FCC Part 15B
Measurement and Test Report

For

Shenzhen Yunding Technology Co., Ltd.

2F, B5b Building, Yingzhan Industrial Zone, Longtian Community, Kengzi Street, Longgang, Shenzhen, China

FCC ID:QG868

Test Standards:	FCC Part 15 Subpart B
Product Description:	tablet pc
Tested Model:	7R02
Report No.:	STR12108028I-2
Tested Date:	2012-10-10 to 2012-10-17
Issued Date:	2012-10-17
Tested By:	Seven Song / Engineer
Reviewed By:	Lahm Peng / EMC Manager
Approved & Authorized By:	Jandy so / PSQ Manager

Prepared By:

SEM.Test Compliance Service Co., Ltd
3/F, Jinbao Commerce Building, Xin'an Fanshen Road,
Bao'an District, Shenzhen, P.R.C.（518101）
Tel.: +86-755-33663308 Fax.: +86-755-33663309 Website: www.semtest.com.cn

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1. GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

Client Information

Applicant:	Shenzhen Yunding Technology Co., Ltd.
Address of applicant:	2F, B5b Building, Yingzhan Industrial Zone, Longtian Community, Kengzi Street, Longgang, Shenzhen, China
Manufacturer:	Shenzhen Yunding Technology Co., Ltd.
Address of manufacturer:	2F, B5b Building, Yingzhan Industrial Zone, Longtian Community，Kengzi Street, Longgang, Shenzhen, China

General Description of EUT	
Product Name:	tablet pc
Trade Name:	JIUZHOU
Model No.:	7R02
Adding Model(s):	E70, A704C, A1001, A74R, P97A, A705, LT7033C, PLT7035, A72, A75
Rated Voltage:	Battery: DC 3.7V, Adapter: DC 5V
Power Adapter Model:	CPS012A050150U (Input: AC 100-240V 50/60Hz, Output: DC 5V 1500mA)
Note: The test data is gathered from a production sample, provided by the manufacturer. The other model listed in the report has different appearance only of 7R02 without circuit and electronic construction changed, declared by the manufacturer.	

Technical Characteristics of EUT	
Rated Voltage:	Battery: DC 3.7V, Adapter: DC 5V
Rated Current:	/
Power Adapter Model:	CPS012A050150U (Input: AC 100-240V 50/60Hz, Output: DC 5V 1500mA)
Highest Internal Frequency:	1.2 GHz
Classification of ITE:	B
Support Interface:	Earphone Port, DC Power Port, Micro USB Port

1.2 Test Standards

The following report is prepared on behalf of the China Shenzhen Yunding Technology Co., Ltd. in accordance with Part 2, Subpart J, and Part 15, Subparts A and B of the Federal Communication Commissions rules.

The objective is to determine compliance with FCC Part 15, Subpart B, and section 15.205, 15.107, and 15.109 rules.

Maintenance of compliance is the responsibility of the manufacturer. Any modification of the product, which result in lowering the emission, should be checked to ensure compliance has been maintained.

1.3 Test Methodology

All measurements contained in this report were conducted with ANSI C63.4-2003, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

1.4 Test Facility

- **FCC – Registration No.: 994117**
  SEM.Test Compliance Services Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files and the Registration is 994117.

- **Industry Canada (IC) Registration No.: 7673A**
  The 3m Semi-anechoic chamber of SEM.Test Compliance Services Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 7673A.

- **CNAS Registration No.: L4062**
  Shenzhen SEM.Test Electronics Service Co., Ltd. is a testing organization accredited by China National Accreditation Service for Conformity Assessment (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L4062. All measurement facilities used to collect the measurement data are located at 3/F, Jinbao Commerce Building, Xin’an Fanshen Road, Bao’an District, Shenzhen, P.R.C (518101)

1.5 EUT Setup and Operation Mode

The equipment under test (EUT) was configured to measure its highest possible emission level. The test modes were adapted according to the operation manual for use, more detailed description as follows:

Test Mode List:

Test Mode	Description	Remark
TM1	Charging & Playing	Charging & Color Bar with 1kHz Video
TM2	Downloading	Reading &writing

EUT Cable List and Details

Cable Description	Length (M)	Shielded/Unshielded	With Core/Without Core
DC Power Cable	1.0	Unshielded	Unshielded
USB Cable (to USB device)	0.15	Shielded	Without Ferrite
USB Cable (to PC)	0.60	Shielded	Without Ferrite

Auxiliary Equipment List and Details

Description	Manufacturer	Model	Serial Number
Notebook	SAMSUNG	NP-R20	124V93FP30082V

Special Cable List and Details

Cable Description	Length (M)	Shielded/Unshielded	With Core/Without Core
Ear Phone Cable	1.0	Unshielded	Without Ferrite

2. SUMMARY OF TEST RESULTS

FCC Rules	Description of Test Item	Result
§ 15.107 (a)	Conducted Emissions	Compliant
§ 15.109 (a)	Radiated Emissions	Compliant

N/A: not applicable

3. §15.107 (a) CONDUCTED EMISSIONS

3.1 Measurement Uncertainty

Base on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any conducted emissions measurement is ± 2.88 dB.

