

FCC Part 15B

Measurement and Test Report

For

Verykool USA Inc

4350 Executive Dr. #100, San Diego, CA 92121, USA

FCC ID: WA6S635

Test Standards:	<u>FCC Part 15 Subpart B</u>	
Product Description:	<u>Mobile Phone</u>	
Tested Model:	<u>S635</u>	
Report No.:	<u>STR12078146I-4</u>	
Tested Date:	<u>2012-07-13 to 2012-08-03</u>	
Issued Date:	<u>2012-08-06</u>	
Tested By:	<u>Vigoss Xiong / Engineer</u>	<i>Vigoss Xiong</i>
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Note: This test report is limited to the above client company and the product model only. It may not be duplicated without prior permitted by SEM.Test Compliance Service Co., Ltd

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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: 4350 Executive Dr. #100, San Diego, CA 92121, USA
 Manufacturer: Shenzhen Konka Telecommunications Technology Co., Ltd
 Address of manufacturer: Overseas Chinese towns, NanShan District, Shenzhen

General Description of EUT	
Product Name:	Mobile Phone
Trade Name:	verykool
Model No.:	S635
Rated Voltage:	DC 3.7V Li-ion Battery, Adapter Charging: DC 5V
<p><i>Note: The test data is gathered from a production sample, provided by the manufacturer (Two SIM Card). The other model listed in the report has different appearance only of one SIM Card without circuit and electronic construction changed, declared by the manufacturer</i></p>	

Technical Characteristics of EUT	
Rated Voltage:	DC 3.7V Li-ion Battery, Adapter DC5V
Rated Current:	500mA
Power Adapter Model:	A361-0500500U (Input: AC 100-240V, Output: DC 5V)
Highest Internal Frequency:	26MHz
Classification of ITE:	B
Support Interface:	USB Port, Earphone Port,

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	Playing	Playing multimedia from TF card
TM2	Charging	Charging with adapter
TM3	Downloading	Reading & writing
TM4	/	/

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

Auxiliary Equipment List and Details

Description	Manufacturer	Model	Serial Number
Notebook	SAMSUNG	NP-R20	124V93FP300082V

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.

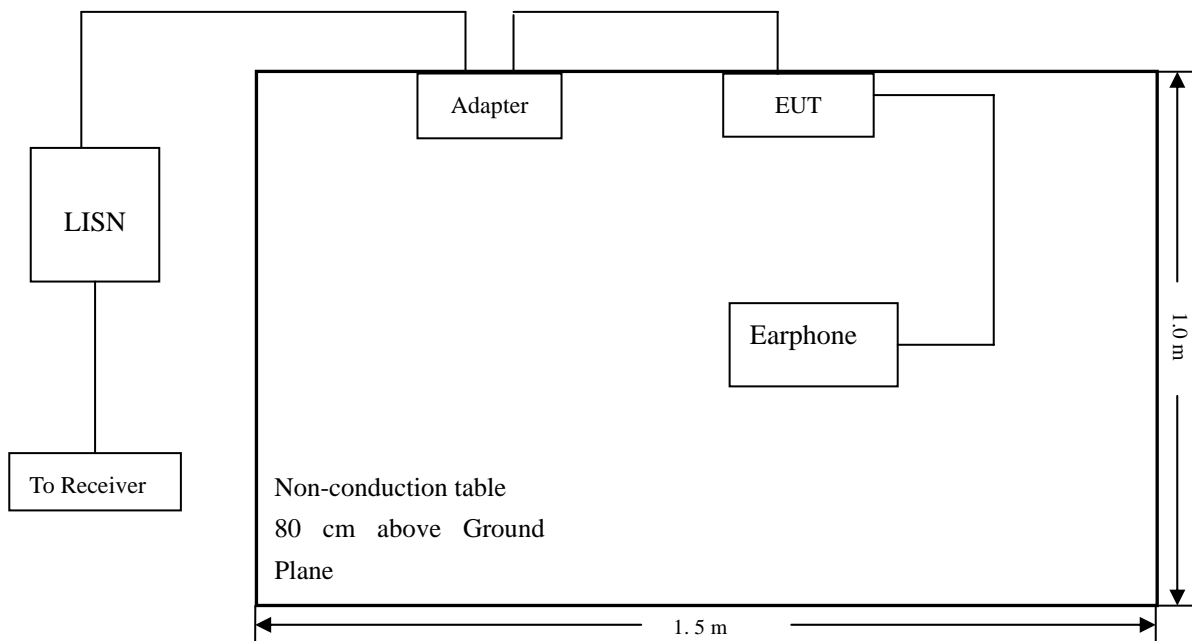
3.2 Test Equipment List and Details

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:

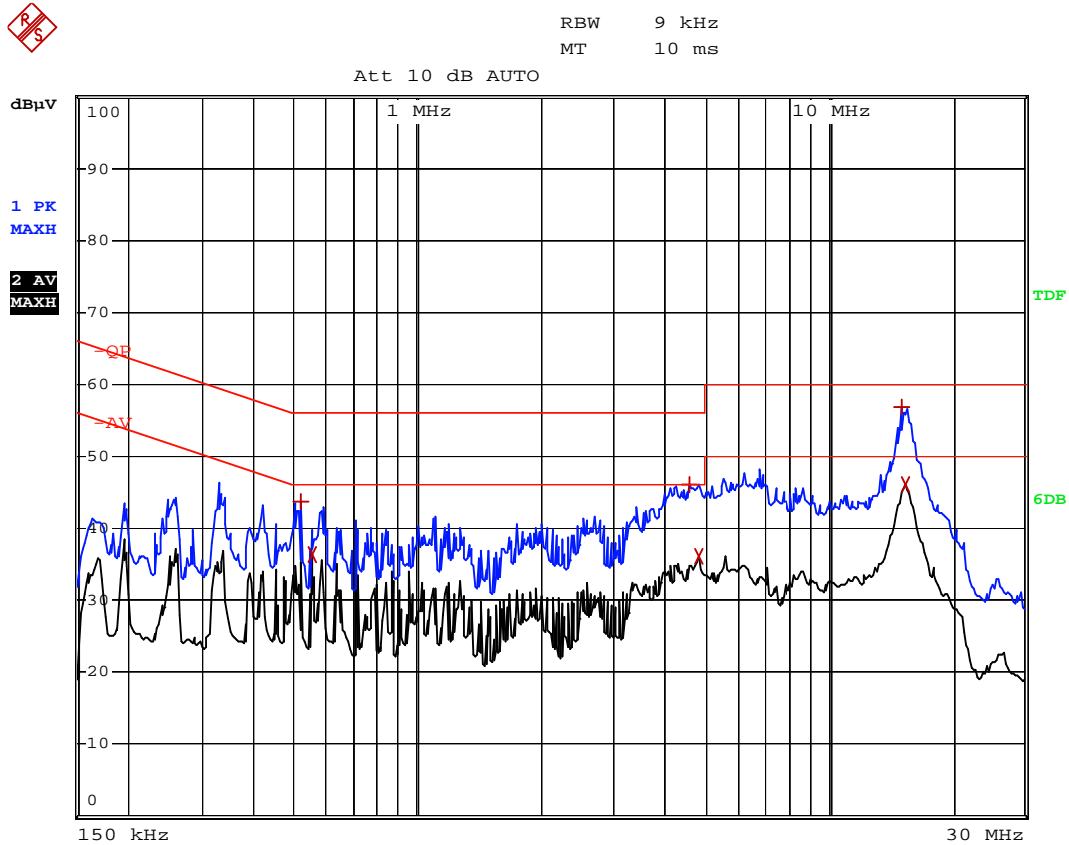
-3.18 dB μ V at 15.61 MHz in the **Line, Ave** detector, 0.15-30MHz

