ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT

INTENTIONAL RADIATOR CERTIFICATION TO FCC PART 22 SUBPART H and PART 24 SUBPART E AND INDUSTRY CANADA RSS-132 and RSS-133 REQUIREMENT

OF

Product Name:	**POS terminal**
Brand Name:	**ingenico**
Model Name:	**iWP250**
Model Difference:	**N/A**
FCC ID:	**XKBIWP250**
IC Number:	**2586D-IWP250**
Report No.:	**EH/2009/30029**
Issue Date:	**Jul. 28, 2009**
FCC Rule Part:	**2 , 22H & 24E**
IC Rule Part:	**RSS 132, Issue 2 and RSS 133, Issue 4**
Prepared for:	**INGENICO** **1 rue Claude Chappe BP346** **Guilherand-Granges France**
Prepared by:	**SGS Taiwan Ltd.** **Electronics & Communication Laboratory** **No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan.**

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VERIFICATION OF COMPLIANCE

Applicant:	INGENICO 1 rue Claude Chappe BP346 Guilherand-Granges France
Product Name:	POS terminal
FCC ID:	XKBIWP250
IC Number:	2586D-IWP250
Brand Name:	ingenico
Model No.:	iWP250
Model Difference:	N/A
File Number:	EH/2009/30029
Date of test:	Jul. 17, 2009 ~ Jul. 27, 2009
Date of EUT Received:	Mar. 27, 2009

We hereby certify that:

The above equipment was tested by SGS Taiwan Ltd. Electronics & Communication Laboratory The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in TIA/EIA-603-C-2004, Issue 2 of RSS-Gen and the energy emitted by the sample EUT tested as described in this report is in compliance with conducted and radiated emission limits of FCC Rule PART 22 subpart H, PART 24 subpart E and IC standards Issue 2 of RSS-129, Issue 4 of RSS-133.

The test results of this report relate only to the tested sample identified in this report.

Test By:		***Date***	Jul. 28, 2009
	Jason Wu/ Asst. Supervisor		
Prepared By:		***Date***	Jul. 28, 2009
	Gigi Yeh / Clerk		
Approved By:		***Date***	Jul. 28, 2009
	Jim Chang / Supervisor		

Version

Version No.	Date	Description
00	Jul. 28, 2009	Initial creation of document

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1. GENERAL INFORMATION

General:

Product Name:	POS terminal	
Brand Name:	ingenico	
Model Name:	iWP250	
Model Difference:	N/A	
Power Supply	24Vdc by AC/DC power adapter	
	Adapter:	Model: EA11002B, Supplier: EDAC

GSM / DCS:

Cellular Phone Standards Frequency Range and Power	Operation Band	Frequency Range	Rated Power
	GSM/EDGE 850, class10	824 MHz– 849MHz	33dBm
	DCS/EDGE 1900, class10	1850MHz – 1910MHz	30dBm
Final Amplifier Voltage and Current Information		DC voltage (V)	DC current (mA)
	GSM 850, class10	24Vdc	325
	DCS1900, class10	24Vdc	310
	DEGE 850	24Vdc	315
	EDGE 1900	24Vdc	305
Antenna Designation:	PIFA Antenna / -2.3 dBi.		
Type of Emission	300KGXW		
IMEI	354060011204555		

WLAN:

Frequency Range:	2412 – 2462 MHz
Channel number:	11 channels
Max. Output Power:	802.11 b: 16.61 dBm (Peak) 802.11 g: 16.54 dBm (Peak)
Modulation Technology:	DSSS, OFDM
Modulation type:	CCK, DQPSK, DBPSK for DSSS 64QAM. 16QAM, QPSK, BPSK for OFDM
Transition Rate:	802.11 b: 1/2/5.5/11 Mbps; 802.11 g: 6/9/12/18/24/36/48/54 Mbps
Antenna Designation:	PIFA Antenna / -3.6dBi.

The EUT is compliance with IEEE 802.11 b/g Standard.

Bluetooth:

Bluetooth Version	☐ V1.1 (GFSK) ☐ V1.2 (GFSK) ☐ V2.0 (GFSK) ☐ V2.0 + EDR (GFSK + π/4DQPSK + 8DPSK) ☒ V2.1 + EDR (GFSK + π/4DQPSK + 8DPSK)
Frequency Range	2402 – 2480MHz
Channel number	79 channels max.
Rated Power	1.93 dBm (Peak)
Modulation type	Frequency Hopping Spread Spectrum
Antenna Designation	PIFA Antenna / -3.9dBi.

The EUT is compliance with Bluetooth 2.1 Standard.

RFID:

Operating Frequency	13.56MHz
Transmit Power	< 123dBuV/m at 3m.
Number of Channels	1
Operating Mode	Point-to-Point
Antenna Type	A permanent fixed antenna, which is built-In, designed as an in-dispensable part of the EUT.
Module Type	ASK

The EUT is compliance with RFID Standard.
This test report applies for GPRS/GPRS 850, GPRS/GPRS 1900.

1.2 Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended for **FCC ID: XKBIWP250** filing to comply with Section Part 22 subpart H, Part 24 subpart E of the FCC CFR 47 Rules.
And **IC: 2586D-IWP250** filing to comply with issue 2 of RSS-129, issue 4 of RSS-133.

1.3 Test Methodology

Both conducted and radiated testing were performed according to the procedures document on chapter 13 of ANSI C63.4 (2003) and FCC 47 CFR 2.1046, 2.1047, 2.1049, 2.1051, 2.1053, 2.1055, 2.1057, issue 2 of RSS-132 and issue 3 of RSS-133.

1.4 Test Facility

The measurement facilities used to collect the 3m Radiated Emission and AC power line conducted data are located on the address of SGS Taiwan Ltd. Electronics & Communication Laboratory No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei Country, Taiwan which are constructed and calibrated to meet the FCC requirements in documents ANSI C63.4: 2003. FCC Registration Number are: 990257 and 236194, Canada Registration Number: 4620A-1

The 10 m Open Area Test Sites located on the address of SGS Taiwan Ltd. Electronics & Communication Laboratory No. 29, Pau-Tou-Tsuo Valley Chia-Pau Tsuen, Linkou Hsiang, Taipei county, which is constructed and calibrated to meet the CISPR 22/EN 55022 requirements. SGS Site No. 1(3 &10 meters) and FCC Registration Number: 94644.

All equipment is calibrated externally and traceable to SI (International System of Unit).

1.5 Special Accessories

Not available for this EUT intended for grant.

1.6 Equipment Modifications

Not available for this EUT intended for grant.

2. SYSTEM TEST CONFIGURATION

2.1 EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

2.2 EUT Exercise

The EUT (Transmitter) was operated in the engineering mode to fix the Tx frequency which was for the purpose of the measurements.

2.3 Test Procedure

2.3.1 AC Power Line Conducted Emissions

The EUT is placed on a turn table which is 0.8 m above ground plane. According to the requirements in Section 7 and 13 of ANSI C63.4-2003. Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-Peak and Average detector mode.

2.3.2 Conducted Measurement at Antenna Port:

According to measurement procured TIA/EIA 603C and RSS-Gen, the EUT is placed on a turn table which is 0.8 m above ground plane. A low loss of RF cable was used to con- nect the antenna port of EUT to measurement equipment.

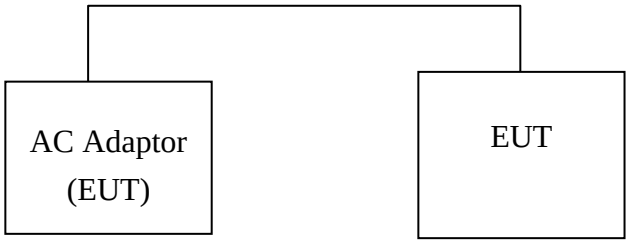
2.3.3 Radiated Emissions (ERP/EIRP):

According to measurement procured TIA/EIA 603C and RSS-Gen. The EUT is placed on a turn table which is 1.0 m above ground plane. The turn table shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the max. emission, the rela- tive positions of this hand-held transmitter (EUT) was rotated through three or- thogonal axes according to the requirements.

A standard antenna was used to replace the EUT and connect to the SG. Adjust the SG output level to reach the max emission level which were measured above.

2.4 Configuration of Tested System

Fig. 2-1 Configuration of Tested System (Fixed Channel)



Remote Side

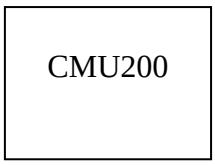


Table 2-1 Equipment Used in Tested System

Item	Equipment	Mfr/Brand	Model/ Type No.	Series No.	Data Cable	Power Cord
1	Universal Radio Communication Tester	R&S	CMU200	102189	N/A	Un-shielded

3. SUMMARY OF TEST RESULTS

FCC Rules	IC Rules	Description Of Test	Result
§2.1046(a) §22.913(a)(2) §24.232(c)	N/A	RF Conducted Power Output	Compliant
§2.1046(a) §22.913(a)(2) §24.232(c)	§4.8 (RSS-Gen) §4.4 (RSS-132) §6.4 (RSS-133)	ERP/EIRP measurement	Compliant
§2.1049(h)	§4.6.1 (RSS-Gen) §2.3 (RSS-133)	99% Occupied Bandwidth	Compliant
§2.1051 §22.917(a) §24.238(a)	§4.9 (RSS-Gen) §4.5 (RSS-132) §6.5 (RSS-133)	Out of Band Emissions at Antenna Terminals	Compliant
§2.1053 §22.917(a) §24.238(a)	§4.9 (RSS-Gen) §4.5 (RSS-132) §6.5 (RSS-133)	Field Strength of Spurious Radiation (TX)	Compliant
§2.1055(a)(1) §22.355 §24.235	§4.7 (RSS-Gen) §4.3 (RSS-132) §6.3 (RSS-133)	Frequency Stability vs. Temperature	Compliant
§2.1055(d)(2) §22.355 §24.235	§4.7 (RSS-Gen) §4.3 (RSS-132) §6.3 (RSS-133)	Frequency Stability vs. Voltage	Compliant
N/A	§4.10 (RSS-Gen) §4.6 (RSS-132) §6.6 (RSS-133)	Receiver Spurious Emissions	Compliant
§15.207(a)	§7.2.2 (RSS-Gen)	AC Power Line Conducted Emission	Compliant

4. DESCRIPTION OF TEST MODES

The EUT has been tested under operating condition.

EUT staying in continuous transmitting mode. Channel Low, Mid and High for each type band with rated data rate were chosen for full testing.

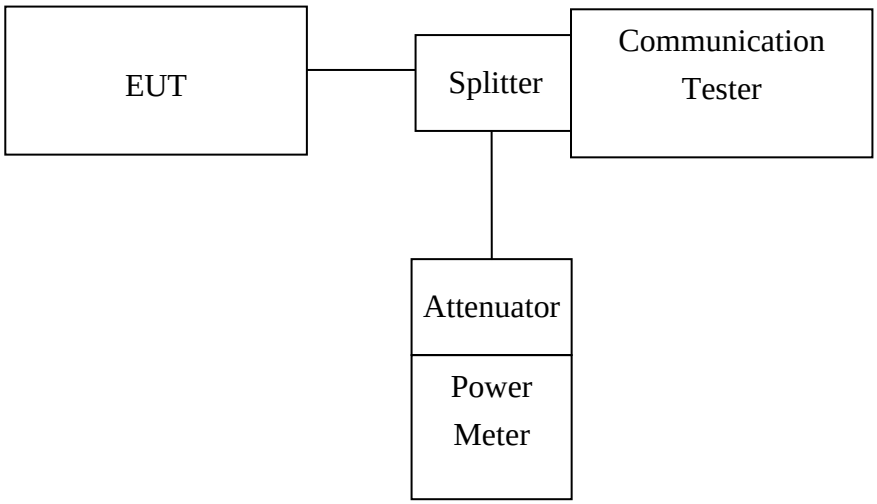
The field strength of spurious radiation emission was measured as EUT stand-up position (H mode) for GPRS with power adaptor. The worst-case of H position for GPRS 850 band, H position for GPRS 1900 band were reported.

5. RF POWER OUTPUT MEASUREMENT

5.1 Standard Applicable

According to FCC §2.1046(a), §22.913(a)(2) and §24.232(c).

5.2 Test Set-up:



Note: *Measurement setup for testing on Antenna connector*

5.3 Measurement Procedure

The transmitter output was connected to a calibrated attenuator, the other end of which was connected to a power meter. Transmitter output was read off the power meter in dBm. The power output at the transmitter antenna port was determined by adding the value of the attenuator to the power meter reading.

5.4 Measurement Equipment Used:

Conducted Emission Test Site					
EQUIPMENT TYPE	**MFR**	**MODEL NUMBER**	**SERIAL NUMBER**	**LAST CAL.**	**CAL DUE.**
Spectrum Analyzer	Agilent	E4446A	MY43360126	04/19/2008	04/18/2010
Spectrum Analyzer	Agilent	E4440A	US41160416	01/23/2008	01/22/2010
Radio Communication Analyzer	R&S	CMU200	102189	05/13/208	05/12/2010
800 – 1000MHz Filter	Micro-Tronics	BRM13462	001	01/05/2009	01/04/2010
1800 – 2000MHz Filter	Micro-Tronics	BRM13463	001	01/05/2009	01/04/2010
Temperature Chamber	TERCHY	MHG-120LF	911009	04/14/2008	04/13/2010
Temperature Chamber	GIANT FORCE	GTH-150-40-CP-AR	MAA0512-018	02/05/2008	02/04/2010
DC Block	Agilent	BLK-18	155452	07/05/2009	07/04/2010
Attenuator	Mini-Circuit	BW-S20W5	N/A	07/05/2009	07/04/2010
Attenuator	Mini-Circuit	BW-S10W5	N/A	07/05/2009	07/04/2010
Attenuator	Mini-Circuit	BW-S6W5	N/A	07/05/2009	07/04/2010
Splitter	Agilent	11636B	N/A	07/05/2009	07/04/2010
DC Power Supply	HP	6038A	2929A-07548	06/27/2009	06/26/2011
DC Power Supply	Topward	3303D	981327	10/26/2007	10/25/2009

5.5 Measurement Result

EUT Mode	Frequency (MHz)	CH	Peak Power (dBm)	Avg. Power (dBm)
GSM 850	824.2	128	32.40	32.30
	836.6	190	32.40	32.30
	848.8	251	32.30	32.20

EUT Mode	Frequency (MHz)	CH	Peak Power (dBm)	Avg. Power (dBm)
GSM 1900	1850.2	512	28.70	28.60
	1880.0	661	28.50	28.30
	1909.8	810	28.20	28.10

EUT Mode	Frequency (MHz)	CH	Peak Power (1DN 1UP) (dBm)	Peak Power (1DN 2UP) (dBm)	Avg. Power (1DN 1UP) (dBm)	Avg. Power (1DN 2UP) (dBm)
GPRS 850 (Class 10)	824.2	128	32.40	32.30	32.30	32.10
	836.6	190	32.40	32.30	32.30	32.20
	848.8	251	32.30	32.20	32.20	32.10

EUT Mode	Frequency (MHz)	CH	Peak Power (1DN 1UP) (dBm)	Peak Power (1DN 2UP) (dBm)	Avg. Power (1DN 1UP) (dBm)	Avg. Power (1DN 2UP) (dBm)
GPRS 1900 (Class 10)	1850.2	512	28.70	28.40	28.50	28.30
	1880.0	661	28.40	28.30	28.30	28.20
	1909.8	810	28.20	28.10	28.00	28.00

Note: offset:0.8dB

EUT Mode	Frequency (MHz)	CH	Peak Power (1DN 1UP) (dBm)	Peak Power (1DN 2UP) (dBm)	Avg. Power (1DN 1UP) (dBm)	Avg. Power (1DN 2UP) (dBm)
EDGE 850 (Class 10)	824.2	128	29.50	29.40	26.10	26.00
	836.6	190	29.30	29.20	25.90	25.80
	848.8	251	29.10	29.10	25.80	25.70

EUT Mode	Frequency (MHz)	CH	Peak Power (1DN 1UP) (dBm)	Peak Power (1DN 2UP) (dBm)	Avg. Power (1DN 1UP) (dBm)	Avg. Power (1DN 2UP) (dBm)
EDGE 1900 (Class 10)	1850.2	512	28.50	28.40	25.00	24.90
	1880.0	661	27.90	27.80	24.50	24.40
	1909.8	810	27.80	27.70	24.30	24.30

Note: offset: 0.8dB

Minimum Communications Power Measurement: PCS1900 band

PCL	0	1	2	3	4	5	6	7	8
Output power (dBm)	28.3	26.9	24.9	22.9	21	19	17	15	12.9
PCL	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**
Output power (dBm)	10.8	8.7	6.5	4.4	2.4	0.3	0		

Minimum Communications Power Measurement: EDGE1900 band

PCL	0	1	2	3	4	5	6	7	8	
Output power (dBm)	24.5	24.5	24.5	24.4	24.5	24.4	22.9	20.8	18.8	
PCL	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**
Output power (dBm)	16.9	14.9	12.9	10.9	8.8	6.9	4.9	3	0.9	0

Note: The EUT output power was controlled by simulator. Set Communication Tester CMU200 PCL as above, and get the mobile phone output power reading.

6. ERP, EIRP MEASUREMENT

6.1 Standard Applicable

According to FCC §2.1046(a)

FCC 24.232(c) Mobile station are limited to 2W EIRP.

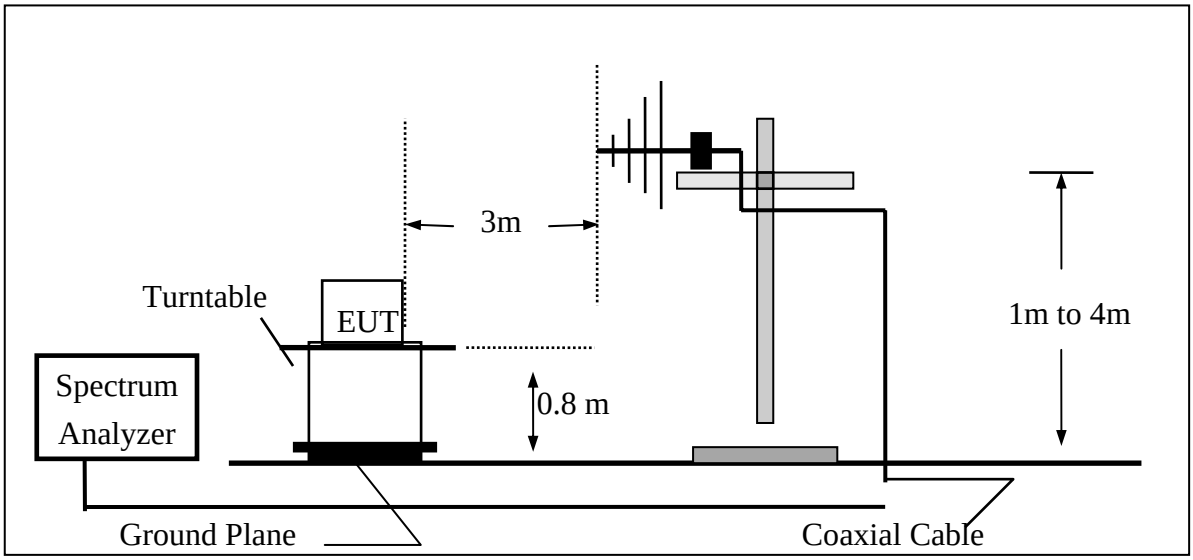
According to IC RSS-133 §6.4

The peak e.i.r.p. for transmitters operating in the band 1850-1910 MHz shall not exceed the limits 2W which given in SRSP-510.

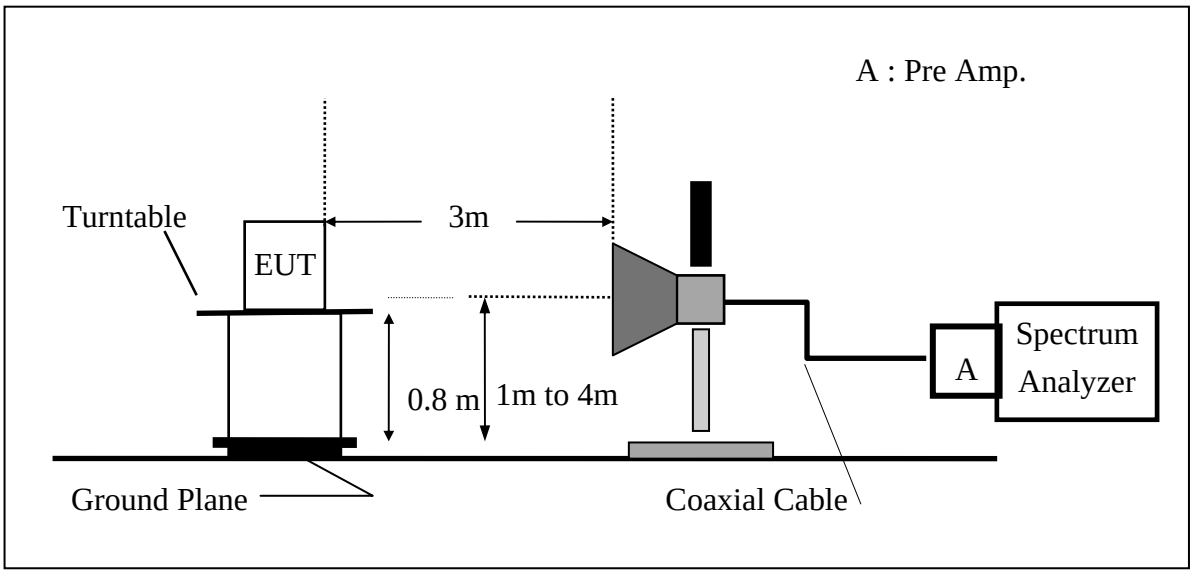
According to issue 2 of RSS 132, section 4.4. The transmitter output power shall not exceed the limits given in SRSP-503.

6.2 Test SET-UP (Block Diagram of Configuration)

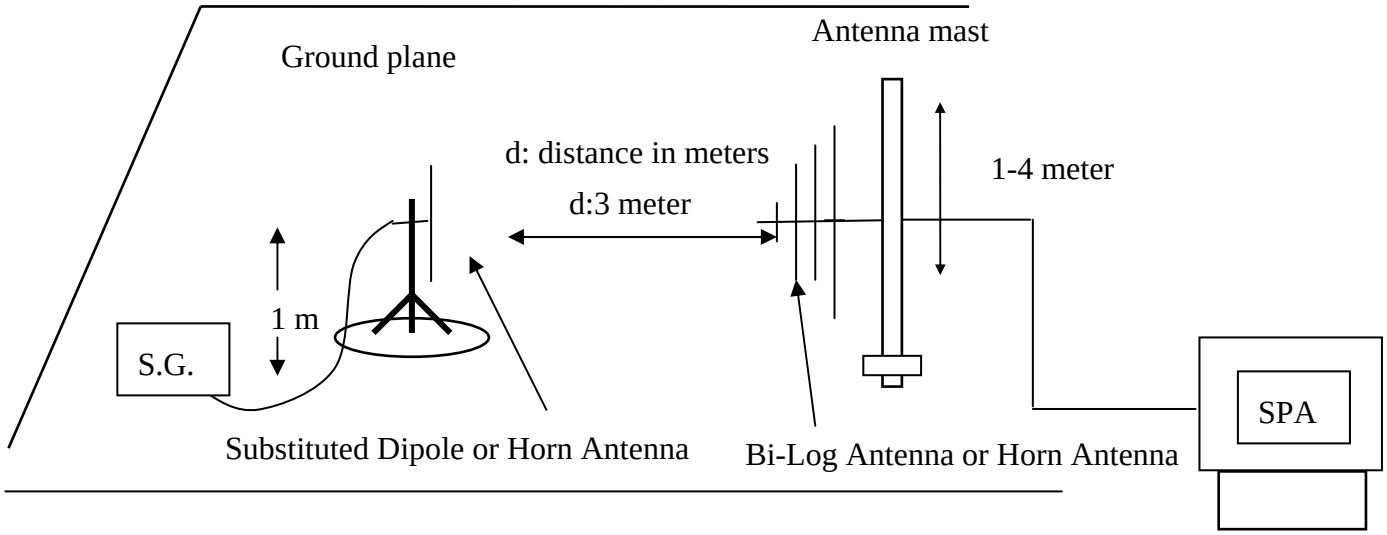
(A) Radiated Emission Test Set-Up, Frequency Below 1000MHz



(B) Radiated Emission Test Set-UP Frequency Over 1 GHz



(C) Substituted Method Test Set-UP



6.3 Measurement Procedure

The EUT was placed on an non-conductive turntable using a non-conductive support. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and EMI spectrum analyzer.

During the measurement, the EUT was communication with the station. The highest emission was recorded with the rotation of the turntable and the lowering of the test antenna from 4m to 1m. The reading was recorded and the field strength (E in dBuV/m) was calculated.

