



**RADIATED SPURIOUS EMISSIONS PORTIONS OF
FCC CFR47 PART 22H & 24E**

**CERTIFICATION TEST REPORT
FOR**

CELL PHONE WITH GSM

**MODEL NUMBER: LG440G
FCC ID: ZNFLG440G**

**REPORT NUMBER: 12U14489-1B
ISSUE DATE: September 13, 2012**

Prepared for

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NVLAP Lab code: 100414-0

Revision History

Rev.	Date	Revisions	Revised By
---	08/03/12	Initial Issue	M.Ferrer
A	09/10/12	Updated Equipment list, ERP/ERIP data	M.Ferrer
B	09/13/12	Removed WCDMA data	M.Ferrer

TABLE OF CONTENTS

1. ATTESTATION OF TEST RESULTS.....4

2. TEST METHODOLOGY5

3. FACILITIES AND ACCREDITATION.....5

4. CALIBRATION AND UNCERTAINTY5

 4.1. *MEASURING INSTRUMENT CALIBRATION.....5*

 4.2. *SAMPLE CALCULATION.....5*

 4.3. *MEASUREMENT UNCERTAINTY.....5*

5. EQUIPMENT UNDER TEST6

 5.1. *DESCRIPTION OF EUT.....6*

 5.2. *MAXIMUM OUTPUT POWER.....6*

 5.3. *SOFTWARE AND FIRMWARE.....7*

 5.4. *WORST-CASE CONFIGURATION AND MODE7*

 5.5. *DESCRIPTION OF TEST SETUP.....8*

6. TEST AND MEASUREMENT EQUIPMENT10

7. RADIATED TEST RESULTS11

 7.1. *RADIATED POWER (ERP & EIRP).....11*

8. SETUP PHOTOS.....24

1. ATTESTATION OF TEST RESULTS

COMPANY NAME: LG Electronics Mobilecomm
1000 Sylvan Ave.
Englewood Cliffs, NJ 07632

EUT DESCRIPTION: LG Phone with GSM

MODEL: LG440G

SERIAL NUMBER: Prototype

DATE TESTED: July 3, 2012 – August 1, 2012

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC PART 22H & 24E	Pass

UL tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of any government.

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2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with TIA-603-C, FCC CFR 47 Part 2, FCC CFR 47 Part 22, FCC CFR Part 24, RSS-132 Issue 2, and RSS-133 Issue 5.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 333 Pfingsten Road, Northbrook, IL 60193, USA.

UL NBK is accredited by NVLAP, Laboratory Code 100414-0

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards

4.2. SAMPLE CALCULATION

Sample Calculations

Radiated Field Strength and Conducted Emissions data contained within this report is calculated on the following basis:

Field Strength (dBuV/m) = Meter Reading (dBuV) + AF (dB/m) - Gain (dB) + Cable Loss (dB)

Conducted Voltage (dBuV) = Meter Reading (dBuV) + Cable Loss (dB) + LISN IL (dB)

Conducted Current (dBuA) = Meter Reading (dBuV) + Cable Loss (dB) - Transducer Factor (dBohms)

4.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	UNCERTAINTY
Conducted Disturbance, 0.15 to 30 MHz	+/- 0.3 dB (k=2)
Radiated Disturbance, 30 to 1000 MHz	+/- 3.17 dB (k=2)

Uncertainty figures are valid to a confidence level of 95%.

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a phone with GSM / WCDMA wireless.

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum peak Conducted output powers as follows with using Anritsu Call Box

Part 22 Cellular Band

Frequency range (MHz)	Modulation	Conducted Output	
		dBm	mW
824.2 – 848.8	GSM	33.20	2089.3
	GPRS	32.90	1949.8

Part 24 PCS Band

Frequency range (MHz)	Modulation	Conducted Ouput	
		dBm	mW
1850.2-1909.8	GSM	30.10	1023.3
	GPRS	30.00	1000.0

5.3. SOFTWARE AND FIRMWARE

The EUT is linked with Anritsu MT8820C Communication Test Set.

