

FCC REPORT

Applicant: Skyroam Technology Company limited

Address of Applicant: BLK F, Room 710-717 Xihaimingzhu Building, Taoyuan Road
Nanshan District, Shenzhen Guangdong 518000 China

Equipment Under Test (EUT)

Product Name: 3Gmate+

Model No.: W20

Trade mark: skyroam™

FCC ID: GVQ3GMATES

Applicable standards: FCC CFR Title 47 Part 2
FCC CFR Title 47 Part22 Subpart H
FCC CFR Title 47 Part24 Subpart E
FCC CFR Title 47 Part 27 Subpart L

Date of sample receipt: 25 Apr., 2014

Date of Test: 26 Apr., to 27 Aug., 2014

Date of report issued: 27 Aug., 2014

Test Result : PASS *

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

Authorized Signature:



Bruce Zhang
Laboratory Manager

This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product and does not permit the use of the CCIS product certification mark. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

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2. Version

Version No.	Date	Description
00	27 Aug., 2014	Original

Prepared by:

Yoyo Luo

Report Clerk

Date:

27 Aug., 2014

Reviewed by:

Wimer Zhang

Project Engineer

Date:

27 Aug., 2014

3. Contents

	Page
1. COVER PAGE	1
2. VERSION.....	2
3. CONTENTS.....	3
4. TEST SUMMARY	4
5. GENERAL INFORMATION	5
5.1 CLIENT INFORMATION.....	5
5.2 GENERAL DESCRIPTION OF E.U.T.....	5
5.3 TEST MODES.....	8
5.4 RELATED SUBMITTAL(S) / GRANT (S).....	8
5.5 TEST METHODOLOGY	8
5.6 LABORATORY FACILITY.....	8
5.7 LABORATORY LOCATION	9
5.8 TEST INSTRUMENTS LIST.....	9
6. SYSTEM TEST CONFIGURATION	10
6.1 EUT CONFIGURATION	10
6.2 EUT EXERCISE.....	10
6.3 CONFIGURATION OF TESTED SYSTEM	10
6.4 DESCRIPTION OF TEST MODES.....	10
6.5 CONDUCTED OUTPUT POWER	11
6.6 OCCUPY BANDWIDTH	21
6.7 MODULATION CHARACTERISTIC.....	50
6.8 OUT OF BAND EMISSION AT ANTENNA TERMINALS	50
6.9 ERP, EIRP MEASUREMENT	78
6.10 FIELD STRENGTH OF SPURIOUS RADIATION MEASUREMENT.....	84
6.11 FREQUENCY STABILITY V.S. TEMPERATURE MEASUREMENT.....	97
6.12 FREQUENCY STABILITY V.S. VOLTAGE MEASUREMENT	105
7 TEST SETUP PHOTO.....	110
8 EUT CONSTRUCTIONAL DETAILS	111

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) Part 27.50 (d)(4)	Pass
Modulation Characteristics	Part 2.1047	Pass
99% & -26 dB Occupied Bandwidth	Part 2.1049 Part 22.917(b) Part 24.238(b) Part 27.53(h)	Pass
Spurious Emissions at Antenna Terminal	Part 2.1051 Part 22.917 (a) Part 24.238 (a) Part 27.53 (h)	Pass
Field Strength of Spurious Radiation	Part 2.1053 Part 22.917 (a) Part 24.238 (a) Part 27.53 (h)	Pass
Out of band emission, Band Edge	Part 22.917 (a) Part 24.238 (a) Part 27.53 (h)	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:	Skyroam Technology Company limited
Address of Applicant:	BLK F, Room 710-717 Xihaimingzhu Building, Taoyuan Road Nanshan District, Shenzhen Guangdong 518000 China
Manufacturer:	Qingdao Haier Telecom Co.,Ltd
Address of Manufacturer:	Building S, No.1, Haier Road, Laoshan District, Qingdao City, Shandong Prov. China
Factory:	Shenzhen Leaguer Telecom Co.,Ltd
Address of Factory:	1F, Block Tsinghua Information Noeth Zone Of Hi-tech Industrial Nanshan Distric. Shenzhen, P.R.C

5.2 General Description of E.U.T.

Product Name:	3Gmate+
Model No.:	W20
Trade mark:	
Operation Frequency range:	GPRS 850: 824.20MHz-848.80MHz GPRS 1900: 1850.20MHz-1909.80MHz WCDMA Band V: 826.4MHz-846.6MHz WCDMA Band II: 1852.4 MHz -1907.6 MHz WCDMA Band IV: 1712.4 MHz -1752.6 MHz
Modulation type:	GPRS: GMSK, EGPRS: 8PSK, UMTS: QPSK, WCDMA_16QAM, WCDMA_64QAM
Antenna type:	Integral Antenna
Antenna gain:	GPRS 850: -3Bi GPRS 1900: -3Bi WCDMA 850 : -3dBi WCDMA 1900 : -3dBi WCDMA 1700: -3dBi
Power supply:	Rechargeable Li-ion Battery DC3.7V/2900mAh

Operation Frequency List:

GPRS 850		GPRS 1900	
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
WCDMA Band V		WCDMA Band II	
Channel:	Frequency (MHz)	Channel:	Frequency (MHz)
4132	826.40	9262	1852.40
4133	826.60	9263	1852.60
....			
4182	836.40	9399	1879.80
4183	836.60	9400	1880.00
4184	836.80	9401	1880.20
...	...	...	...
4232	846.40	9537	1907.40
4233	846.60	9538	1907.60
WCDMA Band IV			
Channel:	Frequency (MHz)		
1312	1712.40		
1313	1712.60		
....			
1412	1732.40		
1413	1732.60		
1414	1732.80		
...	...		
1512	1752.40		
1513	1752.60		

