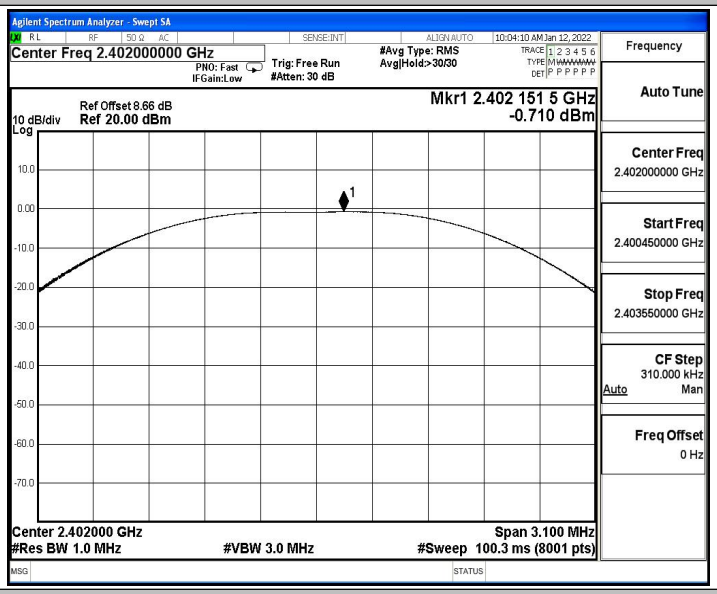
B.2 Maximum peak conducted output power

Test Result

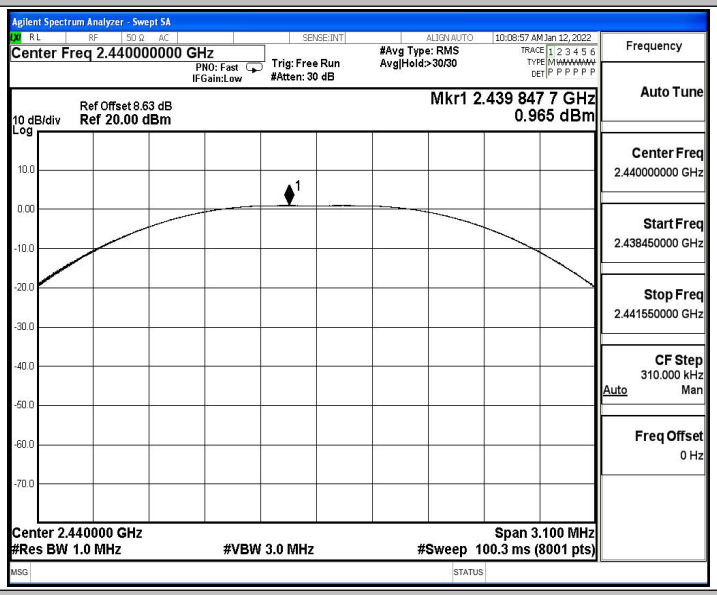
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-0.71	≤30	PASS
		2440	0.97	≤30	PASS
		2480	-0.34	≤30	PASS

Test Graphs

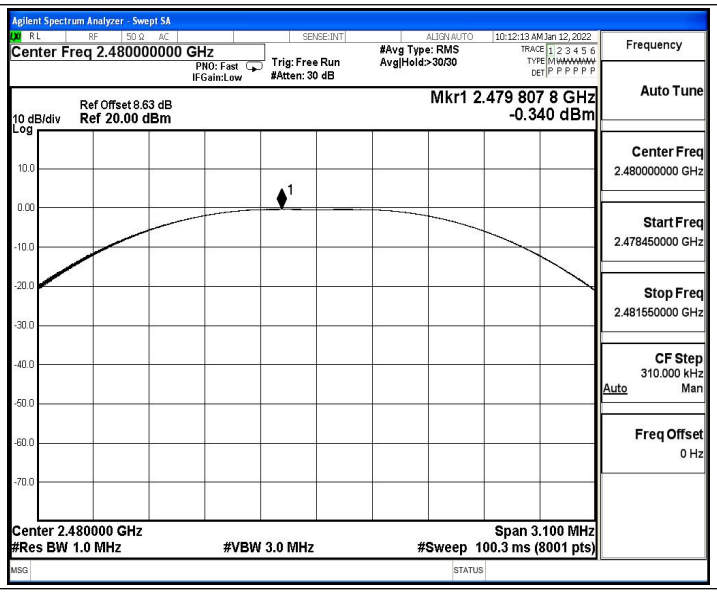
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480


Agilent Spectrum Analyzer - Swept SA
Center Freq 2.480000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
Avg|Hold:>30/30
10:12:13 AM Jan 12, 2022
Ref Offset 8.63 dB
10 dB/div Ref 20.00 dBm
Log
Mkr1 2.479 807 8 GHz
-0.340 dBm
Center 2.480000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 3.100 MHz
#Sweep 100.3 ms (8001 pts)
Frequency
Auto Tune
Center Freq
2.480000000 GHz
Start Freq
2.478450000 GHz
Stop Freq
2.481550000 GHz
CF Step
310.000 kHz
Auto Man
Freq Offset
0 Hz

