

TEST REPORT

Reference No...... : WTS14S0513948E
FCC ID..... : 2AAWUTL100-E26
Applicant..... : AVC Technology (International) Limited
Address..... : 6/F, Enterprise Square Three, 39 Wang Chiu Road, Kowloon Bay, Hong Kong
Manufacturer : SHENZHEN SUNLIGHT TECHNOLOGY CO., LTD
Address..... : Block B, Xinshidai gongrong Industrial Park, Shihuan RD, Shilong, Shiyuan street, Baoan, Shenzhen. China.
Product Name..... : LuMini -3WLED dimmable mood light bulb
Model No..... : TL100-E26, TL100-E12
Standards..... : FCC CFR47 Part 15 Section 15.247:2012
Date of Receipt sample.... : May 13, 2014
Date of Test..... : May 14-16, 2014
Date of Issue..... : Jun.19, 2014
Test Result..... : **Pass ***

***Remarks:**

The 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.

Prepared By:

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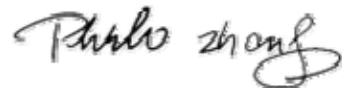
Fax:+86-755-83552400

Compiled by:

Approved by:



Zero Zhou / Project Engineer



Philo Zhong / Manager

2 Test Summary

Test Items	Test Requirement	Result
Radiated Emissions	15.205(a) 15.209(a)	PASS
Conducted Emissions	15.207(a)	PASS
6dB Bandwidth	15.247(a)(2)	PASS
Maximum Peak Output Power	15.247(b)(3),(4)	PASS
Power Spectral Density	15.247(e)	PASS
Band Edge	15.247(d)	PASS
Antenna Requirement	15.203	PASS
Maximum Permissible Exposure (Exposure of Humans to RF Fields)	1.1307(b)(1)	PASS

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4 General Information

4.1 General Description of E.U.T.

Product Name	: LuMini -3WLED dimmable mood light bulb
Model No.	: TL100-E26, TL100-E12
Model Difference	: Only the lamp holder thread size is different. The model TL100-E26 is the tested sample.
Operation Frequency	: 2402MHz ~ 2480MHz, separated by 2MHz,40 channels in total
The lowest oscillator	: 32.768kHz
Type of modulation	: GFSK(BLE only)

4.2 Details of E.U.T.

Technical Data	: AC 100-240V, 50/60Hz, 3W
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4.3 Channel List

Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)
1	2402	2	2404	3	2406	4	2408
5	2410	6	2412	7	2414	8	2416
9	2418	10	2420	11	2422	12	2424
13	2426	14	2428	15	2430	16	2432
17	2434	18	2436	19	2438	20	2440
21	2442	22	2444	23	2446	24	2448
25	2450	26	2452	27	2454	28	2456
29	2458	30	2460	31	2462	32	2464
33	2466	34	2468	35	2470	36	2472
37	2474	38	2476	39	2478	40	2480

4.4 Test Mode

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

Table 1 Tests Carried Out Under FCC part 15.247

Test mode	Low channel	Middle channel	High channel
Transmitting	2402MHz	2440MHz	2480MHz

Table 2 Tests Carried Out Under FCC part 15.207

Test Item	Test Mode
Conduction Emission, 0.15MHz to 30MHz	Communication

4.5 Test Facility

The test facility has a test site registered with the following organizations:

- **IC – Registration No.: 7760A-1**

Waltek Services(Shenzhen) Co., Ltd. Has been registered and fully described in a report filed with the Industry Canada. The acceptance letter from the Industry Canada is maintained in our files.

Registration number 7760A-1, July 12, 2012.

- **FCC – Registration No.: 880581**

Waltek Services(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 880581, April 29, 2014.

5 Equipment Used during Test

5.1 Equipments List

Conducted Emissions						
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Calibration Date	Calibration Due Date
1.	EMI Test Receiver	R&S	ESCI	100947	Sep.18,2013	Sep.17,2014
2.	LISN	R&S	ENV216	101215	Nov. 29,2013	Nov. 28,2014
3.	Cable	Top	TYPE16(3.5M)	-	Sep.18,2013	Sep.17,2014
3m Semi-anechoic Chamber for Radiation Emissions						
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Calibration Date	Calibration Due Date
1	EMC Analyzer	Agilent	E7405A	MY45114943	Sep.18,2013	Sep.17,2014
2	Active Loop Antenna	Beijing Dazhi	ZN30900A	-	Sep.18,2013	Sep.17,2014
3	Trilog Broadband Antenna	SCHWARZBECK	VULB9163	336	Apr.19,2014	Apr.18,2015
4	Coaxial Cable (below 1GHz)	Top	TYPE16(13M)	-	Sep.18,2013	Sep.17,2014
5	Broad-band Horn Antenna	SCHWARZBECK	BBHA 9120 D	667	Apr.19,2014	Apr.18,2015
6	Broad-band Horn Antenna	SCHWARZBECK	BBHA 9170	335	Apr.19,2014	Apr.18,2015
7	Broadband Preamplifier	COMPLIANCE DIRECTION	PAP-1G18	2004	Mar.17,2014	Mar.16,2015
8	Coaxial Cable (above 1GHz)	Top	1GHz-25GHz	EW02014-7	Apr.10,2014	Apr.09,2015
RF Conducted Testing						
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Calibration Date	Calibration Due Date
1.	EMC Analyzer (9k~26.5GHz)	Agilent	E7405A	MY45114943	Sep.18,2013	Sep.17,2014
2.	Spectrum Analyzer (9k-6GHz)	R&S	FSL6	100959	Sep.18,2013	Sep.17,2014
3.	Humidity Chamber	GF	GTH-225-40-1P	IAA061213	May 16,2014	May 15,2015

5.2 Measurement Uncertainty

Parameter	Uncertainty
Radio Frequency	$\pm 1 \times 10^{-6}$
RF Power	± 1.0 dB
RF Power Density	± 2.2 dB
Radiated Spurious Emissions test	± 5.03 dB (Bilog antenna 30M~1000MHz)
	± 4.74 dB (Horn antenna 1000M~25000MHz)
Conducted Spurious Emissions test	± 3.64 dB (AC mains 150KHz~30MHz)

5.3 Test Equipment Calibration

All the test equipments used are valid and calibrated by CEPREI Certification Body that address is No.110 Dongguan Zhuang RD. Guangzhou, P.R.China.

6 Conducted Emissions

Test Requirement:	FCC CFR 47 Part 15 Section 15.207
Test Method:	ANSI C63.4:2003
Test Result:	PASS
Frequency Range:	150kHz to 30MHz
Class/Severity:	Class B
Limit:	66-56 dB μ V between 0.15MHz & 0.5MHz 56 dB μ V between 0.5MHz & 5MHz 60 dB μ V between 5MHz & 30MHz
Detector:	Peak for pre-scan (9kHz Resolution Bandwidth)

6.1 E.U.T. Operation

Operating Environment :

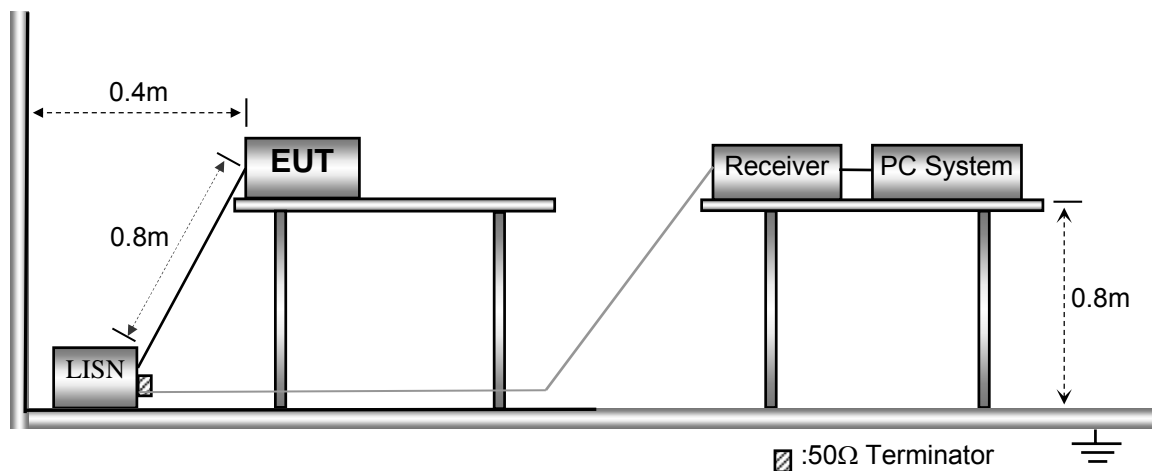
Temperature:	21.5 °C
Humidity:	51.9 % RH
Atmospheric Pressure:	101.2kPa

EUT Operation :

The test was performed in communication mode, the test data were shown in the report.

6.2 EUT Setup

The conducted emission tests were performed using the setup accordance with the ANSI C63.4:2003.