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:

GPRS 850			GPRS 1900		
	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	4183	836.60	Middle channel	9400	1880.00
Highest channel	4233	846.60	Highest channel	9538	1907.60
WCDMA Band IV					
	Channel	Frequency(MHz)			
Lowest channel	1312	1712.40			
Middle channel	1413	1732.60			
Highest channel	1513	1752.60			

5.3 Test modes

Data mode (GPRS850)	Keep the EUT in data communicating mode on GPRS 850 band.
Data mode (EGPRS850)	Keep the EUT in data communicating mode on EGPRS 850 band.
Data mode (GPRS1900)	Keep the EUT in data communicating mode on GPRS1900 band.
Data mode (EGPRS1900)	Keep the EUT in data communicating mode on EGPRS1900 band.
Data mode (RMC UMTS 850)	Keep the EUT in data communicating mode on RMC in UMTS 850 (12.2 kbps, 64 kbps, 144 kbps & 384 kbps).
Data mode (HSDPA UMTS 850)	Keep the EUT in data communicating mode on HSDPA in UMTS 850(Sub-test 1~Sub-test 4).
Data mode (HSUPA UMTS 850)	Keep the EUT in data communicating mode on HSDPA in UMTS 850(Sub-test 1~Sub-test 5).
Data mode (RMC UMTS 1700)	Keep the EUT in data communicating mode on RMC in UMTS 1700 (12.2 kbps, 64 kbps, 144 kbps & 384 kbps).
Data mode (HSDPA UMTS 1700)	Keep the EUT in data communicating mode on HSDPA in UMTS 1700(Sub-test 1~Sub-test 4).
Data mode (HSUPA UMTS 1700)	Keep the EUT in data communicating mode on HSDPA in UMTS 1700(Sub-test 1~Sub-test 5).
Data mode (RMC UMTS 1900)	Keep the EUT in data communicating mode on RMC in UMTS 850 (12.2 kbps, 64 kbps, 144 kbps & 384 kbps).
Data mode (HSDPA UMTS 1900)	Keep the EUT in data communicating mode on HSDPA in UMTS 1900. (Sub-test 1~Sub-test 4).
Data mode (HSDPA UMTS 1900)	Keep the EUT in data communicating mode on HSDPA in UMTS 1900. (Sub-test 1~Sub-test 5).
Remark :	Pre-test output power of all modes, and found GPRS 850, GPRS 1900, UMTS 850 12.2 kbps RMC & UMTS 1900 12.2 kbps RMC were the worst 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, Part 24 subpart E and Part 27 subpart L 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 Laboratory Facility

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

● **FCC - Registration No.: 817957**

Shenzhen Zhongjian Nanfang Testing Co., Ltd. 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.

● **IC - Registration No.: 10106A-1**

The 3m Semi-anechoic chamber of Shenzhen Zhongjian Nanfang Testing Co., Ltd. has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 10106A-1.

● **CNAS - Registration No.: CNAS L6048**

Shenzhen Zhongjian Nanfang Testing Co., Ltd. is accredited to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration laboratories for the competence of testing. The Registration No. is CNAS L6048.

5.7 Laboratory Location

Shenzhen Zhongjian Nanfang Testing Co., Ltd.
Address: No.B-C, 1/F., Building 2, Laodong No.2 Industrial Park, Xixiang Road,
Bao'an District, Shenzhen, Guangdong, China
Tel: 0755-23118282
Fax: 0755-23116366

5.8 Test Instruments list

Radiated Emission:						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)
1	3m Semi- Anechoic Chamber	SAEMC	9(L)*6(W)* 6(H)	CCIS0001	June 09 2013	June 08 2014
2	BiConiLog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	CCIS0005	June 04 2013	June 03 2014
3	Double -ridged waveguide horn	SCHWARZBECK MESS-ELEKTRONIK	BBHA9120D	CCIS0006	May 30 2013	May 29 2014
4	EMI Test Software	AUDIX	E3	N/A	N/A	N/A
5	Coaxial Cable	CCIS	N/A	CCIS0016	Apr. 01 2014	Mar. 31 2015
6	Coaxial Cable	CCIS	N/A	CCIS0017	Apr. 01 2014	Mar. 31 2015
7	Coaxial cable	CCIS	N/A	CCIS0018	Apr. 01 2014	Mar. 31 2015
8	Coaxial Cable	CCIS	N/A	CCIS0019	Apr. 01 2014	Mar. 31 2015
9	Coaxial Cable	CCIS	N/A	CCIS0087	Apr. 01 2014	Mar. 31 2015
10	Amplifier(10kHz-1.3GHz)	HP	8447D	CCIS0003	Apr. 01 2014	Mar. 31 2015
11	Amplifier(1GHz-18GHz)	Compliance Direction Systems Inc.	PAP-1G18	CCIS0011	June 09 2013	June 08 2014
12	Pre-amplifier (18-26GHz)	Rohde & Schwarz	AFS33-18002 650-30-8P-44	GTS218	Apr. 01 2014	Mar. 31 2015
13	Horn Antenna	ETS-LINDGREN	3160	GTS217	Mar. 30 2014	Mar. 29 2015
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 2013	May. 28 2014
17	EMI Test Receiver	Rohde & Schwarz	ESPI	CCIS0022	Apr 01 2014	Mar. 31 2015
18	Loop antenna	Laplace instrument	RF300	EMC0701	Aug. 12 2013	Aug. 11 2014
19	Universal radio communication tester	Rhode & Schwarz	CMU200	CCIS0069	May. 29 2013	May. 28 2014
20	Signal Analyzer	Rohde & Schwarz	FSIQ3	CCIS0088	May. 29 2013	May. 28 2014

6. System test configuration

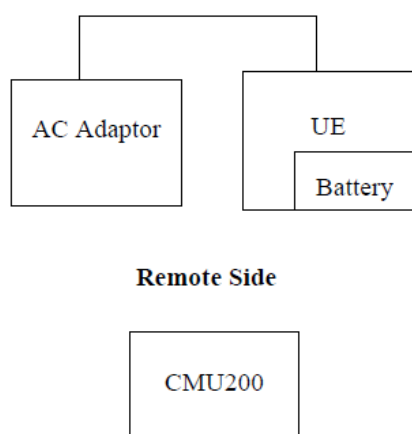
6.1 EUT Configuration

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.

