FCC TEST REPORT

For

Neusoft Xikang Healthcare Technology Co., Ltd.

Intelligent bracelet

Model No.	:	NXK-A01-L1
FCC ID	:	2ACWQ-NXK-A01-L1
Frequency range	:	2402-2480MHz
Number of Channel	:	40CH
Type of antenna	:	Internal monopole Antenna
Applicant	:	Neusoft Xikang Healthcare Technology Co., Ltd. Rooms 321, 315-9, Building 6, No. 8 West Dong Bei Wang Road, Haidian District, Beijing 100193, China
Regulation	:	FCC Rules and Regulations Part 15 Subpart C Section 15.247
Prepared by	:	WST Certification & Testing (HK) Limited
Address	:	12/F., San Toi Building,137-139 Connaught Road Central, Hong Kong, China
Report No.:	:	WST20140803006
Test Date	:	August 01-06, 2014
Date of Report	:	August 06, 2014

TABLE OF CONTENT

Description Page

TEST REPORT DECLARATION

Applicant	:	Neusoft Xikang Healthcare Technology Co., Ltd.
Manufacturer	:	Guangdong Appscomm Co., Ltd
EUT Description	:	Intelligent bracelet
Model NO.	:	NXK-A01-L1
Serial NO.	:	N/A
Power Supply	:	DC 3.7V From Adapter

Measurement Procedure Used:
FCC Rules and Regulations Part 15 Subpart C Section 15.247
ANSI C63.4:2003

The device described above is tested by WST Certification & Testing (HK) Limited to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart C Section 15.247 limits. The measurement results are contained in this test report and WST Certification & Testing (HK) Limited. is assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the Equipment Under Test (EUT) is to be technically compliant with the FCC requirements

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of WST Certification & Testing (HK) Limited.

Date of Test: August 01-06, 2014

Prepared by: Eric Xie

Project Engineer(Eric Xie)

Reviewed by:

Project Supervisor(Nico Lee)

Approved by:

Technical Director（Kait Chen）

1. TEST PROCEDURES AND RESULTS

FCC Rules	Description of Test	Result
Section 15.247(a)2)	6dB Bandwidth Test	Compliant
Section 15.247(e)	Power Spectral Density Test	Compliant
Section 15.247(b)(3)	Maximum Peak Output Power Test	Compliant
Section 15.247(d)	Band Edge Compliance Tes	Compliant
Section 15.247(d) Section 15.209)	Radiated Spurious Emission Test	Compliant
Section 15.247(d)	Conducted Spurious Emission Test	Compliant
Section 15.207	AC Power Line Conducted Emission Test	Compliant
Section 15.203	Antenna Requirement	Compliant

2. GENERAL INFORMATION

1.1. General Information

EUT	:	Intelligent bracelet
Model Number	:	NXK-A01-L1
Frequency Range	:	2402-2480MHz
Number of Channels	:	40CH
Antenna Gain	:	0dBi
Modulation mode	:	GFSK
Applicant	:	Neusoft Xikang Healthcare Technology Co., Ltd. Rooms 321, 315-9, Building 6, No. 8 West Dong Bei Wang Road, Haidian District, Beijing 100193, China
Manufacturer	:	Guangdong Appscomm Co., Ltd Block C3, Innovation Building, No.182, Science Ave., Luogang District, Guangzhou, 510663 China
Test Date	:	August 01-06, 2014

1.2. Test Facility

Test Firm	:	Shenzhen CTL Testing Technology Co., Ltd. Certificated by FCC, Registration No.: 970318
Address	:	Floor 1-A, Baisha Technology Park,No.3011, Shahexi Road. Nanshan, Shenzhen, China
Tel	:	86-755-89486194
Fax	:	86-755-89486194

Measurement Uncertainty

Conducted Emission Expanded Uncertainty	=	3.20dB, k=2
Radiated emission expanded uncertainty(9kHz-30MHz)	=	3.08dB, k=2
Radiated emission expanded uncertainty(30MHz-1000MHz)	=	4.10dB, k=2
Radiated emission expanded uncertainty(Above 1GHz)	=	4.32dB, k=2

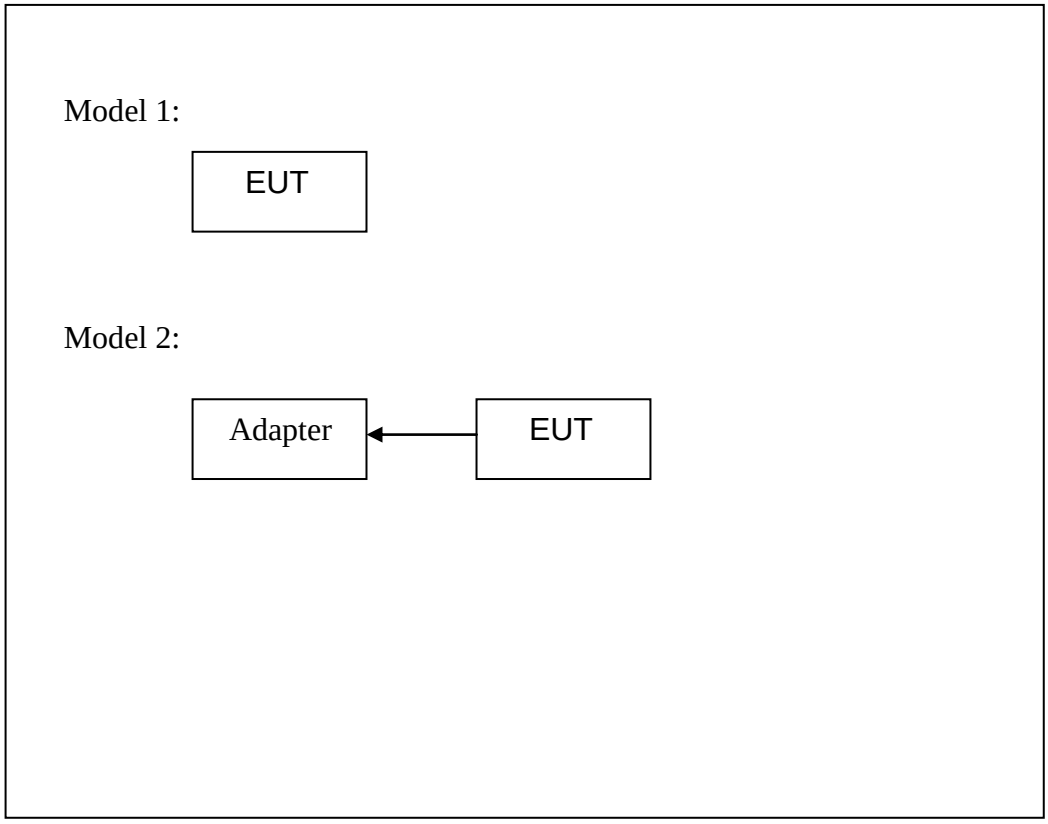
1. TEST INSTRUMENT USED

Test Equipment	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Due Date
Bilog Antenna	Sunol Sciences Corp.	JB1	A061713	2014/07/12	2015/07/11
EMI Test Receiver	R&S	ESCI	103710	2014/07/12	2015/07/11
Spectrum Analyzer	Agilent	E4407B	MY45108355	2014/07/12	2015/07/11
Controller	EM Electronics	Controller EM 1000	N/A	2014/07/12	2015/07/11
Horn Antenna	Sunol Sciences Corp.	DRH-118	A062013	2014/07/12	2015/07/11
Horn Antenna	SCHWARZBECK	BBHA9170	1562	2014/07/12	2015/07/11
Active Loop Antenna	SCHWARZBECK	FMZB1519	1519-037	2014/07/12	2015/07/11
LISN	R&S	ENV216	101316	2014/07/12	2015/07/11
LISN	SCHWARZBECK	NSLK8127	8127687	2014/07/12	2015/07/11
Microwave Preamplifier	HP	8349B	3155A00882	2014/07/12	2015/07/11
Amplifier	HP	8447D	3113A07663	2014/07/12	2015/07/11
Transient Limiter	Com-Power	LIT-153	532226	2014/07/12	2015/07/11
Radio Communication Tester	R&S	CMU200	3655A03522	2014/07/12	2015/07/11
Temperature/Humidity Meter	zhicheng	ZC1-2	22522	2014/07/12	2015/07/11
SIGNAL GENERATOR	HP	8647A	3200A00852	2014/07/12	2015/07/11
Wideband Peak Power Meter	Anritsu	ML2495A	220.23.35	2014/07/12	2015/07/11
Climate Chamber	ESPEC	EL-10KA	A20120523	2014/07/12	2015/07/11
High-Pass Filter	K&L	9SH10-2700/X12750-O/O	/	2014/07/12	2015/07/11
High-Pass Filter	K&L	41H10-1375/U12750-O/O	/	2014/07/12	2015/07/11

2. OPERATION OF EUT DURING TESTING

Operating Mode
The mode is used: **Transmitting mode**
Low Channel: 2402MHz
Middle Channel: 2440MHz
High Channel: 2480MHz

Test Setup

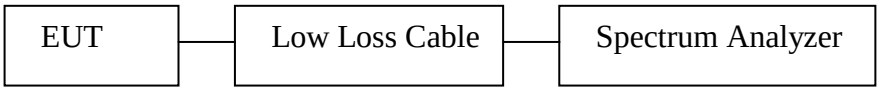


Channel list for Bluetooth

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

3. 6DB BANDWIDTH MEASUREMENT

3.1. Block Diagram of Test Setup



3.2. Limits

Section 15.247(a)(2): Systems using digital modulation techniques may operate in the 902-928MHz, 2400-2483.5MHz, and 5725-5850MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz

3.3. Test Procedure

5.3.1.The transmitter output was connected to the spectrum analyzer through a low loss cable.

