FCC REPORT

Applicant:	Red Bear Company Limited
Address of Applicant:	1711 Block B, Wah Luen Industrial Centre, 15-21 Wong Chuk Yeung Street, Fo Tan, Hong Kong

Equipment Under Test (EUT)

Product Name:	Bluetooth BLE Beacon
Model No.:	B1
FCC ID:	2ABXJ-B-B1
Applicable standards:	FCC CFR Title 47 Part 15 Subpart C Section 15.247:2013
Date of sample receipt:	February 26, 2014
Date of Test:	February 26-March 04, 2014
Date of report issued:	March 05, 2014
Test Result :	PASS *

* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:

Robinson Lo
Laboratory Manager

This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product and does not permit the use of the GTS product certification mark. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

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2 Version

Version No.	Date	Description
00	*March 05, 2014*	*Original*

Prepared By: Sam. Gao **Date:** *March 05, 2014*

Project Engineer

Check By: Hans.Hu **Date:** *March 05, 2014*

Reviewer

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4 Test Summary

Test Item	Section in CFR 47	Result
Antenna requirement	15.203/15.247 (c)	Pass
AC Power Line Conducted Emission	15.207	N/A
Conducted Peak Output Power	15.247 (b)(3)	Pass
Channel Bandwidth	15.247 (a)(2)	Pass
Power Spectral Density	15.247 (e)	Pass
Band Edge	15.247(d)	Pass
Spurious Emission	15.205/15.209	Pass

Pass: The EUT complies with the essential requirements in the standard.

N/A: Not applicable.

5 General Information

5.1 Client Information

Applicant:	Red Bear Company Limited
Address of Applicant:	1711 Block B, Wah Luen Industrial Centre, 15-21 Wong Chuk Yeung Street, Fo Tan, Hong Kong
Manufacturer:	Alutech International Limited
Address of Manufacturer:	Room 719 International Trade Centre 11-19 Sha Tsui Road Tsuen Wan NT, Hong Kong

5.2 General Description of EUT

Product Name:	Bluetooth BLE Beacon
Model No.:	B1
Operation Frequency:	2402MHz~2480MHz
Channel Numbers:	40
Channel Separation:	2MHz
Modulation Type:	GFSK
Antenna Type:	Multilayer Chip Antenna
Antenna Gain:	1.0dBi (declare by Applicant)
Power Supply:	DC 3.0V(SIZE:AAA 1.5V*2)

Operation Frequency each of channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
1	2402MHz	11	2422MHz	21	2442MHz	31	2462MHz
2	2404MHz	12	2424MHz	22	2444MHz	32	2464MHz
⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮
9	2418MHz	19	2438MHz	29	2458MHz	39	2478MHz
10	2420MHz	20	2440MHz	30	2460MHz	40	2480MHz

Note:

In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

Channel	Frequency
The lowest channel	2402MHz
The middle channel	2442MHz
The Highest channel	2480MHz

5.3 Test mode

Transmitting mode	Keep the EUT in continuously transmitting mode
Remark: During the test, the test voltage was tuned from 85% to 115% of the nominal rated supply voltage, and found that the worst case was under the nominal rated supply condition. So the report just shows that condition's data.	

5.4 Description of Support Units

None.

5.5 Test Facility

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

- **CNAS —Registration No.: CNAS L5775**
  CNAS has accredited Global United Technology Services Co., Ltd. To ISO/IEC 17025 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.
- **FCC —Registration No.: 600491**
  Global United Technology Services Co., Ltd., Shenzhen EMC Laboratory has been registered and fuly described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in files. Registration 600491, June 28, 2013.
- **Industry Canada (IC) —Registration No.: 9079A-2**
  The 3m Semi-anechoic chamber of Global United Technology Services Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 9079A-2, June 26, 2013.

5.6 Test Location

All tests were performed at:

Global United Technology Services Co., Ltd.
Address: 2nd Floor, Block No.2, Laodong Industrial Zone, Xixiang Road Baoan District, Shenzhen, China
Tel: 0755-27798480
Fax: 0755-27798960

6 Test Instruments list

Radiated Emission:						
Item	**Test Equipment**	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal.Date (mm-dd-yy)**	**Cal.Due date (mm-dd-yy)**
1	3m Semi- Anechoic Chamber	ZhongYu Electron	9.2(L)*6.2(W)* 6.4(H)	GTS250	Mar. 29 2013	Mar. 28 2014
2	Control Room	ZhongYu Electron	6.2(L)*2.5(W)* 2.4(H)	GTS251	N/A	N/A
3	Spectrum Analyzer	Agilent	E4440A	GTS533	Dec. 5, 2013	Dec. 4 2014
4	EMI Test Receiver	Rohde & Schwarz	ESU26	GTS203	Jul. 02 2013	Jul. 01 2014
5	BiConiLog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	GTS214	Feb. 23 2014	Feb. 22 2015
6	Double -ridged waveguide horn	SCHWARZBECK MESS-ELEKTRONIK	9120D-829	GTS208	June 28 2013	June 27 2014
7	Horn Antenna	ETS-LINDGREN	3160	GTS217	Mar. 29 2013	Mar. 28 2014
8	EMI Test Software	AUDIX	E3	N/A	N/A	N/A
9	Coaxial Cable	GTS	N/A	GTS213	Mar. 30 2013	Mar. 29 2014
10	Coaxial Cable	GTS	N/A	GTS211	Mar. 30 2013	Mar. 29 2014
11	Coaxial cable	GTS	N/A	GTS210	Mar. 30 2013	Mar. 29 2014
12	Coaxial Cable	GTS	N/A	GTS212	Mar. 30 2013	Mar. 29 2014
13	Amplifier(100kHz-3GHz)	HP	8347A	GTS204	Jul. 02 2013	Jul. 01 2014
14	Amplifier(2GHz-20GHz)	HP	8349B	GTS206	Jul. 02 2013	Jul. 01 2014
15	Amplifier (18-26GHz)	Rohde & Schwarz	AFS33-18002 650-30-8P-44	GTS218	June 28 2013	June 27 2014
16	Band filter	Amindeon	82346	GTS219	Mar. 30 2013	Mar. 29 2014

General used equipment:						
Item	**Test Equipment**	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal.Date (mm-dd-yy)**	**Cal.Due date (mm-dd-yy)**
1	Barometer	ChangChun	DYM3	GTS257	July 09 2013	July 08 2014

7 Test results and Measurement Data

7.1 Antenna requirement:

Standard requirement:	FCC Part15 C Section 15.203 /247(c)

15.203 requirement:

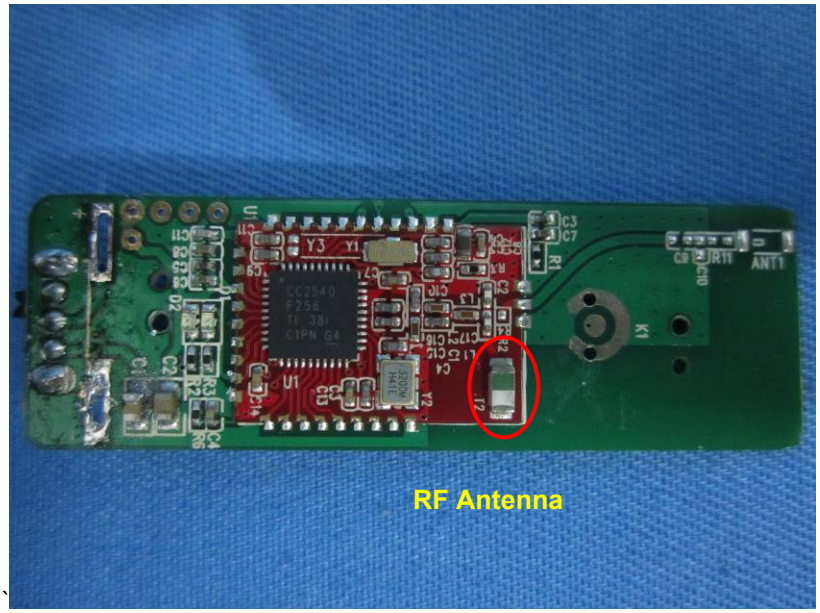
An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

