

**ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT
INTENTIONAL RADIATOR CERTIFICATION TO
FCC PART 15 SUBPART C
REQUIREMENT T**

OF

Assistive Listening System

MODEL No.: MET-127/ALS700/ALSM700

Trademark: MET/HAMILTON BUHL

FCC ID: SSMMEF127

REPORT NO: ES150729379E

ISSUE DATE: August 31, 2015

Prepared for
**MODERN ELECTRONICS FACTORY LTD.
FLAT C, 10/F, PHASE 4, KWUN TONG INDUSTRIAL CENTRE, 472-478
KWUN TONG ROAD, HONG KONG**

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VERIFICATION OF COMPLIANCE


Applicant:	MODERN ELECTRONICS FACTORY LTD. FLAT C, 10/F, PHASE 4, KWUN TONG INDUSTRIAL CENTRE, 472-478 KWUN TONG ROAD, HONG KONG
Manufacturer:	MODERN ELECTRONICS FACTORY LTD. FLAT C, 10/F, PHASE 4, KWUN TONG INDUSTRIAL CENTRE, 472-478 KWUN TONG ROAD, HONG KONG
Product Description:	Assistive Listening System
Model Number:	MET-127/ALS700/ALSM700
Date of Test:	August 01, 2015 to August 31, 2015

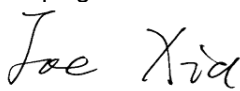
We hereby certify that:

The above equipment was tested by SHENZHEN EMTEK CO., LTD. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10 (2013) and the energy emitted by the sample EUT tested as described in this report is in compliance with conducted and radiated emission limits of FCC Rules Part 15.237.

The test results of this report relate only to the tested sample identified in this report.

Date of Test : August 01, 2015 to August 31, 2015

Prepared by : 
Yaping Shen/Editor

Reviewer : 
Joe Xia/Supervisor


Approve & Authorized Signer : 
Lisa Wang/Manager

Table of Contents

GENERAL INFORMATION	4
1.1. PRODUCT DESCRIPTION	4
1.2. RELATED SUBMITTAL(S) / GRANT (S)	5
1.3. TEST METHODOLOGY	5
1.4. SPECIAL ACCESSORIES	5
1.5. EQUIPMENT MODIFICATIONS	5
1.6. MEASUREMENT UNCERTAINTY	6
1.7. TEST FACILITY.....	6
2. SYSTEM TEST CONFIGURATION	7
2.1. EUT CONFIGURATION	7
2.2. EUT EXERCISE	7
2.3. TEST PROCEDURE	7
2.4. DESCRIPTION OF TEST MODES	8
3. SUMMARY OF TEST RESULTS	9
3.1. CONFIGURATION OF TESTED SYSTEM	9
4. CONDUCTED EMISSIONS TEST	10
4.1. MEASUREMENT PROCEDURE:	10
4.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)	10
4.3. MEASUREMENT EQUIPMENT USED:	10
4.4. CONDUCTED EMISSION LIMIT.....	10
4.5. MEASUREMENT RESULT:	11
5. RADIATED EMISSION TEST	15
5.1. MEASUREMENT PROCEDURE	15
5.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)	16
5.3. MEASUREMENT EQUIPMENT USED:	16
5.4. RADIATED EMISSION LIMIT	17
5.5. MEASUREMENT RESULT	18
6. BANDWIDTH TEST	24
6.1. MEASUREMENT PROCEDURE	24
6.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)	24
6.3. MEASUREMENT EQUIPMENT USED:	24
6.4. MEASUREMENT RESULTS:	24
7. ANTENNA APPLICATION	26
7.1. ANTENNA REQUIREMENT.....	26
7.2. RESULT	26
8. PHOTOGRAPHS	27
8.1. PHOTOS OF CONDUCTED EMISSION MEASUREMENT	27
8.2. PHOTOS OF RADIATION EMISSION MEASUREMENT	28
9. APPENDIX	29

GENERAL INFORMATION

1.1. Product Description

The MET-127 provides outstanding quality. This system operates up to 150 feet line of sight. The system is configured with one wireless transmitter. The system is configured with two channel in 75.5MHz and 75.9MHz band. The system is expandable to limitless receivers.

Product information:	
Power supply:	DC 5V by adapter
Adapter:	Model: FD28UD-5-200 Input: 120V~60Hz 90mA Output: DC 5V, 200mA
Operating Frequency:	Channel 1: 75.5MHz Channel 2: 75.9MHz
Modulation:	FM
Number of Channels:	2
Antenna Type:	Telescopic Antenna
Antenna Gain:	0 dBi
Temperature Range:	-10°C ~ +55°C

1.2. Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended for FCC ID: SSMMEF127 filing to comply with Section 15.249 of the FCC Part 15, Subpart C Rules.

1.3. Test Methodology

Both conducted and radiated testing was performed according to the procedures in ANSI C63.10 (2013). Radiated testing was performed at an antenna to EUT distance 3 meters.

1.4. Special Accessories

Not available for this EUT intended for grant.

1.5. Equipment Modifications

Not available for this EUT intended for grant.

1.6. Measurement Uncertainty

Measurement Type	Range	Confidence Level (%)	Calculated Uncertainty
AC Conducted Spurious Emissions	0.15 MHz to 30 MHz	95%	±3.00dB
Fundamental Fieldstrength	Not Applicable	95%	±2.94dB
Transmitter 20 dB Bandwidth	Not Applicable	95%	±0.92PPm
Radiated Spurious Emissions	30 MHz to 40 GHz	95%	±3.00dB

1.7. Test Facility

Site Description

EMC Lab.

: Accredited by CNAS, 2013.10.29
The certificate is valid until 2016.10.28
The Laboratory has been assessed and proved to be in compliance with CNAS-CL01: 2006(identical to ISO/IEC17025: 2005)
The Certificate Registration Number is L2291

Accredited by TUV Rheinland Shenzhen, 2010.5.25
The Laboratory has been assessed according to the requirements ISO/IEC 17025.

Name of Firm

: Accredited by FCC, July 24, 2013
The Certificate Registration Number is 406365.

Site Location

: Accredited by FCC, April 17, 2013
The Certificate Registration Number is 709623.

2. SYSTEM TEST CONFIGURATION

2.1. EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

2.2. EUT Exercise

The Transmitter was operated in the normal operating mode. The TX frequency was fixed which was for the purpose of the measurements.

2.3. Test Procedure

2.3.1 Conducted Emissions

The EUT is placed on a turn table which is 0.8 m above ground plane. According to the requirements in Section 13.1.4.1 of ANSI C63.10-2013 Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-Peak and average detector mode.

2.3.2 Radiated Emissions

The EUT is placed on a turn table which is 0.8 m above ground plane. The turn table shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the max. Emission, the relative positions of this hand-held transmitter (EUT) was rotated through three orthogonal axes according to the requirements in Section 13.1.4.1 of ANSI C63.10-2013

2.4. Description of test modes

The EUT has been tested under normal operating condition.