ERP in frequency band 824.2 –848.80MHz were measured using a substitution method. The EUT was replaced by dipole antenna connected, the S.G. output was recorded and ERP was calculated as follows:

EIRP in frequency band 1850.2 –1909.8MHz were measured using a substitution method. The EUT was replaced by or horn antenna connected, the S.G. output was recorded and EIRP was calculated as follows:

ERP = S.G. output (dBm) + Antenna Gain (dBd) – Cable Loss (dB)

EIRP = S.G. output (dBm) + Antenna Gain (dBi) – Cable Loss (dB)

6.4 Measurement Equipment Used:

EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Spectrum Analyzer	R&S	FSP 40	100034	02/12/2009	02/11/2010
Bilog Antenna	SCHWAZBECK	VULB9160	9160-3136	11/15/2008	11/14/2009
Dipole Antenna	SCHWAZBECK	VHAP	908/909	07/10/2008	07/09/2010
Dipole Antenna	SCHWAZBECK	UHAP	891/892	07/10/2008	07/09/2010
Hor.n antenna	SCHWAZBECK	BBHA 9120D	309	01/22/2008	01/21/2010
Horn antenna	SCHWAZBECK	BBHA 9120D	9120D-673	05/09/2008	05/08/2010
Signal Generator	R&S	SMR40	100210	01/22/2008	01/21/2010
Signal Generator	Agilent	E4438C	MY45093613	05/22/2009	05/21/2010
Pre-Amplifier	Agilent	8447D	1937A02834	11/30/2008	11/29/2009
Pre-Amplifier	Agilent	8449B	3008A01973	01/05/2009	01/04/2010
Attenuator	Mini-Circuit	BW-S20W5	001	07/05/2009	07/04/2010
Attenuator	Mini-Circuit	BW-S10W5	001	07/05/2009	07/04/2010
Attenuator	Mini-Circuit	BW-S6W5	001	07/05/2009	07/04/2010
Radio Communication Analyzer	R&S	CMU200	102189	05/13/208	05/12/2010
Turn Table	HD	DT420	N/A	N.C.R	N.C.R
Antenna Tower	HD	MA240-N	240/657	N.C.R	N.C.R
Controller	HD	HD100	N/A	N.C.R	N.C.R
Low Loss Cable	HUBER+SUHNER	SUCOFLEX 104PEA-10M	10m	01/05/2009	01/04/2010
Low Loss Cable	HUBER+SUHNER	SUCOFLEX 104PEA-3M	3m	01/05/2009	01/04/2010
3m Site	SGS	966 chamber	N/A	11/08/2008	11/09/2009

6.5 Measurement Result

EUT Mode	Frequency (MHz)	CH	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBd)	Cable Loss (dB)	ERP (dBm)	Limit (dBm)
GSM 850	824.20	128	H	V	120.19	33.80	-7.87	3.62	22.30	38.45
				H	126.56	40.29	-7.87	3.62	28.79	38.45
	836.60	190	H	V	121.57	35.32	-7.88	3.65	23.79	38.45
				H	128.17	41.94	-7.88	3.65	30.41	38.45
	848.80	251	H	V	122.36	36.24	-7.88	3.68	24.68	38.45
				H	129.06	42.87	-7.88	3.68	**31.31**	38.45

EUT Mode	Frequency (MHz)	CH	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBi)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)
PCS 1900	1850.20	512	H	V	122.94	18.55	9.90	5.56	22.89	33.00
				H	124.36	20.18	9.90	5.56	**24.52**	33.00
	1880.00	661	H	V	123.52	19.16	9.99	5.61	23.54	33.00
				H	123.49	19.35	9.99	5.61	23.72	33.00
	1909.80	810	H	V	123.68	19.35	10.08	5.66	23.77	33.00
				H	123.90	19.79	10.08	5.66	24.21	33.00

Remark：

(1) The RBW,VBW of SPA for frequency

RBW=300 KHz, VBW=1MHz,

EUT Mode	Frequency (MHz)	CH	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBd)	Cable Loss (dB)	ERP (dBm)	Limit (dBm)
EDGE 850	824.20	128	H	V	118.09	31.70	-7.87	3.62	20.20	38.45
				H	124.51	38.24	-7.87	3.62	26.74	38.45
	836.60	190	H	V	118.13	31.88	-7.88	3.65	20.35	38.45
				H	124.68	38.45	-7.88	3.65	**26.92**	38.45
	848.80	251	H	V	117.52	31.40	-7.88	3.68	19.84	38.45
				H	124.49	38.30	-7.88	3.68	26.74	38.45

EUT Mode	Frequency (MHz)	CH	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBi)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)
EDGE 1900	1850.20	512	H	V	123.65	19.26	9.90	5.56	23.60	33.00
				H	124.27	20.09	9.90	5.56	**24.43**	33.00
	1880.00	661	H	V	123.31	18.95	9.99	5.61	23.33	33.00
				H	123.49	19.35	9.99	5.61	23.72	33.00
	1909.80	810	H	V	123.88	19.55	10.08	5.66	23.97	33.00
				H	123.98	19.87	10.08	5.66	24.29	33.00

Remark：

(1) The RBW,VBW of SPA for frequency

RBW=300 KHz, VBW=1MHz,

7. 99% OCCUPIED BANDWIDTH MEASUREMENT

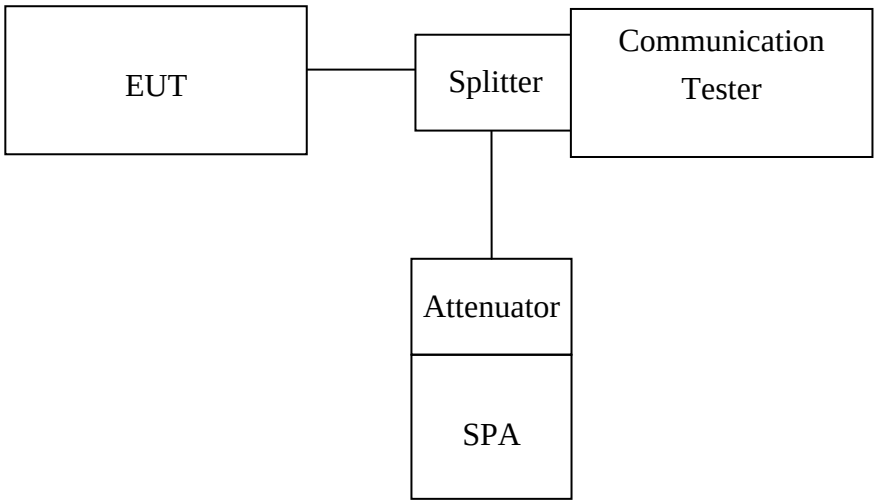
7.1 Standard Applicable

According to FCC§2.1049(h).

According to IC RSS-Gen §4.6.1

According to IC RSS-133 §2.3

7.2 Test Set-up:



Note: *Measurement setup for testing on Antenna connector*

7.3 Measurement Procedure

The EUT's output RF connector was connected with a short cable to the spectrum analyzer, RBW (10KHz) was set to about 1% of emission BW, VBW= 30KHz, -26dBc display line was placed on the screen (or 99% bandwidth), the occupied bandwidth is the delta frequency between the two points where the display line intersects the signal trace.

7.4 Measurement Equipment Used:

Conducted Emission Test Site					
EQUIPMENT TYPE	**MFR**	**MODEL NUMBER**	**SERIAL NUMBER**	**LAST CAL.**	**CAL DUE.**
Spectrum Analyzer	Agilent	E4446A	MY43360126	04/19/2008	04/18/2010
Spectrum Analyzer	Agilent	E4440A	US41160416	01/23/2008	01/22/2010
Radio Communication Analyzer	R&S	CMU200	102189	05/13/2008	05/12/2010
Radio Communication Analyzer	Anritsu	MT8820A	6200307563	04/16/2008	04/15/2010
DC Block	Agilent	BLK-18	155452	07/05/2009	07/04/2010
Attenuator	Mini-Circuit	BW-S20W5	001	07/05/2009	07/04/2010
Attenuator	Mini-Circuit	BW-S10W5	001	07/05/2009	07/04/2010
Attenuator	Mini-Circuit	BW-S6W5	001	07/05/2009	07/04/2010
Splitter	Agilent	11636B	N/A	07/05/2009	07/04/2010
DC Power Supply	HP	6038A	2929A-07548	06/27/2009	06/26/2011
DC Power Supply	Topward	3303D	981327	10/26/2007	10/25/2009

7.5 Measurement Result:

EUT Mode	Frequency (MHz)	CH	99% Bandwidth (MHz)
GSM 850	824.20	128	0.2423
	836.60	190	0.2431
	848.80	251	0.2434

EUT Mode	Frequency (MHz)	CH	99% Bandwidth (MHz)
GSM 1900	1850.20	512	0.2457
	1880.00	661	0.2432
	1909.80	810	0.2450

EUT Mode	Frequency (MHz)	CH	99% Bandwidth (MHz)
EDGE 850	824.20	128	0.2422
	836.60	190	0.2435
	848.80	251	0.2433

EUT Mode	Frequency (MHz)	CH	99% Bandwidth (MHz)
EDGE 1900	1850.20	512	0.2438
	1880.00	661	0.2437
	1909.80	810	0.2465

