



**FCC CFR47 PART 22H AND 24E
CERTIFICATION TEST REPORT**

FOR

**850/1900 GSM/GPRS, EDGE RX ONLY PHONE WITH BLUETOOTH AND WLAN
TRANSCIVER**

MODEL NUMBER: GT-C6712

FCC ID: A3LGTC6712

REPORT NUMBER: 11I13692-1

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Prepared for

**SAMSUNG ELECTRONICS CO., LTD.
416, MAETAN 3-DONG, YEONGTONG-GU
SUWON-CITY, GYEONGGI-DO 443-742, SOUTH KOREA**

Prepared by

**COMPLIANCE CERTIFICATION SERVICES (UL CCS)
47173 BENICIA STREET
FREMONT, CA 94538, U.S.A.
TEL: (510) 771-1000
FAX: (510) 661-0888**



NVLAP LAB CODE 200065-0

Revision History

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: SAMSUNG ELECTRONICS CO., LTD.
416, MAETAN 3-DONG, YEONGTONG-GU
SUWON-CITY, GYEONGGI-DO 443-742, SOUTH KOREA

EUT DESCRIPTION: 850/1900 GSM/GPRS, EDGE RX ONLY PHONE WITH
BLUETOOTH AND WLAN TRANSCEIVER

MODEL: GT-C6712

SERIAL NUMBER: F1 032 C

DATE TESTED: MARCH 08 AND 09, 2011

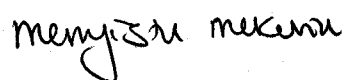
APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC PART 22 SUBPART H AND 24 SUBPART E	Pass

Compliance Certification Services (UL CCS) 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 CCS 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 CCS and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL CCS 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.

Approved & Released For UL CCS By:

Tested By:



THU CHAN
ENGINEERING MANAGER
UL CCS

MENGISTU MEKURIA
EMC ENGINEER
UL CCS

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, and FCC CFR Part 24.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 Benicia Street, Fremont, California, USA.

UL CCS is accredited by NVLAP, Laboratory Code 200065-0. The full scope of accreditation can be viewed at <http://www.ccsemc.com>.

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

Where relevant, the following sample calculation is provided:

Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)

36.5 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 dBuV/m

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	3.52 dB
Radiated Disturbance, 30 to 1000 MHz	4.94 dB

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

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is an 850/1900 GSM/GPRS, EDGE RX ONLY Phone with Bluetooth and WLAN transceiver.

The radio module is manufactured by Samsung.

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum conducted and radiated ERP / EIRP output powers as follows:

Frequency range (MHz)	Modulation	Conducted		ERP / EIRP	
		dBm	mW	dBm	mW
824.2 - 848.80	GPRS	32.65	1840.8	30.82	1207.8
1850.2 - 1909.8	GPRS	29.00	794.3	23.07	202.8

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes a PIFA antenna for the 850MHz and 1900MHz bands with a maximum peak gain of -1.0dBi for both cell and PCS band.

5.4. SOFTWARE AND FIRMWARE

The EUT is linked with Agilent 8960 Communication Test Set

5.5. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

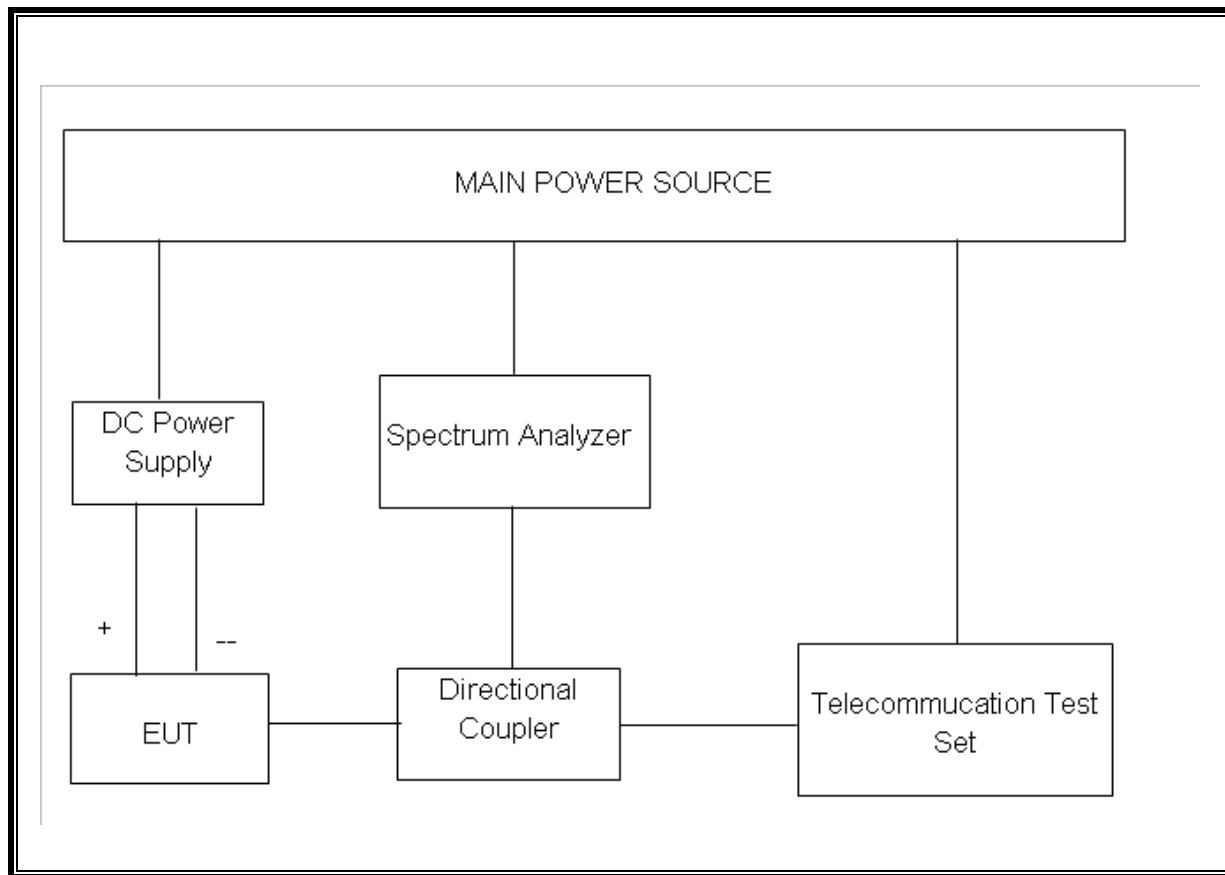
PERIPHERAL SUPPORT EQUIPMENT LIST				
Description	Manufacturer	Model	Serial Number	FCC ID
AC Adapter	Samsung	E7A3U3DEBE	DW1Z423DS/5-E	DoC
DC Power Supply	HP	E3610A	KR24104150	NA
Headset	Samsung	N/A	GT 032 B	NA

