FCC Part 15B
Measurement and Test Report

For

VeryKool USA Inc

3636 Nobel Drive, Suite 325, San Diego, CA 92122 USA

FCC ID: WA6I601

Test Standards:	FCC Part 15 Subpart B
Product Description:	GSM/GPRS Dual-band Mobile Phone
Tested Model:	I601
Report No.:	STR12128052I-3
Tested Date:	2012-12-07 to 2012-12-18
Issued Date:	2012-12-19
Tested By:	Susan Su / Engineer
Reviewed By:	Lahm Peng / EMC Manager
Approved & Authorized By:	Jandy so / PSQ Manager

Prepared By:

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1. GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

Client Information

Applicant:	VeryKool USA Inc
Address of applicant:	3636 Nobel Drive, Suite 325, San Diego, CA 92122 USA
Manufacturer:	Verykool Wireless Technology Ltd.
Address of manufacturer:	Room 1701, Reward Building C, No.203, 2nd Section of WangJing, Li Ze Zhong Yuan, ChaoYang District, Beijing, China

General Description of EUT	
Product Name:	GSM/GPRS Dual-band Mobile Phone
Trade Name:	Verykool
Model No.:	I601
Note: The test data is gathered from a production sample, provided by the manufacturer.	

Technical Characteristics of EUT	
Rated Voltage:	DC 3.7V/500mAh, Li-ion Battery (Model:423450AR)
Rated Current:	/
Rated Power:	/
Power Adapter Model:	H05Z (Input: AC 100-240V, Output: DC 5V 500mA)
Highest Internal Frequency:	78 MHz
Classification of ITE:	Class B
Support Interface:	USB 2.0

1.2 Test Standards

The following report is prepared on behalf of the VeryKool USA Inc 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	1kHz Audio
TM2	Downloading	Test Software: CT3

EUT Cable List and Details

Cable Description	Length (M)	Shielded/Unshielded	With Core/Without Core
USB Cable	1.0	Shielded	Without Core
Earphone Cable	1.2	Unshielded	Without Core
Power Cable	1.0	Unshielded	Without Core

Auxiliary Equipment List and Details

Description	Manufacturer	Model	Serial Number
/	/	/	/

Special Cable List and Details

Cable Description	Length (M)	Shielded/Unshielded	With Core/Without Core
/	/	/	/

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. 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.

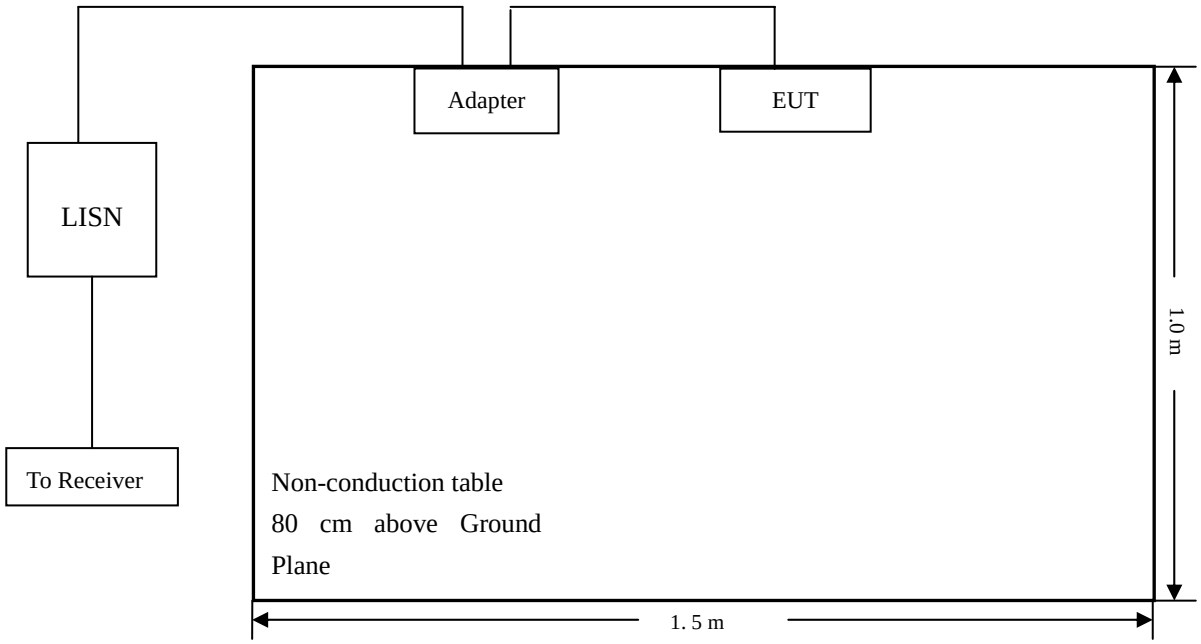
3.2 Test Equipment List and Details

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

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:

-5.83 dB at **2.276 MHz** in the **Neutral**, **Charging mode**, **peak** detector, 0.15-30MHz
-7.34 dB at **2.276 MHz** in the **Neutral**, **Downloading mode**, **peak** detector, 0.15-30MHz

