

SHENZHEN PAKITE TECHNOLOGY CO.,LTD.

Wireless A/V Transmitter&Receiver

Main Model: PAT-530、PAT-550

Serial Model: See P5

February 14, 2014

Report No.: 13021144-FCC-R2

(This report supersedes NONE)



Modifications made to the product : None

This Test Report is Issued Under the Authority of:

William Long	Alex Liu	
Compliance Engineer	Technical Manager	

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Test result presented in this test report is applicable to the representative sample only.

RF Test Report

To: FCC Part 15.249: 2013

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Title: RF Test Report for Wireless A/V Transmitter&Receiver
Main Model: PAT-530, PAT-550
Main Model: See P5
To: FCC 15.249: 2013

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Laboratory Introduction

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In addition to testing and certification, SIEMIC provides initial design reviews and compliance management through out a project. Our extensive experience with China, Asia Pacific, North America, European, and international compliance requirements, assures the fastest, most cost effective way to attain regulatory compliance for the global markets.

Accreditations for Conformity Assessment

Country/Region	Scope
USA	EMC , RF/Wireless , Telecom
Canada	EMC, RF/Wireless , Telecom
Taiwan	EMC, RF, Telecom , Safety
Hong Kong	RF/Wireless ,Telecom
Australia	EMC, RF, Telecom , Safety
Korea	EMI, EMS, RF , Telecom, Safety
Japan	EMI, RF/Wireless, Telecom
Singapore	EMC , RF , Telecom
Europe	EMC, RF, Telecom , Safety



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1 EXECUTIVE SUMMARY & EUT INFORMATION

The purpose of this test programmed was to demonstrate compliance of the SHENZHEN PAKITE TECHNOLOGY CO.,LTD., Wireless A/V Transmitter&Receiver and model: PAT-530、PAT-550 against the current Stipulated Standards. The Wireless A/V Transmitter&Receiver has demonstrated compliance with the FCC 15.249: 2013.

EUT Information

EUT Description	Wireless A/V Transmitter&Receiver
Main Model	PAT-530、PAT-550
Serial Model	PAT-220、PAT-240、PAT-260、PAT-536、PAT-556、PAT-630、PAT-650
Antenna Gain	PAT-530(Tx): 3dBi PAT-550(Tx): 3dBi
Input Power	Adapter: Model: SJ-0510-U INPUT: AC100-240V 50/60Hz OUTPUT: DV 5V 1000mA
Classification Per Stipulated Test Standard	FCC 15.249: 2013

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2 TECHNICAL DETAILS

Purpose	Compliance testing of Wireless A/V Transmitter&Receiver with stipulated standard
Applicant / Client	SHENZHEN PAKITE TECHNOLOGY CO.,LTD. M02A,A Block,Chunhui Yuan,Caitian Road,Futian District,Shenzhen,China
Manufacturer	SHENZHEN PAKITE TECHNOLOGY CO.,LTD. M02A,A Block,Chunhui Yuan,Caitian Road,Futian District,Shenzhen,China
Laboratory performing the tests	SIEMIC (Nanjing-China) Laboratories NO.2-1,Longcang Dadao, Yuhua Economic Development Zone, Nanjing, China Tel:+86(25)86730128/86730129 Fax:+86(25)86730127 Email: China@siemic.com
Test report reference number	13021144-FCC-R2
Date EUT received	December 09, 2013
Standard applied	FCC 15.249: 2013
Dates of test (from – to)	January 12 to January 13, 2014
No of Units	#1
Equipment Category	DXX
Trade Name	Sunrise Energy
RF Operating Frequency (ies)	5733-5847MHz (TX) 433.84MHz (TX)
Number of Channels :	6 CH(5733MHz, 5752MHz, 5771 MHz, 5809MHz, 5828MHz, 5847MHz) 1 CH(433.84MHz)
Modulation :	5.8G: FSK 433.84MHz: OOK
FCC ID	2ABU5-AVSENDER



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3 MODIFICATION

NONE

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4 TEST SUMMARY

The product was tested in accordance with the following specifications.

All testing has been performed according to below product classification:

Spread Spectrum System/Device

Test Results Summary

Test Standard	Description	Product Class	Pass / Fail
§15.203	Antenna Requirement	See Above	Pass
§15.207(a)	AC Line Conducted Emissions	See Above	Pass
§15.205, §15.209, §15.249(a), §15.249(d)	Radiated Fundamental / Radiated Spurious Emissions	See Above	Pass
§15.249(c)	20 dB Bandwidth	See Above	Pass
§15.249(d)	Band Edge	See Above	Pass



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5 MEASUREMENTS, EXAMINATION AND DERIVED RESULTS

5.1 §15.203 – Antenna Requirement

Standard Requirement:

According to § 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 user of a standard antenna jack or electrical connector is prohibited. The structure and application of the EUT were analyzed to determine compliance with section §15.203 of the rules. §15.203 state that the subject device must meet the following criteria:

- a. Antenna must be permanently attached to the unit.
- b. Antenna must use a unique type of connector to attach to the EUT.
- c. Unit must be professionally installed, and installer shall be responsible for verifying that the correct antenna is employed with the unit.

Antenna Connector Construction

EUT antenna is a PCB antenna. It is in accordance to section 15.203, please refer to the internal photos.

Test Result: Pass

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5.2 §15.207 (a) – AC Line Conducted Emissions

Standard Requirement:

Frequency of emission (MHz)	Conducted limit (dBμV)	
	Quasi-peak	Average
0.15–0.5	66 to 56*	56 to 46*
0.5–5	56	46
5–30	60	50

*Decreases with the logarithm of the frequency.

Procedures:

1. All possible modes of operation were investigated. Only the 6 worst case emissions measured, using the correct CISPR and Average detectors, are reported. All other emissions were relatively insignificant.
2. A "-ve" margin indicates a PASS as it refers to the margin present below the limit line at the particular frequency.
3. Conducted Emissions Measurement Uncertainty
All test measurements carried out are traceable to national standards. The uncertainty of the measurement at a confidence level of approximately 95% (in the case where distributions are normal), with a coverage factor of 2, in the range 9kHz – 30MHz (Average & Quasi-peak) is ± 3.5 dB.
4. Environmental Conditions
Temperature 19°C
Relative Humidity 50%
Atmospheric Pressure 1019mbar
5. Test date: January 13, 2014
Tested By: William Long

Test Result: Pass

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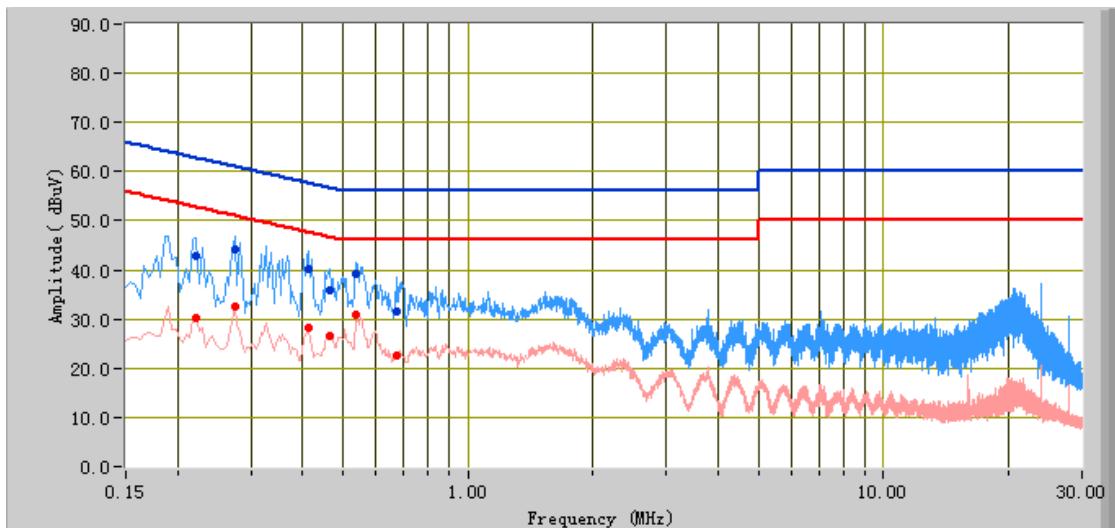
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Test Mode:**Normal Working**

