FCC Test Report

Report No.: AGC01040141002FE02

FCC ID	:	2ACD8BW16R
APPLICATION PURPOSE	:	ORIGINAL EQUIPMENT
PRODUCT DESIGNATION	:	BODYPACK RECEIVER
BRAND NAME	:	PASGAO, BES, POLSEN
MODEL NAME	:	BW16R, ULW-16
CLIENT	:	ENPING PASGAO ELECTRONICS CO., LTD.
DATE OF ISSUE	:	Nov.18, 2014
STANDARD(S)	:	FCC PART 15 RULES
REPORT VERSION	:	V1.0

Attestation of ***G***lobal ***C***ompliance (Shenzhen) Co., Ltd.

Report Revise Record

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	Nov.18, 2014	Valid	Original Report

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1. GENERAL INFORMATION

Applicant	ENPING PASGAO ELECTRONICS CO., LTD.
Address	V1 2nd District Industrial Transfer Park, Enping, Jiangmen, Guangdong, China
Manufacturer	ENPING PASGAO ELECTRONICS CO., LTD.
Address	V1 2nd District Industrial Transfer Park, Enping, Jiangmen, Guangdong, China
Product Description	BODYPACK RECEIVER
Brand Name	PASGAO, BES, POLSEN
Model Name	BW16R
Series Model	ULW-16
Model Difference	All the same except for model name and brand name.
Frequency Range	584.40MHz-606.75MHz
Type of Test	FCC Class B
Measurement Procedure	ANSI C63.4: 2003
Date of test	Nov.03, 2014 to Nov.18, 2014
Deviation	None
Condition of Test Sample	Normal

The above equipment was tested by Attestation Of Global Compliance (Shenzhen) Co., Ltd. For compliance with the requirements set forth in the FCC Rules and Regulations Part 15, the measurement procedure according to ANSI C63.4:2003 This said equipment in the configuration described in this report shows the maximum emission levels emanating from equipment are within the compliance requirements.

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

Tested By : 

Bart Xie Nov.18, 2014

Reviewed By : 

Kidd Yang Nov.18, 2014

Approved By: 

Solger Zhang Nov.18, 2014

2. PRODUCT INFORMATION

Housing Type Plastic

Power Supply DC 3V by battery (2*AA 1.5V)

I/O Port Information (☒Applicable ☐Not Applicable)

I/O Port of EUT			
I/O Port Type	**Q'TY**	**Cable**	**Tested with**
Earphone input port	1	1.0m Unshielded	1

3. TEST FACILITY

Site:	Attestation of Global Compliance (Shenzhen) Co., Ltd.
Location:	1F, No.2 Building, Huafeng No.1 Technical Industrial Park, Sanwei, Xixiang, Baoan District, Shenzhen, China
Description:	There is one 3m semi-anechoic chamber for final test, the Line Conducted labs are constructed and calibrated to meet the FCC requirements in documents ANSI C63.4 and CISPR 22/EN 55022 requirements.
Site Filing:	Accredited by FCC, June 28, 2010 The Certificate Registration Number is 259865
Instrument Tolerance:	All measuring equipment is in accord with ANSI C63.4 requirements that meet industry regulatory agency and accreditation agency requirement.
Ground Plane:	Two conductive reference ground planes were used during the Line Conducted Emission, one in vertical and the other in horizontal. The dimensions of these ground planes are as below. The vertical ground plane was placed distancing 40 cm to the rear of the wooden test table on where the EUT and the support equipment were placed during test. The horizontal ground plane projected 50 cm beyond the footprint of the EUT system and distanced 80 cm to the wooden test table. For radiated emission test, one horizontal conductive ground plane extended at least 1m beyond the periphery of the EUT and the largest measuring antenna, and covered the entire area between the EUT and the antenna. It has no holes or gaps having longitudinal dimensions larger than one-tenth of a wavelength at the highest frequency of measurement up to 1GHz.

4. TEST EQUIPMENT LIST

Equipment used during the tests:

Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyzer	Agilent	E4440A	US41421290	Feb. 17, 2014	Feb.16, 2015
EMI Test Receiver	R&S	ESCI	100694	July 16, 2014	July 15, 2015
ANTENNA	A.H.	SAS-521-4	26	July 16, 2014	July 15, 2015
Power Splitter 11636A	Agilent	N/A	N/A	July 16, 2014	July 15, 2015
LISN	R&S	ESH3-Z5	N/A	July 16, 2014	July 15, 2015
Amplifier	EM	EM30180	607030	Feb.28,2014	Feb.27,2015
Horn Antenna	A.H. Systems Inc.	SAS-574	128	June 6,2014	June 5, 2015
Radiation Cable 1	Sat	RE1	R003	June 04,2014	June 03,2015
Radiation Cable 2	Sat	RE2	R002	June 04,2014	June 03,2015
Conduction Cable	Sat	CE1	C001	June 04,2014	June 03,2015

The calibrations of the measuring instruments, including any accessories that may affect such calibration, are checked frequently to assure their accuracy. Adjustments are made and correction factors applied in accordance with instructions contained in the manual for the measuring instrument.

5. SUPPORT EQUIPMENT LIST

Device Type	Manufacturer	Model Name	Serial No.	Data Cable	Power Cable
Transmitter	POLSEN	ULW-16 T	N/A	--	--

**Note: All the above equipment/cables were placed in worse case positions to maximize emission signals during emission test.

Grounding: Grounding was in accordance with the manufacturer's requirements and conditions for the intended use.

6. SYSTEM DESCRIPTION

EUT test procedure:

1. Connect EUT and peripheral devices.
2. Power on the EUT, the EUT begins to work.
3. Make sure the EUT operates normally during the test.

