



FCC Test Report

On Model Name : Wireless Garage Security Kit

Model Numbers : AC51532

Brand Name : WINPLUS

FCC ID Number: XMEFWINPLUS

Prepared for

Shenzhen SAINT Technology Electronic Co.,Ltd

According to FCC Part 15(2008),Subpart B

Test Report #: SHE-0907-10228-FCCID

Prepared by: May Wang

Reviewed by: Jawen Yin

QC Manager: Paul Chen

Test Report Released by:

A handwritten signature in black ink that appears to read "Paul J. Chen".

Paul Chen

2009, September 18

Date

List of Attached Files

<i>Exhibit Type</i>	<i>File Description</i>	<i>File Name</i>
<i>Test Report</i>	<i>Test Report</i>	<i>XMEFWINPLUS_Test report.pdf</i>
<i>Operational Description</i>	<i>Technical Description</i>	<i>XMEFWINPLUS_operation description.pdf</i>
<i>External Photos</i>	<i>External Photos</i>	<i>XMEFWINPLUS_External Photos</i>
<i>Internal Photos</i>	<i>Internal Photos</i>	<i>XMEFWINPLUS_Internal Photos</i>
<i>Block Diagram</i>	<i>Block Diagram</i>	<i>XMEFWINPLUS_Block Diagram.pdf</i>
<i>Schematics</i>	<i>Circuit Diagram</i>	<i>XMEFWINPLUS_Shematics.pdf</i>
<i>Label&Location</i>	<i>Label Artwork and Location</i>	<i>XMEFWINPLUS_Label & Location.pdf</i>
<i>User Manual</i>	<i>User Manual</i>	<i>XMEFWINPLUS_User Manual.pdf</i>
<i>Test set up photos</i>	<i>Test set up photos</i>	<i>XMEFWINPLUS_Test Setup Photos.pdf</i>

Test Location

Tests performed in a Certified ANSI Semi-Anechoic Chamber and Shielded Room.

Test Site Location : Guangdong Galanz Enterprise Co. Ltd

*25 South Ronggui Rd., Shunde, Foshan,
Guangdong, China*

Tel : 86-757-23612785

Fax : 86-757-23612537

FCC Registration Number : 580210

CNAS Registration Number : L2244

IC Registration Number : 7949A

List of Test Instruments

<i>Equipment</i>	<i>Manufacturer</i>	<i>Model No.</i>	<i>Serial No.</i>	<i>Calibrated Until</i>
<i>Spectrum Analyzer</i>	R&S	FSP30	100755	2010-11-30
<i>EMI Receiver</i>	SCHAFFNER	SMR4503	11725	2010-07-08
<i>Double-ridged Wave guide horn</i>	ETS	3115	6587	2010-08-02
<i>Amplifier</i>	Agilent	83017A	MY39500438	2010-07-11
<i>Biconilog Antenna</i>	ETS	3142C	00042672	2010-09-28
<i>Semi-anechoic Chamber</i>	ETS	N/A	N/A	2010-05-24
<i>Shielding Room</i>	ETS	N/A	N/A	2010-05-24
<i>Line impedance stabilization network</i>	ETS	4825/2	1161	2010-05-24

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Opinions and Interpretations

This test report relates to the abovementioned equipment under test (EUT). Without the permission of ECMG Worldwide Certification Solution, Inc Test Lab this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark on this or similar products. The manufacturer has sole responsibility of continued compliance of the device.

Statement of Measurement Uncertainty

The data and results referenced in the document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities that can account for a nominal measurement error. Furthermore, component and process variability of devices similar to that tested may result in additional deviation.

Administrative Data

Test Sample : Wireless Garage Security Kit

Model Number : AC51532

Date Tested : 2009, July 10 to August 28

Applicant : SHENZHEN SAINT TECHNOLOGY ELECTRONIC CO.,LTD
Address : 804 Room,4th buliding, Qingnian Chengbang Yuan,Longhua st, Baoan Dist, Shenzhen,Guangdong,China.(518000)

Telephone : +86-769-8685 5951

Fax : +86-769-8685 8855

EUT Description

SHENZHEN SAINT TECHNOLOGY ELECTRONIC CO.,LTD model tested AC51532 (referred to as the EUT in this report) is a Wireless Garage Security Kit.