Peak Detector **Quasi Peak Limit**
Average Detector **Average Limit**

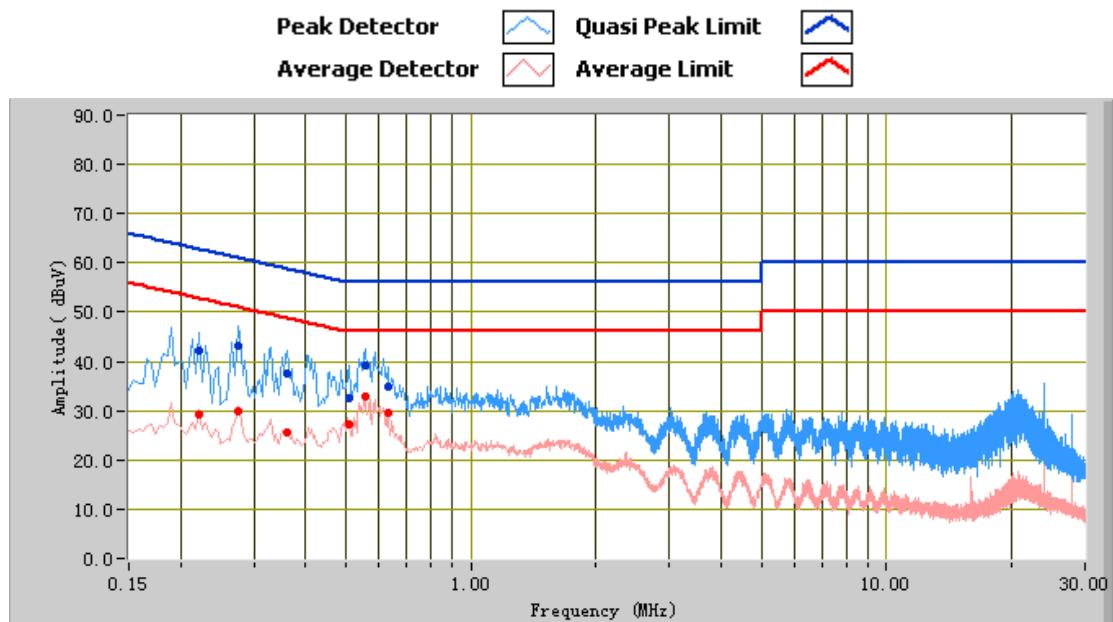
**Phase Neutral Plot at 120V AC, 60Hz**

Frequency (MHz)	Quasi Peak (dB μ V)	Limit (dB μ V)	Margin (dB)	Average (dB μ V)	Limit (dB μ V)	Margin (dB)	Factors (dB)
0.41	40.15	57.57	-17.42	28.13	47.57	-19.44	11.21
0.27	44.14	61.00	-16.86	32.63	51.00	-18.36	11.42
0.54	39.33	56.00	-16.67	31.55	46.00	-14.45	11.06
0.22	42.85	62.74	-19.90	30.17	52.74	-22.57	11.49
0.47	36.02	56.59	-20.56	26.72	46.59	-19.86	11.14
0.67	31.54	56.00	-24.46	22.64	46.00	-23.36	10.95

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Test Mode: Normal Working**Phase Line Plot at 120V AC, 60Hz**

Frequency (MHz)	Quasi Peak (dB μ V)	Limit (dB μ V)	Margin (dB)	Average (dB μ V)	Limit (dB μ V)	Margin (dB)	Factors (dB)
0.55	39.24	56.00	-16.76	32.91	46.00	-13.09	11.02
0.27	43.29	61.00	-17.71	29.76	51.00	-21.24	11.42
0.36	37.42	58.68	-21.26	25.64	48.68	-23.04	11.28
0.51	32.59	56.00	-23.41	27.19	46.00	-18.81	11.05
0.22	42.13	62.74	-20.61	29.19	52.74	-23.55	11.50
0.63	34.90	56.00	-21.10	29.42	46.00	-16.58	10.97



5.3 §15.209, §15.205, §15.249(a) & §15.249(d) - Radiated Spurious Emissions

1. All possible modes of operation were investigated. Only the 6 worst case emissions measured, using the correct CISPR detectors, are reported. All other emissions were relatively insignificant.
2. A "-ve" margin indicates a PASS as it refers to the margin present below the limit line at the particular frequency.
3. Radiated Emissions Measurement Uncertainty
All test measurements carried out are traceable to national standards. The uncertainty of the measurement at a confidence level of approximately 95% (in the case where distributions are normal), with a coverage factor of 2, in the range 30MHz – 1GHz (3m & 10m) & 1GHz above (3m) is +5.6/-4.5dB.
4. Environmental Conditions Temperature 19°C
 Relative Humidity 50%
 Atmospheric Pressure 1019mbar
5. Test date : January 13, 2014
Tested By : William Long

Standard Requirement:

The emissions from the Low-power radio-frequency devices shall not exceed the field strength levels specified in the following table and the level of any unwanted emissions shall not exceed the level of the fundamental emission. The tighter limit applies at the band edges.

The field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:

Fundamental frequency	Field strength of fundamental (millivolts/meter)	Field strength of harmonics (microvolts/meter)
902–928 MHz	50	500
2400–2483.5 MHz	50	500
5725–5875 MHz	50	500
24.0–24.25 GHz	250	2500

Sample Calculation:

EUT Field Strength = Raw Amplitude (dB μ V/m) – Amplitude Gain (dB) + Antenna Factor (dB) + Cable Loss (dB) + Filter Attenuation (dB, if used).

Test Result: Pass

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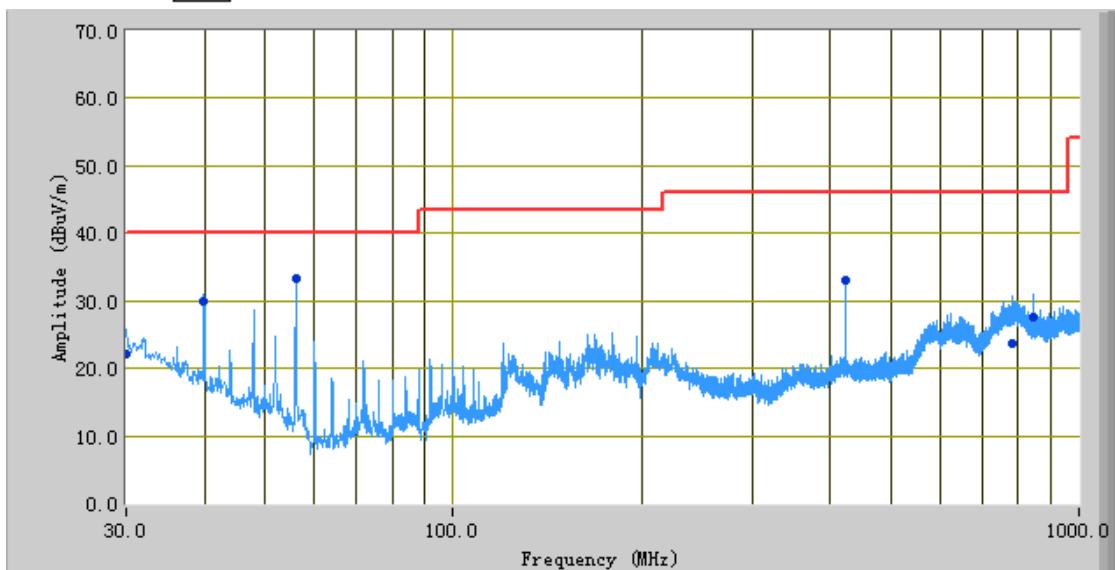
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Test Mode: FN Transmitting***Below 1GHz***

Peak Detector

Quasi Peak Limit

***Test Data*****Vertical/Horizontal Polarity Plot @3m**

Frequency (MHz)	Quasi Peak (dB μ V/m)	Azimuth	Polarity (H/V)	Height (cm)	Factors (dB)	Limit (dB μ V/m)	Margin (dB)
55.99	33.39	116.00	V	100.00	-36.43	40.00	-6.61
40.00	29.85	190.00	H	237.00	-27.73	40.00	-10.15
423.19	32.93	103.00	H	219.00	-28.36	46.00	-13.07
30.00	22.09	235.00	H	279.00	-21.40	40.00	-17.91
846.40	27.54	90.00	V	205.00	-19.18	46.00	-18.46
781.57	23.76	360.00	H	209.00	-17.68	46.00	-22.24



Test Mode: FN Transmitting

Fundamental

Low Channel (5733 MHz)

Frequency (MHz)	Reading(dB μ V/m)		Factors (dB)	Polarity (H/V)	Result(dB μ V/m)		Limit (dB μ V/m)		Margin (dB)	
	AV	PEAK			AV	PEAK	AV	PEAK	AV	PEAK
	5733	100.2	108.23	-13.93	V	86.27	94.3	94	114	-7.73
5733	99.8	100.15	-13.93	H	85.87	86.22	94	114	-8.13	-27.78

Middle Channel (5771 MHz)

Frequency (MHz)	Reading(dB μ V/m)		Factors (dB)	Polarity (H/V)	Result(dB μ V/m)		Limit (dB μ V/m)		Margin (dB)	
	AV	PEAK			AV	PEAK	AV	PEAK	AV	PEAK
	5771	100.21	107.22	-13.93	V	86.28	93.29	94	114	-7.72
5771	98.89	100.02	-13.93	H	84.96	86.09	94	114	-9.04	-27.91

High Channel (5847 MHz)

Frequency (MHz)	Reading(dB μ V/m)		Factors (dB)	Polarity (H/V)	Result(dB μ V/m)		Limit (dB μ V/m)		Margin (dB)	
	AV	PEAK			AV	PEAK	AV	PEAK	AV	PEAK
	5847	99.89	102.55	-13.6	V	86.29	88.95	94	114	-7.71
5847	97.88	99.89	-13.6	H	84.28	86.29	94	114	-9.72	-27.71

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Spurious Emissions above 1GHz

Low Channel (5733 MHz)

Frequency (MHz)	Reading(dB μ V/m)		Factors (dB)	Polarity (H/V)	Result(dB μ V/m)		Limit (dB μ V/m)		Margin (dB)	
	AV	PEAK			AV	PEAK	AV	PEAK	AV	PEAK
3102.02	62.33	78.56	-19.2	V	43.13	59.36	54	74	-10.87	-14.64
4981.16	59.89	74.89	-15.8	H	44.09	59.09	54	74	-9.91	-14.91

Middle Channel (5771 MHz)

Frequency (MHz)	Reading(dB μ V/m)		Factors (dB)	Polarity (H/V)	Result(dB μ V/m)		Limit (dB μ V/m)		Margin (dB)	
	AV	PEAK			AV	PEAK	AV	PEAK	AV	PEAK
3351.78	63.66	77.88	-19.2	V	44.46	58.68	54	74	-9.54	-15.32
2566.89	60.18	76.26	-21.2	H	38.98	55.06	54	74	-15.02	-18.94

High Channel (5847 MHz)

Frequency (MHz)	Reading(dB μ V/m)		Factors (dB)	Polarity (H/V)	Result(dB μ V/m)		Limit (dB μ V/m)		Margin (dB)	
	AV	PEAK			AV	PEAK	AV	PEAK	AV	PEAK
4012.58	62.06	69.88	-16.8	V	45.26	53.08	54	74	-8.74	-20.92
3898.06	59.83	70.45	-17.8	H	42.03	52.65	54	74	-11.97	-21.35



5.4 §15.215(c)– 20 dB BANDWIDTH TESTING

1. Radiated Emissions Measurement Uncertainty

All test measurements carried out are traceable to national standards. The uncertainty of the measurement at a confidence level of approximately 95% (in the case where distributions are normal), with a coverage factor of 2, in the range 30MHz – 1GHz (3m & 10m) & 1GHz above (3m) is +5.6/-4.5dB.