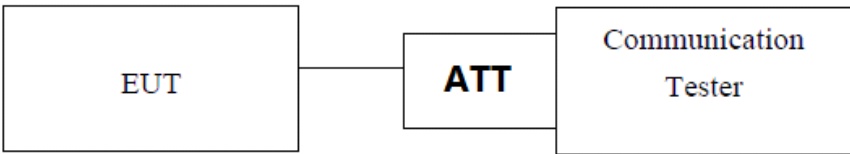
6.3 Configuration of Tested System



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 (GPRS 850, GPRS 1900, WCDMA Band V, WCDMA Band IV and WCDMA II) with power adaptor, earphone and Data cable. The worst-case H mode for GPRS 850, GPRS 1900, RMC UMTS 850, RMC UMTS 1700 and RMC UMTS 1900.

6.5 Conducted Output Power

Test Requirement:	FCC part 22.913(a) , FCC part 24.232(b) and FCC part 27.50(d)
Test Method:	FCC part 2.1046
Limit:	GPRS 850 7W GPRS 1900 2W WCDMA Band V: 7W WCDMA Band II: 2W WCDMA Band IV: 1W
Test setup:	 <i>Note: Measurement setup for testing on Antenna connector</i>
Test Procedure:	The transmitter output was connected to a calibrated attenuator, the other end of which was connected to the CMU200. Transmitter output power was read off 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

MT 6276 part:

EUT Mode	Channel	Frequency (MHz)	Burst Average power (dBm)	Limit(dBm)	Result
GPRS 850 (1 Uplink slot)	128	824.20	31.32	38.45	Pass
	190	836.60	31.34		
	251	848.80	31.31		
GPRS 850 (2 Uplink slots)	128	824.20	30.54		
	190	836.60	30.52		
	251	848.80	30.51		
GPRS 850 (3 Uplink slots)	128	824.20	28.96		
	190	836.60	28.94		
	251	848.80	28.95		
GPRS 850 (4 Uplink slots)	128	824.20	28.23		
	190	836.60	28.21		
	251	848.80	28.21		
GPRS 1900 (1 Uplink slot)	512	1850.20	28.26	33.00	
	661	1880.00	28.11		
	810	1909.80	28.02		
GPRS 1900 (2 Uplink slots)	512	1850.20	27.37		
	661	1880.00	27.24		
	810	1909.80	27.19		
GPRS 1900 (3 Uplink slots)	512	1850.20	25.69		
	661	1880.00	25.58		
	810	1909.80	25.58		
GPRS 1900 (4 Uplink slots)	512	1850.20	24.93		
	661	1880.00	24.83		
	810	1909.80	24.80		

EUT Mode	Channel	Frequency (MHz)	Burst Average power (dBm)	Limit(dBm)	Result
EGPRS 850 (1 Uplink slot)	128	824.20	25.43	38.45	Pass
	190	836.60	25.33		
	251	848.80	25.19		
EGPRS 850 (2 Uplink slots)	128	824.20	24.07		
	190	836.60	23.97		
	251	848.80	23.86		
EGPRS 850 (3 Uplink slots)	128	824.20	21.81		
	190	836.60	21.61		
	251	848.80	21.48		
EGPRS 850 (4 Uplink slots)	128	824.20	20.53		
	190	836.60	20.43		
	251	848.80	20.35		
EGPRS 1900 (1 Uplink slot)	512	1850.20	23.87	33.00	Pass
	661	1880.00	24.13		
	810	1909.80	24.35		
EGPRS 1900 (2 Uplink slots)	512	1850.20	22.28		
	661	1880.00	22.56		
	810	1909.80	22.86		
EGPRS 1900 (3 Uplink slots)	512	1850.20	19.91		
	661	1880.00	20.14		
	810	1909.80	20.35		
EGPRS 1900 (4 Uplink slots)	512	1850.20	18.64		
	661	1880.00	18.87		
	810	1909.80	19.04		

EUT Mode		Channel	Frequency (MHz)	Burst Average power (dBm)	Limit(dBm)	Result
UMTS 850 HSDPA	Subtest 1	4132	826.40	22.57	38.45	Pass
		4183	836.00	22.40		
		4233	846.60	22.59		
	Subtest 2	4132	826.40	21.09		
		4183	836.00	20.97		
		4233	846.60	21.22		
	Subtest 3	4132	826.40	19.50		
		4183	836.00	19.46		
		4233	846.60	19.70		
	Subtest 4	4132	826.40	19.53		
		4183	836.00	19.45		
		4233	846.60	19.62		
UMTS 850 HSUPA	Subtest 1	4132	826.40	21.65		
		4183	836.00	21.47		
		4233	846.60	21.72		
	Subtest 2	4132	826.40	22.35		
		4183	836.00	22.21		
		4233	846.60	22.36		
	Subtest 3	4132	826.40	19.53		
		4183	836.00	19.45		
		4233	846.60	19.53		
	Subtest 4	4132	826.40	22.60		
		4183	836.00	22.43		
		4233	846.60	22.64		
	Subtest 5	4132	826.40	20.62		
		4183	836.00	20.48		
		4233	846.60	20.61		
UMTS 850 RMC	12.2kbps	4132	826.40	22.54		
		4183	836.00	22.36		
		4233	846.60	22.60		
	64kbps	4132	826.40	22.51		
		4183	836.00	22.32		
		4233	846.60	22.58		
	144kbps	4132	826.40	22.55		
		4183	836.00	22.38		
		4233	846.60	22.59		
	384kbps	4132	826.40	22.53		
		4183	836.00	22.38		
		4233	846.60	22.60		