Test mode:

Mode 1: standby
Mode 2: receiving

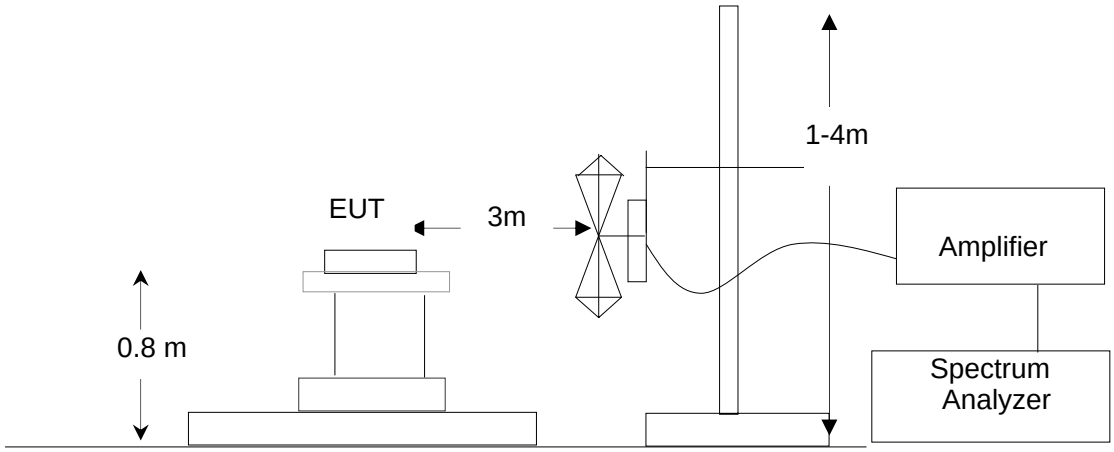
7. FCC RADIATED EMISSION TEST

7.1. LIMITS OF RADIATED EMISSION TEST

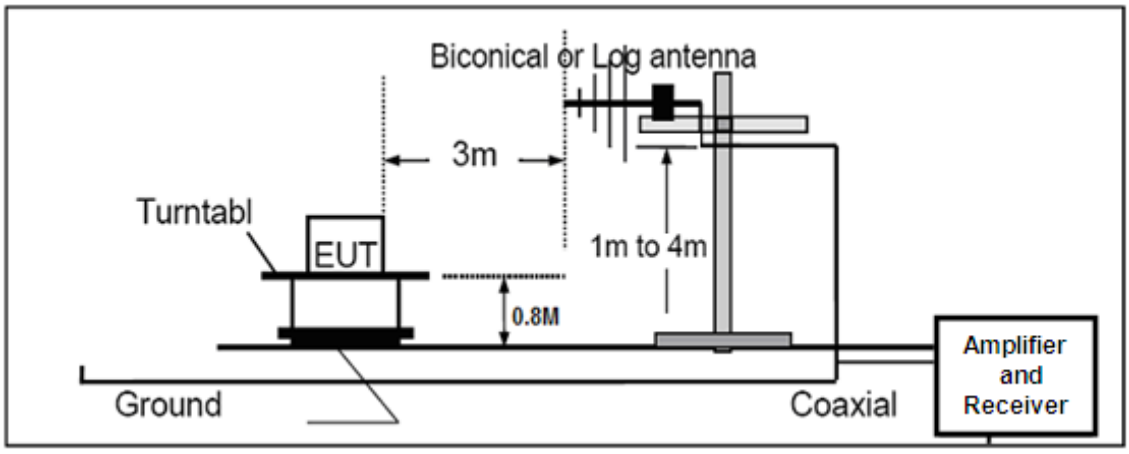
Frequency (MHz)	Distance (m)	Maximum Field Strength Limit (dBuV/m/ Q.P.)
30~88	3	40.0
88~216	3	43.5
216~960	3	46.0
Above 960	3	54.0

**Note: The lower limit shall apply at the transition frequency.

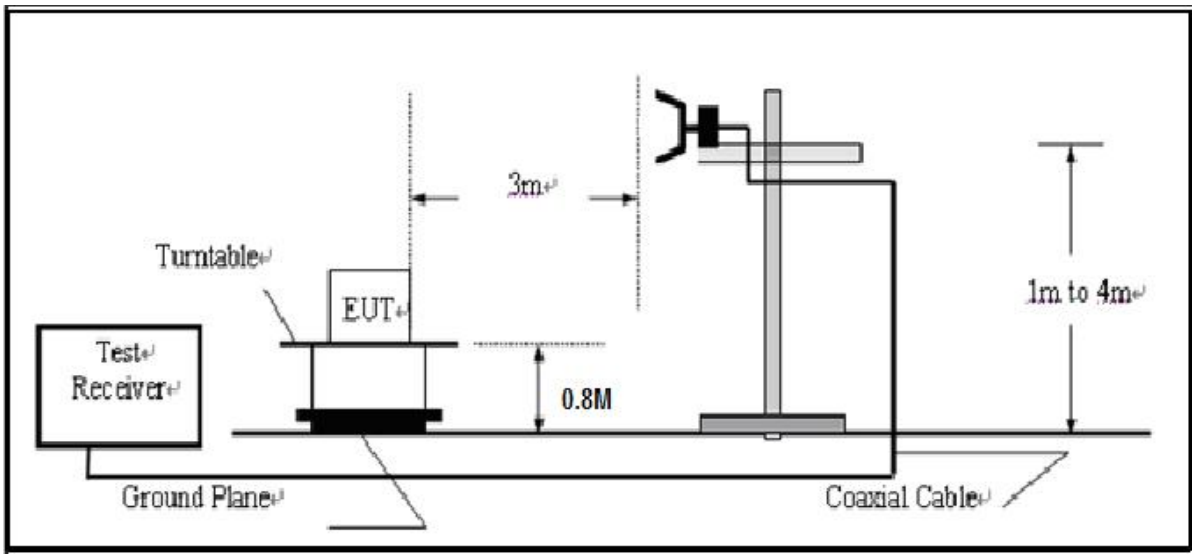
7.2 BLOCK DIAGRAM OF RADIATED EMISSION TEST



