Test Report of FCC Part 15 C for FCC Certificate

On Behalf of

Shenzhen Aoni Electronic Industry Co., Ltd

FCC ID:	**Z63-AONIBT101**
Product Description:	**Bluetooth Headset**
Test Model:	**883**
Supplement Model:	**303, 304, 306, 308, 309, 806, 860, 869, 872, 876, 877, 881, 894, 896, 897, AF36, Air-Fi Touch**
Brand:	**ANC, Aoni**

Applicant:	**ShenZhen Aoni Electronic Industry Co., Ltd.** HongHui Industrial Park,2nd LiuXian Road, Xin'An streets, District 68, Bao'an District,ShenZhen,China
Manufacturer:	**ShenZhen Aoni Electronic Industry Co., Ltd.** HongHui Industrial Park,2nd LiuXian Road, Xin'An streets, District 68, Bao'an District,ShenZhen,China
Prepared by:	**Shenzhen Laker Testing Technology Co.,Ltd** 4D, Block 1, Sunshine Huayi Building,Nanhai West Road, Nanshan, Shenzhen, China Tel: 86-755-86307736 Fax: 86-755-86307356

Report No.:	LK14ER-0210E-1
Issue Date:	May 30, 2014
Test Date:	May 28~30,2014

Test by:	**Reviewed By:**
Owen Li	Edmund Zou
Owen Li	Edmund Zou

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1. GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

Client Information

Applicant:	**ShenZhen Aoni Electronic Industry Co., Ltd.**
Address of applicant:	HongHui Industrial Park,2nd LiuXian Road, Xin'An streets, District 68, Bao'an District,ShenZhen,China
Manufacturer:	**ShenZhen Aoni Electronic Industry Co., Ltd.**
Address of manufacturer:	HongHui Industrial Park,2nd LiuXian Road, Xin'An streets, District 68, Bao'an District,ShenZhen,China

General Description of E.U.T

Items	Description
EUT Description:	Bluetooth Headset
Model No.:	883, 303, 304, 306, 308, 309, 806, 860, 869, 872, 876, 877, 881, 894, 896, 897, AF36, Air-Fi Touch
Trade mark:	ANC, Aoni
Type of Modulation:	FHSS
Frequency Band:	2402 MHz ~ 2480 MHz
Number of Channels:	79
Channel Bandwidth:	1 MHz
Antenna Type:	Integrated antenna，fixed on PCB
Antenna Gain:	-0.6dB
Rated Voltage:	3.7V from battery and charged by USB DC5V
Bluetooth Version:	This report is only for Bluetooth Version V3.0 part only. For BT4.0 part, please see another separate report.

***Note**:*

** The test data gathered are from the production sample provided by the manufacturer,*

** The 883 is the same as other models,just difference in external features,model number and trade mark serves as Marketing strategy.*

1.2Test Facility

All measurement required was performed at laboratory of Centre Testing International (ShenZhen) Corporation ,Location at Building C, Sienific Innovation Park,Tiegang Reservior, Xixiang, Baoan District, Shenzhen, Guangdong, The site and apparatus are constructed in conformance with the requirements of ANSI C63.4, CISPR 16-1-1 and other equivalent standards.

The test facility is recognized, certified, or accredited by the following organizations:

FCC – Registration No.: 565659

Centre Testing International (Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files. Registration 565659, expiration date is 01/27/2017.

IC Registration No.: 7408B

The 3m alternate test site of CENTRE TESTING INTERNATIONAL (SHENZHEN) CORPORATION. EMC Laboratory has been registered by Certification and Engineer Bureau of Industry Canada for the performance of with Registration NO.: 7408B on December 29，2009.

CNAS - Registration No.: L1910

CENTRE TESTING INTERNATIONAL (SHENZHEN) CORPORATION,. to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories(CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.The acceptance letter from the CNAS is maintained in our files: Registration:L1910,January 12,2010.

1.3 Related Submittal(s) / Grant (s)

This submittal(s) is a test report based on the Electromagnetic Interference (EMI) tests performed on the EUT. The EMI measurements were performed according to the measurement procedure described in ANSI C63.4 - 2003.
The tests were performed in order to determine compliance with FCC Part 15, Subpart C, and section 15.203, 15.209, and 15.247 rules.

1.4 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the Product as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Test item	Value (dB)
Conducted Emission	3.2
Radiated Emission	4.5

2. SYSTEM TEST CONFIGURATION

The tests documented in this report were performed in accordance with ANSI C63.4-2003 and FCC CFR 47 Part 15 Subpart C.

2.1 EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner that intends to maximize its emission characteristics in a continuous normal application.

2.2 EUT Exercise

The calibrated antennas used to sample the radiated field strength are mounted on a non-conductive, motorized antenna mast 3 or 10 meters from the leading edge of the turntable.

2.3 General Test Procedures

Conducted Emissions The EUT is placed on the turntable, which is 0.8 m above ground plane. According to the requirements in Section 7.1 of ANSI C63.4-2003.Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-Peak detector mode.

Radiated Emissions The EUT is a placed on as turntable, which is 0.8 m above ground plane. The turntable shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m/10m away from the receiving antenna, which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the maximum emissions, exploratory radiated emission measurements were made according to the requirements in Section 13.1.4.1 of ANSI C63.4-2003.

2.4 List of Measuring Equipments

Test equipments list of CENTRE TESTING INTERNATIONAL (SHENZHEN) CORPORATION.

Shielding Room No. 1 - Conducted disturbance Test				
Equipment	**Manufacturer**	**Model**	**Serial No.**	**Due Date**
Receiver	R&S	ESCI	100009	07/19/2014
LISN	ETS-LINDGREN	3850/2	00051952	07/19/2014
LISN	R&S	ENV216	100098	07/19/2014
Voltage Probe	R&S	ESH2-Z3	100042	07/19/2014
Current Probe	R&S	EZ17	100106	07/19/2014
ISN	TESEQ GmbH	ISN T800	30297	07/04/2014

Control Room - Conducted disturbance Test (10m part)				
Equipment	**Manufacturer**	**Model**	**Serial No.**	**Due Date**
Receiver	R&S	ESCI	100435	07/19/2014
LISN	schwarzbeck	NNLK8121	8121-529	07/19/2014
Transient Limiter	ELECTRO-METRICS	EM-7600	806	07/29/2014
Voltage Probe	R&S	ESH2-Z3	100042	07/19/2014
Current Probe	R&S	EZ17	100106	07/19/2014
ISN	TESEQ GmbH	ISN T800	30297	07/04/2014
Horn Antenna	ETS-LINGREN	3117	00057407	07/19/2014

3M Semi-anechoic Chamber - Radiated disturbance Test				
Equipment	**Manufacturer**	**Model**	**Serial No.**	**Due Date**
3M Chamber & Accessory Equipment	ETS-LINDGREN	FACT-3	3510	07/09/2014
Spectrum Analyzer	Agilent	E4440A	MY46185649	07/07/2014
TRILOG Broadband Antenna	schwarzbeck	VULB 9163	401	07/21/2014
Multi device Controller	ETS-LINGREN	2090	00057230	N/A
Horn Antenna	ETS-LINGREN	3117	00057407	07/19/2014
Microwave Preamplifier	Agilent	8449B	3008A02425	07/29/2014

10M Semi-anechoic Chamber - Radiated disturbance Test				
Equipment	**Manufacturer**	**Model**	**Serial No.**	**Due Date**
10M Chamber & Accessory Equipment	Rainford	--	--	07/06/2015
Receiver	R&S	ESCI	100435	07/19/2014
Spectrum Analyzer	R&S	FSP40	100416	07/06/2014
EMI test receiver	R&S	ESIB40	2023282915	07/24/2014

TRILOG Broadband Antenna	schwarzbeck	VULB 9163	484	07/21/2014
Horn Antenna	ETS-LINGREN	3117	00044562	07/07/2015
Microwave Preamplifier	Agilent	11909A	186871	07/06/2014
Microwave Preamplifier	HP	HP 8447F	2805A03379	07/06/2014
Microwave Preamplifier	CD	PAP-1G18G	2001	07/29/2014

Shielding Room No. 2 - Harmonic / Flicker Test (EN 61000-3-2) / (EN 61000-3-3)				
Equipment	**Manufacturer**	**Model**	**Serial No.**	**Due Date**
5KVA AC POWER SOURCE	California instruments	5001iX-400-413	57344	07/29/2014
Flicker & Harmonic Tester	California instruments	PACS-1	72492	07/29/2014

Shielding Room No. 3 - ESD Test (IEC 61000-4-2)				
Equipment	**Manufacturer**	**Model**	**Serial No.**	**Due Date**
ESD Simulator	EM TEST	ESD30C	V0603101091	07/30/2014
ESD Simulator	TESEQ	NSG437	478	08/22/2014

3M Full-anechoic Chamber - Radio-frequency electromagnetic field Immunity Test (IEC 61000-4-3)				
Equipment	**Manufacturer**	**Model**	**Serial No.**	**Due Date**
3M Chamber & Accessory Equipment	ETS-LINDGREN	FACT-3	3510	07/09/2014
ESG Vector signal generators	Agilent	E4438C	MY45095744	07/07/2014
Power Amplifier	AR	150W1000	0322288	07/19/2014
TRILOG Broadband Antenna	schwarzbeck	VULB 9163	401	07/21/2014
Temperature & Humidity Chamber	ESPEC	DSW0540	ER-009	09/29/2014

Shielding Room No. 3 - EFT / Surges Test (IEC 61000-4-4) (IEC 61000-4-5)				
Equipment	**Manufacturer**	**Model**	**Serial No.**	**Due Date**
Compact Generator	EM-Test	UCS500M/6B	V0603101093	07/19/2014
Capacitive Clamp	EM-Test	C Clamp HFK	0306-43	07/19/2014
CDN for Telecom Port	EM-Test	CNV504S1	V0603101094	07/19/2014
EFT Generator	SCHAFFNER	NSG 2025	19878	07/29/2014
SURGE Generator	SCHAFFNER	NSG 2050	200313-135AR	07/29/2014
CDN	SCHAFFNER	CDN-131/133	34397	07/29/2014

Shielding Room No. 2 - Radio-frequency continuous conducted Immunity Test (IEC 61000-4-6)				
Equipment	**Manufacturer**	**Model**	**Serial No.**	**Due Date**

Signal Generator	IFR	2023B	202307/883	07/07/2014
Power Amplifier	AR	75A 250A	320297	07/29/2014
Attenuator	EM-Test	ATT6/75	0320837	07/19/2014
CDN	EM-Test	CDN M2/M3	0204-01	07/19/2014
EM-Clamp	EM-Test	EM101	35770	07/19/2014

Shielding Room No. 2 - Power-frequency magnetic fields Immunity Test (IEC 61000-4-8)				
Compact Generator	EM-Test	UCS500M/6B	V0603101093	07/19/2014
Induction Coil	EM-Test	MS100	0106-47	07/29/2014
Current Transformer	EM-Test	MC2630	0106-02	07/29/2014

Shielding Room No. 2 –Voltage dips and interruptions Test (IEC 61000-4-11)				
Equipment	**Manufacturer**	**Model**	**Serial No.**	**Due Date**
5KVA AC POWER SOURCE	California instruments	5001iX-400-413	57344	07/29/2014
Electronic output switch	California instruments	EOS-1	72616	07/29/2014

2.5 List of auxiliary device

Equipment	Manufacturer	Model	Specification	Cert.
Notebook	Lenovo	E46L	Input: DC20V (3.25A) Output: USB DC5V	FCC DoC, CE,CCC
Adapter	Lenovo	PA-1650-56LC	Input:100~240V (1.7A)50-60Hz Output: DC20V (3.25A)	FCC DoC, CE,CCC

3. SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
15.207(a)	Condcuted Emission Test	Pass
15.247(a)(1)	Hopping Channel Separation and Bandwith	Pass
15.247(a)(1)	Number of Hopping Frequency Used	Pass
15.247(a)(1)(iii)	Dwell Time of Each Frequency	Pass
15.247(b)(1)	Maximum Peak Output Power	Pass
15.247(d)	Band Edges Emission	Pass
15.247(d)	Spurious Radiated Emission	Pass
15.203/15.247(b)/(c)	Antenna Requirement	Pass

4. Condcuted Emission Test

4.1 Applicable Standard

Section 15.207(a): for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50 μH/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal.

4.2 Limits

Limits for Class A digital devices

Frequency range (MHz)	Limits dB(μV)	
	Quasi-peak	Average
0.15 to 0.50	79	66
0,50 to 30	73	60

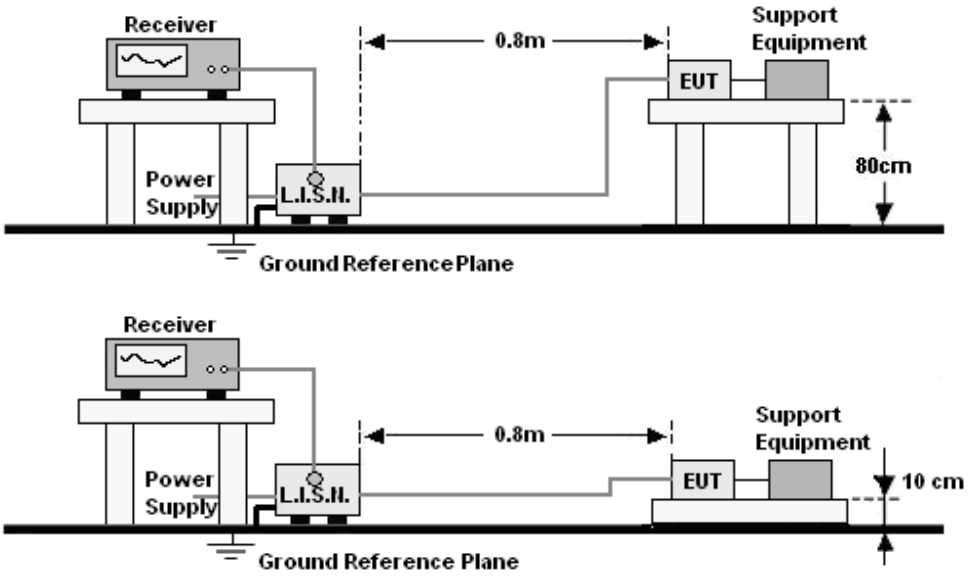
NOTE: The lower limit shall apply at the transition frequency.

Limits for Class B digital devices

Frequency range (MHz)	Limits dB(μV)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56	56 to 46
0,50 to 5	56	46
5 to 30	60	50

NOTE: 1. The lower limit shall apply at the transition frequencies.
2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 to 0.50 MHz.