3.7 Conducted Emissions Test Data

Plot of Conducted Emissions Test Data

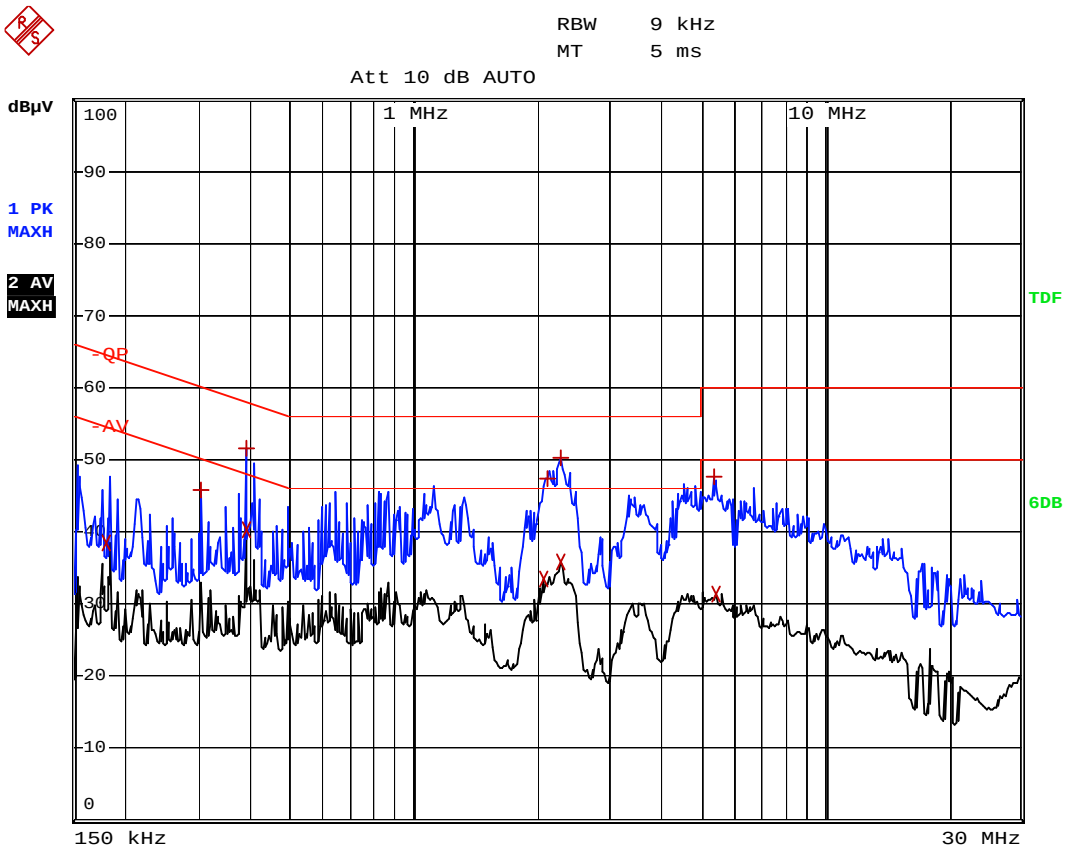
EUT: *GSM/GPRS Dual-band Mobile Phone*

Tested Model: *I601*

Operating Condition: *Charging & Playing*

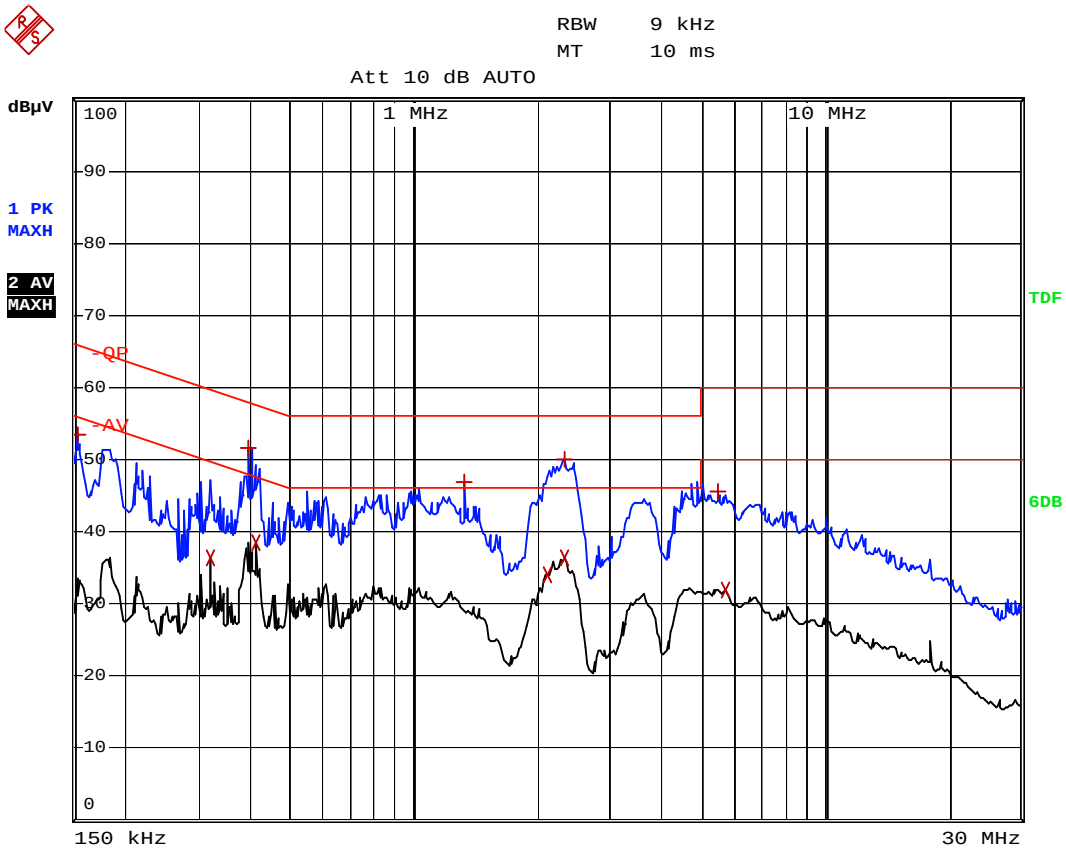
Comment: *AC 120V/60Hz; adapter DC 5V*

Test Specification: *Neutral*



EDIT PEAK LIST (Prescan Results)			
Trace1:	-QP		
Trace2:	-AV		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
2 Average	182 kHz	38.45	-15.94
1 Max Peak	302 kHz	45.77	-14.41
1 Max Peak	390 kHz	51.46	-6.59
2 Average	390 kHz	40.40	-7.66
2 Average	2.074 MHz	33.37	-12.62
1 Max Peak	2.118 MHz	47.43	-8.56
1 Max Peak	2.278 MHz	50.16	-5.83
2 Average	2.278 MHz	35.81	-10.18
1 Max Peak	5.414 MHz	47.65	-12.34
2 Average	5.47 MHz	31.47	-18.52