The EUT's technical specification are as below:

<i>Product</i>	<i>Wireless Garage Security Kit</i>
<i>Model No.</i>	<i>AC51532</i>
<i>Power type</i>	<i>DC 12V</i>
<i>Receiving type</i>	<i>Extra regenerative</i>
<i>Receive frequency</i>	<i>433MHz</i>
<i>Number of Channel</i>	<i>1</i>
<i>Data Cable</i>	<i>N/A</i>
<i>I/O Ports</i>	<i>N/A</i>

The AC/DC adaptor's information as below:

Input voltage: **120V~ 60Hz, 100mA**

Output voltage: **12VDC, 500mA**

Model No.: **MWY-DA120-DC120500**

Manufacturer: **N/A**

DC Output Cable: **1.10meter(with a ferrite core)**

Note :

The above EUT informations was declared by manufacturer and for more detailed features descriptions, please refer to the manufacturer's specifications or user's Manual.

Test Summary

The Electromagnetic Compatibility requirements on model AC51532 for this test are stated below. All results listed in this report relate exclusively to this above-mentioned model as the Equipment Under Test. This report confers no approval or endorsement upon any other component, host or subsystem used in the test set-up.

Emission Tests				
Specifications	Description	Test Results	Test Point	Remark
FCC Part 15, Class B per ANSI C63.4 2003	Conducted Emission	Passed by 16.7 dB of QP	AC Mains	Attachment 1
FCC Part 15, Class B per ANSI C63.4 2003	Radiated Emission	Passed by 8.8 dB of QP	Enclosure	Attachment 2

Test Mode Justification

This device complies with Part 15 of the FCC rules. Operations is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

Equipment Modification

Any modifications installed previous to testing by SHENZHEN SAINT TECHNOLOGY ELECTRONIC CO.,LTD will be incorporated in each production model sold or leased in United States.

There were no modifications installed by ECMG Worldwide Certification Solution, Inc (China) test personnel.

EUT Sample Photos



Front View of EUT



Back View of EUT

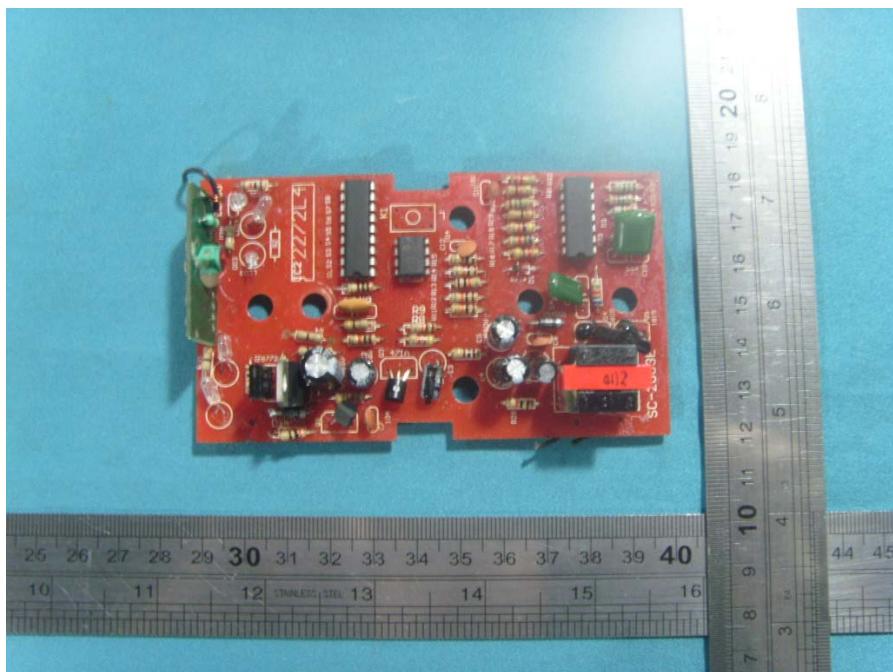
FCC Test Report #: PSZ09071105 FCCID

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Prepared by ECMG Worldwide Certification Solution, Inc



