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Snap Inc.

RF TEST REPORT

Report Type:
FCC Part 15.247 & ISED RSS-247 RF report

Model:
006

REPORT NUMBER:
220100298SHA-003

ISSUE DATE:
April 27, 2022

DOCUMENT CONTROL NUMBER:
TTRF15.247-02_V1 © 2018 Intertek

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TEST REPORT

Report no.: 220100298SHA-003

Applicant:	Snap Inc.
	2772 Donald Douglas Loop North, Santa Monica, California, United States.
Manufacturer:	Hangzhou Zero Zero Technology Co., Ltd
	401, 4th floor, building #2, Wudi Center, #2399 Yuhangtang Road, Yuhang District, Hangzhou, Zhejiang, China
Product Name:	pixy
Type/Model:	006
FCC ID:	2AIRN-006

SUMMARY:

The equipment complies with the requirements according to the following standard(s) or Specification:

47CFR Part 15 (2020): Radio Frequency Devices (Subpart C)

ANSI C63.10 (2013): American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices

PREPARED BY:	**REVIEWED BY:**
Project Engineer Erick Liu	Reviewer Wakeyou Wang

Content

Revision History

Report No.	Version	Description	Issued Date
220100298SHA-003	Rev. 01	Initial issue of report	April 27, 2022

Measurement result summary

TEST ITEM	FCC REFERANCE	RESULT
Minimum 6dB Bandwidth	15.247(a)(2)	Pass
Maximum conducted output power and e.i.r.p.	15.247(b)(3)	Pass
Power spectrum density	15.247(e)	Pass
Emission outside the frequency band	15.247(d)	Pass
Radiated Emissions in restricted frequency bands	15.247(d), 15.205&15.209	Pass
Power line conducted emission	15.207(a)	Pass
Antenna requirement	15.203	Pass

Notes: 1: NA =Not Applicable
2: Determination of the test conclusion is based on IEC Guide 115 in consideration of measurement uncertainty.
3: Additions, Deviations and Exclusions from Standards: None.

TEST REPORT

1 GENERAL INFORMATION

1.1 Description of Equipment Under Test (EUT)

Product name:	pixy
Type/Model:	006
Description of EUT:	The EUT is a drone with BLE and WIFI function, it has only one model.
Rating:	Powered by Battery: 3.85V DC, 860mAh,3.311Wh
Category of EUT:	Class B
EUT type:	☒ Table top ☐ Floor standing
Software Version:	/
Hardware Version:	/
Sample received date:	December 29, 2021
Date of test:	December 29, 2021 ~ March 1, 2022

1.2 Technical Specification

Frequency Band:	2400MHz ~ 2483.5MHz
Support Standards:	IEEE 802.15.1
Type of Modulation:	GFSK
Channel Number:	40
Data Rate:	1Mbps/2Mbps
Channel Separation:	2MHz
Antenna Information:	Dipole antenna, 3.46dBi

TEST REPORT

1.3 Description of Test Facility

Name:	Intertek Testing Services Shanghai
Address:	Building 86, No. 1198 Qinzhou Road(North), Shanghai 200233, P.R. China
Telephone:	86 21 61278200
Telefax:	86 21 54262353

The test facility is recognized, certified, or accredited by these organizations:	CNAS Accreditation Lab Registration No. CNAS L0139
	FCC Accredited Lab Designation Number: CN0175
	IC Registration Lab CAB identifier.: CN0051
	VCCI Registration Lab Registration No.: R-14243, G-10845, C-14723, T-12252
	A2LA Accreditation Lab Certificate Number: 3309.02

2 TEST SPECIFICATIONS

2.1 Standards or specification

47CFR Part 15 (2020)
ANSI C63.10 (2013)
KDB 558074 (v05r02)

2.2 Mode of operation during the test

Three axes (X, Y, Z) were observed while the test receiver worked as “max hold” continuously and the highest reading among the whole test procedure was recorded. Compare with the test results that X axis is the worst case.

The lowest, middle and highest channel were tested as representatives.

Frequency Band (MHz)				2402 ~ 2480			
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
0	**2402**	10	2422	**20**	**2442**	30	2462
1	2404	11	2424	21	2444	31	2464
2	2406	12	2426	22	2446	32	2466
3	2408	13	2428	23	2448	33	2468
4	2410	14	2430	24	2450	34	2470
5	2412	15	2432	25	2452	35	2472
6	2414	16	2434	26	2454	36	2474
7	2416	17	2436	27	2456	37	2476
8	2418	18	2438	28	2458	38	2478
9	2420	19	2440	29	2460	**39**	**2480**

Data rate VS Power:
The test setting software is offered by the manufactory. The pre-scan for the conducted power with all rates in each modulation and bands was used, and the worst case was found and used in all test cases.

Test software and Power Setting parameter			
Test Software	QRCT		
Working Mode	BLE		
Test Channel	2402MHz	2442MHz	2480MHz
Power Setting	Default	Default	Default

While testing transmitting mode of EUT, the internal modulation and continuously transmission was applied.

Radiated test mode: EUT transmitted signal with BT antenna;

Conducted test mode: EUT transmitted signal from BT RF port connected to SPA directly;

2.3 Test software list

Test Items	Software	Manufacturer	Version
Conducted emission	ESxS-K1	R&S	V2.1.0
Radiated emission	ES-K1	R&S	V1.71

2.4 Test peripherals list

Item No.	Name	Band and Model	Description
1	Laptop computer	DELL 5480	-
2	RF cable	/	0.2m length; 0.5dB loss

2.5 Test environment condition:

Test items	Temperature	Humidity
Minimum 6dB Bandwidth	25°C	54% RH
Maximum conducted output power and e.i.r.p.		
Power spectrum density		
Emission outside the frequency band		
Occupied bandwidth		
Radiated Emissions in restricted frequency bands	24°C	52% RH
Power line conducted emission	24°C	51% RH

2.6 Instrument list

Conducted Emission					
Used	Equipment	Manufacturer	Type	Internal no.	Due date
☑	Test Receiver	R&S	ESCS 30	EC 2107	2022-07-09
☑	A.M.N.	R&S	ESH2-Z5	EC 3119	2022-11-10
☐	A.M.N.	R&S	ENV4200	EC 3558	2022-10-11
☑	Attenuator	Huaxiang	TS5-10dB-6G-B	21062303	2023-04-24
☑	Shielded room	Zhongyu	-	EC 2838	2023-01-12
Radiated Emission					
Used	Equipment	Manufacturer	Type	Internal no.	Due date
☑	Test Receiver	R&S	ESIB 26	EC 3045	2022-09-16
☑	Bilog Antenna	TESEQ	CBL 6112D	EC 4206	2022-09-25
☐	Horn antenna	R&S	HF 906	EC 3049	2023-01-17
☑	Horn antenna	ETS	3117	EC 4792-1	2023-03-15
☐	Horn antenna	TOYO	HAP18-26W	EC 4792-3	2022-07-09
☑	Pre-amplifier	R&S	Pre-amp 18	EC5262	2022-06-11
☑	Semi-anechoic chamber	Albatross project	-	EC 3048	2022-07-14
RF test					
Used	Equipment	Manufacturer	Type	Internal no.	Due date
☑	PXA Signal Analyzer	Keysight	N9030A	EC 5338	2023-03-16
☑	PXA Signal Analyzer	Keysight	N9030B	EC 6078	2022-06-10
☑	Power sensor	Agilent	U2021XA	EC 5338-1	2023-03-16
☑	Vector Signal Generator	Agilent	N5182B	EC 5175	2023-03-16
☑	MXG Analog Signal Generator	Agilent	N5181A	EC 5338-2	2023-03-16
☑	Test Receiver	R&S	ESCI 7	EC 4501	2022-09-16
☐	Universal Radio Communication Tester	R&S	CMW500	EC5944	2022-12-09
☐	Universal Radio Communication Tester	R&S	CMW500	Ec6209	2022-12-30
☑	Signal generator	Agilent	N5182A	Ec6172	2022-08-21
☑	Signal generator	Agilent	N5181A	Ec6171	2022-08-21
☑	Climate chamber	GWS	MT3065	EC 6021	2023-03-05
Additional instrument					
Used	Equipment	Manufacturer	Type	Internal no.	Due date
☑	Therom-Hygrograph	ZJ1-2A	S.M.I.F.	EC 3783	2023-03-03
☑	Pressure meter	YM3	Shanghai Mengde	EC 4620	2022-09-09

2.7 Measurement uncertainty

The measurement uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Test item	Measurement uncertainty
Maximum peak output power	± 0.74dB
26 dB Bandwidth & 99% Occupied Bandwidth	
Minimum 6dB Bandwidth	
Power spectral density	
Radiated Emissions in restricted frequency bands below 1GHz	± 4.90dB
Radiated Emissions in restricted frequency bands above 1GHz	± 5.02dB
Emission outside the frequency band	± 2.89dB
Power line conducted emission	± 3.19dB

3 Minimum 6dB bandwidth

Test result: Pass

3.1 Limit

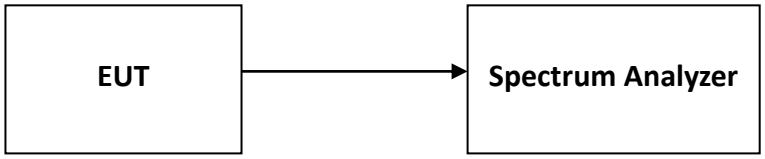
For systems using digital modulation techniques that may operate in the 902 - 928 MHz, 2400 - 2483.5 MHz and 5725 - 5850 MHz bands, the minimum 6 dB bandwidth shall be at least 500 kHz.