5.4. WORST-CASE CONFIGURATION AND MODE

The worst-case channel for RF radiated emissions below 1GHz and AC conducted emissions are determined as the channel with the AC Power Adapter Source

Based on the investigation results, the highest peak power and enhanced data rate is the worst-case scenario for all measurements.

Worst-case modes below:

- For Cellular and PCS band: GPRS and EGPRS

For the fundamental investigation, since the EUT is a portable device that has three orientations; therefore X, Y and Z orientations have been investigated. The worst case was found to be at Y-position for all modes for GSM, GPRS modes.

5.5. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT (RF RADIATED TEST)

Description	Manufacturer	Model	Serial Number	FCC ID
USB plug	LG	MCS02WR	-	DoC

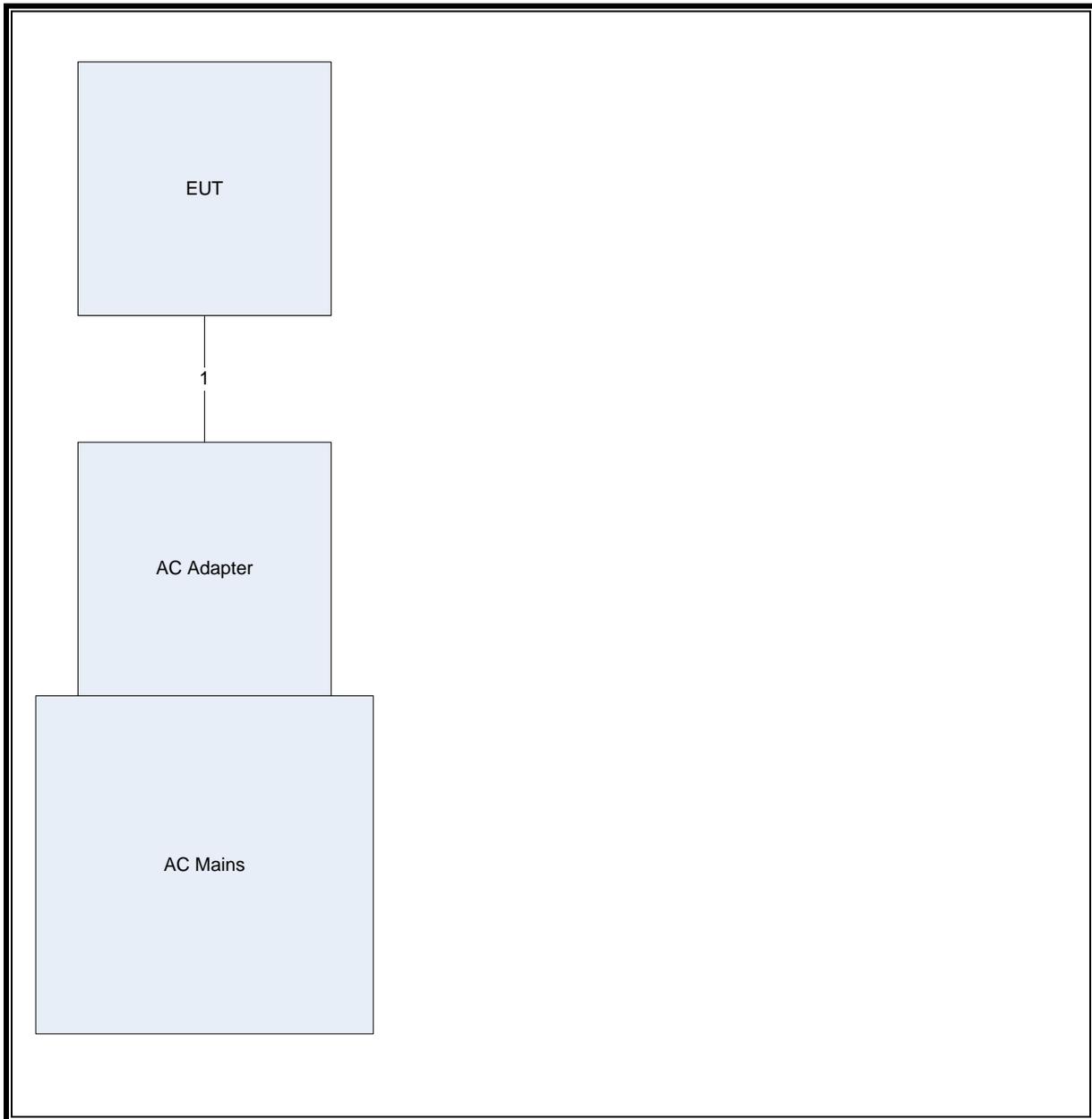
I/O CABLES (RF RADIATED TEST)