Uncovered View

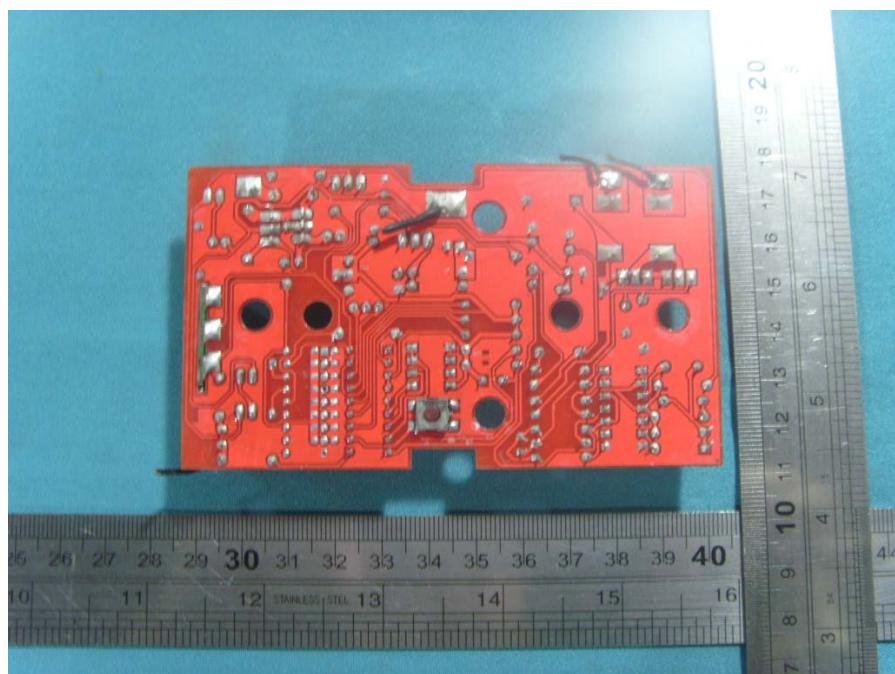


Main Board View #1

FCC Test Report #: PSZ09071105 FCCID

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Main Board View #2



AC/DC Adaptor View #1

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AC/DC Adaptor View #2

FCC Test Report #: PSZ09071105 FCCID

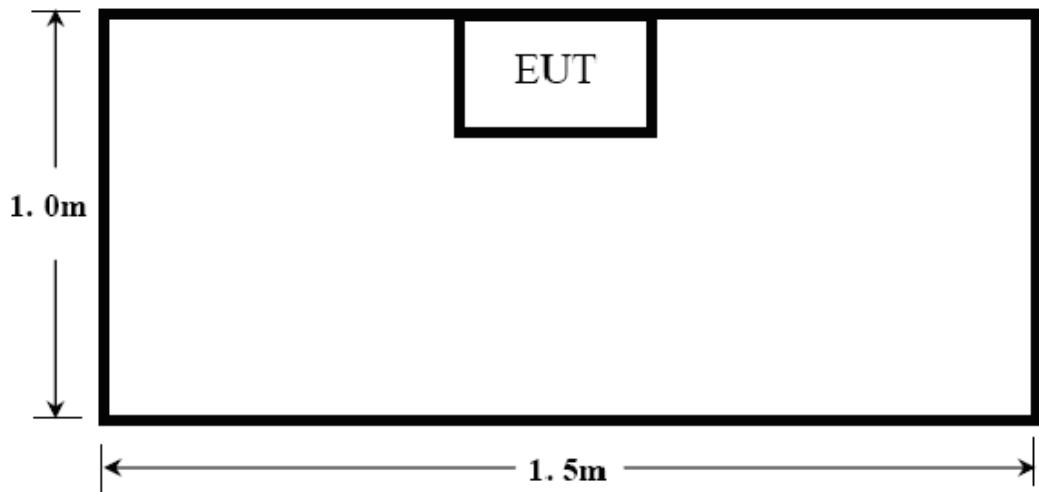
Prepared for SHENZHEN SAINT TECHNOLOGY ELECTRONIC CO.,LTD