EUT Mode		Channel	Frequency (MHz)	Burst Average power (dBm)	Limit(dBm)	Result
UMTS 1900 HSDPA	Subtest 1	9262	1852.40	21.81	33.00	Pass
		9400	1880.00	21.52		
		9538	1907.60	21.16		
	Subtest 2	9262	1852.40	20.44		
		9400	1880.00	20.08		
		9538	1907.60	19.82		
	Subtest 3	9262	1852.40	18.70		
		9400	1880.00	18.49		
		9538	1907.60	18.21		
	Subtest 4	9262	1852.40	18.92		
		9400	1880.00	18.38		
		9538	1907.60	18.36		
UMTS 1900 HSUPA	Subtest 1	9262	1852.40	20.92		
		9400	1880.00	20.46		
		9538	1907.60	20.29		
	Subtest 2	9262	1852.40	21.36		
		9400	1880.00	21.05		
		9538	1907.60	21.21		
	Subtest 3	9262	1852.40	18.77		
		9400	1880.00	18.58		
		9538	1907.60	18.27		
	Subtest 4	9262	1852.40	21.85		
		9400	1880.00	21.47		
		9538	1907.60	21.09		
	Subtest 5	9262	1852.40	19.69		
		9400	1880.00	19.47		
		958	1907.60	19.26		
UMTS 1900 RMC	12.2kbps	9262	1852.40	21.77		
		9400	1880.00	21.40		
		9538	1907.60	21.12		
	64kbps	9262	1852.40	21.74		
		9400	1880.00	21.43		
		9538	1907.60	21.19		
	144kbps	9262	1852.40	21.77		
		9400	1880.00	21.43		
		9538	1907.60	21.09		
	384kbps	9262	1852.40	21.76		
		9400	1880.00	21.42		
		9538	1907.60	21.10		

MT 6280 part:

EUT Mode	Channel	Frequency (MHz)	Burst Average power (dBm)	Limit(dBm)	Result
GPRS 850 (1 Uplink slot)	128	824.20	32.12	38.45	Pass
	190	836.60	32.36		
	251	848.80	32.11		
GPRS 850 (2 Uplink slots)	128	824.20	31.12		
	190	836.60	31.37		
	251	848.80	31.10		
GPRS 850 (3 Uplink slots)	128	824.20	29.49		
	190	836.60	29.71		
	251	848.80	29.50		
GPRS 850 (4 Uplink slots)	128	824.20	28.79		
	190	836.60	29.02		
	251	848.80	28.78		
GPRS 1900 (1 Uplink slot)	512	1850.20	28.62	33.00	Pass
	661	1880.00	28.52		
	810	1909.80	28.53		
GPRS 1900 (2 Uplink slots)	512	1850.20	28.36		
	661	1880.00	28.27		
	810	1909.80	27.50		
GPRS 1900 (3 Uplink slots)	512	1850.20	27.39		
	661	1880.00	27.30		
	810	1909.80	26.54		
GPRS 1900 (4 Uplink slots)	512	1850.20	26.60		
	661	1880.00	26.52		
	810	1909.80	25.81		

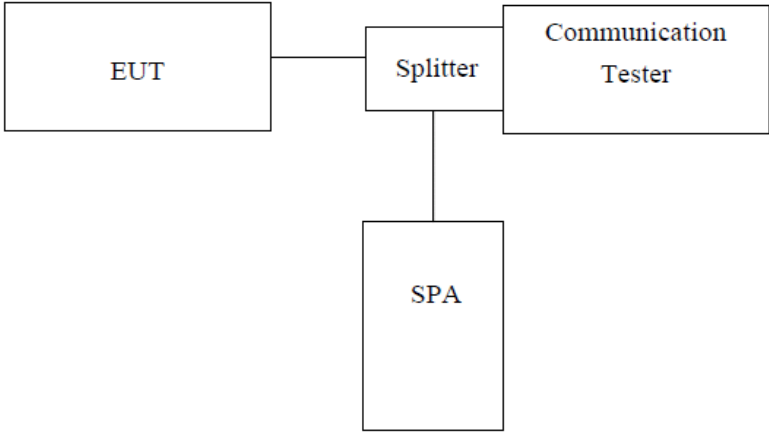
EUT Mode	Channel	Frequency (MHz)	Burst Average power (dBm)	Limit(dBm)	Result
EGPRS 850 (1 Uplink slot)	128	824.20	27.36	38.45	Pass
	190	836.60	27.24		
	251	848.80	27.10		
EGPRS 850 (2 Uplink slots)	128	824.20	25.93		
	190	836.60	25.88		
	251	848.80	25.75		
EGPRS 850 (3 Uplink slots)	128	824.20	23.61		
	190	836.60	23.48		
	251	848.80	23.33		
EGPRS 850 (4 Uplink slots)	128	824.20	22.29		
	190	836.60	22.16		
	251	848.80	22.04		
EGPRS 1900 (1 Uplink slot)	512	1850.20	25.86	33.00	Pass
	661	1880.00	26.51		
	810	1909.80	25.89		
EGPRS 1900 (2 Uplink slots)	512	1850.20	24.41		
	661	1880.00	25.05		
	810	1909.80	24.39		
EGPRS 1900 (3 Uplink slots)	512	1850.20	22.19		
	661	1880.00	22.82		
	810	1909.80	22.01		
EGPRS 1900 (4 Uplink slots)	512	1850.20	20.82		
	661	1880.00	21.44		
	810	1909.80	20.71		