5.3.2. Set RBW of spectrum analyzer to 100kHz and VBW to 300kHz

5.3.3.The 6dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6dB.

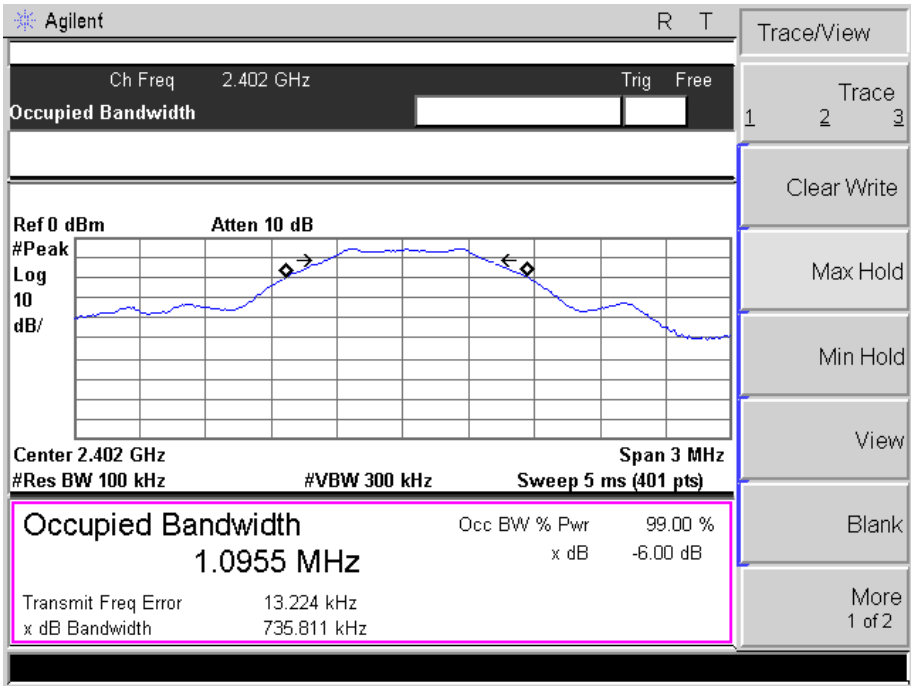
3.4. Test Result

PASS

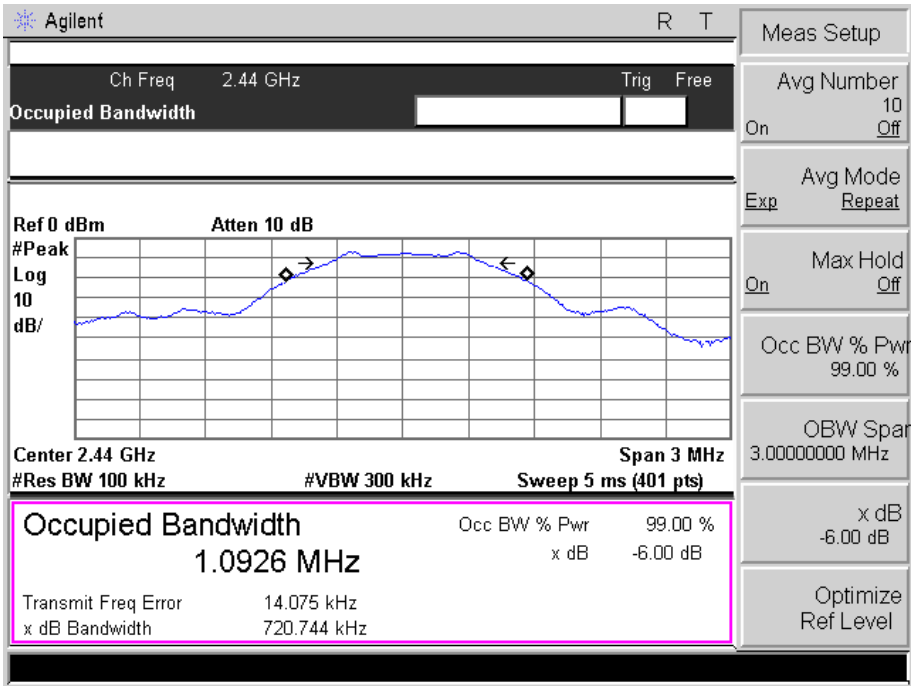
Bt 4.0			
Channel	**Frequency (MHz)**	**6dB Bandwidth (MHz)**	**Limit (MHz)**
Low	2402	1.0955	>0.5MHz
Middle	2440	1.0926	>0.5MHz
High	2480	1.0977	>0.5MHz

The spectrum analyzer plots are attached as below.

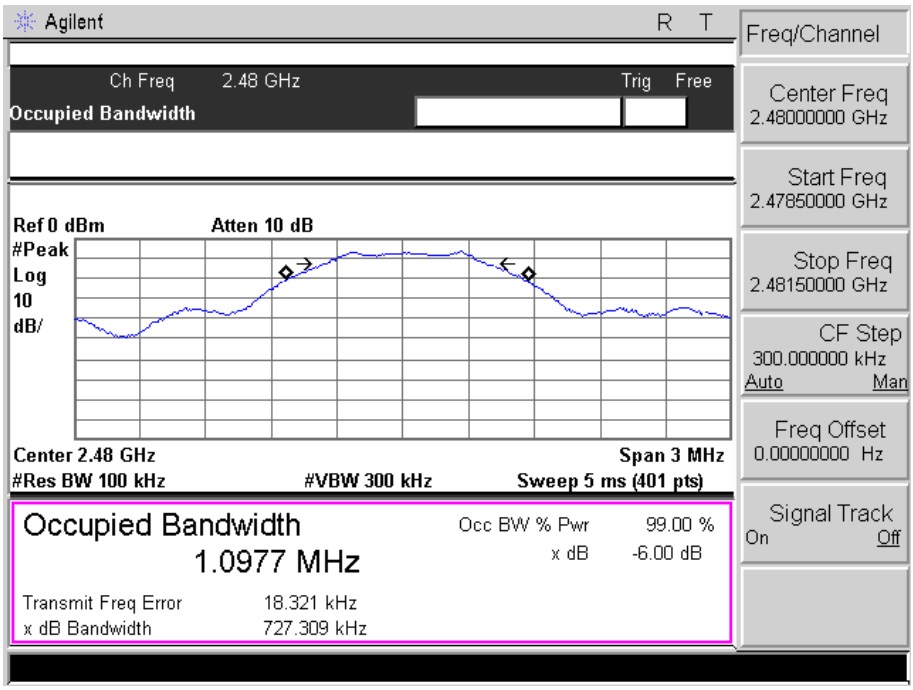
Channel Low 2402MHz



Channel Middle 2440MHz

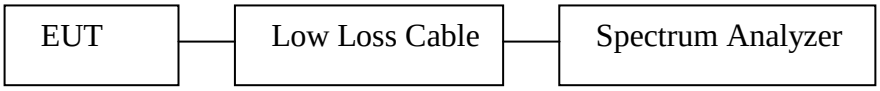


Channel High 2480MHz



4. MAXIMUM PEAK OUTPUT POWER

4.1. Block Diagram of Test Setup



4.2. Limits

Section 15.247(b)(3): For systems using digital modulation in the 902-928MHz, 2400-2483.5MHz, and 5725-5850MHz bands: 1 Watt.