Figure 7-1: GSM 850 Channel Low

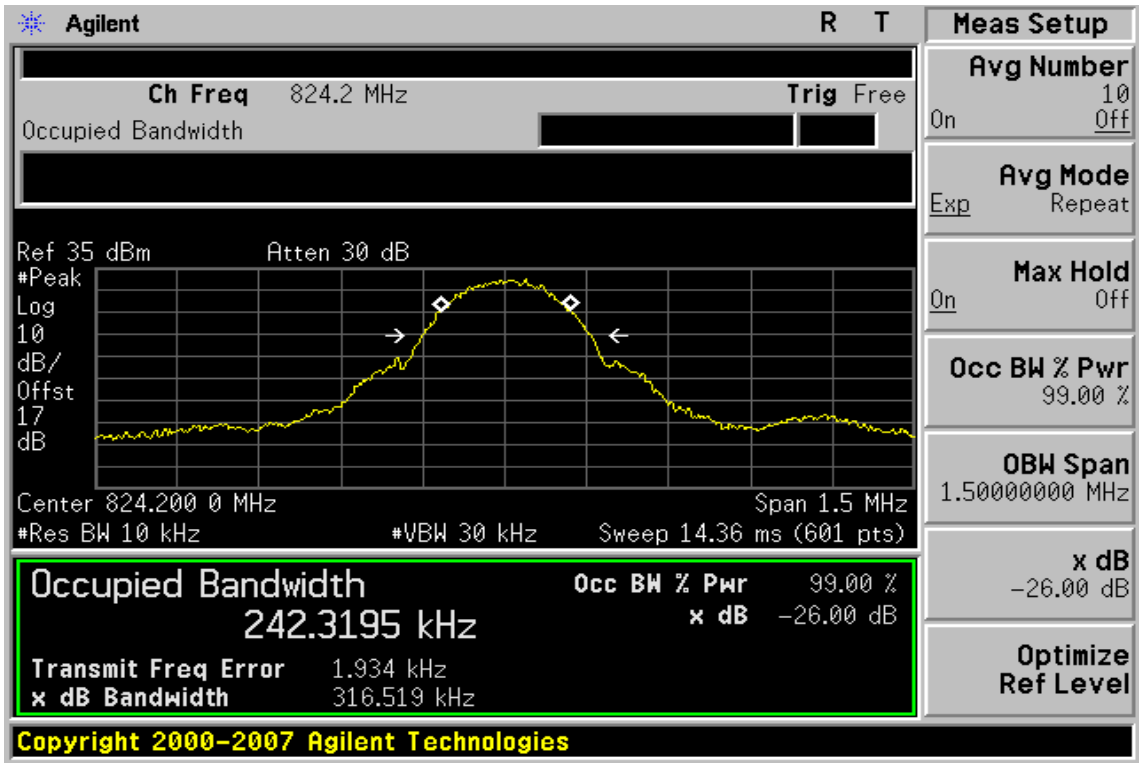


Figure 7-2 GSM 850 Channel Mid

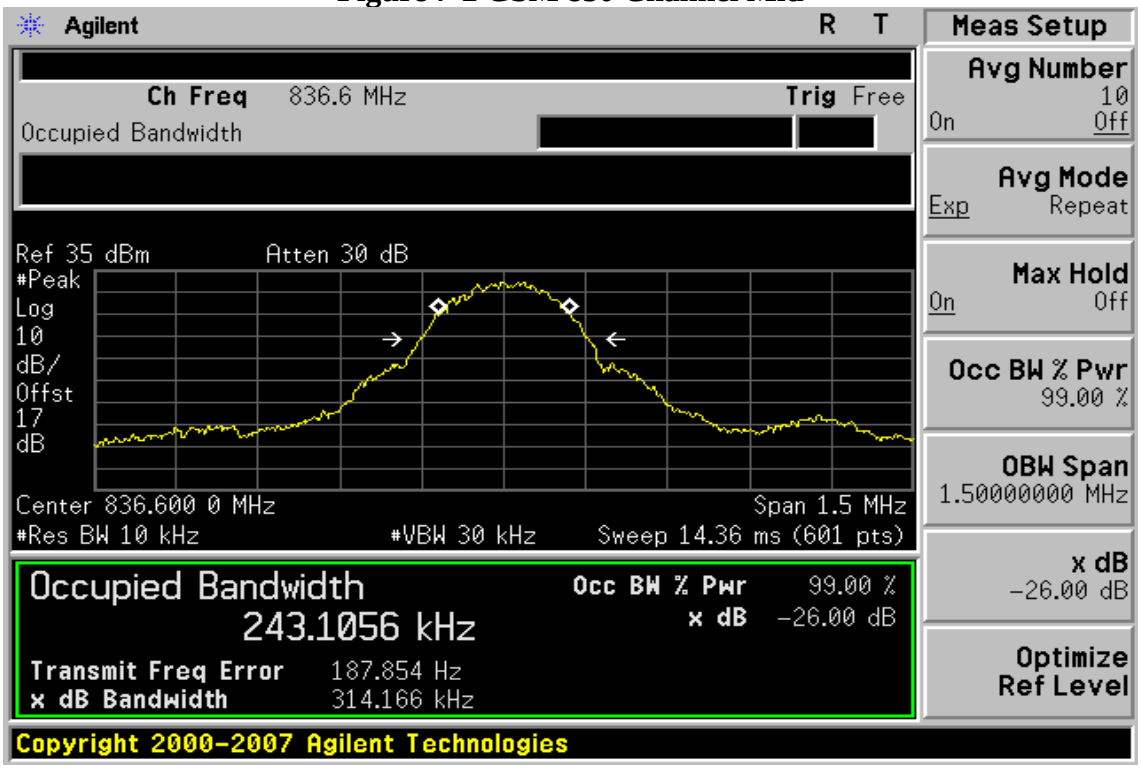


Figure 7-3: GSM 850 Channel High

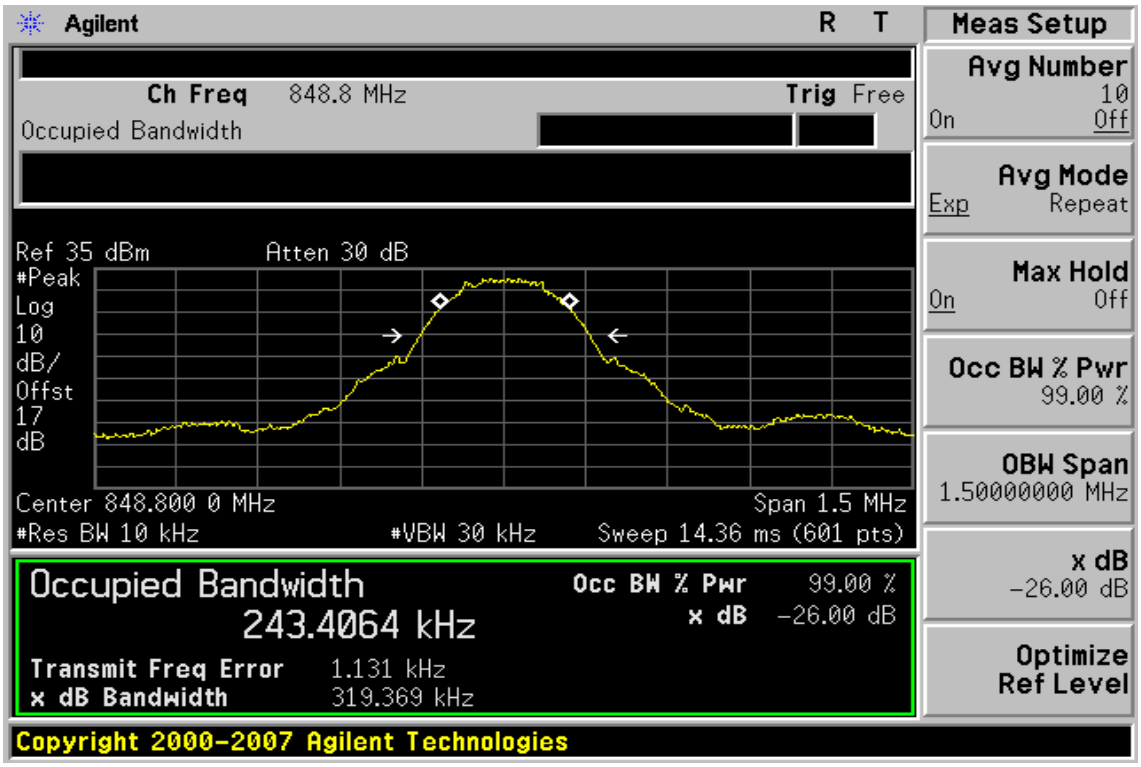


Figure 7-4: PCS 1900 Channel Low

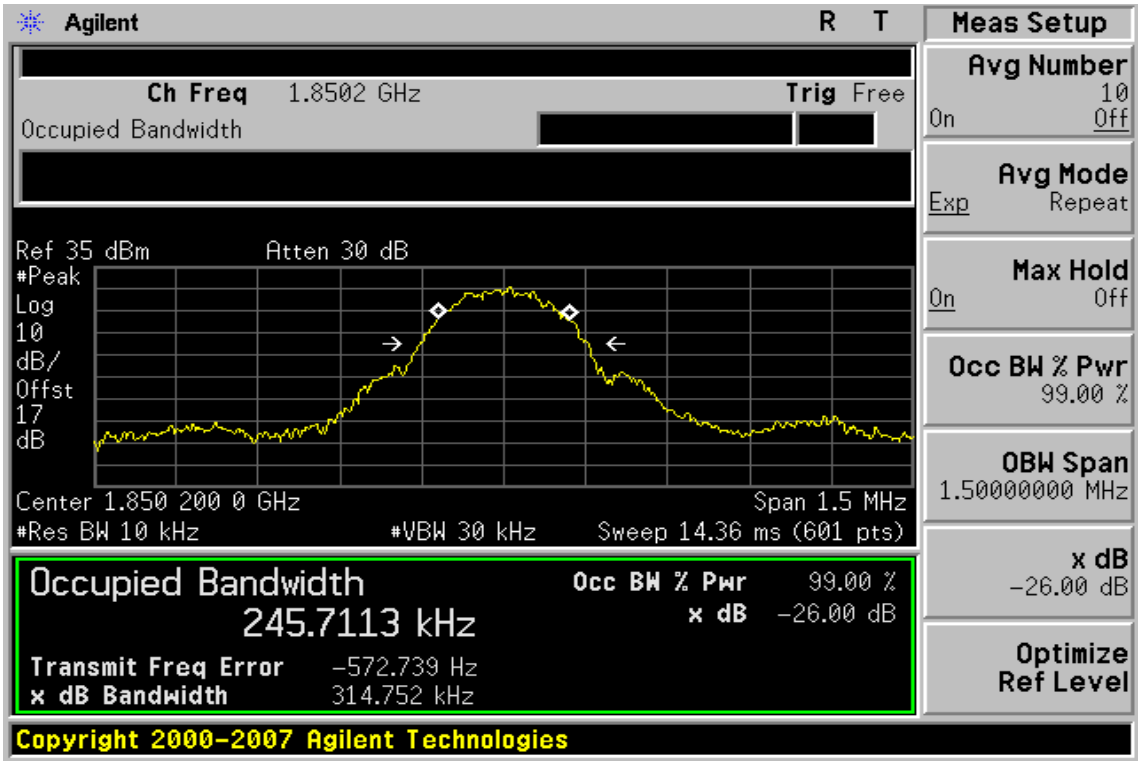


Figure 7-5 PCS 1900 Channel Mid

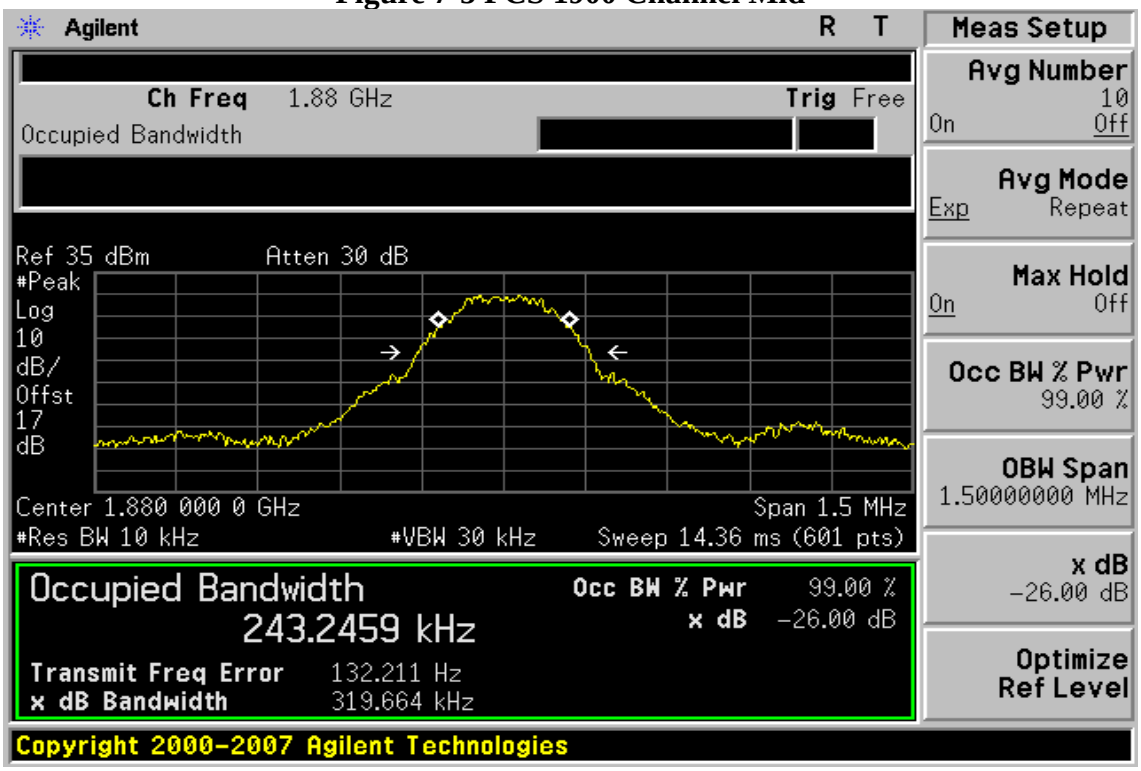


Figure 7-6: PCS 1900 Channel High

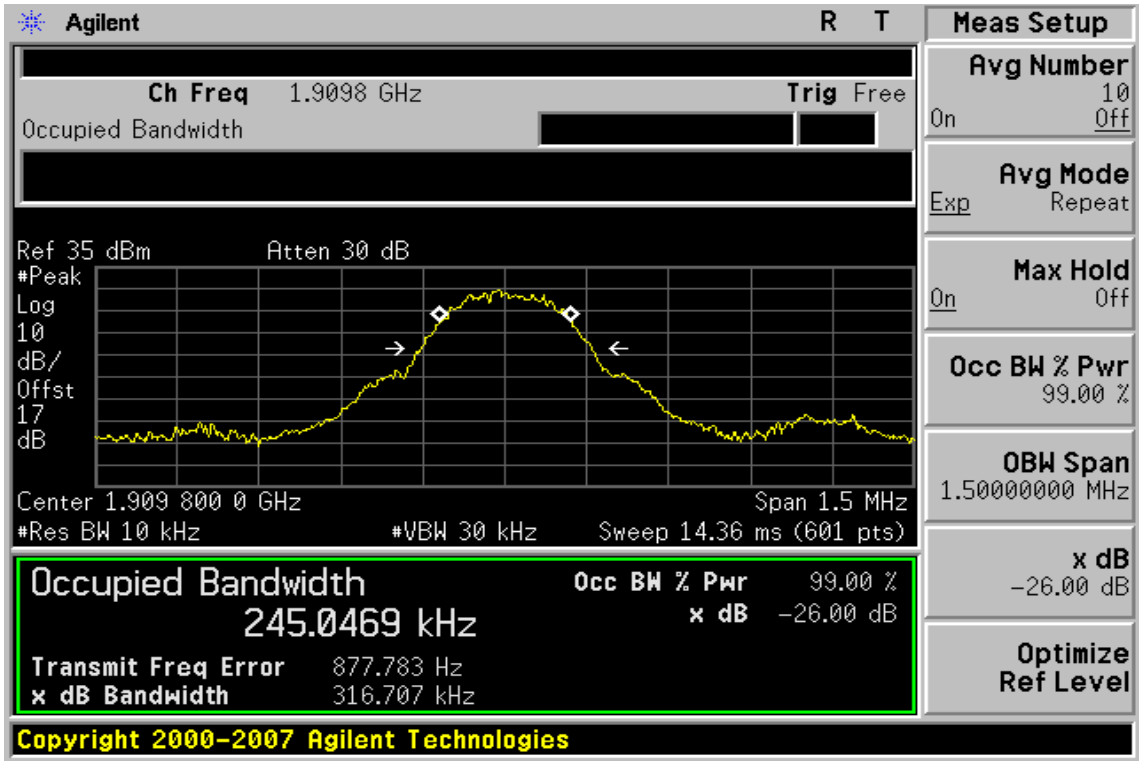


Figure 7-1: EDGE 850 Channel Low

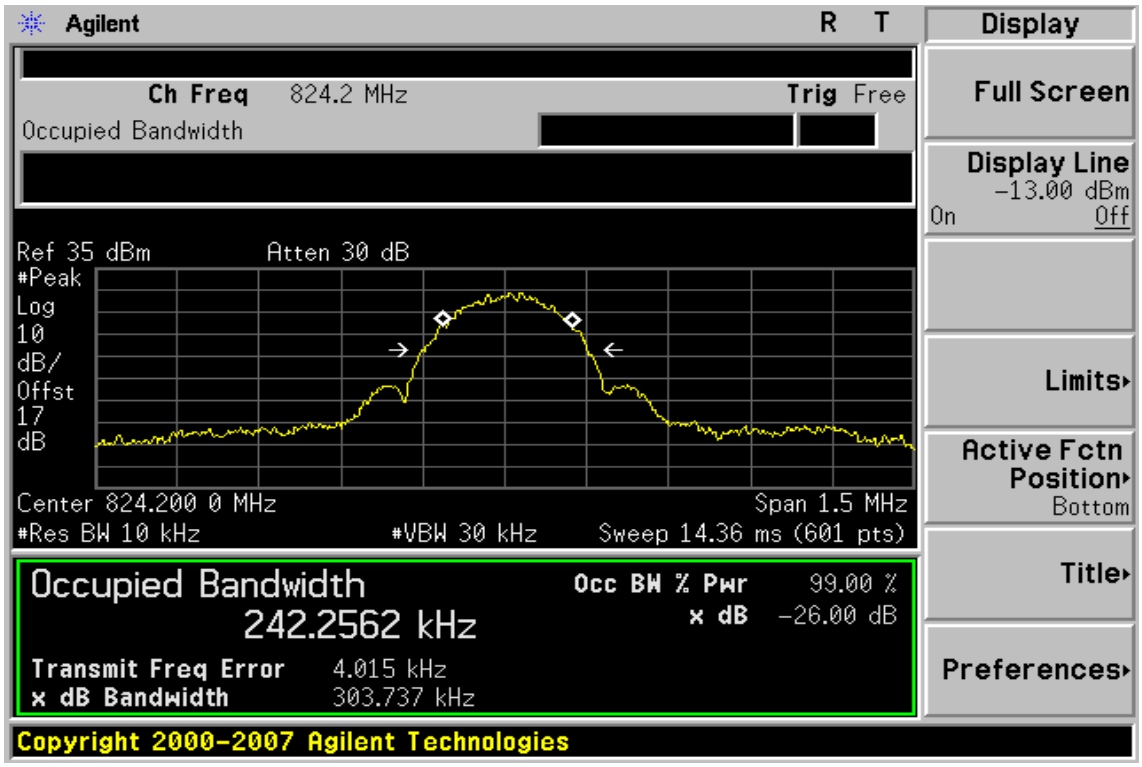


Figure 7-2 EDGE 850 Channel Mid

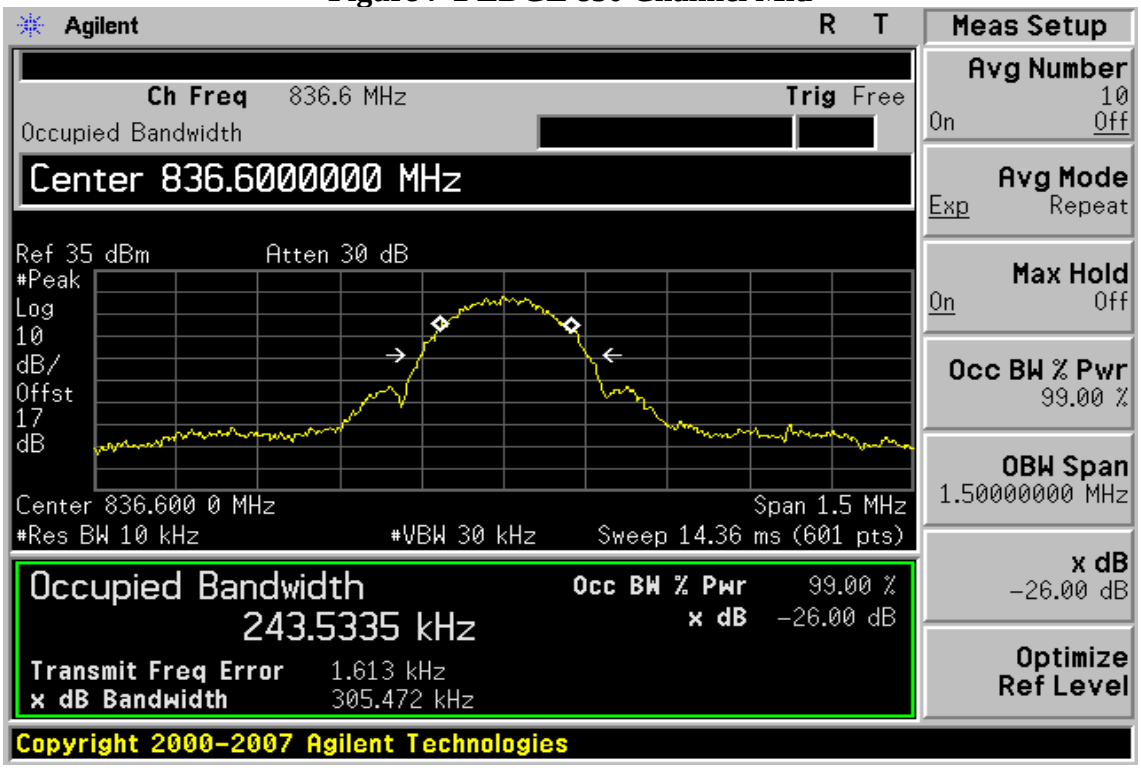


Figure 7-3: EDGE 850 Channel High

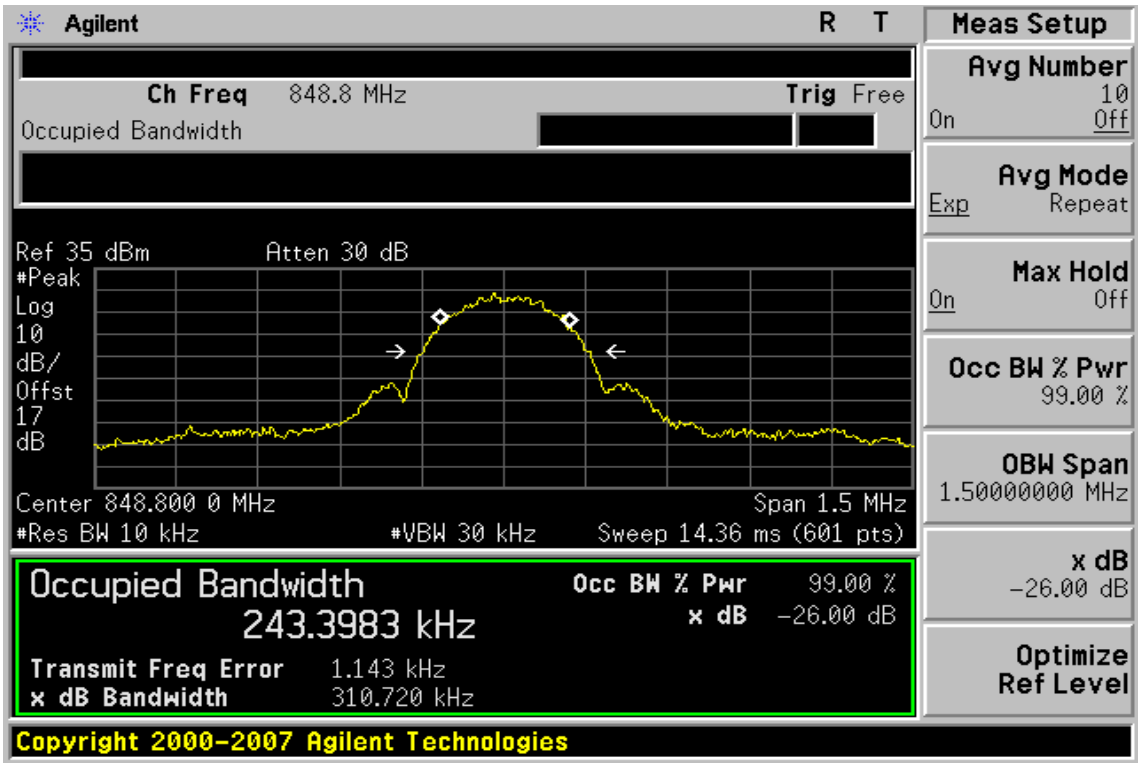


Figure 7-4: EDGE 1900 Channel Low

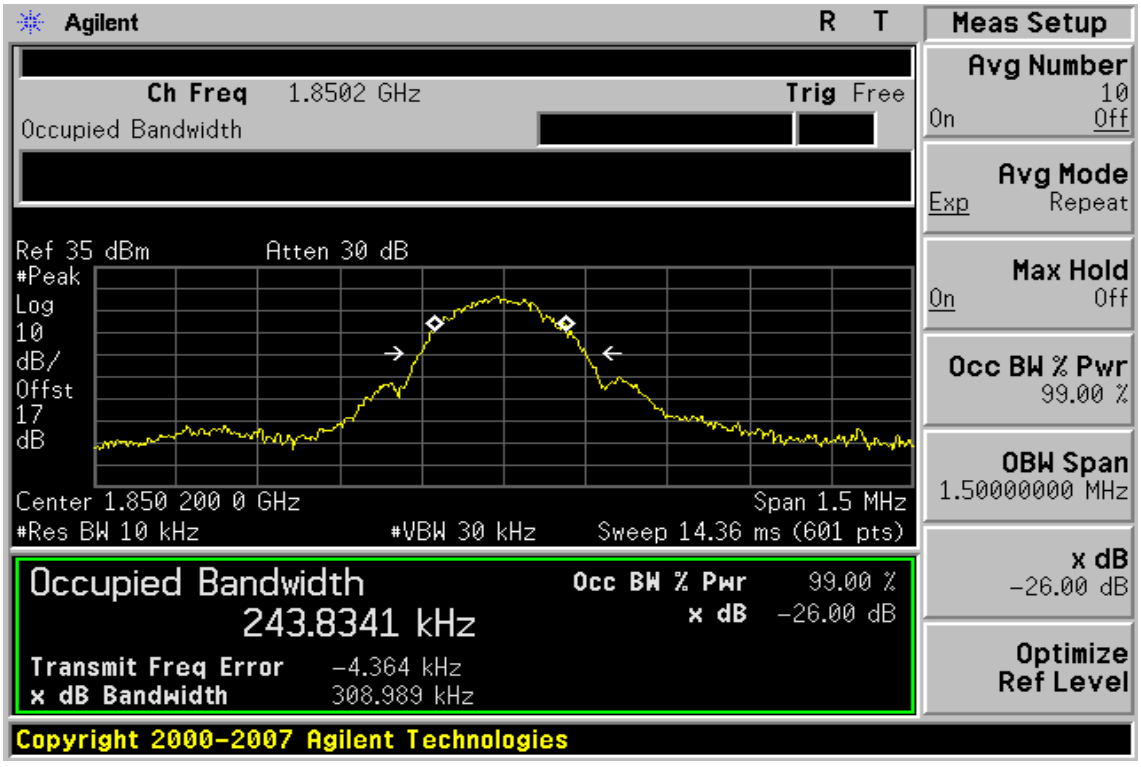


Figure 7-5 EDGE 1900 Channel Mid

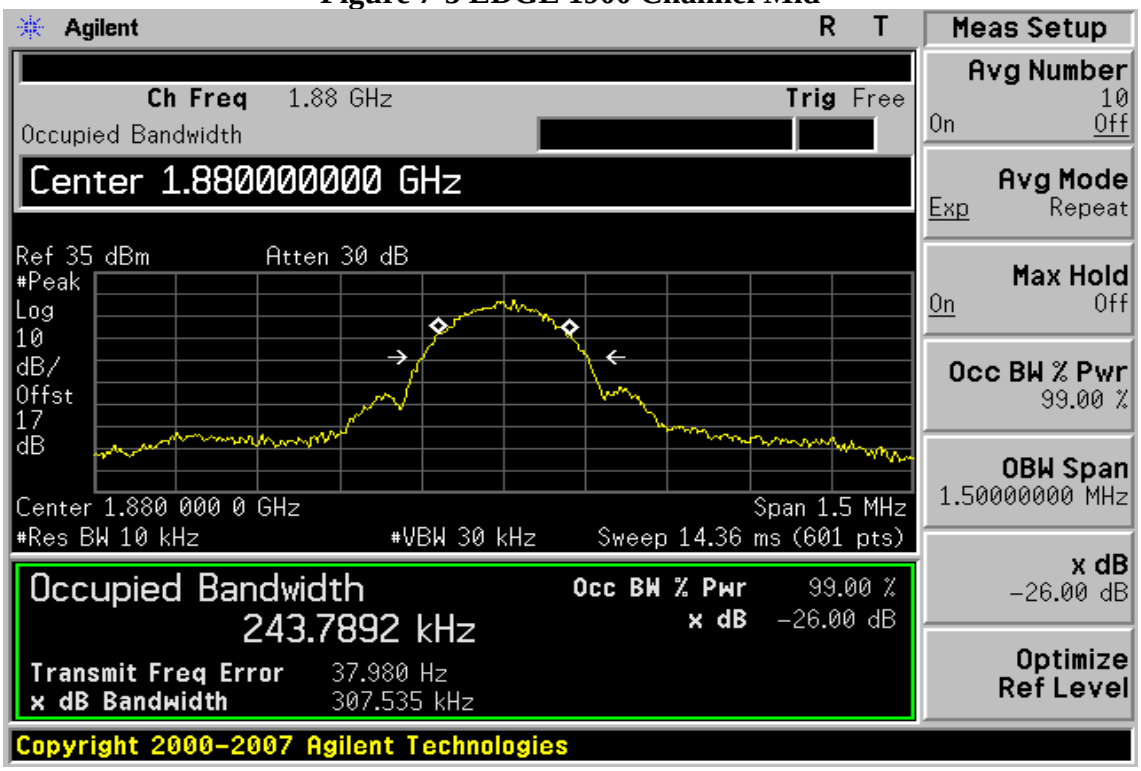
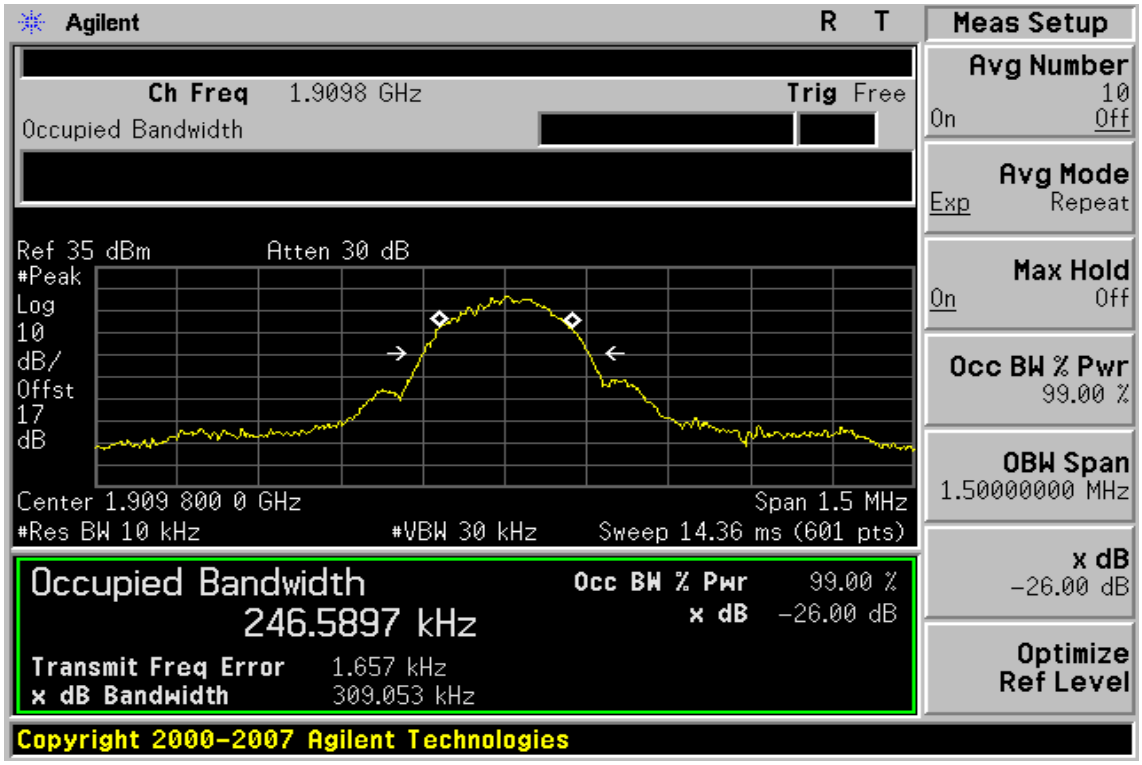


Figure 7-6: EDGE 1900 Channel High



8. OUT OF BAND EMISSION AT ANTENNA TERMINALS (TX)

8.1 Standard Applicable

According to FCC §2.1051.

FCC §24.238(a), the magnitude of each spurious and harmonic emission that can be detected when the equipment is operated under the conditions specified in the instruction manual and/ or alignment procedure, shall not be less than 43 + 10 log (mean output power in watts) dBc below the mean power output outside a license's frequency block (-13dBm)

According to RSS-132 §4.5

4.5.1 Out-of-block Emissions

Mobile and base station equipment with emission bandwidth less than or equal to 4 MHz shall comply with 4.5.1.1. Mobile station equipment with emission bandwidth greater than 4 MHz shall comply with 4.5.1.2. Base station equipment with emission bandwidth greater than 4 MHz shall comply with either 4.5.1.2 or 4.5.1.3.

4.5.1.1 In the first 1.0 MHz band immediately outside and adjacent to the licensee's frequency block, the power of emissions per any 1% of the emission bandwidth shall be attenuated below the transmitter output power P (in watts) by at least 43 + 10 log (P), dB. After the first 1.0 MHz, the power of emissions shall be attenuated below the transmitter output power by at least

43 + 10 log (P), dB, in any 100 kHz bandwidth.

4.5.1.2 In the first 1.0 MHz band immediately outside and adjacent to the licensee's frequency block, the power of emissions per any 1% of the emission bandwidth shall be attenuated below the transmitter output power P (in watts) by at least 43 + 10 log (P), dB. After the first 1.0 MHz, the power of emissions shall be attenuated below the transmitter output power by at least

43 + 10 log (P), dB, in any 1 MHz bandwidth

According to RSS-133 §6.5

6.5.1 Out-of-Block Emissions

a. Mobile stations must comply with subsection i. below.

In the first 1.0MHz band immediately outside and adjacent to the licensee's frequency block. the power of emissions per any 1% of the emission bandwidth shall be attenuated below the transmitter output power P (in watts) by at least 43 + 10 log (P) dB.

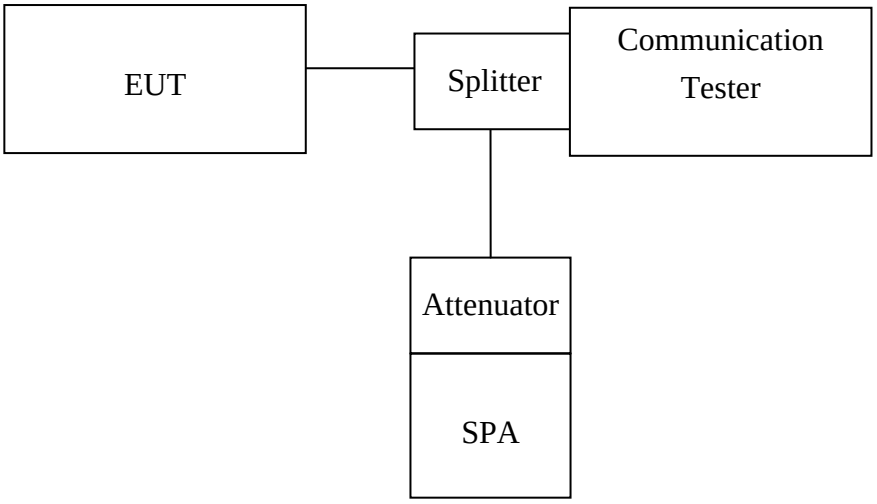
b. After the first 1.0 MHz (for equipment that complies with a.i. of this subsection) or 1.5 MHz (for equipment that complies with all of this subsection), the power of emissions shall be attenuated below the transmitter output power by at least 43 + 10 log (P), dB, per any MHz of bandwidth.

(Note: If the test result using 1% of the emission bandwidth is used, then power integration over 1.0 MHz is required; alternatively, the spectrum analyzer resolution and video bandwidths can be increased to 1.0 MHz for this measurement).

6.5.2 Out-of-Sub-band Emissions

Outside the sub-bands 1850-1910 MHz and 1930-1990 MHz, the attenuation shall be equal to or greater than the out-of-block emission limits in Section 6.5.1.

8.2 Test SET-UP



Note: *Measurement setup for testing on Antenna connector*

8.3 Measurement Procedure

The RF output of the transceiver was connected to a spectrum analyzer through appropriate attenuation. The resolution bandwidth of the spectrum analyzer was set at 1MHz, sufficient scans were taken to show the out of band Emissions if any up to 10th harmonic.

For the out of band: Set the RBW, VBW = 1MHz, Start=30MHz, Stop= 10 th harmonic. Limit = -13dBm

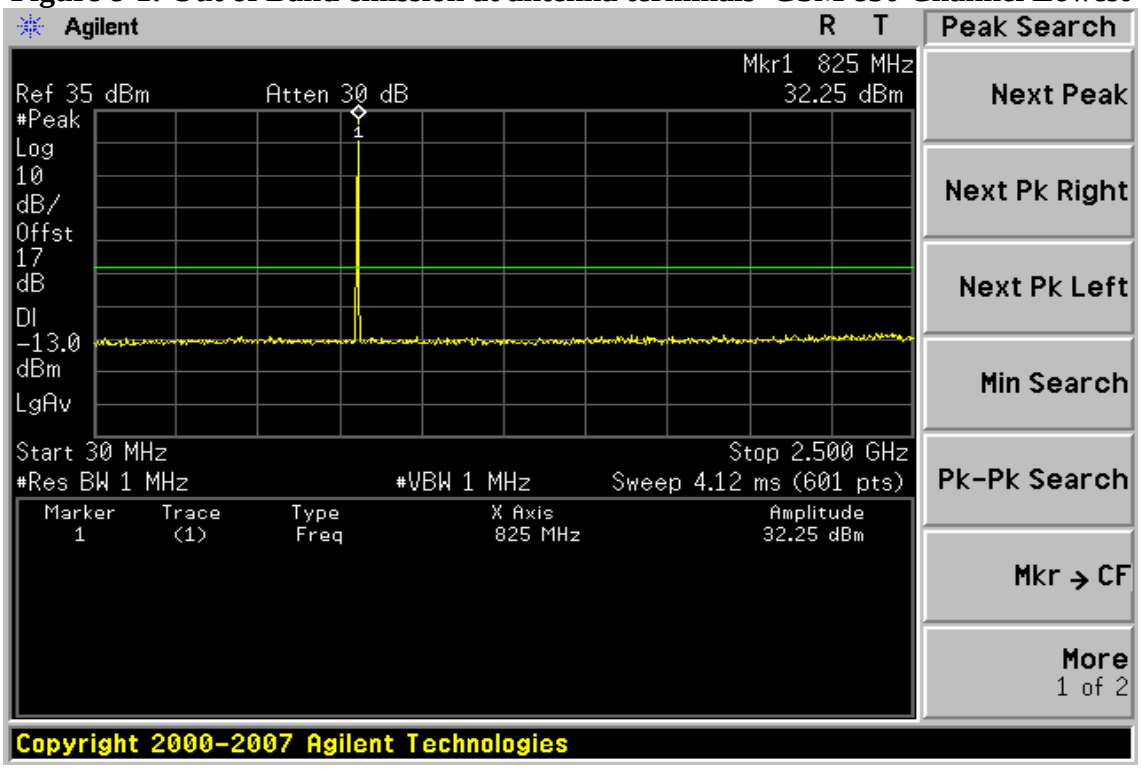
Band Edge Requirements(1850MHz and 1910MHz) : In the 1 MHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 1 percent of the emission bandwidth of the fundamental emission of the transmitter may be employed to measure the out of band Emissions. Limit, -13dBm.

8.4 Measurement Equipment Used:

Conducted Emission Test Site					
EQUIPMENT TYPE	**MFR**	**MODEL NUMBER**	**SERIAL NUMBER**	**LAST CAL.**	**CAL DUE.**
Spectrum Analyzer	Agilent	E4446A	MY43360126	04/19/2008	04/18/2010
Spectrum Analyzer	Agilent	E4440A	US41160416	01/23/2008	01/22/2010
Radio Communication Analyzer	R&S	CMU200	102189	05/13/2008	05/12/2010
800 – 1000MHz Filter	Micro-Tronics	BRM13462	001	01/05/2009	01/04/2010
1800 – 2000MHz Filter	Micro-Tronics	BRM13463	001	01/05/2009	01/04/2010
Temperature Chamber	TERCHY	MHG-120LF	911009	04/14/2008	04/13/2010
Temperature Chamber	GIANT FORCE	GTH-150-40-CP-AR	MAA0512-018	02/05/2008	02/04/2010
DC Block	Agilent	BLK-18	155452	07/05/2009	07/04/2010
Attenuator	Mini-Circuit	BW-S20W5	N/A	07/05/2009	07/04/2010
Attenuator	Mini-Circuit	BW-S10W5	N/A	07/05/2009	07/04/2010
Attenuator	Mini-Circuit	BW-S6W5	N/A	07/05/2009	07/04/2010
Splitter	Agilent	11636B	N/A	07/05/2009	07/04/2010
DC Power Supply	HP	6038A	2929A-07548	06/27/2009	06/26/2011
DC Power Supply	Topward	3303D	981327	10/26/2007	10/25/2009

8.5 Measurement Result

Figure 8-1: Out of Band emission at antenna terminals–GSM 850 Channel Lowest



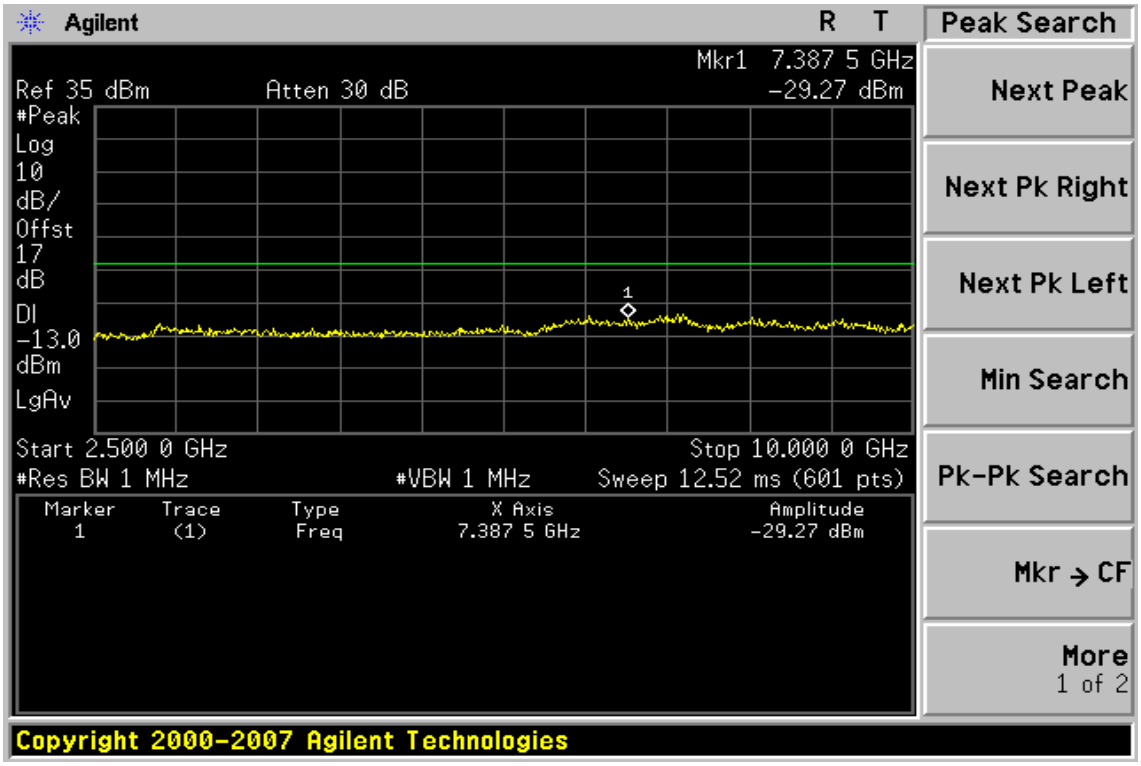
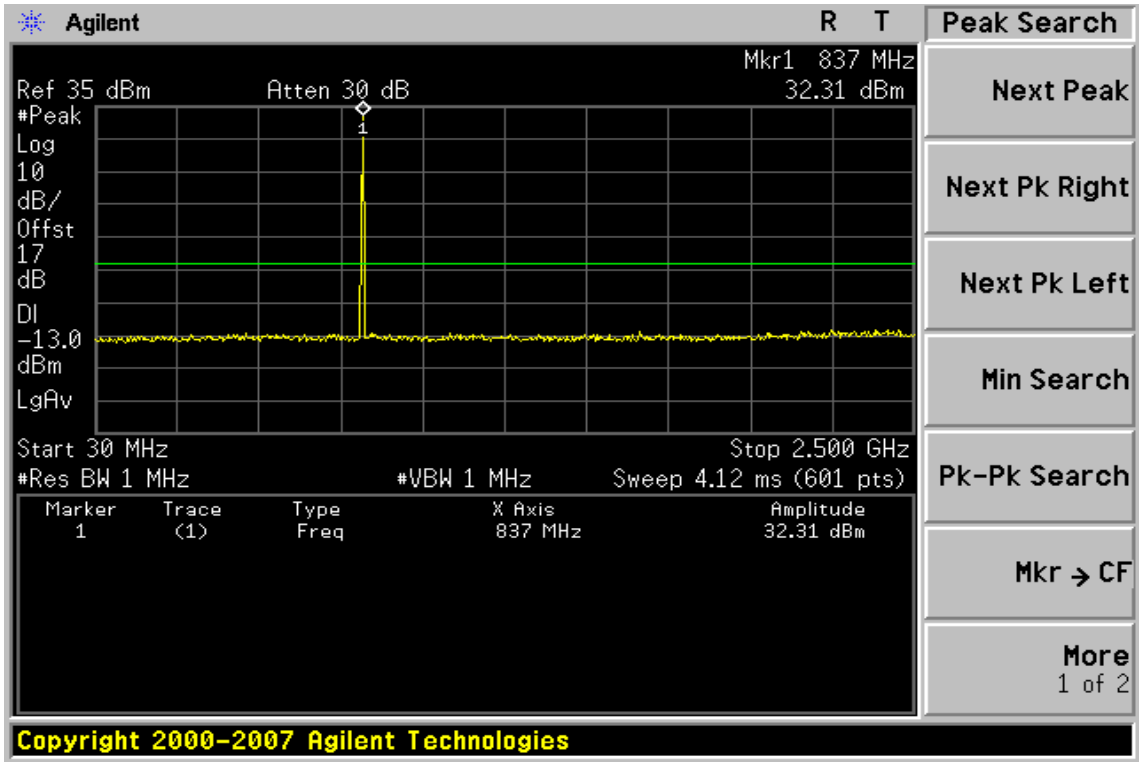


