



Part 15B

TEST REPORT

Product Name	Tablet PC
Model Name	R8
FCC ID	NV8-R8
Client	Estone Technology Inc


TA Technology (Shanghai) Co., Ltd.

TA Technology (Shanghai) Co., Ltd.
Test Report

Report No.: RXC1209-0833EMC01R3

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GENERAL SUMMARY

Product Name	Tablet PC	Model Name	R8
FCC ID	NV8-R8		
Report No.	RXC1209-0833EMC01R3		
Client	Estone Technology Inc		
Manufacturer	Shenzhenshi ChuangZhiCheng Technology Co., Ltd Manufacturing Center		
Reference Standard(s)	<p>FCC Code CFR47 Part15B (2010-12) Radio frequency device.</p> <p>ANSI C63.4 (2009) Methods of Measurement of Radio-Noise Emission from Low-Voltage Electrical and Electronic Equipment in the Range of 9 KHz to 40GHz.</p>		
Conclusion	<p>This portable wireless equipment has been measured in all cases requested by the relevant standards. Test results in Chapter 2 of this test report are below limits specified in the relevant standards.</p> <p>General Judgment : Pass</p> <p style="text-align: right;">(Stamp) Date of issue: January 11th, 2013</p> 		
Comment	The test result only responds to the measured sample.		

Approved by 杨伟中
Director

Revised by 范广羽
EMC Manager

Performed by 盛江鹏
EMC Engineer

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1. General Information

1.1. Notes of the test report

TA Technology (Shanghai) Co., Ltd. guarantees the reliability of the data presented in this test report, which is the results of measurements and tests performed for the items under test on the date and under the conditions stated in this test report and is based on the knowledge and technical facilities available at TA Technology (Shanghai) Co., Ltd. at the time of execution of the test.

TA Technology (Shanghai) Co., Ltd. is liable to the client for the maintenance by its personnel of the confidentiality of all information related to the items under test and the results of the test. This report only refers to the item that has undergone the test.

This report standalone dose not constitute or imply by its own an approval of the product by the certification Bodies or competent Authorities. This report can not be used partially or in full for publicity and/or promotional purposes without previous written approval of **TA Technology (Shanghai) Co., Ltd.** and the Accreditation Bodies, if it applies.

If the electrical report is inconsistent with the printed one, it should be subject to the latter.

1.2. Testing laboratory

Company:	TA Technology (Shanghai) Co., Ltd.
Registration Number:	428261
Address:	No.145, Jintang Rd, Tangzhen Industry Park, Pudong
City:	Shanghai
Post code:	201201
Country:	P. R. China
Contact:	Yang Weizhong
Telephone:	+86-021-50791141/2/3
Fax:	+86-021-50791141/2/3-8000
Website:	http://www.ta-shanghai.com
E-mail:	yangweizhong@ta-shanghai.com

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1.3. Applicant Information

Company: Estone Technology Inc
Address: 3324 secor road #8, Toledo, OH 43606
City: Toledo
Postal Code: /
Country: America

1.4. Manufacturer Information

Company: Shenzhenshi ChuangZhiCheng Technology Co., Ltd Manufacturing Center
Address: 3F, Block A2, A3, Beida Funder Hi-tech park, Songbai Road, ShiyangStreet, Baoan District, Shenzhen
City: Shenzhen
Postal Code: 518000
Country: China

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1.5. Information of EUT

General information

Name of EUT:	Tablet PC
IMEI:	CZC1260024620010
Hardware Version:	VerD
Software Version:	R802R007
Antenna Type:	Internal Antenna

Equipment Under Test (EUT) is Tablet PC with internal antenna.

The sample under test was selected by the Client.

Components list please refer to documents of the manufacturer.

1.6. Test Date

The test is performed from October 26, 2012 to November 15, 2012.

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2. Test Information

2.1. Summary of test results

Number	Test Case	Clause in FCC Rules	Verdict
1	Radiated Emission	15.109, ANSI C63.4-2009	PASS
2	Conducted Emission	15.107, ANSI C63.4-2009	PASS

2.2. Test Mode

The radiated emission was measured in the following position: EUT stand-up position (Z axis), lie-down position (X, Y axis). The worst emission was found in lie-down position (Y axis) and the worst case was recorded.

During the test, the EUT was in the full system mode: the USB port was connected to a mouse and the earphone port was connected to an earphone.

The EUT is configured, installed, arranged and operated in a manner consistent with typical applications, interface cable/loads/devices are connected to at least one of each type of interface Port of the EUT, and where practical, each cables to be used and the interface port (of the EUT) to which these were connected:

No.	Connected cable	length	Shielded(Y/N)	Note
1	headset	1.5	No	For EUT
2	USB	1.8	No	For EUT

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2.3. Radiated Emission

Ambient condition

Temperature	Relative humidity	Pressure
24°C~26°C	45%~50%	102.5kPa

Methods of Measurement

The EUT is placed on a non-metallic table 0.8m above the horizontal metal reference ground plane. The distance between EUT and receive antenna should be 3 meters. During the test, the EUT was operating in its typical mode. The test method is according to ANSI C63.4-2009. Sweep the whole frequency band through the range from 30MHz to the 5th harmonic of the carrier. During the test, the height of receive antenna shall be moved from 1 to 4 meters, and the antenna shall be performed under horizontal and vertical polarization. The turn table shall be rotated from 0 to 360 degrees for detecting the maximum of radiated spurious signal level. The measurements shall be repeated with orthogonal polarization of the test antenna.

The data of cable loss and antenna factor has been calibrated in full testing frequency range before the testing. During the test, the EUT is worked at maximum output power.

Set the spectrum analyzer in the following:

Below 1GHz:

RBW=100kHz / VBW=300kHz / Sweep=AUTO

Above 1GHz:

(a) PEAK: RBW=1MHz VBW=3MHz/ Sweep=AUTO

(b) AVERAGE: RBW=1MHz / VBW=10Hz / Sweep=AUTO

The radiated emission was measured in the following position: EUT stand-up position (Z axis), lie-down position (X, Y axis). The worst emission was found in lie-down position (Y axis) and the worst case was recorded.

