

FCC Part 15B
Measurement and Test Report
For
GlobTek, Inc.
186 Veterans Dr. Northvale, NJ 07647 USA

FCC Rule(s):	<u>FCC Part 15 Subpart B</u>	
Product Description:	<u>Power adapter</u>	
Tested Model:	<u>GT-41076-AABB-C.C</u>	
Report No.:	<u>STR15098233E-3</u>	
Tested Date:	<u>2015-09-21 to 2015-09-28</u>	
Issued Date:	<u>2015-09-28</u>	
Tested By:	<u>Rode Liu / Engineer</u>	<i>Rode Liu</i>
Reviewed By:	<u>Jack kang / EMC Manager</u>	<i>Jack kang</i>
Approved & Authorized By:	<u>Jandy so / PSQ Manager</u>	<i>Jandyso</i>
Prepared By:		

Shenzhen SEM.Test Technology Co., Ltd.
1/F, Building A, Hongwei Industrial Park, Liuxian 2nd Road,
Bao'an District, Shenzhen, P.R.C. (518101)
Tel.: +86-755-33663308 Fax.: +86-755-33663309 Website: www.semtest.com.cn

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 Shenzhen SEM.Test Technology Co., Ltd.

TABLE OF CONTENTS


1. GENERAL INFORMATION	3
1.1 PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT)	3
1.2 TEST STANDARDS	4
1.3 TEST METHODOLOGY	4
1.4 TEST FACILITY	4
1.5 EUT SETUP AND OPERATION MODE	5
1.6 TEST EQUIPMENT LIST AND DETAILS	5
2. SUMMARY OF TEST RESULTS	6
3. CONDUCTED EMISSIONS	7
3.1 MEASUREMENT UNCERTAINTY	7
3.2 TEST PROCEDURE	7
3.3 BASIC TEST SETUP BLOCK DIAGRAM	7
3.4 ENVIRONMENTAL CONDITIONS	7
3.5 SUMMARY OF TEST RESULTS/PLOTS	8
3.6 CONDUCTED EMISSIONS TEST DATA	8
4. RADIATED EMISSION	13
4.1 MEASUREMENT UNCERTAINTY	13
4.2 TEST PROCEDURE	13
4.3 TEST RECEIVER SETUP	13
4.4 CORRECTED AMPLITUDE & MARGIN CALCULATION	14
4.5 ENVIRONMENTAL CONDITIONS	14
4.6 SUMMARY OF TEST RESULTS/PLOTS	14
EXHIBIT 1 - PRODUCT LABELING	19
PROPOSED FCC LABEL FORMAT	19
PROPOSED LABEL LOCATION ON EUT	19
EXHIBIT 2 - EUT PHOTOGRAPHS	21
EXHIBIT 3 - TEST SETUP PHOTOGRAPHS	28
EXHIBIT 4 - USERS MANUAL	30

1. GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

Client Information

Applicant: GlobTek, Inc.
 Address of applicant: 186 Veterans Dr. Northvale, NJ 07647 USA
 Manufacturer: 1. GlobTek, Inc.
 2. GlobTek (Suzhou) Co., Ltd
 Address of manufacturer: 1. 186 Veterans Dr. Northvale, NJ 07647 USA
 2. Building 4, No. 76, Jin Ling East Rd., Suzhou Industrial Park, Suzhou, JiangSu 215021, China

General Description of EUT	
Product Name:	Power adapter
Trade Name:	
Model No.:	GT-41076-AABB-C.C
Adding Model(s):	/
<p><i>Note: The test data is gathered from a production sample, provided by the manufacturer.</i></p> <p><i>GT-41076-AABB-C.C</i></p> <p><i>Where "AA" stands for the output power in Watts, which can be "01" to "06", with interval of 1;</i></p> <p><i>"BB" stands for the output voltage in Volts, which can be "03", "05", "09", "12", "15", "18", "20", "24";</i></p> <p><i>"-c.c" is optional for specifying output voltage deviation from standard model:</i></p> <p><i>subtracting C.C volts from standard output voltage in 0,1 V increments which can be "-0.1" to "-3.9" ;</i></p>	

Technical Characteristics of EUT	
Rated Voltage:	AC 100-240V, 50-60Hz
Rated Current:	Max 0.3A
Rated Power:	/
Power Adapter Model:	/
Lowest Internal Frequency:	/
Highest Internal Frequency:	Below 108MHz
Classification of ITE:	Class B

1.2 Test Standards

The following report is prepared on behalf of the GlobTek, 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 C63.4-2014, 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.: 934118

Shenzhen SEM.Test Technology 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 934118.

Industry Canada (IC) Registration No.: 11464A

The 3m Semi-anechoic chamber of Shenzhen SEM.Test Technology Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 11464A.

CNAS Registration No.: L4062

Shenzhen SEM.Test Technology 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 1/F, Building A, Hongwei Industrial Park, Liuxian 2nd 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	Working	Connect to resistance

EUT Cable List and Details

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

Auxiliary Equipment List and Details

Description	Manufacturer	Model	Serial Number
Resistance*1	/	150W/96RJ	/

Special Cable List and Details

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

1.6 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal Date	Due Date
Spectrum Analyzer	Agilent	E4407B	MY41440400	2015-06-17	2016-06-16
Spectrum Analyzer	Rohde & Schwarz	FSP	836079/035	2015-06-17	2016-06-16
EMI Test Receiver	Rohde & Schwarz	ESVB	825471/005	2015-06-17	2016-06-16
Amplifier	Agilent	8447F	3113A06717	2015-06-17	2016-06-16
Amplifier	C&D	PAP-1G18	2002	2015-06-17	2016-06-16
Broadband Antenna	Schwarz beck	VULB9163	9163-333	2015-06-17	2016-06-16
Horn Antenna	ETS	3117	00086197	2015-06-17	2016-06-16
Loop Antenna	Schwarz beck	FMZB 1516	9773	2015-06-17	2016-06-16
EMI Test Receiver	Rohde & Schwarz	ESPI	101611	2015-06-17	2016-06-16
L.I.S.N	Schwarz beck	NSLK8126	8126-224	2015-06-17	2016-06-16
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100911	2015-06-17	2016-06-16

