

# ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT

## INTENTIONAL RADIATOR CERTIFICATION TO FCC PART 22 SUBPART H, PART 24 SUBPART E

OF

**Product Name:** Digital Book Reader

**Brand Name:** N/A

**FCC ID:** AK8PRS950

**Report No.:** EH/2010/70021

**Model No:** PRS-950

**Model Difference:** N/A

**Issue Date:** Jul. 30, 2010

**FCC Rule Part:** 2, 22H & 24E

**Prepared for:** Sony Corporation  
1-7-1 Konan, Minato-ku,  
Tokyo, 108-0075 Japan

**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:** Sony Corporation  
 1-7-1 Konan, Minato-ku,  
 Tokyo, 108-0075 Japan

**Equipment Under Test:** Digital Book Reader

**Brand Name:** N/A

**Model No:** PRS-950

**Model Difference:** N/A

**FCC ID:** AK8PRS950

**File Number:** EH/2010/70021

**Date of test:** Jul. 12, 2010~ Jul 25, 2010

**Date of EUT Received:** Jul. 12, 2010

**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:** Jason Wu **Date:** July 30, 2010

*Jason Wu / Asst. Supervisor*

**Prepared By:** Mark Chung **Date:** July 30, 2010

*Mark Chung / Project Engineer*

**Approved By:** Arno Hsieh **Date:** July 30, 2010

*Arno Hsieh / Asst. Supervisor*

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## Version

Version No.	Date	Description
00	July 30, 2010	Initial creation of document

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## 1. GENERAL INFORMATION

### 1.1 Product Description

**General:**

Product Name:	DIGITAL BOOK READER	
FCC ID:	AK8PRS950	
Model Name:	PRS-950	
Model Difference:	N/A	
Hardware Version:	ET2	
Software Version:	1.0.00.08210A	
FRN:	0003739166	
Power Supply:	3.7 Vdc re-chargeable battery or 5Vdc by AC/DC power adapter	
	Battery:	Model: LIS1460HEPC(SY6) Supplier: Sony Energy Device Corp
	Adapter:	Model: PRSA-AC1, Supplier: Sony Energy Devices Corp

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**GSM and WCDMA:**

Original Modular Report:	Test Report no: 80-VN379-203 Rev. A		
	Qualcomm Incorporated.		
Cellular Phone Standards Frequency Range:	GSM / GPRS 850, Class 10	824.2 MHz– 848.8 MHz	33 dBm
	EDGE 850, Class 10	824.2 MHz– 848.8 MHz	27 dBm
	GSM / GPRS 1900, Class 10	1850.2MHz – 1909.8MHz	30 dBm
	EDGE 1900, Class 10	1850.2MHz – 1909.8MHz	26 dBm
	WCDMA/HSUPA/HSDPA Band II	1852.4MHz – 1907.6MHz	24 dBm
	WCDMA/HSUPA/HSDPA Band V	826.4MHz - 846.6MHz	24 dBm
IMEI:	353598040001386		
Hardware Version:	P3 Rev C		
Software Version:	3600		
Type of Emission:	22H(GMSK): 824.2 - 848.8 MHz: 248KGXW 24E(GMSK): 1850.2 – 1909.8 MHz: 250KGXW 22H(8PSK): 824.2 - 848.8 MHz: 248KG7W 24E(8PSK): 1850.2 – 1909.8 MHz: 245KG7W 22H(WCDMA): 826.4 - 846.6 MHz: 4M18F9W 24E(WCDMA): 1852.4 – 1907.5 MHz: 4M19F9W		
Transmit power (Conducted Power):	22H(GMSK): 824.2 - 848.8 MHz: 31.69dBm / 1.48W 24E(GMSK): 1850.2 – 1909.8 MHz: 29.21dBm / 0.91W 22H(8PSK): 824.2 - 848.8 MHz: 27.54 dBm / 0.57 W 24E(8PSK): 1850.2 – 1909.8 MHz: 26.16dBm / 0.41W 22H(WCDMA): 826.4 - 846.6 MHz: 23.94dBm / 0.25W 24E(WCDMA): 1852.4 – 1907.5 MHz: 23.71dBm / 0.23W		

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<p>Antenna Designation:</p>	<p>Antenna Type : PIFA Antenna gain : 1.96dBi</p>
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**Final Amplifier Voltage and Current Information:**

Test Mode	DC voltage (V)	DC current (mA)
GPRS 850	3.7Vdc	440
GPRS 1900	3.7Vdc	350
GPRS EDGE 850	3.7Vdc	360
GPRS EDGE 1900	3.7Vdc	320
WCDMA Band 2	3.7Vdc	930
HSDDA Band 2	3.7Vdc	890
WCDMA Band 5	3.7Vdc	815
HSDPA Band 5	3.7Vdc	790

**WLAN: 802.11 b/g (1TX / 1RX)**

Wi-Fi	Frequency Range (MHz)	Channels	Max Power	Modulation Technology	Type of Emission
11b/g	2412-2462	11	b : 14.93dBm g : 20.43dBm	DSSS, OFDM	b : 15M7G1D g : 16M5G1D
Antenna Designation:			Antenna Type : PIFA Antenna gain : 4.14dBi, Manufacturer: Hitachi Cable Fine Tech		
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		

The EUT is compliance with IEEE 802.11 b/g.

This test report applies for GPRS 850/1900, and WCDMA BII/BV.

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## 1.2 Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended for **FCC ID: AK8PRS950** 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 of FCC 47 CFR 2.1046, 2.1047, 2.1049, 2.1051, 2.1053, 2.1055, 2.1057.

## 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-4

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.

## 1.6 Equipment Modifications

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 FCC ID: AK8PRS950 was Tested With AC Adapter. The EUT was stayed in normal operation mode with CMU200. 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. 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 was measured above.

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## 2.4 Measurement Equipment Used:

Conducted Emission Test Site					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Spectrum Analyzer	Agilent	E4446A	MY43360126	04/19/2010	04/18/2012
Spectrum Analyzer	Agilent	E4440A	US41160416	01/25/2010	01/24/2011
Radio Communication Analyzer	R&S	CMU200	111787	10/31/2008	10/30/2010
800 – 1000MHz Filter	Micro-Tronics	BRM13462	001	01/05/2010	01/04/2011
1800 – 2000MHz Filter	Micro-Tronics	BRM13463	001	01/05/2010	01/04/2011
Temperature Chamber	TERCHY	MHG-120LF	911009	04/30/2010	04/29/2012
Temperature Chamber	GIANT FORCE	GTH-150-40-CP-AR	MAA0512-018	02/24/2010	02/23/2012
DC Block	Agilent	BLK-18	155452	07/05/2010	07/04/2011
Attenuator	Mini-Circuit	BW-S20W5	N/A	07/05/2010	07/04/2011
Attenuator	Mini-Circuit	BW-S10W5	N/A	07/05/2010	07/04/2011
Attenuator	Mini-Circuit	BW-S6W5	N/A	07/05/2010	07/04/2011
Splitter	Agilent	11636B	N/A	07/05/2010	07/04/2011
DC Power Supply	Chroma	41901	777188	04/15/2010	04/14/2012

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ERP, EIRP MEASUREMENT EQUIPMENT List 966 Chamber					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Spectrum Analyzer	R&S	FSP 40	100034	02/12/2010	02/11/2011
Bilog Antenna	SCHWAZBECK	VULB9160	3136	11/19/2009	11/18/2010
Dipole Antenna	SCHWAZBECK	VHAP	908/909	07/17/2010	07/16/2012
Dipole Antenna	SCHWAZBECK	UHAP	891/892	07/17/2010	07/16/2012
Horn antenna	SCHWAZBECK	BBHA 9120D	309/320	03/09/2009	03/08/2011
Signal Generator	R&S	SMR40	100210	02/10/2010	02/09/2012
Signal Generator	Agilent	E4438C	MY45093613	06/11/2010	06/10/2012
Pre-Amplifier	Agilent	8447D	1937A02834	11/28/2009	11/27/2010
Pre-Amplifier	Agilent	8449B	3008A01973	01/05/2010	01/04/2011
Attenuator	Mini-Circuit	BW-S20W5	001	07/05/2010	07/04/2011
Attenuator	Mini-Circuit	BW-S10W5	001	07/05/2010	07/04/2011
Attenuator	Mini-Circuit	BW-S6W5	001	07/05/2010	07/04/2011
Radio Communication Analyzer	R&S	CMU200	111787	10/31/2008	10/30/2010
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	01/05/2010	01/04/2011
Low Loss Cable	HUBER+SUHNER	SUCOFLEX 104PEA-3M	3m	01/05/2010	01/04/2011
Filter 800-1000	Micro-Tronics	BRM13462	1	01/05/2010	01/04/2011
Filter 1800-2000	Micro-Tronics	BRM13463	1	01/05/2010	01/04/2011
3m Site	SGS	966 chamber	N/A	11/08/2009	11/09/2010

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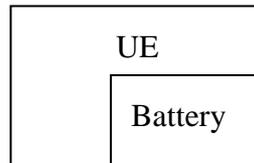
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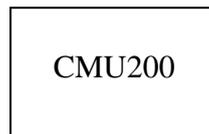
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## 2.5 Configuration of Tested System

**Fig. 2-1 Configuration of Tested System**



**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	shielded	Un-shielded

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### 3. SUMMARY OF TEST RESULTS

FCC Rules	Description Of Test	Result
§2.1046(a) §22.913(a)(2) §24.232(c)	RF Power Output	Compliant
§2.1046(a) §22.913(a)(2) §24.232(c)	ERP/ EIRP measurement	Compliant
§2.1049(h)	99% Occupied Bandwidth	Reference to Original Modular Report: <i>Qualcomm Incorporated. 80-VN379-203 Rev. A</i>
§2.1051 §22.917(a) §24.238(a)	Out of Band Emissions at Antenna Terminals and Band Edge	Reference to Original Modular Report: <i>Qualcomm Incorporated. 80-VN379-203 Rev. A</i>
§2.1053 §22.917(a) §24.238(a)	Field Strength of Spurious Radiation	Compliant
§2.1055(a)(1) §22.355 §24.235	Frequency Stability vs. Temperature	Reference to Original Modular Report: <i>Qualcomm Incorporated. 80-VN379-203 Rev. A</i>
§2.1055(d)(2) §22.355 §24.235	Frequency Stability vs. Voltage	Reference to Original Modular Report: <i>Qualcomm Incorporated. 80-VN379-203 Rev. A</i>

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#### 4. 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.

Channel Low, Mid and High for each type of bands 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) and lie down position (E1, E2 mode) for GPRS850/1900 and WCDMA B2/B5. The worst-case E1 mode of GPRS850 and WCDMA BII while E2 mode is reported as worst case for GPRS1900 WCDMA BV for channels Low, Mid and High were reported.

Max ERP/EIRP measurement result:

	dBm		W
GPRS 850 Band	29.60	ERP	0.912
GPRS 1900 Band	29.04	EIRP	0.802
EDGE 850 Band	29.00	ERP	0.794
EDGE 1900 Band	28.96	EIRP	0.787
WCDMA Band II	28.06	EIRP	0.640
WCDMA Band V	26.41	ERP	0.438
HSUPA II	27.60	EIRP	0.575
HSUPA V	26.23	ERP	0.420

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## 5. RF POWER OUTPUT MEASUREMENT

### 5.1 Standard Applicable

According to FCC §2.1046.

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

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

3GPP Power limitation for HSDPA and HSUPA.