BELLOW 1GHz



ABOVE 1GHz

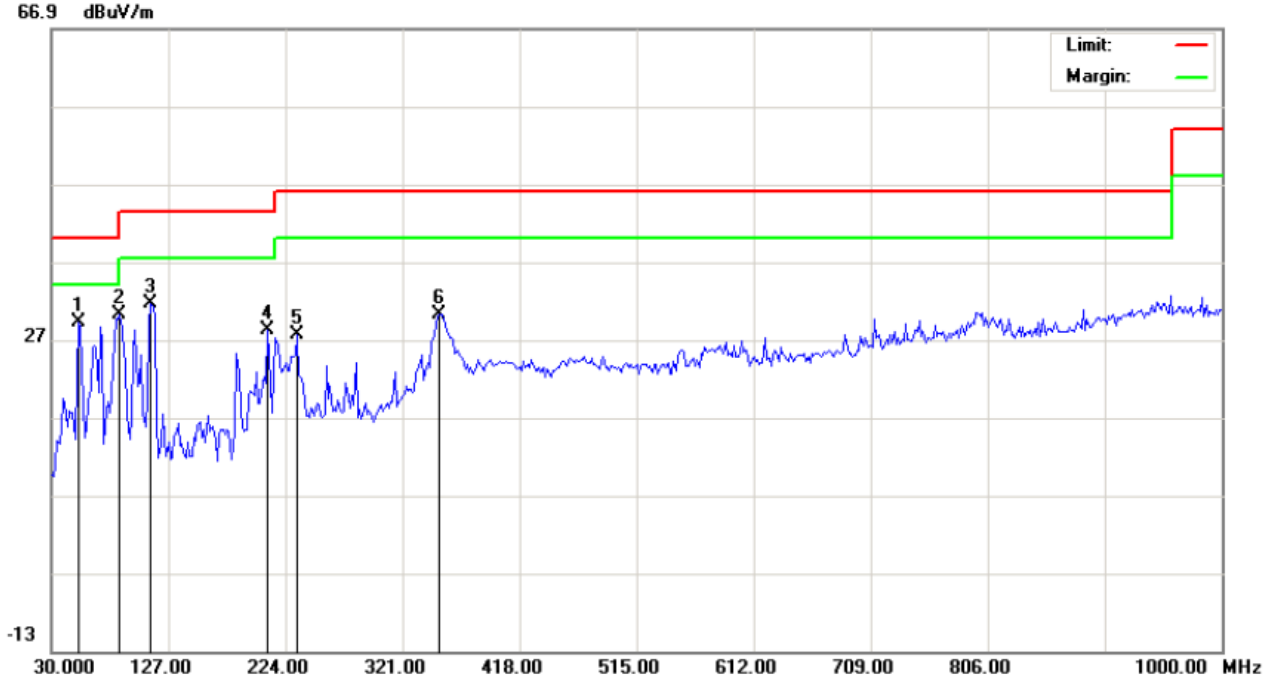


7.3 PROCEDURE OF RADIATED EMISSION TEST

1) The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. When the EUT is a tabletop system, a wooden turntable with a height of 0.8 meters is used which is placed on the ground plane as per ANSI C63.4 (see Test Facility for the dimensions of the ground plane used). When the EUT is floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
2) Support equipment, if needed, was placed as per ANSI C63.4.
3) All I/O cables were positioned to simulate typical actual usage as per ANSI C63.4.
4) The EUT received DC 3V power supply. All support equipments received AC 120V/60Hz power from socket under the turntable, if any.
5) The antenna was placed at 3 meter away from the EUT as stated in FCC Part 15. The antenna connected to the Analyzer via a cable and at times a pre-amplifier would be used.
6) The Analyzer / Receiver quickly scanned from 30MHz to 5GHz. The EUT test program was started. Emissions were scanned and measured rotating the EUT to 360 degrees and positioning the antenna 1 to 4 meters above the ground plane, in both the vertical and the horizontal polarization, to maximize the emission reading level.
7) The test mode(s) were scanned during the test:
8) Recorded at least the six highest emissions. Emission frequency, amplitude, antenna position, polarization and turntable position were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit and Q.P./Peak reading is presented.
9) The test data of the worst case condition(s) was reported on the Summary Data page.