3.2 Test Equipment List and Details

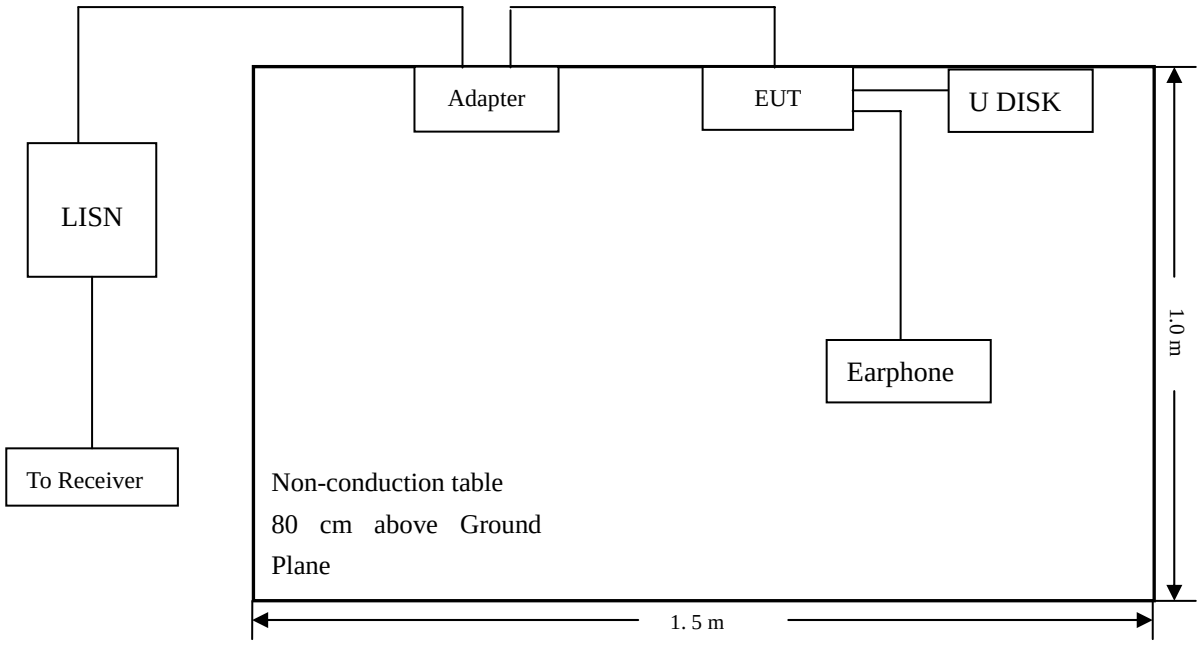
Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
EMI Test Receiver	Rohde & Schwarz	ESPI	101611	2012-03-28	2013-03-27
L.I.S.N	Schwarz beck	NSLK8126	8126-224	2012-03-28	2013-03-27
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100911	2012-03-28	2013-03-27

Statement of Traceability: All calibrations have been performed per the NVLAP requirements traceable to the NIST.

3.3 Test Procedure

Test is conducting under the description of ANSI C63.4-2003, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

3.4 Basic Test Setup Block Diagram



3.5 Environmental Conditions

Temperature:	23 °C
Relative Humidity:	52%
ATM Pressure:	1011 mbar

3.6 Summary of Test Results/Plots

According to the data in section 3.7, the EUT complied with the FCC Part 15.107(a) Conducted margin for a Class B device, with the *worst* margin reading of:

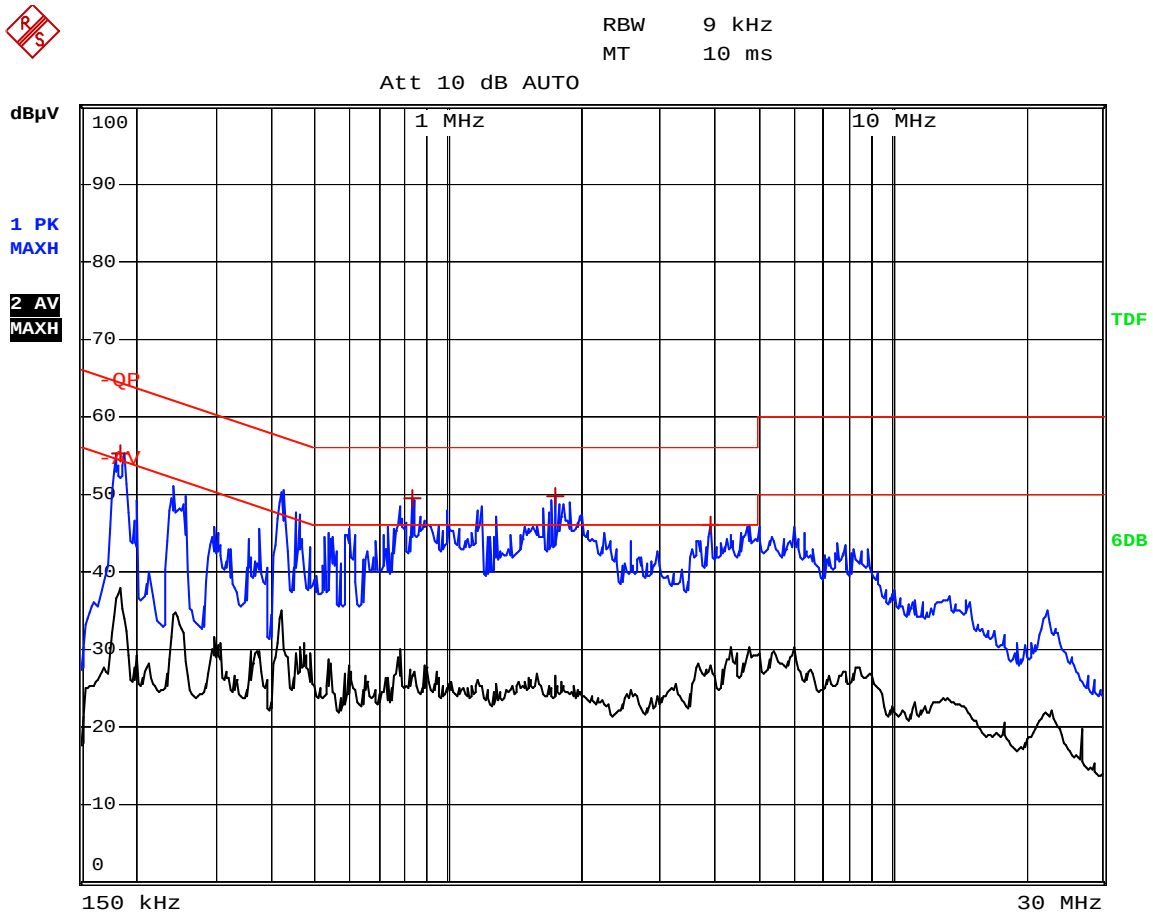
-5.18 dBμV at **0.426 MHz** in the **Line**, **Peak** detector, 0.15-30MHz