Test Specification: *Line*



EDIT PEAK LIST (Prescan Results)

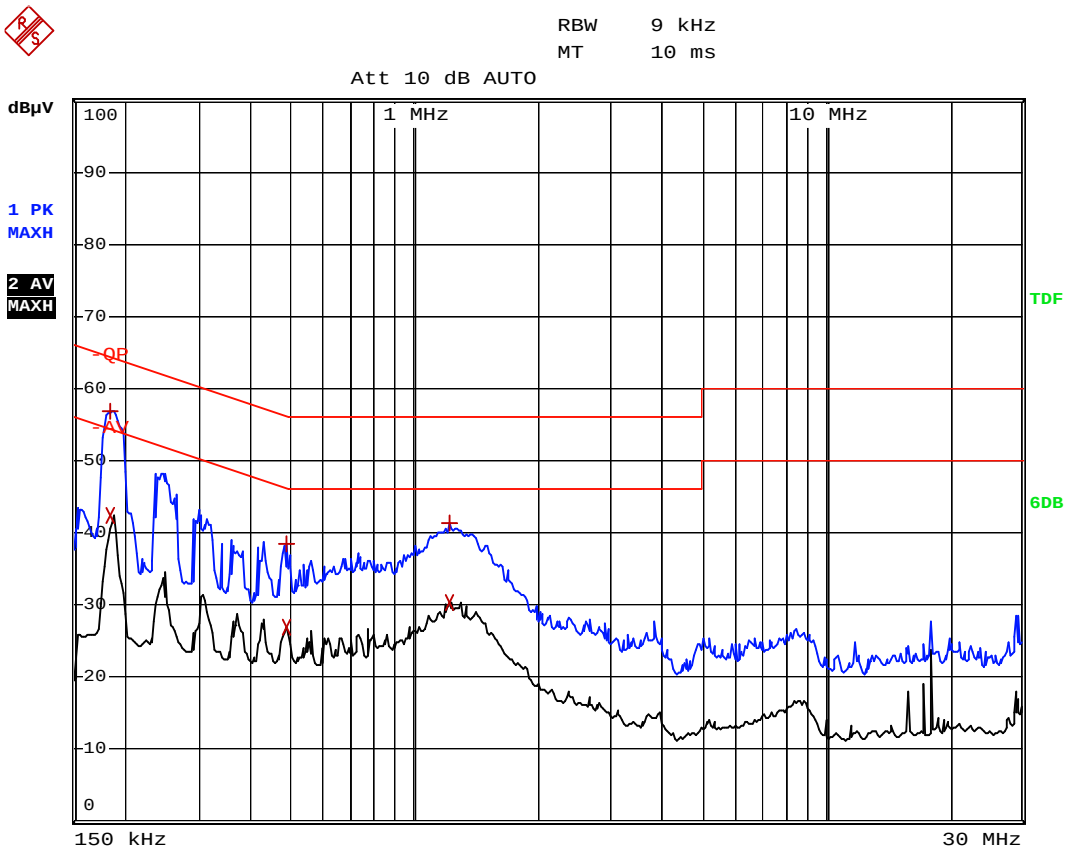
Trace1:	-QP
Trace2:	-AV
Trace3:	---

TRACE		FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
1	Max Peak	154 kHz	53.46	-12.32
2	Average	318 kHz	36.32	-13.43
1	Max Peak	394 kHz	51.69	-6.28
2	Average	410 kHz	38.52	-9.12
1	Max Peak	1.326 MHz	46.89	-9.10
2	Average	2.118 MHz	33.97	-12.02
1	Max Peak	2.322 MHz	50.09	-5.90
2	Average	2.322 MHz	36.30	-9.69
1	Max Peak	5.502 MHz	45.47	-14.52
2	Average	5.718 MHz	31.95	-18.04