2. SUMMARY OF TEST RESULTS

Description of Test	Result
§15.107 (a) Conducted Emission	Compliant
§15.109(a) Radiated Emission	Compliant

N/A: not applicable

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3. Conducted Emissions

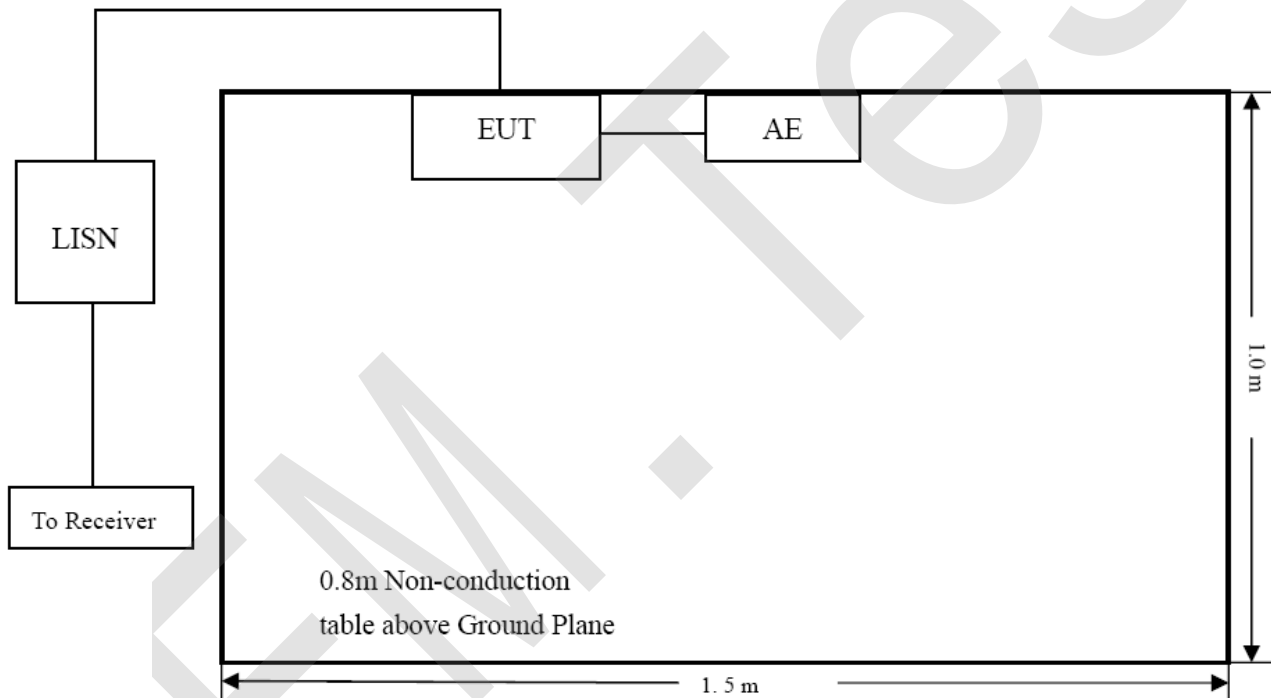
3.1 Measurement Uncertainty

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 Procedure

Test is conducting under the description of ANSI C63.4-2014, 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.

3.3 Basic Test Setup Block Diagram



3.4 Environmental Conditions

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

3.5 Summary of Test Results/Plots

According to the data in section 3.6, the EUT complied with the FCC Part 15.107(a) Conducted margin for a Class B device, with the *worst* margin reading of:

-2.59 dB at 0.7220 MHz in the Line, Average detector, GT-41076-0603 Model, 0.15-30MHz