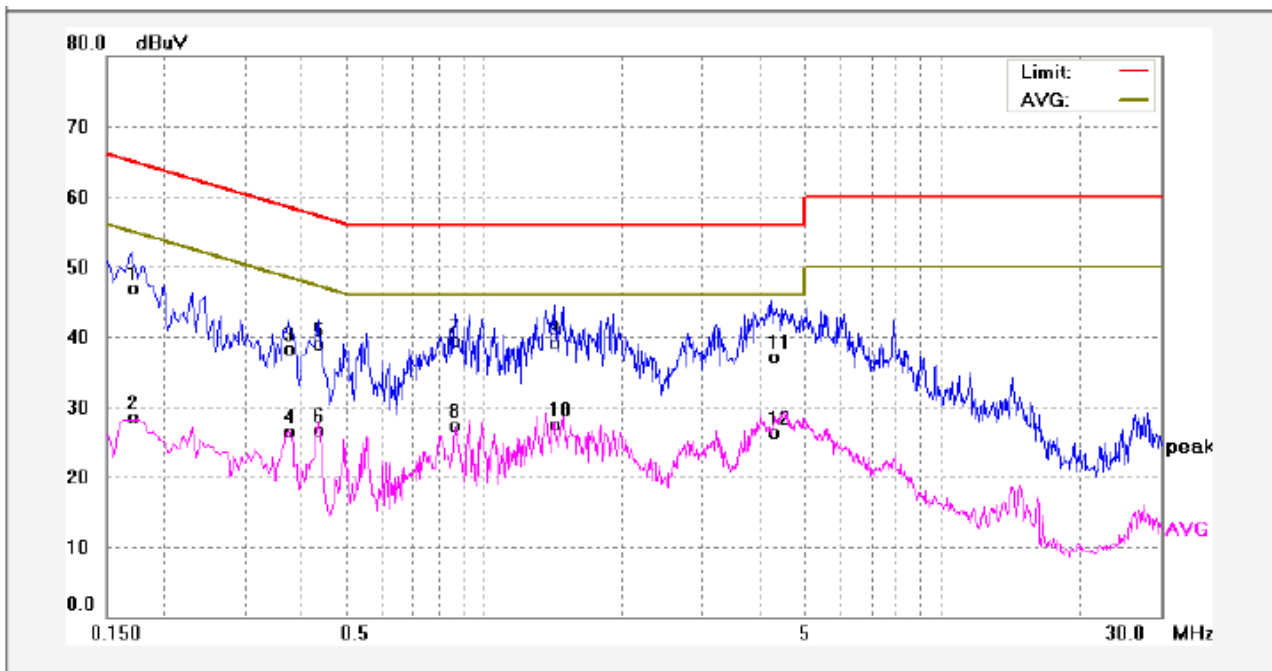
6.3 Measurement Description

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

6.4 Conducted Emission Test Result

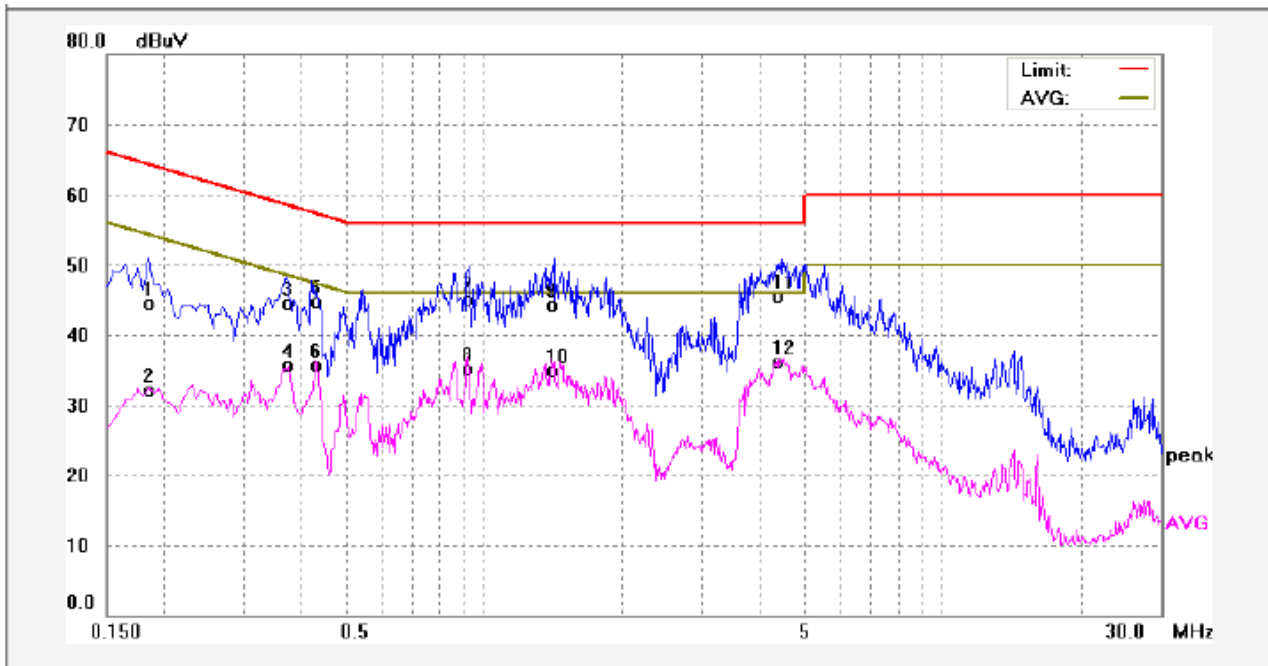
An initial pre-scan was performed on the live and neutral lines.

Live line:



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit dBuV	Margin (dB)	Detector	Remark
1	0.1700	36.52	10.48	47.00	64.96	-17.96	QP	
2	0.1700	18.08	10.48	28.56	54.96	-26.40	AVG	
3	0.3750	27.82	10.49	38.31	58.39	-20.08	QP	
4	0.3750	16.01	10.49	26.50	48.39	-21.89	AVG	
5	0.4350	28.39	10.49	38.88	57.16	-18.28	QP	
6	0.4350	16.26	10.49	26.75	47.16	-20.41	AVG	
7	0.8650	28.92	10.60	39.52	56.00	-16.48	QP	
8	0.8650	16.74	10.60	27.34	46.00	-18.66	AVG	
9	1.4250	28.54	10.62	39.16	56.00	-16.84	QP	
10	1.4250	16.84	10.62	27.46	46.00	-18.54	AVG	
11	4.2300	26.38	10.65	37.03	56.00	-18.97	QP	
12	4.2300	15.60	10.65	26.25	46.00	-19.75	AVG	

Neutral line:



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit dBuV	Margin (dB)	Detector	Remark
1	0.1850	33.98	10.48	44.46	64.25	-19.79	QP	
2	0.1850	21.66	10.48	32.14	54.25	-22.11	AVG	
3	0.3700	34.05	10.49	44.54	58.50	-13.96	QP	
4	0.3700	25.27	10.49	35.76	48.50	-12.74	AVG	
5	0.4305	34.27	10.49	44.76	57.24	-12.48	QP	
6	0.4305	25.22	10.49	35.71	47.24	-11.53	AVG	
7	0.9250	34.59	10.60	45.19	56.00	-10.81	QP	
8	0.9250	24.52	10.60	35.12	46.00	-10.88	AVG	
9	1.4200	33.71	10.62	44.33	56.00	-11.67	QP	
10	1.4200	24.21	10.62	34.83	46.00	-11.17	AVG	
11	4.4450	34.90	10.65	45.55	56.00	-10.45	QP	
12	4.4450	25.42	10.65	36.07	46.00	-9.93	AVG	

7 Radiated Emissions

Test Requirement: FCC CFR47 Part 15 Section 15.209 & 15.247

Test Method: ANSI C63.4:2003

Test Result: PASS

Measurement Distance: 3m

Limit:

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

7.1 EUT Operation

Operating Environment:

Temperature: 25.5 °C

Humidity: 51 % RH

Atmospheric Pressure: 101.6kPa

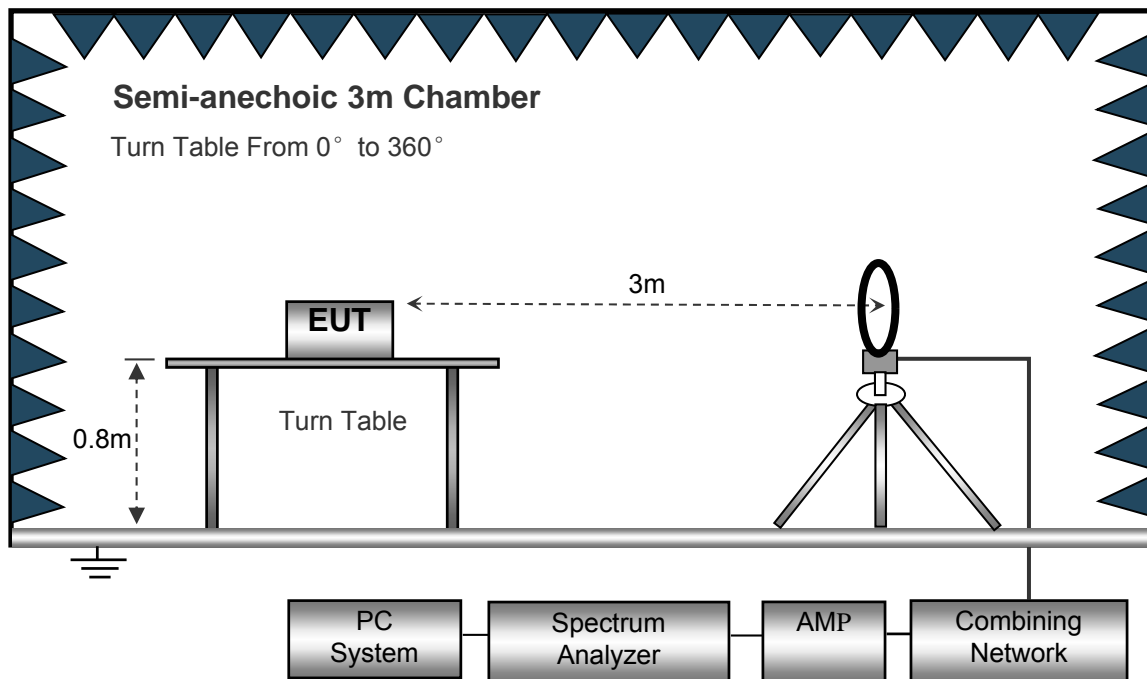
EUT Operation:

The test was performed in transmitting mode, the test data were shown in the report.