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Test System Details

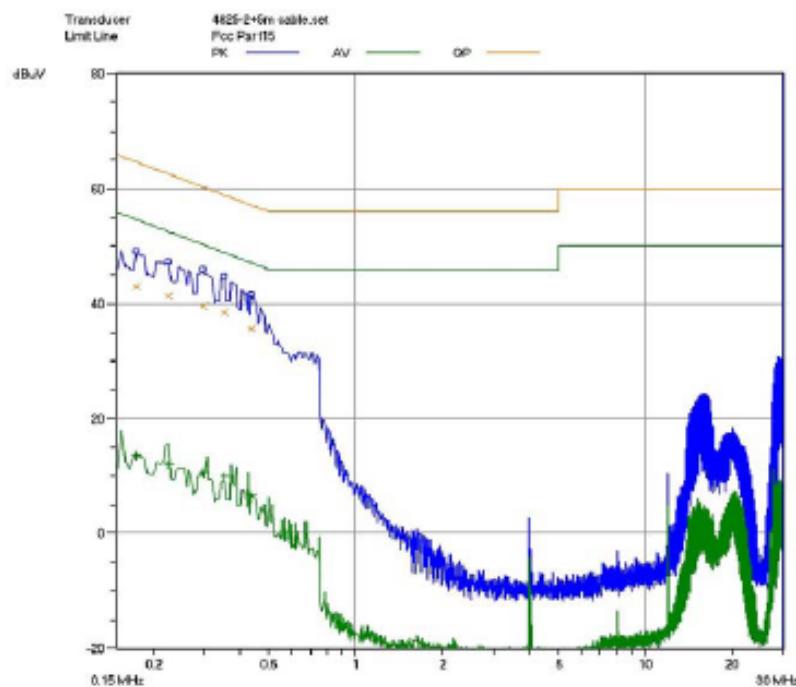
<i>EUT</i>	
<i>Model Number:</i>	AC51532
<i>Description:</i>	Wireless Garage Security Kit
<i>Manufacturer:</i>	SHENZHEN SAINT TECHNOLOGY ELECTRONIC CO.,LTD
<i>Support Equipment</i>	
N/A	
<i>Cable Description</i>	
N/A	