3.7 Conducted Emissions Test Data

Plot of Conducted Emissions Test Data

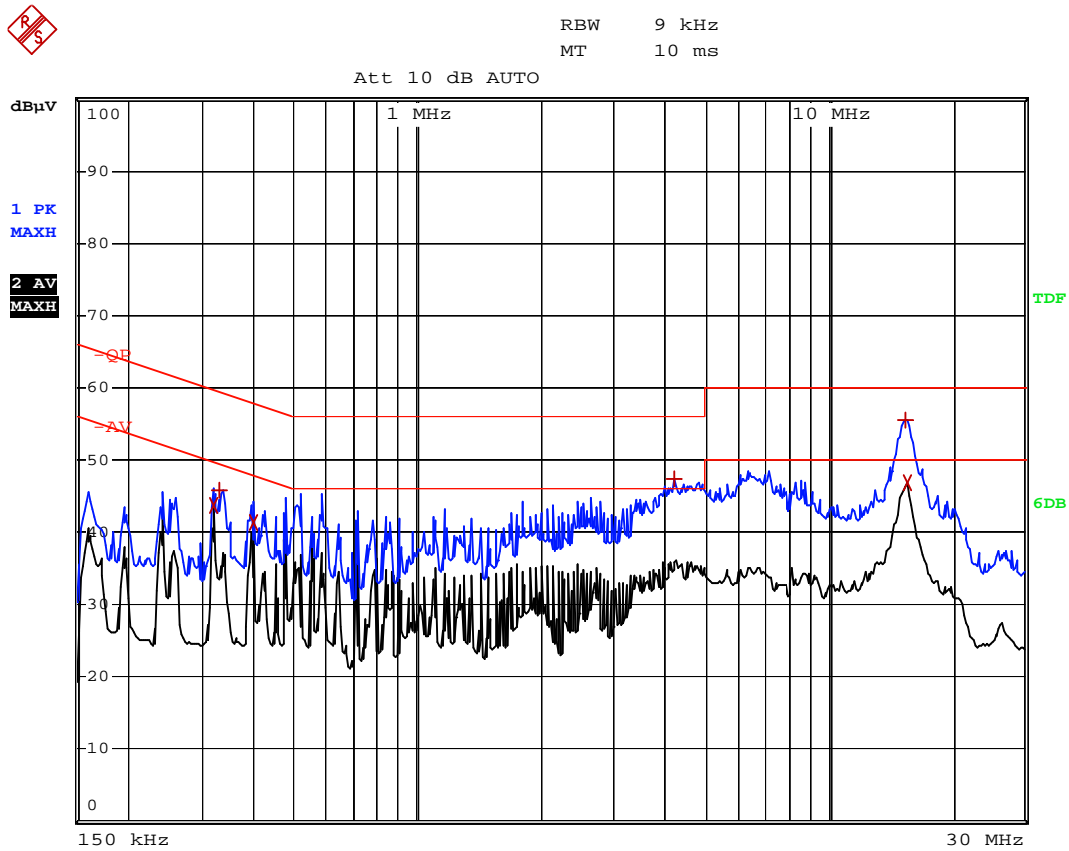
EUT: *Mobile Phone*
 Tested Model: *S635*
 Operating Condition: *Charging and Playing*
 Comment: *AC 120V/60Hz*

Test Specification: *Neutral*



EDIT PEAK LIST (Prescan Results)			
Trace1:		-QP	
Trace2:		-AV	
Trace3:		---	
TRACE	FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
1 Max Peak	518 kHz	43.65	-12.34
2 Average	554 kHz	36.34	-9.65
1 Max Peak	4.59 MHz	46.03	-9.96
2 Average	4.846 MHz	36.21	-9.78
1 Max Peak	15.046 MHz	56.87	-3.12
2 Average	15.398 MHz	46.03	-3.96

Test Specification: Line



EDIT PEAK LIST (Prescan Results)			
Trace1:	-QP		
Trace2:	-AV		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dB μ V	DELTA LIMIT dB
2 Average	318 kHz	43.62	-6.13
1 Max Peak	334 kHz	45.72	-13.62
2 Average	398 kHz	41.35	-6.53
1 Max Peak	4.202 MHz	47.31	-8.68
1 Max Peak	15.43 MHz	55.57	-4.42
2 Average	15.61 MHz	46.81	-3.18

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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.

