



Test Report No.: RF190315N012



## TEST REPORT

Applicant	IoT Gizmo Corporation
Address	255 Old New Brunswick, Suite N330, Piscataway, New Jersey, United States 08854

Manufacturer or Supplier	Earda Technologies Co., Ltd
Address	Block A, LianFeng Creative Industry Park, NO.2 JiSheng Road, HuangGe Town, Nansha District, Guangzhou, PRC.
Product	Smart Dimming Light Switch
Brand Name	Touch Dimmer
Model	D6932
Additional Model & Model Difference	DSCR32, See items 3.1
Date of tests	Jan. 24~26, 2019

The tests have been carried out according to the requirements of the following standard:

FCC Part 15, Subpart C, Section 15.247

**CONCLUSION: The submitted sample was found to COMPLY with the test requirement**

Tested by Evans He Project Engineer / EMC Department	Approved by David Huang Supervisor / EMC Department

Date: Jan. 30, 2019

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## RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF190315N012	Original release	Jan. 30, 2019



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## 1 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC PART 15, SUBPART C (SECTION 15.247)			
STANDARD SECTION	TEST TYPE AND LIMIT	RESULT	REMARK
15.207	AC Power Conducted Emission	PASS	Meet the requirement of limit.
15.247(d) 15.209	Radiated Emissions	PASS	Meet the requirement of limit.

**NOTE: Test Lab Information:**

**Lab:** Bureau Veritas Shenzhen Co., Ltd. Dongguan Branch

**Test Lab Address:** Zone A, Floor 1, Building 2 Wan Ye Long Technology Park  
South Side of Zhoushi Road, Bao'an District Shenzhen, Guangdong, 518108, People's Republic of China

## 2 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

MEASUREMENT	FREQUENCY	UNCERTAINTY
Conducted emissions	9kHz~30MHz	3.11dB
Radiated emissions	9KHz ~ 30MHz	3.11dB
	30MHz ~ 1GHz	5.12dB
	1GHz ~ 18GHz	5.34dB
	18GHz ~ 40GHz	5.02dB

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of  $k = 2$ .



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### 3 GENERAL INFORMATION

#### 3.1 GENERAL DESCRIPTION OF EUT

<b>PRODUCT</b>	Smart Dimming Light Switch
<b>MODEL NO.</b>	D6932
<b>ADDITIONAL NO.</b>	DSCR32
<b>FCC ID</b>	2AHVE-D6932
<b>NOMINAL VOLTAGE</b>	AC 100-240V
<b>MODULATION TECHNOLOGY</b>	DSSS, OFDM
<b>MODULATION TYPE</b>	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
<b>OPERATING FREQUENCY</b>	2412-2462MHz for 11b/g/n(HT20) 2422-2452MHz for 11n(HT40)
<b>ANTENNA TYPE</b>	3D Antenna, with 3dBi gain
<b>I/O PORTS</b>	Refer to user's manual
<b>CABLE SUPPLIED</b>	AC line: Unshielded, Non-detachable, 0.3m.

#### NOTE:

1. The EUT provides completed transmitters and receivers:

MODULATION MODE	FUNCTION
802.11b	1TX/1RX
802.11g	1TX/1RX
802.11n (HT20)	1TX/1RX
802.11n (HT40)	1TX/1RX

2. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
3. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.
4. Please refer to the EUT photo document (Reference No.: 190315N012) for detailed product photo.
5. Additional models (see above table) are identical with the test model D6932 except it has LCD display, capacitive touch panel and model name for trading purpose, so, based on the differences, we will retest the "AC Power Line Conducted Emissions and Radiated Emissions" test data, others test data please refer to 18071115-FCC-R report.



### 3.2 DESCRIPTION OF TEST MODES

11 channels are provided for 802.11b, 802.11g and 802.11n(HT20):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
1	2412 MHz	7	2442 MHz
2	2417 MHz	8	2447 MHz
3	2422 MHz	9	2452 MHz
4	2427 MHz	10	2457 MHz
5	2432 MHz	11	2462 MHz
6	2437 MHz		

7 channels are provided for 802.11n (HT40):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
3	2422MHz	7	2442MHz
4	2427MHz	8	2447MHz
5	2432MHz	9	2452MHz
6	2437MHz		



### 3.2.1 CONFIGURATION OF SYSTEM UNDER TEST

Please see section 5 photographs of the test configuration for reference.

### 3.2.2 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ axis and antenna ports.

The worst case was found when positioned on X axis for radiated emission. Following test modes were selected for the final test, and the final worst case is marked in boldface and recorded in the report:

EUT CONFIGURE MODE	APPLICABLE TO				MODE
	RE<1G	RE≥1G	PLC	APCM	
-	√	√	√	√	Powered by AC 120/240 with WIFI function

Where

**RE<1G:** Radiated Emission below 1GHz

**RE≥1G:** Radiated Emission above 1GHz

**PLC:** Power Line Conducted Emission

**APCM:** Antenna Port Conducted Measurement

#### POWER LINE CONDUCTED EMISSION TEST:

- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	TESTED CONDITION
-	WIFI (2.4G) Link

#### RADIATED EMISSION TEST (BELOW 1GHz):

- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ axis and antenna ports (if EUT with antenna diversity architecture).
- Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
-	802.11b	1 to 11	1	DSSS	DBPSK	1.0

**RADIATED EMISSION TEST (ABOVE 1GHz):**

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ axis and antenna ports (if EUT with antenna diversity architecture).

Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
-	802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1.0
-	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0
-	802.11n HT20	1 to 11	1, 6, 11	OFDM	BPSK	6.5
-	802.11n HT40	3 to 9	3, 9	OFDM	BPSK	13.5

**BANDEdge MEASUREMENT:**

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
-	802.11b	1 to 11	1, 11	DSSS	DBPSK	1.0
-	802.11g	1 to 11	1, 11	OFDM	BPSK	6.0
-	802.11n HT20	1 to 11	1, 11	OFDM	BPSK	6.5
-	802.11n HT40	3 to 9	3, 9	OFDM	BPSK	13.5

**ANTENNA PORT CONDUCTED MEASUREMENT:**

This item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
-	802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1.0
-	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0
-	802.11n HT20	1 to 11	1, 6, 11	OFDM	BPSK	6.5
-	802.11n HT40	3 to 9	3, 6, 9	OFDM	BPSK	13.5



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**TEST CONDITION:**

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	TEST VOLTAGE	TESTED BY
RE<1G	24deg. C, 55%RH	AC 120/240	Evans He
RE≥1G	24deg. C, 55%RH	AC 120/240	Evans He
PLC	21deg. C, 57%RH	AC 120/240	Evans He
APCM	26deg. C, 60%RH	AC 120/240	Evans He



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### 3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

**FCC Part 15, Subpart C, Section 15.247**  
**KDB 558074 D01 15.247 Meas Guidance v05r01**  
**ANSI C63.10-2013**

All test items have been performed and recorded as per the above standards.

**NOTE:** It has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B.  
The test report has been issued separately.

### 3.4 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	Laptop	Lenovo	E40	LR-1EHRX	N/A
2	Lamp	N/A	N/A	N/A	N/A

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	N/A



## 4 TEST TYPES AND RESULTS

### 4.1. CONDUCTED EMISSION MEASUREMENT

#### 4.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dB $\mu$ V)	
	Quasi-peak	Average
0.15 ~ 0.5	66 to 56	56 to 46
0.5 ~ 5	56	46
5 ~ 30	60	50

**NOTE:** 1. The lower limit shall apply at the transition frequencies.

2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.
3. All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

#### 4.1.2 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde&Schwarz	ESCS30	8471241027	Jan. 04,19	Jan. 04,20
Artificial Mains Network	SCHWARZBECK	8127	8127713	Jan. 04,19	Jan. 04,20
ISN	Com-Power	ISN T800	34373	Jan. 04,19	Jan. 04,20
Test software	EZ-EMC	ICP-03A1	N/A	N/A	N/A

**NOTE:**

1. The test was performed in CE shielded room..
2. The calibration interval of the above test instruments is 12 months. And the calibrations are traceable to CEPREI/CHINA, GRT/CHINA and NIM/CHINA.



#### 4.1.3 TEST PROCEDURES

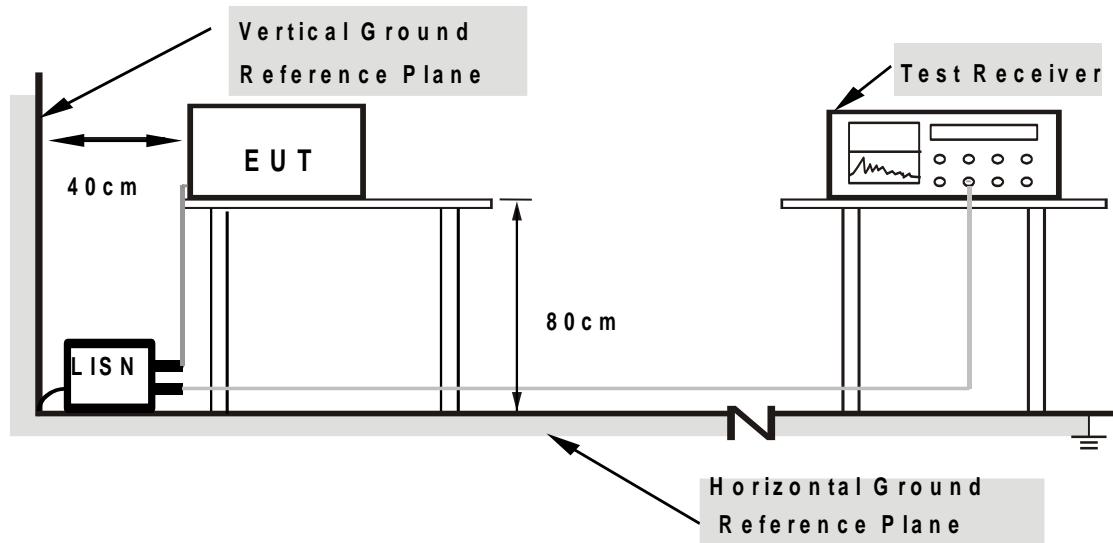
- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

**NOTE:** All modes of operation were investigated and the worst-case emissions are reported.

#### 4.1.4 DEVIATION FROM TEST STANDARD

No deviation.

