FCC TEST REPORT
FCC ID: 2AIEGB11PRO

Product	:	Alarm Clock Radio Speaker System
Model Name	:	B11pro
Brand	:	Homtime
Report No.	:	PTC800261160422E-FC02

Prepared for

All Best Technology Limited

Yincheng 1st Rd., Yincheng Industrial Zone,Xiabian Village,Chang'an Town,

Dongguan City,Guangdong Province,C hina

Prepared by

DongGuan Precise Testing Service Co.,Ltd.

Building D, Baoding Technology Park, Guangming Road 2, Guangming Community

Dongcheng District, Dongguan, Guangdong, China

TEST RESULT CERTIFICATION

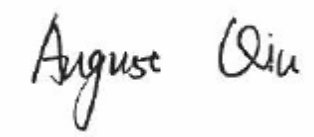
Applicant's name	:	All Best Technology Limited
Address	:	Yincheng 1st Rd., Yincheng Industrial Zone,Xiabian Village,Chang'an Town,Dongguan City,Guangdong Province,China
Manufacture's name	:	All Best Technology Limited
Address	:	Yincheng 1st Rd., Yincheng Industrial Zone,Xiabian Village,Chang'an Town,Dongguan City,Guangdong Province,China
Product name	:	Alarm Clock Radio Speaker System
Model name	:	B11pro
Standards	:	FCC CFR47 Part 15 Section 15.247
Test procedure	:	ANSI C63.10:2013,DA 00-705
Test Date	:	Jul. 01, 2016 ~Aug.02, 2016
Date of Issue	:	Aug.10, 2016
Test Result	:	Pass

This device described above has been tested by PTC, and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable onlyto the tested sample identified in the report.

This report shall not be reproduced except in full, without the written approval of PTC, this document may be altered or revised by PTC, personal only, and shall be noted in the revision of the document.

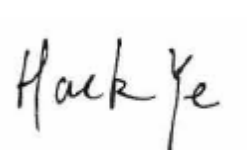
Testing Engineer

August Qiu



TechnicalManager

Hack Ye



AuthorizedSignatory

Chris Du

Contents

2 Test Summary

Test Items	Test Requirement	Result
Conduct Emission	15.207	PASS
Radiated Spurious Emissions	15.205(a) 15.209 15.247(d)	PASS
Band edge	15.247(d) 15.205(a)	PASS
6dB Bandwidth	15.247(a)(2)	PASS
Maximum Peak Output Power	15.247(b)(1)	PASS
Power Spectral Density	15.247(e)	PASS
Antenna Requirement	15.203	PASS

Remark:

N/A: Not Applicable

3 General Information

3.1 General Description of E.U.T

Product Name	:	Alarm Clock Radio Speaker System
Model Name	:	B11pro
Model Description	:	N/A
Bluetooth Version	:	V4.0(With BLE)
Operating frequency	:	2402-2480MHz,79channels
Antenna installation:	:	PCB printed antenna
Antenna Gain:	:	-0.55dBi
The lowest oscillator:	:	32.768kHz
Type of Modulation	:	GFSK, Pi/4DQPSK, 8DPSK
Adapter1,M/N:CW12030 00	:	Input:AC100-240V 50~60Hz 1A Max, Output: DC 12V 3A
Adapter2,M/N: LY036SPS-120300C	:	Input:AC100-240V 50~60Hz 1A Max, Output: DC 12V 3A
Adapter3,M/N: LY036SPS-120300U	:	Input:AC100-240V 50~60Hz 1A Max, Output: DC 12V 3A
Note:Testing in the worst state power with model M/N: LY036SPS-120300C		
		The test facility has a test site registered with the following organization: 371540

3.2 Channel List

BLE							
Channel No.	**Frequency (MHz)**	**Channel No.**	**Frequency (MHz)**	**Channel No.**	**Frequency (MHz)**	**Channel No.**	**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

3.3 Test Mode

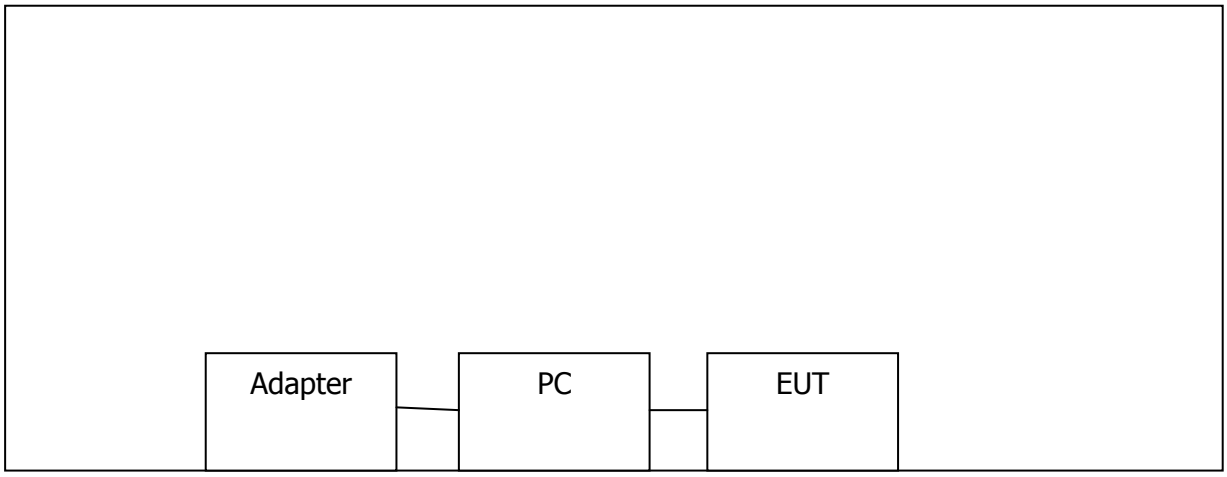
All test mode(s) and condition(s) mentioned were considered and evaluated respectivelyby performing full tests,the worst data were recorded and reported.

Test mode	**Low channel**	**Middle channel**	**High channel**
Transmitting	2402MHz	2440MHz	2480MHz
Hopping	2402-2480MHz		
Tests Carried Out Under FCC part 15.207& 15.209			
Test Item	Test Mode		
Conduction Emission, 0.15MHz to 30MHz	BT Communication		
Radiated Emission, 30M-1GHz	BT Communication		

3.4 Test Voltage

Normal Test Voltage	Item
120V 60Hz	Conducted Emission & Radiated Emission
240V 60Hz	Conducted Emission & Radiated Emission
Remark: Only the worst case (120V 60Hz) was recorded in the report.	