4.3. Test Procedure

6.3.1. The transmitter output was connected to the spectrum analyzer through a low

6.3.2. Set RBW of spectrum analyzer to 1MHz and VBW to 3MHz.

6.3.3. Measurement the maximum peak output power.

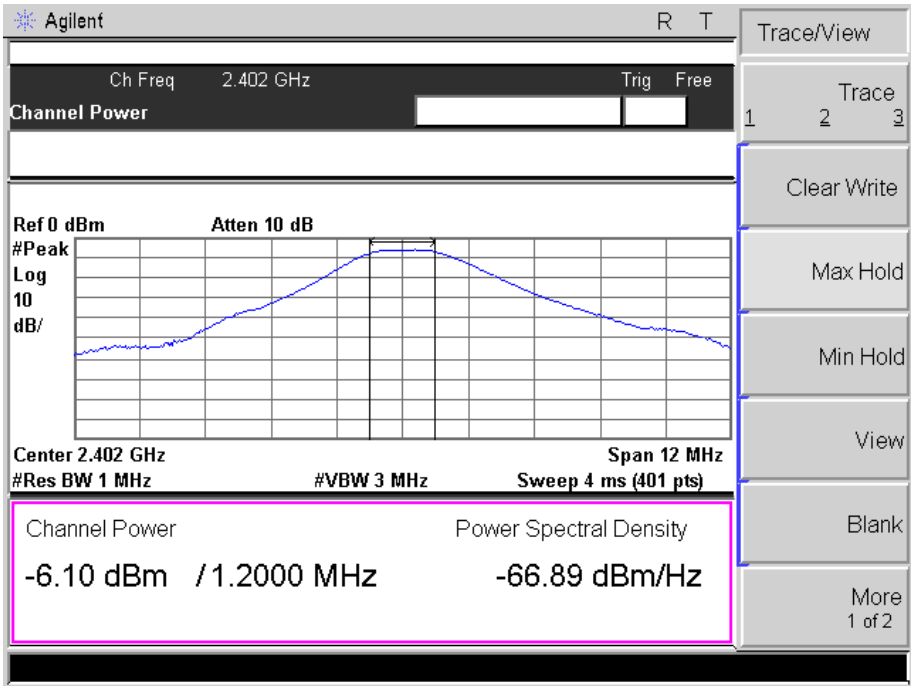
4.4.Test Result

PASS

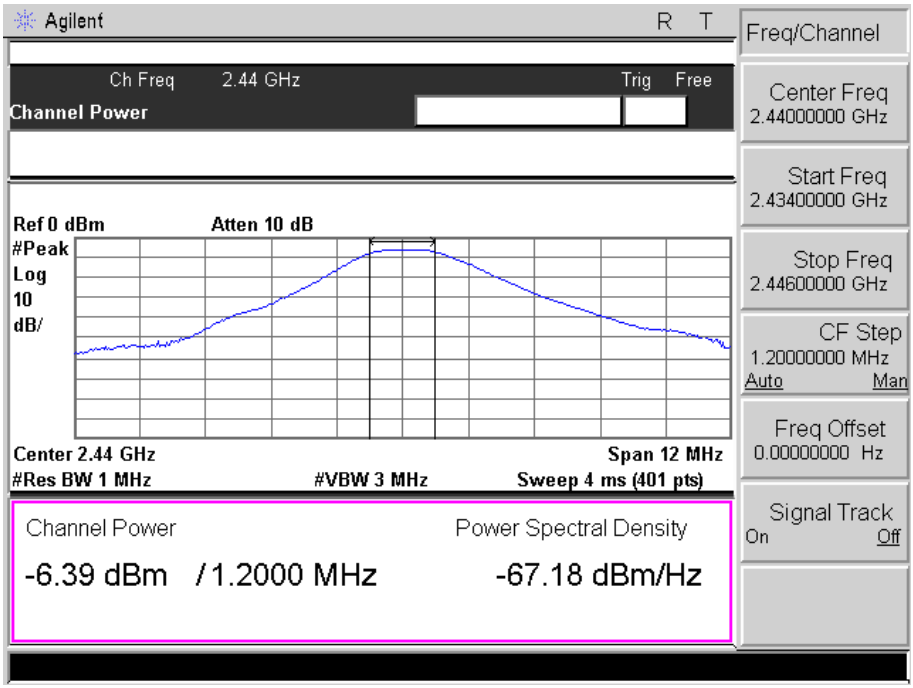
Bt 4.0(Maximum Average Conducted Output Power)			
Channel	**Frequency (MHz)**	**Peak output power (dBm)**	**Limit (dBm)**
Low	2402	-6.10	30
Middle	2440	-6.39	30
High	2480	-6.37	30

The spectrum analyzer plots are attached as below.

Channel Low 2402MHz



Channel Middle 2440MHz



Channel High 2480MHz

5. POWER SPECTRAL DENSITY MEASUREMENT

5.1. Block Diagram of Test Setup

5.2. Limits

Section 15.247(e): For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

5.3. Test Procedure

7.3.1. The transmitter output was connected to the spectrum analyzer through a low loss cable.

7.3.2. Set RBW of spectrum analyzer to 3kHz and VBW to 10kHz, sweep time = Span/30kHz

7.3.2. Measurement the maximum power spectral density.

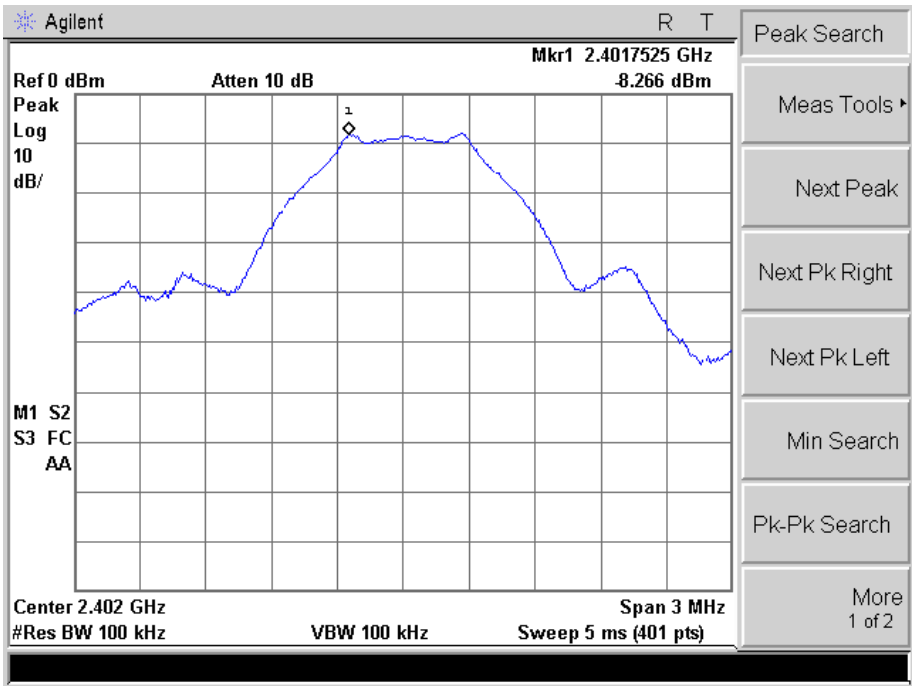
5.4. Test Result

PASS

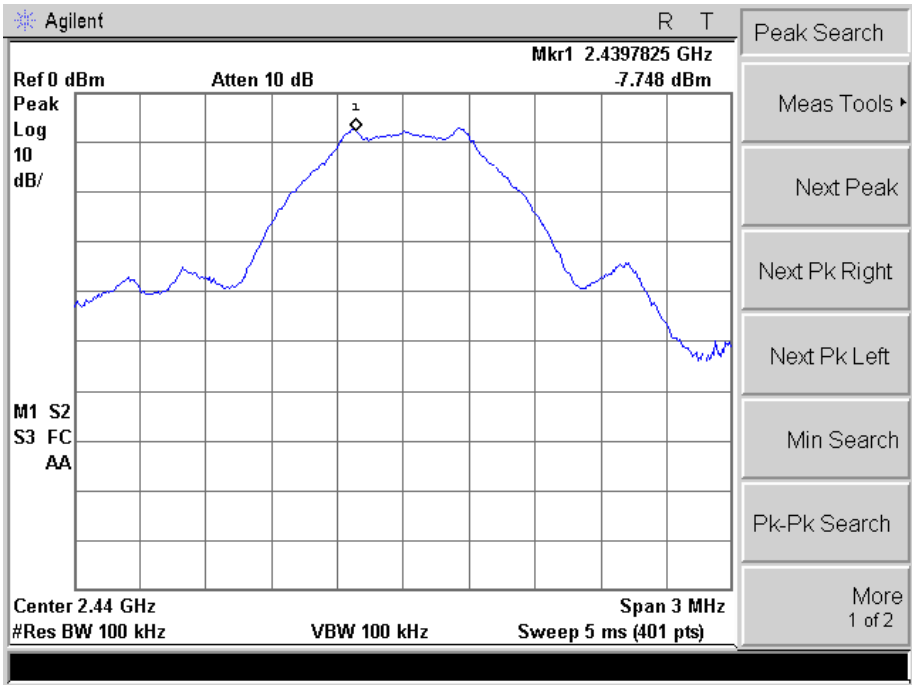
Channel	Frequency (MHz)	Power Spectral Density (dBm)	Limit (dBm)
Low	2402	-8.226	8
Middle	2440	-7.748	8
High	2480	-7.302	8

The spectrum analyzer plots are attached as below.

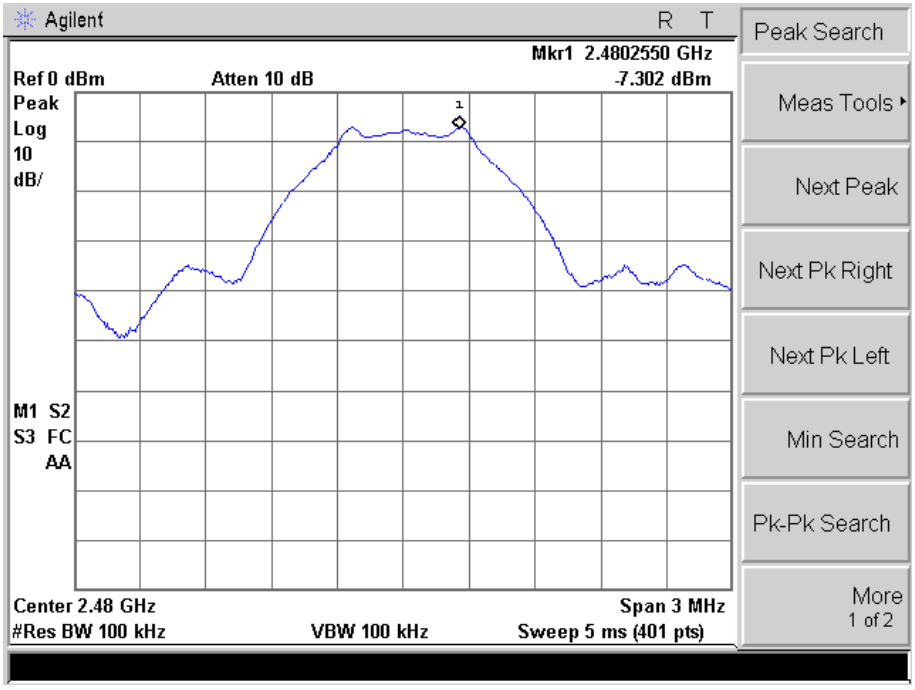
Channel Low 2402MHz



Channel Middle 2440MHz

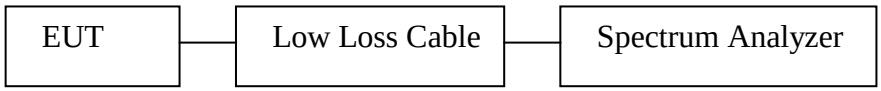


Channel High 2480MHz



6. BAND EDGE COMPLIANCE TEST

6.1.Block Diagram of Test Setup



6.2.Limits

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, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the
general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).