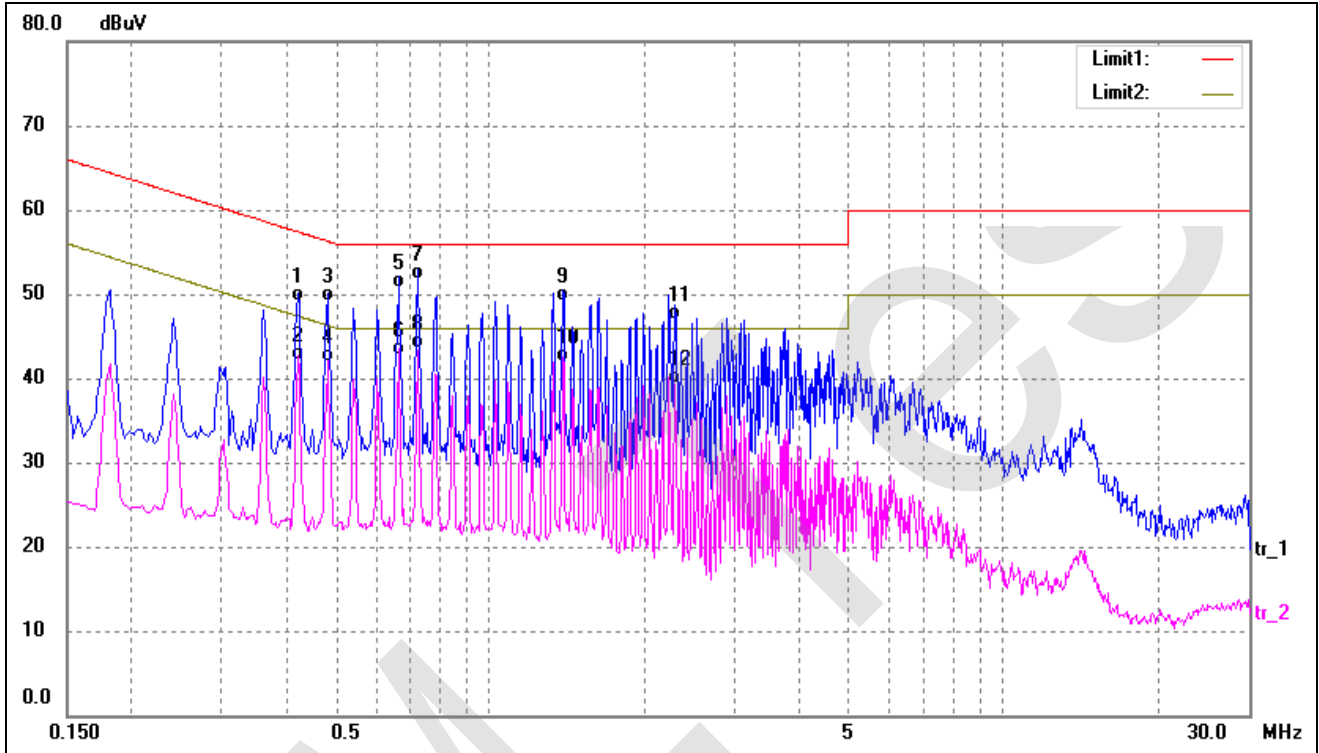
3.6 Conducted Emissions Test Data

SEM TEST

Plot of Conducted Emissions Test Data

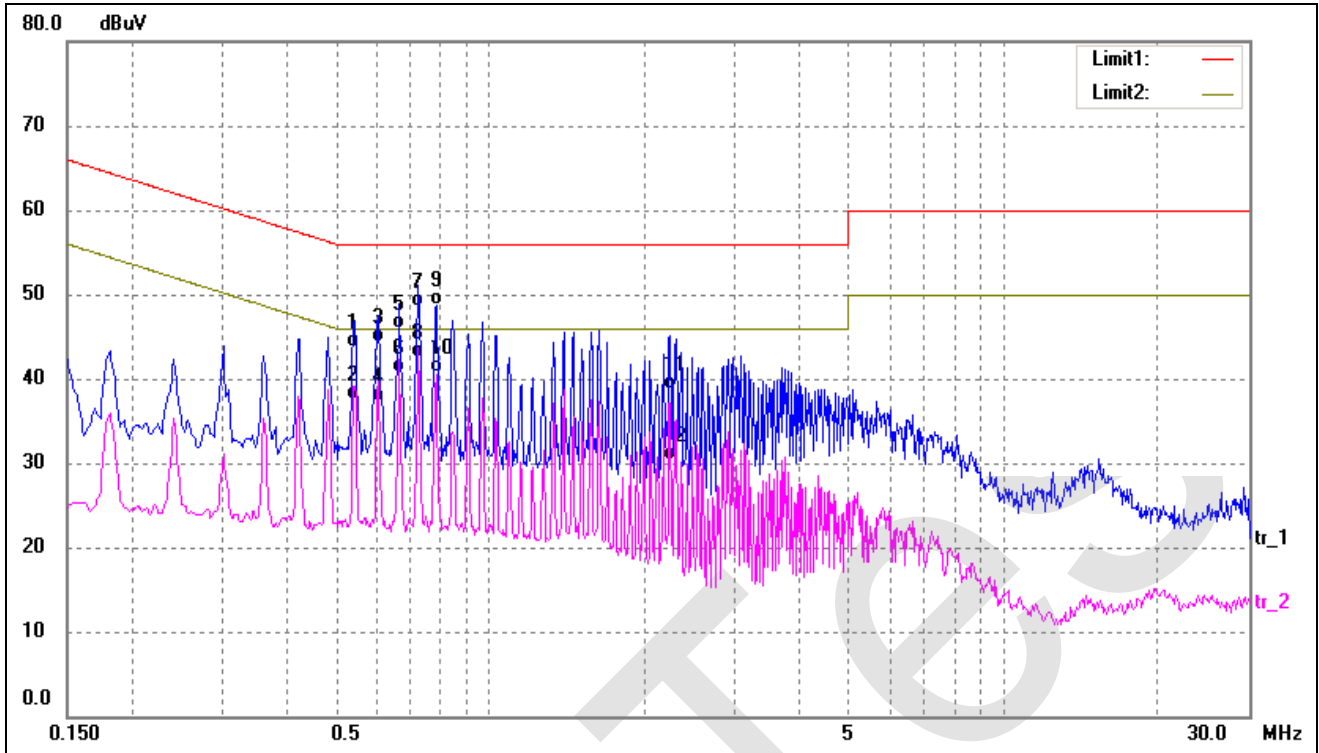
EUT: Power adapter
 Tested Model: GT-41076-0603
 Operating Condition: TM1
 Comment: AC 120V/60Hz

Test Specification: Line



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.4220	36.63	12.50	49.13	57.41	-8.28	QP
2	0.4220	29.67	12.50	42.17	47.41	-5.24	AVG
3	0.4820	36.53	12.50	49.03	56.30	-7.27	QP
4	0.4820	29.39	12.50	41.89	46.30	-4.41	AVG
5	0.6620	38.12	12.66	50.78	56.00	-5.22	QP
6	0.6620	30.05	12.66	42.71	46.00	-3.29	AVG
7	0.7220	38.92	12.72	51.64	56.00	-4.36	QP
8*	0.7220	30.69	12.72	43.41	46.00	-2.59	AVG
9	1.3860	36.11	13.00	49.11	56.00	-6.89	QP
10	1.3860	28.83	13.00	41.83	46.00	-4.17	AVG
11	2.2900	33.87	13.00	46.87	56.00	-9.13	QP
12	2.2900	26.38	13.00	39.38	46.00	-6.62	AVG