3.5 Configuration of System



4 Equipment During Test

4.1 Equipments List

RF Conducted Test

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	EMC Analyzer (9k~26.5GHz)	Agilent	E4407B	MY45109572	Aug.04, 2016	Aug.03, 2017	1 year
2	EXA Signal Analyzer	Keysight	N9010A	MY50520207 526B25MPB W7X	Aug.04, 2016	Aug.03, 2017	1 year
3	EMI Test Receiver	R&S	ESCI	101155	July 15, 2016	July 14, 2017	1 year

RadiatedEmissions

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	EMI Test Receiver	Rohde&Schwarz	ESCI	101417	July 15, 2016	July 14, 2017	1 year
2	Trilog Broadband Antenna	SCHWARZBECK	VULB9160	9160-3355	July 15, 2016	July 14, 2017	1 year
3	Amplifier	EM	EM-30180	060538	July 15, 2016	July 14, 2017	1 year
4	Horn Antenna	SCHWARZBECK	BBHA9120 D	9120D-1246	July 15, 2016	July 14, 2017	1 year

Conducted Emissions

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	EMI Test Receiver	R&S	ESCI	101155	July 15, 2016	July 14, 2017	1 year
2	LISN	SCHWARZBECK	NSLK 8128	8128-289	July 15, 2016	July 14, 2017	1 year
3	Cable	LARGE	RF300	-	July 15, 2016	July 14, 2017	1 year

4.2 Measurement Uncertainty

Parameter	**Uncertainty**
RF output power, conducted	±1.0dB
Power Spectral Density, conducted	±2.2dB
Radio Frequency	± 1 x 10^{-6}
Bandwidth	± 1.5 x 10^{-6}
Time	±2%
Duty Cycle	±2%
Temperature	±1°C
Humidity	±5%
DC and low frequency voltages	±3%
Conducted Emissions(150kHz~30MHz)	±3.64dB
Radiated Emission(30MHz~1GHz)	±5.03dB
Radiated Emission(1GHz~25GHz)	±4.74dB

5 Conducted Emission

Test Requirement:	:	FCC CFR 47 Part 15 Section 15.207
Test Method:	:	ANSI C63.10:2013
Test Result:	:	PASS
FrequencyRange:	:	150kHz to 30MHz
Class/Severity:	:	Class B
Limit:	:	66-56 dBμV between 0.15MHz & 0.5MHz
	:	56 dBμV between 0.5MHz & 5MHz
	:	60 dBμV between 5MHz & 30MHz
Detector:	:	Peak for pre-scan(9kHz Resolution Bandwidth)

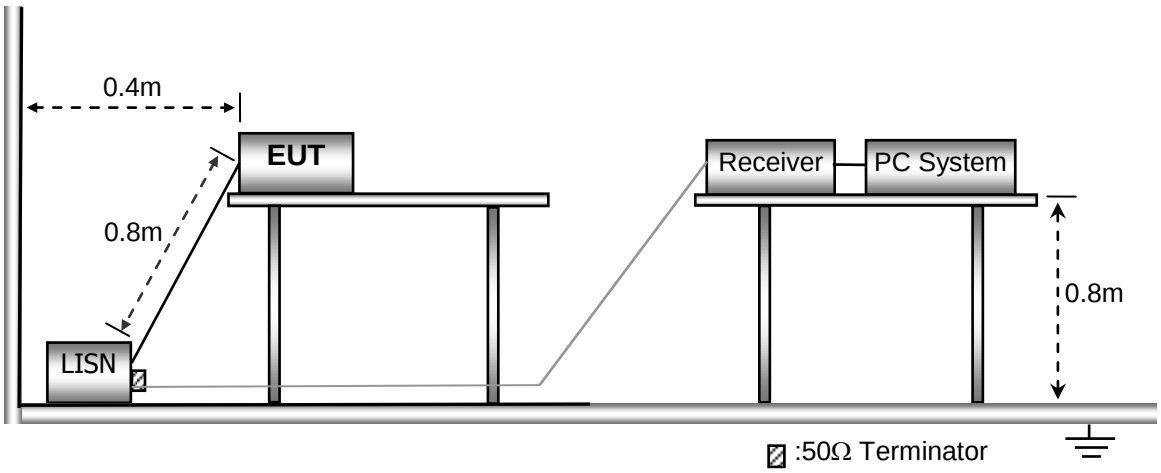
5.1 E.U.T. Operation

Operating Environment**:**

Temperature:	:	25.5 °C
Humidity:	:	51 % RH
Atmospheric Pressure:	:	101.2kPa
EUT Operation**:**	:	Refer to section 3.3

5.2 EUT Setup

The conducted emission tests were performed using the setup accordance with the ANSI C63.10:2013.

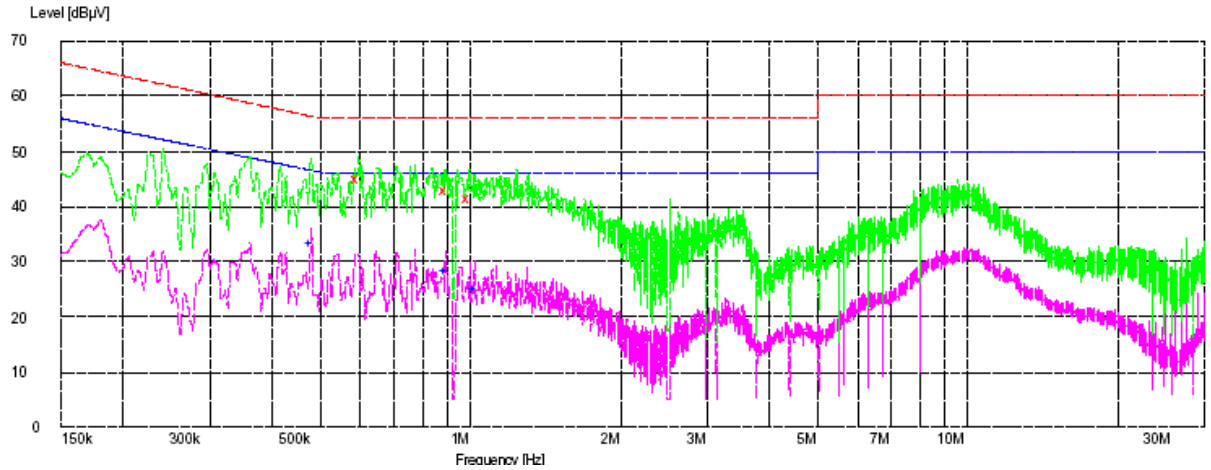


5.3 Measurement Description

The maximised peak emissions from the EUT was scanned and measured for both the Live and Neutral Lines. Quasi-peak & average measurements were performed if peak emissions were within 6dB of the average limit line.

5.4 Conducted Emission Test Result

Live line:



MEASUREMENT RESULT: "vol_0001_fin QP"

8/3/2016 4:15PM

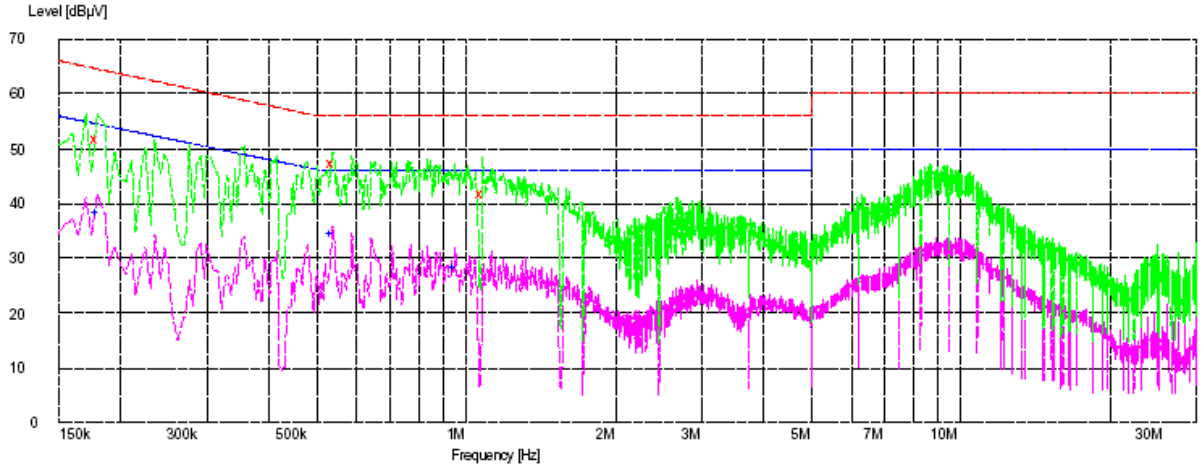
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.595000	45.20	9.6	56	10.8	L1	GND
0.895000	42.90	9.6	56	13.1	L1	GND
1.000000	41.50	9.6	56	14.5	L1	GND