Figure 8-2: Out of Band emission at antenna terminals –GSM 850 Channel Mid



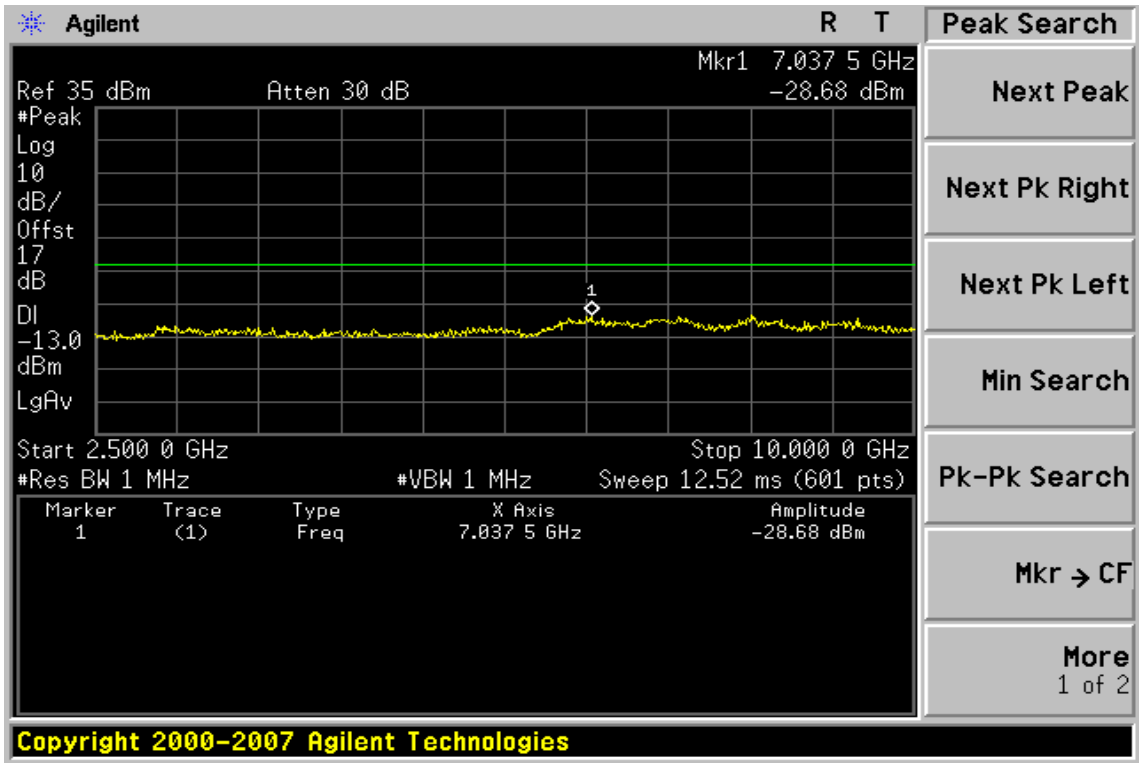
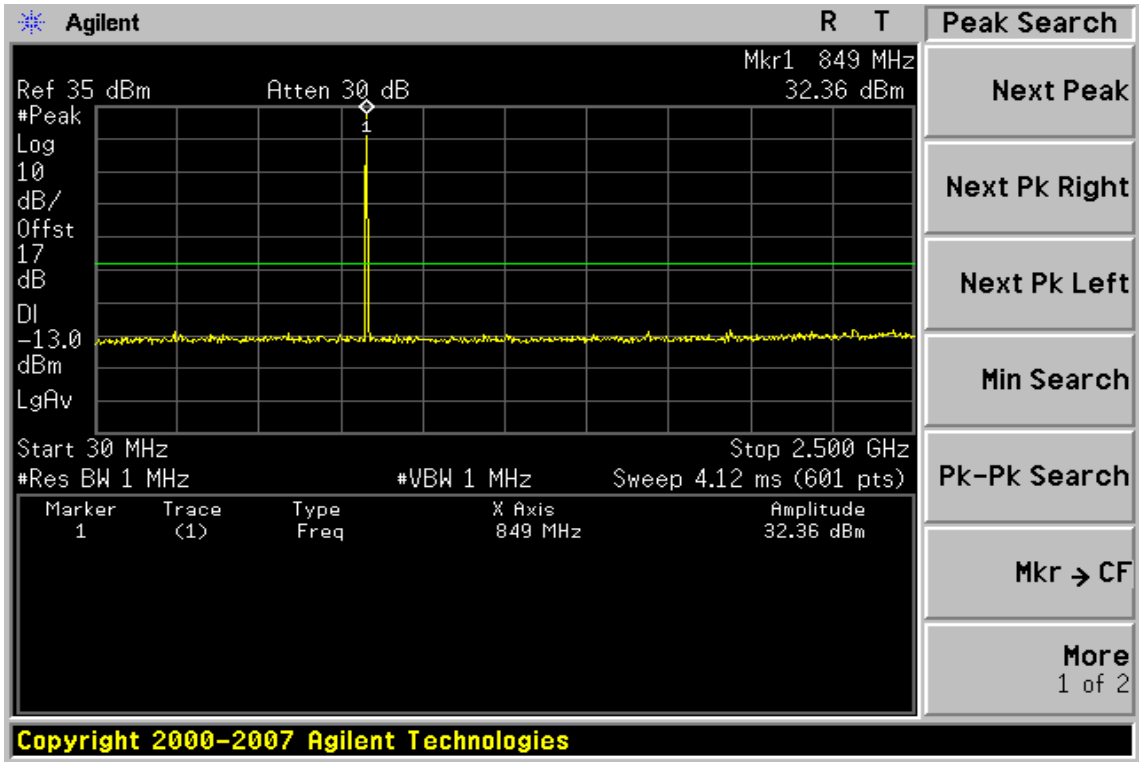


Figure 8-3: Out of Band emission at antenna terminals–GSM 850 Channel Highest



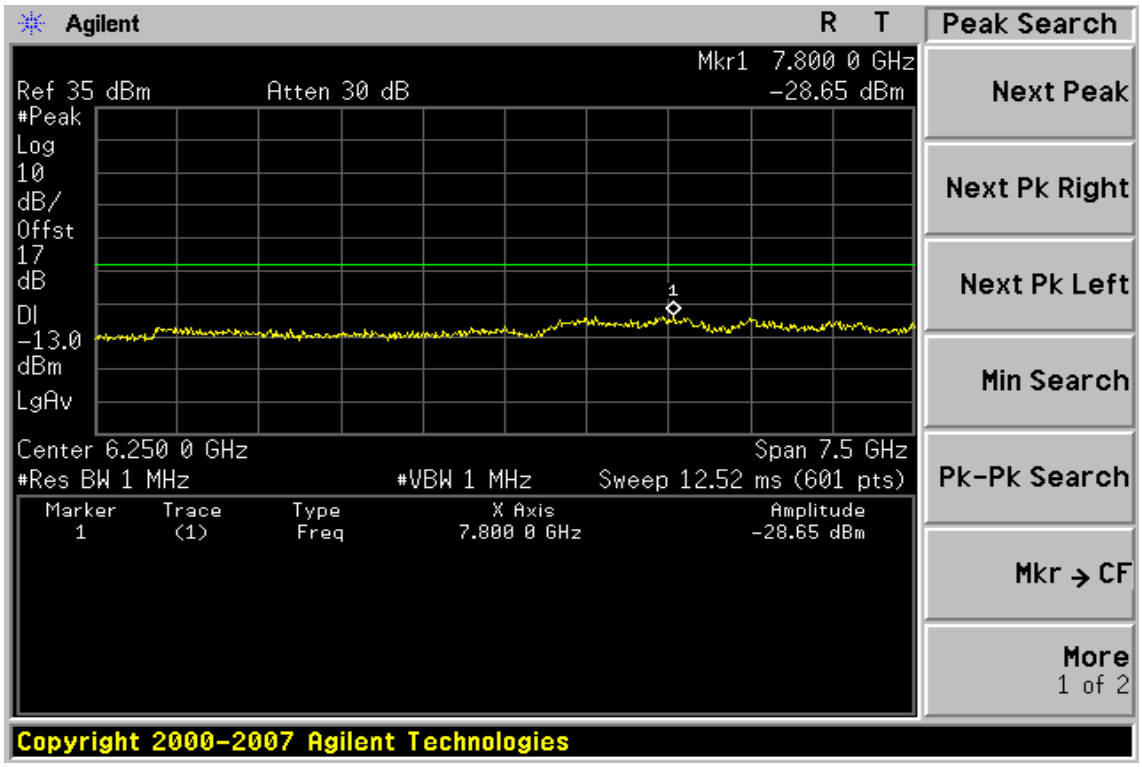


Figure 8-4: Band edge emission at antenna terminals –GSM 850 Channel Lowest

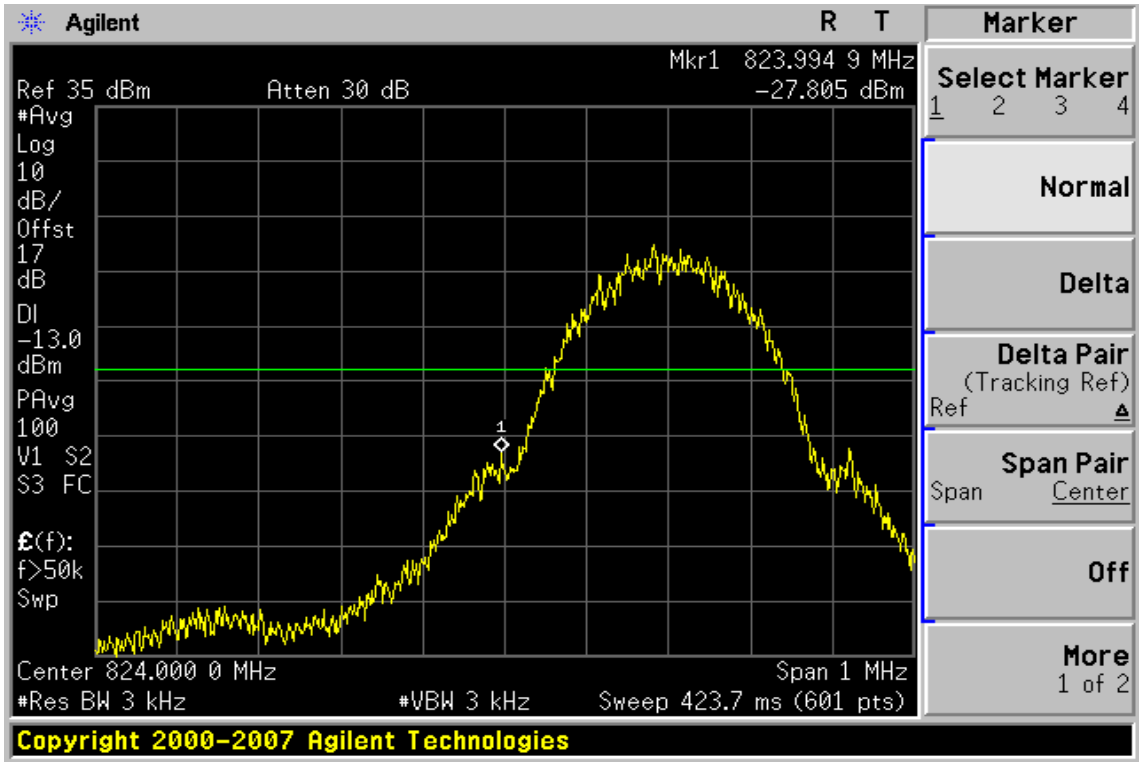


Figure 8-5: Band edge emission at antenna terminals –GPRS 850 Channel Highest

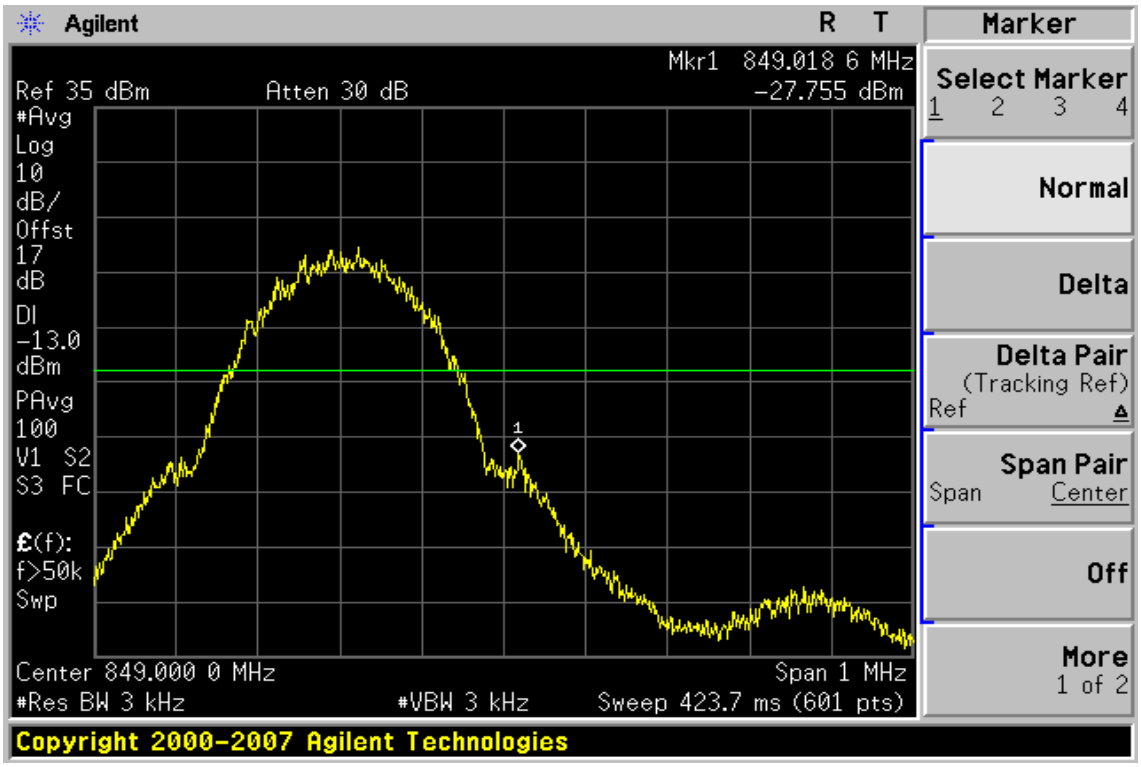
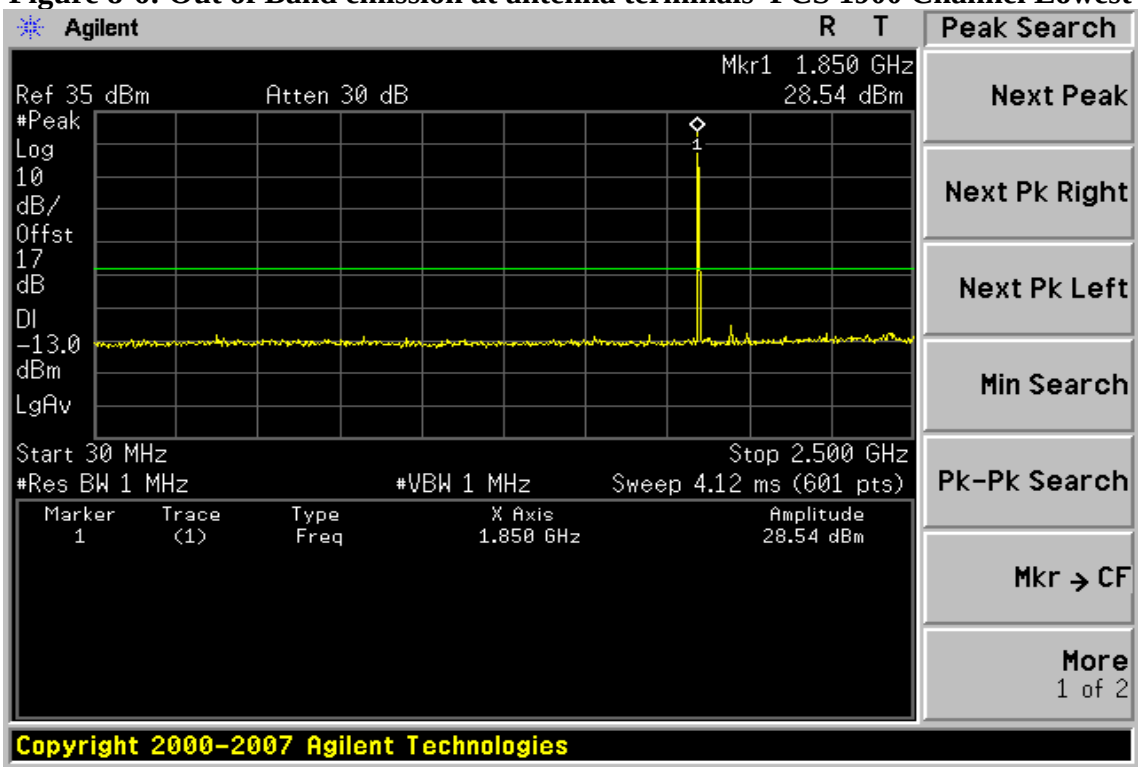


Figure 8-6: Out of Band emission at antenna terminals–PCS 1900 Channel Lowest



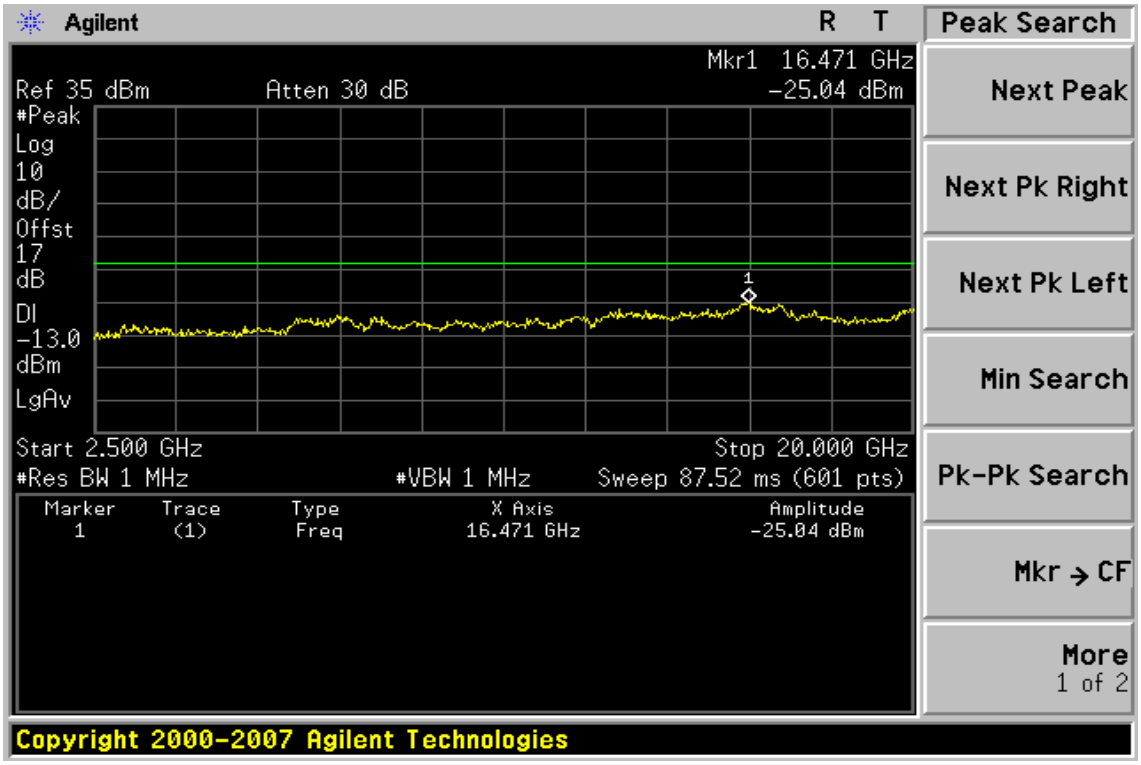
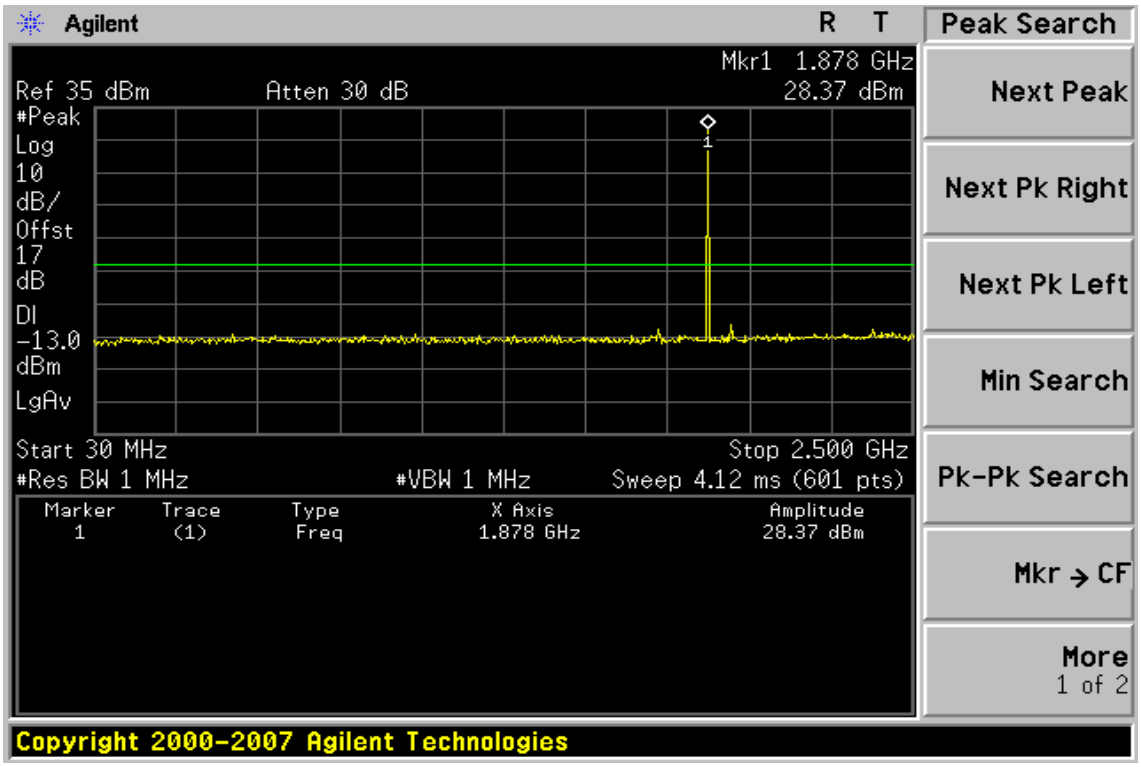


Figure 8-7: Out of Band emission at antenna terminals –PCS 1900 Channel Mid



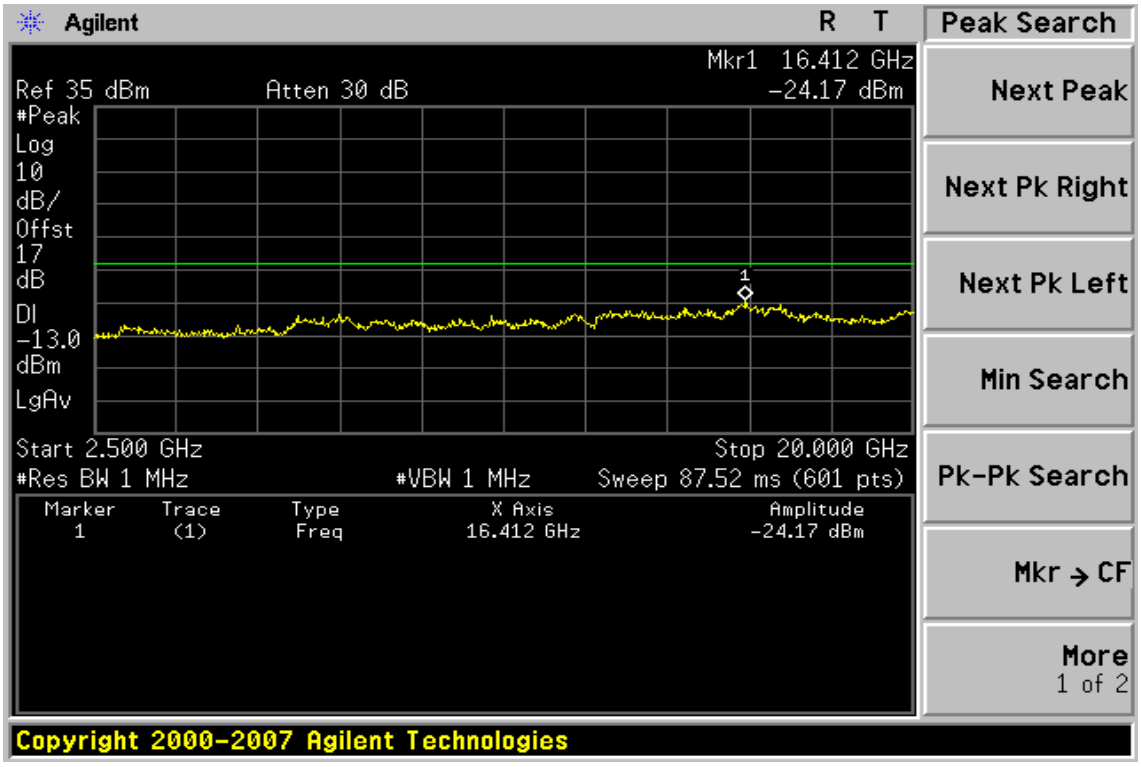
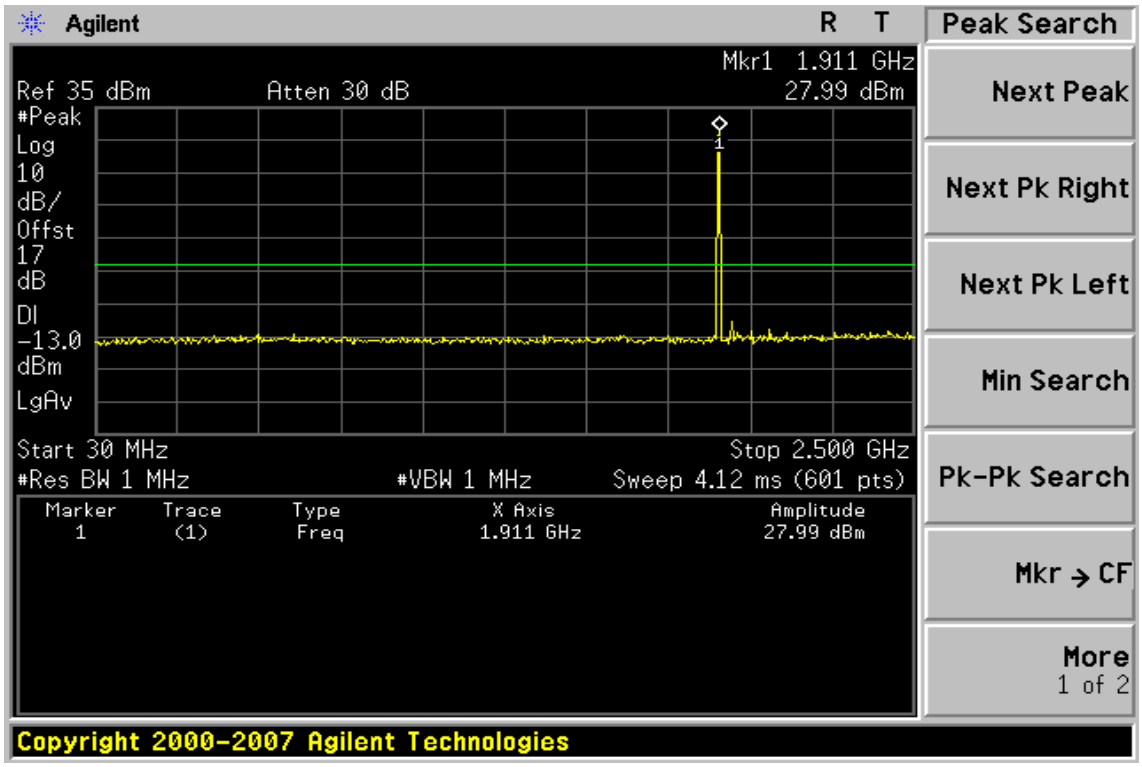