I/O CABLE LIST						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length	Remarks
1	USB	1	USB	USB	1.24m	Does not affect emissions

TEST SETUP

The EUT is a stand-alone device. A link is established between the EUT and the communication test set

SETUP DIAGRAM FOR RF RADIATED TESTS



6. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

TEST EQUIPMENT LIST				
Description	Manufacturer	Model	Asset	Cal Due
EMI Test Receiver	Rohde & Schwarz	ESCI	EMC4328	20121231
Bicon Antenna	Chase	VBA6106A	EMC4078	20130131
Log-P Antenna (RX)	Chase	UPA6109	EMC4258	20120928
Log-P Antenna (TX)	Chase	UPA6109	EMC4313	20130831
Spectrum Analyzer	Rhode & Schwarz	FSEK	EMC4182	20121231
Antenna Array	UL	BOMS	EMC4276	20121231
Signal Generator	Rohde & Schwarz	SML 03	EMC 4331	20121231
Signal Generator	Agilent	E8251A	EMC4243	20121231
Call Box	Anritsu	MT8820C	6200985429	20130913

7. RADIATED TEST RESULTS

7.1. RADIATED POWER (ERP & EIRP)

RULE PART(S)

FCC: §2.1046, §22.913, §24.232
RSS132 & RSS133

LIMITS

22.913(a) - The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.

24.232(c) - Mobile/portable stations are limited to 2 watts e.i.r.p. peak power and the equipment must employ means to limit the power to the minimum necessary for successful communications.

TEST PROCEDURE

ANSI / TIA / EIA 603C Clause 2.2.17

MODES TESTED

- GSM and GPRS

RESULTS

In the table of results the Voltage at the antenna includes signal generator level and cable loss
EUT level will be EUT measured level – Substitution measured +ERP Level (or EIRP level)

ERP CELL BANDS

Mode	Channel	f (MHz)	ERP	
			dBm	mW
GSM	128	824.20	32.52	1788.13
	190	836.60	32.11	1625.55
	251	848.80	31.89	1544.54
GPRS	128	824.20	33.12	2053.05
	190	836.60	32.16	1644.37
	251	848.80	32.07	1609.90

EIRP PCS BANDS

EUT	Channel	f (MHz)	EIRP	
			dBm	mW
GSM	512	1850.20	24.88	307.70
	661	1880.00	25.06	320.92
	810	1909.80	25.24	333.89
GPRS	512	1850.20	24.93	311.26
	661	1880.00	25.33	341.51
	810	1909.80	25.39	345.62

GSM (Cellular Band)

Description	Freq. MHz	Polarization	Voltage at antenna dBm	Substitution Peak Filed Strenght Measured dBuV/m	TX ant dBi	EIRP Level	ERP Level dBm	EUT Measured Peak Level dBuV/m	Delta EUT and Substitution dB	ERP EUT Level dBm	Limit dBm/MHz	Margin dB
GSM												
Low	824.2	Horizontal	-51.38	54.83	5.584	-45.796	-43.646	131	76.17	32.524	38.45	-5.926
		Vertical	-51.38	53.07	5.284	-46.096	-43.946	124.09	71.02	27.074	38.45	-11.376
Mid	836.6	Horizontal	-51.42	54.28	5.5	-45.92	-43.77	130.16	75.88	32.11	38.45	-6.34
		Vertical	-51.42	53.78	5.334	-46.086	-43.936	123.92	70.14	26.204	38.45	-12.246
Hi	848.8	Horizontal	-51.43	54.55	5.588	-45.842	-43.692	130.13	75.58	31.888	38.45	-6.562
		Vertical	-51.43	53.02	5.476	-45.954	-43.804	124.29	71.27	27.466	38.45	-10.984