Plot of Conducted Emissions Test Data

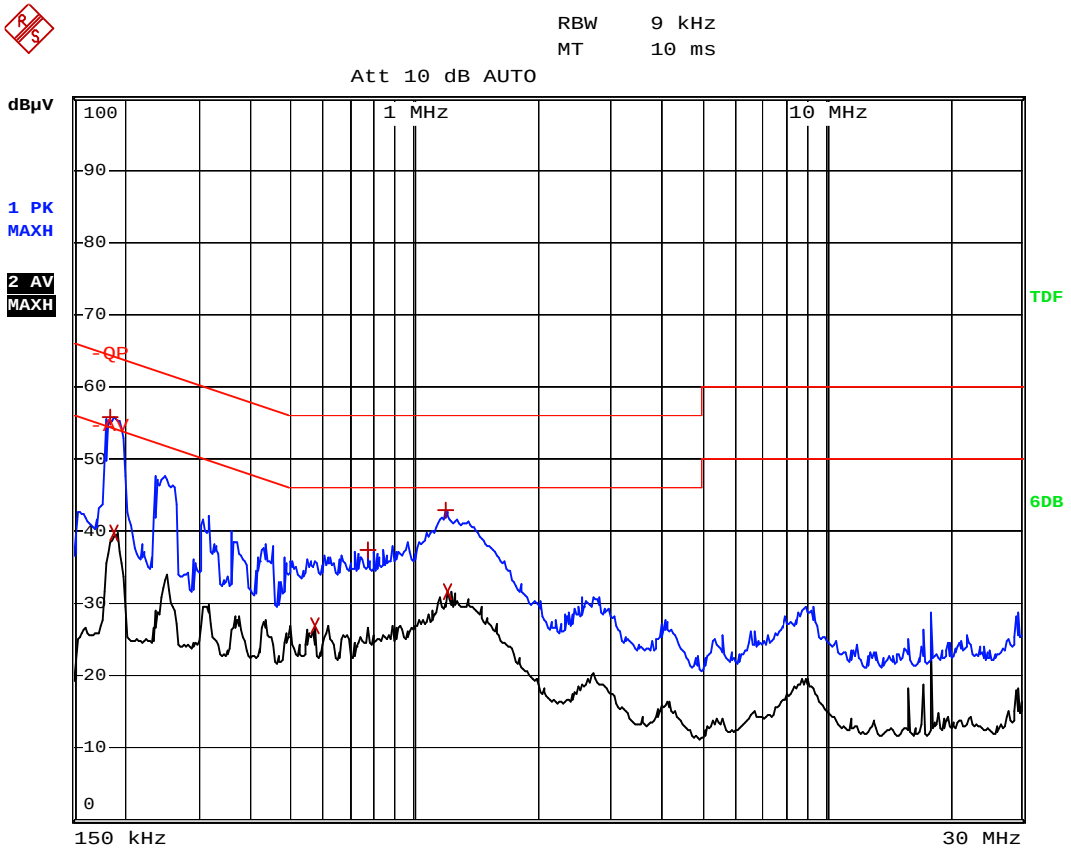
EUT: *GSM/GPRS Dual-band Mobile Phone*
Tested Model: *I601*
Operating Condition: *Downloading*
Comment: *Connected to PC (AC 120V/60Hz)*

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	56.86	-7.34
2 Average	186 kHz	42.42	-11.79
1 Max Peak	490 kHz	38.44	-17.72
2 Average	490 kHz	26.99	-19.17
2 Average	1.214 MHz	30.36	-15.63
1 Max Peak	1.218 MHz	41.27	-14.72

Test Specification: *Line*



EDIT PEAK LIST (Prescan Results)

Trace1:	-QP
Trace2:	-AV
Trace3:	---

TRACE		FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
1	Max Peak	186 kHz	55.65	-8.56
2	Average	190 kHz	39.70	-14.33
2	Average	570 kHz	26.97	-19.02
1	Max Peak	774 kHz	37.43	-18.56
1	Max Peak	1.19 MHz	42.87	-13.12
2	Average	1.206 MHz	31.69	-14.31

4. Radiated Emissions

4.1 Measurement Uncertainty

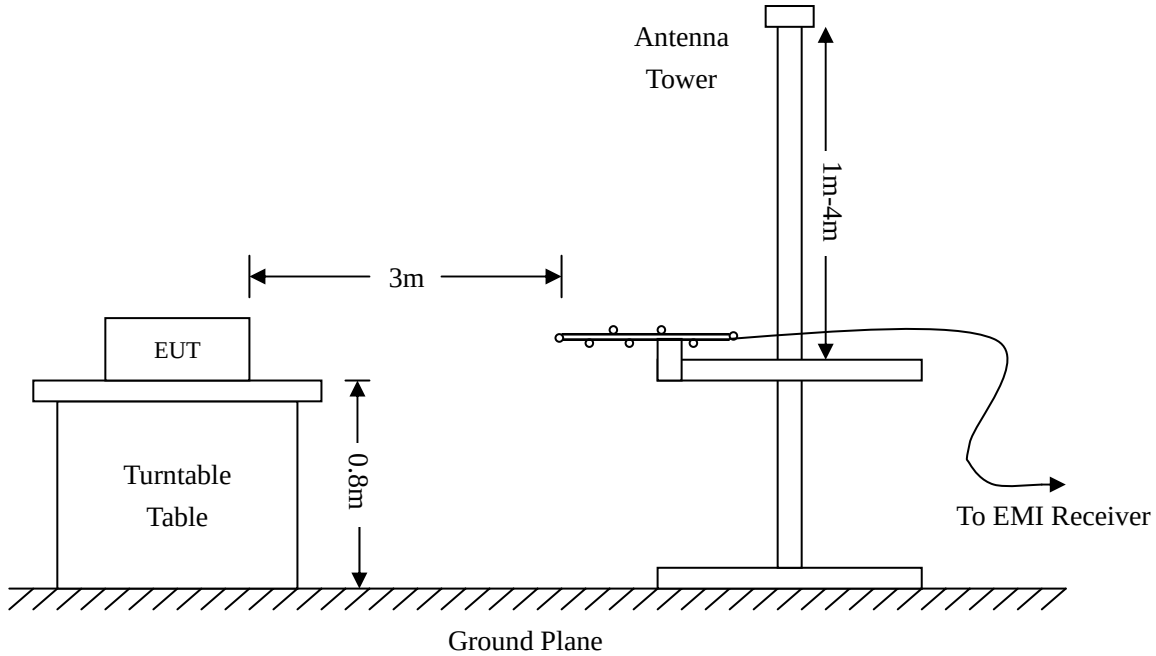
Base on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any radiation emissions measurement is ± 5.10 dB.