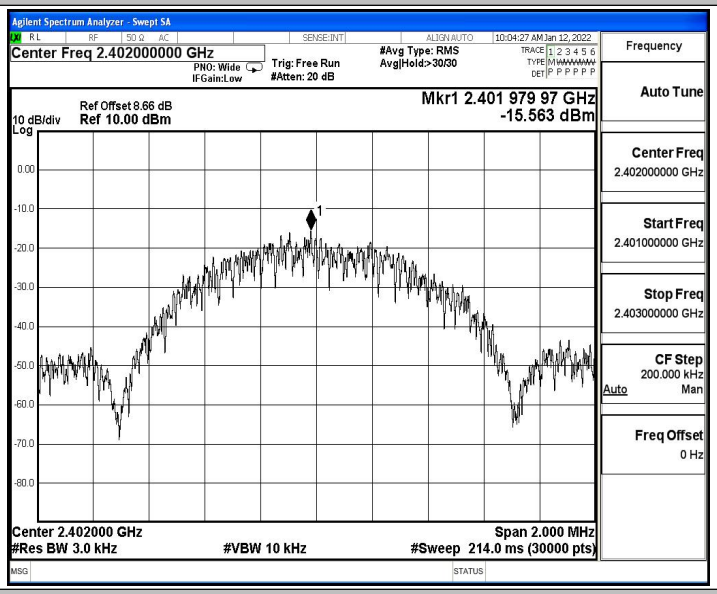
B.3 Maximum power spectral density

Test Result

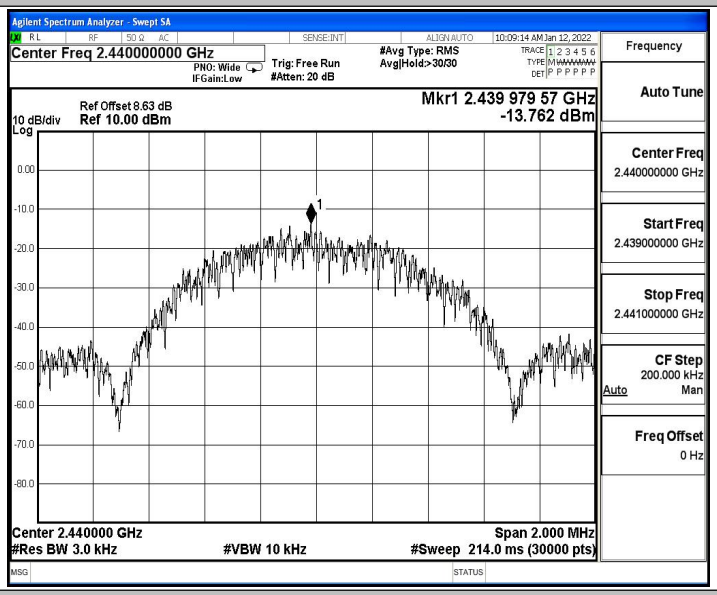
TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-15.56	≤8.00	PASS
		2440	-13.76	≤8.00	PASS
		2480	-15.13	≤8.00	PASS

Test Graphs

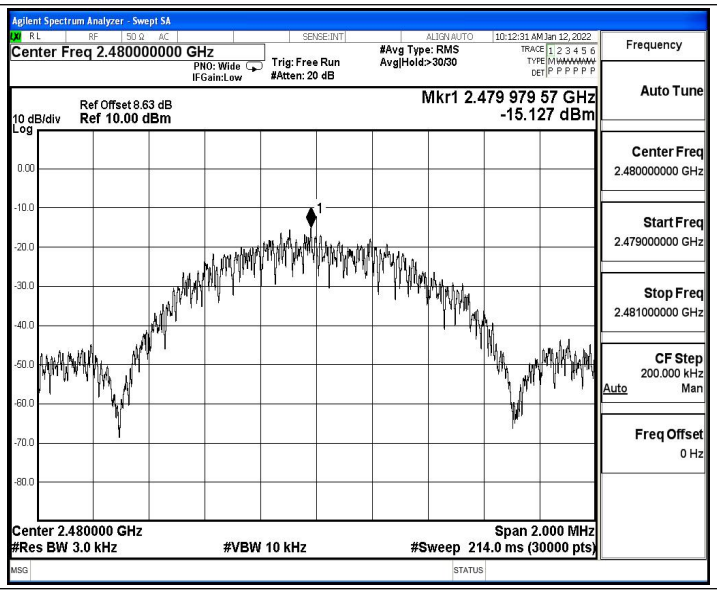
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480


Agilent Spectrum Analyzer - Swept SA
Center Freq 2.480000000 GHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 20 dB
#Avg Type: RMS
Avg|Hold:>30/30
10:12:31 AM Jan 12, 2022
Frequency
Auto Tune
Ref Offset 8.63 dB
10 dB/div Ref 10.00 dBm
Log
Mkr1 2.479 979 57 GHz
-15.127 dBm
Center Freq
2.480000000 GHz
Start Freq
2.479000000 GHz
Stop Freq
2.481000000 GHz
CF Step
200.000 kHz
Auto Man
Freq Offset
0 Hz
Center 2.480000 GHz
#Res BW 3.0 kHz
#VBW 10 kHz
Span 2.000 MHz
#Sweep 214.0 ms (30000 pts)