15.247(c) (1)(i) requirement:

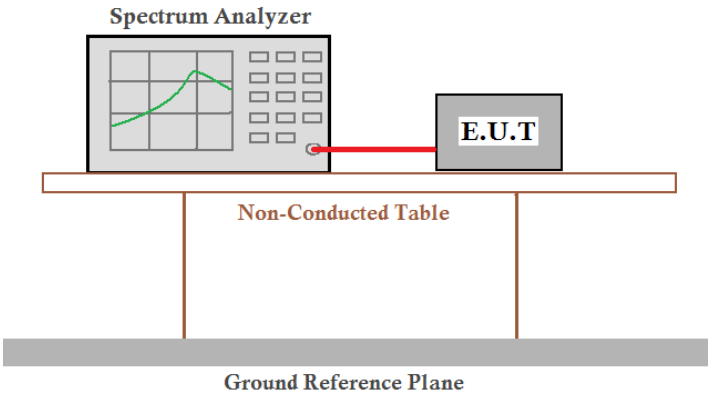
(i) Systems operating in the 2400-2483.5 MHz band that is used exclusively for fixed. Point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6dBi.

E.U.T Antenna:

The antenna is Integral antenna, the best case gain of the antenna is 1.0dBi



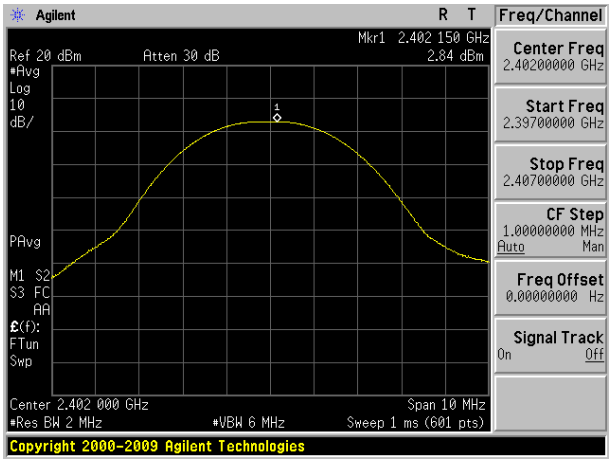
7.2 Conducted Peak Output Power

Test Requirement:	FCC Part15 C Section 15.247 (b)(3)
Test Method:	ANSI C63.4:2003 and KDB558074 D01 DTS Meas Guidance V03
Limit:	30dBm
Test setup:	
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.3 for details
Test results:	Pass

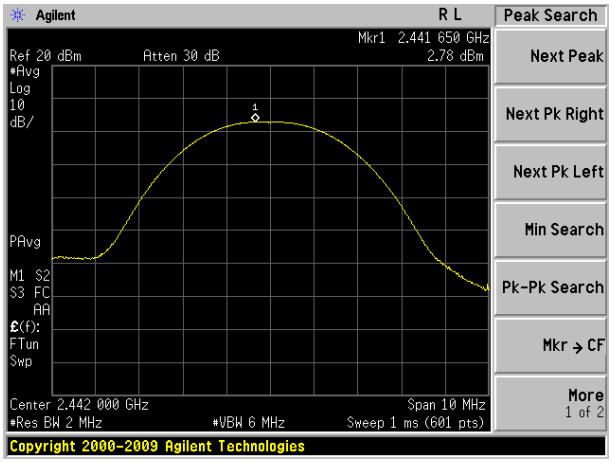
Measurement Data

Test channel	Peak Output Power (dBm)	Limit(dBm)	Result
Lowest	2.84	30.00	Pass
Middle	2.78		
Highest	2.75		

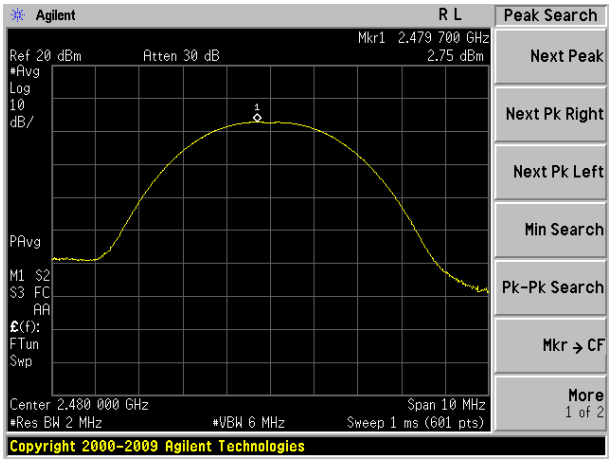
Test plot as follows:



Lowest channel

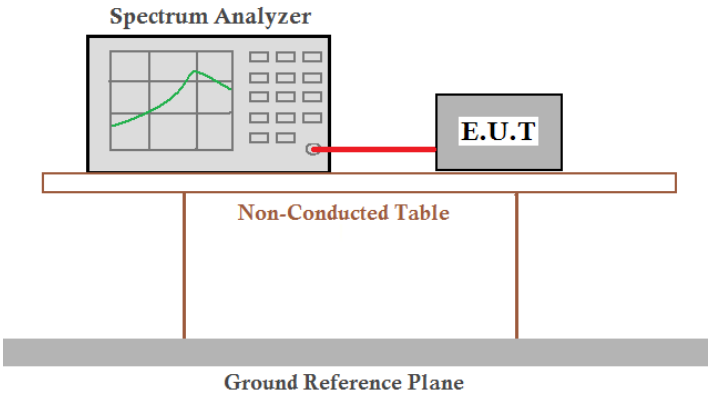


Middle channel



Highest channel

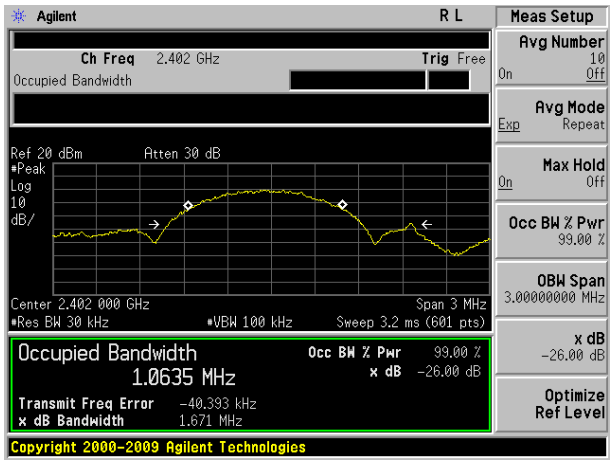
7.3 Channel Bandwidth

Test Requirement:	FCC Part15 C Section 15.247 (a)(2)
Test Method:	ANSI C63.4:2003 and KDB558074 D01 DTS Meas Guidance V03
Limit:	>500KHz
Test setup:	
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.3 for details
Test results:	Pass

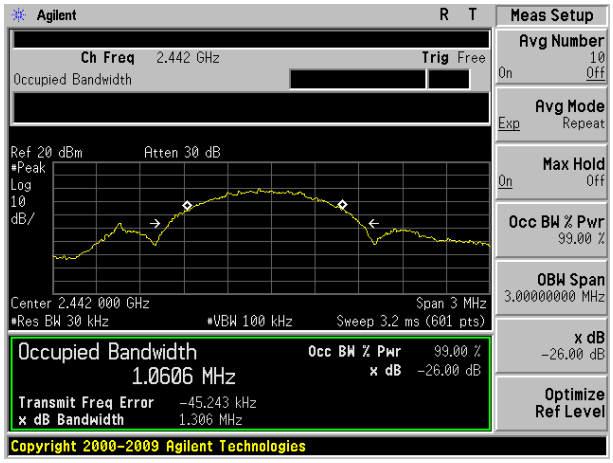
Measurement Data

Test channel	Channel Bandwidth (MHz)	Limit(KHz)	Result
Lowest	1.671	>500	Pass
Middle	1.306		
Highest	1.673		

