FCC Test Report

FCC ID: 2ALLS-TW7W

Product:	MULTIMEDIA TOWER
Trade Mark:	N/A
Model Number:	TW7W
Serial Model:	TW7
Report No.:	NTEK-2017NT022881660F2

Prepared for

4 Sizzle, Inc.

297 Kingsbury Grade, Box 4470-203, Stateline, NV 89449, USA

Prepared by

NTEK Testing Technology Co., Ltd.

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TEST RESULT CERTIFICATION

Applicant's name ..... :	4 Sizzle, Inc.
Address ..... :	297 Kingsbury Grade, Box 4470-203, Stateline, NV 89449, USA
Manufacturer's Name..... :	OHM TECHNOLOGY (HONGKONG)COMPANY LIMITED
Address ..... :	Unit5, 27/F, RichMond Comm, Bldg, 109Argyle Street MongKok, KowLoon. HongKong

Product description

Product name..... :	MULTIMEDIA TOWER
Model and/or type reference :	TW7W
Standards..... :	FCC Part15B:01 Oct.2016 ANSI C63.4:2014

This device described above has been tested by NTEK, and the test results show that the equipment under test (EUT) is in compliance with Part 15 of FCC Rules. And it is applicable only to the tested sample identified in the report.

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Date of Test ..... :	
Date (s) of performance of tests..... :	28 Feb. 2017 ~ 18 Mar. 2017
Date of Issue..... :	18 Mar. 2017
Test Result..... :	**Pass**

Testing Engineer : Lebron Wang

(Lebron Wang)

Technical Manager : Jason Chen

(Jason Chen)

Authorized Signatory : Sam. Chen

(Sam Chen)

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1. TEST SUMMARY

Test procedures according to the technical standards:

EMC Emission				
Standard	Test Item	Limit	Judgment	Remark
FCC Part15B:2014 ANSI C63.4: 2014	Conducted Emission	Class B	PASS	
	Radiated Emission	Class B	PASS	

NOTE:

(1) 'N/A' denotes test is not applicable in this Test Report

(2) For client's request and manual description, the test will not be executed.

1.1 TEST FACILITY

NTEK Testing Technology Co., Ltd
Add. : 1/F, Building E, Fenda Science Park, Sanwei Community, Xixiang Street, Bao'an District, Shenzhen P.R. China.
FCC Registration Number:238937; IC Registration Number:9270A-1
CNAS Registration Number:L5516

1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement **y** ± **U**, where expended uncertainty **U** is based on a standard uncertainty multiplied by a coverage factor of **k=2**, providing a level of confidence of approximately **95** %.

A. Conducted Measurement :

Test Site	Method	Measurement Frequency Range	U, (dB)	NOTE
NTEKC01	ANSI	150 KHz ~ 30MHz	3.2	

B. Radiated Measurement :

Test Site	Method	Measurement Frequency Range	U, (dB)	NOTE
NTEKA01	ANSI	30MHz ~ 1000MHz	4.7	
		1GHz ~12.4GHz	5.0	

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Equipment	MULTIMEDIA TOWER
Trade Mark	N/A
Model Name	TW7W
Serial Model	TW7
Model Difference	All the model are the same circuit and RF module, except the model No. and TW7W have more than a bass line.
Product Description	The EUT is a MULTIMEDIA TOWER. Connecting I/O port: USB, DC in Operation Frequency: BT:2402~2480 MHz Modulation Type: BT(1Mbps)/BLE: GFSK BT EDR(2Mbps): π/4-DQPSK BT EDR(3Mbps): 8-DPSK
Power Source	DC 15V from adapter.
Adapter	Model:WT24-1501600-U Input:100-240V 50/60Hz 1.6A Output:15V,1.6A
Battery	N/A
HW Version	N/A
SW Version	BK3251_flash_image_FS_6188_TW7_V1.0_20160624_0x7aae.bin

2.1.1 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generates from EUT, the test

system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Pretest Mode	Description
Mode 1	U-Disk Playing
Mode 2	SD Playing
Mode 3	USB Charging

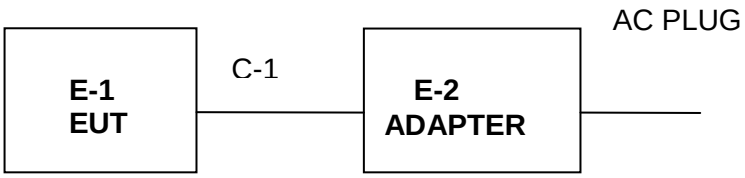
For Conducted Test	
Final Test Mode	Description
Mode 1	U-Disk Playing

For Radiated Test	
Final Test Mode	Description
Mode 1	U-Disk Playing

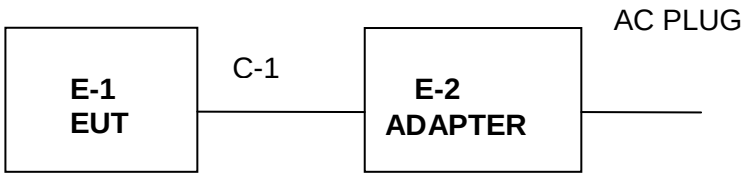
Note: Final Test Mode: Through Pre-scan, find the mode 1 is the worst case.
Only the worst case mode is recorded in the report.

2.2 DESCRIPTION OF TEST SETUP

CE:



RE



2.3 DESCRIPTION TEST PERIPHERAL AND EUT PERIPHERAL

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.

Item	Equipment	Brand	Model/Type No.	Series No.	Note
E-1	MULTIMEDIA TOWER	N/A	TW7W	N/A	EUT
E-2	Adapter	N/A	WT24-1501600-U	N/A	Peripherals

Item	Cable Type	Shielded Type	Ferrite Core	Length	Note
C-1	Power Cable	NO	NO	1.2m	

Note:

(1) The support equipment was authorized by Declaration of Confirmation.
(2) For detachable type I/O cable should be specified the length in cm in 『Length』 column.
(3) “YES” means “shielded” “with core”; “NO” means “unshielded” “without core”.