#### 4.1.5 TEST SETUP



Note: 1. Support units were connected to second LISN.  
2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes

For the actual test configuration, please refer to the attached file (Test Setup Photo).

#### 4.1.6 EUT OPERATING CONDITIONS

- Turned on the power and connected of all equipment.
- EUT was operated according to the type used was description in manufacturer's specifications or the User's Manual.

#### 4.1.7 TEST RESULTS

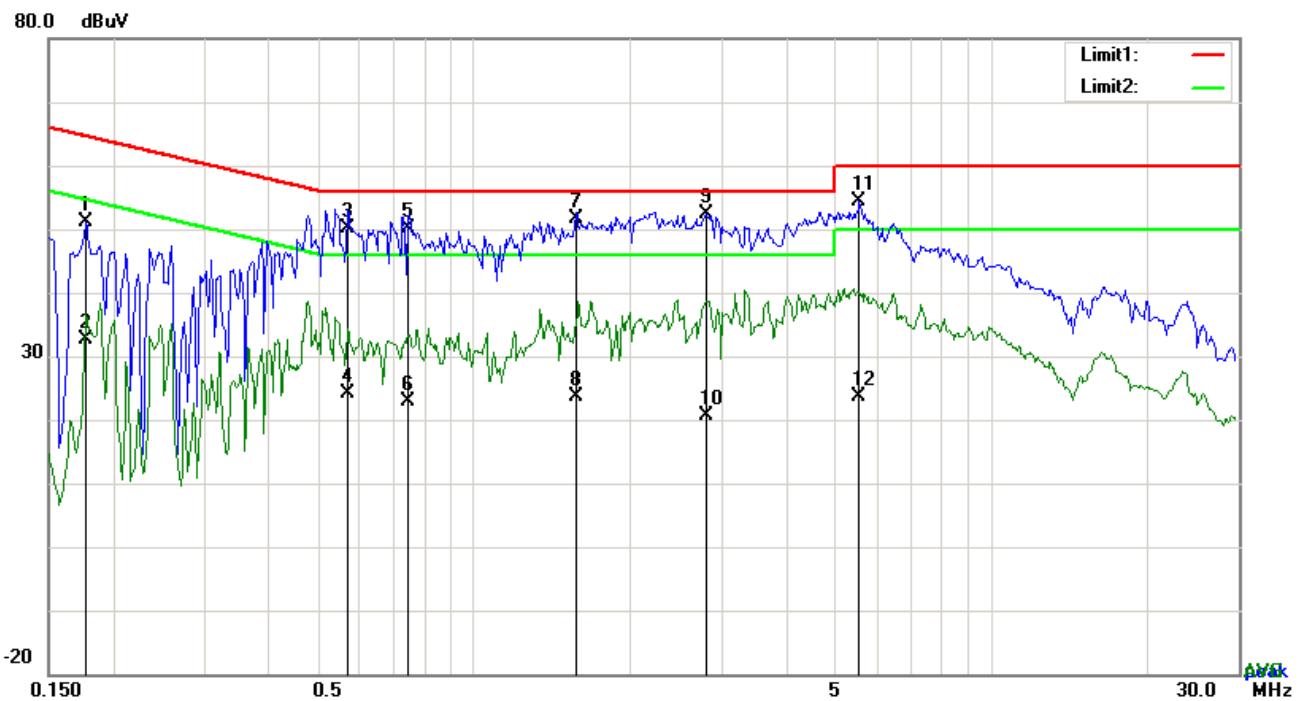
##### CONDUCTED WORST-CASE DATA:

PHASE	Line	6dB BANDWIDTH	9kHz
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No.	P/L	Frequency (MHz)	Reading (dBuV)	Detector	Corrected (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)
1	L1	0.1773	41.05	QP	10.03	51.08	64.61	-13.53
2	L1	0.1773	22.48	AVG	10.03	32.51	54.61	-22.10
3	L1	0.5673	40.21	QP	10.03	50.24	56.00	-5.76
4	L1	0.5673	14.15	AVG	10.03	24.18	46.00	-21.82
5	L1	0.7467	40.11	QP	10.03	50.14	56.00	-5.86
6	L1	0.7467	12.81	AVG	10.03	22.84	46.00	-23.16
7	L1	1.5735	41.53	QP	10.04	51.57	56.00	-4.43
8	L1	1.5735	13.57	AVG	10.04	23.61	46.00	-22.39
9	L1	2.7942	42.34	QP	10.05	52.39	56.00	-3.61
10	L1	2.7942	10.60	AVG	10.05	20.65	46.00	-25.35
11	L1	5.5506	44.30	QP	10.09	54.39	60.00	-5.61
12	L1	5.5506	13.63	AVG	10.09	23.72	50.00	-26.28

**REMARKS:** 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.

2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Correction factor = Insertion loss + Cable loss
6. Emission Level = Correction Factor + Reading Value.