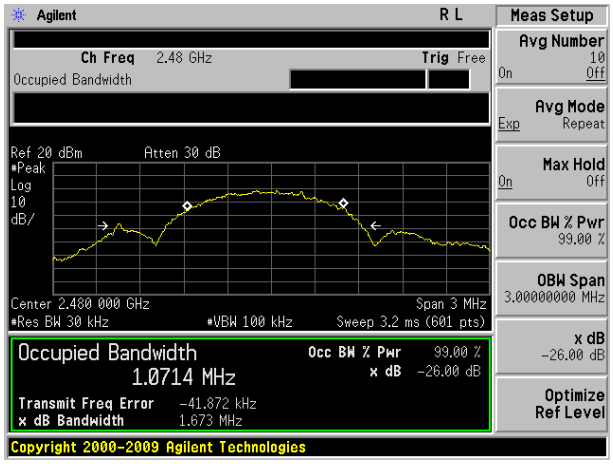
Test plot as follows:



Lowest channel

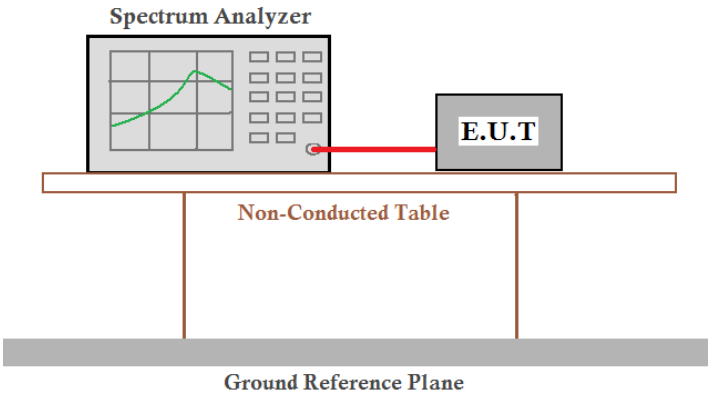


Middle channel



Highest channel

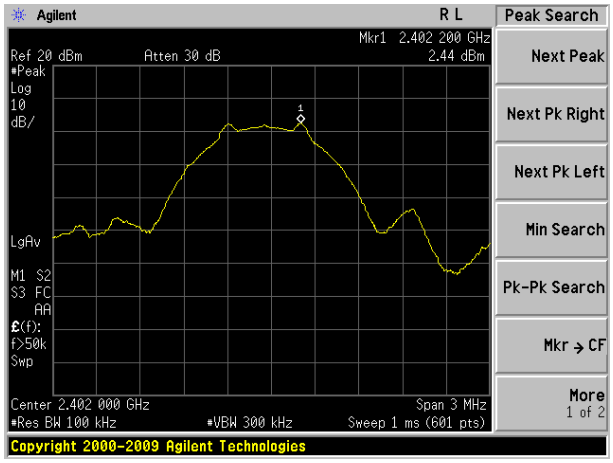
7.4 Power Spectral Density

Test Requirement:	FCC Part15 C Section 15.247 (e)
Test Method:	ANSI C63.4:2003 and KDB558074 D01 DTS Meas Guidance V03
Limit:	8dBm/3kHz
Test setup:	
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.3 for details
Test results:	Pass

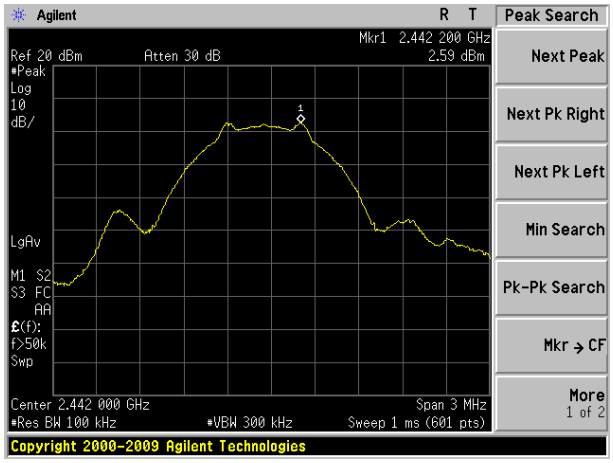
Measurement Data

Test channel	Power Spectral Density (dBm)	Limit(dBm/3kHz)	Result
Lowest	2.44	8.00	Pass
Middle	2.59		
Highest	2.27		

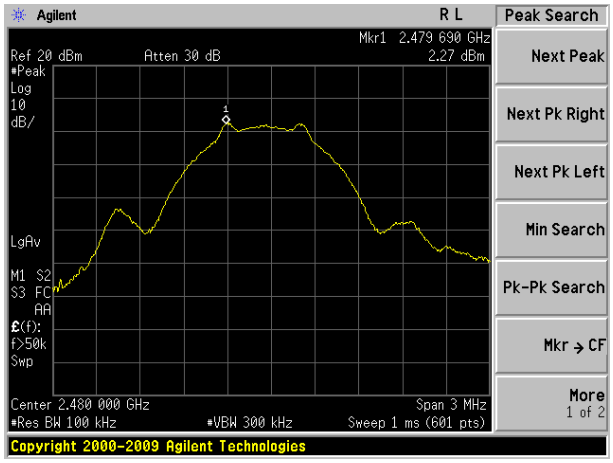
Test plot as follows:



Lowest channel



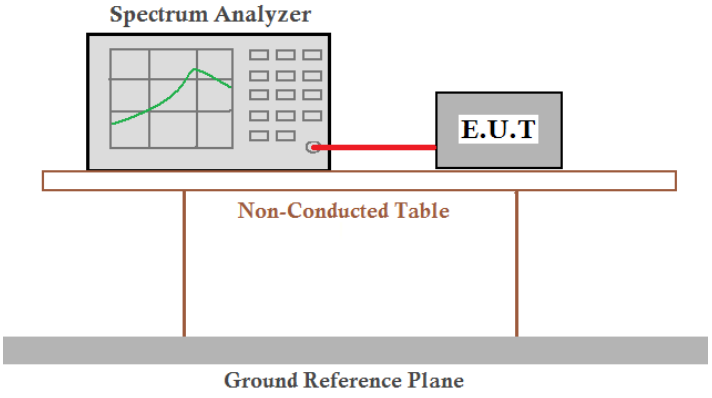
Middle channel



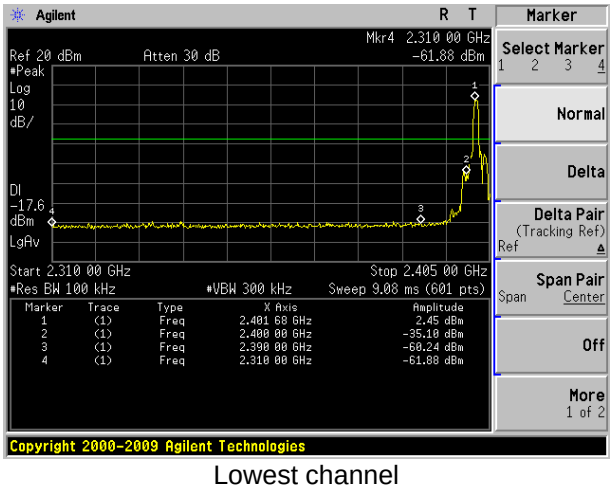
Highest channel

7.5 Band edges

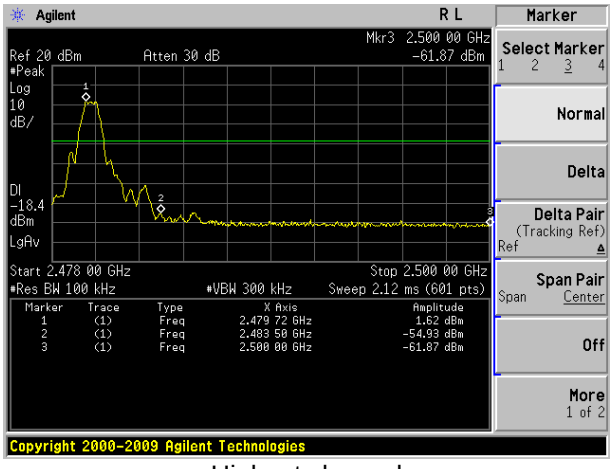
7.5.1 Conducted Emission Method

Test Requirement:	FCC Part15 C Section 15.247 (d)
Test Method:	ANSI C63.4:2003 and KDB558074 D01 DTS Meas Guidance V03
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, based on either an RF conducted or a radiated measurement.
Test setup:	
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.3 for details
Test results:	Pass

