Report No: CCIS12120029901

FCC REPORT

Applicant:	Verykool USA Inc
Address of Applicant:	3636 Nobel Drive, Suite 325, San Diego, CA 92122 USA
Equipment Under Test (EUT)	
Product Name:	Mobile Phone
Model No.:	RS75
FCC ID:	WA6RS75
Applicable standards:	FCC CFR Title 47 Part 2: 2011 FCC CFR Title 47 Part22 Subpart H: 2011 FCC CFR Title 47 Part24 Subpart E: 2011
Date of sample receipt:	14 Dec., 2012
Date of Test:	19 Dec., 2012 to 05 Jan.,2013
Date of report issued:	06 Jan.,2013
Test Result :	PASS *

* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:

Bruce Zhang
Laboratory Manage

2. Version

Version No.	Date	Description
00	06 Jan.,2013	*Original*

Prepared by: Lisa chen ***Date:*** 06 Jan.,2013

Report Clerk

Reviewed by: Vincent chen ***Date:*** 06 Jan.,2013

Project Engineer

3. Contents

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4. Test Summary

Test Item	Section in CFR 47	Result
RF Exposure (SAR)	Part 1.1307 Part 2.1093	Passed* (Please refer to SAR Report)
RF Output Power	Part 2.1046 Part 22.913 (a)(2) Part 24.232 (c)	Pass
Modulation Characteristics	Part 2.1047	Pass
99% & -26 dB Occupied Bandwidth	Part 2.1049 Part 22.917 Part 24.238	Pass
Spurious Emissions at Antenna Terminal	Part 2.1051 Part 22.917 (a) Part 24.238 (a)	Pass
Field Strength of Spurious Radiation	Part 2.1053 Part 22.917 (a) Part 24.238 (a)	Pass
Out of band emission, Band Edge	Part 22.917 (a) Part 24.238 (a)	Pass
Frequency stability vs. temperature	Part 2.1055(a)(1)(b)	Pass
Frequency stability vs. voltage	Part 2.1055(d)(1)(2)	Pass

Pass: The EUT complies with the essential requirements in the standard.

5. General Information

5.1 Client Information

Applicant:	Verykool USA Inc
Address of Applicant:	4350 Executive Dr. #100, San Diego
Manufacturer:	Verykool Wireless Technology Ltd.
Address of Manufacturer:	Room 1701, Reward Building C, No.203, 2nd Section of WangJing, Li Ze Zhong Yuan, ChaoYang District, Beijing, P.R. of China 100102

5.2 General Description of E.U.T.

Product Name:	Mobile Phone
Model No.:	RS75
Operation Frequency range:	GSM 850: 824.20MHz-848.80MHz PCS1900: 1850.20MHz-1909.80MHz WCDMA Band V:826.4MHz-846.6MHz WCDMA Band II:1852.4 MHz -1907.6 MHz
IMEI:	IMEI 1:866755000000010, IMEI 2:866755000000028
Software Version:	WK-T350A_B05-S01_V03_20121212
Hardware Version:	GW_MX06M_V1.0
Modulation type:	GSM/GPRS:GMSK, UMTS:QPSK
Antenna type:	Internal Antenna
Antenna gain:	GSM850: -0.5 dBi PCS1900: -0.8 dBi WCDMA Band V: -0.5 dBi WCDMA Band II: -0.82 dBi
AC adapter:	Model:CYSK05-050050 Input:100-240V AC,50/60Hz 0.15A Output:5V DC MAX500mA
Power supply:	Rechargeable Li-ion Battery DC3.7V/1350mAh

Operation Frequency List:

GSM 850		PCS1900	
Channel:	Frequency (MHz)	Channel:	Frequency (MHz)
128	824.20	512	1850.20
129	824.40	513	1850.40
….	….	….	….
189	836.40	660	1879.80
190	836.60	661	1880.00
191	836.80	662	1880.20
…	…	…	…
250	848.60	809	1909.60
251	848.80	810	1909.80

Regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

GSM850			PCS1900		
	Channel	Frequency(MHz)		Channel	Frequency(MHz)
Lowest channel	128	824.20	Lowest channel	512	1850.20
Middle channel	190	836.60	Middle channel	661	1880.00
Highest channel	251	848.80	Highest channel	810	1909.80
WCDMA Band V			WCDMA Band II		
	Channel	Frequency(MHz)		Channel	Frequency(MHz)
Lowest channel	4132	826.40	Lowest channel	9262	1852.40
Middle channel	4180	836.00	Middle channel	9400	1880.00
Highest channel	4233	846.60	Highest channel	9538	1907.60

5.3 Test mode:

Communicate mode (GSM850)	Keep the EUT in communicating mode on GSM850 band.
Data mode (GPRS850)	Keep the EUT in data communicating mode on GPRS850 band.
Communicate mode (PCS1900)	Keep the EUT in communicating mode on PCS1900 band.
Data mode (GPRS1900)	Keep the EUT in data communicating mode on GPRS1900 band.
Communicate mode (RMC UMTS 850)	Keep the EUT in data communicating mode on RMC in UMTS850 (12.2kbps, 64kbps, 144kbps&384kbps).
Data mode (HSDPA UMTS 850)	Keep the EUT in data communicating mode on HSDPA in UMTS 850(Sub-test 1~Sub-test 4).
Communicate mode (RMC UMTS 1900)	Keep the EUT in data communicating mode on RMC in UMTS850 (12.2kbps, 64kbps, 144kbps&384kbps).
Data mode (HSDPA UMTS 850)	Keep the EUT in data communicating mode on HSDPA in UMTS 1900. (Sub-test 1~Sub-test 4).
Remark :	Pre-test output power of all modes, and found GSM 900, PCS 1900, UMTS 850 12.2k RMC & UMTS 1900 12.2k RMC were the worse case. The details please refer to section 6.5.

5.4 Related Submittal(s) / Grant (s)

This submittal(s) (test report) is filing to comply with Section Part 22 subpart H and Part 24 subpart E of the FCC CFR 47 Rules.

5.5 Test Methodology

Both conducted and radiated testing were performed according to the procedures document on TIA/EIA 603 and FCC CFR 47.1046, 2.1047, 2.1049, 2.1051, 2.1053, 2.1055 and 2.1057

5.6 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

● **FCC —Registration No.:** 817957

China Certification & Inspection Services Co., Ltd., Shenzhen EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in out files. Registration 817957, February 27, 2012

● **Industry Canada (IC)**

The 3m Semi-anechoic chamber of China Certification & Inspection Services Co., Ltd. Has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 10106A-1.

5.7 Test Location

All tests were performed at:

China Certification & Inspection Services Co., Ltd.
Address: 1st Floor, Block No.2, Laodong Industrial Zone, Xixiang Road Baoan District, Shenzhen, China
Tel: 0755-23118282
Fax: 0755-23116366

5.8 Test Instruments list

Radiated Emission:						
Item	**Test Equipment**	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal.Date (dd-mm-yy)**	**Cal.Due date (dd-mm-yy)**
1	3m Semi- Anechoic Chamber	SAEMC	9(L)*6(W)* 6(H)	CCIS0001	June 09 2012	June 08 2013
2	BiConiLog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	CCIS0005	June 04 2012	June 03 2013
3	Double -ridged waveguide horn	SCHWARZBECK MESS-ELEKTRONIK	BBHA9120D	CCIS0006	May 30 2012	May 29 2013
4	EMI Test Software	AUDIX	E3	N/A	N/A	N/A
5	Coaxial Cable	CCIS	N/A	CCIS0016	Apr. 01 2012	Mar. 31 2013
6	Coaxial Cable	CCIS	N/A	CCIS0017	Apr. 01 2012	Mar. 31 2013
7	Coaxial cable	CCIS	N/A	CCIS0018	Apr. 01 2012	Mar. 31 2013
8	Coaxial Cable	CCIS	N/A	CCIS0019	Apr. 01 2012	Mar. 31 2013
9	Coaxial Cable	CCIS	N/A	CCIS0087	Apr. 01 2012	Mar. 31 2013
10	Amplifier(10kHz-1.3GHz)	HP	8447D	CCIS0003	Apr. 01 2012	Mar. 31 2013
11	Amplifier(1GHz-18GHz)	Compliance Direction Systems Inc.	PAP-1G18	CCIS0011	June 09 2012	June 08 2013
12	Pre-amplifier (18-26GHz)	Rohde & Schwarz	AFS33-18002 650-30-8P-44	GTS218	Apr. 01 2012	Mar. 31 2013
13	Horn Antenna	ETS-LINDGREN	3160	GTS217	Mar. 30 2012	Mar. 29 2013
14	Printer	HP	HP LaserJet P1007	N/A	N/A	N/A
15	Positioning Controller	UC	UC3000	CCIS0015	N/A	N/A
16	Spectrum analyzer 9k-30GHz	Rohde & Schwarz	FSP	CCIS0023	May. 29 2012	May. 28 2013
17	EMI Test Receiver	Rohde & Schwarz	ESPI	CCIS0022	Apr 01 2012	Mar. 31 2013
18	Loop antenna	Laplace instrument	RF300	EMC0701	Aug. 12 2012	Aug. 11 2013
19	Universal radio communication tester	Rhode & Schwarz	CMU200	CCIS0069	May. 29 2012	May. 28 2013

6. System test configuration

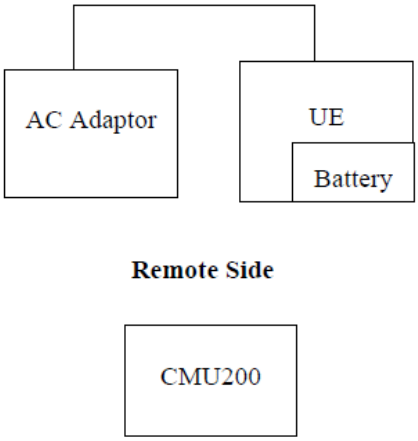
6.1 EUT Configuration

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

6.2 EUT Exercise

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

6.3 Configuration of Tested System

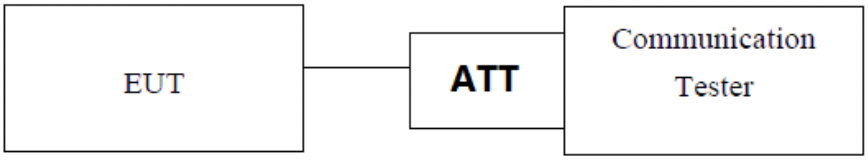


Remote Side

6.4 DESCRIPTION OF TEST MODES

The EUT has been tested under operating condition.
EUT staying in continuous transmitting mode. Channel Low, Mid and High for each type band with rated data rate were chosen for full testing.
The field strength of spurious radiation emission was measured as EUT stand-up position (H mode) and lie down position (E1, E2 mode) for three modes (GSM850, PCS1900, WCDMA Band V and WCDMA Band II) with power adaptor, earphone and Data cable. The worst-case H mode for GSM850, PCS1900, UMTS 850 and UMTS 1900.

6.5 Conducted Output Power

Test Requirement:	FCC part22.913(a) and FCC part24.232(b)
Test Method:	FCC part2.1046
Limit:	GSM850 7W PCS1900 2W WCDMA Band V: 7W WCDMA Band II: 2W
Test setup:	 *Note: Measurement setup for testing on Antenna connector*
Test Procedure:	The transmitter output was connected to a calibrated attenuator, the other end of which was connected to the CMU200. Transmitter output was read off the CMU200 in dBm.
Test Instruments:	Refer to section 5.8 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

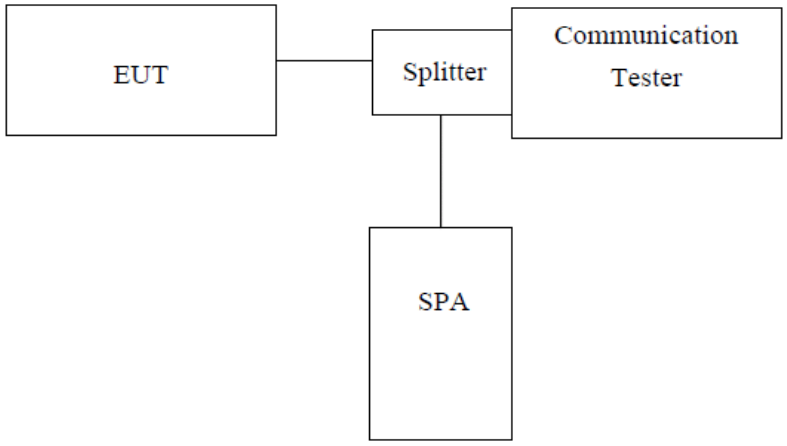
Measurement Data

EUT Mode	Channel	Frequency (MHz)	Burst Average power (dBm)	Limit(dBm)	Result
GSM 850	128	824.20	31.63	38.45	Pass
	190	836.60	**31.74**		
	251	848.80	31.74		
GPRS 850 (1 Uplink slot)	128	824.20	31.64		
	190	836.60	31.69		
	251	848.80	31.67		
GPRS 850 (2 Uplink slots)	128	824.20	30.78		
	190	836.60	30.80		
	251	848.80	30.83		
GPRS 850 (3 Uplink slots)	128	824.20	29.10		
	190	836.60	29.11		
	251	848.80	29.33		
GPRS 850 (4 Uplink slots)	128	824.20	28.33		
	190	836.60	28.35		
	251	848.80	28.35		
PCS 1900	512	1850.20	**30.85**	33.00	Pass
	661	1880.00	30.54		
	810	1909.80	30.15		
GPRS 1900 (1 Uplink slot)	512	1850.20	30.83		
	661	1880.00	30.51		
	810	1909.80	30.12		
GPRS 1900 (2 Uplink slots)	512	1850.20	29.95		
	661	1880.00	29.62		
	810	1909.80	29.28		
GPRS 1900 (3 Uplink slots)	512	1850.20	28.19		
	661	1880.00	27.94		
	810	1909.80	27.72		
GPRS 1900 (4 Uplink slots)	512	1850.20	27.38		
	661	1880.00	27.17		
	810	1909.80	26.88		