2.4 MEASUREMENT INSTRUMENTS LIST

Radiation Test equipment

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	Spectrum Analyzer	Agilent	E4407B	MY45108040	2016.07.06	2017.07.05	1 year
2	Test Receiver	R&S	ESPI	101318	2016.06.07	2017.06.06	1 year
3	Bilog Antenna	TESEQ	CBL6111D	31216	2016.07.06	2017.07.05	1 year
4	50Ω Coaxial Switch	Anritsu	MP59B	6200264416	2016.06.07	2017.06.06	1 year
5	Spectrum Analyzer	ADVANTEST	R3132	150900201	2016.06.07	2017.06.06	1 year
6	Horn Antenna	EM	EM-AH-10180	2011071402	2016.07.06	2017.07.05	1 year
7	Horn Ant	Schwarzbeck	BBHA 9170	9170-181	2016.07.06	2017.07.05	1 year
8	Amplifier	EM	EM-30180	060538	2016.07.06	2017.07.05	1 year
9	Loop Antenna	ARA	PLA-1030/B	1029	2016.06.08	2017.06.07	1 year
10	Power Meter	R&S	NRVS	100696	2016.07.06	2017.07.05	1 year
11	Power Sensor	R&S	URV5-Z4	0395.1619.05	2016.07.06	2017.07.05	1 year
12	Test Cable	N/A	R-01	N/A	2016.07.06	2017.07.05	1 year
13	Test Cable	N/A	R-02	N/A	2016.07.06	2017.07.05	1 year

Conduction Test equipment

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	Test Receiver	R&S	ESCI	101160	2016.06.06	2017.06.05	1 year
2	LISN	R&S	ENV216	101313	2016.08.24	2017.08.23	1 year
3	LISN	EMCO	3816/2	00042990	2016.08.24	2017.08.23	1 year
4	50Ω Coaxial Switch	Anritsu	MP59B	6200264417	2016.06.07	2017.06.06	1 year
5	Passive Voltage Probe	R&S	ESH2-Z3	100196	2016.06.07	2017.06.06	1 year
6	Absorbing clamp	R&S	MOS-21	100423	2016.06.08	2017.06.07	1 year
7	Test Cable	N/A	C01	N/A	2016.06.08	2017.06.07	1 year
8	Test Cable	N/A	C02	N/A	2016.06.08	2017.06.07	1 year
9	Test Cable	N/A	C03	N/A	2016.06.08	2017.06.07	1 year

3. EMC EMISSION TEST

3.1 CONDUCTED EMISSION MEASUREMENT

3.1.1 POWER LINE CONDUCTED EMISSION (Frequency Range 150KHz-30MHz)

FREQUENCY (MHz)	Class A (dBuV)		Class B (dBuV)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46 *
0.50 -5.0	73.00	60.00	56.00	46.00
5.0 -30.0	73.00	60.00	60.00	50.00

Note:

(1) The tighter limit applies at the band edges.

(2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

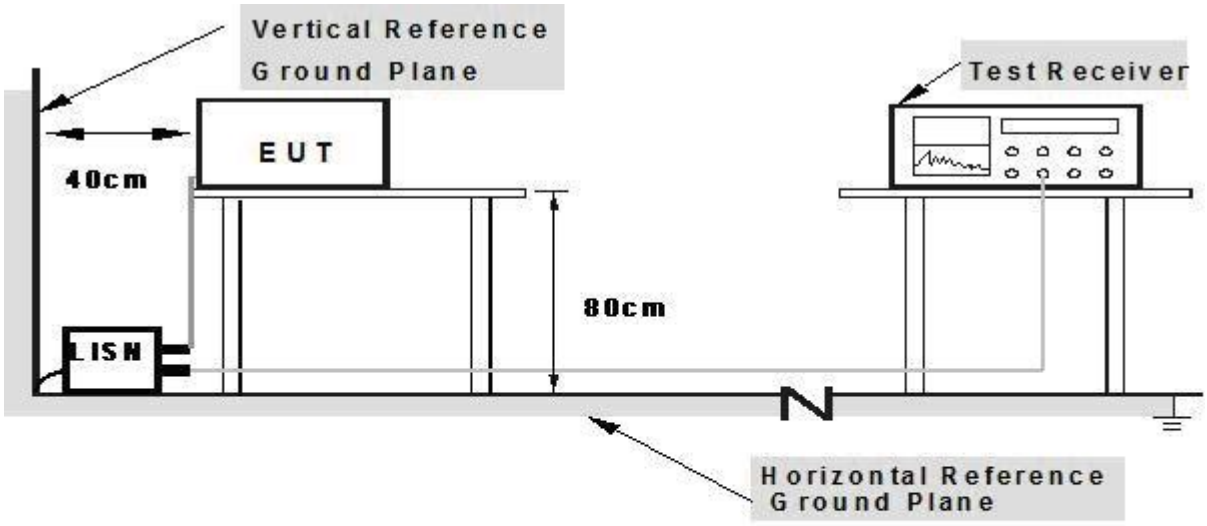
The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

3.1.2 TEST PROCEDURE

a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
d. LISN at least 80 cm from nearest part of EUT chassis.
e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

3.1.3 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 from other units and other metal planes

3.1.4 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of **2.3** Unless otherwise a special operating condition is specified in the follows during the testing.