#### Maximum Output Powers for HSDPA

Sub-test in table C.10.1.4	Power Class 3		Power Class 4	
	Power (dBm)	Tol (dB)	Power (dBm)	Tol (dB)
1	+24	+1.7/-3.7	+21	+2.7/-2.7
2	+24	+1.7/-3.7	+21	+2.7/-2.7
3	+23.5	+2.2/-3.7	+20.5	+3.2/-2.7
4	+23.5	+2.2/-3.7	+20.5	+3.2/-2.7

#### Maximum Output Powers for HSUPA

Sub-test in table C.11.1.3	Power Class 3		Power Class 4	
	Power (dBm)	Tol (dB)	Power (dBm)	Tol (dB)
1	+24	+1.7/-6.7	+21	+2.7/-5.7
2	+22	+3.7/-5.2	+19	+4.7/-4.2
3	+23	+2.7/-5.2	+20	+3.7/-4.2
4	+22	+3.7/-5.2	+19	+4.7/-4.2
5	+24	+1.7/-6.7	+21	+2.7/-5.7

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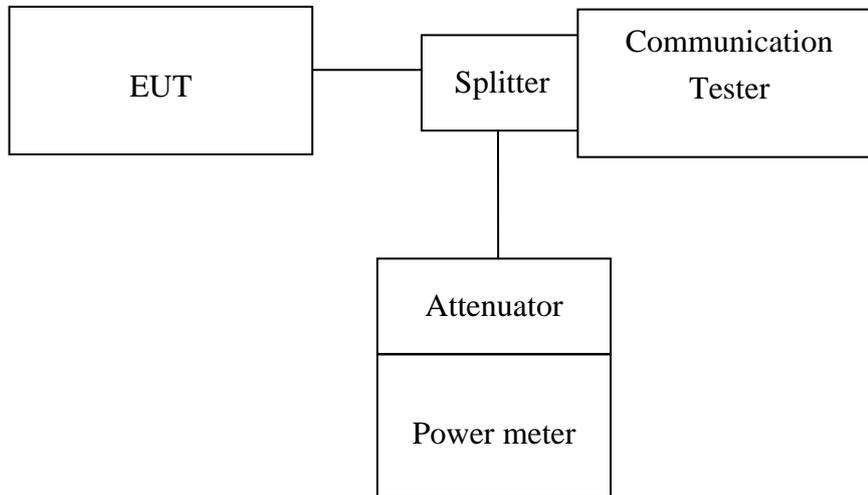
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## 5.2 Test Set-up:



*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. The Procedure of KDB941225 KDB941125 (SAR Measurement Procedures for 3G devices, WCDMA/HSDPA) was used for EUT and Base station setting. RMC 12.2kps is used for this testing

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#### 5.4 Measurement Equipment Used:

Conducted Emission Test Site					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Radio Communication Analyzer	R&S	MT8815B	6200711454	11/25/2008	11/24/2010
Radio Communication Analyzer	R&S	CMU200	102189	05/13/2010	05/12/2012
Attenuator	Mini-Circuit	BW-S20W5	N/A	07/05/2010	07/04/2011
DC Block	Agilent	BLK-18	155452	07/05/2010	07/04/2011
Splitter	Agilent	11636B	N/A	07/05/2010	07/04/2011
Power Sensor	Anritsu	MA2411B	917032	01/21/2010	01/20/2012
Power Meter	Anritsu	ML2495A	1005007	02/17/2010	02/16/2012

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## 5.5 Measurement Result

### GPRS/EDGE (GMSK; 8-PSK)

Frequency (MHz)	CH	CLASS 8	
		GMSK Mode	8-PSK Mode
		AV Power (dBm)	AV Power (dBm)
824.2	128	31.69	27.54
836.6	190	31.58	27.46
848.8	251	31.28	27.24
1850.2	512	29.21	26.16
1880.0	661	29.04	26.04
1909.8	810	28.86	25.96

\* Offset = 824.2~848.8MHz (0.26dB) ; 1860.2~1909.8 MHz (0.41dB)

Frequency (MHz)	CH	CLASS 10	
		GMSK Mode	8-PSK Mode
		AV Power (dBm)	AV Power (dBm)
824.2	128	31.56	27.48
836.6	190	31.46	27.42
848.8	251	31.20	27.19
1850.2	512	29.16	26.08
1880.0	661	29.00	25.98
1909.8	810	28.82	25.94

\* Offset = 824.2~848.8MHz (0.26dB) ; 1860.2~1909.8 MHz (0.41dB)

#### 5.5.1.2.: WCDMA mode

The following tests were completed according to the test requirements outlined in section 5.2 of the 3GPP TS34.121-1 V8.4.0 specification. The EUT supports power Class 3, which has a nominal maximum output power of 24 dBm (+1.7/-3.7). RMC 12.2kps is used for this testing.

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**Results:**

EUT Mode	Frequency (MHz)	CH	Avg. Power (dBm)
WCDMA Band II	1852.4	9262	23.67
	1880.0	9400	23.71
	1907.6	9538	23.36

● *Offset = 0.26dB*

EUT Mode	Frequency (MHz)	CH	Avg. Power (dBm)
WCDMA Band V	826.4	4132	23.94
	836.6	4183	24.09
	846.6	4233	23.84

● *Offset = 0.41dB*

Note: The results above reflect max power with all up bits.

**HSDPA mode**

The following 4 Sub-Tests were completed according to the test requirements outlined in section 5.2A of the 3GPP TS34.121-1 V8.4.0 specification. All TX RMS power requirements for Power Class 3 were met according to table 5.2AA.5 and 5.2B.5 All UE channels and power ratio's are set according to table C10.1.4 & C11.1.3 in the 3GPP TS34.121-1 V8.4.0. RMC 12.2kps is used for this testing

**HSDPA SUB-TEST Setting**

**Table C.10.1.4:  $\beta$  values for transmitter characteristics tests with HS-DPCCH(FOR HSDPA)**

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**Result:**

**Band V**

Mode	Sub-test	AVG Power (dBm)			Power Class 3 Limitation (dBm)	Comments
		Frequency(MHz)				
		826.4	826.4	826.4		
		Channel				
		4132	4183	4233		
HSDPA	1	23.84	23.81	23.71	20.3dBm – 25.7dBm	Pass
	2	23.64	23.7	23.54	20.3dBm – 25.7dBm	Pass
	3	23.07	23.21	23.08	19.8dBm – 25.7dBm	Pass
	4	23.05	23.14	23.02	19.8dBm – 25.7dBm	Pass

\* Offset = 0.26dB

**Band II**

Mode	Sub-test	AVG Power (dBm)			Power Class 3 Limitation (dBm)	Comments
		Frequency(MHz)				
		1852.4	1852.4	1852.4		
		Channel				
		9262	9400	9538		
HSDPA	1	23.65	23.69	23.10	20.3dBm – 25.7dBm	Pass
	2	23.60	23.64	23.08	20.3dBm – 25.7dBm	Pass
	3	23.27	23.16	22.82	19.8dBm – 25.7dBm	Pass
	4	23.26	23.14	22.80	19.8dBm – 25.7dBm	Pass

\* Offset = 0.41dB

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### HSUPA mode

The following 5 Sub-Tests were completed according to the test requirements outlined in section 5.2A of the 3GPP TS34.121-1 V8.4.0 specification. All TX RMS power requirements for Power Class 3 were met according to table 5.2AA.5 and 5.2B.5 All UE channels and power ratio's are set according to table C11.1.3 in the 3GPP TS34.121-1 V8.4.0. RMC 12.2kps is used for this testing

### HSPA SUB-TEST Setting

**Table C.11.1.3:  $\beta$  values for transmitter characteristics tests with HS-DPCCH and E-DCH(FOR HSUPA)**

Sub-test	$\beta_c$	$\beta_a$	$\beta_d$ (SF)	$\beta_c/\beta_d$	$\beta_{HS}$	$\beta_{ec}$	$\beta_{ed}$	$\beta_{ed}$ (SF)	$\beta_{ed}$ (Codes)	CM (dB)	MPR (dB)	AG Index	E-TFCI	RMC (Kbps)
1	11/15 (Note 3)	15/15 (Note 3)	64	11/15 (Note 3)	22/15	209/225	1309/225	4	1	1.0	0.0	20	75	12.2
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67	12.2
3	15/15	9/15	64	15/9	30/15	30/15	$\beta_{ed1}: 47/15$ $\beta_{ed2}: 47/15$	4 4	2	2.0	1.0	15	92	12.2
4	2/15	15/15	64	2/15	4/15	2/15	56/75	4	1	3.0	2.0	17	71	12.2
5	15/15 (Note 4)	15/15 (Note 4)	64	15/15 (Note 4)	30/15	24/15	134/15	4	1	1.0	0.0	21	81	12.2

**Note: The recommended HSUPA-Maximum Power Reductions (MPRs) are implemented as per following sub-tests.**

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**Results:**

**BAND V**

Mode	Sub-test	AVG Power (dBm)			Power Class 3 Limitation (dBm)	Comments
		Frequency(MHz)				
		824.2	836.6	848.8		
		Channel				
		4132	4183	4233		
HSUPA	1	23.61	23.9	23.54	18.8dBm – 25.7dBm	Pass
	2	22.14	22.52	22.18	16.8dBm – 25.7dBm	Pass
	3	22.08	23.1	22.11	17.8dBm – 25.7dBm	Pass
	4	21.91	22.56	21.83	16.8dBm – 25.7dBm	Pass
	5	23.06	23.01	22.97	18.8dBm – 25.7dBm	Pass

\* Offset = 0.26dB

**BAND II**

Mode	Sub-test	AVG Power (dBm)			Power Class 3 Limitation (dBm)	Comments
		Frequency(MHz)				
		1852.4	1880	1907.6		
		Channel				
		9262	9400	9538		
HSUPA	1	23.66	23.61	23.31	18.8dBm – 25.7dBm	Pass
	2	21.89	21.99	21.52	16.8dBm – 25.7dBm	Pass
	3	22.71	22.82	22.56	17.8dBm – 25.7dBm	Pass
	4	22.03	21.95	21.06	16.8dBm – 25.7dBm	Pass
	5	23.01	23.08	23.08	18.8dBm – 25.7dBm	Pass

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**Maximum Power Reduction:**

**PCS 1900 band**

PCL	0	1	2	3	4	5	6	7	8
Output power (dBm)	29.13	28.15	25.67	24.19	22.21	20.27	18.27	16.32	14.35
PCL	9	10	11	12	13	14	15	16	17
Output power (dBm)	12.38	10.42	8.42	6.43	4.45	2.43	0.41		