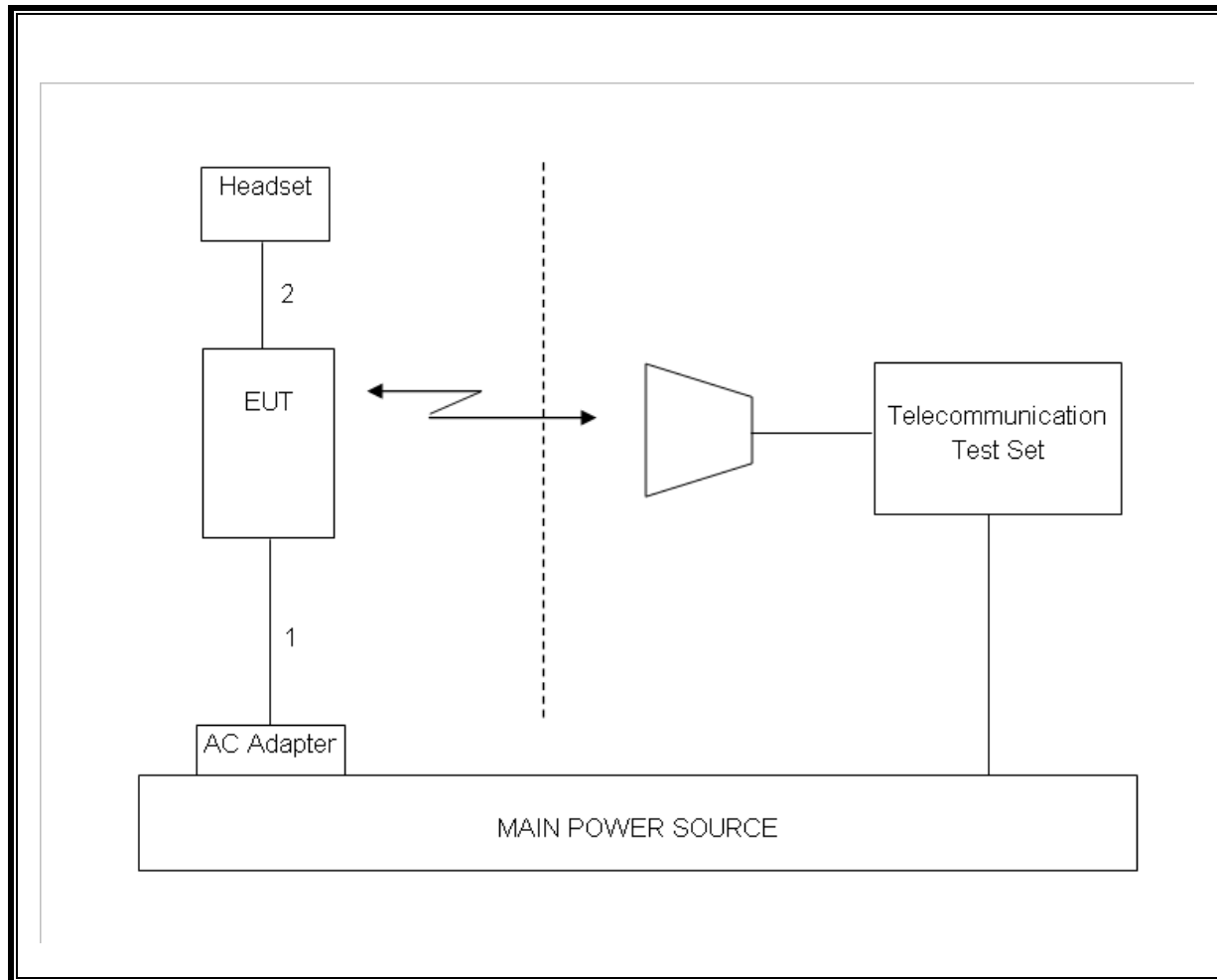
I/O CABLES

I/O CABLE LIST						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length	Remarks
1	DC	1	DC	Un-shielded	1.5m	NA
2	Audio	1	Headset	Un-shielded	1.0m	NA

TEST SETUP

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

SETUP DIAGRAM FOR CONDUCTED TESTS

SETUP DIAGRAM FOR 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
Preamplifier, 26.5 GHz	Agilent / HP	8449B	C01063	07/14/11
Antenna, Bilog, 2 GHz	Sundt Sciences	JB1	C01011	07/14/11
Antenna, Horn, 18 GHz	EMCO	3115	C00783	06/29/11
Antenna, Horn, 18 GHz	EMCO	3115	C00943	CNR
Spectrum Analyzer, 26.5 GHz	Agilent / HP	E4440A	C01161	06/07/12
Spectrum Analyzer, 26.5 GHz	Agilent / HP	E4440A	C01178	08/30/11
Communication Test Set	Agilent / HP	E5515C	C01086	06/17/11
Communication Test Set	R & S	CMU 200	C00944	02/16/12
Signal Generator, 20 GHz	Agilent / HP	83732B	C00774	07/14/12
Power Meter	Agilent / HP	437B	N/A	02/08/12
Power Sensor, 18 GHz	Agilent / HP	8481A	N/A	02/08/12
Peak Power Meter	Agilent / HP	E9327A	C00964	12/04/11
Peak Power Sensor	Agilent / HP	E4416A	C00963	12/04/11
Temperature / Humidity Chamber	Thermotron	SE 600-10-10	C00930	04/07/11
DC power supply, 8 V @ 3 A or 15 V	Agilent / HP	E3610A	2844	CNR
Antenna, Tuned Dipole 400~1000	ETS	3121C DB4	C00993	06/28/11
Highpass Filter, 2.7 GHz	Micro-Tronics	HPM13194	N02686	CNR
Highpass Filter, 1.5 GHz	Micro-Tronics	HPM13193	N02688	CNR
Directional Coupler, 18 GHz	Krytar	1817	N02656	CNR

7. RF POWER OUTPUT VERIFICATION

PROCEDURE USED TO ESTABLISH TEST SIGNAL

GPRS/EGPRS

Function: Menu select > GSM Mobile Station > GSM 850/900/1800/1900
 Press Connection control to choose the different menus
 Press RESET > choose all to reset all settings
 Connection Press Signal Off to turn off the signal and change settings
 Network Support > GSM+GPRS or GSM+EGPRS
 Main Service > Packet Data
 Service selection > Test Mode A – Auto Slot Config. off
 MS Signal Press Slot Config bottom on the right twice to select and change the number of time slots and power setting
 > Slot configuration > Uplink/Gamma
 > 33 dBm for GPRS 850/900
 > 30 dBm for GPRS1800/1900
 BS Signal Enter the same channel number for TCH channel (test channel) and BCCH channel
 Frequency Offset > + 0 Hz
 Mode > BCCH and TCH
 BCCH Level > -85 dBm (May need to adjust if link is not stable)
 BCCH Channel > choose desire test channel [Enter the same channel number for TCH channel (test channel) and BCCH channel]
 Channel Type > Off
 P0> 4 dB
 Slot Config > Unchanged (if already set under MS Signal)
 TCH > choose desired test channel
 Hopping > Off
 Main Timeslot > 3 (Default)
 Network Coding Scheme > CS4 (GPRS) and MCS9 (EGPRS)
 Bit Stream > 2E9-1PSR Bit Pattern
 AF/RF Enter appropriate offsets for Ext. Att. Output and Ext. Att. Input
 Connection Press Signal On to turn on the signal and change settings

RULE PART(S)

FCC: §2.1046

LIMITS

For reporting purposes only

TEST PROCEDURE

The transmitter output was connected to a Communications Test Set and configured to operate at maximum power in a call. The peak power was measured using the peak power meter for the GSM measurement.

MODES TESTED

- GSM (GMSK) mode
- GPRS (GMSK) mode

RESULTS**GSM (GMSK)**

Band	Ch	Frequency	Conducted output power (dBm)
			Peak
GSM850	128	824.2	32.50
	190	836.6	32.35
	251	848.8	32.25
GSM1900	512	1850.2	28.85
	661	1880.0	28.55
	810	1909.8	28.85

GPRS (GMSK) - Coding scheme: MCS4

Band	Ch	Frequency	Conducted Peak output power (dBm)			
			1 slot	2 slot	3 slot	4 slot
GSM850	128	824.2	32.65	32.55	29.70	28.10
	190	836.6	32.45	32.35	29.60	27.50
	251	848.8	32.35	32.35	29.40	27.80
GSM1900	512	1850.2	28.95	29.00	25.30	23.40
	661	1880.0	28.65	28.65	25.10	23.10
	810	1909.8	28.95	29.00	25.30	23.40

7.1. WORST-CASE CONFIGURATION AND MODE

The worst-case channel is determined as the channel with the highest output power.

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

Worst case modes:

- GPRS (GMSK) 1 Slot for Cell and 2 Slots for PCS Bands.

Since the EUT is a portable device an X, Y and Z orientations and the worst-orientations among them with AC/DC adapter and headset were investigated to determine the worst case. After the investigation Z-Orientation and X-Orientations with AC Adapter were turned out to be the worst case for Cell and PCS bands respectively.

8. LIMITS AND RESULTS

8.1. CONDUCTED TEST RESULTS

8.1.1. RF POWER OUTPUT

LIMIT

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

24.232(b) & RSS133 § 6.4 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.

RSS-132 § 4.4 The maximum ERP shall be 6.3 Watts for mobile stations.