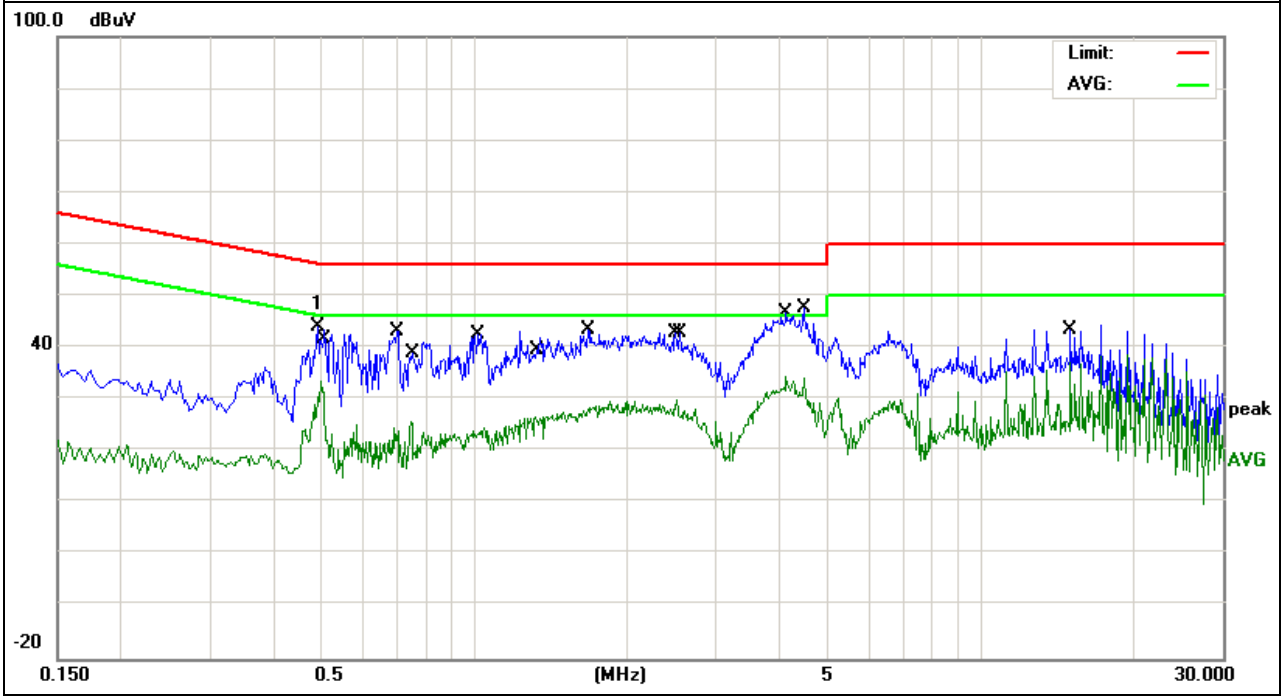
3.1.5 TEST RESULTS

EUT:	MULTIMEDIA TOWER	Model Name. :	TW7W
Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	1010hPa	Test Date:	2017-3-06
Test Mode:	Mode 1	Phase :	L
Test Voltage:	DC 5V from Adapter AC120V/60Hz		

Frequency (MHz)	Reading Level (dBμV)	Correct Factor (dB)	Measure-ment (dBμV)	Limits (dBμV)	Margin (dB)	Remark
0.49	34.19	9.85	44.04	56.17	-12.13	QP
0.498	23.69	9.84	33.53	46.03	-12.5	AVG
0.7019	33.41	9.77	43.18	56	-12.82	QP
0.75	15.83	9.77	25.6	46	-20.4	AVG
1.018	32.82	9.76	42.58	56	-13.42	QP
1.318	17.05	9.75	26.8	46	-19.2	AVG
1.674	33.63	9.76	43.39	56	-12.61	QP
2.5099	20.24	9.76	30	46	-16	AVG
2.5459	33.16	9.76	42.92	56	-13.08	QP
4.13	24.74	9.78	34.52	46	-11.48	AVG
4.462	37.99	9.78	47.77	56	-8.23	QP
14.9939	27.12	9.93	37.05	50	-12.95	AVG

Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.

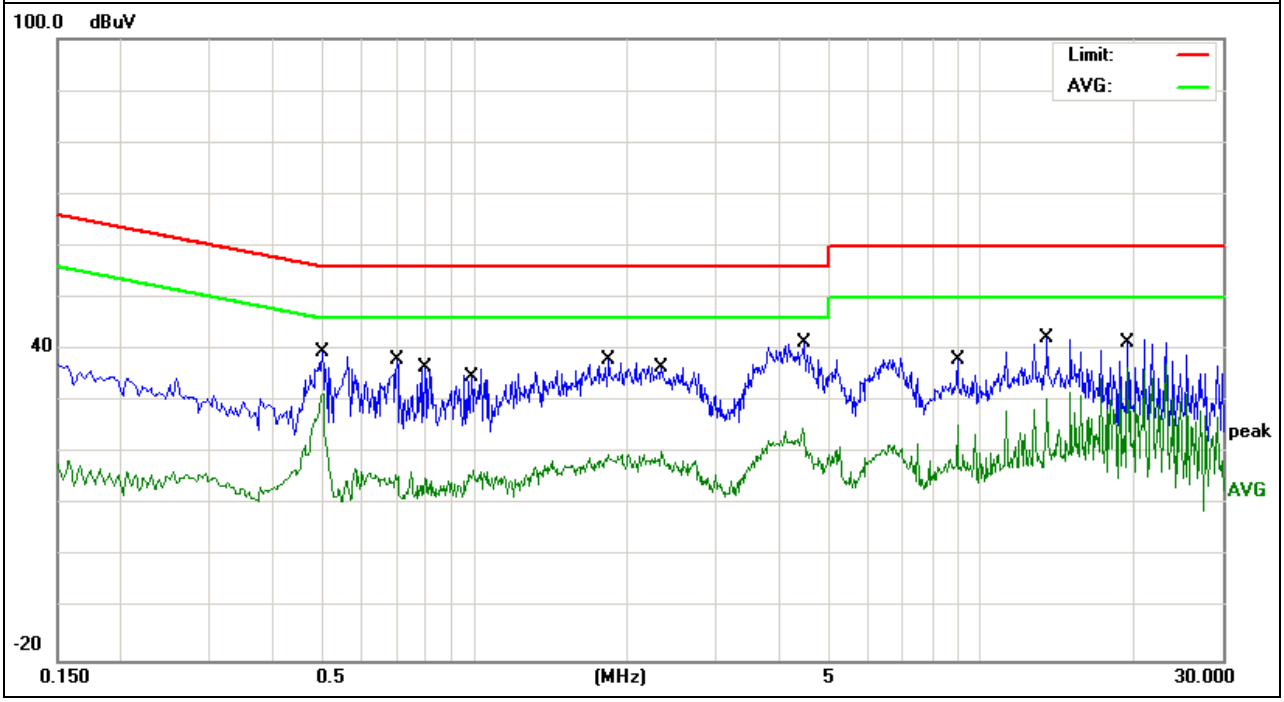


EUT:	MULTIMEDIA TOWER	Model Name. :	TW7W
Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	1010hPa	Test Date:	2017-3-06
Test Mode:	Mode 1	Phase :	N
Test Voltage:	DC 5V from Adapter AC120V/60Hz		

