Test Report

Date : 2017-04-19
No. : DM17040045

Applicant	:	Kidz Toyz, Inc 280 N, Bedford Rd. Suite 203, Mt. Kisco, NY 10549, USA
Supplier / Manufacturer	:	Kidz Toyz, Inc 280 N, Bedford Rd. Suite 203, Mt. Kisco, NY 10549, USA
Description of Sample(s)	:	Submitted sample(s) said to be Product: 1500ft Walkie Talkies Brand Name: N/A Model No.: #22256 FCC ID: 2AI7A22256
Date Samples Received	:	2017-04-13
Date Tested	:	2017-04-14 to 2017-04-15
Investigation Requested	:	Perform ElectroMagnetic Interference measurement in accordance with FCC 47CFR [Codes of Federal Regulations] Part 15: 2015 and ANSI C63.10: 2013 for FCC Certification.
Conclusions	:	The submitted product COMPLIED with the requirements of Federal Communications Commission [FCC] Rules and Regulations Part 15. The tests were performed in accordance with the standards described above and on Section 2.2 in this Test Report.
Remarks	:	---

LONG Yun Jian, Along
Authorized Signatory
ElectroMagnetic Compatibility Department
For and on behalf of
STC (Dongguan) Company Limited

Test Report

CONTENT:

1.0 General Details

1.1 Equipment Under Test [EUT]

Description of Sample(s)

Product:	1500ft Walkie Talkies
Manufacturer:	Kidz Toyz, Inc 280 N, Bedford Rd. Suite 203, Mt. Kisco, NY 10549, USA
Brand Name:	N/A
Model Number:	#22256
Rating:	9Vd.c("6F22" battery x 1)

1.1.1 Description of EUT Operation

The Equipment Under Test (EUT) is a Walkie Talkies. Operating at 49.86MHz. Test was conducted under Tx mode.

1.2 Date of Order

2017-04-13

1.3 Submitted Sample(s):

1 Sample

1.4 Test Duration

2017-04-14 to 2017-04-15

1.5 Country of Origin

China

2.0 Technical Details

2.1 Investigations Requested

Perform Electromagnetic Interference measurements in accordance with FCC 47CFR [Codes of Federal Regulations] Part 15: 2015 Regulations and ANSI C63.10: 2013 for FCC Certification. The device was realized by test software.

2.2 Test Standards and Results Summary Tables

EMISSION Results Summary						
Test Condition	Test Requirement	Test Method	Class / Severity	Test Result		
				Pass	Failed	N/A
Field Strength of Fundamental & Harmonics Emissions	FCC 47CFR 15.235	ANSI C63.10: 2013	N/A	☒	☐	☐
Radiated Emissions	FCC 47CFR 15.209	ANSI C63.10: 2013	N/A	☒	☐	☐
Antenna requirement	FCC 47CFR 15.203	N/A	N/A	☒	☐	☐

Note: N/A - Not Applicable

3.0 Test Results

3.1 Emission

3.1.1 Radiated Emissions (30 – 1000MHz)

Test Requirement:	FCC 47CFR 15.235
Test Method:	ANSI C63.10:2013
Test Date:	2017-04-15
Mode of Operation:	Tx mode

Test Method:

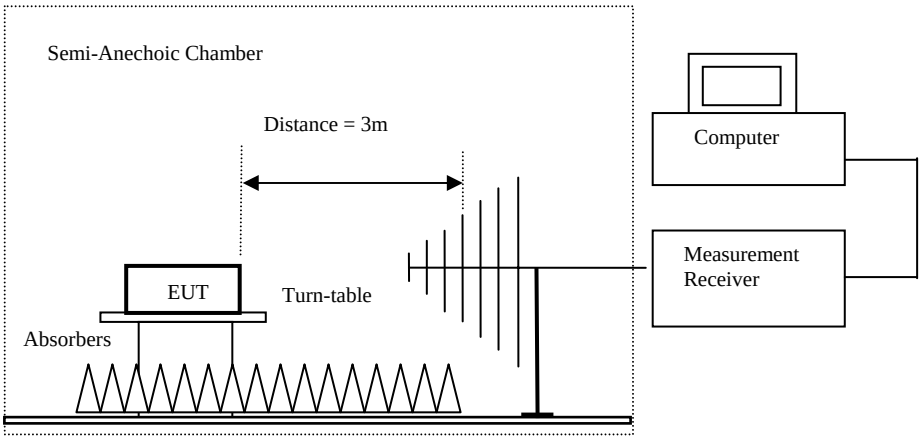
For emission measurements at or below 1 GHz, the sample was placed 0.8m above the ground plane of semi-anechoic Chamber*. For emission measurements above 1 GHz, the sample was placed 1.5m above the ground plane of semi-anechoic Chamber*. Measurements in both horizontal and vertical polarities were performed. 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, rotating turntable, varying antenna height from 1m to 4m in both horizontal and vertical polarizations. The emissions worst-case are shown in Test Results of the following pages.

* Semi-anechoic chamber located on the STC (Dongguan) Company Ltd. 68 Fumin Nan Road, Dalang, Dongguan, Guangdong, PRC with a metal ground plane filed with the FCC pursuant to section 2.948 of the FCC rules, with Registration Number: 629686.

Spectrum Analyzer Setting:

9KHz – 30MHz (Pk & Av)	RBW:	10kHz
	VBW:	30kHz
	Sweep:	Auto
	Span:	Fully capture the emissions being measured
	Trace:	Max. hold
30MHz – 1GHz (QP)	RBW:	120kHz
	VBW:	120kHz
	Sweep:	Auto
	Span:	Fully capture the emissions being measured
	Trace:	Max. hold

Test Setup:



- Absorbers placed on top of the ground plane are for measurements above 1000MHz only.
- Measurements between 30MHz to 1000MHz made with Bi-log antennas, above 1000MHz horn antennas are used, 9kHz to 30MHz loop antennas are used.

Limits for Field Strength of Fundamental & Harmonics Emissions [FCC 47CFR 15.235]:

Frequency Range of Fundamental [MHz]	Field Strength of Fundamental Emission [Peak] [μV/m]	Field Strength of Harmonics Emission [Average] [μV/m]
49.82-49.90	100,000	10,000

Results of Tx mode(30MHz-1GHz): PASS

Field Strength of Fundamental Emissions Peak Value						
Frequency MHz	Measured Level @3m dBμV	Correction Factor dB/m	Field Strength dBμV/m	Field Strength μV/m	Limit @3m μV/m	E-Field Polarity
49.86	41.4	9.2	50.6	338.8	100,000	Vertical
49.86	20.2	9.8	30.0	31.6	100,000	Horizontal

Field Strength of Fundamental Emissions Average						
Frequency MHz	Measured Level @3m dBμV	Correction Factor dB/m	Field Strength dBμV/m	Field Strength μV/m	Limit @3m μV/m	E-Field Polarity
49.86	40.5	9.2	49.7	305.5	10,000	Vertical
49.86	19.9	9.8	29.7	30.5	10,000	Horizontal

According to FCC 47CFR15.35, the limit on the radio frequency emissions as measured using instrumentation with a peak detector function, corresponding to 20dB above the maximum permitted average limit for the frequency being investigated unless a different peak emission limit is otherwise specified in the rules.

Remarks:

Correction Factor includes Antenna Factor and Cable Attenuation.