TEST PROCEDURE

RSS-132, RSS-133, & ANSI / TIA / EIA 603C Clause 2.2.17

RESULTS

GPRS850 CELL Band

Channel	Frequency (MHz)	Conducted Peak Power (dBm)	Conducted Peak Power (mW)
Low	824.2	32.65	1840.77
Middle	836.6	32.45	1757.92
High	848.8	32.35	1717.91

GPRS1900 PCS Band

Channel	Frequency (MHz)	Conducted Peak Power (dBm)	Conducted Peak Power (mW)
Low	1850.20	29.00	794.33
Middle	1880.00	28.65	732.82
High	1909.80	29.00	794.33

8.1.2. OCCUPIED BANDWIDTH

RULE PART(S)

FCC: §2.1049

LIMITS

For reporting purposes only

TEST PROCEDURE

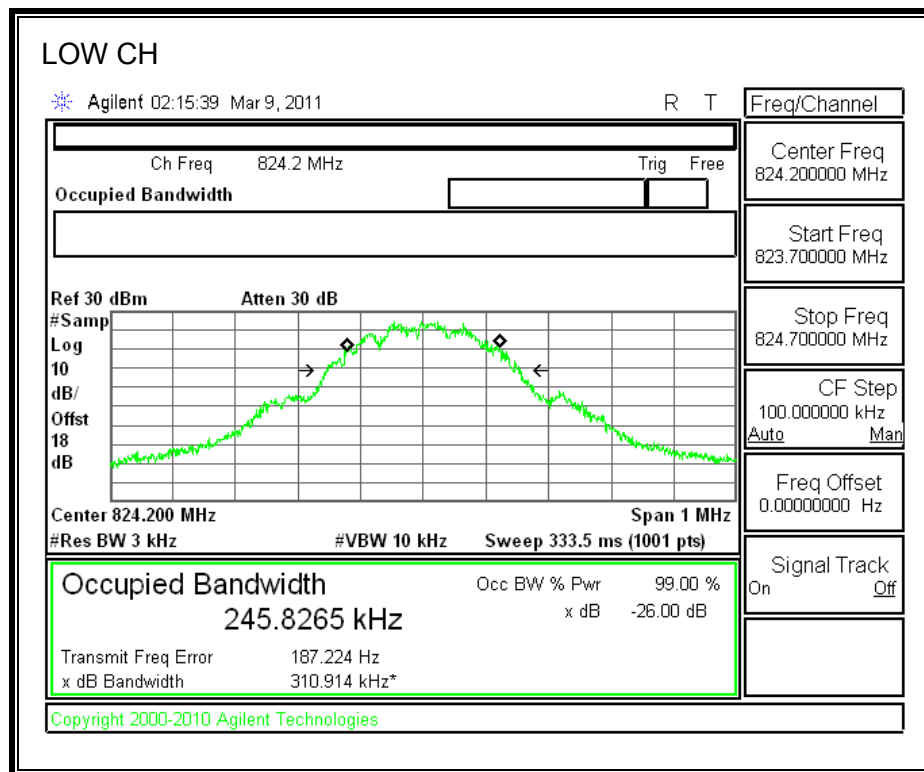
The transmitter output was connected to a calibrated coaxial cable and coupler, the other end of which was connected to a spectrum analyzer. The occupied bandwidth was measured with the spectrum analyzer at the low, middle and high channel in each band. The -26dB bandwidth was also measured and recorded.

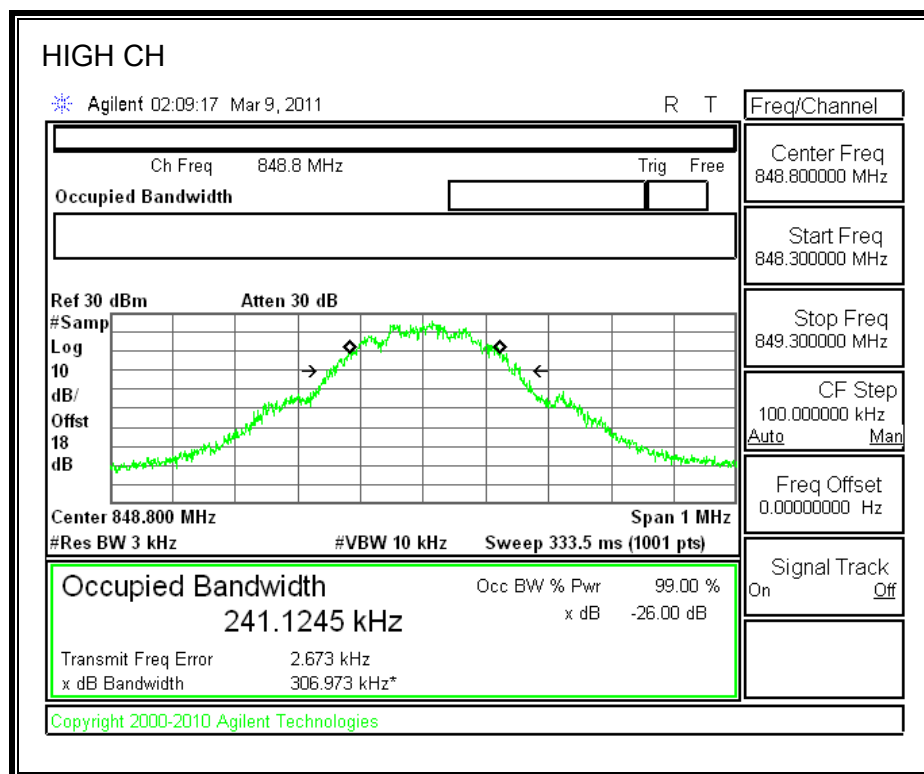
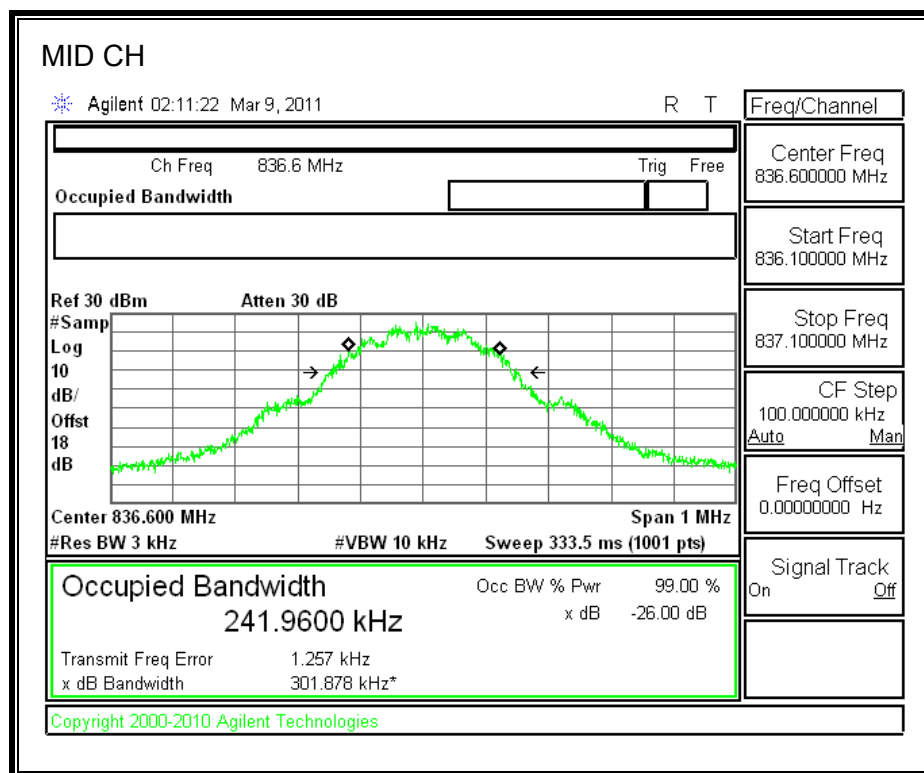
MODES TESTED

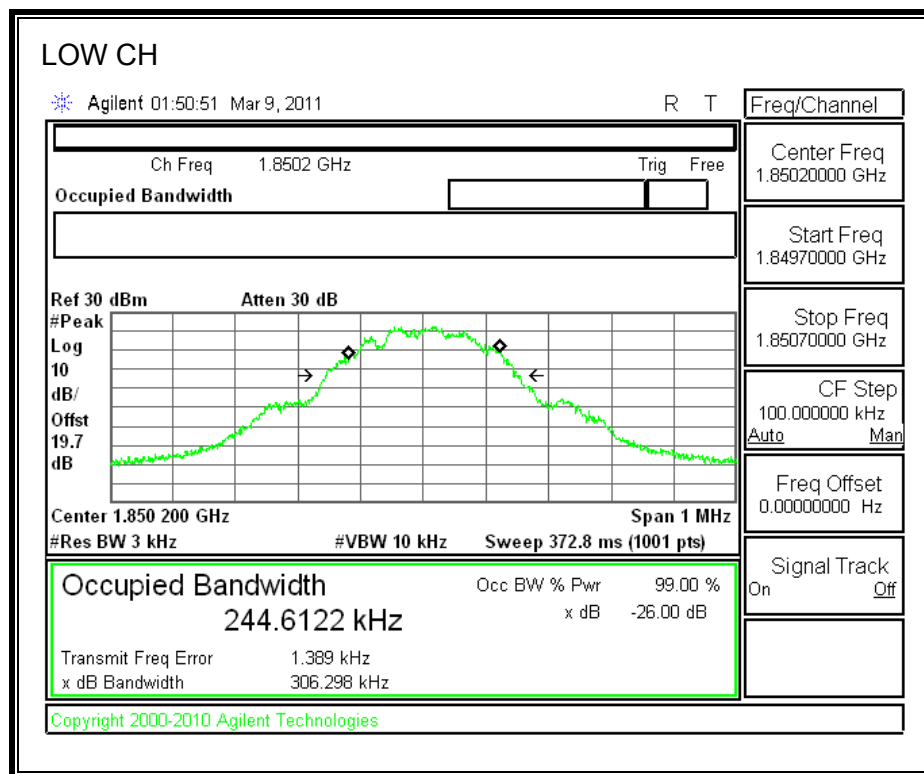
- GPRS (GMSK)