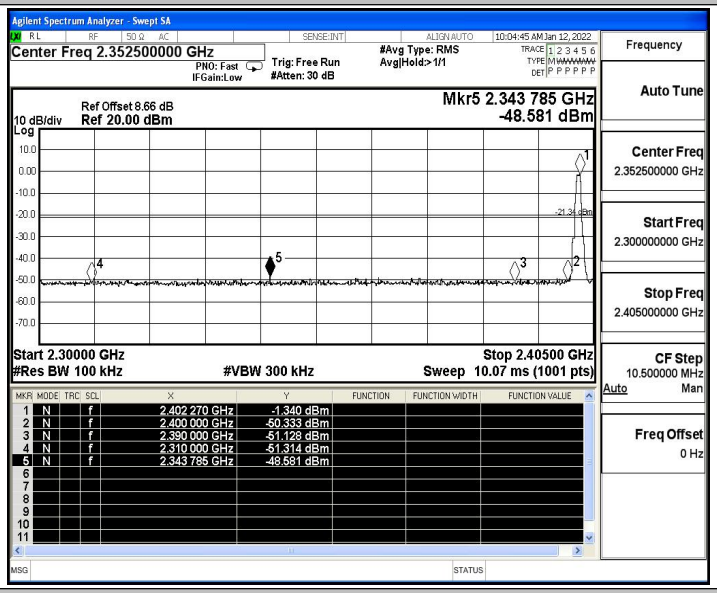
B.4 Band edge measurements

Test Result

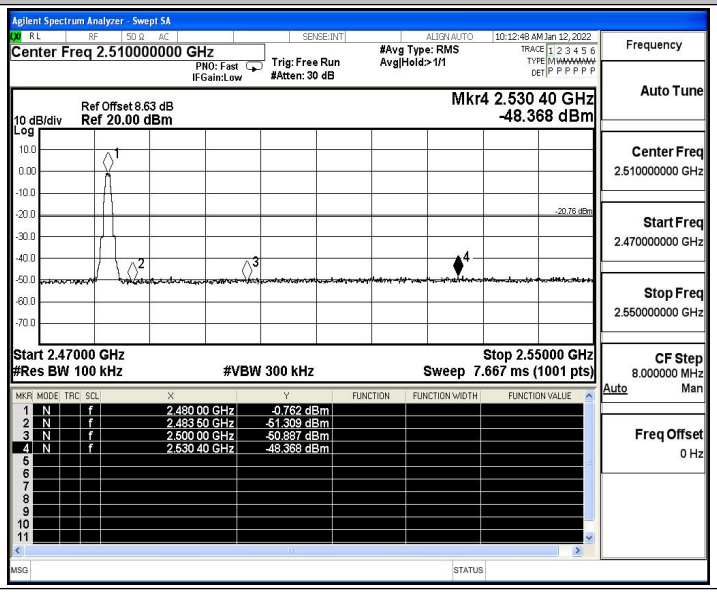
TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-1.34	-48.58	≤-21.34	PASS
		High	2480	-0.76	-48.37	≤-20.76	PASS