Frequency	Reading Level	Correct Factor	Measure-ment	Limits	Margin	Remark
(MHz)	(dBμV)	(dB)	(dBμV)	(dBμV)	(dB)	
0.502	29.84	9.85	39.69	56	-16.31	QP
0.502	21.57	9.85	31.42	46	-14.58	AVG
0.7019	28.18	9.77	37.95	56	-18.05	QP
0.798	26.79	9.76	36.55	56	-19.45	AVG
0.9979	6.84	9.76	16.6	46	-29.4	QP
1.846	28.19	9.75	37.94	56	-18.06	AVG
2.342	10.55	9.76	20.31	46	-25.69	QP
4.454	15.05	9.79	24.84	46	-21.16	AVG
4.474	31.53	9.79	41.32	56	-14.68	QP
8.9978	15.52	9.87	25.39	50	-24.61	AVG
13.4939	32.22	9.94	42.16	60	-17.84	QP
19.4939	26.32	10.11	36.43	50	-13.57	AVG

Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.

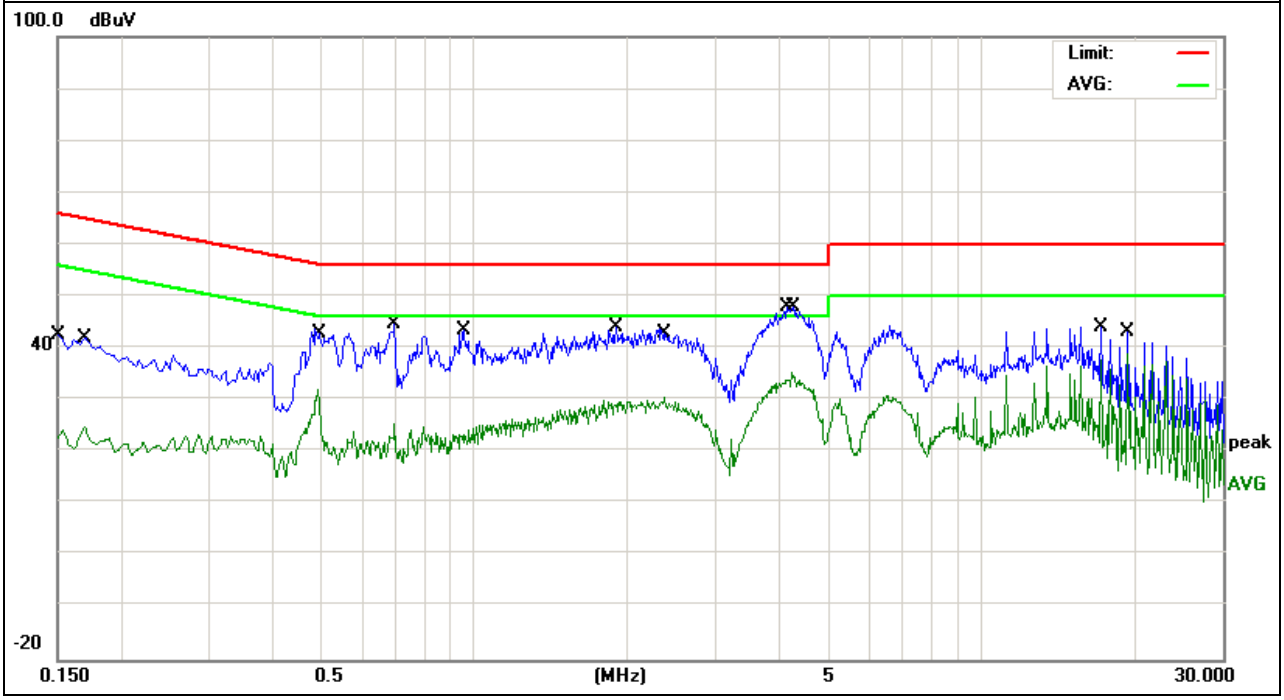


EUT:	MULTIMEDIA TOWER	Model Name. :	TW7W
Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	1010hPa	Test Date:	2017-3-06
Test Mode:	Mode 1	Phase :	L
Test Voltage:	DC 5V from Adapter AC240V/60Hz		

Frequency	Reading Level	Correct Factor	Measure-ment	Limits	Margin	Remark
(MHz)	(dBμV)	(dB)	(dBμV)	(dBμV)	(dB)	
0.1499	32.52	10.13	42.65	66	-23.35	QP
0.17	14.73	10.15	24.88	54.96	-30.08	AVG
0.49	22.14	9.85	31.99	46.17	-14.18	QP
0.694	34.76	9.77	44.53	56	-11.47	AVG
0.694	15.59	9.77	25.36	46	-20.64	QP
0.95	33.55	9.76	43.31	56	-12.69	AVG
1.898	34.33	9.75	44.08	56	-11.92	QP
2.382	20.83	9.76	30.59	46	-15.41	AVG
4.154	38.04	9.78	47.82	56	-8.18	QP
4.242	25.69	9.78	35.47	46	-10.53	AVG

Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.