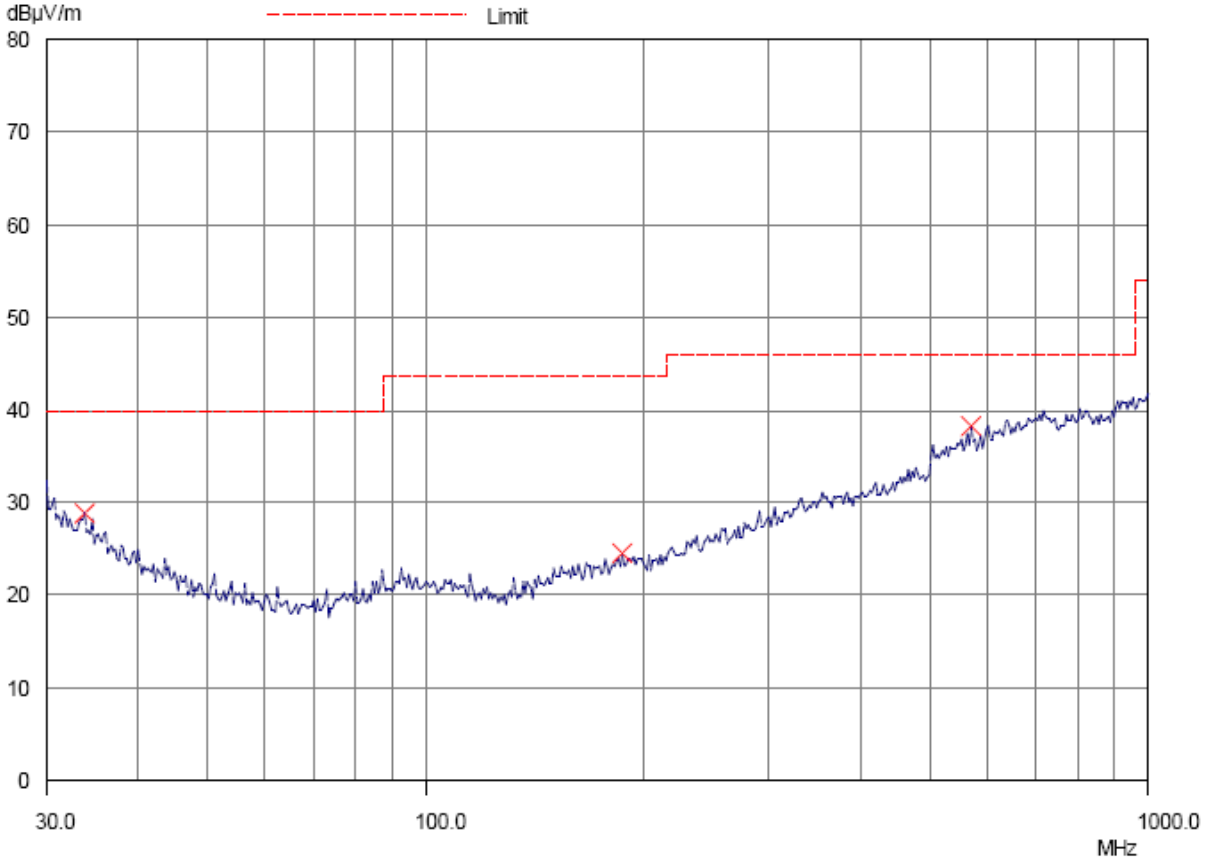
Limits for Radiated Emissions [FCC 47 CFR 15.209]:

Frequency Range [MHz]	Quasi-Peak Limits [μV/m]
30-88	100
88-216	150
216-960	200
Above960	500

The emission limits shown in the above table are based on measurement employing a CISPR quasi-peak detector and above 1000MHz are based on measurements employing an average detector.

Results of TX mode (9kHz – 30MHz): PASS
Emissions detected are more than 20 dB below the limit line(s).

Results of TX mode (30MHz – 1GHz): PASS
Horizontal



Results of TX mode (30MHz – 1GHz): PASS

Radiated Emissions Quasi-Peak						
Frequency MHz	Measured Level @3m dBμV	Correction Factor dB/m	Field Strength dBμV/m	Field Strength μV/m	Limit @3m μV/m	E-Field Polarity
199.40	17.0	11.6	28.6	26.9	150	Horizontal
249.30	19.4	13.9	33.3	46.2	200	Horizontal
299.2	17.5	15.6	33.1	45.2	200	Horizontal
349	16.9	17.5	34.4	52.5	200	Horizontal