Configuration of Tested System

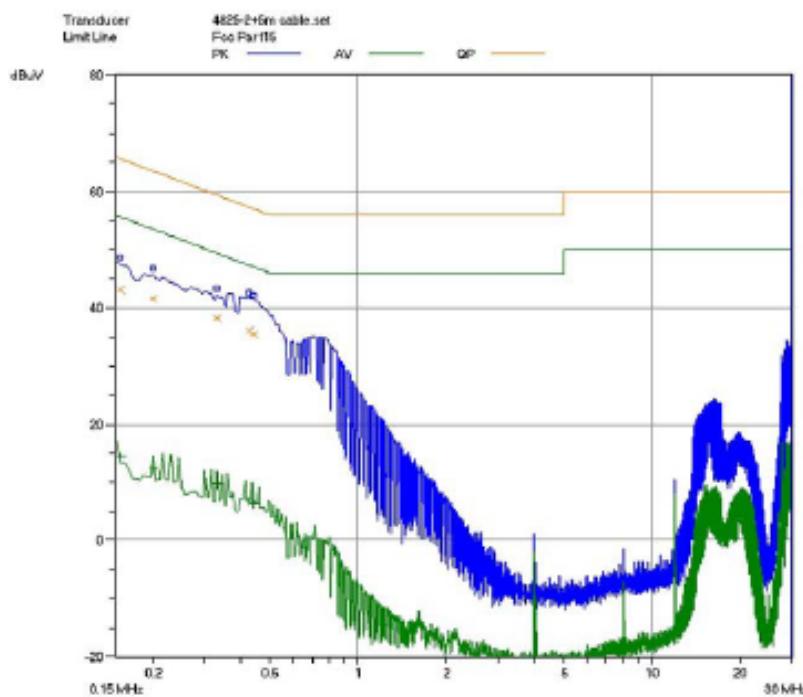


ATTACHMENT 1 - CONDUCTED EMISSION TEST RESULTS

CLIENT:	Shenzhen SAINT Technology Electronic Co.,Ltd	TEST STANDERD:	FCC Part 15,Class B
MODEL NUMBERS:	AC51532	PRODUCT:	Wireless Garage Security Kit
MODEL TESTED:	AC51532	EUT DESIGNATION:	Wireless Receiver
TEMPERATURE:	21°C	HUMIDITY:	56%
ATM PRESSURE:	101kPa	GROUNDING:	None
TESTED BY:	May Wang	DATE OF TEST:	2009,September 10
TEST REFERENCE:	ANSI C63.4: 2003, CISPR 16-1: 2003		
TEST PROCEDURE:	<p>The EUT was set up according to the guideline of ANSI C63.4: 2003 for conducted emissions.</p> <p>The measurement was using a AMN on each line and an EMI receiver peak scan was made at the frequency measurement range.</p> <p>The six highest significant peaks were then marked, and these signals were then quasi-peaked and averaged. The frequency range investigated was from 150KHz to 30MHz.</p>		
TESTED RANGE:	150kHz to 30MHz		
TEST VOLTAGE:	AC120V/60Hz		
RESULTS:	<p>According to the recorded data in following data table, the EUT complied with the <u>FCC PART 15 CLASS B</u>, with the worst margin reading of:</p> <p>-16.7 dB at 0.200 MHz in the Line N. The test results relate only to the equipment under test provided by client.</p>		
CHANGES OR MODIFICATIONS:	There were no modifications installed by ECMG Worldwide Certifition Solution,Inc. (China) test personnel.		
M. UNCERTAINTY:	Freq. $\pm 2 \times 10^{-7} \times$ Center Freq., Amp ± 2.6 dB		



Line L Conducted Emission Graph



Line N Conducted Emission Graph

Test Data:

Line	Frequency (MHz)	Corrected QP Level (dBμV)	Limits QP (dBμV)	Margin QP (dB)	Corrected AVE Level (dBμV)	Limits AVE (dBμV)	Margin AVE (dB)
L	0.175	43.1	64.6	-21.5	13.6	54.6	-41.0
L	0.225	41.4	62.6	-21.2	12.2	52.6	-40.4
L	0.350	38.5	58.9	-20.4	9.8	48.9	-39.1
N	0.155	48.8	65.6	-16.8	14.4	55.6	-41.2
N	0.200	46.8	63.5	-16.7	12.3	53.5	-41.2
N	0.425	42.5	57.3	-14.8	6.9	47.3	-40.4

Note: All readings are using a bandwidth of 9 kHz, with a 30 ms sweep time. A video filter was not used.

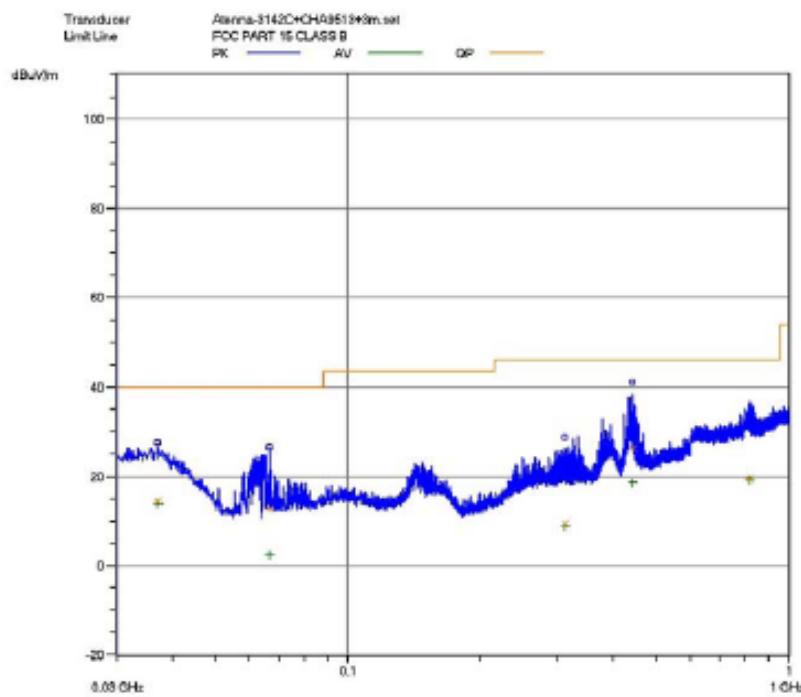
Conducted Emission Test Set-up :