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

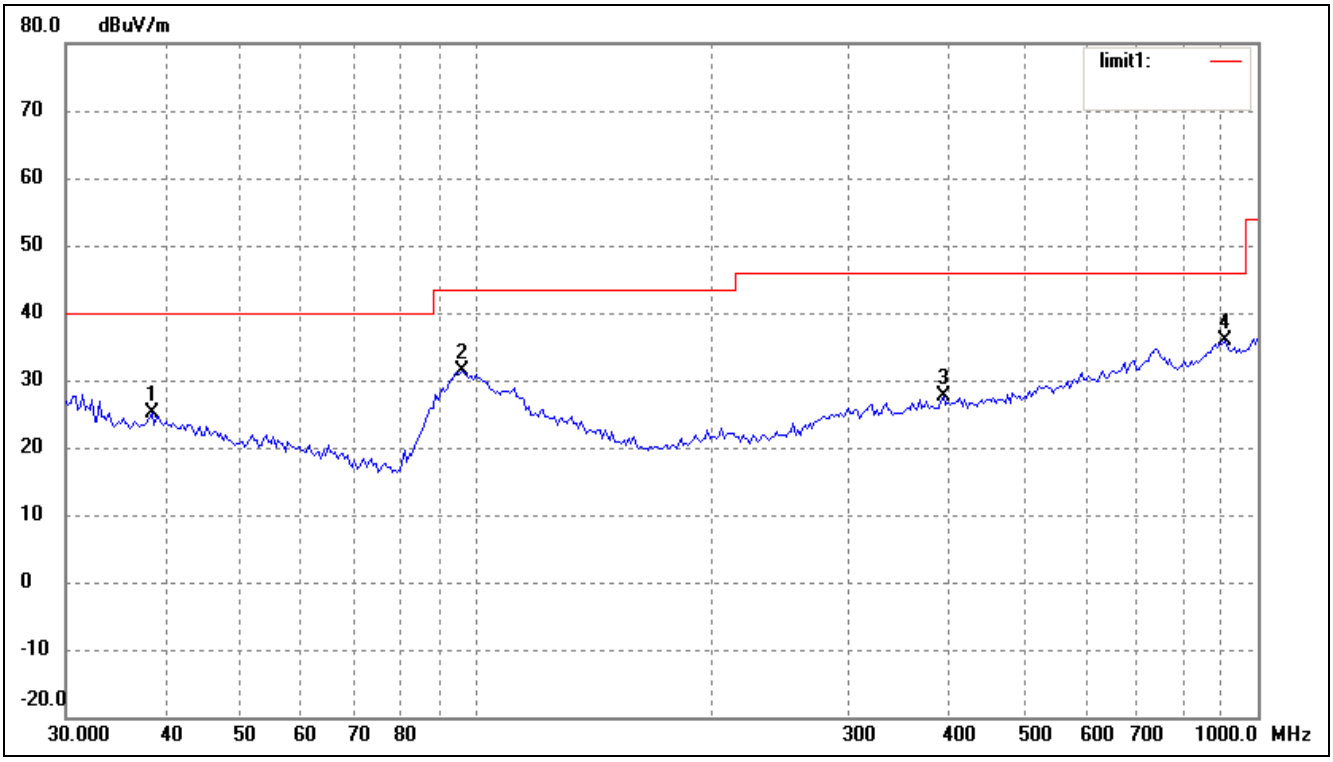
According to the data, the EUT complied with the FCC Part 15.109(a) rule, and had the worst margin of:

-3.32 dB at **33.0950 MHz** in the **Vertical** polarization, **Charging & Playing** mode, **30 MHz** to **6 GHz**, **3Meters**

Plot of Radiated Emissions Test Data (30MHz to 1GHz)

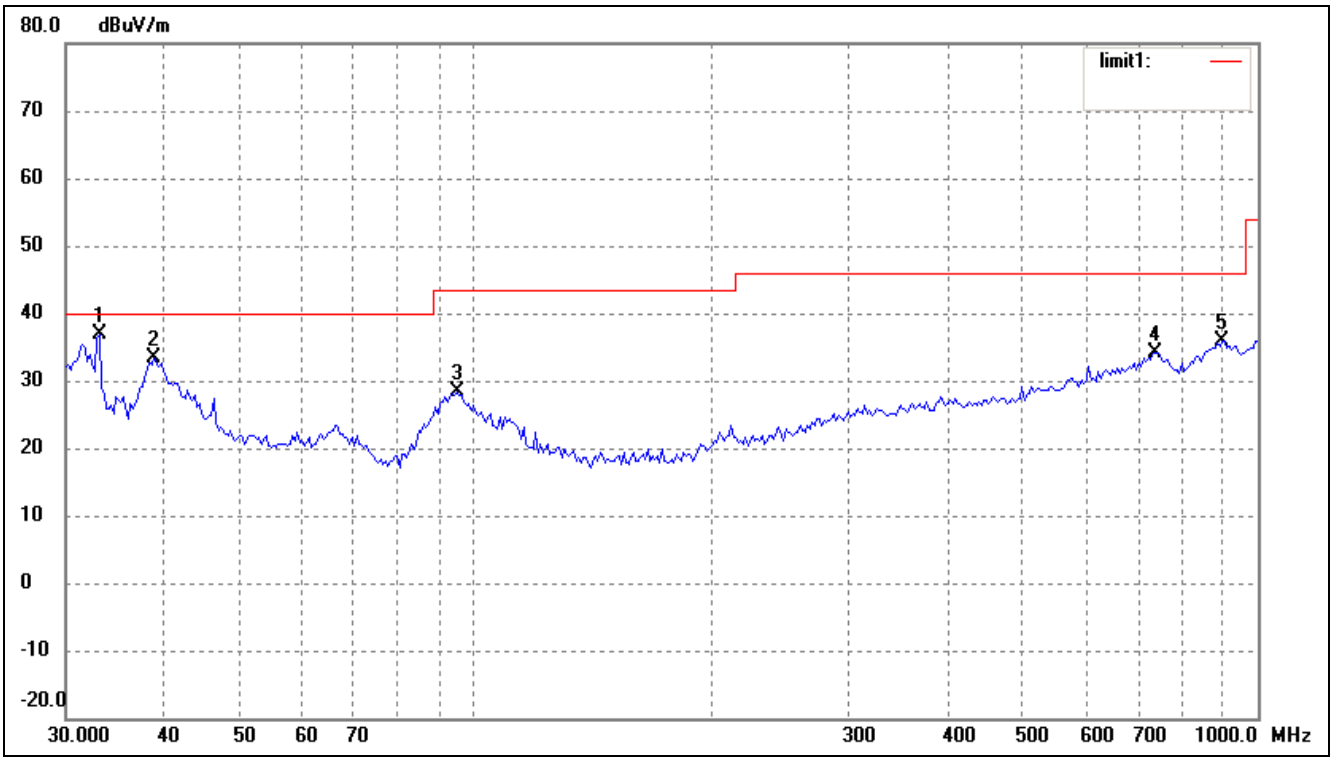
EUT: *GSM/GPRS Dual-band Mobile Phone*
Tested Model: *I601*
Operating Condition: *Charring & Playing*
Comment: *AC 120V/60Hz; Adapter DC 5V*