Test plot as follows:

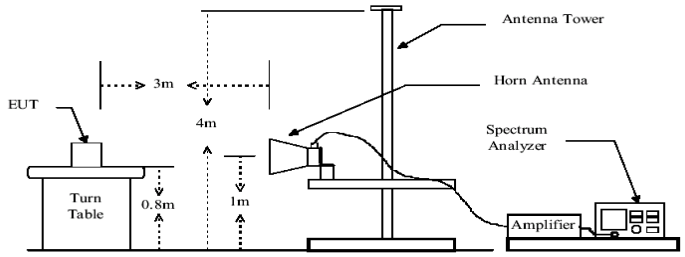


Lowest channel



Highest channel

7.5.2 Radiated Emission Method

Test Requirement:	FCC Part15 C Section 15.209 and 15.205
Test Method:	ANSI C63.4: 2003
Test Frequency Range:	All of the restrict bands were tested, only the worst band's (2310MHz to 2500MHz) data was showed.
Test site:	Measurement Distance: 3m
Receiver setup:	Frequency / Detector / RBW / VBW / Value Above 1GHz / Peak / 1MHz / 3MHz / Peak Above 1GHz / Peak / 1MHz / 10Hz / Average
Limit:	Frequency / Limit (dBuV/m @3m) / Value Above 1GHz / 54.00 / Average Above 1GHz / 74.00 / Peak
Test setup:	
Test Procedure:	1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation. 2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. 3. The antenna height 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. 4. 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 rota table was turned from 0 degrees to 360 degrees to find the maximum reading. 5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. 6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet. 7. The radiation measurements are performed in X, Y, Z axis positioning. And found the X axis positioning which it is worse case, only the test worst case mode is recorded in the report.
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.3 for details
Test results:	Pass

Measurement data:

Remark: The pre-test were performed on lowest, middle and highest frequencies, only the worst case's (lowest and highest frequencies) data was showed.

Test channel:	Lowest

Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2310.00	38.38	27.91	5.30	34.11	37.48	74.00	-36.52	Vertical
2390.00	36.56	27.59	5.38	34.01	35.52	74.00	-38.48	Vertical
2400.00	58.40	27.58	5.39	34.01	57.36	74.00	-16.64	Vertical
2310.00	36.26	27.91	5.30	34.11	35.36	74.00	-38.64	Horizontal
2390.00	37.73	27.59	5.38	34.01	36.69	74.00	-37.31	Horizontal
2400.00	59.71	27.58	5.39	34.01	58.67	74.00	-15.33	Horizontal

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2310.00	21.33	27.91	5.30	34.11	20.43	54.00	-33.57	Vertical
2390.00	20.54	27.59	5.38	34.01	19.50	54.00	-34.50	Vertical
2400.00	42.69	27.58	5.39	34.01	41.65	54.00	-12.35	Vertical
2310.00	20.35	27.91	5.30	34.11	19.45	54.00	-34.55	Horizontal
2390.00	20.14	27.59	5.38	34.01	19.10	54.00	-34.90	Horizontal
2400.00	43.62	27.58	5.39	34.01	42.58	54.00	-11.42	Horizontal

Test channel:	Highest

Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2483.50	40.04	27.53	5.47	33.92	39.12	74.00	-34.88	Vertical
2500.00	39.20	27.55	5.49	33.90	38.34	74.00	-35.66	Vertical
2483.50	43.37	27.53	5.47	33.92	42.45	74.00	-31.55	Horizontal
2500.00	39.18	27.55	5.49	33.90	38.32	74.00	-35.68	Horizontal

Average value:

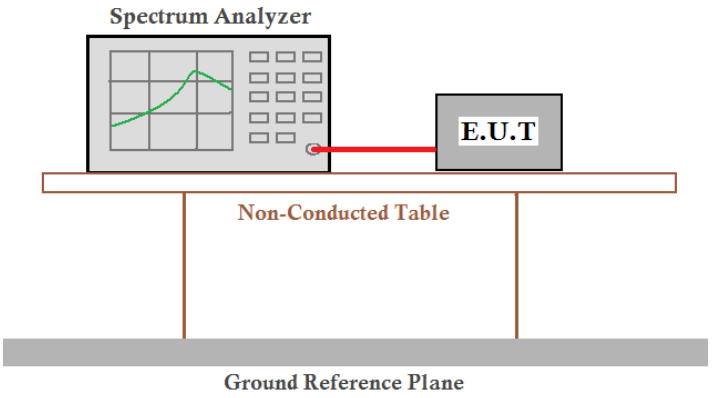
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2483.50	24.47	27.53	5.47	33.92	23.55	54.00	-30.45	Vertical
2500.00	23.13	27.55	5.49	33.90	22.27	54.00	-31.73	Vertical
2483.50	26.66	27.53	5.47	33.92	25.74	54.00	-28.26	Horizontal
2500.00	24.65	27.55	5.49	33.90	23.79	54.00	-30.21	Horizontal

Remark:

1. *Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor*
2. *The emission levels of other frequencies are very lower than the limit and not show in test report.*

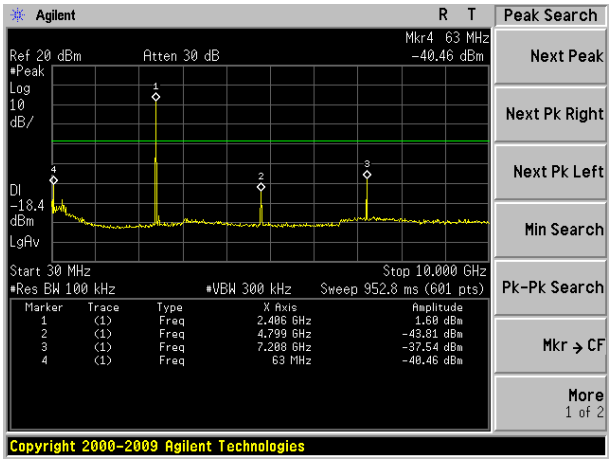
7.6 Spurious Emission

7.6.1 Conducted Emission Method

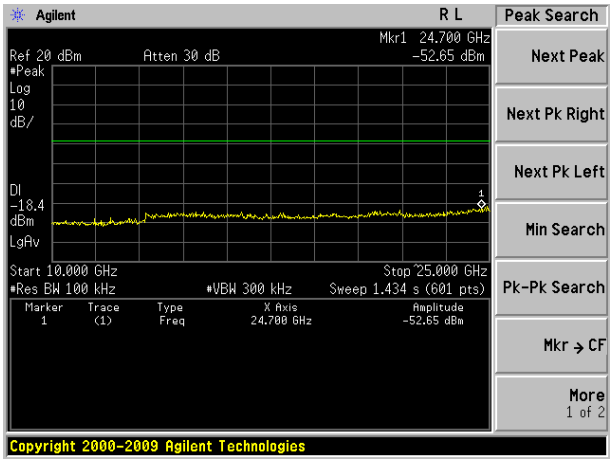
Test Requirement:	FCC Part15 C Section 15.247 (d)
Test Method:	ANSI C63.4:2003 and KDB558074 D01 DTS Meas Guidance V03
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional 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, based on either an RF conducted or a radiated measurement.
Test setup:	
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.3 for details
Test results:	Pass