Pre-scanned tests, X, Y, Z in the three orthogonal panels, were conducted to determine the final configuration from all possible combinations. Let EUT transmit with highest power, and the worst result was reported with modulation FSK. The 3 channels of lower, medium and higher were chosen for test.

For Conducted Test	
Final Test Mode	Description
Mode 1	Channel 1-75.5MHz
Mode 2	Channel 2-75.9MHz

For Radiated Test	
Mode 1	Channel 1-75.5MHz
Mode 2	Channel 2-75.9MHz

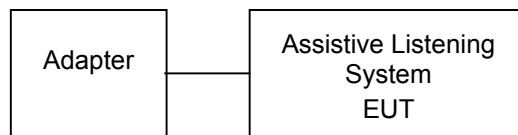
3. SUMMARY OF TEST RESULTS

FCC Part15, Subpart C (15.237)		
Standard Section	Test Item	Result
FCC		
15.207	Conducted Emission	Pass
15.209	Radiated Emission	Pass
15.237	Transmitter Fundamental Field Strength	Pass
15.237	20dB Bandwidth	Pass

Note: (1) "N/A" denotes test is not applicable in this test report.

3.1. CONFIGURATION OF TESTED SYSTEM

Fig. 2-1 Configuration of Tested System

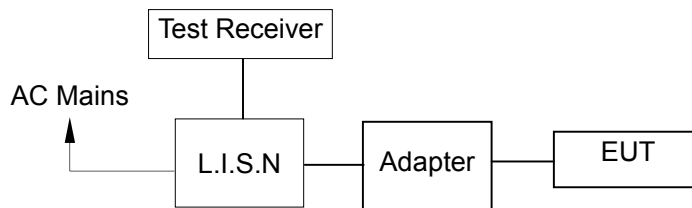


4. CONDUCTED EMISSIONS TEST

4.1. Measurement Procedure:

1. The EUT was placed on a table which is 0.8m above ground plane.
2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
3. Repeat above procedures until all frequency measured was complete.

4.2. Test SET-UP (Block Diagram of Configuration)



4.3. Measurement Equipment Used:

Conducted Emission Test Site # 1					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Test Receiver	Rohde & Schwarz	ESCS30	828985/018	May 17, 2015	May 16, 2016
L.I.S.N	Rohde & Schwarz	ESH2-Z5	834549/005	May 17, 2015	May 16, 2016
50ΩCoaxial Switch	Anritsu	MP59B	M20531	May 17, 2015	May 16, 2016

4.4. Conducted Emission Limit

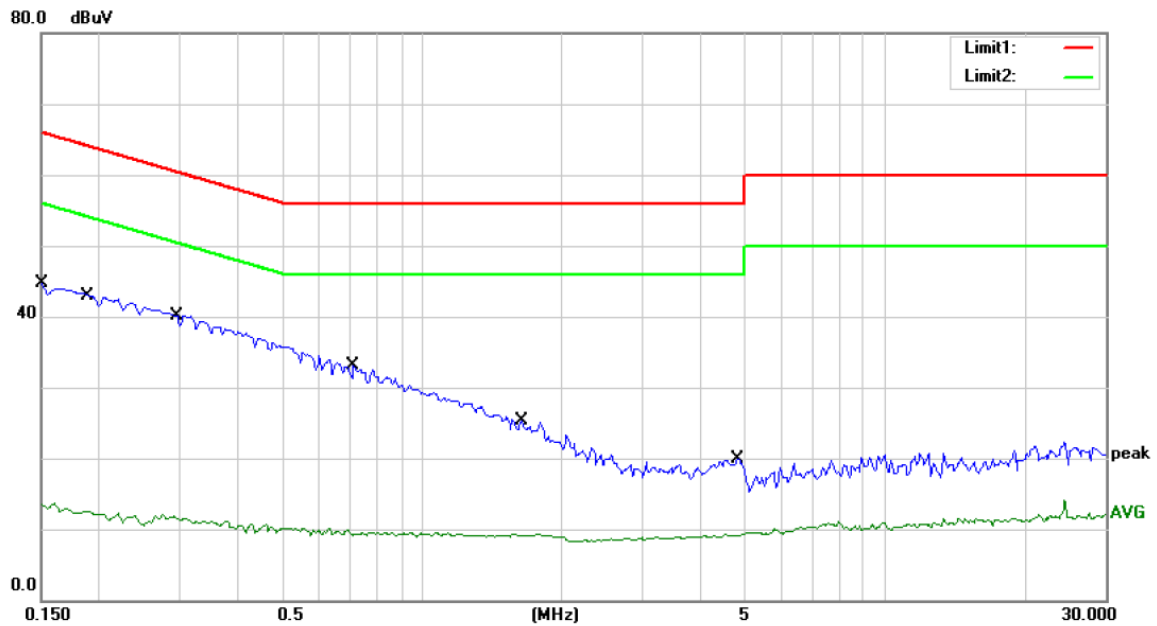
Conducted Emission

Frequency(MHz)	Quasi-peak	Average
0.15-0.5	66-56	56-46
0.5-5.0	56	46
5.0-30.0	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.