MEASUREMENT RESULT: "vol_0001_fin AV"

8/3/2016 4:15PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.480000	33.20	9.6	46	13.1	L1	GND
0.895000	28.10	9.6	46	17.9	L1	GND
1.020000	25.30	9.6	46	20.7	L1	GND

Neutral line:



MEASUREMENT RESULT: "vol_0001_fin QP"

8/3/2016 4:13PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.180000	52.10	9.7	65	12.4	N	GND
0.535000	47.40	9.6	56	8.6	N	GND
1.080000	41.80	9.6	56	14.2	N	GND

MEASUREMENT RESULT: "vol_0001_fin AV"

8/3/2016 4:13PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.180000	38.40	9.7	55	16.1	N	GND
0.535000	34.40	9.6	46	11.6	N	GND
0.955000	28.40	9.6	46	17.6	N	GND

6 Radiated Spurious Emissions

Test Requirement: : FCC CFR47 Part 15 Section 15.209 & 15.247

Test Method: : ANSI C63.10:2013,DA 00-705

Test Result: : PASS

Measurement Distance: : 3m

Limit: : See the follow table

Frequency (MHz)	Field Strength		Field Strength Limit at 3m Measurement Dist	
	uV/m	Distance (m)	uV/m	dBuV/m
0.009 ~ 0.490	2400/F(kHz)	300	10000 * 2400/F(kHz)	$20\log^{(2400/F(kHz))} + 80$
0.490 ~ 1.705	24000/F(kHz)	30	100 * 24000/F(kHz)	$20\log^{(24000/F(kHz))} + 40$
1.705 ~ 30	30	30	100 * 30	$20\log^{(30)} + 40$
30 ~ 88	100	3	100	$20\log^{(100)}$
88 ~ 216	150	3	150	$20\log^{(150)}$
216 ~ 960	200	3	200	$20\log^{(200)}$
Above 960	500	3	500	$20\log^{(500)}$

6.1 EUT Operation

Operating Environment :

Temperature: : 23.5 °C

Humidity: : 51.1 % RH

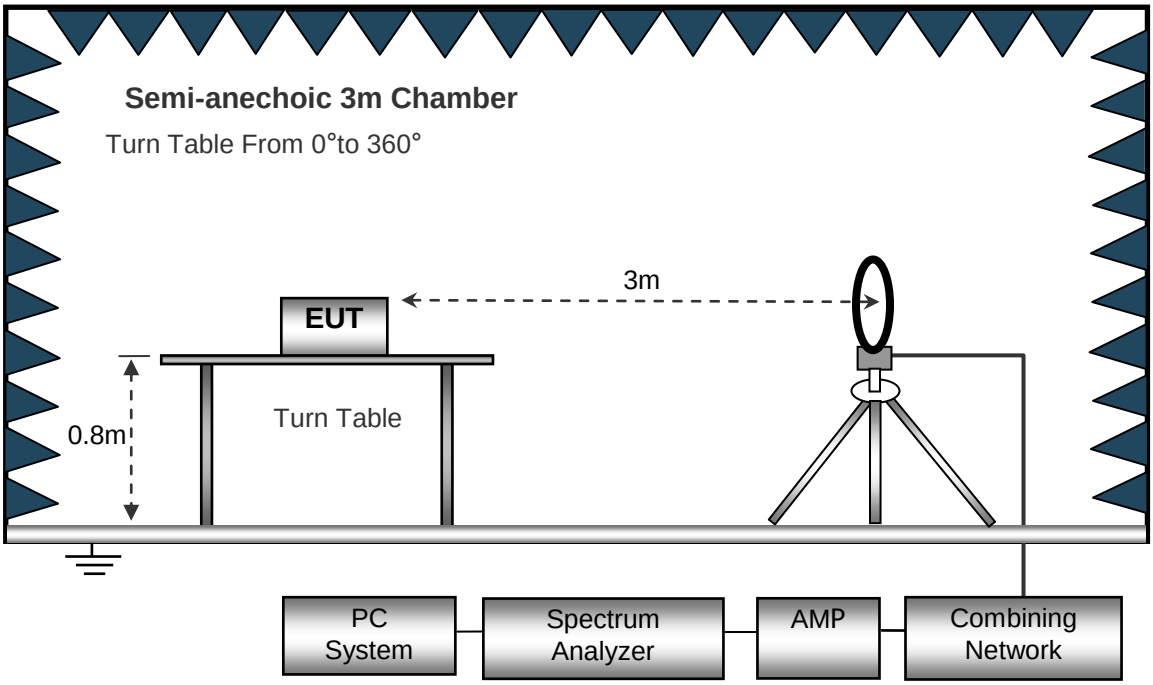
Atmospheric Pressure: : 101.2kPa

EUT Operation : : Refer to section 3.3

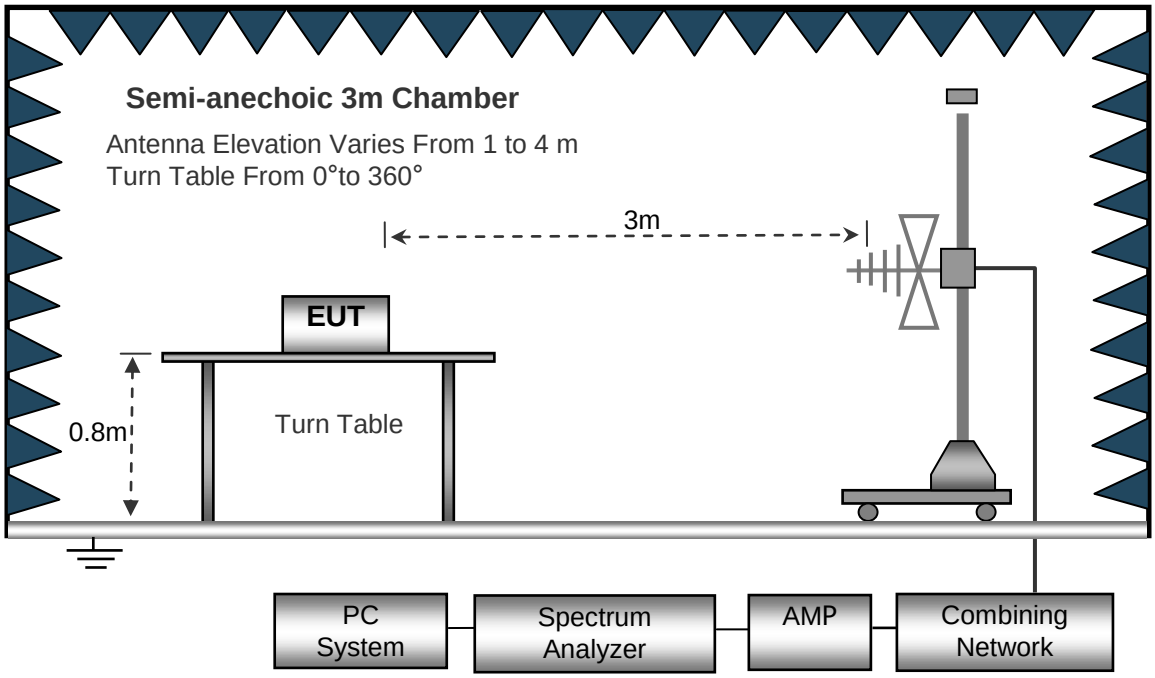
6.2 Test Setup

The radiated emission tests were performed in the 3m Semi- Anechoic Chamber testsite