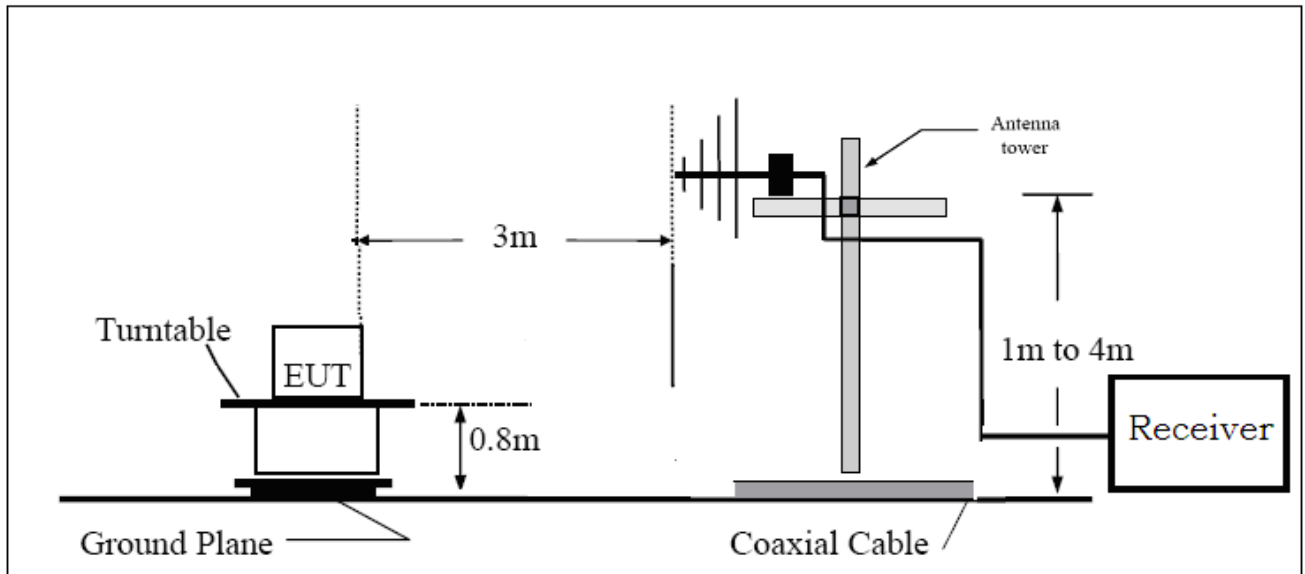
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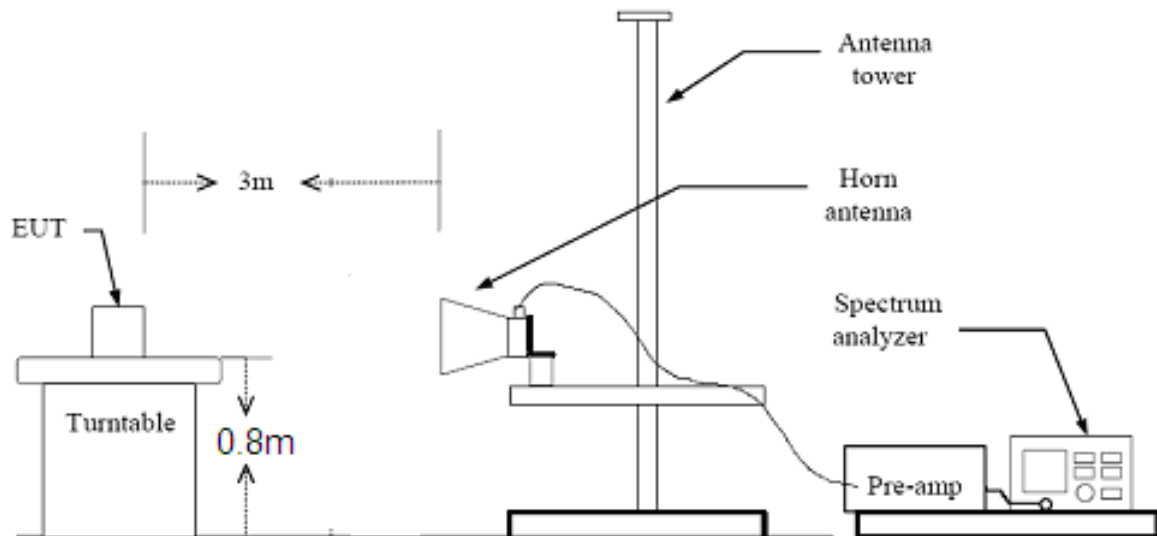
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Test Setup

Below 1GHz



Above 1GHz



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Limits

Frequency (MHz)	Field Strength (dB μ V/m)	Detector
30 -88	40.0	Quasi-peak
88-216	43.5	Quasi-peak
216 – 960	46.0	Quasi-peak
960-1000	54.0	Quasi-peak
1000-5 th harmonic of the highest frequency or 40GHz, which is lower	54 74	Average Peak

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 1.96$. $U = 3.92$ dB.