3.7 Conducted Emissions Test Data

Plot of Conducted Emissions Test Data

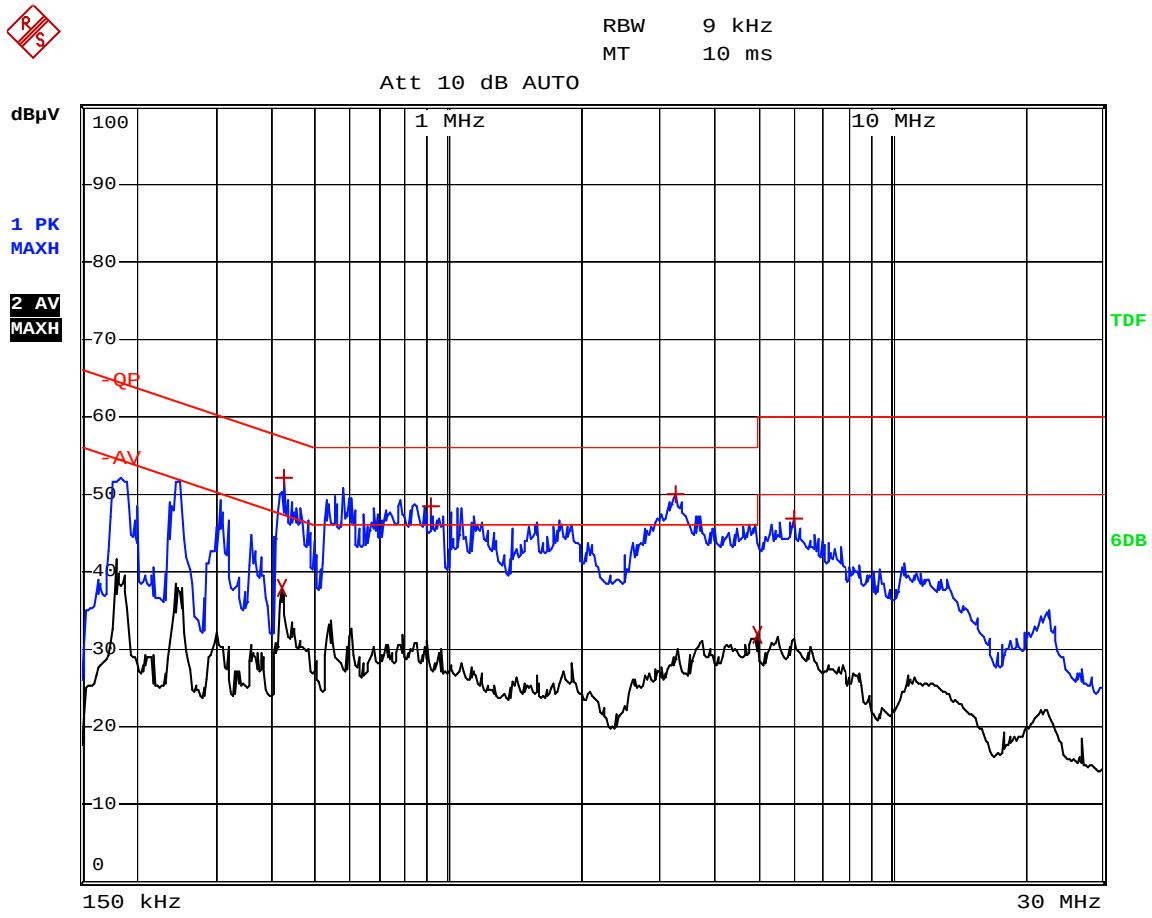
EUT: *tablet pc*
Tested Model: *7R02*
Operating Condition: *Charging & Color Bar with 1kHz Video*
Comment: *AC 120V/60Hz*

Test Specification: *Neutral*



EDIT PEAK LIST (Prescan Results)			
Trace1:	-QP		
Trace2:	-AV		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
1 Max Peak	186 kHz	55.28	-8.92
1 Max Peak	830 kHz	49.45	-6.54
1 Max Peak	1.746 MHz	49.76	-6.23
1 Max Peak	3.918 MHz	45.98	-10.02

Test Specification: *Line*



EDIT PEAK LIST (Prescan Results)			
Trace1:	-QP		
Trace2:	-AV		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
2 Average	418 kHz	37.96	-9.52
1 Max Peak	426 kHz	52.14	-5.18
1 Max Peak	910 kHz	48.39	-7.60
1 Max Peak	3.27 MHz	49.89	-6.10
2 Average	4.986 MHz	31.83	-14.16
1 Max Peak	6.022 MHz	46.96	-13.03

4. §15.109(a)- RADIATED EMISSION

4.1 Measurement Uncertainty

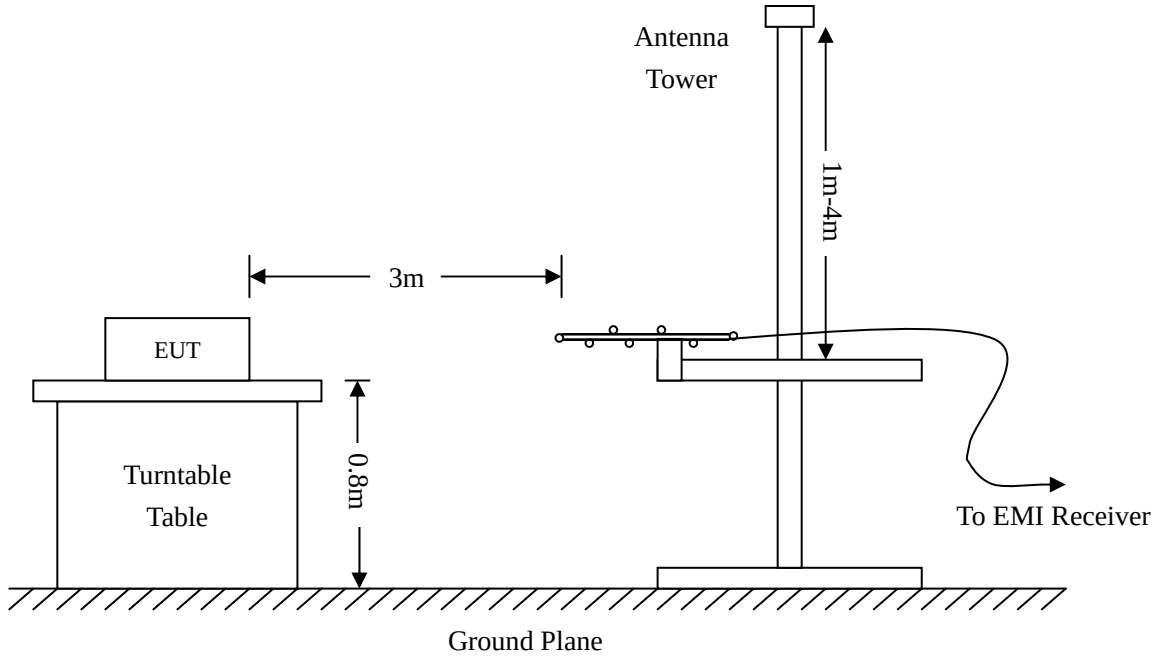
Base on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any radiation emissions measurement is ± 5.10 dB.

