

Global United Technology Services Co., Ltd.

Report No.: GTS201709000029F01

FCC REPORT

Applicant: IPW China Limited

Address of Applicant: 2826, Fu Xin Business Centre 31, Fu Yuan Yi Road, Fuhai

Jiedao, Baoan, Shenzhen, China

El Shenzhen Limited Manufacturer:

Address of 2826, Fu Xin Business Centre 31, Fu Yuan Yi Road, Fuhai

Jiedao, Baoan, Shenzhen, China Manufacturer:

Equipment Under Test (EUT)

Product Name: **BULBLITE-MESH**

Model No.: **BULBLITE-MESH**

FCC ID: **2ANRU-BULBLITE**

FCC CFR Title 47 Part 15 Subpart C Section 15.249:2017 **Applicable standards:**

Date of sample receipt: July 03, 2017

Date of Test: July 04-10, 2017

Date of report issued: July 11, 2017

Test Result: PASS *

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

Authorized Signature:

Laboratory Manager

This results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.



2 Version

Version No.	Date	Description
00	July 11, 2017	Original

Prepared By:	Tiger. Cha	Date:	July 11, 2017	
	Project Engineer			
Check By:	Andy un	Date:	July 11, 2017	
	Reviewer			



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4 Test Summary

Test Item	Section in CFR 47	Result
Antenna requirement	15.203	Pass
AC Power Line Conducted Emission	15.207	N/A
Field strength of the fundamental signal	15.249 (a)	Pass
Spurious emissions	15.249 (a) (d)/15.209	Pass
Band edge	15.249 (d)/15.205	Pass
20dB Occupied Bandwidth	15.215 (c)	Pass

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

Remark: Test according to ANSI C63.10: 2013 and ANSI C63.4: 2014.

4.1 Measurement Uncertainty

Test Item	Frequency Range	Measurement Uncertainty	Notes	
Radiated Emission	9kHz ~ 30MHz	± 4.34dB	(1)	
Radiated Emission	30MHz ~ 1000MHz	± 4.24dB	(1)	
Radiated Emission	1GHz ~ 26.5GHz ± 4.68dB		(1)	
AC Power Line Conducted Emission 0.15MHz ~ 30MHz ± 3.45dB				
Note (1): The measurement unce	ertainty is for coverage factor of k	=2 and a level of confidence of 9	95%.	



5 General Information

5.1 General Description of EUT

Product Name:	BULBLITE-MESH
Model No.:	BULBLITE-MESH
Operation Frequency:	2402MHz~2480MHz
Channel numbers:	40
Channel separation:	2MHz
Modulation type:	GFSK
Antenna Type:	Integral antenna
Antenna gain: 0dBi (Declared by Applicant)	
Power supply:	Battery: DC 3.7V, 850mAh, 3.145wh



Operation F	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
• !			• !	• !	· i	· i	•
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	2440MHz
The Highest channel	2480MHz



5.2 Test mode

Transmitting mode	Keep the EUT in continuously transmitting mode				
Remark: Full battery is used during all test.					

Per-test mode.

We have verified the construction and function in typical operation, The EUT was placed on three different polar directions; i.e. X axis, Y axis, Z axis. which was shown in this test report and defined as follows:

Axis	Х	Y	Z
Field Strength(dBuV/m)	88.78	90.43	89.56

5.3 Description of Support Units

None

5.4 Test Facility

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

• FCC —Registration No.: 600491

Global United Technology Services Co., Ltd., Shenzhen 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 files. Registration 600491, June 22, 2016.

• 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, August 15, 2016

5.5 Test Location

All tests were performed at:

Global United Technology Services Co., Ltd.

Address: No. 301-309, 3/F., Jinyuan Business Building, No.2, Laodong Industrial Zone, Xixiang Road, Baoan District, Shenzhen, Guangdong, China 518102

Tel: 0755-27798480 Fax: 0755-27798960

5.6 Other Information Requested by the Customer

None.