EUT Mode		Channel	Frequency (MHz)	Burst Average power (dBm)	Limit(dBm)	Result
UMTS 850 HSDPA	Subtest 1	4132	826.40	25.32	38.45	Pass
		4180	836.00	25.14		
		4233	846.60	24.68		
	Subtest 2	4132	826.40	25.26		
		4180	836.00	25.12		
		4233	846.60	24.51		
	Subtest 3	4132	826.40	24.98		
		4180	836.00	25.13		
		4233	846.60	24.49		
	Subtest 4	4132	826.40	25.24		
		4180	836.00	25.22		
		4233	846.60	24.56		
UMTS 850 RMC	12.2kbps	4132	826.40	**25.38**		
		4180	836.00	25.27		
		4233	846.60	24.64		
	64kbps	4132	826.4	25.32		
		4180	836	25.11		
		4233	846.6	24.35		
	144kbps	4132	826.4	25.31		
		4180	836	25.26		
		4233	846.6	24.52		
	384kbps	4132	826.4	25.26		
		4180	836	25.21		
		4233	846.6	24.59		

EUT Mode		Channel	Frequency (MHz)	Burst Average power (dBm)	Limit(dBm)	Result
UMTS1900 HSDPA	Subtest 1	9262	1852.40	25.20	33.00	Pass
		9400	1880.00	25.06		
		9538	1907.60	24.65		
	Subtest 2	9262	1852.40	25.21		
		9400	1880.00	24.93		
		9538	1907.60	24.54		
	Subtest 3	9262	1852.40	25.16		
		9400	1880.00	24.83		
		9538	1907.60	24.57		
	Subtest 4	9262	1852.40	25.23		
		9400	1880.00	24.94		
		9538	1907.60	24.60		
UMTS1900 RMC	12.2kbps	9262	1852.40	**25.28**	33.00	Pass
		9400	1880.00	25.04		
		9538	1907.60	24.73		
	64kbps	9262	1852.4	25.24		
		9400	1880	25.01		
		9538	1907.6	24.65		
	144kbps	9262	1852.4	25.15		
		9400	1880	25.03		
		9538	1907.6	24.75		
	384kbps	9262	1852.4	25.18		
		9400	1880	25.06		
		9538	1907.6	24.69		

6.6 Occupy Bandwidth

Test Requirement:	FCC part22.913(a) and FCC part24.232(b)
Test Method:	FCC part2.1049
Test setup:	 *Note: Measurement setup for testing on Antenna connector*
Test Procedure:	1. The EUT's output RF connector was connected with a short cable to the spectrum analyzer 2. RBW was set to about 1% of emission BW, VBW= 3 times RBW. 3. -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.
Test Instruments:	Refer to section 5.8 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

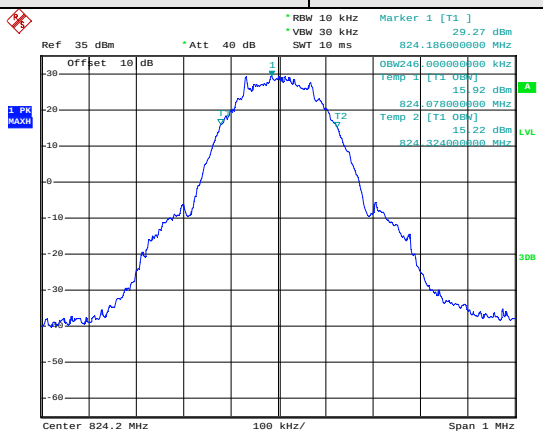
Measurement Data

EUT Mode	Channel	Frequency (MHz)	99% Occupy bandwidth (kHz)	-26dB bandwidth (kHz)
GSM 850	128	824.2	246	320
	190	836.6	246	312
	251	848.8	244	324
PCS 1900	512	1850.2	246	326
	661	1880.0	246	326
	810	1909.8	246	318
UMTS850 12.2k RMC	4132	824.40	4180	4680
	4180	836.00	4200	4680
	4233	846.60	4180	4720
UMTS1900 12.2k RMC	9262	1852.40	4180	4720
	9400	1880.00	4180	4720
	9538	1907.60	4122	4760
UMTS850 HSDPA	4132	824.40	4680	4160
	4180	836.00	4700	4180
	4233	846.60	4700	4180
UMTS1900 HSDPA	9262	1852.40	4720	4180
	9400	1880.00	4700	4160
	9538	1907.60	4760	4200

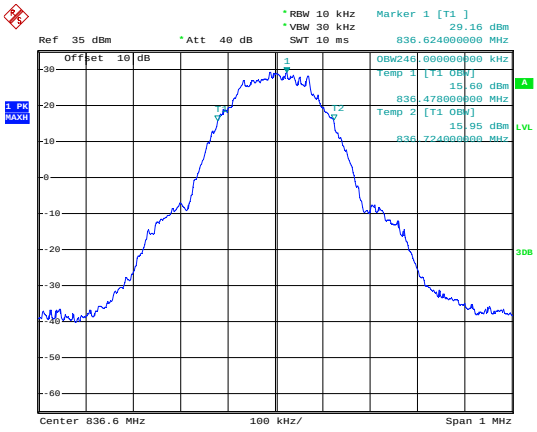
Note: GSM & GPRS use the same modulation technical (GMSK), so the 99% OBW of GPRS not performed.

Test plot as follows:

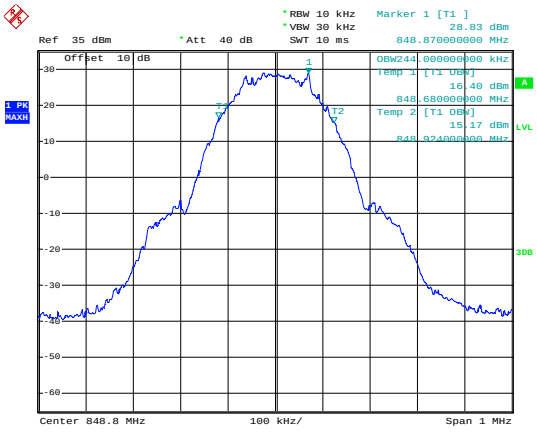
Test Item:	99% Occupy bandwidth	Test Mode:	GSM850



Lowest channel

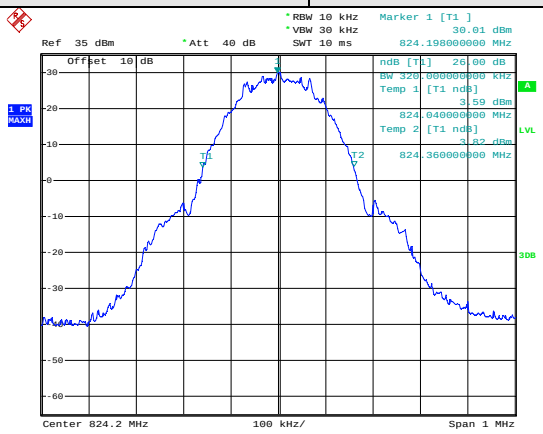


Middle channel

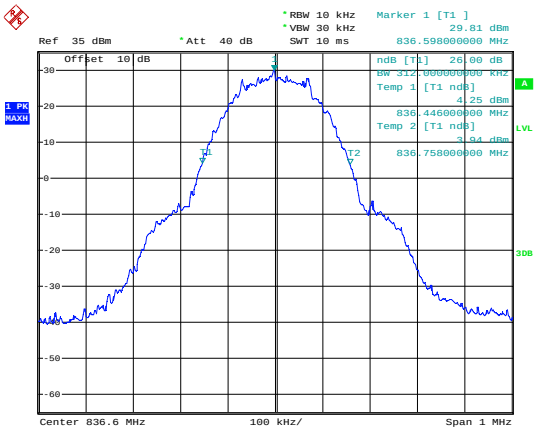


Highest channel

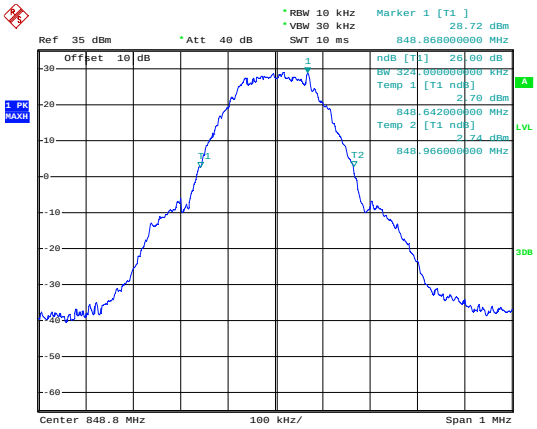
Test Item:	-26dB bandwidth	Test Mode:	GSM850



Lowest channel

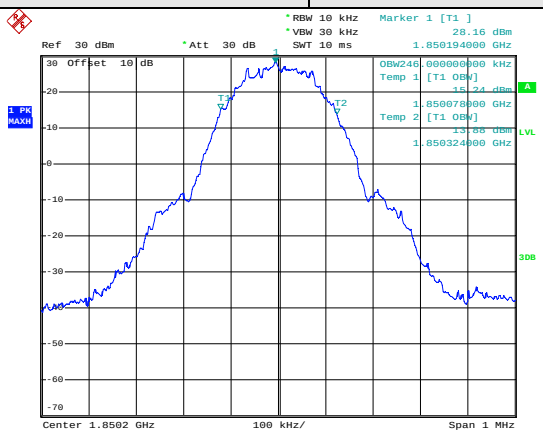


Middle channel

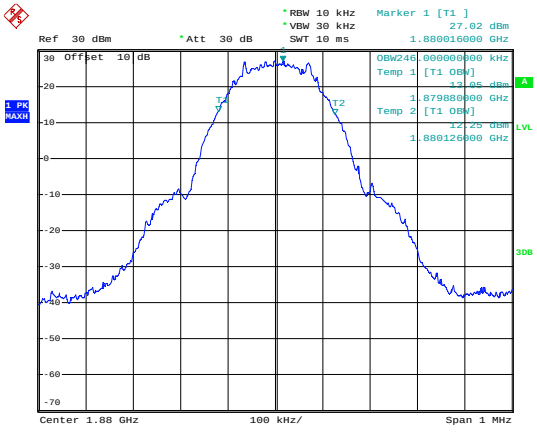


Highest channel

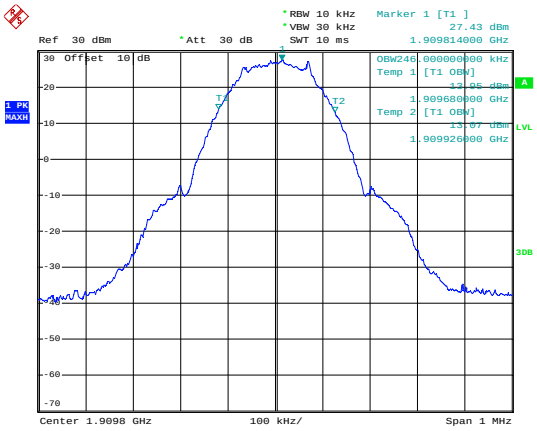
Test Item:	99% Occupy bandwidth	Test Mode:	PCS 1900



Lowest channel

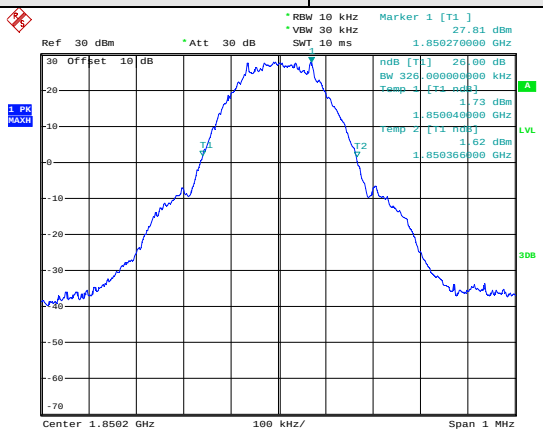


Middle channel

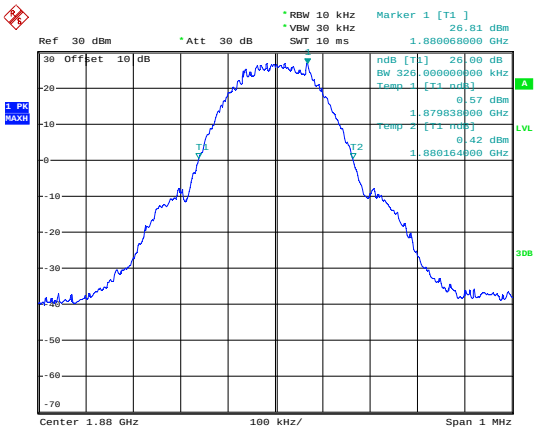


Highest channel

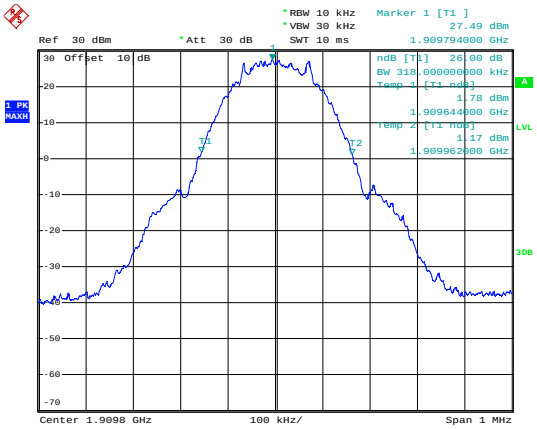
Test Item:	-26dB bandwidth	Test Mode:	PCS 1900