4.3 EUT Test Setup



（Floor Stand）

4.4 Procedure Of Conducted Emission Test

a. The Product was placed on a nonconductive table above the horizontal ground reference plane, and 0.4 m from the vertical ground reference plane, and connected to the main through Line Impedance Stability Network (L.I.S.N).
b. The RBW of the receiver was set at 9 kHz in 150 kHz ~ 30MHz with Peak and AVG detector in Max Hold mode. Run the receiver's pre-scan to record the maximum disturbance generated from Product in all power lines in the full band.
c. For each frequency whose maximum record was higher or close to limit, measure its QP and AVG values and record.

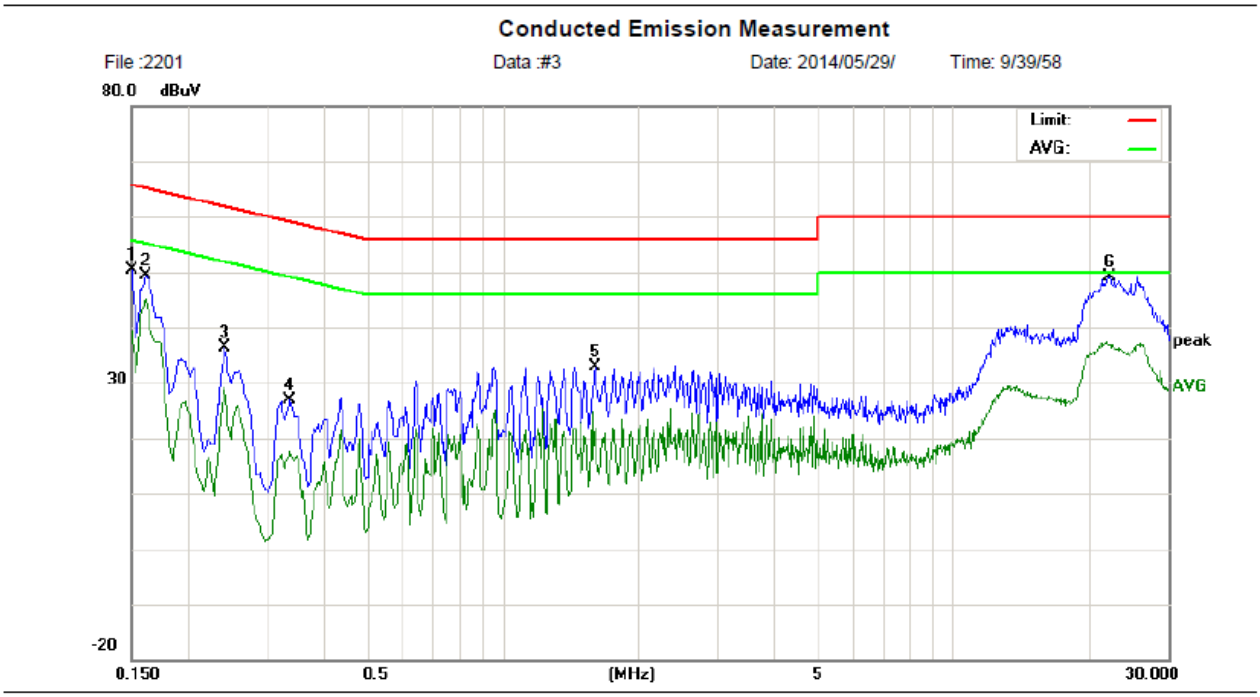
4.5 Test Result

Temperature (℃) : 22~23	EUT: Bluetooth Headset
Humidity (%RH): 50~54	M/N: 883
Barometric Pressure (mbar): 950~1000	Operation Condition: Charging and BT working

The charging and BT working mode test data worse than charging mode,so only record this mode test datas

The Test Data Of Conducted Emission

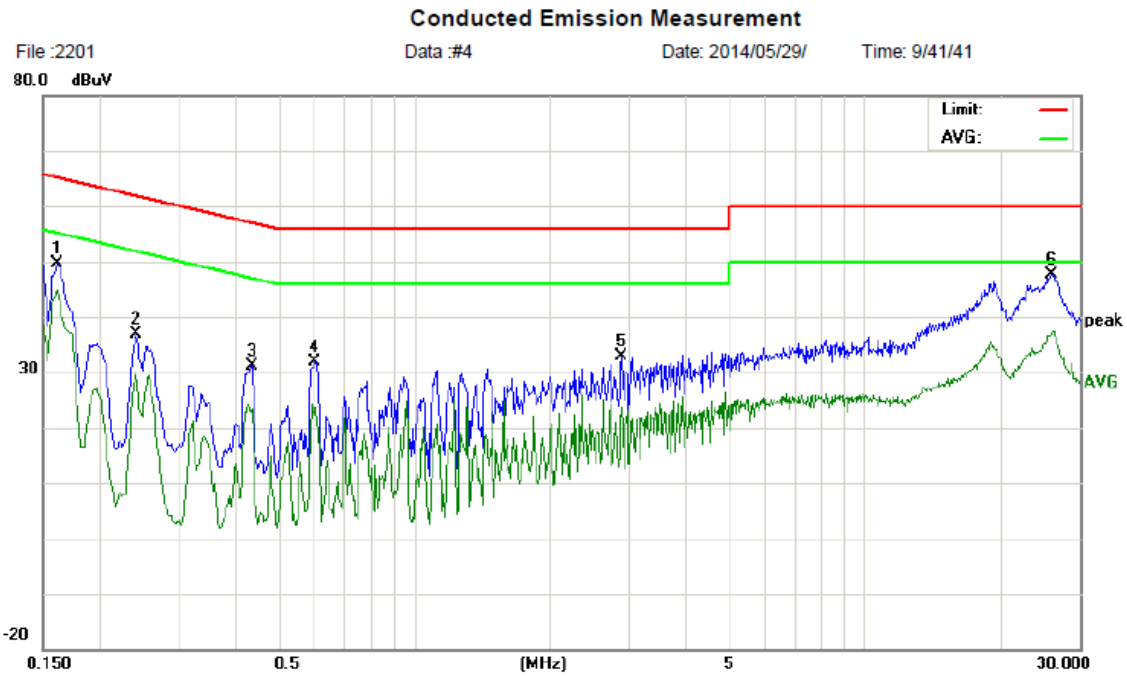
EUT:	Bluetooth Headset
M/N:	883
Operating Condition:	Charging and BT working
Test Site:	CHAMBER
Operator:	Owen Li
Comment:	Line:L
	Tem:23℃ Hum:50%



No.	Freq.	Reading_Level (dBuV)			Correct Factor	Measurement (dBuV)			Limit (dBuV)		Margin (dB)			
	MHz	Peak	QP	AVG	dB	peak	QP	AVG	QP	AVG	QP	AVG	P/F	Comment
1	0.1500	40.67		29.52	9.79	50.46		39.31	65.99	55.99	-15.53	-16.68	P	
2	0.1620	40.67		29.52	9.79	50.46		39.31	65.36	55.36	-14.90	-16.05	P	
3	0.2420	26.58		19.33	9.81	36.39		29.14	62.02	52.02	-25.63	-22.88	P	
4	0.3379	16.96		7.82	9.81	26.77		17.63	59.25	49.25	-32.48	-31.62	P	
5	1.6019	22.96		11.91	9.88	32.84		21.79	56.00	46.00	-23.16	-24.21	P	
6	22.2500	38.99		26.57	10.26	49.25		36.83	60.00	50.00	-10.75	-13.17	P	

The Test Data Of Conducted Emission

EUT:	Bluetooth Headset
M/N:	883
Operating Condition:	Charging and BT working
Test Site:	CHAMBER
Operator:	Owen Li
Comment:	Line:N
	Tem:23℃ Hum:50%



No.	Freq.	Reading_Level (dBuV)			Correct Factor	Measurement (dBuV)			Limit (dBuV)		Margin (dB)			
	MHz	Peak	QP	AVG	dB	peak	QP	AVG	QP	AVG	QP	AVG	P/F	Comment
1	0.1620	39.88		34.97	9.79	49.67		44.76	65.36	55.36	-15.69	-10.60	P	
2	0.2420	27.18		19.99	9.81	36.99		29.80	62.02	52.02	-25.03	-22.22	P	
3	0.4380	21.40		13.61	9.81	31.21		23.42	57.10	47.10	-25.89	-23.68	P	
4	0.6020	22.08		12.46	9.83	31.91		22.29	56.00	46.00	-24.09	-23.71	P	
5	2.8980	22.88		13.83	9.92	32.80		23.75	56.00	46.00	-23.20	-22.25	P	
6	26.0419	37.33		26.62	10.38	47.71		37.00	60.00	50.00	-12.29	-13.00	P	

5. Test of Hopping Channel Bandwidth

5.1 Applicable Standard

Section 15.247(a)(1): Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater.

5.2 EUT Setup

Spectrum Analyzer

5.3 Test Equipment List and Details

See section 2.4.

5.4 Test Procedure

1. The transmitter output was connected to the spectrum analyzer through an attenuator.

2. Set RBW of spectrum analyzer to 100KHz and VBW to 100KHz.

3. Set Detector to Peak, Trace to Max Hold and Sweep Time is Auto.

4. The spectrum width with level higher than 20dB below the peak level.

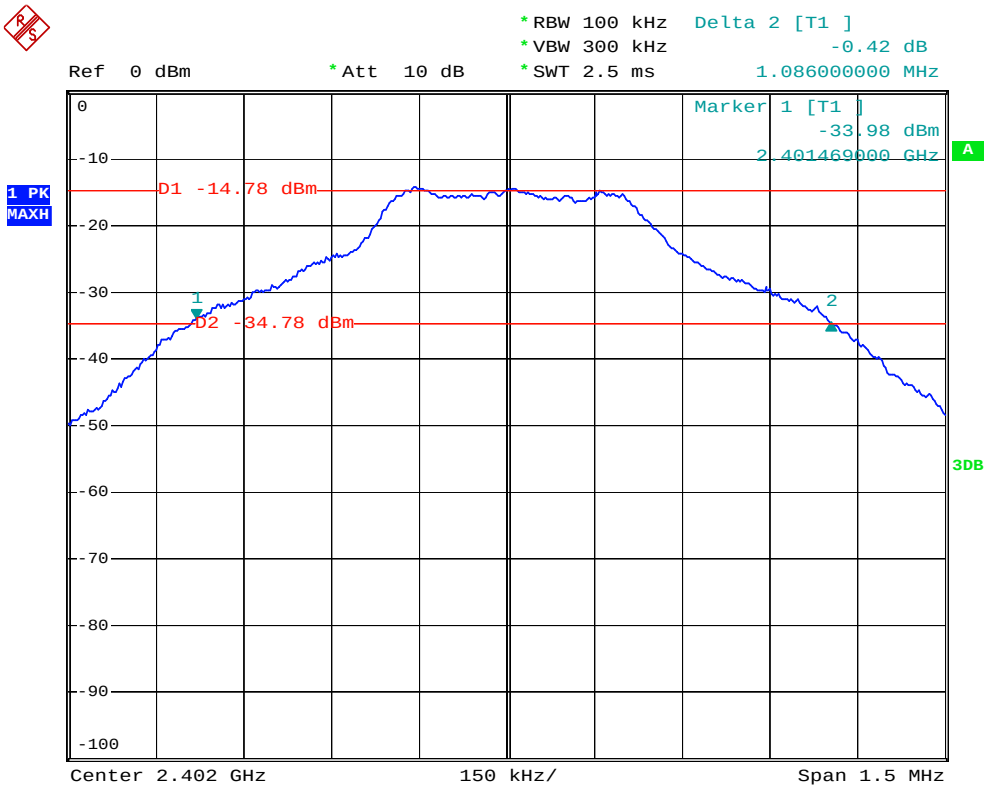
5. Repeat above 1~3 points for the low, middle and highest 3 channels of the EUT.

5.5 Test Result

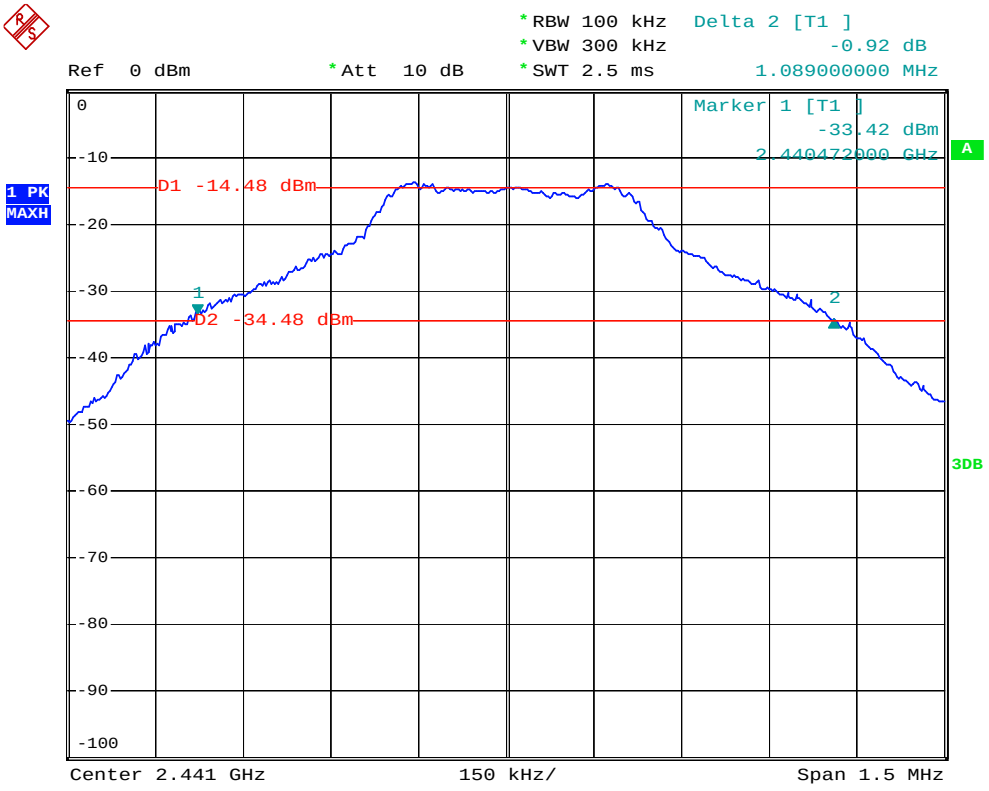
Temperature (℃) : 22~23	EUT: Bluetooth Headset
Humidity (%RH): 50~54	M/N: 883
Barometric Pressure (mbar): 950~1000	Operation Condition: Tx Mode

Channel No.	Frequency (MHz)	20dB Bandwidth (kHz)	Result
Low	2402	1086	Pass
Middle	2441	1089	Pass
High	2480	1080	Pass