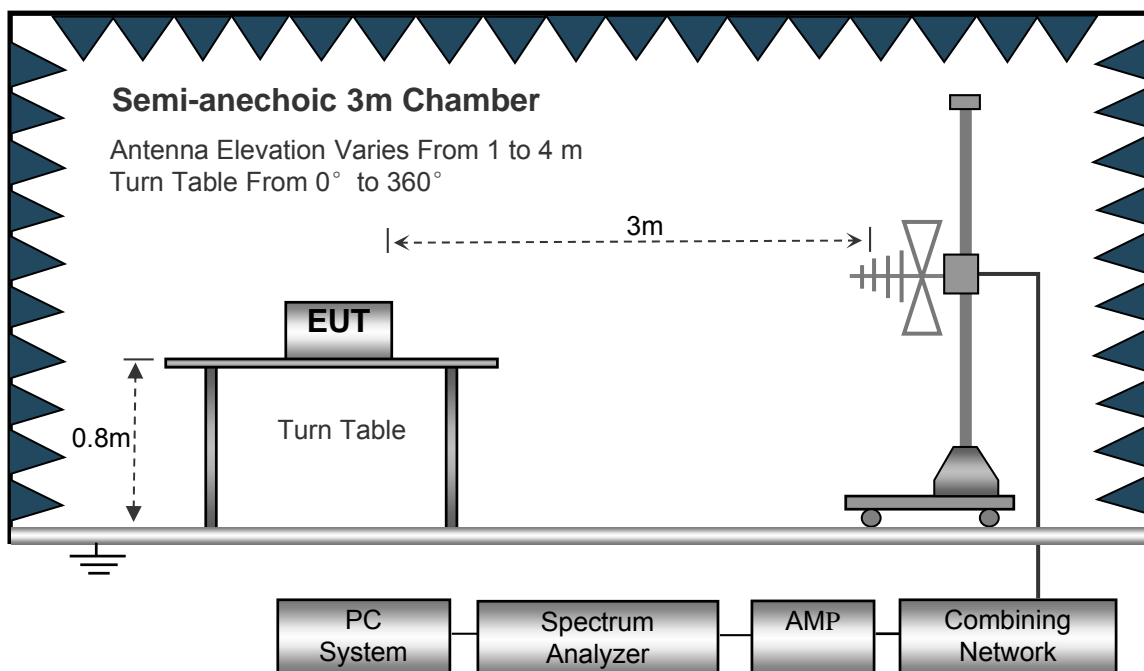
7.2 Test Setup

The radiated emission tests were performed in the 3m Semi- Anechoic Chamber test site, using the setup accordance with the ANSI C63.4: 2003.

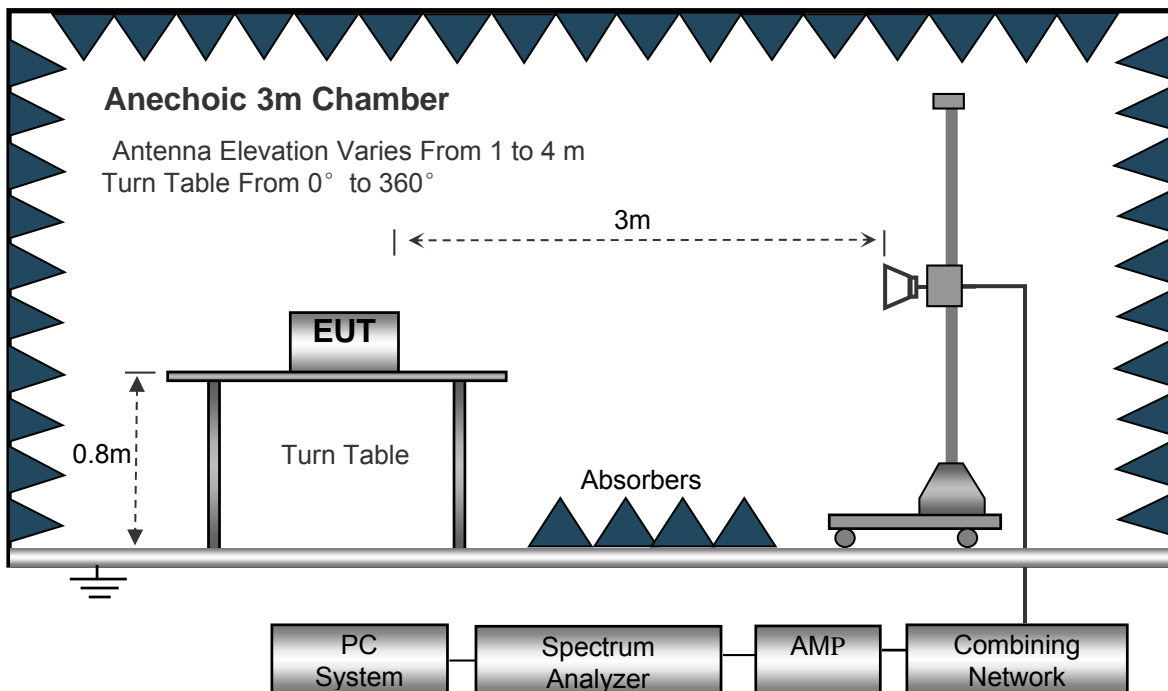
The test setup for emission measurement below 30MHz.



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



The test setup for emission measurement above 1 GHz.



7.3 Spectrum Analyzer Setup

Below 30MHz

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

30MHz ~ 1GHz

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

Above 1GHz

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

7.4 Test Procedure

1. The EUT is placed on a turntable, which is 0.8m above ground plane.
2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
3. EUT is set 3m away from the receiving antenna, which is moved from 1m to 4m to find out the maximum emissions.
4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
6. Repeat above procedures until the measurements for all frequencies are complete.
7. The radiation measurements are performed in X,Y and Z axis positioning(X denotes lying on the table, Y denotes side stand and Z denotes vertical stand),the worst condition was tested putting the eut in X axis,so the worst data were shown as follow.

7.5 Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain from the Amplitude reading. The basic equation is as follows:

$$\text{Corr. Ampl.} = \text{Indicated Reading} + \text{Antenna Factor} + \text{Cable Factor} - \text{Amplifier Gain}$$

The "Margin" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -7dB means the emission is 7dB below the maximum limit for Class B. The equation for margin calculation is as follows:

$$\text{Margin} = \text{Corr. Ampl.} - \text{Limit}$$

$$\text{Corrected factor} = \text{Antenna Factor} + \text{Cable Factor} - \text{Amplifier Gain}$$

7.6 Summary of Test Results

Test Frequency: 32.768kHz~30MHz

The measurements were more than 20 dB below the limit and not reported.

Test Frequency: 30MHz ~ 18GHz

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	Limit	Margin
				Height	Polar				
(MHz)	(dB μ V)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)
GFSK Low Channel									
82.23	12.32	PK	333	1.8	H	17.01	29.33	40.00	-10.67
82.23	10.52	PK	28	1.5	V	17.01	27.53	40.00	-12.47
4804.00	55.21	PK	317	1.1	V	-1.06	54.15	74.00	-19.85
4804.00	45.63	Ave	317	1.1	V	-1.06	44.57	54.00	-9.43
7206.00	43.52	PK	53	1.5	V	1.33	44.85	74.00	-29.15
7206.00	40.47	Ave	53	1.5	V	1.33	41.80	54.00	-12.20
2334.53	46.05	PK	296	1.3	V	-13.19	32.86	74.00	-41.14
2334.53	39.96	Ave	296	1.3	V	-13.19	26.77	54.00	-27.23
2365.02	42.09	PK	47	1.5	H	-13.14	28.95	74.00	-45.05
2365.02	38.13	Ave	47	1.5	H	-13.14	24.99	54.00	-29.01
2492.13	42.06	PK	328	1.5	V	-13.08	28.98	74.00	-45.02
2492.13	37.71	Ave	328	1.5	V	-13.08	24.63	54.00	-29.37

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	Limit	Margin
				Height	Polar				
(MHz)	(dB μ V)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)
GFSK Middle Channel									
82.23	12.68	PK	161	1.6	H	17.01	29.69	40.00	-10.31
82.23	10.25	PK	90	2.0	V	17.01	27.26	40.00	-12.74
4880.00	54.63	PK	111	2.0	V	-0.62	54.01	74.00	-19.99
4880.00	45.32	Ave	111	2.0	V	-0.62	44.70	54.00	-9.30
7320.00	42.98	PK	352	1.7	V	2.21	45.19	74.00	-28.81
7320.00	40.91	Ave	352	1.7	V	2.21	43.12	54.00	-10.88
2326.88	45.77	PK	293	1.4	V	-13.19	32.58	74.00	-41.42
2326.88	39.19	Ave	293	1.4	V	-13.19	26.00	54.00	-28.00
2385.58	44.36	PK	264	1.9	H	-13.14	31.22	74.00	-42.78
2385.58	37.30	Ave	264	1.9	H	-13.14	24.16	54.00	-29.84
2487.82	43.14	PK	26	1.5	V	-13.08	30.06	74.00	-43.94
2487.82	38.47	Ave	26	1.5	V	-13.08	25.39	54.00	-28.61