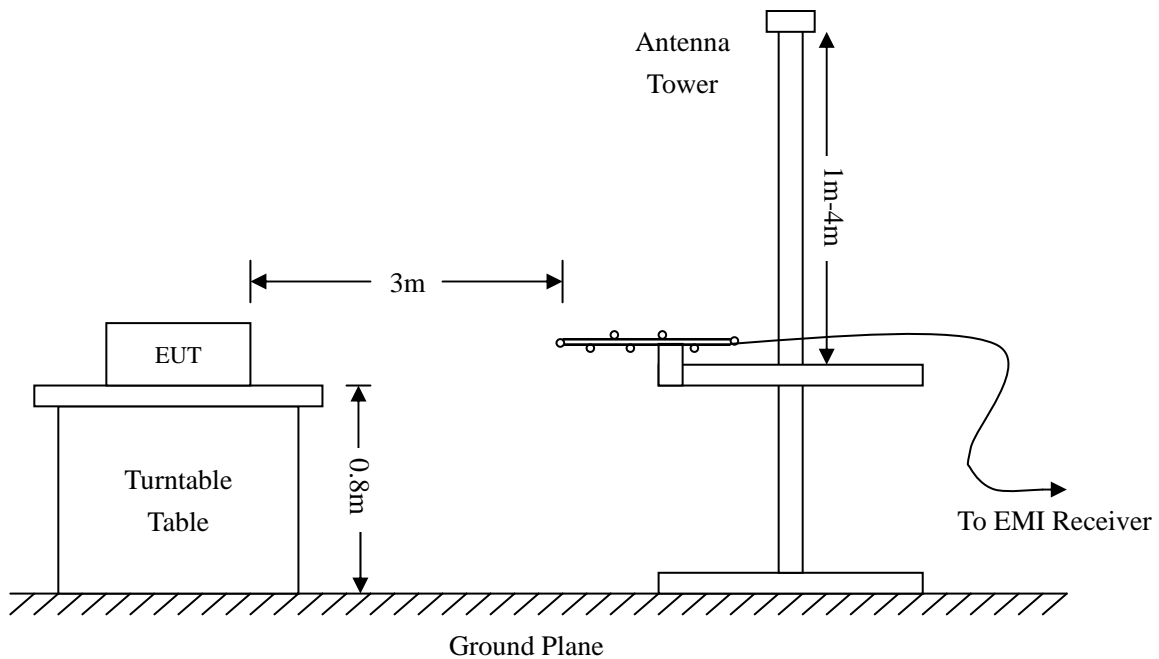
4.2 Test Equipment List and Details

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:

$$\text{Corr. Ampl.} = \text{Indicated Reading} - \text{Corr. Factor}$$

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:

$$\text{Margin} = \text{Corr. Ampl.} - \text{FCC Part 15.109(a) Limit}$$

4.6 Environmental Conditions

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

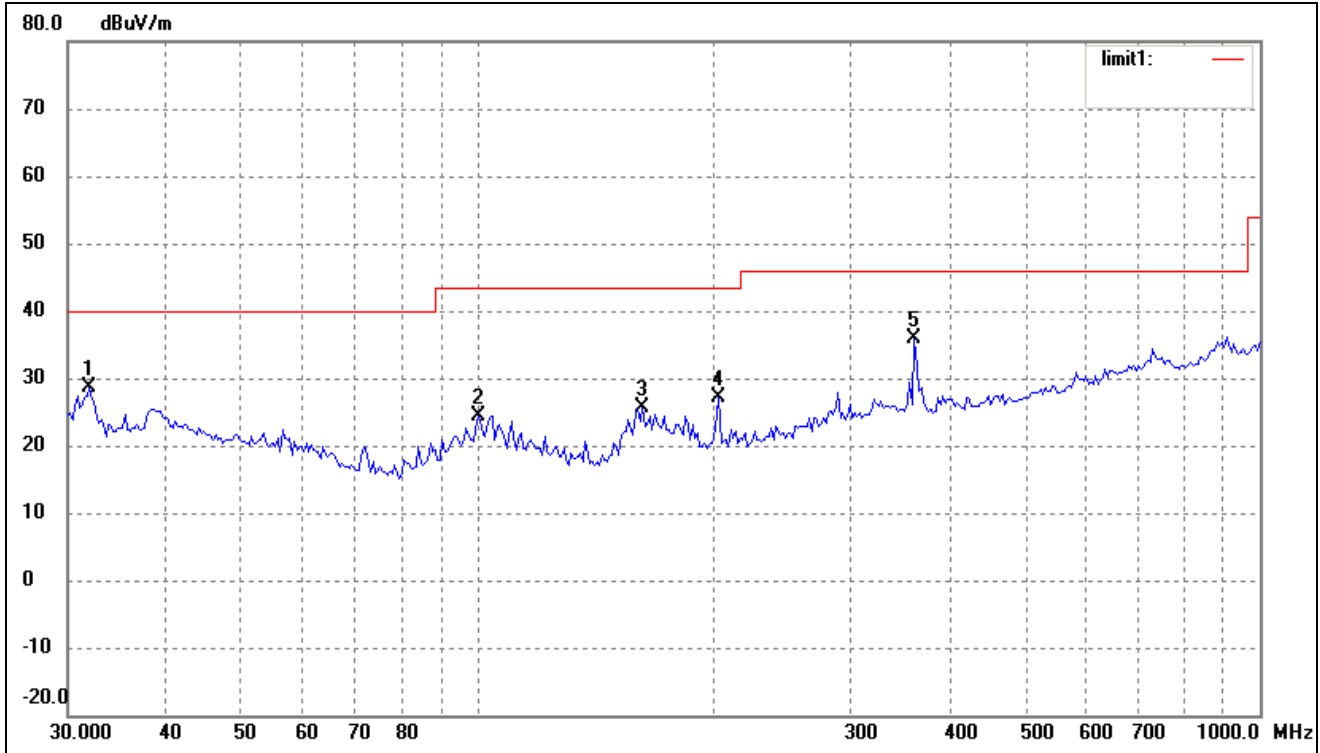
4.7 Summary of Test Results/Plots

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

-4.04 dBμV at 39.4371 MHz in the Vertical polarization, Playing and Charging Mode, 30 MHz to 1 GHz, 3Meters

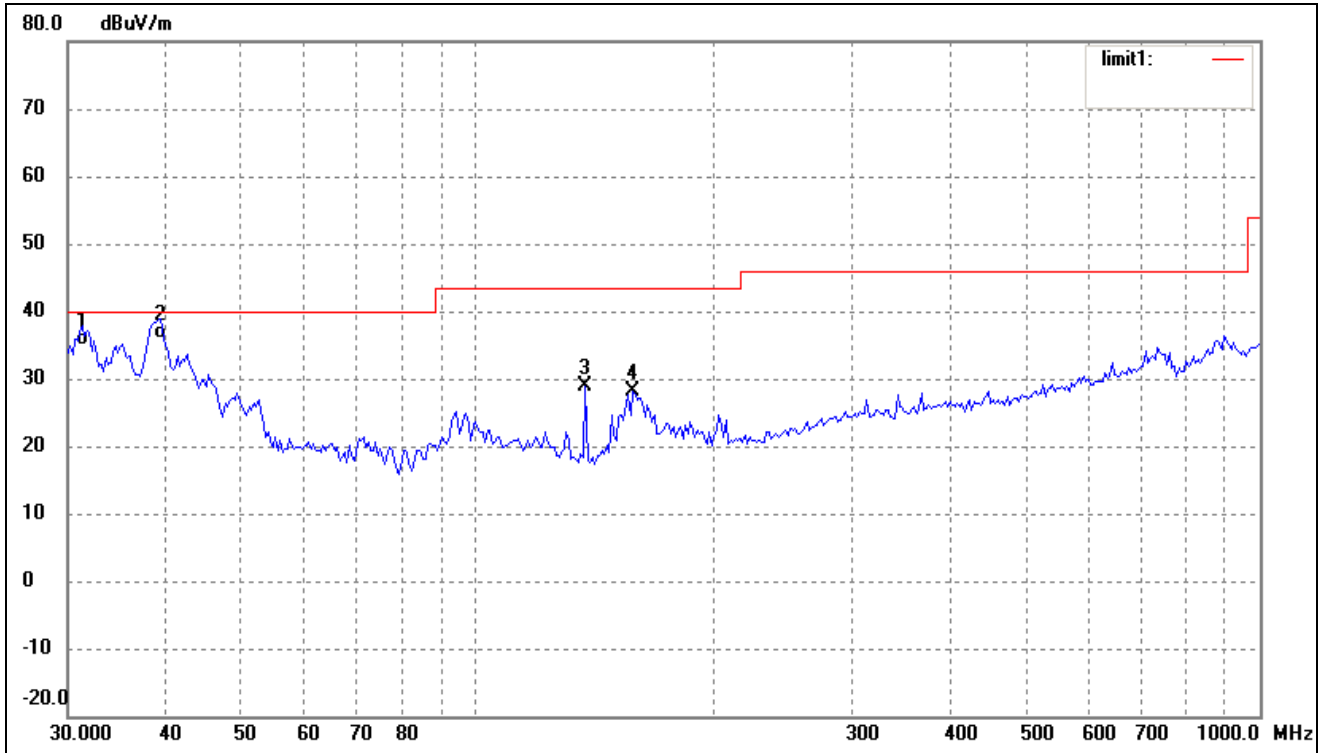
Plot of Radiated Emissions Test Data

EUT: *Mobile Phone*
 Tested Model: *S635*
 Operating Condition: *Charging and Playing*
 Comment: *Playing multimedia from TF card*
 Test Specification: *Horizontal*