Test Specification: Neutral

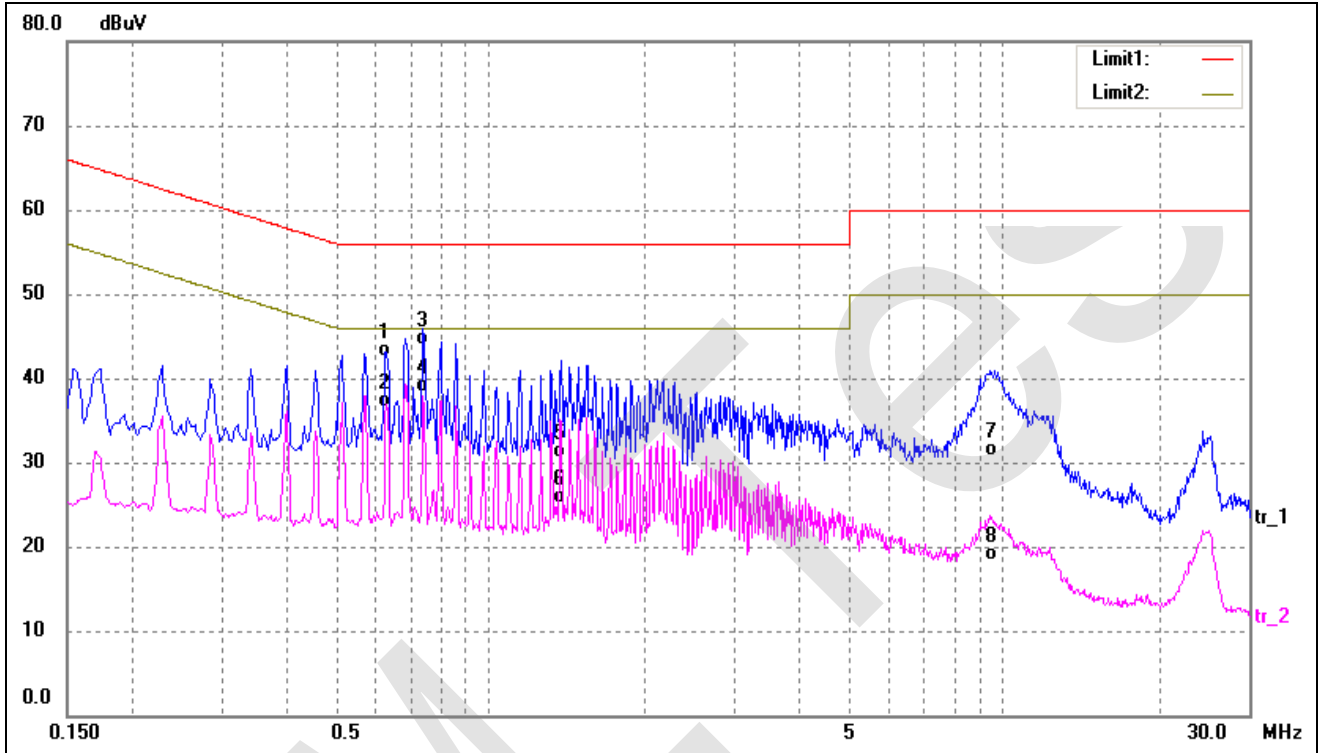


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.5460	31.14	12.55	43.69	56.00	-12.31	QP
2	0.5460	25.05	12.55	37.60	46.00	-8.40	AVG
3	0.6060	31.71	12.61	44.32	56.00	-11.68	QP
4	0.6060	24.60	12.61	37.21	46.00	-8.79	AVG
5	0.6660	33.26	12.67	45.93	56.00	-10.07	QP
6	0.6660	28.13	12.67	40.80	46.00	-5.20	AVG
7	0.7260	35.86	12.73	48.59	56.00	-7.41	QP
8*	0.7260	29.80	12.73	42.53	46.00	-3.47	AVG
9	0.7860	35.89	12.79	48.68	56.00	-7.32	QP
10	0.7860	27.94	12.79	40.73	46.00	-5.27	AVG
11	2.2380	25.79	13.00	38.79	56.00	-17.21	QP
12	2.2380	17.28	13.00	30.28	46.00	-15.72	AVG