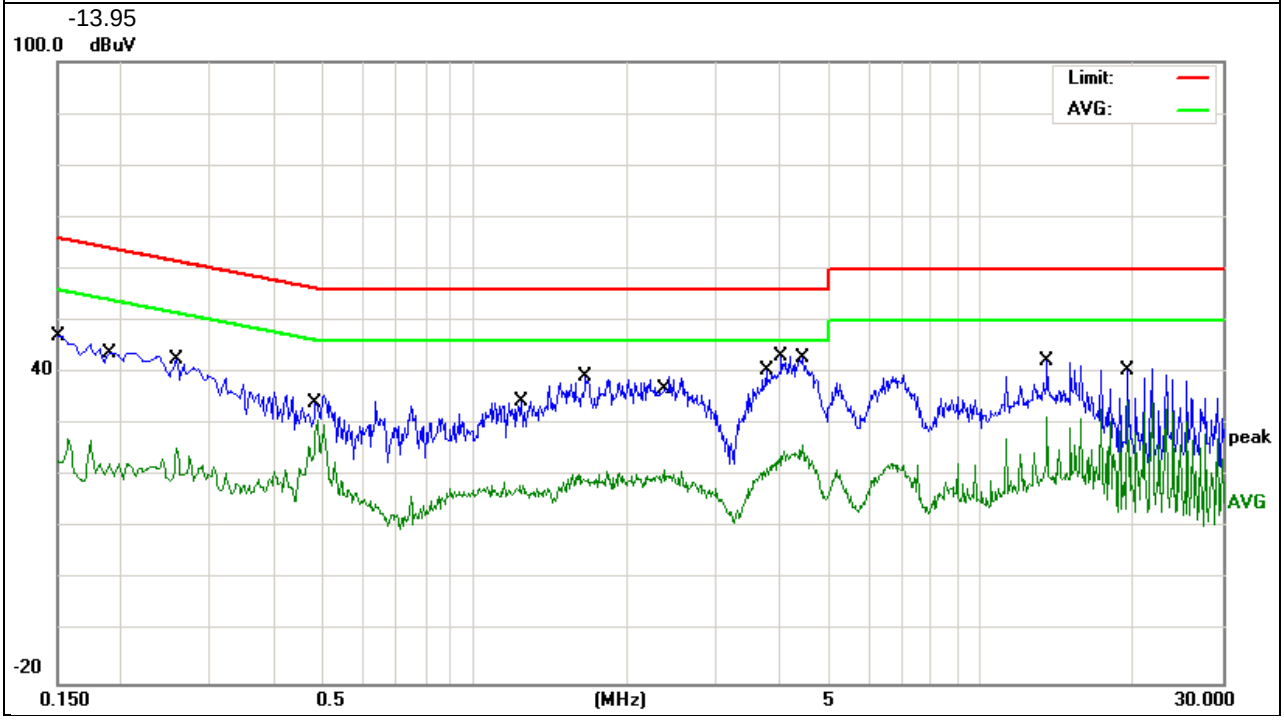


EUT:	MULTIMEDIA TOWER	Model Name. :	TW7W
Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	1010hPa	Test Date:	2017-3-06
Test Mode:	Mode 1	Phase :	N
Test Voltage:	DC 5V from Adapter AC240V/60Hz		

Frequency	Reading Level	Correct Factor	Measure-ment	Limits	Margin	Remark
(MHz)	(dBμV)	(dB)	(dBμV)	(dBμV)	(dB)	
0.1516	36.92	10.06	46.98	65.91	-18.93	QP
0.19	33.68	10.12	43.8	64.03	-20.23	AVG
0.258	15.46	10.12	25.58	51.49	-25.91	QP
0.49	20.98	9.86	30.84	46.17	-15.33	AVG
1.238	24.62	9.76	34.38	56	-21.62	QP
1.662	29.4	9.76	39.16	56	-16.84	AVG
2.374	11.59	9.76	21.35	46	-24.65	QP
3.774	30.69	9.79	40.48	56	-15.52	AVG
4.03	33.25	9.79	43.04	56	-12.96	QP
4.438	16.14	9.79	25.93	46	-20.07	AVG

Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.



3.2 RADIATED EMISSION MEASUREMENT

3.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

FREQUENCY (MHz)	Class A (at 10m)	Class B (at 3m)
	dBuV/m	dBuV/m
30 ~ 88	39.0	40.0
88 ~ 216	43.5	43.5
216 ~ 960	46.5	46.0
Above 960	49.5	54.0

Notes:

(1) The limit for radiated test was performed according to as following: FCC PART 15B /ICES-003.

(2) The tighter limit applies at the band edges.

(3) Emission level (dBuV/m)=20log Emission level (uV/m).

3.2.2 TEST PROCEDURE

Test Arrangement for Radiated Emissions up to 1 GHz

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at an accredited test facility. 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. The antenna is a broadband 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.

Note: The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for quasi-peak detection (QP) at frequency below 1GHz.

Test Arrangement for Radiated Emissions above 1 GHz.

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at an accredited chamber room. 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. The height of antenna can be varied from one meter to four meters, the height of adjustment depends on the EUT height and the antenna 3dB beamwidth both, to detect 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 and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