3.2 Measurement Procedure

The minimum 6dB bandwidth is measured using the Spectrum Analyzer according to DTS test procedure of “KDB558074 D01 DTS Meas Guidance” (clause 8.2) for compliance requirements.

a) Set RBW = 100 kHz.
b) Set the video bandwidth (VBW) ≥ 3 × RBW.
c) Detector = Peak.
d) Trace mode = max hold.
e) Sweep = auto couple.
f) Allow the trace to stabilize.
g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

3.3 Test Configuration



3.4 Test Results of Minimum 6dB bandwidth

Please refer to Appendix A

4 Maximum conducted output power and e.i.r.p.

Test result: Pass

4.1 Limit

For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 W. (The e.i.r.p. shall not exceed 4 W)

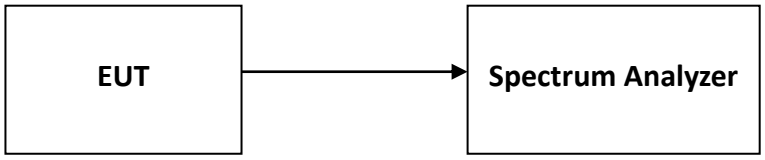
If the transmitting antenna of directional gain greater than 6dBi is used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi. If there have a beam forming type, the limit should be the minimum of 30dBm and 30+ (6 –antenna gain-beam forming gain).

4.2 Measurement Procedure

The EUT was tested according to DTS test procedure of “KDB558074 D01 DTS Meas Guidance” (clause 9.1.1) for compliance requirements.

a) Set the RBW ≥ DTS bandwidth.
b) Set VBW ≥ 3 × RBW.
c) Set span ≥ 3 x RBW
d) Sweep time = auto couple.
e) Detector = peak.
f) Trace mode = max hold.
g) Allow trace to fully stabilize.
h) Use peak marker function to determine the peak amplitude level.

4.3 Test Configuration



4.4 Test Results of Maximum conducted output power

Please refer to Appendix A

5 Power spectrum density

Test result: **Pass**

5.1 Limit

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dBm in any 3 kHz band during any time interval of continuous transmission.

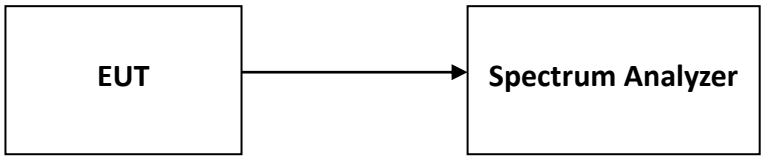
If the transmitting antenna of directional gain greater than 6dBi is used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi. If there have a beam forming type, the limit should be the minimum of 8dBm/MHz and 8+ (6 –antenna gain-beam forming gain).

5.2 Measurement Procedure

The power output was tested according to DTS test procedure of “KDB558074 D01 DTS Meas Guidance” (clause 10.2) for compliance requirements.

a) Set analyzer center frequency to DTS channel center frequency.
b) Set the span to 1.5 times the DTS bandwidth.
c) Set the RBW to: 3 kHz ≤ RBW ≤ 100 kHz.
d) Set the VBW ≥ 3 × RBW.
e) Detector = peak.
f) Sweep time = auto couple.
g) Trace mode = max hold.
h) Allow trace to fully stabilize.
i) Use the peak marker function to determine the maximum amplitude level within the RBW.
j) If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

5.3 Test Configuration



5.4 Test Results of Power spectrum density

Please refer to Appendix A

6 Emission outside the frequency band

Test result: **Pass**

6.1 Limit

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power.

6.2 Measurement Procedure

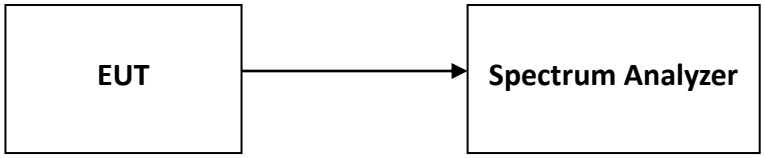
The EUT was tested according to DTS test procedure of "KDB558074 D01 DTS Meas Guidance" (clause 11.0) for compliance requirements.

Reference level measurement
Establish a reference level by using the following procedure:
a) Set instrument center frequency to DTS channel center frequency.
b) Set the span to ≥ 1.5 times the DTS bandwidth.
c) Set the RBW = 100 kHz.
d) Set the VBW ≥ 3 x RBW.
e) Detector = peak.
f) Sweep time = auto couple.
g) Trace mode = max hold.
h) Allow trace to fully stabilize.
i) Use the peak marker function to determine the maximum PSD level.

Emission level measurement
a) Set the center frequency and span to encompass frequency range to be measured.
b) Set the RBW = 100 kHz.
c) Set the VBW ≥ 3 x RBW.
d) Detector = peak.
e) Sweep time = auto couple.
f) Trace mode = max hold.
g) Allow trace to fully stabilize.
h) Use the peak marker function to determine the maximum amplitude level.

Ensure that the amplitude of all unwanted emissions outside of the authorized frequency band (excluding restricted frequency bands) are attenuated by at least the minimum requirements specified in 11.1 a) or 11.1 b). Report the three highest emissions relative to the limit.

6.3 Test Configuration



6.4 The results of Emission outside the frequency band

Please refer to Appendix A

7 Radiated Emissions in restricted frequency bands

Test result: **Pass**

7.1 Limit

The radiated emissions which fall in the restricted bands, must also comply with the radiated emission limits specified showed as below:

Frequencies (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 ~ 0.490	2400/F(kHz)	300
0.490 ~ 1.705	24000/F(kHz)	30
1.705 ~ 30.0	30	30
30 ~ 88	100	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

7.2 Measurement Procedure

For Radiated emission below 30MHz:

a) The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.
b) The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
c) Both X and Y axes of the antenna are set to make the measurement.
d) For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
e) The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9kHz at frequency below 30MHz.

TEST REPORT

For Radiated emission above 30MHz:

a) The EUT was placed on the top of a rotating table 0.8 meters (for 30MHz ~ 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.

b) The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c) The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d) For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e) The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

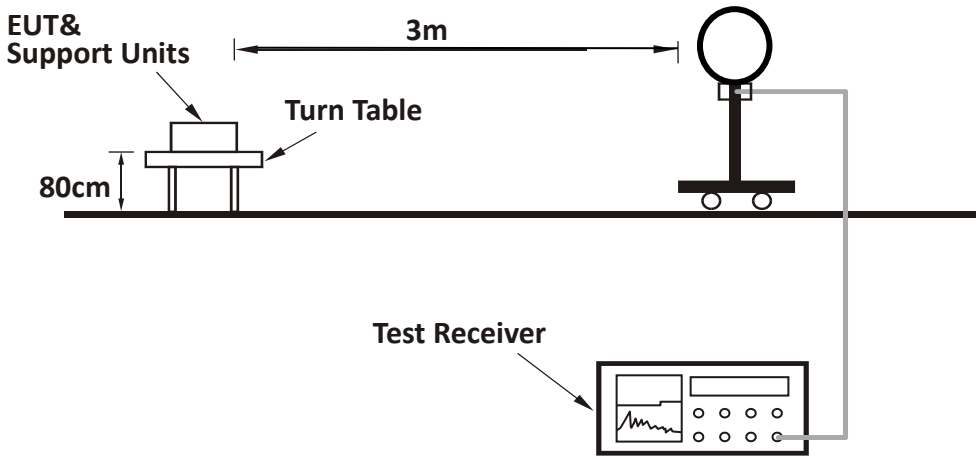
f) The test-receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Note:

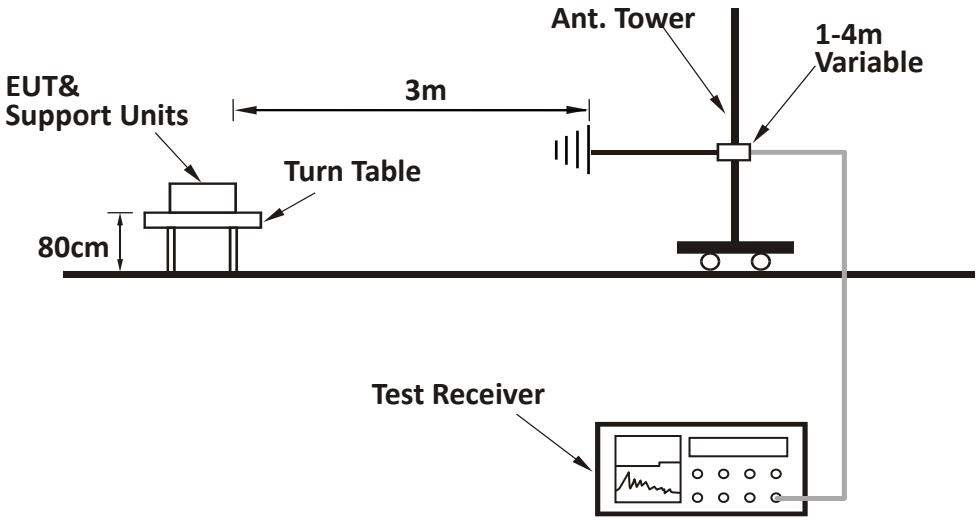
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is ≥1/T (Duty cycle < 98%), peak detector or 3 x RBW (Duty cycle ≥ 98%), RMS detector, trance average for AV data measurement at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.

