

Report No.: EH/2009/70050 Issue Date: Jul. 30, 2009

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ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT

INTENTIONAL RADIATOR CERTIFICATION TO FCC PART 22 SUBPART H, PART 24 SUBPART E **CLASS II PC REPORT**

For

Product Name: Prescott

Trade Name: N/A

Model Name: HSTNN-Q44C

Model Difference: N/A

FCC ID: **J9CUNDP-1H**

Report No.: EH/2009/70050

Issue Date: Jul. 30, 2009

FCC Rule Part: 2, 22H & 24E

Prepared for: Qualcomm Incorporated

5775 Morehouse Dr,San Diego,CA 92121,U.S.A

Prepared by: SGS Taiwan Ltd.

Electronics & Communication Laboratory

No. 134, Wu Kung Rd., Wuku Industrial Zone,

Taipei County, Taiwan.

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CERTIFICATION OF COMPLIANCE

Applicant: Qualcomm Incorporated

5775 Morehouse Dr, San Diego, CA 92121, U.S.A

Product Name: Prescott

Brand Name: N/A

FCC ID: J9CUNDP-1H Model No.: HSTNN-Q44C

Model Difference: N/A

File Number: EH/2009/70050

Date of test: Jul. 28, 2009 ~ Jul. 30, 2009

Date of EUT Received: Jul. 28, 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 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.

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

Test By:	Lazz Huang	Date:	Jul. 30, 2009	
	Jazz Huang / Engineer			
Prepared By:	Eva Cono	Date:	Jul. 30, 2009	
	Eva Kao / Asst. Supervisor	_		
Approved By:	Timent Su	Date:	Jul. 30, 2009	
_	Vincent Su / Manager			

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Version

Version No.	Date	Description
00	Jul. 30, 2009	Initial creation of document

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GENERAL INFORMATION

1.1 **Product Description**

General:

Type Name:	Prescott
Brand Name:	N/A
Model Name:	HSTNN-Q44C
Model Difference:	N/A
Power Supply:	10.8 Vdc re-chargeable battery or 18.5Vdc by AC/DC power adapter, model: Series PPP009H

GSM / WCDMA / CDMA:

USMI WEDMA CDMA.					
	GPRS 850	824.2 - 848.8 MHz			
	EDGE 850	824.2 - 848.8 MHz			
	GPRS 1900	1850.2 – 1909.8 MHz			
Cellular Phone Standards	EDGE 1900	1850.2 – 1909.8 MHz			
Frequency Range	WCDMA/HSUPA/HSDPA Band II	1852.4 – 1907.5 MHz			
	WCDMA/HSUPA/HSDPA Band V	826.4 - 846.6 MHz			
	CDMA2000 Cellular	824.7 MHz – 848.31MHz			
	CDMA2000 PCS	1851.25 MHz – 1908.75MHz			
IMEI	352354024088945				
Hardware Version	P7				
Software Version	D4357				
WWAN module FCC ID	J9CUNDP-1H				
Class II Pemissive change	Adding an HP HSTNN-Q44C series laptop.				

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	22H: 824.2 - 848.8 MHz: 248KGXW
	22H: 824.2 - 848.8 MHz: 248KG7W
	22H: 826.4 - 846.6 MHz: 4M18F9W
Type of Emission	22H: 824.7 - 848.31 MHz: 1M28F9W
Type of Emission	24E: 1850.2 – 1909.8 MHz: 250KGXW
	24E: 1850.2 – 1909.8 MHz: 250KG7W
	24E: 1852.4 – 1907.5 MHz: 4M19F9W
	24E: 1851.25 – 1908.75 MHz: 1M28F9W
	22H: 824.2 - 848.8 MHz: 1.986W
	22H: 824.2 - 848.8 MHz: 0.607W
	22H: 826.4 - 846.6 MHz: 0.277W
Transmit power (Conducted Power) Listed	22H: 824.7 - 848.31 MHz: 0.31W
in Original Grant	24E: 1850.2 – 1909.8 MHz: 0.885W
	24E: 1850.2 – 1909.8 MHz: 0.48W
	24E: 1852.4 – 1907.5 MHz: 0.286W
	24E: 1851.25 – 1908.75 MHz: 0.289W

This test report applies for GPRS/EDGE 850, GPRS/EDGE 1900, WCDMA/HSUPA/HSDPA Band II, Band V bands, CDMA2000 Cellular and PCS bands.