Test plot as follows:

Lowest channel

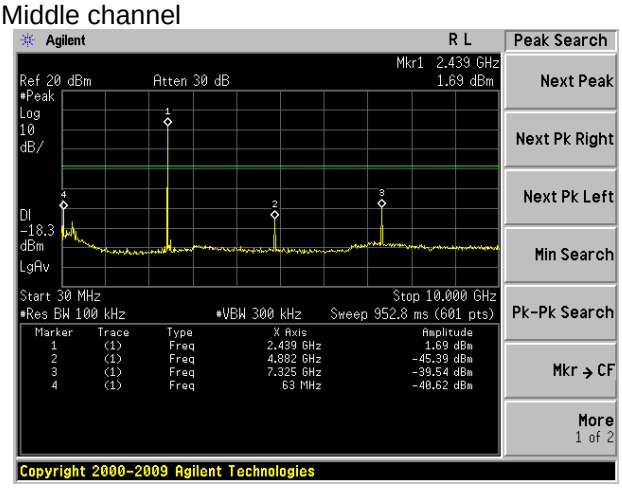


30MHz~10GHz

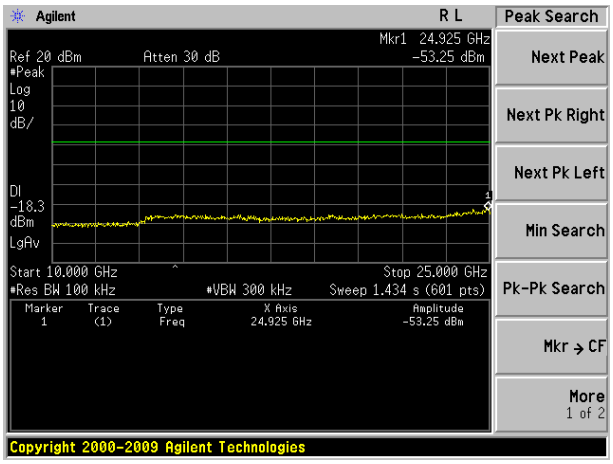


10GHz~25GHz

Middle channel

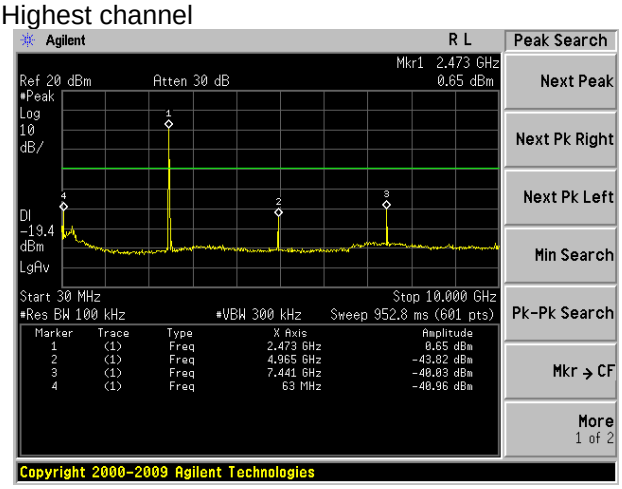


30MHz~10GHz

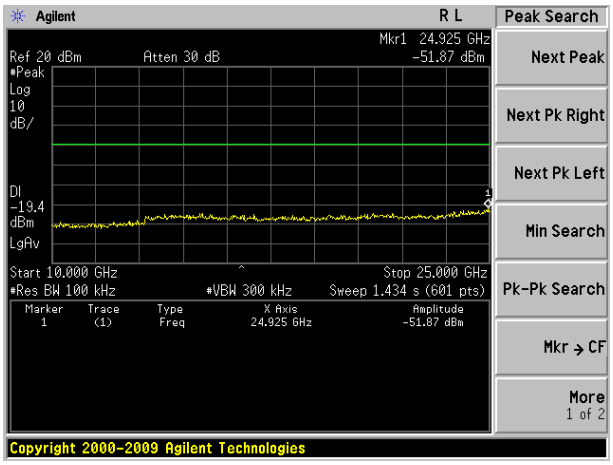


10GHz~25GHz

Highest channel



30MHz~10GHz



10GHz~25GHz

7.6.2 Radiated Emission Method

Test Requirement:	FCC Part15 C Section 15.209
Test Method:	ANSI C63.4: 2003
Test Frequency Range:	30MHz to 25GHz
Test site:	Measurement Distance: 3m

Receiver setup:

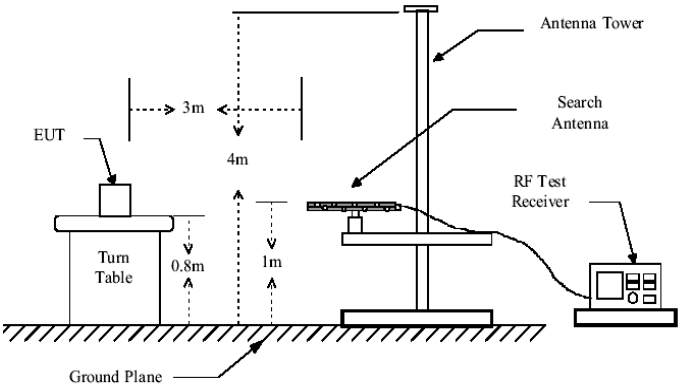
Frequency	Detector	RBW	VBW	Value
30MHz-1GHz	Quasi-peak	120KHz	300KHz	Quasi-peak
Above 1GHz	Peak	1MHz	3MHz	Peak
	Peak	1MHz	10Hz	Average

Limit:

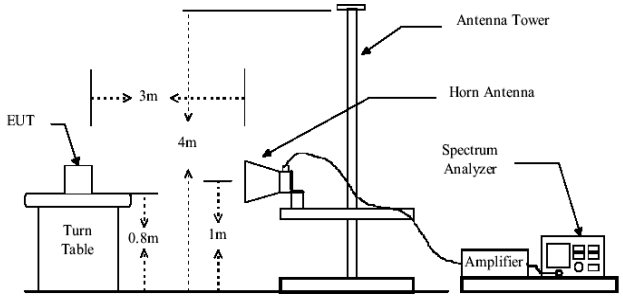
Frequency	Limit (dBuV/m @3m)	Value
30MHz-88MHz	40.00	Quasi-peak
88MHz-216MHz	43.50	Quasi-peak
216MHz-960MHz	46.00	Quasi-peak
960MHz-1GHz	54.00	Quasi-peak
Above 1GHz	54.00	Average
	74.00	Peak

Test setup:

Below 1GHz



Above 1GHz



Test Procedure:

1. The EUT was placed on the top of a rotating table 0.8 meters above

	the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation. 2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. 3. The antenna height 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. 4. 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 rota table was turned from 0 degrees to 360 degrees to find the maximum reading. 5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. 6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet. 7. The radiation measurements are performed in X, Y, Z axis positioning. And found the X axis positioning which it is worse case, only the test worst case mode is recorded in the report.
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.3 for details
Test results:	Pass

Remark:

Pre-scan all kind of the place mode (X-axis, Y-axis, Z-axis), and found the X-axis which it is worse case.