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PHASE	Neutral	6dB BANDWIDTH	9kHz
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No.	P/L	Frequency (MHz)	Reading (dBuV)	Detector	Corrected (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)
1	N	0.2085	39.14	QP	10.02	49.16	63.26	-14.10
2	N	0.2085	19.40	AVG	10.02	29.42	53.26	-23.84
3	N	0.5439	41.56	QP	10.02	51.58	56.00	-4.42
4	N	0.5439	21.45	AVG	10.02	31.47	46.00	-14.53
5	N	1.3512	41.84	QP	10.03	51.87	56.00	-4.13
6	N	1.3512	21.43	AVG	10.03	31.46	46.00	-14.54
7	N	3.6084	40.98	QP	10.06	51.04	56.00	-4.96
8	N	3.6084	21.50	AVG	10.06	31.56	46.00	-14.44
9	N	5.1528	42.54	QP	10.07	52.61	60.00	-7.39
10	N	5.1528	20.77	AVG	10.07	30.84	50.00	-19.16
11	N	8.4562	38.39	QP	10.12	48.51	60.00	-11.49
12	N	8.4562	19.31	AVG	10.12	29.43	50.00	-20.57

REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.

2. "-": The Quasi-peak reading value also meets average limit and

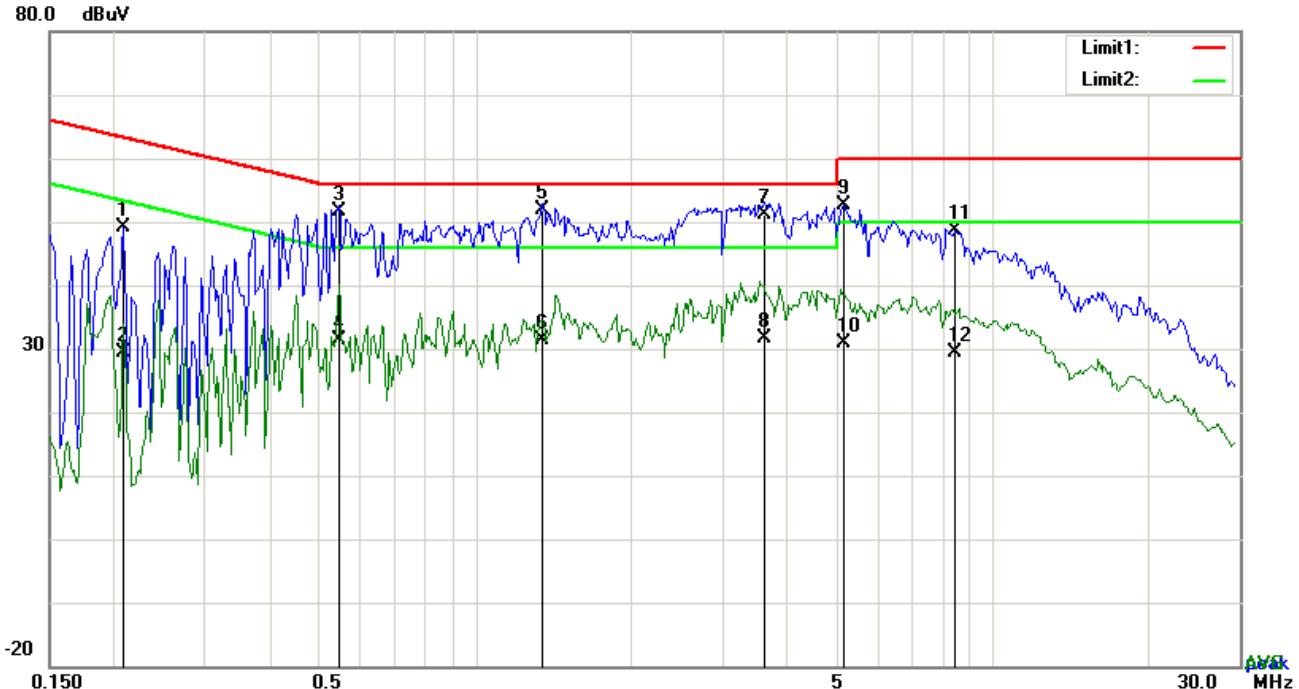
measurement with the average detector is unnecessary.

3. The emission levels of other frequencies were very low against the limit.

4. Margin value = Emission level - Limit value

5. Correction factor = Insertion loss + Cable loss

6. Emission Level = Correction Factor + Reading Value.





## 4.2. RADIATED EMISSION MEASUREMENT

### 4.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

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).