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	Limit	Margin
				Height	Polar				
(MHz)	(dB μ V)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)
GFSK High Channel									
82.23	12.36	PK	88	1.0	H	17.01	29.37	40.00	-10.63
82.23	10.15	PK	112	1.4	V	17.01	27.16	40.00	-12.84
4960.00	54.71	PK	339	1.5	V	-0.24	54.47	74.00	-19.53
4960.00	45.62	Ave	339	1.5	V	-0.24	45.38	54.00	-8.62
7440.00	43.02	PK	73	2.0	V	2.84	45.86	74.00	-28.14
7440.00	41.25	Ave	73	2.0	V	2.84	44.09	54.00	-9.91
2337.27	45.40	PK	27	1.5	V	-13.19	32.21	74.00	-41.79
2337.27	39.08	Ave	27	1.5	V	-13.19	25.89	54.00	-28.11
2386.03	43.33	PK	286	1.0	H	-13.14	30.19	74.00	-43.81
2386.03	36.63	Ave	286	1.0	H	-13.14	23.49	54.00	-30.51
2488.52	42.03	PK	291	1.5	V	-13.08	28.95	74.00	-45.05
2488.52	38.83	Ave	291	1.5	V	-13.08	25.75	54.00	-28.25

Test Frequency: 18GHz~25GHz

The measurements were more than 20 dB below the limit and not reported

8 Band Edge Measurement

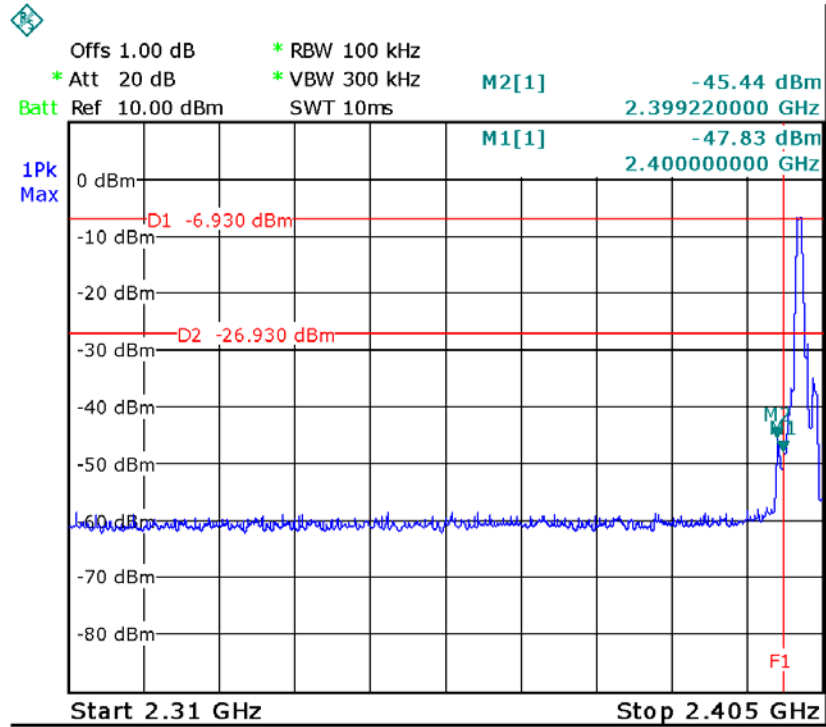
Test Requirement:	Section 15.247(d) In addition, radiated emissions which fall in the restricted bands. as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) and 15.205(c).
Test Method:	KDB558074 D01 DTS Meas Guidance v03r02
Test Mode:	Transmitting

8.1 Test Produce

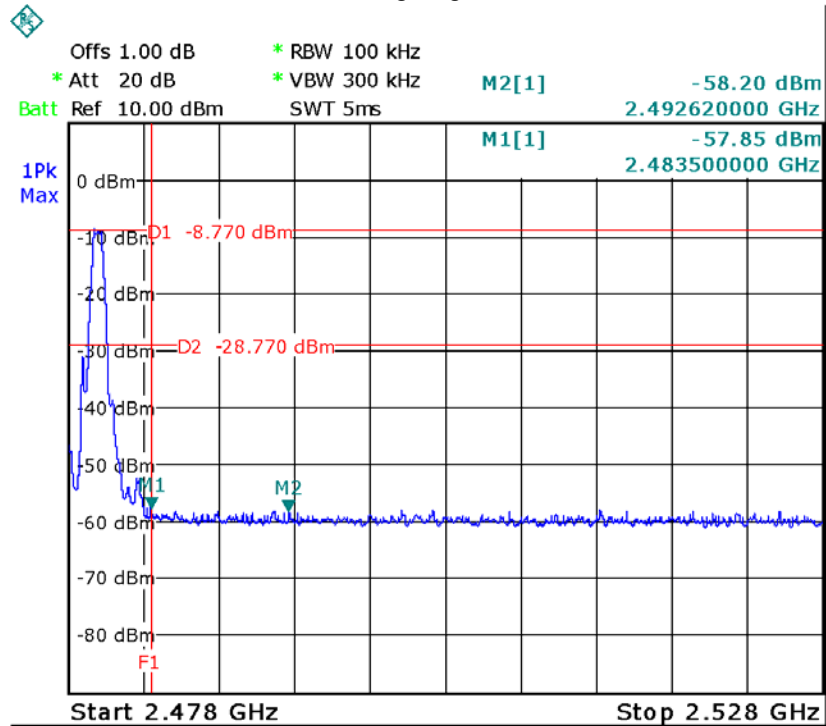
1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
3. Set the spectrum analyzer: RBW = 100kHz, VBW = 300kHz, Sweep = auto
Detector function = peak, Trace = max hold
4. Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
5. Repeat above procedures until all measured frequencies were complete.

8.2 Test Result

Band edge-left side



Band edge-right side



9 6 dB Bandwidth Measurement

Test Requirement:

FCC CFR47 Part 15 Section 15.247

Test Method:

KDB558074 D01 DTS Meas Guidance v03r02

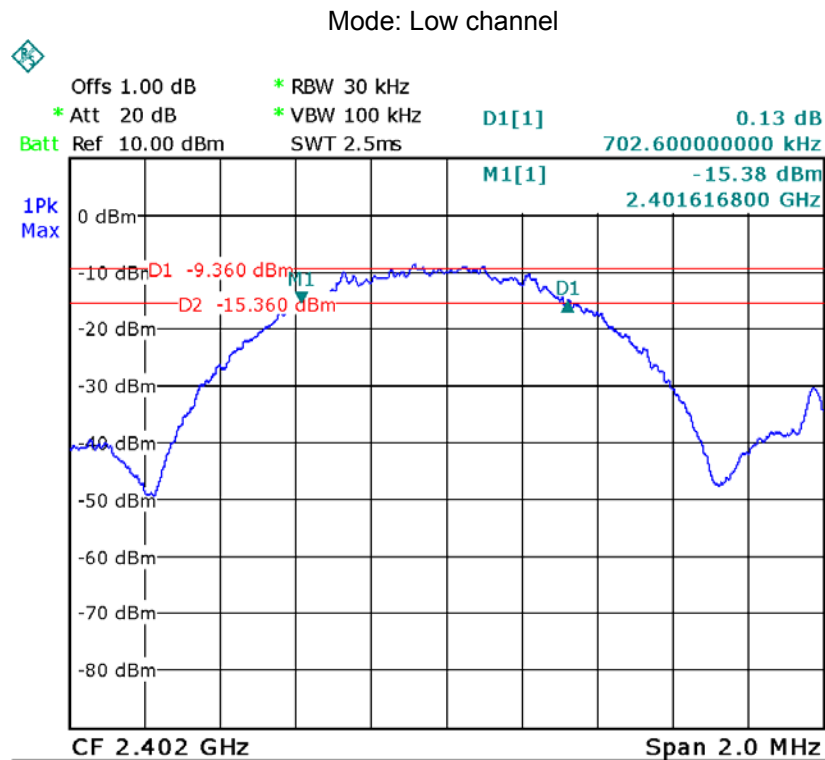
9.1 Test Procedure

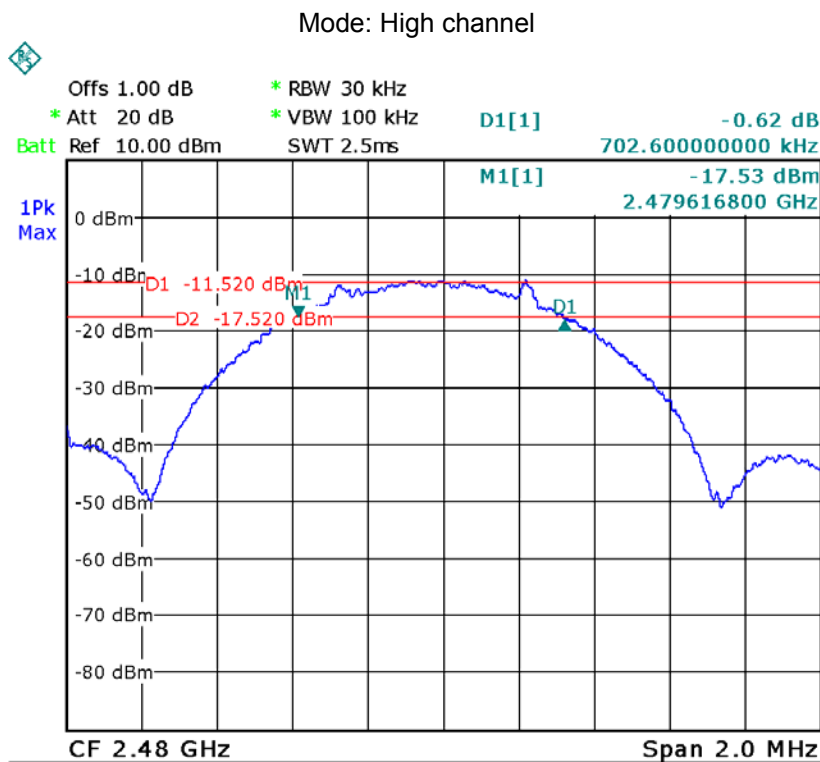
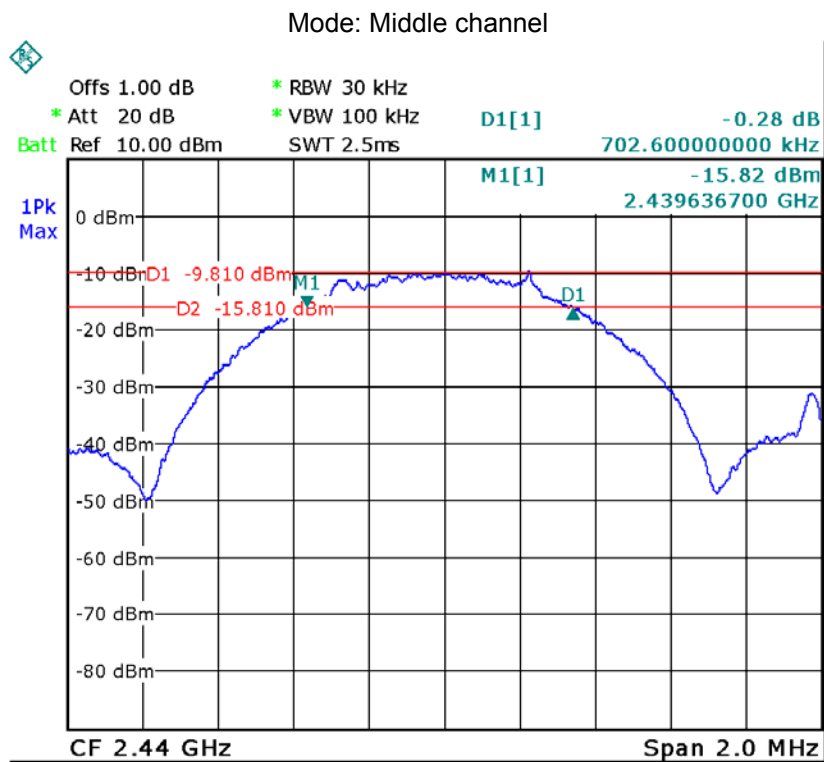
1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum;
2. Set the spectrum analyzer: RBW = 30kHz, VBW = 100kHz

9.2 Test Result

Operation mode	Bandwidth (MHz)
Lowchannel	0.703
Middle channel	0.703
High channel	0.703

Test result plot as follows:





10 Maximum Peak Output Power

Test Requirement:

FCC CFR47 Part 15 Section 15.247

Test Method:

KDB558074 D01 DTS Meas Guidance v03r02

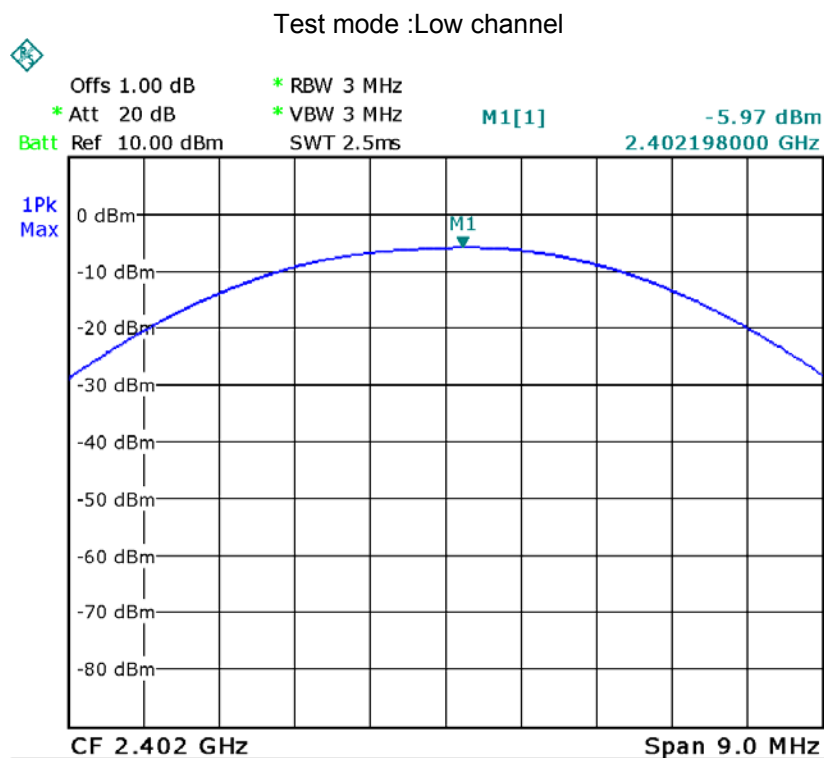
10.1 Test Procedure

KDB558074 D01 DTS Meas Guidance v03r02 section 8.1.2 Option 2

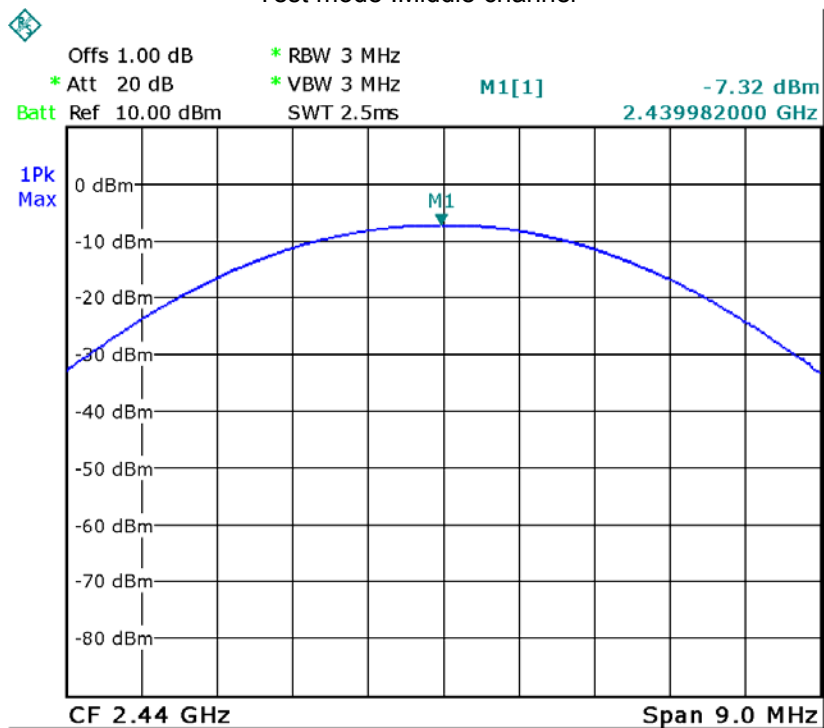
1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum.
2. Set the spectrum analyzer: RBW = 3MHz. VBW = 3MHz. Sweep = auto; Detector Function = Peak, Set the span to fully encompass the DTS bandwidth.
3. Keep the EUT in transmitting at lowest, medium and highest channel individually. Record the max value.

10.2 Test Result

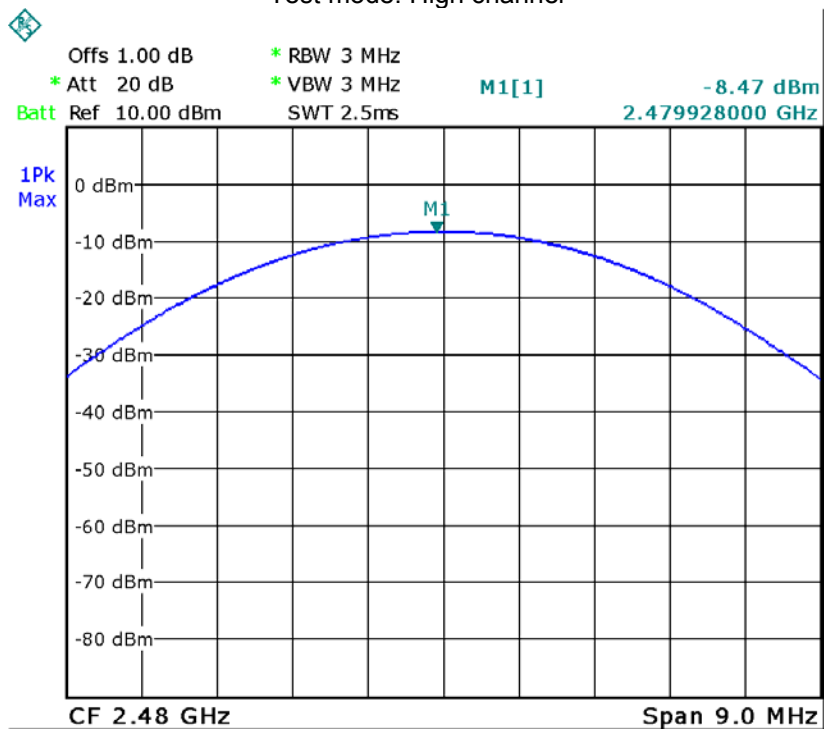
Maximum Peak Output Power (dBm)		
Low channel	Middle channel	High channel
-5.97	-7.32	-8.47
Limit		
1W/30dBm		



Test mode :Middle channel



Test mode: High channel



11 Power Spectral density

Test Requirement:

FCC CFR47 Part 15 Section 15.247

Test Method:

KDB558074 D01 DTS Meas Guidance v03r02

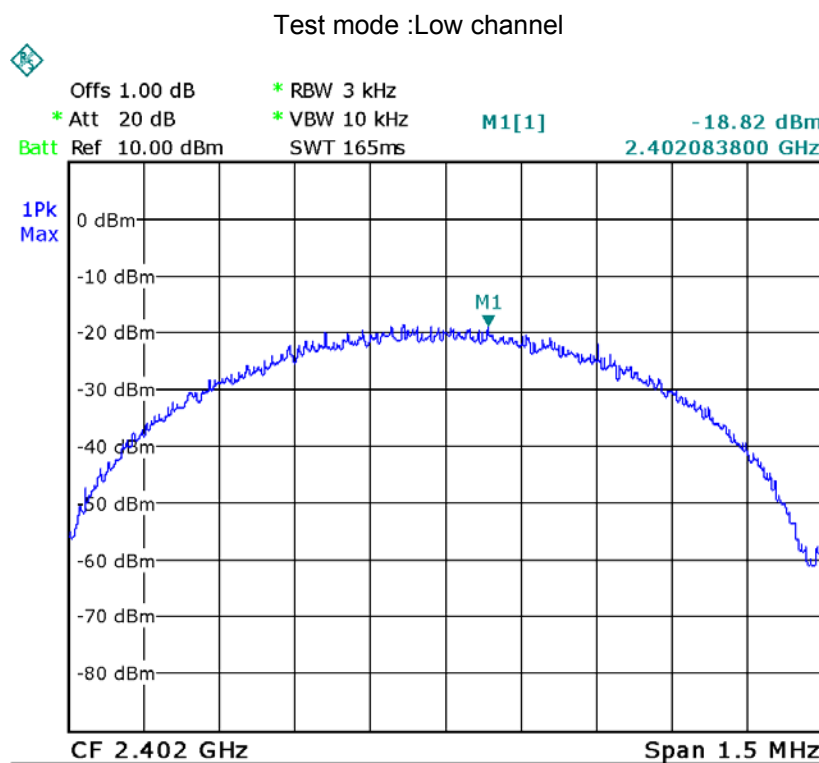
11.1 Test Procedure

KDB558074 D01 DTS Meas Guidance v03r02 section 9.1 Option 1

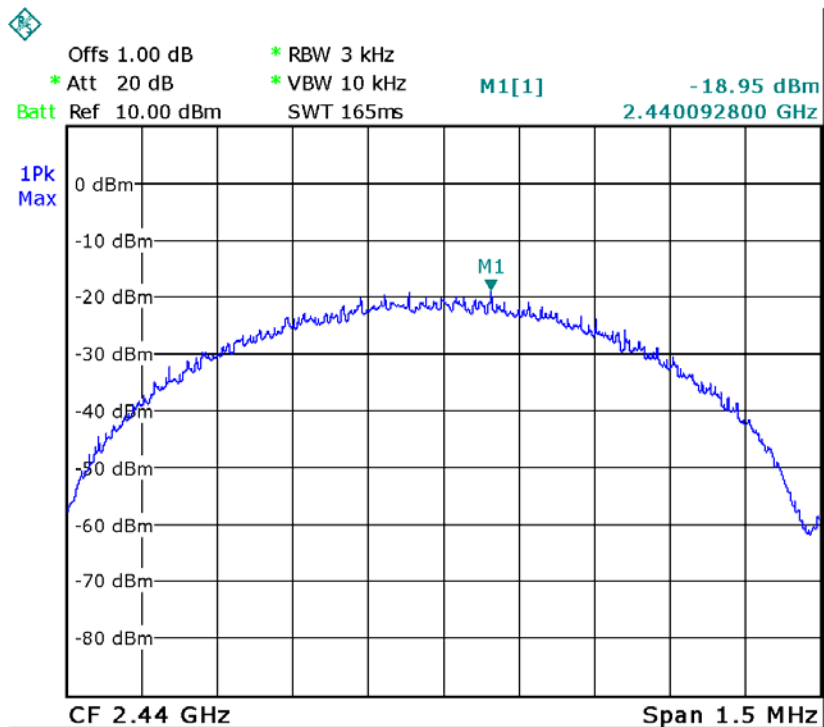
1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum.
2. Set the spectrum analyzer: RBW = 3kHz. VBW = 10kHz , Span = 1.5 times the DTS channel bandwidth(6 dB bandwidth). Sweep = auto; Detector Function = Peak. Trace = Max hold.
3. Allow the trace to stabilize. Use the marker-delta function to determine the separation between the peaks of the adjacent channels. The limit is specified in one of the subparagraphs of this Section
Submit this plot.

11.2 Test Result

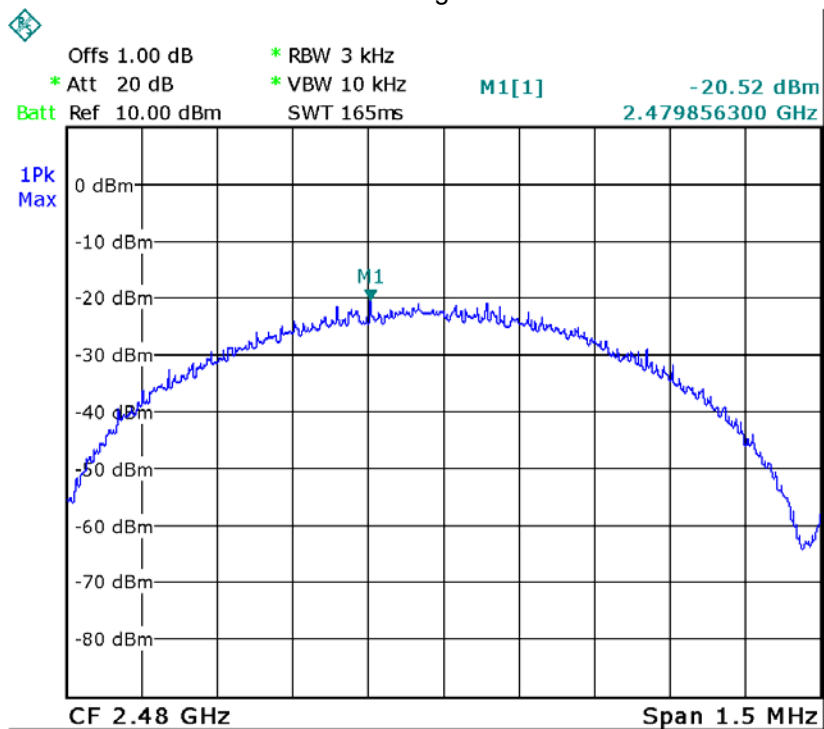
Power Spectral Density		
Low channel	Middle channel	High channel
-18.82	-18.95	-20.52
Limit		
8dBm per 3kHz		



Test mode : Middle channel



Test mode :High channel



12 Antenna Requirement

According to the FCC Part 15 Paragraph 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. This product has a PCB printed antenna, fulfill the requirement of this section.

13 RF Exposure

Test Requirement: FCC Part 1.1307

Test Mode: The EUT work in test mode(Tx).

13.1 Requirements

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 0.2 m normally can be maintained between the user and the device.

13.2 The procedures / limit

(A) Limits for Occupational / Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842 / f	4.89 / f	(900 / f)*	6
30-300	61.4	0.163	1.0	6
300-1500			F/300	6
1500-100,000			5	6

(B) Limits for General Population / Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-100,000			1.0	30

Note: f = frequency in MHz ; *Plane-wave equivalent power density

13.3 MPE Calculation Method

$$E \text{ (V/m)} = \frac{\sqrt{30 \times P \times G}}{d} \quad \text{Power Density: } Pd \text{ (W/m}^2\text{)} = \frac{E^2}{377}$$

E = Electric field (V/m)

P = Peak RF output power (W)

G = EUT Antenna numeric gain (numeric)

d = Separation distance between radiator and human body (m)

The formula can be changed to

$$Pd = \frac{30 \times P \times G}{377 \times d^2}$$

From the peak EUT RF output power, the minimum mobile separation distance, $d=0.2\text{m}$, as well as the gain of the used antenna, the RF power density can be obtained

Antenna Gain (numeric)	Max.Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (mW/cm ²)	Limit of Power Density (mW/cm ²)
1.000	-5.97	0.253	0.000050	1

14 Photographs – Model TL100-E26 Test Setup

14.1 Conducted Emission

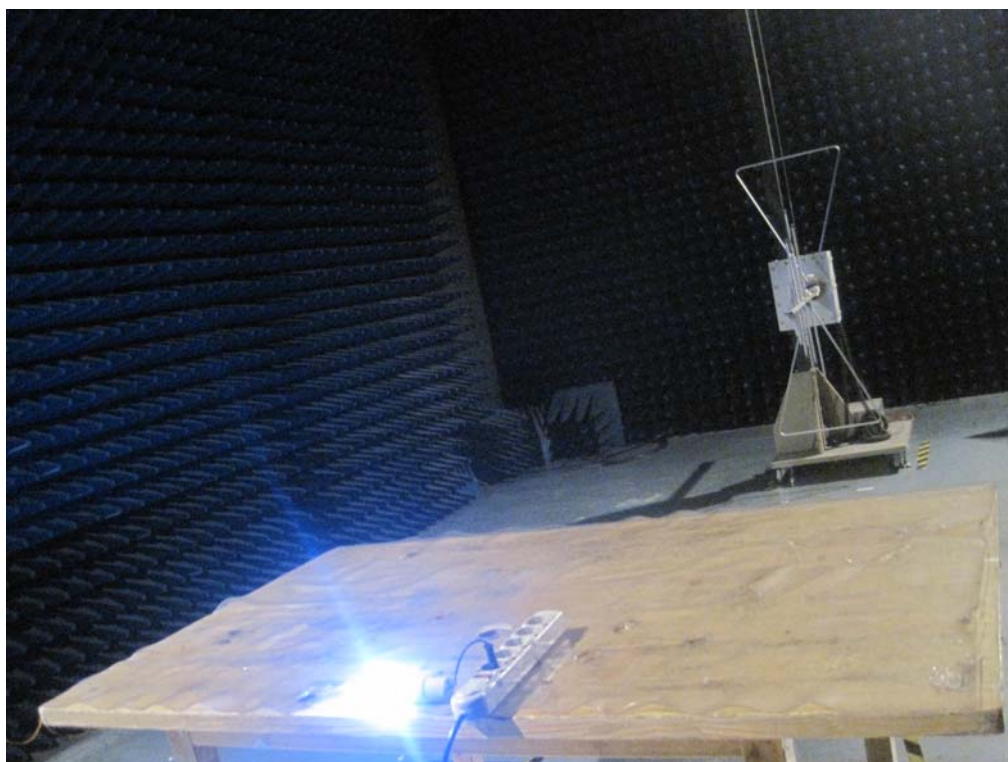


14.2 Radiated Emission

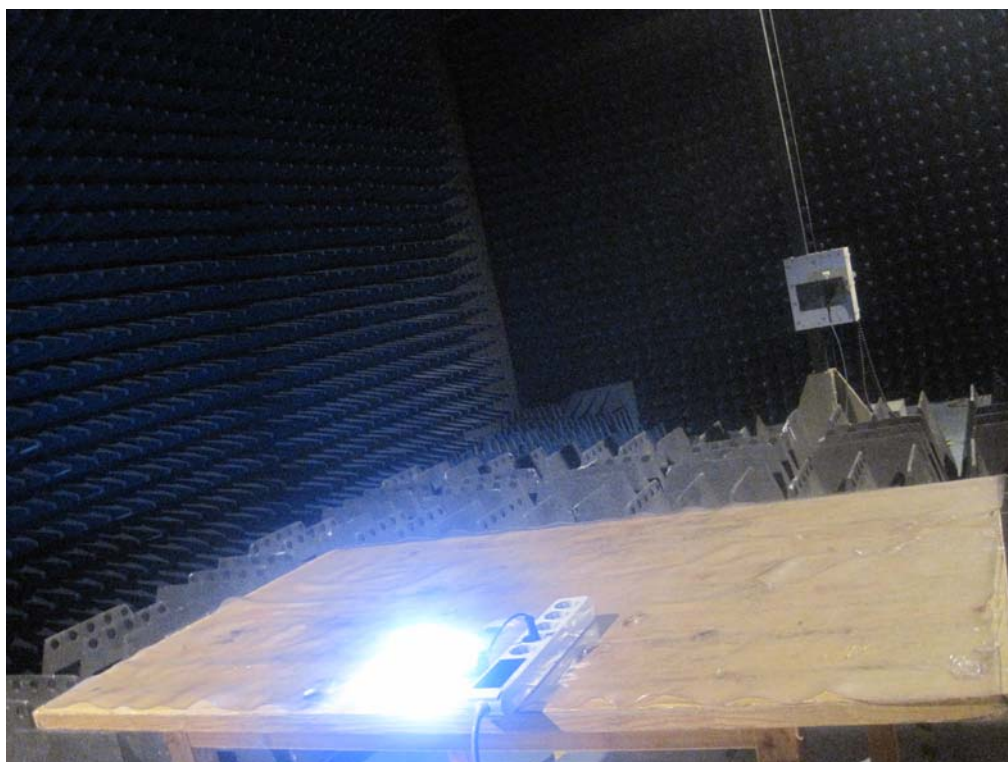
Test frequency below 30MHz



Test frequency from 30MHz to 1GHz



Test frequency above 1GHz



15 Photographs - Constructional Details

15.1 EUT- External View

Model: TL100-E12



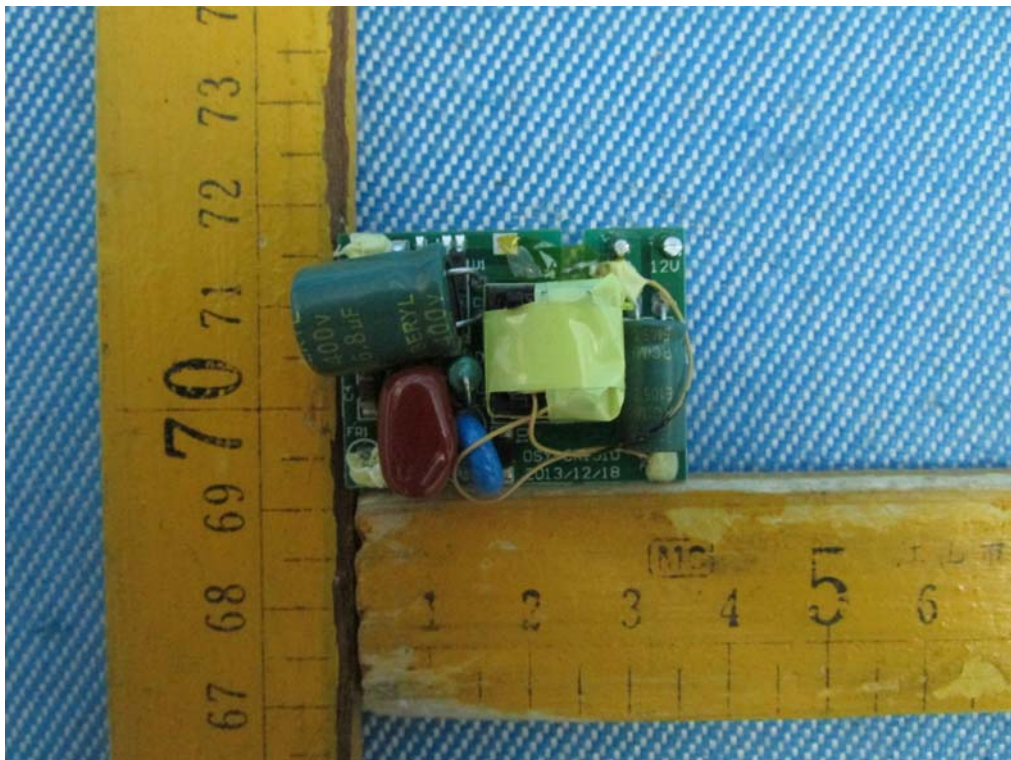


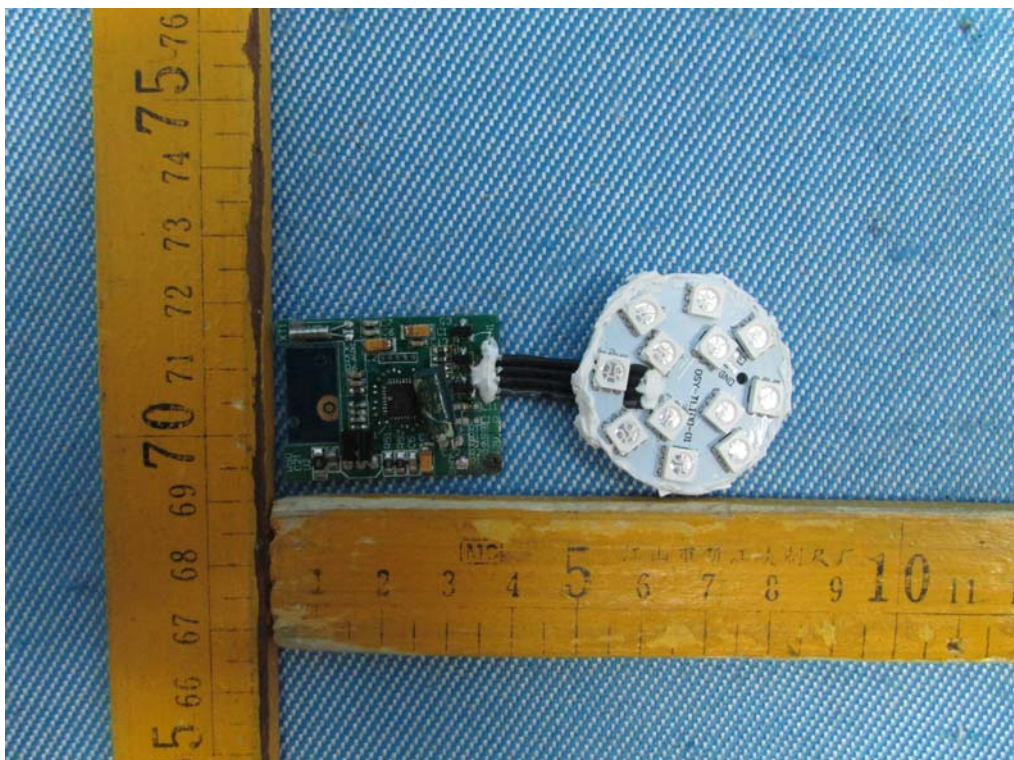
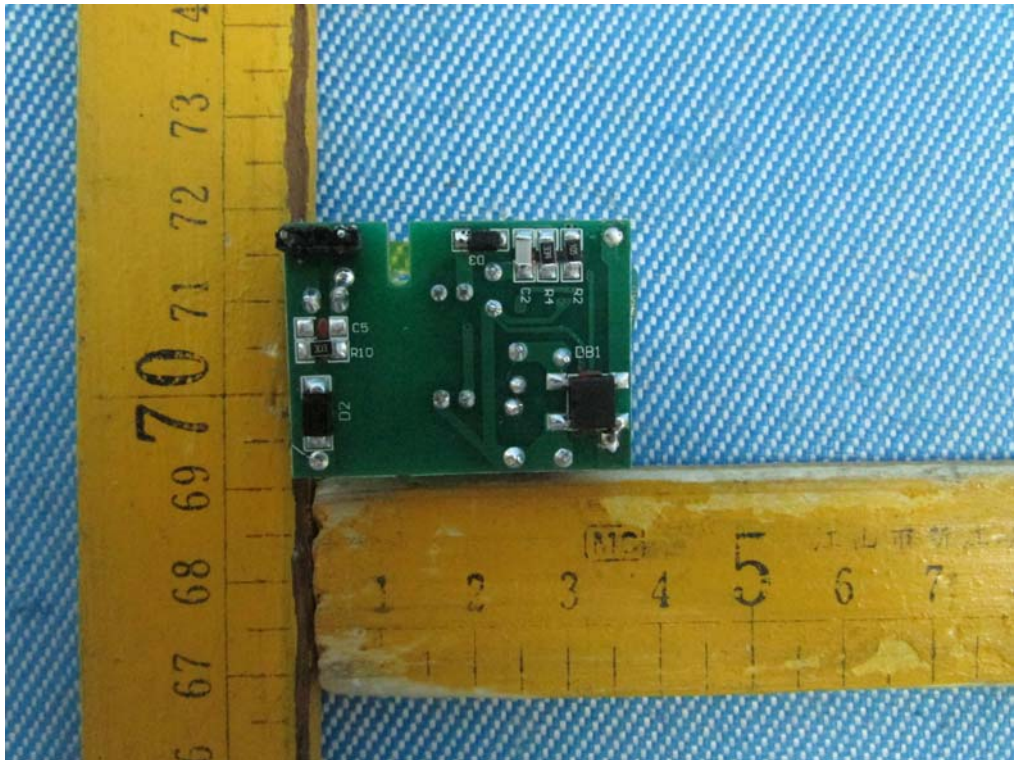
Model: TL100-E26