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

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## 6. ERP/EIRP MEASUREMENT

### 6.1 Standard Applicable

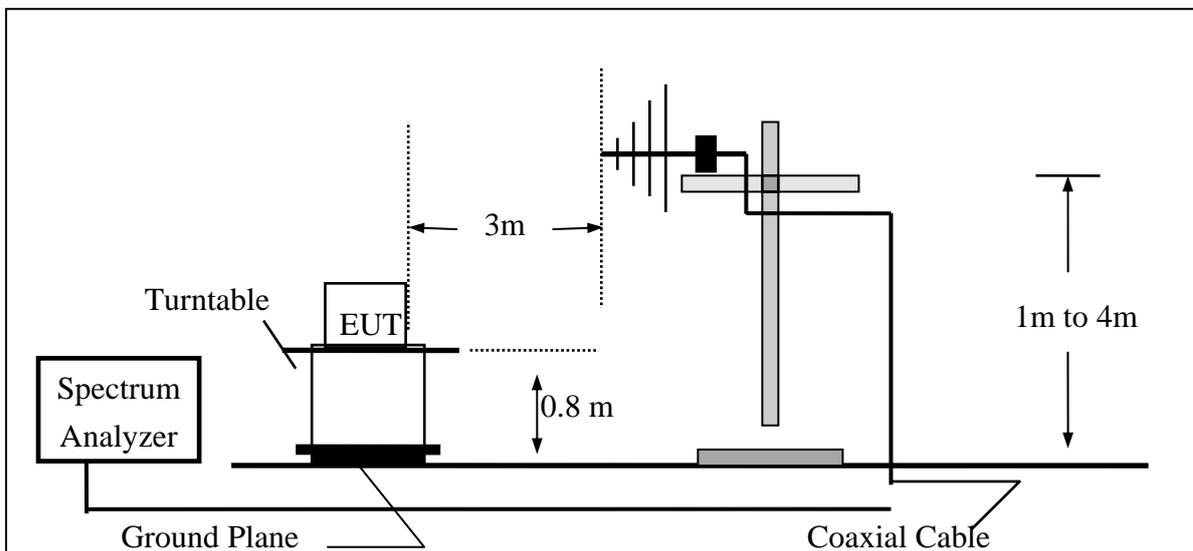
According to FCC §2.1046

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

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

### 6.2 Test SET-UP (Block Diagram of Configuration)

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

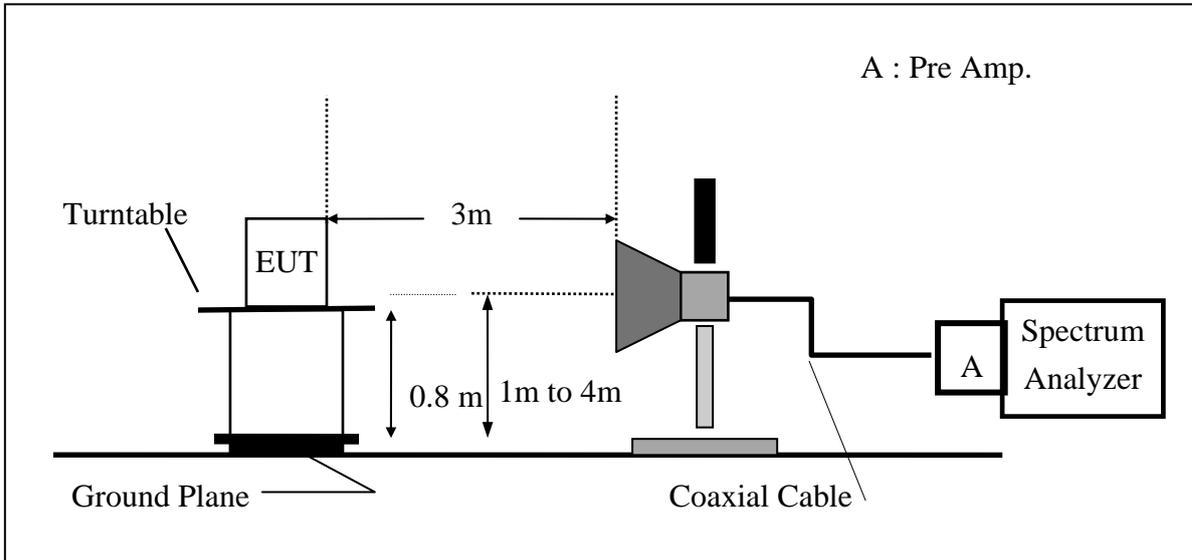


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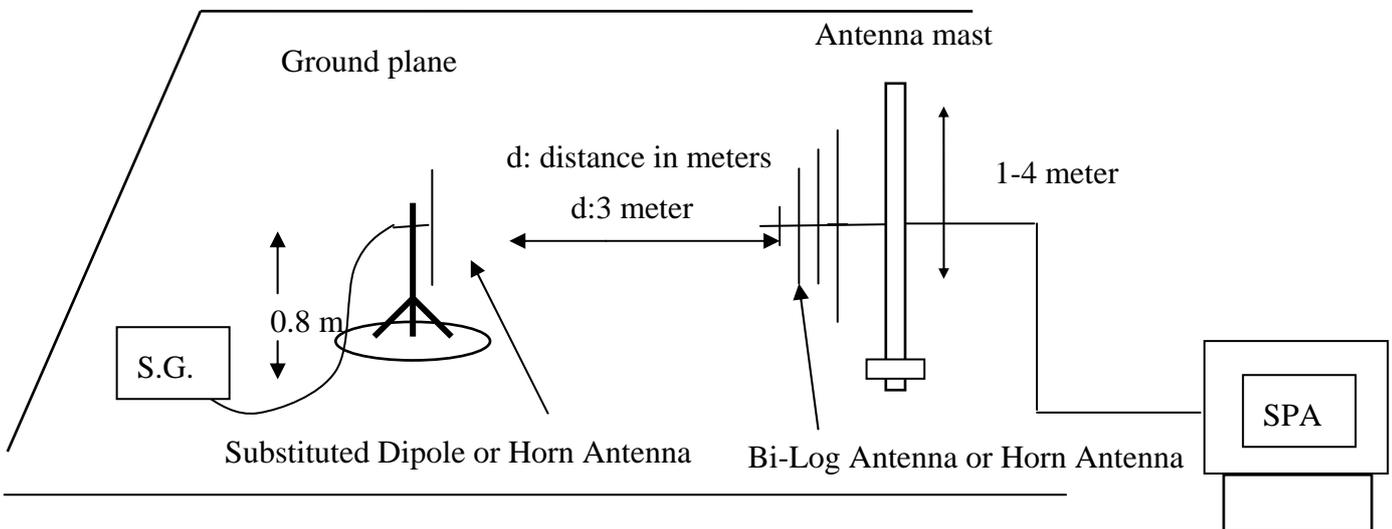
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(B) Radiated Emission Test Set-UP Frequency Over 1 GHz



(C) Substituted Method Test Set-UP



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### 6.3 Measurement Procedure

The EUT was placed on a non-conductive 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 in 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 a 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:

$$\text{ERP} = \text{S.G. output (dBm)} + \text{Antenna Gain (dBd)} - \text{Cable Loss (dB)}$$

$$\text{EIRP} = \text{S.G. output (dBm)} + \text{Antenna Gain (dBi)} - \text{Cable Loss (dB)}$$

### 6.4 Measurement Equipment Used:

Refer to section 2.4 in this report

### 6.5 Measurement Result

Refer to following pages for detail.

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### 6.5.1. Measurement Result:

EUT Mode	Frequency (MHz)	CH	EUT Pol.	Antenna Pol.	SPA Reading (dBuV)	S.G. Output (dBm)	Antenna Gain (dBi)	Cable Loss (dB)	ERP (dBm)	Limit (dBm)
GPRS 850	824.20	128	H	V	128.67	39.10	-7.87	2.84	28.38	38.45
				H	129.56	37.82	-7.87	2.84	27.11	38.45
			E1	V	129.89	40.32	-7.87	2.84	<b>29.60</b>	38.45
				H	128.05	36.31	-7.87	2.84	25.60	38.45
			E2	V	128.44	38.87	-7.87	2.84	28.15	38.45
				H	131.63	39.89	-7.87	2.84	29.18	38.45
	836.60	190	H	V	127.98	38.71	-7.88	2.88	27.95	38.45
				H	129.27	37.87	-7.88	2.88	27.11	38.45
			E1	V	129.54	40.27	-7.88	2.88	29.51	38.45
				H	127.20	35.80	-7.88	2.88	25.04	38.45
			E2	V	128.16	38.89	-7.88	2.88	28.13	38.45
				H	131.40	40.00	-7.88	2.88	29.24	38.45
	848.80	251	H	V	127.87	38.90	-7.88	2.93	28.09	38.45
				H	128.94	37.87	-7.88	2.93	27.06	38.45
			E1	V	129.21	40.24	-7.88	2.93	29.43	38.45
				H	126.84	35.77	-7.88	2.93	24.96	38.45
			E2	V	127.60	38.63	-7.88	2.93	27.82	38.45
				H	131.20	40.13	-7.88	2.93	29.32	38.45

**Remark :**

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

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**6.5.2. Measurement Result:**

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)
GPRS 1900	1850.20	512	H	V	127.94	20.94	9.90	4.14	26.69	33.00
				H	124.63	18.65	9.90	4.14	24.40	33.00
			E1	V	127.44	20.44	9.90	4.14	26.19	33.00
				H	127.49	21.51	9.90	4.14	27.26	33.00
			E2	V	126.56	19.56	9.90	4.14	25.31	33.00
				H	128.93	22.95	9.90	5.84	27.01	33.00
	1880.00	661	H	V	127.71	20.76	9.99	4.18	26.57	33.00
				H	125.09	19.20	9.99	4.18	25.01	33.00
			E1	V	127.90	20.95	9.99	4.18	26.76	33.00
				H	127.71	21.82	9.99	4.18	27.63	33.00
			E2	V	127.14	20.19	9.99	4.18	26.00	33.00
				H	129.12	23.23	9.99	4.18	<b>29.04</b>	33.00
	1909.80	810	H	V	127.26	20.36	10.08	4.21	26.23	33.00
				H	124.17	18.36	10.08	4.21	24.23	33.00
			E1	V	127.11	20.21	10.08	4.21	26.08	33.00
				H	127.46	21.65	10.08	4.21	27.52	33.00
			E2	V	126.76	19.86	10.08	4.21	25.73	33.00
				H	128.86	23.05	10.08	4.21	28.92	33.00

**Remark :**

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

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**6.5.3. Measurement Result:**

EUT Mode	Frequency (MHz)	CH	EUT Pol.	Antenna Pol.	SPA Reading (dBUV)	S.G. Output (dBm)	Antenna Gain (dBi)	Cable Loss (dB)	ERP (dBm)	Limit (dBm)
EDGE 850	824.20	128	H	V	127.70	38.13	-7.87	2.84	27.41	38.45
				H	128.78	37.04	-7.87	2.84	26.33	38.45
			E1	V	128.58	39.01	-7.87	2.84	28.29	38.45
				H	127.38	35.64	-7.87	2.84	24.93	38.45
			E2	V	127.43	37.86	-7.87	2.84	27.14	38.45
				H	131.10	39.36	-7.87	2.84	28.65	38.45
	836.60	190	H	V	126.97	37.70	-7.88	2.88	26.94	38.45
				H	128.48	37.08	-7.88	2.88	26.32	38.45
			E1	V	128.76	39.49	-7.88	2.88	28.73	38.45
				H	126.32	34.92	-7.88	2.88	24.16	38.45
			E2	V	127.10	37.83	-7.88	2.88	27.07	38.45
				H	130.75	39.35	-7.88	2.88	28.59	38.45
	848.80	251	H	V	126.97	38.00	-7.88	2.93	27.19	38.45
				H	128.04	36.97	-7.88	2.93	26.16	38.45
			E1	V	128.78	39.81	-7.88	2.93	<b>29.00</b>	38.45
				H	125.98	34.91	-7.88	2.93	24.10	38.45
			E2	V	126.54	37.57	-7.88	2.93	26.76	38.45
				H	130.48	39.41	-7.88	2.93	28.60	38.45

**Remark :**

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

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**6.5.4. Measurement Result:**

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	127.71	20.71	9.90	4.14	26.46	33.00
				H	125.36	19.38	9.90	4.14	25.13	33.00
			E1	V	126.56	19.56	9.90	4.14	25.31	33.00
				H	127.32	21.34	9.90	4.14	27.09	33.00
			E2	V	126.20	19.20	9.90	4.14	24.95	33.00
				H	128.78	22.80	9.90	5.84	26.86	33.00
	1880.00	661	H	V	127.89	20.94	9.99	4.18	26.75	33.00
				H	125.33	19.44	9.99	4.18	25.25	33.00
			E1	V	127.60	20.65	9.99	4.18	26.46	33.00
				H	127.63	21.74	9.99	4.18	27.55	33.00
			E2	V	127.12	20.17	9.99	4.18	25.98	33.00
				H	129.04	23.15	9.99	4.18	28.96	33.00
	1909.80	810	H	V	127.18	20.28	10.08	4.21	26.15	33.00
				H	124.18	18.37	10.08	4.21	24.24	33.00
			E1	V	126.89	19.99	10.08	4.21	25.86	33.00
				H	127.01	21.20	10.08	4.21	27.07	33.00
			E2	V	126.20	19.30	10.08	4.21	25.17	33.00
				H	128.78	22.97	10.08	4.21	<b>28.84</b>	33.00

**Remark :**

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

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**6.5.5. Measurement Result:**