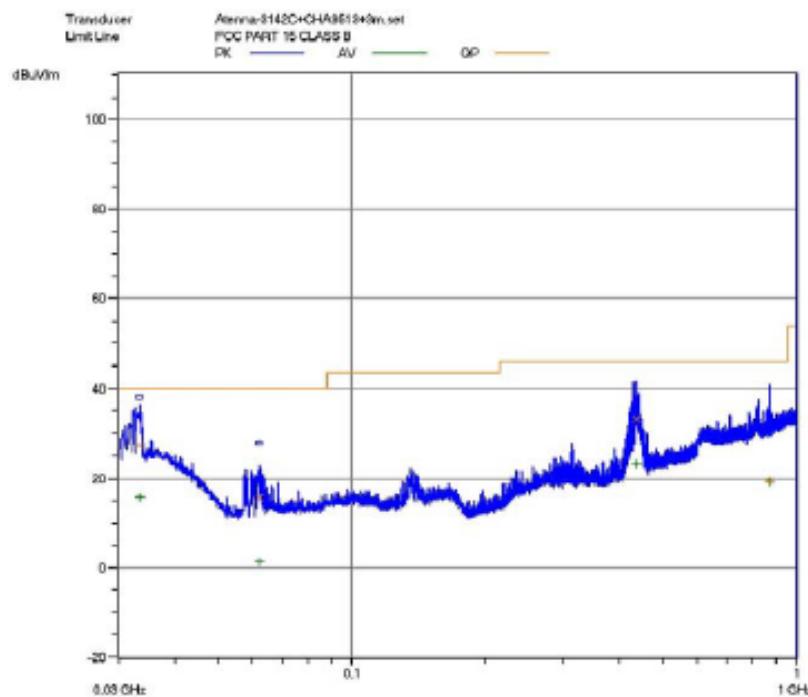
ATTACHMENT 2 - RADIATED EMISSION TEST RESULTS

CLIENT:	Shenzhen SAINT Technology Electronic Co.,Ltd	TEST STANDERD:	FCC Part 15, Class B
MODEL NUMBER:	AC51532		
PRODUCT:	Wireless Garage Security Kit	EUT DESIGNATION:	Wireless Receiver
TEMPERATURE:	22°C	HUMIDITY:	55%RH
ATM PRESSURE:	101.0kPa	GROUNDING:	None
TESTED BY:	Jawen Yin	DATE OF TEST:	2009, August 30
TEST REFERENCE:	ANSI C63.4: 2003, CISPR 16-1: 2003		
TEST PROCEDURE:	<p>The EUT was set up according to the guidelines of ANSI C63.4: 2003 for radiated emissions. An EMI receiver peak scan was made at the frequency measurement range (pre-scan) in an Anechoic chamber. Signal discrimination was then performed and the significant peaks marked. These peaks were then quasi-peaked in the frequency range of 30 MHz to 1GHz at an Anechoic chamber.</p> <p>The following data lists the significant emission frequencies, measured levels, correction factors (including cable and antenna correction factors), and the corrected readings against the limits. Explanation of the Correction Factor are given as follows:</p> <p>FS= RA + AF + CF - AG</p> <p>Where: FS = Field Strength</p> <p>RA = Receiver Amplitude</p> <p>AF = Antenna Factor</p> <p>CF = Cable Attenuation Factor</p> <p>AG = Amplifier Gain</p>		
TESTED RANGE:	30MHz to 5,000MHz		
TEST VOLTAGE:	120VAC/60Hz		
RESULTS:	The EUT meets the requirements of test reference for Radiated Emissions. The test results relate only to the equipment under test provided by client.		
CHANGES OR MODIFICATIONS:	There were no modifications installed by ECMG Worldwide Certifition Solution,Inc (China) test personnel.		
M. UNCERTAINTY:	Freq. $\pm 2 \times 10^{-7} \times$ Center Freq., Amp ± 2.6 dB		