EUT Mode		Channel	Frequency (MHz)	Burst Average power (dBm)	Limit(dBm)	Result
UMTS 850 HSDPA	Subtest 1	4132	826.40	22.27	38.45	Pass
		4183	836.00	21.41		
		4233	846.60	22.54		
	Subtest 2	4132	826.40	21.92		
		4183	836.00	21.18		
		4233	846.60	21.52		
	Subtest 3	4132	826.40	20.43		
		4183	836.00	19.45		
		4233	846.60	19.40		
	Subtest 4	4132	826.40	20.32		
		4183	836.00	19.62		
		4233	846.60	19.20		
UMTS 850 HSUPA	Subtest 1	4132	826.40	22.21		
		4183	836.00	21.38		
		4233	846.60	22.25		
	Subtest 2	4132	826.40	22.27		
		4183	836.00	21.33		
		4233	846.60	22.47		
	Subtest 3	4132	826.40	20.48		
		4183	836.00	19.44		
		4233	846.60	19.56		
	Subtest 4	4132	826.40	22.30		
		4183	836.00	21.36		
		4233	846.60	22.63		
	Subtest 5	4132	826.40	21.49		
		4183	836.00	20.50		
		4233	846.60	21.10		
UMTS 850 RMC	12.2kbps	4132	826.40	23.14		
		4183	836.00	22.30		
		4233	846.60	23.47		
	64kbps	4132	826.40	23.16		
		4183	836.00	22.33		
		4233	846.60	23.46		
	144kbps	4132	826.40	23.19		
		4183	836.00	22.35		
		4233	846.60	23.52		
	384kbps	4132	826.40	23.17		
		4183	836.00	22.34		
		4233	846.60	23.47		

EUT Mode		Channel	Frequency (MHz)	Burst Average power (dBm)	Limit(dBm)	Result
UMTS 1900 HSDPA	Subtest 1	9262	1852.40	21.19	33.00	Pass
		9400	1880.00	21.20		
		9538	1907.60	21.00		
	Subtest 2	9262	1852.40	20.86		
		9400	1880.00	20.80		
		9538	1907.60	20.68		
	Subtest 3	9262	1852.40	19.39		
		9400	1880.00	19.19		
		9538	1907.60	19.07		
	Subtest 4	9262	1852.40	19.50		
		9400	1880.00	19.36		
		9538	1907.60	19.08		
UMTS 1900 HSUPA	Subtest 1	9262	1852.40	21.12	33.00	Pass
		9400	1880.00	21.10		
		9538	1907.60	20.93		
	Subtest 2	9262	1852.40	21.15		
		9400	1880.00	21.17		
		9538	1907.60	20.93		
	Subtest 3	9262	1852.40	19.40		
		9400	1880.00	19.12		
		9538	1907.60	19.20		
	Subtest 4	9262	1852.40	21.19		
		9400	1880.00	21.19		
		9538	1907.60	20.98		
	Subtest 5	9262	1852.40	20.30		
		9400	1880.00	20.29		
		9538	1907.60	20.08		
UMTS 1900 RMC	12.2kbps	9262	1852.40	22.11	33.00	Pass
		9400	1880.00	22.13		
		9538	1907.60	21.91		
	64kbps	9262	1852.40	22.12		
		9400	1880.00	22.07		
		9538	1907.60	21.87		
	144kbps	9262	1852.40	22.15		
		9400	1880.00	22.14		
		9538	1907.60	21.90		
	384kbps	9262	1852.40	22.15		
		9400	1880.00	22.10		
		9538	1907.60	21.88		

EUT Mode		Channel	Frequency (MHz)	Burst Average power (dBm)	Limit(dBm)	Result
UMTS 1700 HSDPA	Subtest 1	1312	1712.40	19.80	30.00	Pass
		1412	1732.40	19.90		
		1513	1752.60	19.56		
	Subtest 2	1312	1712.40	19.43		
		1412	1732.40	19.41		
		1513	1752.60	19.28		
	Subtest 3	1312	1712.40	17.93		
		1412	1732.40	18.08		
		1513	1752.60	17.88		
	Subtest 4	1312	1712.40	18.01		
		1412	1732.40	18.08		
		1513	1752.60	17.90		
UMTS 1700 HSUPA	Subtest 1	1312	1712.40	19.77		
		1412	1732.40	19.75		
		1513	1752.60	19.49		
	Subtest 2	1312	1712.40	19.78		
		1412	1732.40	19.87		
		1513	1752.60	19.56		
	Subtest 3	1312	1712.40	17.96		
		1412	1732.40	17.91		
		1513	1752.60	17.75		
	Subtest 4	1312	1712.40	19.96		
		1412	1732.40	20.05		
		1513	1752.60	19.69		
	Subtest 5	1312	1712.40	18.93		
		1412	1732.40	19.12		
		1513	1752.60	18.72		
UMTS 1700 RMC	12.2kbps	1312	1712.40	20.74		
		1412	1732.40	20.80		
		1513	1752.60	20.47		
	64kbps	1312	1712.40	20.74		
		1412	1732.40	20.77		
		1513	1752.60	20.47		
	144kbps	1312	1712.40	20.76		
		1412	1732.40	20.81		
		1513	1752.60	20.49		
	384kbps	1312	1712.40	20.79		
		1412	1732.40	20.79		
		1513	1752.60	20.47		

6.6 Occupy Bandwidth

Test Requirement:	FCC part 22.917(b) , FCC part 24.238(b) and FCC part 27.53(h)
Test Method:	FCC part 2.1049
Test setup:	 <i>Note: Measurement setup for testing on Antenna connector</i>
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