Lowest channel

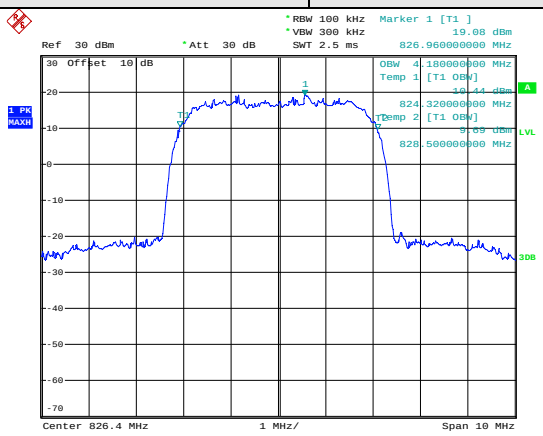


Middle channel

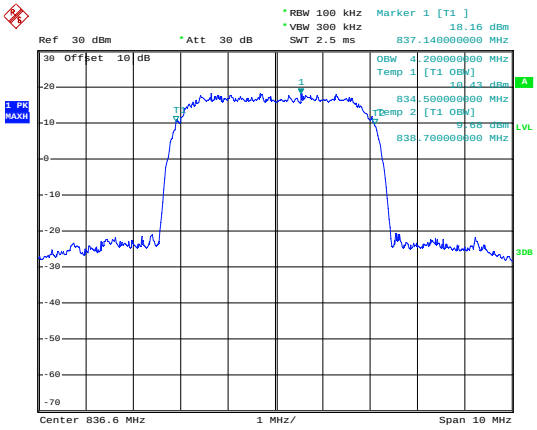


Highest channel

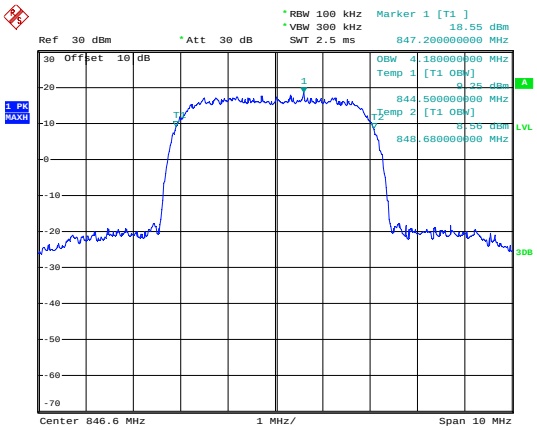
Test Item:	99% Occupy bandwidth	Test Mode:	UMTS 850 12.2k RMC



Lowest channel

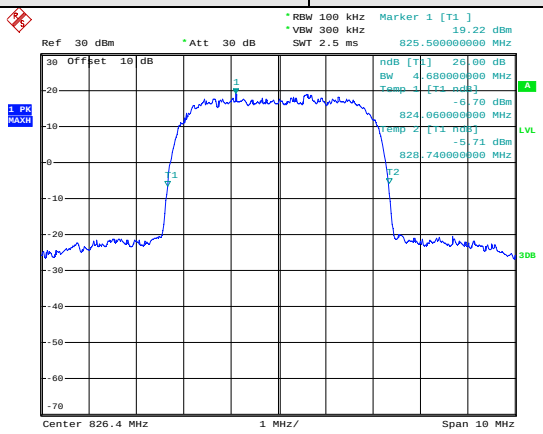


Middle channel

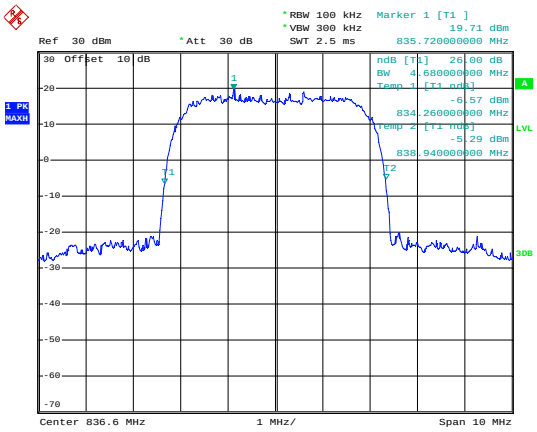


Highest channel

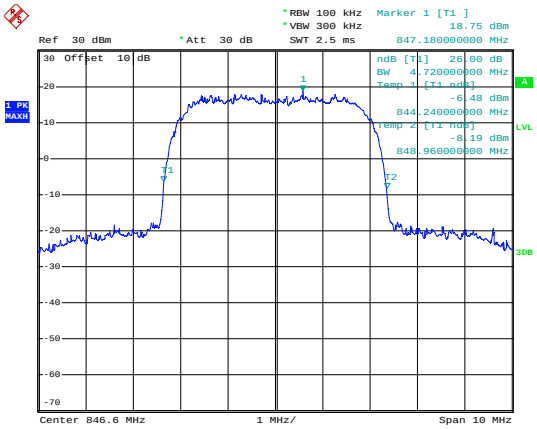
Test Item:	-26dB bandwidth	Test Mode:	UMTS 850 12.2k RMC



Lowest channel

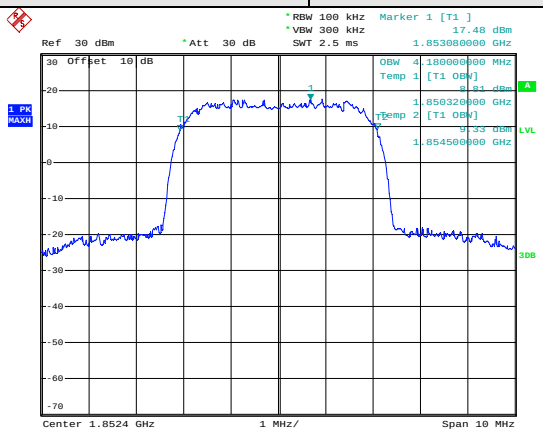


Middle channel

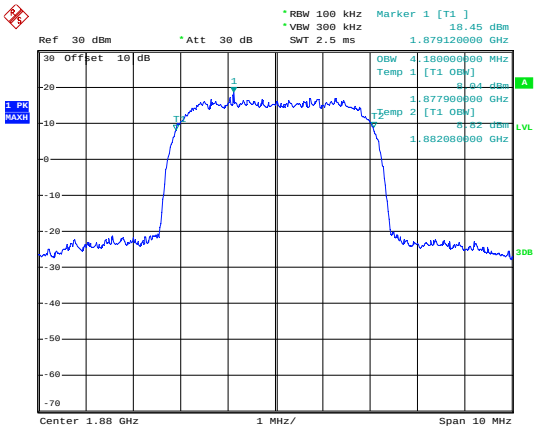


Highest channel

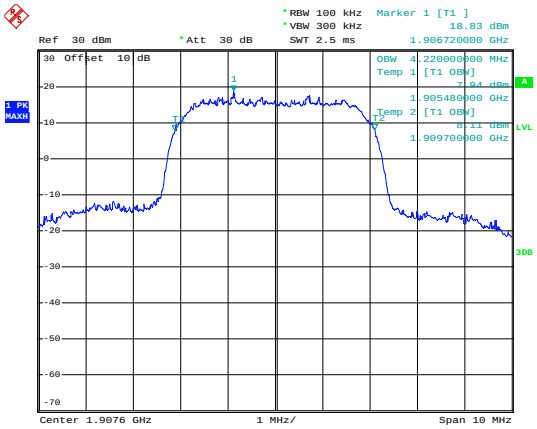
Test Item:	99% Occupy bandwidth	Test Mode:	UMTS 1900 12.2k RMC



Lowest channel

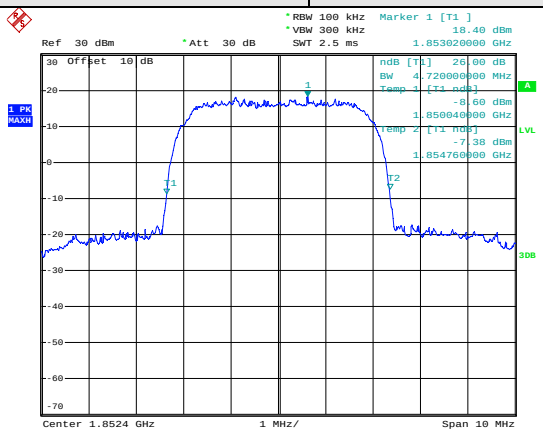


Middle channel

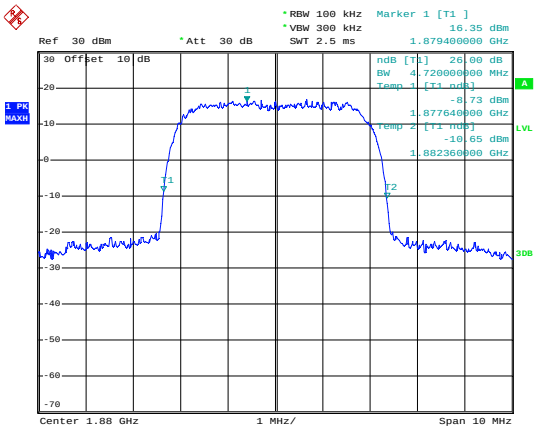


Highest channel

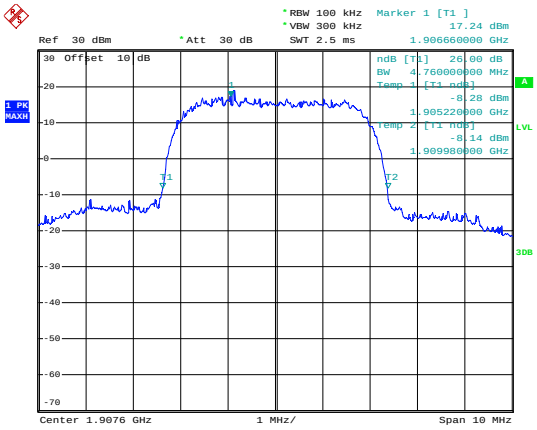
Test Item:	-26dB bandwidth	Test Mode:	UMTS 1900 12.2k RMC



Lowest channel

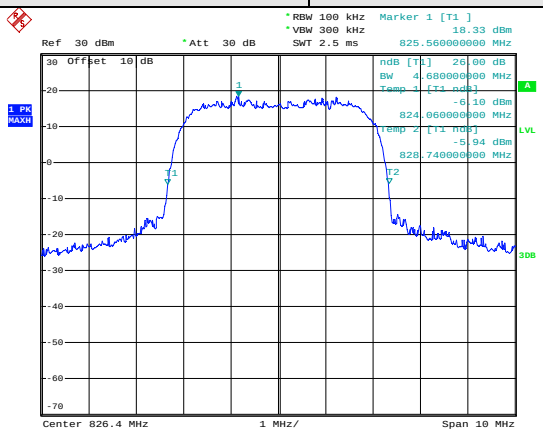


Middle channel

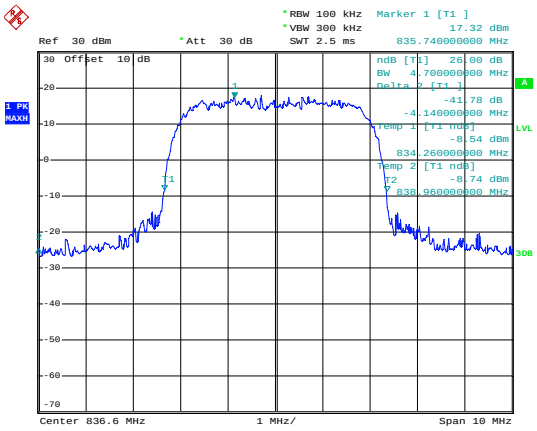


Highest channel

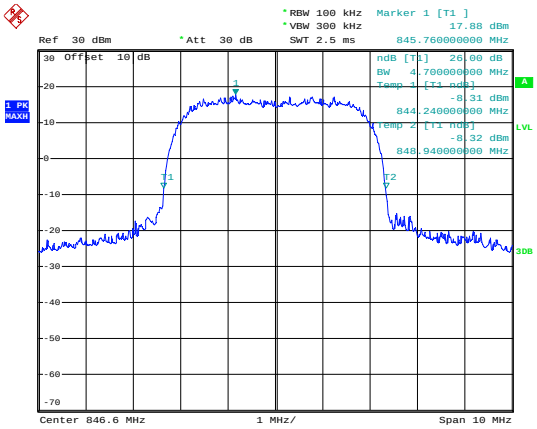
Test Item:	-26dB bandwidth	Test Mode:	UMTS 850 HSDPA



Lowest channel

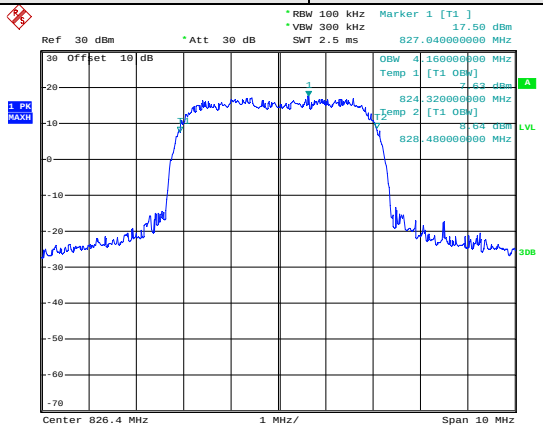


Middle channel

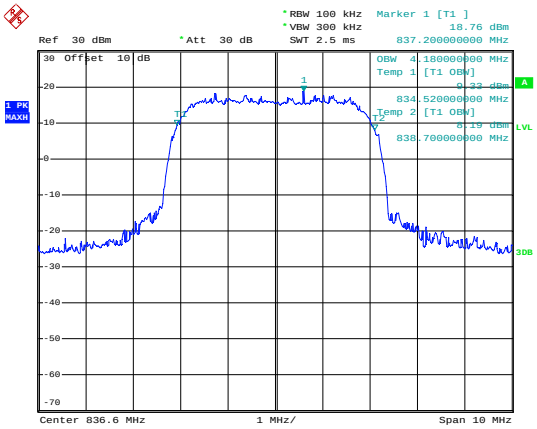


Highest channel

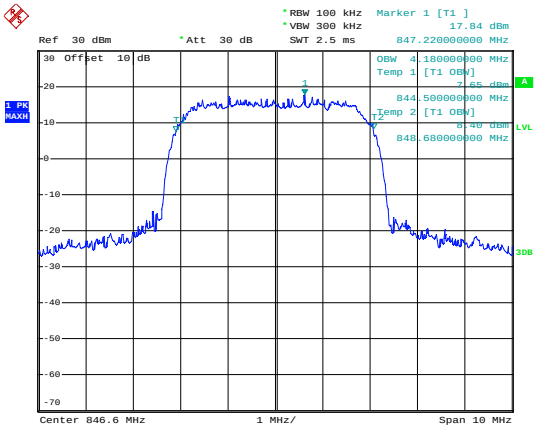
Test Item:	99% Occupy bandwidth	Test Mode:	UMTS 850 HSDPA