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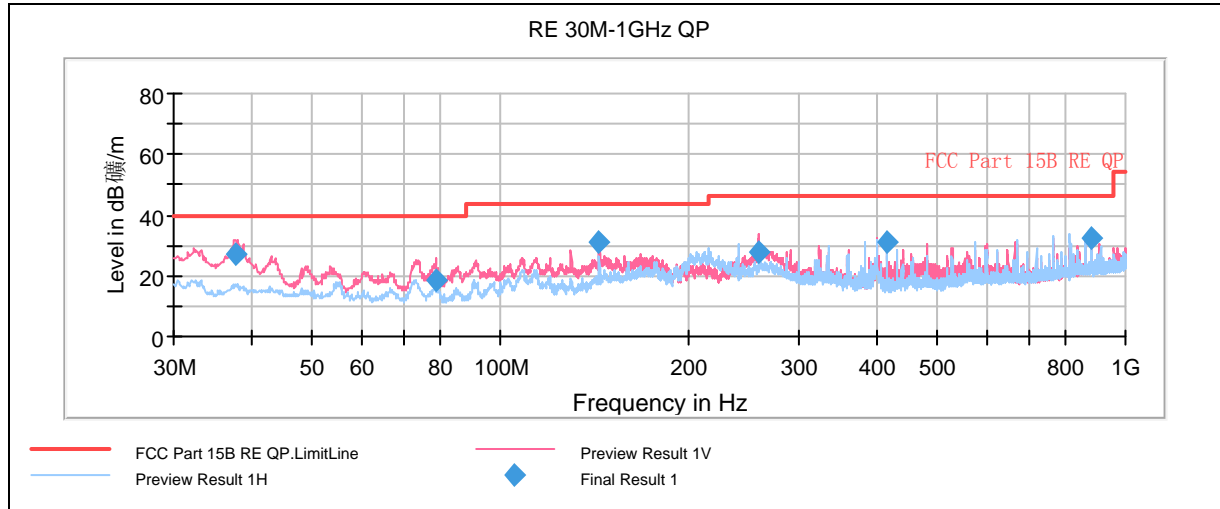
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Test Results

CDMA Cellular



Note: a font (Level in dB 磁/m) in the test plot =(level in dbuv/m)

Radiated Emission from 30MHz to 1GHz

Frequency (MHz)	Quasi-Peak (dBUV/m)	Height (cm)	Polarization	Azimuth (deg)	Reading value (dBUV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBUV/m)
37.745600	26.9	100.0	V	20.0	49.4	-22.5	13.1	40.0
78.746590	18.6	121.0	V	4.0	48.6	-30.0	21.4	40.0
144.015062	30.8	100.0	V	330.0	61.9	-31.1	12.7	43.5
259.638500	27.6	200.0	V	244.0	54.1	-26.5	18.4	46.0
414.971250	31.2	125.0	V	32.0	54	-22.8	14.8	46.0
881.816750	32.4	121.0	V	289.0	47.4	-15.0	13.6	46.0

Remark: 1. Quasi-Peak = Reading value + Correction factor

2. Correction Factor = Antenna factor+ Insertion loss(cable loss+amplifier gain)

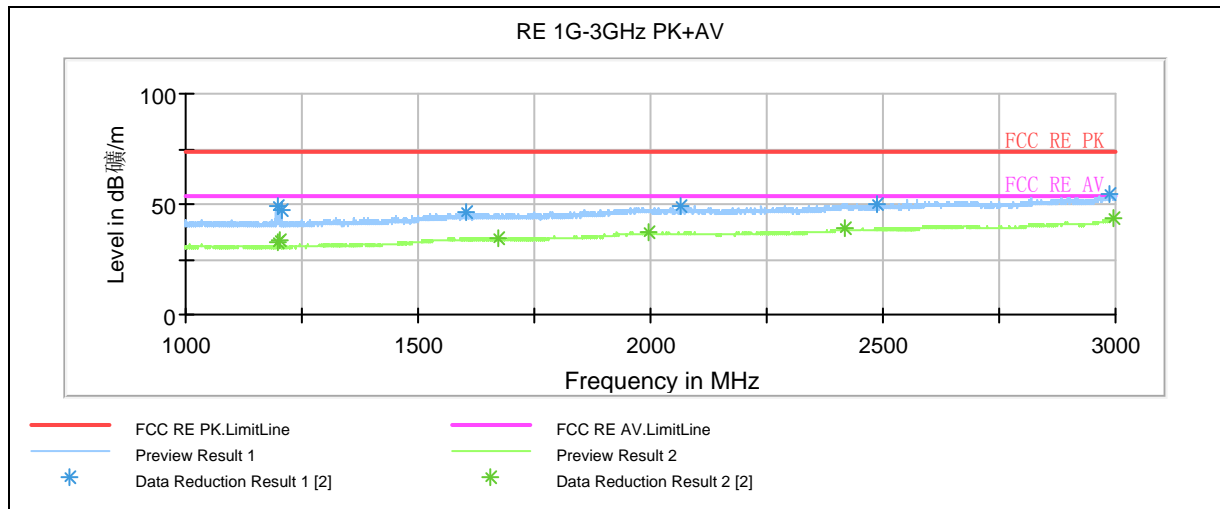
3. Margin = Limit – Quasi-Peak

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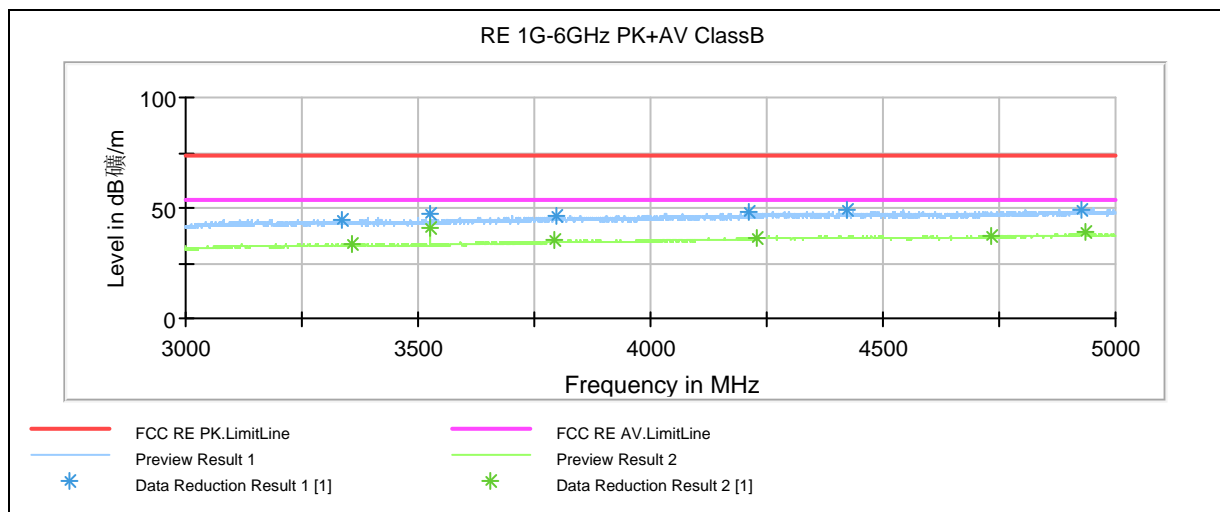
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Note: a font (Level in dB μ V/m) in the test plot =(level in dbuv/m)