Figure 8-8: Out of Band emission at antenna terminals–PCS 1900 Channel Highest



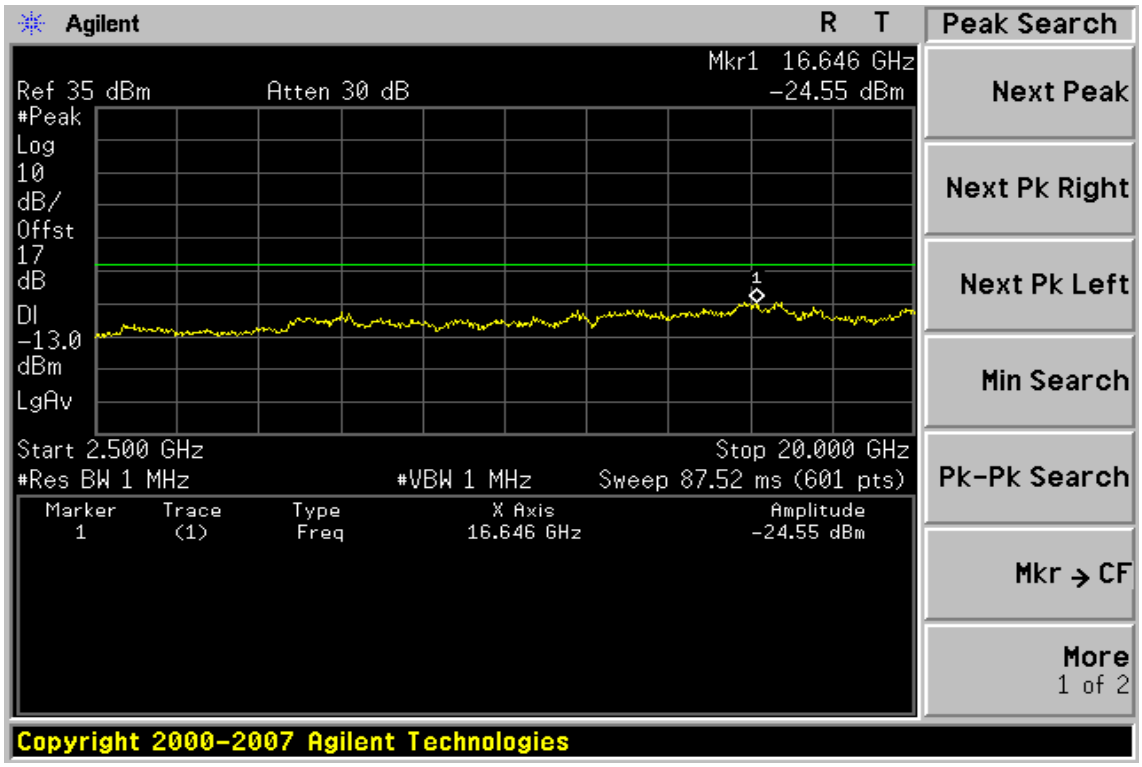


Figure 8-9: Band edge emission at antenna terminals –PCS 1900 Channel Lowest

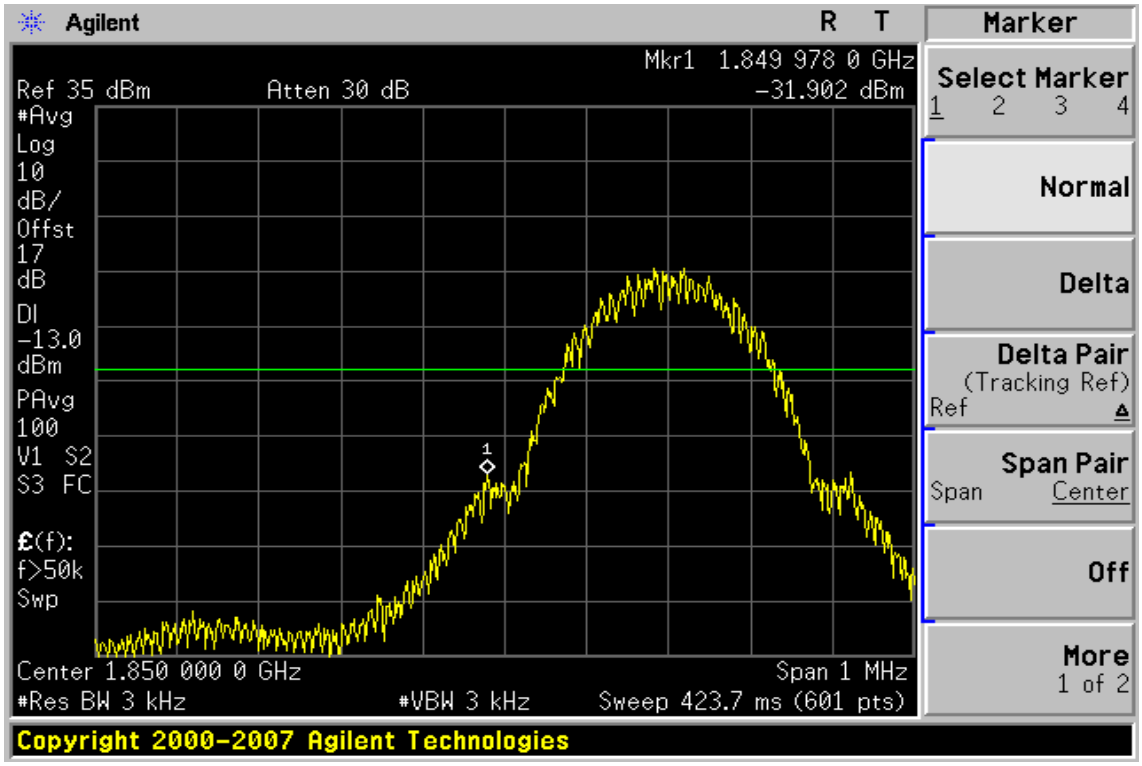
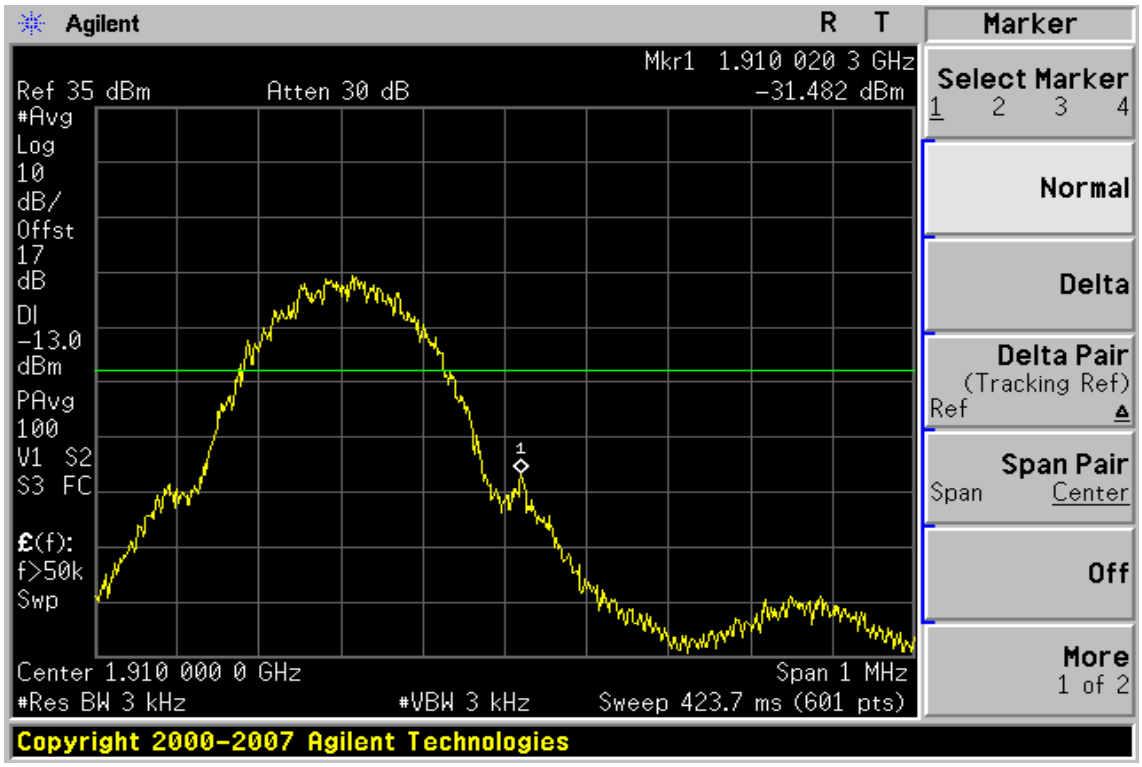


Figure 8-10: Band edge emission at antenna terminals –PCS 1900 Channel Highest



9. FIELD STRENGTH OF SPURIOUS RADIATION MEASUREMENT (TX)

9.1 Standard Applicable

According to FCC §2.1053,

FCC §24.238(a), the magnitude of each spurious and harmonic emission that can be detected when the equipment is operated under the conditions specified in the instruction manual and/ or alignment procedure, shall not be less than 43 + 10 log (mean output power in watts) dBc below the mean power output outside a license's frequency block (-13dBm)

According to RSS-132 §4.5

4.5.1 Out-of-block Emissions

Mobile and base station equipment with emission bandwidth less than or equal to 4 MHz shall comply with 4.5.1.1. Mobile station equipment with emission bandwidth greater than 4 MHz shall comply with 4.5.1.2. Base station equipment with emission bandwidth greater than 4 MHz shall comply with either 4.5.1.2 or 4.5.1.3.

4.5.1.1 In the first 1.0 MHz band immediately outside and adjacent to the licensee's frequency block, the power of emissions per any 1% of the emission bandwidth shall be attenuated below the transmitter output power P (in watts) by at least 43 + 10 log (P), dB. After the first 1.0 MHz, the power of emissions shall be attenuated below the transmitter output power by at least

43 + 10 log (P), dB, in any 100 kHz bandwidth.

4.5.1.2 In the first 1.0 MHz band immediately outside and adjacent to the licensee's frequency block, the power of emissions per any 1% of the emission bandwidth shall be attenuated below the transmitter output power P (in watts) by at least 43 + 10 log (P), dB. After the first 1.0 MHz, the power of emissions shall be attenuated below the transmitter output power by at least

43 + 10 log (P), dB, in any 1 MHz bandwidth

According to RSS-133 §6.5

6.5.1 Out-of-Block Emissions

a. Mobile stations must comply with subsection i. below.

In the first 1.0MHz band immediately outside and adjacent to the licensee's frequency block. the power of emissions per any 1% of the emission bandwidth shall be attenuated below the transmitter output power P (in watts) by at least 43 + 10 log (P) dB.

b. After the first 1.0 MHz (for equipment that complies with a.i. of this subsection) or 1.5 MHz (for equipment that complies with all of this subsection), the power of emissions shall be attenuated below the transmitter output power by at least 43 + 10 log (P), dB, per any MHz of bandwidth.

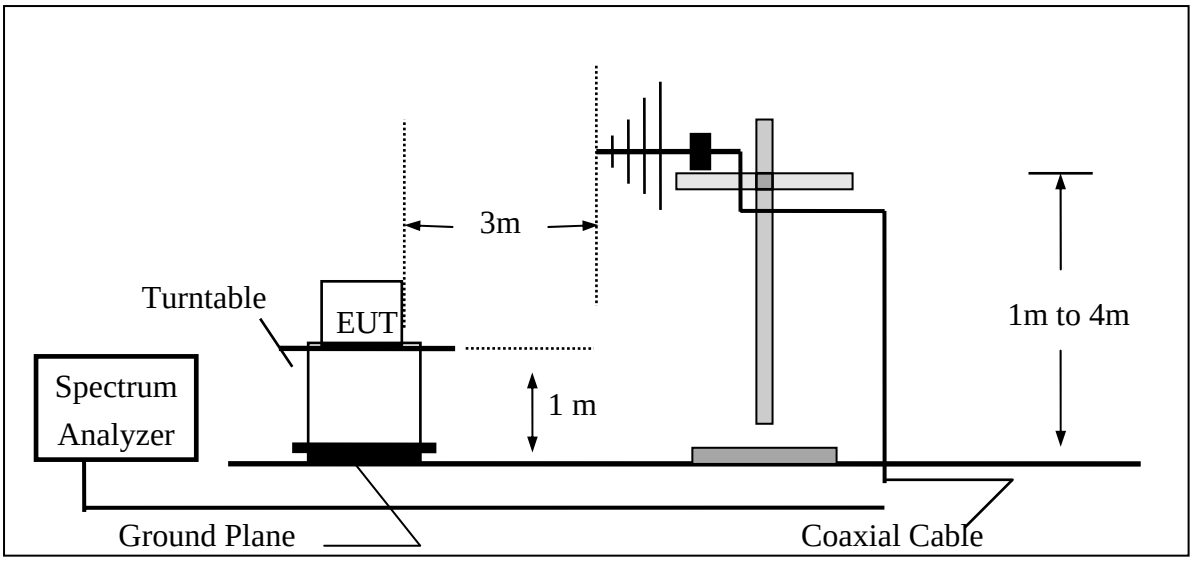
(Note: If the test result using 1% of the emission bandwidth is used, then power integration over 1.0 MHz is required; alternatively, the spectrum analyzer resolution and video bandwidths can be increased to 1.0 MHz for this measurement).

6.5.2 Out-of-Sub-band Emissions

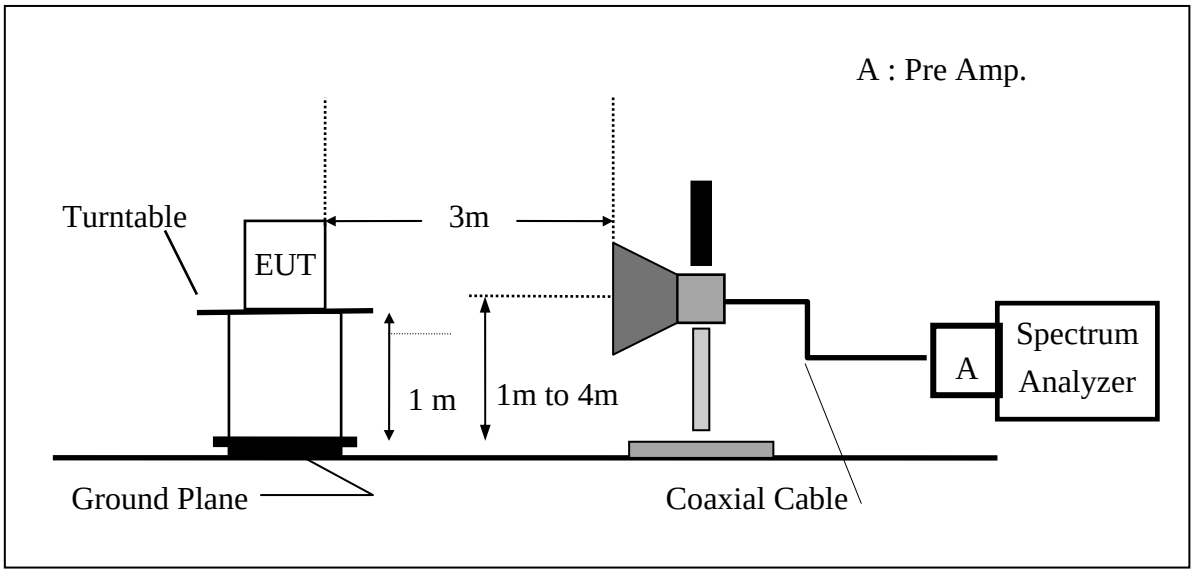
Outside the sub-bands 1850-1910 MHz and 1930-1990 MHz, the attenuation shall be equal to or greater than the out-of-block emission limits in Section 6.5.1.

9.2 EUT Setup (Block Diagram of Configuration)

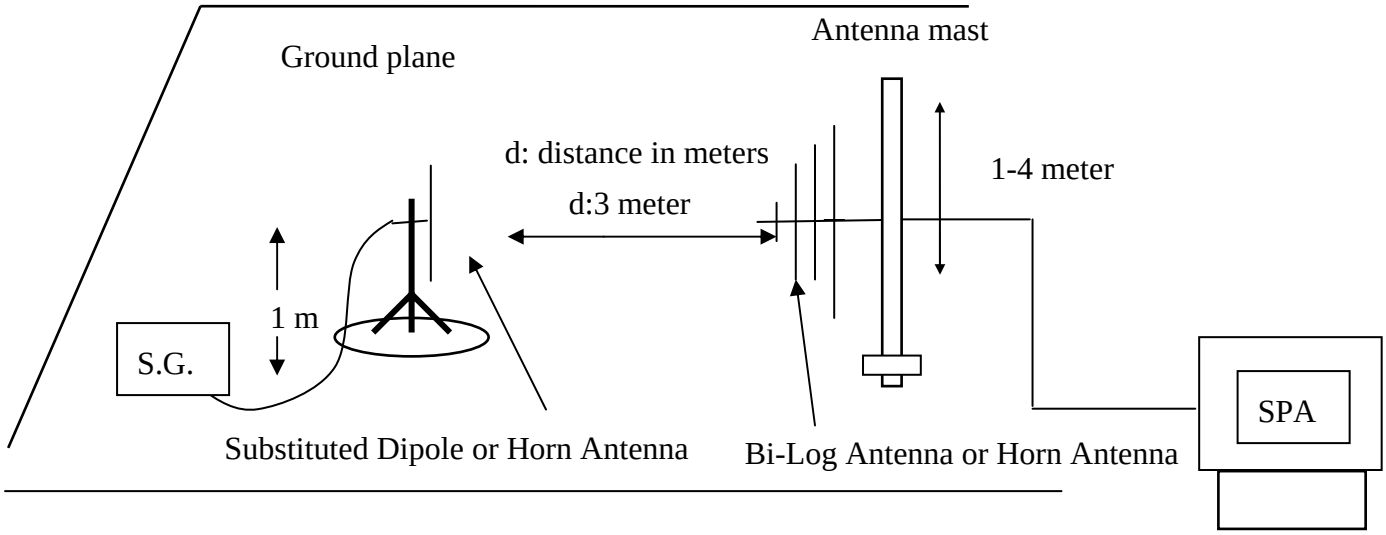
(A) Radiated Emission Test Set-Up, Frequency Below 1000MHz



(B) Radiated Emission Test Set-UP Frequency Over 1 GHz



(C) Substituted Method Test Set-UP



9.3 Measurement Procedure

The EUT was placed on an non-conductive turntable using a non-conductive support. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and EMI spectrum analyzer.

During the measurement, the EUT was communication with the station. The highest emission was recorded with the rotation of the turntable and the lowering of the test antenna from 4m to 1m. The reading was recorded and the field strength (E in dBuV/m) was calculated.

ERP in frequency band 824.2 –848.8 MHz were measured using a substitution method. The EUT was replaced by dipole antenna connected, the S.G. output was recorded and ERP was calculated as follows:

EIRP in frequency band 1850.2 –1909.8MHz were measured using a substitution method. The EUT was replaced by or horn antenna connected, the S.G. output was recorded and EIRP was calculated as follows:

ERP = S.G. output (dBm) + Antenna Gain (dBd) – Cable Loss (dB)

EIRP = S.G. output (dBm) + Antenna Gain (dBi) – Cable Loss (dB)

9.4 Measurement Equipment Used:

EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Spectrum Analyzer	R&S	FSP 40	100034	02/12/2009	02/11/2010
Bilog Antenna	SCHWAZBECK	VULB9160	9160-3136	11/15/2008	11/14/2009
Dipole Antenna	SCHWAZBECK	VHAP	908/909	07/10/2008	07/09/2010
Dipole Antenna	SCHWAZBECK	UHAP	891/892	07/10/2008	07/09/2010
Hor.n antenna	SCHWAZBECK	BBHA 9120D	309	01/22/2008	01/21/2010
Horn antenna	SCHWAZBECK	BBHA 9120D	9120D-673	05/09/2008	05/08/2010
Signal Generator	R&S	SMR40	100210	01/22/2008	01/21/2010
Signal Generator	Agilent	E4438C	MY45093613	05/22/2009	05/21/2010
Pre-Amplifier	Agilent	8447D	1937A02834	11/30/2008	11/29/2009
Pre-Amplifier	Agilent	8449B	3008A01973	01/05/2009	01/04/2010
Attenuator	Mini-Circuit	BW-S20W5	001	07/05/2009	07/04/2010
Attenuator	Mini-Circuit	BW-S10W5	001	07/05/2009	07/04/2010
Attenuator	Mini-Circuit	BW-S6W5	001	07/05/2009	07/04/2010
Radio Communication Analyzer	R&S	CMU200	102189	05/13/208	05/12/2010
Turn Table	HD	DT420	N/A	N.C.R	N.C.R
Antenna Tower	HD	MA240-N	240/657	N.C.R	N.C.R
Controller	HD	HD100	N/A	N.C.R	N.C.R
Low Loss Cable	HUBER+SUHNER	SUCOFLEX 104PEA-10M	10m	01/05/2009	01/04/2010
Low Loss Cable	HUBER+SUHNER	SUCOFLEX 104PEA-3M	3m	01/05/2009	01/04/2010
3m Site	SGS	966 chamber	N/A	11/08/2008	11/09/2009

9.5 Measurement Result

Refer to attach tabular data sheets.

Radiated Spurious Emission Measurement Result: GSM 850 Mode

Operation Mode	: TX CH Low Mode	Test Date:	Jul. 24, 2009
Fundamental Frequency	: 824.20 MHz	Test By:	Jason
Temperature	: 25℃	Pol:	Ver
Humidity	: 65%		

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Out-put (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP/ EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
41.64	50.20	V	-52.45	-2.31	0.93	-55.70	-13.00	-42.70
104.69	48.93	V	-52.56	-7.76	1.38	-61.70	-13.00	-48.70
497.54	41.78	V	-52.35	-7.72	2.79	-62.86	-13.00	-49.86
824.00	71.57	V	-14.82	-7.87	3.62	-26.32	-13.00	-13.32
1648.40	67.99	V	-36.59	9.29	5.23	-32.53	-13.00	-19.53
2472.60	54.27	V	-46.74	10.08	6.53	-43.19	-13.00	-30.19
3296.80	---	V		12.17	7.71		-13.00	
4121.00	39.09	V	-57.03	12.61	8.86	-53.28	-13.00	-40.28
4945.20	38.60	V	-53.87	12.65	9.74	-50.96	-13.00	-37.96
5769.40	35.08	V	-55.12	13.55	10.54	-52.10	-13.00	-39.10
6593.60	36.55	V	-48.98	12.05	11.30	-48.23	-13.00	-35.23
7417.80	---	V		11.49	12.10		-13.00	
8242.00	---	V		11.48	12.71		-13.00	

Measurement uncertainty	30MHz - 80MHz: 5.04dB
	80MHz -1000MHz: 3.76dB
	1GHz - 13GHz: 4.45dB

Remark：

1 The emission behaviors belong to narrowband spurious emission.

2 Remark"---" means that the emission level is too low to be measured

3 The result basic equation calculation is as follows:

4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) – Cable loss (dB)

Radiated Spurious Emission Measurement Result: GSM 850 Mode

Operation Mode	: TX CH Low Mode	Test Date:	Jul. 24, 2009
Fundamental Frequency	: 824.20 MHz	Test By:	Jason
Temperature	: 25℃	Pol:	Hor
Humidity	: 65%		

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Out-put (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP/ EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
41.64	49.46	H	-54.05	-2.31	0.93	-57.29	-13.00	-44.29
497.54	44.09	H	-49.38	-7.72	2.79	-59.89	-13.00	-46.89
664.38	38.01	H	-51.11	-7.82	3.20	-62.13	-13.00	-49.13
824.00	77.71	H	-8.56	-7.87	3.62	-20.06	-13.00	-7.06
1648.40	63.95	H	-40.45	9.29	5.23	-36.39	-13.00	-23.39
2472.60	52.44	H	-48.47	10.08	6.53	-44.92	-13.00	-31.92
3296.80	---	H		12.17	7.71		-13.00	
4121.00	37.36	H	-58.89	12.61	8.86	-55.14	-13.00	-42.14
4945.20	---	H		12.65	9.74		-13.00	
5769.40	---	H		13.55	10.54		-13.00	
6193.50	34.67	H	-53.50	13.22	10.93	-51.21	-13.00	-38.21
6593.60	---	H		12.05	11.30		-13.00	
7417.80	---	H		11.49	12.10		-13.00	
8242.00	---	H		11.48	12.71		-13.00	

Measurement uncertainty	30MHz - 80MHz: 5.04dB
	80MHz -1000MHz: 3.76dB
	1GHz - 13GHz: 4.45dB

Remark：

1 The emission behaviors belong to narrowband spurious emission.

2 Remark"---" means that the emission level is too low to be measured

3 The result basic equation calculation is as follows:

4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) – Cable loss (dB)

Radiated Spurious Emission Measurement Result: GSM 850 Mode

Operation Mode	: TX CH Mid Mode	Test Date:	Jul. 24, 2009
Fundamental Frequency	: 836.60 MHz	Test By:	Jason
Temperature	: 25℃	Pol:	Ver
Humidity	: 65%		

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Out-put (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP/ EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
39.70	48.67	V	-53.22	-2.79	0.89	-56.90	-13.00	-43.90
104.69	48.39	V	-53.10	-7.76	1.38	-62.24	-13.00	-49.24
133.79	45.38	V	-53.41	-7.79	1.52	-62.71	-13.00	-49.71
1318.50	40.47	V	-65.02	7.80	3.17	-60.39	-13.00	-47.39
1673.20	66.21	V	-38.35	9.36	5.27	-34.25	-13.00	-21.25
2509.80	58.38	V	-42.40	10.09	6.58	-38.90	-13.00	-25.90
3346.40	---	V		12.28	7.79		-13.00	
4183.00	37.29	V	-58.60	12.62	8.93	-54.91	-13.00	-41.91
5019.60	---	V		12.67	9.81		-13.00	
5856.20	---	V		13.68	10.62		-13.00	
6692.80	---	V		11.95	11.39		-13.00	
7529.40	---	V		11.45	12.20		-13.00	
8366.00	---	V		11.59	12.81		-13.00	

Measurement uncertainty	30MHz - 80MHz: 5.04dB
	80MHz -1000MHz: 3.76dB
	1GHz - 13GHz: 4.45dB

Remark：

1 The emission behaviors belong to narrowband spurious emission.

2 Remark"---" means that the emission level is too low to be measured

3 The result basic equation calculation is as follows:

4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) – Cable loss (dB)

Radiated Spurious Emission Measurement Result: GSM Mode

Operation Mode	: TX CH Mid Mode	Test Date:	Jul. 24, 2009
Fundamental Frequency	: 836.60 MHz	Test By:	Jason
Temperature	: 25℃	Pol:	Hor
Humidity	: 65%		

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Out-put (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP/ EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
39.70	46.43	H	-56.46	-2.79	0.89	-60.15	-13.00	-47.15
497.54	42.68	H	-50.79	-7.72	2.79	-61.30	-13.00	-48.30
664.38	38.69	H	-50.43	-7.82	3.20	-61.45	-13.00	-48.45
1673.20	61.46	H	-42.92	9.36	5.27	-38.82	-13.00	-25.82
2509.80	56.91	H	-43.79	10.09	6.58	-40.29	-13.00	-27.29
3346.40	---	H		12.28	7.79		-13.00	
4183.00	39.93	H	-56.10	12.62	8.93	-52.41	-13.00	-39.41
5019.60	---	H		12.67	9.81		-13.00	
5856.20	---	H		13.68	10.62		-13.00	
6692.80	35.96	H	-49.05	11.95	11.39	-48.49	-13.00	-35.49
7529.40	---	H		11.45	12.20		-13.00	
8366.00	---	H		11.59	12.81		-13.00	