6.3.Test Procedure

Conducted Band Edge:

8.3.1. The transmitter output was connected to the spectrum analyzer via a low loss cable.

8.5.2. Set RBW of spectrum analyzer to 100kHz and VBW to 300kHz.

Radiate Band Edge:

8.5.3. The EUT is placed on a turntable, which is 0.8m above the ground plane and worked at highest radiated power.

8.3.4. The turntable was rotated for 360 degrees to determine the position of maximum emission level.

8.3.5. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emission.

8.3.6.Set the spectrum analyzer in the following setting in order to capture the lower and upper band-edges of the emission: RBW=1MHz, VBW=1MHz

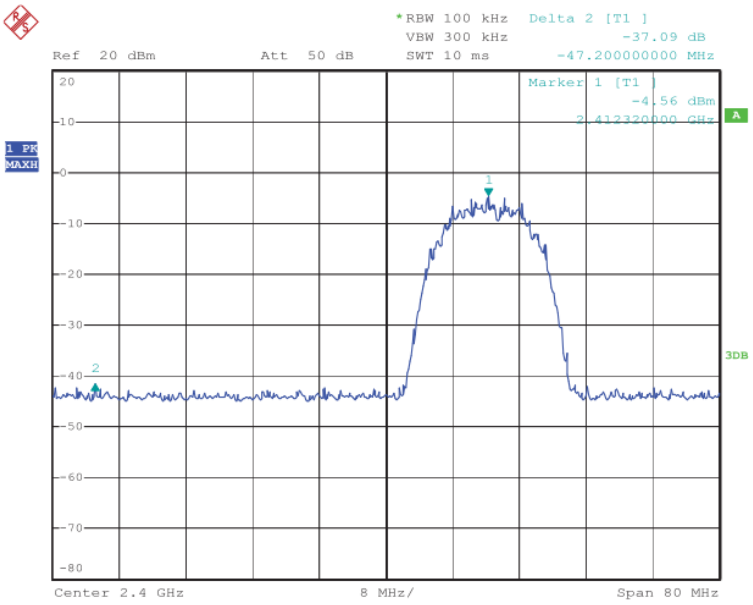
8.3.7.The band edges was measured and recorded.

6.4.Test Result

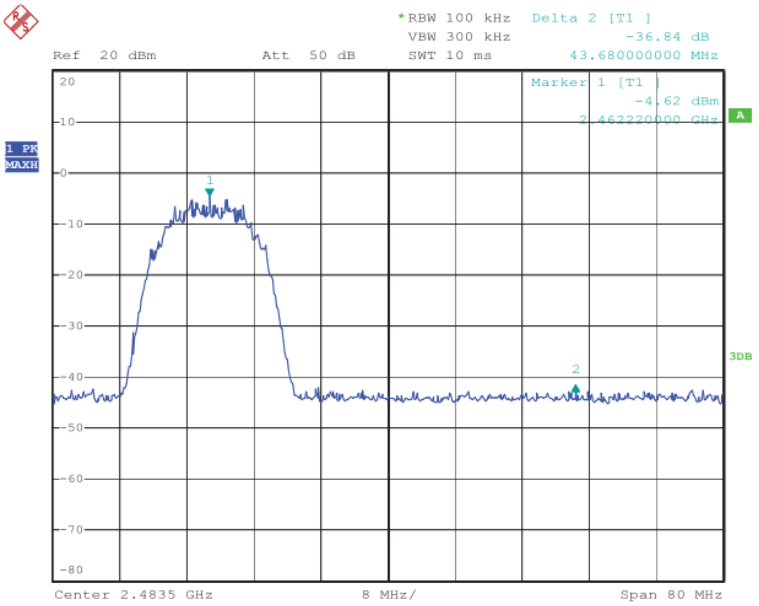
PASS

Frequency(MHz)	Result of Band Edge(dBc)	Limit of Band Edge(dBc)
2402	37.09	>20 dBc
2480	36.84	>20 dBc

Channel Low 2402MHz



Channel High 2480MHz

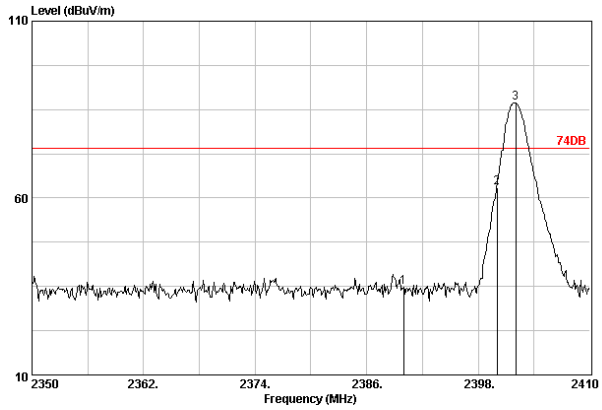


V

Radiated Band Edge Result

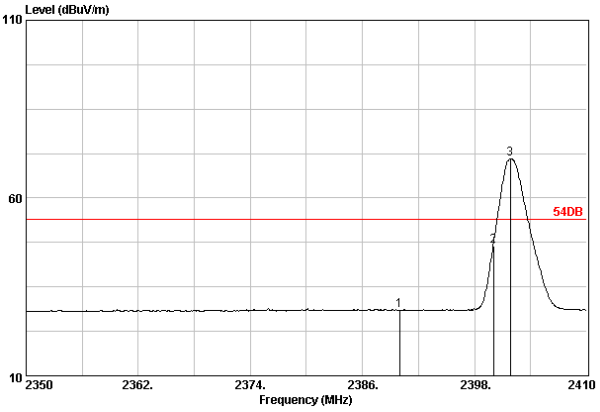
Low 2402MHz
Horizontal

PK



	Freq. (MHz)	Ant. Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.00	28.78	4.61	36.89	34.92	74.00	39.08	Peak
2	2400.00	28.78	4.61	64.88	62.91	74.00	11.09	Peak
3	2402.02	28.78	4.61	88.84	86.87	74.00	-12.87	Peak

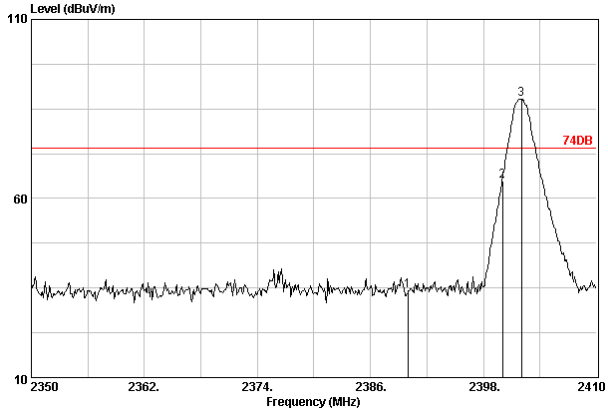
AV



	Freq. (MHz)	Ant. Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.00	28.78	4.61	30.35	28.38	54.00	25.62	Average
2	2400.00	28.78	4.61	48.49	46.52	54.00	7.48	Average
3	2401.84	28.78	4.61	72.95	70.98	54.00	-16.98	Average

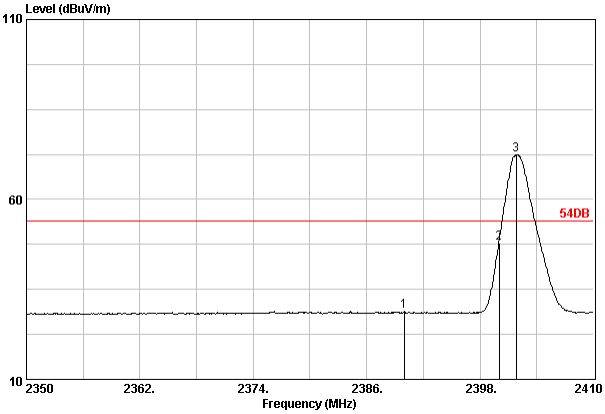
Vertical

PK



	Freq. (MHz)	Ant. Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.00	28.78	4.61	36.13	34.16	74.00	39.84	Peak
2	2400.00	28.78	4.61	66.95	64.98	74.00	9.02	Peak
3	2402.02	28.78	4.61	89.77	87.80	74.00	-13.80	Peak

AV



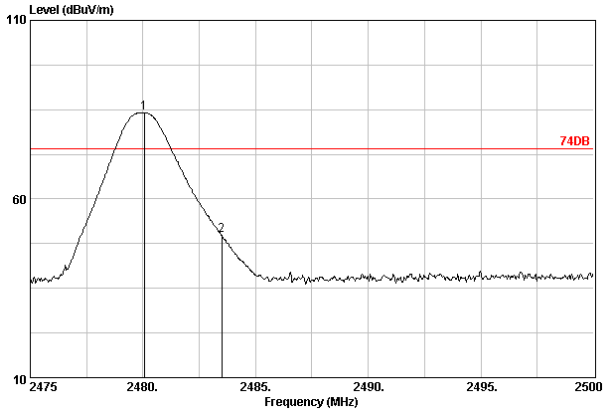
	Freq. (MHz)	Ant. Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.00	28.78	4.61	30.77	28.80	54.00	25.20	Average
2	2400.00	28.78	4.61	49.94	47.97	54.00	6.03	Average
3	2401.84	28.78	4.61	74.32	72.35	54.00	-18.35	Average

Note:
1. Emissions attenuated more than 20 dB below the permissible value are not reported.
2. The field strength is calculated by adding the antenna factor, high pass filter loss(if used) and cable loss, and
subtracting the amplifier gain(if any)from the measured reading. The basic equation calculation is as follows:
Result = Reading + Corrected Factor