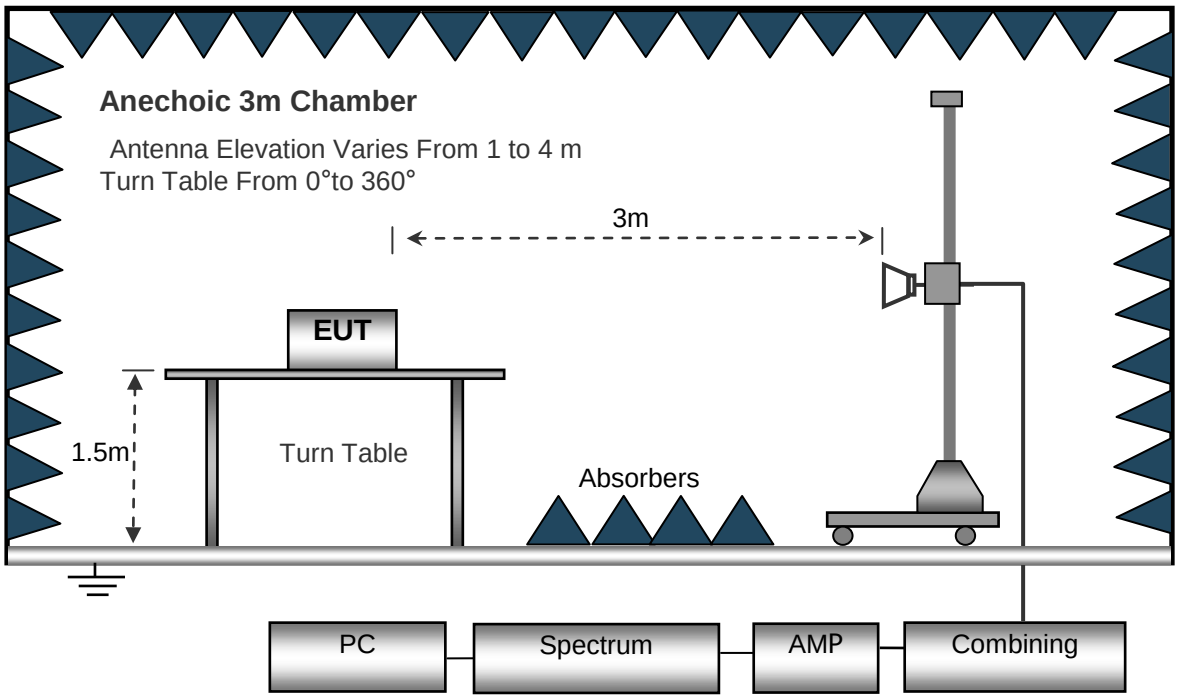
The test setup for emission measurement below 30MHz.



The test setup for emission measurement from 30 MHz to 1 GHz.



The test setup for emission measurement above 1 GHz.



6.3 Spectrum Analyzer Setup

Below 30MHz

Sweep Speed ..... Auto
IF Bandwidth 10kHz
Video Bandwidth 10kHz
Resolution Bandwidth 10kHz

30MHz ~ 1GHz

Sweep Speed ..... Auto
Detector ..... PK
Resolution Bandwidth 100kHz
Video Bandwidth 300kHz

Above 1GHz

Sweep Speed ..... Auto
Detector ..... PK
Resolution Bandwidth 1MHz
Video Bandwidth 3MHz
Detector ..... Ave.
Resolution Bandwidth 1MHz
Video Bandwidth 10Hz

6.4 Test Procedure

1.The EUT is placed on a turntable, which is 0.8m above ground plane for below 1GHz and 1.5m for above 1GHz.

2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.

3. EUT is set 3m away from the receiving antenna, which is moved from 1m to 4m to find out the maximum emissions. The spectrum was investigated from the lowest radio frequency signal generated in the device, without going below 9 kHz, up tothe tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower.

4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.

5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.

6. Repeat above procedures until the measurements for all frequencies are complete.

7. The radiation measurements are tested under 3-axes(X,Y,Z) position(X denotes lying on the table, Y denotes side stand and Z denotes vertical stand), After pre-test, It was found that the worse radiation emission was get at the X position. So the data shown was the X position only.

6.5 Summary of Test Results

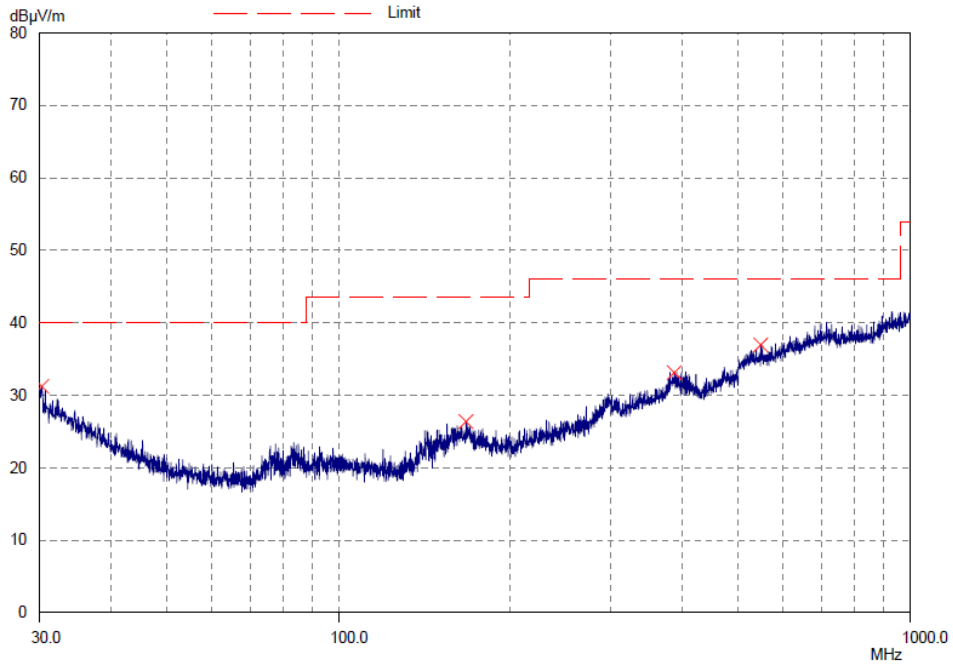
Test Frequency: Below 30MHz

The measurements were more than 30 dB below the limit and not reported.