Below 1GHz:

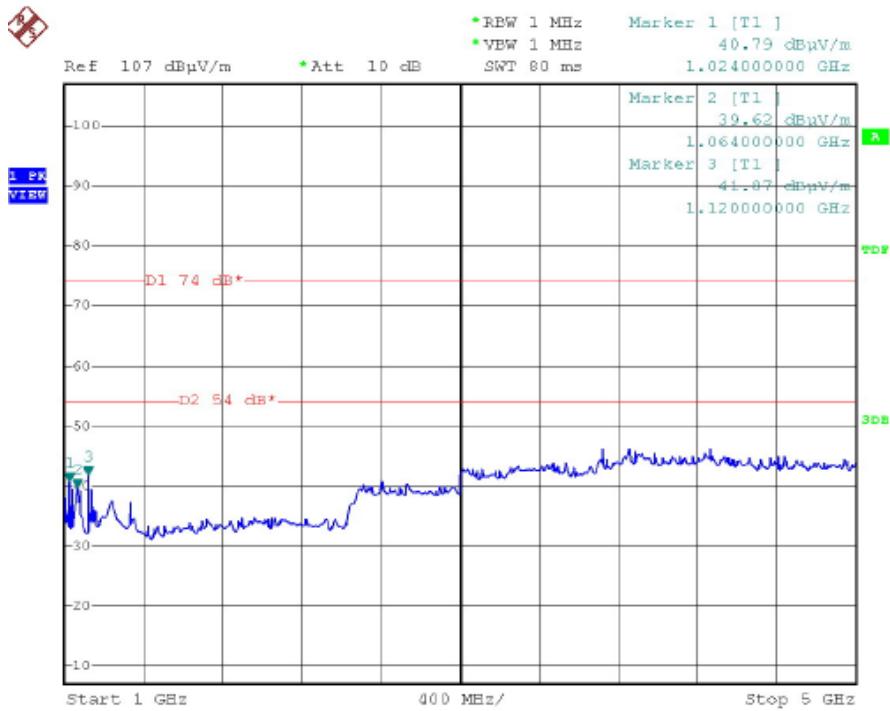


Radiated Emission Plot -Horizontal(Peak detector)

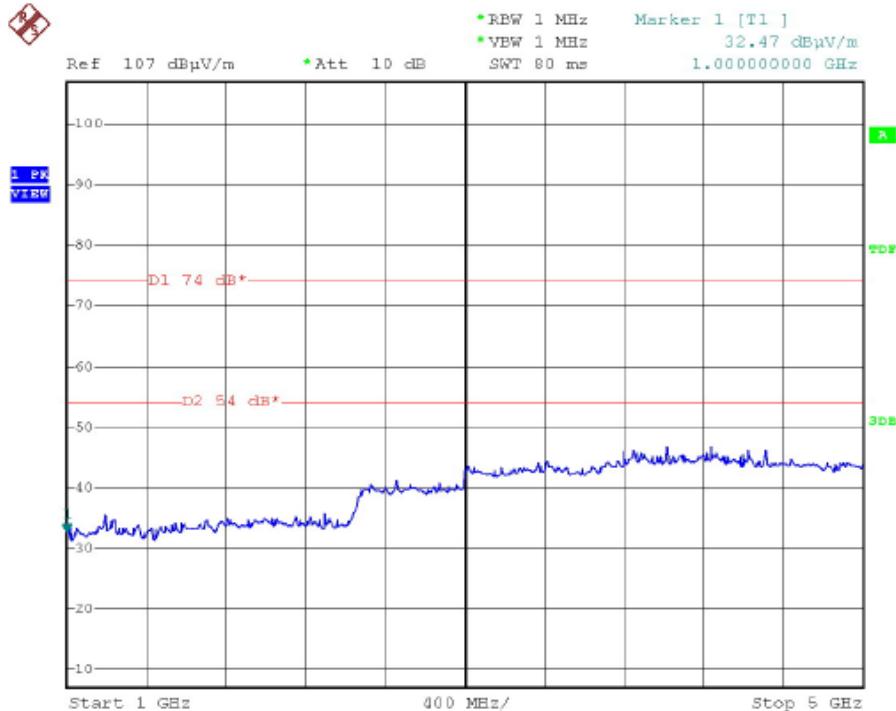


Radiated Emission Plot -Vertical(Peak detector)