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Related Submittal(s) / Grant (s) 1.2

This submittal(s) (test report) is intended for FCC ID: J9CUNDP-1H filing to comply with Section Part 22 subpart H, Part 24 subpart E of the FCC CFR 47 Rules.

1.3 **Test Methodology**

Both conducted and radiated testing were performed according to the procedures document on TIA/EIA-603-C-2004 and FCC CFR 47 2.1046, 2.1053.

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.

1.5 **Special Accessories**

Not available for this EUT intended for grant.

Equipment Modifications 1.6

Not available for this EUT intended for grant.

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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 Conducted Measurement at Antenna Port:

According to measurement procured TIA/EIA 603C, 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 connect the antenna port of EUT to measurement equipment.

2.3.2 Radiated Emissions (ERP/EIRP):

According to measurement procured TIA/EIA 603C, issue 2 of RSS-Gen and TIA/EIA IS-98 for Mobile stations. The EUT is placed on a turn table which is 0.8 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 relative positions of this hand-held transmitter (EUT) was rotated through three orthogonal 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.

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Configuration of Tested System

Fig. 1-1 Configuration for Radiated Emission

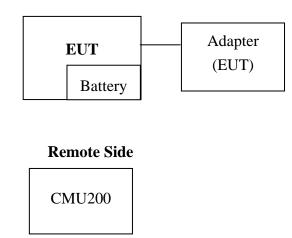


Table 2-1 Equipment Used in Tested System

It	tem	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

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SUMMARY OF TEST RESULTS

FCC Rules	Description Of Test	Result
§2.1046(a)		
§22.913(a)(2)	ERP/ EIRP measurement	Compliant
§24.232(c)		
§2.1053	Field Strength of Spurious Ra-	
§22.917(a)	diation	Compliant
§24.238(a)	(TX)	

DESCRIPTION OF TEST MODES

The EUT has been tested under operating condition.

Set EUT power control "all up bits" for all test mode through base station.

The Channel Low, Mid and High for each type of bands with rated data rate were chosen for full testing.

The field strength of ERP/EIRP power and spurious radiation emission were measured as EUT stand up position for both GPRS 850 and 1900 bands were reported which has worst data.

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ERP/EIRP MEASUREMENT

5.1 Standard Applicable

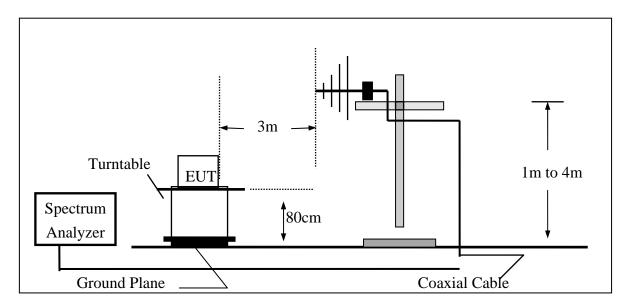
According to FCC §2.1046

FCC 22.913(a)(2) Mobile station are limited to 7W ERP.

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

5.2 Test SET-UP (Block Diagram of Configuration)

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



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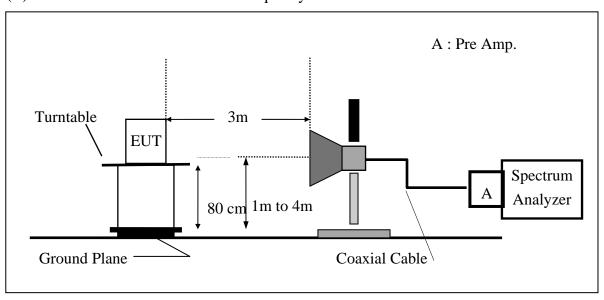


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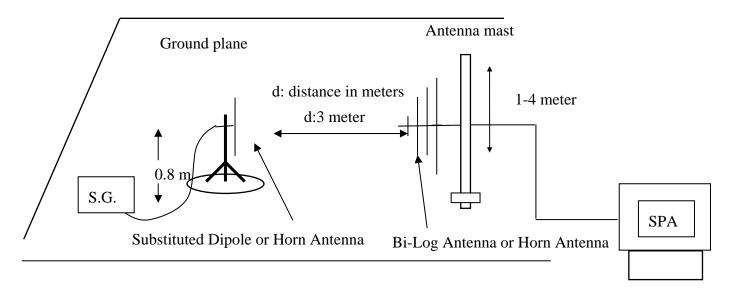
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(B) Radiated Emission Test Set-UP Frequency Over 1 GHz