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	31.9546	20.19	8.37	28.56	40.00	-11.44	58	150	QP
2	100.2286	17.61	6.81	24.42	43.50	-19.08	326	100	QP
3	162.6106	22.01	3.66	25.67	43.50	-17.83	29	120	QP
4	203.5228	22.28	4.87	27.15	43.50	-16.35	359	100	peak
5	361.7139	25.18	10.69	35.87	46.00	-10.13	359	100	peak

Test Specification: Vertical

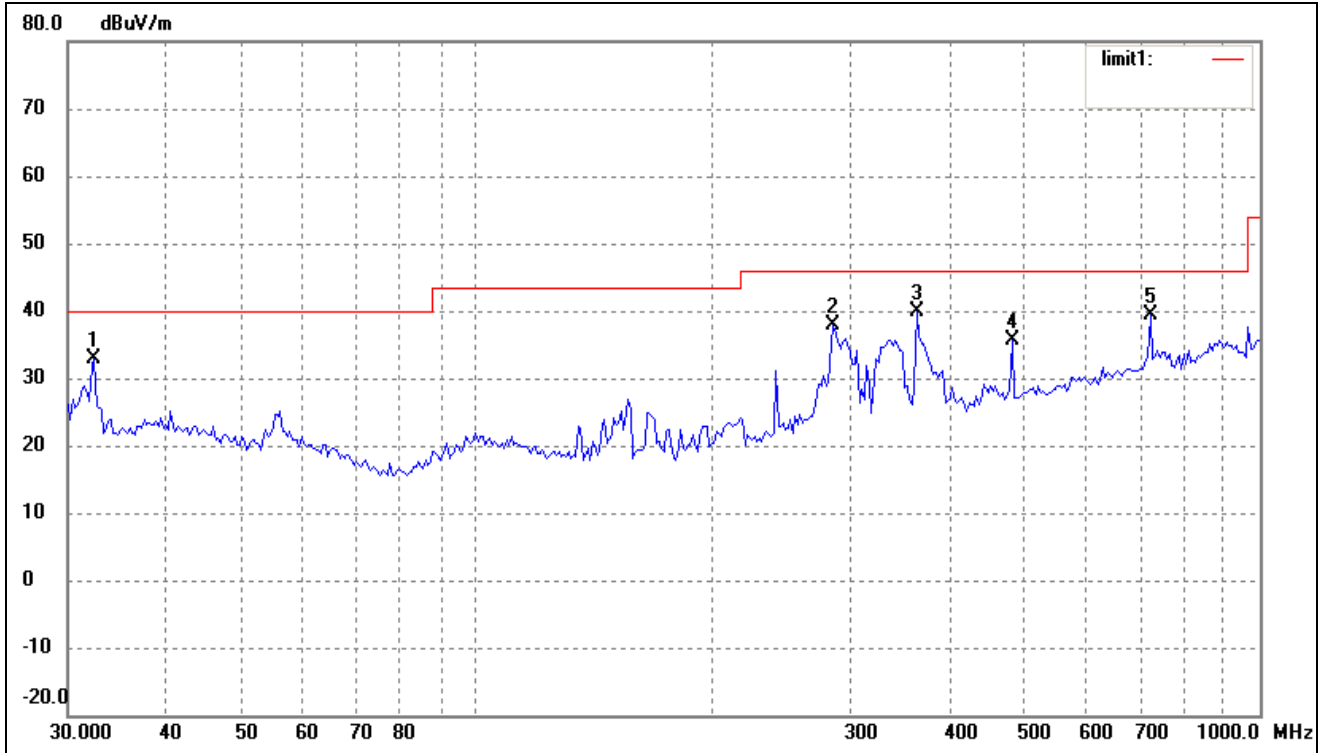


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	31.2893	26.53	8.25	34.78	40.00	-5.22	51	100	peak
2	39.4371	26.36	9.60	35.96	40.00	-4.04	308	100	peak
3	137.4202	25.23	3.58	28.81	43.50	-14.69	120	100	peak
4	158.1123	24.44	3.63	28.07	43.50	-15.43	359	100	peak