Above 1GHz:



Radiated Emission Plot -Horizontal(Peak detector)



Radiated Emission Plot -Vertical(Peak detector)

Test Data:

30MHz to 1GHz:

Frequency [MHz]	Antenna Polarization [V/H]	Corrected Reading [dB μ V/m]	Factor (dB)	Field Strength [dB μ V/m]	Delta, QP [dB]	3 Meters Limits [dB μ V/m]
33.280	H	11.12	16.28	27.4	-12.6	40
435.120	H	14.75	18.35	33.1	-12.9	46
869.280	H	-3.82	23.32	19.5	-26.5	46
33.280	V	14.92	16.28	31.2	-8.8	40
60.320	V	10.49	6.51	17.0	-23.0	40
527.20	V	-4.94	18.42	13.3	-32.7	46

1GHz to 5GHz:

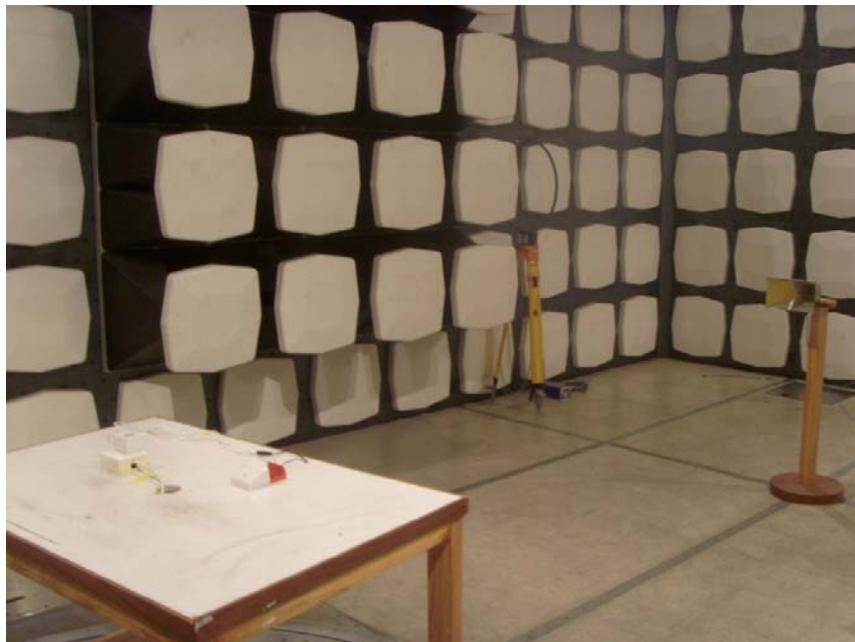
Frequency [MHz]	Antenna Polarization [V/H]	Corrected Reading [dB μ V/m]	Factor (dB)	Field Strength [dB μ V/m]	Delta, AV [dB]	3 Meters Limits [dB μ V/m]
1024.00	H	50.17	-9.38	40.79	-13.21	54
1064.00	H	48.82	-9.20	39.62	-14.38	54
1112.00	H	49.35	-8.28	41.07	-12.93	54
1024.00	V	42.65	-9.38	33.27	-20.73	54
2601.00	V	-7.87	49.12	41.25	-12.75	54
2900.00	V	41.26	-0.50	40.76	-13.24	54

Note:

1. Unless stated otherwise, all readings below 1GHz are quasi-peak and using a QPA bandwidth of 120KHz, above 1GHz are average value, using a QPA bandwidth of 1MHz.
2. Field Strength=Read Level + Factor, Factor = Antenna Factor + Cable Loss - Preamp Factor
3. The frequency range was scanned from 30MHz to 5GHz, all emissions not recorded were very low against the limit.

Radiated Emission Test Set-up :

Above 1GHz:



Below 1GHz:

