



FCC TEST REPORT

Issued to

CORPORATIVO LANIX S.A. DE C.V.

For

GSM mobile phone

Model Name:

LX5

Brand Name:

LANIX

Trade Name:

LANIX

FCC ID:

ZC4LX5

Standard:

47 CFR Part 2

47 CFR Part 22 Subpart H

47 CFR Part 24 Subpart E

Test date:

September 09, 2011- September 15, 2011

Issue date:

April 24, 2012

Shenzhen Morlabi ogy Co., Ltd.

2512.4.24 Date



IEEE 1725







Date

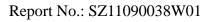








The report refers only to the sample tested and does not apply to the bulk. This report is issued in confidence to the client and it will be strictly treated as such by the Shenzhen MORLAB Communication Technology Co., Ltd. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the Shenzhen MORLAB Telecommunication Co., Ltd to his customer. Supplier or others persons directly concerned. Shenzhen MORLAB Telecommunication Co., Ltd will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report. In the event of the improper use of the report, Shenzhen MORLAB Telecommunication Co., Ltd reserves the rights to withdraw it and to adopt any other remedies which may be appropriate





1.0

April 24, 2012

		TAI	BLE OF CONTENTS	
1.	GENE	RAL INFORMATION		3
1.1	EUT I	Description		3
1.2	Test St	andards and Results		4
1.3	Facilit	ies and Accreditations		5
2.	47 CF	R PART 2, PART 22H & 2	24E REQUIREMENTS	6
2.1	Condu	cted RF Output Power		6
2.2	99% C	Occupied Bandwidth		.17
2.3	Freque	ency Stability		.21
2.4	Condu	cted Out of Band Emission	ons	.23
2.5	Band l	Edge		.30
2.6	Transı	nitter Radiated Power (E	IRP/ERP)	.33
2.7	Radiat	ted Out of Band Emission	ns	.39
Ī			Change History	
	Issue	Date	Reason for change	

First edition



1. GENERAL INFORMATION

1.1 EUT Description

EUT Type: GSM mobile phone

Serial No.....: (n.a, marked #1 by test site)

Hardware Version: V1.0

Software Version ZV268A_45A0_V1_0_6

Applicant CORPORATIVO LANIX S.A. DE C.V.

CARRETERA INTERNACIONAL A NOGALES KM 8.5 C.P.

83160 HERMOSILLO SONORA, MEXICO

Manufacturer: Shanghai Huaqin Telecom Technology Co., Ltd.

NO.1 Building,399 Keyuan Road, Zhangjiang Hi-Tech Park,

Pudong New Area, Shanghai, China 201203

Frequency Range: GSM 850MHz:

Tx: 824.20 - 848.80MHz (at intervals of 200kHz);

Rx: 869.20 - 893.80MHz (at intervals of 200kHz)

GSM 1900MHz:

Tx: 1850.20 - 1909.80MHz (at intervals of 200kHz);

Rx: 1930.20 - 1989.80MHz (at intervals of 200kHz)

Multislot Class Multislot Class 10

Antenna Type.....: PIFA

Modulation Type....: GMSK

Emission Designators...: 300KGXW

- Note 1: The transmitter (Tx) frequency arrangement of the Cellular 850MHz band used by the EUT can be represented with the formula F(n)=824.2+0.2*(n-128), 128<=n<=251; the lowest, middle, highest channel numbers (ARFCHs) used and tested in this report are separately 128 (824.2MHz), 190 (836.6MHz) and 251 (848.8MHz).
- Note 2: The transmitter (Tx) frequency arrangement of the PCS 1900MHz band used by the EUT can be represented with the formula F(n)=1850.2+0.2*(n-512), 512<=n<=810; the lowest, middle and highest channel numbers (ARFCHs) used and tested in this report are separately 512 (1850.2MHz), 661 (1880.0MHz) and 810 (1909.8MHz).
- Note 3: The GPRS was tested under 4 time-slots mode.
- *Note 4:* For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.



1.2 Test Standards and Results

The objective of the report is to perform testing according to 47 CFR Part 2, Part 22 and Part 24 for the EUT FCC ID Certification:

No.	Identity	Document Title
1	47 CFR Part 2	Frequency Allocations and Radio Treaty Matters; General
	(10-1-09 Edition)	Rules and Regulations
2	47 CFR Part 22	Public Mobile Services
	(10-1-09 Edition)	
3	47 CFR Part 24	Personal Communications Services
	(10-1-09 Edition)	

Test detailed items/section required by FCC rules and results are as below:

No.	Section	Description	Result
1	2.1046	Conducted RF Output Power	PASS
2	2.1049	20dB Occupied Bandwidth	PASS
3	2.1055	Frequency Stability	PASS
	22.355		
	24.235		
4	2.1051	Conducted Out of Band Emissions	PASS
	2.1057		
	22.917		
	24.238		
5	2.1051	Band Edge	PASS
	2.1057		
	22.917		
	24.238		
6	22.913	Transmitter Radiated Power (EIPR/ERP)	PASS
	24.232		
7	2.1053	Radiated Out of Band Emissions	PASS
	2.1057		
	22.917		
	24.238		

NOTE: Measurement method according to ANSI/TIA-603-D 2010.



1.3 Facilities and Accreditations

1.3.1 Facilities

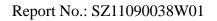
Shenzhen Morlab Communications Technology Co., Ltd. Morlab Laboratory is a testing organization accredited by China National Accreditation Service for Conformity Assessment (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L3572.

All measurement facilities used to collect the measurement data are located at 3/F, Electronic Testing Building, Shahe Road, Xili, Nanshan District, Shenzhen, 518055 P. R. China. The test site is constructed in conformance with the requirements of ANSI C63.7, ANSI C63.4 and CISPR Publication 22; the FCC registration number is 741109.

1.3.2 Test Environment Conditions

During the measurement, the environmental conditions were within the listed ranges:

Temperature (°C):	15 - 35
Relative Humidity (%):	30 -60
Atmospheric Pressure (kPa):	86-106





2. 47 CFR PART 2, PART 22H & 24E REQUIREMENTS

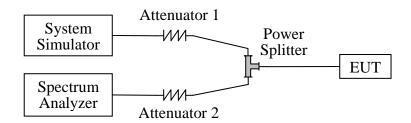
2.1 Conducted RF Output Power

2.1.1 Requirement

According to FCC section 2.1046(a), for transmitters other than single sideband, independent sideband and controlled carrier radiotelephone, power output shall be measured at the RF output terminals when the transmitter is adjusted in accordance with the tune-up procedure to give the values of current and voltage on the circuit elements specified in FCC section 2.1033(c)(8).

2.1.2 Test Description

1. Test Setup:



The EUT, which is powered by the Battery, is coupled to the Spectrum Analyzer (SA) and the System Simulator (SS) with Attenuators through the Power Splitter; the RF load attached to the EUT antenna terminal is 500hm; the path loss as the factor is calibrated to correct the reading. The EUT is commanded by the SS to operate at the maximum output power i.e. Power Control Level (PCL) = 5 and Power Class = 4. A call is established between the EUT and the SS.

2. Equipments List:

Description	Manufacturer	Model	Serial No.	Cal. Date
System Simulator	Agilent	E5515C	GB43130131	2011.05
Spectrum Analyzer	Agilent	E7405A	US44210471	2011.05
Power Splitter	Weinschel	1506A	NW521	(n.a.)
Attenuator 1	Resnet	20dB	(n.a.)	(n.a.)
Attenuator 2	Resnet	3dB	(n.a.)	(n.a.)

2.1.3 Test Result

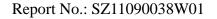
Here the lowest, middle and highest channels are selected to perform testing to verify the conducted RF output power of the EUT. For the GSM 850MHz operates at PCL=5 (where Power Class is 4), the



rated conducted RF output power is 33dBm, and For the GSM 1900MHz operates at PCL=0 (where Power Class is 1), the rated conducted RF output power is 30dBm.

1. Test Verdict:

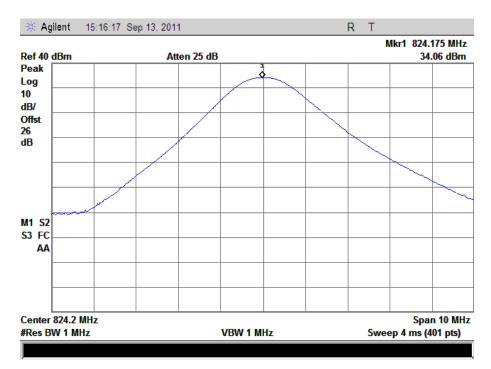
Dand	Channel	Frequency	Measured	Output Power	Limit	Vandiat
Band	Channel	(MHz)	dBm	Refer to Plot	dBm	Verdict
CCM	128	824.1	34.06			PASS
GSM 850MHz	190	836.6	34.00	Plot A1 to A3	35	PASS
830MHZ	251	848.7	33.95			PASS
CCM	512	1850.1	30.09			PASS
GSM 1900MHz	661	1879.9	30.04	Plot B1 to B3	32	PASS
1900MHZ	810	1909.8	29.55			PASS
CDDC	128	824.1	33.43	Plot G1 to G3		PASS
GPRS 850MHz	190	836.5	33.14	3down link	35	PASS
830MHZ	251	848.7	33.15	2up link		PASS
GPRS	512	1850.2	29.45	Plot H1 to H3		PASS
1900MHz	661	1879.9	29.54	3down link	32	PASS
1900MHZ	810	1909.8	29.65	2up link		PASS
GPRS	128	824.2	32.23	Plot I1 to I3		PASS
850MHz	190	836.5	33.88	4down link	35	PASS
8301/1112	251	848.7	33.88	1up link		PASS
CDDC	512	1850.0	30.08	Plot J1 to J3		PASS
GPRS 1900MHz	661	1879.9	30.12	4down link	32	PASS
1900MITZ	810	1909.7	30.45	1up link		PASS



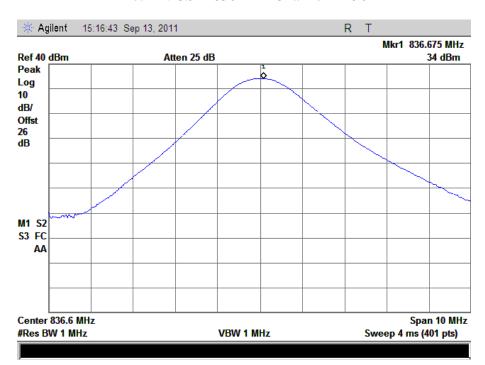


2. Test Plot

Plot A1: GSM 850MHz Channel = 128



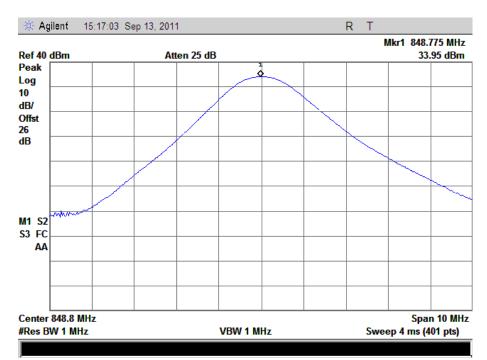
Plot A2: GSM 850MHz Channel = 190



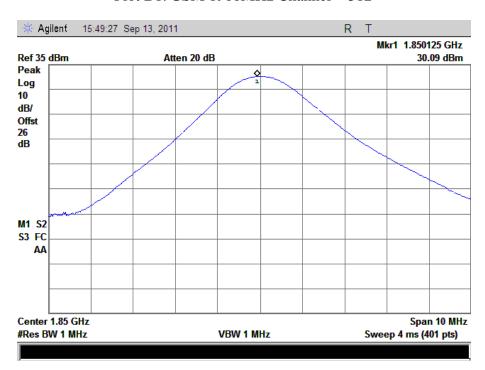


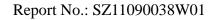






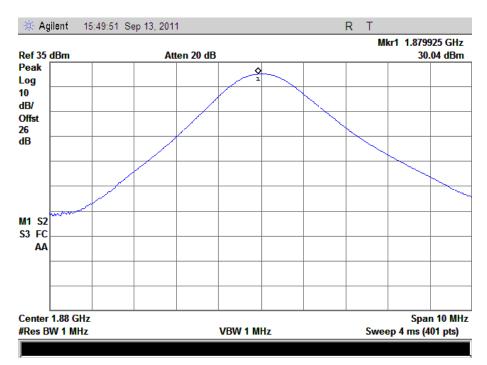
Plot B1: GSM 1900MHz Channel = 512



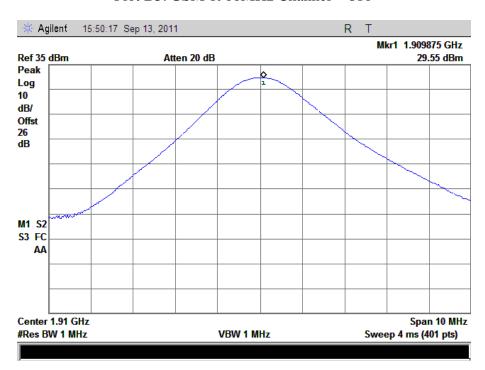


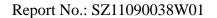




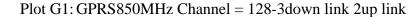


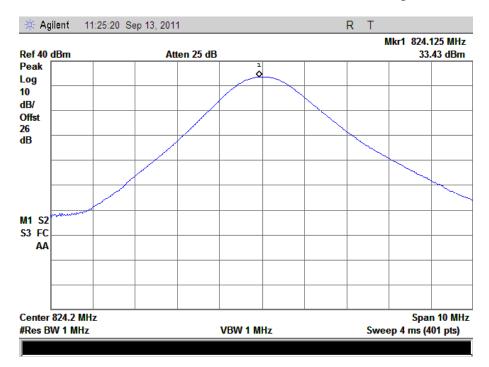
Plot B3: GSM 1900MHz Channel = 810



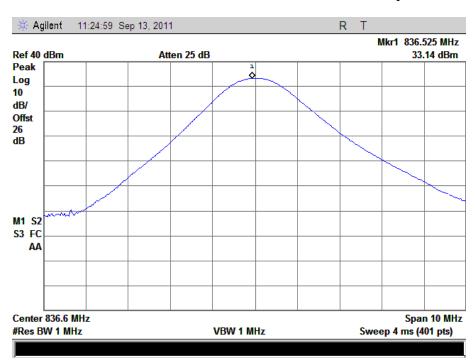


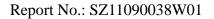




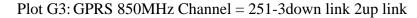


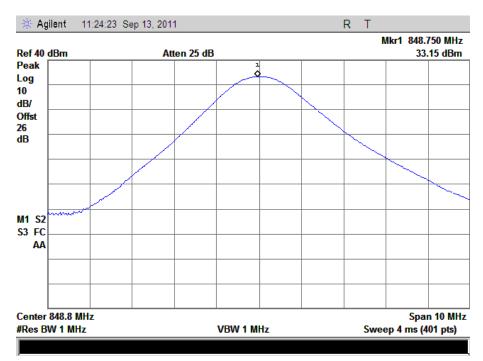
Plot G2: GPRS 850MHz Channel = 190-3down link 2up link



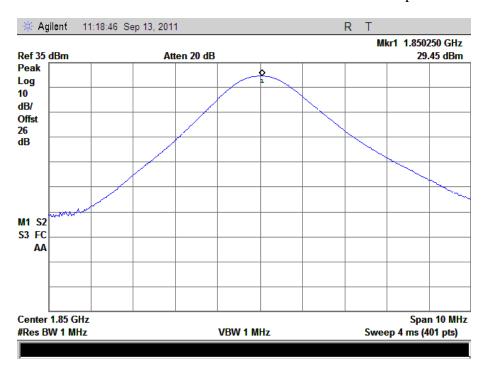




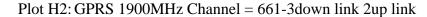


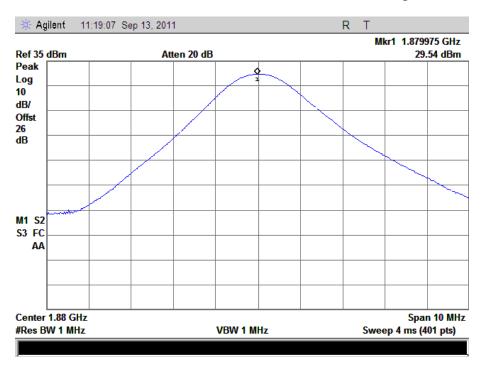


Plot H1: GPRS 1900MHz Channel = 512-3down link 2up link

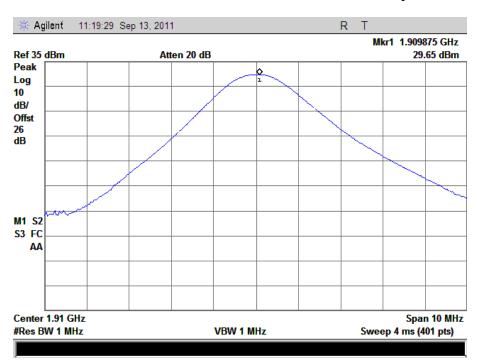


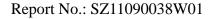




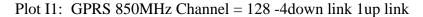


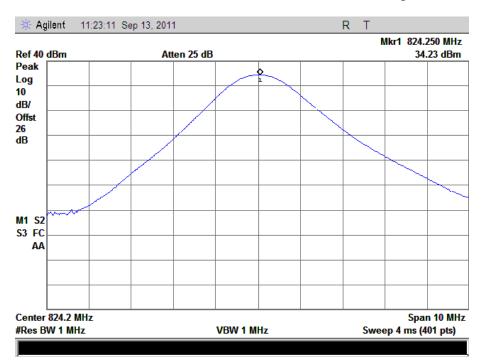
Plot H3: GPRS 1900MHz Channel = 810-3down link 2up link



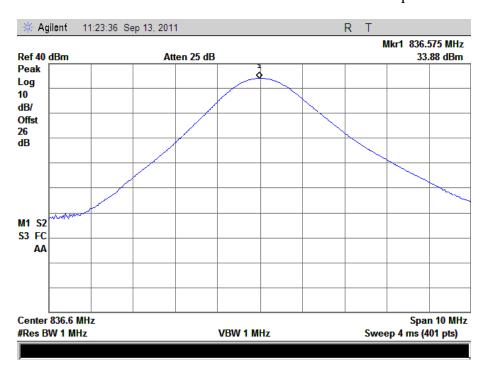


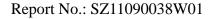




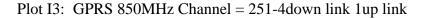


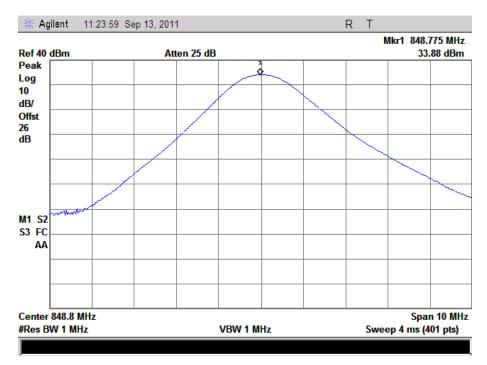
Plot I2: GPRS 850MHz Channel = 190-4down link 1up link



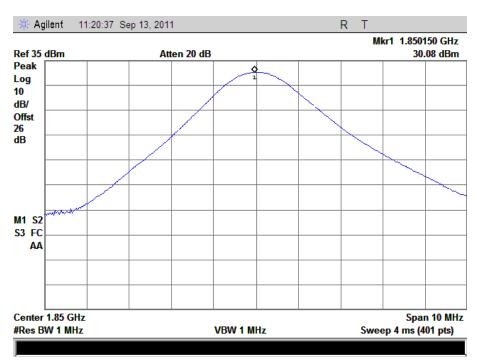


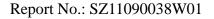




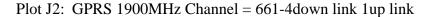


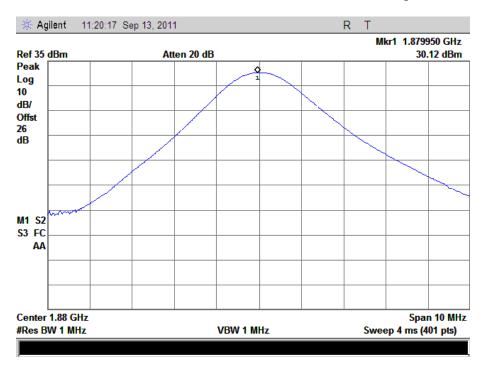
Plot J1: GPRS 1900MHz Channel = 512-4down link 1up link



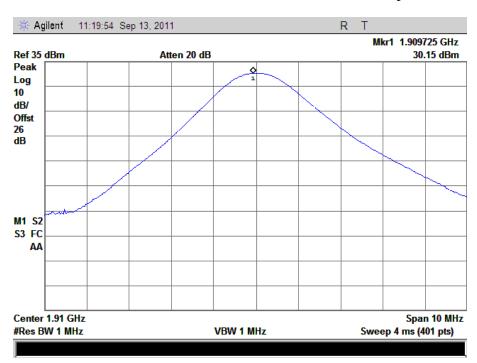








Plot J3: GSM1900MHz Channel = 810-4down link 1up link





2.2 99% Occupied Bandwidth

2.2.1 Definition

According to FCC section 2.1049, the occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission.

Occupied bandwidth is also known as the 99% emission bandwidth.

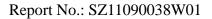
2.2.2 Test Description

See section 2.1.2 of this report.

2.2.3 Test Verdict

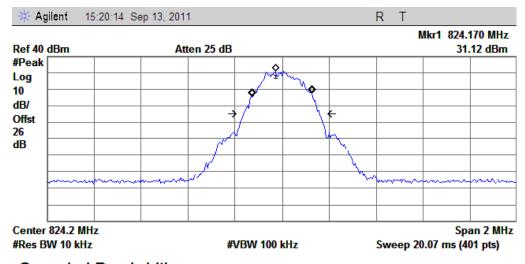
Here the lowest, middle and highest channels are tested to record the 99% occupied bandwidth Test Verdict:

Band Channel Fre		Frequency (MHz)	Measured 99% Occupied Bandwidth (kHz)	Refer to Plot
CCM	128	824.1	247.7259	Plot A
GSM 850MHz	190	836.5	248.2947	Plot B
830MHZ	251	848.7	245.2808	Plot C
CCM	512	1850.2	243.3654	Plot D
GSM 1900MHz	661	1880.0	251.0824	Plot E
1900MHZ	810	1909.7	245.5848	Plot F





3. Test Plots:

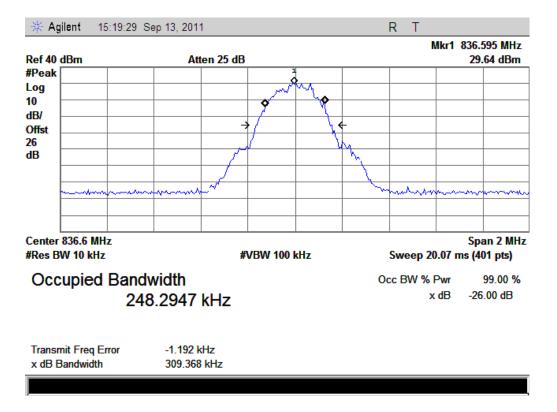


Occupied Bandwidth 247.7259 kHz

Occ BW % Pwr 99.00 % x dB -26.00 dB

Transmit Freq Error 668.533 Hz x dB Bandwidth 320.929 kHz

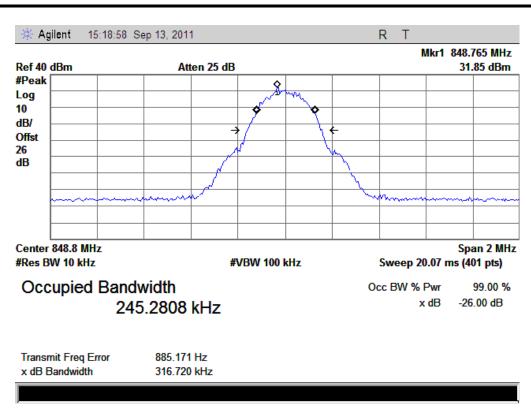
(Plot A: GSM 850MHz Channel = 128)



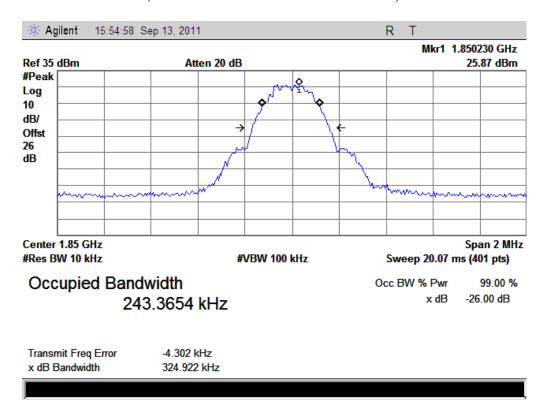
(Plot B: GSM 850MHz Channel = 190)







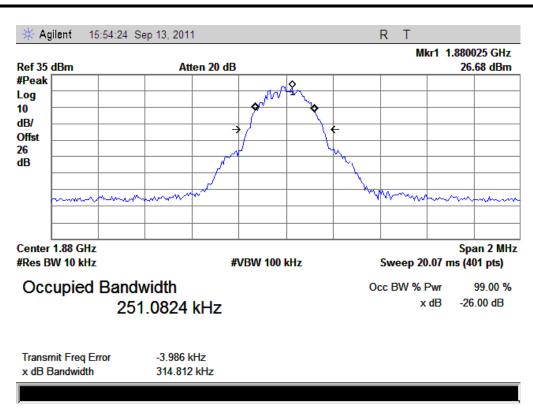
(Plot C: GSM 850MHz Channel = 251)



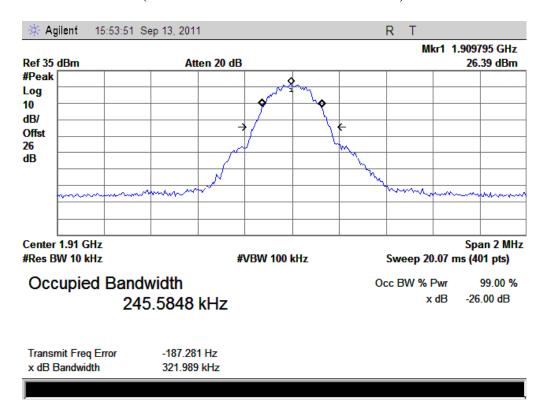
(Plot D: GSM 1900MHz Channel = 512)







(Plot E: GSM 1900MHz Channel = 661)



(Plot F: GSM 1900MHz Channel = 810)



2.3 Frequency Stability

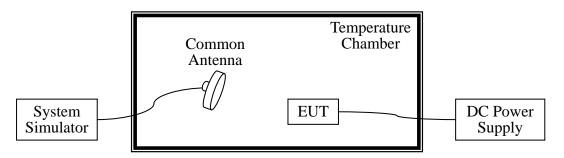
2.3.1 Requirement

According to FCC section 22.355 and FCC section 24.235, the frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block. According to FCC section 2.1055, the test conditions are:

- (a) The temperature is varied from -30° C to $+50^{\circ}$ C at intervals of not more than 10° C.
- (b) For hand carried battery powered equipment, the primary supply voltage is reduced to the battery operating end point which shall be specified by the manufacture. The supply voltage shall be measured at the input to the cable normally provided with the equipment, or at the power supply terminals if cables are not normally provided.

2.3.2 Test Description

1. Test Setup:



The EUT, which is powered by the DC Power Supply directly, is located in the Temperature Chamber. The EUT is commanded by the System Simulator (SS) to operate at the maximum output power i.e. Power Control Level (PCL) = 5 and Power Class = 4. A call is established between the EUT and the SS via a Common Antenna.

2. Equipments List:

Description	Manufacturer	Model	Serial No.	Cal. Date
System Simulator	Agilent	E5515C	GB43130131	2011.05
DC Power Supply	Good Will	GPS-3030DD	EF920938	2011.05
Temperature	YinHe Experimental	HL4003T	(n.a.)	2011.05
Chamber	Equip.			

2.3.3 Test Verdict

The nominal, highest and lowest extreme voltages are separately 3.7VDC, 4.2VDC and 3.5VDC, which are specified by the applicant; the normal temperature here used is 25°C. The frequency



deviation limit of GSM 850MHz band is $\pm 2.5 ppm,$ and GSM 1900MHz is $\pm 1 ppm$

	Test Conditions		Frequency Deviation							
Band	Power	Temperat	Chann	iel = 128	Chann	el = 190	Chann	nel = 251	Verdict	
Dana	(VDC)	ure (°C)	(824.	2MHz)	(836.	6MHz)	(848.	8MHz)	verturet	
	(VDC)	ure (c)	Hz	Limits	Hz	Limits	Hz	Limits		
		-30	27.12		27.82		25.74			
		-20	26.83		29.70		25.74			
		-10	23.28		28.12		31.14			
		0	25.11		21.06		25.17			
GSM	3.8	+10	-23.13		13.07		25.47			
850MHz		+20	-10.39	± 2060.5	-12.76	±2091.5	-7.61	±2122	PASS	
05011112		+30	17.75		-2.05		6.09			
		+40	5.31		-33.77		15.49			
		+50	-12.19		5.39		10.19			
	4.2	+25	20.74		19.65		8.71			
	3.6	+25	-27.28		-26.96		-25.27			
	Test C	onditions	Frequency Deviation							
Band	Power (VDC)	Power Temperat	Channel $= 512$		Chann	el = 661	Channel = 810		Verdict	
Dana			1	(1850.2MHz)		(1880.0MHz)		(1909.8MHz)		verdict
			ure (c)	Hz	Limits	Hz	Limits	Hz	Limits	
		-30	29.30		27.82		29.47			
		-20	29.22		29.45		29.30			
		-10	25.19		28.17		27.12			
		0	29.37		-3.20		11.82			
GSM	3.8	+10	13.97		20.04		19.77			
1900MHz		+20	22.42	±1850.2	-14.29	±1880.0	-22.73	±1909.8	PASS	
190011112		+30	18.57		-27.62		-22.22			
		+40	-19.93		-17.97		22.21			
		+50	23.76		-18.23		-22.22			
	4.2	+25	-21.20		27.16		22.63			
	3.6	+25	-19.17		-15.31		-15.15			



2.4 Conducted Out of Band Emissions

2.4.1 Requirement

According to FCC section 22.917(a) and FCC section 24.238(a), 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. This calculated to be -13dBm.

2.4.2 Test Description

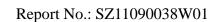
See section 2.1.2 of this report.

2.4.3 Test Result

The measurement frequency range is from 30MHz to the 10th harmonic of the fundamental frequency. The lowest, middle and highest channels are tested t80 verify the out of band emissions.