6 Test Instruments list

Rad	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	July 03 2015	July 02 2020	
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	June 28 2017	June 27 2018	
4	EMI Test Receiver	Rohde & Schwarz	ESU26	GTS203	June 28 2017	June 27 2018	
5	BiConiLog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	GTS214	June 28 2017	June 27 2018	
6	Double -ridged waveguide horn	SCHWARZBECK MESS-ELEKTRONIK	9120D-829	GTS208	June 28 2017	June 27 2018	
7	Horn Antenna	ETS-LINDGREN	3160	GTS217	June 28 2017	June 27 2018	
8	EMI Test Software	AUDIX	E3	N/A	N/A	N/A	
9	Coaxial Cable	GTS	N/A	GTS213	June 28 2017	June 27 2018	
10	Coaxial Cable	GTS	N/A	GTS211	June 28 2017	June 27 2018	
11	Coaxial cable	GTS	N/A	GTS210	June 28 2017	June 27 2018	
12	Coaxial Cable	GTS	N/A	GTS212	June 28 2017	June 27 2018	
13	Amplifier(100kHz-3GHz)	HP	8347A	GTS204	June 28 2017	June 27 2018	
14	Amplifier(2GHz-20GHz)	HP	8349B	GTS206	June 28 2017	June 27 2018	
15	Amplifier (18-26GHz)	Rohde & Schwarz	AFS33-18002 650-30-8P-44	GTS218	June 28 2017	June 27 2018	
16	Band filter	Amindeon	82346	GTS219	June 28 2017	June 27 2018	
17	Power Meter	Anritsu	ML2495A	GTS540	June 28 2017	June 27 2018	
18	Power Sensor	Anritsu	MA2411B	GTS541	June 28 2017	June 27 2018	

Gen	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	June 28 2017	June 27 2018	



7 Test results and Measurement Data

7.1 Antenna requirement

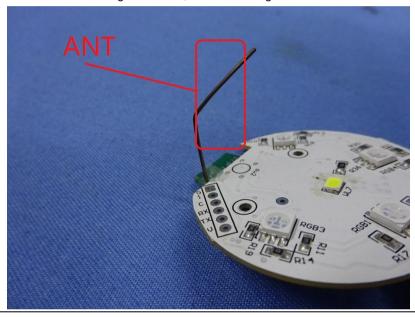
Standard requirement: FCC Part15 C Section 15.203

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.

EUT Antenna:

The antenna is Integral antenna, the best case gain of the antenna is 0dBi





7.2 Radiated Emission Method

FCC Part15 C S	Section 15 20	20				
FCC Part15 C Section 15.209						
ANSI C63.10:20	013					
30MHz to 25GH	łz					
Measurement D	istance: 3m					
Frequency	Detector	I	RBW	VBW	Remark	
30MHz- 1GHz	Quasi-pea	k 12	20KHz	300KHz	Quasi-peak Value	
Above 1CHz	Peak	1	1MHz	3MHz	Peak Value	
Above 1GHz	Peak	1	1MHz	10Hz	Average Value	
Freque	ency	Limi	t (dBuV/	m @3m)	Remark	
2400MHz-24	183.5MHz		94.0	0	Average Value	
		Limi	t (dBuV/	m @3m)	Remark	
					Quasi-peak Value	
					Quasi-peak Value	
					Average Value	
Above	GHZ		74.0	0	Peak Value	
harmonics, sha fundamental or	II be attenuat to the genera	ed by a	at least tated emis	50 dB belov	w the level of the	
Below 1GHz	EUT+		Test A	?	fiere/	
	30MHz to 25GH Measurement D Frequency 30MHz- 1GHz Above 1GHz Freque 2400MHz-24 Freque 30MHz-8 88MHz-2: 216MHz-9 960MHz- Above 1 Emissions radia harmonics, shar fundamental or whichever is the Below 1GHz	30MHz-1GHz Above 1GHz Peak Frequency 2400MHz-2483.5MHz Frequency 30MHz-88MHz 88MHz-216MHz 216MHz-960MHz 960MHz-1GHz Above 1GHz Emissions radiated outside of harmonics, shall be attenuate fundamental or to the general whichever is the lesser atternated below 1GHz Below 1GHz	Measurement Distance: 3m Frequency Detector 30MHz- Quasi-peak 1: 1GHz Peak Above 1GHz Peak Frequency Limi 2400MHz-2483.5MHz Frequency Limi 30MHz-88MHz 88MHz-216MHz 216MHz-960MHz 960MHz-1GHz Above 1GHz Emissions radiated outside of the sharmonics, shall be attenuated by fundamental or to the general radia whichever is the lesser attenuation Below 1GHz	Measurement Distance: 3m Frequency Detector RBW 30MHz- Quasi-peak 120KHz 1GHz Above 1GHz Peak 1MHz Peak 1MHz Peak 1MHz Frequency Limit (dBuV/ 2400MHz-2483.5MHz 94.00 Frequency Limit (dBuV/ 30MHz-88MHz 40.00 88MHz-216MHz 43.50 216MHz-960MHz 46.00 960MHz-1GHz 54.00 Above 1GHz 54.00 Emissions radiated outside of the specified harmonics, shall be attenuated by at least of the specified harmonics.	Measurement Distance: 3m Frequency Detector RBW VBW 30MHz-1GHz Quasi-peak 120KHz 300KHz Above 1GHz Peak 1MHz 3MHz Peak 1MHz 10Hz Frequency Limit (dBuV/m @3m) 2400MHz-2483.5MHz 94.00 Frequency Limit (dBuV/m @3m) 30MHz-88MHz 40.00 88MHz-216MHz 43.50 216MHz-960MHz 46.00 960MHz-1GHz 54.00 Above 1GHz 54.00 Emissions radiated outside of the specified frequency harmonics, shall be attenuated by at least 50 dB below fundamental or to the general radiated emission limits whichever is the lesser attenuation. Below 1GHz Frequency Limit (dBuV/m @3m) 40.00 Frequency 40.00 Emissions radiated outside of the specified frequency harmonics, shall be attenuated by at least 50 dB below fundamental or to the general radiated emission limits whichever is the lesser attenuation. Below 1GHz	