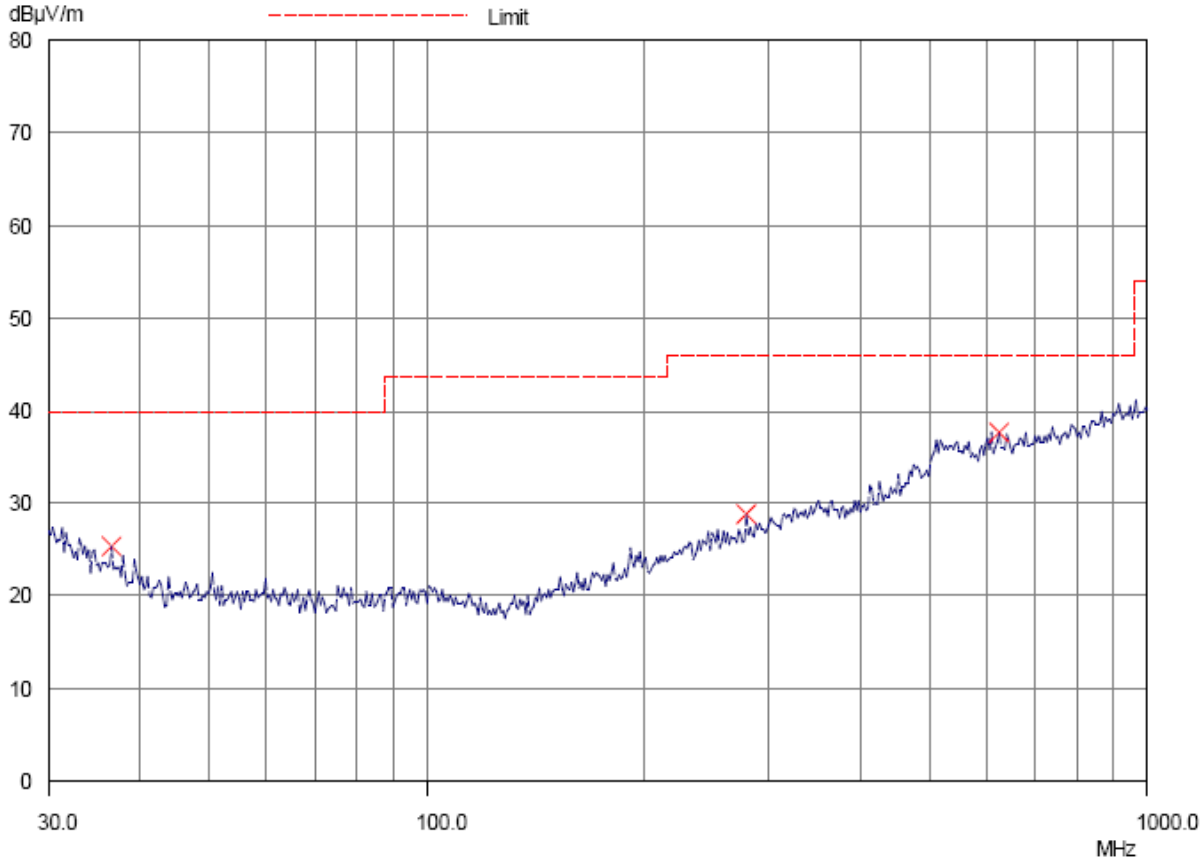
Limits for Radiated Emissions [FCC 47 CFR 15.209]:

Frequency Range [MHz]	Quasi-Peak Limits [μV/m]
30-88	100
88-216	150
216-960	200
Above960	500

The emission limits shown in the above table are based on measurement employing a CISPR quasi-peak detector and above 1000MHz are based on measurements employing an average detector.