Note: Blue trace uses the peak detection Green trace uses the average detection

Radiated Emission from 1GHz to 3GHz



Note: a font (Level in dB μ V/m) in the test plot =(level in dbuv/m)

Note: Blue trace uses the peak detection Green trace uses the average detection

Radiated Emission from 3GHz to 5GHz

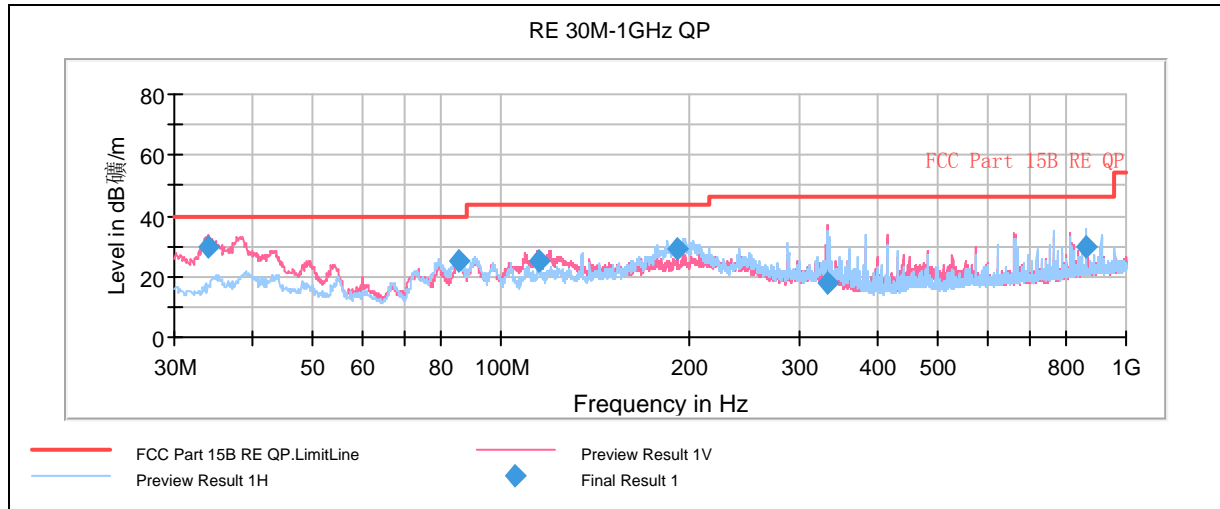
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CDMA PCS



Note: a font (Level in dB/m) in the test plot =(level in dbuv/m)

Radiated Emission from 30MHz to 1GHz

Frequency (MHz)	Quasi-Peak (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
34.117194	30.1	100.0	V	177.0	52.7	-22.6	9.9	40.0
85.518669	24.8	200.0	H	179.0	53.2	-28.4	15.2	40.0
114.625919	25.1	100.0	V	49.0	53.1	-28.0	18.4	43.5
191.990025	29.1	100.0	H	105.0	58.1	-29.0	14.4	43.5
333.091250	17.7	100.0	V	114.0	42.4	-24.7	28.3	46.0
863.878750	29.8	220.0	H	340.0	45.2	-15.4	16.2	46.0