Test Frequency: 30MHz ~ 1GHz

The data display worst state in the 2402MHz

Antenna Polarization: Horizontal

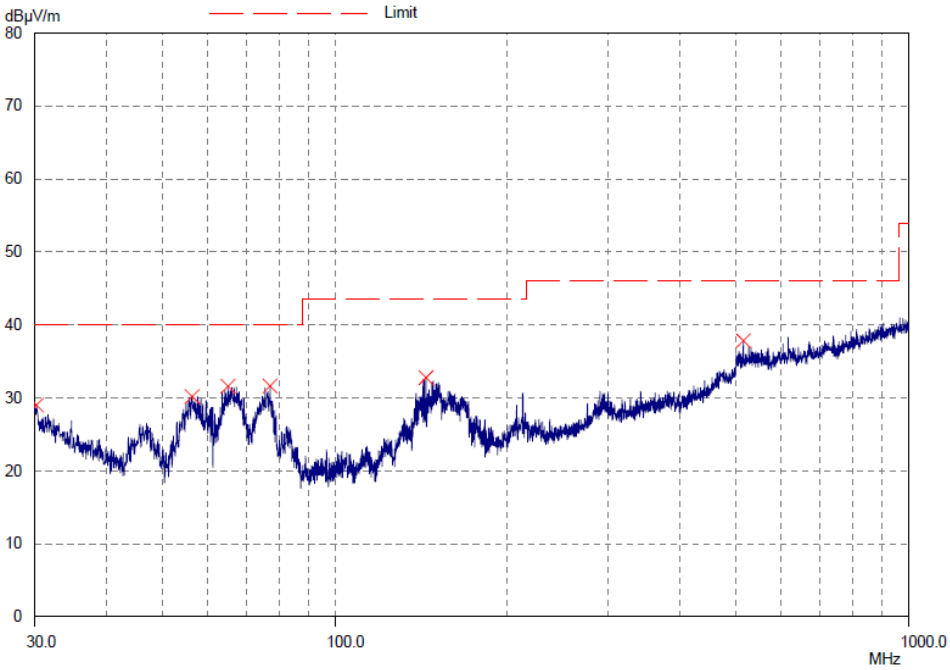


Peak Search Results

Frequency MHz	QP Level dBµV/m	QP Limit dBµV/m	QP Delta dB
30.25	31.23	40.00	8.77
167.1875	26.36	43.50	17.14
386.6875	33.12	46.00	12.88
547.75	36.94	46.00	9.06

Frequency MHz	Level dBµV/m	Limit dBµV/m	Delta dB

Antenna Polarization: Vertical



Peak Search Results

Frequency MHz	QP Level dBµV/m	QP Limit dBµV/m	QP Delta dB
30.1875	29.02	40.00	10.98
56.375	30.18	40.00	9.82
65.125	31.59	40.00	8.41
77.125	31.65	40.00	8.35
144.125	32.77	43.50	10.73
515.25	37.84	46.00	8.16

Frequency MHz	Level dBµV/m	Limit dBµV/m	Delta dB

Test Frequency: 1GHz ~ 18GHz

Frequency	Receiver Reading	Detector	Corrected Factor	Corrected Amplitude	Limit	Margin	Antenna polarity
(MHz)	(dBμV)	(PK/QP/ Ave)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
GFSK(BLE)Low Channel							
Harmonic& Spurious Emission							
1251.53	62.65	PK	-18.95	43.7	74	-30.3	V
1251.53	45.29	Ave	-18.95	26.34	54	-27.66	V
4804.00	57.32	PK	-1.06	56.26	74	-17.74	V
4804.00	46.19	Ave	-1.06	45.13	54	-8.87	V
7206.00	54.07	PK	1.33	55.4	74	-18.6	H
7206.00	43.22	Ave	1.33	44.55	54	-9.45	H
Restricted bands Emission							
2310.85	61.16	PK	-13.19	47.97	74	-26.03	V
2310.85	47.08	Ave	-13.19	33.89	54	-20.11	V
2390.00	59.81	PK	-13.14	46.67	74	-27.33	V
2390.00	44.92	Ave	-13.14	31.78	54	-22.22	V
2488.24	60.07	PK	-13.08	46.99	74	-27.01	H
2488.24	46.41	Ave	-13.08	33.33	54	-20.67	H
Remark:							
1.Corrected Factor=ANT Factor + Cable Loss – Amp Gain 2. Corrected Amplitude= Receiver Reading+ Corrected Factor							

Frequency	Receiver Reading	Detector	Corrected Factor	Corrected Amplitude	Limit	Margin	Antenna polarity
(MHz)	(dBμV)	(PK/QP/ Ave)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
GFSK(BLE)Middle Channel							
Harmonic& Spurious Emission							
1201.78	62.81	PK	-18.95	43.86	74	-30.14	V
1201.78	48.19	Ave	-18.95	29.24	54	-24.76	V
4880.00	59.08	PK	-0.93	58.15	74	-15.85	V
4880.00	45.88	Ave	-0.93	44.95	54	-9.05	V
7320.00	60.17	PK	1.67	61.84	74	-12.16	H
7320.00	46.68	Ave	1.67	48.35	54	-5.65	H
Restricted bands Emission							
2331.22	61.05	PK	-13.19	47.86	74	-26.14	V
2331.22	47.29	Ave	-13.19	34.1	54	-19.9	V
2350.85	62.35	PK	-13.14	49.21	74	-24.79	V
2350.85	46.81	Ave	-13.14	33.67	54	-20.33	V
2486.78	63.07	PK	-13.08	49.99	74	-24.01	H
2486.78	47.51	Ave	-13.08	34.43	54	-19.57	H
Remark:							
1.Corrected Factor=ANT Factor + Cable Loss – Amp Gain 2. Corrected Amplitude= Receiver Reading+ Corrected Factor							

Frequency	Receiver Reading	Detector	Corrected Factor	Corrected Amplitude	Limit	Margin	Antenna polarity
(MHz)	(dBμV)	(PK/QP/ Ave)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
GFSK(BLE)High Channel							
Harmonic& Spurious Emission							
1203.25	61.49	PK	-18.95	42.54	74	-31.46	V
1203.25	47.09	Ave	-18.95	28.14	54	-25.86	V
4960.00	59.27	PK	-0.87	58.4	74	-15.6	V
4960.00	45.38	Ave	-0.87	44.51	54	-9.49	V
7440.00	59.15	PK	1.84	60.99	74	-13.01	H
7440.00	43.04	Ave	1.84	44.88	54	-9.12	H
Restricted bands Emission							
2309.62	63.39	PK	-13.19	50.2	74	-23.8	V
2309.62	47.17	Ave	-13.19	33.98	54	-20.02	V
2348.19	62.12	PK	-13.14	48.98	74	-25.02	V
2348.19	48.01	Ave	-13.14	34.87	54	-19.13	V
2483.50	61.52	PK	-13.08	48.44	74	-25.56	H
2483.50	47.08	Ave	-13.08	34	54	-20	H
Remark:							
1.Corrected Factor=ANT Factor + Cable Loss – Amp Gain 2. Corrected Amplitude= Receiver Reading+ Corrected Factor							

Test Frequency: 18-25GHz

The measurements were more than 30 dB below the limit and not reported

Remark : 1. The testing has been conformed to 10*2480 =24800MHz.
2. All other emissions more than 30dB below the limit

7 Conducted Spurious Emissions

Test Requirement	:	FCC CFR47 Part 15 Section 15.247
Test Method	:	ANSI C63.10 2013
Test Limit	:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated 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, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).
Test Result	:	PASS

7.1 Test Procedure

1. Remove the antenna f m the EUT and then connect a low RF cable from the antenna port to the spectrum;

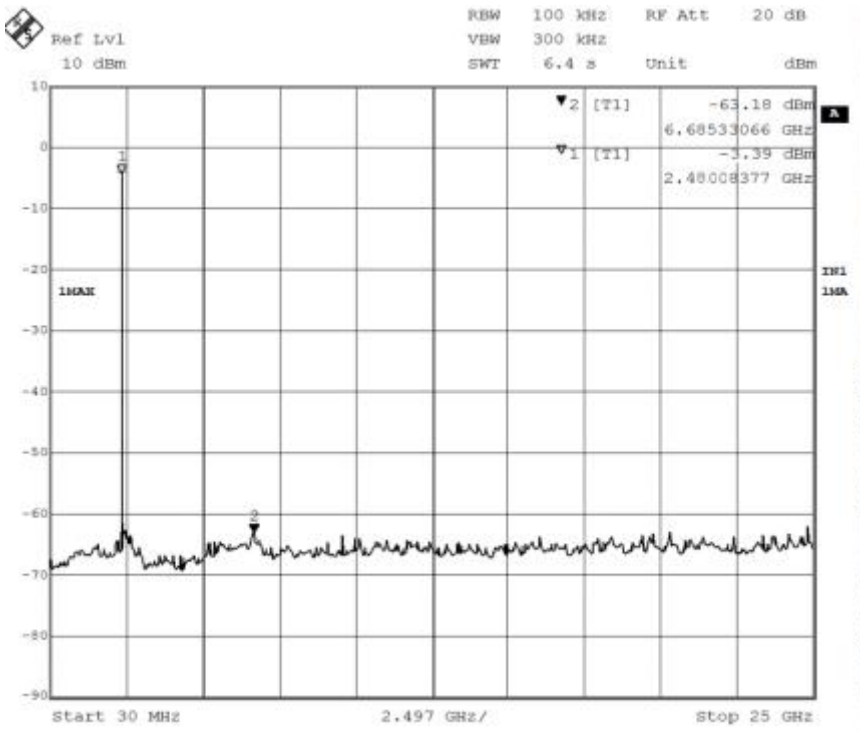
2. Set the spectrum analyzer:

RBW = 100 kHz, VBW = 300kHz, Sweep = auto

Detector function = peak, Trace = max hold

7.2 Test Result

Remark: only the worst data(2480MHz) were reported.