Report No.: GTS201709000029F01 < 1m ... 4m > EUT Tum Table <150cm; Preamplifier-Receiver+ Test Procedure: 1. The EUT was placed on the top of a rotating table (0.8m for below 1GHz and 1.5 meters for above 1GHz) 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. Test Instruments: Refer to section 6.0 for details Test mode: Refer to section 5.2 for details Test results: Pass

Measurement data:



7.2.1 Field Strength of The Fundamental Signal

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
2402.00	91.28	27.58	5.39	34.01	90.24	114.00	-23.76	Vertical
2402.00	85.89	27.58	5.39	34.01	84.85	114.00	-29.15	Horizontal
2440.00	91.48	27.48	5.43	33.96	90.43	114.00	-23.57	Vertical
2440.00	85.51	27.48	5.43	33.96	84.46	114.00	-29.54	Horizontal
2480.00	90.35	27.52	5.47	33.92	89.42	114.00	-24.58	Vertical
2480.00	84.54	27.52	5.47	33.92	83.61	114.00	-30.39	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
2402.00	81.40	27.58	5.39	34.01	80.36	94.00	-13.64	Vertical
2402.00	76.29	27.58	5.39	34.01	75.25	94.00	-18.75	Horizontal
2440.00	81.59	27.48	5.43	33.96	80.54	94.00	-13.46	Vertical
2440.00	74.94	27.48	5.43	33.96	73.89	94.00	-20.11	Horizontal
2480.00	80.65	27.52	5.47	33.92	79.72	94.00	-14.28	Vertical
2480.00	75.16	27.52	5.47	33.92	74.23	94.00	-19.77	Horizontal



7.2.2 Spurious emissions

■ Below 1GHz

- BCIOW I	01.12							
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
35.38	50.09	11.20	0.61	30.07	31.83	40.00	-8.17	Vertical
44.59	47.92	12.25	0.72	30.02	30.87	40.00	-9.13	Vertical
49.36	47.89	12.20	0.77	30.00	30.86	40.00	-9.14	Vertical
69.11	47.12	7.40	0.93	29.86	25.59	40.00	-14.41	Vertical
129.92	47.71	8.10	1.44	29.51	27.74	43.50	-15.76	Vertical
144.84	46.06	7.43	1.53	29.43	25.59	43.50	-17.91	Vertical
46.18	36.66	12.25	0.73	30.02	19.62	40.00	-20.38	Horizontal
56.79	34.68	11.67	0.83	29.94	17.24	40.00	-22.76	Horizontal
70.09	41.93	7.40	0.94	29.85	20.42	40.00	-19.58	Horizontal
133.62	42.41	7.83	1.46	29.49	22.21	43.50	-21.29	Horizontal
151.07	37.41	7.68	1.58	29.40	17.27	43.50	-26.23	Horizontal
168.41	37.22	8.40	1.68	29.32	17.98	43.50	-25.52	Horizontal