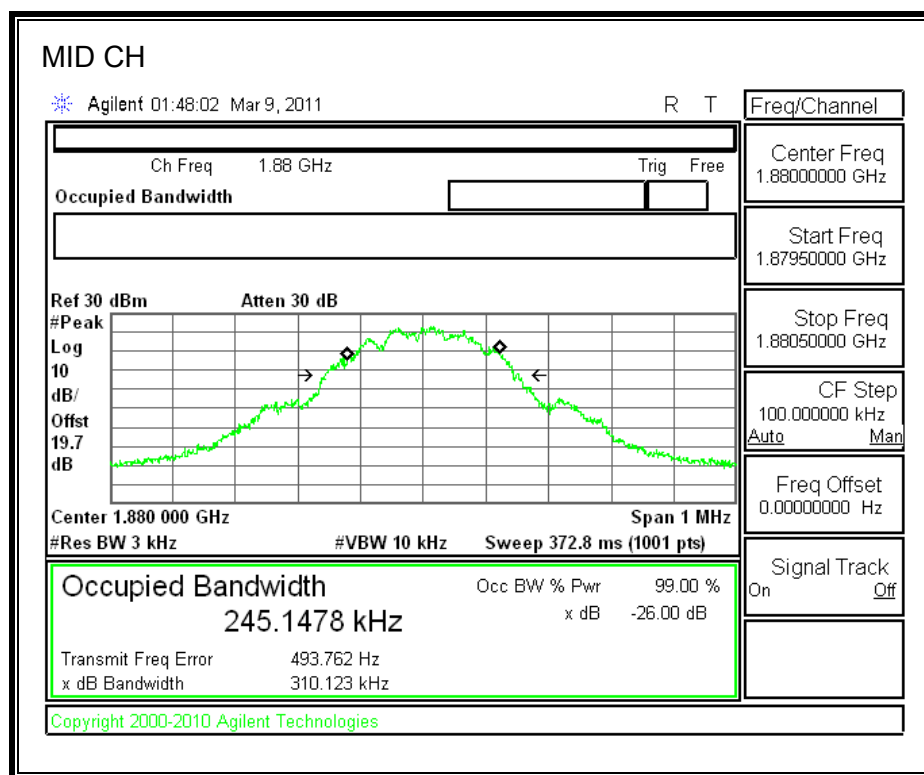
RESULTS

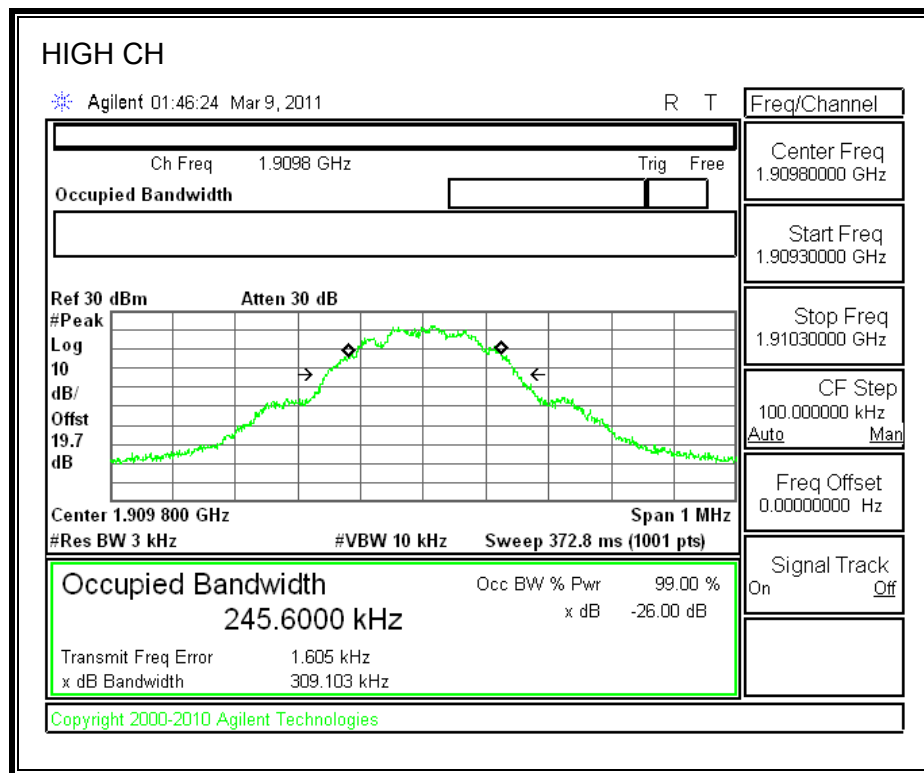
Band	Mode	Channel	f (MHz)	99% BW (kHz)	-26dB BW (kHz)
CELL	GPRS	128	824.2	245.8265	310.914
		190	836.6	241.9600	301.878
		251	848.8	241.1245	306.973
PCS	GPRS	512	1850.2	244.6122	306.298
		661	1880.0	245.1478	310.123
		810	1909.8	245.6000	309.103

GPRS850 BAND**99% and 26dB Bandwidth**



GPRS1900 PCS Band





8.1.3. BAND EDGE

RULE PART(S)

FCC: §22.359, 24.238

LIMITS

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

The transmitter output was connected to a Agilent 8960 Test Set and configured to operate at maximum power. The band edge emissions were measured at the required operating frequencies in each band on the Spectrum Analyzer.

For each band edge measurement:

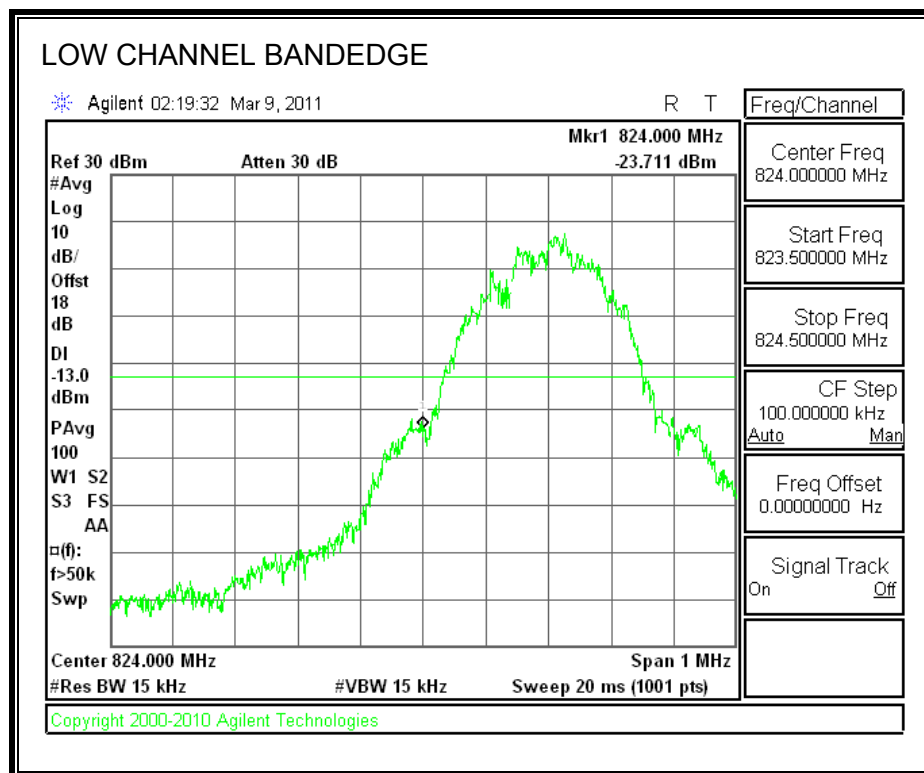
- Set the spectrum analyzer span to include the block edge frequency (824, 848, 1850, 1910MHz)
- Set a marker to point the corresponding band edge frequency in each test case.
- Set display line at -13 dBm
- Set resolution bandwidth to at least 1% of emission bandwidth.