Measurement Data

■ **Below 1GHz**

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
39.16	37.02	15.34	0.65	32.06	20.95	40.00	-19.05	Vertical
68.87	41.79	11.06	0.93	31.89	21.89	40.00	-18.11	Vertical
95.76	38.25	14.90	1.16	31.74	22.57	43.50	-20.93	Vertical
155.91	42.06	10.51	1.60	32.00	22.17	43.50	-21.33	Vertical
389.36	36.92	16.83	2.80	31.92	24.63	46.00	-21.37	Vertical
785.09	36.51	21.87	4.40	31.30	31.48	46.00	-14.52	Vertical
40.14	36.92	15.58	0.66	32.06	21.10	40.00	-18.90	Horizontal
99.18	35.52	15.13	1.18	31.76	20.07	43.50	-23.43	Horizontal
110.57	36.21	14.15	1.28	31.81	19.83	43.50	-23.67	Horizontal
296.18	36.62	14.98	2.34	32.18	21.76	46.00	-24.24	Horizontal
467.24	37.09	17.77	3.17	31.66	26.37	46.00	-19.63	Horizontal
661.15	36.45	20.67	3.95	31.13	29.94	46.00	-16.06	Horizontal

■ **Above 1GHz**

Test channel:	Lowest

Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4804.00	37.26	31.78	8.60	32.09	45.55	74.00	-28.45	Vertical
7206.00	35.65	36.15	11.65	32.00	51.45	74.00	-22.55	Vertical
9608.00	26.81	37.95	14.14	31.62	47.28	74.00	-26.72	Vertical
12010.00	*					74.00		Vertical
14412.00	*					74.00		Vertical
4804.00	37.98	31.78	8.60	32.09	46.27	74.00	-27.73	Horizontal
7206.00	35.17	36.15	11.65	32.00	50.97	74.00	-23.03	Horizontal
9608.00	23.63	37.95	14.14	31.62	44.10	74.00	-29.90	Horizontal
12010.00	*					74.00		Horizontal
14412.00	*					74.00		Horizontal

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4804.00	24.73	31.78	8.60	32.09	33.02	54.00	-20.98	Vertical
7206.00	22.98	36.15	11.65	32.00	38.78	54.00	-15.22	Vertical
9608.00	16.70	37.95	14.14	31.62	37.17	54.00	-16.83	Vertical
12010.00	*					54.00		Vertical
14412.00	*					54.00		Vertical
4804.00	24.78	31.78	8.60	32.09	33.07	54.00	-20.93	Horizontal
7206.00	22.65	36.15	11.65	32.00	38.45	54.00	-15.55	Horizontal
9608.00	12.10	37.95	14.14	31.62	32.57	54.00	-21.43	Horizontal
12010.00	*					54.00		Horizontal
14412.00	*					54.00		Horizontal

Remark:

1. *Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor*
2. *"*", means this data is the too weak instrument of signal is unable to test.*

Test channel:	Middle

Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4884.00	38.76	31.86	8.67	32.12	47.17	74.00	-26.83	Vertical
7326.00	33.67	36.41	11.72	31.89	49.91	74.00	-24.09	Vertical
9768.00	25.31	38.35	14.27	31.62	46.31	74.00	-27.69	Vertical
12210.00	*					74.00		Vertical
14652.00	*					74.00		Vertical
4884.00	37.50	31.86	8.67	32.12	45.91	74.00	-28.09	Horizontal
7326.00	32.50	36.41	11.72	31.89	48.74	74.00	-25.26	Horizontal
9768.00	23.95	38.35	14.27	31.62	44.95	74.00	-29.05	Horizontal
12210.00	*					74.00		Horizontal
14652.00	*					74.00		Horizontal

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4884.00	25.64	31.86	8.67	32.12	34.05	54.00	-19.95	Vertical
7326.00	20.32	36.41	11.72	31.89	36.56	54.00	-17.44	Vertical
9768.00	12.78	38.35	14.27	31.62	33.78	54.00	-20.22	Vertical
12210.00	*					54.00		Vertical
14652.00	*					54.00		Vertical
4884.00	24.98	31.86	8.67	32.12	33.39	54.00	-20.61	Horizontal
7326.00	19.60	36.41	11.72	31.89	35.84	54.00	-18.16	Horizontal
9768.00	10.46	38.35	14.27	31.62	31.46	54.00	-22.54	Horizontal
12210.00	*					54.00		Horizontal
14652.00	*					54.00		Horizontal

Remark:

1. *Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor*
2. *"*", means this data is the too weak instrument of signal is unable to test.*

Test channel:	Highest

Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4960.00	39.35	31.93	8.73	32.16	47.85	74.00	-26.15	Vertical
7440.00	32.23	36.59	11.79	31.78	48.83	74.00	-25.17	Vertical
9920.00	25.53	38.81	14.38	31.88	46.84	74.00	-27.16	Vertical
12400.00	*					74.00		Vertical
14880.00	*					74.00		Vertical
4960.00	36.12	31.93	8.73	32.16	44.62	74.00	-29.38	Horizontal
7440.00	33.98	36.59	11.79	31.78	50.58	74.00	-23.42	Horizontal
9920.00	26.30	38.81	14.38	31.88	47.61	74.00	-26.39	Horizontal
12400.00	*					74.00		Horizontal
14880.00	*					74.00		Horizontal

Average value:

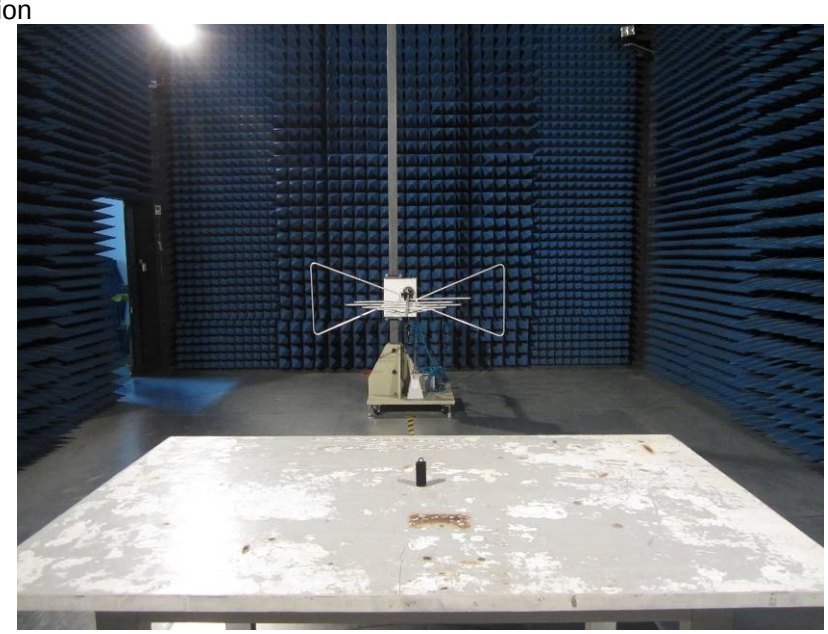
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4960.00	26.13	31.93	8.73	32.16	34.63	54.00	-19.37	Vertical
7440.00	19.32	36.59	11.79	31.78	35.92	54.00	-18.08	Vertical
9920.00	12.64	38.81	14.38	31.88	33.95	54.00	-20.05	Vertical
12400.00	*					54.00		Vertical
14880.00	*					54.00		Vertical
4960.00	23.45	31.93	8.73	32.16	31.95	54.00	-22.05	Horizontal
7440.00	20.65	36.59	11.79	31.78	37.25	54.00	-16.75	Horizontal
9920.00	13.06	38.81	14.38	31.88	34.37	54.00	-19.63	Horizontal
12400.00	*					54.00		Horizontal
14880.00	*					54.00		Horizontal