FREQUENCIES (MHz)	FIELD STRENGTH (microvolts/meter)	MEASUREMENT DISTANCE (meters)
0.009 ~ 0.490	2400/F(kHz)	300
0.490 ~ 1.705	24000/F(kHz)	30
1.705 ~ 30.0	30	30
30 ~ 88	100	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

**NOTE:**

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dB<sub>u</sub>V/m) = 20 log Emission level (uV/m).
3. As shown in 15.35(b), for frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.



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#### 4.2.2 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde&Schwarz	ESL6	1300.5001K06-1 00262-eQ	Jan. 04, 19	Jan. 03, 20
Bilog Antenna	Sunol Sciences	JB6	A110712	Feb. 06, 18	Feb. 07, 19
Signal Amplifier	HP	8447E	443008	Jan. 24, 19	Jan. 23, 20
3m Semi-anechoic Chamber	SAEMC	9m*6m*6m	N/A	Oct. 18, 18	Oct. 17, 19
MXA signal analyzer	Agilent	N9020A	MY49100060	Jan. 04, 19	Jan. 03, 20
Horn Antenna	COM-POWER	HAH-118	71259	Jan. 25, 19	Jan. 24, 20
Horn Antenna	COM-POWER	HAH-118	71283	Feb. 01, 19	Jan 31, 20
AMPLIFIER	EM Electronic Corporation	EM01G26G	60613	Jan. 24, 19	Jan. 23, 20
AMPLIFIER	Emc Instruments Corporation	Emc012645	980077	Jan. 04, 19	Jan. 03, 20
Test Software	EZ-EMC	ICP-03A1	N/A	N/A	N/A

**NOTE:**

1. The test was performed in 3m Chamber.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to CEPREI/CHINA, GRRG/CHINA and NIM/CHINA.
3. The horn antenna is used only for the measurement of emission frequency above 1GHz if tested.
4. The FCC Site Registration No. is 749762.



#### 4.2.3 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 1.5 meters (above 1GHz) and 0.8 meters (below 1GHz) above the ground at a 3 meters semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. For below 1GHz was used bilog antenna, and above 1GHz was used horn antenna, and its 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.
- d. 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 rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. For below 30MHz, a loop antenna with its vertical plane is place 3m from the EUT and rotated about its vertical axis for maximum response at each azimuth about the EUT. And the centre of the loop shall be 1m above the ground.
- g. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, For battery operated equipment, the equipment tests shall be perform using fresh batteries. The turntable was rotated to maximize the emission level.

**NOTE:**

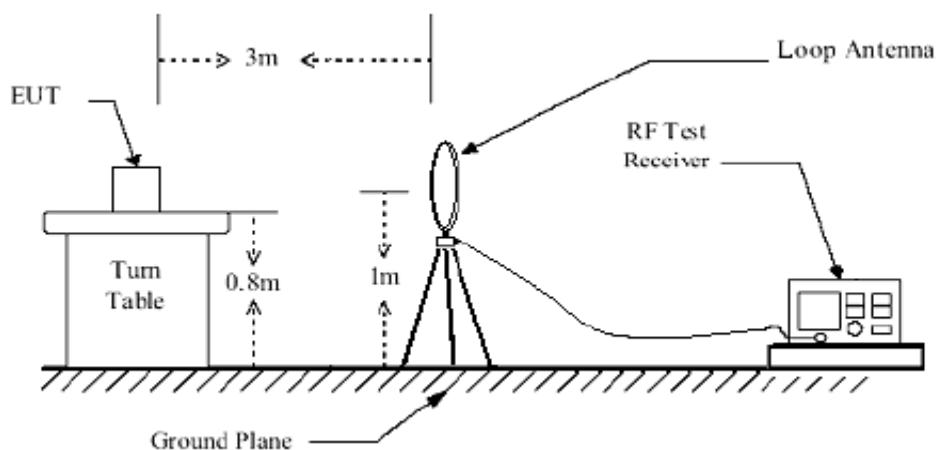
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is  $\geq 1/T$  (Duty cycle < 98%) or 10Hz(Duty cycle > 98%) for Average detection (AV) at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.
5. The testing of the EUT was performed on all 3 orthogonal axes, the worst-case test configuration was reported on the file test setup photo.

#### 4.2.4 DEVIATION FROM TEST STANDARD

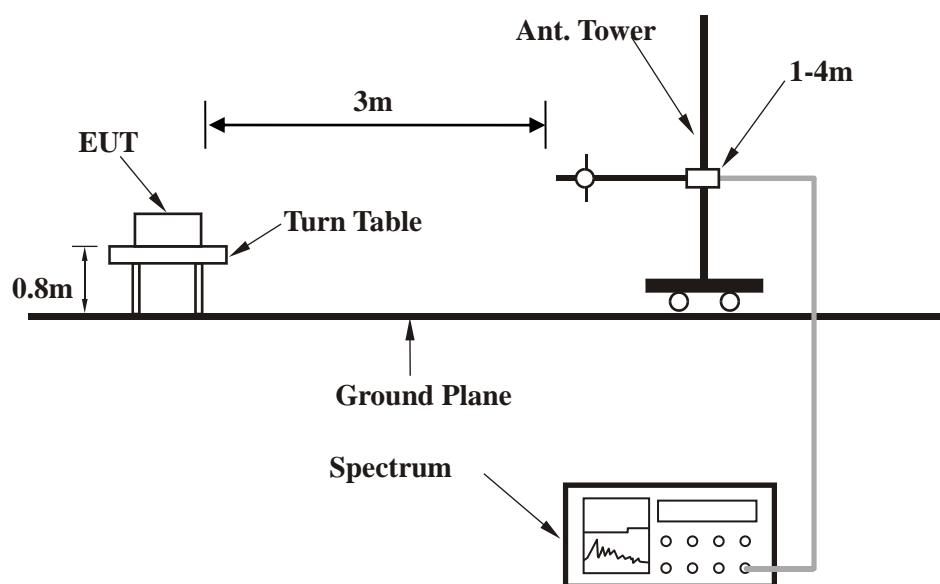
No deviation.