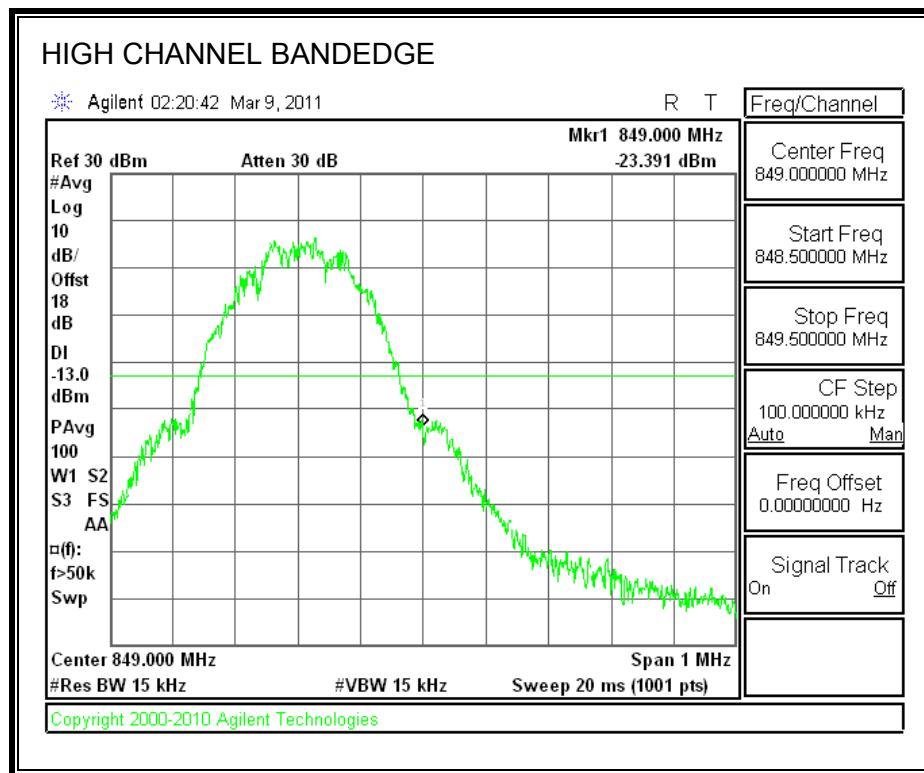
MODES TESTED

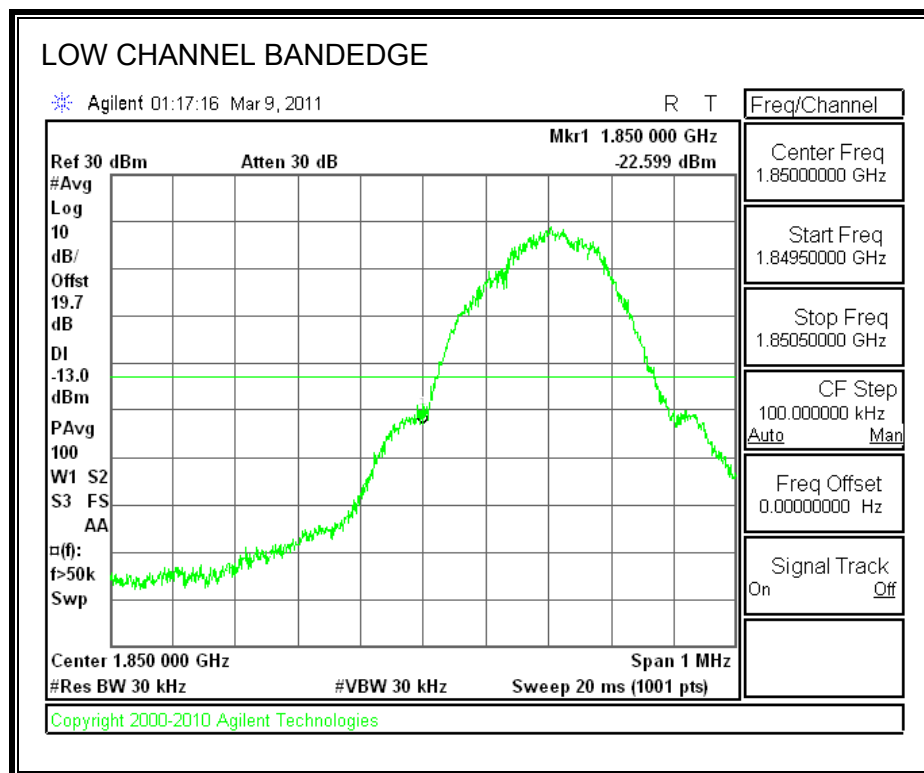
- GPRS (GMSK)

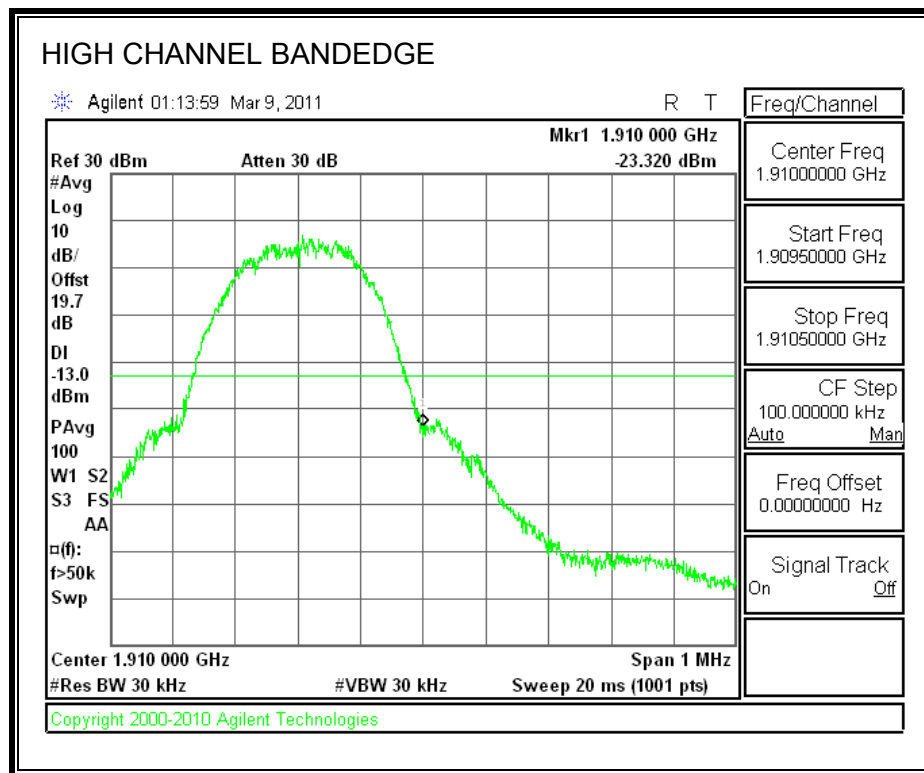
RESULTS

See the following pages.

GPRS850 CELL BAND



GPRS1900 PCS BAND



8.1.4. OUT OF BAND EMISSIONS

RULE PART(S)

FCC: §2.1051, §22.901, §22.917, §24.238

LIMITS

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

The RF output of the transmitter was connected to a spectrum analyzer through a calibrated coaxial cable. Sufficient scans were taken to show the out-of-band Emissions, if any, up to 10th harmonic. Multiple sweeps were recorded in maximum hold mode using a peak detector to ensure that the worst-case emissions were caught.