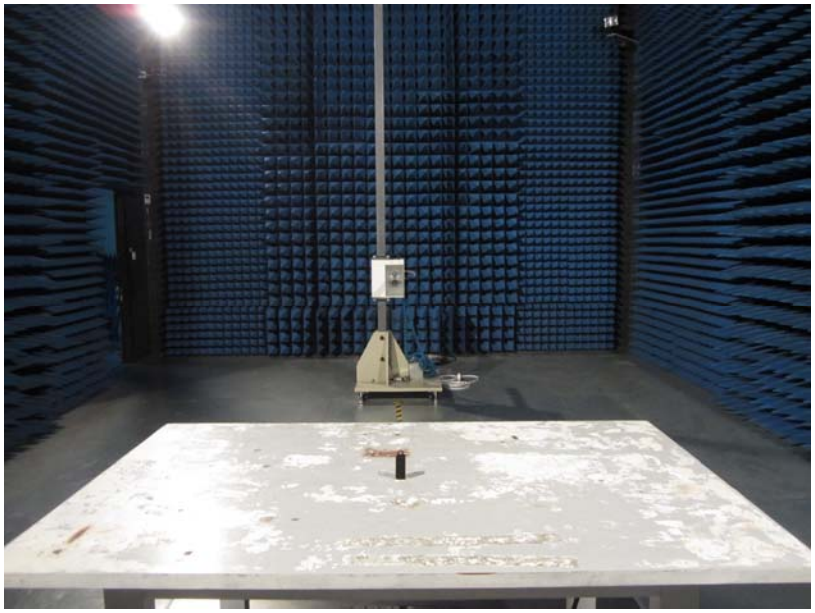
Remark:

1. *Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor*
2. *"*", means this data is the too weak instrument of signal is unable to test.*