7.4 TEST RESULT OF RADIATED EMISSION TEST

BELLOW 1GHZ_HORIZONTAL



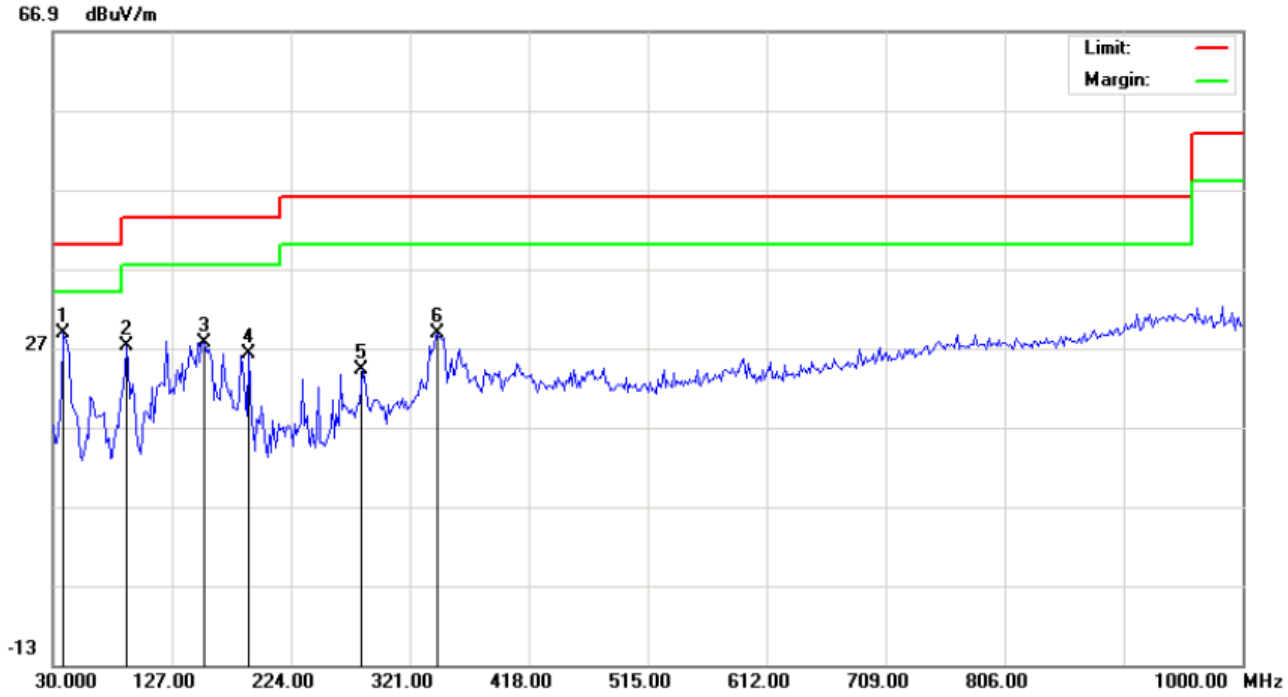
Site: site #1
Limit: FCC Class B 3M Radiation
EUT: BODYPACK RECEIVER
M/N: BW16R
Mode: Receiving
Note:

Polarization: ***Horizontal***
Power:
Distance: 3m

Temperature: 26
Humidity: 60 %

No.	Mk.	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1		52.6332	17.94	11.22	29.16	40.00	-10.84	peak			
2	*	86.5832	20.68	9.52	30.20	40.00	-9.80	peak			
3		112.4500	20.25	11.34	31.59	43.50	-11.91	peak			
4		209.4499	15.92	12.36	28.28	43.50	-15.22	peak			
5		233.6999	14.32	13.28	27.60	46.00	-18.40	peak			
6		351.7167	11.50	18.75	30.25	46.00	-15.75	peak			

BELLOW 1GHZ_VERTICAL



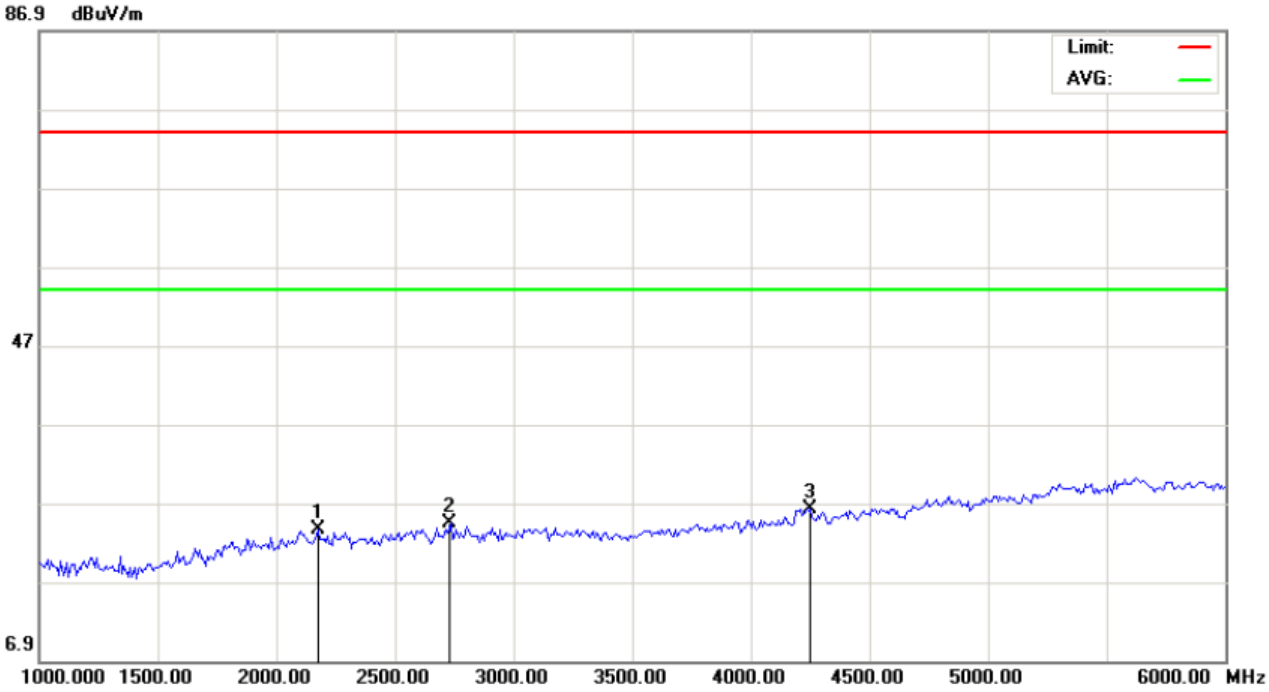
Site: site #1
Limit: FCC Class B 3M Radiation
EUT: BODYPACK RECEIVER
M/N: BW16R
Mode: Receiving
Note:

Polarization: ***Vertical***
Power:
Distance: 3m

Temperature: 26
Humidity: 60 %

No.	Mk.	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1	*	38.0833	22.34	6.39	28.73	40.00	-11.27	peak			
2		89.8165	21.87	5.31	27.18	43.50	-16.32	peak			
3		152.8667	12.38	15.28	27.66	43.50	-15.84	peak			
4		190.0500	14.67	11.52	26.19	43.50	-17.31	peak			
5		282.1999	9.38	14.87	24.25	46.00	-21.75	peak			
6		343.6333	10.44	18.32	28.76	46.00	-17.24	peak			