4.2 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Spectrum Analyzer	R&S	FSP	836079/035	2012-03-28	2013-03-27
EMI Test Receiver	R&S	ESVB	825471/005	2012-03-28	2013-03-27
Pre-amplifier	Agilent	8447F	3113A06717	2012-03-28	2013-03-27
Pre-amplifier	Compliance Direction	PAP-0118	24002	2012-03-28	2013-03-27
Trilog Broadband Antenna	SCHWARZBECK	VULB9163	9163-333	2012-02-25	2013-02-24
Horn Antenna	ETS	3117	00086197	2012-02-25	2013-02-24

4.3 Test Procedure

The setup of EUT is according with per ANSI C63.4-2003 measurement procedure. The specification used was with the FCC Part 15.109 Limit.
The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.
The spacing between the peripherals was 10 cm.



4.4 Test Receiver Setup

During the radiated emission test for above 1GHz, the test receiver was set with the following configurations:

For peak detector:
RBW = 1000kHz, VBW = 3000kHz, Sweep Time = Auto

For average detector:
RBW = 1000kHz, VBW = 10Hz, Sweep Time = Auto

4.5 Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and the Cable Factor, and subtracting the Amplifier Gain from the Amplitude reading. The basic equation is as follows:

Corr. Ampl. = Indicated Reading – Corr. Factor

The "**Margin**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -6dBμV means the emission is 6dBμV below the maximum limit for a Class B device. The equation for margin calculation is as follows:

Margin = Corr. Ampl. – FCC Part 15.109(a) Limit

4.6 Environmental Conditions

Temperature:	23 °C
Relative Humidity:	55 %
ATM Pressure:	1011 mbar

4.7 Summary of Test Results/Plots

According to the data, the EUT complied with the FCC Part 15.109(a) rule, and had the worst margin of:

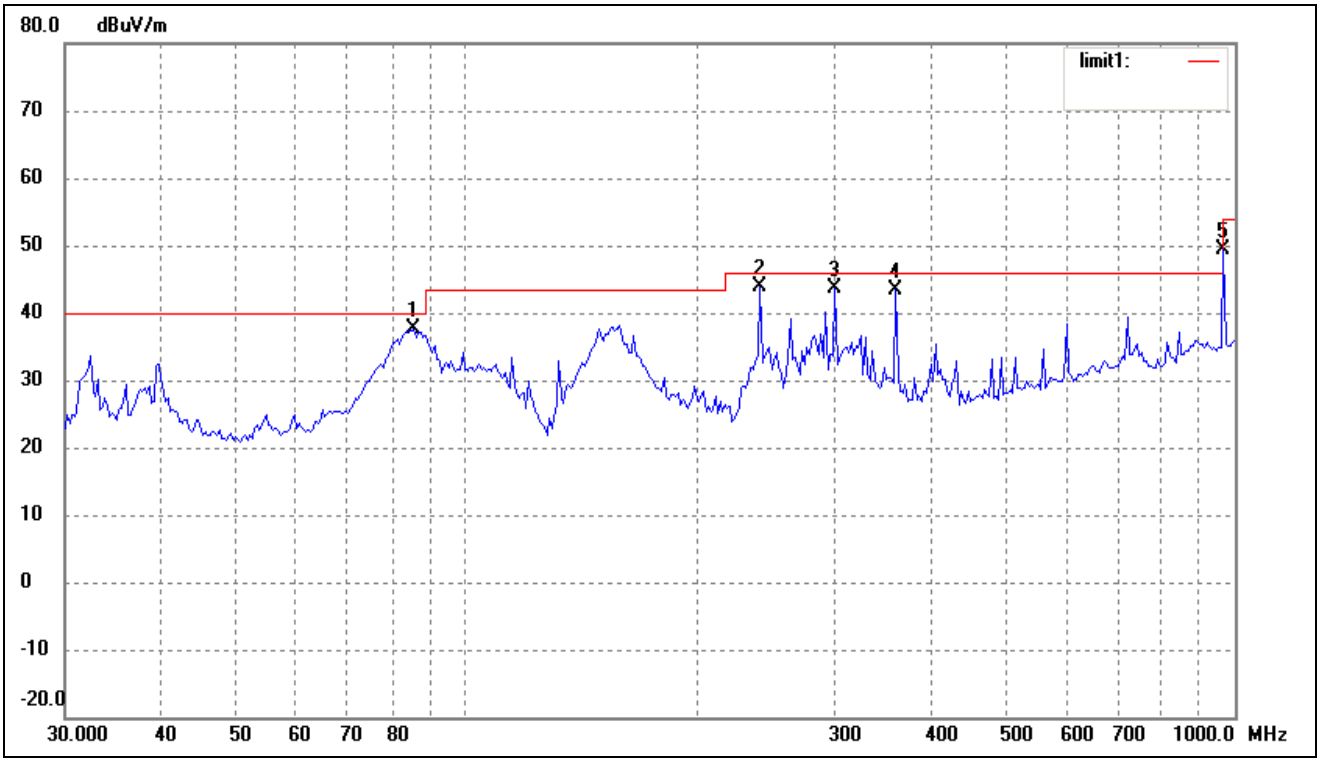
-2.09 dBμV at **240.8303MHz** in the **Horizontal** polarization, **Charging &Playing Mode**, **30 MHz** to **6 GHz**, **3Meters**