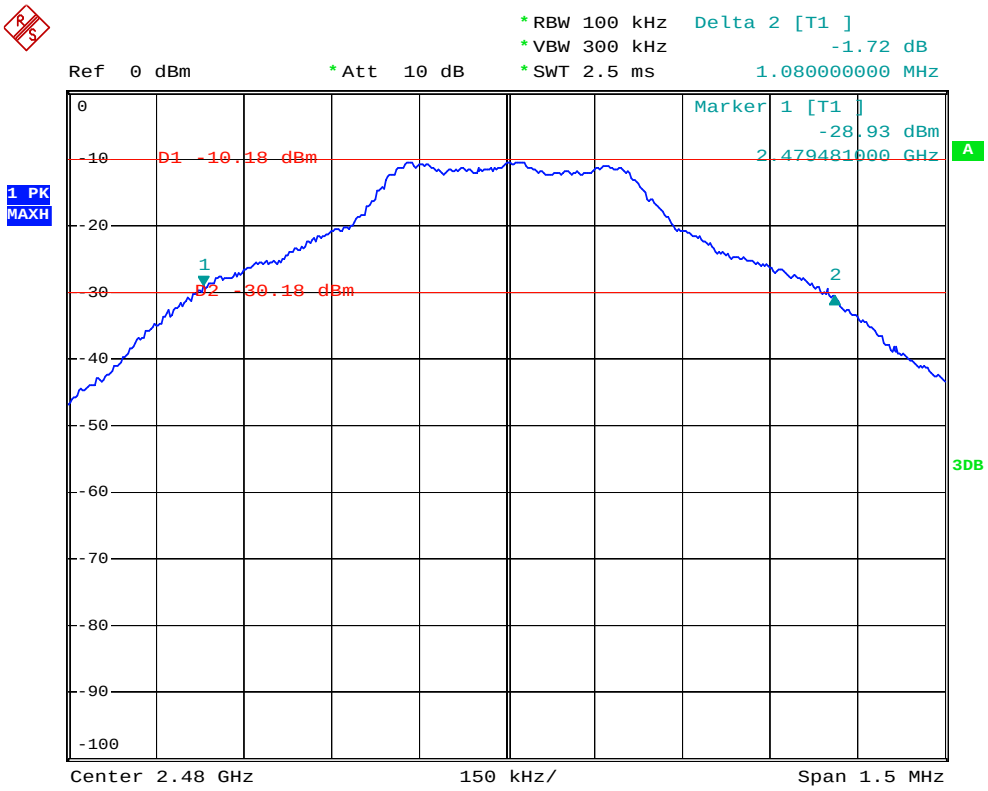
Channel Low：


*RBW 100 kHz
*VBW 300 kHz
*SWT 2.5 ms
Delta 2 [T1]
-0.42 dB
1.086000000 MHz
Ref 0 dBm
*Att 10 dB
Marker 1 [T1]
-33.98 dBm
2.401469000 GHz
A
1 PK
MAXH
D1 -14.78 dBm
D2 -34.78 dBm
3DB
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
Center 2.402 GHz
150 kHz/
Span 1.5 MHz

Channel Middle：



Channel High：



6. Test of Hopping Channel Separation

6.1 Applicable Standard

Section 15.247(a)(1): Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater.

6.2 EUT Setup

Spectrum Analyzer

6.3 Test Equipment List and Details

See section 2.4.

6.4 Test Procedure

1. The transmitter output was connected to the spectrum analyzer through an attenuator.

2. Set RBW of spectrum analyzer to 100KHz and VBW to 300KHz.

3. Set Detector to Peak, Trace to Max Hold and Sweep Time is Auto.

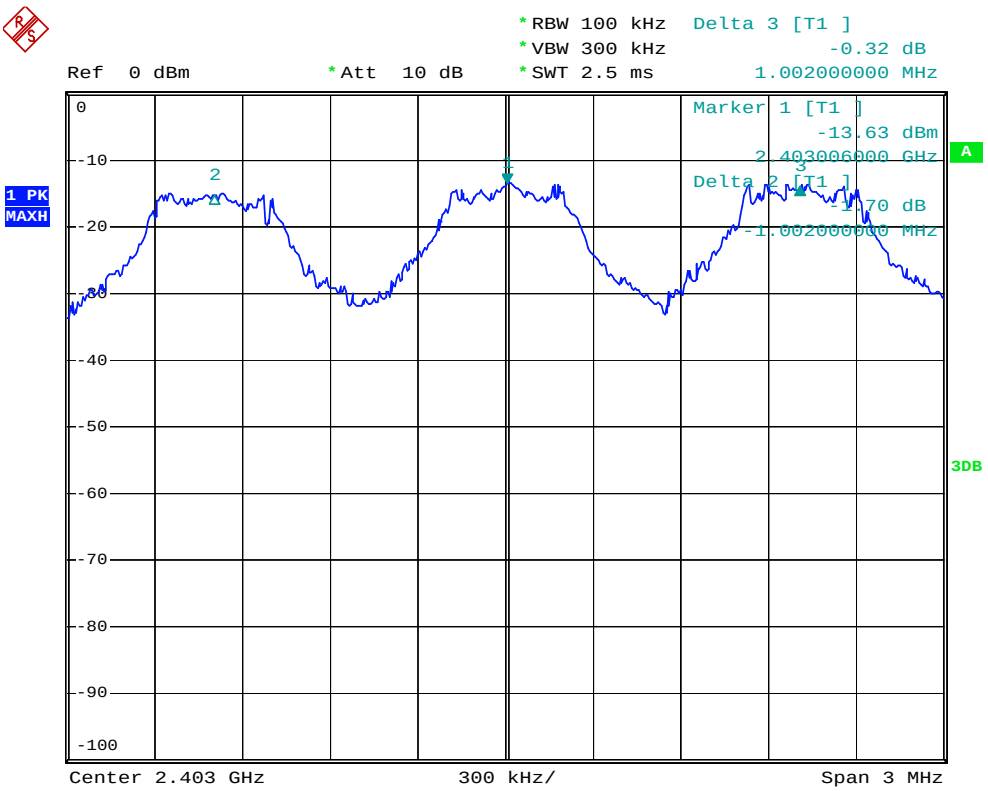
4. The Hopping Channel Separation is defined as the separation between 2 neighboring hopping frequencies.

6.5 Test Result

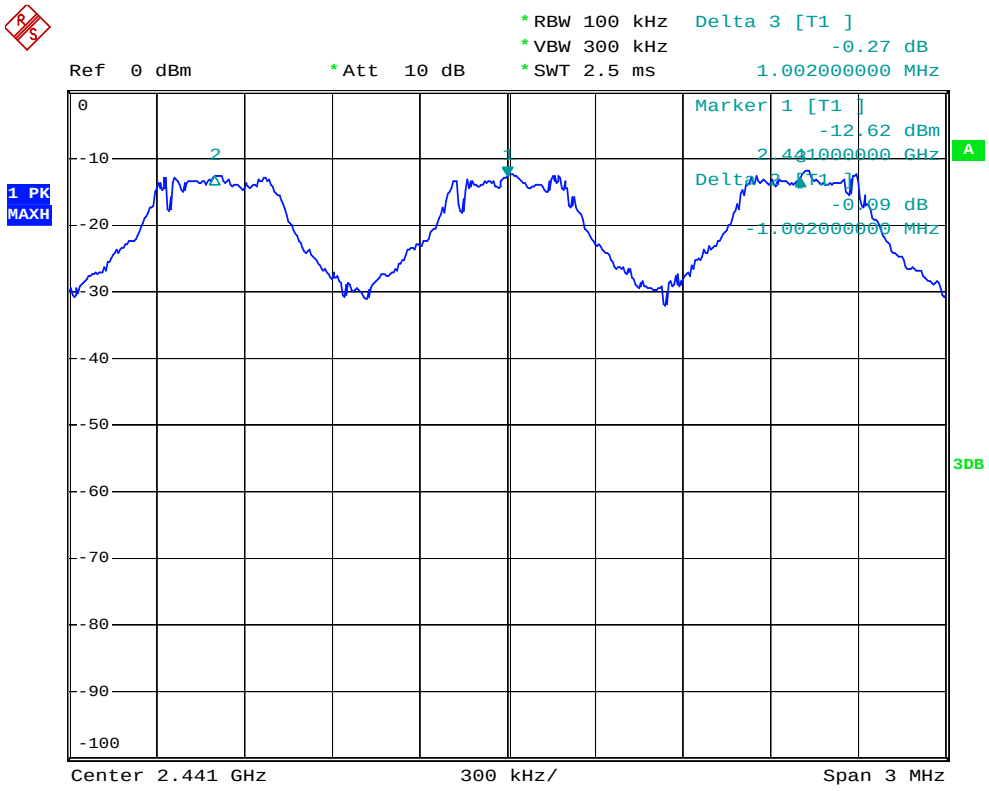
Temperature (℃) : 22~23	EUT: Bluetooth Headset
Humidity (%RH): 50~54	M/N: 883
Barometric Pressure (mbar): 950~1000	Operation Condition: Tx Mode

Channel No.	Frequency (MHz)	Channel Separation (kHz)	Limit (kHz)	Result
Low	2402	1002	>=25 KHz or 2/3 20 dB BW	Pass
Middle	2441	1020		
High	2480	1002		

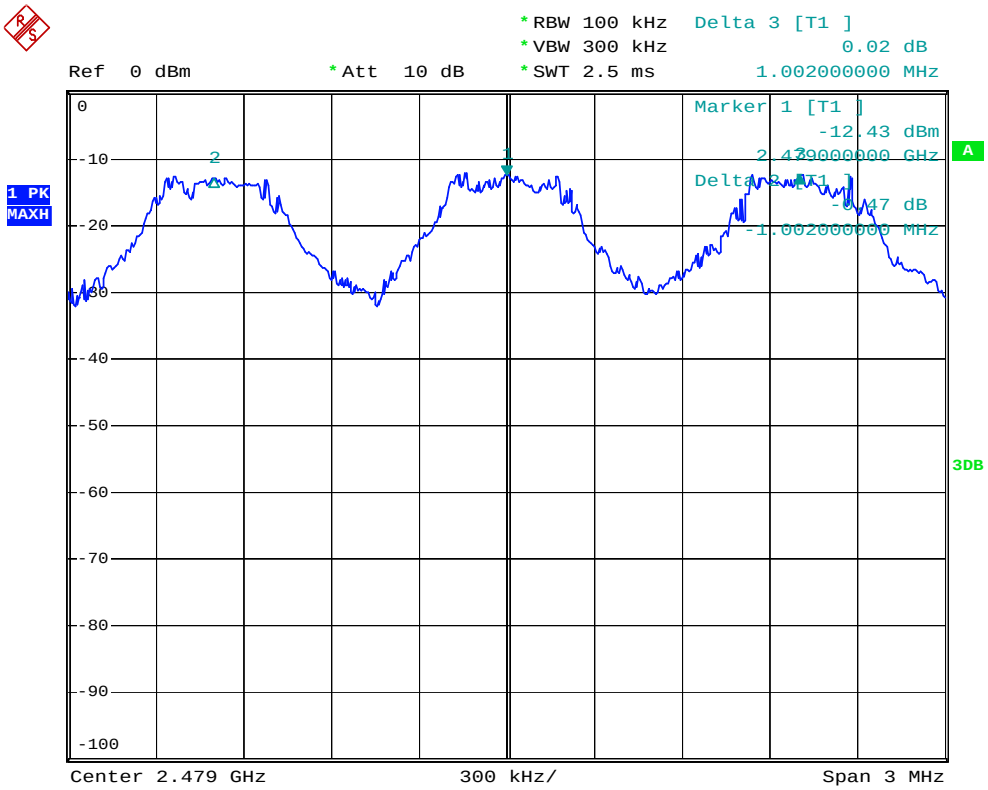
Channel Low：


*RBW 100 kHz
*VBW 300 kHz
*SWT 2.5 ms
Delta 3 [T1]
-0.32 dB
1.002000000 MHz
Ref 0 dBm
*Att 10 dB
Marker 1 [T1]
-13.63 dBm
2.403006000 GHz
Delta 2 [T1]
-11.70 dB
-1.002000000 MHz
1 PK
MAXH
A
3DB
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
Center 2.403 GHz
300 kHz/
Span 3 MHz

Channel Middle：



Channel High：



7. Test of Number of Hopping Frequency

7.1 Applicable Standard

Section 15.247(a)(1)(iii): For frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 15 non-overlapping hopping channels. Frequency hopping system which use fewer than 75 hopping frequencies may employ intelligent hopping techniques to avoid interference to other transmissions. Frequency hopping system may avoid or suppress transmissions on a particular hopping frequency provided that a minimum of 15 non-overlapping channels are used.

7.2 EUT Setup

Spectrum Analyzer

7.3 Test Equipment List and Details

See section 2.4.

7.4 Test Procedure

1. The transmitter output was connected to the spectrum analyzer through an attenuator.

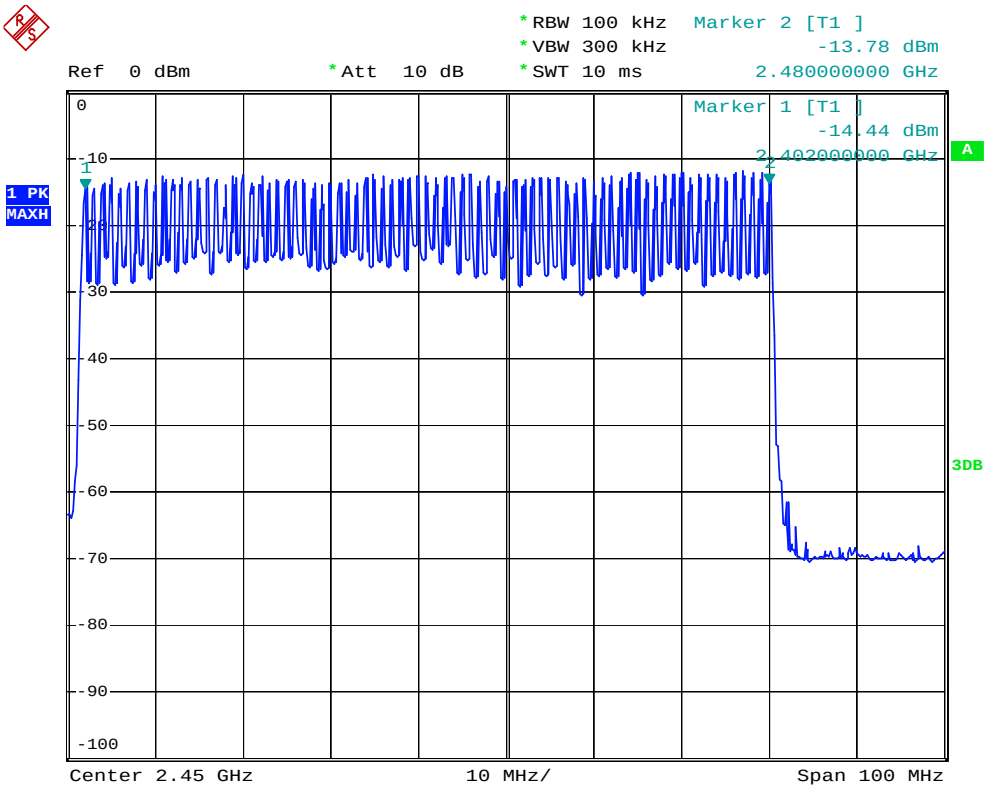
2. Set RBW of spectrum analyzer to 100KHz and VBW to 1MHz.