Channel High 2480MHz

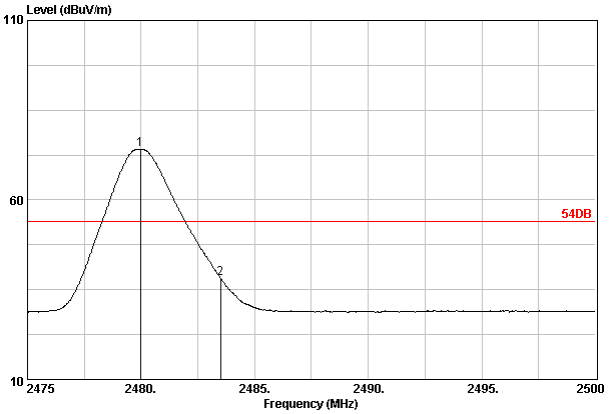
Horizontal

PK



	Freq. (MHz)	Ant. Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2480.05	28.93	4.70	85.88	84.13	74.00	-10.13	Peak
2	2483.50	28.93	4.70	51.45	49.70	74.00	24.30	Peak

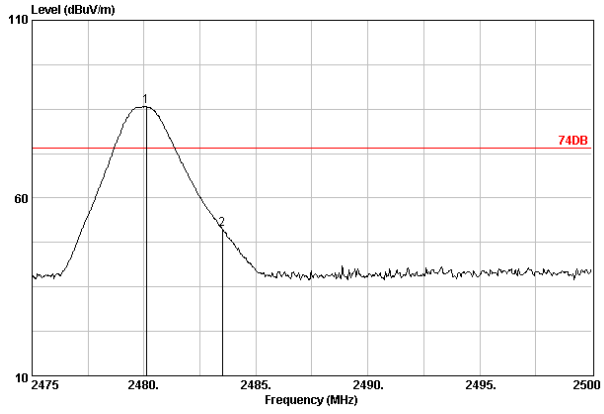
AV



	Freq. (MHz)	Ant. Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2479.98	28.93	4.70	75.96	74.21	54.00	-20.21	Average
2	2483.50	28.93	4.70	39.97	38.22	54.00	15.78	Average

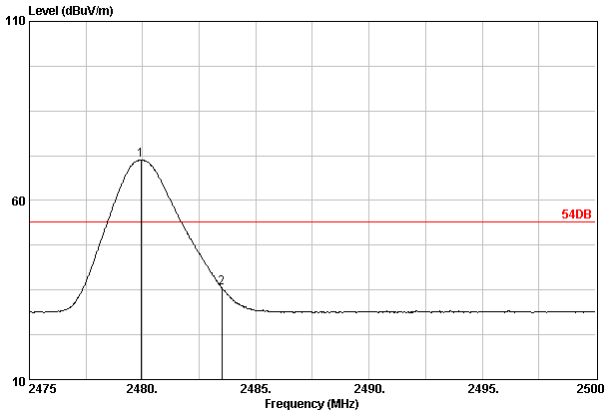
Vertical

PK



	Freq. (MHz)	Ant. Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2480.10	28.93	4.70	87.43	85.68	74.00	-11.68	Peak
2	2483.50	28.93	4.70	53.04	51.29	74.00	22.71	Peak

AV



	Freq. (MHz)	Ant. Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2479.93	28.93	4.70	72.98	71.23	54.00	-17.23	Average
2	2483.50	28.93	4.70	37.27	35.52	54.00	18.48	Average

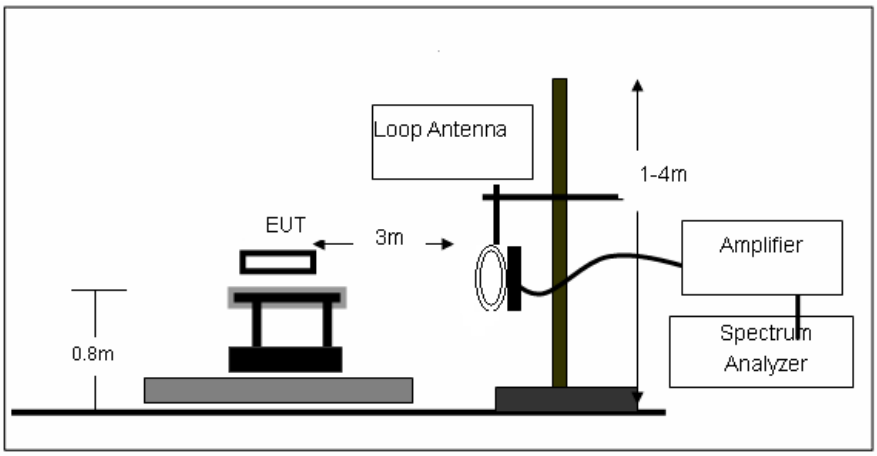
Note:

1. Emissions attenuated more than 20 dB below the permissible value are not reported.
2. The field strength is calculated by adding the antenna factor, high pass filter loss(if used) and cable loss, and
subtracting the amplifier gain(if any)from the measured reading. The basic equation calculation is as follows:
Result = Reading + Corrected Factor

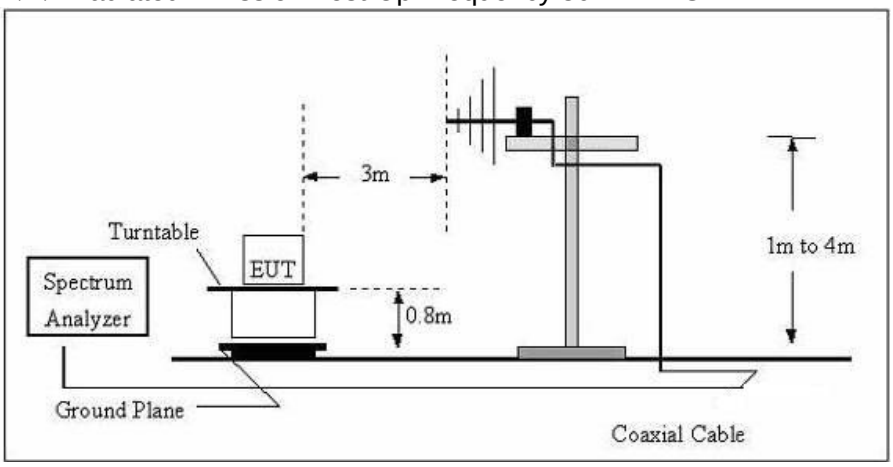
7. RADIATED SPURIOUS EMISSION TEST

7.1. Block Diagram of Test Setup

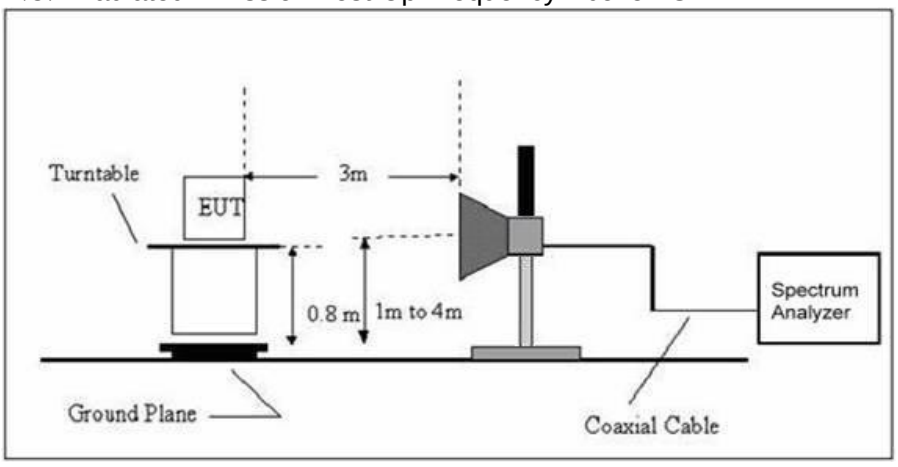
（1）Radiated Emission Test-Up Frequency Below 30MHz



（2）Radiated Emission Test-Up Frequency 30MHz~1GHz



（3）Radiated Emission Test-Up Frequency Above 1GHz



7.2.Limits

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, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).

7.3.Restricted bands of operation

9.3.1.FCC Part 15.205 Restricted bands of operation

(a) Except as shown in paragraph (d) of this section, Only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
[1]0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	([2])
13.36-13.41			

[1]Until February 1, 1999, this restricted band shall be 0.490-0.510

[2]Above 38.6

(b) Except as provided in paragraphs (d) and (e), the field strength of emission appearing within these frequency bands shall not exceed the limits shown in Section 15.209. At frequencies equal to or less than 1000MHz, Compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000MHz, compliance with the emission limits in Section15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section 15.35 apply to these measurements.

7.4. Test Procedure

The EUT and its simulators are placed on a turntable, which is 0.8 meter high above ground. The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on an antenna tower. The antenna can be moved up and down between 1.0 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bilog antenna) is used as receiving antenna. Both horizontal and vertical polarizations of the antenna are set on measurement. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.4: 2003 on radiated emission measurement. The EUT was tested in 3 orthogonal planes.

The worst-case data rate for this channel to be 1Mbps for 802.11b mode and 6Mbps for 802.11g mode and 300Mbps for 802.11n mode, based on previous with 802.11 WLAN product design architectures.

The bandwidth of test receiver is set at 9kHz in below 30MHz. and set at 120kHz in 30-1000MHz, and 1MHz in above 1000MHz.

The frequency range from 9kHz to 25GHz is checked.

The final measurement in band 9-90kHz, 110-490kHz and above 1000MHz is performed with Average detector. Except those frequency bands mention above, the final measurement for frequencies below 1000MHz is performed with Quasi Peak detector.