Measurement uncertainty	30MHz - 80MHz: 5.04dB
	80MHz -1000MHz: 3.76dB
	1GHz - 13GHz: 4.45dB

Remark：

1 The emission behaviors belong to narrowband spurious emission.

2 Remark"---" means that the emission level is too low to be measured

3 The result basic equation calculation is as follows:

4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) – Cable loss (dB)

Radiated Spurious Emission Measurement Result: GSM 850 Mode

Operation Mode	: TX CH High Mode	Test Date:	Jul. 24, 2009
Fundamental Frequency	: 848.80 MHz	Test By:	Jason
Temperature	: 25℃	Pol:	Ver
Humidity	: 65%		

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Out-put (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP/ EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
39.70	48.25	V	-53.64	-2.79	0.89	-57.32	-13.00	-44.32
104.69	48.47	V	-53.02	-7.76	1.38	-62.16	-13.00	-49.16
133.79	45.78	V	-53.01	-7.79	1.52	-62.31	-13.00	-49.31
850.00	72.93	V	-13.18	-7.88	3.68	-24.74	-13.00	-11.74
1697.60	60.60	V	-43.94	9.44	5.31	-39.81	-13.00	-26.81
2546.40	55.39	V	-45.25	10.20	6.63	-41.69	-13.00	-28.69
3395.20	36.85	V	-62.00	12.38	7.87	-57.49	-13.00	-44.49
4244.00	40.73	V	-54.93	12.63	9.00	-51.30	-13.00	-38.30
5092.80	---	V		12.74	9.88		-13.00	
5941.60	36.05	V	-53.64	13.81	10.70	-50.53	-13.00	-37.53
6790.40	42.96	V	-41.57	11.86	11.48	-41.20	-13.00	-28.20
7639.20	---	V		11.40	12.27		-13.00	
8488.00	---	V		11.70	12.91		-13.00	

Measurement uncertainty	30MHz - 80MHz: 5.04dB
	80MHz -1000MHz: 3.76dB
	1GHz - 13GHz: 4.45dB

Remark：

1 The emission behaviors belong to narrowband spurious emission.

2 Remark"---" means that the emission level is too low to be measured

3 The result basic equation calculation is as follows:

4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) – Cable loss (dB)

Radiated Spurious Emission Measurement Result: GSM 850 Mode

Operation Mode	: TX CH High Mode	Test Date:	Jul. 24, 2009
Fundamental Frequency	: 848.80 MHz	Test By:	Jason
Temperature	: 25℃	Pol:	Hor
Humidity	: 65%		

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Out-put (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP/ EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
39.70	46.84	H	-56.05	-2.79	0.89	-59.74	-13.00	-46.74
497.54	43.32	H	-50.15	-7.72	2.79	-60.66	-13.00	-47.66
664.38	39.87	H	-49.25	-7.82	3.20	-60.27	-13.00	-47.27
850.00	78.76	H	-7.43	-7.88	3.68	-18.99	-13.00	-5.99
1697.60	59.51	H	-44.84	9.44	5.31	-40.71	-13.00	-27.71
2546.40	62.01	H	-38.59	10.20	6.63	-35.03	-13.00	-22.03
3395.20	38.84	H	-60.19	12.38	7.87	-55.67	-13.00	-42.67
4244.00	42.82	H	-52.99	12.63	9.00	-49.37	-13.00	-36.37
5092.80	---	H		12.74	9.88		-13.00	
5941.60	---	H		13.81	10.70		-13.00	
6790.40	40.79	H	-43.73	11.86	11.48	-43.36	-13.00	-30.36
7639.20	---	H		11.40	12.27		-13.00	
8488.00	---	H		11.70	12.91		-13.00	

Measurement uncertainty	30MHz - 80MHz: 5.04dB
	80MHz -1000MHz: 3.76dB
	1GHz - 13GHz: 4.45dB

Remark：

1 The emission behaviors belong to narrowband spurious emission.

2 Remark"---" means that the emission level is too low to be measured

3 The result basic equation calculation is as follows:

4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) – Cable loss (dB)

Radiated Spurious Emission Measurement Result: PCS 1900 Mode

Operation Mode	: TX CH Low Mode	Test Date:	Jul. 24, 2009
Fundamental Frequency	: 1850.20MHz	Test By:	Jason
Temperature	: 25℃	Pol:	Ver
Humidity	: 65%		

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Out-put (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP/ EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
40.67	47.33	V	-54.82	-2.51	0.91	-58.24	-13.00	-45.24
101.78	48.49	V	-53.27	-7.76	1.37	-62.39	-13.00	-49.39
133.79	46.39	V	-52.40	-7.79	1.52	-61.70	-13.00	-48.70
1000.00	46.85	V	-36.62	-7.99	4.03	-48.64	-13.00	-35.64
1330.00	43.52	V	-61.92	7.86	3.29	-57.34	-13.00	-44.34
1850.00	77.14	V	-27.25	9.90	5.56	-22.91	-13.00	-9.91
3700.40	52.11	V	-45.82	12.61	8.31	-41.52	-13.00	-28.52
5550.60	56.58	V	-34.26	13.23	10.33	-31.36	-13.00	-18.36
7400.80	36.88	V	-44.36	11.50	12.08	-44.94	-13.00	-31.94
9251.00	---	V		11.92	13.50		-13.00	
11101.20	---	V		11.66	15.11		-13.00	
12951.40	---	V		13.63	16.60		-13.00	
14801.60	---	V		12.76	17.95		-13.00	
16651.80	---	V		15.92	19.14		-13.00	
18502.00	---	V		18.75	10.40		-13.00	

Measurement uncertainty	30MHz - 80MHz: 5.04dB
	80MHz -1000MHz: 3.76dB
	1GHz - 13GHz: 4.45dB

Remark：

1 The emission behaviors belong to narrowband spurious emission.

2 Remark"---" means that the emission level is too low to be measured

3 The result basic equation calculation is as follows:

4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) – Cable loss (dB)

Radiated Spurious Emission Measurement Result: PCS 1900 Mode

Operation Mode	: TX CH Low Mode	Test Date:	Jul. 24, 2009
Fundamental Frequency	: 1850.20MHz	Test By:	Jason
Temperature	: 25℃	Pol:	Hor
Humidity	: 65%		

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Out-put (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP/ EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
39.70	44.47	H	-58.42	-2.79	0.89	-62.11	-13.00	-49.11
997.09	35.26	H	-48.67	-7.99	4.02	-60.68	-13.00	-47.68
1000.00	52.34	H	-31.57	-7.99	4.03	-43.59	-13.00	-30.59
1330.00	43.47	H	-61.88	7.86	3.29	-57.30	-13.00	-44.30
1850.00	73.63	H	-30.55	9.90	5.56	-26.21	-13.00	-13.21
3700.40	52.20	H	-45.84	12.61	8.31	-41.54	-13.00	-28.54
5550.60	51.97	H	-39.08	13.23	10.33	-36.18	-13.00	-23.18
7400.80	35.39	H	-45.84	11.50	12.08	-46.42	-13.00	-33.42
9251.00	---	H		11.92	13.50		-13.00	
11101.20	---	H		11.66	15.11		-13.00	
12951.40	---	H		13.63	16.60		-13.00	
14801.60	---	H		12.76	17.95		-13.00	
16651.80	---	H		15.92	19.14		-13.00	
18502.00	---	H		18.75	10.40		-13.00	

Measurement uncertainty	30MHz - 80MHz: 5.04dB
	80MHz -1000MHz: 3.76dB
	1GHz - 13GHz: 4.45dB

Remark：

1 The emission behaviors belong to narrowband spurious emission.

2 Remark"---" means that the emission level is too low to be measured

3 The result basic equation calculation is as follows:

4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) – Cable loss (dB)

Radiated Spurious Emission Measurement Result: PCS 1900 Mode

Operation Mode : TX CH Mid Mode
Fundamental Frequency : 1880MHz
Temperature : 25℃
Humidity : 65%

Test Date: Jul. 24, 2009
Test By: Jason
Pol: Ver

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Out-put (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP/ EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
41.64	48.10	V	-54.55	-2.31	0.93	-57.80	-13.00	-44.80
133.79	45.66	V	-53.13	-7.79	1.52	-62.43	-13.00	-49.43
1000.00	45.61	V	-37.86	-7.99	4.03	-49.88	-13.00	-36.88
1330.00	39.73	V	-65.71	7.86	3.29	-61.13	-13.00	-48.13
3760.00	55.96	V	-41.70	12.60	8.39	-37.48	-13.00	-24.48
5640.00	57.03	V	-33.55	13.36	10.41	-30.60	-13.00	-17.60
7520.00	38.40	V	-42.26	11.45	12.19	-43.00	-13.00	-30.00
9400.00	---	V		11.93	13.61		-13.00	
11280.00	---	V		11.92	15.27		-13.00	
13160.00	---	V		13.33	16.71		-13.00	
15040.00	---	V		13.76	18.15		-13.00	
16920.00	---	V		15.27	19.32		-13.00	
18800.00	---	V		18.68	16.58		-13.00	

Measurement uncertainty	30MHz - 80MHz: 5.04dB
	80MHz -1000MHz: 3.76dB
	1GHz - 13GHz: 4.45dB

Remark：

1 The emission behaviors belong to narrowband spurious emission.

2 Remark"---" means that the emission level is too low to be measured

3 The result basic equation calculation is as follows:

4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) – Cable loss (dB)

Radiated Spurious Emission Measurement Result: PCS 1900 Mode

Operation Mode : TX CH Mid Mode
Fundamental Frequency : 1880MHz
Temperature : 25℃
Humidity : 65%

Test Date: Jul. 24, 2009
Test By: Jason
Pol: Hor

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Out-put (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP/ EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
39.70	45.23	H	-57.66	-2.79	0.89	-61.35	-13.00	-48.35
997.09	34.46	H	-49.47	-7.99	4.02	-61.48	-13.00	-48.48
1000.00	48.72	H	-35.19	-7.99	4.03	-47.21	-13.00	-34.21
3760.00	50.89	H	-46.88	12.60	8.39	-42.67	-13.00	-29.67
5640.00	57.39	H	-33.36	13.36	10.41	-30.41	-13.00	-17.41
7520.00	---	H		11.45	12.19		-13.00	
9400.00	---	H		11.93	13.61		-13.00	
11280.00	---	H		11.92	15.27		-13.00	
13160.00	---	H		13.33	16.71		-13.00	
15040.00	---	H		13.76	18.15		-13.00	
16920.00	---	H		15.27	19.32		-13.00	
18800.00	---	H		18.68	16.58		-13.00	

Measurement uncertainty	30MHz - 80MHz: 5.04dB
	80MHz -1000MHz: 3.76dB
	1GHz - 13GHz: 4.45dB

Remark：

1 The emission behaviors belong to narrowband spurious emission.

2 Remark"---" means that the emission level is too low to be measured

3 The result basic equation calculation is as follows:

4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) – Cable loss (dB)

Radiated Spurious Emission Measurement Result: PCS 1900 Mode

Operation Mode	: TX CH High Mode	Test Date:	Jul. 24, 2009
Fundamental Frequency	: 1909.8 MHz	Test By:	Jason
Temperature	: 25℃	Pol:	Ver
Humidity	: 65%		

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Out-put (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP/ EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
40.67	47.40	V	-54.75	-2.51	0.91	-58.17	-13.00	-45.17
133.79	45.78	V	-53.01	-7.79	1.52	-62.31	-13.00	-49.31
1910.00	72.18	V	-32.15	10.08	5.66	-27.73	-13.00	-14.73
3805.00	54.44	V	-43.02	12.60	8.45	-38.86	-13.00	-25.86
3981.60	---	V		12.60	8.69		-13.00	
5717.50	54.08	V	-36.27	13.48	10.49	-33.28	-13.00	-20.28
5972.40	---	V		13.86	10.73		-13.00	
7963.20	---	V		11.27	12.49		-13.00	
9954.00	---	V		12.08	14.24		-13.00	
11944.80	---	V		13.08	15.87		-13.00	
13935.60	---	V		11.82	17.21		-13.00	
15926.40	---	V		17.08	18.70		-13.00	
17917.20	---	V		9.63	19.97		-13.00	
19908.00	---	V		18.88	21.24		-13.00	

Measurement uncertainty	30MHz - 80MHz: 5.04dB
	80MHz -1000MHz: 3.76dB
	1GHz - 13GHz: 4.45dB

Remark：

1 The emission behaviors belong to narrowband spurious emission.

2 Remark"---" means that the emission level is too low to be measured

3 The result basic equation calculation is as follows:

4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) – Cable loss (dB)

Radiated Spurious Emission Measurement Result: PCS 1900 Mode

Operation Mode	: TX CH High Mode	Test Date:	Jul. 24, 2009
Fundamental Frequency	: 1909.8 MHz	Test By:	Jason
Temperature	: 25℃	Pol:	Hor
Humidity	: 65%		

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Out-put (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP/ EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
40.67	45.08	H	-58.01	-2.51	0.91	-61.43	-13.00	-48.43
997.09	35.01	H	-48.92	-7.99	4.02	-60.93	-13.00	-47.93
1000.00	49.37	H	-34.54	-7.99	4.03	-46.56	-13.00	-33.56
1910.00	75.15	H	-28.96	10.08	5.66	-24.54	-13.00	-11.54
3805.00	53.44	H	-44.13	12.60	8.45	-39.98	-13.00	-26.98
3981.60	---	H		12.60	8.69		-13.00	
5717.50	51.21	H	-39.28	13.48	10.49	-36.29	-13.00	-23.29
5972.40	---	H		13.86	10.73		-13.00	
7963.20	---	H		11.27	12.49		-13.00	
9954.00	---	H		12.08	14.24		-13.00	
11944.80	---	H		13.08	15.87		-13.00	
13935.60	---	H		11.82	17.21		-13.00	
15926.40	---	H		17.08	18.70		-13.00	
17917.20	---	H		9.63	19.97		-13.00	
19908.00	---	H		18.88	21.24		-13.00	

Measurement uncertainty	30MHz - 80MHz: 5.04dB
	80MHz -1000MHz: 3.76dB
	1GHz - 13GHz: 4.45dB

Remark：

1 The emission behaviors belong to narrowband spurious emission.

2 Remark"---" means that the emission level is too low to be measured

3 The result basic equation calculation is as follows:

4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) – Cable loss (dB)

10. FREQUENCY STABILITY V.S. TEMPERATURE MEASUREMENT

10.1 Standard Applicable

According to FCC §2.1055(a)(1).

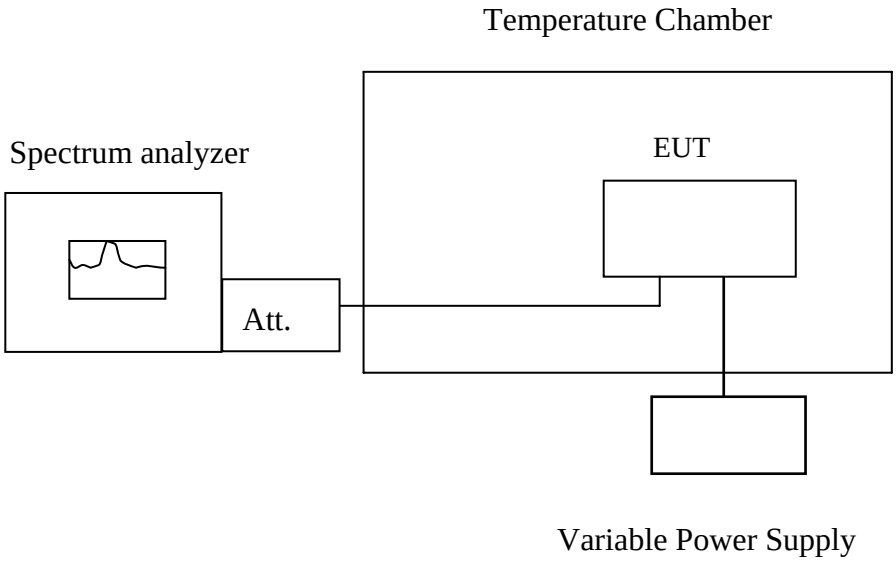
Frequency Tolerance: +/-2.5 ppm for 850MHz band

+/-2.5 ppm for 1900MHz band

According to RSS-133 §6.3, RSS-132 §4.3

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

10.2 Test Set-up:



Note : Measurement setup for testing on Antenna connector

10.3 Measurement Procedure

The equipment under test was connected to an external AC or DC power supply and input rated voltage. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. The EUT was placed inside the temperature chamber. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 25^{o}C operating frequency as reference frequency. Turn EUT off and set the chamber temperature to 5^{o}C. After the temperature stabilized for approximately 30 minutes recorded the frequency. Repeat step measure with 10^{o}C increased per stage until the highest temperature of +50^{o}C reached.

10.4 Measurement Equipment Used:

Conducted Emission Test Site					
EQUIPMENT TYPE	**MFR**	**MODEL NUMBER**	**SERIAL NUMBER**	**LAST CAL.**	**CAL DUE.**
Spectrum Analyzer	Agilent	E4446A	MY43360126	04/19/2008	04/18/2010
Spectrum Analyzer	Agilent	E4440A	US41160416	01/23/2008	01/22/2010
Radio Communication Analyzer	R&S	CMU200	102189	05/13/2008	05/12/2010
800 – 1000MHz Filter	Micro-Tronics	BRM13462	001	01/05/2009	01/04/2010
1800 – 2000MHz Filter	Micro-Tronics	BRM13463	001	01/05/2009	01/04/2010
Temperature Chamber	TERCHY	MHG-120LF	911009	04/14/2008	04/13/2010
Temperature Chamber	GIANT FORCE	GTH-150-40-CP-AR	MAA0512-018	02/05/2008	02/04/2010
DC Block	Agilent	BLK-18	155452	07/05/2009	07/04/2010
Attenuator	Mini-Circuit	BW-S20W5	N/A	07/05/2009	07/04/2010
Attenuator	Mini-Circuit	BW-S10W5	N/A	07/05/2009	07/04/2010
Attenuator	Mini-Circuit	BW-S6W5	N/A	07/05/2009	07/04/2010
Splitter	Agilent	11636B	N/A	07/05/2009	07/04/2010
DC Power Supply	HP	6038A	2929A-07548	06/27/2009	06/26/2011
DC Power Supply	Topward	3303D	981327	10/26/2007	10/25/2009

10.5 Measurement Result

Reference Frequency: GSM Mid Channel 836.6 MHz @ 25℃				
Limit: +/- 2.5 ppm = 2091 Hz				
Power Supply	Environment	Frequency	Delta (Hz)	Limit (Hz)
Vdc	Temperature (℃)	(MHz)		
24	5	836.600038	-28.00	2091
24	10	836.600015	-5.00	2091
24	20	836.60001	0.00	2091
24	30	836.600001	9.00	2091
24	40	836.600007	3.00	2091
24	50	836.600029	-19.00	2091

Reference Frequency: PCS Mid Channel 1880 MHz @ 25℃				
Limit: +/- 2.5 ppm = 4700 Hz				
Power Supply	Environment	Frequency	Delta (Hz)	Limit (Hz)
Vdc	Temperature (℃)	(MHz)		
24	5	1880.000035	145.00	4700
24	10	1880.000290	-110.00	4700
24	20	1880.000180	0.00	4700
24	30	1880.000032	148.00	4700
24	40	1880.000039	141.00	4700
24	50	1880.000010	170.00	4700

Note: The battery is rated 24V dc.

11. FREQUENCY STABILITY V.S. VOLTAGE MEASUREMENT

11.1 Standard Applicable

According to FCC §2.1055(d)(1)

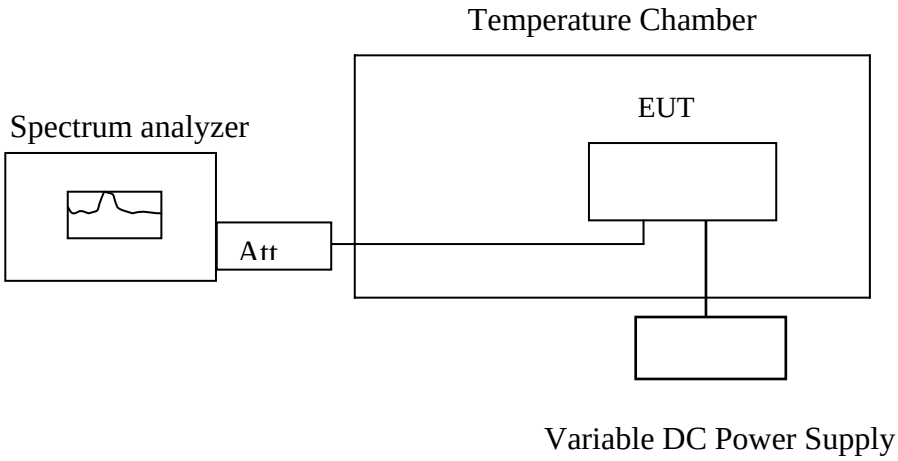
Frequency Tolerance: +/-2.5ppm for 850MHz band

+/-2.5ppm for 1900MHz band

According to RSS-133 §6.3, RSS-132 §4.3

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

11.2 Test Set-up:



Note: *Measurement setup for t*

11.3 Measurement Procedure

Set chamber temperature to 25℃. Use a variable AC power supply / DC power source to power the EUT and set the voltage to rated voltage. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency.

Reduce the input voltage to specified extreme voltage variation (+/- 15%) and endpoint, record the maximum frequency change.

11.4 Measurement Equipment Used:

Conducted Emission Test Site					
EQUIPMENT TYPE	**MFR**	**MODEL NUMBER**	**SERIAL NUMBER**	**LAST CAL.**	**CAL DUE.**
Spectrum Analyzer	Agilent	E4446A	MY43360126	04/19/2008	04/18/2010
Spectrum Analyzer	Agilent	E4440A	US41160416	01/23/2008	01/22/2010
Radio Communication Analyzer	R&S	CMU200	102189	05/13/2008	05/12/2010
800 – 1000MHz Filter	Micro-Tronics	BRM13462	001	01/05/2009	01/04/2010
1800 – 2000MHz Filter	Micro-Tronics	BRM13463	001	01/05/2009	01/04/2010
Temperature Chamber	TERCHY	MHG-120LF	911009	04/14/2008	04/13/2010
Temperature Chamber	GIANT FORCE	GTH-150-40-CP-AR	MAA0512-018	02/05/2008	02/04/2010
DC Block	Agilent	BLK-18	155452	07/05/2009	07/04/2010
Attenuator	Mini-Circuit	BW-S20W5	N/A	07/05/2009	07/04/2010
Attenuator	Mini-Circuit	BW-S10W5	N/A	07/05/2009	07/04/2010
Attenuator	Mini-Circuit	BW-S6W5	N/A	07/05/2009	07/04/2010
Splitter	Agilent	11636B	N/A	07/05/2009	07/04/2010
DC Power Supply	HP	6038A	2929A-07548	06/27/2009	06/26/2011
DC Power Supply	Topward	3303D	981327	10/26/2007	10/25/2009

11.5 Measurement Result

Reference Frequency: GSM Mid Channel 836.6 MHz @ 25℃				
Limit: +/- 2.5 ppm = 2091 Hz				
Power Supply	Environment	Frequency	Delta (Hz)	Limit (Hz)
Vdc	Temperature (℃)	(MHz)		
26.40	25.00	836.600008	0.00	2091.00
24.00	25.00	836.600013	-5.00	2091.00
22.60	25.00	836.600021	-13.00	2091.00
6.5 (End Point)	25.00	836.600017	9.00	2091.00

Reference Frequency: PCS Mid Channel 1880 MHz @ 25℃				
Limit: +/- 2.5 ppm = 4700 Hz				
Power Supply	Environment	Frequency	Delta (Hz)	Limit (Hz)
Vdc	Temperature (℃)	(MHz)		
26.4	25	1880.000024	0.00	4700
24	25	1880.000016	8.00	4700
22.6	25	1880.00006	-36.00	4700
6.5 (Endpoint)	25	1880.00004	-14.00	4700

12. AC POWER LINE CONDUCTED EMISSION TEST

12.1 Standard Applicable

According to §15.207. The emission value for frequency within 150KHz to 30MHz shall not exceed criteria of below chart.

Frequency range MHz	Limits dB(uV)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5	56	46
5 to 30	60	50
Note 1.The lower limit shall apply at the transition frequencies 2.The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.		

12.2 EUT Setup

1. The conducted emission tests were performed in the test site, using the setup in accordance with the ANSI C63.4-2003.
2. The EUT was plug-in DC power adaptort and was placed on the center of the back edge on the test table. The peripherals like earphone was placed on the side of the EUT. The rear of the EUT and peripherals were placed flushed with the rear of the tabletop.
3. The Power adaptor was connected with 110Vac/60Hz power source.

12.3 Measurement Procedure

1. The EUT was placed on a table which is 0.8m above ground plane.
2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
3. Repeat above procedures until all frequency measured were complete.

12.4 Measurement Equipment Used:

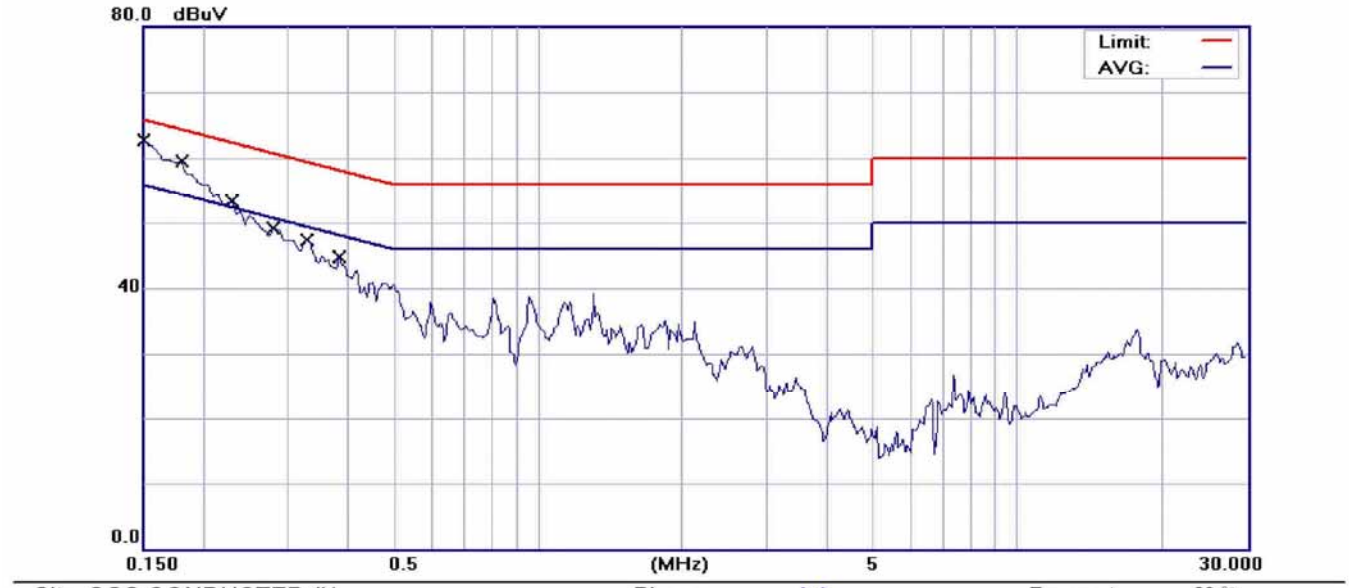
Conducted Emission Test Site					
EQUIPMENT TYPE	**MFR**	**MODEL NUMBER**	**SERIAL NUMBER**	**LAST CAL.**	**CAL DUE.**
EMI Test Receiver	R&S	ESCS30	828985/004	09/15/2008	09/14/2009
LISN	Rolf-Heine	NNB-2/16Z	99012	02/18/2009	02/17/2010
LISN	FCC	FCC-LISN-50/250-25-2-01	04034	02/18/2009	02/17/2010
Coaxial Cables	N/A	WK CE Cable	N/A	10/30/2008	10/29/2009

12.5 Measurement Result

The initial step in collecting conducted data is a spectrum analyzer peak scan of the measurement range. Significant peaks are then marked as shown on the following data page, and these signals are then quasi-peaked.