Plot of Conducted Emissions Test Data

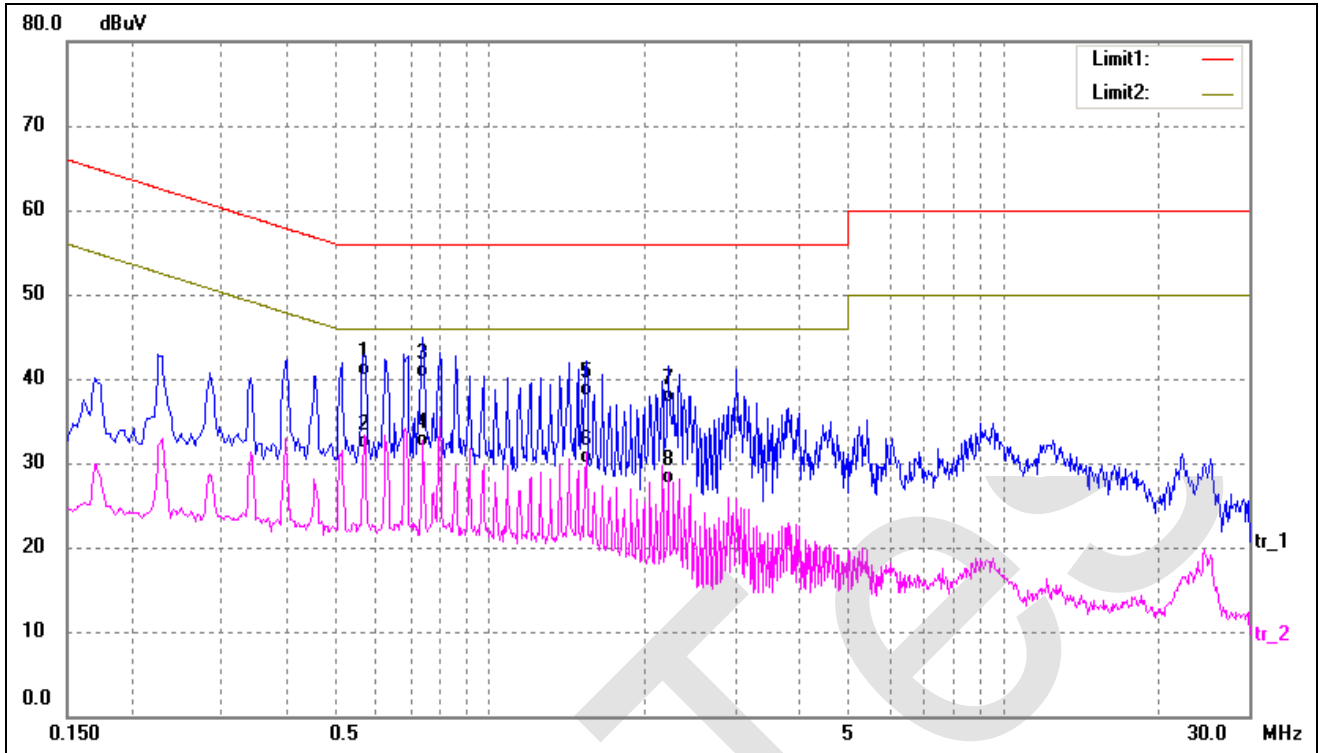
EUT: Power adapter
 Tested Model: GT-41076-0624
 Operating Condition: TM1
 Comment: AC 120V/60Hz

Test Specification: Line



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.6260	29.84	12.63	42.47	56.00	-13.53	QP
2	0.6260	23.86	12.63	36.49	46.00	-9.51	AVG
3	0.7420	31.16	12.74	43.90	56.00	-12.10	QP
4*	0.7420	25.51	12.74	38.25	46.00	-7.75	AVG
5	1.3740	17.45	13.00	30.45	56.00	-25.55	QP
6	1.3740	12.20	13.00	25.20	46.00	-20.80	AVG
7	9.6059	19.49	11.16	30.65	60.00	-29.35	QP
8	9.6059	7.19	11.16	18.35	50.00	-31.65	AVG

Test Specification: Neutral



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.5700	27.64	12.57	40.21	56.00	-15.79	QP
2	0.5700	19.15	12.57	31.72	46.00	-14.28	AVG
3	0.7420	27.33	12.74	40.07	56.00	-15.93	QP
4*	0.7420	19.13	12.74	31.87	46.00	-14.13	AVG
5	1.5380	24.91	13.00	37.91	56.00	-18.09	QP
6	1.5380	16.95	13.00	29.95	46.00	-16.05	AVG
7	2.2220	24.12	13.00	37.12	56.00	-18.88	QP
8	2.2220	14.58	13.00	27.58	46.00	-18.42	AVG

4. RADIATED EMISSION

4.1 Measurement Uncertainty

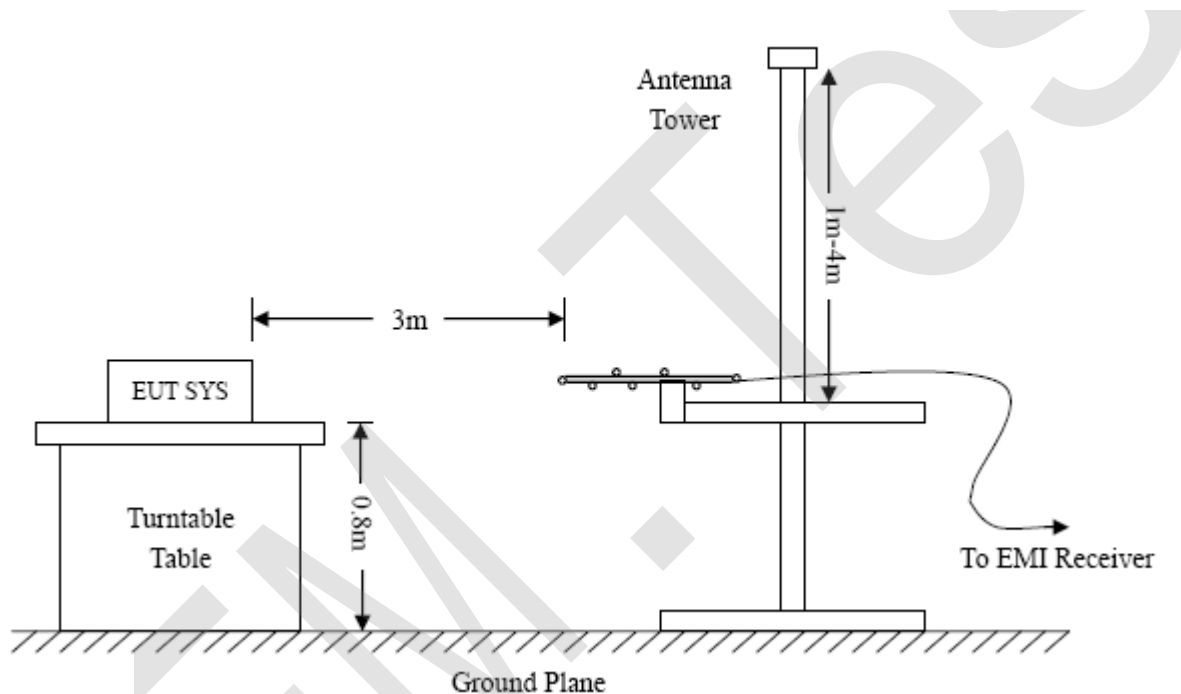
Base on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any radiation emissions measurement is ± 5.10 dB.