The field strength is calculated by adding the antenna factor, and cable loss, and subtracting the amplifier gain from the measured reading. The basic equation calculation is as follows:

Result = Reading + Corrected Factor

Where Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

7.5.Test Result

PASS

Channel Low 2402MHz

For Below 30MHz

Freq.(MHz)	Reading (dBuV/m) (QP)	Factor(dB) Corr.	Result (dBuV/m)	Limit (dBuV/m)	Margin(dB)
/	/	/	/	/	/
/	/	/	/	/	/
/	/	/	/	/	/

For 30MHz-1000MHz
Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

Freq.(MHz)	Reading (dBuV/m) (QP)	Factor(dB) Corr.	Result (dBuV/m) (QP)	Limit (dBuV/m) (QP)	Margin(dB) (QP)	Polarization
446.4141	51.44	-14.75	36.69	46.00	-9.31	Vertical
593.0497	49.57	-11.83	37.74	46.00	-8.26	
965.5421	44.82	-5.18	39.64	54.00	-14.36	
73.8756	56.64	-21.57	35.07	40.00	-4.93	Horizontal
161.4739	58.48	-22.69	35.79	43.50	-7.71	
593.0497	51.54	-11.83	39.71	46.00	-6.29	

For 1GHz-25GHz

Freq.(MHz)	Reading (dBuV/m) (QP)		Factor (dB) Corr.	Result (dBuV/m) (QP)		Limit (dBuV/m) (QP)		Margin(dB) (QP)		Polarization
	AV	PEAK		AV	PEAK	AV	PEAK	AV	PEAK	
4804.086	50.62	61.74	-3.41	47.21	58.33	54	74	-6.79	-15.67	Vertical
7602.052	48.35	61.24	-2.62	45.73	58.62	54	74	-8.27	-15.38	
4804.086	45.68	54.79	-3.41	42.27	51.38	54	74	-11.73	-22.62	Horizontal
7602.052	48.95	61.89	-2.62	46.33	59.27	54	74	-7.67	-14.73	

Note: 1. Emissions attenuated more than 20 dB below the permissible value are not reported.

Channel Middle 2440MHz

For Below 30MHz

Freq.(MHz)	Reading (dBuV/m) (QP)	Factor(dB) Corr.	Result (dBuV/m)	Limit (dBuV/m)	Margin(dB)
/	/	/	/	/	/
/	/	/	/	/	/
/	/	/	/	/	/

For 30MHz-1000MHz

Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

Freq.(MHz)	Reading (dBuV/m) (QP)	Factor(dB) Corr.	Result (dBuV/m) (QP)	Limit (dBuV/m) (QP)	Margin(dB) (QP)	Polarization
172.5988	51.21	-22.07	29.14	43.50	-14.36	Vertical
247.6819	61.50	-19.75	41.75	46.00	-4.25	
316.5889	58.35	-17.49	40.86	46.00	-5.14	
181.2834	50.26	-21.73	28.53	43.50	-14.97	Horizontal
267.5455	57.36	-18.78	38.58	46.00	-7.42	
356.6758	57.11	-16.03	41.08	46.00	-4.92	

For 1GHz-25GHz

Freq.(MHz)	Reading (dBuV/m) (QP)		Factor (dB) Corr.	Result (dBuV/m) (QP)		Limit (dBuV/m) (QP)		Margin(dB) (QP)		Polarization
	AV	PEAK		AV	PEAK	AV	PEAK	AV	PEAK	
4880.083	44.9	56.16	-4.40	40.50	51.76	54	74	-13.50	-22.24	Vertical
7320. 026	49.83	62.57	-3.61	46.22	58.96	54	74	-7.78	-15.04	
4880.083	45.73	60.52	-4.40	41.33	56.12	54	74	-12.67	-17.88	Horizontal
7320. 026	49.73	61.94	-3.61	46.12	58.33	54	74	-7.88	-15.67	

Note: 1. Emissions attenuated more than 20 dB below the permissible value are not reported.

Channel Middle 2480MHz

For Below 30MHz

Freq.(MHz)	Reading (dBuV/m) (QP)	Factor(dB) Corr.	Result (dBuV/m)	Limit (dBuV/m)	Margin(dB)
/	/	/	/	/	/
/	/	/	/	/	/
/	/	/	/	/	/

For 30MHz-1000MHz
Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

Freq.(MHz)	Reading (dBuV/m) (QP)	Factor(dB) Corr.	Result (dBuV/m) (QP)	Limit (dBuV/m) (QP)	Margin(dB) (QP)	Polarization
71.8319	55.00	-21.45	33.55	40.00	-6.45	Vertical
119.8555	51.41	-22.52	28.89	43.50	-14.61	
965.5421	44.82	-5.18	39.64	54.00	-14.36	
73.8756	56.64	-21.57	35.07	40.00	-4.93	Horizontal
161.4740	58.48	-22.69	35.79	43.50	-7.53	
593.0497	51.54	-11.83	39.71	46.00	-6.29	

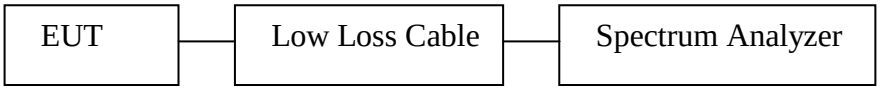
For 1GHz-25GHz

Freq.(MHz)	Reading (dBuV/m) (QP)		Factor (dB) Corr.	Result (dBuV/m) (QP)		Limit (dBuV/m) (QP)		Margin(dB) (QP)		Polarization
	AV	PEAK		AV	PEAK	AV	PEAK	AV	PEAK	
4960	45.70	57.18	-3.30	42.40	53.88	54	74	-11.60	-20.12	Vertical
7440	46.77	58.87	0.34	47.11	59.21	54	74	-6.89	-14.79	
4960	42.06	52.51	-3.30	38.76	49.21	54	74	-15.24	-24.79	Horizontal
7440	47.05	58.99	0.34	47.39	59.33	54	74	-6.61	-14.67	

Note: 1. Emissions attenuated more than 20 dB below the permissible value are not reported.

8. CONDUCTED SPURIOUS EMISSION COMPLIANCE TEST

8.1.Block Diagram of Test Setup



8.2.Limits

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, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).

8.3.Test Procedure

8.3.1.The transmitter output was connected to the spectrum analyzer via a low loss cable.

10.3.2. Set RBW of spectrum analyzer to 100kHz and VBW to 300kHz.

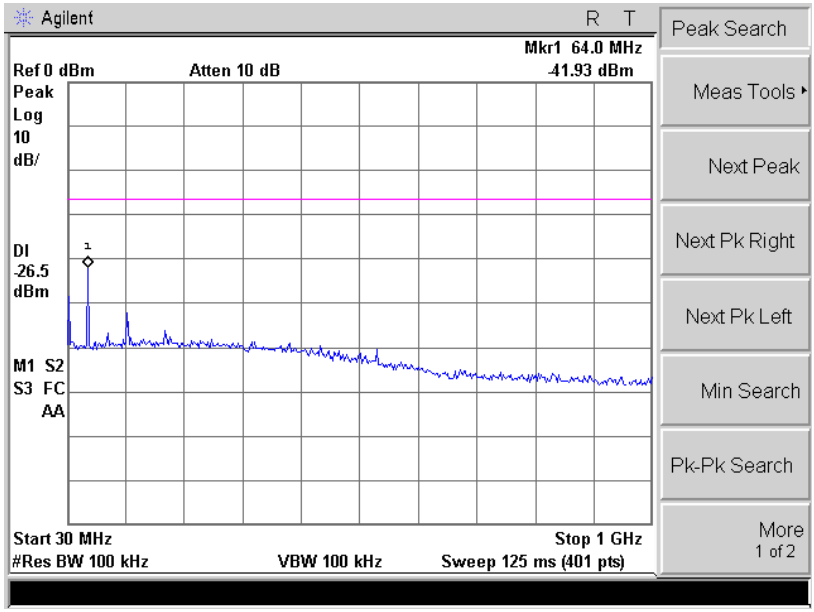
10.3.3. The Conducted Spurious Emission was measured and recorded.