Lowest channel

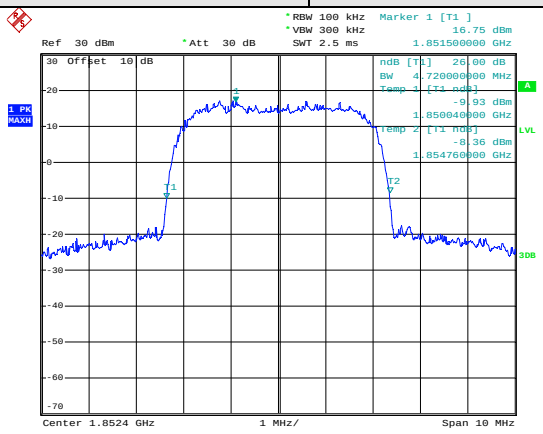


Middle channel

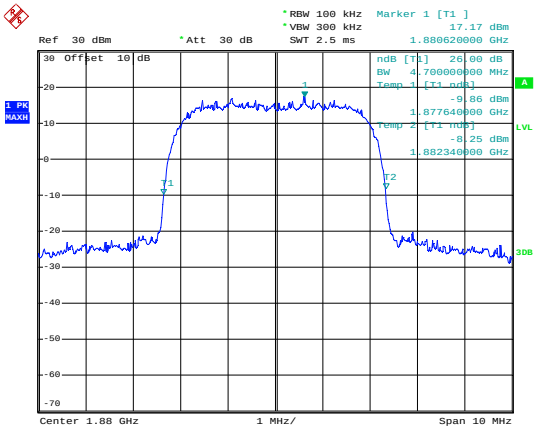


Highest channel

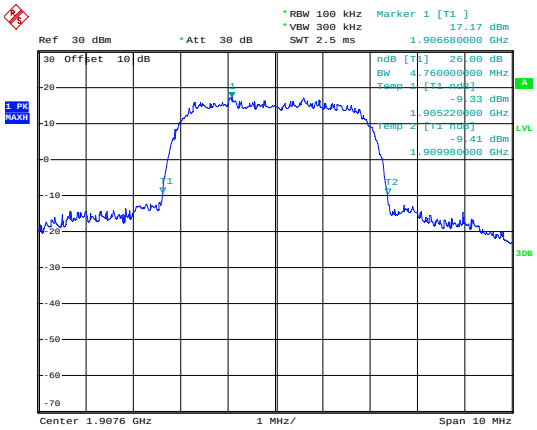
Test Item:	-26dB bandwidth	Test Mode:	UMTS 1900 HSDPA



Lowest channel

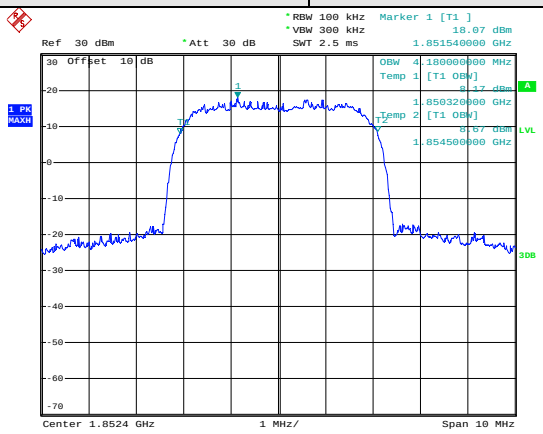


Middle channel

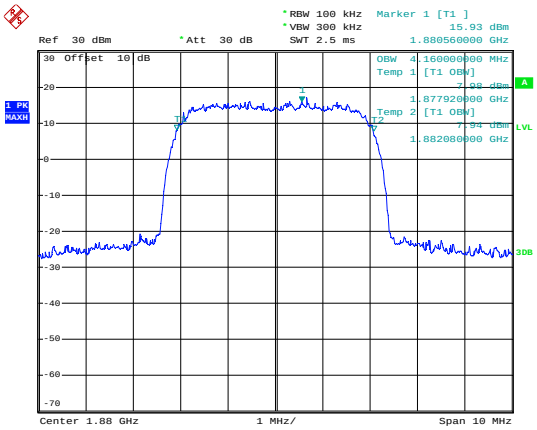


Highest channel

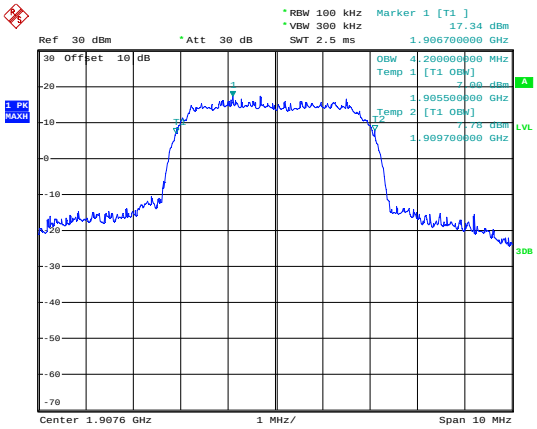
Test Item:	99% Occupy bandwidth	Test Mode:	UMTS 1900 HSDPA



Lowest channel



Middle channel

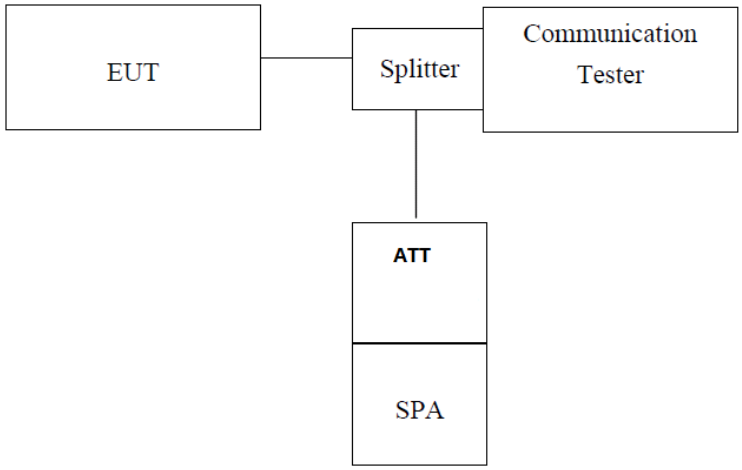


Highest channel

6.7 MODULATION CHARACTERISTIC

According to FCC § 2.1047(d), Part 22H & 24E there is no specific requirement for digital modulation, therefore modulation characteristic is not presented.

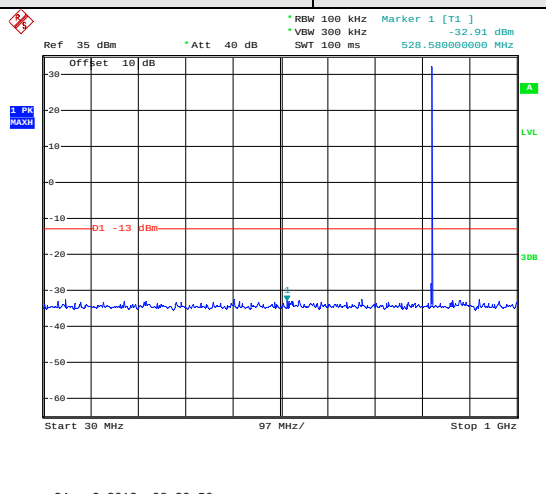
6.8 Out of band emission at antenna terminals

Test Requirement:	FCC part22.917(a) and FCC part24.238(a)
Test Method:	FCC part2.1051
Limit:	-13dBm
Test setup:	 *Note: Measurement setup for testing on Antenna connector*
Test Procedure:	1 The RF output of the transceiver was connected to a spectrum analyzer through appropriate attenuation. 2 The resolution bandwidth of the spectrum analyzer was set at 100 kHz when below 1GHz, 1MHz when above 1 GHz; sufficient scans were taken to show the out of band Emissions if any up to 10th harmonic. 3 For the out of band: Set the RBW=100 kHz, VBW=300 kHz when below 1 GHz, RBW =1 MHz, VBW=3 MHz when above 1 GHz, Start=30MHz, Stop= 10th harmonic. 4 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.
Test Instruments:	Refer to section 5.8 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

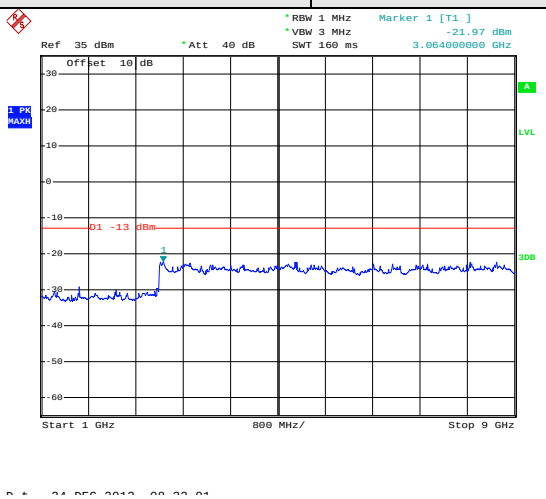
Test plot as follows:

Spurious emission

Test Mode:	GSM850	Test Channel:	Lowest channel

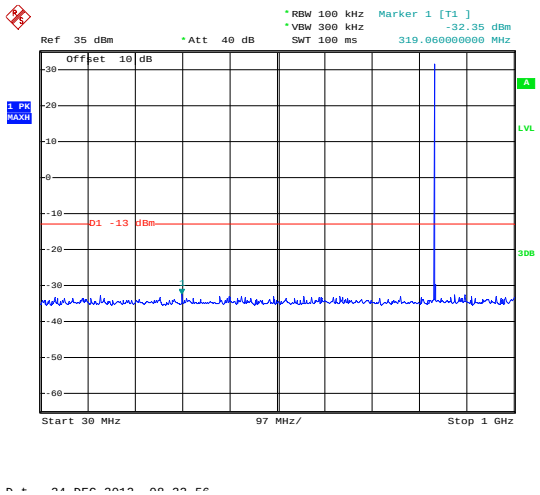


30MHz~1GHz

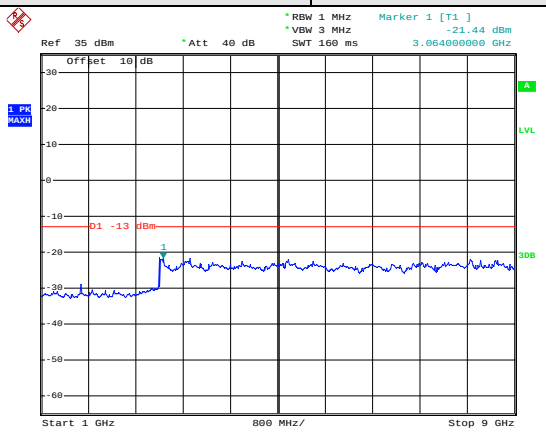


1GHz~9GHz

Test Mode:	GSM850	Test Channel:	Middle channel

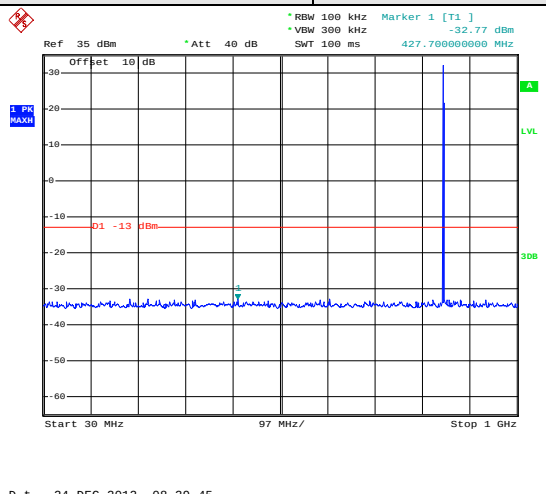


30MHz~1GHz

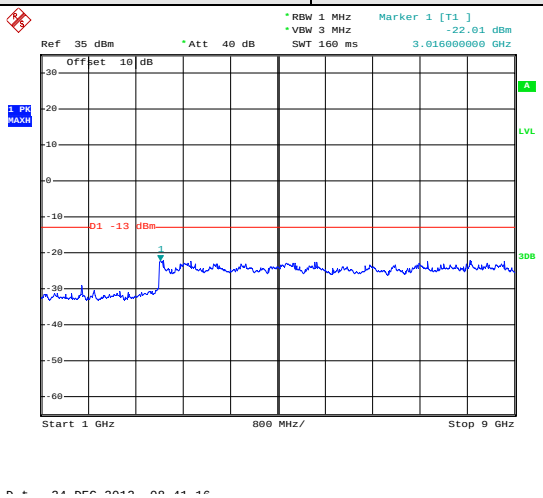


1GHz~9GHz

Test Mode:	GSM850	Test Channel:	Highest channel

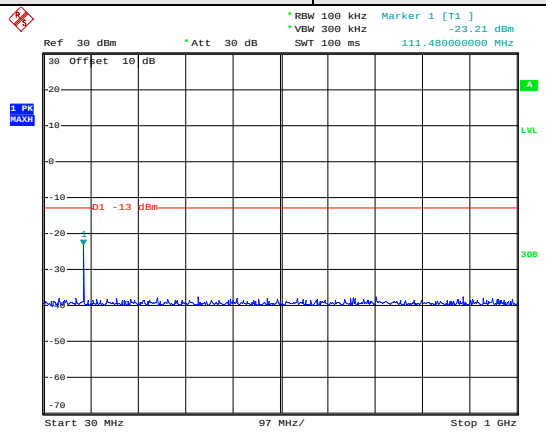


30MHz~1GHz

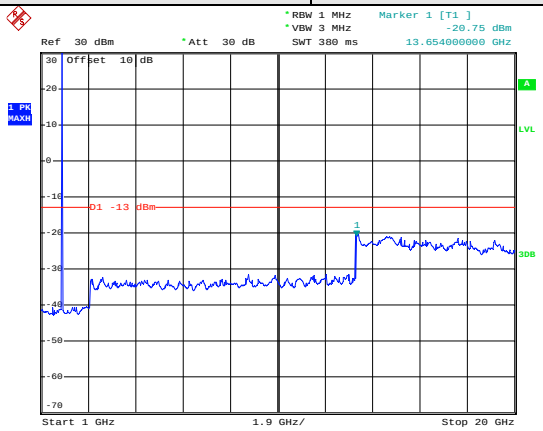


1GHz~9GHz

Test Mode:	PCS1900	Test Channel:	Lowest channel

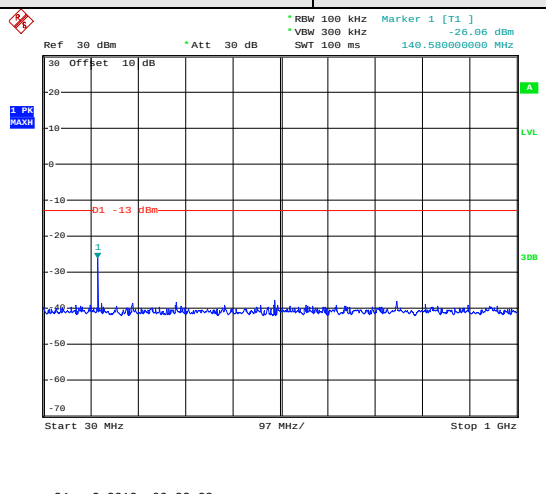


30MHz~1GHz

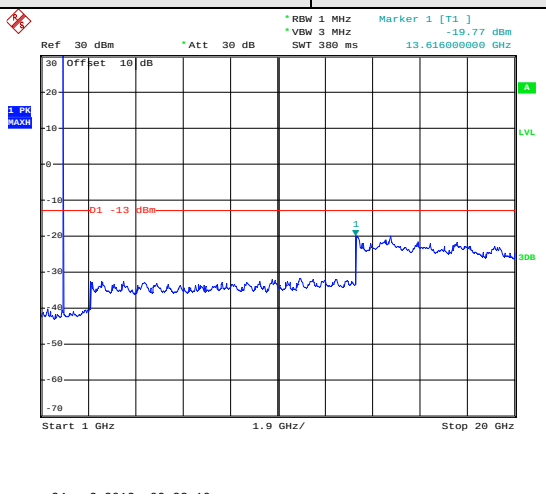


1GHz~20GHz

Test Mode:	PCS1900	Test Channel:	Middle channel

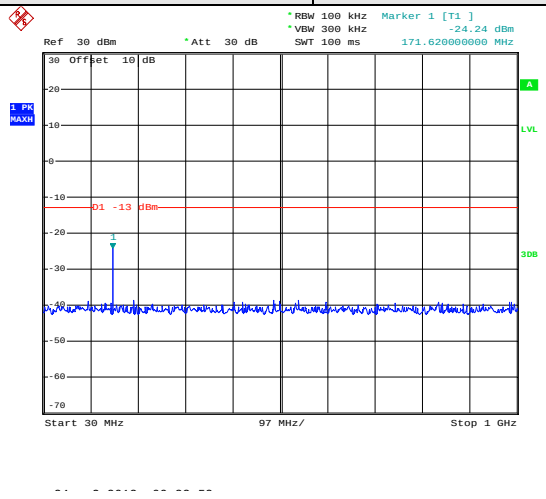


30MHz~1GHz

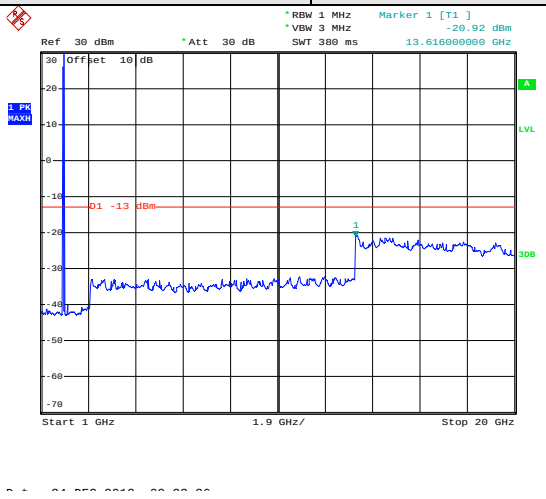


1GHz~20GHz

Test Mode:	PCS1900	Test Channel:	Highest channel

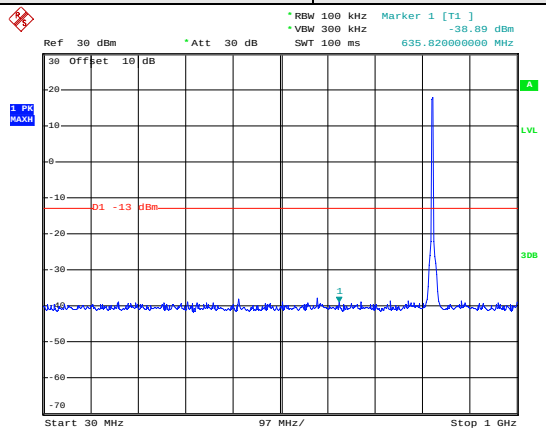


30MHz~1GHz

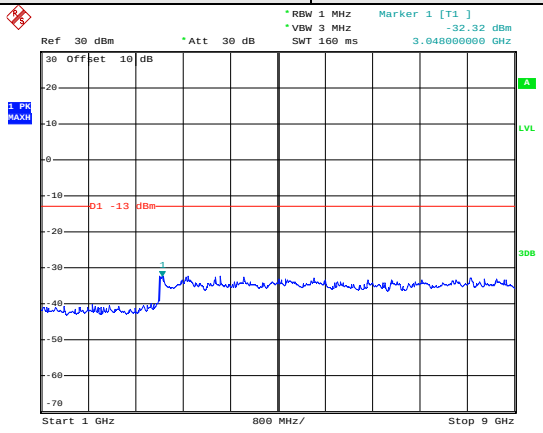


1GHz~20GHz

Test Mode:	UMTS 850 12.2k RMC	Test Channel:	Lowest channel

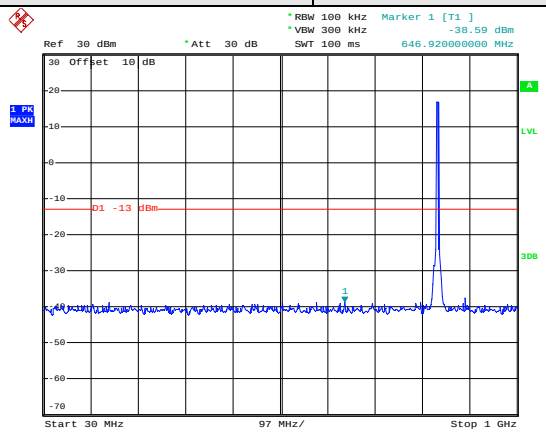


30MHz~1GHz

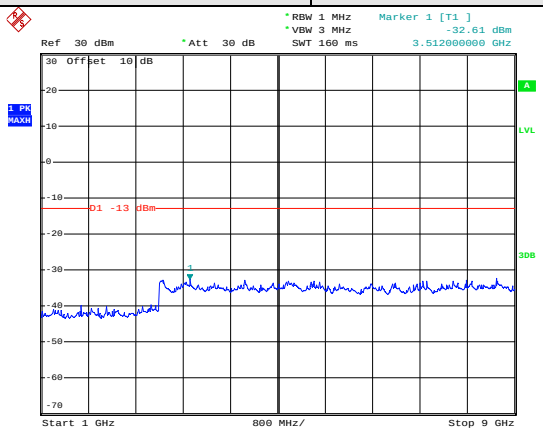


1GHz~9GHz

Test Mode:	UMTS 850 12.2k RMC	Test Channel:	Middle channel

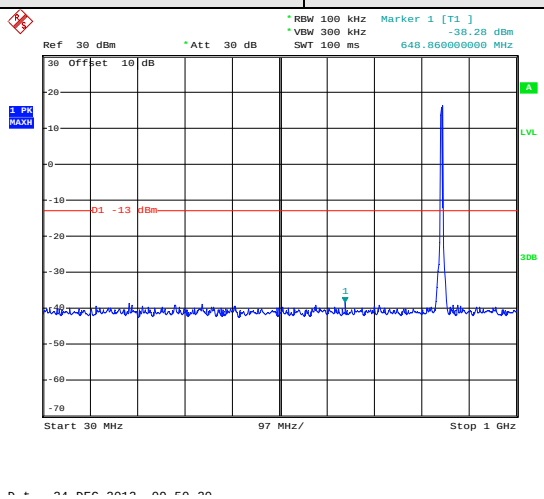


30MHz~1GHz

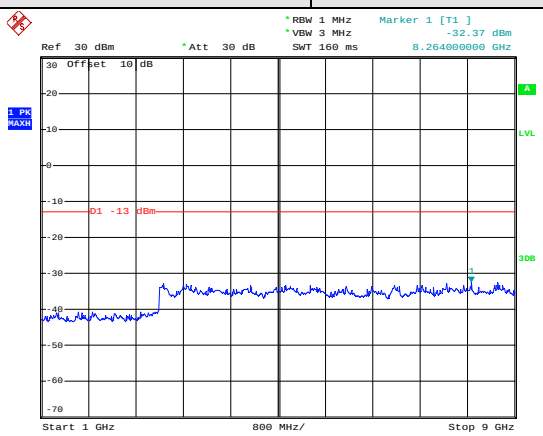


1GHz~9GHz

Test Mode:	UMTS 850 12.2k RMC	Test Channel:	Highest channel

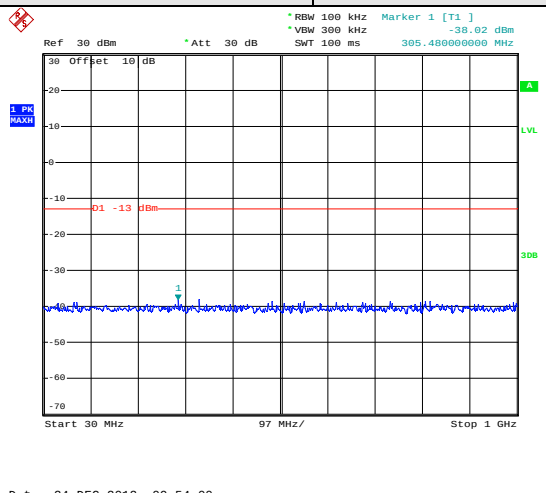


30MHz~1GHz

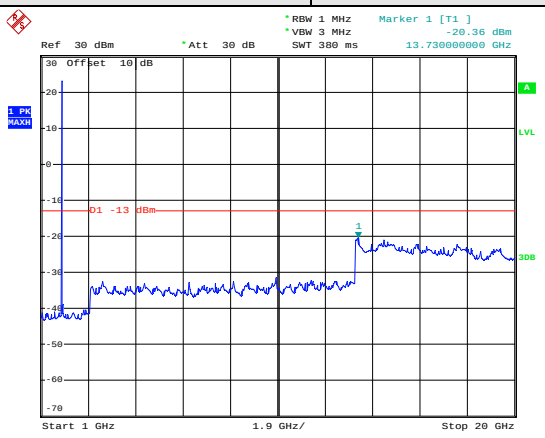


1GHz~9GHz

Test Mode:	UMTS 1900 12.2k RMC	Test Channel:	Lowest channel

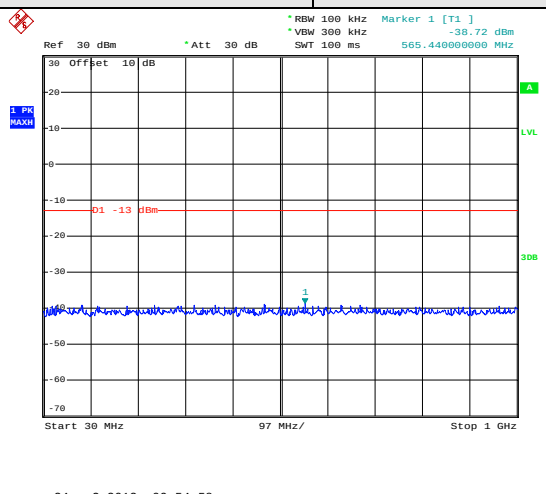


30MHz~1GHz

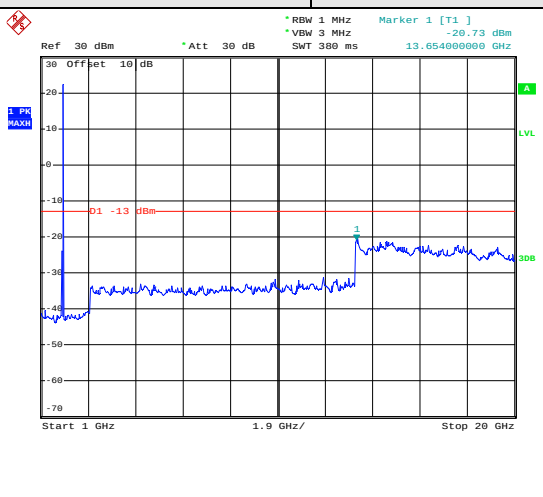


1GHz~20GHz

Test Mode:	UMTS 1900 12.2k RMC	Test Channel:	Middle channel

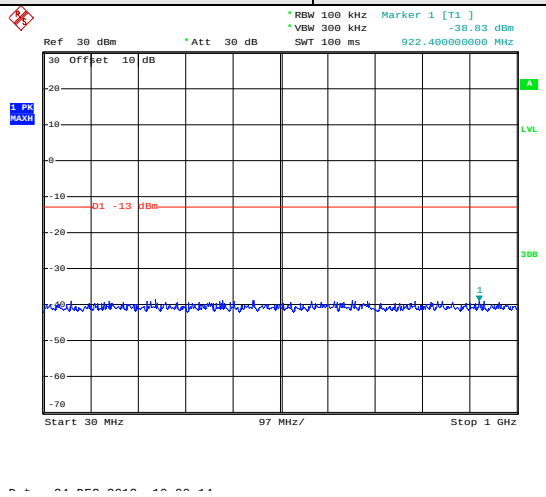


30MHz~1GHz

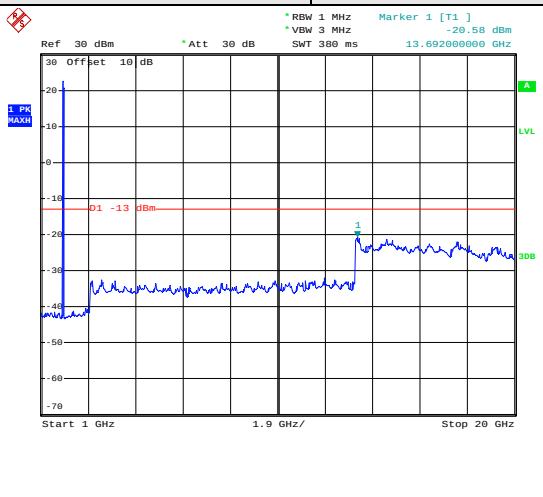


1GHz~20GHz

Test Mode:	UMTS 1900 12.2k RMC	Test Channel:	Highest channel



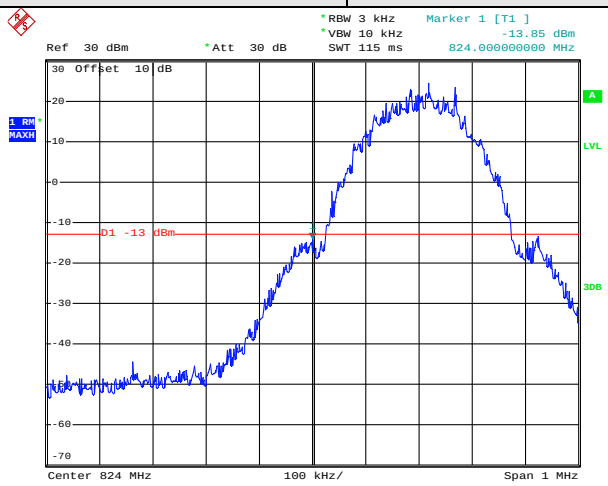
30MHz~1GHz



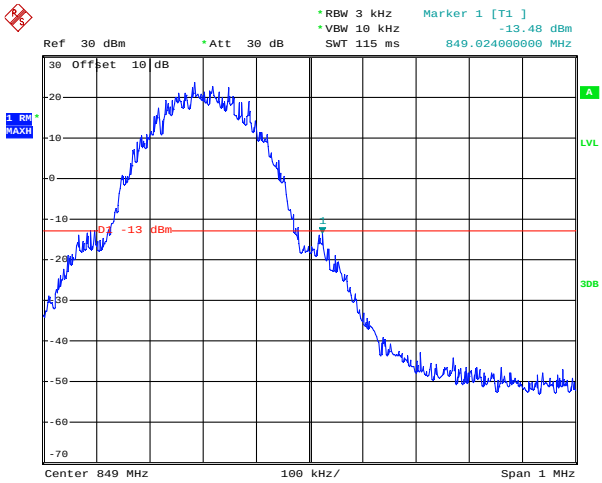