■ Above 1GHz

Test channel: Lowest channel

Peak value:

reak 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	36.14	31.78	8.60	32.09	44.43	74.00	-29.57	Vertical
7206.00	31.06	36.15	11.65	32.00	46.86	74.00	-27.14	Vertical
9608.00	30.78	37.95	14.14	31.62	51.25	74.00	-22.75	Vertical
12010.00	*					74.00		Vertical
14412.00	*					74.00		Vertical
4804.00	40.19	31.78	8.60	32.09	48.48	74.00	-25.52	Horizontal
7206.00	32.71	36.15	11.65	32.00	48.51	74.00	-25.49	Horizontal
9608.00	30.09	37.95	14.14	31.62	50.56	74.00	-23.44	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	25.18	31.78	8.60	32.09	33.47	54.00	-20.53	Vertical
7206.00	19.88	36.15	11.65	32.00	35.68	54.00	-18.32	Vertical
9608.00	19.03	37.95	14.14	31.62	39.50	54.00	-14.50	Vertical
12010.00	*					54.00		Vertical
14412.00	*					54.00		Vertical
4804.00	29.28	31.78	8.60	32.09	37.57	54.00	-16.43	Horizontal
7206.00	21.97	36.15	11.65	32.00	37.77	54.00	-16.23	Horizontal
9608.00	18.66	37.95	14.14	31.62	39.13	54.00	-14.87	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. &}quot;*", means this data is the too weak instrument of signal is unable to test.



Test channel	est 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
4880.00	36.60	31.85	8.67	32.12	45.00	74.00	-29.00	Vertical
7320.00	31.36	36.37	11.72	31.89	47.56	74.00	-26.44	Vertical
9760.00	31.05	38.35	14.25	31.62	52.03	74.00	-21.97	Vertical
12200.00	*					74.00		Vertical
14640.00	*					74.00		Vertical
4880.00	40.74	31.85	8.67	32.12	49.14	74.00	-24.86	Horizontal
7320.00	33.06	36.37	11.72	31.89	49.26	74.00	-24.74	Horizontal
9760.00	30.41	38.35	14.25	31.62	51.39	74.00	-22.61	Horizontal
12200.00	*					74.00		Horizontal
14640.00	*					74.00		Horizontal
Average val	ue:							
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
4880.00	25.56	31.85	8.67	32.12	33.96	54.00	-20.04	Vertical
7320.00	20.14	36.37	11.72	31.89	36.34	54.00	-17.66	Vertical
9760.00	19.26	38.35	14.25	31.62	40.24	54.00	-13.76	Vertical
12200.00	*					54.00		Vertical
14640.00	*					54.00		Vertical
4880.00	29.71	31.85	8.67	32.12	38.11	54.00	-15.89	Horizontal
7320.00	22.26	36.37	11.72	31.89	38.46	54.00	-15.54	Horizontal
9760.00	18.93	38.35	14.25	31.62	39.91	54.00	-14.09	Horizontal
12200.00	*					54.00		Horizontal
14640.00	*					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	l:			Hig	hest			
Peak value:				<u>'</u>				
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	36.81	31.93	8.73	32.16	45.31	74.00	-28.69	Vertical
7440.00	31.50	36.59	11.79	31.78	48.10	74.00	-25.90	Vertical
9920.00	31.18	38.81	14.38	31.88	52.49	74.00	-21.51	Vertical
12400.00	*					74.00		Vertical
14880.00	*					74.00		Vertical
4960.00	41.00	31.93	8.73	32.16	49.50	74.00	-24.50	Horizontal
7440.00	33.22	36.59	11.79	31.78	49.82	74.00	-24.18	Horizontal
9920.00	30.55	38.81	14.38	31.88	51.86	74.00	-22.14	Horizontal
12400.00	*					74.00		Horizontal
14880.00	*					74.00		Horizontal
Average val	ue:							
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	25.79	31.93	8.73	32.16	34.29	54.00	-19.71	Vertical
7440.00	20.29	36.59	11.79	31.78	36.89	54.00	-17.11	Vertical
9920.00	19.40	38.81	14.38	31.88	40.71	54.00	-13.29	Vertical
12400.00	*					54.00		Vertical
14880.00	*					54.00		Vertical
4960.00	29.98	31.93	8.73	32.16	38.48	54.00	-15.52	Horizontal
7440.00	22.44	36.59	11.79	31.78	39.04	54.00	-14.96	Horizontal
9920.00	19.09	38.81	14.38	31.88	40.40	54.00	-13.60	Horizontal
12400.00	*					54.00		Horizontal
	i i	1	1	1			1	i

Remark:

14880.00

- 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.
- 3. The emission levels of other frequencies are very lower than the limit and not show in test report.