4.2 Test Procedure

The setup of EUT is according with per ANSI C63.4-2014 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.



4.3 Test Receiver Setup

Frequency :9kHz-30MHz

RBW=10KHz,

VBW =30KHz

Sweep time= Auto

Trace = max hold

Detector function = peak

Frequency :30MHz-1GHz

RBW=120KHz,

VBW=300KHz

Sweep time= Auto

Trace = max hold

Detector function = peak, QP

Frequency :Above 1GHz

RBW=1MHz,

VBW=3MHz(Peak), 10Hz(AV)

Sweep time= Auto

Trace = max hold

Detector function = peak, AV

4.4 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 -6dB μ V means the emission is 6dB μ V below the maximum limit for a Class B device. The equation for margin calculation is as follows:

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

4.5 Environmental Conditions

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

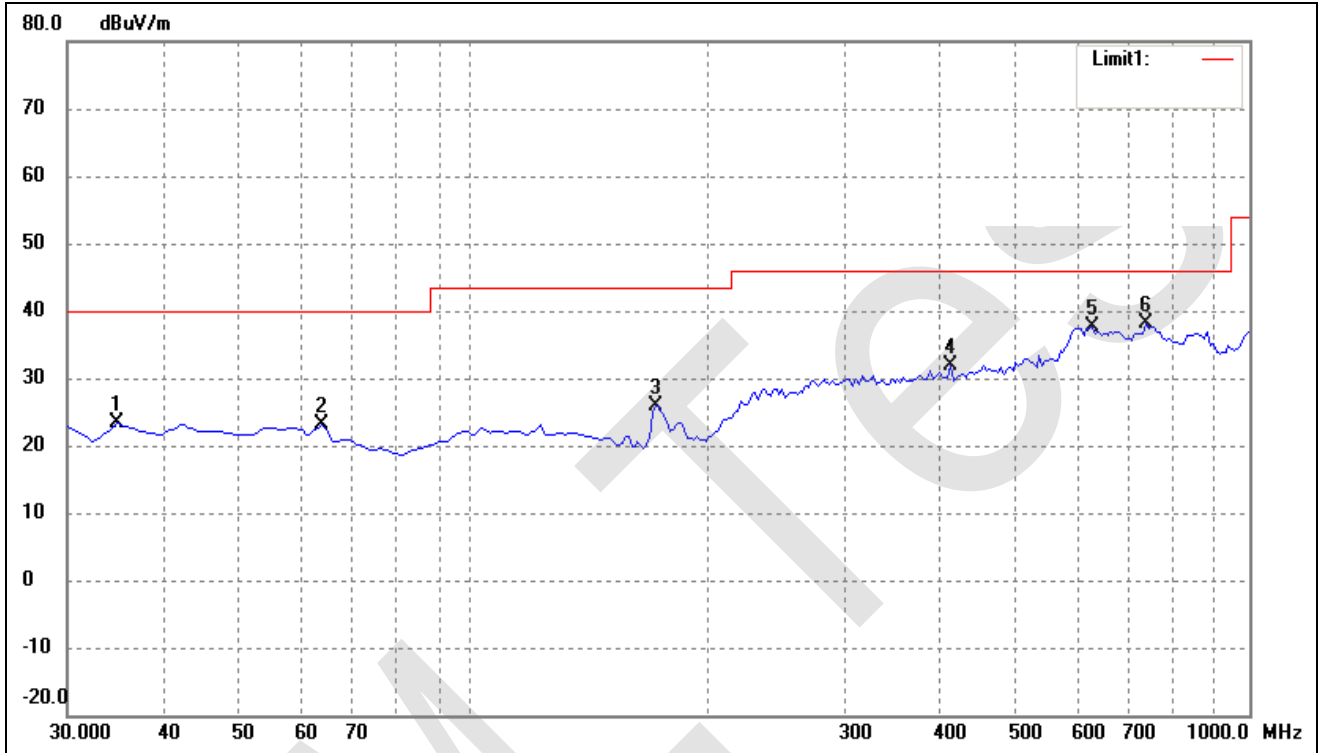
4.6 Summary of Test Results/Plots

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

-2.64 dB at 44.5500 MHz in the Vertical polarization, GT-41076-0624 Model, 30 MHz to 1 GHz, 3Meters