Test Graphs

BLE_1M_Ant1_Low_2402



BLE_1M_Ant1_High_2480



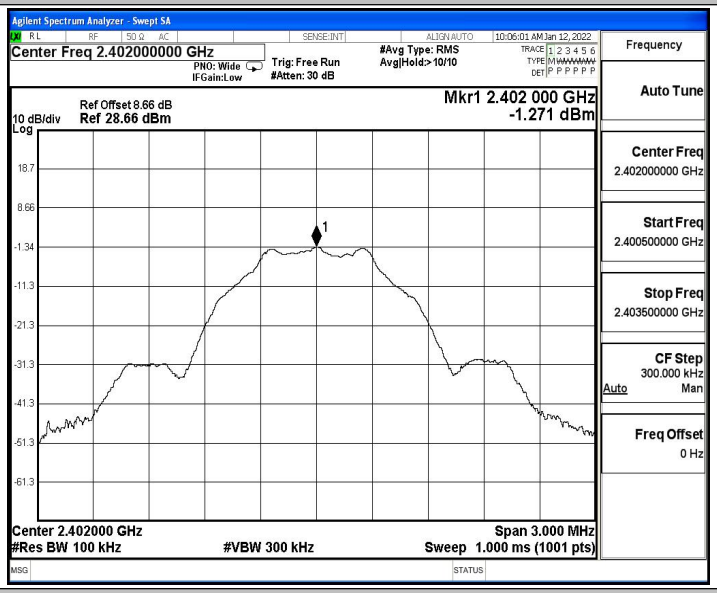
B.5 Conducted Spurious Emission

Test Result

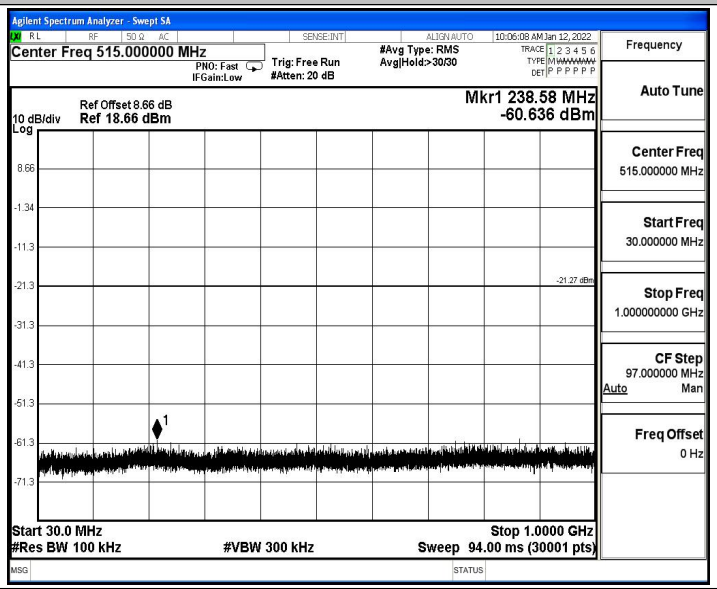
TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-1.27	-1.27	---	PASS
			30~1000	-1.27	-60.64	≤-21.27	PASS
			1000~26500	-1.27	-46.56	≤-21.27	PASS
		2440	Reference	0.44	0.44	---	PASS
			30~1000	0.44	-60.55	≤-19.56	PASS
			1000~26500	0.44	-46.74	≤-19.56	PASS
		2480	Reference	-0.90	-0.90	---	PASS
			30~1000	-0.90	-61.08	≤-20.9	PASS
			1000~26500	-0.90	-46.89	≤-20.9	PASS