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)		
WCDMA II	1852.40	9262	H	V	124.07	17.07	9.90	4.15	22.83	33.00		
				H	120.03	14.06	9.90	4.15	19.81	33.00		
			E1	V	123.18	16.18	9.90	4.15	21.94	33.00		
				H	128.28	22.31	9.90	4.15	<b>28.06</b>	33.00		
			E2	V	121.97	14.97	9.90	4.15	20.73	33.00		
				H	125.52	19.55	9.90	5.84	23.61	33.00		
			1880.00	9400	H	V	124.32	17.37	9.99	4.18	23.18	33.00
						H	121.03	15.14	9.99	4.18	20.95	33.00
					E1	V	124.15	17.20	9.99	4.18	23.01	33.00
						H	124.18	18.29	9.99	4.18	24.10	33.00
					E2	V	123.23	16.28	9.99	4.18	22.09	33.00
						H	126.30	20.41	9.99	4.18	26.22	33.00
	1907.60	9538	H	V	123.66	16.76	10.07	4.21	22.62	33.00		
				H	120.08	14.27	10.07	4.21	20.13	33.00		
			E1	V	122.91	16.01	10.07	4.21	21.87	33.00		
				H	123.38	17.57	10.07	4.21	23.43	33.00		
			E2	V	122.71	15.81	10.07	4.21	21.67	33.00		
				H	126.12	20.31	10.07	4.21	26.17	33.00		

**Remark :**

(1) The RBW,VBW of SPA for frequency

RBW= 5MHz, VBW=5MHz,

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**6.5.6. 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)
WCDMA V	826.40	4132	H	V	122.92	33.40	-7.88	2.85	22.67	38.45
				H	125.41	33.73	-7.88	2.85	23.01	38.45
			E1	V	125.84	36.32	-7.88	2.85	25.59	38.45
				H	122.83	31.15	-7.88	2.85	20.43	38.45
			E2	V	121.56	32.04	-7.88	2.85	21.31	38.45
				H	127.15	35.47	-7.88	2.85	24.75	38.45
	836.60	4183	H	V	122.62	33.35	-7.88	2.88	22.59	38.45
				H	124.37	32.97	-7.88	2.88	22.21	38.45
			E1	V	125.48	36.21	-7.88	2.88	25.45	38.45
				H	121.73	30.33	-7.88	2.88	19.57	38.45
			E2	V	122.00	32.73	-7.88	2.88	21.97	38.45
				H	126.46	35.06	-7.88	2.88	24.30	38.45
	846.60	4233	H	V	123.04	34.02	-7.88	2.92	23.22	38.45
				H	123.57	32.44	-7.88	2.92	21.64	38.45
			E1	V	125.44	36.42	-7.88	2.92	25.62	38.45
				H	118.46	27.33	-7.88	2.92	16.53	38.45
			E2	V	120.93	31.91	-7.88	2.92	21.11	38.45
				H	127.66	36.53	-7.88	2.92	<b>26.41</b>	38.45

**Remark :**

- (1) The RBW,VBW of SPA for frequency  
RBW=5MHz, VBW=5MHz,

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**6.5.7. Measurement Result:**

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)		
HSUPA II	1852.40	9262	H	V	124.61	17.61	9.90	4.15	23.37	33.00		
				H	120.72	14.75	9.90	4.15	20.50	33.00		
			E1	V	123.72	16.72	9.90	4.15	22.48	33.00		
				H	124.14	18.17	9.90	4.15	23.92	33.00		
			E2	V	123.19	16.19	9.90	4.15	21.95	33.00		
				H	126.40	20.43	9.90	5.84	24.49	33.00		
			1880.00	9400	H	V	125.51	18.56	9.99	4.18	24.37	33.00
						H	121.96	16.07	9.99	4.18	21.88	33.00
					E1	V	125.17	18.22	9.99	4.18	24.03	33.00
						H	125.23	19.34	9.99	4.18	25.15	33.00
					E2	V	124.61	17.66	9.99	4.18	23.47	33.00
						H	127.27	21.38	9.99	4.18	27.19	33.00
	1907.60	9538	H	V	124.56	17.66	10.07	4.21	23.52	33.00		
				H	121.21	15.40	10.07	4.21	21.26	33.00		
			E1	V	124.42	17.52	10.07	4.21	23.38	33.00		
				H	124.99	19.18	10.07	4.21	25.04	33.00		
			E2	V	123.92	17.02	10.07	4.21	22.88	33.00		
				H	127.55	21.74	10.07	4.21	<b>27.60</b>	33.00		

**Remark :**

- (1) The RBW,VBW of SPA for frequency  
RBW=5MHz, VBW=5MHz,

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**6.5.8. 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)
HSUPA V	826.40	4132	H	V	123.64	34.12	-7.88	2.85	23.39	38.45
				H	125.77	34.09	-7.88	2.85	23.37	38.45
			E1	V	126.31	36.79	-7.88	2.85	26.06	38.45
				H	122.43	30.75	-7.88	2.85	20.03	38.45
			E2	V	123.92	34.40	-7.88	2.85	23.67	38.45
				H	128.09	36.41	-7.88	2.85	25.69	38.45
	836.60	4183	H	V	122.46	33.19	-7.88	2.88	22.43	38.45
				H	124.86	33.46	-7.88	2.88	22.70	38.45
			E1	V	125.75	36.48	-7.88	2.88	25.72	38.45
				H	121.91	30.51	-7.88	2.88	19.75	38.45
			E2	V	123.29	34.02	-7.88	2.88	23.26	38.45
				H	127.49	36.09	-7.88	2.88	25.33	38.45
	846.60	4233	H	V	123.52	34.50	-7.88	2.92	23.70	38.45
				H	125.05	33.92	-7.88	2.92	23.12	38.45
			E1	V	126.60	37.58	-7.88	2.92	<b>26.23</b>	38.45
				H	122.08	30.95	-7.88	2.92	20.15	38.45
			E2	V	122.88	33.86	-7.88	2.92	23.06	38.45
				H	127.78	36.65	-7.88	2.92	25.85	38.45

**Remark :**

- (1) The RBW,VBW of SPA for frequency  
RBW=5MHz, VBW=5MHz,

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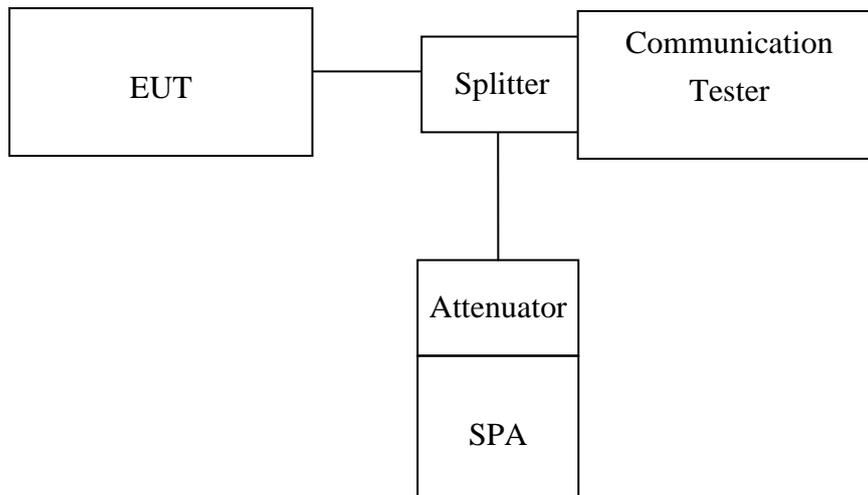
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## 7. 99% OCCUPIED BANDWIDTH MEASUREMENT

### 7.1 Standard Applicable

According to §FCC 2.1049.

### 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 (10/30KHz) was set to about 1% of emission BW, VBW= 3 times RBW(30/100KHz), -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:

Refer to section 2.4 in this report.

### 7.5 Measurement Result:

*Please refer to the original modular report: Qualcomm Incorporated. Report no. 80-VN379-203 Rev. A*

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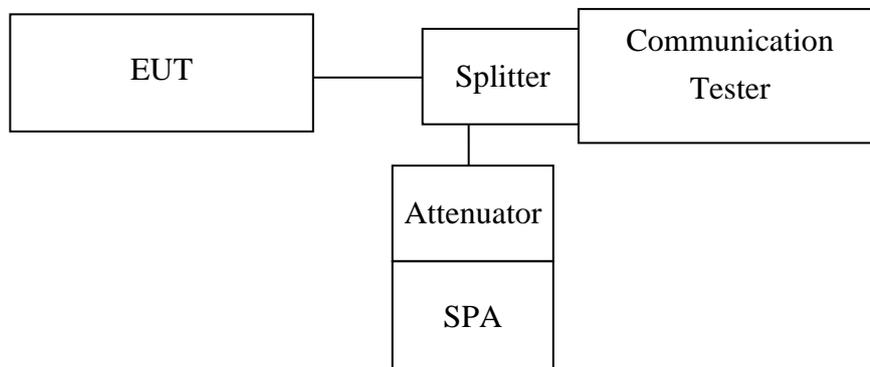
## 8. OUT OF BAND EMISSION AT ANTENNA TERMINALS

### 8.1 Standard Applicable

According to FCC §2.1051.

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)

### 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= 10th harmonic. Limit = -13dBm

Band Edge Requirements: 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:

Refer to section 2.4 in this report

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

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## 8.5 Measurement Result

Please refer to the original modular report: *Qualcomm Incorporated. Report no. 80-VN379-203 Rev. A*

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## 9. FIELD STRENGTH OF SPURIOUS RADIATION MEASUREMENT (TX)

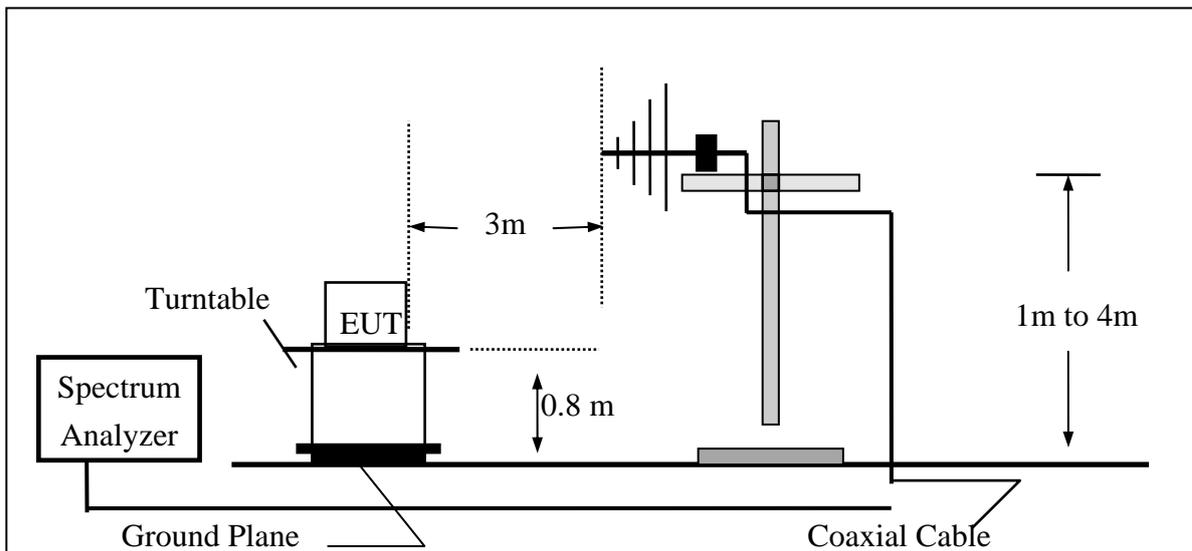
### 9.1 Standard Applicable

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)