#### 4.2.5 TEST SETUP

##### Below 30MHz test setup

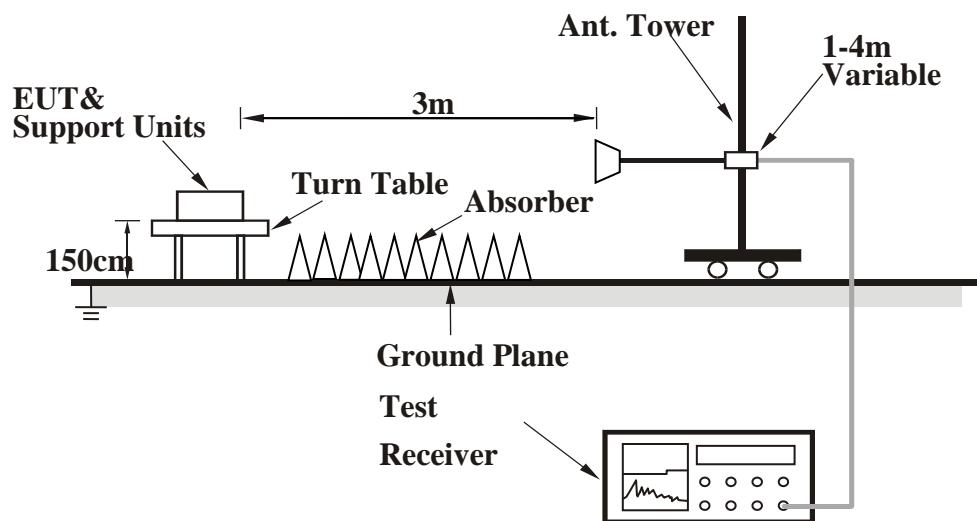


##### Below 1GHz test setup



**Note:** For the actual test configuration, please refer to the attached file (Test Setup Photo).

### Above 1GHz test setup



**Note:** For the actual test configuration, please refer to the attached file (Test Setup Photo).

#### 4.2.6 EUT OPERATING CONDITIONS

- Placed the EUT on a testing table.
- Set the transmitter part of EUT under transmission condition continuously at specific channel frequency.
- The necessary accessories enable the EUT in full functions.