Results of TX mode (30MHz – 1GHz): PASS

Vertical



Results of TX mode (30MHz – 1GHz): PASS

Radiated Emissions Quasi-Peak						
Frequency MHz	Measured Level @3m dBμV	Correction Factor dB/m	Field Strength dBμV/m	Field Strength μV/m	Limit @3m μV/m	E-Field Polarity
149.60	24.9	9.4	34.3	51.9	150	Vertical
199.40	21.9	12.0	33.9	49.5	150	Vertical
249.30	22.8	14.1	36.9	70.0	200	Vertical
299.20	23.9	15.7	39.6	95.5	200	Vertical
349.00	24.2	17.0	41.2	114.8	200	Vertical
398.90	21.8	17.4	39.2	91.2	200	Vertical

Remarks:
No further spurious emissions found between lowest internal frequency and 30MHz.

Correction Factor includes Antenna Factor and Cable Attenuation.
Calculated measurement uncertainty : (9kHz –30MHz): 3.3dB
(30MHz – 1GHz): 4.6dB
Emissions in the vertical and horizontal polarizations have been investigated and the worst-case test results are recorded in this report.

3.1.2 Antenna Requirement

Test Requirements: § 15.203

Test Specification:

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.

Test Results:

This is Monoploe antenna. The antenna gain =0dBi. User is unable to remove or changed the Antenna.

3.2 20dB Bandwidth of Fundamental Emission

Test Requirement:	FCC 47 CFR 15.235
Test Method:	ANSI C63.10: 2013 (Section 13.1.7)
Test Date:	2017-04-15
Mode of Operation:	Tx mode

Test Method:

The bandwidth is measured at an amplitude level reduced from the reference level by a specified ratio. The reference level is the level of the highest amplitude signal observed from the transmitter at the fundamental frequency. Once the reference level is established, the equipment is conditioned with typical modulating signal to produce the worst-case (i.e. the widest) bandwidth.

Test Setup:

As Test Setup of clause 3.1.1 in this test report.

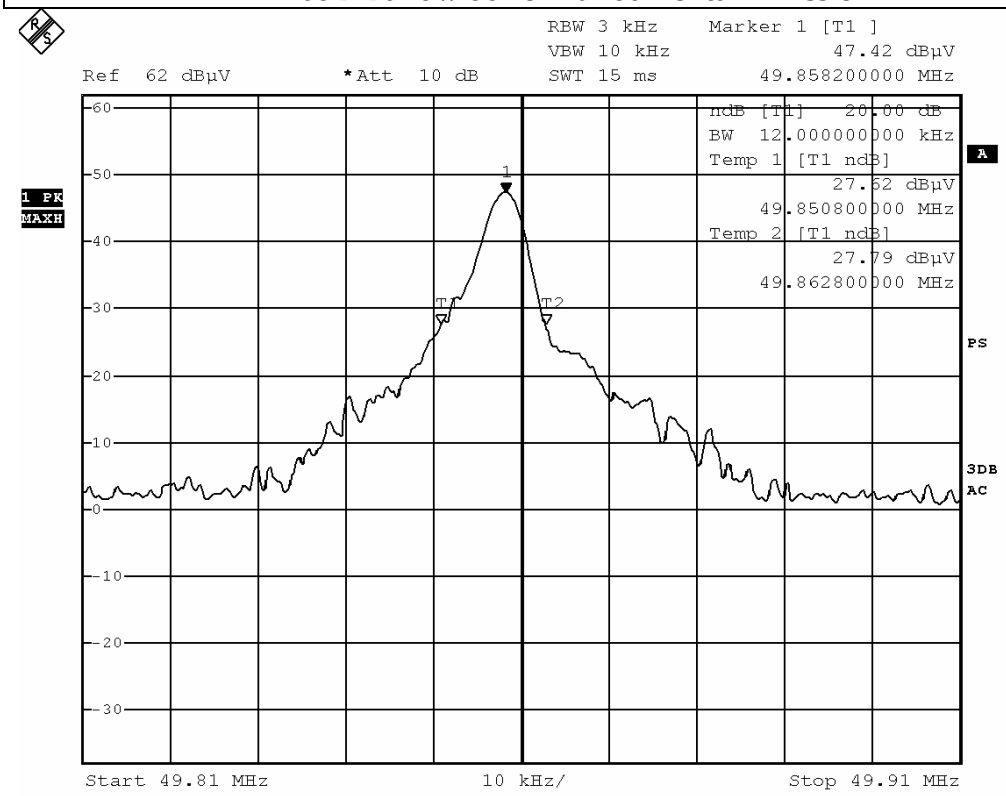
Spectrum Analyzer Setting:

RBW: 3kHz
VBW: 10kHz
Sweep: Auto
Trace: Max. hold

Limits for 20dB Bandwidth of Fundamental Emission:

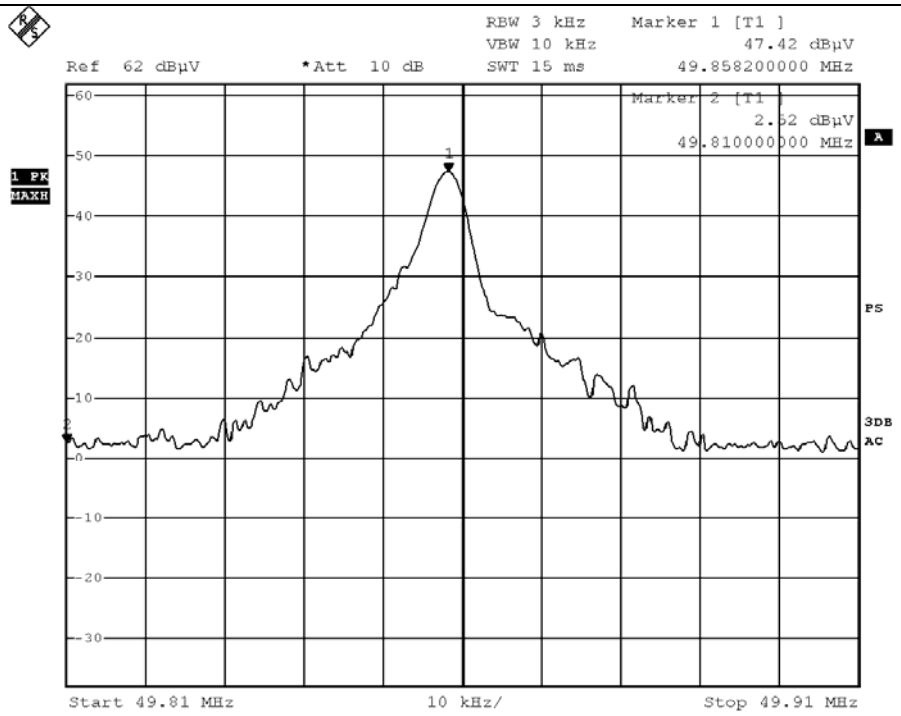
Fl(MHz)	Fh(MHz)	Permitted frequency range(MHz)	Result
49.8508	49.8628	49.82-49.90	Compliant

20dB Bandwidth of Fundamental Emission



Limits for 26dB Bandwidth of Fundamental Emission:
The field strength of any emissions appearing between the band edges and up to 10 kHz above and below the band edges shall be attenuated at least 26 dB below the level of the unmodulated carrier or to the general limits in §15.209, whichever permits the higher emission levels.