### 9.2 EUT Setup (Block Diagram of Configuration)

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

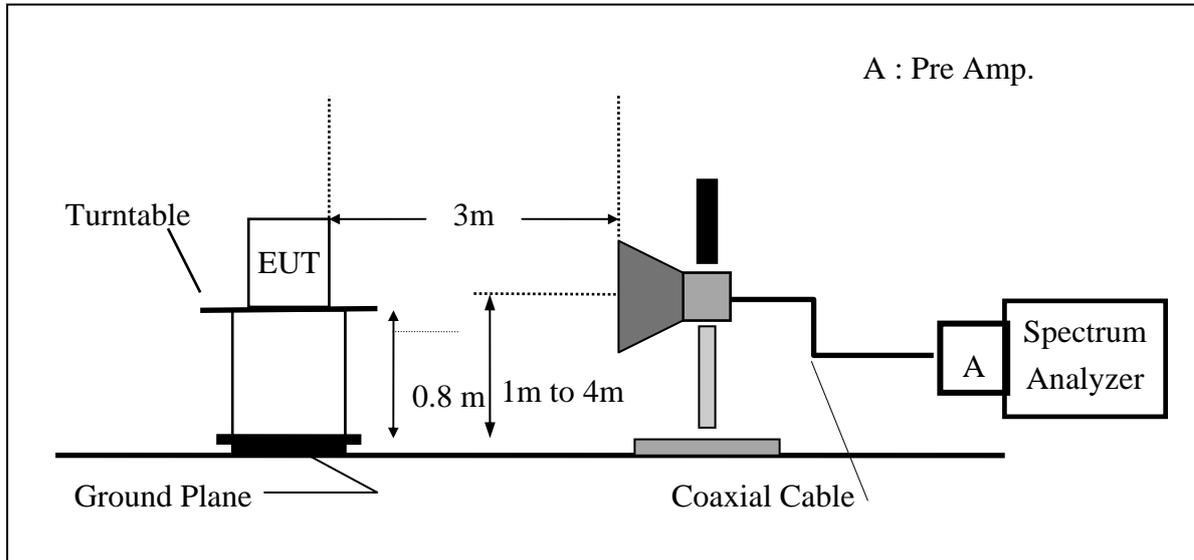


Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

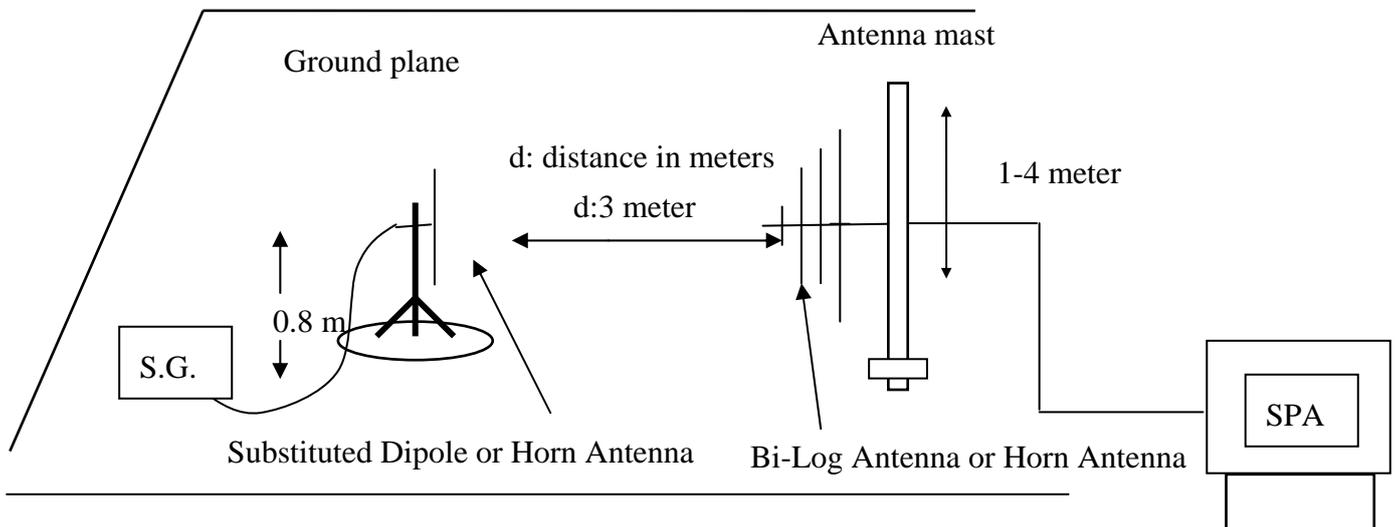
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(B) Radiated Emission Test Set-UP Frequency Over 1 GHz



(C) Substituted Method Test Set-UP



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### 9.3 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 –848.80.8MHz 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:

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 (dB)

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

### 9.4 Measurement Equipment Used:

Refer to section 2.4 in this report

### 9.5 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 E1 Mode	Test Date:	Jul. 21, 2010
Fundamental Frequency	: 824.70 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 (dBd/dBi)	Cable Loss (dB)	ERP/EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
102.75	47.23	V	-59.12	-7.76	0.88	-67.77	-13.00	-54.77
193.93	43.73	V	-57.95	-7.84	1.20	-66.98	-13.00	-53.98
236.61	42.03	V	-56.87	-7.88	1.36	-66.11	-13.00	-53.11
259.89	40.79	V	-56.86	-7.90	1.44	-66.19	-13.00	-53.19
409.27	36.18	V	-62.14	-7.67	1.83	-71.64	-13.00	-58.64
824.00	83.77	V	-5.81	-7.87	2.84	-16.53	-13.00	-3.53
1648.40	55.33	V	-52.03	9.29	3.91	-46.65	-13.00	-33.65
2472.60	43.33	V	-59.18	10.08	4.80	-53.90	-13.00	-40.90
3296.80	---	V		12.17	5.05		-13.00	
4121.00	---	V		12.61	5.70		-13.00	
4945.20	---	V		12.65	6.75		-13.00	
5769.40	---	V		13.55	8.13		-13.00	
6593.60	37.08	V	-52.24	12.05	8.21	-48.40	-13.00	-35.40
7417.80	---	V		11.49	9.96		-13.00	
8242.00	---	V		11.48	9.44		-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  $ERP/EIRP (dBm) = SG \text{ Setting}(dBm) + Antenna \text{ Gain} (dB/dBi) - Cable \text{ loss} (dB)$

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

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**Radiated Spurious Emission Measurement Result: GPRS850 Cellular Mode**

Operation Mode	: TX CH Low E1 Mode	Test Date:	Jul. 21, 2010
Fundamental Frequency	: 824.70 MHz	Test By:	Jason
Temperature	: 25	Pol:	Hor
Humidity	: 65%		

Freq. (MHz)	SPA Reading (dBuV)	Ant.Pol. H/V	S.G Output (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)	ERP/EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
100.81	48.69	H	-55.79	-7.76	0.87	-64.42	-13.00	-51.42
159.98	31.00	H	-71.53	-7.81	1.11	-80.45	-13.00	-67.45
215.27	33.82	H	-72.45	-7.86	1.27	-81.58	-13.00	-68.58
296.75	33.69	H	-69.23	-7.92	1.50	-78.66	-13.00	-65.66
296.75	34.00	H	-68.92	-7.92	1.50	-78.35	-13.00	-65.35
327.79	31.76	H	-70.45	-7.76	1.60	-79.82	-13.00	-66.82
430.61	38.50	H	-60.37	-7.68	1.88	-69.93	-13.00	-56.93
824.00	82.55	H	-9.19	-7.87	2.84	-19.91	-13.00	-6.91
1648.40	53.17	H	-53.40	9.29	3.91	-48.02	-13.00	-35.02
2472.60	46.90	H	-57.12	10.08	4.80	-51.84	-13.00	-38.84
3296.80	33.23	H	-68.11	12.17	5.05	-61.00	-13.00	-48.00
4121.00	37.49	H	-61.88	12.61	5.70	-54.97	-13.00	-41.97
4945.20	---	H		12.65	6.75		-13.00	
5769.40	---	H		13.55	8.13		-13.00	
6593.60	35.59	H	-53.69	12.05	8.21	-49.85	-13.00	-36.85
7417.80	---	H		11.49	9.96		-13.00	
8242.00	---	H		11.48	9.44		-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  $ERP/EIRP (dBm) = SG \text{ Setting}(dBm) + Antenna \text{ Gain} (dB/dBi) - Cable \text{ loss} (dB)$

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

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**Radiated Spurious Emission Measurement Result: GPRS 850 Mode**

Operation Mode	: TX CH Mid E1 Mode	Test Date:	Jul. 21, 2010
Fundamental Frequency	: 836.52 MHz	Test By:	Jason
Temperature	: 25	Pol:	Ver
Humidity	: 65%		

Freq. (MHz)	SPA Reading (dBuV)	Ant.Pol. H/V	S.G Output (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)	ERP/EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
98.87	52.16	V	-54.46	-7.76	0.87	-63.09	-13.00	-50.09
151.25	34.83	V	-66.94	-7.80	1.09	-75.83	-13.00	-62.83
182.29	38.64	V	-63.07	-7.83	1.17	-72.06	-13.00	-59.06
242.43	39.87	V	-58.59	-7.88	1.39	-67.86	-13.00	-54.86
1673.20	46.86	V	-60.46	9.36	3.93	-55.03	-13.00	-42.03
2509.80	42.02	V	-60.25	10.09	4.83	-54.98	-13.00	-41.98
3346.40	34.86	V	-67.12	12.28	5.13	-59.97	-13.00	-46.97
4183.00	---	V		12.62	5.65		-13.00	
5019.60	---	V		12.67	6.95		-13.00	
5466.00	32.39	V	-62.81	13.12	7.96	-57.66	-13.00	-44.66
5856.20	---	V		13.68	8.16		-13.00	
6692.80	---	V		11.95	8.41		-13.00	
7529.40	---	V		11.45	10.06		-13.00	
8366.00	---	V		11.59	9.76		-13.00	

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

Remark :

- 1 The emission behaviors belongs 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  $ERP/EIRP (dBm) = SG \text{ Setting}(dBm) + Antenna \text{ Gain} (dB/dBi) - Cable \text{ loss} (dB)$

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**Radiated Spurious Emission Measurement Result: GPRS 850 Mode**

Operation Mode	: TX CH Mid E1 Mode	Test Date:	Jul. 21, 2010
Fundamental Frequency	: 836.52 MHz	Test By:	Jason
Temperature	: 25	Pol:	Hor
Humidity	: 65%		

Freq. (MHz)	SPA Reading (dBUV)	Ant.Pol. H/V	S.G Output (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)	ERP/EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
103.72	43.61	H	-60.69	-7.76	0.89	-69.34	-13.00	-56.34
177.44	40.75	H	-63.66	-7.82	1.16	-72.63	-13.00	-59.63
200.72	39.70	H	-67.10	-7.84	1.21	-76.16	-13.00	-63.16
336.52	33.96	H	-68.07	-7.72	1.63	-77.42	-13.00	-64.42
647.89	32.59	H	-62.88	-7.81	2.39	-73.07	-13.00	-60.07
718.70	32.61	H	-61.33	-7.86	2.49	-71.68	-13.00	-58.68
1673.20	46.55	H	-59.95	9.36	3.93	-54.52	-13.00	-41.52
2509.80	45.43	H	-58.46	10.09	4.83	-53.19	-13.00	-40.19
3346.40	33.55	H	-67.74	12.28	5.13	-60.59	-13.00	-47.59
4183.00	36.13	H	-63.09	12.62	5.65	-56.13	-13.00	-43.13
5019.60	---	H		12.67	6.95		-13.00	
5856.20	---	H		13.68	8.16		-13.00	
6692.80	---	H		11.95	8.41		-13.00	
7529.40	---	H		11.45	10.06		-13.00	
8366.00	---	H		11.59	9.76		-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  $ERP/EIRP (dBm) = SG \text{ Setting}(dBm) + Antenna \text{ Gain} (dB/dBi) - Cable \text{ loss} (dB)$

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**Radiated Spurious Emission Measurement Result: GPRS 850 Mode**

Operation Mode	: TX CH High E1 Mode	Test Date:	Jul. 21, 2010
Fundamental Frequency	: 848.31 MHz	Test By:	Jason
Temperature	: 25	Pol:	Ver
Humidity	: 65%		