3. Set Detector to Peak, Trace to Max Hold and Sweep Time is Auto.

7.5 Test Result

Temperature (℃) : 22~23	EUT: Bluetooth Headset
Humidity (%RH): 50~54	M/N: 883
Barometric Pressure (mbar): 950~1000	Operation Condition: Normal Mode

Modulation Type	Frequency (MHz)	Number of Hopping Channels	Min. Limit (kHz)
FHSS	2402~2480	79	≥15


*RBW 100 kHz
*VBW 300 kHz
*SWT 10 ms
Marker 2 [T1]
-13.78 dBm
2.480000000 GHz
Ref 0 dBm
*Att 10 dB
Marker 1 [T1]
-14.44 dBm
2.402000000 GHz
1 PK
MAXH
A
3DB
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
Center 2.45 GHz
10 MHz/
Span 100 MHz

8. Test of Dwell Time of Each Frequency

8.1 Applicable Standard

Section 15.247(a)(1)(iii): For frequency hopping systems operating in the 2400-2483.5 MHz band The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4seconds multiplied by the number of hopping channels employed.

8.2 EUT Setup

Spectrum Analyzer

8.3 Test Equipment List and Details

See section 2.4.

8.4 Test Procedure

1. The transmitter output was connected to the spectrum analyzer through an attenuator.
2. Set RBW of spectrum analyzer to 1000kHz and VBW to 1000kHz.
3. Set Detector to Peak, Trace to Max Hold and Sweep Time is more than once pulse time.
4. Set the center frequency on any frequency would be measure and set the frequency span to zero span.

5. Measure the maximum time duration of one single pulse.

8.5 Test Result

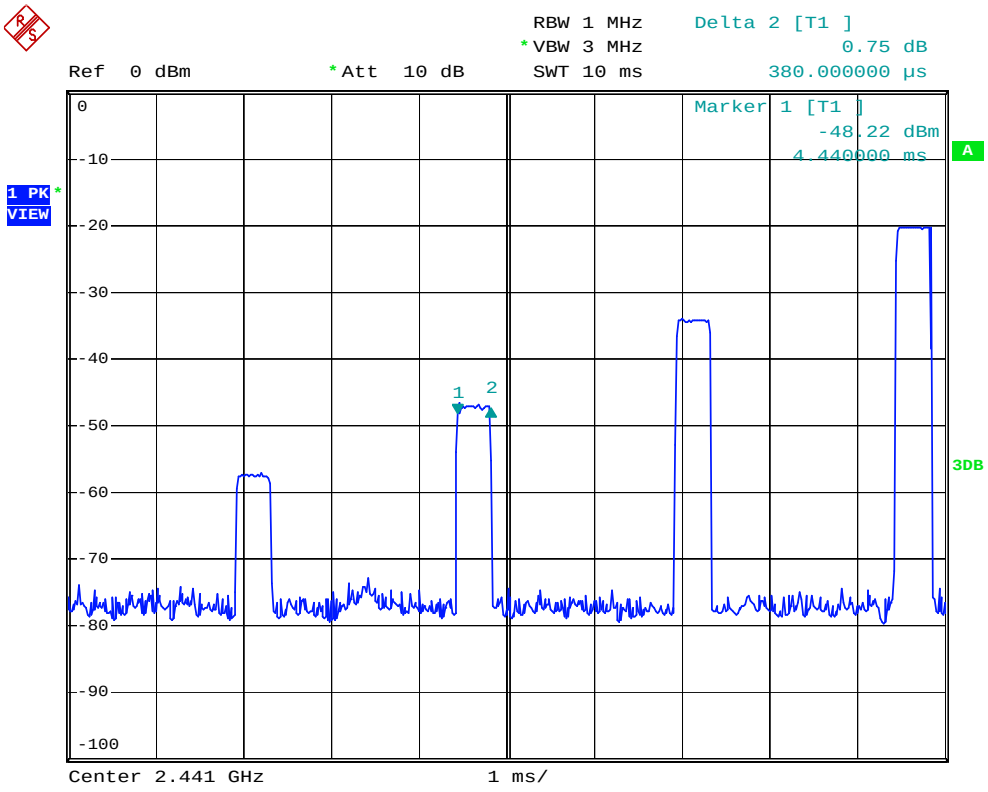
Temperature (℃) : 22~23	EUT: Bluetooth Headset
Humidity (%RH): 50~54	M/N: 883
Barometric Pressure (mbar): 950~1000	Operation Condition: Normal Mode

Note: The channel mid test data is the worse case in channel low,mid and high there modes test results

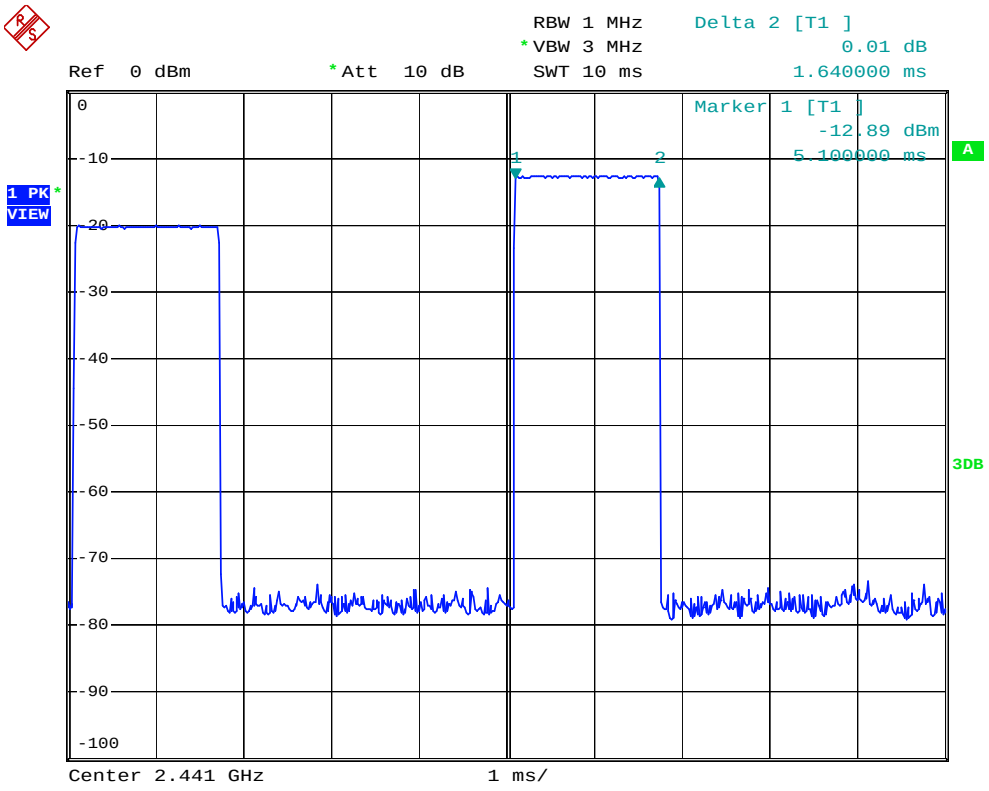
Test Data (Worse case)

Packet	Frequency (MHz)	Pulse Wide （ms）	Number of Hopping Pulses in 0.4*channel number	Dwell Time (ms)	Limit (ms)
DH1	2441	0.38	*(1600/(2*79))*31.6	121.6	400
DH3	2441	1.64	*(1600/(4*79))*31.6	262.4	400
DH5	2441	2.90	*(1600/(6*79))*31.6	309.3	400

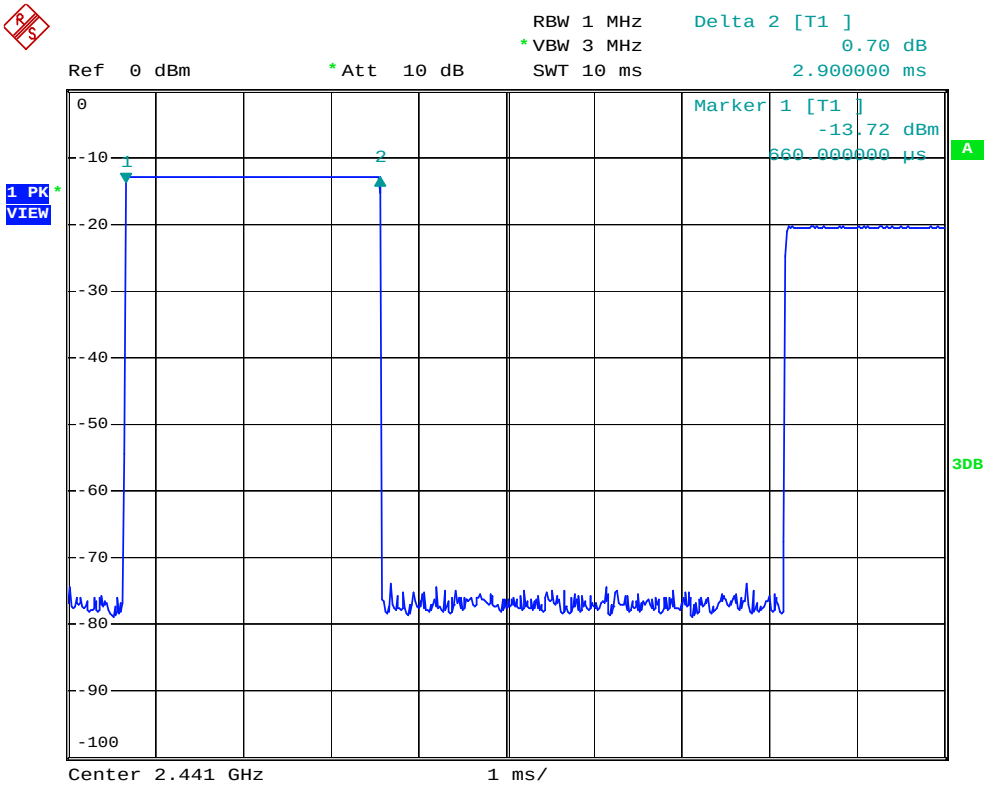
DH1:


RBW 1 MHz
*VBW 3 MHz
SWT 10 ms
Delta 2 [T1]
0.75 dB
380.000000 µs
Ref 0 dBm
*Att 10 dB
Marker 1 [T1]
-48.22 dBm
4.440000 ms
1 PK
VIEW
A
3DB
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
Center 2.441 GHz
1 ms/

DH3:


RBW 1 MHz
*VBW 3 MHz
SWT 10 ms
Delta 2 [T1]
0.01 dB
1.640000 ms
Ref 0 dBm
*Att 10 dB
Marker 1 [T1]
-12.89 dBm
5.100000 ms
1 PK
VIEW
A
3DB
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
Center 2.441 GHz
1 ms/

DH5:


RBW 1 MHz
*VBW 3 MHz
SWT 10 ms
Delta 2 [T1]
0.70 dB
2.900000 ms
Ref 0 dBm
*Att 10 dB
Marker 1 [T1]
-13.72 dBm
660.000000 µs
1 PK*
VIEW
A
3DB
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
Center 2.441 GHz
1 ms/

9. Test of Maximum Peak Output Power

9.1 Applicable Standard

Section 15.247(b)(1): For frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 non-overlapping hopping channels and The maximum peak output power shall not exceed 1 watt. For all other frequency hopping systems in this frequency band, The maximum peak output power shall not exceed 0.125 watt.

9.2 EUT Setup

Spectrum Analyzer

9.3 Test Equipment List and Details

See section 2.4.

9.4 Test Equipment List and Details

1. The transmitter output was connected to the spectrum analyzer through an attenuator.

2. Set RBW of spectrum analyzer to 3MHz and VBW to 3MHz.Span to10MHz

3. Set Detector to Peak,

9.5 Test Result

Temperature (℃) : 22~23	EUT: Bluetooth Headset
Humidity (%RH): 50~54	M/N: 883
Barometric Pressure (mbar): 950~1000	Operation Condition: Tx Mode

Channel	Frequency (MHz)	Output Power (dBm)	Limits (dBm)	Margin (dB)
Low	2402	-0.54	30	30.54
Middle	2441	-0.37	30	30.37
High	2480	-0.65	30	30.65

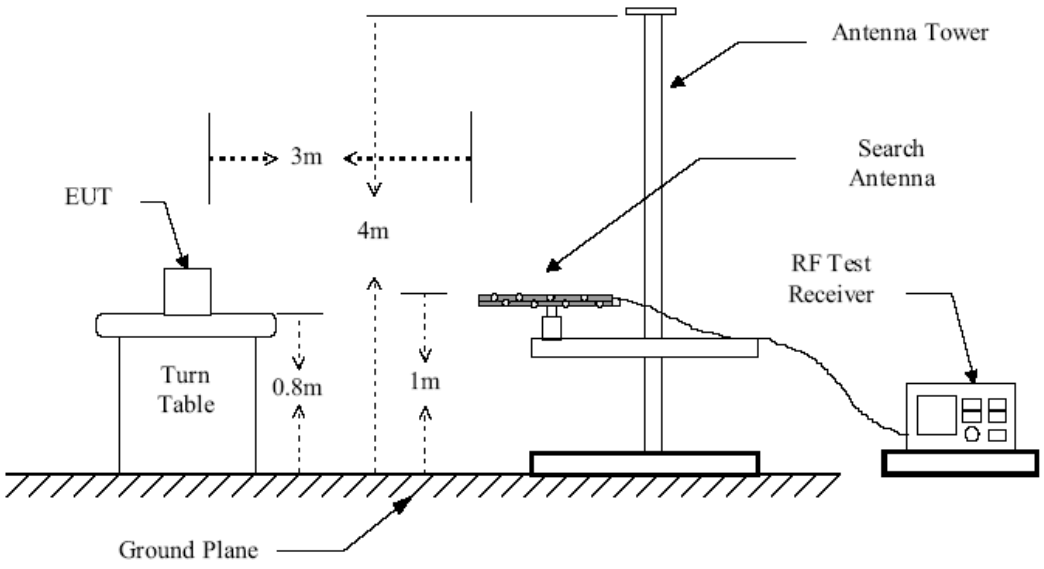
10. Test of Band Edges Emission

10.1 Applicable Standard

Section 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. In addition, radiated emissions that fall in the restricted bands, as defined in Section 15.205, must also comply with the radiated emission limits specified in Section 15.209.