GPRS (Cellular Band)

Description	Freq. MHz	Polarization	Voltage at antenna dBm	Substitution Peak Filed Strenght Measured dBuV/m	TX ant dBi	EIRP Level	ERP Level dBm	EUT Measured Peak Level dBuV/m	Delta EUT and Substitution dB	ERP EUT Level dBm	Limit dBm/MHz	Margin dB
GPRS Slot 1												
Low	824.2	Horizontal	-51.38	54.83	5.584	-45.796	-43.646	131.6	76.77	33.124	38.45	-5.326
		Vertical	-51.38	53.07	5.284	-46.096	-43.946	124.63	71.56	27.614	38.45	-10.836
Mid	836.6	Horizontal	-51.42	54.28	5.5	-45.92	-43.77	130.21	75.93	32.16	38.45	-6.29
		Vertical	-51.42	53.78	5.334	-46.086	-43.936	124.18	70.4	26.464	38.45	-11.986
Hi	848.8	Horizontal	-51.43	54.55	5.588	-45.842	-43.692	130.31	75.76	32.068	38.45	-6.382
		Vertical	-51.43	53.02	5.476	-45.954	-43.804	123.5	70.48	26.676	38.45	-11.774
GPRS Slot 2												
Low	824.2	Horizontal	-51.38	54.83	5.7004	-45.68	-43.53	128.47	73.64	30.1104	38.45	-8.3396
		Vertical	-51.38	53.07	5.7148	-45.665	-43.515	122.32	69.25	25.7348	38.45	-12.7152
Mid	836.6	Horizontal	-51.42	54.28	5.713	-45.707	-43.557	128.01	73.73	30.173	38.45	-8.277
		Vertical	-51.42	53.78	5.6785	-45.742	-43.592	121.9	68.12	24.5285	38.45	-13.9215
Hi	848.8	Horizontal	-51.43	54.55	5.7256	-45.704	-43.554	127.82	73.27	29.7156	38.45	-8.7344
		Vertical	-51.43	53.02	5.6427	-45.787	-43.637	121.19	68.17	24.5327	38.45	-13.9173

GSM (PCS Band)

Description	Freq. MHz	Polarization	Voltage at antenna dBm	Substitution Peak Filed Strenght Measured dBuV/m	TX ant dBi	EIRP Level	EUT Measured Peak Level dBuV/m	Delta EUT and Substitution dB	EIRP EUT Level dBm	Limit dBm/MHz	Margin dB
GSM											
Low	1850.2	Horizontal	-50.96	53.32	4.7313	-46.229	124.43	71.11	24.8813	33	-8.1187
		Vertical	-50.96	51.52	4.628	-46.332	121.52	70	23.668	33	-9.332
Mid	1880	Horizontal	-51.08	52.73	4.694	-46.386	124.18	71.45	25.064	33	-7.936
		Vertical	-51.08	50.56	4.4192	-46.661	121.76	71.2	24.5392	33	-8.4608
Hi	1909.8	Horizontal	-51.1	52.8	4.676	-46.424	124.46	71.66	25.236	33	-7.764
		Vertical	-51.1	51.02	4.332	-46.768	122.18	71.16	24.392	33	-8.608

GPRS (PCS Band)