Remark: 1. Quasi-Peak = Reading value + Correction factor

2. Correction Factor = Antenna factor+ Insertion loss(cable loss+amplifier gain)

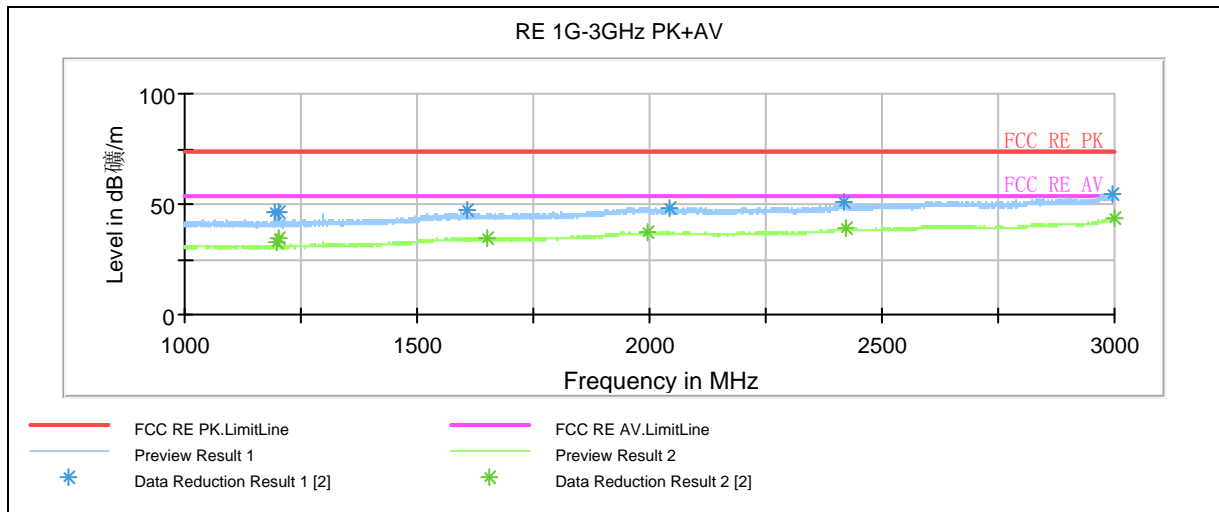
3. Margin = Limit – Quasi-Peak

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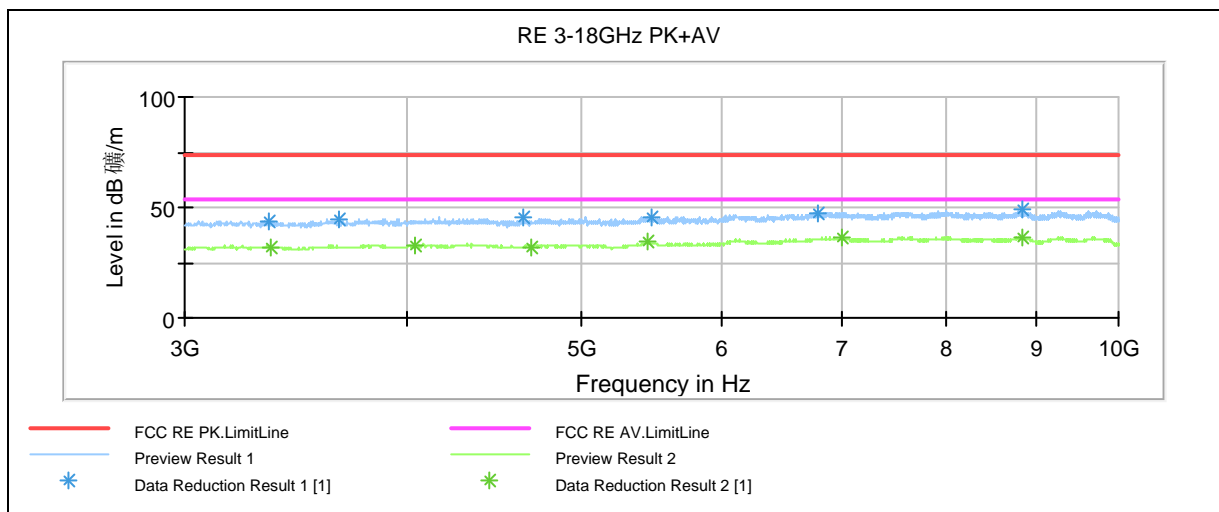
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Note: a font (Level in dB 磁/m) in the test plot =(level in dbuv/m)

Note: Blue trace uses the peak detection Green trace uses the average detection

Radiated Emission from 1GHz to 3GHz



Note: a font (Level in dB 磁/m) in the test plot =(level in dbuv/m)

Note: Blue trace uses the peak detection Green trace uses the average detection

Radiated Emission from 3GHz to 10GHz

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2.4. Conducted Emission

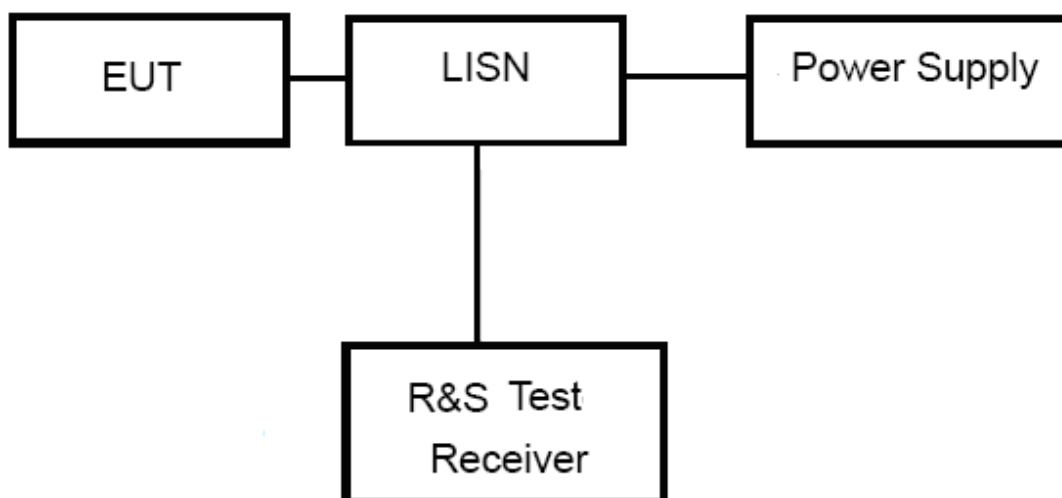
Ambient condition

Temperature	Relative humidity	Pressure
24°C ~26°C	50%~55%	102.5kPa

Methods of Measurement

The EUT is placed on a non-metallic table of 80cm height above the horizontal metal reference ground plane. During the test, the EUT was operating in its typical mode. The test method is according to ANSI C63.4-2009. Connect the AC power line of the EUT to the L.I.S.N. Use EMI receiver to detect the average and Quasi-peak value. RBW is set to 9 kHz, VBW is set to 30kHz. The measurement result should include both L line and N line.

Test Setup



Note: Power Supply is AC Power source and it is used to change the voltage from 220V/50Hz to 110V/60Hz.

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Limits

Frequency (MHz)	Conducted Limits(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.		

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 1.96$. $U = 2.69$ dB.