10.2 EUT Setup

Radiated Measurement Setup



Conducted Measurement Setup

Spectrum Analyzer

10.3 Test Equipment List and Details

See section 2.4.

10.4 Test Procedure

Conducted Measurement

1. The transmitter is set to the lowest channel.

2. The transmitter output was connected to the spectrum analyzer via a cable and cable loss is used as the offset of the spectrum analyzer.

3. Set both RBW and VBW of spectrum analyzer to 100KHz with convenient frequency span including 100MHz bandwidth from lower band edge. Then detector set to peak and max hold this trace.

4. The lowest band edges emission was measured and recorded.

5. The transmitter set to the highest channel and repeated 2~4.

Radiated Measurement

1. Configure the EUT according to ANSI C63.4-2003

2. The turntable was rotated by 360 degrees to determine the position of the highest radiation.

3. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emission field strength of both horizontal and vertical polarization.

4. For band edge emission, the antenna tower was scan (from 1 M to 4 M) and then the turn table was rotated (from 0 degree to 360 degrees) to find the maximum reading.

5. For band edge emission, use 1MHz VBW and 1MHz RBW for reading under AV and use 1MHz VBW and 1MHz RBW for reading under PK.

10.5 Test Result

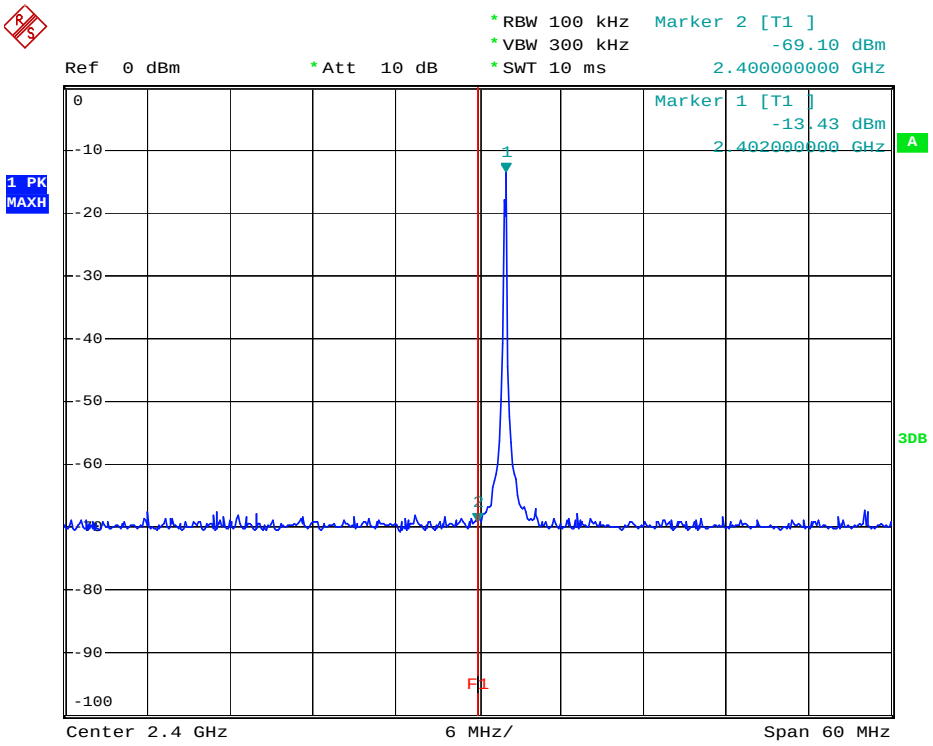
Temperature (℃) : 22~23	EUT: Bluetooth Headset
Humidity (%RH): 50~54	M/N: 883
Barometric Pressure (mbar): 950~1000	Operation Condition: Tx mode & hopping mode

Note:Channel low,mid and high,30MHz-25GHz conducted emissions all more than 20 dB below fundamental.And only record the worest band edge test datas.

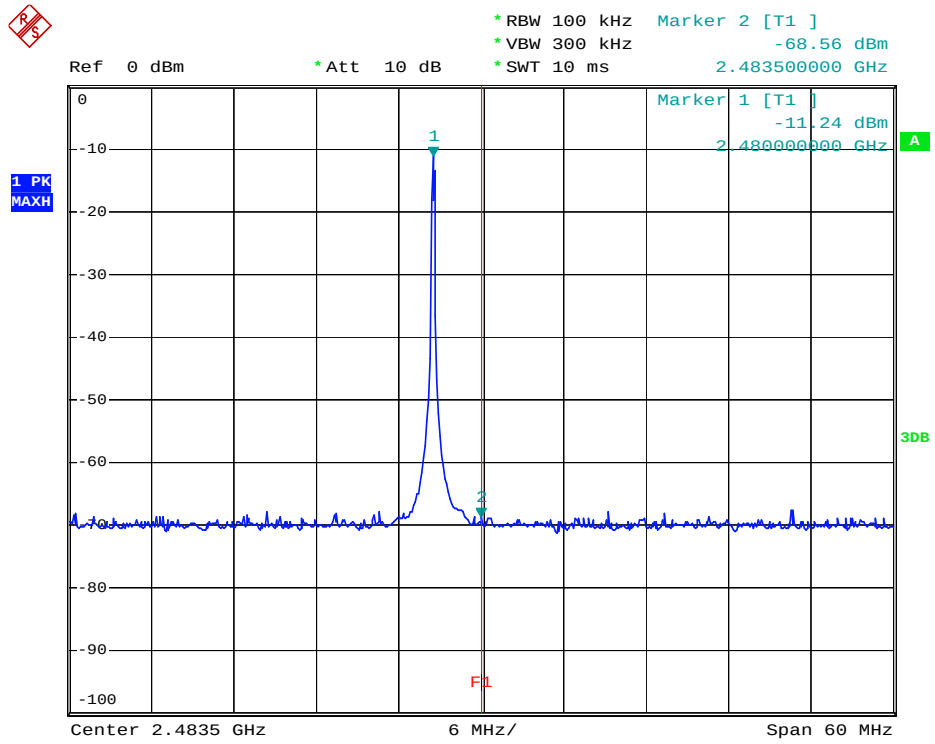
Radiated Test Result

Frequency(MHz)
<2400
>2483.5

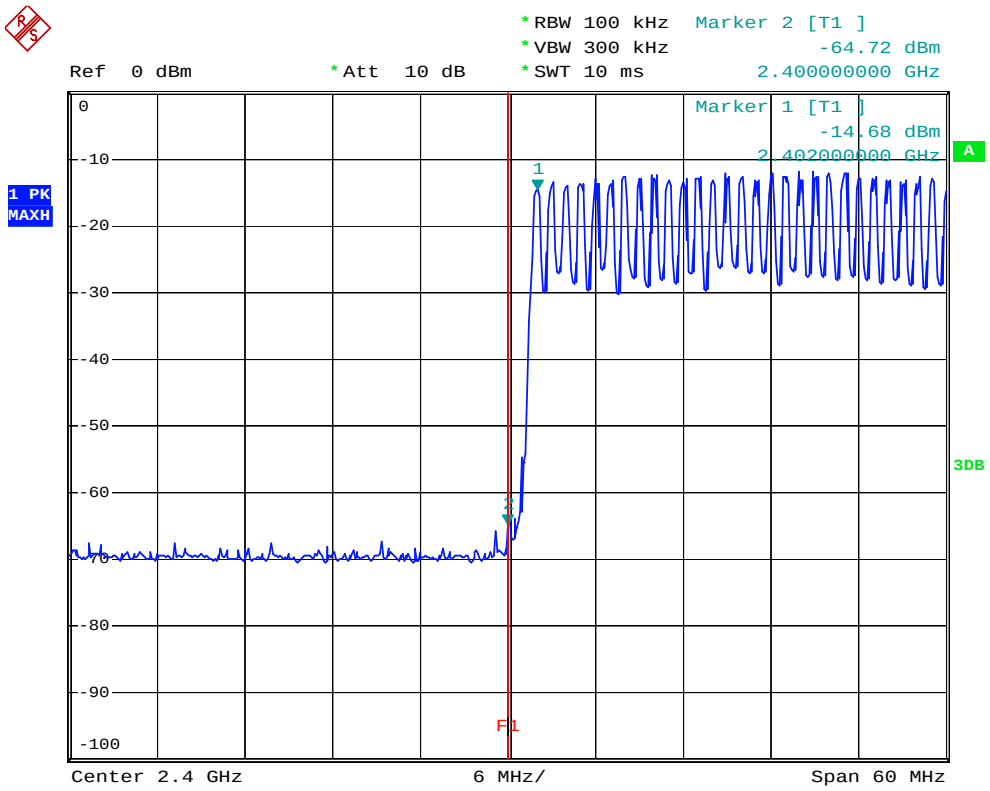
The worest frequency range of continual TX Low Channel

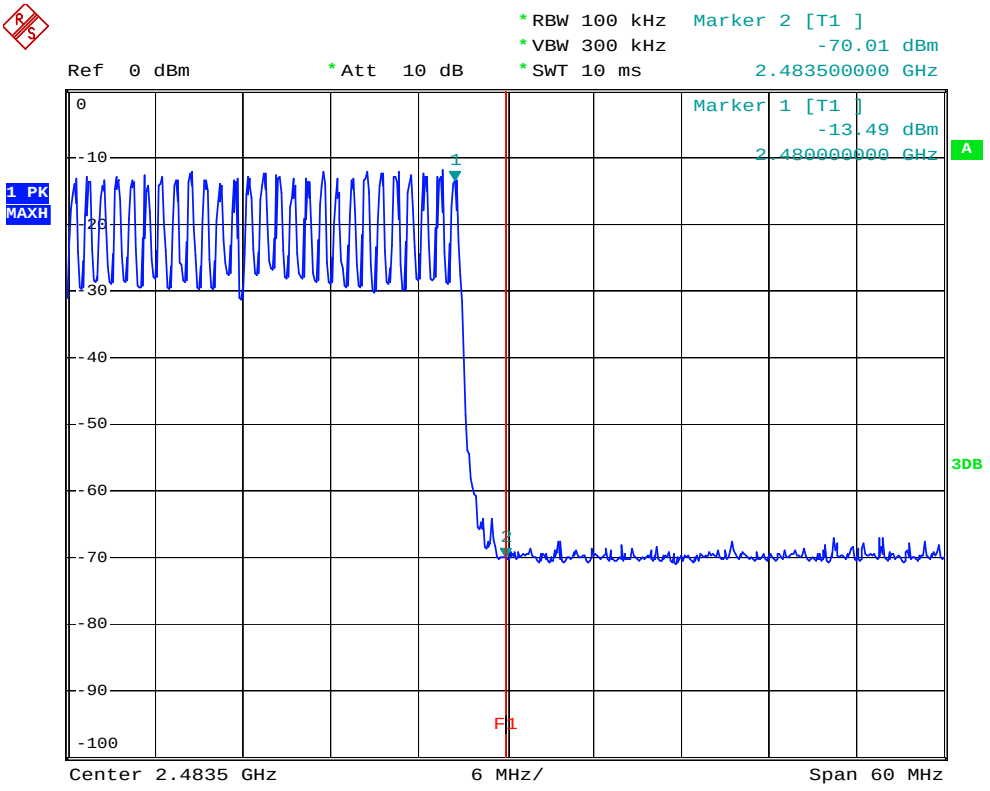


The worest frequency range of continual TX High Channel



The worest frequency range of Hopping Mode





11. Test of Spurious Radiated Emission

11.1 Applicable Standard

Section 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. In addition, radiated emissions that fall in the restricted bands, as defined in Section 15.205, must also comply with the radiated emission limits specified in Section 15.209.

Limits for Class B digital devices

Frequency (MHz)	limits at 3m dB(μV/m)
30-88	40.0
88-216	43.5
216-960	46.0
Above 960	54.0

NOTE: 1. The lower limit shall apply at the transition frequency.
2. The limits shown above are based on measuring equipment employing a CISPR quasi-peak detector function for frequencies below or equal to 1000MHz.
3. The limits shown above are based on measuring equipment employing an average detector function for frequencies above 1000MHz.

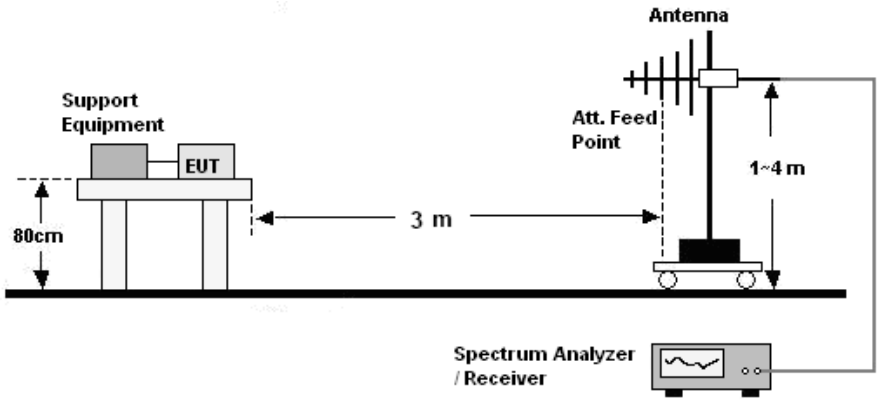
Limits for Class B digital devices

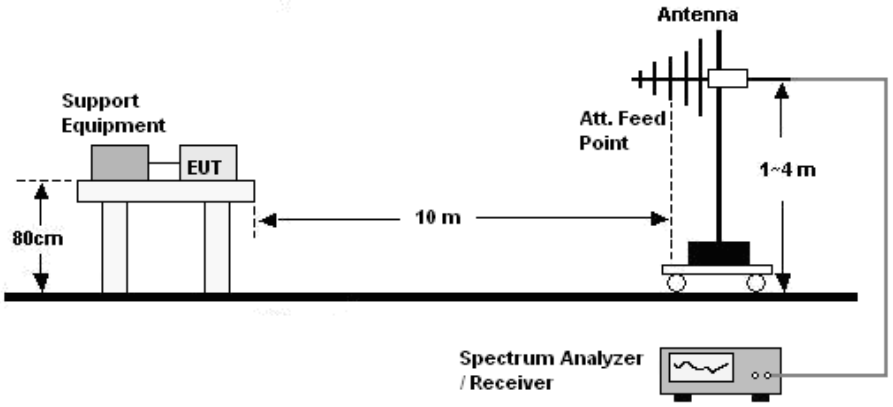
Frequency (MHz)	limits at 10m dB(μV/m)
30-88	30.0
88-216	33.5
216-960	56.0
Above 960	64.0

NOTE: 1. The lower limit shall apply at the transition frequency.
2. The limits shown above are based on measuring equipment employing a CISPR quasi-peak detector function for frequencies below or equal to 1000MHz.
3. The limits shown above are based on measuring equipment employing an average detector function for frequencies above 1000MHz.