2. Environmental Conditions

3. Test date : January 12, 2014

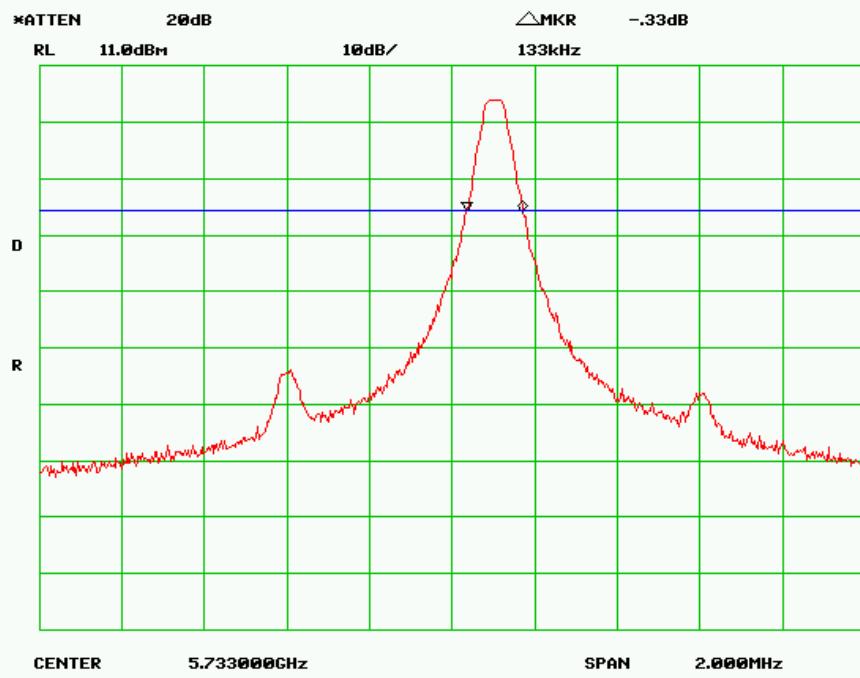
Tested By : William Long

Test Procedure

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT on the test table without connection to measurement instrument. Turn on the EUT. Then set it to any one convenient frequency within its operating range. Set a reference level on the measuring instrument equal to the highest peak value.
3. Measure the frequency difference of two frequencies that were attenuated 20 dB from the reference level. Record the frequency difference as the emission bandwidth.
4. Repeat above procedures until all frequencies measured were complete.

Test Result: Pass

Channel	Fundamental Frequency (MHz)	20dB Bandwidth (kHz)	Result
Low	5733	133	Pass
Middle	5771	140	Pass
High	5847	130	Pass

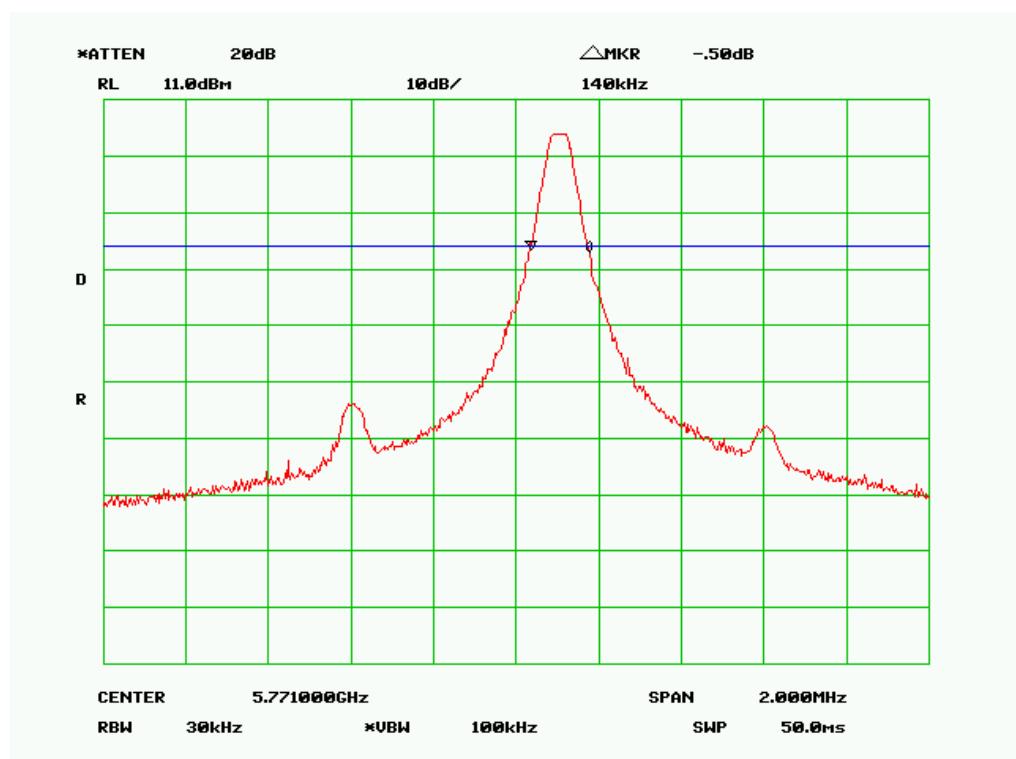


Low Channel

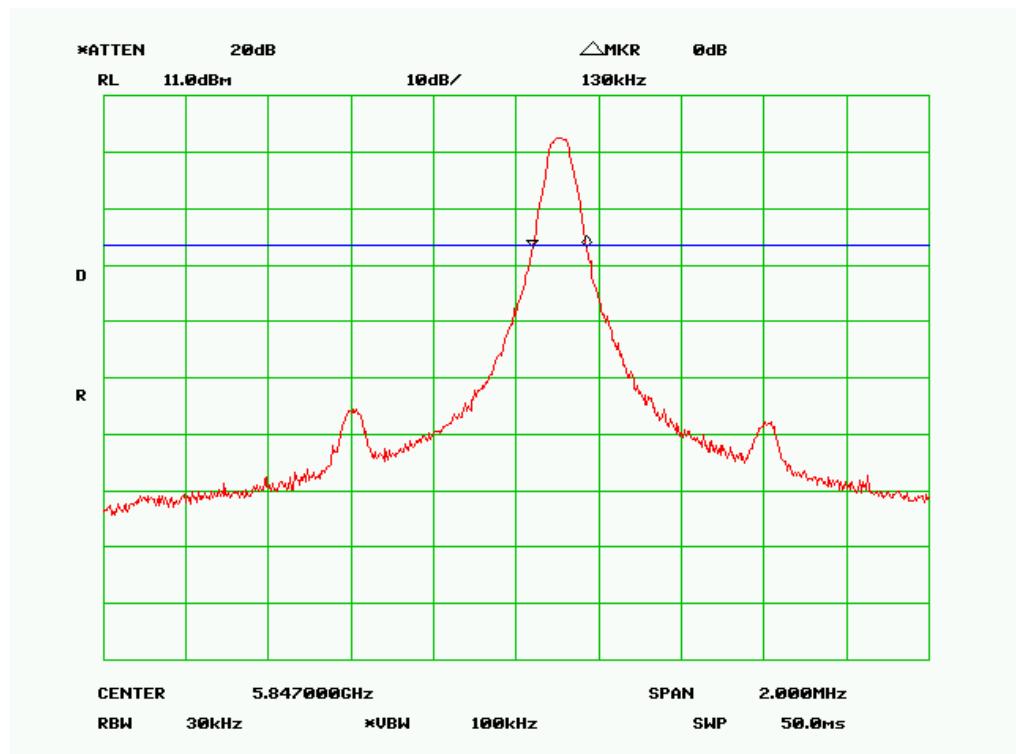
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Middle Channel



High Channel



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5.5 §15.249(d) - Band Edge

1. Radiated Emissions Measurement Uncertainty

All test measurements carried out are traceable to national standards. The uncertainty of the measurement at a confidence level of approximately 95% (in the case where distributions are normal), with a coverage factor of 2, in the range 30MHz – 1GHz (3m & 10m) & 1GHz above (3m) is +5.6/-4.5dB.

2. Environmental Conditions

Temperature	19°C
Relative Humidity	50%
Atmospheric Pressure	1019mbar

3. Test date : January 12, 2014

Tested By : William Long

Standard Requirement:

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 to the general radiated emission limits in §15.209, whichever is the lesser attenuation.

Procedures:

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT without connection to measurement instrument. Put it on the Rotated table and turn on the EUT and make it operate in transmitting mode. Then set it to Low Channel and High Channel within its operating range, and make sure the instrument is operated in its linear range.
3. Set both RBW and VBW of spectrum analyzer to 1MHz.
4. Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
5. Repeat above procedures until all measured frequencies were complete.