-2.36 dBμV at **240.8303 MHz** in the **Vertical** polarization, **Downloading Mode, 30 MHz** to **6 GHz**, **3Meters**

Plot of Radiated Emissions Test Data

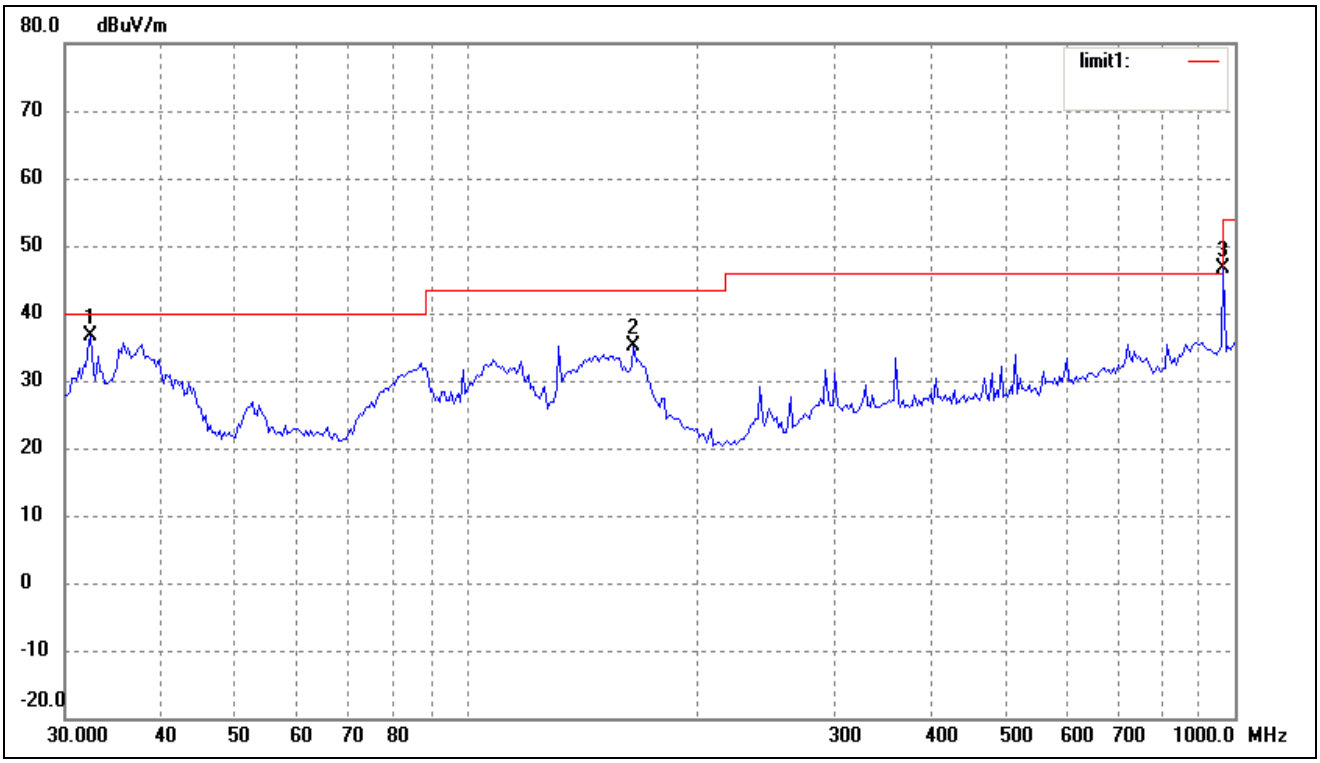
EUT: *tablet pc*
Tested Model: *7R02*
Operating Condition: *Charging & playing*
Comment: *Playing Color Bar with 1kHz Video from TF card and U DISK*