MT 6276 part:

EUT Mode	Channel	Frequency (MHz)	99% Occupy bandwidth (kHz)	-26dB bandwidth (kHz)
GPRS 850	128	824.2	246	310
	190	836.6	244	316
	251	848.8	248	322
EGPRS 850	128	824.2	240	306
	190	836.6	244	308
	251	848.8	242	304
GPRS 1900	512	1850.2	246	324
	661	1880.0	248	320
	810	1909.8	248	326
EGPRS1900	512	1850.2	240	300
	661	1880.0	244	300
	810	1909.8	242	304
UMTS850 12.2k RMC	4132	824.40	4180	4680
	4183	836.00	4200	4720
	4233	846.60	4180	4720
UMTS1900 12.2k RMC	9262	1852.40	4180	4680
	9400	1880.00	4200	4720
	9538	1907.60	4200	4700

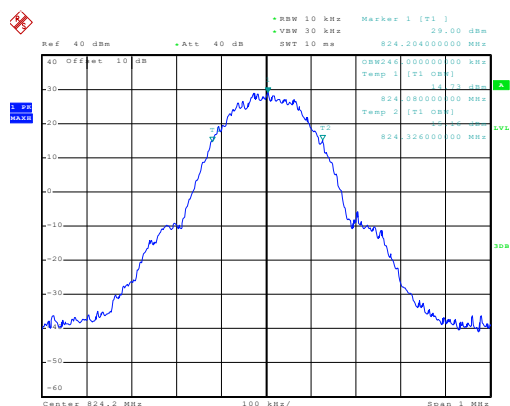
MT 6280 part:

EUT Mode	Channel	Frequency (MHz)	99% Occupy bandwidth (kHz)	-26dB bandwidth (kHz)
GPRS 850	128	824.2	246	318
	190	836.6	248	318
	251	848.8	246	322
EGPRS 850	128	824.2	242	312
	190	836.6	246	310
	251	848.8	242	308
GPRS 1900	512	1850.2	244	324
	661	1880.0	244	312
	810	1909.8	244	316
EGPRS1900	512	1850.2	248	316
	661	1880.0	250	314
	810	1909.8	246	316
UMTS850 12.2k RMC	4132	824.40	4160	4700
	4183	836.00	4200	4740
	4233	846.60	4160	4740
UMTS1900 12.2k RMC	9262	1852.40	4180	4760
	9400	1880.00	4180	4700
	9538	1907.60	4220	4760
UMTS1700 12.2k RMC	1312	1712.40	4220	4800
	1413	1732.60	4220	4820
	1513	1752.60	4200	4720

Test plot as follows:

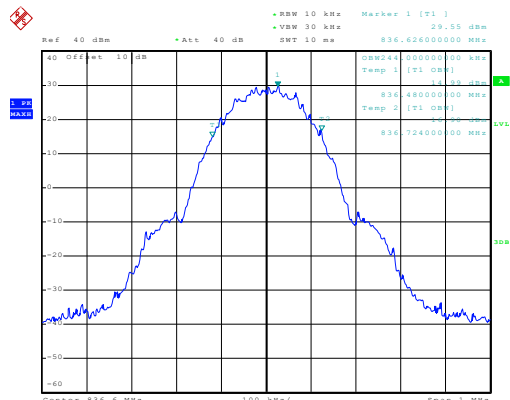
MT 6276 part:

Test Item:	99% Occupancy bandwidth	Test Mode:	GPRS 850
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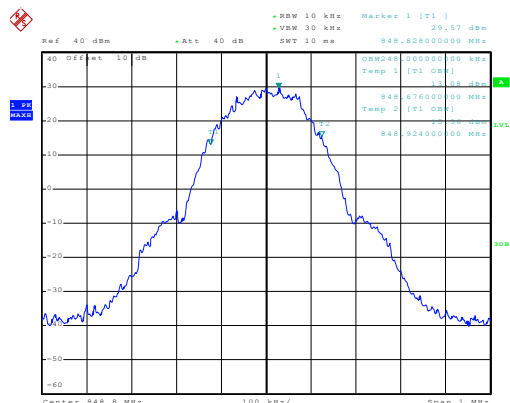
Date: 13.MAY.2014 16:11:44