1. Test Verdict:

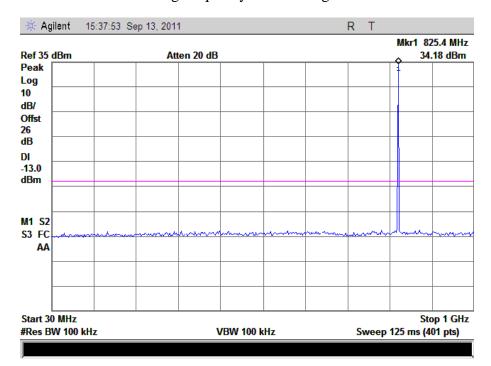
Band	Channe 1	ne Frequency (MHz) Measured Max. Spurious Emission (dBm) Refer to Plot		Limit (dBm)	Verdic t	
CCM	128	824.2	-30.00	Plot A		PASS
GSM 850MHz	190	836.6	-30.09	Plot B	-13	PASS
830MHZ	251	848.8	-30.74	Plot C		PASS
CCM	512	1850.2	-32.76	Plot D		PASS
GSM 1900MHz	661	1880.0	-32.20	Plot E	-13	PASS
1900MITZ	810	1909.8	-33.07	Plot F		PASS



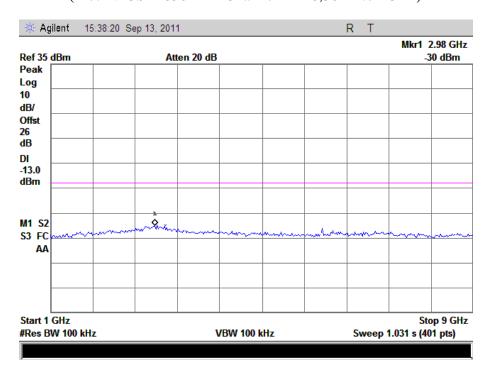


2. Test Plots for the Whole Measurement Frequency Range:

Note: the power of the EUT transmitting frequency should be ignored.

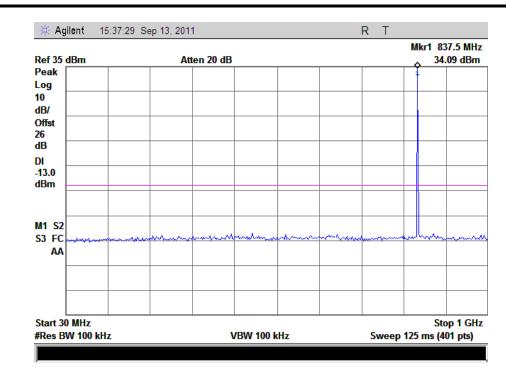


(Plot A: GSM 850MHz Channel = 128,30Hz to 1GHz)

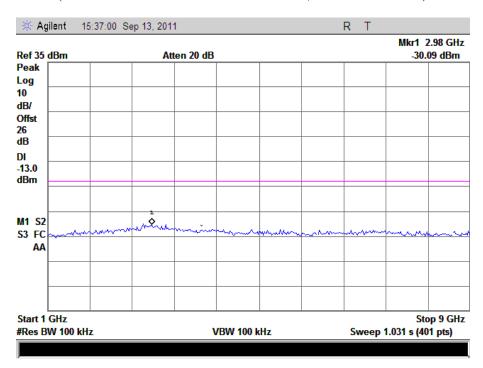


(Plot A: GSM 850MHz Channel = 128, 1GHz to 9GHz)



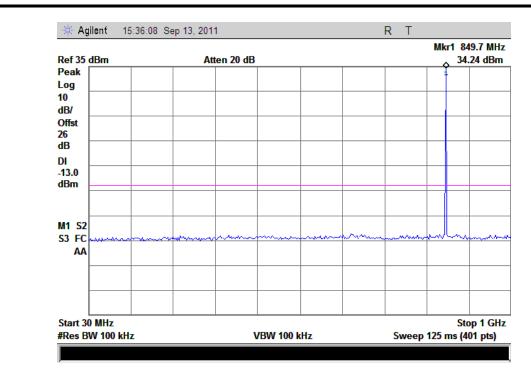


(Plot B: GSM 850MHz Channel = 190, 30MHz to 1GHz)

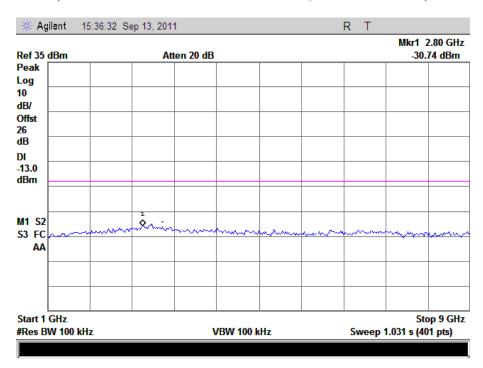


(Plot B: GSM 850MHz Channel = 190, 1GHz to 9GHz)



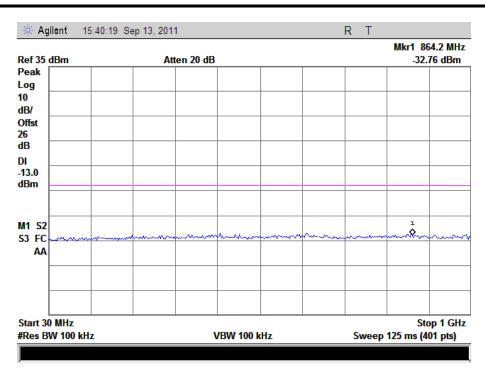


(Plot C: GSM 850 MHz Channel = 251, 30MHz to 1GHz)

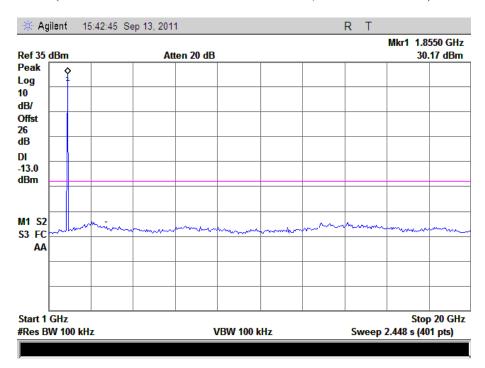


(Plot C: GSM 850MHz Channel = 251, 1GHz to 9GHz)



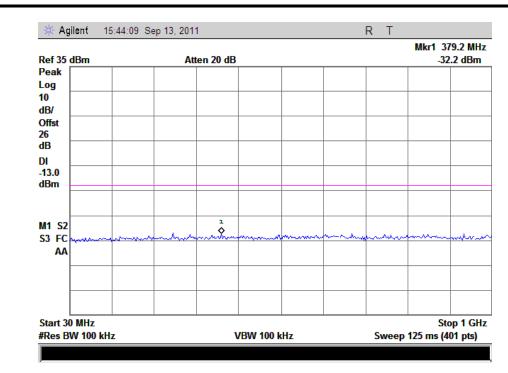


(Plot D: GSM 1900MHz Channel = 512, 30MHz to 1GHz)

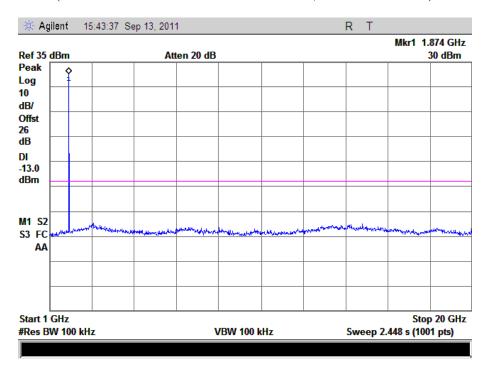


(Plot D: GSM 1900MHz Channel = 512, 1GHz to 20GHz)



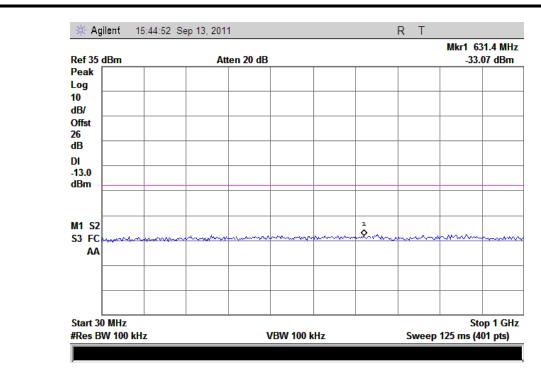


(Plot E: GSM 1900MHz Channel = 661, 30MHz to 1GHz)

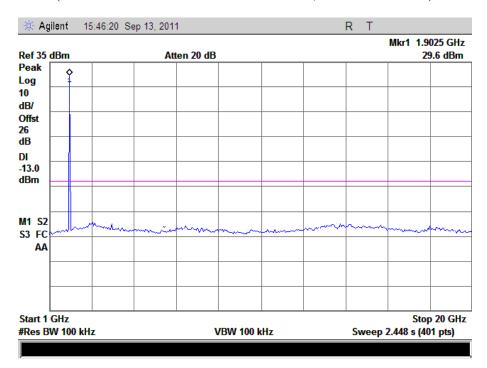


(Plot E: GSM 1900MHz Channel = 661, 1GHz to 20GHz)





(Plot F: GSM 1900MHz Channel = 810, 30MHz to 1GHz)



(Plot F: GSM 1900MHz Channel = 810, 1GHz to 20GHz)



2.5 Band Edge

2.5.1 Requirement

According to FCC section 22.917(b) and FCC section 24.238(b), in the 1MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth (26dB emission bandwidth) of the fundamental emission of the transmitter may be employed.