Test Specification: *Horizontal*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	85.2981	34.47	3.17	37.64	40.00	-2.36	264	100	QP
2	240.8303	36.89	7.02	43.91	46.00	-2.09	168	100	QP
3	301.4223	33.49	10.20	43.69	46.00	-2.31	226	100	QP
4	361.7139	32.59	10.69	43.28	46.00	-2.72	360	100	QP
5	965.5421	31.10	18.37	49.47	54.00	-4.53	137	100	QP

Test Specification: *Vertical*

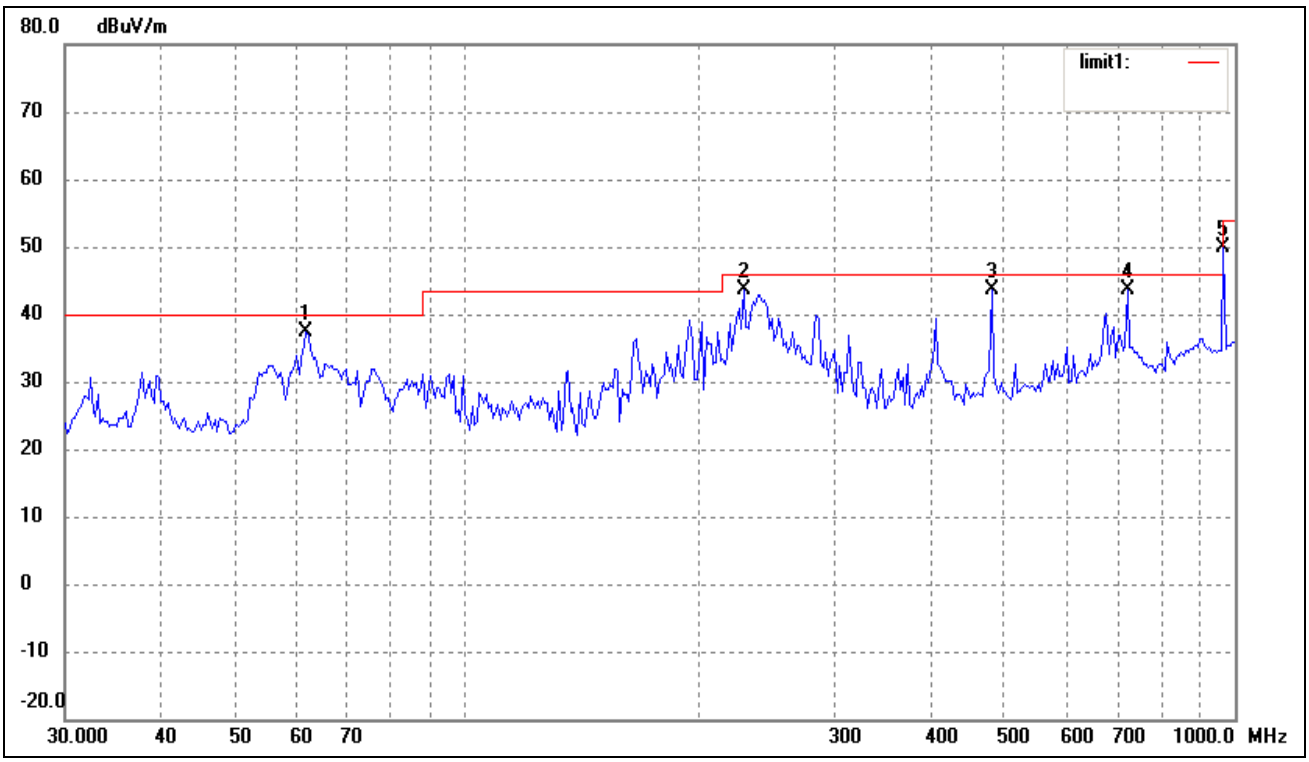


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	32.4059	28.24	8.44	36.68	40.00	-3.32	178	100	QP
2	164.9074	31.54	3.68	35.22	43.50	-8.28	254	100	peak
3	965.5421	28.32	18.37	46.69	54.00	-7.31	119	100	QP