Plot of Radiated Emissions Test Data

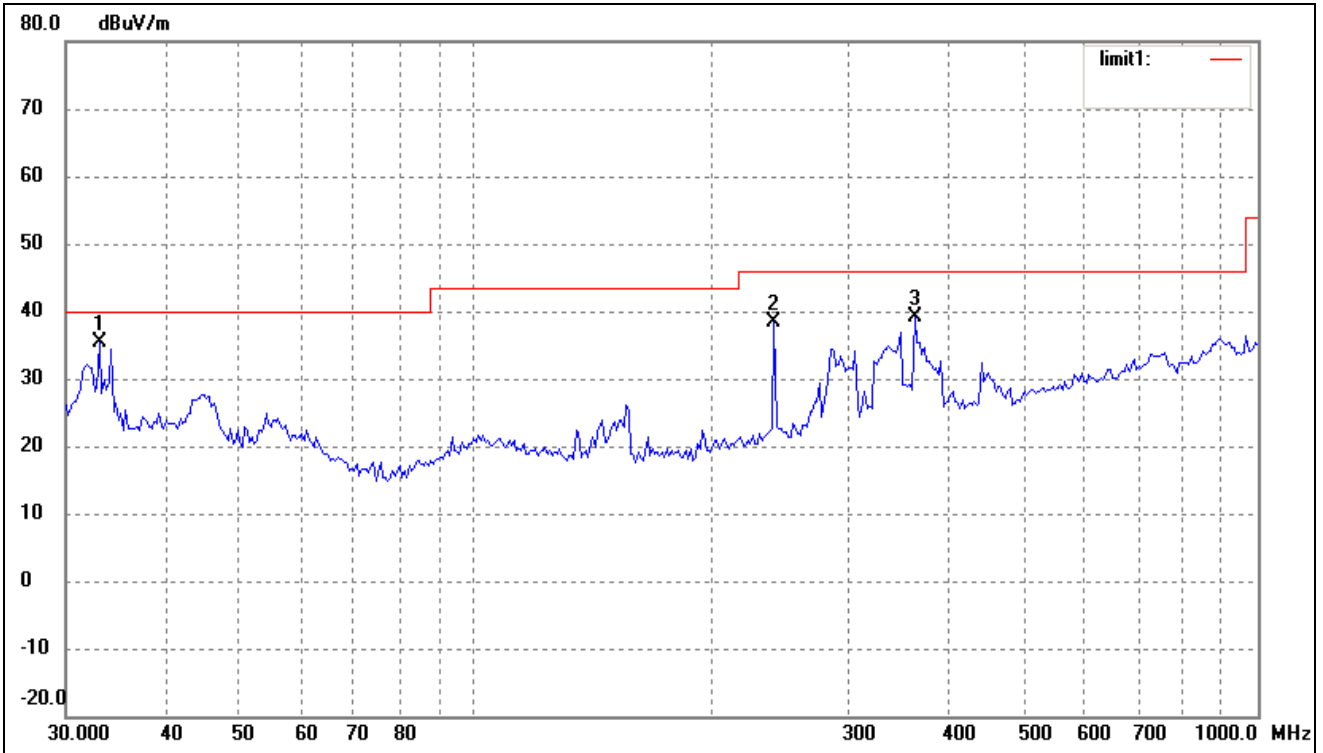
EUT: *Mobile Phone*
 Tested Model: *S635*
 Operating Condition: *Downloading*
 Comment: *Connect to PC*

Test Specification: *Horizontal*



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	32.4059	24.33	8.44	32.77	40.00	-7.23	58	150	QP
2	284.9767	28.40	9.47	37.87	46.00	-8.13	326	100	QP
3	364.2595	29.08	10.68	39.76	46.00	-6.24	29	120	QP
4	482.2156	24.17	11.49	35.66	46.00	-10.34	359	100	QP
5	724.2611	22.40	16.93	39.33	46.00	-6.67	359	100	QP

Test Specification: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	33.0950	26.75	8.56	35.31	40.00	-4.69	51	100	peak
2	240.8304	31.24	7.02	38.26	46.00	-7.74	308	100	peak
3	364.2595	28.43	10.68	39.11	46.00	-6.89	120	100	peak

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