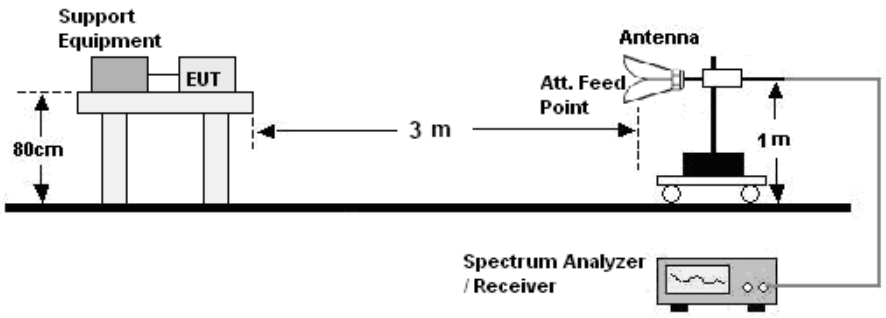
11.2 Radiated Measurement Setup

30MHz ~ 1GHz:





Above 1GHz:



11.3 Test Equipment List and Details

See section 2.4.

11.4 Radiated Measurement Test Procedure

30MHz ~ 1GHz:

a. The Product was placed on the non-conductive turntable 0.8/0.1 m above the ground at a chamber.

b. Set the spectrum analyzer/receiver in Peak detector, Max Hold mode, and 120 kHz RBW. Record the maximum field strength of all the pre-scan process in the full band when the antenna is varied between 1~4 m in both horizontal and vertical, and the turntable is rotated from 0 to 360 degrees.

c. For each frequency whose maximum record was higher or close to limit, measure its QP value: vary the antenna's height and rotate the turntable from 0 to 360 degrees to find the height and degree where Product radiated the maximum emission, then set the test frequency analyzer/receiver to QP Detector and specified bandwidth with Maximum Hold Mode, and record the maximum value.

Above 1GHz:

a. The Product was placed on the non-conductive turntable 0.8/0.1 m above the ground at a chamber.

b. Set the spectrum analyzer/receiver in Peak detector, Max Hold mode, and 1MHz RBW. Record the maximum field strength of all the pre-scan process in the full band when the antenna is varied in both horizontal and vertical, and the turntable is rotated from 0 to 360 degrees.

c. For each frequency whose maximum record was higher or close to limit, measure its AV value: rotate the turntable from 0 to 360 degrees to find the degree where Product radiated the maximum emission, then set the test frequency analyzer/receiver to AV value and specified bandwidth with Maximum Hold Mode, and record the maximum value.

10.5 Test Result

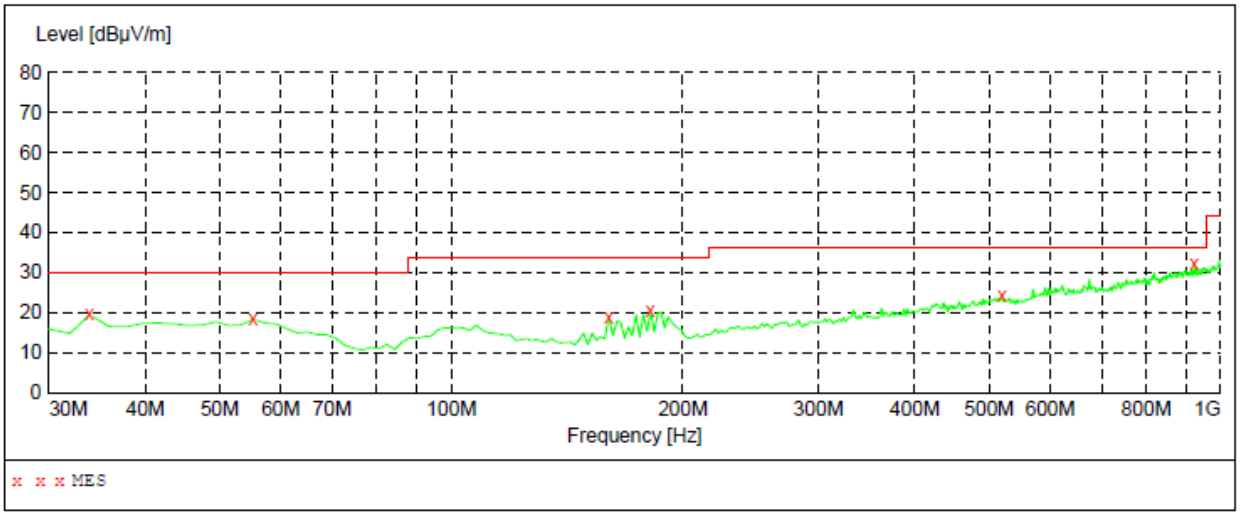
Temperature (℃) : 22~23	EUT: Bluetooth Headset
Humidity (%RH): 50~54	M/N: 883
Barometric Pressure (mbar): 950~1000	Operation Condition: Normal operation

The Spurious Emission (30~1000MHz) Of Horizontal （Charge mode）

EUT:	Bluetooth Headset
M/N:	883
Operating Condition:	Charge mode
Test Site:	10m CHAMBER
Operator:	Owen Li
Test Specification:	AC 120V 60Hz
Comment:	Polarization: Horizontal
	Tem:23℃ Hum:50%

SWEEP TABLE: "test (30M-1G) 8447F"

Short Description:			Field Strength		
Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
30.0 MHz	1.0 GHz	MaxPeak	Coupled	100 kHz	VBLU9163-484



MEASUREMENT RESULT:

5/29/2014 5:16PM

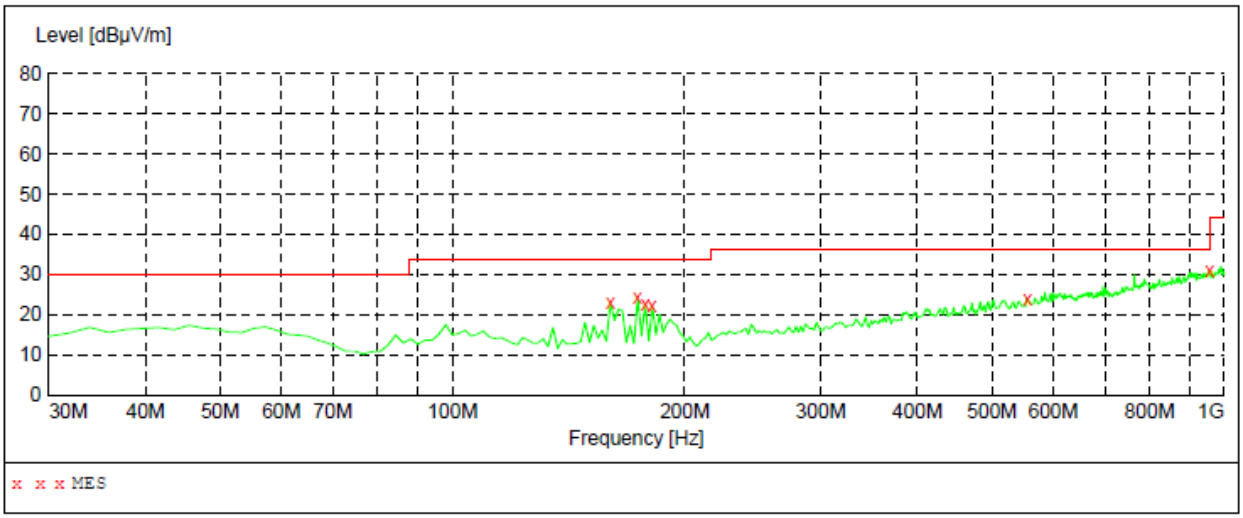
Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
33.887776	19.50	-12.8	30.0	10.5	---	100.0	363.00	HORIZONTAL
55.270541	18.30	-10.9	30.0	11.7	---	100.0	43.00	HORIZONTAL
160.240481	19.00	-15.4	33.5	14.5	---	400.0	39.00	HORIZONTAL
181.623246	20.40	-13.9	33.5	13.1	---	400.0	221.00	HORIZONTAL
519.859719	24.20	-5.5	36.0	11.8	---	400.0	39.00	HORIZONTAL
924.188377	32.30	0.3	36.0	3.7	---	100.0	225.00	HORIZONTAL

The Spurious Emission (30~1000MHz) Of Vertical （Charge mode）

EUT:	Bluetooth Headset
M/N:	883
Operating Condition:	Charge mode
Test Site:	10m CHAMBER
Operator:	Owen Li
Test Specification:	AC 120V 60Hz
Comment:	Polarization: Vertical
	Tem:23℃ Hum:50%

SWEEP TABLE: "test (30M-1G) 8447F"

Short Description:			Field Strength		
Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
30.0 MHz	1.0 GHz	MaxPeak	Coupled	100 kHz	VBLU9163-484



MEASUREMENT RESULT:

5/29/2014 5:10PM

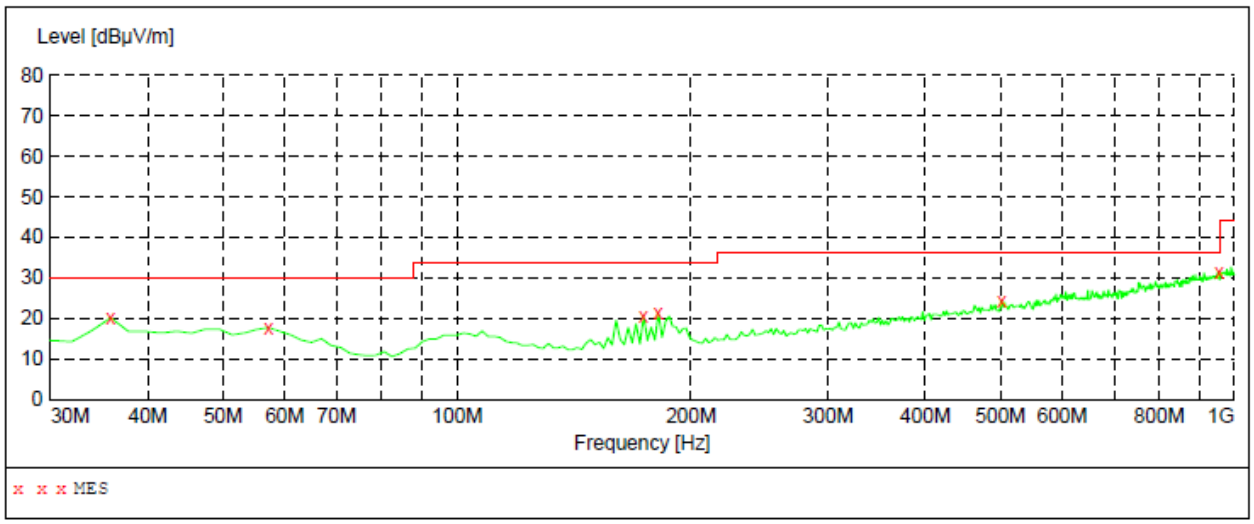
Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
160.240481	22.90	-15.4	33.5	10.6	---	100.0	364.00	VERTICAL
173.847695	24.20	-14.6	33.5	9.3	---	100.0	349.00	VERTICAL
177.735471	22.70	-14.3	33.5	10.8	---	100.0	349.00	VERTICAL
181.623246	22.10	-13.9	33.5	11.4	---	100.0	44.00	VERTICAL
556.793587	24.00	-5.3	36.0	12.0	---	100.0	258.00	VERTICAL
957.234469	30.80	0.3	36.0	5.2	---	100.0	364.00	VERTICAL

The Spurious Emission (30~1000MHz) Of Horizontal （charging working Model）

EUT:	Bluetooth Headset
M/N:	883
Operating Condition:	Charging and BT working
Test Site:	10m CHAMBER
Operator:	Owen Li
Test Specification:	AC 120V 60Hz
Comment:	Polarization: Horizontal
	Tem:23℃ Hum:50%

SWEEP TABLE: "test (30M-1G) 8447F"

Short Description:			Field Strength		
Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
30.0 MHz	1.0 GHz	MaxPeak	Coupled	100 kHz	VBLU9163-484



MEASUREMENT RESULT:

5/29/2014 5:49PM

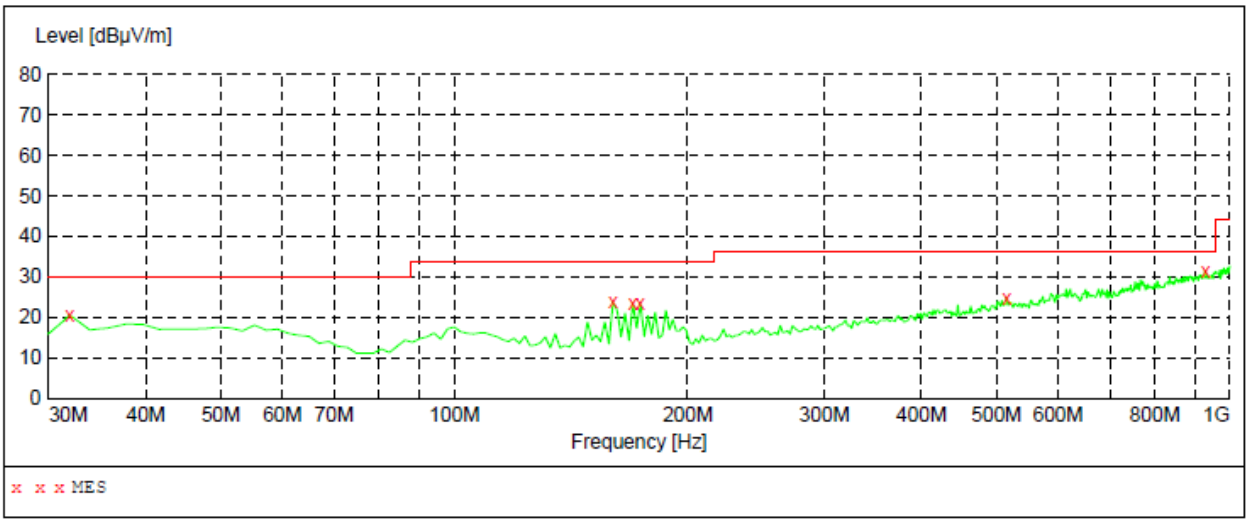
Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
35.831663	20.10	-12.2	30.0	9.9	---	200.0	20.00	HORIZONTAL
57.214429	17.70	-10.9	30.0	12.3	---	100.0	370.00	HORIZONTAL
173.847695	20.60	-14.6	33.5	12.9	---	400.0	228.00	HORIZONTAL
181.623246	21.30	-13.9	33.5	12.2	---	400.0	258.00	HORIZONTAL
502.364729	24.50	-5.9	36.0	11.5	---	400.0	167.00	HORIZONTAL
955.290581	31.40	0.3	36.0	4.6	---	400.0	167.00	HORIZONTAL