4.5. Measurement Result:



Site Conduction #2

Phase: **L1**

Temperature: 26

Limit: (CE)FCC PART 15 C

Power: AC 120V/60Hz

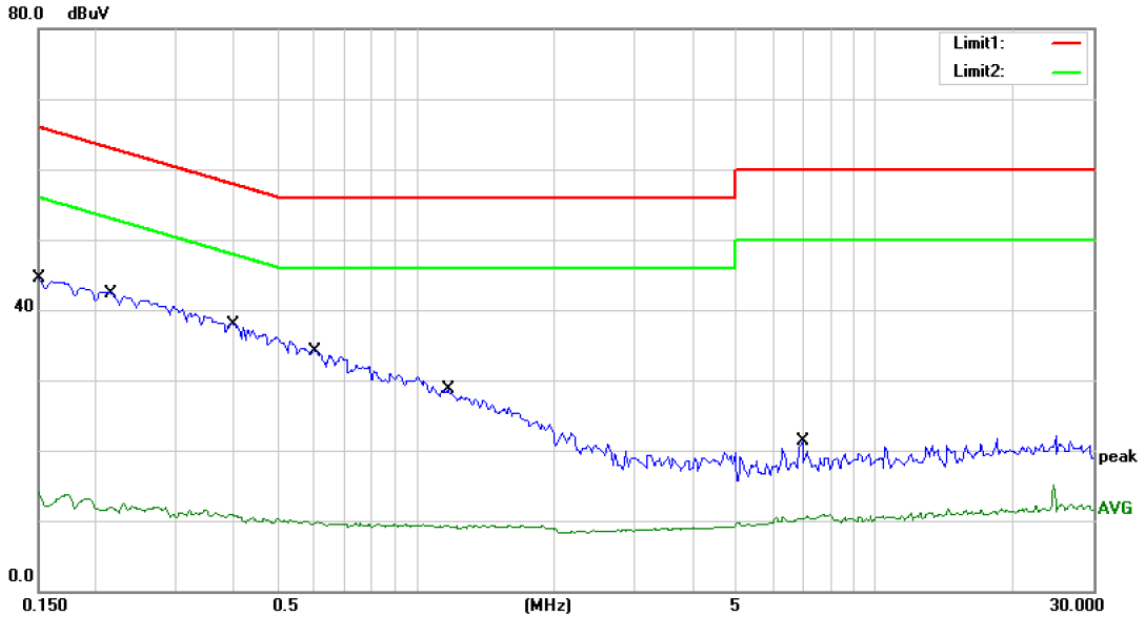
Humidity: 55 %

Mode: Channel 1

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1500	44.73	0.00	44.73	66.00	-21.27	QP	
2		0.1500	13.69	0.00	13.69	56.00	-42.31	AVG	
3		0.1914	42.90	0.00	42.90	63.98	-21.08	QP	
4		0.1914	12.53	0.00	12.53	53.98	-41.45	AVG	
5	*	0.2950	40.19	0.00	40.19	60.38	-20.19	QP	
6		0.2950	11.85	0.00	11.85	50.38	-38.53	AVG	
7		0.7160	32.61	0.00	32.61	56.00	-23.39	QP	
8		0.7160	9.90	0.00	9.90	46.00	-36.10	AVG	
9		1.6400	25.31	0.00	25.31	56.00	-30.69	QP	
10		1.6400	9.30	0.00	9.30	46.00	-36.70	AVG	
11		4.8200	19.89	0.00	19.89	56.00	-36.11	QP	
12		4.8200	9.58	0.00	9.58	46.00	-36.42	AVG	

*:Maximum data x:Over limit !:over margin Comment: Factor build in receiver. Operator: KK



Site Conduction #2

Phase: **N**

Temperature: 26

Limit: (CE)FCC PART 15 C

Power: AC 120V/60Hz

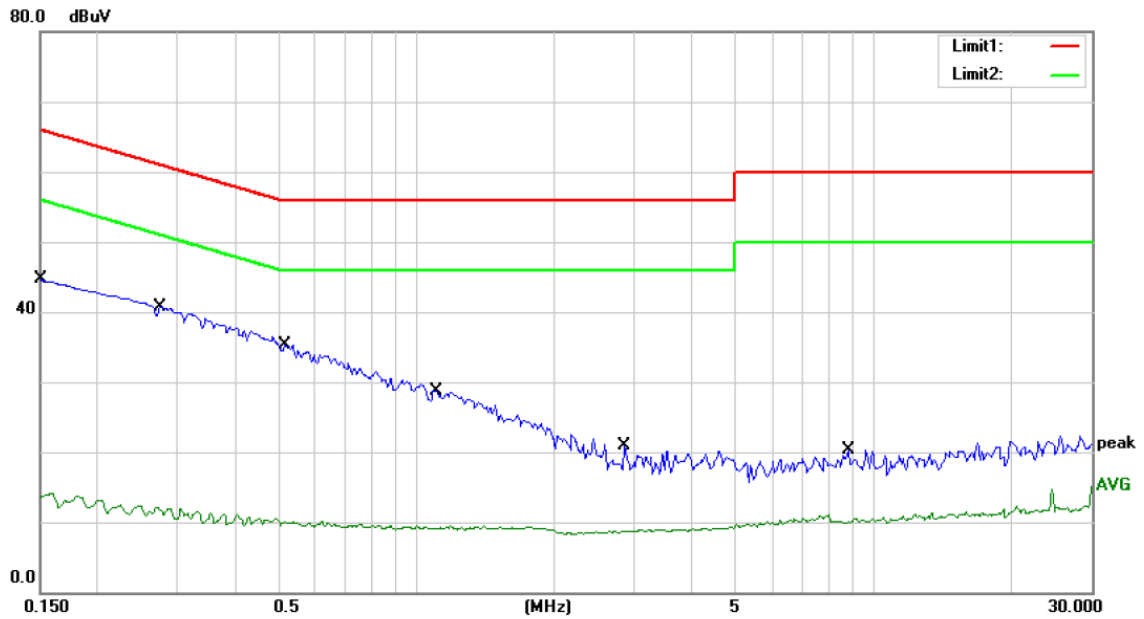
Humidity: 55 %

Mode: Channel 1

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1500	44.57	0.00	44.57	66.00	-21.43	QP	
2		0.1500	14.07	0.00	14.07	56.00	-41.93	AVG	
3		0.2185	13.18	0.00	13.18	52.88	-39.70	AVG	
4		0.2185	42.17	0.00	42.17	62.88	-20.71	QP	
5		0.4050	10.93	0.00	10.93	47.75	-36.82	AVG	
6	*	0.4050	37.67	0.00	37.67	57.75	-20.08	QP	
7		0.6100	9.87	0.00	9.87	46.00	-36.13	AVG	
8		0.6100	32.90	0.00	32.90	56.00	-23.10	QP	
9		1.1781	9.40	0.00	9.40	46.00	-36.60	AVG	
10		1.1781	28.51	0.00	28.51	56.00	-27.49	QP	
11		6.9600	21.23	0.00	21.23	60.00	-38.77	QP	
12		6.9600	10.86	0.00	10.86	50.00	-39.14	AVG	

*:Maximum data x:Over limit !:over margin Comment: Factor build in receiver. Operator: KK