Description	Freq. MHz	Polarization	Voltage at antenna dBm	Substitution Peak Filed Streight Measured dBuV/m	TX ant dBi	EIRP Level	EUT Measured Peak Level dBuV/m	Delta EUT and Substitution dB	EIRP EUT Level dBm	Limit dBm/MHz	Margin dB
GPRS Slot 1											
Low	1850.2	Horizontal	-50.96	53.32	4.7313	-46.229	124.48	71.16	24.9313	33	-8.0687
		Vertical	-50.96	51.52	4.628	-46.332	121.78	70.26	23.928	33	-9.072
Mid	1880	Horizontal	-51.08	52.73	4.694	-46.386	124.45	71.72	25.334	33	-7.666
		Vertical	-51.08	50.56	4.4192	-46.661	121.7	71.14	24.4792	33	-8.5208
Hi	1909.8	Horizontal	-51.1	52.8	4.676	-46.424	124.61	71.81	25.386	33	-7.614
		Vertical	-51.1	51.02	4.332	-46.768	122.19	71.17	24.402	33	-8.598
GPRS Slot 2											
Low	1850.2	Horizontal	-50.96	53.32	4.7313	-46.229	122.32	69	22.7713	33	-10.2287
		Vertical	-50.96	51.52	4.628	-46.332	119.68	68.16	21.828	33	-11.172
Mid	1880	Horizontal	-51.08	52.73	4.694	-46.386	122.31	69.58	23.194	33	-9.806
		Vertical	-51.08	50.56	4.4192	-46.661	119.53	68.97	22.3092	33	-10.6908
Hi	1909.8	Horizontal	-51.1	52.8	4.676	-46.424	122.38	69.58	23.156	33	-9.844
		Vertical	-51.1	51.02	4.332	-46.768	119.87	68.85	22.082	33	-10.918

FIELD STRENGTH OF SPURIOUS RADIATION

RULE PART(S)

FCC: §2.1053, §22.917, §24.238
IC: RSS-132, 4.5; RSS-133, 6.5

LIMIT

§22.917 (e) and §24.238 (a): Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log (P)$ dB

TEST PROCEDURE

For Cellular equipment - Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 100 kHz or 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

For PCS equipment - Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 1 MHz or 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

MODES TESTED:

- GSM and GPRS

RESULTS

One mode per channel was used (either GSM or GPRS) to determine any harmonics above noise floor. All harmonics found have a minimum margin of 12 dB or more to the -13dBm limit. Measurements at more than one mode were considered not necessary.

Lo CH (Cellular Band)

Description	Freq. MHz	Polarization	Voltage at antenna dBm	Substitution Peak Filed Streight Measured dBuV/m	TX ant dBi	EIRP Level	ERP Level dBm	EUT Measured Peak Level dBuV/m	Delta EUT and Substitution dB	ERP EUT Level dBm	Limit dBm/MHz	Margin dB
GPRS Slot 1 Lo	824.2											
2nd Harmonic	1648.4	Horizontal	-53.62	52.15	6.032	-47.588	-45.438	68.61	16.46	-28.978104	-13	-15.9781
		Vertical	-53.62	50.69	6.125	-47.495	-45.345	65.35	14.66	-30.684904	-13	-17.6849
5th Harmonic	4121	Horizontal	-56.16	49.33	8.935	-47.225	-45.075	54.17	4.84	-40.23537	-13	-27.2354
		Vertical	-56.16	49.7	8.977	-47.183	-45.033	52.02	2.32	-42.71283	-13	-29.7128
6th Harmonic	4945.2	Horizontal	-56.81	49.36	9.719	-47.091	-44.941	51.92	2.56	-42.381132	-13	-29.3811
		Vertical	-56.81	49.59	9.794	-47.016	-44.866	44.72	-4.87	-49.736428	-13	-36.7364
7th Harmonic	5769.4	Horizontal	-57.59	49.53	10.1	-47.487	-45.337	51.19	1.66	-43.676874	-13	-30.6769
		Vertical	-57.59	50.06	10.24	-47.346	-45.196	48.13	-1.93	-47.125628	-13	-34.1256
8th Harmonic	6593.6	Horizontal	-58.41	49.13	10.69	-47.718	-45.568	51.72	2.59	-42.97812	-13	-29.9781
		Vertical	-58.41	50.57	10.71	-47.697	-45.547	54.11	3.54	-42.00724	-13	-29.0072
9th Harmonic	7417.8	Horizontal	-59.32	49.53	11.86	-47.455	-45.305	46.12	-3.41	-48.715058	-13	-35.7151

Mid CH (Cellular Band)