(C) Substituted Method Test Set-UP



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5.3 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 –848.80.8MHz 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 a 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)

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5.4 Measurement Equipment Used:

ERP, EIRP MEASUREMENT EQUIPMENT List 966 Chamber								
EQUIPMENT	MFR	MODEL	SERIAL	LAST	CAL DUE.			
TYPE		NUMBER	NUMBER	CAL.				
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	06/11/2009	06/10/2010			
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			

5.5 Measurement Result

Refer to following pages for detail.

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Measurement Result:

EUT Mode	Frequency (MHz)	СН	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBi)	Cable Loss (dB)	ERP (dBm)	Limit (dBm)
	824.20	128	Н	V	125.21	38.82	-7.87	3.62	27.32	38.45
	824.20			Н	125.95	39.68	-7.87	3.62	28.18	38.45
GPRS 850	836.60	190	Н	V	127.10	40.85	-7.88	3.65	29.32	38.45
GPRS 630				Н	127.82	41.59	-7.88	3.65	30.06	38.45
	949 90	251	Н	V	128.29	42.17	-7.88	3.68	30.61	38.45
	848.80			Н	129.28	43.09	-7.88	3.68	31.53	38.45

Remark:

(1) The RBW, VBW of SPA for frequency RBW=300 KHz, VBW=1MHz

EUT Mode	Frequency (MHz)	СН	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBi)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)
	1850.20	512	Н	V	125.61	21.22	9.90	5.56	25.56	33.00
		312	п	Н	124.13	19.95	9.90	5.56	24.29	33.00
CDDS 1000	1880.00	661	Н	V	124.68	20.32	9.99	5.61	24.70	33.00
GPRS 1900				Н	125.01	20.87	9.99	5.61	25.24	33.00
	1909.80	810	Н	V	121.58	17.25	10.08	5.66	21.67	33.00
				Н	122.91	18.80	10.08	5.66	23.22	33.00

Remark:

(1) The RBW, VBW of SPA for frequency

RBW=1MHz, VBW=1MHz

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FIELD STRENGTH OF SPURIOUS RADIATION MEASUREMENT(TX)

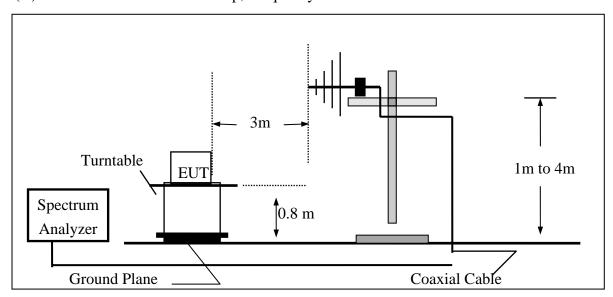
6.1 Standard Applicable

According to FCC §2.1053,

FCC §22.917(a),§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)

6.2 **EUT Setup (Block Diagram of Configuration)**

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



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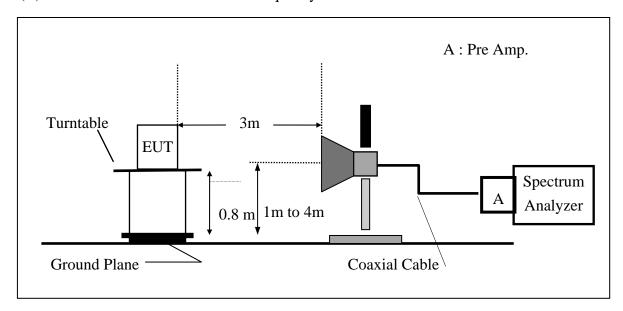


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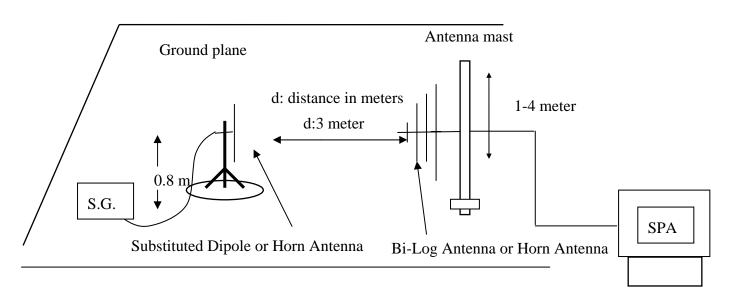
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(B) Radiated Emission Test Set-UP Frequency Over 1 GHz



(C) Substituted Method Test Set-UP



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6.3 Measurement Procedure

The EUT was placed on a non-conductive, The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and the EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. This maximization process was repeated with the EUT positioned in each of its three orthogonal orientations.