7.3 Test Configuration

For Radiated emission below 30MHz:

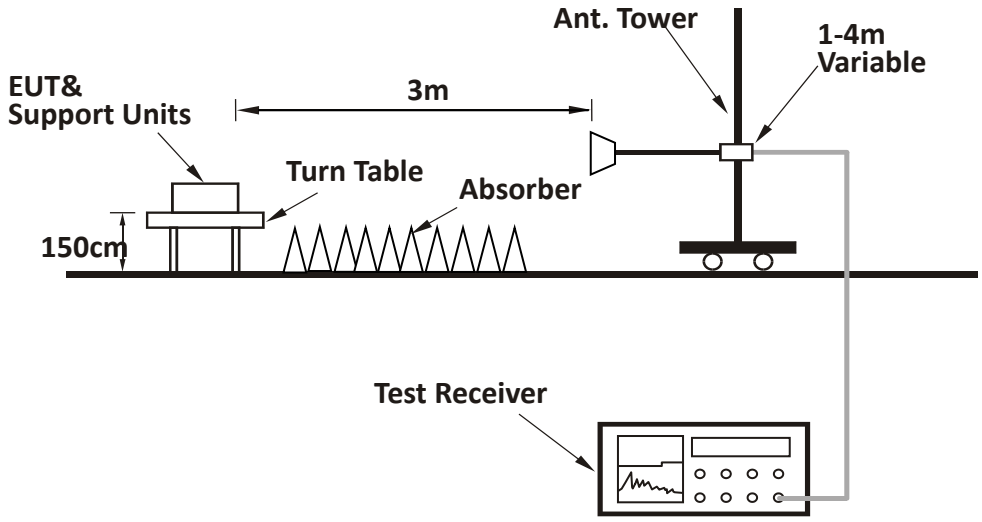


For Radiated emission 30MHz to 1GHz:



TEST REPORT

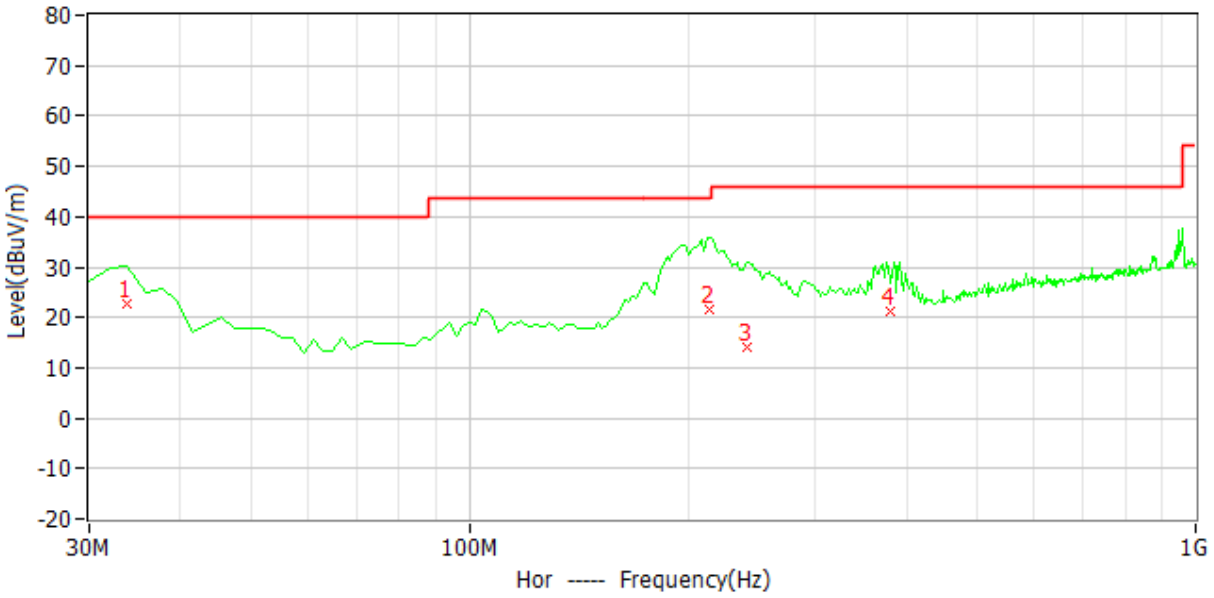
For Radiated emission above 1GHz:



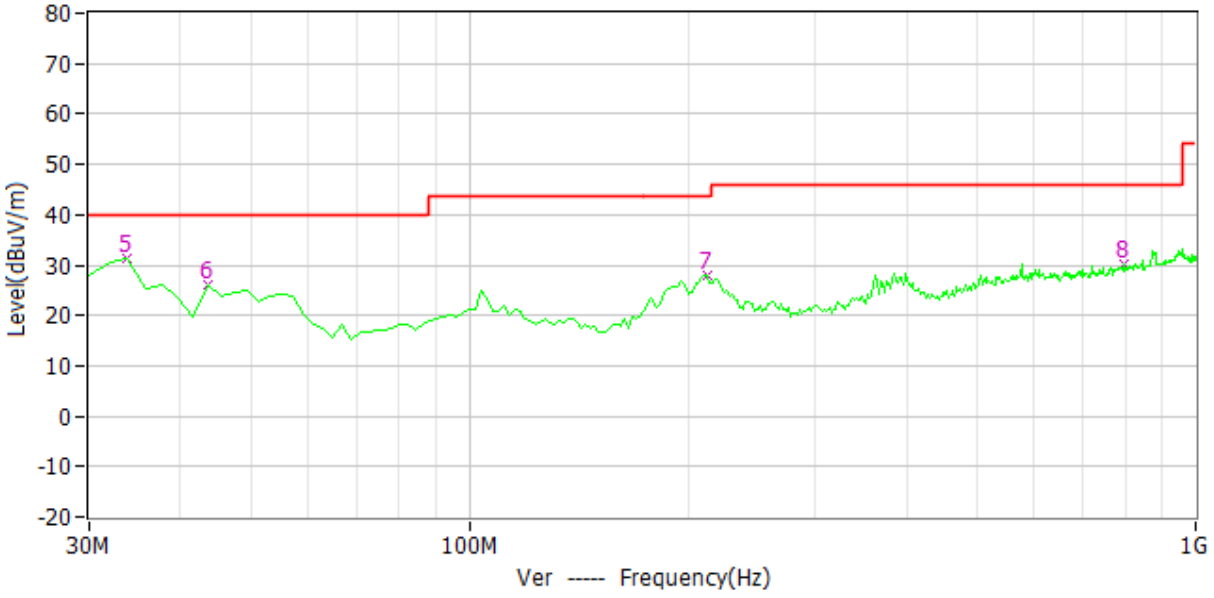
7.4 Test Results of Radiated Emissions

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line per 15.31(o) was not reported.

Horizontal



Vertical



TEST REPORT

Test data below 1GHz

Antenna	Frequency (MHz)	Corrected Reading (dBuV/m)	Correct Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Detector
H	33.888	22.6	19.0	40.0	17.4	PK
H	214.615	21.5	11.3	43.5	22.0	PK
H	241.884	14.2	13.7	46.0	31.8	PK
H	379.900	21.1	17.9	46.0	24.9	PK
V	33.888	31.3	19.0	40.0	8.7	PK
V	43.607	26.0	13.3	40.0	14.0	PK
V	212.726	28.1	11.3	43.5	15.4	PK
V	797.836	30.1	23.6	46.0	15.9	PK

TEST REPORT

Test result above 1GHz:

The emission was conducted from 1GHz to 25GHz

CH	Antenna	Frequency (MHz)	Correct Factor (dB/m)	Corrected Reading (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
L	H	2390.00	30.30	50.60	74.00	23.40	PK
	V	2390.00	30.30	51.70	74.00	22.30	PK
	H	4804.00	-1.50	48.90	74.00	25.10	PK
	V	4804.00	-1.50	49.10	74.00	24.90	PK
M	H	4880.00	-1.10	47.70	74.00	26.30	PK
	V	4880.00	-1.10	48.20	74.00	25.80	PK
H	H	2483.50	30.80	52.10	74.00	21.90	PK
	V	2483.50	30.80	52.20	74.00	21.80	PK
	H	4960.00	-0.80	48.10	74.00	25.90	PK
	V	4960.00	-0.80	48.70	74.00	25.30	PK

Remark: 1. Correct Factor = Antenna Factor + Cable Loss (+ Amplifier, for higher than 1GHz), the value was added to Original Receiver Reading by the software automatically.
2. Corrected Reading = Original Receiver Reading + Correct Factor
3. Margin = Limit - Corrected Reading
4. If the PK Corrected Reading is lower than AV limit, the AV test can be elided.

Example: Assuming Antenna Factor = 30.20dB/m, Cable Loss = 2.00dB,
Gain of Preamplifier = 32.00dB, Original Receiver Reading = 10.00dBuV,
Limit = 40.00dBuV/m.
Then Correct Factor = 30.20 + 2.00 – 32.00 = 0.20dB/m;
Corrected Reading = 10dBuV + 0.20dB/m = 10.20dBuV/m;
Margin = 40.00dBuV/m - 10.20dBuV/m = 29.80dB.