## 4.2.7 TEST RESULTS

## BELOW 1GHz WORST-CASE DATA:

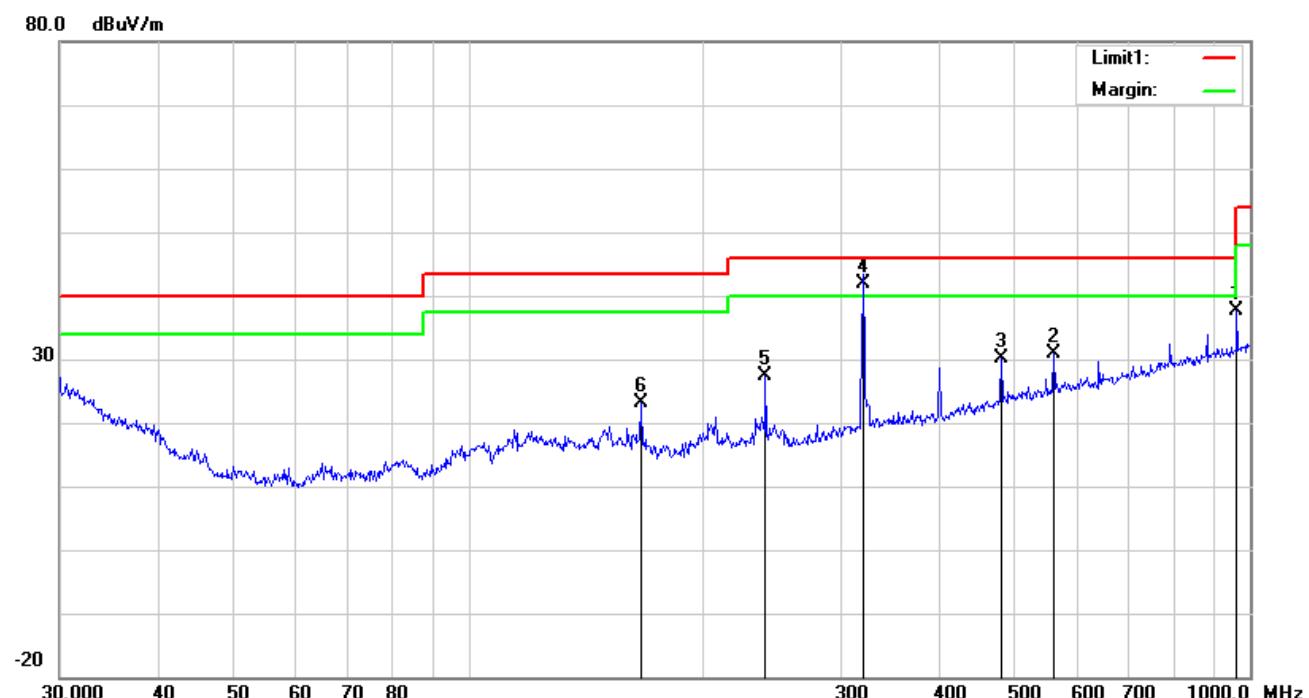
## 802.11b

CHANNEL	TX Channel 1	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9KHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
No.	Frequency (MHz)	Reading (dBuV/m)	Ant_F (dB/m)	PA_G (dB)	Cab_L (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)
1	962.1623	32.36	22.81	20.76	3.24	37.65	54.00	-16.35	100	264
2	560.6928	31.54	18.55	21.67	2.48	30.90	46.00	-15.10	100	74
3	480.5276	32.42	17.31	21.85	2.31	30.19	46.00	-15.81	100	237
4	319.9370	48.12	14.02	22.23	1.89	41.80	46.00	-4.20	100	167
5	239.9873	36.36	11.54	22.31	1.67	27.26	46.00	-18.74	100	127
6	166.0680	31.81	12.11	22.26	1.37	23.03	43.50	-20.47	100	172

## REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The emission levels of other frequencies were less than 20dB margin against the limit.
4. Margin value = Emission level – Limit value.