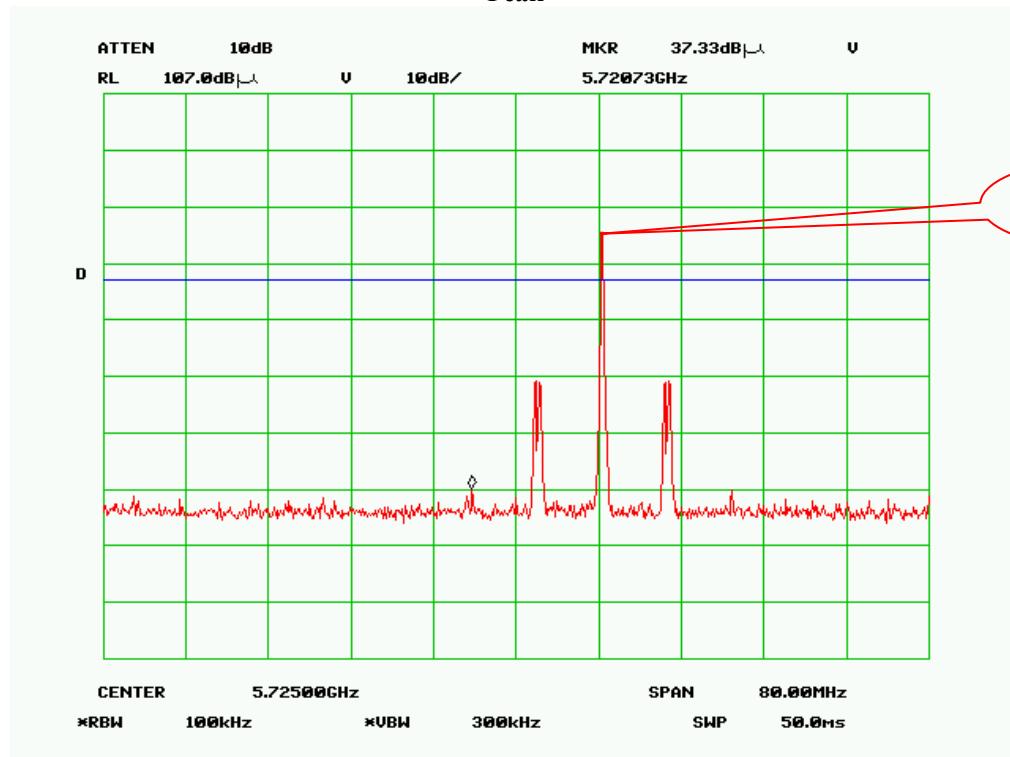
Test Result: Pass

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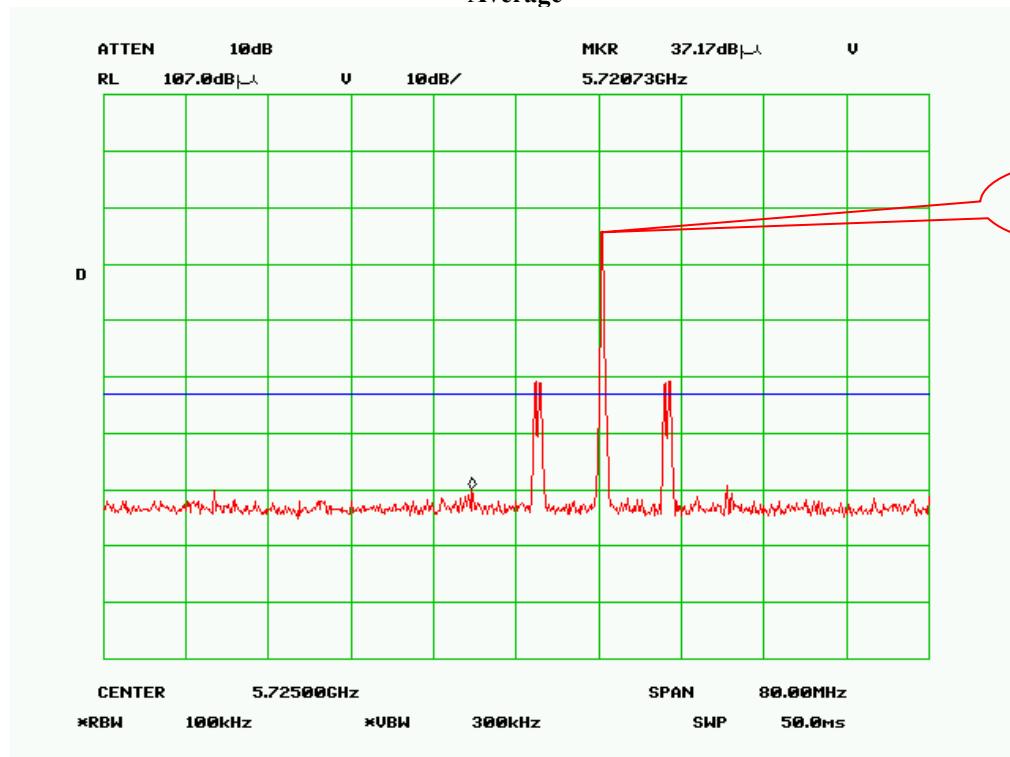
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Band Edge: Left Side Peak



Fundamental

Band Edge: Left Side Vertical Average



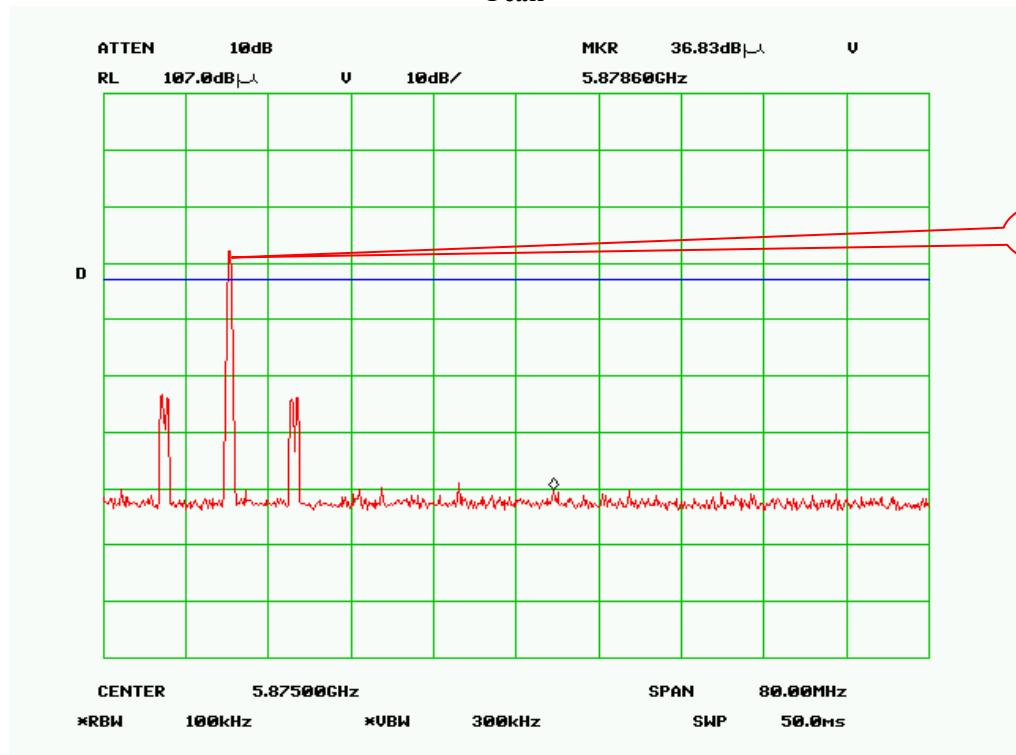
Fundamental

**SIEMIC, INC.**

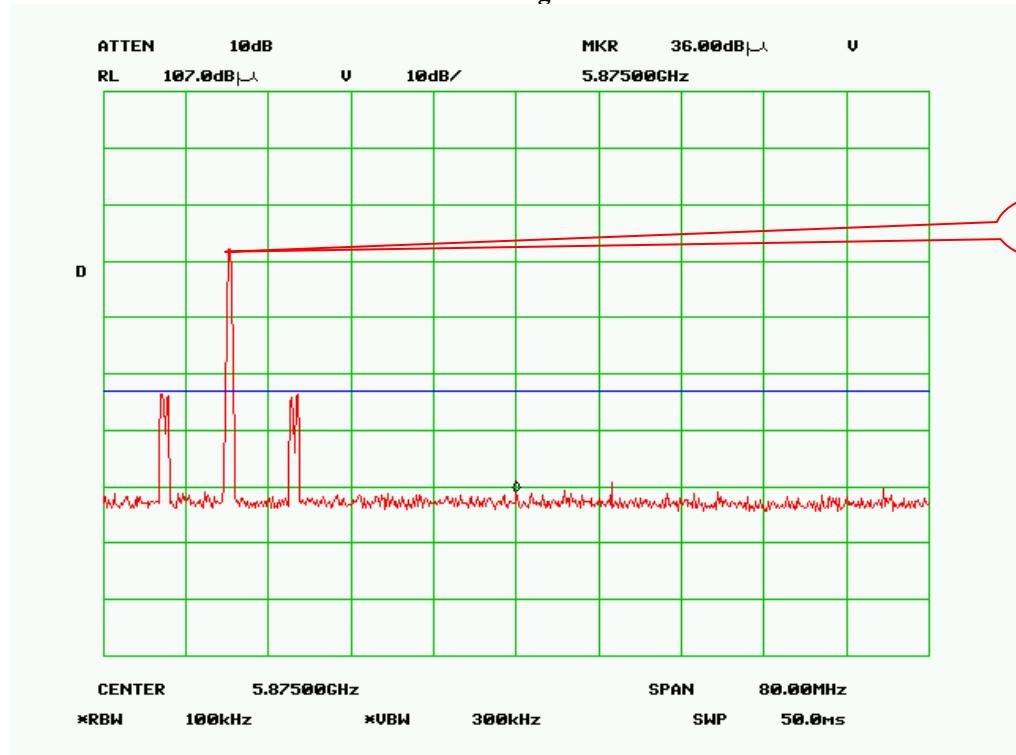
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Band Edge: Right Side
Vertical
Peak



Band Edge: Right Side
Vertical
Average



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Annex A. TEST INSTRUMENT & METHOD