For each out of band emissions measurement:

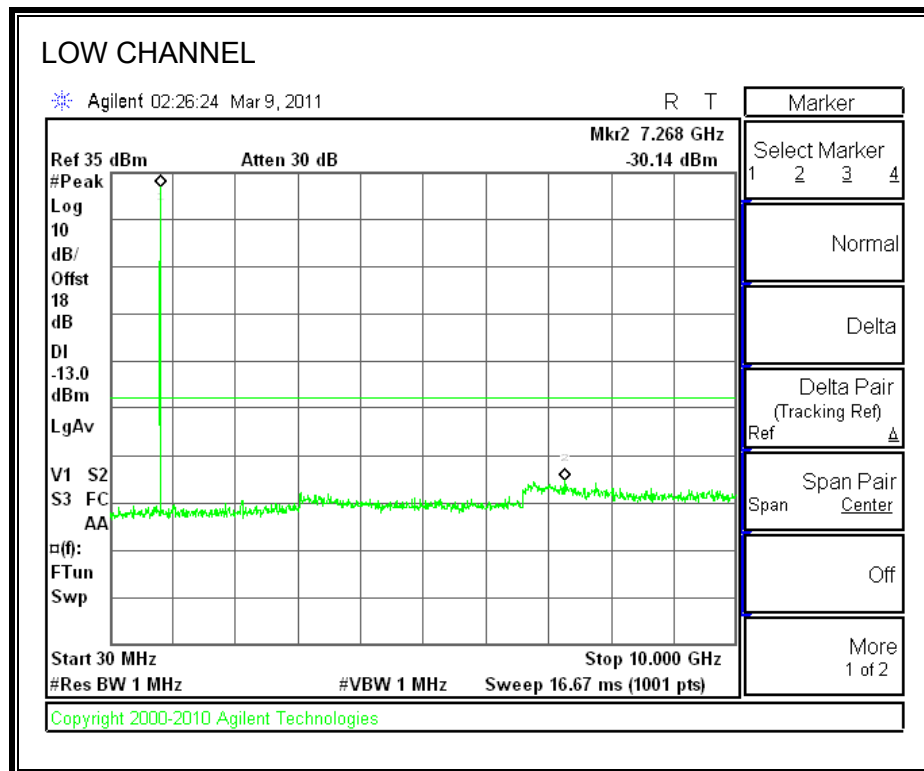
- Set display line at -13 dBm
- Set RBW & VBW to 100 kHz for the measurement below 1 GHz, and 1 MHz for the measurement above 1 GHz.

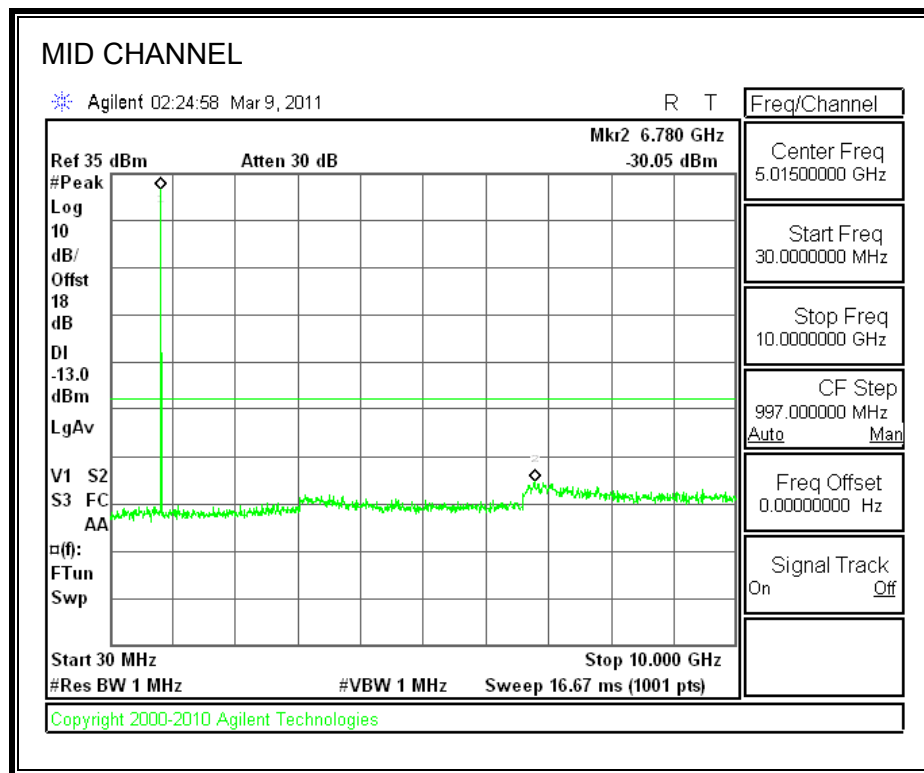
MODES TESTED

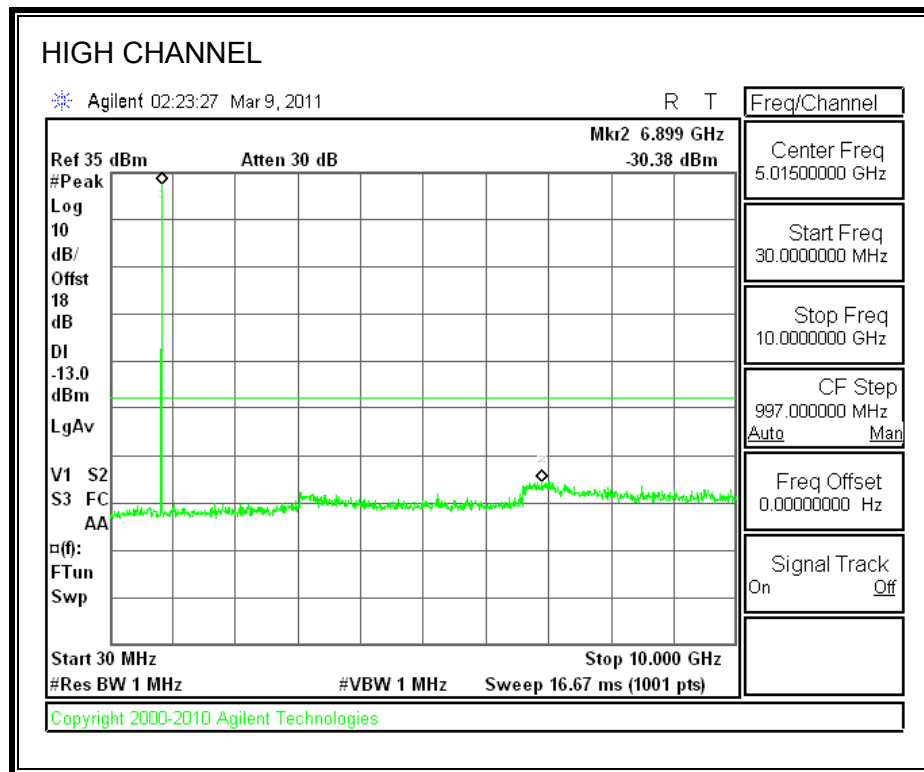
- GPRS (GMSK)