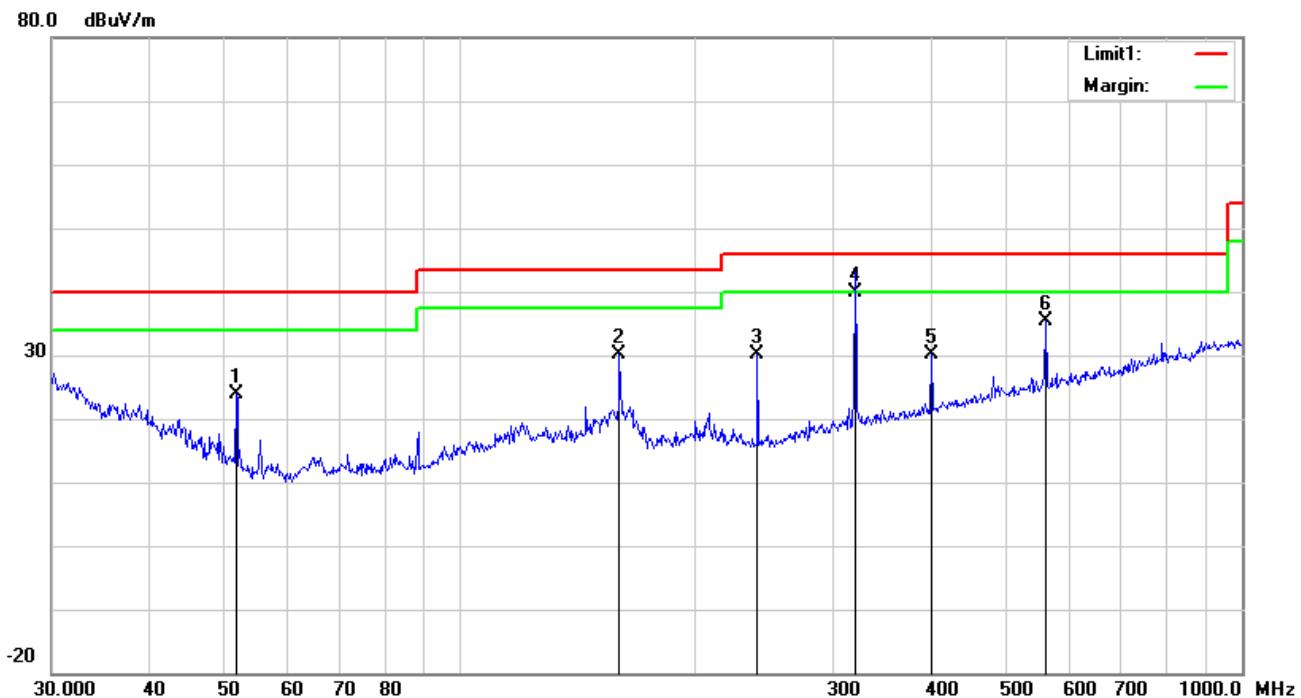
Test Report No.: RF190315N012

CHANNEL	TX Channel 1	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9KHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
No.	Frequency (MHz)	Reading (dBuV/m)	Ant_F (dB/m)	PA_G (dB)	Cab_L (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree
1	51.6616	37.14	8.22	22.38	0.79	23.77	40.00	-16.23	100	84
2	159.7844	38.30	12.60	22.27	1.39	30.02	43.50	-13.48	100	36
3	239.9873	39.32	11.54	22.31	1.67	30.22	46.00	-15.78	200	232
4	319.9370	46.16	14.02	22.23	1.89	39.84	46.00	-6.16	100	339
5	400.4319	34.40	15.71	22.01	2.01	30.11	46.00	-15.89	100	125
6	560.6928	35.96	18.55	21.67	2.48	35.32	46.00	-10.68	100	144

**REMARKS:**

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The emission levels of other frequencies were less than 20dB margin against the limit.
4. Margin value = Emission level – Limit value.





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**ABOVE 1GHz WORST-CASE DATA:**

**802.11b**

CHANNEL	TX Channel 1	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

Frequency (MHz)	S.A. Reading (dB $\mu$ V)	Detector (PK/AV)	Polarity (H/V)	Ant. Factor (dB/m)	Cable Loss (dB)	Pre-Amp. Gain (dB)	Cord Amp. (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)
4824	47.76	AV	V	33.39	7.22	48.46	39.91	54	-14.09
4824	45.07	AV	H	33.39	7.22	48.46	37.22	54	-16.78
4824	70.37	PK	V	33.39	7.22	48.46	62.52	74	-11.48
4824	65.57	PK	H	33.39	7.22	48.46	57.72	74	-16.28
11078	40.08	AV	V	38.81	9.64	47.67	40.86	54	-13.14
11078	31.42	AV	H	38.81	9.64	47.67	32.2	54	-21.8
11078	53.83	PK	V	38.81	9.64	47.67	54.61	74	-19.39
11078	51.43	PK	H	38.81	9.64	47.67	52.21	74	-21.79

**REMARKS:**

1. Emission level (dB $\mu$ V/m) = Raw Value (dB $\mu$ V) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The emission levels of other frequencies were less than 20dB margin against the limit.
4. Margin value = Emission level – Limit value.



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CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

Frequency (MHz)	S.A. Reading (dB $\mu$ V)	Detector (PK/AV)	Polarity (H/V)	Ant. Factor (dB/m)	Cable Loss (dB)	Pre-Amp. Gain (dB)	Cord Amp. (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)
4874	47.46	AV	V	33.62	7.53	48.36	40.25	54	-13.75
4874	44.27	AV	H	33.62	7.53	48.36	37.06	54	-16.94
4874	68.75	PK	V	33.62	7.53	48.36	61.54	74	-12.46
4874	65.6	PK	H	33.62	7.53	48.36	58.39	74	-15.61
7273	41.98	AV	V	36.76	7.4	48.22	37.92	54	-16.08
7273	46.92	AV	H	36.76	7.4	48.22	42.86	54	-11.14
7273	62.31	PK	V	36.76	7.4	48.22	58.25	74	-15.75
7273	62.7	PK	H	36.76	7.4	48.22	58.64	74	-15.36

**REMARKS:**

1. Emission level (dB $\mu$ V/m) = Raw Value (dB $\mu$ V) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The emission levels of other frequencies were less than 20dB margin against the limit.
4. Margin value = Emission level – Limit value.



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CHANNEL	TX Channel 11		DETECTOR FUNCTION		Peak (PK)		
FREQUENCY RANGE	1GHz ~ 25GHz					Average (AV)	

Frequency (MHz)	S.A. Reading (dB $\mu$ V)	Detector (PK/AV)	Polarity (H/V)	Ant. Factor (dB/m)	Cable Loss (dB)	Pre-Amp. Gain (dB)	Cord Amp. (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)
4924	47.03	AV	V	33.74	7.78	48.34	40.21	54	-13.79
4924	46.87	AV	H	33.74	7.78	48.34	40.05	54	-13.95
4924	65.76	PK	V	33.74	7.78	48.34	58.94	74	-15.06
4924	64.93	PK	H	33.74	7.78	48.34	58.11	74	-15.89
17843	24.16	AV	V	42.47	18.78	45	40.41	54	-13.59
17843	21.4	AV	H	42.47	18.78	45	37.65	54	-16.35
17843	42.86	PK	V	42.47	18.78	45	59.11	74	-14.89
17843	44.71	PK	H	42.47	18.78	45	60.96	74	-13.04

**REMARKS:**

1. Emission level (dB $\mu$ V/m) = Raw Value (dB $\mu$ V) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The emission levels of other frequencies were less than 20dB margin against the limit.
4. Margin value = Emission level – Limit value.



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## 4 PHOTOGRAPHS OF THE TEST CONFIGURATION

Please refer to the attached file (Test Setup Photo).



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## 5 APPENDIX A - MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No any modifications are made to the EUT by the lab during the test.

---END---