Horizontal

54.00



7.2.3 Bandedge emissions

All of the restriction bands were tested, and only the data of worst case was exhibited.

Test channel:	Lowest channel
---------------	----------------

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
2390.00	40.09	27.59	5.38	30.18	42.88	74.00	-31.12	Horizontal
2400.00	56.48	27.58	5.39	30.18	59.27	74.00	-14.73	Horizontal
2390.00	40.38	27.59	5.38	30.18	43.17	74.00	-30.83	Vertical
2400.00	58.22	27.58	5.39	30.18	61.01	74.00	-12.99	Vertical

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
2390.00	31.27	27.59	5.38	30.18	34.06	54.00	-19.94	Horizontal
2400.00	32.34	27.58	5.39	30.18	35.13	54.00	-18.87	Horizontal
2390.00	31.02	27.59	5.38	30.18	33.81	54.00	-20.19	Vertical
2400.00	33.73	27.58	5.39	30.18	36.52	54.00	-17.48	Vertical

Ī	Test channel:	Highest channel
- 1		1

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	41.86	27.53	5.47	29.93	44.93	74.00	-29.07	Horizontal
2500.00	41.57	27.55	5.49	29.93	44.68	74.00	-29.32	Horizontal
2483.50	42.24	27.53	5.47	29.93	45.31	74.00	-28.69	Vertical
2500.00	42.30	27.55	5.49	29.93	45.41	74.00	-28.59	Vertical

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	34.07	27.53	5.47	29.93	37.14	54.00	-16.86	Horizontal
2500.00	32.47	27.55	5.49	29.93	35.58	54.00	-18.42	Horizontal
2483.50	35.05	27.53	5.47	29.93	38.12	54.00	-15.88	Vertical
2500.00	32.16	27.55	5.49	29.93	35.27	54.00	-18.73	Vertical

Remark:

^{1.} Final Level =Receiver Read level + Antenna Factor + Cable Loss - Preamplifier Factor



7.3 20dB Occupy Bandwidth

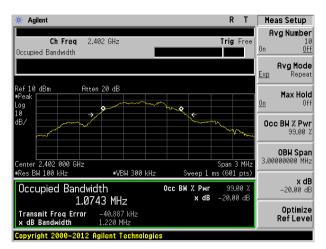
1.7			
Test Requirement:	FCC Part15 C Section 15.249/15.215		
Test Method:	ANSI C63.10:2013		
Limit:	Operation Frequency range 2400MHz~2483.5MHz		
Test setup:	Spectrum Analyzer E.U.T Non-Conducted Table Ground Reference Plane		
Test Instruments:	Refer to section 6.0 for details		
Test mode:	Test mode: Refer to section 5.2 for details		
Test results:	Pass		

Measurement Data

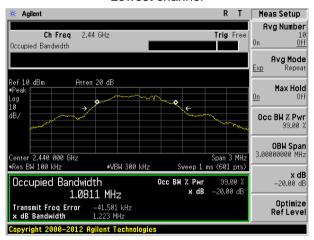
Test channel	20dB bandwidth(MHz)	Result
Lowest	1.220	Pass
Middle	1.223	Pass
Highest	1.213	Pass

Test plot as follows:

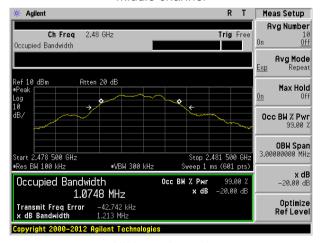




Lowest channel



Middle channel

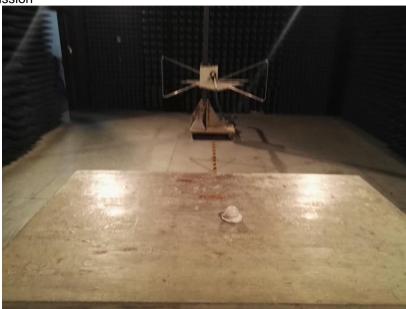


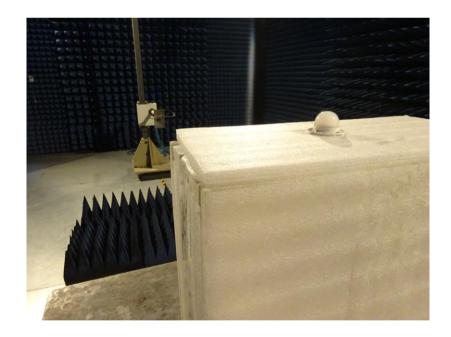
Highest channel



8 Test Setup Photo

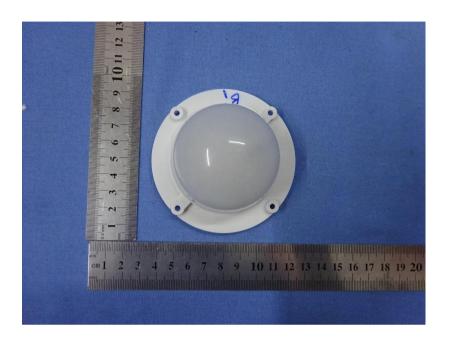
Radiated Emission







9 EUT Constructional Details





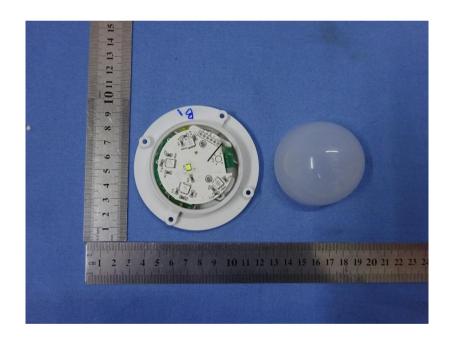






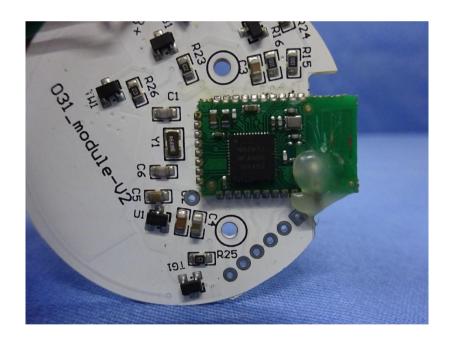




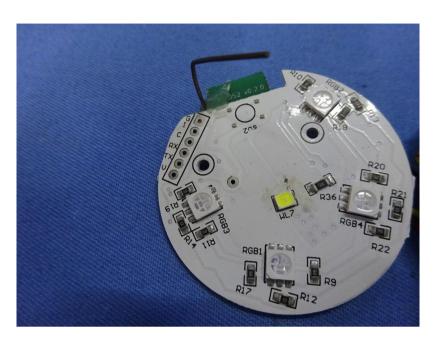


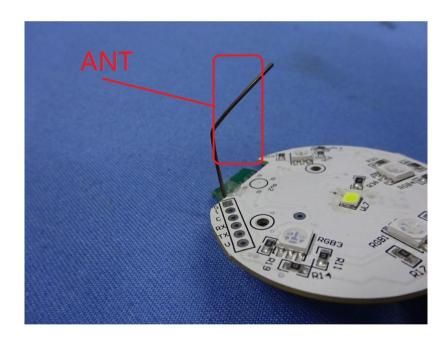






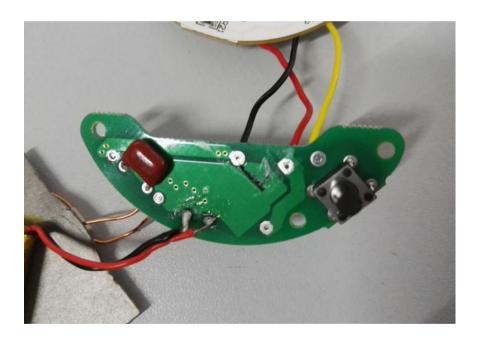
















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