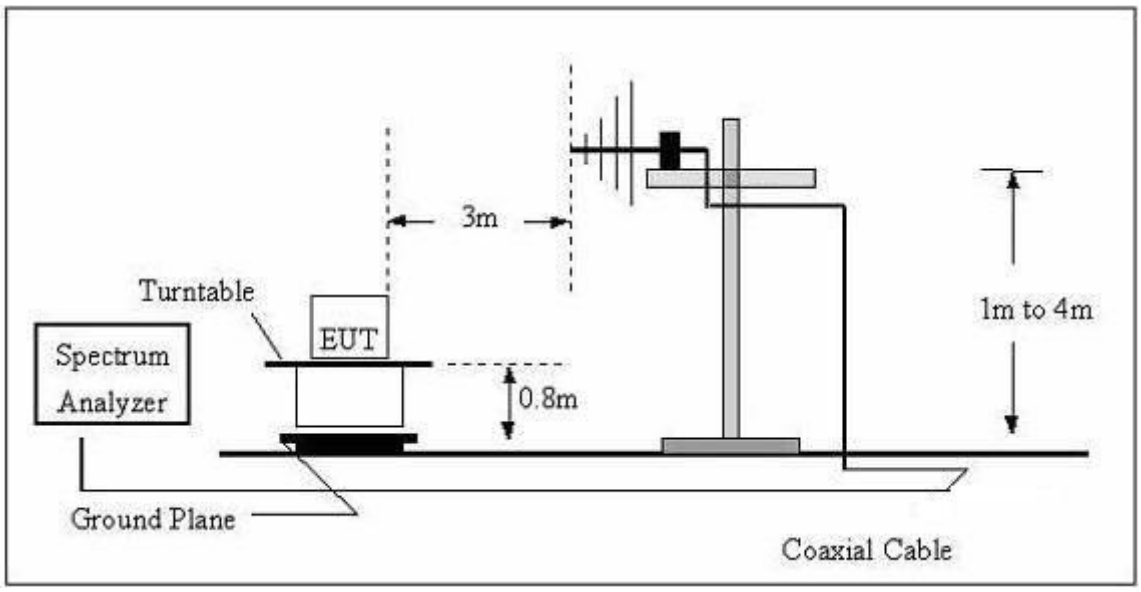
Note：For the hand-held device, the EUT should be measured for all 3 axes and only the worst case is recorded in the report

During the radiated emission test, the Spectrum Analyzer was set with the following configurations:

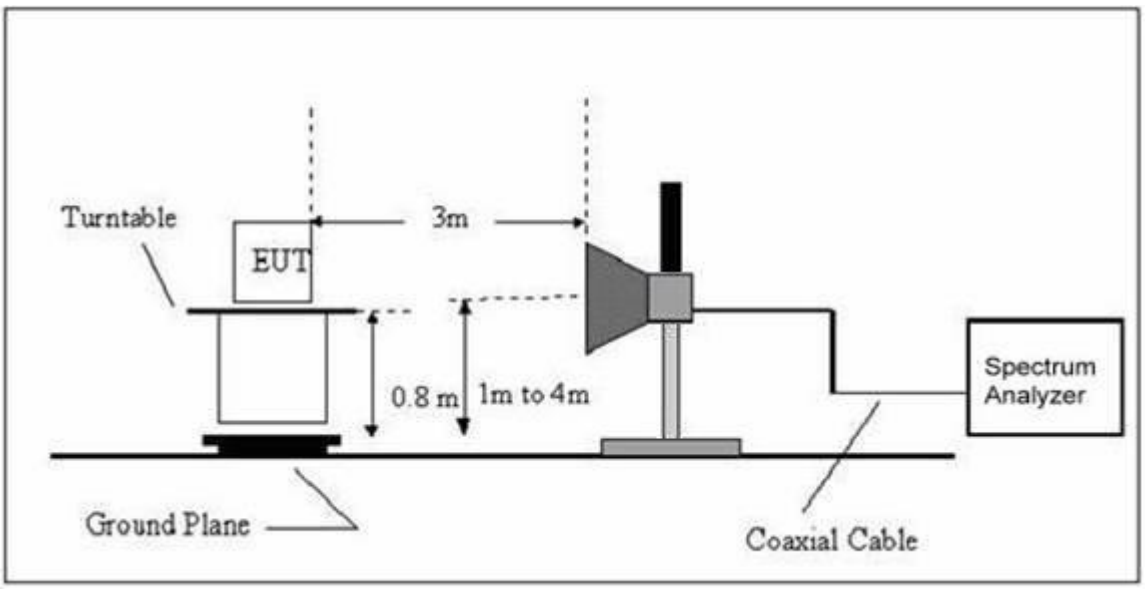
Frequency Band (MHz)	Function	Resolution bandwidth	Video Bandwidth
30 to 1000	QP	120 kHz	300 kHz
Above 1000	Peak	1 MHz	1 MHz
	Avg	1 MHz	10 Hz