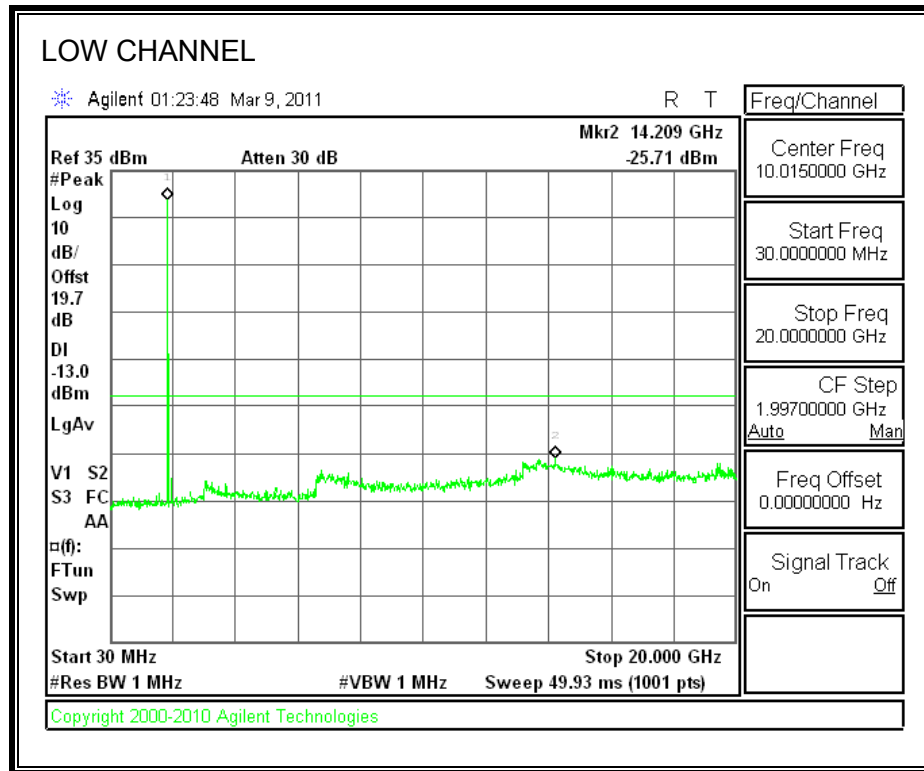
RESULTS

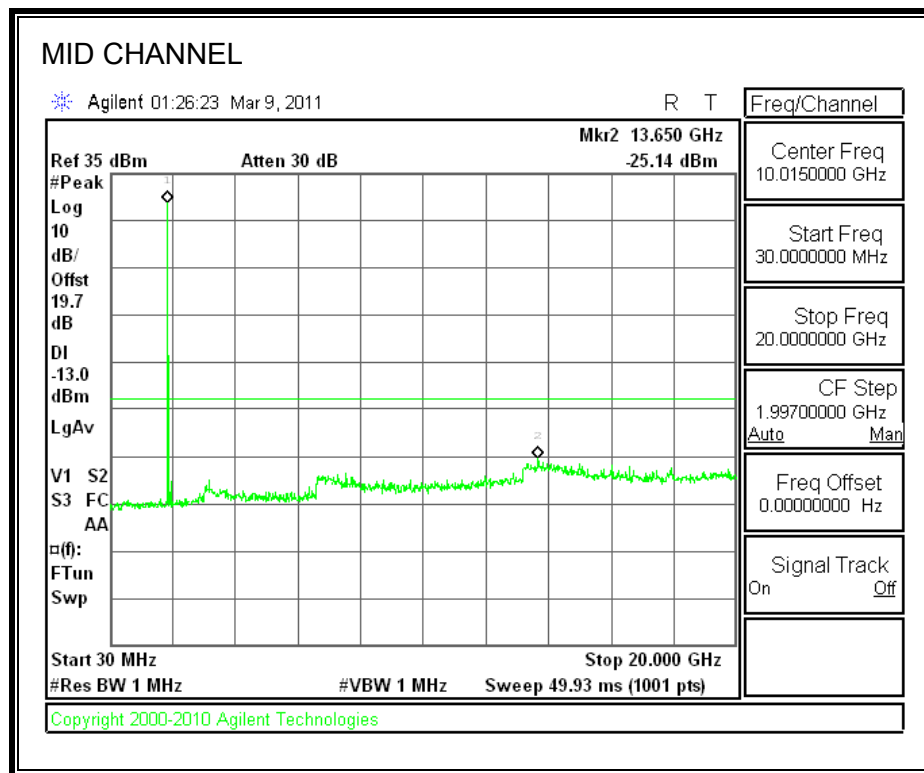
See the following pages.

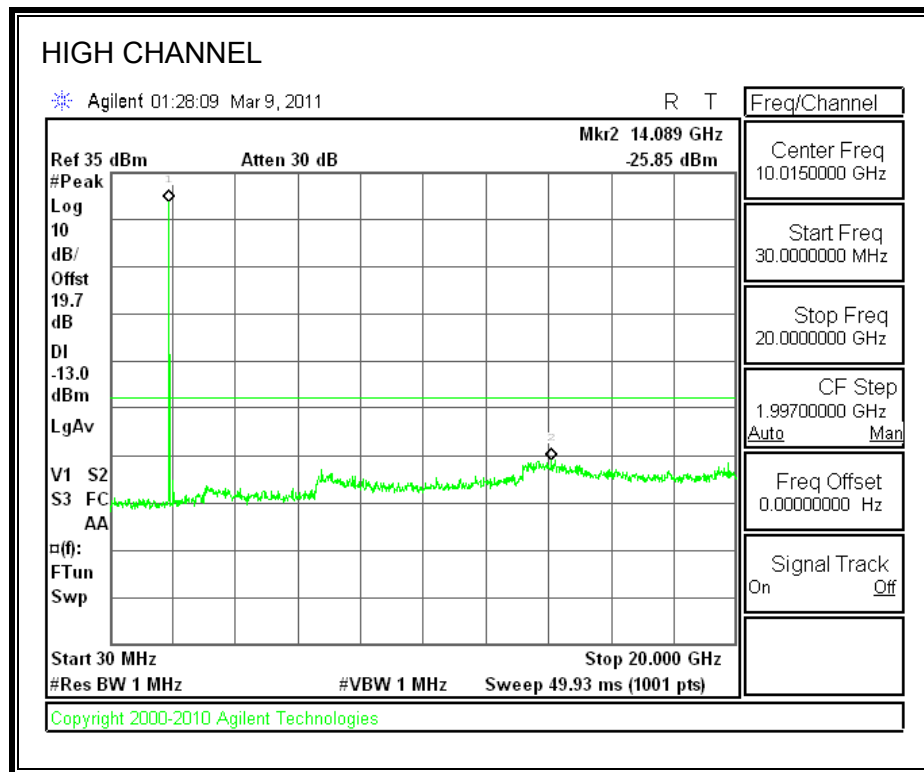
GPRS850 CELL BAND





GPRS1900 PCS BAND





8.1.5. FREQUENCY STABILITY

RULE PART(S)

FCC: §2.1055, §22.355, §24.235

LIMITS

§22.355 - The carrier frequency shall not depart from the reference frequency in excess of ± 2.5 ppm for mobile stations.

§24.235 - The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

TEST PROCEDURE

Frequency Stability vs Temperature:

The EUT is placed inside a temperature chamber. The temperature is set to 20°C and allowed to stabilize. After sufficient soak time, the transmitting frequency error is measured. The temperature is increased by 10 degrees, allowed to stabilize and soak, and then the measurement is repeated. This is repeated until +50°C is reached. Reference power supply voltage for these tests is 4.1 Vdc.

Frequency Stability vs Voltage:

The peak frequency error is recorded (worst-case). The test voltage ranges from 3.49 to 4.72 VDC.

MODES TESTED

- GPRS (GMSK)

RESULTS

See the following pages.

GPRS850 CELL BAND

Reference Frequency: CELL Mid Channel 836.590994MHz @ 20°C				
Limit: within the authorized block or +/- 2.5 ppm = 2091.477 Hz				
Power Supply (Vdc)	Environment Temperature (°C)	Frequency Deviation Measured with Time Elapse		
		(MHz)	Delta (ppm)	Limit (ppm)
4.10	50	836.591236	-0.289	2.5
4.10	40	836.591188	-0.232	2.5
4.10	30	836.591152	-0.189	2.5
4.10	20	836.590994	0	2.5
4.10	10	836.591075	-0.097	2.5
4.10	0	836.591010	-0.019	2.5
4.10	-10	836.590075	1.099	2.5
4.10	-20	836.589997	1.192	2.5
4.10	-30	836.589964	1.231	2.5
(Vdc +/- 15%)	Temperature (°C)	(MHz)	Delta (ppm)	Limit (ppm)
3.49	20	836.591013	-0.023	2.5
4.72	20	836.590890	0.124	2.5

GPRS1900 PCS BAND

Reference Frequency: PCS Mid Channel 1879.986490MHz @ 20°C				
Limit: within the authorized block or +/- 2.5 ppm = 4699.966 Hz				
Power Supply (Vdc)	Environment Temperature (°C)	Frequency Deviation Measured with Time Elapse		
		(MHz)	Delta (ppm)	Limit (ppm)
4.10	50	1879.983264	1.716	2.5
4.10	40	1879.984421	1.101	2.5
4.10	30	1879.984963	0.812	2.5
4.10	20	1879.986490	0	2.5
4.10	10	1879.985563	0.493	2.5
4.10	0	1879.985999	0.261	2.5
4.10	-10	1879.985647	0.448	2.5
4.10	-20	1879.985134	0.721	2.5
4.10	-30	1879.984909	0.841	2.5
(Vdc +/- 15%)	Temperature (°C)	(MHz)	Delta (ppm)	Limit (ppm)
3.49	20	1879.986567	-0.041	2.5
4.72	20	1879.986440	0.027	2.5

8.2. RADIATED TEST RESULTS

8.2.1. RADIATED POWER (ERP & EIRP)

RULE PART(S)

FCC: §2.1046, §22.913, §24.232

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

MODES TESTED

- GPRS (GMSK)

RESULTS

GPRS850 CELL Band

Channel	Frequency (MHz)	ERP Peak Power (dBm)	ERP Peak Power (mW)
Low	824.2	30.31	1073.99
Middle	836.6	30.82	1207.81
High	848.8	27.33	540.75

GPRS1900 PCS Band

Channel	Frequency (MHz)	EIRP Peak Power (dBm)	EIRP Peak Power (mW)
Low	1850.20	23.07	202.77
Middle	1880.00	23.03	200.91
High	1909.80	22.83	191.87

NOTE: RBW=VBW=3MHz

ERP for GPRS850 CELL BAND**High Frequency Substitution Measurement
Compliance Certification Services Chamber B**

Company: SAMSUNG
Project #: 11113692
Date: 03/09/11
Test Engineer: Mengistu Mekuria
Configuration: EUT Alone
Mode: TX, GSM+GPRS CELL Band

Test Equipment:

Receiving: Sunol T130, and 3m Chamber N-type Cable (Setup this one for testing EUT)

Substitution: Dipole S/N: 00022117, 6ft SMA Cable (SN # 208947003) Warehouse.