2.5.2 Test Description

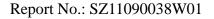
See section 2.1.2 of this report.

2.5.3 Test Result

The lowest and highest channels are tested to verify the band edge emissions.

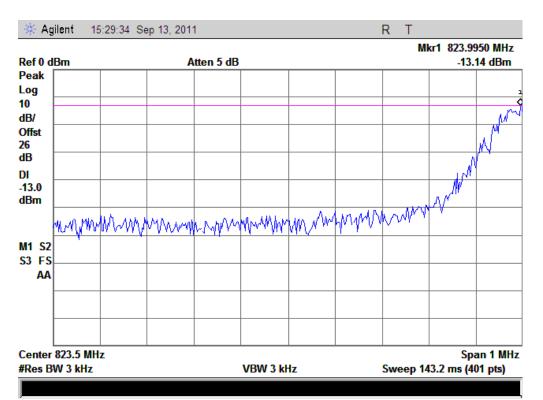
1. Test Verdict:

Band	Channel	Frequency (MHz)	Measured Max. Band Edge Emission (dBm)	Refer to Plot	Limit (dBm)	Verdict
GSM	128	823.9	-13.14	Plat A	-13	PASS
850MHz	251	848.8	-13.76	Plot B	-13	PASS
GSM	512	1850.2	-18.10	Plat C	12	PASS
1900MHz	810	1909.8	-17.50	Plot D	-13	PASS

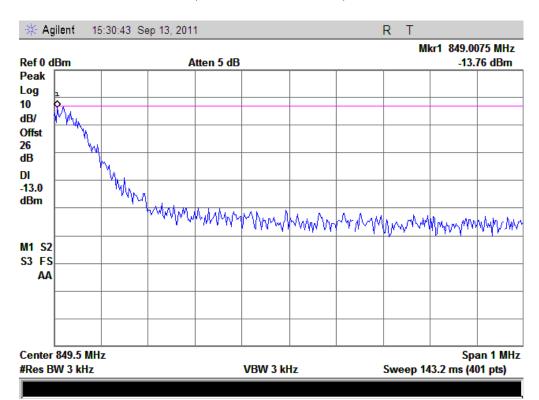




2. Test Plots:



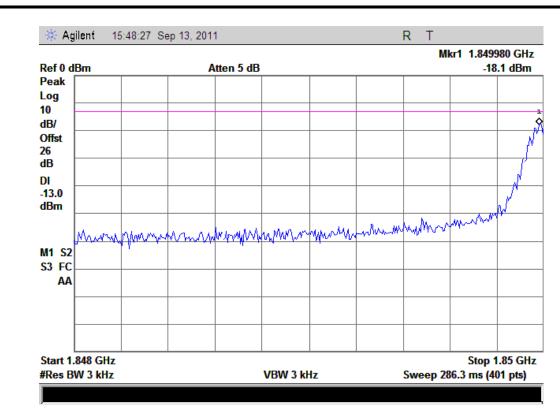
(Plot A: Channel = 128)



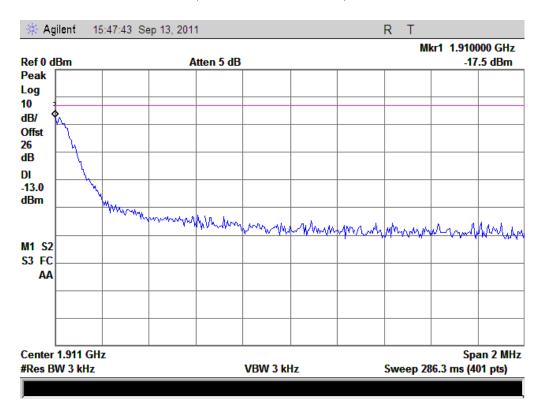
(Plot B: Channel = 251)



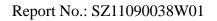




(Plot C: Channel = 512)



(Plot D: Channel = 810)





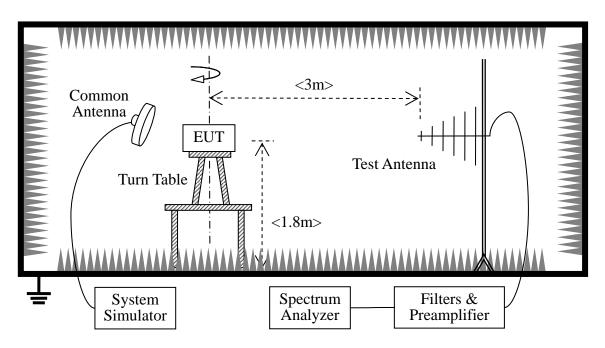
2.6 Transmitter Radiated Power (EIRP/ERP)

2.6.1 Requirement

According to FCC section 22.913, the Effective Radiated Power (ERP) of mobile transmitters and auxiliary test transmitters must not exceed 7Watts, and FCC section 24.232, the broadband PCS mobile station is limited to 2Watts e.i.r.p. peak power.

2.6.2 Test Description

1. Test Setup:



The EUT, which is powered by the Battery charged with the AC Adapter, is located in a 3m Full-Anechoic Chamber; the cable loss, air loss and so on of the site as factors are pre-calibrated using the "Substitution" method, and calculated to correct the reading.

A call is established between the EUT and the SS via a Common Antenna. The EUT is commanded by the SS to operate at the maximum and minimum output power (i.e. GSM850MHz band Power Control Level (PCL) = 5/19 and Power Class = 4, GSM1900MHz band Power Control Level (PCL) = 0/15 and Power Class = 1), and only the test result of the maximum output power was recorded.

- -Maximum RF output power: GSM850 31.82dBm, GSM 1900 29.26dBm, Please refer to section 2.1.3 of this report.
- Step size (dB): 3dB
- Minimum RF power: GSM850 -4.2dBm, GSM 1900 -10.16dBm



The Test Antenna is a Bi-Log one (used for 30MHz to 1GHz) or a Horn one (used for above 3GHz), and it's located at the same height as the EUT. The Filters consists of Notch Filters and High Pass Filter.

2. Equipments List:

Description	Manufacturer	Model	Serial No.	Cal. Date
System Simulator	Agilent	E5515C	GB43130131	2011.05
Spectrum Analyzer	Agilent	E7405A	US44210471	2011.05
Full-Anechoic Chamber	Albatross	9m*6m*6m	(n.a.)	2011.05
Test Antenna - Bi-Log	Schwarzbeck	VULB 9163	9163-274	2011.05
Test Antenna - Horn	Schwarzbeck	BBHA 9120C	9120C-384	2011.05

2.6.3 Test Result

The Turn Table is actuated to turn from 0° to 360° , and both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power. The lowest, middle and highest channels are tested.

The substitution corrections are obtained as described below:

 $A_{SUBST} = P_{SUBST_TX} - P_{SUBST_RX} - L_{SUBST_CABLES} + G_{SUBST_TX_ANT}$

 $A_{TOT} = L_{CABLES} + A_{SUBST}$

Where A_{SUBST} is the final substitution correction including receive antenna gain.