The Spurious Emission (30~1000MHz) Of Vertical （charging working Model）

EUT:	Bluetooth Headset
M/N:	883
Operating Condition:	Charging and BT working
Test Site:	10m CHAMBER
Operator:	Owen Li
Test Specification:	AC 120V 60Hz
Comment:	Polarization: Vertical
	Tem:23℃ Hum:50%

SWEEP TABLE: "test (30M-1G) 8447F"

Short Description:			Field Strength		
Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
30.0 MHz	1.0 GHz	MaxPeak	Coupled	100 kHz	VBLU9163-484



MEASUREMENT RESULT:

5/29/2014 5:55PM

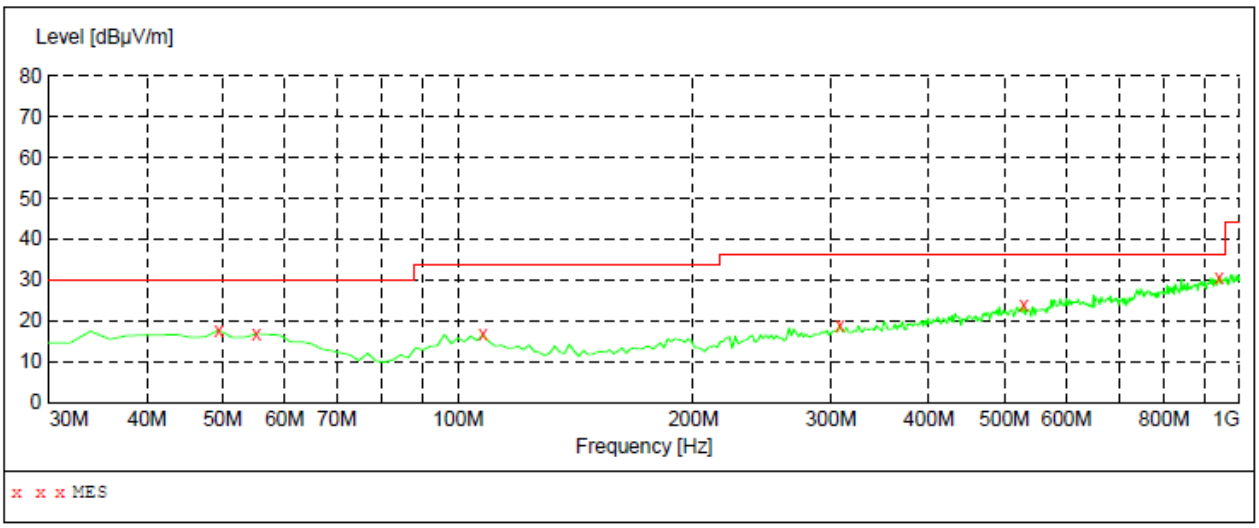
Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
31.943888	20.50	-13.4	30.0	9.5	---	100.0	363.00	VERTICAL
160.240481	23.70	-15.4	33.5	9.8	---	100.0	363.00	VERTICAL
169.959920	23.50	-14.8	33.5	10.0	---	100.0	10.00	VERTICAL
173.847695	23.50	-14.6	33.5	10.0	---	100.0	10.00	VERTICAL
515.971944	24.90	-5.6	36.0	11.1	---	200.0	196.00	VERTICAL
930.020040	31.40	0.2	36.0	4.6	---	200.0	74.00	VERTICAL

The Spurious Emission (30~1000MHz) Of Horizontal （BT TX Model L）

EUT:	Bluetooth Headset
M/N:	883
Operating Condition:	BT TX Channel Low
Test Site:	10m CHAMBER
Operator:	Owen Li
Test Specification:	DC 3.7V
Comment:	Polarization: Horizontal
	Tem:23℃ Hum:50%

SWEEP TABLE: "test (30M-1G) 8447F"

Short Description:			Field Strength		
Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
30.0 MHz	1.0 GHz	MaxPeak	Coupled	100 kHz	VBLU9163-484



MEASUREMENT RESULT:

5/30/2014 1:47PM

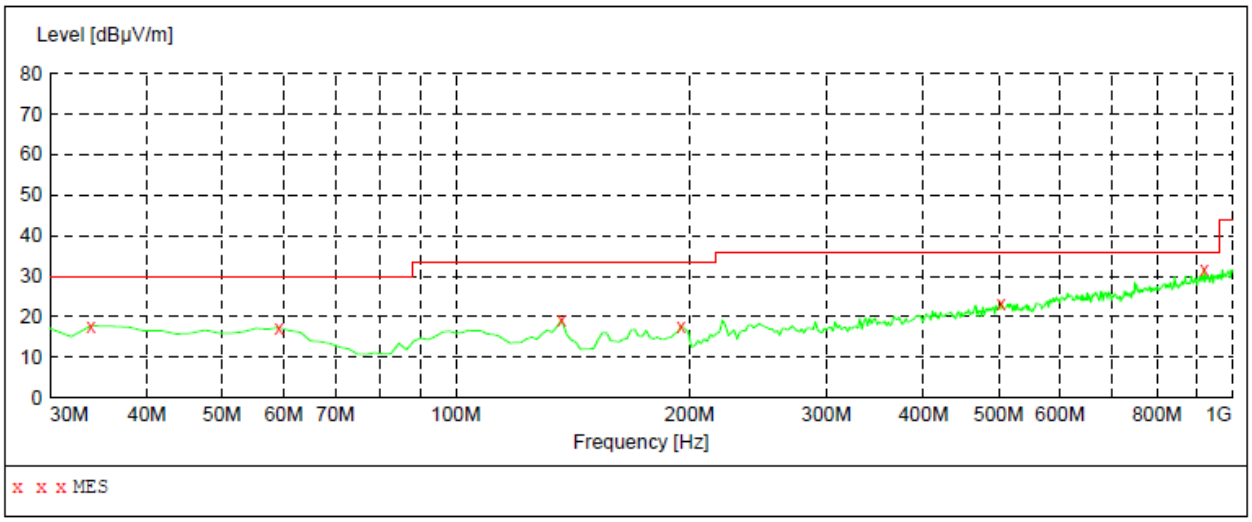
Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
49.438878	17.70	-11.1	30.0	12.3	---	100.0	227.00	HORIZONTAL
55.270541	16.80	-10.9	30.0	13.2	---	100.0	349.00	HORIZONTAL
107.755511	16.60	-12.5	33.5	16.9	---	100.0	370.00	HORIZONTAL
307.975952	18.90	-9.2	36.0	17.1	---	100.0	363.00	HORIZONTAL
529.579158	23.80	-5.5	36.0	12.2	---	100.0	370.00	HORIZONTAL
941.683367	30.70	0.1	36.0	5.3	---	100.0	43.00	HORIZONTAL

The Spurious Emission (30~1000MHz) Of Vertical （BT TX Model L）

EUT:	Bluetooth Headset
M/N:	883
Operating Condition:	BT TX Channel Low
Test Site:	10m CHAMBER
Operator:	Owen Li
Test Specification:	DC 3.7V
Comment:	Polarization: Vertical
	Tem:23℃ Hum:50%

SWEEP TABLE: "test (30M-1G) 8447F"

Short Description:			Field Strength		
Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
30.0 MHz	1.0 GHz	MaxPeak	Coupled	100 kHz	VBLU9163-484



MEASUREMENT RESULT:

5/30/2014 1:50PM

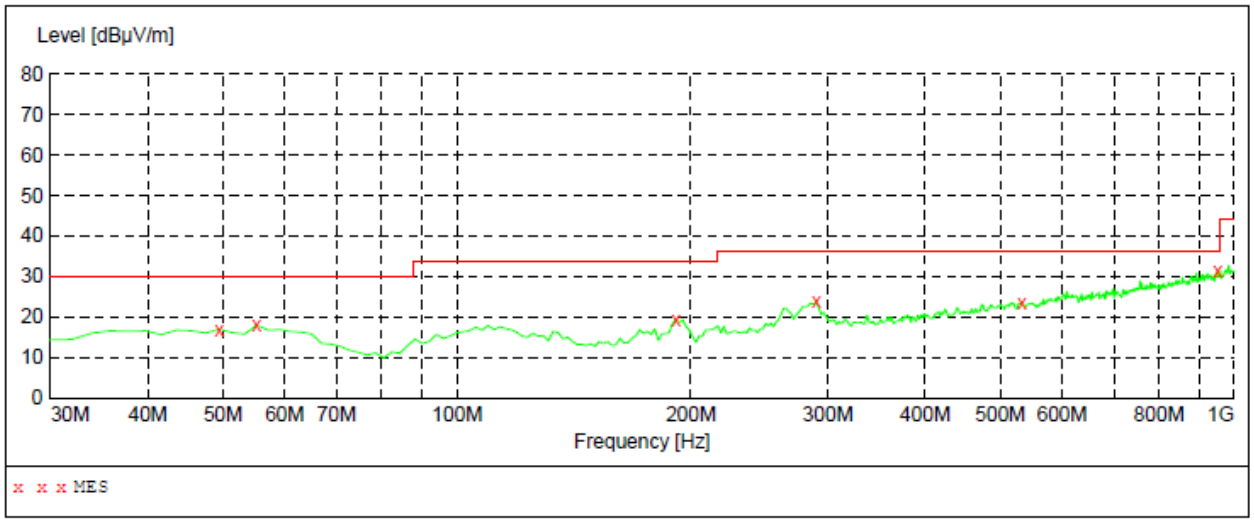
Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
33.887776	17.80	-12.8	30.0	12.2	---	100.0	370.00	VERTICAL
59.158317	17.30	-11.4	30.0	12.7	---	100.0	370.00	VERTICAL
136.913828	19.30	-15.9	33.5	14.2	---	100.0	10.00	VERTICAL
195.230461	17.70	-12.6	33.5	15.8	---	100.0	286.00	VERTICAL
504.308617	23.40	-5.8	36.0	12.6	---	100.0	72.00	VERTICAL
920.300601	31.70	0.2	36.0	4.3	---	100.0	133.00	VERTICAL

The Spurious Emission (30~1000MHz) Of Horizontal （BT TX Model M）

EUT:	Bluetooth Headset
M/N:	883
Operating Condition:	BT TX Channel Middle
Test Site:	10m CHAMBER
Operator:	Owen Li
Test Specification:	DC 3.7V
Comment:	Polarization: Horizontal
	Tem:23℃ Hum:50%

SWEEP TABLE: "test (30M-1G) 8447F"

Short Description:			Field Strength		
Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
30.0 MHz	1.0 GHz	MaxPeak	Coupled	100 kHz	VBLU9163-484



MEASUREMENT RESULT:

5/30/2014 1:11PM

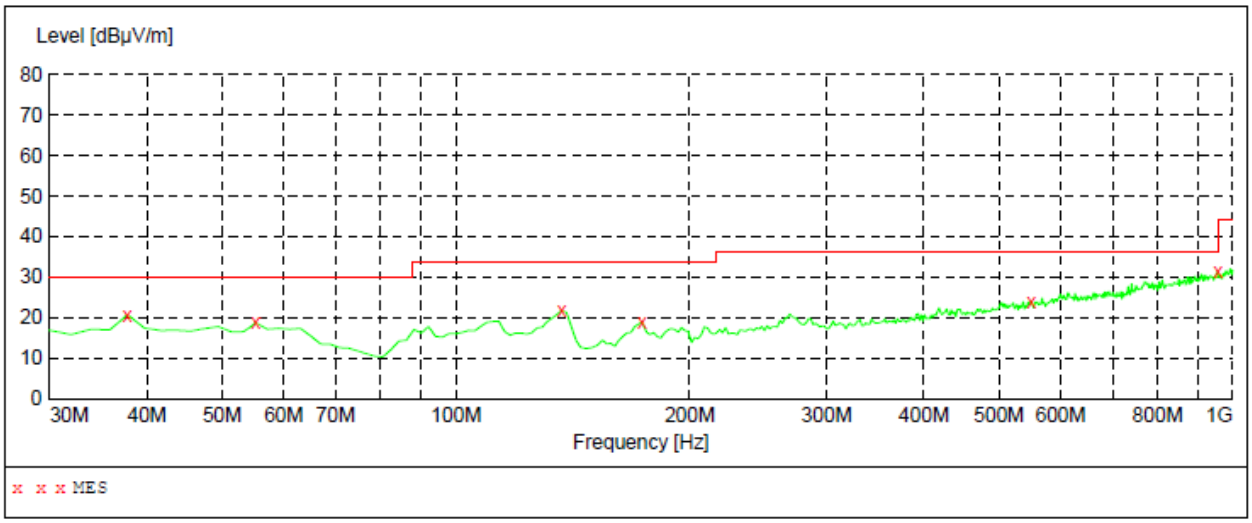
Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
49.438878	16.90	-11.1	30.0	13.1	---	300.0	10.00	HORIZONTAL
55.270541	17.90	-10.9	30.0	12.1	---	100.0	279.00	HORIZONTAL
191.342685	19.30	-12.4	33.5	14.2	---	400.0	191.00	HORIZONTAL
290.480962	23.70	-9.6	36.0	12.3	---	200.0	195.00	HORIZONTAL
533.466934	23.60	-5.5	36.0	12.4	---	300.0	100.00	HORIZONTAL
953.346693	31.20	0.3	36.0	4.8	---	100.0	10.00	HORIZONTAL

The Spurious Emission (30~1000MHz) Of Vertical （BT TX Model M）

EUT:	Bluetooth Headset
M/N:	883
Operating Condition:	BT TX Channel Middle
Test Site:	10m CHAMBER
Operator:	Owen Li
Test Specification:	DC 3.7V
Comment:	Polarization: Vertical
	Tem:23℃ Hum:50%

SWEEP TABLE: "test (30M-1G) 8447F"

Short Description:			Field Strength		
Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
30.0 MHz	1.0 GHz	MaxPeak	Coupled	100 kHz	VBLU9163-484



MEASUREMENT RESULT:

5/30/2014 1:02PM

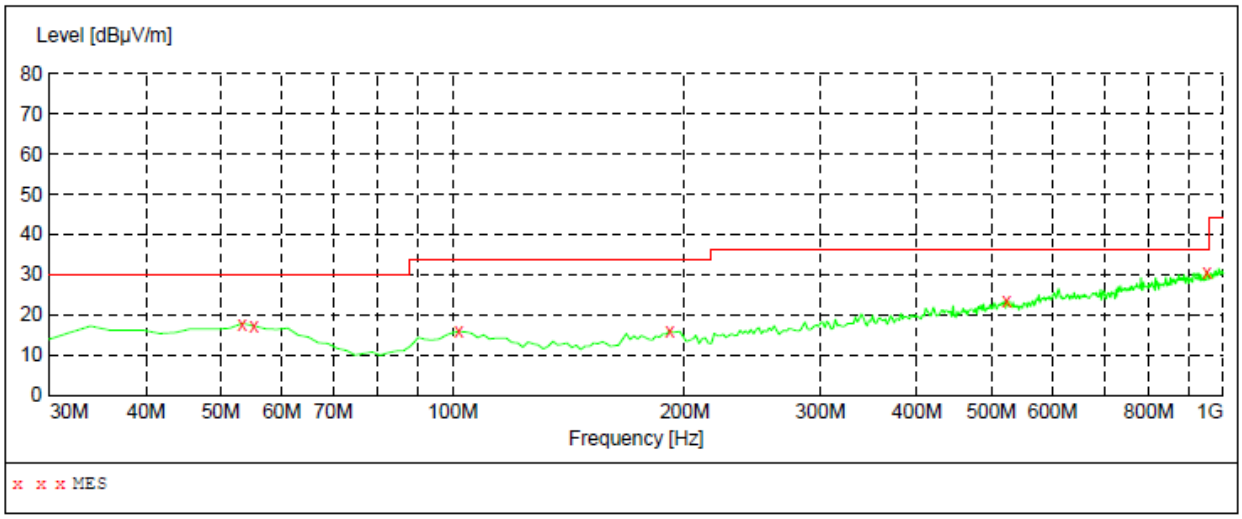
Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
37.775551	20.70	-11.8	30.0	9.3	---	100.0	283.00	VERTICAL
55.270541	18.70	-10.9	30.0	11.3	---	100.0	99.00	VERTICAL
136.913828	21.70	-15.9	33.5	11.8	---	100.0	222.00	VERTICAL
173.847695	18.90	-14.6	33.5	14.6	---	200.0	98.00	VERTICAL
550.961924	24.00	-5.4	36.0	12.0	---	300.0	128.00	VERTICAL
957.234469	31.30	0.3	36.0	4.7	---	400.0	282.00	VERTICAL

The Spurious Emission (30~1000MHz) Of Horizontal （BT TX Model H）

EUT:	Bluetooth Headset
M/N:	883
Operating Condition:	BT TX Channel High
Test Site:	10m CHAMBER
Operator:	Owen Li
Test Specification:	DC 3.7V
Comment:	Polarization: Horizontal
	Tem:23℃ Hum:50%

SWEEP TABLE: "test (30M-1G) 8447F"

Short Description:			Field Strength		
Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
30.0 MHz	1.0 GHz	MaxPeak	Coupled	100 kHz	VBLU9163-484



MEASUREMENT RESULT:

5/30/2014 2:02PM

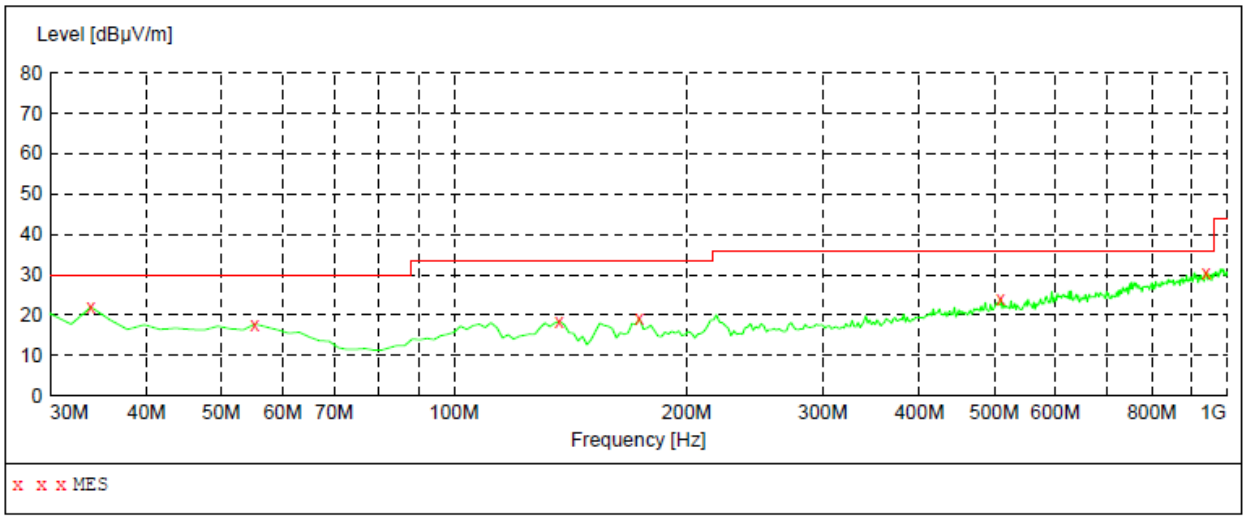
Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
53.326653	17.80	-11.5	30.0	12.2	---	100.0	344.00	HORIZONTAL
55.270541	17.20	-10.9	30.0	12.8	---	100.0	37.00	HORIZONTAL
101.923848	15.80	-12.3	33.5	17.7	---	100.0	344.00	HORIZONTAL
191.342685	16.10	-12.4	33.5	17.4	---	100.0	98.00	HORIZONTAL
523.747495	23.50	-5.5	36.0	12.5	---	100.0	362.00	HORIZONTAL
953.346693	30.70	0.3	36.0	5.3	---	100.0	251.00	HORIZONTAL

The Spurious Emission (30~1000MHz) Of Vertical （BT TX Model H）

EUT:	Bluetooth Headset
M/N:	883
Operating Condition:	BT TX Channel High
Test Site:	10m CHAMBER
Operator:	Owen Li
Test Specification:	DC 3.7V
Comment:	Polarization: Vertical
	Tem:23℃ Hum:50%

SWEEP TABLE: "test (30M-1G) 8447F"

Short Description:			Field Strength		
Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
30.0 MHz	1.0 GHz	MaxPeak	Coupled	100 kHz	VBLU9163-484



MEASUREMENT RESULT:

5/30/2014 1:57PM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
33.887776	22.00	-12.8	30.0	8.0	---	100.0	35.00	VERTICAL
55.270541	17.80	-10.9	30.0	12.2	---	100.0	10.00	VERTICAL
136.913828	18.40	-15.9	33.5	15.1	---	100.0	280.00	VERTICAL
173.847695	19.10	-14.6	33.5	14.4	---	100.0	249.00	VERTICAL
510.140281	23.90	-5.7	36.0	12.1	---	100.0	219.00	VERTICAL
939.739479	30.60	0.1	36.0	5.4	---	100.0	10.00	VERTICAL

The Spurious Emission (Above 1GHz)

Test Results-(Measurement Distance: 3m)_Channel low							
Frequency (MHz)	Measurement value			Limit		Antenna	Result
	PK (dBμV/m)	AV factor (dB)	AV (dBμV/m)	PK (dBμV/m)	AV (dBμV/m)	(H/V)	(P/F)
2402.000*	89.53	---	---	---	---	H	P
4804.000	42.18	---	---	74	54	H	P
7206.000	30.72	---	---	74	54	H	P
2402.000*	87.64	---	---	---	---	V	P
4804.000	39.27	---	---	74	54	V	P
7206.000	31.35	---	---	74	54	V	P

*: fundamental frequency

Test Results-(Measurement Distance: 3m)_Channel middle							
Frequency (MHz)	Measurement value			Limit		Antenna	Result
	PK (dBμV/m)	AV factor (dB)	AV (dBμV/m)	PK (dBμV/m)	AV (dBμV/m)	(H/V)	(P/F)
2441.000*	90.43	---	---	---	---	H	P
4882.000	43.19	---	---	74	54	H	P
7323.000	33.67	---	---	74	54	H	P
2441.000*	89.76	---	---	---	---	V	P
4882.000	41.59	---	---	74	54	V	P
7323.000	33.24	---	---	74	54	V	P

*: fundamental frequency

Test Results-(Measurement Distance: 3m)_Channel high							
Frequency (MHz)	Measurement value			Limit		Antenna	Result
	PK (dBμV/m)	AV factor (dB)	AV (dBμV/m)	PK (dBμV/m)	AV (dBμV/m)	(H/V)	(P/F)
2480.000*	88.74	---	---	---	---	H	P
4960.000	41.29	---	---	74	54	H	P
7440.000	31.06	---	---	74	54	H	P
2480.000*	84.36	---	---	---	---	V	P
4960.000	39.42	---	---	74	54	V	P
7440.000	29.78	---	---	74	54	V	P

*: fundamental frequency

Remark:
1. The above tables show that the frequencies peak data are all below the average limit, so the average data of these frequencies are deems to fulfill the average limits and not reported.
2. According to the emissions below 18GHz, the data curve is lower than the limit, and the data between 18GHz to 25GHz will be lower than the limit, so they are not recorded in the report. All outside of operating frequency band and restricted band specified are below 15.209.

12. ANTENNA REQUIREMENT

12.1 Standard Applicable

Section 15.203:

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. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

Section 15.247(b)/(c):

If transmitting antennas of directional gain greater than 6 dBi are used, the peak output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

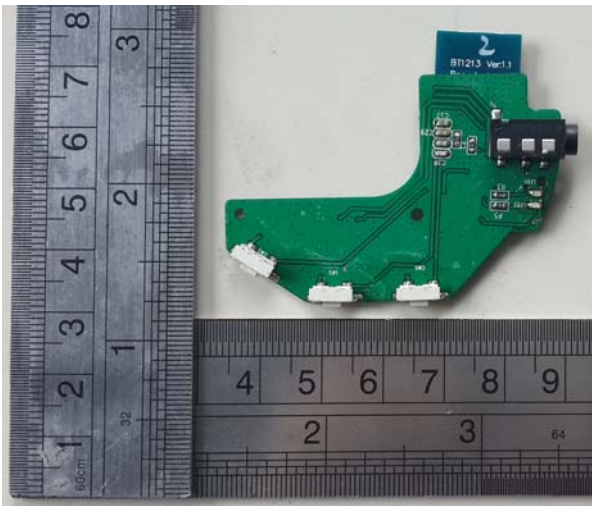
If the intentional radiator is used exclusively for fixed, point-to-point operations may employ transmitting antennas with directional gain greater than 6 dBi provided the maximum peak output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.

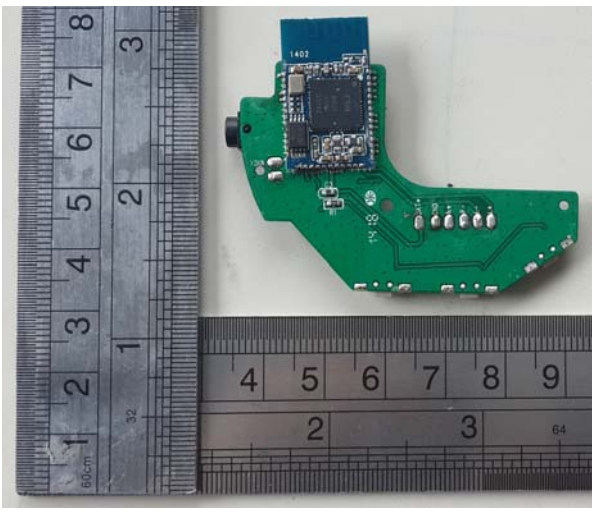
12.2 Antenna Connected Construction

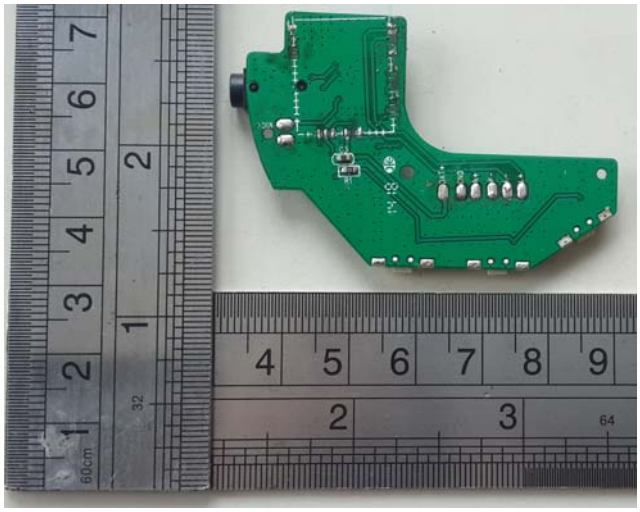
The antenna used in this product is complied with Standdard. The maximum Gain of the antenna lower than 6.0dBi and the antenna is integrated,fixed on PCB.

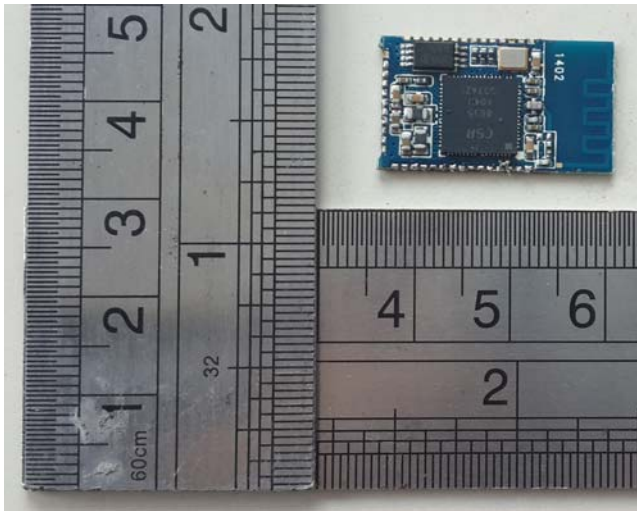
APPENDIX A - External Photographs

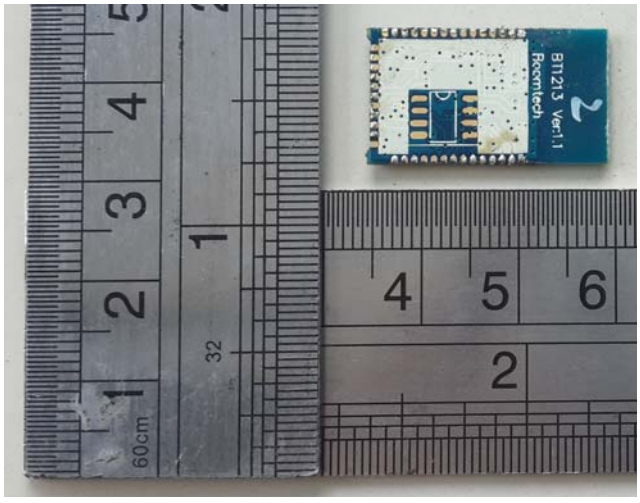
APPENDIX B - Internal Photographs










BT213 Ver:1.1
Acomtech

APPENDIX C - Test Setup Photographs

Conducted Emission Test

Radiated Emission Test