Annex A.i. TEST INSTRUMENTATION & GENERAL PROCEDURES

Instrument	Model	Serial #	Calibration Date	Calibration Due Date
AC Line Conducted Emissions				
R&S EMI Test Receiver	ESPI3	101216	09/27/2013	09/26/2014
ROHDE&SCHWARZ V-LISN	ESH3-Z5	838979/005	09/27/2013	09/26/2014
Com-Power Transient Limiter	LIT-153	531021	09/27/2013	09/26/2014
SIEMIC Labview Conducted Emissions software	V1.0	N/A	N/A	N/A
Radiated Emissions				
R&S Receiver	ESPI 3	101216	09/27/2013	09/26/2014
Hp Spectrum Analyzer	8563E	3821A09023	09/27/2013	09/26/2014
HP Pre-amplifier	8447F	1937A01160	10/27/2013	10/26/2014
Sunol Sciences, Inc. antenna	JB6	A121411	03/27/2013	03/26/2014
A-INFOMW Horn Antenna (1~18GHz)	JXTXLB-10180	J2031081120092	10/09/2013	10/08/2014
MITEQ Pre-Amplifier(0.1 ~ 18GHz)	AMF-7D-00101800-30-10P	1451710	11/03/2013	11/02/2014
SIEMIC Labview Radiated Emissions software	V1.0	N/A	N/A	N/A



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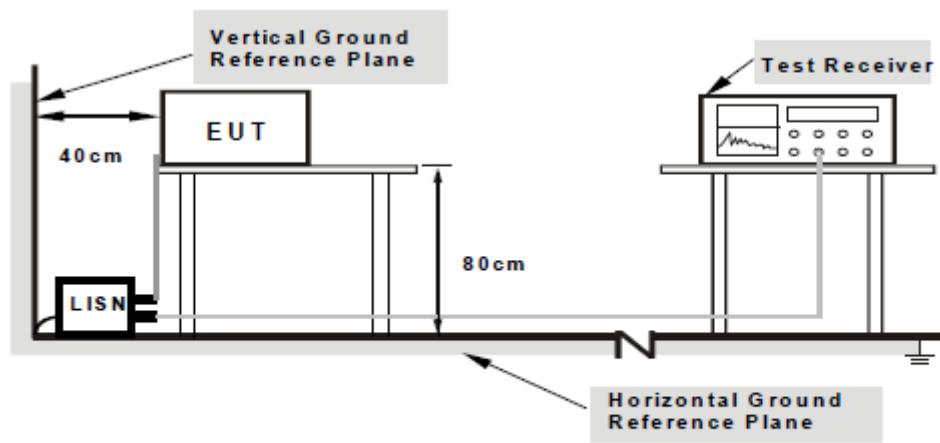
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Annex A.ii. CONDUCTED EMISSIONS TEST DESCRIPTION

Test Set-up

1. The EUT and supporting equipment were set up in accordance with the requirements of the standard on top of a 1.5m x 1m x 0.8m high, non-metallic table, as shown in [Annex B](#).
2. The power supply for the EUT was fed through a $50\Omega/50\mu\text{H}$ EUT LISN, connected to filtered mains.
3. The RF OUT of the EUT LISN was connected to the EMI test receiver via a low-loss coaxial cable.
4. All other supporting equipments were powered separately from another main supply.



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

For the actual test configuration, please refer to the related item – Photographs of the Test Configuration1.

Test Method

1. The EUT was switched on and allowed to warm up to its normal operating condition.
2. A scan was made on the NEUTRAL line (for AC mains) or Earth line (for DC power) over the required frequency range using an EMI test receiver.
3. High peaks, relative to the limit line, were then selected.
4. The EMI test receiver was then tuned to the selected frequencies and the necessary measurements made with a receiver bandwidth setting of 10 kHz. For FCC tests, only Quasi-peak measurements were made; while for CISPR/EN tests, both Quasi-peak and Average measurements were made.
5. Steps 2 to 4 were then repeated for the LIVE line (for AC mains) or DC line (for DC power).

Description of Conducted Emission Program

This EMC Measurement software run LabView automation software and offers a common user interface for electromagnetic interference (EMI) measurements. This software is a modern and powerful tool for controlling and monitoring EMI test receivers and EMC test systems. It guarantees reliable collection, evaluation, and documentation of measurement results. Basically, this program will run a pre-scan measurement before it proceeds with the final measurement. The pre-scan routine will run the common scan range from 150 kHz to 30 MHz; the program will first start a peak and average scan on selectable measurement time and step size. After the program complete the pre-scan, this program will perform the Quasi Peak and Average measurement, based on the pre-scan peak data reduction result.



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Sample Calculation Example

At 20 MHz

limit = 250 μ V = 47.96 dB μ V

Transducer factor of LISN, pulse limiter & cable loss at 20 MHz = 11.20 dB

Q-P reading obtained directly from EMI Receiver = 40.00 dB μ V
(Calibrated for system losses)

Therefore, Q-P margin = $47.96 - 40.00 = 7.96$ i.e. **7.96 dB below limit**



Annex A. iii. RADIATED EMISSIONS TEST DESCRIPTION

Limit

1. Except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength (mV/m)	Measurement Distance (m)
30-88	100*	3
88-216	150*	3
216-960	200*	3
Above 960	500	3

Remark: Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g., Sections 15.231 and 15.241.

2. In the above emission table, the tighter limit applies at the band edges.

Frequency (Hz)	Field Strength (μ V/m at 3-meter)	Field Strength (dB μ V/m at 3-meter)
30-88	100	40
88-216	150	43.5
216-960	200	46
Above 960	500	54

EUT Characterisation

EUT characterisation, over the frequency range from 30MHz to 10th Harmonic, was done in order to minimise radiated emissions testing time while still maintaining high confidence in the test results.

The EUT was placed in the chamber, at a height of about 0.8m on a turntable. Its radiated emissions frequency profile was observed, using a spectrum analyzer /receiver with the appropriate broadband antenna placed 3m away from the EUT. Radiated emissions from the EUT were maximised by rotating the turntable manually, changing the antenna polarisation and manipulating the EUT cables while observing the frequency profile on the spectrum analyzer / receiver. Frequency points at which maximum emissions occurred, clock frequencies and operating frequencies were then noted for the formal radiated emissions test at the Open Area Test Site (OATS) or 3m EMC chamber.



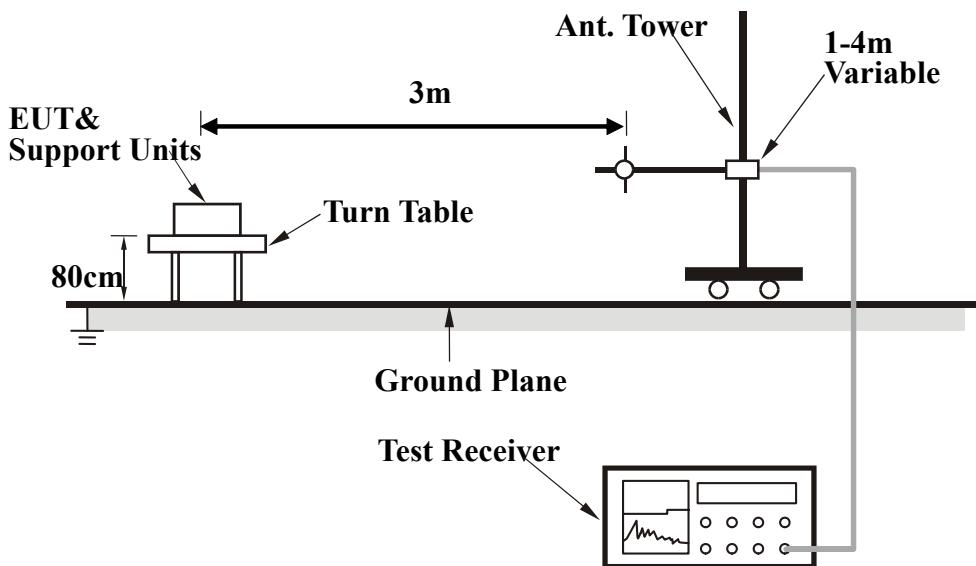
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Test Set-up

1. The EUT and supporting equipment were set up in accordance with the requirements of the standard on top of a 1.5m X 1.0m X 0.8m high, non-metallic table.
2. The filtered power supply for the EUT and supporting equipment were tapped from the appropriate power sockets located on the turntable.
3. The relevant broadband antenna was set at the required test distance away from the EUT and supporting equipment boundary.



Test Method

The following procedure was performed to determine the maximum emission axis of EUT:

1. With the receiving antenna is H polarization, rotate the EUT in turns with three orthogonal axes to determine the axis of maximum emission.
2. With the receiving antenna is V polarization, rotate the EUT in turns with three orthogonal axes to determine the axis of maximum emission.
3. Compare the results derived from above two steps. So, the axis of maximum emission from EUT was determined and the configuration was used to perform the final measurement.

Final Radiated Emission Measurement

1. Setup the configuration according to figure 1. Turn on EUT and make sure that it is in normal function.
2. For emission frequencies measured below 1 GHz, a pre-scan is performed in a shielded chamber to determine the accurate frequencies of higher emissions will be checked on a open test site. As the same purpose, for emission frequencies measured above 1 GHz, a pre-scan also be performed with a 1 meter measuring distance before final test.
3. For emission frequencies measured below and above 1 GHz, set the spectrum analyzer on a 100 kHz and 1 MHz resolution bandwidth respectively for each frequency measured in step 2.
4. The search antenna is to be raised and lowered over a range from 1 to 4 meters in horizontally polarized orientation. Position the highness when the highest value is indicated on spectrum analyzer, then change the orientation of EUT on test table over a range from 0 ° to 360 ° with a speed as slow as possible, and keep the azimuth that highest emission is indicated on the spectrum analyzer. Vary the antenna position again and record the highest value as a final reading.
5. Repeat step 4 until all frequencies need to be measured were complete.
6. Repeat step 5 with search antenna in vertical polarized orientations.