Plot of Radiated Emissions Test Data

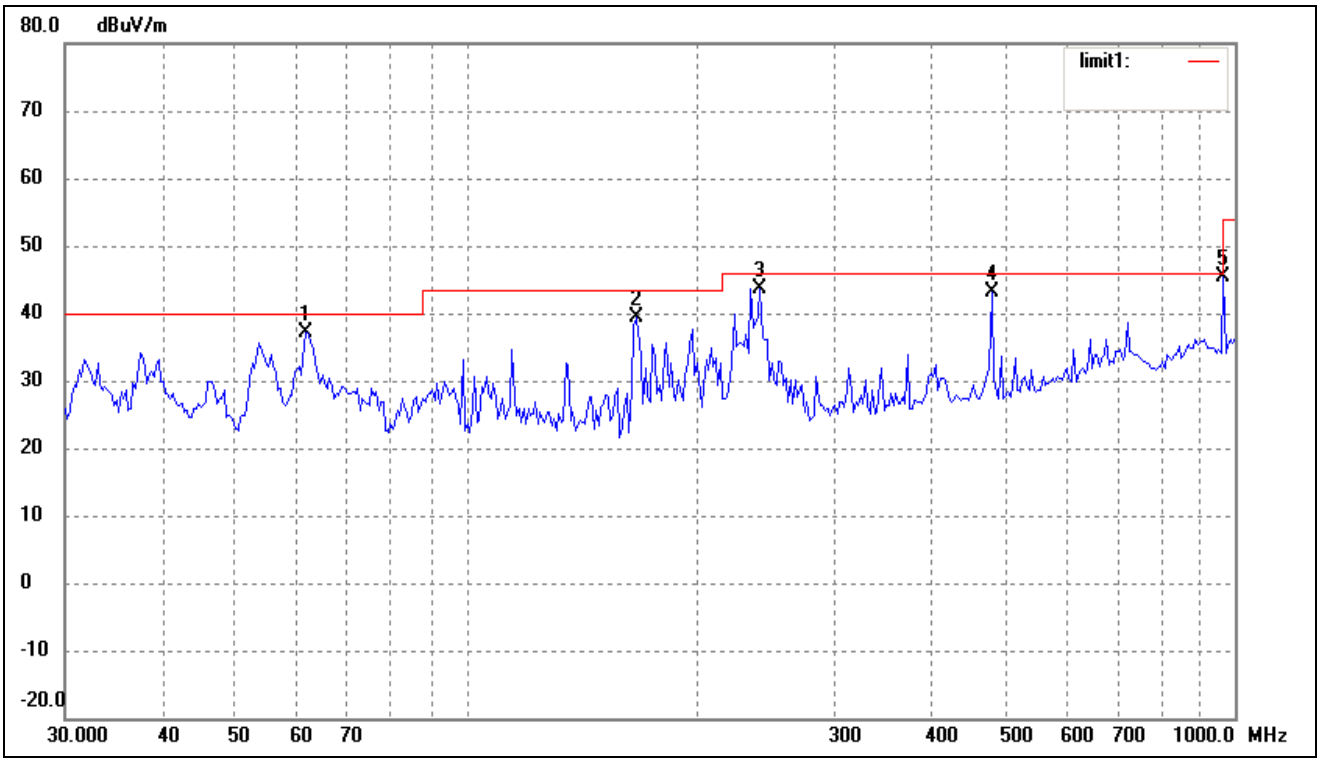
EUT: *tablet pc*
Tested Model: *7R02*
Operating Condition: *Downloading*
Comment: *Connect to PC*

Test Specification: *Horizontal*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	61.7781	32.32	5.13	37.45	40.00	-2.55	235	100	QP
2	229.2931	37.16	6.42	43.58	46.00	-2.42	116	100	QP
3	482.2155	32.12	11.49	43.61	46.00	-2.39	79	100	QP
4	724.2611	26.66	16.93	43.59	46.00	-2.41	157	100	QP
5	965.5421	31.46	18.37	49.83	54.00	-4.17	300	100	QP

Test Specification: *Vertical*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	61.7781	32.02	5.13	37.15	40.00	-2.85	360	100	QP
2	166.0680	35.72	3.68	39.40	43.50	-4.10	112	100	QP
3	240.8303	36.62	7.02	43.64	46.00	-2.36	87	100	QP
4	482.2155	31.55	11.49	43.04	46.00	-2.96	168	100	QP
5	965.5421	27.00	18.37	45.37	54.00	-8.63	228	200	peak

Note: Testing is carried out with frequency rang 9kHz to 6GHz, which above 1G and 9kHz to 30MHz are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.