ABOVE 1GHz_HORIZONTAL



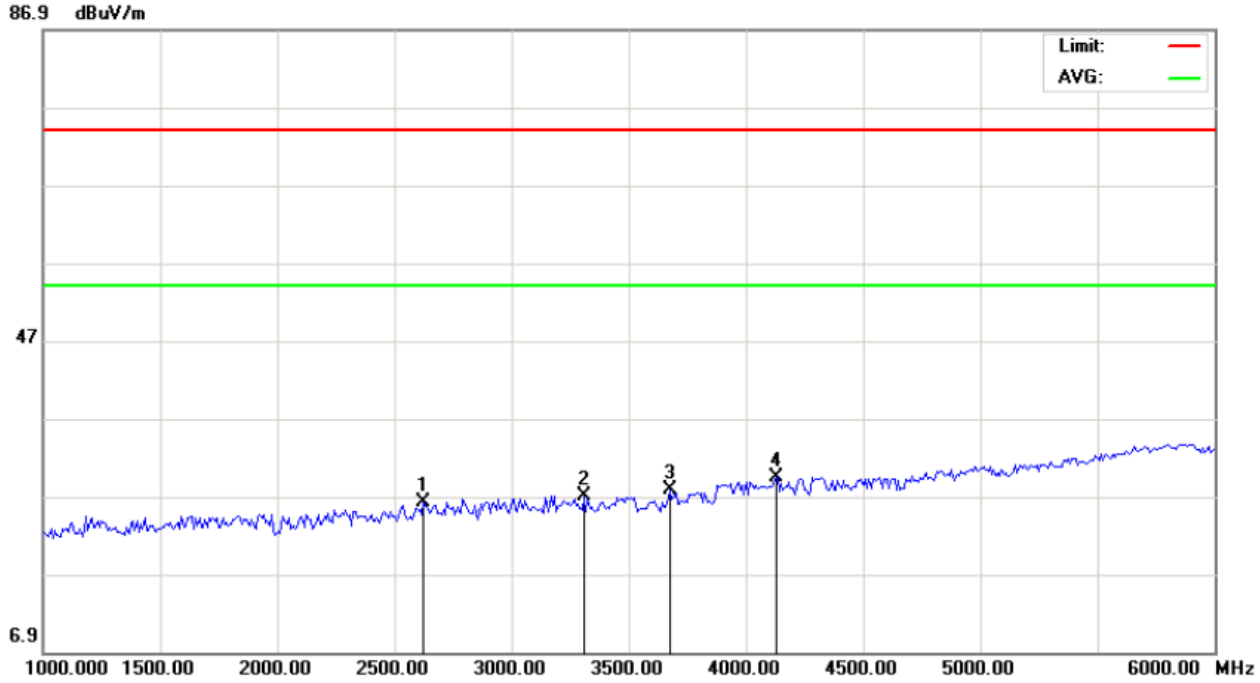
Site: site #1
Limit: FCC Class B 3M Radiation above 1GHZ(PK)
EUT: BODYPACK RECEIVER
M/N: BW16R
Mode: Receiving
Note:

Polarization: ***Horizontal***
Power:
Distance: 3m

Temperature: 26
Humidity: 60 %

No.	Mk.	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1		2175.000	33.56	-9.93	23.63	74.00	-50.37	peak			
2		2733.333	33.45	-9.01	24.44	74.00	-49.56	peak			
3	*	4250.000	30.19	-3.96	26.23	74.00	-47.77	peak			

ABOVE 1GHz_VERTICAL



Site: site #1
Limit: FCC Class B 3M Radiation above 1GHZ(PK)
EUT: BODYPACK RECEIVER
M/N: BW16R
Mode: Receiving
Note:

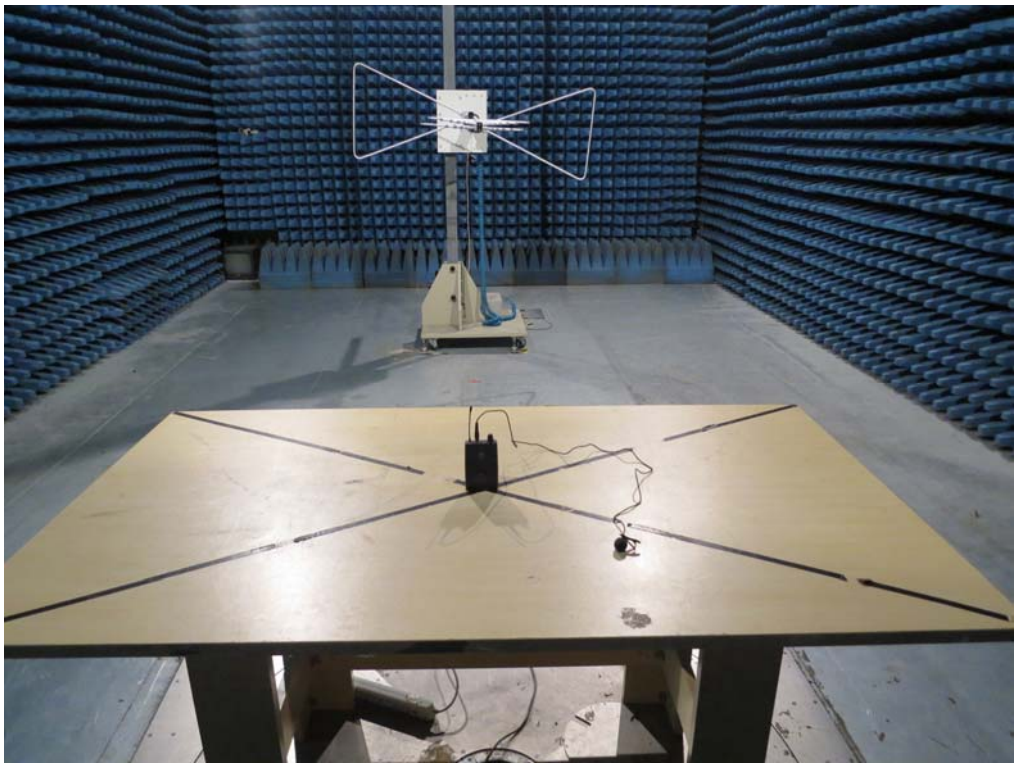
Polarization: ***Vertical***
Power:
Distance: 3m