P_{SUBST_TX} is signal generator level,

P_{SUBST RX} is receiver level,

L_{SUBST CABLES} is cable losses including TX cable,

G_{SUBST_TX_ANT} is substitution antenna gain.

A_{TOT} is total correction factor including cable loss and substitution correction

During the test, the data of A_{TOT} was added in the Test Spectrum Analyze, so Spectrum Analyze reading is the final values which contain the data of A_{TOT} .



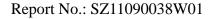
1. Test Verdict:

Test result of ERP:

Band	Channel	Frequency	DCI	Measured ERP			Limit		Vandiat
		(MHz)	PCL	dBm	W	Refer to Plot	dBm	W	Verdict
GSM 850MHz	128	824.20	5	29.9	0.977237				PASS
	190	836.60	5	30.73	1.183042	Plot A	38.45	7	PASS
	251	848.80	5	30.1	1.023293				PASS
GPRS 850MHz	128	824.20	5	29.5	0.891251	Plot D			PASS
	190	836.60	5	30.53	1.129796	3down link	38.45	7	PASS
	251	848.80	5	30.09	1.020939	2up link			PASS
GPRS 850MHz	128	824.20	5	29.09	0.810961	Plot C			PASS
	190	836.60	5	30.4	1.096478	4down link	38.45	7	PASS
	251	848.80	5	30.07	1.016249	1up link			PASS

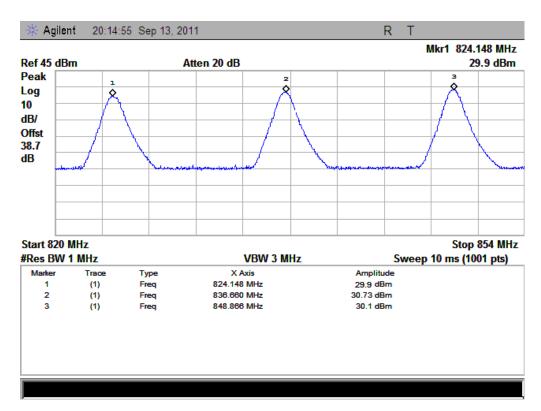
Test result of EIRP:

Band	Channel	Frequency	PCL	Measured EIRP			Limit		Vandiat
		(MHz)	PCL	dBm	W	Refer to Plot	dBm	W	Verdict
GSM 1900MHz	512	1850.2	0	29.74	0.941890				PASS
	661	1880.0	0	29.2	0.831764	Plot D	33	2	PASS
	810	1909.8	0	28.78	0.755092				PASS
GPRS 1900MHz	512	1850.2	0	28.04	0.636796	Plot E			PASS
	661	1880.0	0	28.25	0.668344	3down link	33	2	PASS
	810	1909.8	0	28.64	0.731139	2up link			PASS
GPRS 1900MHz	512	1850.2	0	29.72	0.937562	Plot F			PASS
	661	1880.0	0	29.22	0.835603	4down link	33	2	PASS
	810	1909.8	0	29.54	0.899498	1up link			PASS

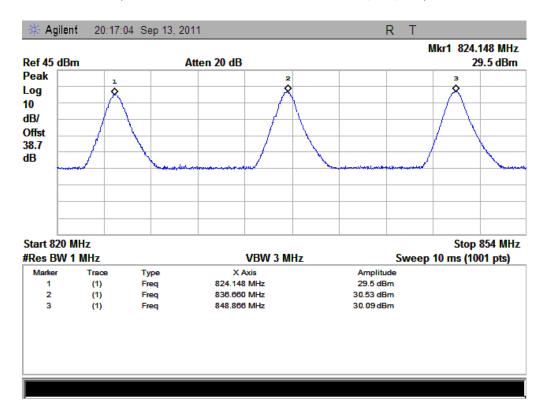




2. Test Plots:

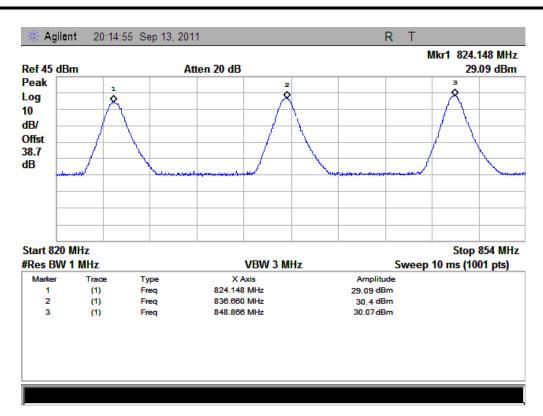


(Plot A: GSM 850MHz Channel = 128,190,251)

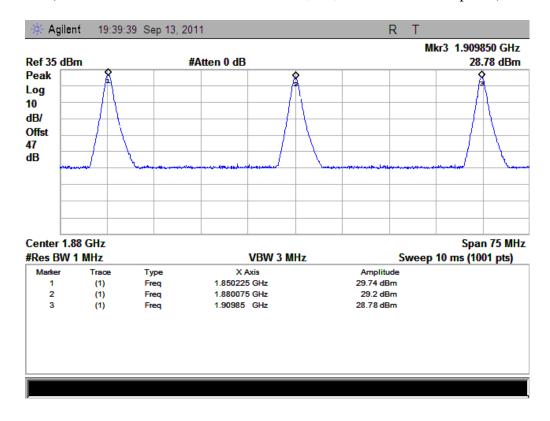


(Plot B: GPRS 850MHz Channel = 128,190,251-3down link 2up link)



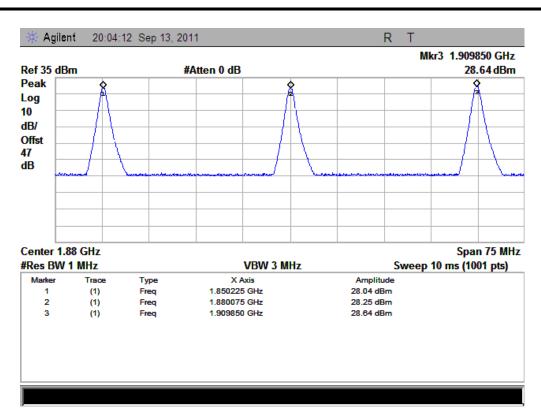


(Plot C: GPRS 850MHz Channel = 128,190,251-4down link 1up link)

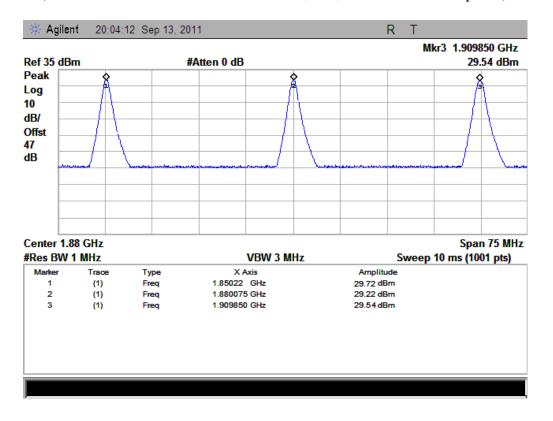


(Plot D: GSM 1900MHz Channel = 512, 661, 810)





(Plot E: GPRS 1900MHz Channel = 512, 661, 810-3down link 2up link)



(Plot F: GPRS 1900MHz Channel = 512,661,810-2down link 3up link)



2.7 Radiated Out of Band Emissions

2.7.1 Requirement

According to FCC section 22.917(a) and section 24.238(a), 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. This calculated to be -13dBm.

2.7.2 Test Description

See section 2.6.2 of this report.

Note: when doing measurements above 1GHz, the EUT has been within the 3dB cone width of the horn antenna during horizontal antenna.