1GHz~20GHz

Band edge emission:

Test Mode:	GSM850

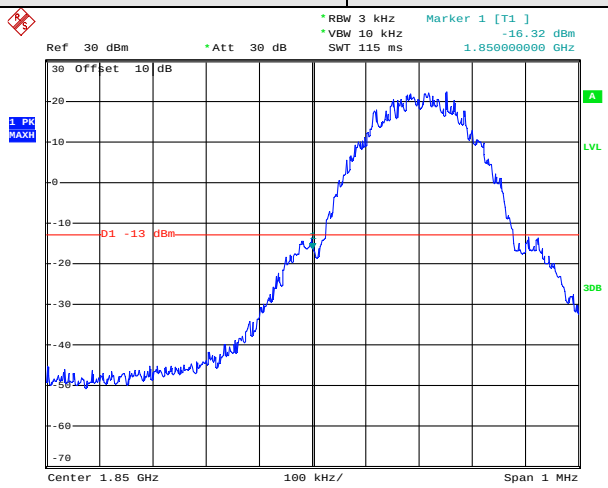


Lowest channel

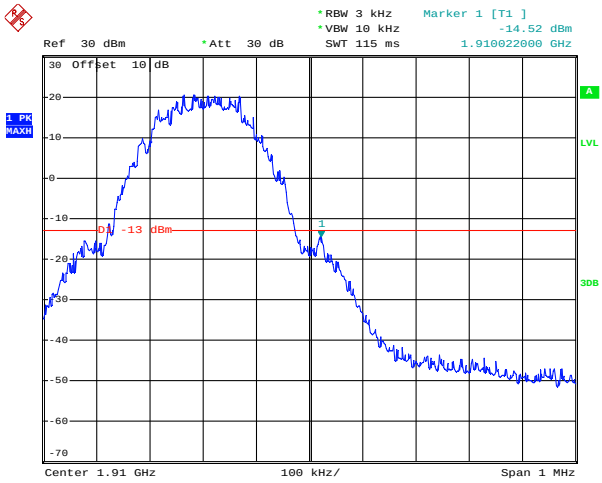


Highest channel

Test Mode:	PCS1900

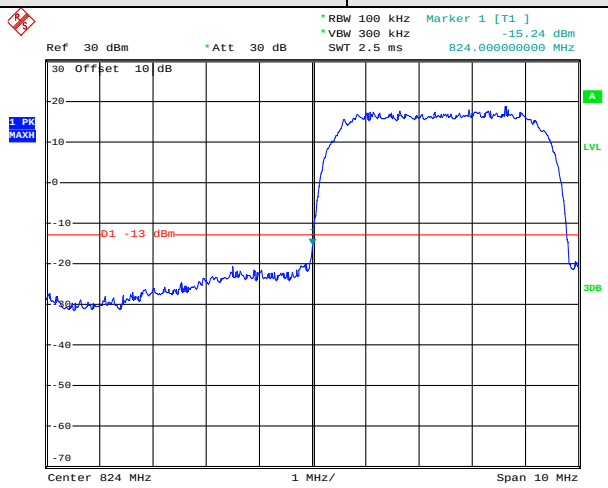


Lowest channel

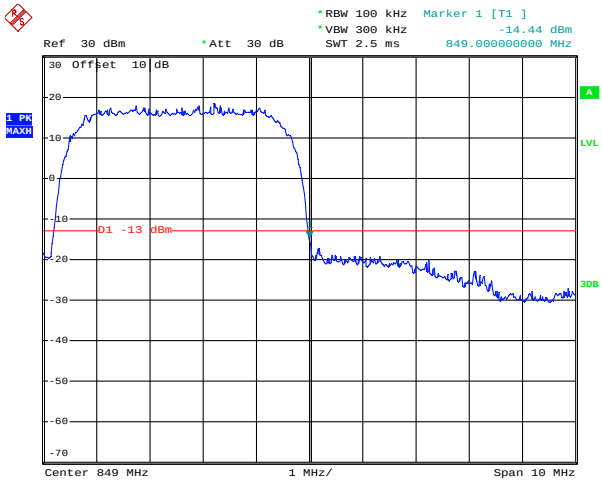


Highest channel

Test Mode:	UMTS850 12.2k RMC

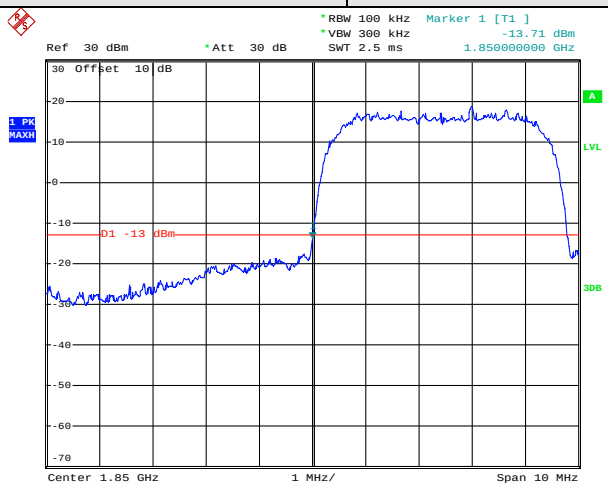


Lowest channel

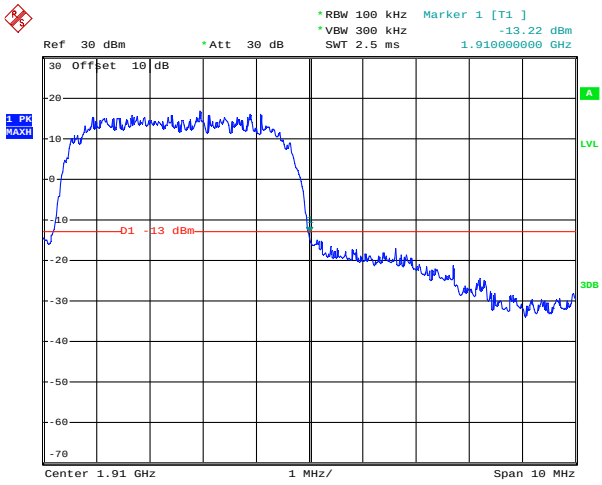


Highest channel

Test Mode:	UMTS 1900 12.2k RMC

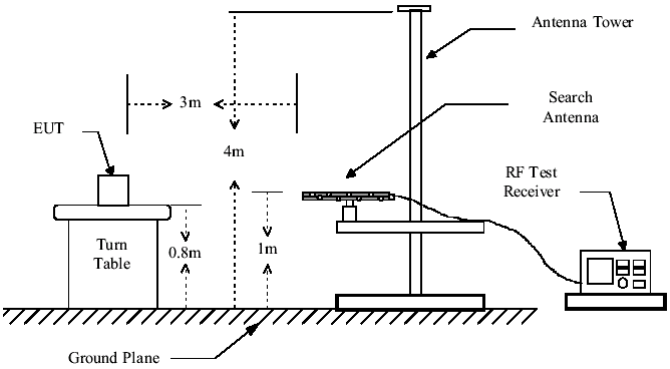
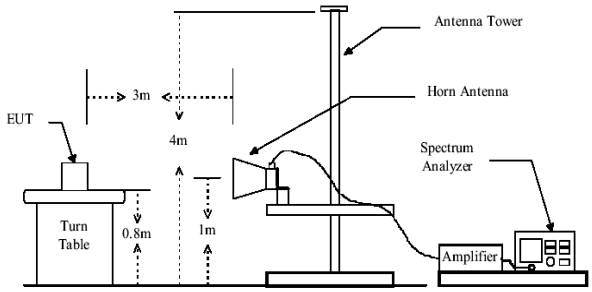
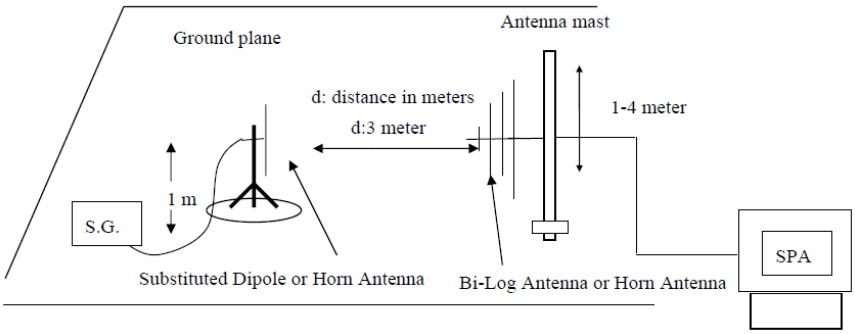


Lowest channel



Highest channel

6.9 ERP, EIRP Measurement

Test Requirement:	FCC part22.913(a) and FCC part24.232(b)
Test Method:	FCC part2.1046
Limit:	GSM850 7W ERP PCS1900 2W EIRP WCDMA Band V: 7W ERP WCDMA Band II: 2W EIRP
Test setup:	Below 1GHz  Above 1GHz  Substituted method: 

Test Procedure:	1. 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. 2. 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. 3. 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: ERP = S.G. output (dBm) + Antenna Gain (dBd) – Cable Loss (dB) 4. EIRP in frequency band 1850.2 –1909.8MHz were measured using a substitution method. The EUT was replaced by or horn antenna connected, the S.G. output was recorded and EIRP was calculated as follows: EIRP = S.G. output (dBm) + Antenna Gain (dBi) – Cable Loss (dB) 5. The worse case was relating to the conducted output power.
Test Instruments:	Refer to section 5.8 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

Measurement Data (worse case)

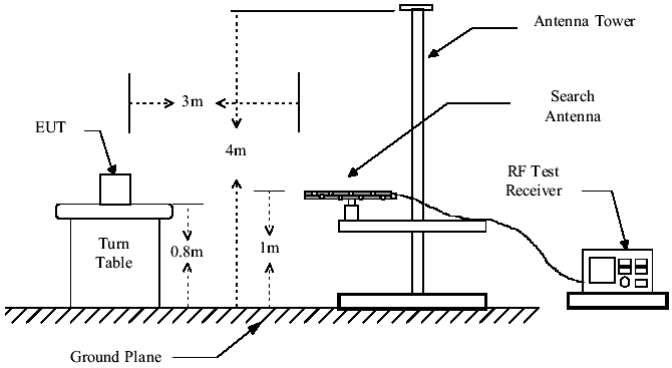
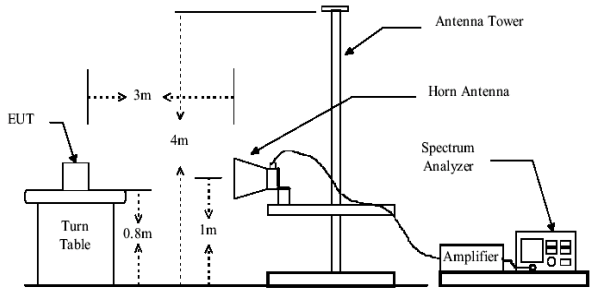
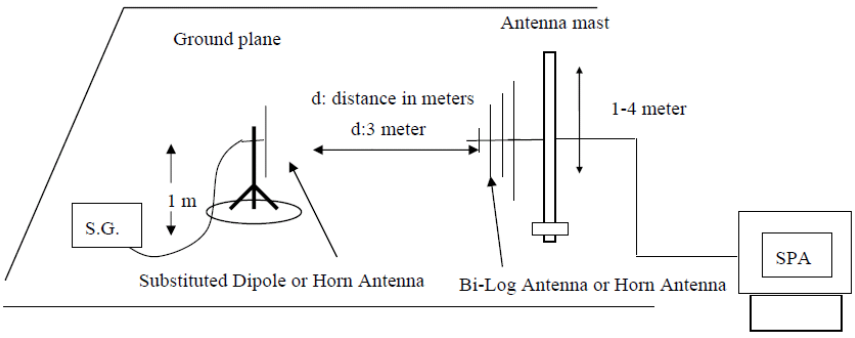
EUT mode	Channel	EUT Pol.	Antenna Pol.	ERP(dBm)	Limit (dBm)	Result
GSM850	190	H	V	32.33	38.45	Pass
			H	26.55		
		E1	V	28.67		
			H	25.31		
		E2	V	28.67		
			H	25.55		
GPRS850	190	H	V	32.20		
			H	26.43		