Description	Freq. MHz	Polarization	Voltage at antenna dBm	Substitution Peak Filed Strenght Measured dBuV/m	TX ant dBi	EIRP Level	ERP Level dBm	EUT Measured Peak Level dBuV/m	Delta EUT and Substitution dB	ERP EUT Level dBm	Limit dBm/MHz	Margin dB
GSM Mid	836.6											
2nd Harmonic	1673.2	Horizontal	-53.67	52.17	5.956	-47.714	-45.564	68.2	16.03	-29.533992	-13	-16.534
		Vertical	-53.67	50.6	6.062	-47.608	-45.458	64.6	14	-31.458392	-13	-18.4584
5th Harmonic	4183	Horizontal	-56.29	50.94	9.06	-47.23	-45.08	57.15	6.21	-38.86951	-13	-25.8695
		Vertical	-56.29	51.33	9.087	-47.203	-45.053	53.3	1.97	-43.08309	-13	-30.0831
6th Harmonic	5019.6	Horizontal	-57.04	49.37	9.824	-47.216	-45.066	46.52	-2.85	-47.915968	-13	-34.916
7th Harmonic	5856.2	Horizontal	-57.89	48.1	10.21	-47.677	-45.527	51.27	3.17	-42.35684	-13	-29.3568
		Vertical	-57.89	49.28	10.33	-47.558	-45.408	51.6	2.32	-43.087568	-13	-30.0876
8th Harmonic	6692.8	Horizontal	-58.35	50.12	10.81	-47.537	-45.387	45.5	-4.62	-50.007	-13	-37.007
		Vertical	-58.35	50.8	10.83	-47.519	-45.369	49.96	-0.84	-46.209352	-13	-33.2094

Hi CH (Cellular Band)

Description	Freq. MHz	Polarization	Voltage at antenna dBm	Substitution Peak Filed Streight Measured dBuV/m	TX ant dBi	EIRP Level	ERP Level dBm	EUT Measured Peak Level dBuV/m	Delta EUT and Substitution dB	ERP EUT Level dBm	Limit dBm/MHz	Margin dB
GPRS Slot 1 Hi	848.8											
2nd Harmonic	1697.6	Horizontal	-53.73	52.24	5.881	-47.849	-45.699	67.98	15.74	-29.958656	-13	-16.9587
		Vertical	-53.73	50.79	5.999	-47.731	-45.581	63.18	12.39	-33.190856	-13	-20.1909
5th Harmonic	4244	Horizontal	-56.2	49.73	9.207	-46.993	-44.843	51.97	2.24	-42.6028	-13	-29.6028
		Vertical	-56.2	50.07	9.181	-47.019	-44.869	46.36	-3.71	-48.5792	-13	-35.5792
6th Harmonic	5092.8	Horizontal	-57.11	49.63	9.891	-47.219	-45.069	48.93	-0.7	-45.768624	-13	-32.7686
		Vertical	-57.11	49.92	9.869	-47.241	-45.091	45.52	-4.4	-49.49124	-13	-36.4912
7th Harmonic	5941.6	Horizontal	-57.81	49.43	10.36	-47.452	-45.302	50.81	1.38	-43.922272	-13	-30.9223
		Vertical	-57.81	50.83	10.43	-47.381	-45.231	52.58	1.75	-43.48056	-13	-30.4806
8th Harmonic		Vertical	-58.55	49.44	10.93	-47.618	-45.468	48.22	-1.22	-46.687888	-13	-33.6879

Lo CH (PCS Band)

Description	Freq. MHz	Polarization	Voltage at antenna dBm	Substitution Peak Filed Strenght Measured dBuV/m	TX ant dBi	EIRP Level	EUT Measured Peak Level dBuV/m	Delta EUT and Substitution dB	EIRP EUT Level dBm	Limit dBm/MHz	Margin dB
GPRS Slot 1 Lo	1850.2										
2nd Harmonic	3700.4	Horizontal	-43.58	56.97	8.42	-35.16	66.26	9.29	-25.870196	-13	-12.8702
		Vertical	-43.58	59.38	8.359	-35.221	66.58	7.2	-28.020876	-13	-15.0209
3rd Harmonic	5550.6	Horizontal	-44.3	59.62	10.19	-34.111	53.34	-6.28	-40.390566	-13	-27.3906
		Vertical	-44.3	61.01	10.15	-34.149	49.32	-11.69	-45.839026	-13	-32.839
4th Harmonic	7400.8	Horizontal	-45.18	60.35	11.86	-33.322	50.42	-9.93	-43.251688	-13	-30.2517
		Vertical	-45.18	62.51	11.81	-33.371	51.32	-11.19	-44.561072	-13	-31.5611