Freq. (MHz)	SPA Reading (dBuV)	Ant.Pol. H/V	S.G Output (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)	ERP/EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
83.35	36.59	V	-70.03	-7.75	0.30	-78.08	-13.00	-65.08
125.06	39.71	V	-64.48	-7.78	0.98	-73.24	-13.00	-60.24
140.58	36.64	V	-66.04	-7.79	1.05	-74.88	-13.00	-61.88
201.69	42.32	V	-59.22	-7.84	1.22	-68.28	-13.00	-55.28
631.40	32.14	V	-62.10	-7.80	2.37	-72.27	-13.00	-59.27
849.00	82.98	V	-5.98	-7.88	2.93	-16.79	-13.00	-3.79
1697.60	46.23	V	-61.04	9.44	3.96	-55.57	-13.00	-42.57
2546.40	42.27	V	-60.03	10.20	4.81	-54.64	-13.00	-41.64
3395.20	33.38	V	-68.50	12.38	5.20	-61.32	-13.00	-48.32
4244.00	---	V		12.63	5.61		-13.00	
5092.80	---	V		12.74	7.12		-13.00	
5941.60	---	V		13.81	8.19		-13.00	
6790.40	---	V		11.86	8.61		-13.00	
7639.20	---	V		11.40	9.77		-13.00	
8488.00	---	V		11.70	10.08		-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  $ERP/EIRP (dBm) = SG \text{ Setting}(dBm) + Antenna \text{ Gain} (dB/dBi) - Cable \text{ loss} (dB)$

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**Radiated Spurious Emission Measurement Result: GPRS 850 Mode**

Operation Mode	: TX CH High E1 Mode	Test Date:	Jul. 21, 2010
Fundamental Frequency	: 848.31 MHz	Test By:	Jason
Temperature	: 25	Pol:	Hor
Humidity	: 65%		

Freq. (MHz)	SPA Reading (dBuV)	Ant.Pol. H/V	S.G Output (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)	ERP/EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
96.93	39.70	H	-65.47	-7.76	0.88	-74.11	-13.00	-61.11
175.50	35.02	H	-69.18	-7.82	1.15	-78.15	-13.00	-65.15
201.69	37.80	H	-68.97	-7.84	1.22	-78.03	-13.00	-65.03
238.55	37.08	H	-68.34	-7.88	1.37	-77.59	-13.00	-64.59
345.25	34.31	H	-67.54	-7.67	1.66	-76.87	-13.00	-63.87
663.41	31.96	H	-63.19	-7.82	2.40	-73.42	-13.00	-60.42
849.00	81.67	H	-9.40	-7.88	2.93	-20.20	-13.00	-7.20
1697.60	40.78	H	-65.65	9.44	3.96	-60.18	-13.00	-47.18
2546.40	44.42	H	-59.30	10.20	4.81	-53.91	-13.00	-40.91
3395.20	---	H		12.38	5.20		-13.00	
4101.00	31.93	H	-67.49	12.61	5.72	-60.59	-13.00	-47.59
4244.00	---	H		12.63	5.61		-13.00	
5092.80	---	H		12.74	7.12		-13.00	
5941.60	---	H		13.81	8.19		-13.00	
6790.40	---	H		11.86	8.61		-13.00	
7639.20	---	H		11.40	9.77		-13.00	
8488.00	---	H		11.70	10.08		-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  $ERP/EIRP (dBm) = SG \text{ Setting}(dBm) + Antenna \text{ Gain} (dB/dBi) - Cable \text{ loss} (dB)$

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**Radiated Spurious Emission Measurement Result: GPRS 1900 Mode**

Operation Mode	: TX CH Low E2 Mode	Test Date:	Jul. 21, 2010
Fundamental Frequency	: 1850.20MHz	Test By:	Jason
Temperature	: 25	Pol:	Ver.
Humidity	: 65%		

Freq. (MHz)	SPA Reading (dBuV)	Ant.Pol. H/V	S.G Output (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)	ERP/EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
144.46	30.97	V	-71.34	-7.80	1.07	-80.20	-13.00	-67.20
219.15	34.38	V	-65.84	-7.86	1.29	-74.99	-13.00	-61.99
329.73	33.86	V	-63.90	-7.75	1.61	-73.26	-13.00	-60.26
531.49	32.55	V	-64.43	-7.75	2.14	-74.31	-13.00	-61.31
762.85	31.57	V	-58.80	-7.87	2.62	-69.29	-13.00	-56.29
1850.00	81.61	V	-25.39	9.90	4.14	-19.64	-13.00	-6.64
3700.40	42.25	V	-58.66	12.61	5.53	-51.59	-13.00	-38.59
5550.60	44.84	V	-50.09	13.23	8.06	-44.92	-13.00	-31.92
7400.80	---	V		11.50	9.92		-13.00	
9251.00	---	V		11.92	10.53		-13.00	
11101.20	---	V		11.66	12.05		-13.00	
12951.40	---	V		13.63	12.14		-13.00	
14801.60	---	V		12.76	12.89		-13.00	
16651.80	---	V		15.92	13.62		-13.00	
18502.00	---	V		18.75	6.92		-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  $ERP/EIRP (dBm) = SG \text{ Setting}(dBm) + Antenna \text{ Gain} (dB/dBi) - Cable \text{ loss} (dB)$

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**Radiated Spurious Emission Measurement Result: GPRS 1900 Mode**

Operation Mode	: TX CH Low E2 Mode	Test Date:	Jul. 21, 2010
Fundamental Frequency	: 1850.20MHz	Test By:	Jason
Temperature	: 25	Pol:	Hor.
Humidity	: 65%		

Freq. (MHz)	SPA Reading (dBuV)	Ant.Pol. H/V	S.G Output (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)	ERP/EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
157.07	30.97	H	-71.25	-7.81	1.11	-80.16	-13.00	-67.16
247.28	32.70	H	-72.40	-7.89	1.41	-81.70	-13.00	-68.70
331.67	32.23	H	-69.90	-7.74	1.62	-79.26	-13.00	-66.26
585.81	32.32	H	-63.56	-7.78	2.28	-73.63	-13.00	-60.63
789.51	31.70	H	-60.88	-7.87	2.72	-71.47	-13.00	-58.47
1850.00	82.75	H	-23.23	9.90	4.14	-17.48	-13.00	-4.48
3700.40	35.97	H	-64.57	12.61	5.53	-57.50	-13.00	-44.50
5550.60	36.05	H	-56.67	13.23	8.06	-51.50	-13.00	-38.50
7400.80	---	H		11.50	9.92		-13.00	
9251.00	---	H		11.92	10.53		-13.00	
11101.20	---	H		11.66	12.05		-13.00	
12951.40	---	H		13.63	12.14		-13.00	
14801.60	---	H		12.76	12.89		-13.00	
16651.80	---	H		15.92	13.62		-13.00	
18502.00	---	H		18.75	6.92		-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  $ERP/EIRP (dBm) = SG \text{ Setting}(dBm) + Antenna \text{ Gain} (dB/dBi) - Cable \text{ loss} (dB)$

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**Radiated Spurious Emission Measurement Result: GPRS 1900 Mode**

Operation Mode	: TX CH Mid E2 Mode	Test Date:	Jul. 21, 2010
Fundamental Frequency	: 1880.00MHz	Test By:	Jason
Temperature	: 25	Pol:	Ver
Humidity	: 65%		

Freq. (MHz)	SPA Reading (dBuV)	Ant.Pol. H/V	S.G Output (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)	ERP/EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
159.98	32.05	V	-69.70	-7.81	1.11	-78.62	-13.00	-65.62
338.46	33.10	V	-64.97	-7.70	1.64	-74.32	-13.00	-61.32
488.81	32.45	V	-65.11	-7.72	2.05	-74.88	-13.00	-61.88
674.08	33.71	V	-59.60	-7.83	2.41	-69.85	-13.00	-56.85
848.68	32.27	V	-56.70	-7.88	2.93	-67.51	-13.00	-54.51
3760.00	45.95	V	-54.73	12.60	5.58	-47.71	-13.00	-34.71
5640.00	38.46	V	-56.05	13.36	8.09	-50.77	-13.00	-37.77
7520.00	---	V		11.45	10.09		-13.00	
9400.00	---	V		11.93	10.72		-13.00	
11280.00	---	V		11.92	11.77		-13.00	
13160.00	---	V		13.33	12.30		-13.00	
15040.00	---	V		13.76	13.59		-13.00	
16920.00	---	V		15.27	13.08		-13.00	
18800.00	---	V		18.68	11.02		-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  $ERP/EIRP (dBm) = SG \text{ Setting}(dBm) + Antenna \text{ Gain} (dB/dBi) - Cable \text{ loss} (dB)$

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**Radiated Spurious Emission Measurement Result: GPRS 1900 Mode**

Operation Mode	: TX CH Mid E2 Mode	Test Date:	Jul. 21, 2010
Fundamental Frequency	: 1880.00MHz	Test By:	Jason
Temperature	: 25	Pol:	Hor.
Humidity	: 65%		

Freq. (MHz)	SPA Reading (dBuV)	Ant.Pol. H/V	S.G Output (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)	ERP/EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
158.04	31.60	H	-70.72	-7.81	1.11	-79.64	-13.00	-66.64
249.22	33.07	H	-71.96	-7.89	1.42	-81.26	-13.00	-68.26
445.16	32.34	H	-65.85	-7.70	1.91	-75.45	-13.00	-62.45
576.11	32.96	H	-63.13	-7.78	2.25	-73.16	-13.00	-60.16
772.05	32.60	H	-60.30	-7.87	2.65	-70.82	-13.00	-57.82
3760.00	37.35	H	-63.02	12.60	5.58	-55.99	-13.00	-42.99
5640.00	33.40	H	-59.07	13.36	8.09	-53.79	-13.00	-40.79
7520.00	---	H		11.45	10.09		-13.00	
9400.00	---	H		11.93	10.72		-13.00	
11280.00	---	H		11.92	11.77		-13.00	
13160.00	---	H		13.33	12.30		-13.00	
15040.00	---	H		13.76	13.59		-13.00	
16920.00	---	H		15.27	13.08		-13.00	
18800.00	---	H		18.68	11.02		-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  $ERP/EIRP (dBm) = SG \text{ Setting}(dBm) + Antenna \text{ Gain} (dB/dBi) - Cable \text{ loss} (dB)$

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**Radiated Spurious Emission Measurement Result: GPRS 1900 Mode**

Operation Mode	: TX CH High E2 Mode	Test Date:	Jul. 21, 2010
Fundamental Frequency	: 1909.80MHz	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 (dBd/dBi)	Cable Loss (dB)	ERP/EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
178.41	41.52	V	-60.19	-7.82	1.16	-69.17	-13.00	-56.17
329.73	33.29	V	-64.47	-7.75	1.61	-73.83	-13.00	-60.83
663.41	33.25	V	-60.30	-7.82	2.40	-70.53	-13.00	-57.53
780.78	31.97	V	-58.30	-7.87	2.69	-68.86	-13.00	-55.86
898.15	34.34	V	-53.86	-7.95	3.01	-64.81	-13.00	-51.81
1910.00	80.39	V	-26.51	10.08	4.21	-20.64	-13.00	-7.64
3819.60	47.38	V	-53.07	12.60	5.63	-46.10	-13.00	-33.10
5729.40	36.18	V	-57.90	13.49	8.12	-52.53	-13.00	-39.53
7639.20	---	V		11.40	9.77		-13.00	
9549.00	---	V		11.95	10.87		-13.00	
11458.80	---	V		12.17	11.49		-13.00	
13368.60	---	V		12.97	12.45		-13.00	
15278.40	---	V		15.00	13.75		-13.00	
17188.20	---	V		14.47	13.46		-13.00	
19098.00	---	V		18.66	13.95		-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  $ERP/EIRP (dBm) = SG \text{ Setting}(dBm) + Antenna \text{ Gain} (dB/dBi) - Cable \text{ loss} (dB)$

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**Radiated Spurious Emission Measurement Result: GPRS 1900 Mode**

Operation Mode	: TX CH High E2 Mode	Test Date:	Jul. 21, 2010
Fundamental Frequency	: 1909.80MHz	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 (dBd/dBi)	Cable Loss (dB)	ERP/EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
157.07	31.33	H	-70.89	-7.81	1.11	-79.80	-13.00	-66.80
324.88	32.44	H	-69.83	-7.78	1.59	-79.20	-13.00	-66.20
537.31	31.37	H	-65.40	-7.75	2.15	-75.30	-13.00	-62.30
722.58	32.30	H	-61.56	-7.86	2.50	-71.92	-13.00	-58.92
846.74	32.37	H	-58.76	-7.88	2.92	-69.56	-13.00	-56.56
1910.00	80.33	H	-25.47	10.08	4.21	-19.61	-13.00	-6.61
3819.60	40.98	H	-59.21	12.60	5.63	-52.24	-13.00	-39.24
5729.40	32.68	H	-59.53	13.49	8.12	-54.16	-13.00	-41.16
7639.20	---	H		11.40	9.77		-13.00	
9549.00	---	H		11.95	10.87		-13.00	
11458.80	---	H		12.17	11.49		-13.00	
13368.60	---	H		12.97	12.45		-13.00	
15278.40	---	H		15.00	13.75		-13.00	
17188.20	---	H		14.47	13.46		-13.00	
19098.00	---	H		18.66	13.95		-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  $ERP/EIRP (dBm) = SG \text{ Setting}(dBm) + Antenna \text{ Gain} (dB/dBi) - Cable \text{ loss} (dB)$