2.7.3 Test Result

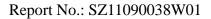
The measurement frequency range is from 30MHz to the 10th harmonic of the fundamental frequency. The Turn Table is actuated to turn from 0° to 360° , and both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power. The lowest, middle and highest channels are tested to verify the out of band emissions.

1. Test Verdict:

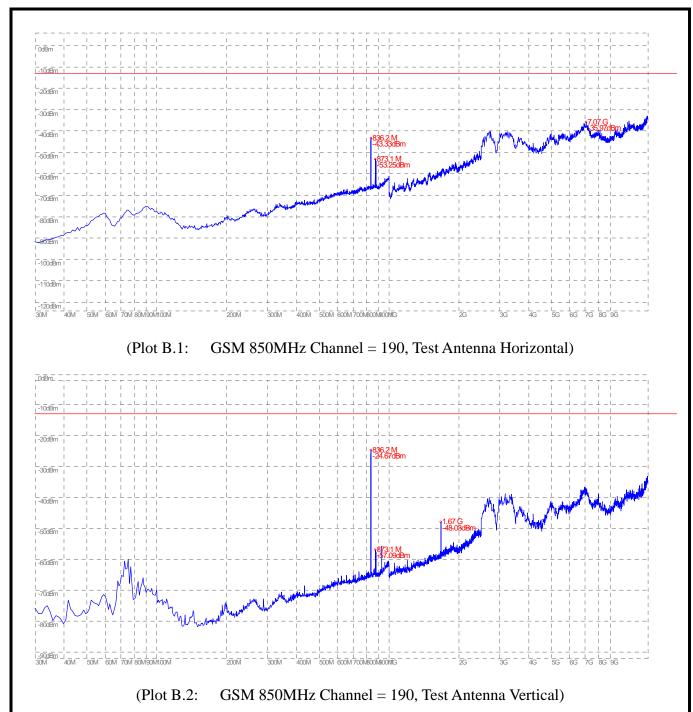
Band	Channe 1	Frequenc y (MHz)		fax. Spurious n (dBm)		Limit (dBm)	Verdict
			Test Antenna Horizontal	Test Antenna Vertical	Refer to Plot		
GSM 850MHz	128	824.2	-36.33	-36.37	Plot A.1/A.2		PASS
	190	836.6	-35.97	-48.03	Plot B.1/B.2	-13	PASS
	251	848.8	-35.98	-35.69	Plot C.1/C.2		PASS
GSM 1900MHz	512	1850.2	22.21	-17.49	Plot D.1/D.2		PASS
	661	1880.0	-20.23	-16.64	Plot E.1/E.2	-13	PASS
	810	1909.8	-20.42	-14.29	Plot F.1/F.2		PASS

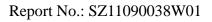


Test Plots for the Whole Measurement Frequency Range: Note: the power of the EUT transmitting frequency should be ignored. -20dBm -30dBm -50dBm -60dBm -100dBm (Plot A.1: GSM 850MHz Channel = 128, Test Antenna Horizontal) -30dBm -40dBm | -60dBm . ı -70dBm GSM 850MHz Channel = 128, Test Antenna Vertical) (Plot A.2:

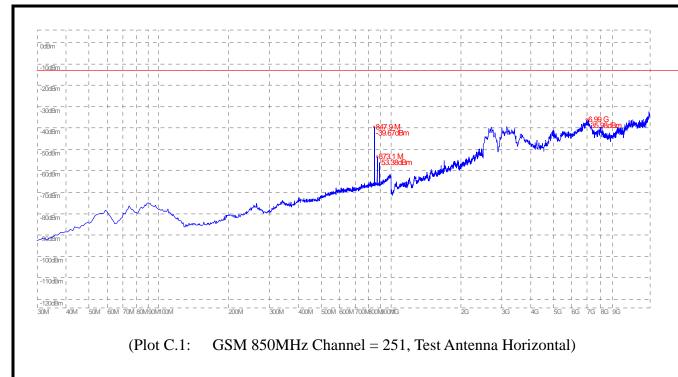


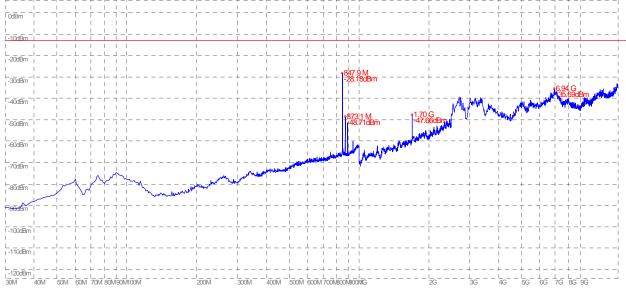










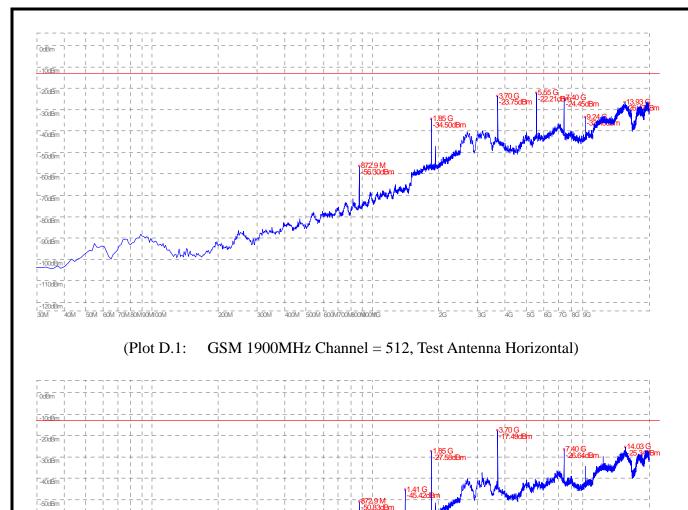


(Plot C.2: GSM 850MHz Channel = 251, Test Antenna Vertical)



| -60dBm | -70dBm | -70dBm

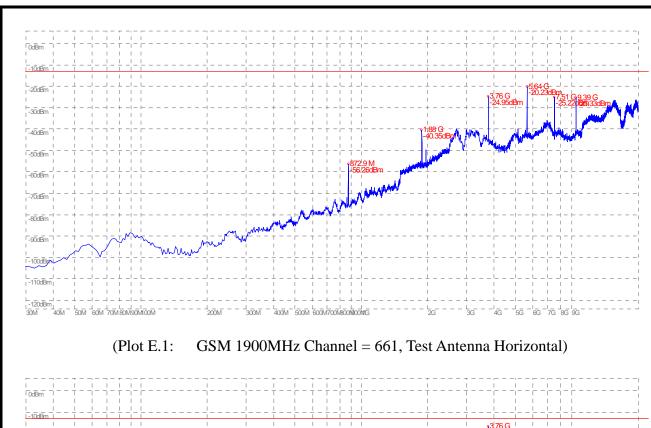
-110dBm



(Plot D.2: GSM 1900MHz Channel = 512, Test Antenna Vertical)

200M 300M 400M 500M 600M700M800MG 2G 3G 4G 5G 6G 7G 8G 9G





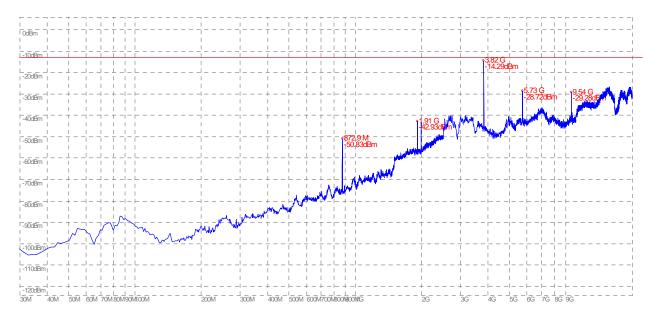


(Plot E.2: GSM 1900MHz Channel = 661, Test Antenna Vertical)





(Plot F.1: GSM 1900MHz Channel = 810, Test Antenna Horizontal)



(Plot F.2: GSM 1900MHz Channel = 810, Test Antenna Vertical)

** END OF REPORT **