Temperature: 26
Humidity: 60 %

No.	Mk.	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1		2625.000	35.44	-9.27	26.17	74.00	-47.83	peak			
2		3308.333	35.05	-8.07	26.98	74.00	-47.02	peak			
3		3675.000	34.65	-6.81	27.84	74.00	-46.16	peak			
4	*	4133.333	33.72	-4.36	29.36	74.00	-44.64	peak			

APPENDIX 1: PHOTOGRAPHS OF TEST SETUP

RADIATED EMISSION TEST SETUP



APPENDIX 2: PHOTOGRAPHS OF EUT

TOTAL VIEW OF EUT

TOP VIEW OF EUT

BOTTOM VIEW OF EUT

FRONT VIEW OF EUT

BACK VIEW OF EUT

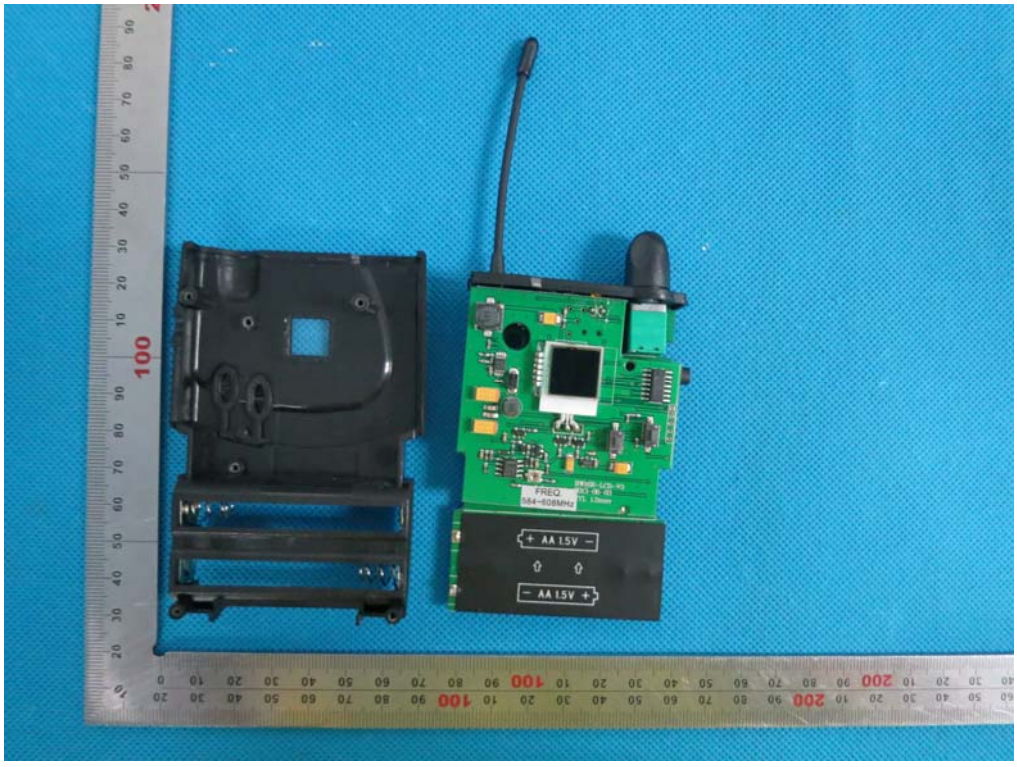
LEFT VIEW OF EUT

RIGHT VIEW OF EUT

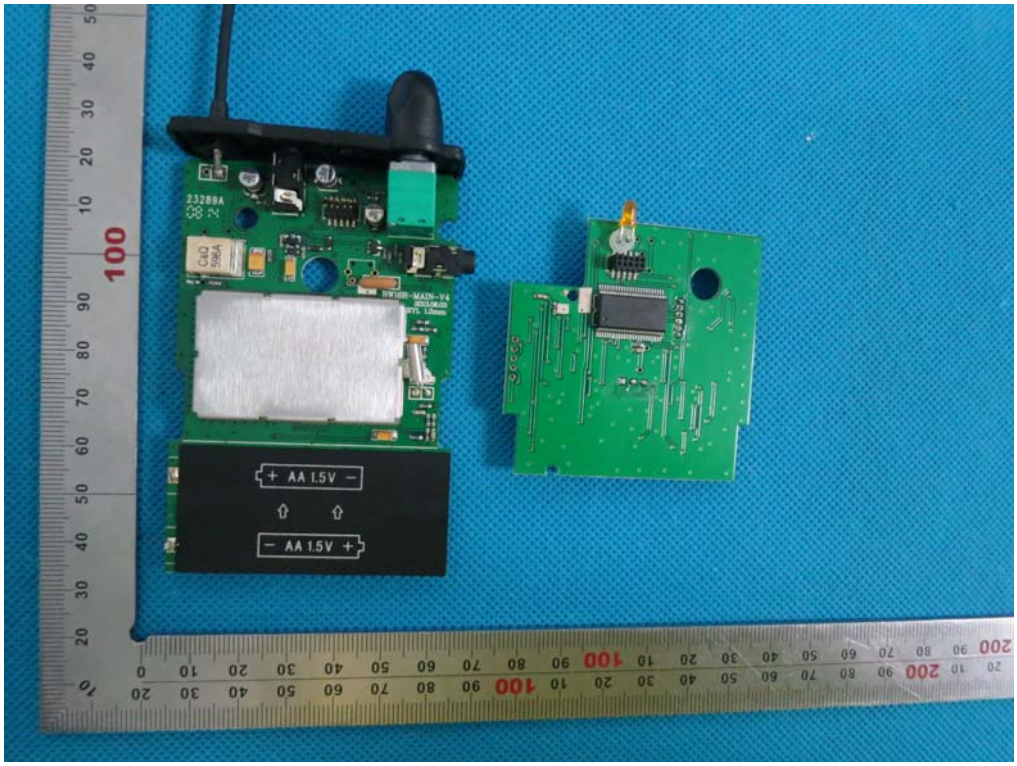
OPEN VIEW OF EUT-1

OPEN VIEW OF EUT-2

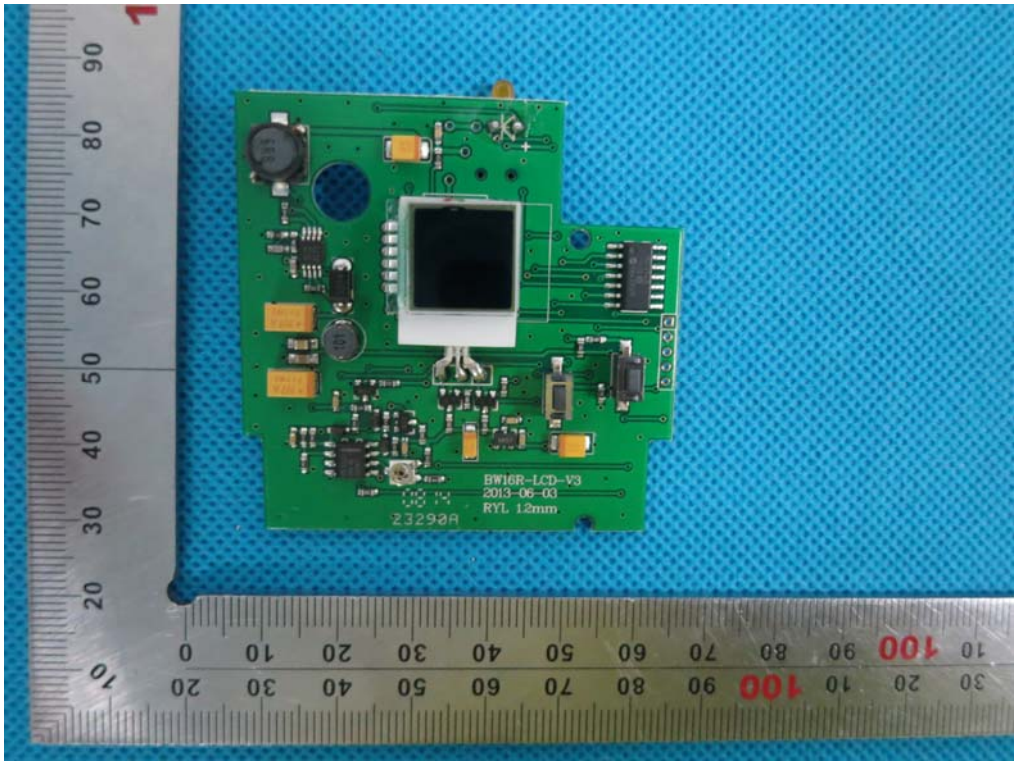