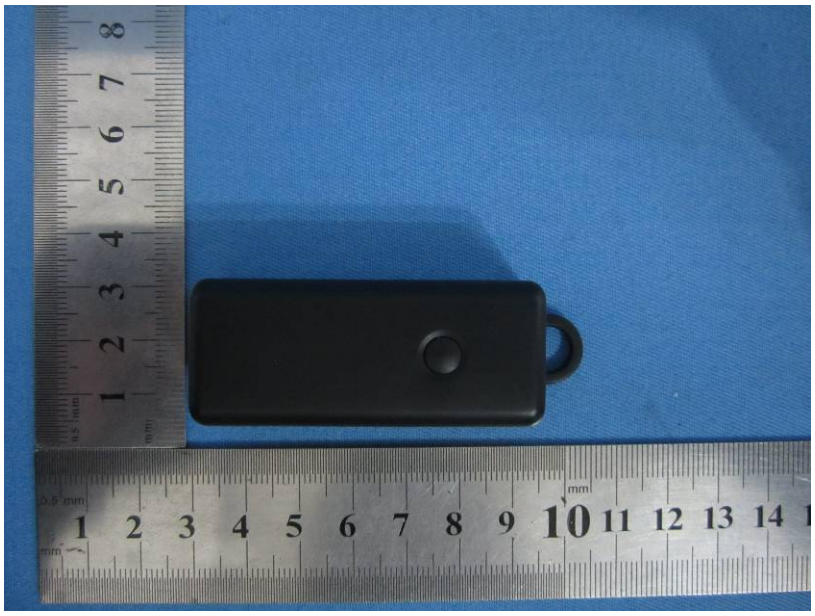
8 Test Setup Photo

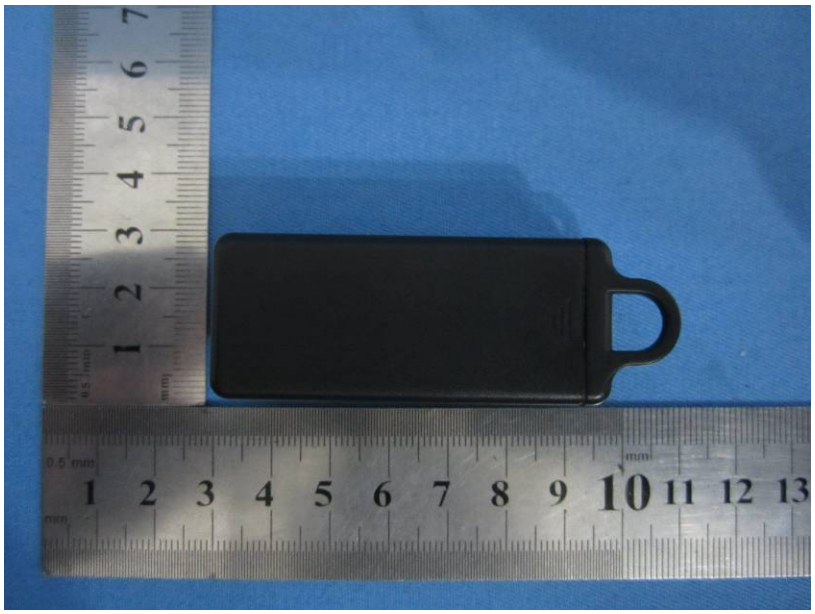
Radiated Emission

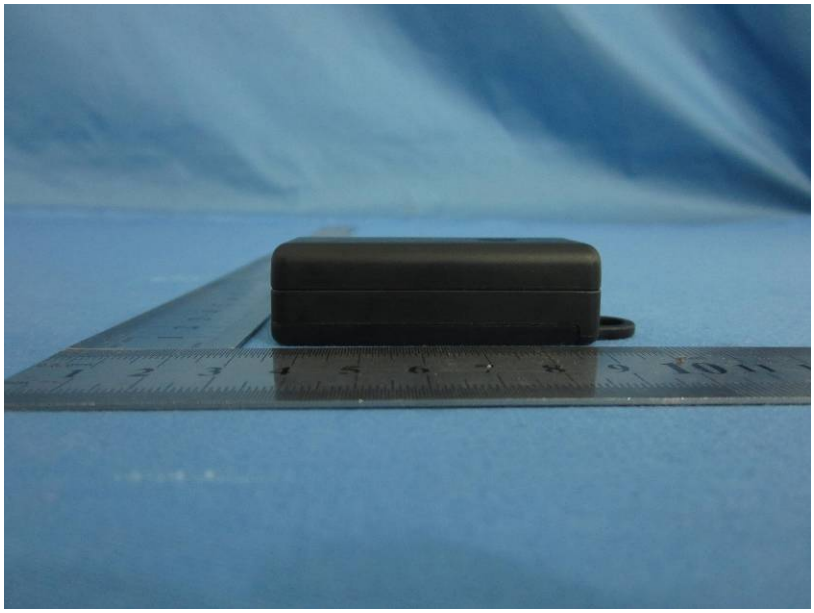


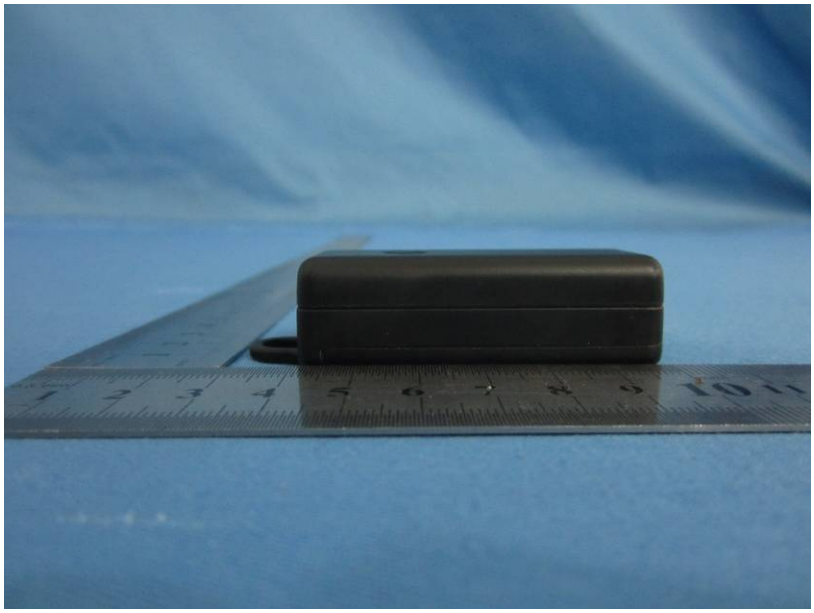


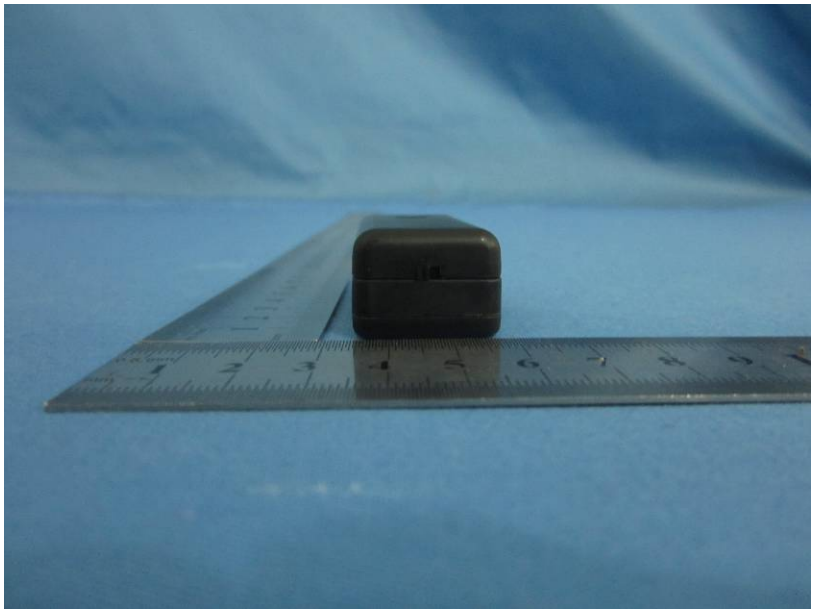
9 EUT Constructional Details

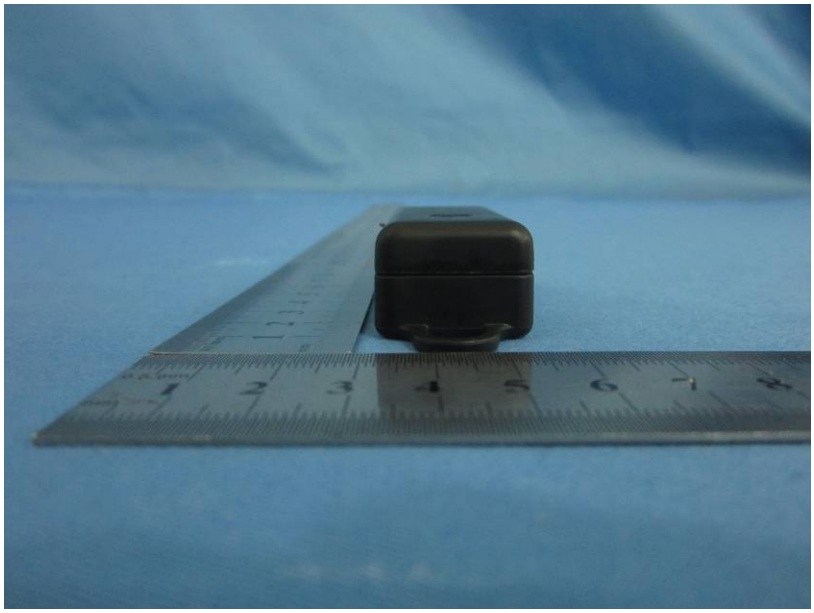


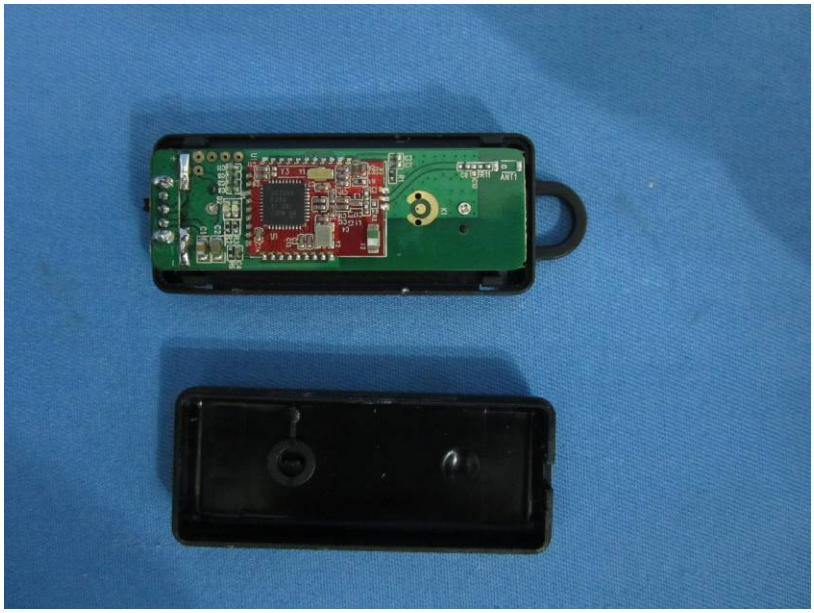


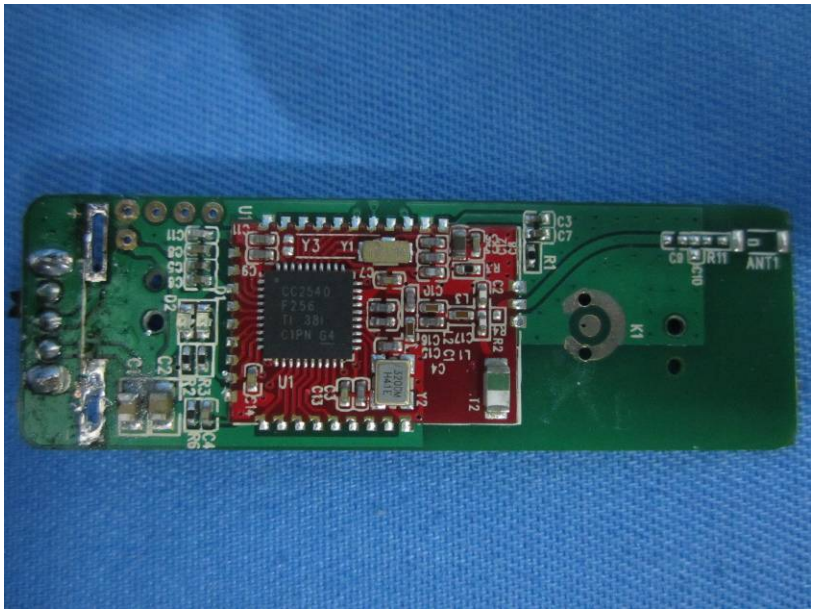








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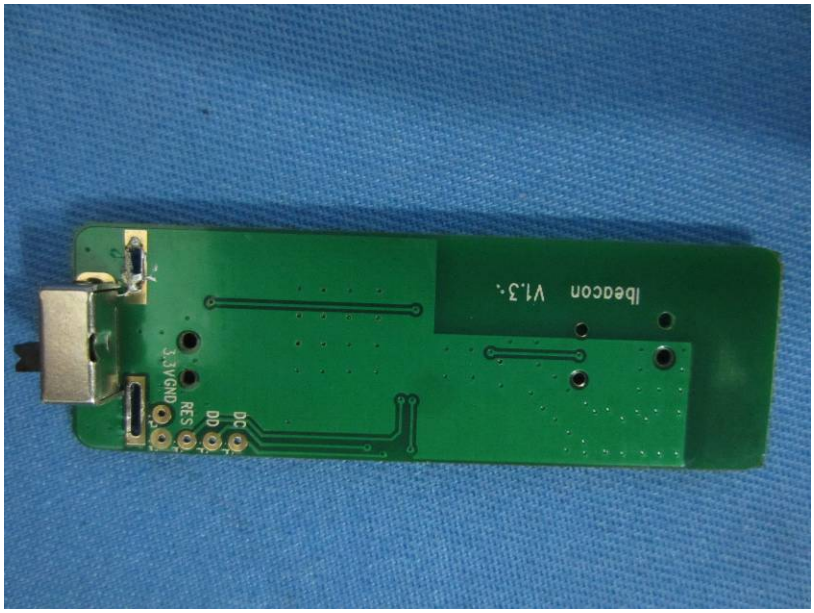
Y1
C3
C7
R1
ANT1
K1
U1
Y2



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