EUT mode	Channel	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
PCS1900	512	H	V	26.35	33.00	Pass
			H	23.86		
		E1	V	25.84		
			H	23.10		
		E2	V	25.11		
			H	22.75		
GPRS1900	512	H	V	26.24		
			H	23.69		

EUT mode	Channel	EUT Pol.	Antenna Pol.	ERP(dBm)	Limit (dBm)	Result
UMTS 850 12.2k RMC	4132	H	V	21.54	38.45	Pass
			H	20.35		
		E1	V	21.06		
			H	20.02		
		E2	V	19.90		
			H	19.33		
UMTS 850 HSDPA	4132	H	V	21.34		
			H	20.18		

EUT mode	Channel	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
UMTS 1900 12.2k RMC	9262	H	V	20.15	38.45	Pass
			H	19.73		
		E1	V	18.91		
			H	16.41		
		E2	V	17.62		
			H	15.63		
UMTS 1900 HSDPA	9262	H	V	20.08		
			H	19.54		

6.10 Field strength of spurious radiation measurement

Test Requirement:	FCC part22.917(a) and FCC part24.238(a)
Test Method:	FCC part2.1053
Limit:	-13dBm
Test setup:	Below 1GHz  Above 1GHz  Substituted method: 
Test Procedure:	1. 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. 2. 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. 3. The frequency range up to tenth harmonic was investigated for each of three fundamental frequency (low, middle and high channels). Once spurious emission was identified, the power of the emission was determined using the substitution method. 4. The spurious emissions attenuation was calculated as the difference between radiated power at the fundamental frequency and the spurious emissions frequency. ERP / EIRP = S.G. output (dBm) + Antenna Gain(dB/dBi) – Cable Loss (dB)
Test Instruments:	Refer to section 5.8 for details
Test mode:	Refer to section 5.3 for details. Based on the ERP/EIRP results, we selected GSM850, PCS1900, UMTS RMC 850 and UMTS RMC 1900 for Radiated spurious emission test; HSDPA and GPRS mode were not test.
Test results:	Passed

Measurement Data (worse case)

Test mode:	GSM850		Test channel:	Lowest
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1648.40	Vertical	-35.57	-13.00	Pass
2472.60	V	-44.02		
3296.80	V	-45.09		
4121.00	V	-46.23		
4945.20	V	---		
5769.40	V	---		
1648.40	Horizontal	-38.25	-13.00	Pass
2472.60	H	-49.36		
3296.80	H	-45.08		
4121.00	H	-48.77		
4945.20	H	---		
5769.40	H	---		
Test mode:	**GSM850**		**Test channel:**	**Middle**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1673.20	Vertical	-35.31	-13.00	Pass
2509.80	V	-44.22		
3346.40	V	-38.56		
4183.00	V	-43.11		
5019.60	V	---		
5856.20	V	---		
1673.20	Horizontal	-31.56	-13.00	Pass
2509.80	H	-37.88		
3346.40	H	-41.89		
4183.00	H	-43.56		
5019.60	H	---		
5856.20	H	---		

Remark：

1. The emission behavior belongs to narrowband spurious emission.
2. Remark"---" means that the emission level is too low to be measured
3. The emission levels of below 1 GHz are very lower than the limit and not show in test report.

Test mode:	GSM850		Test channel:	Highest
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1697.60	Vertical	-34.69	-13.00	Pass
2546.40	V	-42.36		
3395.20	V	-44.28		
4244.00	V	-49.96		
5092.80	V	---		
5941.60	V	---		
1697.60	Horizontal	-31.55	-13.00	Pass
2546.40	H	-42.87		
3395.20	H	-41.55		
4244.00	H	-46.89		
5092.80	H	---		
5941.60	H	---		
Test mode:	**PCS1900**		**Test channel:**	**Lowest**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3700.40	Vertical	-25.89	-13.00	Pass
5550.60	V	-23.56		
7400.80	V	-31.56		
9251.00	V	-33.89		
11101.20	V	---		
12951.40	V	---		
3700.40	Horizontal	-37.56	-13.00	Pass
5550.60	H	-38.63		
7400.80	H	-32.56		
9251.00	H	-42.98		
11101.20	H	---		
12951.40	H	---		

Remark：

1. The emission behavior belongs to narrowband spurious emission.
2. Remark"---" means that the emission level is too low to be measured
3. The emission levels of below 1 GHz are very lower than the limit and not show in test report.

Test mode:	PCS1900		Test channel:	Middle
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3760.00	Vertical	-24.86	-13.00	Pass
5640.00	V	-35.22		
7520.00	V	-38.89		
9400.00	V	-37.45		
11280.00	V	---		
13160.00	V	---		
3760.00	Horizontal	-31.67	-13.00	Pass
5640.00	H	-42.89		
7520.00	H	-37.56		
9400.00	H	-42.02		
11280.00	H	---		
13160.00	H	---		
Test mode:	**PCS1900**		**Test channel:**	**Highest**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3819.60	Vertical	-25.55	-13.00	Pass
5729.40	V	-37.86		
7639.20	V	-39.25		
9549.00	V	-39.66		
11458.80	V	---		
13368.60	V	---		
3819.60	Horizontal	-33.45	-13.00	Pass
5729.40	H	-37.85		
7639.20	H	-39.06		
9549.00	H	-41.22		
11458.80	H	---		
13368.60	H	---		

Remark：

1. The emission behavior belongs to narrowband spurious emission.
2. Remark"---" means that the emission level is too low to be measured
3. The emission levels of below 1 GHz are very lower than the limit and not show in test report.

Test mode:	UMTS850 12.2k RMC		Test channel:	Lowest
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1652.80	Vertical	-31.09	-13.00	Pass
2479.20	V	-40.05		
3305.60	V	-41.40		
4132.00	V	-43.50		
4958.40	V	---		
5784.80	V	---		
1652.80	Horizontal	-34.65	-13.00	Pass
2479.20	H	-41.36		
3305.60	H	-46.98		
4132.00	H	-47.98		
4958.40	H	---		
5784.80	H	---		
Test mode:	**UMTS850 12.2k RMC**		**Test channel:**	**Middle**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1672.00	Vertical	-30.78	-13.00	Pass
2508.00	V	-45.66		
3344.00	V	-41.59		
4180.00	V	-45.63		
5016.00	V	---		
5852.00	V	---		
1672.00	Horizontal	-34.61	-13.00	Pass
2508.00	H	-37.76		
3344.00	H	-41.87		
4180.00	H	-45.55		
5016.00	H	---		
5852.00	H	---		

Test mode:	**UMTS850 12.2k RMC**		Test channel:	Highest
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1693.20	Vertical	-28.89	-13.00	Pass
2539.80	V	-41.75		
3386.40	V	-44. 44		
4233.00	V	-46.00		
5079.60	V	---		
5926.20	V	---		
1693.20	Horizontal	-35.88	-13.00	Pass
2539.80	H	-46.67		
3386.40	H	-43.53		
4233.00	H	-49.63		
5079.60	H	---		
5926.20	H	---		

Remark：

1. The emission behavior belongs to narrowband spurious emission.
2. Remark”---“ means that the emission level is too low to be measured
3. The emission levels of below 1 GHz are very lower than the limit and not show in test report.

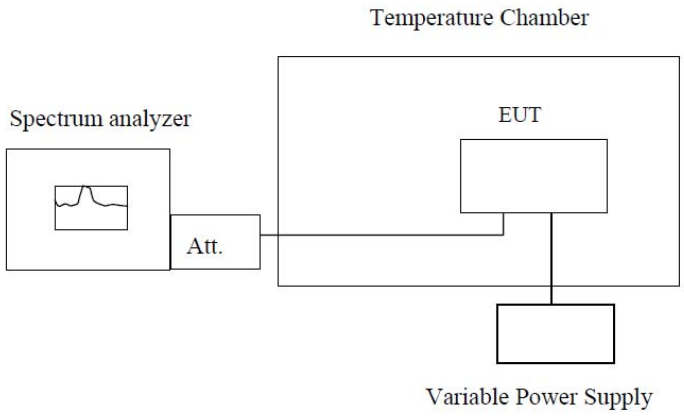
Test mode:	UMTS 1900 12.2k RMC		Test channel:	Lowest
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1652.80	Vertical	-34.45	-13.00	Pass
2479.20	V	-42.76		
3305.60	V	-43.55		
4132.00	V	-46.72		
4958.40	V	---		
5784.80	V	---		
1652.80	Horizontal	-36.96	-13.00	Pass
2479.20	H	-49.55		
3305.60	H	-49.28		
4132.00	H	-51.12		
4958.40	H	---		
5784.80	H	---		
Test mode:	**UMTS 1900 12.2k RMC**		**Test channel:**	**Middle**
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1672.00	Vertical	-29.25	-13.00	Pass
2508.00	V	-41.56		
3344.00	V	-49.53		
4180.00	V	-47.29		
5016.00	V	---		
5852.00	V	---		
1672.00	Horizontal	-36.24	-13.00	Pass
2508.00	H	-37.46		
3344.00	H	-45.30		
4180.00	H	-45.35		
5016.00	H	---		
5852.00	H	---		

Test mode:	UMTS 1900 12.2k RMC		Test channel:	Highest
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1693.20	Vertical	-28.66	-13.00	Pass
2539.80	V	-41.99		
3386.40	V	-45.68		
4233.00	V	-49.44		
5079.60	V	---		
5926.20	V	---		
1693.20	Horizontal	-37.72	-13.00	Pass
2539.80	H	-42.44		
3386.40	H	-43.85		
4233.00	H	-49.55		
5079.60	H	---		
5926.20	H	---		

Remark：

1. The emission behavior belongs to narrowband spurious emission.
2. Remark”---“ means that the emission level is too low to be measured
3. The emission levels of below 1 GHz are very lower than the limit and not show in test report.

6.11 Frequency stability V.S. Temperature measurement

Test Requirement:	FCC Part2.1055(a)(1)(b)
Test Method:	FCC Part2.1055(a)(1)(b)
Limit:	2.5ppm
Test setup:	 **Note :** Measurement setup for testing on Antenna connector
Test procedure:	1. The equipment under test was connected to an external DC power supply and input rated voltage. 2. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. 3. The EUT was placed inside the temperature chamber. 4. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 25℃ operating frequency as reference frequency. 5. Turn EUT off and set the chamber temperature to –30℃. After the temperature stabilized for approximately 30 minutes recorded the frequency. 6. Repeat step measure with 10℃ increased per stage until the highest temperature of +50℃ reached
Test Instruments:	Refer to section 5.8 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

Measurement Data

Reference Frequency: GSM850 Lowest channel=128 channel=824.2MHz					
Power supplied (Vdc)	Temperature (℃)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.70	-30	42	0.050959	2.5	Pass
	-20	35	0.042465		
	-10	44	0.053385		
	0	39	0.047319		
	10	45	0.054598		
	20	34	0.041252		
	30	45	0.054598		
	40	39	0.047319		
	50	45	0.054598		
Reference Frequency: PCS1900 Lowest channel=512 channel=1850.2MHz					
Power supplied (Vdc)	Temperature (℃)	Frequency error			Result
		Hz	ppm		
3.70	-30	31	0.016755	2.5	Pass
	-20	35	0.018917		
	-10	37	0.019998		
	0	38	0.020538		
	10	43	0.023241		
	20	39	0.021079		
	30	41	0.022160		
	40	44	0.023781		
	50	42	0.022700		

Reference Frequency: GPRS850 Lowest channel=128 channel=824.2MHz					
Power supplied (Vdc)	Temperature（℃）	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.70	-30	38	0.046105	2.5	Pass
	-20	29	0.035186		
	-10	41	0.049745		
	0	32	0.038826		
	10	40	0.048532		
	20	29	0.035186		
	30	43	0.052172		
	40	31	0.037612		
	50	43	0.052172		
Reference Frequency: GPRS1900 Lowest channel=512 channel=1850.2MHz					
Power supplied (Vdc)	Temperature（℃）	Frequency error			Result
		Hz	ppm		
3.70	-30	24	0.012972	2.5	Pass
	-20	32	0.017295		
	-10	33	0.017836		
	0	31	0.016755		
	10	43	0.023241		
	20	30	0.016214		
	30	29	0.015674		
	40	41	0.022160		
	50	33	0.017836		

Reference Frequency: UMTS850 12.2k RMC Lowest channel=4132 channel=826.4MHz					
Power supplied (Vdc)	Temperature（℃）	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.70	-30	34	0.041142	2.5	Pass
	-20	36	0.043562		
	-10	27	0.032672		
	0	31	0.037512		
	10	46	0.055663		
	20	44	0.053243		
	30	39	0.047193		
	40	40	0.048403		
	50	43	0.052033		
Reference Frequency: UMTS1900 12.2k RMC Lowest channel=9262 channel=1852.4MHz					
Power supplied (Vdc)	Temperature（℃）	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.70	-30	35	0.018894	2.5	Pass
	-20	34	0.018355		
	-10	26	0.014036		
	0	33	0.017815		
	10	48	0.025912		
	20	49	0.026452		
	30	34	0.018355		
	40	48	0.025912		
	50	45	0.024293		