Test Graphs

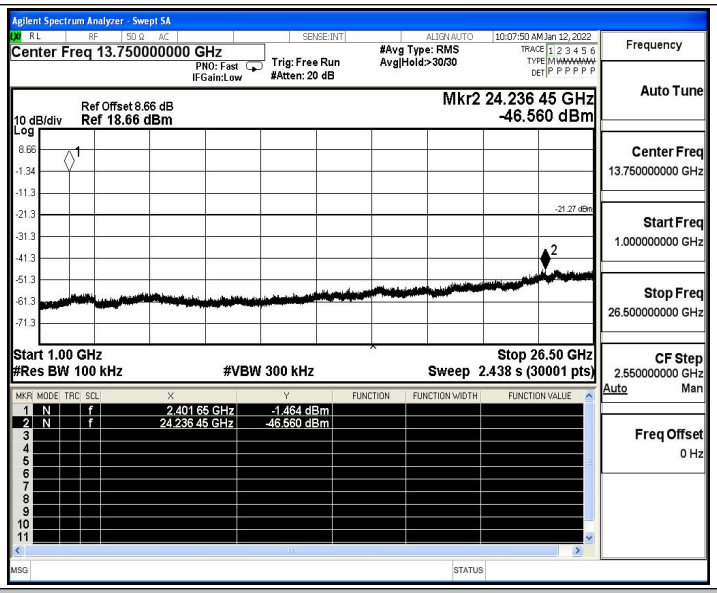
BLE_1M_Ant1_2402_0~Reference



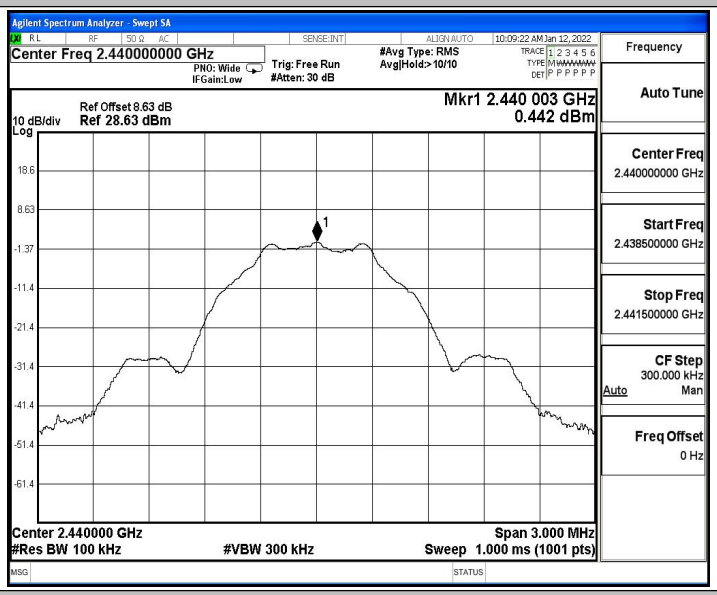
BLE_1M_Ant1_2402_30~1000



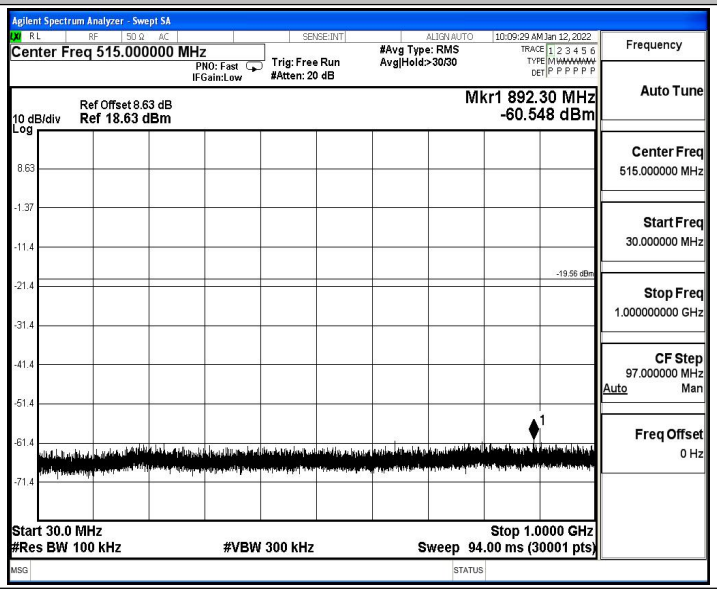
BLE_1M_Ant1_2402_1000~26500



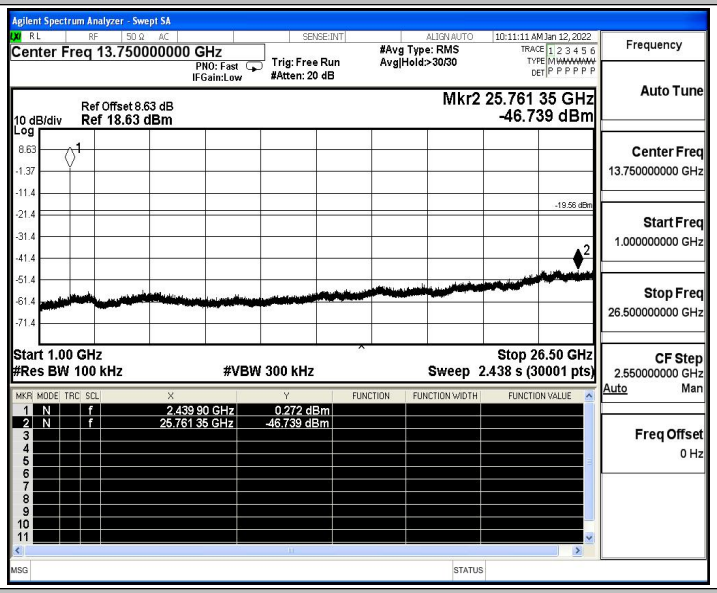
BLE_1M_Ant1_2440_0~Reference



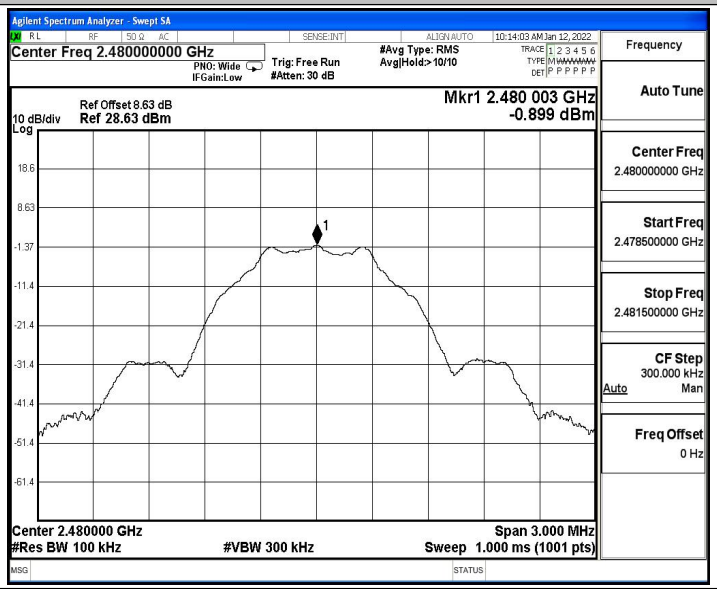
BLE_1M_Ant1_2440_30~1000



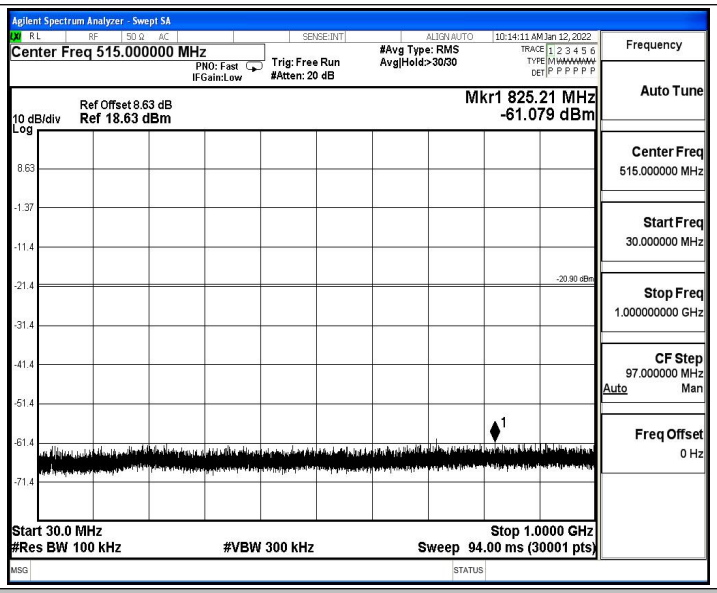
BLE_1M_Ant1_2440_1000~26500