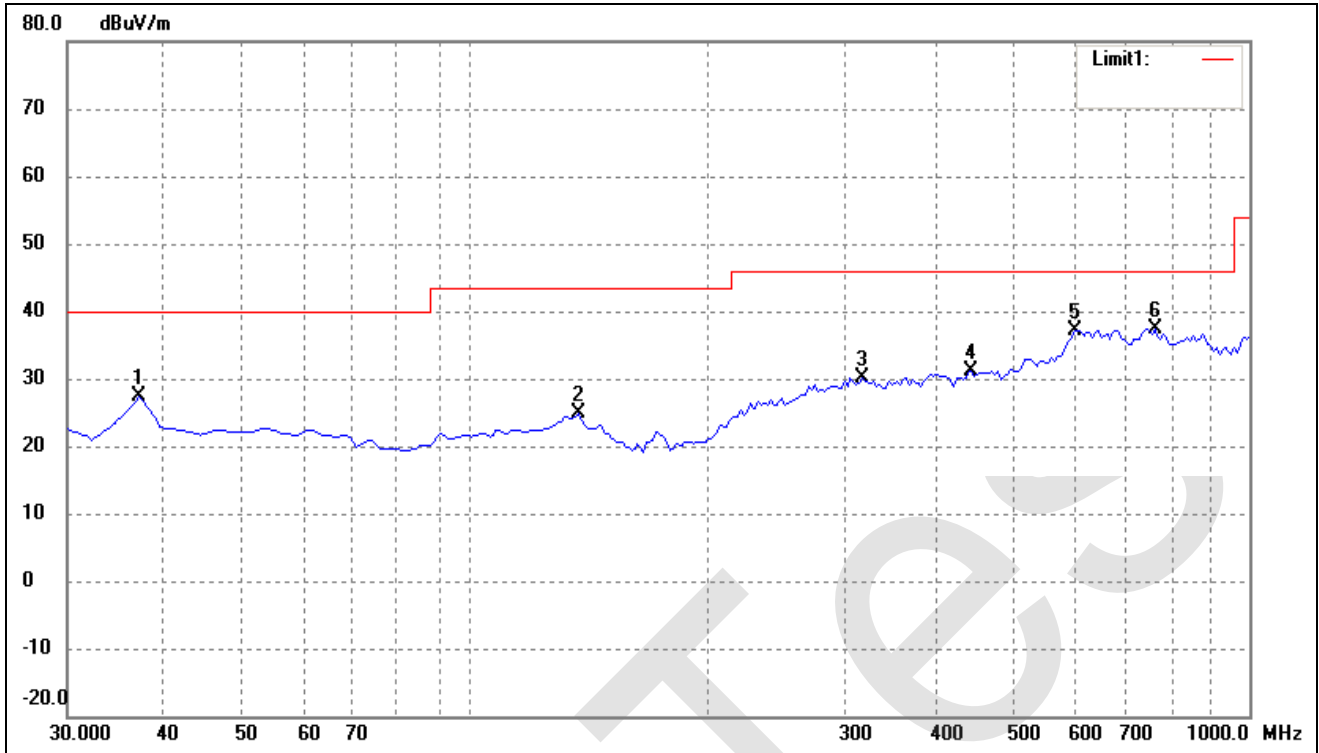
Plot of Radiated Emissions Test Data

EUT: Power adapter
 Tested Model: GT-41076-0603
 Operating Condition: TM1
 Comment: AC 120V/60Hz
 Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	34.8500	18.90	4.37	23.27	40.00	-16.73	100	100	peak
2	63.9500	18.52	4.51	23.03	40.00	-16.97	100	100	peak
3	173.0750	23.24	2.70	25.94	43.50	-17.56	100	100	peak
4	413.1500	19.13	12.65	31.78	46.00	-14.22	100	100	peak
5	628.9750	19.28	18.23	37.51	46.00	-8.49	100	100	peak
6	738.1000	18.77	19.44	38.21	46.00	-7.79	100	100	peak

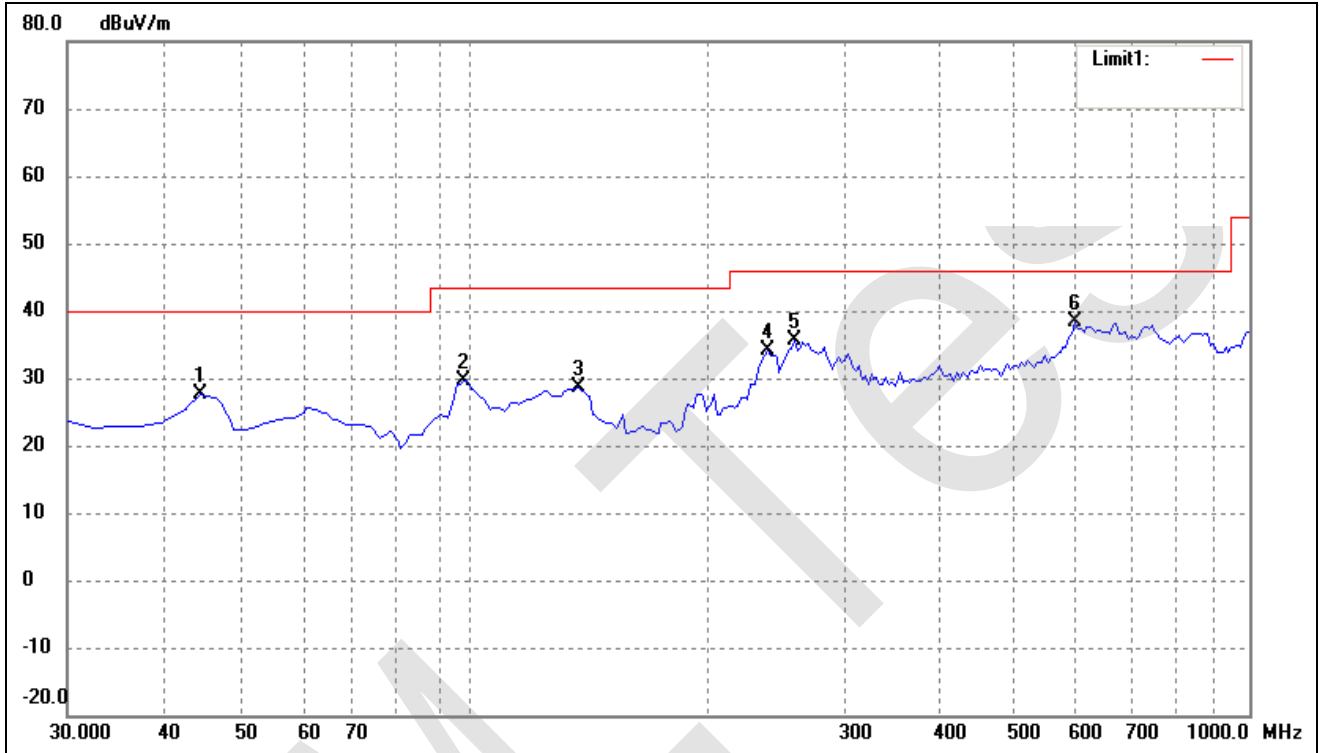
Test Specification: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	37.2750	22.55	4.79	27.34	40.00	-12.66	100	100	peak
2	136.7000	21.19	3.67	24.86	43.50	-18.64	100	100	peak
3	318.5750	17.77	12.29	30.06	46.00	-15.94	100	100	peak
4	439.8250	18.19	13.01	31.20	46.00	-14.80	100	100	peak
5	599.8750	17.82	19.30	37.12	46.00	-8.88	100	100	peak
6	757.5000	18.62	18.77	37.39	46.00	-8.61	100	100	peak