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**Radiated Spurious Emission Measurement Result: WCDMA BII Mode**

Operation Mode	: TX CH Low E1 Mode	Test Date:	Jul. 21, 2010
Fundamental Frequency	: 1852.40MHz	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 (dBd/dBi)	Cable Loss (dB)	ERP/EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
160.95	30.67	V	-71.08	-7.81	1.12	-80.00	-13.00	-67.00
348.16	32.47	V	-65.95	-7.65	1.67	-75.28	-13.00	-62.28
489.78	32.39	V	-65.17	-7.72	2.06	-74.94	-13.00	-61.94
682.81	31.55	V	-61.56	-7.84	2.42	-71.83	-13.00	-58.83
846.74	32.12	V	-56.90	-7.88	2.92	-67.70	-13.00	-54.70
1850.00	67.41	V	-39.59	9.90	4.14	-33.84	-13.00	-20.84
3704.80	53.20	V	-47.69	12.61	5.54	-40.62	-13.00	-27.62
3863.00	38.06	V	-62.23	12.60	5.67	-55.30	-13.00	-42.30
5557.20		V	-94.90	13.24	8.06	-89.72	-13.00	-76.72
7409.60		V	-85.43	11.49	9.94	-83.87	-13.00	-70.87
9262.00	---	V		11.92	10.55		-13.00	
11114.40	---	V		11.68	12.03		-13.00	
12966.80	---	V		13.62	12.16		-13.00	
14819.20	---	V		12.83	12.95		-13.00	
16671.60	---	V		15.87	13.58		-13.00	
18524.00	---	V		18.74	7.22		-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  $ERP/EIRP (dBm) = SG \text{ Setting}(dBm) + Antenna \text{ Gain} (dB/dBi) - Cable \text{ loss} (dB)$

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**Radiated Spurious Emission Measurement Result: WCDMA BII Mode**

Operation Mode	: TX CH Low E1 Mode	Test Date:	Jul. 21, 2010
Fundamental Frequency	: 1852.40MHz	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 (dBd/dBi)	Cable Loss (dB)	ERP/EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
149.31	31.54	H	-69.96	-7.80	1.09	-78.85	-13.00	-65.85
244.37	40.14	H	-65.07	-7.88	1.40	-74.35	-13.00	-61.35
328.76	33.36	H	-68.83	-7.76	1.61	-78.19	-13.00	-65.19
650.80	31.76	H	-63.68	-7.81	2.39	-73.88	-13.00	-60.88
785.63	31.18	H	-61.47	-7.87	2.71	-72.05	-13.00	-59.05
1850.00	71.54	H	-34.44	9.90	4.14	-28.69	-13.00	-15.69
3704.80	47.79	H	-52.74	12.61	5.54	-45.67	-13.00	-32.67
5557.20		H		13.24	8.06		-13.00	
7409.60	---	H		11.49	9.94		-13.00	
9262.00	---	H		11.92	10.55		-13.00	
11114.40	---	H		11.68	12.03		-13.00	
12966.80	---	H		13.62	12.16		-13.00	
14819.20	---	H		12.83	12.95		-13.00	
16671.60	---	H		15.87	13.58		-13.00	
18524.00	---	H		18.74	7.22		-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.
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**Radiated Spurious Emission Measurement Result: WCDMA BII Mode**

Operation Mode	: TX CH Mid E1 Mode	Test Date:	Jul. 21, 2010
Fundamental Frequency	: 1880.0MHz	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 (dBd/dBi)	Cable Loss (dB)	ERP/EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
167.74	31.72	V	-70.01	-7.81	1.13	-78.96	-13.00	-65.96
216.24	33.86	V	-66.58	-7.86	1.28	-75.72	-13.00	-62.72
328.76	33.44	V	-64.28	-7.76	1.61	-73.65	-13.00	-60.65
656.62	32.29	V	-61.42	-7.82	2.40	-71.63	-13.00	-58.63
917.55	31.92	V	-56.15	-7.97	3.03	-67.14	-13.00	-54.14
3760.00	44.77	V	-55.91	12.60	5.58	-48.89	-13.00	-35.89
3919.00	36.96	V	-63.11	12.60	5.72	-56.23	-13.00	-43.23
5640.00	---	V		13.36	8.09		-13.00	
7520.00	---	V		11.45	10.09		-13.00	
9400.00	---	V		11.93	10.72		-13.00	
11280.00	---	V		11.92	11.77		-13.00	
13160.00	---	V		13.33	12.30		-13.00	
15040.00	---	V		13.76	13.59		-13.00	
16920.00	---	V		15.27	13.08		-13.00	
18800.00	---	V		18.68	11.02		-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  $ERP/EIRP (dBm) = SG \text{ Setting}(dBm) + Antenna \text{ Gain} (dB/dBi) - Cable \text{ loss} (dB)$

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**Radiated Spurious Emission Measurement Result: WCDMA BII Mode**

Operation Mode	: TX CH Mid E1 Mode	Test Date:	Jul. 21, 2010
Fundamental Frequency	: 1880.0MHz	Test By:	Jason
Temperature	: 25	Pol:	Hor.
Humidity	: 65%		

Freq. (MHz)	SPA Reading (dBuV)	Ant.Pol. H/V	S.G Output (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)	ERP/EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
158.04	31.03	H	-71.29	-7.81	1.11	-80.21	-13.00	-67.21
244.37	32.37	H	-72.84	-7.88	1.40	-82.12	-13.00	-69.12
420.91	31.64	H	-67.69	-7.68	1.86	-77.22	-13.00	-64.22
658.56	32.30	H	-62.96	-7.82	2.40	-73.18	-13.00	-60.18
761.38	31.64	H	-61.45	-7.87	2.61	-71.94	-13.00	-58.94
3760.00	41.75	H	-58.62	12.60	5.58	-51.59	-13.00	-38.59
5640.00	---	H		13.36	8.09		-13.00	
7520.00	---	H		11.45	10.09		-13.00	
9400.00	---	H		11.93	10.72		-13.00	
11280.00	---	H		11.92	11.77		-13.00	
13160.00	---	H		13.33	12.30		-13.00	
15040.00	---	H		13.76	13.59		-13.00	
16920.00	---	H		15.27	13.08		-13.00	
18800.00	---	H		18.68	11.02		-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  $ERP/EIRP (dBm) = SG \text{ Setting}(dBm) + Antenna \text{ Gain} (dB/dBi) - Cable \text{ loss} (dB)$

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**Radiated Spurious Emission Measurement Result: WCDMA BII Mode**

Operation Mode	: TX CH High E1 Mode	Test Date:	Jul. 21, 2010
Fundamental Frequency	: 1907.60MHz	Test By:	Jason
Temperature	: 25	Pol:	Ver.
Humidity	: 65%		

Freq. (MHz)	SPA Reading (dBuV)	Ant.Pol. H/V	S.G Output (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)	ERP/EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
117.30	34.88	V	-70.06	-7.77	0.95	-78.78	-13.00	-65.78
307.42	31.65	V	-65.30	-7.88	1.54	-74.71	-13.00	-61.71
383.08	33.51	V	-64.99	-7.65	1.77	-74.41	-13.00	-61.41
590.66	31.72	V	-63.48	-7.78	2.30	-73.56	-13.00	-60.56
823.46	31.90	V	-57.69	-7.87	2.84	-68.41	-13.00	-55.41
1910.00	69.43	V	-37.47	10.08	4.21	-31.60	-13.00	-18.60
3815.20	48.21	V	-52.26	12.60	5.63	-45.29	-13.00	-32.29
3975.00	37.03	V	-62.83	12.60	5.77	-55.99	-13.00	-42.99
5722.80	---	V		13.48	8.12		-13.00	
7630.40	---	V		11.41	9.79		-13.00	
9538.00	---	V		11.95	10.87		-13.00	
11445.60	---	V		12.15	11.51		-13.00	
13353.20	---	V		13.00	12.44		-13.00	
15260.80	---	V		14.91	13.74		-13.00	
17168.40	---	V		14.53	13.40		-13.00	
19076.00	---	V		18.65	13.91		-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  $ERP/EIRP (dBm) = SG \text{ Setting}(dBm) + Antenna \text{ Gain} (dB/dBi) - Cable \text{ loss} (dB)$

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**Radiated Spurious Emission Measurement Result: WCDMA BII Mode**

Operation Mode	: TX CH High E1 Mode	Test Date:	Jul. 21, 2010
Fundamental Frequency	: 1907.60MHz	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 (dBd/dBi)	Cable Loss (dB)	ERP/EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
156.10	31.25	H	-70.87	-7.80	1.10	-79.77	-13.00	-66.77
279.29	32.36	H	-71.34	-7.91	1.47	-80.72	-13.00	-67.72
333.61	32.86	H	-69.23	-7.73	1.62	-78.58	-13.00	-65.58
611.03	32.45	H	-63.10	-7.79	2.34	-73.24	-13.00	-60.24
763.32	32.37	H	-60.69	-7.87	2.62	-71.18	-13.00	-58.18
1910.00	68.58	H	-37.22	10.08	4.21	-31.36	-13.00	-18.36
3815.20	47.34	H	-52.86	12.60	5.63	-45.89	-13.00	-32.89
5722.80	---	H		13.48	8.12		-13.00	
7630.40	---	H		11.41	9.79		-13.00	
9538.00	---	H		11.95	10.87		-13.00	
11445.60	---	H		12.15	11.51		-13.00	
13353.20	---	H		13.00	12.44		-13.00	
15260.80	---	H		14.91	13.74		-13.00	
17168.40	---	H		14.53	13.40		-13.00	
19076.00	---	H		18.65	13.91		-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  $ERP/EIRP (dBm) = SG \text{ Setting}(dBm) + Antenna \text{ Gain} (dB/dBi) - Cable \text{ loss} (dB)$

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**Radiated Spurious Emission Measurement Result: WCDMA BV Mode**

Operation Mode	: TX CH Low E2 Mode	Test Date:	Jul. 21, 2010
Fundamental Frequency	: 826.4MHz	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 (dBd/dBi)	Cable Loss (dB)	ERP/EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
143.49	32.45	V	-69.95	-7.79	1.06	-78.81	-13.00	-65.81
256.98	42.50	V	-55.22	-7.89	1.43	-64.55	-13.00	-51.55
595.51	32.06	V	-62.97	-7.79	2.32	-73.07	-13.00	-60.07
772.05	31.94	V	-58.38	-7.87	2.65	-68.90	-13.00	-55.90
914.64	31.29	V	-56.80	-7.96	3.02	-67.78	-13.00	-54.78
824.00	69.93	V	-19.65	-7.87	2.84	-30.37	-13.00	-17.37
1652.80	---	V		9.30	3.91		-13.00	
2479.20	---	V		10.07	4.81		-13.00	
3305.60	36.13	V	-65.93	12.19	5.06	-58.81	-13.00	-45.81
4132.00	---	V		12.62	5.69		-13.00	
4958.40	32.29	V	-63.66	12.65	6.79	-57.79	-13.00	-44.79
5784.80	---	V		13.58	8.14		-13.00	
6611.20	---	V		12.03	8.25		-13.00	
7437.60	---	V		11.48	10.00		-13.00	
8264.00	---	V		11.50	9.50		-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  $ERP/EIRP (dBm) = SG \text{ Setting}(dBm) + Antenna \text{ Gain} (dB/dBi) - Cable \text{ loss} (dB)$