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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	Peak	100 kHz	100 kHz
Above 1000	Peak	1 MHz	1 MHz
	Average	1 MHz	10 Hz

Description of Radiated Emission Program

This EMC Measurement software run LabView automation software and offers a common user interface for electromagnetic interference (EMI) measurements. This software is a modern and powerful tool for controlling and monitoring EMI test receivers and EMC test systems. It guarantees reliable collection, evaluation, and documentation of measurement results. Basically, this program will run a pre-scan measurement before it proceeds with the final measurement. The pre-scan routine will run the scan on four different antenna heights, 2 antenna polarity, and 360 degrees table rotation. For example, the program was set to run 30 MHz to 1 GHz scan; the program will first start from a meter antenna height and divide the 30 MHz to 1 GHz into 10 separate parts of maximum hold sweeps. Each parts of maximum hold sweep, the program will collect the data from 0 degree to 360 degrees table rotation. After the program complete the 1m scan, the antenna continues to rise to 2m and continue the scan. The step will repeated for all specified antenna height and polarity. This program will perform the Quasi Peak measurement after the signal maximization process and pre-scan routine. The final measurement will be base on the pre-scan data reduction result.

Sample Calculation Example

The field strength is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain (if any) from the measured reading. For the limit is employed average value, therefore the peak value can be transferred to average value by subtracting the duty factor. The basic equation with a sample calculation is as follows:

$$\text{Peak} = \text{Reading} + \text{Corrected Factor}$$

where

$$\text{Corr. Factor} = \text{Antenna Factor} + \text{Cable Factor} - \text{Amplifier Gain (if any)}$$

And the average value is

$$\begin{aligned} \text{Average} &= \text{Peak Value} + \text{Duty Factor} \text{ or} \\ &\text{Set RBW} = 1\text{MHz}, \text{VBW} = 10\text{Hz}. \end{aligned}$$

Note:

If the measured frequencies are fall in the restricted frequency band, the limit employed must be quasi peak value when frequencies are below or equal to 1 GHz. And the measuring instrument is set to quasi peak detector function.



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Annex B. EUT AND TEST SETUP PHOTOGRAPHS

Annex B.i. Photograph : EUT External Photo



All Packages – Front View



EUT - Front View



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EUT - Rear View



EUT – Top View



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EUT – Bottom View (Transmitter)



EUT – Left View

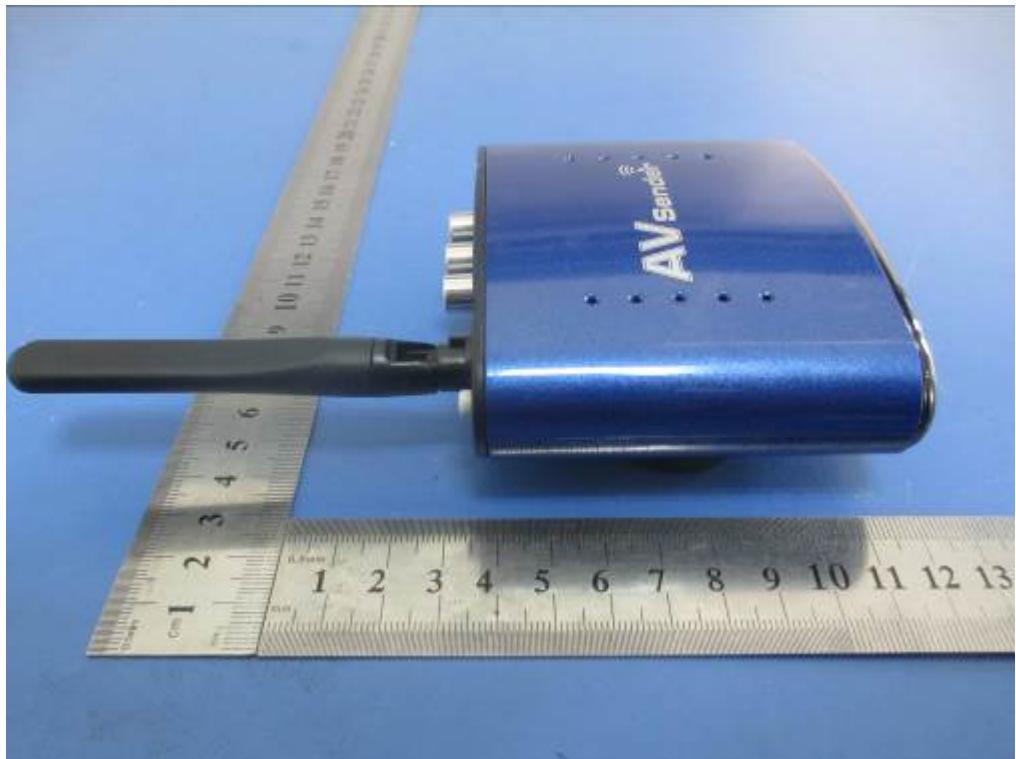


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EUT – Right View



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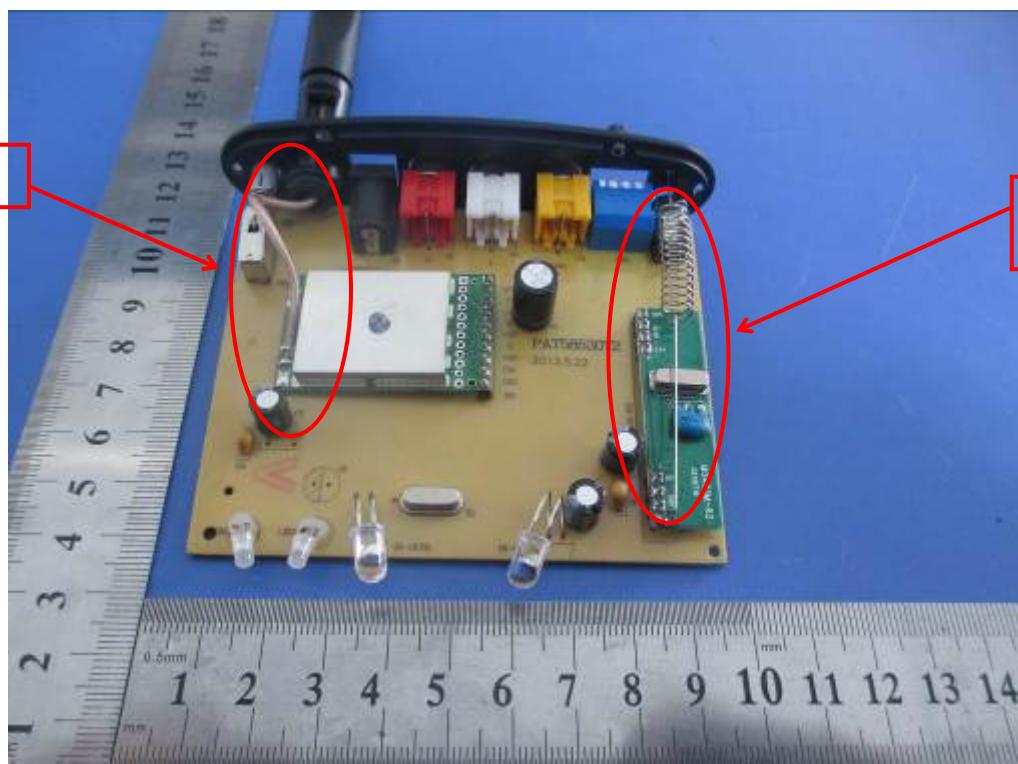
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Annex B.ii. Photograph 2: EUT Internal Photo