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	38.6161	15.67	9.46	25.13	40.00	-14.87	145	100	peak
2	96.0986	25.45	5.87	31.32	43.50	-12.18	36	100	peak
3	396.2415	16.23	11.37	27.60	46.00	-18.40	78	100	peak
4	906.4824	16.69	19.15	35.84	46.00	-10.16	54	100	peak

Test Specification: *Vertical*

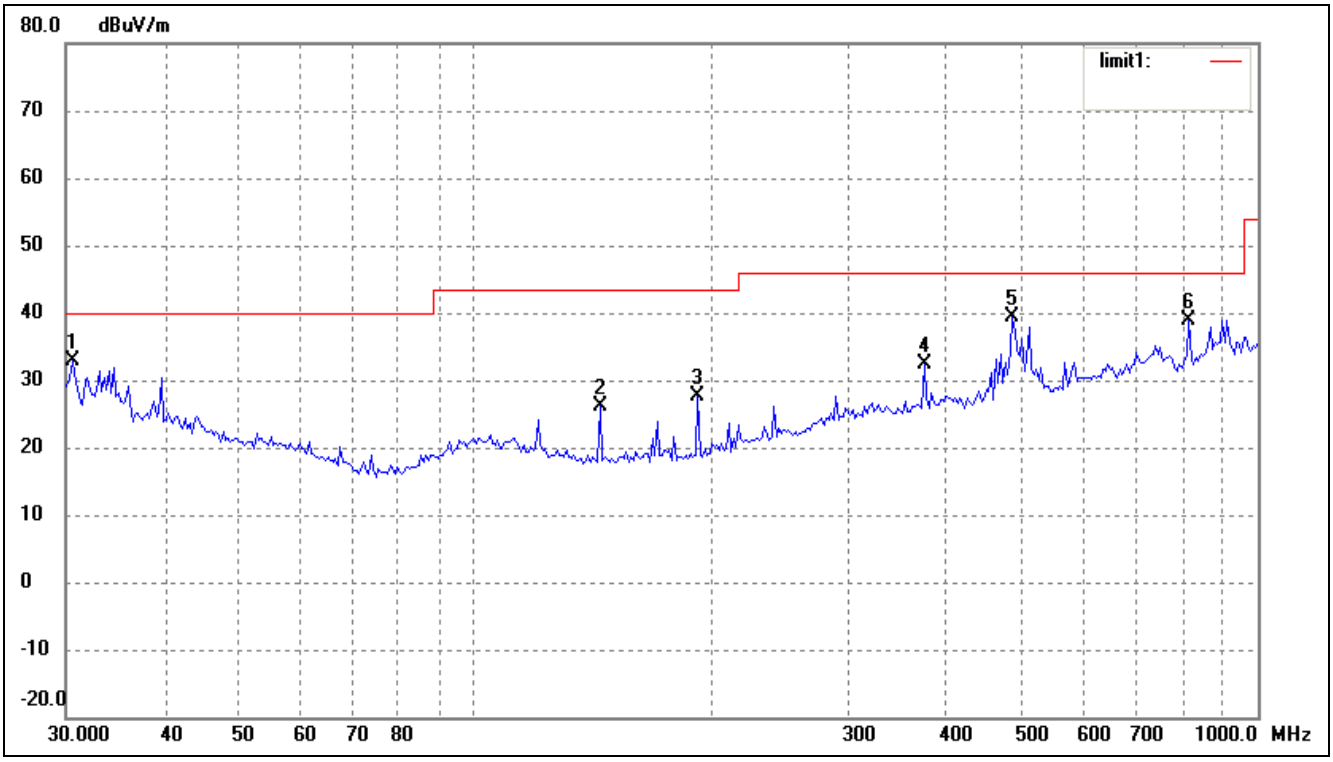


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	33.0950	28.21	8.56	36.77	40.00	-3.23	57	100	peak
2	38.8879	23.93	9.50	33.43	40.00	-6.57	17	100	peak
3	94.7601	22.83	5.54	28.37	43.50	-15.13	257	100	peak
4	739.6605	16.09	18.07	34.16	46.00	-11.84	94	100	peak
5	900.1474	16.49	19.38	35.87	46.00	-10.13	31	100	peak

Plot of Radiated Emissions Test Data (30MHz to 1GHz)