The frequency range up to tenth harmonic was investigated for each of three fundamental frequency (low, middle and high channels). Once spurious emission were identified, the power of the emission was determined using the substitution method.

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 a horn antenna connected, the S.G. output was recorded and EIRP was calculated as follows:

The spurious emissions attenuation was calculated as the difference between radiated power at the fundamental frequency and the spurious emissions frequency.

ERP = S.G. output (dBm) + Antenna Gain(dBd) - Cable Loss <math>(dB)

EIRP = S.G. output (dBm) + Antenna Gain(dBi) - Cable Loss <math>(dB)

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Measurement Equipment Used:

EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Spectrum Analyzer	Agilent	E4446A	MY43360126	04/19/2008	04/18/2010
Bilo 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	05/09/2008	05/10/2010
Horn antenna	SCHWAZBECK	BBHA 9120D	9120D-320	03/14/2009	03/13/2010
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	05/13/2010
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
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
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**

Refer to attach tabular data sheets.

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Radiated Spurious Emission Measurement Result: GPRS 850 Mode

Operation Mode : TX CH Low Mode Test Date: Jul. 28, 2009

Fundamental Frequency : 824.20 MHz Test By: Jazz Temperature : 25° C Pol: Ver

Humidity : 65%

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Output (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP/ EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
67.83	46.33	V	-65.36	-0.95	1.14	-67.45	-13.00	-54.45
599.39	39.73	V	-49.88	-7.79	3.03	-60.69	-13.00	-47.69
824.00	78.44	V	-7.95	-7.87	3.62	-19.45	-13.00	-6.45
1648.40		V		9.29	5.23		-13.00	
2472.60	50.21	V	-50.80	10.08	6.53	-47.25	-13.00	-34.25
3296.80		V		12.17	7.71		-13.00	
4121.00		V		12.61	8.86		-13.00	
4945.20		V		12.65	9.74		-13.00	
5769.40		V		13.55	10.54		-13.00	
6593.60		V		12.05	11.30		-13.00	
7417.80		V		11.49	12.10		-13.00	
8242.00		V		11.48	12.71		-13.00	

	30MHz - 80MHz: 5.04dB
Measurement uncertainty	80MHz -1000MHz: 3.76dB
	1GHz - 40GHz: 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)

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Radiated Spurious Emission Measurement Result: GPRS 850 Mode

Operation Mode : TX CH Low Mode Test Date: Jul. 28, 2009

Fundamental Frequency : 824.20 MHz Test By: Jazz Temperature : 25° C Pol: Hor

Humidity : 65%

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Output (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP/ EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
70.74	43.78	Н	-68.53	-1.18	1.16	-70.87	-13.00	-57.87
313.24	37.98	Н	-59.56	-7.85	2.22	-69.62	-13.00	-56.62
434.49	36.35	Н	-58.33	-7.69	2.61	-68.63	-13.00	-55.63
824.00	78.16	Н	-8.11	-7.87	3.62	-19.61	-13.00	-6.61
1648.40		Н		9.29	5.23		-13.00	
2472.60	48.35	Н	-52.56	10.08	6.53	-49.01	-13.00	-36.01
3296.80		Н		12.17	7.71		-13.00	
4121.00		Н		12.61	8.86		-13.00	
4945.20		Н		12.65	9.74		-13.00	
5769.40		Н		13.55	10.54		-13.00	
6593.60		Н		12.05	11.30		-13.00	
7417.80		Н		11.49	12.10		-13.00	
8242.00		Н		11.48	12.71		-13.00	

	30MHz - 80MHz: 5.04dB
Measurement uncertainty	80MHz -1000MHz: 3.76dB
	1GHz - 40GHz: 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)

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Radiated Spurious Emission Measurement Result: GPRS 850 Mode

: TX CH Mid Mode Jul. 28, 2009 Test Date:

Fundamental Frequency: 836.60 MHz Test By: Jazz Temperature Pol: Ver : 25°C

Humidity : 65%

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Output (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP/ EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
67.83	47.03	V	-64.66	-0.95	1.14	-66.75	-13.00	-53.75
412.18	38.74	V	-56.38	-7.67	2.55	-66.59	-13.00	-53.59
533.43	35.72	V	-57.32	-7.75	2.91	-67.97	-13.00	-54.97
1673.20	43.64	V	-60.92	9.36	5.27	-56.82	-13.00	-43.82
2509.80	52.42	V	-48.36	10.09	6.58	-44.86	-13.00	-31.86
3346.40		V		12.28	7.79		-13.00	
4183.00		V		12.62	8.93		-13.00	
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	

	30MHz - 80MHz: 5.04dB
Measurement uncertainty	80MHz -1000MHz: 3.76dB
	1GHz - 40GHz: 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)

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Radiated Spurious Emission Measurement Result: GPRS 850 Mode

Operation Mode : TX CH Mid Mode Test Date: Jul. 28, 2009

Fundamental Frequency : 836.60 MHz Test By: Jazz Temperature : 25° C Pol: Hor

Humidity : 65%

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Output (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP/ EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
72.68	44.98	Н	-67.35	-1.45	1.18	-69.97	-13.00	-56.97
96.93	43.91	Н	-59.32	-7.76	1.33	-68.41	-13.00	-55.41
434.49	36.27	Н	-58.41	-7.69	2.61	-68.71	-13.00	-55.71
1673.20	41.68	Н	-62.70	9.36	5.27	-58.60	-13.00	-45.60
2509.80	51.55	Н	-49.15	10.09	6.58	-45.65	-13.00	-32.65
3346.40		Н		12.28	7.79		-13.00	
4183.00		Н		12.62	8.93		-13.00	
5019.60		Н		12.67	9.81		-13.00	
5856.20		Н		13.68	10.62		-13.00	
6692.80		Н		11.95	11.39		-13.00	
7529.40		Н		11.45	12.20		-13.00	
8366.00		Н		11.59	12.81		-13.00	

	30MHz - 80MHz: 5.04dB
Measurement uncertainty	80MHz -1000MHz: 3.76dB
	1GHz - 40GHz: 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)

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Radiated Spurious Emission Measurement Result: GPRS 850 Mode

Operation Mode : TX CH High Mode Test Date: Jul. 28, 2009

Fundamental Frequency : $848.80 \, \text{MHz}$ Test By: Jazz Temperature : 25°C Pol: Ver

Humidity : 65%

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Output (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP/ EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
65.89	45.64	V	-65.95	-0.83	1.12	-67.90	-13.00	-54.90
368.53	39.13	V	-57.71	-7.65	2.42	-67.77	-13.00	-54.77
412.18	39.09	V	-56.03	-7.67	2.55	-66.24	-13.00	-53.24
849.00	81.81	V	-4.31	-7.88	3.68	-15.87	-13.00	-2.87
1697.60	42.55	V	-61.99	9.44	5.31	-57.86	-13.00	-44.86
2546.40	45.65	V	-54.99	10.20	6.63	-51.43	-13.00	-38.43
3395.20		V		12.38	7.87		-13.00	
4244.00		V		12.63	9.00		-13.00	
5092.80		V		12.74	9.88		-13.00	
5941.60		V		13.81	10.70		-13.00	
6790.40		V		11.86	11.48		-13.00	
7639.20		V		11.40	12.27		-13.00	
8488.00		V		11.70	12.91		-13.00	

	30MHz - 80MHz: 5.04dB
Measurement uncertainty	80MHz -1000MHz: 3.76dB
	1GHz - 40GHz: 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)

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Radiated Spurious Emission Measurement Result: GPRS 850 Mode

Operation Mode : TX CH High Mode Test Date: Jul. 28, 2009

Fundamental Frequency : $848.80 \, \text{MHz}$ Test By: Jazz Temperature : 25°C Pol: Hor