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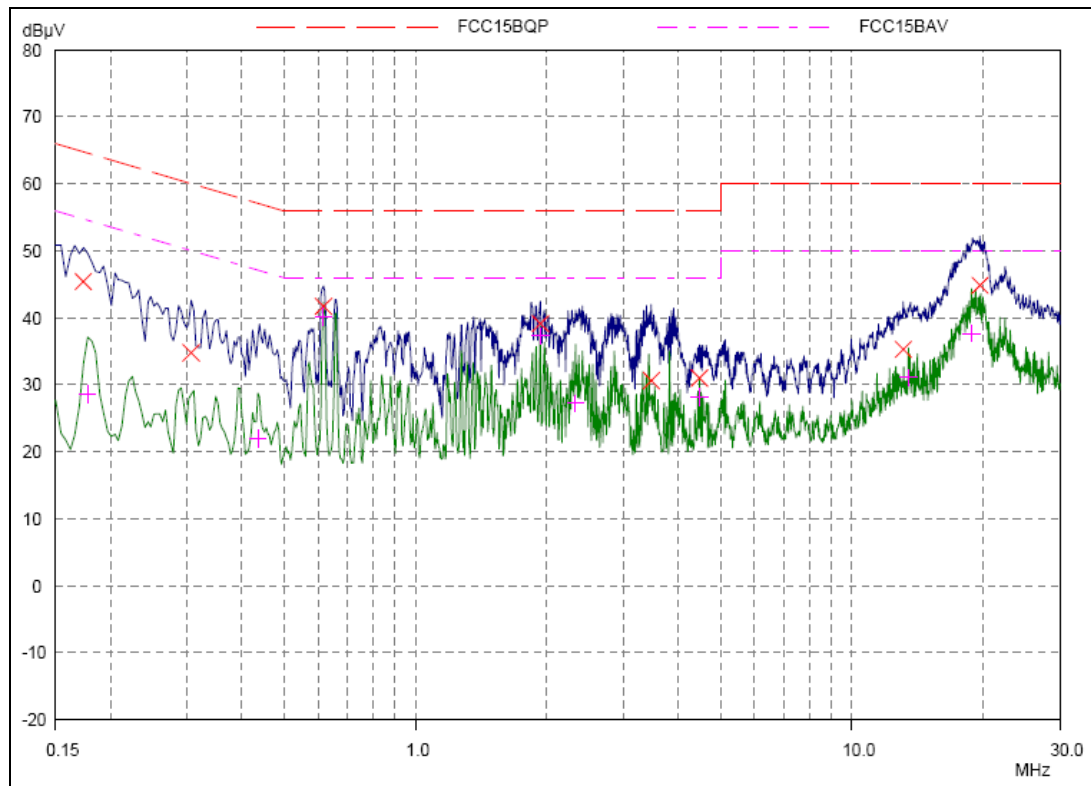
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Test Results

CDMA Cellular



Note: Blue trace uses the peak detection Green trace uses the average detection
L line

Conducted Emission from 150 KHz to 30 MHz

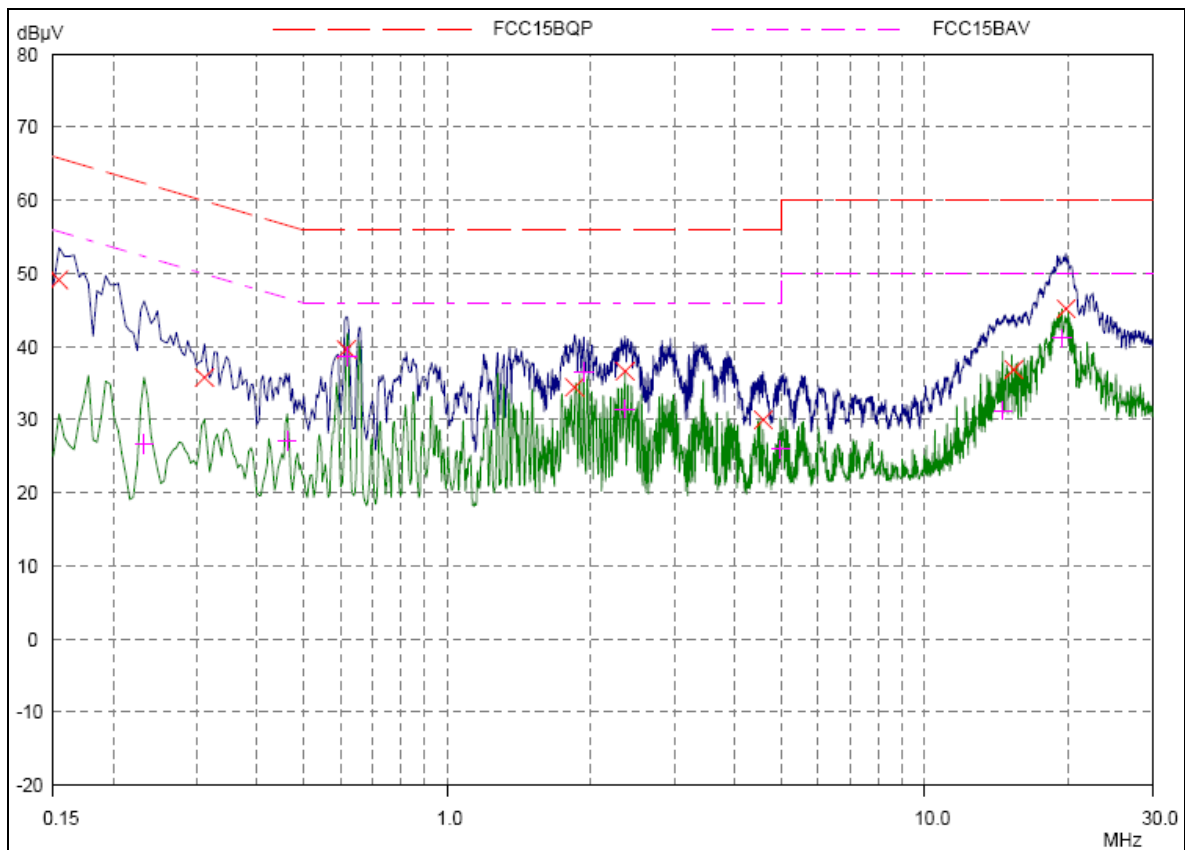
Final Measurement Results				
Frequency MHz	QP Level dBμV	QP Limit dBμV	QP Delta dB	Phase -
0.17343	45.44	64.79	19.35	L1
0.30625	34.78	60.07	25.29	L1
0.61484	41.70	56.00	14.30	L1
1.93125	39.11	56.00	16.89	L1
3.47031	30.63	56.00	25.37	L1
4.48203	31.02	56.00	24.98	L1
13.11093	35.29	60.00	24.71	L1
19.67343	44.88	60.00	15.12	L1
Frequency MHz	AV Level dBμV	AV Limit dBμV	AV Delta dB	Phase -
0.17734	28.60	54.61	26.01	L1
0.43515	21.96	47.15	25.19	L1
0.61484	40.18	46.00	5.82	L1
1.93125	37.31	46.00	8.69	L1
2.32578	27.23	46.00	18.77	L1
4.48203	28.20	46.00	17.80	L1
13.48593	31.06	50.00	18.94	L1
18.80625	37.70	50.00	12.30	L1