AC POWER LINE CONDUCTED EMISSION TEST DATA

Operation Mode:	GSM 850 LINK			Test Date:	Jul. 20, 2009
Temperature:	23 ℃	Humidity:	60 %	Test By:	Jason

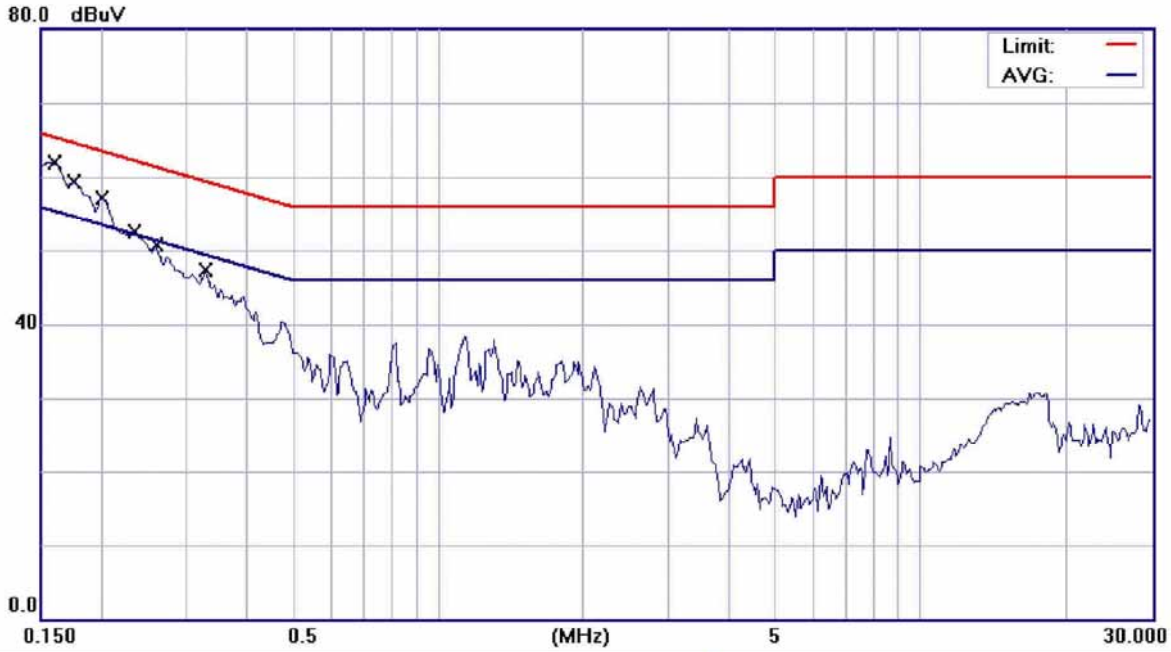


Site SGS CONDUCTED #1
Limit: CISPR22/11/EN55022 Class B
EUT: POS terminal
M/N: M82-250
Note: GSM 850 Link Mode

Phase: L1
Power: AC 120V/60Hz
Distance:

Temperature: 23 ℃
Humidity: 60 %
Air Pressure: hpa

No.	Mk.	Freq.	Reading Level	Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1509	56.45	0.17	56.62	65.95	-9.33	QP	
2		0.1509	40.00	0.17	40.17	55.95	-15.78	AVG	
3		0.1796	52.77	0.14	52.91	64.50	-11.59	QP	
4		0.1796	35.76	0.14	35.90	54.50	-18.60	AVG	
5		0.2294	47.12	0.11	47.23	62.47	-15.24	QP	
6		0.2294	27.82	0.11	27.93	52.47	-24.54	AVG	
7		0.2793	42.52	0.10	42.62	60.84	-18.22	QP	
8		0.2793	24.01	0.10	24.11	50.84	-26.73	AVG	
9		0.3294	40.25	0.09	40.34	59.47	-19.13	QP	
10		0.3294	33.86	0.09	33.95	49.47	-15.52	AVG	
11		0.3845	37.60	0.08	37.68	58.18	-20.50	QP	
12		0.3845	31.69	0.08	31.77	48.18	-16.41	AVG	



Site SGS CONDUCTED #1
Limit: CISPR22/11/EN55022 Class B
EUT: POS terminal
M/N: M82-250
Note: GSM 850 Link Mode

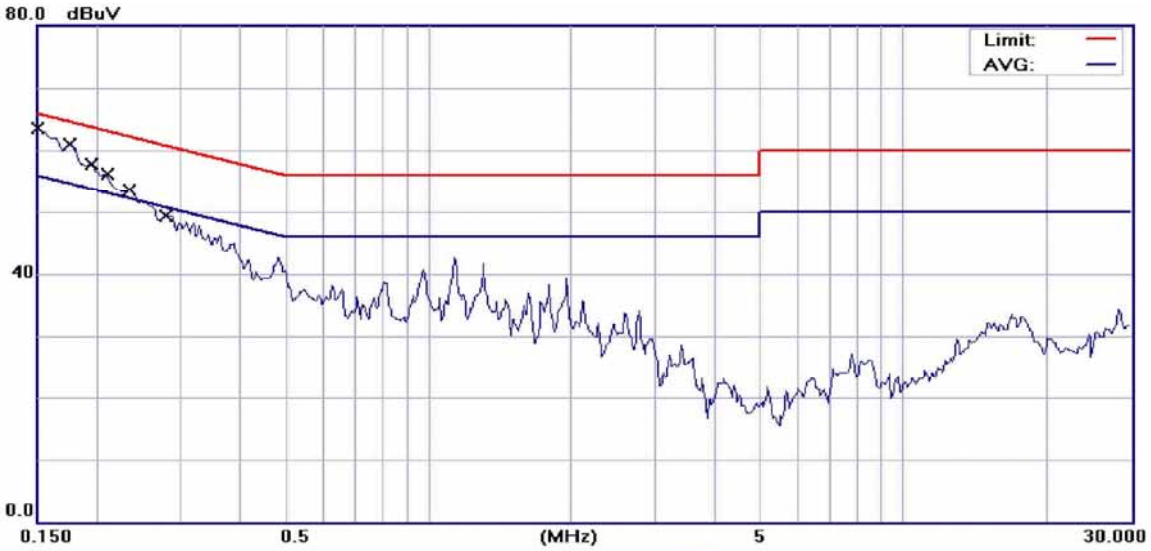
Phase: N
Power: AC 120V/60Hz
Distance:

Temperature: 23 ℃
Humidity: 60 %
Air Pressure: hpa

No.	Mk.	Freq.	Reading Level	Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1593	54.99	0.19	55.18	65.50	-10.32	QP	
2		0.1593	41.31	0.19	41.50	55.50	-14.00	AVG	
3		0.1768	52.71	0.17	52.88	64.63	-11.75	QP	
4		0.1768	37.14	0.17	37.31	54.63	-17.32	AVG	
5		0.1999	49.66	0.14	49.80	63.61	-13.81	QP	
6		0.1999	30.67	0.14	30.81	53.61	-22.80	AVG	
7		0.2346	46.44	0.13	46.57	62.29	-15.72	QP	
8		0.2346	25.06	0.13	25.19	52.29	-27.10	AVG	
9		0.2594	43.98	0.13	44.11	61.45	-17.34	QP	
10		0.2594	23.58	0.13	23.71	51.45	-27.74	AVG	
11		0.3291	40.00	0.12	40.12	59.47	-19.35	QP	
12		0.3291	33.95	0.12	34.07	49.47	-15.40	AVG	

AC POWER LINE CONDUCTED EMISSION TEST DATA

Operation Mode:	GSM 1900 Link			Test Date:	Jul. 20, 2009
Temperature:	23 ℃	Humidity:	60 %	Test By:	Jason

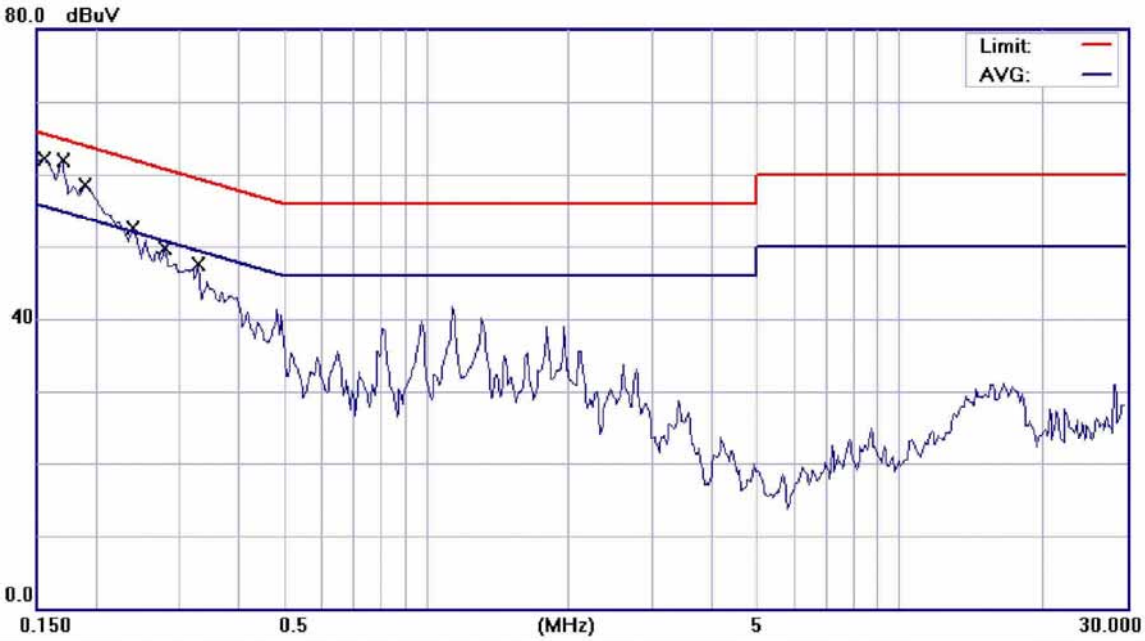


Site SGS CONDUCTED #1
Limit: CISPR22/11/EN55022 Class B
EUT: POS terminal
M/N: M82-250
Note: GSM 1900 Link Mode

Phase: L1
Power: AC 120V/60Hz
Distance:

Temperature: 23 ℃
Humidity: 60 %
Air Pressure: hpa

No.	Mk.	Freq.	Reading Level	Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1504	56.13	0.17	56.30	65.98	-9.68	QP	
2		0.1504	40.83	0.17	41.00	55.98	-14.98	AVG	
3		0.1747	52.95	0.15	53.10	64.73	-11.63	QP	
4		0.1747	38.17	0.15	38.32	54.73	-16.41	AVG	
5		0.1943	50.48	0.13	50.61	63.85	-13.24	QP	
6		0.1943	30.86	0.13	30.99	53.85	-22.86	AVG	
7		0.2093	49.04	0.12	49.16	63.23	-14.07	QP	
8		0.2093	28.82	0.12	28.94	53.23	-24.29	AVG	
9		0.2344	46.58	0.11	46.69	62.29	-15.60	QP	
10		0.2344	24.74	0.11	24.85	52.29	-27.44	AVG	
11		0.2796	42.40	0.10	42.50	60.83	-18.33	QP	
12		0.2796	24.15	0.10	24.25	50.83	-26.58	AVG	

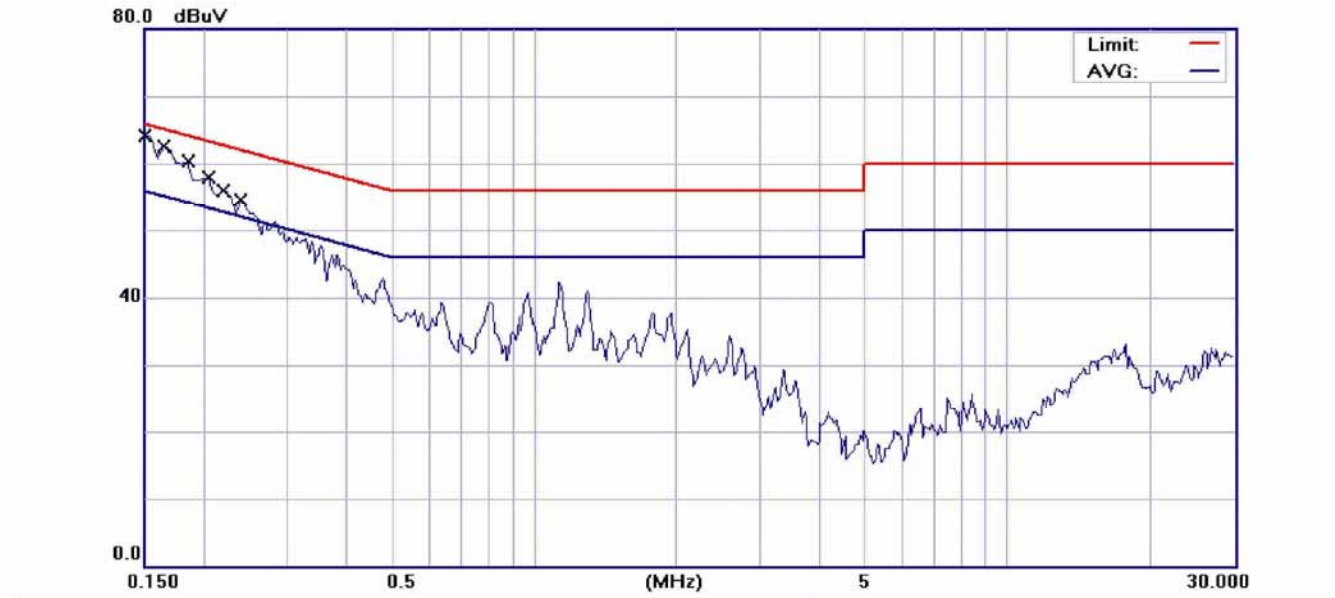


Site SGS CONDUCTED #1 | Phase: N | Temperature: 23 ℃
Limit: CISPR22/11/EN55022 Class B | Power: AC 120V/60Hz | Humidity: 60 %
EUT: POS terminal | Distance: | Air Pressure: hpa
M/N: M82-250
Note: GSM 1900 Link Mode

No.	Mk.	Freq.	Reading Level	Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1546	55.52	0.19	55.71	65.75	-10.04	QP	
2		0.1546	41.62	0.19	41.81	55.75	-13.94	AVG	
3		0.1694	52.92	0.17	53.09	64.99	-11.90	QP	
4		0.1694	40.55	0.17	40.72	54.99	-14.27	AVG	
5		0.1900	50.20	0.15	50.35	64.04	-13.69	QP	
6		0.1900	30.13	0.15	30.28	54.04	-23.76	AVG	
7		0.2390	45.48	0.13	45.61	62.13	-16.52	QP	
8		0.2390	24.11	0.13	24.24	52.13	-27.89	AVG	
9		0.2789	42.01	0.13	42.14	60.85	-18.71	QP	
10		0.2789	24.22	0.13	24.35	50.85	-26.50	AVG	
11		0.3291	40.71	0.12	40.83	59.47	-18.64	QP	
12		0.3291	34.87	0.12	34.99	49.47	-14.48	AVG	

AC POWER LINE CONDUCTED EMISSION TEST DATA

Operation Mode:	EGPS 850 LINK			Test Date:	Jul. 20, 2009
Temperature:	23 ℃	Humidity:	60 %	Test By:	Jason

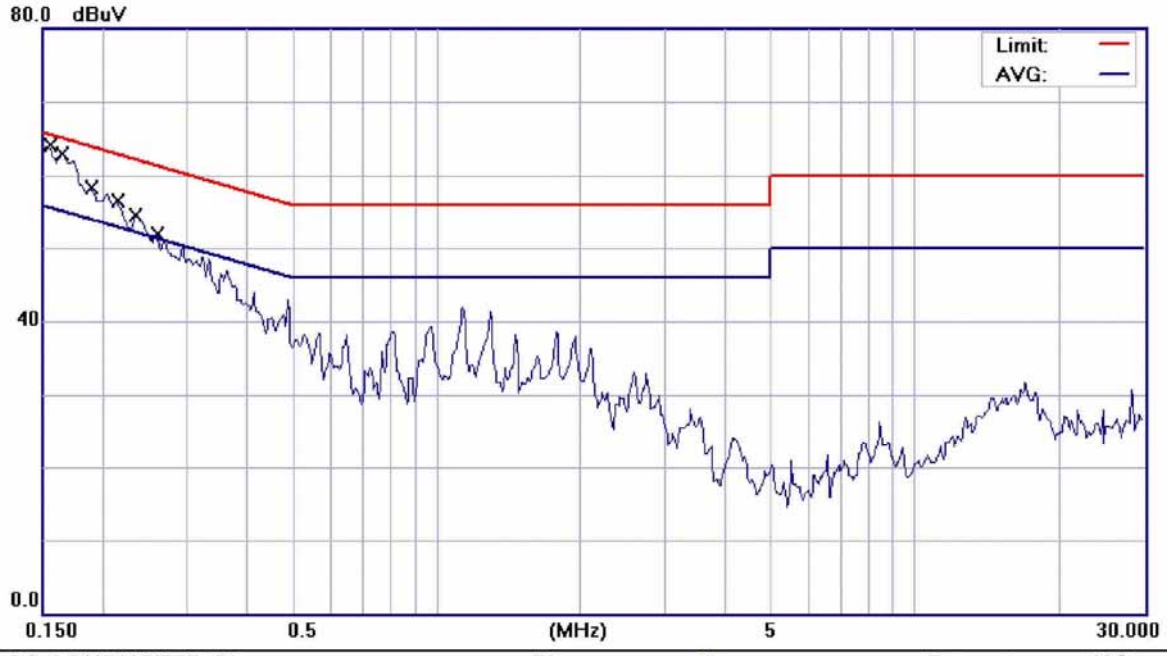


Site SGS CONDUCTED #1
Limit: CISPR22/11/EN55022 Class B
EUT: POS terminal
M/N: M82-250
Note: EGPRS 850 Link Mode

Phase: L1
Power: AC 120V/60Hz
Distance:

Temperature: 23 ℃
Humidity: 60 %
Air Pressure: hpa

No.	Mk.	Freq.	Reading Level	Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1507	56.33	0.17	56.50	65.96	-9.46	QP	
2		0.1507	41.07	0.17	41.24	55.96	-14.72	AVG	
3		0.1646	54.43	0.16	54.59	65.23	-10.64	QP	
4		0.1646	42.06	0.16	42.22	55.23	-13.01	AVG	
5		0.1846	51.90	0.14	52.04	64.28	-12.24	QP	
6		0.1846	31.67	0.14	31.81	54.28	-22.47	AVG	
7		0.2046	49.72	0.12	49.84	63.42	-13.58	QP	
8		0.2046	29.22	0.12	29.34	53.42	-24.08	AVG	
9		0.2195	47.97	0.12	48.09	62.84	-14.75	QP	
10		0.2195	27.91	0.12	28.03	52.84	-24.81	AVG	
11		0.2391	46.12	0.11	46.23	62.13	-15.90	QP	
12		0.2391	24.52	0.11	24.63	52.13	-27.50	AVG	



Site SGS CONDUCTED #1
Limit: CISPR22/11/EN55022 Class B
EUT: POS terminal
M/N: M82-250
Note: EGPRS 850 Link Mode

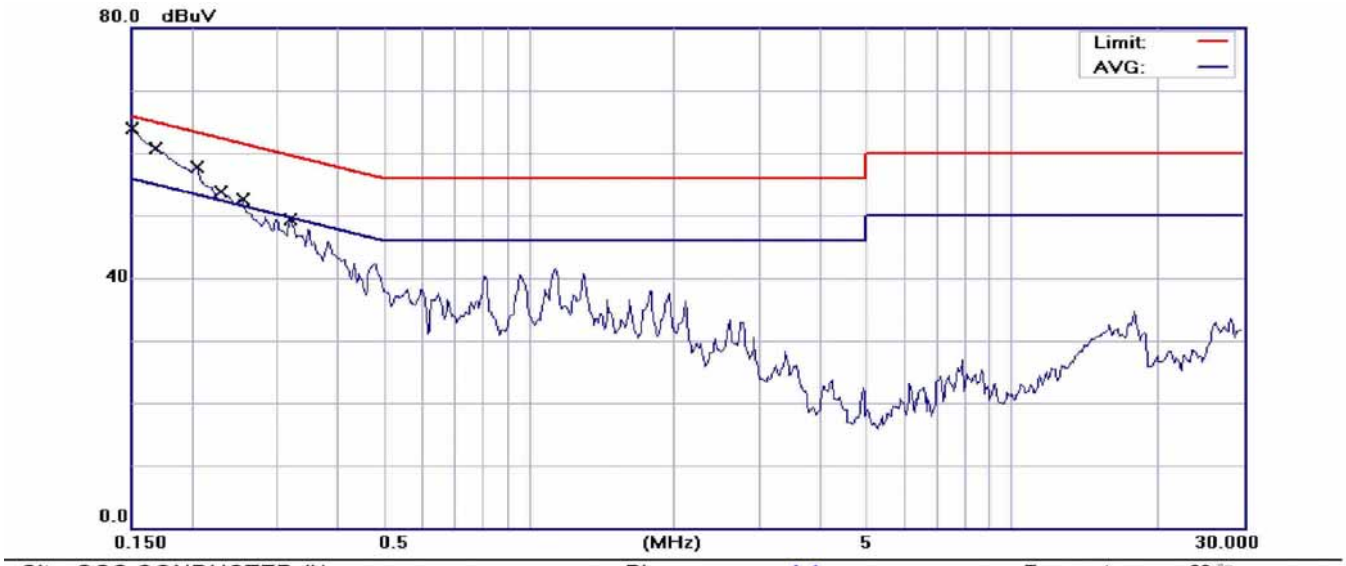
Phase: N
Power: AC 120V/60Hz
Distance:

Temperature: 23 ℃
Humidity: 60 %
Air Pressure: hpa

No.	Mk.	Freq.	Reading Level	Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1546	55.83	0.19	56.02	65.75	-9.73	QP	
2		0.1546	42.14	0.19	42.33	55.75	-13.42	AVG	
3		0.1646	53.99	0.18	54.17	65.23	-11.06	QP	
4		0.1646	42.13	0.18	42.31	55.23	-12.92	AVG	
5		0.1894	50.96	0.15	51.11	64.06	-12.95	QP	
6		0.1894	30.93	0.15	31.08	54.06	-22.98	AVG	
7		0.2142	48.20	0.14	48.34	63.04	-14.70	QP	
8		0.2142	26.79	0.14	26.93	53.04	-26.11	AVG	
9		0.2345	46.58	0.13	46.71	62.29	-15.58	QP	
10		0.2345	24.58	0.13	24.71	52.29	-27.58	AVG	
11		0.2592	44.22	0.13	44.35	61.46	-17.11	QP	
12		0.2592	24.10	0.13	24.23	51.46	-27.23	AVG	

AC POWER LINE CONDUCTED EMISSION TEST DATA

Operation Mode:	EGPS 1900 Link			Test Date:	Jul. 20, 2009
Temperature:	23 ℃	Humidity:	60 %	Test By:	Jason

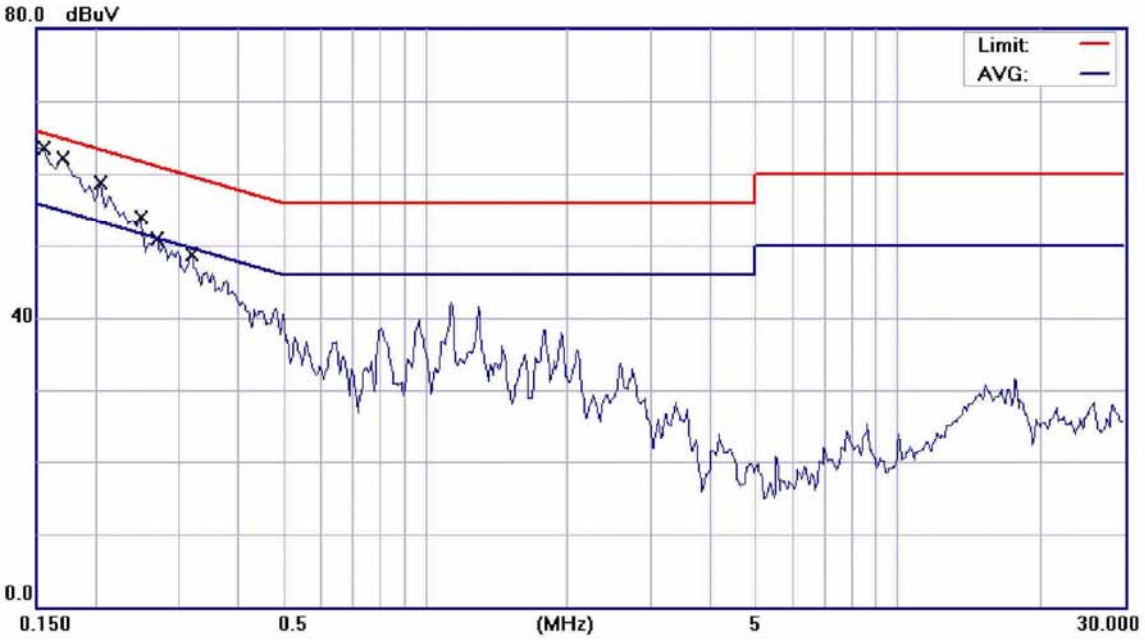


Site SGS CONDUCTED #1
Limit: CISPR22/11/EN55022 Class B
EUT: POS terminal
M/N: M82-250
Note: EGPRS 1900 Link Mode

Phase: L1
Power: AC 120V/60Hz
Distance:

Temperature: 23 ℃
Humidity: 60 %
Air Pressure: hpa

No.	Mk.	Freq.	Reading Level	Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1505	56.21	0.17	56.38	65.97	-9.59	QP	
2		0.1505	40.83	0.17	41.00	55.97	-14.97	AVG	
3		0.1699	53.44	0.15	53.59	64.97	-11.38	QP	
4		0.1699	40.55	0.15	40.70	54.97	-14.27	AVG	
5		0.2047	49.56	0.12	49.68	63.42	-13.74	QP	
6		0.2047	29.70	0.12	29.82	53.42	-23.60	AVG	
7		0.2293	47.00	0.11	47.11	62.48	-15.37	QP	
8		0.2293	27.44	0.11	27.55	52.48	-24.93	AVG	
9		0.2546	44.70	0.11	44.81	61.61	-16.80	QP	
10		0.2546	27.42	0.11	27.53	51.61	-24.08	AVG	
11		0.3195	41.16	0.10	41.26	59.72	-18.46	QP	
12		0.3195	35.11	0.10	35.21	49.72	-14.51	AVG	



Site SGS CONDUCTED #1
Limit: CISPR22/11/EN55022 Class B
EUT: POS terminal
M/N: M82-250
Note: EGPRS 1900 Link Mode

Phase: *N*
Power: AC 120V/60Hz
Distance:

Temperature: 23 ℃
Humidity: 60 %
Air Pressure: hpa

No.	Mk.	Freq.	Reading Level	Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1546	55.46	0.19	55.65	65.75	-10.10	QP	
2		0.1546	41.92	0.19	42.11	55.75	-13.64	AVG	
3		0.1696	52.94	0.17	53.11	64.98	-11.87	QP	
4		0.1696	40.55	0.17	40.72	54.98	-14.26	AVG	
5		0.2048	49.18	0.14	49.32	63.41	-14.09	QP	
6		0.2048	29.06	0.14	29.20	53.41	-24.21	AVG	
7		0.2494	44.60	0.13	44.73	61.78	-17.05	QP	
8		0.2494	25.24	0.13	25.37	51.78	-26.41	AVG	
9		0.2691	42.91	0.13	43.04	61.15	-18.11	QP	
10		0.2691	22.94	0.13	23.07	51.15	-28.08	AVG	
11		0.3195	40.82	0.12	40.94	59.72	-18.78	QP	
12		0.3195	35.11	0.12	35.23	49.72	-14.49	AVG	

13. SPURIOUS RADIATED EMISSION TEST (RX)

13.1 Standard Applicable

According to RSS 132 §4.6, all spurious emissions shall comply with the limits of Table 2. The resolution bandwidth of the spectrum analyzer shall be 100 kHz for spurious emissions measurements below 1.0 GHz, and 1.0 MHz for measurements above 1.0 GHz.