Lowest channel



Date: 13.MAY.2014 16:12:47

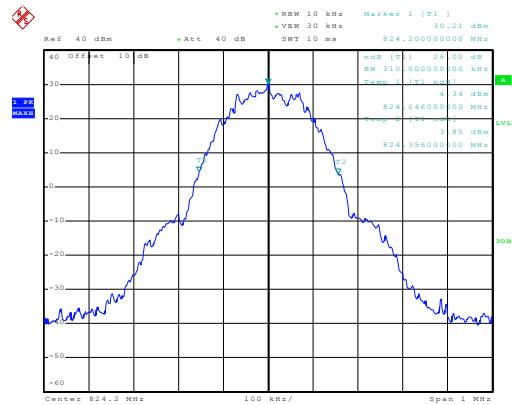
Middle channel



Date: 13.MAY.2014 16:13:50

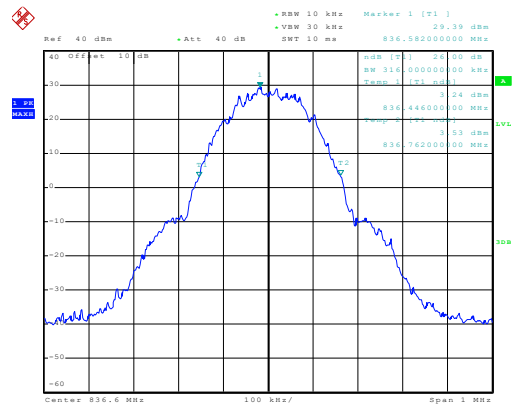
Highest channel

Test Item:	-26dB bandwidth	Test Mode:	GPRS 850
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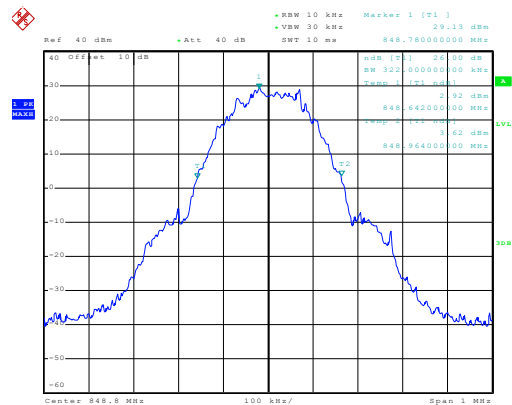
Date: 13.MAY.2014 16:16:07

Lowest channel



Date: 13.MAY.2014 16:15:25

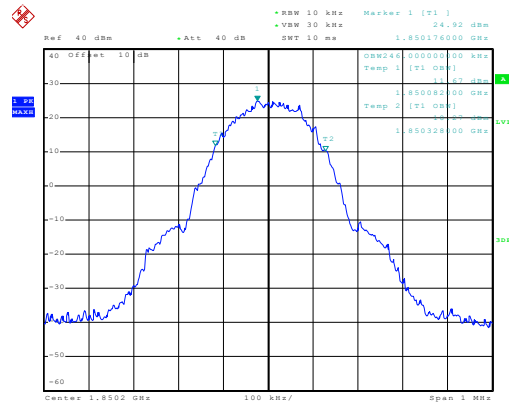
Middle channel



Date: 13.MAY.2014 16:14:33

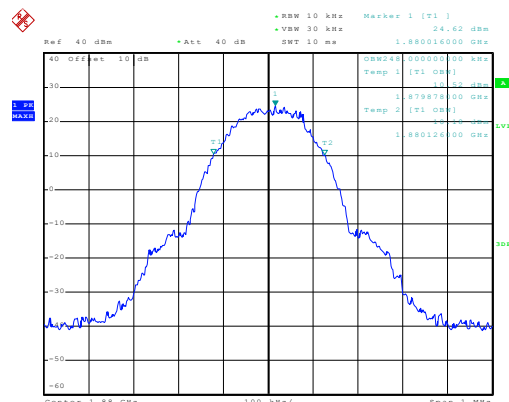
Highest channel

Test Item:	99% Occupy bandwidth	Test Mode:	GPRS 1900
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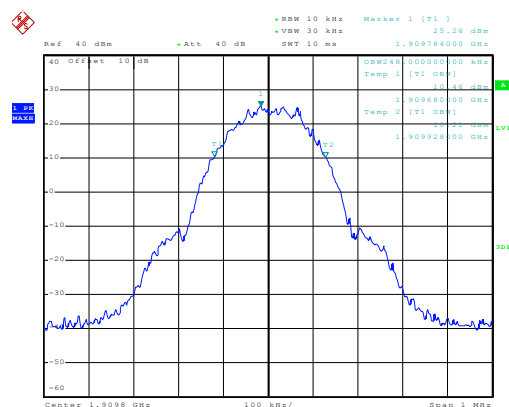
Date: 13.MAY.2014 17:02:42

Lowest channel



Date: 13.MAY.2014 17:03:17

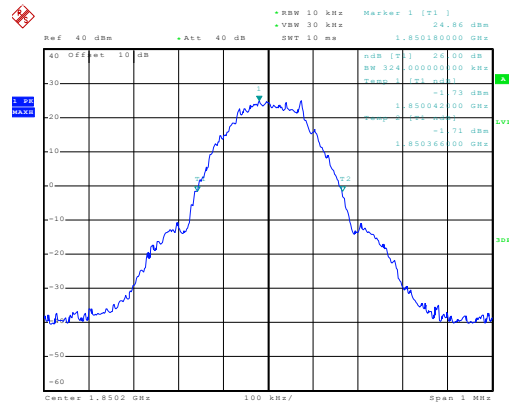
Middle channel



Date: 13.MAY.2014 17:04:08

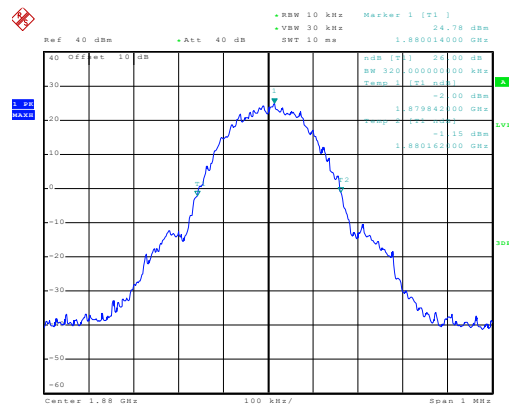
Highest channel

Test Item:	-26dB bandwidth	Test Mode:	GPRS 1900
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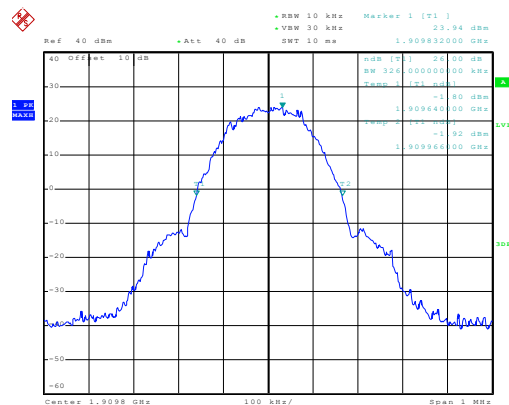
Date: 13.MAY.2014 17:06:25