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Note: Blue trace uses the peak detection Green trace uses the average detection
N line

Conducted Emission from 150 KHz to 30 MHz

Final Measurement Results				
Frequency MHz	QP Level dBμV	QP Limit dBμV	QP Delta dB	Phase -
0.1539	49.14	65.79	16.65	N
0.31015	35.76	59.97	24.21	N
0.61484	39.60	56.00	16.40	N
1.84921	34.46	56.00	21.54	N
2.35703	36.62	56.00	19.38	N
4.59531	29.96	56.00	26.04	N
15.38437	36.87	60.00	23.13	N
19.79062	45.19	60.00	14.81	N
Frequency MHz	AV Level dBμV	AV Limit dBμV	AV Delta dB	Phase -
0.23203	26.67	52.38	25.71	N
0.4625	27.12	46.65	19.53	N
0.61875	38.69	46.00	7.31	N
1.93125	36.53	46.00	9.47	N
2.35703	31.50	46.00	14.50	N
4.98593	25.98	46.00	20.02	N
14.57968	31.19	50.00	18.81	N
19.36875	41.11	50.00	8.89	N

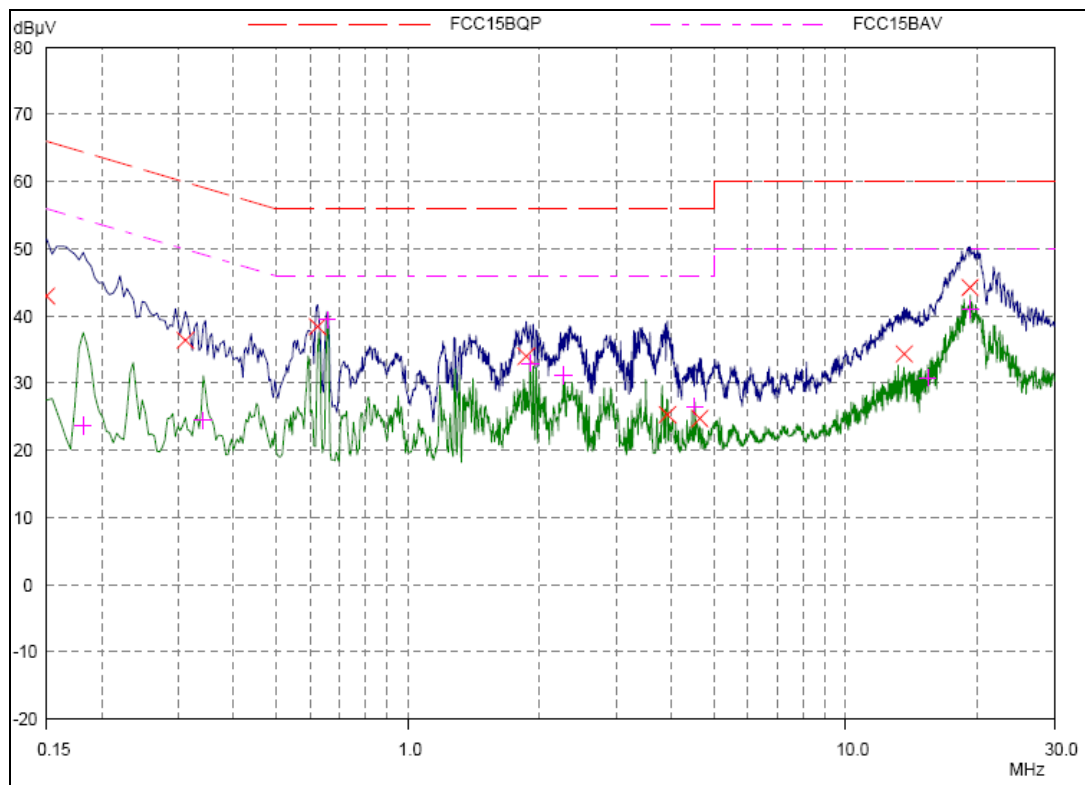
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CDMA PCS



Note: Blue trace uses the peak detection Green trace uses the average detection
L line