Mid CH (PCS Band)

Description	Freq. MHz	Polarization	Voltage at antenna dBm	Substitution Peak Filed Strenght Measured dBuV/m	TX ant dBi	EIRP Level	EUT Measured Peak Level dBuV/m	Delta EUT and Substitution dB	EIRP EUT Level dBm	Limit dBm/MHz	Margin dB
GPRS Slot 1 Mid	1880										
2nd Harmonic	3760	Horizontal	-51.58	51.39	8.391	-43.189	64.43	13.04	-30.1494	-13	-17.1494
		Vertical	-51.58	54.32	8.229	-43.351	66.85	12.53	-30.8214	-13	-17.8214
3rd Harmonic	5640	Horizontal	-51.69	54.01	10.14	-41.546	47.29	-6.72	-48.2664	-13	-35.2664
4th Harmonic	7520	Horizontal	-52.17	52.5	11.91	-40.259	46.19	-6.31	-46.5692	-13	-33.5692
		Vertical	-52.17	54.03	11.95	-40.223	52.1	-1.93	-42.1528	-13	-29.1528
6th Harmonic	11280	Horizontal	-52.19	61.63	13.15	-39.037	55.95	-5.68	-44.7172	-13	-31.7172
		Vertical	-52.19	61.81	13.13	-39.061	54.75	-7.06	-46.1214	-13	-33.1214
7th Harmonic	13160	Horizontal	-52.55	63.59	13.6	-38.949	60.69	-2.9	-41.8488	-13	-28.8488
9th Harmonic	16920	Horizontal	-53.65	62.27	14.32	-39.33	59.74	-2.53	-41.8602	-13	-28.8602
		Vertical	-53.65	63.67	14.3	-39.354	59.03	-4.64	-43.994	-13	-30.994

HI CH (PCS Band)

Description	Freq. MHz	Polarization	Voltage at antenna dBm	Substitution Peak Filed Strenght Measured dBuV/m	TX ant dBi	EIRP Level	EUT Measured Peak Level dBuV/m	Delta EUT and Substitution dB	EIRP EUT Level dBm	Limit dBm/MHz	Margin dB
GPRS Slot 1 Hi	1909.8										
2nd Harmonic	3819.6	Horizontal	-43.59	56.65	8.404	-35.186	61.81	5.16	-30.026072	-13	-17.0261
		Vertical	-43.59	60.18	8.168	-35.422	64.48	4.3	-31.121952	-13	-18.122
3rd Harmonic	5729.4	Horizontal	-44.42	59.95	10.09	-34.328	43.7	-16.25	-50.578474	-13	-37.5785
		Vertical	-44.42	60.62	10.23	-34.191	46.88	-13.74	-47.930828	-13	-34.9308
4th Harmonic	7639.2	Horizontal	-45.32	57.01	11.99	-33.327	48.59	-8.42	-41.74656	-13	-28.7466
		Vertical	-45.32	58.79	12.01	-33.307	54.54	-4.25	-37.556616	-13	-24.5566
6th Harmonic	11458.8	Horizontal	-45.93	66.63	13.16	-32.769	60.58	-6.05	-38.819468	-13	-25.8195
		Vertical	-45.93	67.43	13.13	-32.797	57.62	-9.81	-42.6073	-13	-29.6073
7th Harmonic	13368.6	Horizontal	-45.58	64.92	13.59	-31.991	59	-5.92	-37.910506	-13	-24.9105
		Vertical	-45.58	65.83	13.62	-31.96	57.15	-8.68	-40.64	-13	-27.64
9th Harmonic	17188.2	Horizontal	-47.07	66.1	14.51	-32.562	59	-7.1	-39.661882	-13	-26.6619
		Vertical	-47.07	67.56	14.48	-32.59	57.25	-10.31	-42.9	-13	-29.9