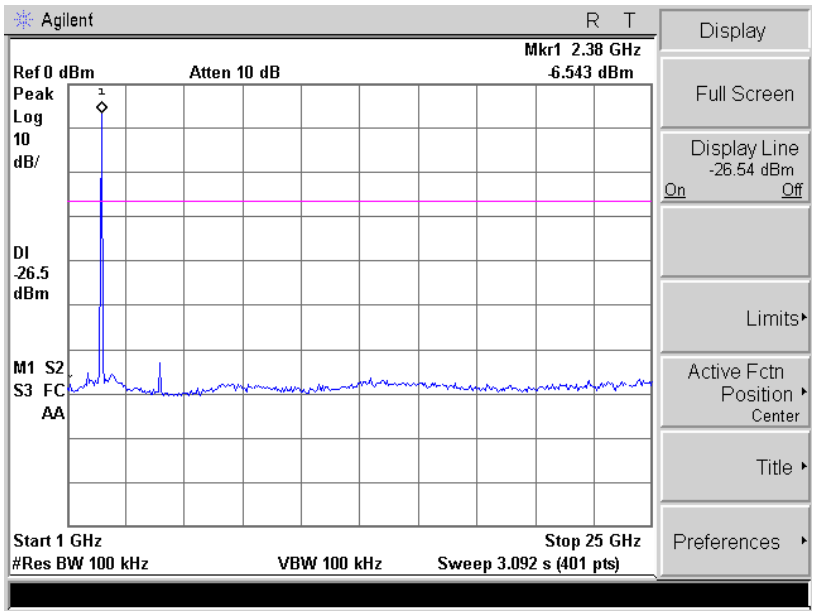
8.4.Test Result

PASS

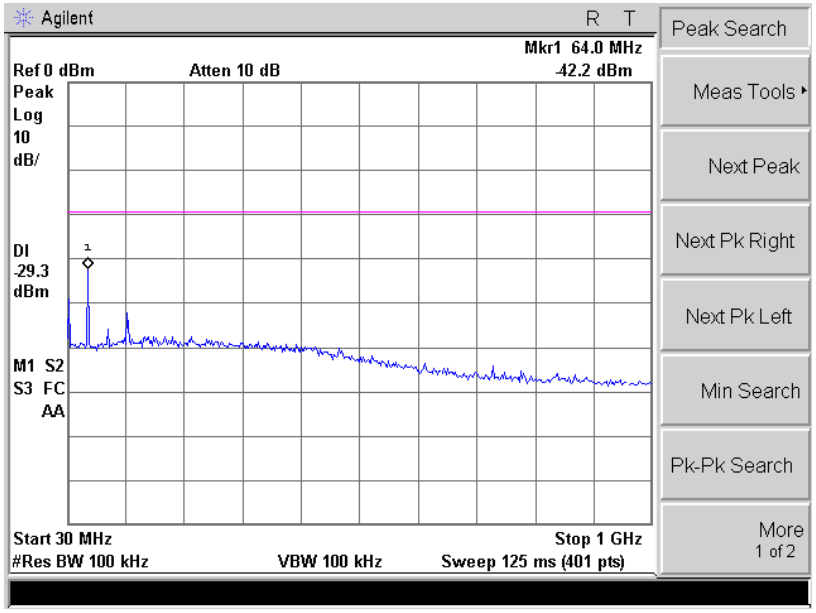
The spectrum analyzer plots are attached as below.

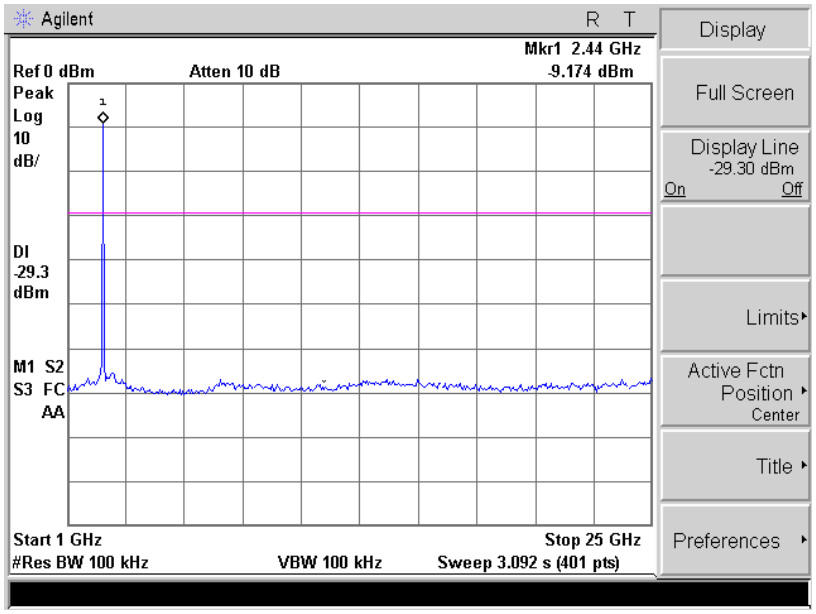
Channel Low 2402MHz



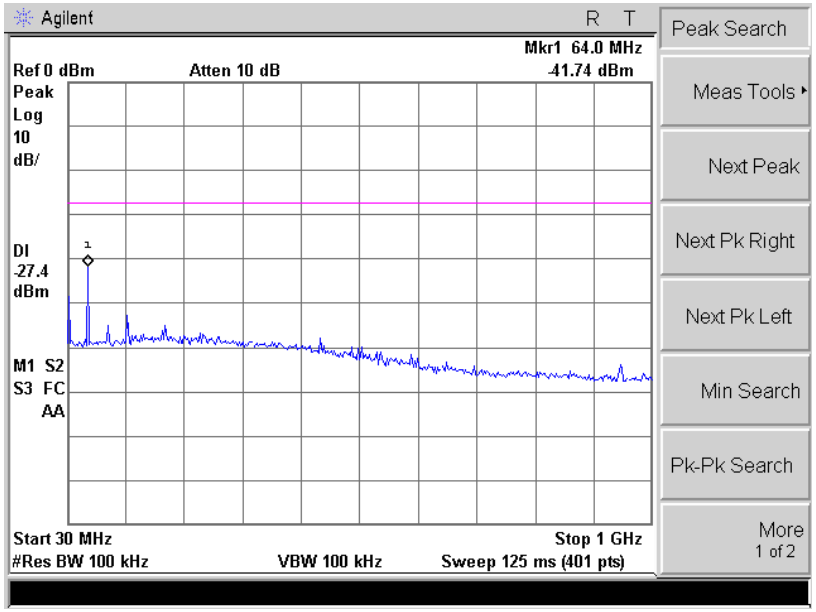


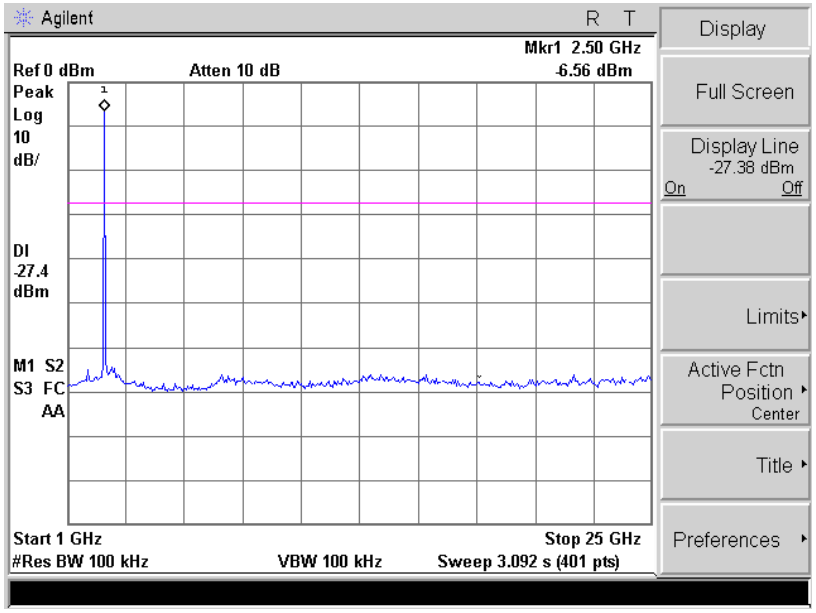
Channel Middle 2440MHz





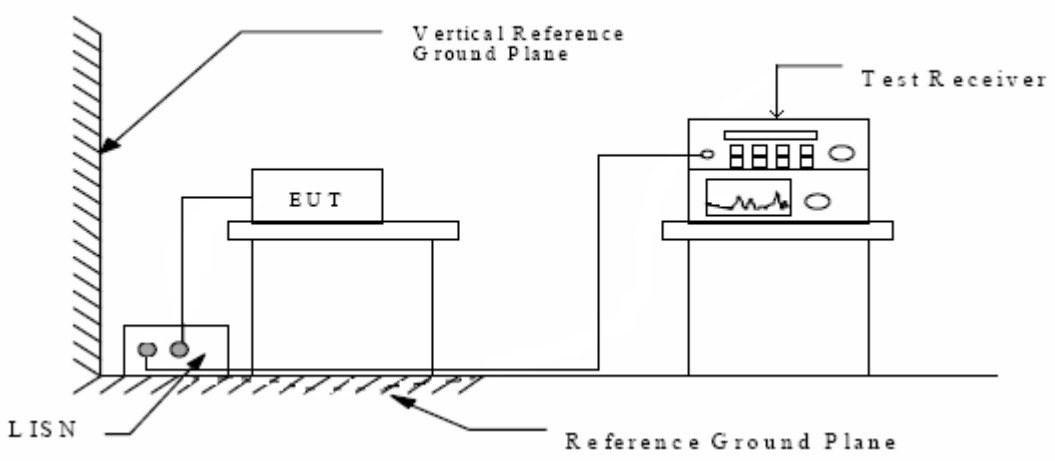
Channel High 2480MHz





9. AC POWER LINE CONDUCTED EMISSION FOR PART 15 SECTION 15.207(A)

9.1.Block Diagram of Test Setup



9.2.Limits

Conducted Emission Measurement Limits According to Section 15.207(a)

Frequency MHz	Limits (dBμV)	
	Quasi-peak Level	Average Level
0.15 ~ 0.50	66 ~ 56*	56 ~ 46*
0.50 ~ 5.00	56	46
5.00 ~ 30.00	60	50

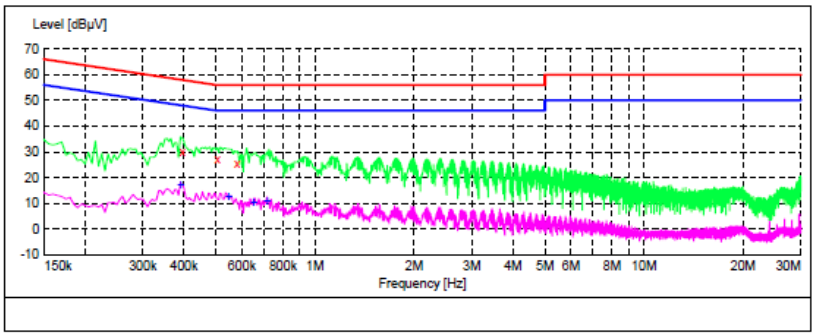
* Decreases with the logarithm of the frequency.