EUT (Transmitter) – Uncover Front View



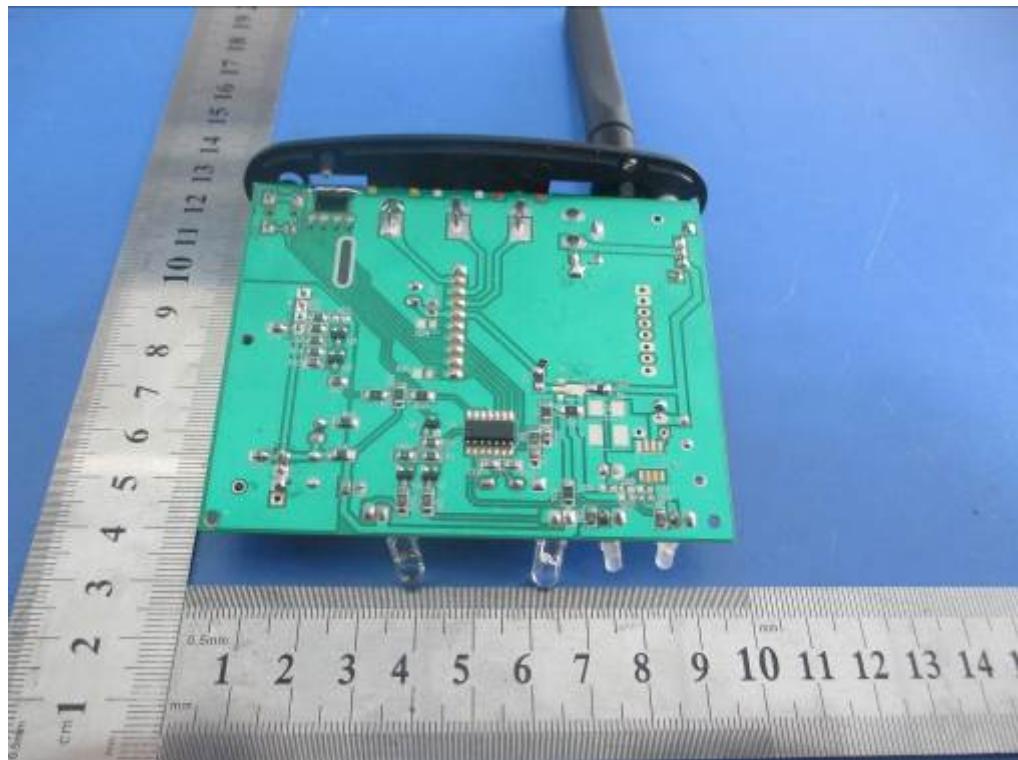
EUT (Transmitter) – PCB 1 Front View



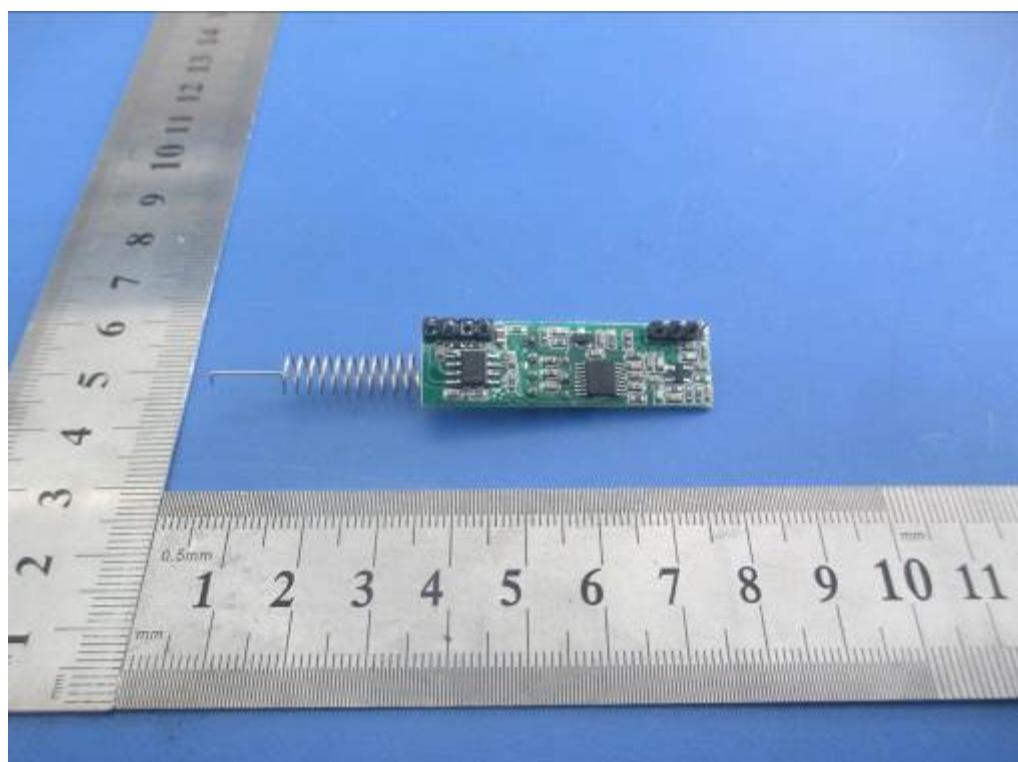
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EUT (Transmitter) – PCB 1 Rear View



EUT (Transmitter) – PCB 2 Front View

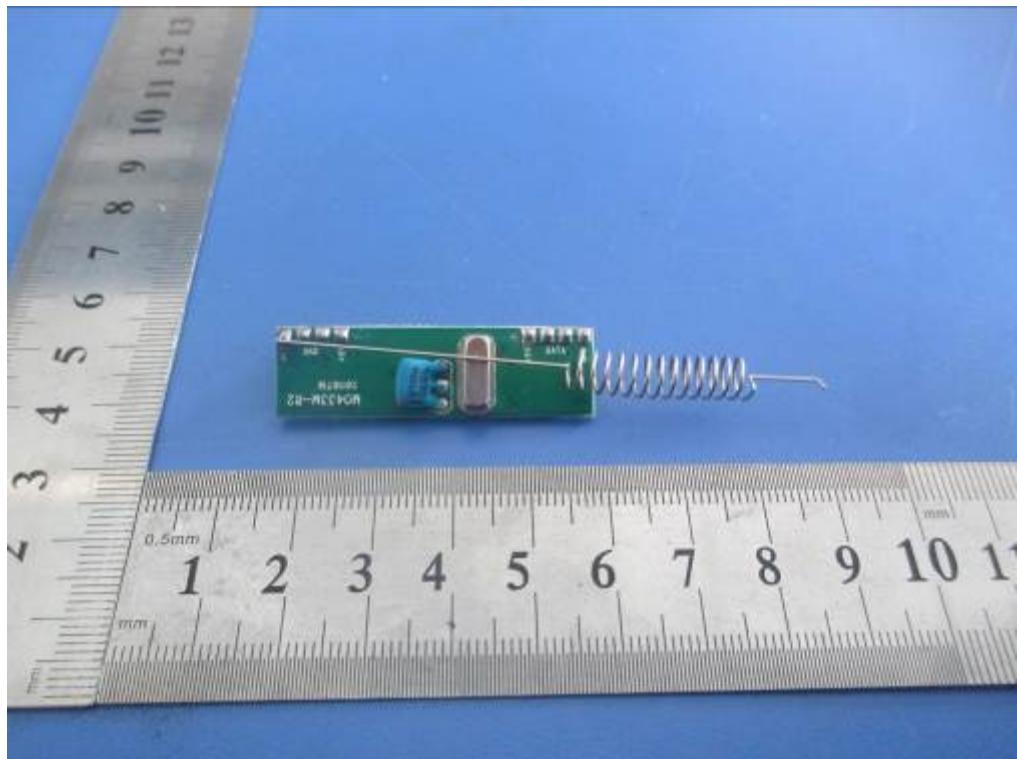


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EUT (Transmitter) – PCB 2 Rear View



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Annex B.iii. Photograph : Test Setup Photo



Conducted Emissions Test Setup Front View



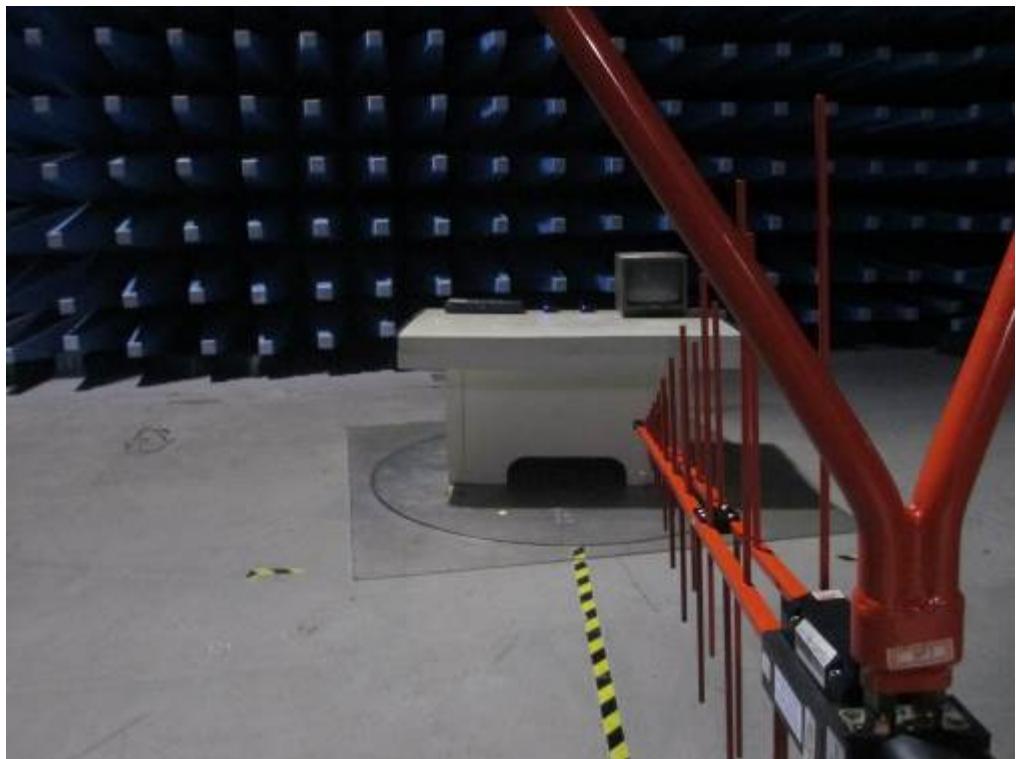
Conducted Emissions Test Setup Side View



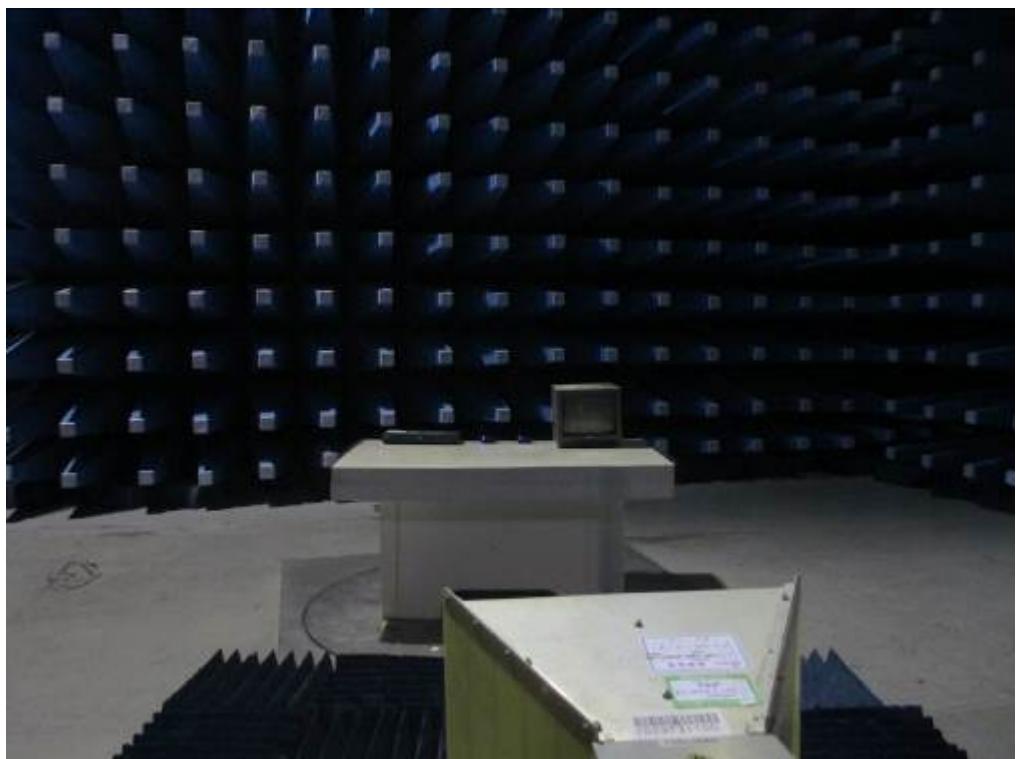
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Radiated Emissions Test Setup Front View Below 1GHz



Radiated Emissions Test Setup Front View Above 1GHz

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Annex C. TEST SETUP AND SUPPORTING EQUIPMENT

EUT TEST CONDITIONS

Annex C. i. SUPPORTING EQUIPMENT DESCRIPTION

The following is a description of supporting equipment and details of cables used with the EUT.