Site Conduction #2

Phase: **L1**

Temperature: 26

Limit: (CE)FCC PART 15 C

Power: AC 120V/60Hz

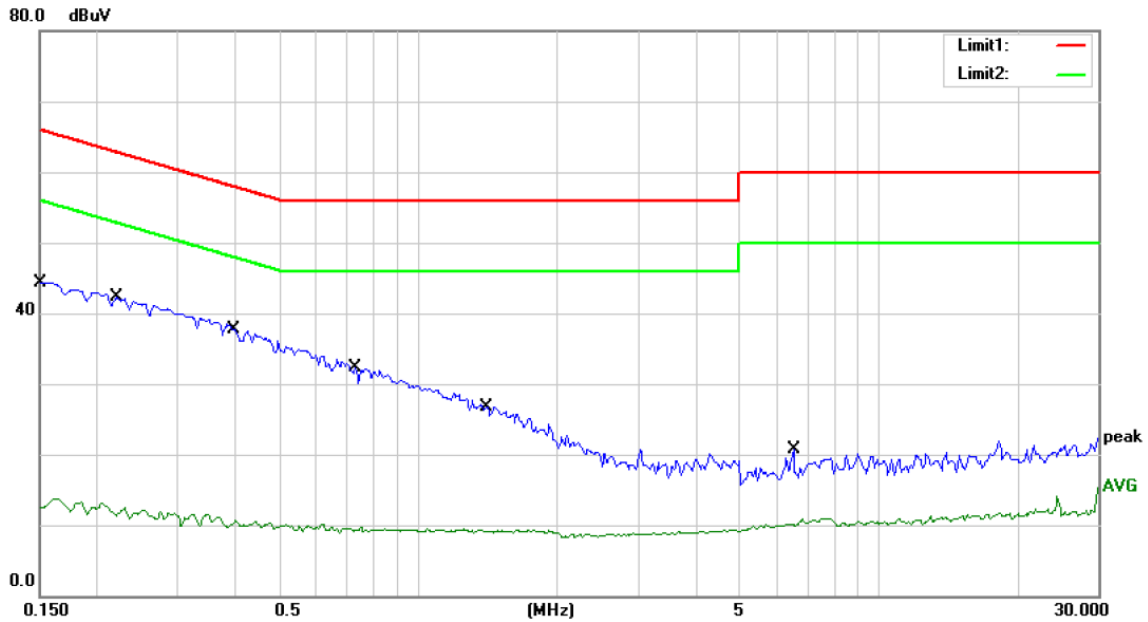
Humidity: 55 %

Mode: Channel 2

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1500	44.65	0.00	44.65	66.00	-21.35	QP	
2		0.1500	14.16	0.00	14.16	56.00	-41.84	AVG	
3	*	0.2750	40.69	0.00	40.69	60.97	-20.28	QP	
4		0.2750	12.39	0.00	12.39	50.97	-38.58	AVG	
5		0.5150	35.27	0.00	35.27	56.00	-20.73	QP	
6		0.5150	10.45	0.00	10.45	46.00	-35.55	AVG	
7		1.1050	28.76	0.00	28.76	56.00	-27.24	QP	
8		1.1050	9.55	0.00	9.55	46.00	-36.45	AVG	
9		2.8450	20.91	0.00	20.91	56.00	-35.09	QP	
10		2.8450	8.93	0.00	8.93	46.00	-37.07	AVG	
11		8.8200	20.28	0.00	20.28	60.00	-39.72	QP	
12		8.8200	10.87	0.00	10.87	50.00	-39.13	AVG	

*:Maximum data x:Over limit !:over margin Comment: Factor build in receiver. Operator: KK



Site Conduction #2

Phase: **N**

Temperature: 26

Limit: (CE)FCC PART 15 C

Power: AC 120V/60Hz

Humidity: 55 %

Mode: Channel 2

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1500	44.36	0.00	44.36	66.00	-21.64	QP	
2		0.1500	13.79	0.00	13.79	56.00	-42.21	AVG	
3		0.2200	42.24	0.00	42.24	62.82	-20.58	QP	
4		0.2200	13.07	0.00	13.07	52.82	-39.75	AVG	
5	*	0.4000	37.51	0.00	37.51	57.85	-20.34	QP	
6		0.4000	11.20	0.00	11.20	47.85	-36.65	AVG	
7		0.7300	32.26	0.00	32.26	56.00	-23.74	QP	
8		0.7300	10.04	0.00	10.04	46.00	-35.96	AVG	
9		1.4100	26.75	0.00	26.75	56.00	-29.25	QP	
10		1.4100	9.40	0.00	9.40	46.00	-36.60	AVG	
11		6.5300	20.79	0.00	20.79	60.00	-39.21	QP	
12		6.5300	10.99	0.00	10.99	50.00	-39.01	AVG	

*:Maximum data x:Over limit !:over margin Comment: Factor build in receiver. Operator: KK

5. RADIATED EMISSION TEST

5.1. Measurement Procedure

The test site semi-anechoic chamber has met the requirement of NSA tolerance 4 dB according to the standards: ANSI C63.10. The test distance is 3m. The setup is according to the requirements in Section 13.1.4.1 of ANSI C63.10-2013

Below 30MHz:

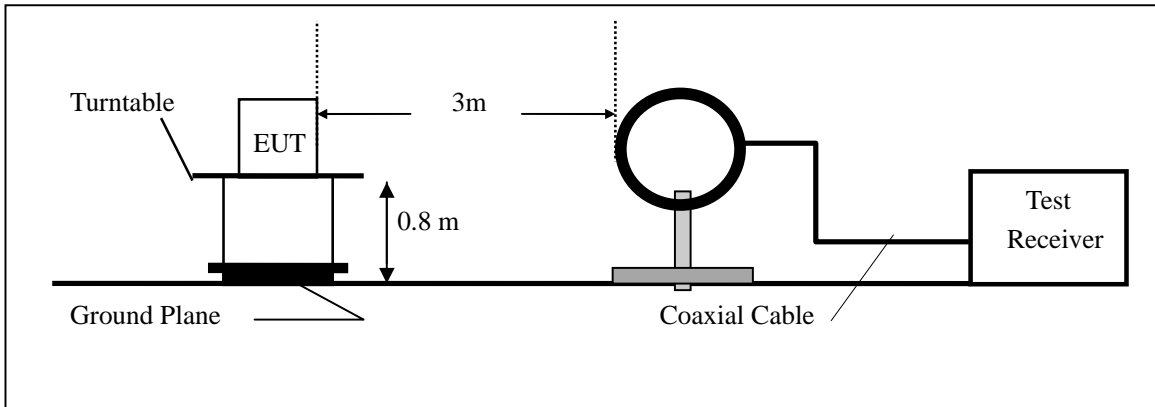
The EUT is placed on a turntable 0.8 meters above the ground in the chamber, 3 meter away from the antenna (loop antenna). The Antenna should be positioned with its plane vertical at the specified distance from the EUT and rotated about its vertical axis for maximum response at each azimuth about the EUT. The center of the loop shall be 1 m above the ground. For certain applications, the loop antenna plane may also need to be positioned horizontally at the specified distance from the EUT.

30GHz-1GHz:

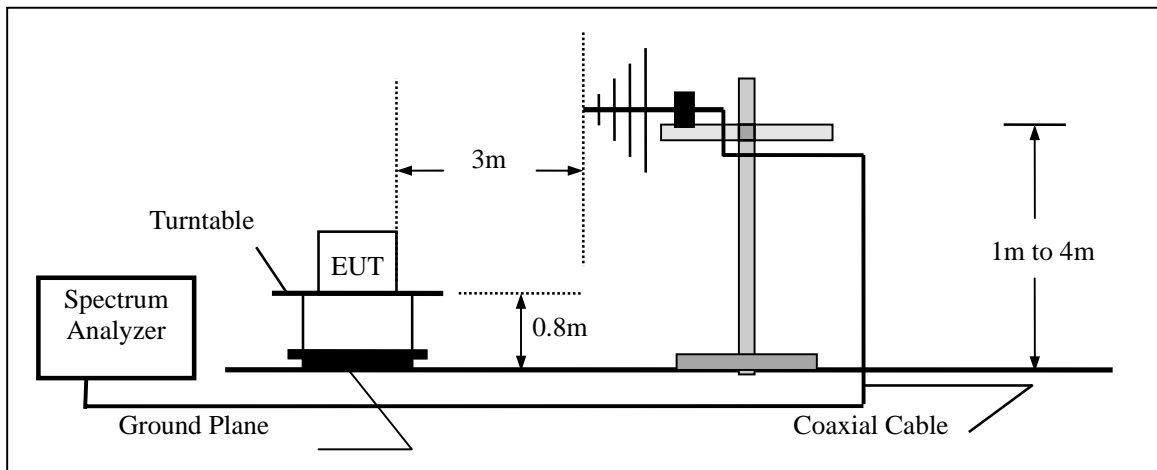
The EUT is placed on a turntable 0.8 meters above the ground in the chamber, 3 meter away from the antenna. The maximal emission value is acquired by adjusting the antenna height, polarisation and turntable azimuth. Normally, the height range of antenna is 1 m to 4 m, the azimuth range of turntable is 0° to 360°, and the receive antenna has two polarizations Vertical (V) and Horizontal (H).

5.2. Test SET-UP (Block Diagram of Configuration)

(A) Radiated Emission Test Set-Up, Frequency Below 30MHz



(B) Radiated Emission Test Set-Up, Frequency Below 1000MHz



5.3 Measurement Equipment Used:

EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Spectrum Analyzer	Rohde & Schwarz	FSP7	839511/010	May 17, 2015	May 16, 2016
Spectrum Analyzer	HP	E4407B	839840481	May 17, 2015	May 16, 2016
EMI Test Receiver	Rohde & Schwarz	ESCS30	828985/018	May 17, 2015	May 16, 2016
Pre-Amplifier	HP	8447D	2944A07999	May 17, 2015	May 16, 2016
Bilog Antenna	Schwarzbeck	VULB9163	142	May 17, 2015	May 16, 2016
Loop Antenna	ARA	PLA-1030/B	1029	May 17, 2015	May 16, 2016
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170399	May 17, 2015	May 16, 2016
Horn Antenna	Schwarzbeck	BBHA 9120	D143	May 17, 2015	May 16, 2016

5.4 Radiated Emission Limit

Frequencies (MHz)	Field Strength (micorvolts/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
960~1000	500	3

Harmonic emissions limits comply with below 54 dBuV/m at 3m. Other emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or comply with the radiated emissions limits specified in section 1 5.209(a) limit in the table below has to be followed.

Note:

- (1) The tighter limit applies at the band edges.
- (2) Emission level (dBuV/m)=20log Emission level (uV/m).

Limits of radiated emission measurement (FCC 15.237)

FCC Part15 (15.237) , Subpart C	
	Limit
Field strength of fundamental	80mV/m (98 dBV/m) @ 3 m
Field strength of harmonics	1500uV/m (63.5 dBV/m) @ 3 m

5.5 Measurement Result

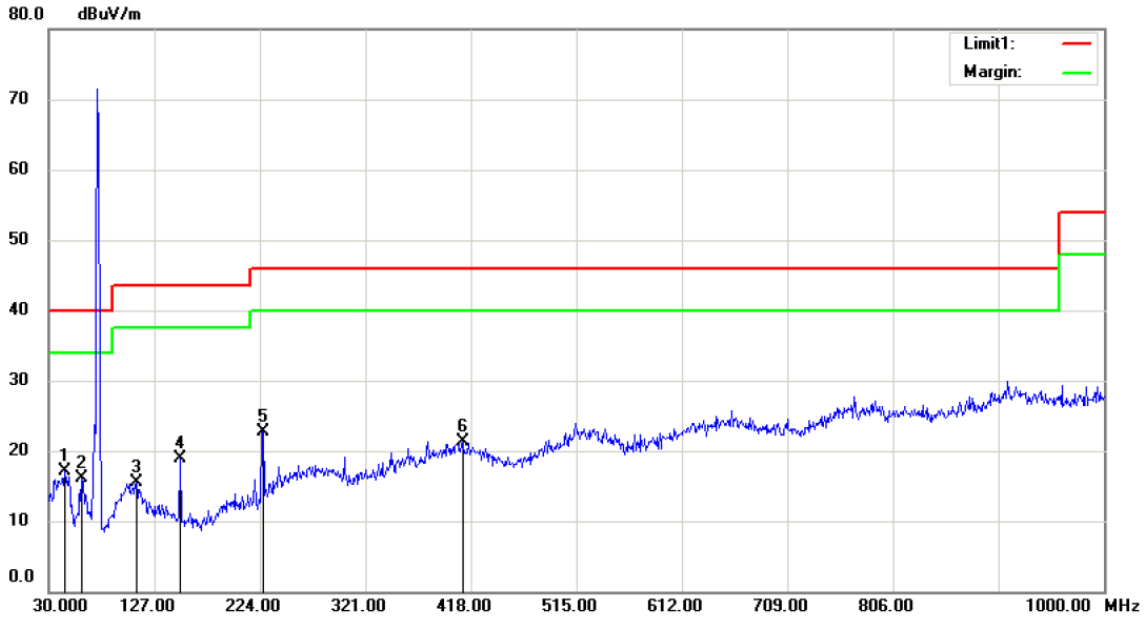
Operation Mode: TX Test Date : August 14, 2015
Frequency Range: 9KHz~30MHz Temperature : 24℃
Test Result: PASS Humidity : 55 %
Measured Distance: 3m Test By: SYP

Freq. (MHz)	Ant.Pol. H/V	Emission Level (dBuV/m)	Limit 3m (dBuV/m)	Over (dB)
--	--	--	--	--

Note: the amplitude of spurious emission that is attenuated by more than 20dB below the permissible limit has no need to be reported.

All the x/y/z orientation has been investigated, and only worst case is presented in this report.