Ref Lvl
10 dBm
RBW 100 kHz
VBW 300 kHz
SWT 6.4 s
RF Att 20 dB
Unit dBm
2 [T1] -63.18 dBm
6.68533066 GHz
1 [T1] -3.39 dBm
2.48008377 GHz
1MAX
IN1
1MA
Start 30 MHz
2.497 GHz/
Stop 25 GHz

8 Band Edge Measurement

TestRequirement	:	Section 15.247(d) In addition, radiated emissions which fall in the restricted bands. as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).
Test Method	:	ANSI C63.10:2013,DA 00-705
Test Limit	:	Regulation 15.247 (d),In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated 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, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).
Test Mode	:	Transmitting & Hopping
Remark	:	The worst case was recorded.

8.1 Test Procedure

1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to thespectrum;

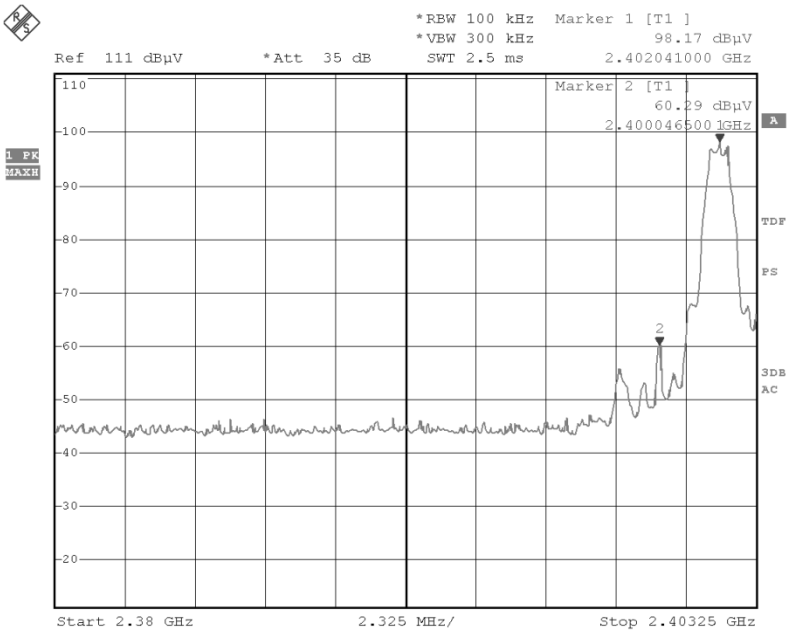
2. Set the spectrum analyzer: RBW = 100kHz, VBW = 300kHz, Sweep = auto

Detector function = peak, Trace = max hold

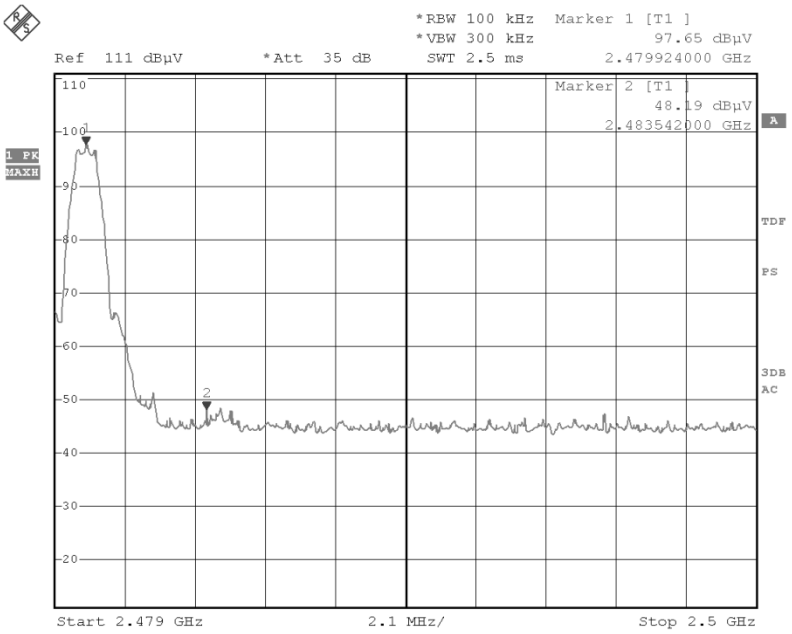
8.2 Test Result

Modulation	Mode	Band edge	Value (dBm)	Limit (dBm)	Result
GFSK(BLE)	Transmitting	Left	60.29	78.17	Pass
		Right	48.19	77.65	Pass
Remark:					
The limit is 20dB below the maximum peak level, please refer to the display line of the follow plot					

TX in GFSK Band edge-left side



TX in GFSK Band edge-right side



9 6dB Bandwidth Measurement

TestRequirement	:	FCC CFR47 Part 15 Section 15.247
Test Method	:	ANSI C63.10:2013, KDB 558074 D01 DTS MEAS GUIDANCE V03R03
Test Limit		Systems using digital modulation techniques 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.
Test Mode	:	Refer to section 3.3

9.1 Test Procedure

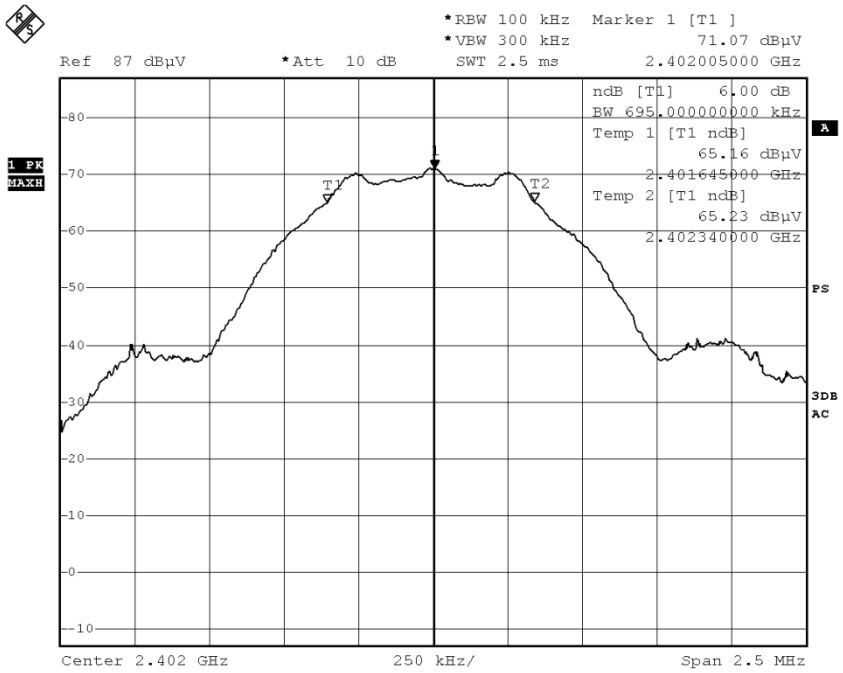
1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum;