OPEN VIEW OF EUT-3



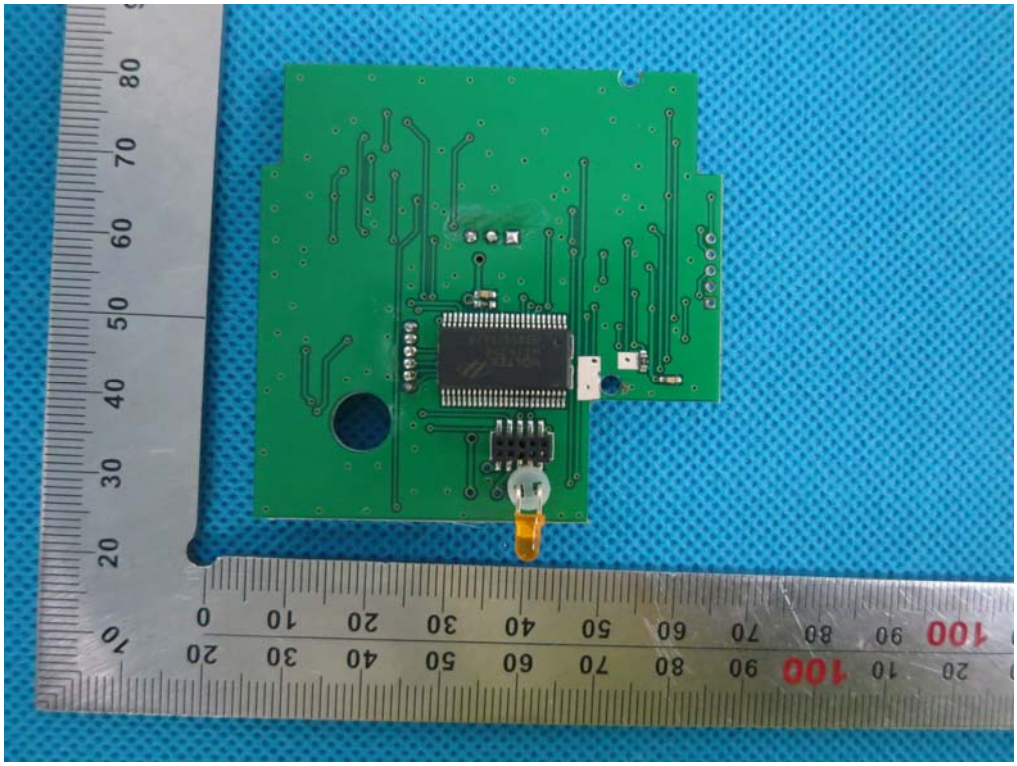
INTERNAL VIEW OF EUT-1



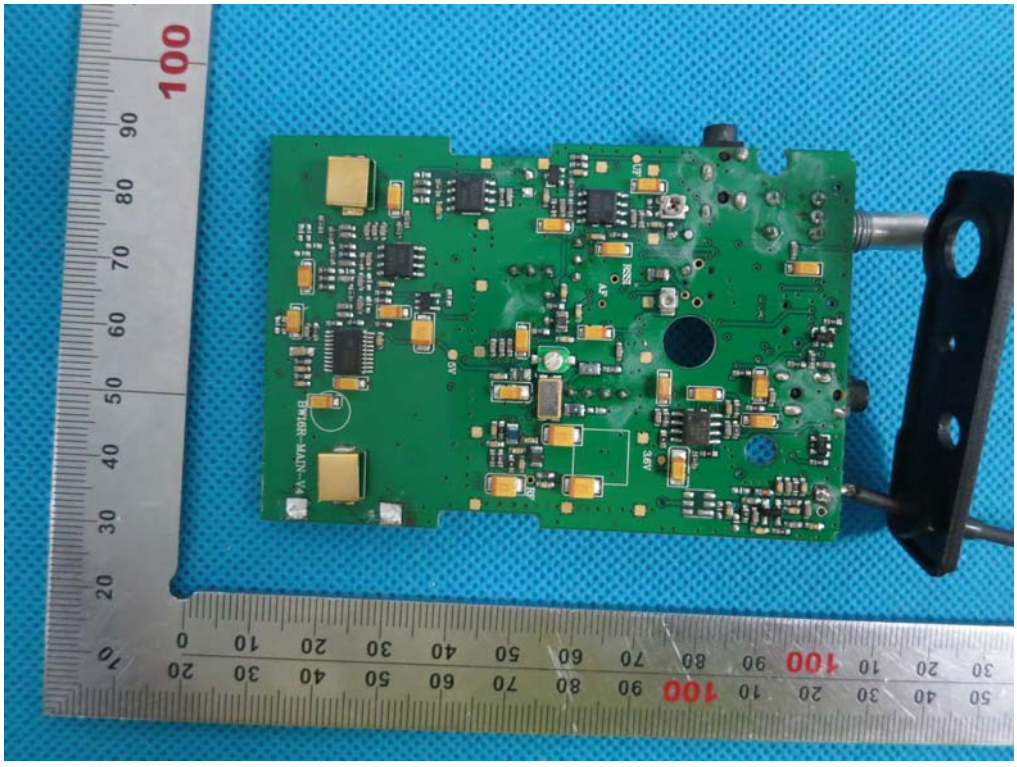
INTERNAL VIEW OF EUT-2



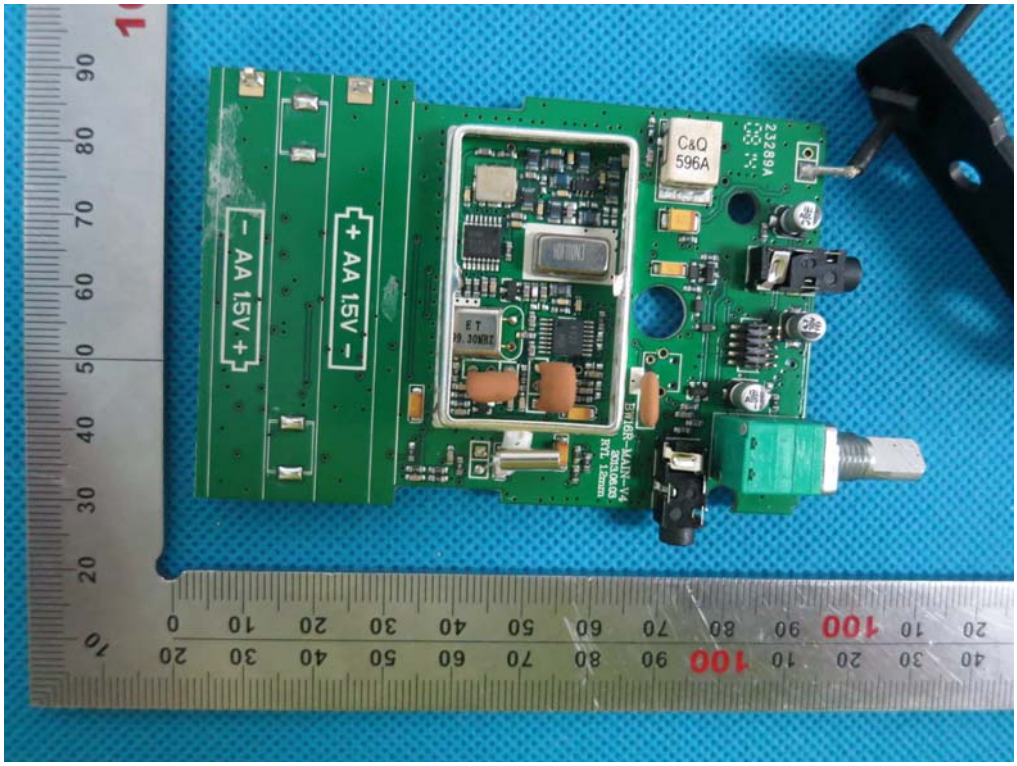
INTERNAL VIEW OF EUT-3



INTERNAL VIEW OF EUT-4



INTERNAL VIEW OF EUT-5



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