Operation Mode:	75.5 MHz	Test Date :	August 14, 2015
Frequency Range:	30~1000MHz	Temperature :	24°C
Test Result:	PASS	Humidity :	55 %
Measured Distance:	3m	Test By:	SYP

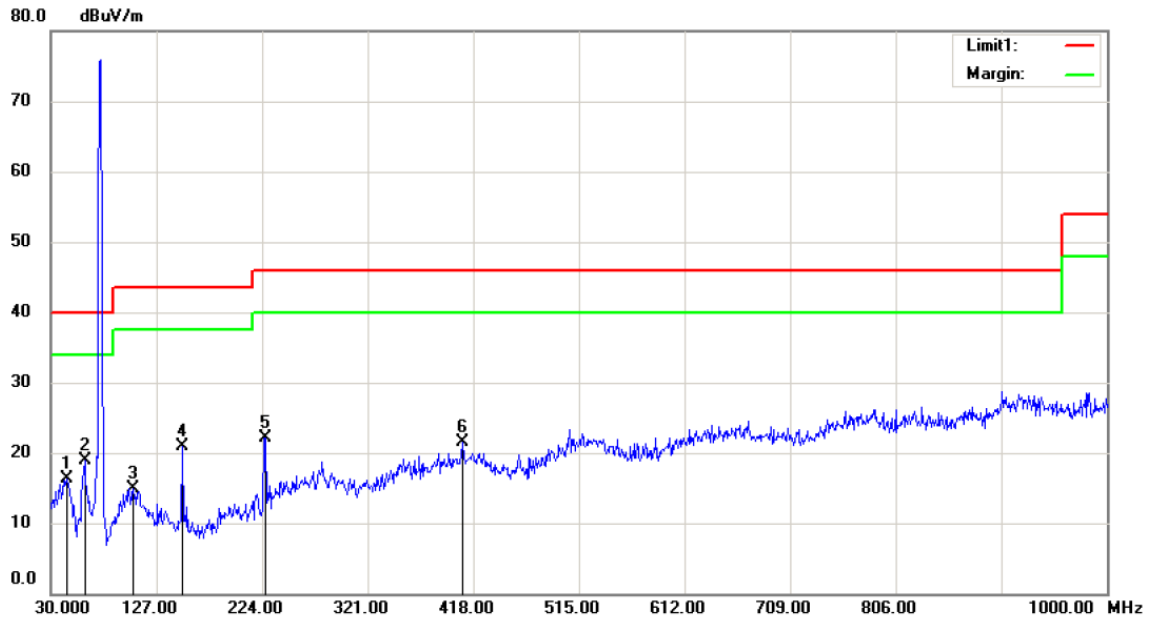


Site 3m Chamber #1 Polarization: **Horizontal** Temperature: 22 C
 Limit: (RE)FCC PART 15 C Power: AC 120V/60Hz Humidity: 50 %
 Mode: Channel 1
 Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1	*	44.5500	28.86	-11.71	17.15	40.00	-22.85	QP		
2		60.0700	29.50	-13.43	16.07	40.00	-23.93	QP		
3		110.5100	29.12	-13.64	15.48	43.50	-28.02	QP		
4		151.2500	36.38	-17.55	18.83	43.50	-24.67	QP		
5		226.9100	36.98	-14.23	22.75	46.00	-23.25	QP		
6		410.2400	29.28	-7.95	21.33	46.00	-24.67	QP		

*:Maximum data x:Over limit !:over margin

Operator: KK



Site 3m Chamber #1

Polarization: **Vertical**

Temperature: 22 C

Limit: (RE)FCC PART 15 C

Power: AC 120V/60Hz

Humidity: 50 %

Mode: Channel 1

Note:

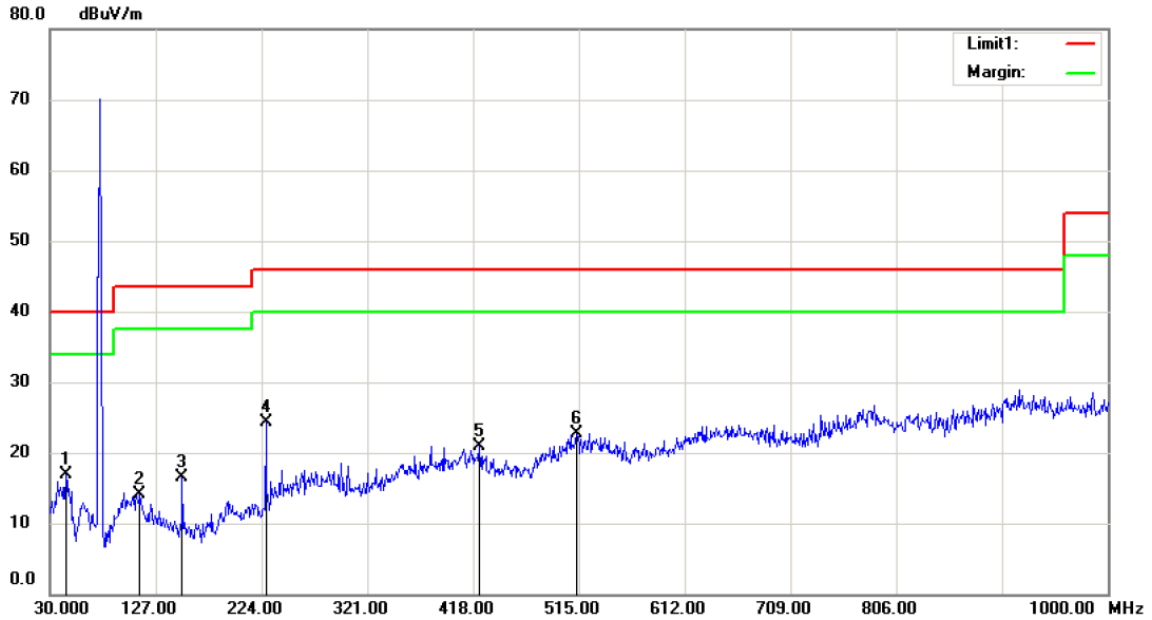
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		44.5500	28.05	-11.71	16.34	40.00	-23.66	QP		
2	*	61.0400	32.84	-13.92	18.92	40.00	-21.08	QP		
3		105.6600	28.41	-13.43	14.98	43.50	-28.52	QP		
4		150.2800	38.43	-17.55	20.88	43.50	-22.62	QP		
5		226.9100	36.34	-14.23	22.11	46.00	-23.89	QP		
6		408.3000	29.38	-7.96	21.42	46.00	-24.58	QP		

*:Maximum data x:Over limit !:over margin

Operator: KK

Operation Mode: 75.9 MHz
 Frequency Range: 30~1000MHz
 Test Result: PASS
 Measured Distance: 3m