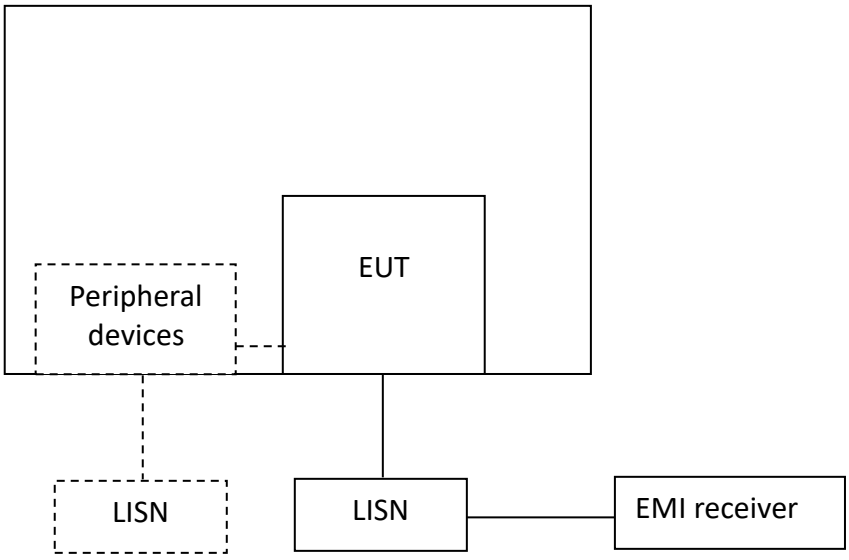
8 Power line conducted emission

Test result: **Pass**

8.1 Limit

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	QP	AV
0.15-0.5	66 to 56*	56 to 46 *
0.5-5	56	46
5-30	60	50
* Decreases with the logarithm of the frequency.		

8.2 Test Configuration



8.3 Measurement Procedure

Measured levels of ac power-line conducted emission shall be the emission voltages from the voltage probe, where permitted, or across the 50 Ω LISN port (to which the EUT is connected), where permitted, terminated into a 50 Ω measuring instrument. All emission voltage and current measurements shall be made on each current-carrying conductor at the plug end of the EUT power cord by the use of mating plugs and receptacles on the LISN, if used. Equipment shall be tested with power cords that are normally supplied or recommended by the manufacturer and that have electrical and shielding characteristics that are the same as those cords normally supplied or recommended by the manufacturer. For those measurements using a LISN, the 50 Ω measuring port is terminated by a measuring instrument having 50 Ω input impedance. All other ports are terminated in 50 Ω loads.

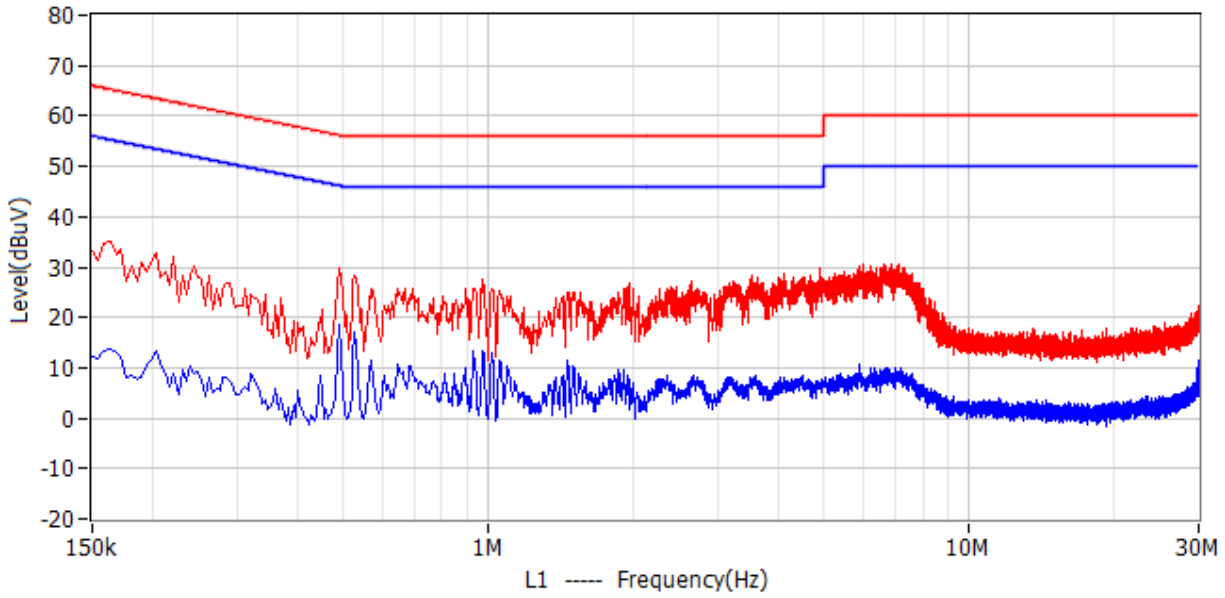
Tabletop devices shall be placed on a platform of nominal size 1 m by 1.5 m, raised 80 cm above the reference ground plane. The vertical conducting plane or wall of an RF-shielded (screened) room shall be located 40 cm to the rear of the EUT. Floor-standing devices shall be placed either directly on the reference ground-plane or on insulating material as described in ANSI C63.4. All other surfaces of tabletop or floor-standing EUTs shall be at least 80 cm from any other grounded conducting surface, including the case or cases of one or more LISNs.

The bandwidth of the test receiver is set at 9 kHz.

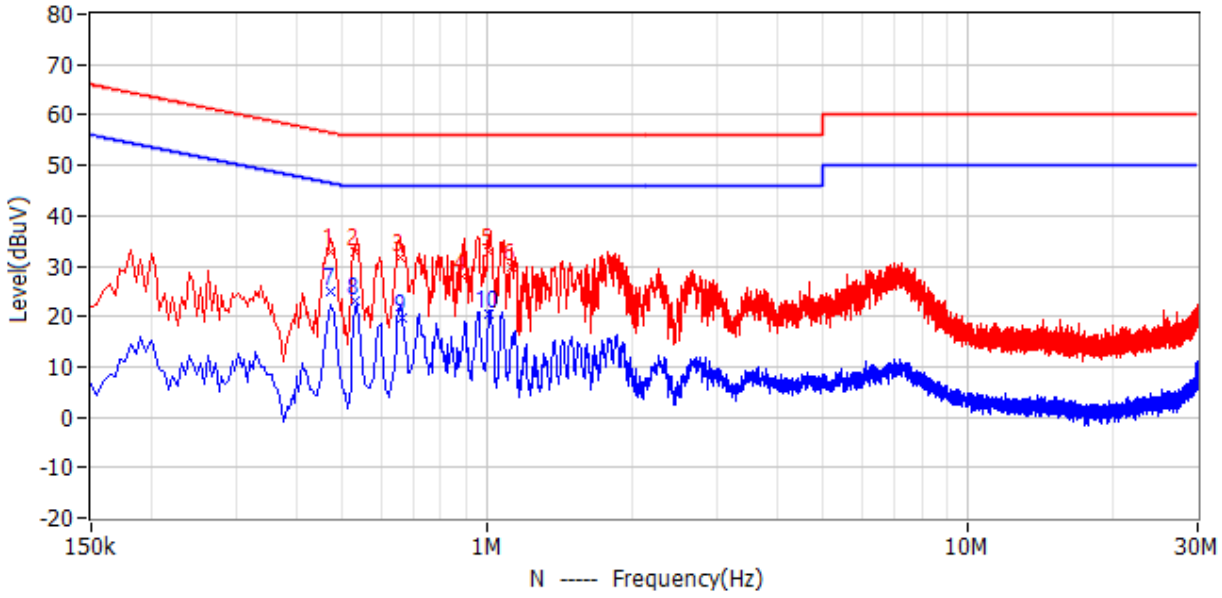
8.4 Test Results of Power line conducted emission

Test Curve:

L line



N line



TEST REPORT

Test Data:

No.	Frequency	Limit dBuV	Level dBuV	Delta dB	Reading dBuV	Factor dB	Detector	Phase
1	474.000kHz	56.4	32.8	-23.6	22.5	10.3	QP	N
2	532.500kHz	56.0	32.7	-23.3	22.3	10.4	QP	N
3	658.500kHz	56.0	31.6	-24.4	21.1	10.5	QP	N
4	888.000kHz	56.0	27.8	-28.2	17.2	10.6	QP	N
5	1.005MHz	56.0	32.8	-23.2	22.2	10.6	QP	N
6	1.122MHz	56.0	29.7	-26.3	19.1	10.6	QP	N
7	474.000kHz	46.4	24.9	-21.6	14.6	10.3	CAV	N
8	532.500kHz	46.0	23.2	-22.8	12.8	10.4	CAV	N
9	663.000kHz	46.0	19.6	-26.4	9.1	10.5	CAV	N
10	1.010MHz	46.0	20.6	-25.4	10.0	10.6	CAV	N

Remark: 1. Factor = LISN Factor + Cable Loss, the value was added to Original Receiver Reading by the software automatically.
2. Level = Original Receiver Reading + Factor
3. Delta= Level - Limit
4. If the PK Level is lower than AV limit, the AV test can be elided.

Example: Assuming LISN Factor = 10.00dB, Cable Loss = 2.00dB,
Original Receiver Reading = 10.00dBuV, Limit = 66.00dBuV.
Then Factor = 10.00 + 2.00 = 12.00dB;
Level = 10dBuV + 12.00dB = 22.00dBuV;
Delta = 22.00dBuV - 66.00dBuV = –44.00dB.

9 Antenna requirement

Requirement:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

Result:

EUT uses permanently attached antenna to the intentional radiator, so it can comply with the provisions of this section.