3.2.3 TEST SETUP

For Radiated Emission 30~1000MHz



(B) Radiated Emission Test Set-Up Frequency Above 1GHz



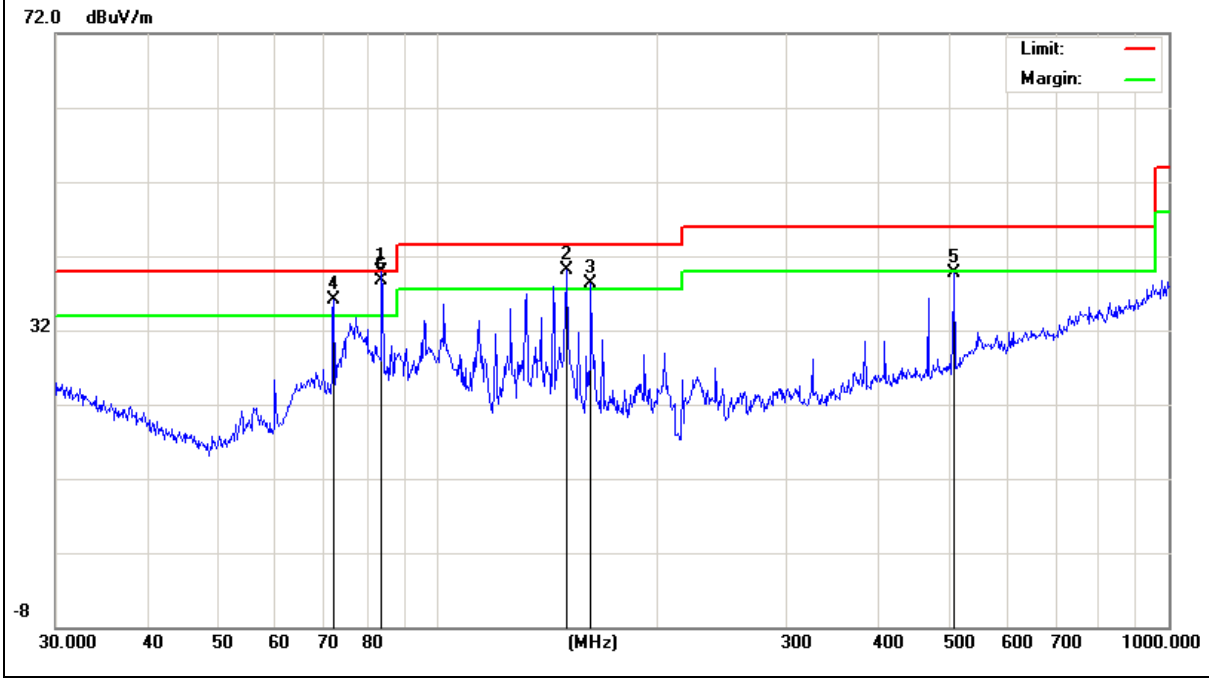
3.2.4 TEST RESULTS

TEST RESULTS (30~1000 MHz)

EUT:	MULTIMEDIA TOWER	Model Name:	TW7W
Temperature:	24 ℃	Relative Humidity:	54%
Pressure:	1010 hPa	Test Date :	2017-3-06
Test Mode :	Mode 1	Polarization :	Horizontal
Test Power :	DC 5V from Adapter AC120V/60Hz		

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
H	83.8156	30.6	9.27	39.87	40	-0.13	QP
H	150.0108	27.06	13.07	40.13	43.5	-3.37	QP
H	162.0414	26.22	12.05	38.27	43.5	-5.23	QP
H	72.0843	28.55	7.63	36.18	40	-3.82	QP
H	508.2582	17.82	21.95	39.77	46	-6.23	QP
H	84.0156	29.31	9.3	38.61	40	-1.39	QP

Remark:
Factor = Antenna Factor + Cable Loss - Amplifier.

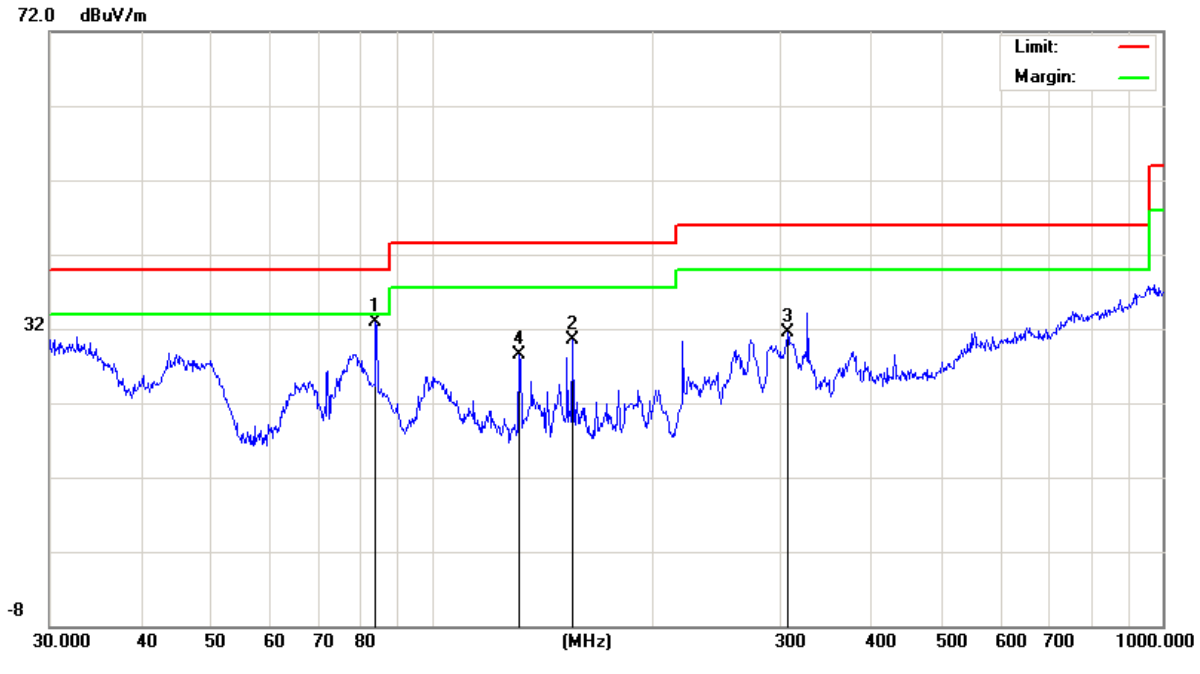


EUT:	MULTIMEDIA TOWER	Model Name :	TW7W
Temperature:	24 ℃	Relative Humidity:	54%
Pressure:	1010 hPa	Test Date :	2017-3-06
Test Mode :	Mode 1	Polarization :	Vertical
Test Power :	DC 5V from Adapter AC120V/60Hz		

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
V	83.8156	23.63	9.27	32.9	40	-7.1	QP
V	155.9101	17.88	12.54	30.42	43.5	-13.08	QP
V	306.7537	15.01	16.48	31.49	46	-14.51	QP
V	131.7577	15.31	13.28	28.59	43.5	-14.91	QP

Remark:

Factor = Antenna Factor + Cable Loss - Amplifier.