Test Date : August 14, 2015
 Temperature : 24°C
 Humidity : 55 %
 Test By: SYP

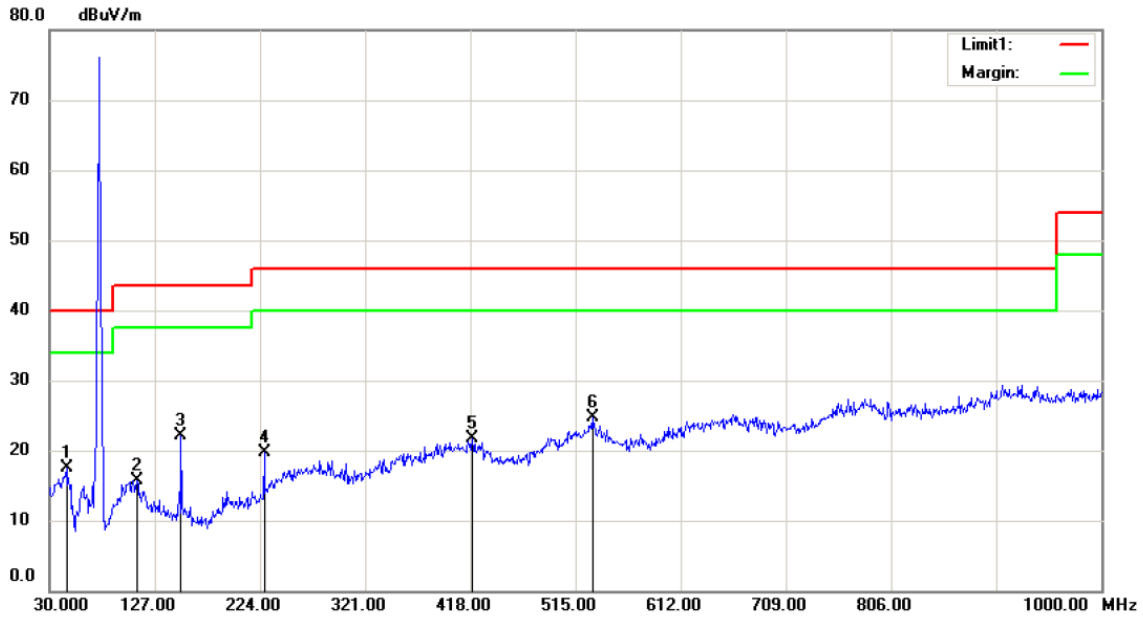


Site 3m Chamber #1 Polarization: *Horizontal* Temperature: 22 C
 Limit: (RE)FCC PART 15 C Power: AC 120V/60Hz Humidity: 50 %
 Mode: Channel 2
 Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Antenna Height cm	Table Degree	Comment
1		44.5500	28.65	-11.71	16.94	40.00	-23.06	QP			
2		112.4500	28.15	-14.11	14.04	43.50	-29.46	QP			
3		151.2500	34.10	-17.55	16.55	43.50	-26.95	QP			
4	*	227.8800	38.36	-13.99	24.37	46.00	-21.63	QP			
5		423.8200	29.47	-8.52	20.95	46.00	-25.05	QP			
6		513.0600	29.17	-6.51	22.66	46.00	-23.34	QP			

*:Maximum data x:Over limit !:over margin

Operator: KK



Site 3m Chamber #1 Polarization: *Vertical* Temperature: 22 C
 Limit: (RE)FCC PART 15 C Power: AC 120V/60Hz Humidity: 50 %
 Mode: Channel 2
 Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		45.5200	29.78	-12.37	17.41	40.00	-22.59	QP		
2		110.5100	29.42	-13.64	15.78	43.50	-27.72	QP		
3		151.2500	39.62	-17.55	22.07	43.50	-21.43	QP		
4		227.8800	33.72	-13.99	19.73	46.00	-26.27	QP		
5		419.9400	29.98	-8.28	21.70	46.00	-24.30	QP		
6	*	530.5200	30.68	-5.96	24.72	46.00	-21.28	QP		

*:Maximum data x:Over limit !:over margin

Operator: KK

Transmitter Fundamental Field Strength

Operation Mode:	CH1: 75.5MHz	Test Date :	August 14, 2015
FCC Part:	15.237(a)	Temperature :	24°C
Test Result:	PASS	Humidity :	55 %
Measured Distance:	3m	Test By:	SYP
Test Method Used:			

Freq. (MHz)	Ant.Pol. H/V	Emission Level(dBuV/m)		Limit 3m(dBuV/m)		Over(dB)	
		PK	AV	PK	AV	PK	AV
75.5 MHz	V	76.80	69.35	118.0	98.0	-41.2	-28.65
75.5 MHz	H	72.10	65.41	118.0	98.0	-45.9	-32.59

Operation Mode:	CH1: 75.9MHz	Test Date :	August 14, 2015
FCC Part:	15.237(a)	Temperature :	24°C
Test Result:	PASS	Humidity :	55 %
Measured Distance:	3m	Test By:	SYP
Test Method Used:			

Freq. (MHz)	Ant.Pol. H/V	Emission Level(dBuV/m)		Limit 3m(dBuV/m)		Over(dB)	
		PK	AV	PK	AV	PK	AV
75.9 MHz	V	76.70	68.49	118.0	98.0	-41.3	-29.51
75.9 MHz	H	70.20	64.55	118.0	98.0	-47.8	-33.45

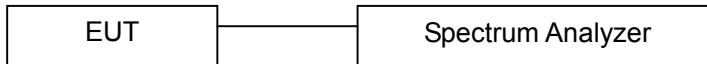
- Note:**
- (1) All Readings are Peak Value and AV.
 - (2) Emission Level= Reading Level+Probe Factor +Cable Loss
 - (3) Data of measurement within this frequency range shown "--" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
 - (4) All the x/y/z orientation has been investigated, and only worst case is presented in this report.

6. BANDWIDTH TEST

6.1. Measurement Procedure

The EUT was operating in hopping mode or could be controlled its channel. Printed out the test result from the spectrum by hard copy function.

6.2. Test SET-UP (Block Diagram of Configuration)



6.3. Measurement Equipment Used:

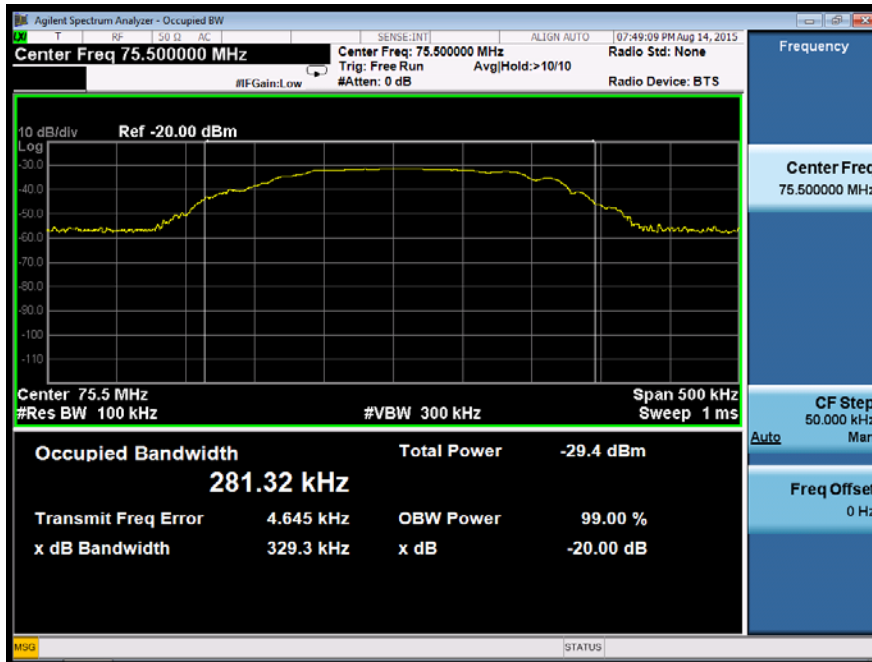
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Spectrum Analyzer	Agilent	E4407B	88156318	05/17/2015	05/16/2016

6.4. Measurement Results:

20dB Bandwidth test data Chart:
Refer to attached data chart.