Appendix A: Test results

DTS Bandwidth

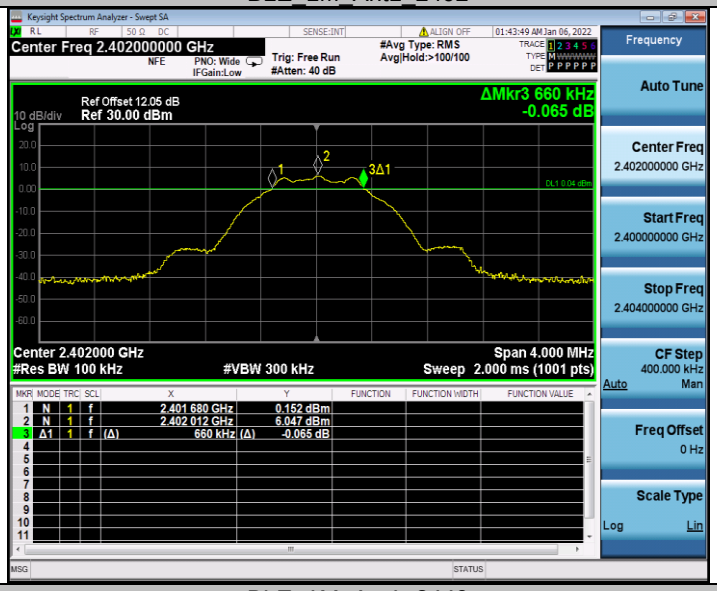
Test Result

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.660	2401.680	2402.340	0.5	PASS
		2440	0.664	2439.676	2440.340	0.5	PASS
		2480	0.656	2479.680	2480.336	0.5	PASS
BLE_2M	Ant1	2402	1.128	2401.456	2402.584	0.5	PASS
		2440	1.128	2439.452	2440.580	0.5	PASS
		2480	1.124	2479.456	2480.580	0.5	PASS

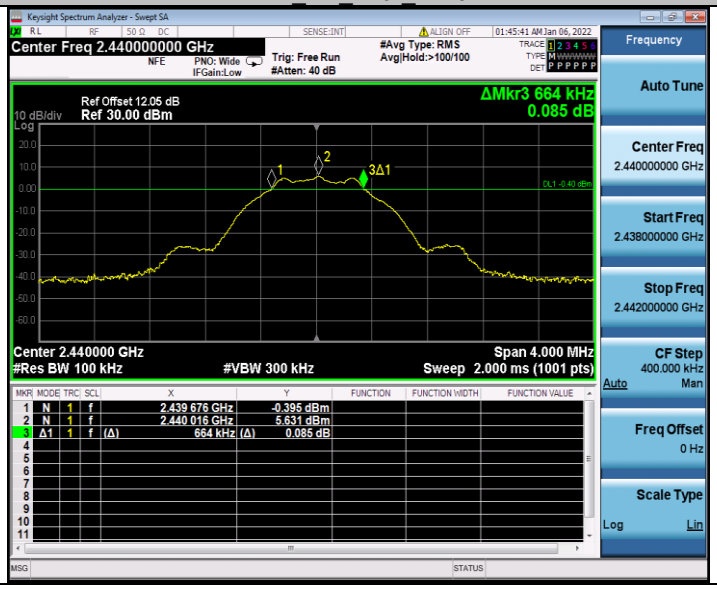
TEST REPORT

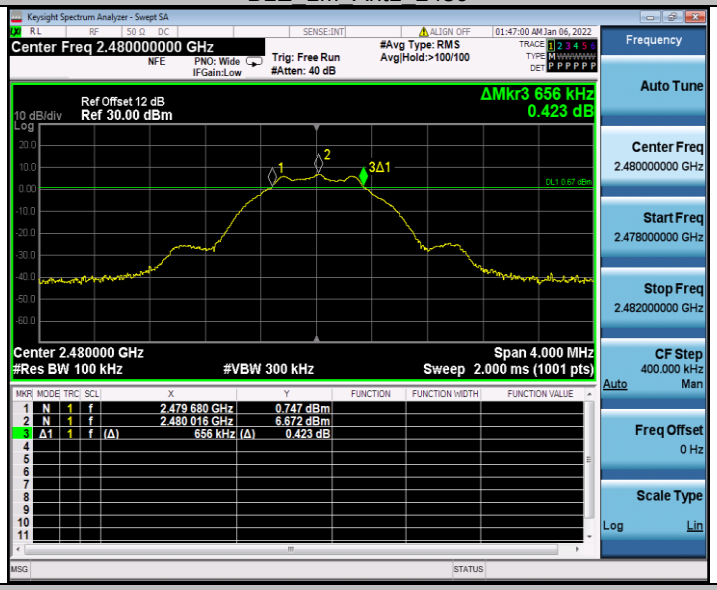
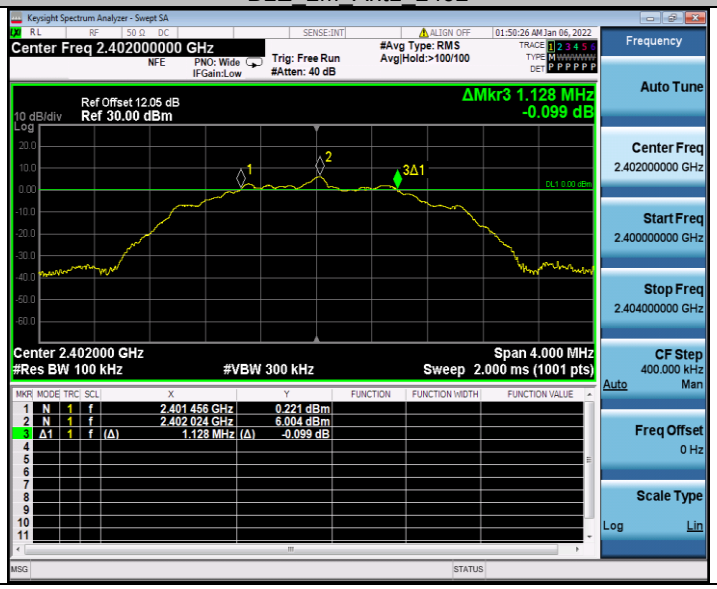
Test Graphs

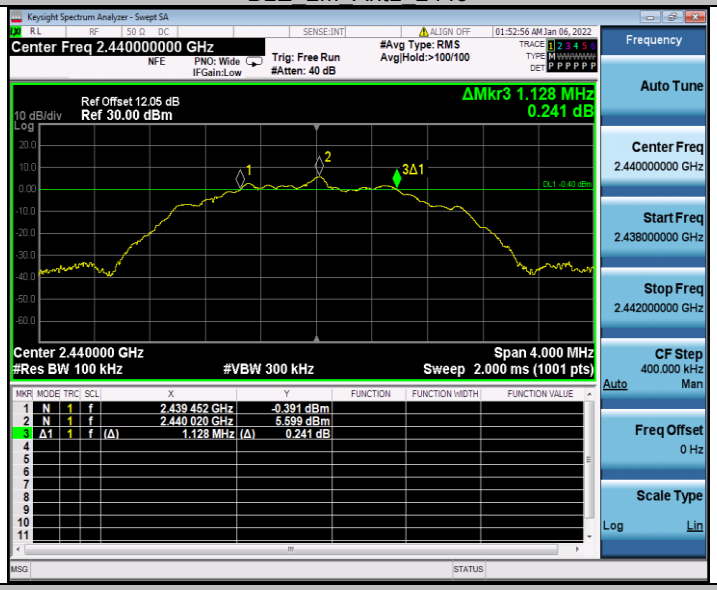
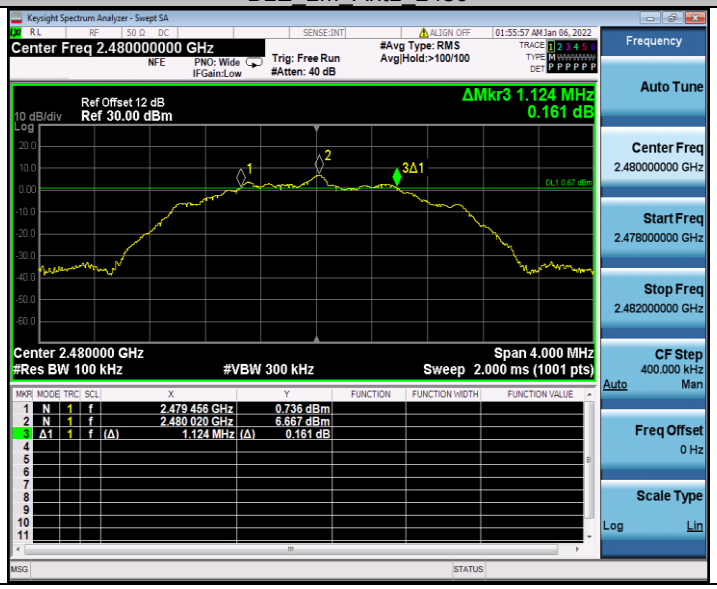
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

BLE_2M_Ant1_2402


BLE_2M_Ant1_2440

BLE_2M_Ant1_2480


Occupied Channel Bandwidth

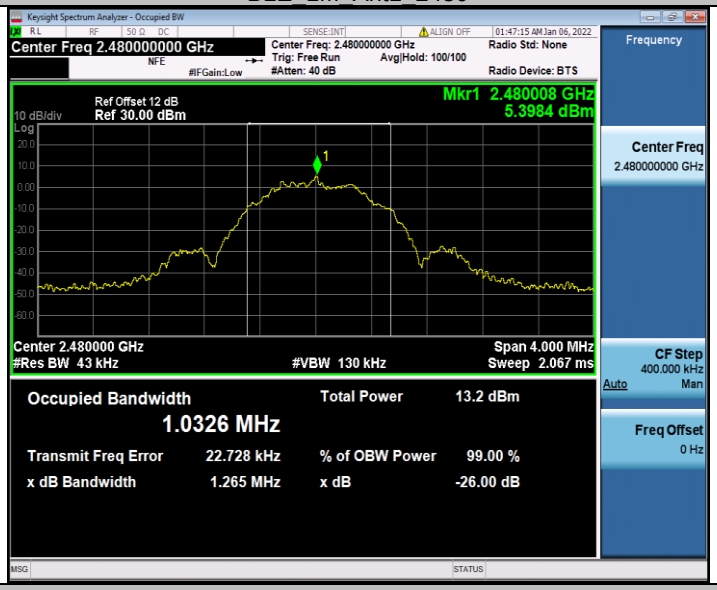
Test Result

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0306	2401.507	2402.537	---	---
		2440	1.0280	2439.507	2440.535	---	---
		2480	1.0326	2479.506	2480.539	---	---
BLE_2M	Ant1	2402	2.0345	2401.023	2403.057	---	---
		2440	2.0437	2439.011	2441.054	---	---
		2480	2.0369	2479.012	2481.049	---	---