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**Radiated Spurious Emission Measurement Result: WCDMA BV Mode**

Operation Mode	: TX CH Low E2 Mode	Test Date:	Jul. 21, 2010
Fundamental Frequency	: 826.4MHz	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 (dBd/dBi)	Cable Loss (dB)	ERP/EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
154.16	34.48	H	-67.43	-7.80	1.10	-76.33	-13.00	-63.33
233.70	37.25	H	-68.35	-7.87	1.35	-77.57	-13.00	-64.57
324.88	36.55	H	-65.72	-7.78	1.59	-75.09	-13.00	-62.09
573.20	32.53	H	-63.62	-7.77	2.24	-73.64	-13.00	-60.64
722.58	32.48	H	-61.38	-7.86	2.50	-71.74	-13.00	-58.74
824.00	77.79	H	-13.95	-7.87	2.84	-24.67	-13.00	-11.67
1652.80	---	H		9.30	3.91		-13.00	
2479.20	---	H		10.07	4.81		-13.00	
3305.60	40.01	H	-61.32	12.19	5.06	-54.20	-13.00	-41.20
4132.00	32.51	H	-66.84	12.62	5.69	-59.91	-13.00	-46.91
4958.40	33.15	H	-61.48	12.65	6.79	-55.61	-13.00	-42.61
5784.80	32.89	H	-59.17	13.58	8.14	-53.73	-13.00	-40.73
6611.20	---	H		12.03	8.25		-13.00	
7437.60	---	H		11.48	10.00		-13.00	
8264.00	---	H		11.50	9.50		-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.
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**Radiated Spurious Emission Measurement Result: WCDMA BV Mode**

Operation Mode	: TX CH Mid E2 Mode	Test Date:	Jul. 21, 2010
Fundamental Frequency	: 836.6 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 (dBd/dBi)	Cable Loss (dB)	ERP/EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
157.07	31.46	V	-70.30	-7.81	1.11	-79.21	-13.00	-66.21
236.61	49.88	V	-49.02	-7.88	1.36	-58.26	-13.00	-45.26
256.98	38.81	V	-58.91	-7.89	1.43	-68.24	-13.00	-55.24
337.49	34.74	V	-63.30	-7.71	1.64	-72.64	-13.00	-59.64
660.50	32.62	V	-61.00	-7.82	2.40	-71.22	-13.00	-58.22
1673.20	36.45	V	-70.87	9.36	3.93	-65.44	-13.00	-52.44
2509.80	---	V		10.09	4.83		-13.00	
3346.40	35.45	V	-66.53	12.28	5.13	-59.38	-13.00	-46.38
4183.00	---	V		12.62	5.65		-13.00	
5019.60	---	V		12.67	6.95		-13.00	
5856.20	---	V		13.68	8.16		-13.00	
6692.80	---	V		11.95	8.41		-13.00	
7529.40	---	V		11.45	10.06		-13.00	
8366.00	---	V		11.59	9.76		-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
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**Radiated Spurious Emission Measurement Result: WCDMA BV Mode**

Operation Mode	: TX CH Mid E2 Mode	Test Date:	Jul. 21, 2010
Fundamental Frequency	: 836.6 MHz	Test By:	Jason
Temperature	: 25	Pol:	Hor.
Humidity	: 65%		

Freq. (MHz)	SPA Reading (dBuV)	Ant.Pol. H/V	S.G Output (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)	ERP/EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
159.98	32.12	H	-70.41	-7.81	1.11	-79.33	-13.00	-66.33
259.89	34.71	H	-69.85	-7.90	1.44	-79.18	-13.00	-66.18
334.58	33.90	H	-68.17	-7.73	1.63	-77.52	-13.00	-64.52
508.21	31.85	H	-65.21	-7.73	2.10	-75.04	-13.00	-62.04
685.72	31.81	H	-62.84	-7.85	2.43	-73.11	-13.00	-60.11
1673.20	35.32	H	-71.18	9.36	3.93	-65.75	-13.00	-52.75
2509.80	---	H		10.09	4.83		-13.00	
3346.40	41.47	H	-59.82	12.28	5.13	-52.67	-13.00	-39.67
4183.00	33.02	H	-66.20	12.62	5.65	-59.24	-13.00	-46.24
5019.60	---	H		12.67	6.95		-13.00	
5856.20	35.09	H	-56.77	13.68	8.16	-51.24	-13.00	-38.24
6692.80	---	H		11.95	8.41		-13.00	
7529.40	---	H		11.45	10.06		-13.00	
8366.00	---	H		11.59	9.76		-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
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**Radiated Spurious Emission Measurement Result: WCDMA BV Mode**

Operation Mode	: TX CH High E2 Mode	Test Date:	Jul. 21, 2010
Fundamental Frequency	: 846.60MHz	Test By:	Jason
Temperature	: 25	Pol:	Ver.
Humidity	: 65%		

Freq. (MHz)	SPA Reading (dBuV)	Ant.Pol. H/V	S.G Output (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)	ERP/EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
94.02	43.54	V	-63.08	-7.75	0.89	-71.72	-13.00	-58.72
224.00	36.15	V	-63.71	-7.86	1.31	-72.88	-13.00	-59.88
264.74	39.21	V	-58.32	-7.90	1.45	-67.67	-13.00	-54.67
316.15	36.86	V	-60.40	-7.83	1.56	-69.80	-13.00	-56.80
531.49	32.06	V	-64.92	-7.75	2.14	-74.80	-13.00	-61.80
850.00	66.56	V	-22.38	-7.88	2.93	-33.19	-13.00	-20.19
1693.20	44.38	V	-62.90	9.42	3.96	-57.43	-13.00	-44.43
2539.80	---	V		10.18	4.81		-13.00	
3386.40	36.56	V	-65.34	12.36	5.19	-58.17	-13.00	-45.17
4233.00	---	V		12.63	5.62		-13.00	
5291.00	31.34	V	-64.01	12.94	7.57	-58.63	-13.00	-45.63
5079.60	---	V		12.73	7.09		-13.00	
5926.20	---	V		13.79	8.18		-13.00	
6772.80	---	V		11.87	8.58		-13.00	
7619.40	---	V		11.41	9.82		-13.00	
8466.00	---	V		11.68	10.02		-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
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**Radiated Spurious Emission Measurement Result: WCDMA BV Mode**

Operation Mode	: TX CH High E2 Mode	Test Date:	Jul. 21, 2010
Fundamental Frequency	: 846.60MHz	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 (dBd/dBi)	Cable Loss (dB)	ERP/EIRP (dBm)	Limit (dBm)	Safe Margin (dBm)
152.22	30.88	H	-70.82	-7.80	1.10	-79.72	-13.00	-66.72
249.22	34.69	H	-70.34	-7.89	1.42	-79.64	-13.00	-66.64
340.40	34.36	H	-67.59	-7.69	1.65	-76.93	-13.00	-63.93
595.51	32.09	H	-63.59	-7.79	2.32	-73.69	-13.00	-60.69
750.71	31.54	H	-61.75	-7.87	2.57	-72.19	-13.00	-59.19
850.00	76.66	H	-14.38	-7.88	2.93	-25.19	-13.00	-12.19
1693.20	44.52	H	-61.92	9.42	3.96	-56.46	-13.00	-43.46
2539.80	---	H		10.18	4.81		-13.00	
3386.40	41.52	H	-59.73	12.36	5.19	-52.55	-13.00	-39.55
4233.00	34.93	H	-64.18	12.63	5.62	-57.17	-13.00	-44.17
5079.60	---	H		12.73	7.09		-13.00	
5926.20	34.59	H	-57.07	13.79	8.18	-51.46	-13.00	-38.46
6772.80	---	H		11.87	8.58		-13.00	
7619.40	---	H		11.41	9.82		-13.00	
8466.00	---	H		11.68	10.02		-13.00	

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	80MHz - 1000MHz: 3.76dB
	1GHz - 13GHz: 4.45dB

Remark :

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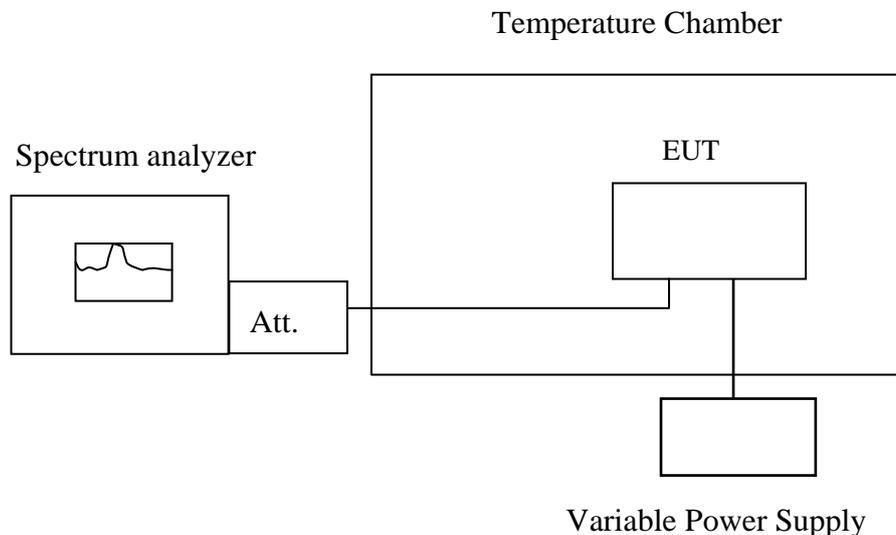
## 10. FREQUENCY STABILITY V.S. TEMPERATURE MEASUREMENT

### 10.1 Standard Applicable

According to FCC §2.1055(a)(1)

Frequency Tolerance: +/- 2.5 ppm

### 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°C operating frequency as reference frequency. Turn EUT off and set the chamber temperature to -30°C. After the temperature stabilized for approximately 30 minutes recorded the frequency. Repeat step measure with 10°C increased per stage until the highest temperature of +50°C reached.

### 10.4 Measurement Equipment Used:

Refer to section 2.4 in this report

### 10.5 Measurement Result

Please refer to the original modular report: *Qualcomm Incorporated. Report no. 80-VN379-203 Rev. A*

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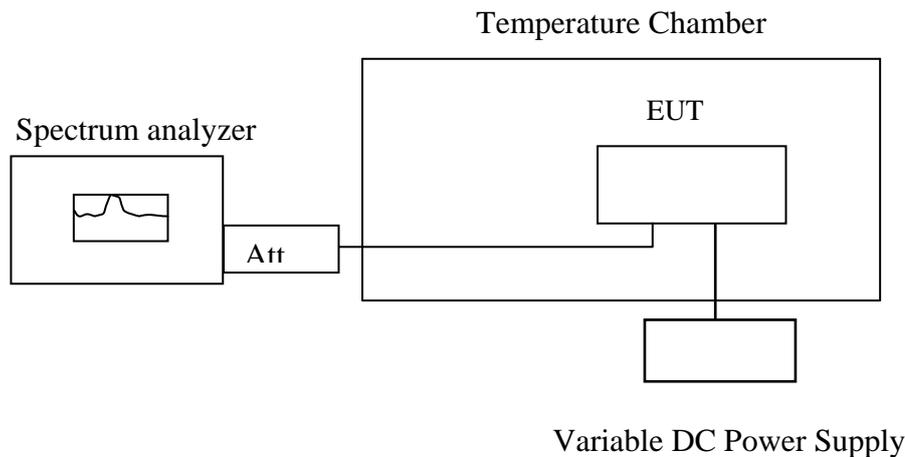
## 11. FREQUENCY STABILITY V.S. VOLTAGE MEASUREMENT

### 11.1 Standard Applicable

According to FCC §2.1055(d)(2)

Frequency Tolerance: +/- 2.5 ppm

### 11.2 Test Set-up:



*Note: Measurement setup for testing on Antenna connector*

### 11.3 Measurement Procedure

Set chamber temperature to 25°C. 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:

Refer to section 2.4 in this report

### 11.5 Measurement Result

Please refer to the original modular report: *Qualcomm Incorporated. Report no. 80-VN379-203 Rev. A*

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