Spectrum Detector:	PK	Test Date:	August 14, 2015
Test By:	SYP	Temperature:	24°C
Test Result:	PASS	Humidity:	55 %
Modulation:	FM		

Channel number	Channel frequency (MHz)	20dB Down BW(kHz)
CH1	75.5	329.3
CH2	75.9	333.6



7. Antenna Application

7.1. Antenna Requirement

Standard	Requirement
FCC CRF Part 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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of §15.211, §15.213, §15.217, §15.219, or §15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

For intentional device, according to FCC 47 CFR 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. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

7.2. Result

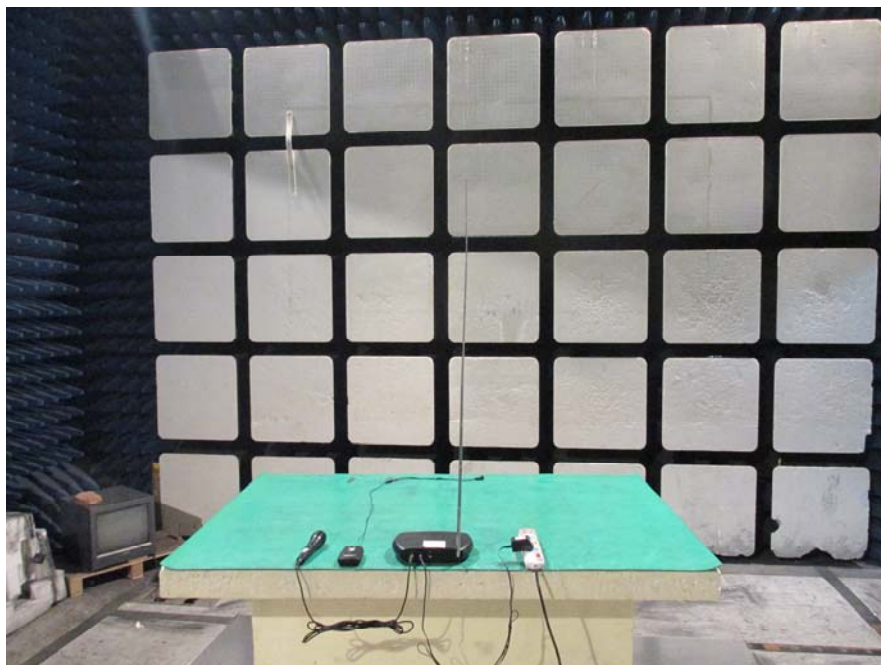
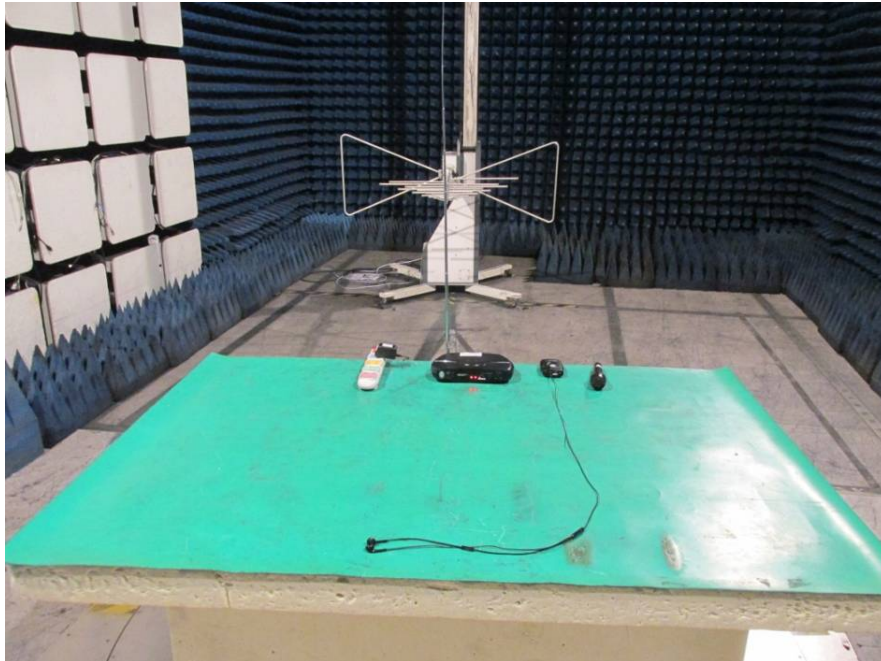
The EUT has a telescopic antenna, the gain is 0 dBi, which in accordance to section 15.203, please refer to the internal photos.

8. PHOTOGRAPHS

8.1. Photos of Conducted Emission Measurement



8.2. Photos of Radiation Emission Measurement

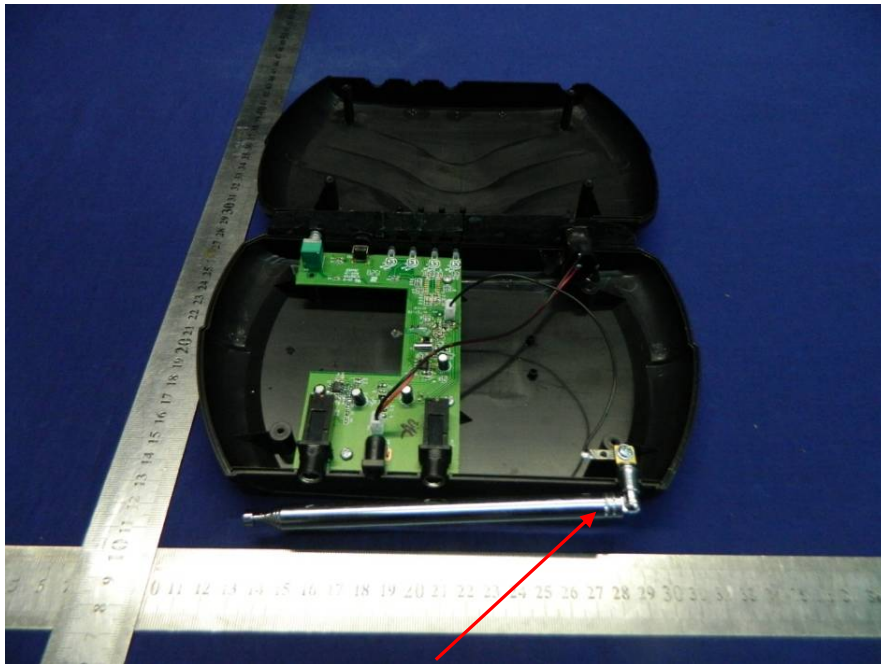


9. APPENDIX









ANTENNA