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

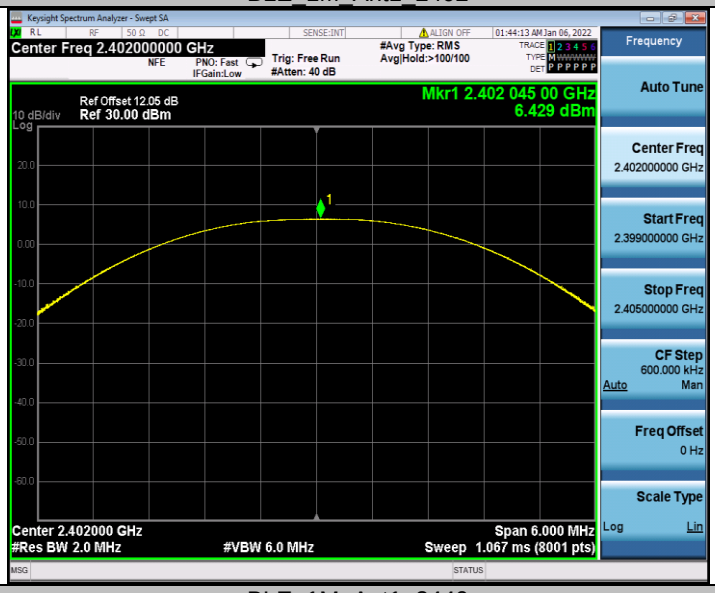

Maximum conducted output power

Test Result Peak

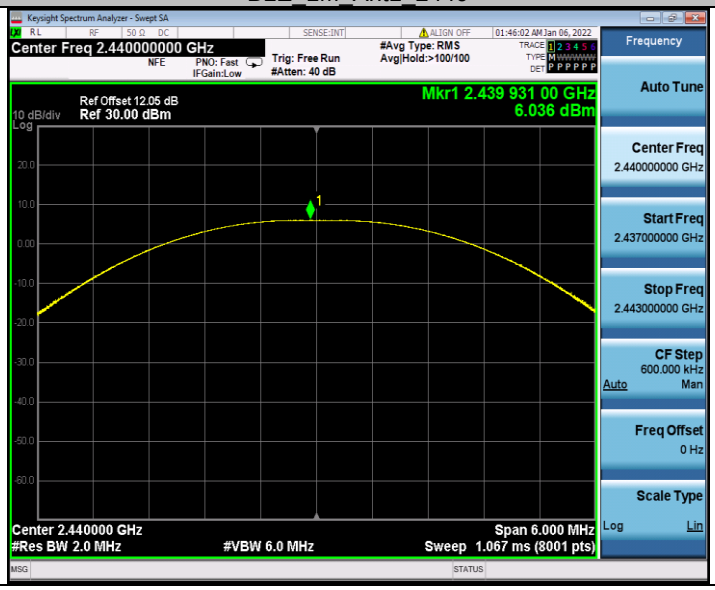
TestMode	Antenna	Channel	Conducted Peak Powert[dBm]	Conducted Limit[dBm]	EIRP[dBm]	EIRP Limit[dBm]	Verdict
BLE_1M	Ant1	2402	6.43	≤30	9.89	≤36	PASS
		2440	6.04	≤30	9.5	≤36	PASS
		2480	7.06	≤30	10.52	≤36	PASS
BLE_2M	Ant1	2402	6.48	≤30	9.94	≤36	PASS
		2440	6.08	≤30	9.54	≤36	PASS
		2480	7.11	≤30	10.57	≤36	PASS

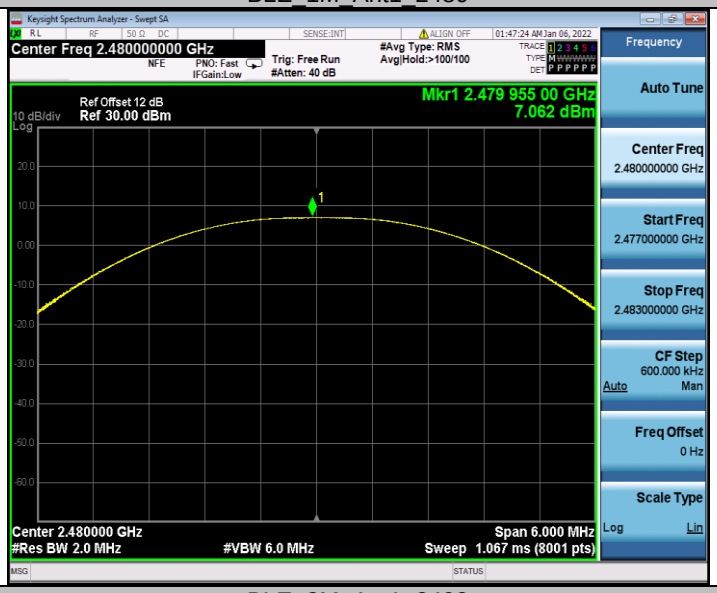
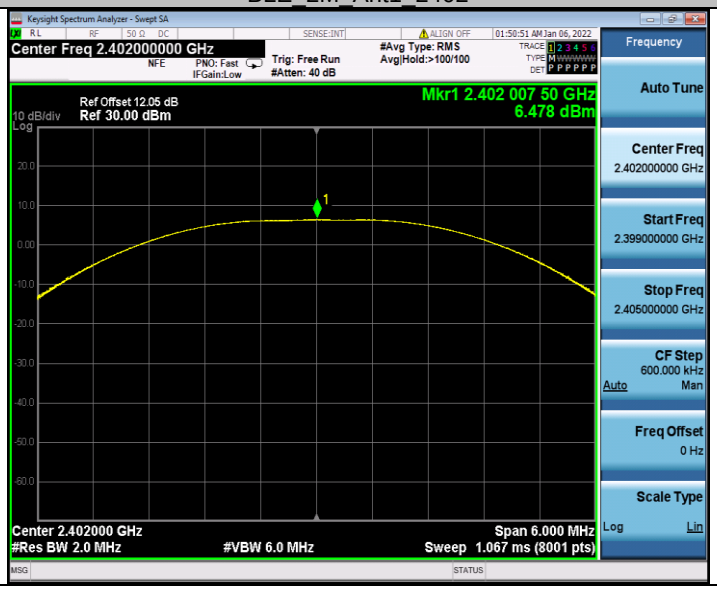
Test Graphs Peak

BLE_1M_Ant1_2402

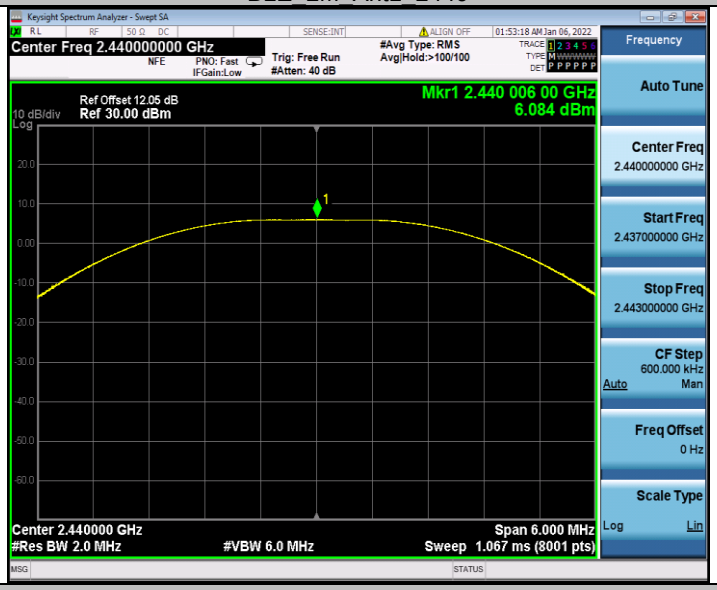
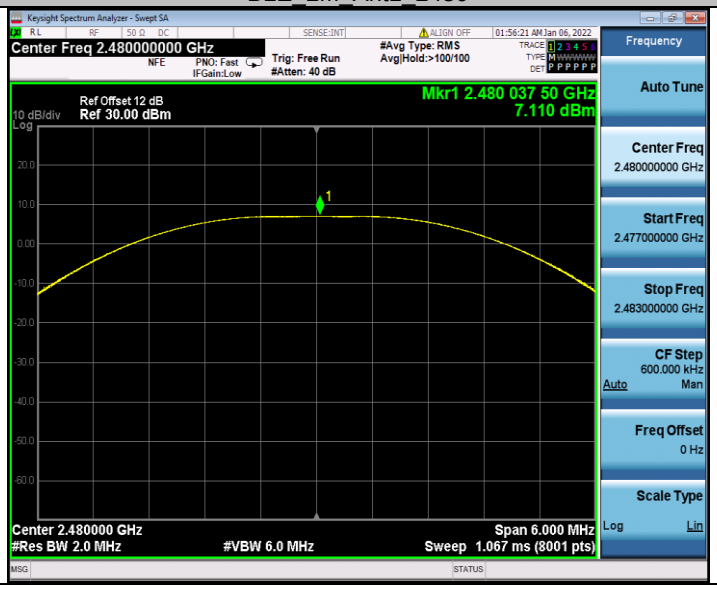


BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

BLE_2M_Ant1_2402


TEST REPORT

BLE_2M_Ant1_2440

BLE_2M_Ant1_2480


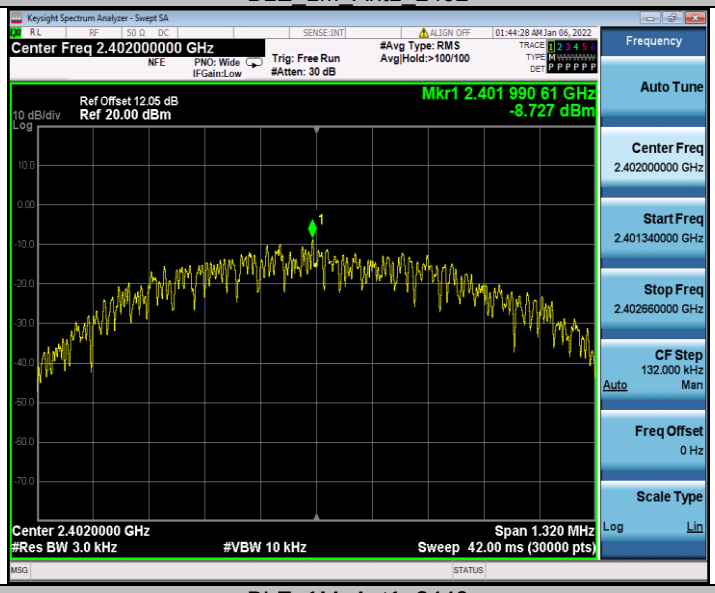
Maximum power spectral density

Test Result

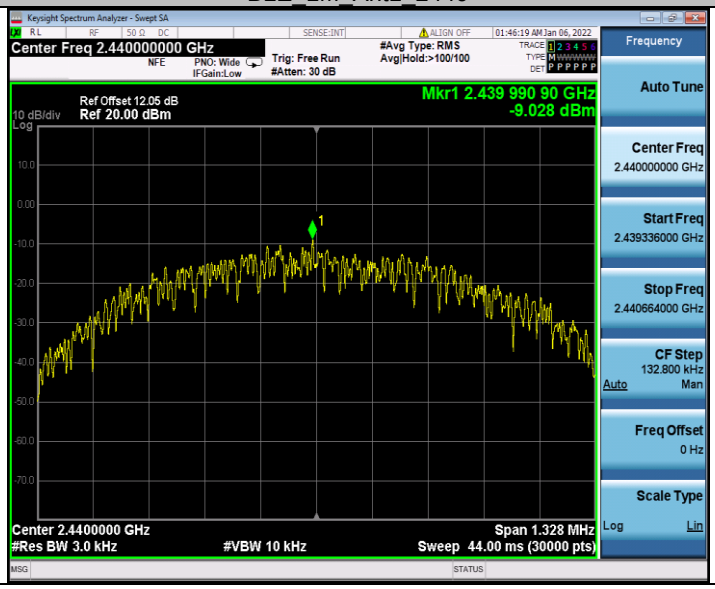
TestMode	Antenna	Channel	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-8.73	≤8.00	PASS
		2440	-9.03	≤8.00	PASS
		2480	-8.02	≤8.00	PASS
BLE_2M	Ant1	2402	-12.35	≤8.00	PASS
		2440	-12.62	≤8.00	PASS
		2480	-11.68	≤8.00	PASS

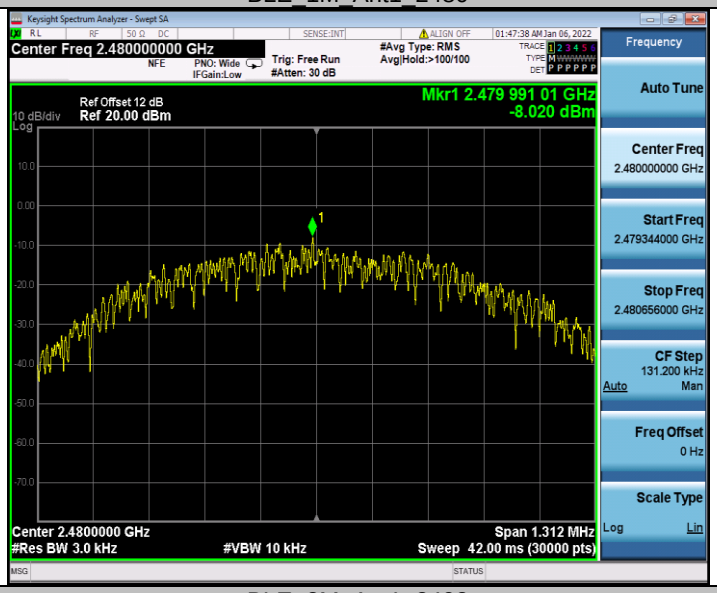
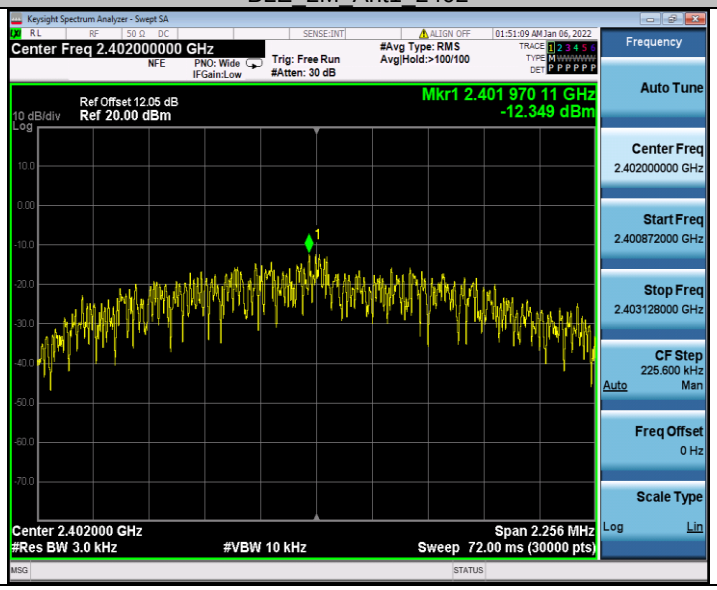
Test Graphs

BLE_1M_Ant1_2402

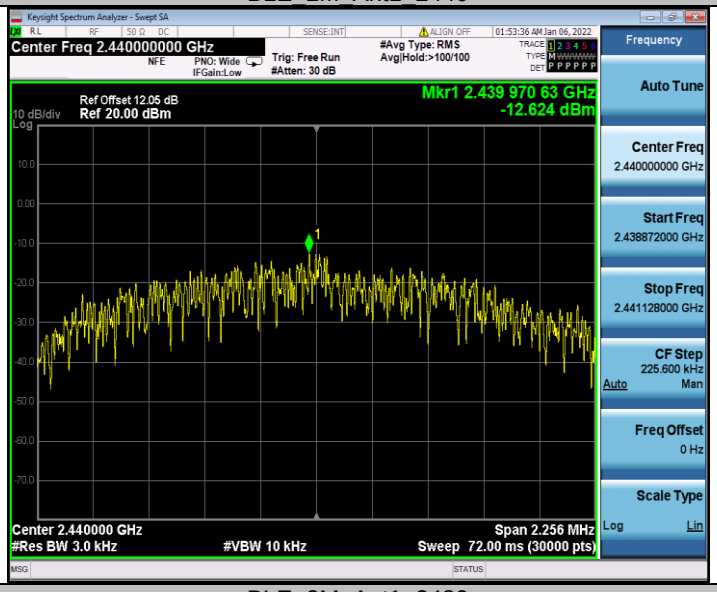
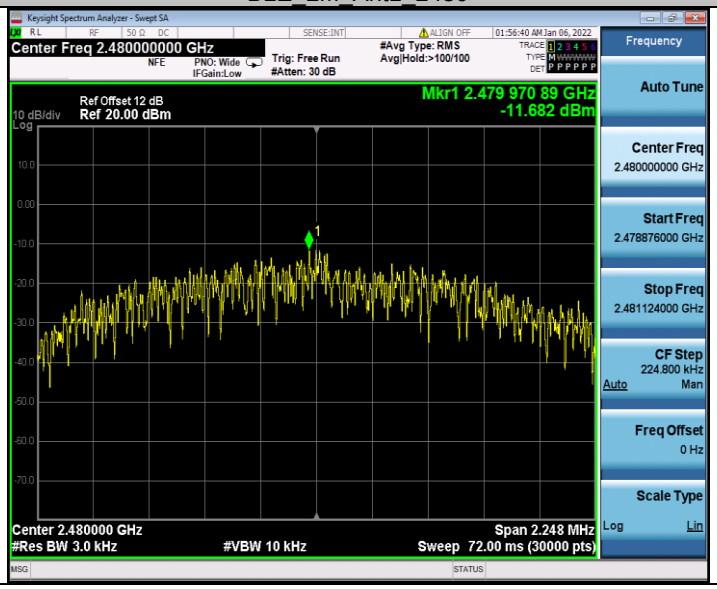


BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

BLE_2M_Ant1_2402


TEST REPORT

BLE_2M_Ant1_2440

BLE_2M_Ant1_2480


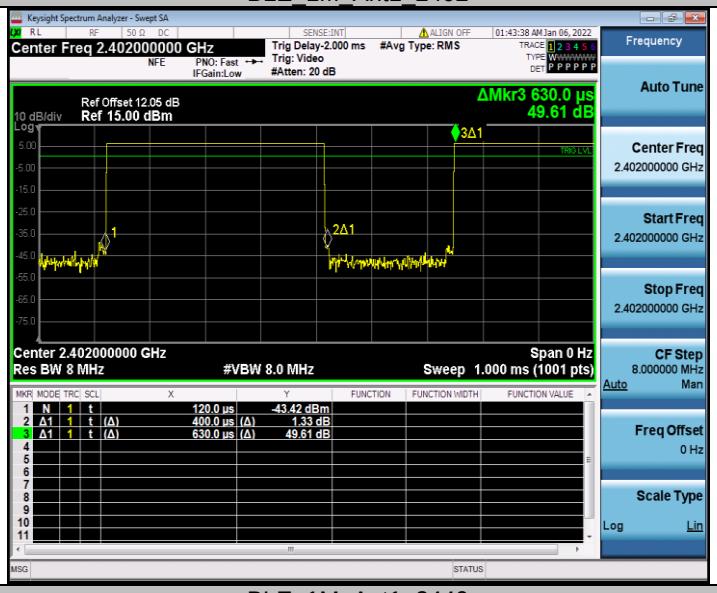
Duty Cycle

Test Result

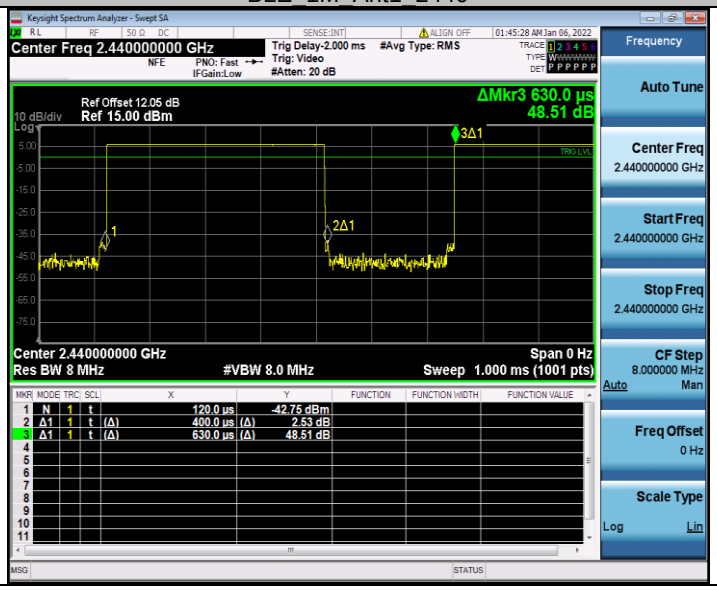
TestMode	Antenna	Channel	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	Limit	Verdict
BLE_1M	Ant1	2402	0.40	0.63	0.6349	63.49	1.97	---	---
		2440	0.40	0.63	0.6349	63.49	1.97	---	---
		2480	0.40	0.63	0.6349	63.49	1.97	---	---
BLE_2M	Ant1	2402	0.21	0.63	0.3333	33.33	4.77	---	---
		2440	0.21	0.63	0.3333	33.33	4.77	---	---
		2480	0.21	0.63	0.3333	33.33	4.77	---	---

Test Graphs

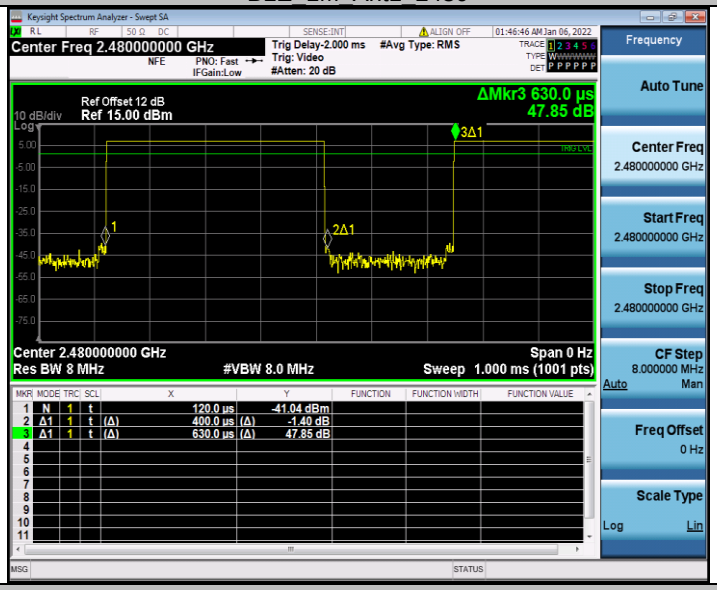
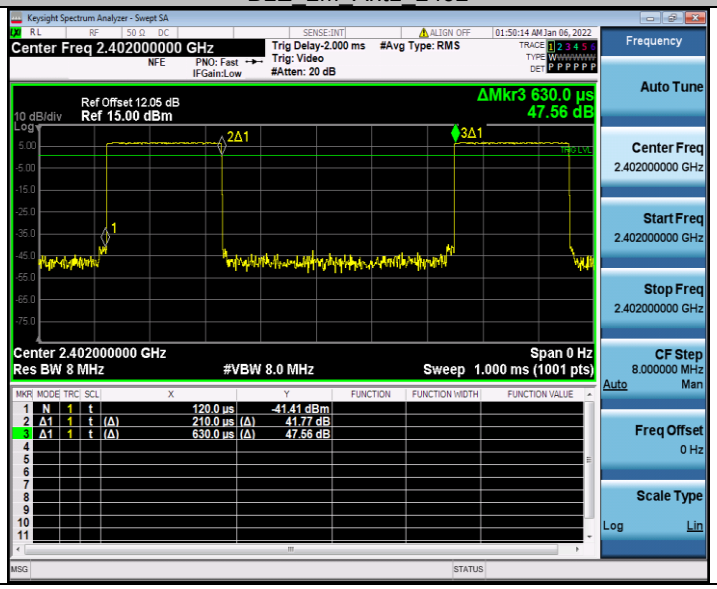
BLE_1M_Ant1_2402

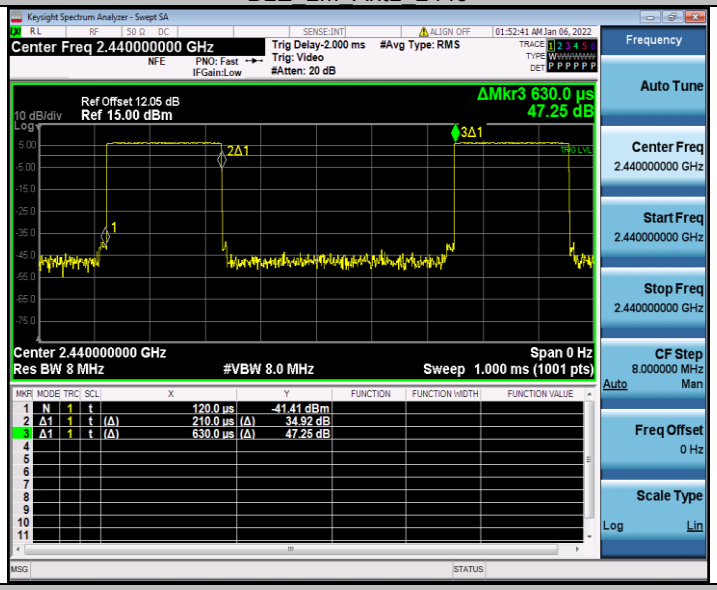
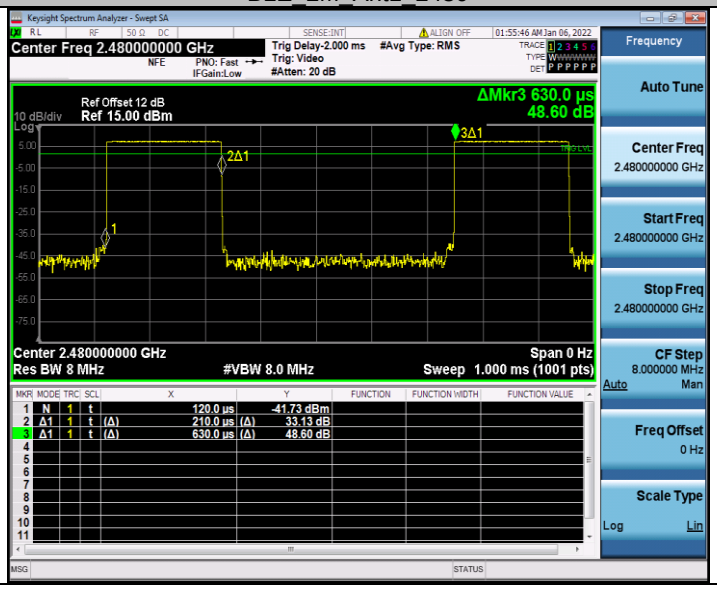


BLE_1M_Ant1_2440



TEST REPORT

BLE_1M_Ant1_2480

BLE_2M_Ant1_2402


BLE_2M_Ant1_2440

BLE_2M_Ant1_2480


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