2. Set the spectrum analyzer: For BLE, RBW = 100 kHz, VBW = 300kHz, For WIFI, RBW = 100kHz, VBW = 300kHz,

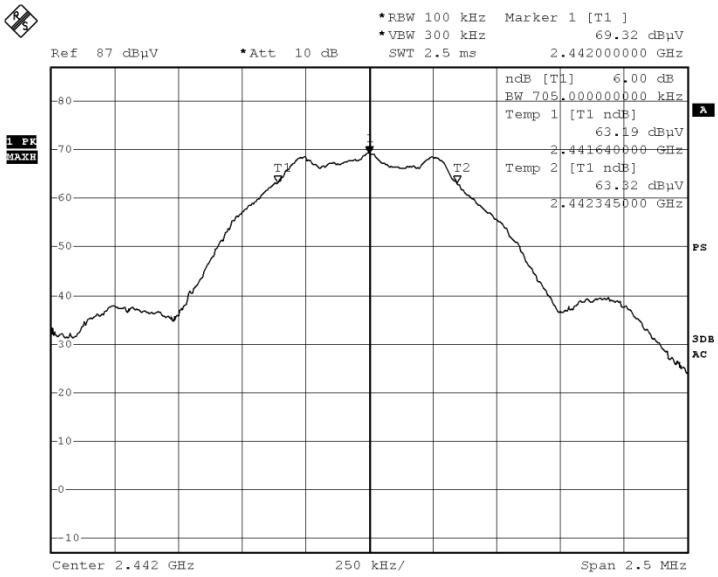
9.2 Test Result

Modulation	Bandwidth(MHz)			Limit
	Low Channel	Middle Channel	High Channel	
GFSK(BLE)	0.695	0.705	0.695	≥500kHz

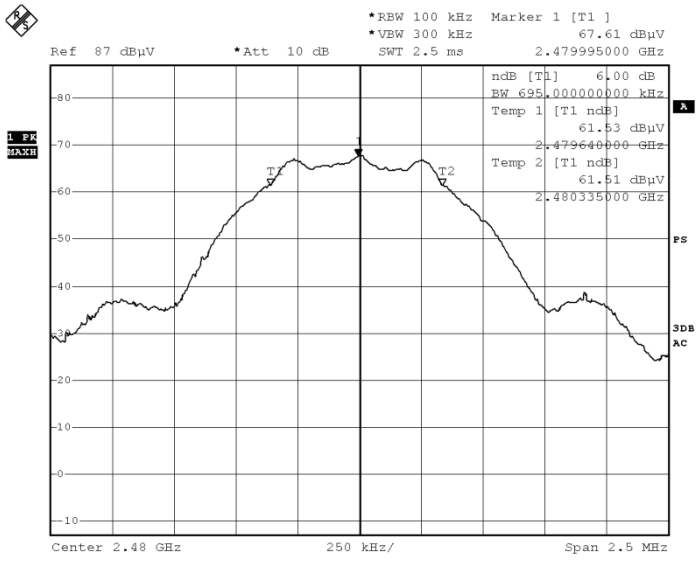
GFSK(BLE) Low Channel



GFSK(BLE) Middle Channel



GFSK(BLE)High Channel



10 Maximum Peak Output Power

Test Requirement	:	FCC CFR47 Part 15 Section 15.247
Test Method	:	ANSI C63.10:2013,KDB 558074 D01 DTS MEAS GUIDANCE V03R03
Test Limit	:	Regulation 15.247 (b)(3), For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power.
Test Mode	:	Refer to section 3.3

10.1Test Procedure

KDB 558074 D01 DTS Meas Guidance v03r03

section 9.1.1(For BLE)

This procedure shall be used when the measurement instrument has available a resolution bandwidth that is greater than the DTS bandwidth.

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.

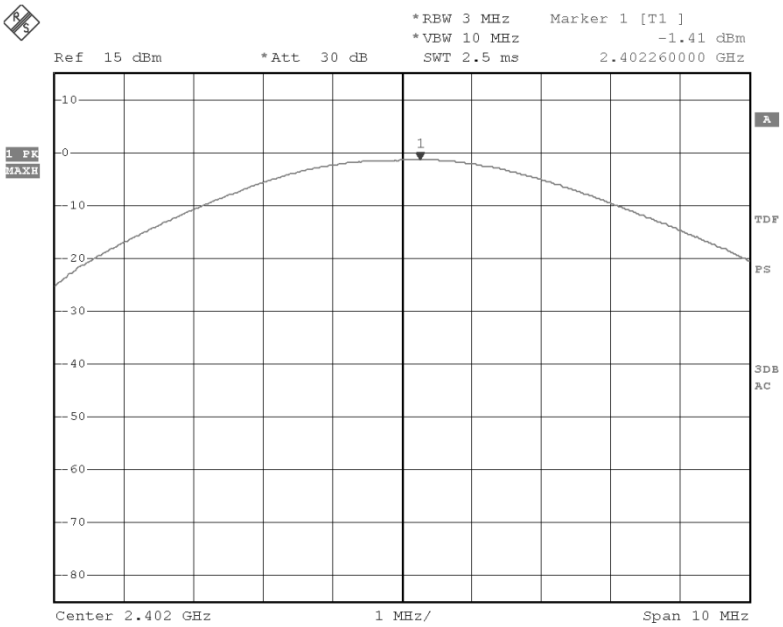
g) Allow trace to fully stabilize.

h) Use peak marker function to determine the peak amplitude level.

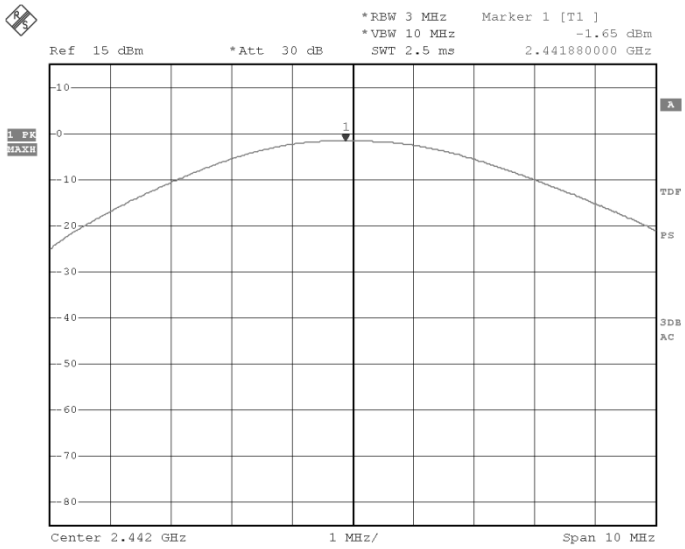
10.2Test Result

Modulation	Maximum Peak Output Power (dBm)			Limit
	Low Channel	Middle Channel	High Channel	
GFSK(BLE)	-1.41	-1.65	-1.36	1W(30dBm)