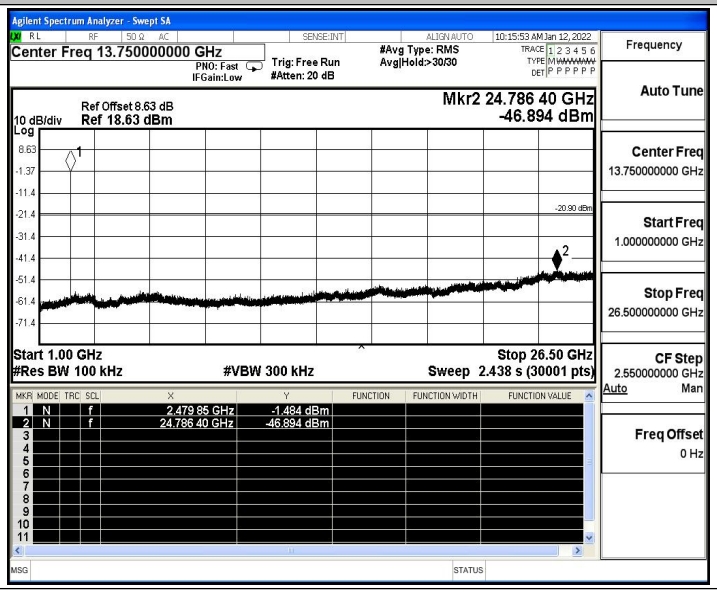
BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500



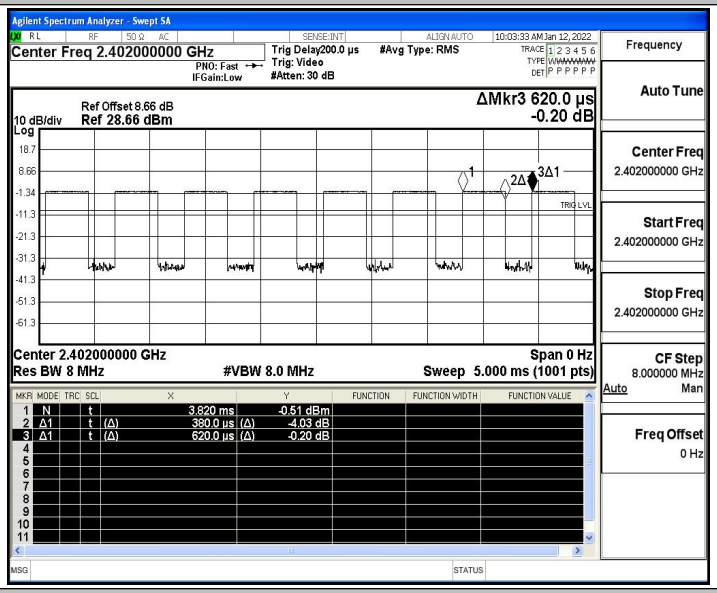
B.6 Duty Cycle

Test Result

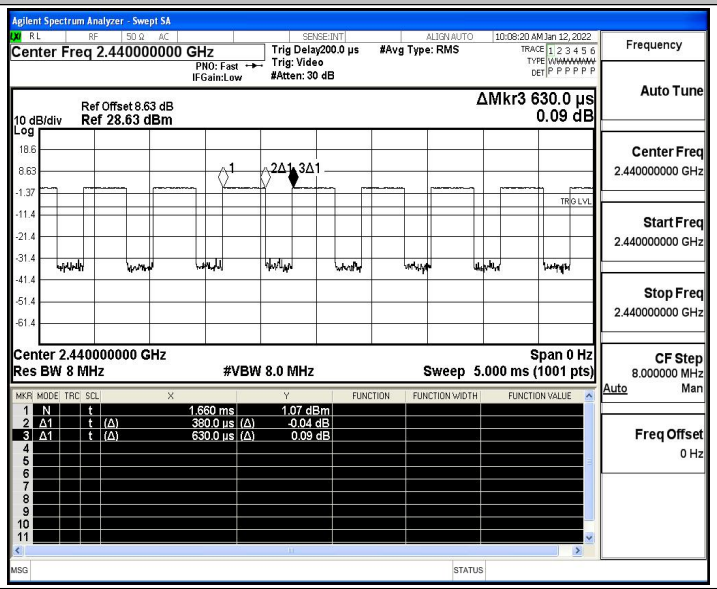
TestMode	Antenna	Channel	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	Minimum VBW(KHz)	Limit	Verdict
BLE_1M	Ant1	2402	0.38	0.62	0.6129	61.29	2.13	2.63	---	---
		2440	0.38	0.63	0.6032	60.32	2.20	2.63	---	---
		2480	0.38	0.63	0.6032	60.32	2.20	2.63	---	---