26dB Bandwidth of Fundamental Emission



Appendix A

List of Measurement Equipment

EQP NO.	DESCRIPTION	MANUFACTURER	MODEL NO.	SERIAL NO.	LAST CAL	DUE CAL
EMD004	LISN	ROHDE & SCHWARZ	ESH3-Z5	100102	2017-04-14	2018-04-14
EMD022	EMI Test Receiver	ROHDE & SCHWARZ	ESCS30	100314	2017-04-15	2018-04-15
EMD035	EMI Test Receiver	ROHDE & SCHWARZ	ESCI	100441	2017-04-14	2018-04-14
EMD036	EMI Test Receiver	ROHDE & SCHWARZ	ESIB 26	100388	2017-04-15	2018-04-15
EMD041	TWO-LINE V-NETWORK	ROHDE & SCHWARZ	ENV216	100261	2017-04-14	2018-04-14
EMD061	Biconilog Antenna	ETS.LINDGREN	3142C	00060439	2016.12.30	2018.12.30
EMD062	Double-Ridged Waveguide (1GHz – 18GHz)	ETS.LINDGREN	3117	00075933	2014.11.15	2017.11.15
EMD084	MULTI-DVICE CONTROLLER	ETS.LINDGREN	2090	00060107	N/A	N/A
EMD088	Video Contol Unit	ETS.LINDGREN	Y21953A	2601073	N/A	N/A
EMD093	Monitor	ViewSonic	VA9036	Q8X064201876	N/A	N/A
EMD102	Intelligent Frequency	Ainuo lnstrument Co., Ltd	AN97005SS	79707454	N/A	N/A
EMD103	Intelligent Frequency	Ainuo lnstrument Co., Ltd	AN97005SS	79707455	N/A	N/A
EMD105	FACT-3 EMC Chamber	ETS.LINDGREN	FACT-3	3803	N/A	N/A
EMD106	Shielding Room #1	ETS.LINDGREN	RFD-100	3802	N/A	N/A
EMD111	Power meter	ROHDE & SCHWARZ	NRVD	102051	2017-04-14	2018-4-14
	100V Insertion Unit	ROHDE & SCHWARZ	URV5-Z4	100464	2017-04-14	2018-4-14
EMD113	Pre-Amplifier	ROHDE & SCHWARZ	N/A	1129588	2017-04-14	2018-4-14
EMD124	Loop Antenna	ETS-Lindgren	6502	00104905	2016.05.23	2017.05.23
EMD131	Standard Gain Horn Antenna (18GHz – 26.5GHz)	Chengdu AINFO lnc.	JXTXLB-42-15-C-KF	J2021100721001	2015.06.27	2017.06.27
RE01	RF cable	N/A	N/A	N/A	2016-9-28	2018-9-27
RE02	RF cable	N/A	N/A	N/A	2016-9-28	2018-9-27