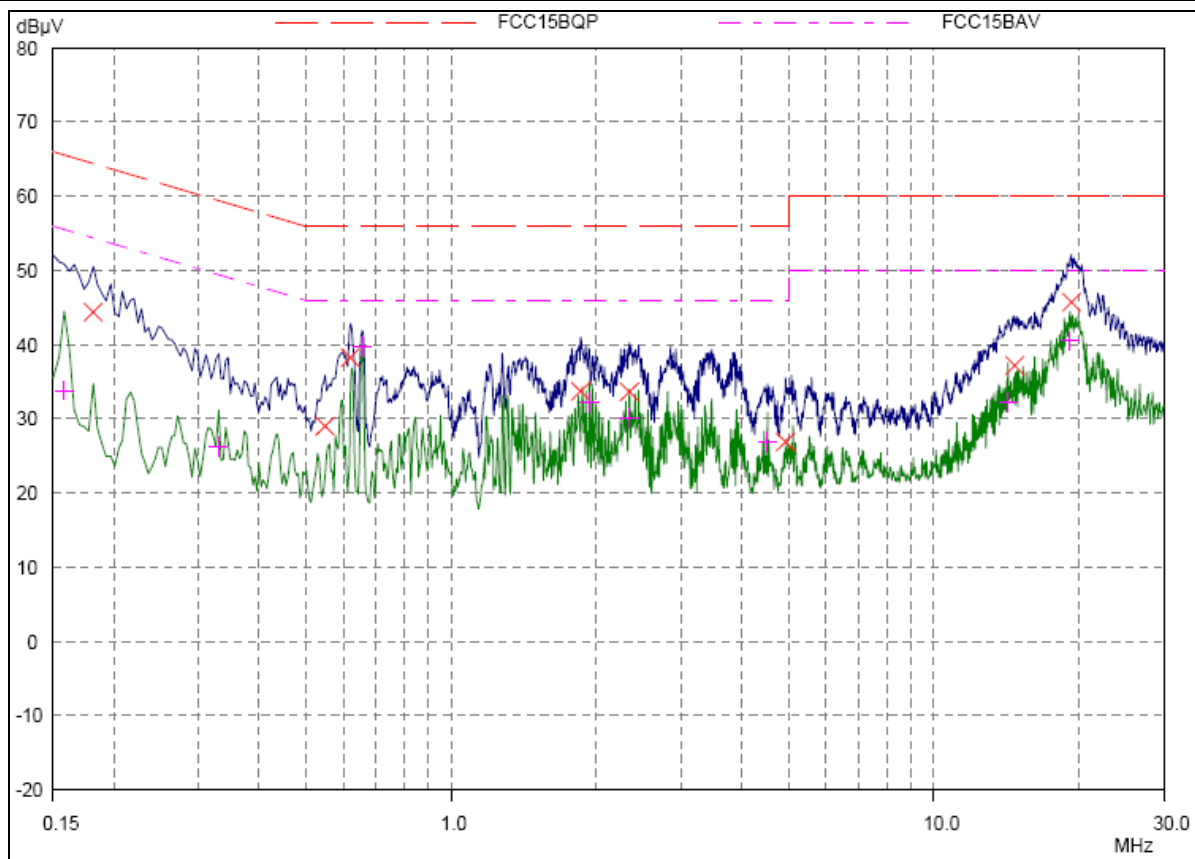
Conducted Emission from 150 KHz to 30 MHz

Final Measurement Results				
Frequency MHz	QP Level dBμV	QP Limit dBμV	QP Delta dB	Phase -
0.15	42.95	66.00	23.05	L1
0.31015	36.41	59.97	23.56	L1
0.62265	38.43	56.00	17.57	L1
1.86484	34.01	56.00	21.99	L1
3.91953	25.31	56.00	30.69	L1
4.64609	24.76	56.00	31.24	L1
13.5914	34.35	60.00	25.65	L1
19.2125	44.25	60.00	15.75	L1
Frequency MHz	AV Level dBμV	AV Limit dBμV	AV Delta dB	Phase -
0.18125	23.64	54.43	30.79	L1
0.3414	24.49	49.17	24.68	L1
0.6539	39.40	46.00	6.60	L1
1.9039	32.94	46.00	13.06	L1
2.26328	31.10	46.00	14.90	L1
4.5289	26.50	46.00	19.50	L1
15.41953	30.80	50.00	19.20	L1
19.29453	41.03	50.00	8.97	L1

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Note: Blue trace uses the peak detection Green trace uses the average detection
N line

Conducted Emission from 150 KHz to 30 MHz

Final Measurement Results				
Frequency MHz	QP Level dBμV	QP Limit dBμV	QP Delta dB	Phase -
0.18125	44.39	64.43	20.04	N
0.54843	29.04	56.00	26.96	N
0.61875	38.29	56.00	17.71	N
1.85703	33.73	56.00	22.27	N
2.3375	33.67	56.00	22.33	N
4.92734	26.93	56.00	29.07	N
14.7164	37.21	60.00	22.79	N
19.27109	45.70	60.00	14.30	N
Frequency MHz	AV Level dBμV	AV Limit dBμV	AV Delta dB	Phase -
0.15781	33.85	55.58	21.73	N
0.32968	26.32	49.46	23.14	N
0.6539	39.79	46.00	6.21	N
1.93125	32.24	46.00	13.76	N
2.3375	30.16	46.00	15.84	N
4.525	26.88	46.00	19.12	N
14.26328	32.22	50.00	17.78	N
19.20078	40.48	50.00	9.52	N

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3. Main Test Instruments

No.	Name	Type	Manufacturer	Serial Number	Calibration Date	Valid Period
01	EMI Test Receiver	ESCI	R&S	100948	2012-06-30	One year
02	Trilog Antenna	VULB 9163	SCHWARZB ECK	9163-201	2010-06-20	Three years
03	Signal Analyzer	FSV30	R&S	100815	2012-06-30	One year
04	Horn Antenna	HF907	R&S	100126	2012-07-01	Three years
05	EMI Test Receiver	ESCS30	R&S	100138	2012-01-16	One year
06	LISN	ENV216	R&S	101171	2010-04-16	Three years

*******END OF REPORT BODY*******

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ANNEX A: The EUT Appearance and Test Setup

A.1 EUT Appearance



Picture 1 EUT

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A.2 Test Setup



Below 1GHz



Above 1GHz

Picture 2 Radiated Emission Test Setup

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Picture 3 Conducted Emission Test Setup