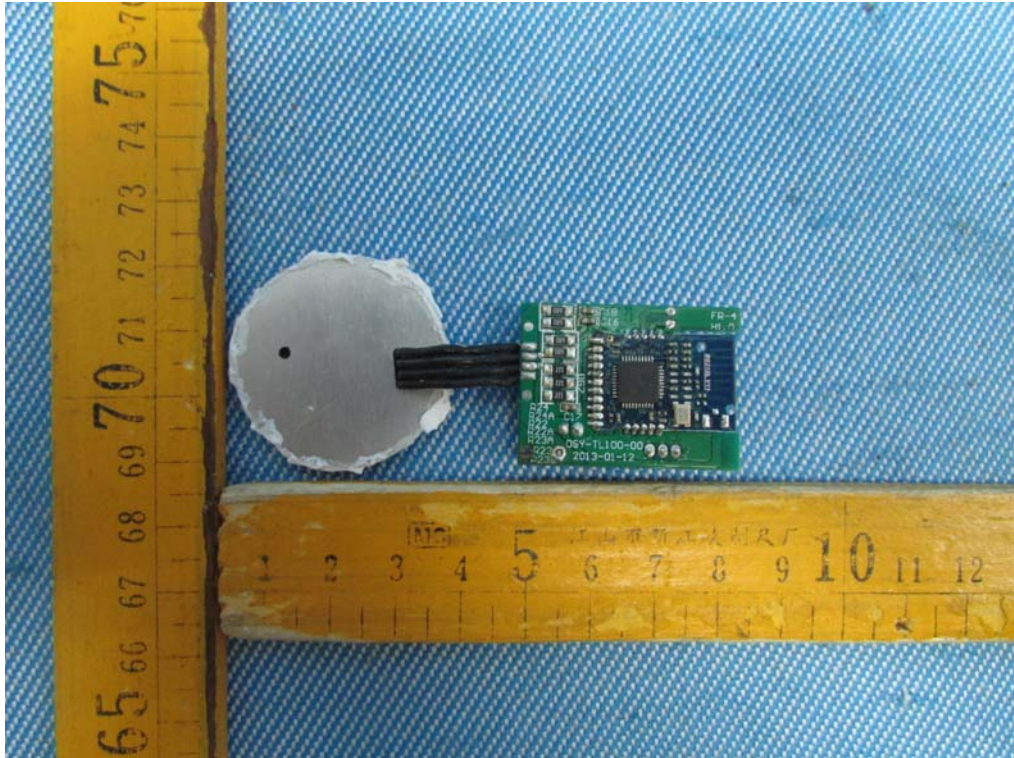




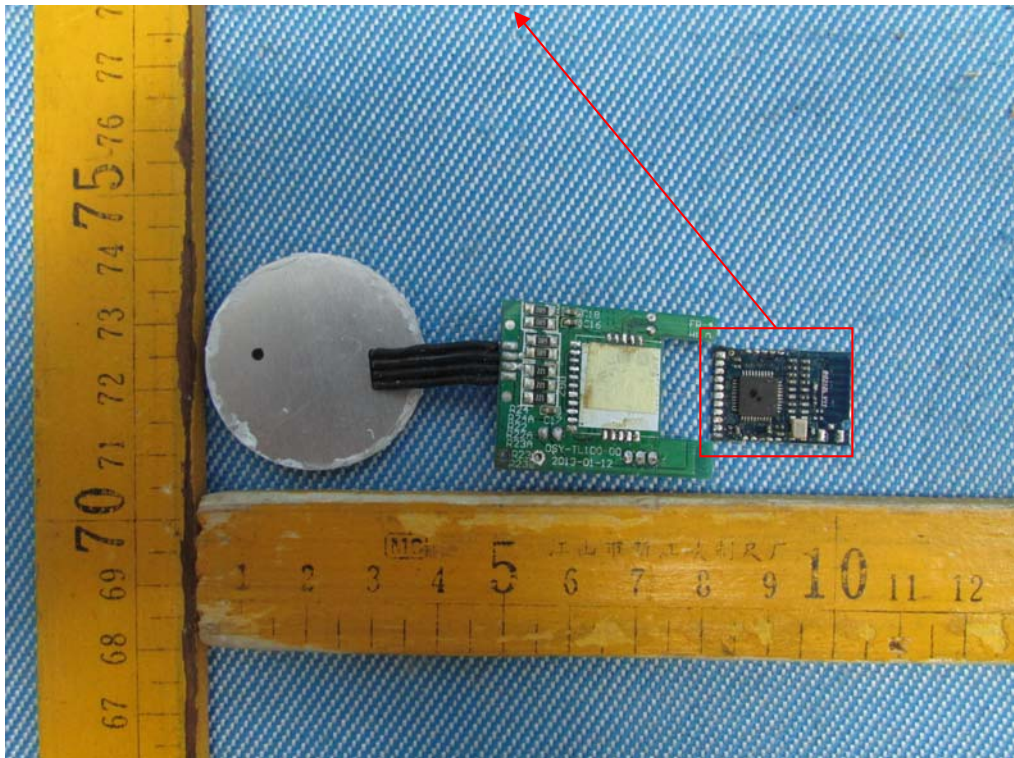
15.2 Model TL100-E26 - Internal View

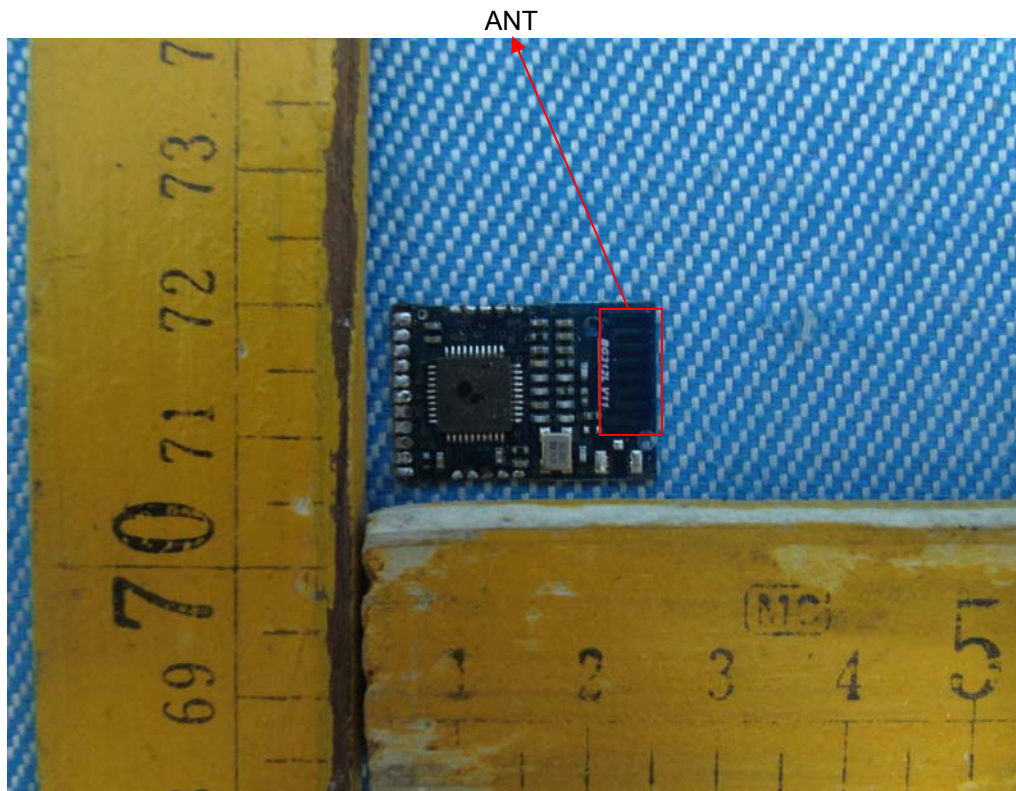






RF module





====End of Report====