Humidity : 65%

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Output (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP/ EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
72.68	43.76	Н	-68.57	-1.45	1.18	-71.19	-13.00	-58.19
434.49	36.74	Н	-57.94	-7.69	2.61	-68.24	-13.00	-55.24
849.00	79.64	Н	-6.55	-7.88	3.68	-18.11	-13.00	-5.11
1697.60		Н		9.44	5.31		-13.00	
2546.40	49.45	Н	-51.15	10.20	6.63	-47.59	-13.00	-34.59
3395.20		Н		12.38	7.87		-13.00	
4244.00		Н		12.63	9.00		-13.00	
5092.80		Н		12.74	9.88		-13.00	
5941.60		Н		13.81	10.70		-13.00	
6790.40		Н		11.86	11.48		-13.00	
7639.20		Н		11.40	12.27		-13.00	
8488.00		Н		11.70	12.91		-13.00	

	30MHz - 80MHz: 5.04dB
Measurement uncertainty	80MHz -1000MHz: 3.76dB
	1GHz - 40GHz: 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)

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Radiated Spurious Emission Measurement Result: GPRS 1900 Mode

Operation Mode : TX CH Low Mode Test Date: Jul. 28, 2009

Fundamental Frequency : 1850.20 MHz Test By: Jazz Temperature : 25°C Pol: Ver

Humidity : 65%

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Output (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP/ EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
67.83	46.02	V	-65.67	-0.95	1.14	-67.76	-13.00	-54.76
412.09	40.25	V	-54.87	-7.67	2.55	-65.09	-13.00	-52.09
1850.00	77.45	V	-26.94	9.90	5.56	-22.60	-13.00	-9.60
3700.40	45.17	V	-52.76	12.61	8.31	-48.46	-13.00	-35.46
5550.60	58.56	V	-32.28	13.23	10.33	-29.38	-13.00	-16.38
7400.80		V		11.50	12.08		-13.00	
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	

	30MHz - 80MHz: 5.04dB
Measurement uncertainty	80MHz -1000MHz: 3.76dB
	1GHz - 40GHz: 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)

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Radiated Spurious Emission Measurement Result: GPRS 1900 Mode

Operation Mode : TX CH Low Mode Test Date: Jul. 28, 2009

Fundamental Frequency: 1850.20MHz Test By: Jazz Temperature Pol: Hor : 25°C

Humidity : 65%

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Output (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP/ EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
72.68	44.33	Н	-68.00	-1.45	1.18	-70.62	-13.00	-57.62
366.59	45.19	Н	-51.75	-7.65	2.41	-61.81	-13.00	-48.81
434.49	36.61	Н	-58.07	-7.69	2.61	-68.37	-13.00	-55.37
1850.00	76.37	Н	-27.81	9.90	5.56	-23.47	-13.00	-10.47
3569.00	43.93	Н	-54.71	12.61	8.13	-50.22	-13.00	-37.22
3700.40	61.60	Н	-36.44	12.61	8.31	-32.14	-13.00	-19.14
5550.60		Н		13.23	10.33		-13.00	
7400.80		Н		11.50	12.08		-13.00	
9251.00		Н		11.92	13.50		-13.00	
11101.20		Н		11.66	15.11		-13.00	
12951.40		Н		13.63	16.60		-13.00	
14801.60		Н		12.76	17.95		-13.00	
16651.80		Н		15.92	19.14		-13.00	
18502.00		Н		18.75	10.40		-13.00	

	30MHz - 80MHz: 5.04dB				
Measurement uncertainty	80MHz -1000MHz: 3.76dB				
	1GHz - 40GHz: 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)

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Radiated Spurious Emission Measurement Result: GPRS 1900 Mode

Operation Mode : TX CH Mid Mode Test Date: Jul. 28, 2009

Fundamental Frequency : 1880 MHz Test By: Jazz Temperature : 25°C 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)
67.83	45.00	V	-66.69	-0.95	1.14	-68.78	-13.00	-55.78
412.09	39.47	V	-55.65	-7.67	2.55	-65.87	-13.00	-52.87
696.39	35.75	V	-53.65	-7.86	3.28	-64.79	-13.00	-51.79
3760.00	41.65	V	-56.01	12.60	8.39	-51.79	-13.00	-38.79
5640.00	52.75	V	-37.83	13.36	10.41	-34.88	-13.00	-21.88
7520.00		V		11.45	12.19		-13.00	
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	

	30MHz - 80MHz: 5.04dB
Measurement uncertainty	80MHz -1000MHz: 3.76dB
	1GHz - 40GHz: 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)

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Radiated Spurious Emission Measurement Result: GPRS 1900 Mode