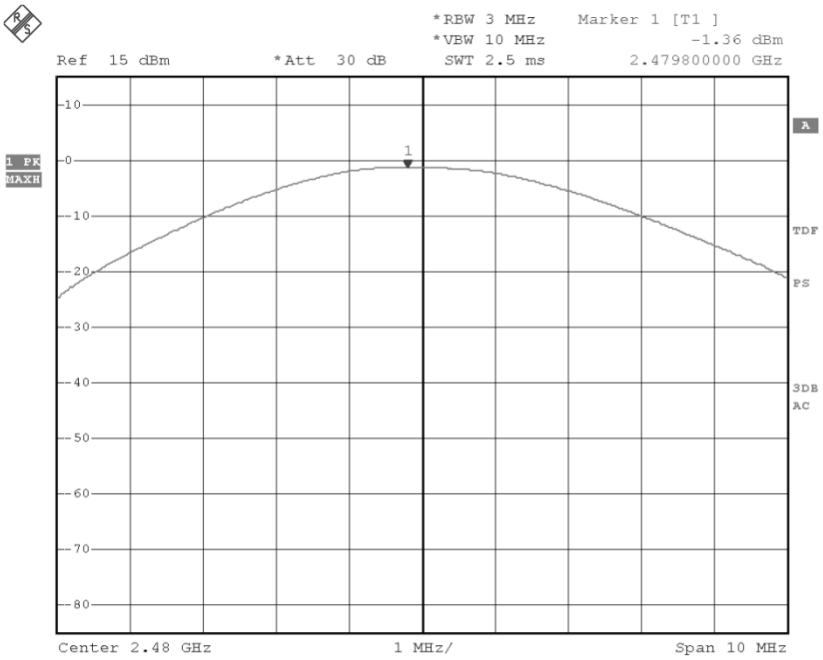
GFSK(BLE) Low Channel



GFSK(BLE) Middle Channel



GFSK(BLE)High Channel



11 Power Spectral density

Test Requirement	:	FCC CFR47 Part 15 Section 15.247
Test Method	:	ANSI C63.10:2013,KDB 558074 D01 DTS MEAS GUIDANCE V03R03
Test Limit	:	Regulation 15.247(f)The power spectral density conducted from the intentional radiator to the antenna due to the digital modulation operation of the hybrid system, with the frequency hopping operation turned off, shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.
Test Mode	:	Refer to section 3.3

11.1 Test Procedure

KDB 558074 D01 DTS Meas Guidance v03r03

1. Remove the antenna from the EUT and then connect a low RF cable from the antenna portto the spectrum.

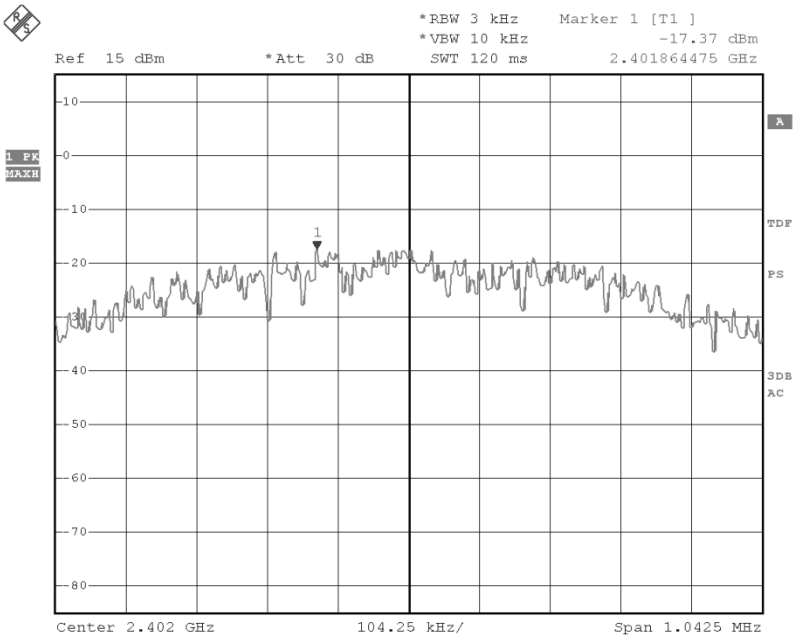
2. Set the spectrum analyzer: RBW = 3kHz. VBW = 10kHz , Span = 1.5 times the DTS channel bandwidth(6 dB bandwidth). Sweep = auto; Detector Function = Peak. Trace = Max hold.

3. Allow the trace to stabilize. Use the marker-delta function to determine the separation between the peaks of the adjacent channels. The limit is specified in one of the subparagraphs of this Section Submit this plot.

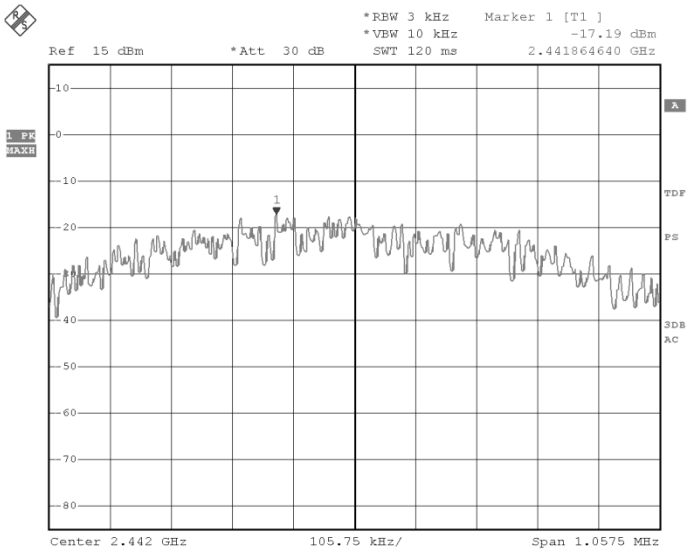
11.2 Test Result

Modulation	Power Spectraldensity (dBm/3kHz)			Limit
	Low Channel	Middle Channel	High Channel	
GFSK(BLE)	-17.37	-17.19	-16.49	8dBm/3kHz

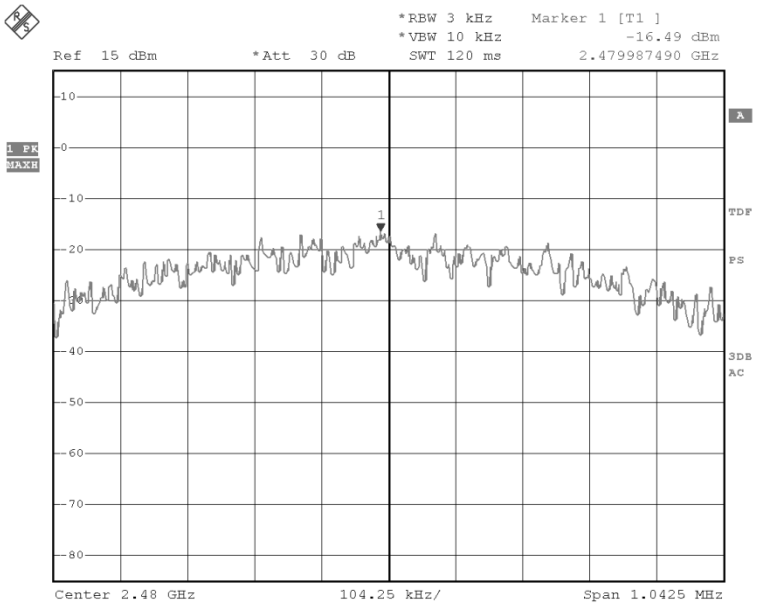
GFSK(BLE) Low Channel



GFSK(BLE) Middle Channel



GFSK(BLE)High Channel



12 Antenna Requirement

According to the FCC part15.203, a transmitter can only be sold or operated with antennas with which it was approved. This product has a PCB printed antenna, it meet the requirement of this section.

********THE END REPORT********