Test Graphs

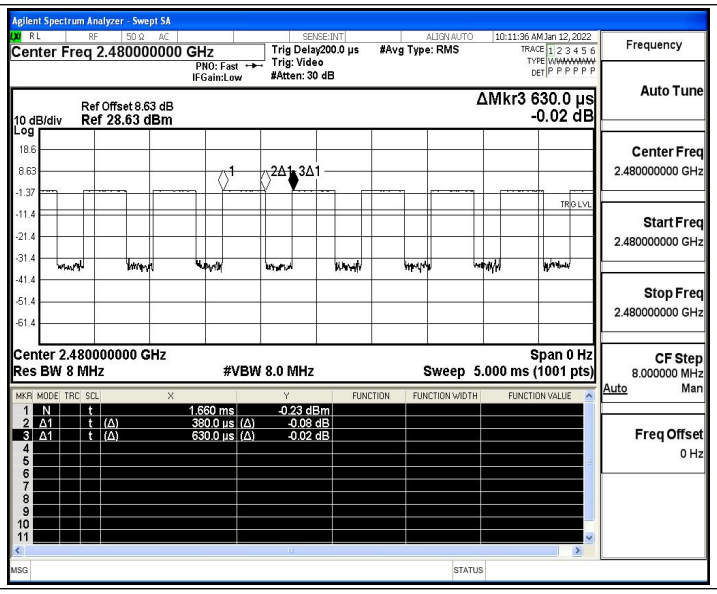
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480


Agilent Spectrum Analyzer - Swept SA
Center Freq 2.480000000 GHz
Trig Delay200.0 µs
#Avg Type: RMS
Trig: Video
#Atten: 30 dB
PNO: Fast
IFGain:Low
10:11:36 AM Jan 12, 2022
Ref Offset 8.63 dB
10 dB/div
Ref 28.63 dBm
Log
ΔMkr3 630.0 µs
-0.02 dB
Center 2.480000000 GHz
Span 0 Hz
Res BW 8 MHz
#VBW 8.0 MHz
Sweep 5.000 ms (1001 pts)
1 N t 1.660 ms -0.23 dBm
2 Δ1 t (Δ) 380.0 µs (Δ) -0.08 dB
3 Δ1 t (Δ) 630.0 µs (Δ) -0.02 dB
Frequency
Auto Tune
Center Freq
2.480000000 GHz
Start Freq
2.480000000 GHz
Stop Freq
2.480000000 GHz
CF Step
8.000000 MHz
Auto Man
Freq Offset
0 Hz

B.7 Emissions in Restricted Bands

Test Result

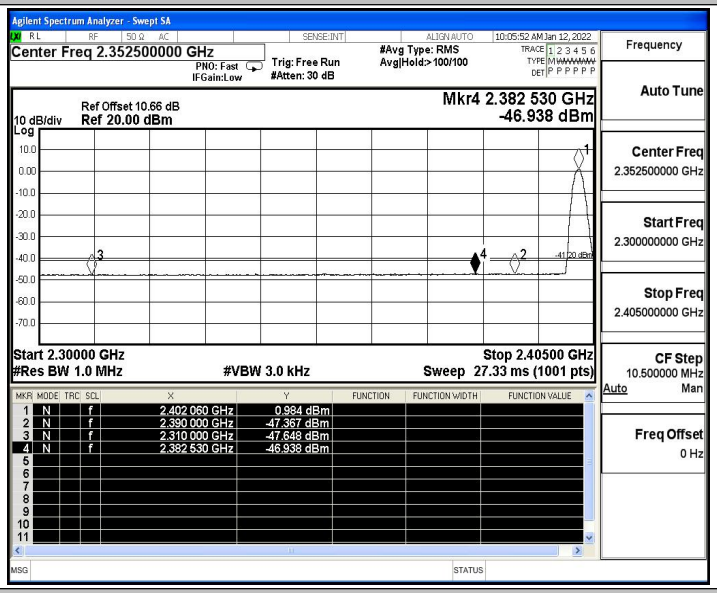
TestMode	Antenna	ChName	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-47.65	≤-41.20	47.55	≤54	PASS
				AV	2382.530	-46.94	≤-41.20	48.26	≤54	PASS
				AV	2390.000	-47.37	≤-41.20	47.83	≤54	PASS
				Peak	2310.000	-39.18	≤-21.20	56.02	≤74	PASS
				Peak	2334.860	-36.98	≤-21.20	58.22	≤74	PASS
				Peak	2390.000	-39.08	≤-21.20	56.12	≤74	PASS
		High	2480	AV	2483.500	-46.53	≤-41.20	48.67	≤54	PASS
				AV	2483.520	-46.53	≤-41.20	48.67	≤54	PASS
				AV	2500.000	-46.87	≤-41.20	48.33	≤54	PASS
				Peak	2483.500	-37.9	≤-21.20	57.30	≤74	PASS
				Peak	2497.840	-36.41	≤-21.20	58.79	≤74	PASS
				Peak	2500.000	-38.34	≤-21.20	56.86	≤74	PASS