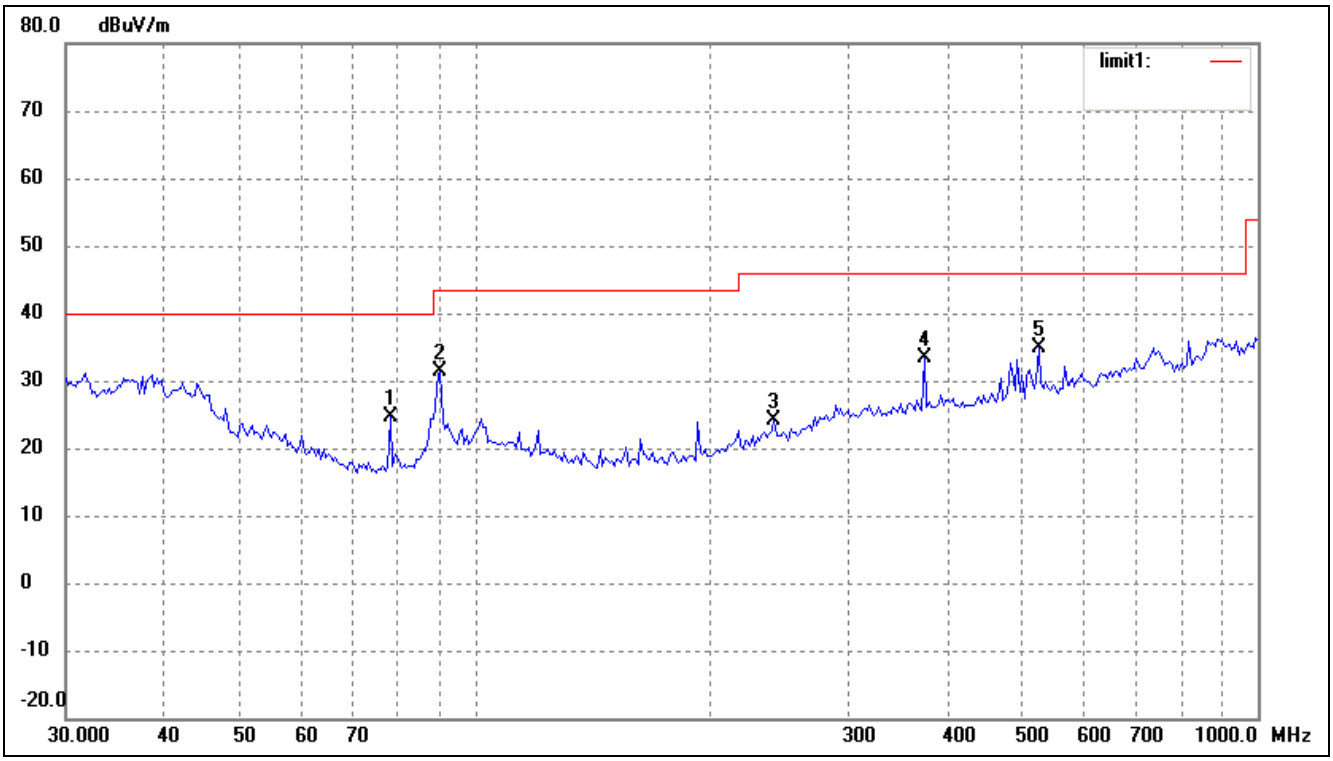
EUT: *GSM/GPRS Dual-band Mobile Phone*
Tested Model: *I601*
Operating Condition: *Downloading*
Comment: *Connected to PC (AC 120V/60Hz)*

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	30.6379	24.63	8.15	32.78	40.00	-7.22	268	100	peak
2	144.3348	22.71	3.46	26.17	43.50	-17.33	69	100	peak
3	192.4186	23.22	4.31	27.53	43.50	-15.97	74	100	peak
4	374.6226	21.63	10.63	32.26	46.00	-13.74	54	100	peak
5	485.6093	27.68	11.62	39.30	46.00	-6.70	154	100	peak
6	815.9678	22.08	16.70	38.78	46.00	-7.22	166	100	peak