Reference Frequency: UMTS850 HSDPA Lowest channel=4132 channel=826.4MHz					
Power supplied (Vdc)	Temperature（℃）	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.70	-30	38	0.045983	2.5	Pass
	-20	36	0.043562		
	-10	25	0.030252		
	0	39	0.047193		
	10	44	0.053243		
	20	48	0.058083		
	30	34	0.041142		
	40	47	0.056873		
	50	45	0.054453		
Reference Frequency: UMTS1900 HSDPA Lowest channel=9262 channel=1852.4MHz					
Power supplied (Vdc)	Temperature（℃）	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.70	-30	31	0.016735	2.5	Pass
	-20	35	0.018894		
	-10	28	0.015116		
	0	33	0.017815		
	10	49	0.026452		
	20	44	0.023753		
	30	37	0.019974		
	40	45	0.024293		
	50	42	0.022673		

Reference Frequency: GSM850 Middle channel=190 channel=836.6MHz					
Power supplied (Vdc)	Temperature（℃）	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.70	-30	43	0.051399	2.5	Pass
	-20	37	0.044227		
	-10	38	0.045422		
	0	47	0.056180		
	10	44	0.052594		
	20	44	0.052594		
	30	48	0.057375		
	40	42	0.050203		
	50	45	0.053789		
Reference Frequency: PCS1900 Middle channel=661 channel=1880MHz					
Power supplied (Vdc)	Temperature（℃）	Frequency error			Result
		Hz	ppm		
3.70	-30	45	0.023936	2.5	Pass
	-20	38	0.020213		
	-10	45	0.023936		
	0	33	0.017553		
	10	36	0.019149		
	20	37	0.019681		
	30	34	0.018085		
	40	43	0.022872		
	50	48	0.025532		

Reference Frequency: GSM850 Middle channel=190 channel=836.6MHz					
Power supplied (Vdc)	Temperature（℃）	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.70	-30	25	0.029883	2.5	Pass
	-20	33	0.039445		
	-10	26	0.031078		
	0	39	0.046617		
	10	40	0.047813		
	20	41	0.049008		
	30	43	0.051399		
	40	37	0.044227		
	50	44	0.052594		
Reference Frequency: PCS1900 Middle channel=661 channel=1880MHz					
Power supplied (Vdc)	Temperature（℃）	Frequency error			Result
		Hz	ppm		
3.70	-30	41	0.021809	2.5	Pass
	-20	32	0.017021		
	-10	41	0.021809		
	0	25	0.013298		
	10	31	0.016489		
	20	34	0.018085		
	30	25	0.013298		
	40	33	0.017553		
	50	42	0.02234		

Reference Frequency: UMTS850 12.2k RMC Middle channel=4180 channel=836MHz					
Power supplied (Vdc)	Temperature（℃）	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.70	-30	48	0.057416	2.5	Pass
	-20	45	0.053828		
	-10	47	0.056220		
	0	43	0.051435		
	10	57	0.068182		
	20	44	0.052632		
	30	38	0.045455		
	40	45	0.053828		
	50	43	0.051435		
Reference Frequency: UMTS1900 12.2k RMC Middle channel=9400 channel=1880MHz					
Power supplied (Vdc)	Temperature（℃）	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.70	-30	44	0.023404	2.5	Pass
	-20	45	0.023936		
	-10	43	0.022872		
	0	43	0.022872		
	10	56	0.029787		
	20	47	0.025000		
	30	35	0.018617		
	40	46	0.024468		
	50	40	0.021277		

Reference Frequency: UMTS850 HSDPA Middle channel=4180 channel=836MHz					
Power supplied (Vdc)	Temperature（℃）	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.70	-30	47	0.056220	2.5	Pass
	-20	45	0.053828		
	-10	47	0.056220		
	0	40	0.047847		
	10	52	0.062201		
	20	45	0.053828		
	30	38	0.045455		
	40	44	0.052632		
	50	42	0.050239		
Reference Frequency: UMTS1900 HSDPA Middle channel=9400 channel=1880MHz					
Power supplied (Vdc)	Temperature（℃）	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.70	-30	48	0.025532	2.5	Pass
	-20	43	0.022872		
	-10	47	0.025000		
	0	45	0.023936		
	10	51	0.027128		
	20	46	0.024468		
	30	38	0.020213		
	40	42	0.022340		
	50	43	0.022872		

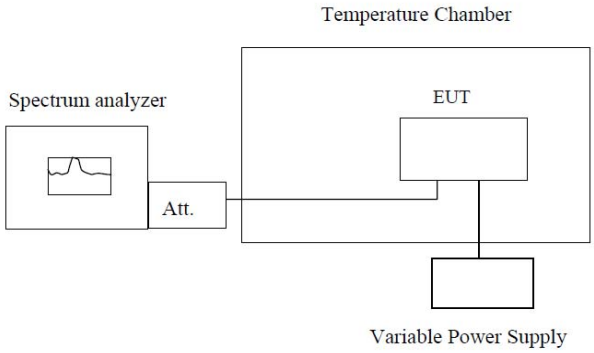
Reference Frequency: GSM850 Highest channel=251 channel=848.8 MHz					
Power supplied (Vdc)	Temperature（℃）	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.70	-30	43	0.050660	2.5	Pass
	-20	36	0.042413		
	-10	33	0.038878		
	0	46	0.054194		
	10	45	0.053016		
	20	46	0.054194		
	30	38	0.044769		
	40	37	0.043591		
	50	42	0.049482		
Reference Frequency: PCS1900 Highest channel=810 channel=1909.8MHz					
Power supplied (Vdc)	Temperature（℃）	Frequency error			Result
		Hz	ppm		
3.70	-30	39	0.020421	2.5	Pass
	-20	32	0.016756		
	-10	44	0.023039		
	0	46	0.024086		
	10	41	0.021468		
	20	46	0.024086		
	30	38	0.019897		
	40	33	0.017279		
	50	37	0.019374		

Reference Frequency: GSM850 Highest channel=251 channel=848.8 MHz					
Power supplied (Vdc)	Temperature（℃）	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.70	-30	35	0.041235	2.5	Pass
	-20	32	0.037700		
	-10	30	0.035344		
	0	42	0.049482		
	10	38	0.044769		
	20	34	0.040057		
	30	31	0.036522		
	40	35	0.041235		
	50	29	0.034166		
Reference Frequency: PCS1900 Highest channel=810 channel=1909.8MHz					
Power supplied (Vdc)	Temperature（℃）	Frequency error			Result
		Hz	ppm		
3.70	-30	31	0.016232	2.5	Pass
	-20	30	0.015708		
	-10	41	0.021468		
	0	43	0.022515		
	10	36	0.018850		
	20	38	0.019897		
	30	31	0.016232		
	40	24	0.012567		
	50	31	0.016232		

Reference Frequency: UMTS 850 12.2k RMC Highest channel=4233 channel=846.6MHz					
Power supplied (Vdc)	Temperature（℃）	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.70	-30	37	0.043704	2.5	Pass
	-20	39	0.046067		
	-10	46	0.054335		
	0	44	0.051973		
	10	47	0.055516		
	20	46	0.054335		
	30	35	0.041342		
	40	43	0.050791		
	50	38	0.044885		
Reference Frequency: UMTS 190012.2k RMC Highest channel=9538 channel=1907.60MHz					
Power supplied (Vdc)	Temperature（℃）	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.70	-30	35	0.018348	2.5	Pass
	-20	33	0.017299		
	-10	47	0.024638		
	0	48	0.025163		
	10	45	0.023590		
	20	44	0.023066		
	30	38	0.019920		
	40	42	0.022017		
	50	38	0.019920		

Reference Frequency: UMTS 850 HSDPA Highest channel=4233 channel=846.6MHz					
Power supplied (Vdc)	Temperature（℃）	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.70	-30	34	0.040161	2.5	Pass
	-20	37	0.043704		
	-10	45	0.053154		
	0	44	0.051973		
	10	44	0.051973		
	20	46	0.054335		
	30	39	0.046067		
	40	41	0.048429		
	50	34	0.040161		
Reference Frequency: UMTS 1900 HSDPA Highest channel=9538 channel=1907.60MHz					
Power supplied (Vdc)	Temperature（℃）	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.70	-30	35	0.018348	2.5	Pass
	-20	34	0.017823		
	-10	47	0.024638		
	0	43	0.022541		
	10	48	0.025163		
	20	41	0.021493		
	30	35	0.018348		
	40	43	0.022541		
	50	37	0.019396		

6.12 Frequency stability V.S. Voltage measurement

Test Requirement:	FCC Part2.1055(d)(1)(2)
Test Method:	FCC Part2.1055(d)(1)(2)
Limit:	2.5ppm
Test setup:	 **Note :** Measurement setup for testing on Antenna connector
Test procedure:	1. Set chamber temperature to 25℃. Use a variable DC power source to power the EUT and set the voltage to rated voltage. 2. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency. 3. Reduce the input voltage to specified extreme voltage variation (+/- 15%) and endpoint, record the maximum frequency change.
Test Instruments:	Refer to section 5.8 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

Measurement Data

Reference Frequency: GSM850 Lowest channel=128 channel=824.2MHz					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.25	38	0.043679	2.5	Pass
	3.70	36	0.044892		
	3.40	39	0.046105		
Reference Frequency: PCS1900 Lowest channel=512 channel=1850.2MHz					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.25	41	0.022160	2.5	Pass
	3.70	38	0.020538		
	3.40	36	0.019457		
Reference Frequency: GPRS850 Lowest channel=128 channel=824.2MHz					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.25	42	0.050959	2.5	Pass
	3.70	31	0.037612		
	3.40	45	0.054598		
Reference Frequency: GPRS1900 Lowest channel=512 channel=1850.2MHz					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.25	53	0.028646	2.5	Pass
	3.70	46	0.024862		
	3.40	44	0.023781		
Reference Frequency: UMTS 850 12.2k RMC Lowest channel=4132 channel=826.4MHz					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.25	47	0.056873	2.5	Pass
	3.70	34	0.041142		
	3.40	36	0.043562		

Reference Frequency: UMTS 1900 12.2k RMC Lowest channel=9262 channel=1852.40MHz					
Temperature（℃）	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.25	49	0.026452	2.5	Pass
	3.70	34	0.018355		
	3.40	33	0.017815		
Reference Frequency: UMTS 850 HSDPA Lowest channel=4132 channel=826.4MHz					
Temperature（℃）	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.25	47	0.056873	2.5	Pass
	3.70	36	0.043562		
	3.40	39	0.047193		
Reference Frequency: UMTS 1900 HSDPA Lowest channel=9262 channel=1852.40MHz					
Temperature（℃）	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.25	47	0.025372	2.5	Pass
	3.70	36	0.019434		
	3.40	34	0.018355		
Reference Frequency: GSM850 Middle channel=190 channel=836.6MHz					
Temperature（℃）	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.25	36	0.043031	2.5	Pass
	3.70	34	0.040641		
	3.40	46	0.054984		
Reference Frequency: PCS1900 Middle channel=661 channel=1880MHz					
Temperature（℃）	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.25	43	0.022872	2.5	Pass
	3.70	45	0.023936		
	3.40	46	0.024468		

Reference Frequency: GPRS850 Middle channel=190 channel=836.6MHz					
Temperature（℃）	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.25	29	0.034664	2.5	Pass
	3.70	32	0.038250		
	3.40	41	0.049008		
Reference Frequency: GPRS1900 Middle channel=661 channel=1880MHz					
Temperature（℃）	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.25	41	0.021809	2.5	Pass
	3.70	37	0.019681		
	3.40	43	0.022872		
Reference Frequency: UMTS 850 12.2k RMC Middle channel=4180 channel=836MHz					
Temperature（℃）	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.25	33	0.039474	2.5	Pass
	3.70	47	0.056220		
	3.40	36	0.043062		
Reference Frequency: UMTS 1900 12.2k RMC Middle channel=9400 channel=1880MHz					
Temperature（℃）	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.25	41	0.021809	2.5	Pass
	3.70	45	0.023936		
	3.40	34	0.018085		
Reference Frequency: UMTS 850 HSDPA Middle channel=4180 channel=836MHz					
Temperature（℃）	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.25	35	0.041866	2.5	Pass
	3.70	47	0.056220		
	3.40	33	0.039474		

Reference Frequency: UMTS 1900 HSDPA Middle channel=9400 channel=1880MHz					
Temperature（℃）	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.25	41	0.021809	2.5	Pass
	3.70	47	0.025000		
	3.40	35	0.018617		
Reference Frequency: GSM850 Highest channel=251 channel=848.8MHz					
Temperature（℃）	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.25	37	0.043591	2.5	Pass
	3.70	35	0.041235		
	3.40	36	0.042413		
Reference Frequency: PCS1900 Highest channel=810 channel=1909.8MHz					
Temperature（℃）	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.25	33	0.017279	2.5	Pass
	3.70	35	0.018327		
	3.40	46	0.024086		
Reference Frequency: GPRS850 Highest channel=251 channel=848.8MHz					
Temperature（℃）	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.25	35	0.041235	2.5	Pass
	3.70	28	0.032988		
	3.40	31	0.036522		
Reference Frequency: GPRS1900 Highest channel=810 channel=1909.8MHz					
Temperature（℃）	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.25	31	0.016232	2.5	Pass
	3.70	34	0.017803		
	3.40	39	0.020421		

Reference Frequency: 12.2k RMC UMTS 850 12.2k RMC Highest channel=4233 channel=846.6MHz					
Temperature（℃）	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.25	42	0.049610	2.5	Pass
	3.70	38	0.044885		
	3.40	44	0.051973		
Reference Frequency: UMTS 1900 12.2k RMC Highest channel=9538 channel=1907.60MHz					
Temperature（℃）	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.25	35	0.018348	2.5	Pass
	3.70	36	0.018872		
	3.40	45	0.023590		
Reference Frequency: UMTS 850 HSDPA Highest channel=4233 channel=846.6MHz					
Temperature（℃）	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.25	44	0.051973	2.5	Pass
	3.70	45	0.053154		
	3.40	47	0.055516		
Reference Frequency: UMTS 1900 HSDPA Highest channel=9538 channel=1907.60MHz					
Temperature（℃）	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.25	36	0.018872	2.5	Pass
	3.70	38	0.019920		
	3.40	49	0.025687		