Manufacturer	Equipment Description (Including Brand Name)	Model	Calibration Due Date
PANDA	TV	N/A	N/A
SONY	DVD	BDP-S350	N/A

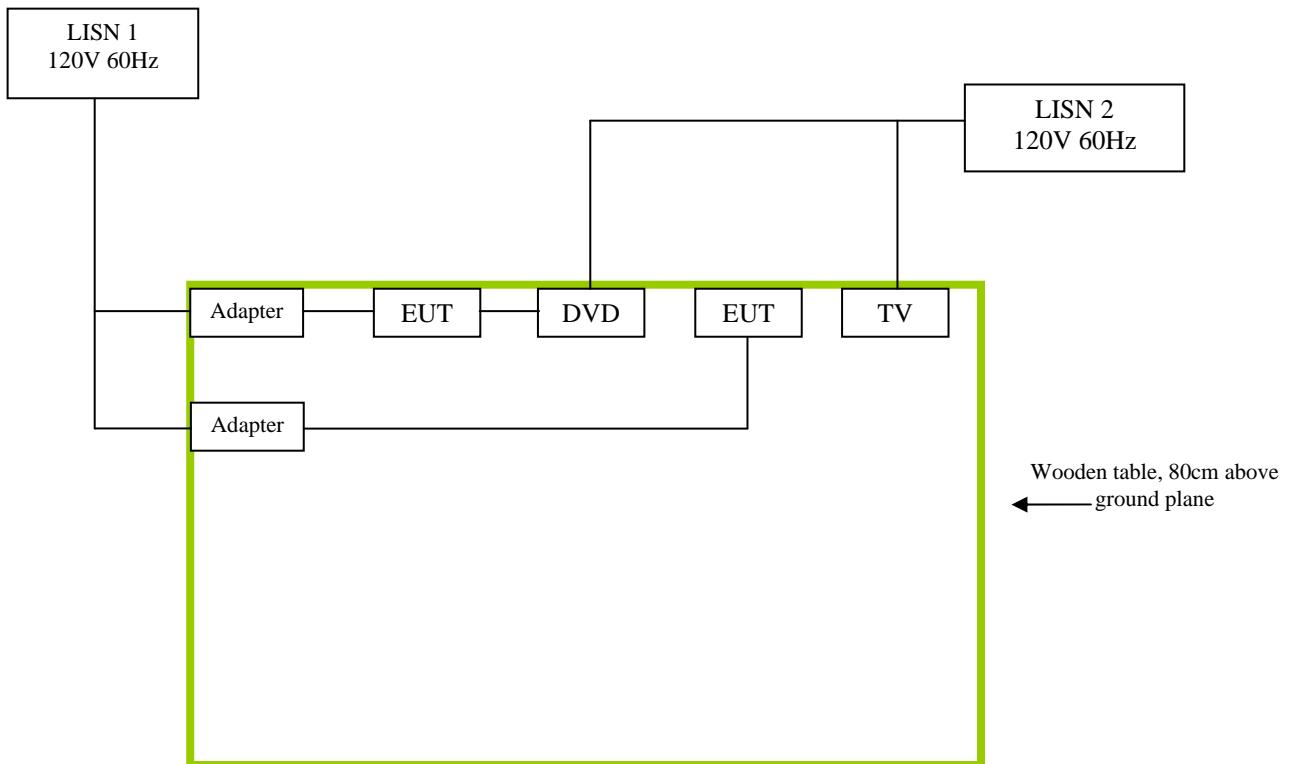


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Block Configuration Diagram for Conducted Emissions



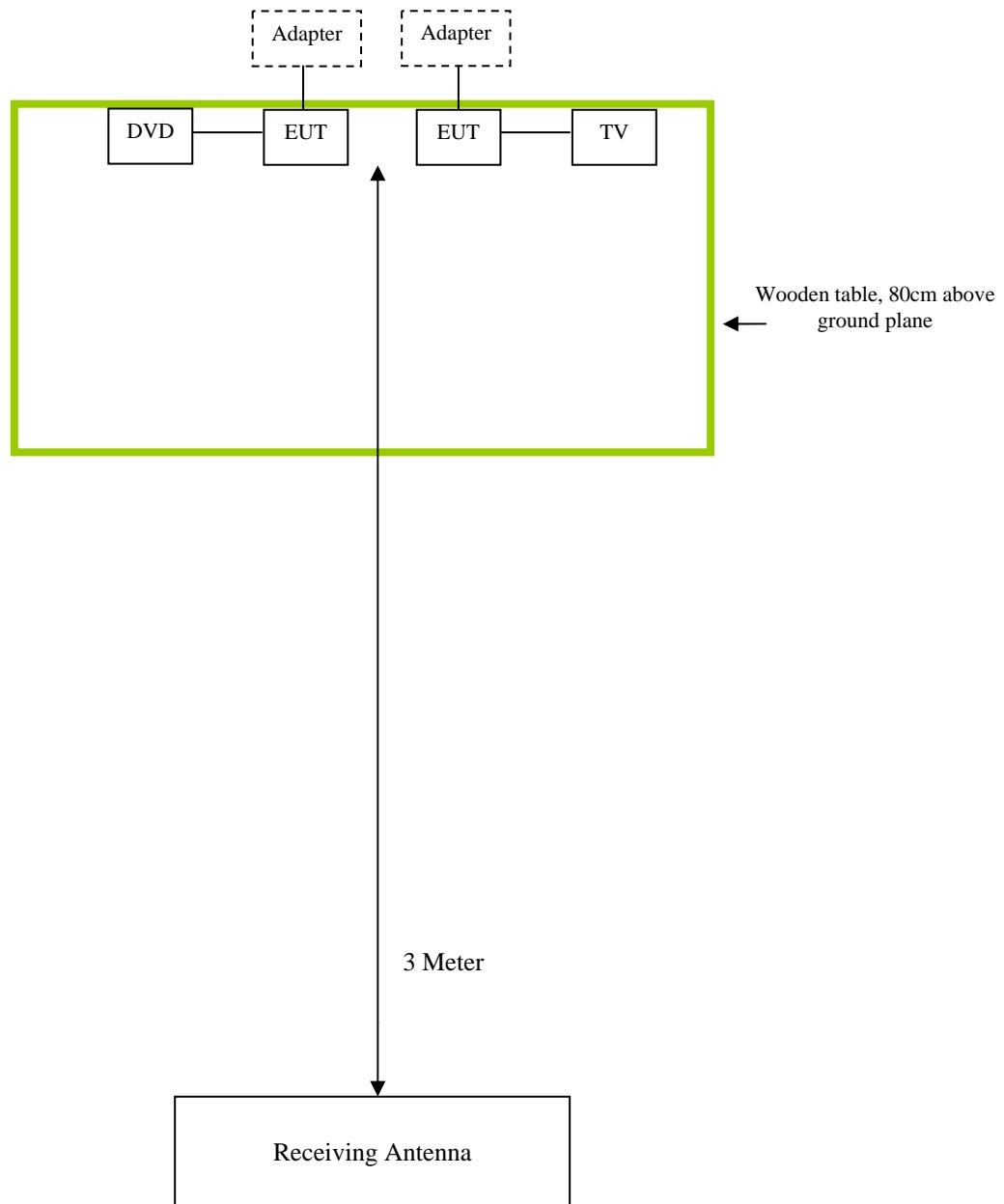


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Block Configuration Diagram for Radiated Emission



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Annex C.ii. EUT OPERATING CONDITIONS

The following is the description of how the EUT is exercised during testing.

Test	Description Of Operation
Emissions Testing	The EUT was continuously transmitting to stimulate the worst case.



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Annex D. USER MANUAL / BLOCK DIAGRAM / SCHEMATICS / PART LIST

Please see attachment



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Annex E. DECLARATION OF SIMILARITY

PAKITE

深圳市柏旗特科技有限公司
Shenzhen pakite Technology Co.,Ltd.

To: SIEMIC (Nanjing-China) Laboratories
NO.2-1,Longcang Dadao, Yuhua Economic Development Zone,
Nanjing, China

Statement

Model number: PAT-530、PAT-550、PAT-220、PAT-240、PAT-260、
PAT-536、PAT-556、PAT-630、PAT-650

We hereby state that these models are identical in interior structure, electrical circuits and components, and just model names are different for the marketing requirement.

Your assistance on this matter is highly appreciated.

Sincerely,

Signature:

Name : PEIZHEN WU

Title: General Manager

Company Name: SHENZHEN PAKITE TECHNOLOGY CO.,LTD.

Address: M02A, A Block, Chunhui Yuan, Caitian Road, Futian District, Shenzhen, China.

Telephone: +86-755-83366901

Fax No.: +86-755-83366909