Operation Mode : TX CH Mid Mode Test Date: Jul. 28, 2009

Fundamental Frequency : 1880 MHz Test By: Jazz Temperature : 25°C Pol: Hor

Humidity : 65%

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Output (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP/ EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
90.14	44.71	Н	-59.02	-7.75	1.27	-68.04	-13.00	-55.04
434.49	35.89	Н	-58.79	-7.69	2.61	-69.09	-13.00	-56.09
701.24	35.06	Н	-52.80	-7.86	3.29	-63.96	-13.00	-50.96
3760.00	41.22	Н	-56.55	12.60	8.39	-52.34	-13.00	-39.34
5640.00	54.42	Н	-36.33	13.36	10.41	-33.38	-13.00	-20.38
7520.00		Н		11.45	12.19		-13.00	
9400.00		Н		11.93	13.61		-13.00	
11280.00		Н		11.92	15.27		-13.00	
13160.00		Н		13.33	16.71		-13.00	
15040.00		Н		13.76	18.15		-13.00	
16920.00		Н		15.27	19.32		-13.00	
18800.00		Н		18.68	16.58		-13.00	

	30MHz - 80MHz: 5.04dB
Measurement uncertainty	80MHz -1000MHz: 3.76dB
	1GHz - 40GHz: 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)

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Issue Date: Jul. 30, 2009

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Radiated Spurious Emission Measurement Result: GPRS 1900 Mode

Operation Mode : TX CH High Mode Test Date: Jul. 28, 2009

Fundamental Frequency : 1909.8 MHz Test By: Jazz Temperature : 25° C Pol: Ver

Humidity : 65%

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Output (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP/ EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
67.83	46.31	V	-65.38	-0.95	1.14	-67.47	-13.00	-54.47
412.09	40.72	V	-54.40	-7.67	2.55	-64.62	-13.00	-51.62
1910.00	74.40	V	-29.93	10.08	5.66	-25.51	-13.00	-12.51
3819.60	39.27	V	-58.12	12.60	8.47	-53.99	-13.00	-40.99
5729.40	53.19	V	-37.13	13.49	10.50	-34.13	-13.00	-21.13
7639.20		V		11.40	12.27		-13.00	
9549.00		V		11.95	13.74		-13.00	
11458.80		V		12.17	15.43		-13.00	
13368.60		V		12.97	16.82		-13.00	
15278.40		V		15.00	18.29		-13.00	
17188.20		V		14.47	19.52		-13.00	
19098.00		V		18.66	20.78		-13.00	

	30MHz - 80MHz: 5.04dB
Measurement uncertainty	80MHz -1000MHz: 3.76dB
	1GHz - 40GHz: 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
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- 4 ERP/EIRP (dBm) = SG Setting(dBm) + Antenna Gain (dB/dBi) Cable loss (dB)

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Radiated Spurious Emission Measurement Result: GPRS 1900 Mode

Operation Mode : TX CH High Mode Test Date: Jul. 28, 2009

Fundamental Frequency: 1909.8 MHz Test By: Jazz Temperature Pol: Hor : 25℃

Humidity : 65%

Freq. (MHz)	SPA. Reading (dBuV)	Ant.Pol. H/V	S.G Output (dBm)	Antenna Gain (dB/dBi)	Cable Loss (dB)	ERP/ EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
72.68	43.91	Н	-68.42	-1.45	1.18	-71.04	-13.00	-58.04
90.14	44.43	Н	-59.30	-7.75	1.27	-68.32	-13.00	-55.32
434.49	37.11	Н	-57.57	-7.69	2.61	-67.87	-13.00	-54.87
1910.00	74.86	Н	-29.25	10.08	5.66	-24.83	-13.00	-11.83
3819.60	40.50	Н	-57.01	12.60	8.47	-52.87	-13.00	-39.87
5729.40	58.07	Н	-32.38	13.49	10.50	-29.39	-13.00	-16.39
7639.20		Н		11.40	12.27		-13.00	
9549.00		Н		11.95	13.74		-13.00	
11458.80		Н		12.17	15.43		-13.00	
13368.60		Н		12.97	16.82		-13.00	
15278.40		Н		15.00	18.29		-13.00	
17188.20		Н		14.47	19.52		-13.00	
19098.00		Н		18.66	20.78		-13.00	

	30MHz - 80MHz: 5.04dB
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