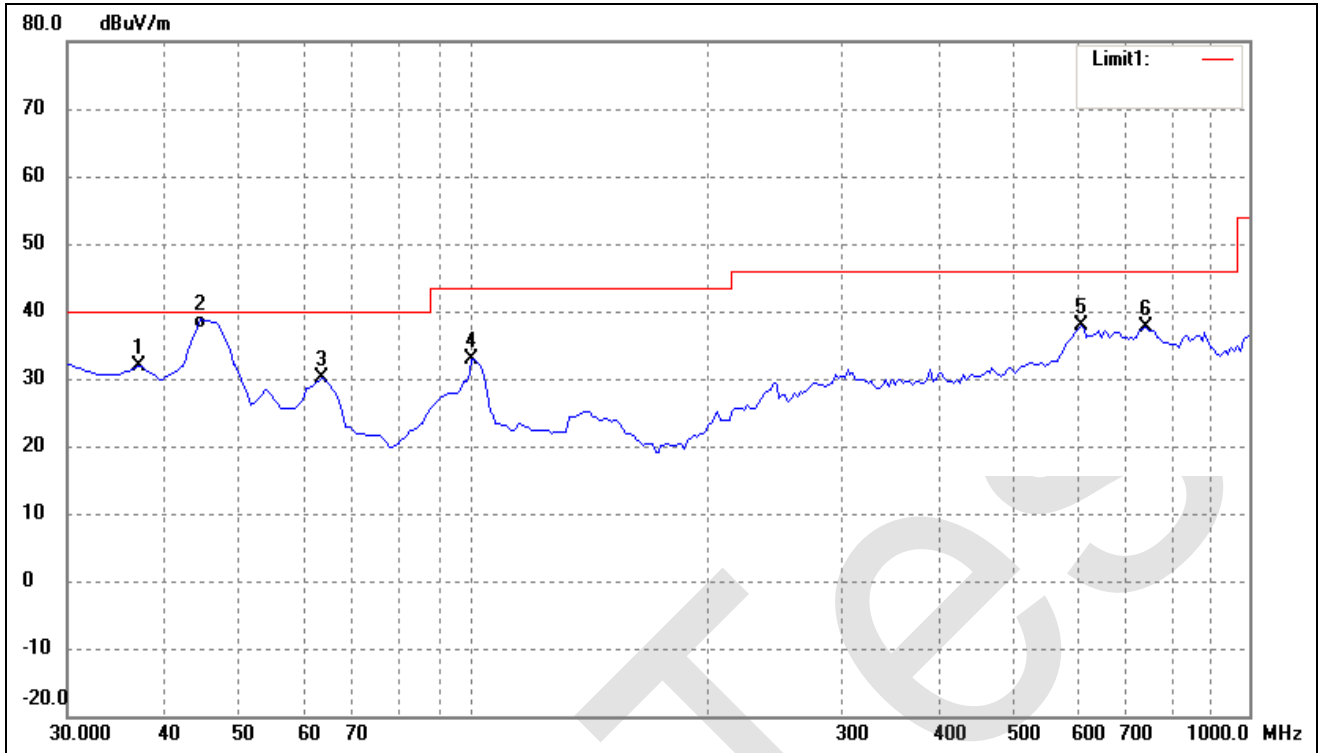
Plot of Radiated Emissions Test Data

EUT: Power adapter
 Tested Model: GT-41076-0624
 Operating Condition: TM1
 Comment: AC 120V/60Hz
 Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	44.5500	22.32	5.26	27.58	40.00	-12.42	100	100	peak
2	97.9000	24.73	4.81	29.54	43.50	-13.96	100	100	peak
3	136.7000	24.86	3.67	28.53	43.50	-14.97	100	100	peak
4	240.9750	24.82	9.37	34.19	46.00	-11.81	100	100	peak
5	260.3750	25.55	10.05	35.60	46.00	-10.40	100	100	peak
6	599.8750	19.07	19.30	38.37	46.00	-7.63	100	100	peak

Test Specification: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	37.2750	27.08	4.79	31.87	40.00	-8.13	100	100	peak
2	44.5500	32.10	5.26	37.36	40.00	-2.64	100	100	QP
3	63.9500	25.59	4.51	30.10	40.00	-9.90	100	100	peak
4	100.3250	27.75	5.13	32.88	43.50	-10.62	100	100	peak
5	607.1500	19.18	18.82	38.00	46.00	-8.00	100	100	peak
6	740.5250	17.99	19.53	37.52	46.00	-8.48	100	100	peak

EXHIBIT 1 - PRODUCT LABELING

Proposed FCC Label Format

This device complies with Part 15 of the FCC Rules.
Operation 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.

Specifications: Text is Black in color and is justified. Labels are printed in indelible ink on permanent adhesive backing or silk-screened onto the EUT or shall be affixed at a conspicuous location on the EUT. Where the EUT is constructed in two or more sections connected by wires and marketed together, the above statement is required to be affixed only to the main control unit. When the EUT is so small or for such use that it is not practicable to place the statement on it, the above information shall be placed in a prominent location in the instruction manual or pamphlet supplied to the user or, alternatively, shall be placed on the container in which the device is marketed.

Proposed Label Location on EUT

Test Model: GT-41076-0603

FCC Label Location



Test Model: GT-41076-0624

FCC Label Location



EXHIBIT 4 - USERS MANUAL

Information to Users

According to the FCC Part 15.19, 15.21 rules, for this EUT, the instructions or operation manual furnished the user shall include the following or similar statement, placed in a prominent location in the text of the manual:

FCC Caution

This device complies with part 15 of the FCC Rules. Operation 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.

NOTE: Any changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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