Frequency (MHz)	Field strength μV/m	Distance (m)	Field strength at 3m dBμV/m
30-88	100	3	40
88-216	150	3	43.5
216-960	200	3	46
Above 960	500	3	54

According to RSS 133 §6.6, Receiver spurious emissions shall comply with the limits specified in RSS-Gen.

13.2 EUT Setup

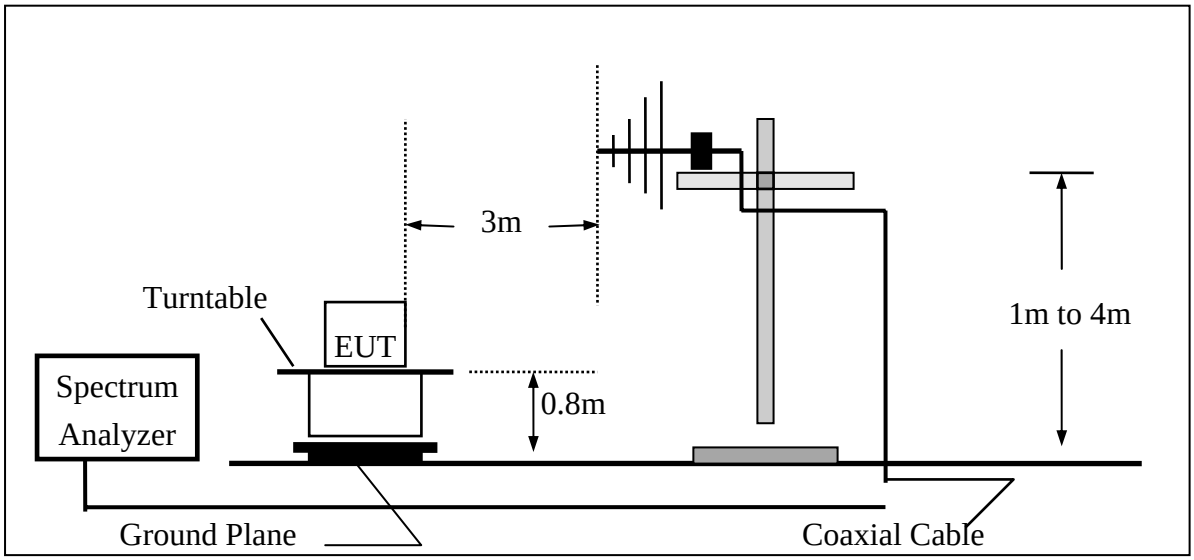
1. The radiated emission tests were performed in the 3 meter open-test site, using the setup in accordance with the ANSI C63.4-2003.
2. The EUT was put in the front of the test table. The rear of the EUT and peripherals were placed flushed with the rear of the tabletop.
3. The spacing between the peripherals was 10 centimeters.
4. External I/O cables were draped along the edge of the test table and bundle when necessary.
5. The host was connected with 110Vac/60Hz power source.

13.3 Measurement Procedure

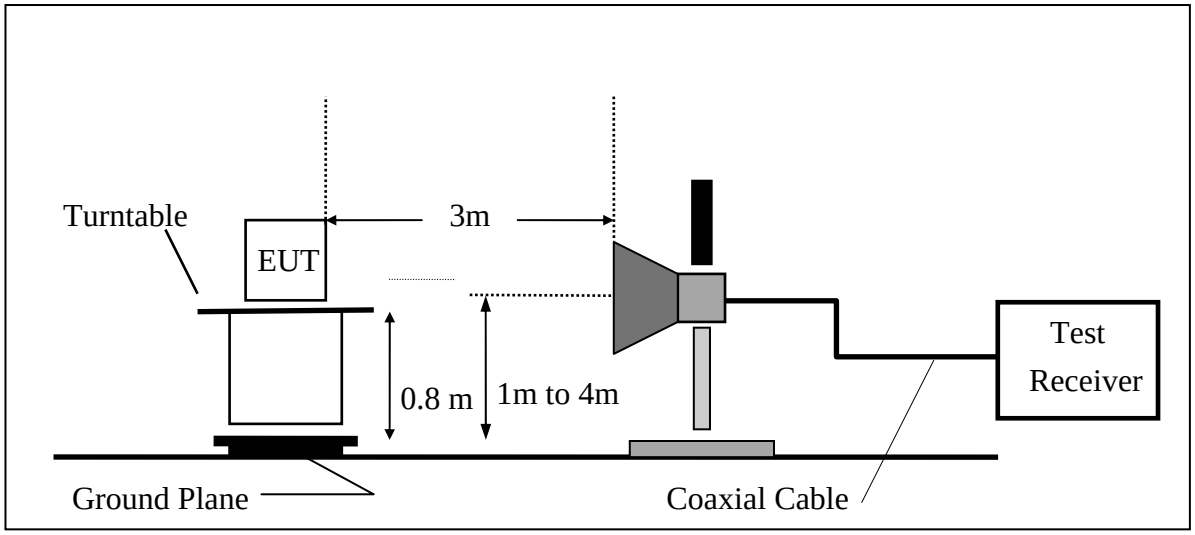
1. The EUT was placed on a turn table which is 0.8m above ground plane.
2. The turn table shall rotate 360 degrees to determine the position of maximum emission level.
3. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emissions.
4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
5. Repeat above procedures until all frequency measured were complete.

13.4 Test SET-UP (Block Diagram of Configuration)

Radiated Emission Test Set-Up, Frequency Below 1000MHz



(B) Radiated Emission Test Set-UP Frequency Over 1 GHz



13.5 Measurement Equipment Used:

EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Spectrum Analyzer	R&S	FSP 40	100034	02/12/2009	02/11/2010
Bilog Antenna	SCHWAZBECK	VULB9160	9160-3136	11/15/2008	11/14/2009
Dipole Antenna	SCHWAZBECK	VHAP	908/909	07/10/2008	07/09/2010
Dipole Antenna	SCHWAZBECK	UHAP	891/892	07/10/2008	07/09/2010
Hor.n antenna	SCHWAZBECK	BBHA 9120D	309	01/22/2008	01/21/2010
Horn antenna	SCHWAZBECK	BBHA 9120D	9120D-673	05/09/2008	05/08/2010
Signal Generator	R&S	SMR40	100210	01/22/2008	01/21/2010
Signal Generator	Agilent	E4438C	MY45093613	05/22/2009	05/21/2010
Pre-Amplifier	Agilent	8447D	1937A02834	11/30/2008	11/29/2009
Pre-Amplifier	Agilent	8449B	3008A01973	01/05/2009	01/04/2010
Attenuator	Mini-Circuit	BW-S20W5	001	07/05/2009	07/04/2010
Attenuator	Mini-Circuit	BW-S10W5	001	07/05/2009	07/04/2010
Attenuator	Mini-Circuit	BW-S6W5	001	07/05/2009	07/04/2010
Radio Communica-tion Analyzer	R&S	CMU200	102189	05/13/208	05/12/2010
Turn Table	HD	DT420	N/A	N.C.R	N.C.R
Antenna Tower	HD	MA240-N	240/657	N.C.R	N.C.R
Controller	HD	HD100	N/A	N.C.R	N.C.R
Low Loss Cable	HUBER+SUHNER	SUCOFLEX 104PEA-10M	10m	01/05/2009	01/04/2010
Low Loss Cable	HUBER+SUHNER	SUCOFLEX 104PEA-3M	3m	01/05/2009	01/04/2010
3m Site	SGS	966 chamber	N/A	11/08/2008	11/09/2009

13.6 Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor(if any) from the measured reading. The basic equation with a sample calculation is as follows:

FS = RA + AF + CL - AG

Where	FS = Field Strength	CL = Cable Attenuation Factor (Cable Loss)
	RA = Reading Amplitude	AG = Amplifier Gain
	AF = Antenna Factor	

13.7 Measurement Result

Refer to attach tabular data sheets.

Radiated Spurious Emission Measurement Result (below 1GHz)

Operation Mode	GSM 850 CH Low	Test Date	Jul. 24, 2009
Fundamental Frequency	N/A	Test By	Jason
Temperature	25 ℃	Pol	Ver./Hor
Humidity	65 %		

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Ant./CL/ Amp. CF(dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
31.94	V	Peak	51.75	-14.82	36.93	40.00	-3.07
104.69	V	Peak	50.33	-16.63	33.70	43.50	-9.80
138.64	V	Peak	44.99	-13.80	31.19	43.50	-12.31
303.54	V	Peak	43.12	-12.93	30.19	46.00	-15.81
405.39	V	Peak	38.37	-9.86	28.51	46.00	-17.49
497.54	V	Peak	41.73	-8.51	33.22	46.00	-12.78
664.38	V	Peak	35.83	-5.01	30.82	46.00	-15.18
997.09	V	Peak	38.47	-0.65	37.82	54.00	-16.18
38.73	H	Peak	46.97	-13.84	33.13	40.00	-6.87
72.68	H	Peak	46.18	-16.62	29.56	40.00	-10.44
109.54	H	Peak	47.82	-16.25	31.57	43.50	-11.93
216.24	H	Peak	45.22	-15.05	30.17	46.00	-15.83
405.39	H	Peak	41.63	-9.86	31.77	46.00	-14.23
497.54	H	Peak	44.79	-8.51	36.28	46.00	-9.72
664.38	H	Peak	40.81	-5.01	35.80	46.00	-10.20
997.09	H	Peak	43.93	-0.65	43.28	54.00	-10.72

Remark：

(1) Measuring frequencies from 30 MHz to the 1GHz.

(2) Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/AV detector mode.

(3) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(4) The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

Radiated Spurious Emission Measurement Result (below 1GHz)

Operation Mode	GSM 850 CH Mid	Test Date	Jul. 24, 2009
Fundamental Frequency	N/A	Test By	Jason
Temperature	25 ℃	Pol	Ver./Hor
Humidity	65 %		

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Ant./CL/ Amp. CF(dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
31.94	V	Peak	52.38	-14.82	37.56	40.00	-2.44
90.14	V	Peak	49.27	-17.62	31.65	43.50	-11.85
133.79	V	Peak	46.40	-14.18	32.22	43.50	-11.28
305.48	V	Peak	42.00	-12.89	29.11	46.00	-16.89
405.39	V	Peak	38.09	-9.86	28.23	46.00	-17.77
497.54	V	Peak	41.38	-8.51	32.87	46.00	-13.13
664.38	V	Peak	36.28	-5.01	31.27	46.00	-14.73
997.09	V	Peak	39.07	-0.65	38.42	54.00	-15.58
38.73	H	Peak	46.88	-13.84	33.04	40.00	-6.96
72.68	H	Peak	46.69	-16.62	30.07	40.00	-9.93
109.54	H	Peak	47.45	-16.25	31.20	43.50	-12.30
218.18	H	Peak	44.31	-14.99	29.32	46.00	-16.68
400.54	H	Peak	42.53	-9.99	32.54	46.00	-13.46
497.54	H	Peak	44.06	-8.51	35.55	46.00	-10.45
664.38	H	Peak	41.09	-5.01	36.08	46.00	-9.92
997.09	H	Peak	44.45	-0.65	43.80	54.00	-10.20

Remark：

(1) Measuring frequencies from 30 MHz to the 1GHz。

(2) Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/AV detector mode.

(3) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(4) The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

Radiated Spurious Emission Measurement Result (below 1GHz)

Operation Mode	GSM 850 CH High	Test Date	Jul. 24, 2009
Fundamental Frequency	N/A	Test By	Jason
Temperature	25 ℃	Pol	Ver./Hor
Humidity	65 %		

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Ant./CL/ Amp. CF(dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
31.94	V	Peak	51.84	-14.82	37.02	40.00	-2.98
41.64	V	Peak	48.22	-13.76	34.46	40.00	-5.54
104.69	V	Peak	49.59	-16.63	32.96	43.50	-10.54
133.79	V	Peak	45.03	-14.18	30.85	43.50	-12.65
300.63	V	Peak	44.38	-13.11	31.27	46.00	-14.73
497.54	V	Peak	41.89	-8.51	33.38	46.00	-12.62
664.38	V	Peak	36.05	-5.01	31.04	46.00	-14.96
997.09	V	Peak	37.85	-0.65	37.20	54.00	-16.80
38.73	H	Peak	47.04	-13.84	33.20	40.00	-6.80
72.68	H	Peak	45.88	-16.62	29.26	40.00	-10.74
109.54	H	Peak	48.41	-16.25	32.16	43.50	-11.34
216.24	H	Peak	45.15	-15.05	30.10	46.00	-15.90
405.39	H	Peak	40.16	-9.86	30.30	46.00	-15.70
497.54	H	Peak	44.02	-8.51	35.51	46.00	-10.49
664.38	H	Peak	40.86	-5.01	35.85	46.00	-10.15
997.09	H	Peak	44.60	-0.65	43.95	54.00	-10.05

Remark：

(1) Measuring frequencies from 30 MHz to the 1GHz。

(2) Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/AV detector mode.

(3) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(4) The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode	GSM 850 CH Low	Test Date	Jul. 24, 2009
Fundamental Frequency	N/A	Test By	Jason
Temperature	25 ℃	Pol	Ver
Humidity	65 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	
1000.0	44.85	---	-7.74	37.11	---	74.00	54.00	-16.89	Peak
1318.5	40.96	---	-6.72	34.24	---	74.00	54.00	-19.76	Peak
1648.4	--								
2472.6	--								
3296.8	--								
3886.0	35.17	---	3.32	38.49	---	74.00	54.00	-15.51	Peak
4121.0	--								
4945.2	--								
5769.4	--								
6593.6	--								
7417.8	--								
8242.0	--								

Remark：

(1) Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency。

(2) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column。

(4) Spectrum Peak Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 1MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode	GSM 850 CH Low	Test Date	Jul. 24, 2009
Fundamental Frequency	N/A	Test By	Jason
Temperature	25 ℃	Pol	Hor
Humidity	65 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	
1000.0	48.69	---	-7.74	40.95	---	74.00	54.00	-13.05	Peak
1648.4	--								
2472.6	--								
3296.8	--								
4035.0	34.56	---	3.80	38.36	---	74.00	54.00	-15.64	Peak
4121.0	--								
4945.2	--								
5769.4	--								
6593.6	--								
7417.8	--								
8242.0	--								

Remark：

(1) Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency。

(2) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column。

(4) Spectrum Peak Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 1MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode	GSM 850 CH Mid	Test Date	Jul. 24, 2009
Fundamental Frequency	N/A	Test By	Jason
Temperature	25 ℃	Pol	Ver
Humidity	65 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	
1000.0	46.11	---	-7.74	38.37	---	74.00	54.00	-15.63	Peak
1318.5	38.86	---	-6.72	32.14	---	74.00	54.00	-21.86	Peak
1673.2	--								
2509.8	--								
3346.4	--								
4183.0	--								
4763.5	34.19	---	5.90	40.09	---	74.00	54.00	-13.91	Peak
5019.6	--								
5856.2	--								
6692.8	--								
7529.4	--								
8366.0	--								

Remark：

(1) Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency。

(2) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column。

(4) Spectrum Peak Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 1MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode	GSM 850 CH Mid	Test Date	Jul. 24, 2009
Fundamental Frequency	N/A	Test By	Jason
Temperature	25 ℃	Pol	Hor
Humidity	65 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	
1000.0	49.98	---	-7.74	42.24	---	74.00	54.00	-11.76	Peak
1673.2	43.28	---	-13.72	29.56	---	74.00	54.00	-24.44	Peak
2509.8	--								
3346.4	--								
3723.5	36.16	---	2.78	38.94	---	74.00	54.00	-15.06	Peak
4183.0	--								
4328.0	34.81	---	4.79	39.60	---	74.00	54.00	-14.40	Peak
5019.6	--								
5856.2	--								
6692.8	--								
7529.4	--								
8366.0	--								

Remark：

(1) Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency。

(2) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column。

(4) Spectrum Peak Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 1MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode	GSM 850 CH High	Test Date	Jul. 24, 2009
Fundamental Frequency	N/A	Test By	Jason
Temperature	25 ℃	Pol	Ver
Humidity	65 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	
1000.0	46.20	---	-7.74	38.46	---	74.00	54.00	-15.54	Peak
1318.5	39.74	---	-6.72	33.02	---	74.00	54.00	-20.98	Peak
1697.6	--								
2546.4	--								
3395.2	--								
3938.0	34.82	---	3.68	38.50	---	74.00	54.00	-15.50	Peak
4244.0	--								
5092.8	--								
5941.6	--								
6790.4	--								
7639.2	--								
8488.0	--								

Remark：

(1) Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency。

(2) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column。

(4) Spectrum Peak Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 1MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode	GSM 850 CH High	Test Date	Jul. 24, 2009
Fundamental Frequency	N/A	Test By	Jason
Temperature	25 ℃	Pol	Hor
Humidity	65 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	
1000.0	48.31	---	-7.74	40.57	---	74.00	54.00	-13.43	Peak
1318.5	38.96	---	-6.72	32.24	---	74.00	54.00	-21.76	Peak
1697.6	--								
1741.0	38.18	---	-4.71	33.47	---	74.00	54.00	-20.53	Peak
2546.4	--								
3395.2	36.13	---	1.72	37.85	---	74.00	54.00	-16.15	Peak
4244.0	--								
5092.8	--								
5941.6	--								
6790.4	--								
7639.2	--								
8488.0	--								

Remark：

(1) Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency。

(2) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column。

(4) Spectrum Peak Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 1MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (below 1GHz)

Operation Mode	PCS 1900 CH Low	Test Date	Jul. 24, 2009
Fundamental Frequency	N/A	Test By	Jason
Temperature	25 ℃	Pol	Ver./Hor
Humidity	65 %		

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Ant./CL/ Amp. CF(dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
31.94	V	Peak	52.59	-14.82	37.77	40.00	-2.23
41.64	V	Peak	48.04	-13.76	34.28	40.00	-5.72
138.64	V	Peak	45.38	-13.80	31.58	43.50	-11.92
303.54	V	Peak	43.42	-12.93	30.49	46.00	-15.51
405.39	V	Peak	38.53	-9.86	28.67	46.00	-17.33
497.54	V	Peak	41.98	-8.51	33.47	46.00	-12.53
664.38	V	Peak	38.09	-5.01	33.08	46.00	-12.92
997.09	V	Peak	38.20	-0.65	37.55	54.00	-16.45
38.73	H	Peak	45.99	-13.84	32.15	40.00	-7.85
72.68	H	Peak	46.44	-16.62	29.82	40.00	-10.18
109.54	H	Peak	47.61	-16.25	31.36	43.50	-12.14
213.33	H	Peak	46.29	-15.16	31.13	43.50	-12.37
405.39	H	Peak	41.26	-9.86	31.40	46.00	-14.60
497.54	H	Peak	44.36	-8.51	35.85	46.00	-10.15
664.38	H	Peak	41.87	-5.01	36.86	46.00	-9.14
997.09	H	Peak	43.85	-0.65	43.20	54.00	-10.80

Remark：

(1) Measuring frequencies from 30 MHz to the 1GHz。

(2) Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/AV detector mode.

(3) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(4) The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

Radiated Spurious Emission Measurement Result (below 1GHz)

Operation Mode	PCS 1900 CH Mid	Test Date	Jul. 24, 2009
Fundamental Frequency	N/A	Test By	Jason
Temperature	25 ℃	Pol	Ver./Hor
Humidity	65 %		

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Ant./CL/ Amp. CF(dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
31.94	V	Peak	50.60	-14.82	35.78	40.00	-4.22
90.14	V	Peak	48.97	-17.62	31.35	43.50	-12.15
133.79	V	Peak	45.38	-14.18	31.20	43.50	-12.30
305.48	V	Peak	42.66	-12.89	29.77	46.00	-16.23
410.24	V	Peak	36.64	-9.64	27.00	46.00	-19.00
497.54	V	Peak	39.84	-8.51	31.33	46.00	-14.67
664.38	V	Peak	38.05	-5.01	33.04	46.00	-12.96
997.09	V	Peak	38.78	-0.65	38.13	54.00	-15.87
39.70	H	Peak	44.84	-13.73	31.11	40.00	-8.89
72.68	H	Peak	46.52	-16.62	29.90	40.00	-10.10
109.54	H	Peak	47.13	-16.25	30.88	43.50	-12.62
211.39	H	Peak	46.16	-15.22	30.94	43.50	-12.56
400.54	H	Peak	41.32	-9.99	31.33	46.00	-14.67
497.54	H	Peak	43.79	-8.51	35.28	46.00	-10.72
664.38	H	Peak	40.44	-5.01	35.43	46.00	-10.57
997.09	H	Peak	43.94	-0.65	43.29	54.00	-10.71

Remark：

(1) Measuring frequencies from 30 MHz to the 1GHz。

(2) Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/AV detector mode.

(3) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(4) The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

Radiated Spurious Emission Measurement Result (below 1GHz)

Operation Mode	PCS 1900 CH High	Test Date	Jul. 24, 2009
Fundamental Frequency	N/A	Test By	Jason
Temperature	25 ℃	Pol	Ver./Hor
Humidity	65 %		

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Ant./CL/ Amp. CF(dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
31.94	V	Peak	52.82	-14.82	38.00	40.00	-2.00
90.14	V	Peak	49.28	-17.62	31.66	43.50	-11.84
138.64	V	Peak	44.71	-13.80	30.91	43.50	-12.59
266.68	V	Peak	42.13	-13.57	28.56	46.00	-17.44
305.48	V	Peak	42.70	-12.89	29.81	46.00	-16.19
497.54	V	Peak	40.71	-8.51	32.20	46.00	-13.80
664.38	V	Peak	36.46	-5.01	31.45	46.00	-14.55
997.09	V	Peak	38.46	-0.65	37.81	54.00	-16.19
38.73	H	Peak	45.97	-13.84	32.13	40.00	-7.87
72.68	H	Peak	46.03	-16.62	29.41	40.00	-10.59
109.54	H	Peak	47.11	-16.25	30.86	43.50	-12.64
211.39	H	Peak	44.97	-15.22	29.75	43.50	-13.75
439.34	H	Peak	40.37	-8.80	31.57	46.00	-14.43
497.54	H	Peak	43.01	-8.51	34.50	46.00	-11.50
664.38	H	Peak	40.74	-5.01	35.73	46.00	-10.27
997.09	H	Peak	44.16	-0.65	43.51	54.00	-10.49

Remark：

(1) Measuring frequencies from 30 MHz to the 1GHz。

(2) Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/AV detector mode.

(3) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(4) The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode	PCS 1900 CH Low	Test Date	Jul. 24, 2009
Fundamental Frequency	N/A	Test By	Jason
Temperature	25 ℃	Pol	Ver
Humidity	65 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	
1000.0	47.53	---	-7.74	39.79	---	74.00	54.00	-14.21	Peak
1330.0	41.67	---	-6.62	35.05	---	74.00	54.00	-18.95	Peak
2943.5	37.23	---	0.24	37.47	---	74.00	54.00	-16.53	Peak
3700.4	--								
5140.5	34.04	---	6.73	40.77	---	74.00	54.00	-13.23	Peak
5550.6	--								
7400.8	--								
9251.0	--								
11101.2	--								
12951.4	--								
14801.6	--								
16651.8	--								
18502.0	--								

Remark：

(1) Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency。

(2) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column。

(4) Spectrum Peak Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 1MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode	PCS 1900 CH Low	Test Date	Jul. 24, 2009
Fundamental Frequency	N/A	Test By	Jason
Temperature	25 ℃	Pol	Hor
Humidity	65 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	
1000.0	49.61	---	-7.74	41.87	---	74.00	54.00	-12.13	Peak
1338.0	40.74	---	-6.62	34.12	---	74.00	54.00	-19.88	Peak
3700.4	--								
4718.0	34.30	---	5.83	40.13	---	74.00	54.00	-13.87	Peak
5550.6	--								
7400.8	--								
9251.0	--								
11101.2	--								
12951.4	--								
14801.6	--								
16651.8	--								
18502.0	--								

Remark：

(1) Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency。

(2) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column。

(4) Spectrum Peak Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 1MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode	PCS 1900 CH Mid	Test Date	Jul. 24, 2009
Fundamental Frequency	N/A	Test By	Jason
Temperature	25 ℃	Pol	Ver
Humidity	65 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	
1000.0	43.44	---	-7.74	35.70	---	74.00	54.00	-18.30	Peak
1318.5	39.83	---	-6.72	33.11	---	74.00	54.00	-20.89	Peak
1936.0	37.31	---	-3.73	33.58	---	74.00	54.00	-20.42	Peak
3760.0	--								
3951.0	35.20	---	3.51	38.71	---	74.00	54.00	-15.29	Peak
5640.0	--								
7520.0	--								
9400.0	--								
11280.0	--								
13160.0	--								
15040.0	--								
16920.0	--								
18800.0	--								

Remark：

(1) Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency。

(2) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column。

(4) Spectrum Peak Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 1MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode	PCS 1900 CH Mid	Test Date	Jul. 24, 2009
Fundamental Frequency	N/A	Test By	Jason
Temperature	25 ℃	Pol	Hor
Humidity	65 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	
1000.0	49.03	---	-7.74	41.29	---	74.00	54.00	-12.71	Peak
3760.0	--								
5640.0	34.30	---	7.79	42.09	---	74.00	54.00	-11.91	Peak
7520.0	--								
9400.0	--								
11280.0	--								
13160.0	--								
15040.0	--								
16920.0	--								
18800.0	--								

Remark：

(1) Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency。

(2) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column。

(4) Spectrum Peak Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 1MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode	PCS 1900 CH High	Test Date	Jul. 24, 2009
Fundamental Frequency	N/A	Test By	Jason
Temperature	25 ℃	Pol	Ver
Humidity	65 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	
1000.0	45.79	---	-7.74	38.05	---	74.00	54.00	-15.95	Peak
1318.5	38.79	---	-6.72	32.07	---	74.00	54.00	-21.93	Peak
2976.0	36.06	---	0.32	36.38	---	74.00	54.00	-17.62	Peak
3819.6	--								
5729.4	--								
7639.2	--								
9549.0	--								
11458.8	--								
13368.6	--								
15278.4	--								
17188.2	--								
19098.0	--								

Remark：

(1) Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency。

(2) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column。

(4) Spectrum Peak Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 1MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode	PCS 1900 CH High	Test Date	Jul. 24, 2009
Fundamental Frequency	N/A	Test By	Jason
Temperature	25 ℃	Pol	Hor
Humidity	65 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)
1000.0	48.68	---	-7.74	40.94	---	74.00	54.00	-13.06
1318.5	39.08	---	-6.72	32.36	---	74.00	54.00	-21.64
2716.0	36.22	---	-0.26	35.96	---	74.00	54.00	-18.04
3819.6	--							
5729.4	--							
7639.2	--							
9549.0	--							
11458.8	--							
13368.6	--							
15278.4	--							
17188.2	--							
19098.0	--							

Remark：

(1) Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency。

(2) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column。

(4) Spectrum Peak Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 1MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 13GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.