Test Specification: *Vertical*

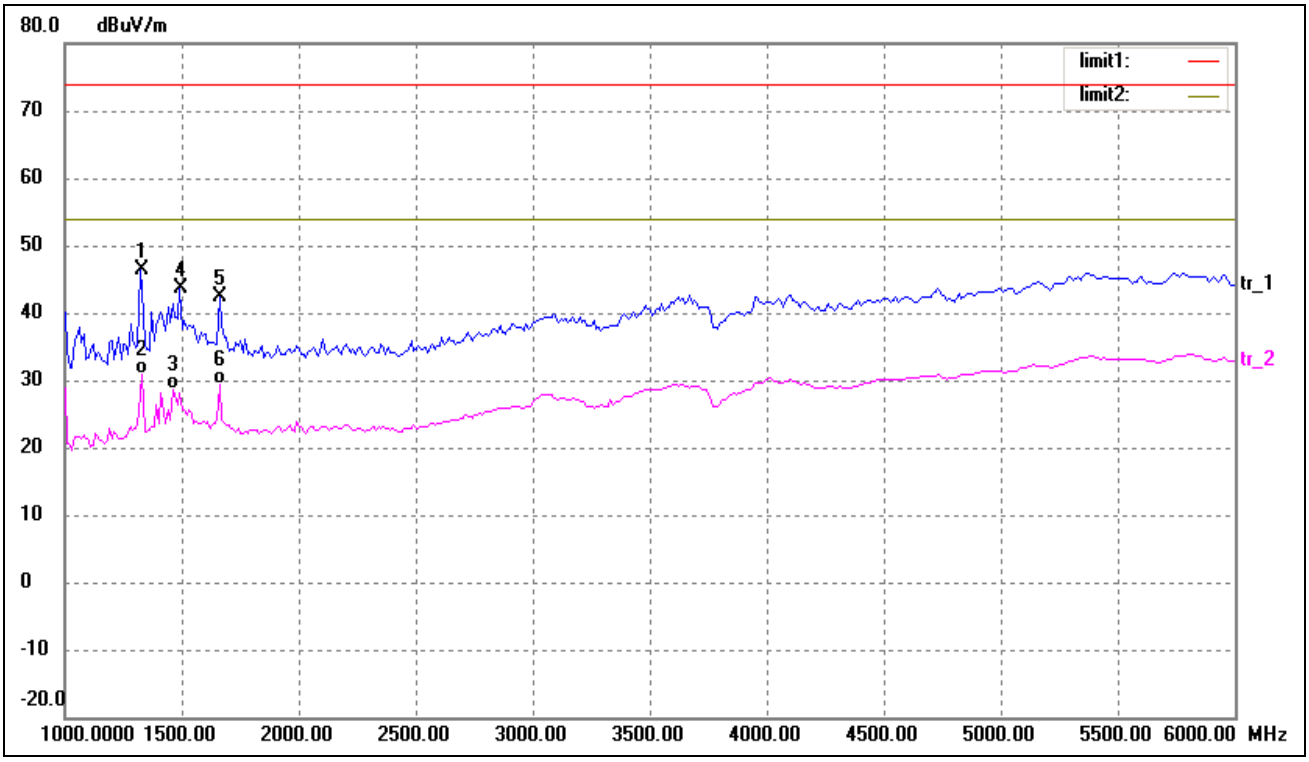


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	77.8654	22.90	1.79	24.69	40.00	-15.31	253	100	peak
2	90.2205	26.99	4.43	31.42	43.50	-12.08	67	100	peak
3	240.8304	17.01	7.02	24.03	46.00	-21.97	47	100	peak
4	374.6226	22.85	10.63	33.48	46.00	-12.52	78	100	peak
5	524.5541	21.93	12.95	34.88	46.00	-11.12	55	100	peak

Plot of Radiated Emissions Test Data (Above 1GHz)

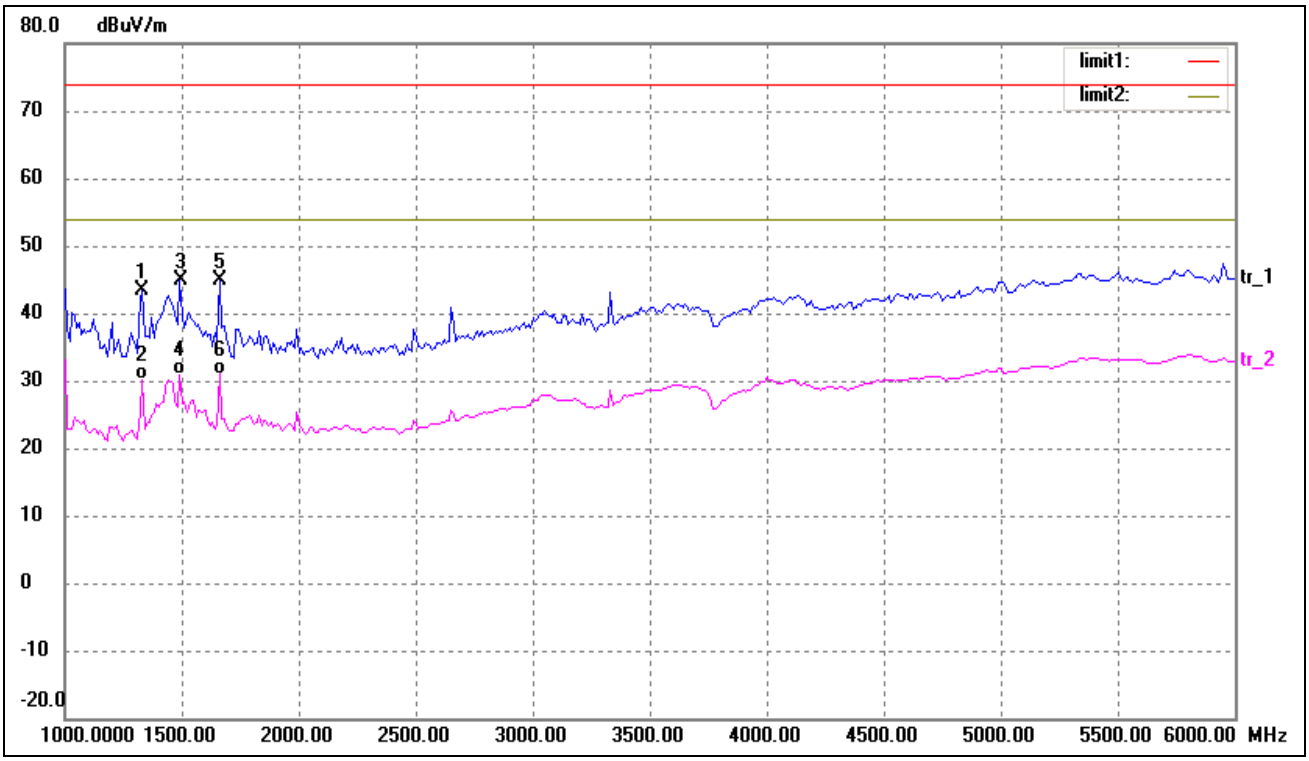
EUT: *GSM/GPRS Dual-band Mobile Phone*
Tested Model: *I601*
Operating Condition: *Downloading*
Comment: *Connected to PC (AC 120V/60Hz)*

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	1327.235	61.65	-15.36	46.29	74.00	-27.71	255	100	peak
2	1332.000	46.31	-15.34	30.97	54.00	-23.03	255	100	AVG
3	1467.318	43.28	-14.66	28.62	54.00	-25.38	244	100	AVG
4	1499.209	58.21	-14.50	43.71	74.00	-30.29	244	100	peak
5	1663.393	55.83	-13.56	42.27	74.00	-31.73	360	100	peak
6	1663.393	42.93	-13.56	29.37	54.00	-24.63	360	100	AVG

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	1332.000	58.75	-15.34	43.41	74.00	-30.59	152	100	peak
2	1332.000	45.56	-15.34	30.22	54.00	-23.78	152	100	AVG
3	1493.846	59.48	-14.53	44.95	74.00	-29.05	0	100	peak
4	1499.209	45.28	-14.50	30.78	54.00	-23.22	0	100	AVG
5	1663.393	58.38	-13.56	44.82	74.00	-29.18	45	100	peak
6	1663.393	44.56	-13.56	31.00	54.00	-23.00	45	100	AVG

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