9.3.Test Procedure

The EUT is put on the plane 0.8m high above the ground by insulating support and is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of AC lines are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.4: 2003 on Conducted Emission Measurement.
The bandwidth of test receiver (R & S ESPI) is set at 9kHz.
The frequency range from 150kHz to 30MHz is checked.

9.4.Test Result

L



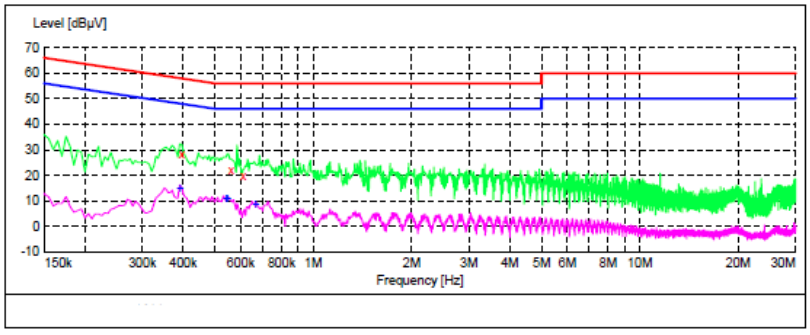
MEASUREMENT RESULT:

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.395000	30.20	10.7	58	27.8	QP	L1	GND
0.505000	27.20	10.5	56	28.8	QP	L1	GND
0.580000	25.20	10.4	56	30.8	QP	L1	GND

MEASUREMENT RESULT:

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.390000	17.50	10.7	48	30.6	AV	L1	GND
0.545000	12.70	10.5	46	33.3	AV	L1	GND
0.650000	10.60	10.4	46	35.4	AV	L1	GND
0.715000	11.00	10.4	46	35.0	AV	L1	GND

N



MEASUREMENT RESULT:

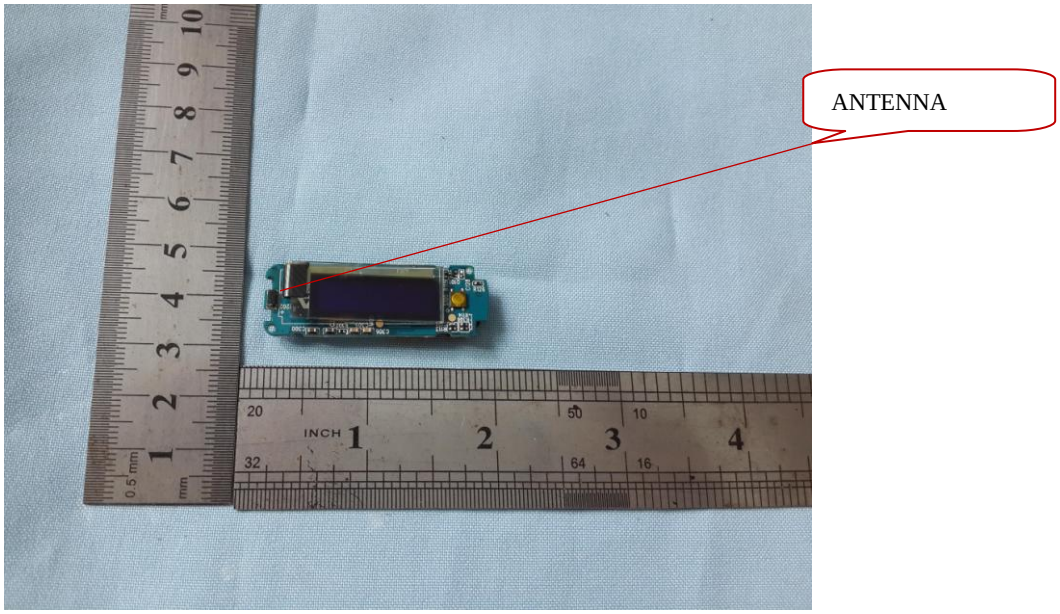
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.395000	28.10	10.7	58	29.9	QP	N	GND
0.560000	22.30	10.5	56	33.7	QP	N	GND
0.610000	19.50	10.4	56	36.5	QP	N	GND

MEASUREMENT RESULT:

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.390000	15.10	10.7	48	33.0	AV	N	GND
0.540000	11.00	10.5	46	35.0	AV	N	GND
0.545000	11.00	10.5	46	35.0	AV	N	GND
0.665000	9.20	10.4	46	36.8	AV	N	GND

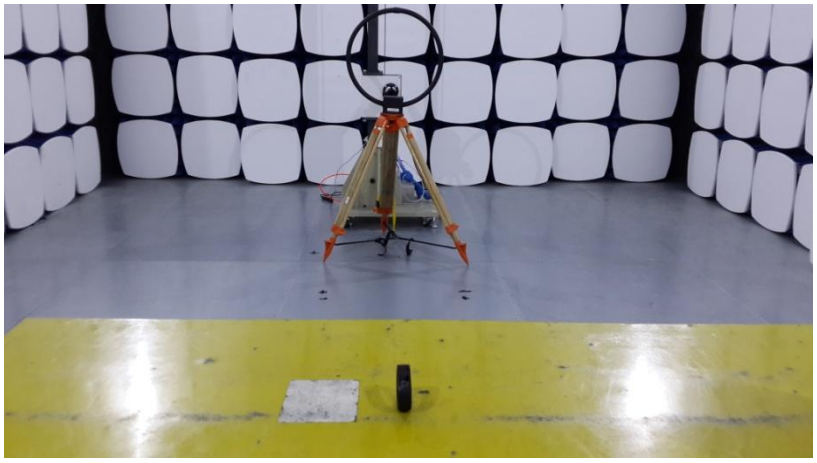
10. ANTENNA REQUIREMENT

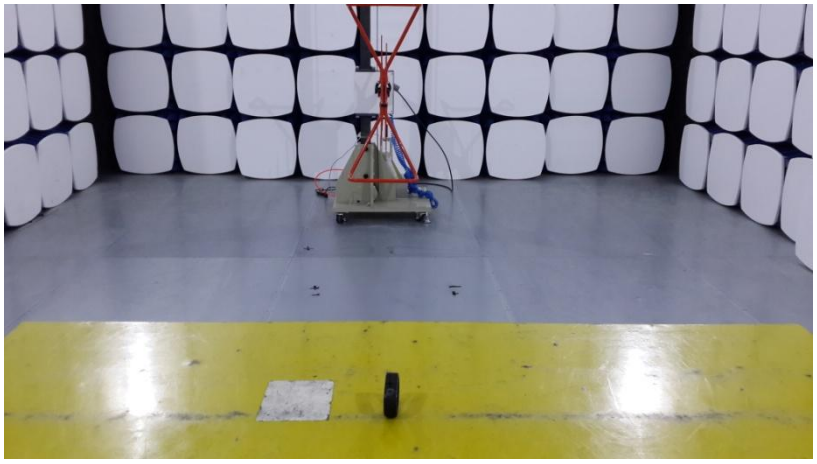
According to Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. Antenna is fixed by enclosure, can not be changed except take apart the product.

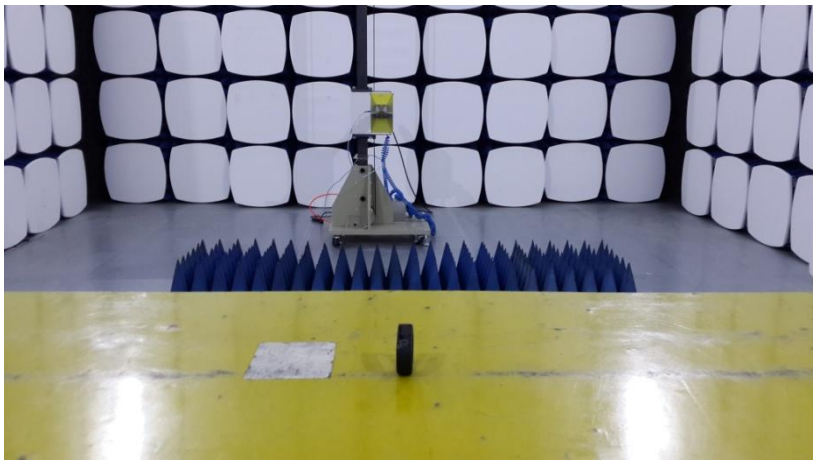


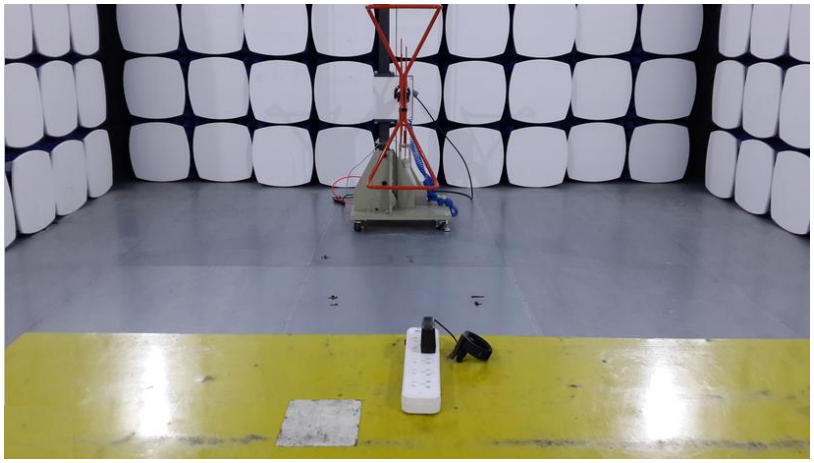
11. PHOTOGRAPH OF TEST

Radiated Emission









Ac power line conducted emission