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
824.20	30.81	V	0.5	0.0	30.31	38.5	-8.1	
824.20	16.56	H	0.5	0.0	16.06	38.5	-22.4	
836.60	31.32	V	0.5	0.0	30.82	38.5	-7.6	
836.60	15.98	H	0.5	0.0	15.48	38.5	-23.0	
848.80	27.83	V	0.5	0.0	27.33	38.5	-11.1	
848.80	15.27	H	0.5	0.0	14.77	38.5	-23.7	

Rev. 1.24.7

EIRP for GPRS1900 PCS BAND

High Frequency Fundamental Measurement Compliance Certification Services Chamber B								
Company:		SAMSUNG						
Project #:		11113692						
Date:		03/09/11						
Test Engineer:		Mengistu Mekuria						
Configuration:		EUT Alone						
Mode:		TX, GSM+GPRS PCS Band						
Test Equipment:								
Receiving: Horn T59, and Camber B SMA Cables								
Substitution: Horn T60 Substitution, 6ft SMA Cable (208947003) Warehouse								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
1.850	8.7	V	0.85	8.01	15.86	33.0	-17.1	
1.850	15.9	H	0.85	8.01	23.07	33.0	-9.9	
1.880	6.5	V	0.85	8.07	13.76	33.0	-19.2	
1.880	15.8	H	0.85	8.07	23.03	33.0	-10.0	
1.910	6.2	V	0.85	8.13	13.50	33.0	-19.5	
1.910	15.6	H	0.85	8.13	22.83	33.0	-10.2	
Rev. 1.24.7								

8.2.2. FIELD STRENGTH OF SPURIOUS RADIATION

RULE PART(S)

FCC: §2.1053, §22.917, §24.238

LIMIT

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

- GPRS (GMSK)

RESULTS

See the following pages.

GPRS850 CELL BAND

Compliance Certification Services Above 1GHz High Frequency Substitution Measurement									
Company:		SAMSUNG							
Project #:		11I13692							
Date:		03/10/11							
Test Engineer:		Mengistu Mekuria							
Configuration:		EUT Alone							
Mode:		TX, GSM+GPRS CELL Band							
Chamber		Pre-amplifier		Filter		Limit			
5m Chamber B		T145 8449B		Filter 1		Part 22			
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 824.2MHz									
1.648	-15.9	V	3.0	35.5	1.0	-50.5	-13.0	-37.5	
2.473	-10.6	V	3.0	35.4	1.0	-45.0	-13.0	-32.0	
6.594	-18.4	V	3.0	35.6	1.0	-53.0	-13.0	-40.0	
7.418	-17.9	V	3.0	35.7	1.0	-52.6	-13.0	-39.6	
1.648	-9.6	H	3.0	35.5	1.0	-44.1	-13.0	-31.1	
2.473	-7.6	H	3.0	35.4	1.0	-42.1	-13.0	-29.1	
6.594	-10.0	H	3.0	35.6	1.0	-44.6	-13.0	-31.6	
7.418	-6.0	H	3.0	35.7	1.0	-40.7	-13.0	-27.7	
Mid Ch, 836.6MHz									
1.673	-14.2	V	3.0	35.5	1.0	-48.7	-13.0	-35.7	
2.510	-13.1	V	3.0	35.4	1.0	-47.5	-13.0	-34.5	
6.693	-11.8	V	3.0	35.7	1.0	-46.5	-13.0	-33.5	
1.673	-7.3	H	3.0	35.5	1.0	-41.8	-13.0	-28.8	
2.510	-16.3	H	3.0	35.4	1.0	-50.7	-13.0	-37.7	
5.856	-14.2	H	3.0	35.5	1.0	-48.7	-13.0	-35.7	
6.693	-10.3	H	3.0	35.7	1.0	-44.9	-13.0	-31.9	
7.529	-8.4	H	3.0	35.7	1.0	-43.1	-13.0	-30.1	
High Ch, 848.8MHz									
1.698	-12.1	V	3.0	35.5	1.0	-46.6	-13.0	-33.6	
2.546	-14.6	V	3.0	35.4	1.0	-49.0	-13.0	-36.0	
6.790	-12.7	V	3.0	35.7	1.0	-47.4	-13.0	-34.4	
1.698	-9.9	H	3.0	35.5	1.0	-44.4	-13.0	-31.4	
2.546	-14.9	H	3.0	35.4	1.0	-49.3	-13.0	-36.3	
5.942	-13.8	H	3.0	35.5	1.0	-48.3	-13.0	-35.3	
6.790	-8.7	H	3.0	35.7	1.0	-43.4	-13.0	-30.4	
7.639	-12.2	H	3.0	35.7	1.0	-46.9	-13.0	-33.9	
Rev. 03.03.09									
Note: No other emissions were detected above the system noise floor.									

GPRS1900 PCS BAND

Compliance Certification Services									
Above 1GHz High Frequency Substitution Measurement									
Company:		SAMSUNG							
Project #:		11113692							
Date:		03/09/11							
Test Engineer:		Mengistu Mekuria							
Configuration:		EUT Alone							
Mode:		TX, GSM+GPRS PCS Band							

Chamber	Pre-amplifier	Filter	Limit
5m Chamber B	T145 8449B	Filter 1	Part 24

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1850.2MHz									
3.700	5.2	V	3.0	35.4	1.0	-29.2	-13.0	-16.2	
5.551	4.1	V	3.0	35.4	1.0	-30.3	-13.0	-17.3	
7.401	4.9	V	3.0	35.7	1.0	-29.8	-13.0	-16.8	
11.101	-9.7	V	3.0	34.8	1.0	-43.5	-13.0	-30.5	
12.951	-7.2	V	3.0	34.0	1.0	-40.2	-13.0	-27.2	
14.802	-7.0	V	3.0	33.6	1.0	-39.7	-13.0	-26.7	
3.700	-12.2	H	3.0	35.4	1.0	-46.5	-13.0	-33.5	
5.551	-1.3	H	3.0	35.4	1.0	-35.7	-13.0	-22.7	
7.401	-5.4	H	3.0	35.7	1.0	-40.1	-13.0	-27.1	
Mid Ch, 1880.0MHz									
3.760	4.4	V	3.0	35.3	1.0	-30.0	-13.0	-17.0	
5.640	3.2	V	3.0	35.4	1.0	-31.2	-13.0	-18.2	
7.520	2.3	V	3.0	35.7	1.0	-32.4	-13.0	-19.4	
9.400	-11.7	V	3.0	35.6	1.0	-46.3	-13.0	-33.3	
11.280	-6.7	V	3.0	34.7	1.0	-40.4	-13.0	-27.4	
13.160	-7.1	V	3.0	34.0	1.0	-40.0	-13.0	-27.0	
15.040	-7.1	V	3.0	33.5	1.0	-39.7	-13.0	-26.7	
3.760	-3.5	H	3.0	35.3	1.0	-37.9	-13.0	-24.9	
5.640	0.6	H	3.0	35.4	1.0	-33.8	-13.0	-20.8	
7.520	-2.5	H	3.0	35.7	1.0	-37.2	-13.0	-24.2	
11.280	-15.2	H	3.0	34.7	1.0	-48.9	-13.0	-35.9	
High Ch, 1909.8MHz									
3.820	4.8	V	3.0	35.3	1.0	-29.5	-13.0	-16.5	
5.729	1.9	V	3.0	35.4	1.0	-32.5	-13.0	-19.5	
7.639	-4.8	V	3.0	35.7	1.0	-39.5	-13.0	-26.5	
9.549	-14.3	V	3.0	35.6	1.0	-48.8	-13.0	-35.8	
11.459	-7.4	V	3.0	34.6	1.0	-40.9	-13.0	-27.9	
13.369	-7.8	V	3.0	33.9	1.0	-40.8	-13.0	-27.8	
15.278	-9.7	V	3.0	33.4	1.0	-42.1	-13.0	-29.1	
3.820	-1.3	H	3.0	35.3	1.0	-35.6	-13.0	-22.6	
5.729	1.0	H	3.0	35.4	1.0	-33.4	-13.0	-20.4	
7.639	7.9	H	3.0	35.7	1.0	-26.8	-13.0	-13.8	
9.549	-7.4	H	3.0	35.6	1.0	-41.9	-13.0	-28.9	
11.459	-15.1	H	3.0	34.6	1.0	-48.7	-13.0	-35.7	
13.369	-12.1	H	3.0	33.9	1.0	-45.1	-13.0	-32.1	
15.278	-12.5	H	3.0	33.4	1.0	-45.0	-13.0	-32.0	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

Note: No other emissions were found within 40dB from the system noise below 1GHz.