3.2.5 TEST RESULTS(1000~6000MHz)

EUT:	MULTIMEDIA TOWER	Model Name :	TW7W
Temperature:	24 ℃	Relative Humidity:	54%
Pressure:	1010 hPa	Test Date :	2017-3-06
Test Mode :	Mode 1		
Test Power :	DC 5V from Adapter AC120V/60Hz		

All the modulation modes have been tested, and the worst result was report as below:

Polar (H/V)	Frequency (MHz)	Reading (dBuV/m	Correct dB/m	Result (dBuV/m	Limit (dBuV/m	Over Limit (dB)	Remark
V	1049.57	52.69	-14.8	37.93	74	-36.1	Pk
V	1430.97	55.96	-13.2	42.72	74	-31.3	AV
V	1496.53	54.5	-13.4	41.06	74	-32.9	Pk
V	1993.37	67.24	-11	56.21	74	-17.8	AV
V	1993.37	46.02	-11	34.99	54	-19	Pk
V	3216.29	46.52	-8.36	38.16	74	-35.8	AV
V	4979.93	41.47	-1.98	39.49	74	-34.5	Pk
H	1021.73	51.98	-14.8	37.23	74	-36.8	Pk
H	1198.38	50.85	-13.5	37.37	74	-36.6	AV
H	1346.4	49.52	-13.2	36.28	74	-37.7	Pk
H	1761.55	54.57	-12.2	42.36	74	-31.6	AV
H	1872.2	55.51	-11.8	43.76	74	-30.2	Pk
H	2004.12	57.27	-10.8	46.44	74	-27.6	AV

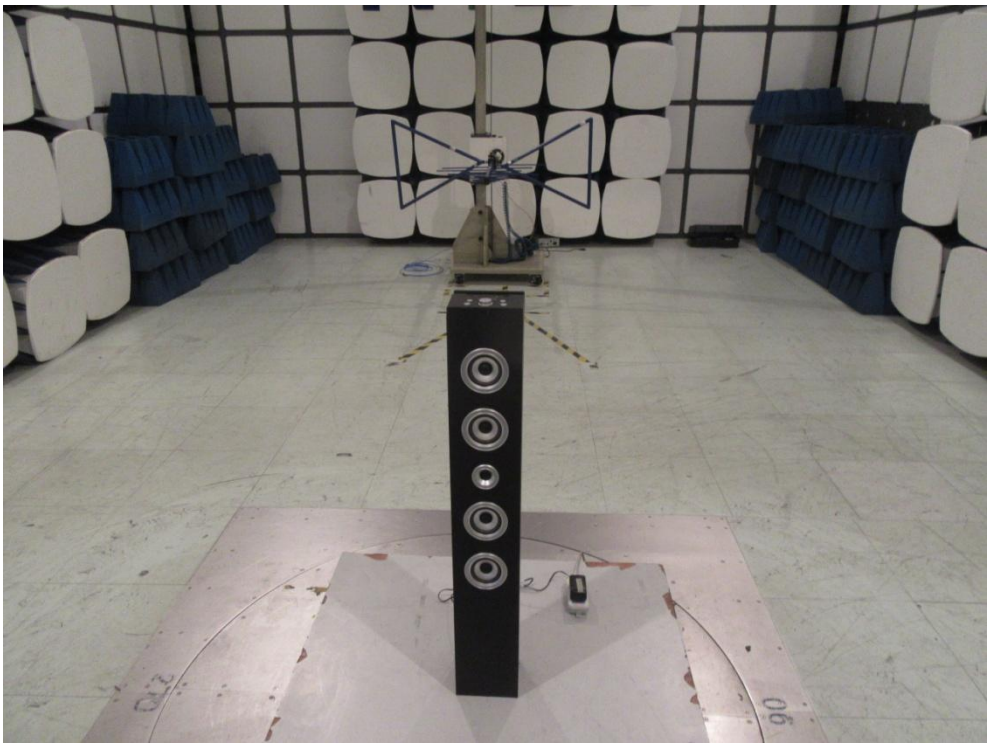
Remark:

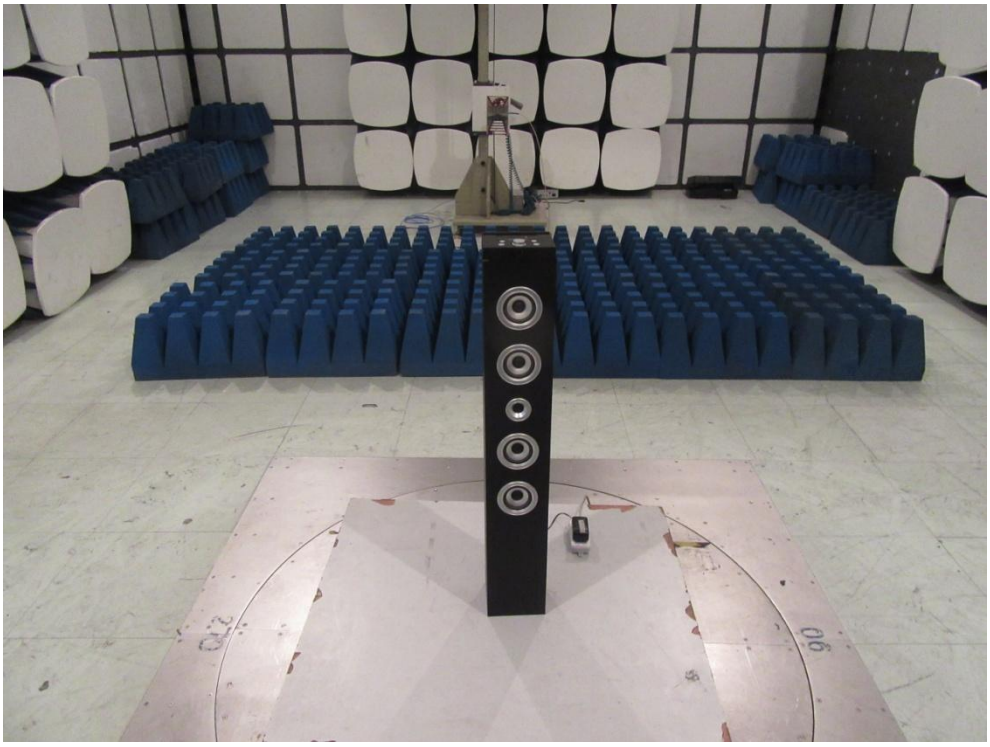
Absolute Level= ReadingLevel+ Factor, Margin= Absolute Level - Limit

Note: Only the worst results data points are reported in the report.

4. EUT TEST PHOTO

Radiated Measurement Photos





Conducted Measurement Photos