Remarks:-

N/A Not Applicable or Not Available

Appendix B

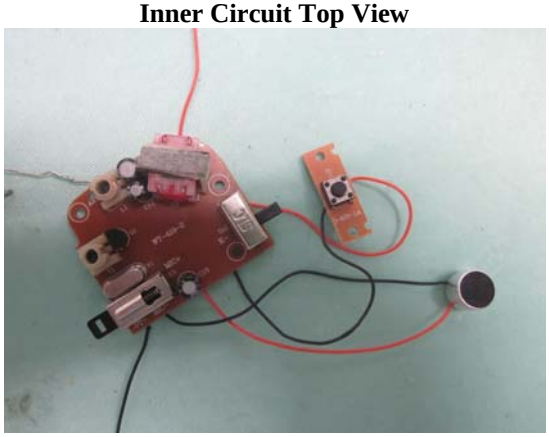
Photographs of EUT

Front View of the product

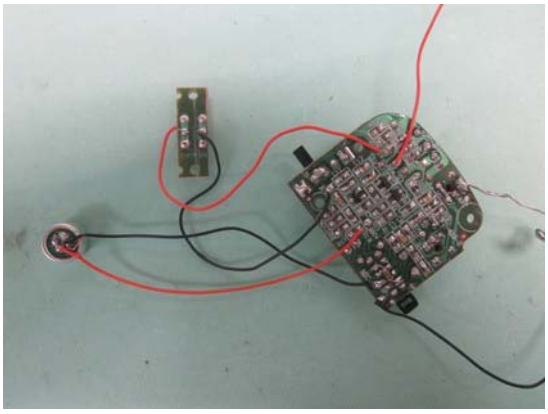
Rear View of the product

Inside View of the product

Inner Circuit Top View

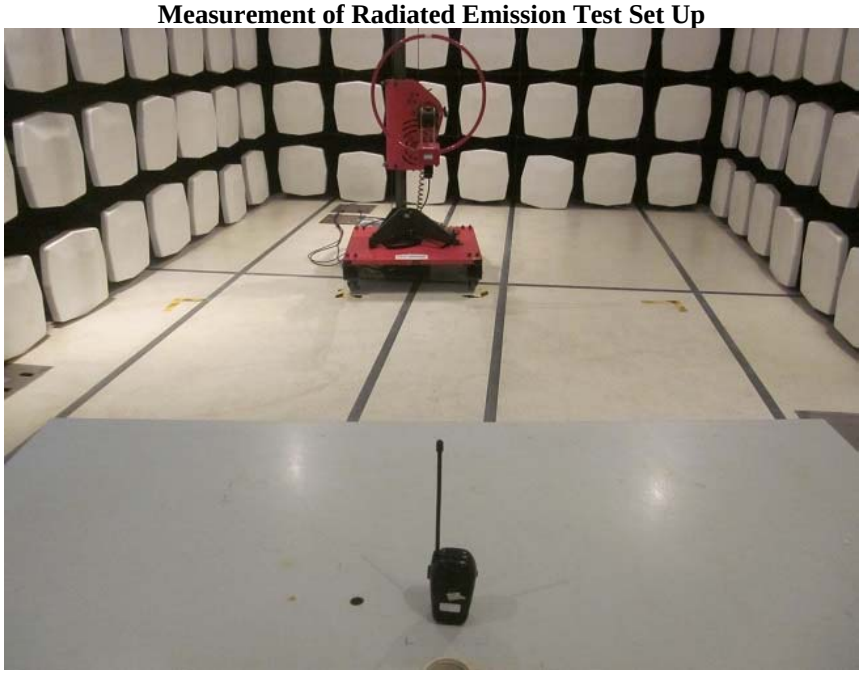


Inner Circuit Bottom View

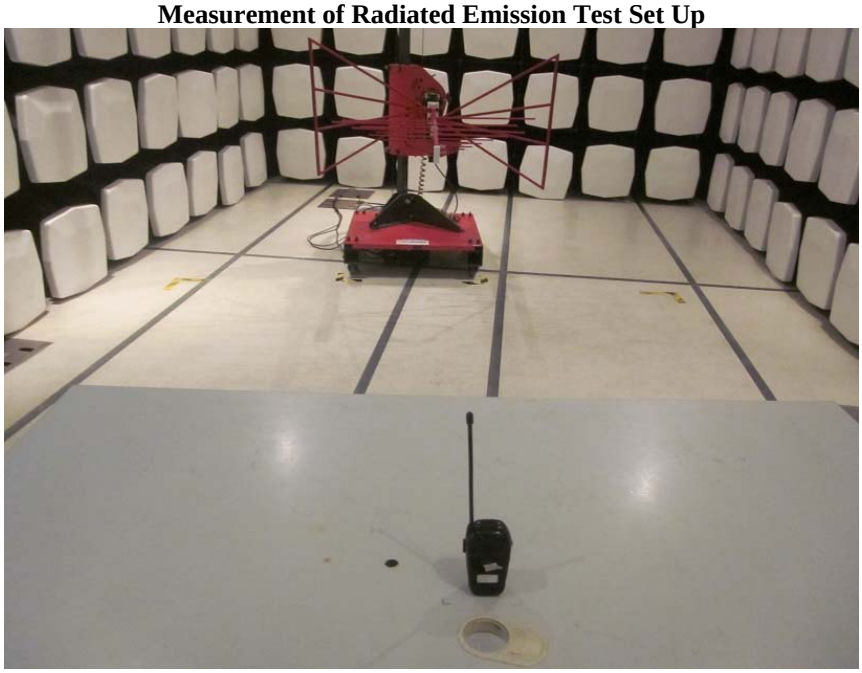


Photographs of EUT

Measurement of Radiated Emission Test Set Up



Measurement of Radiated Emission Test Set Up



******* End of Test Report *******

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