Note：

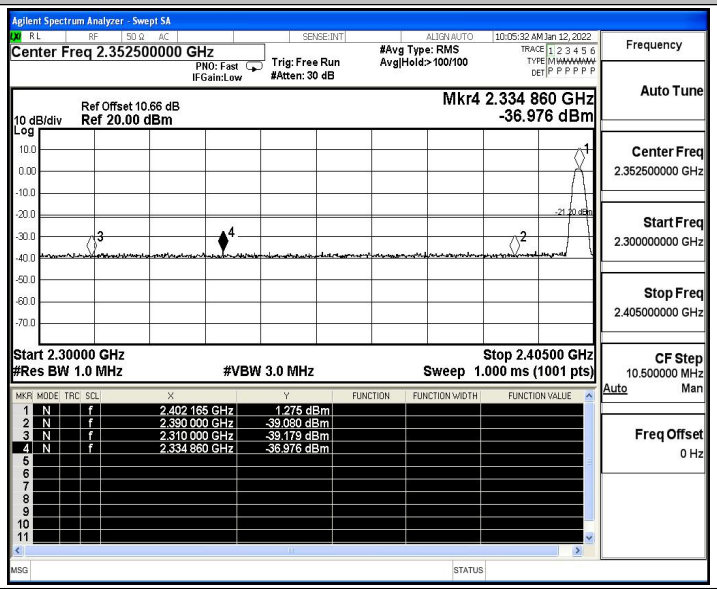
1. The Antenna Gain is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs

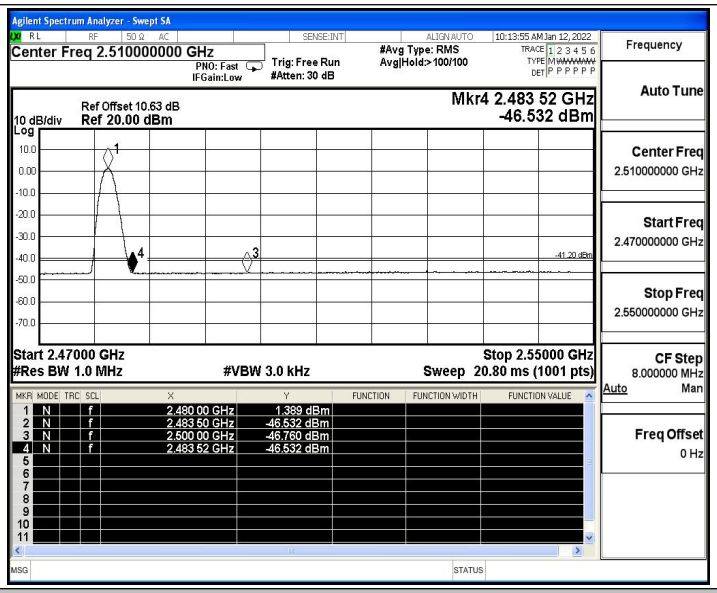
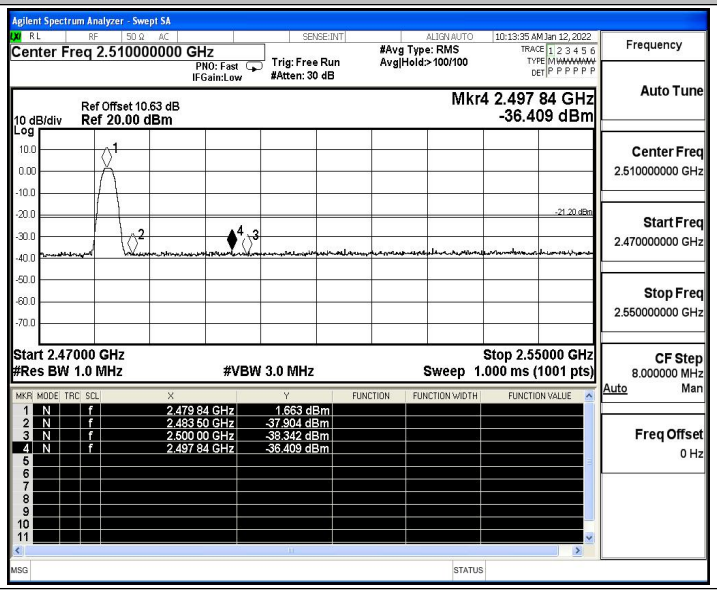
BLE_1M_Ant1_Low_2402_AV



BLE_1M_Ant1_Low_2402_Peak



BLE_1M_Ant1_High_2480_AV



BLE_1M_Ant1_High_2480_Peak