Lowest channel



Date: 13.MAY.2014 17:05:33

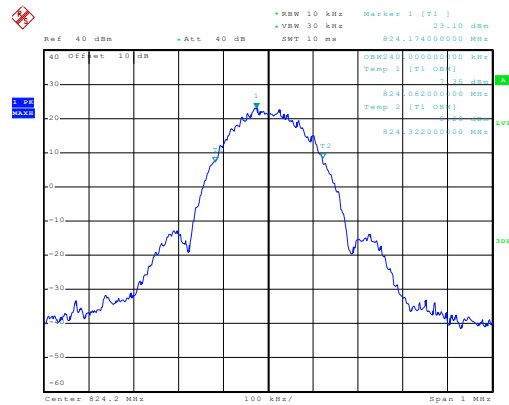
Middle channel



Date: 13.MAY.2014 17:05:01

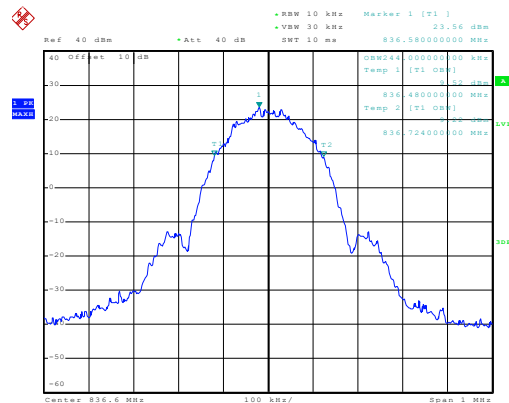
Highest channel

Test Item:	99% Occupy bandwidth	Test Mode:	EGPRS 850
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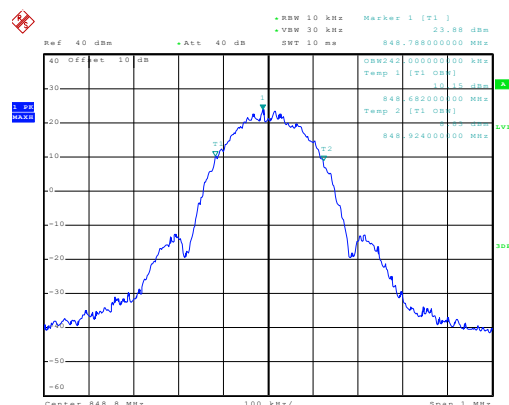
Date: 13.MAY.2014 16:39:23

Lowest channel



Date: 13.MAY.2014 16:40:22

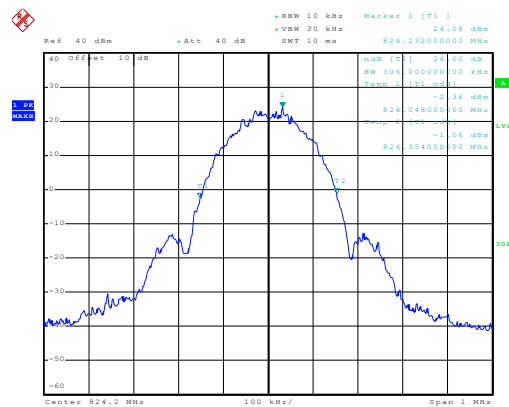
Middle channel



Date: 13.MAY.2014 16:41:26

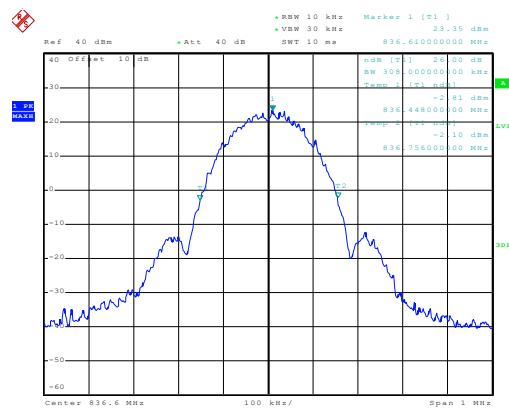
Highest channel

Test Item:	-26dB bandwidth	Test Mode:	EGPRS 850
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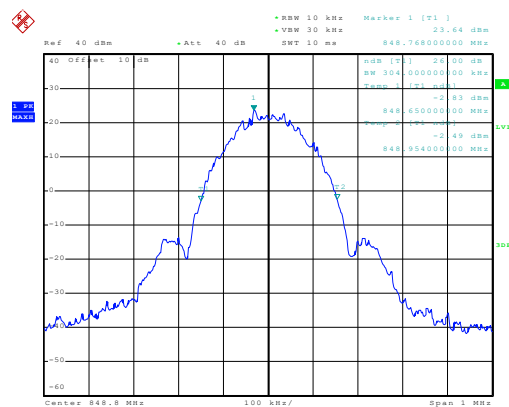
Date: 13.MAY.2014 16:44:35

Lowest channel



Date: 13.MAY.2014 16:43:33

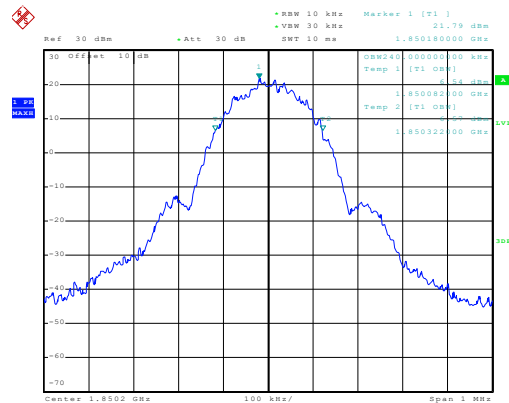
Middle channel



Date: 13.MAY.2014 16:42:28

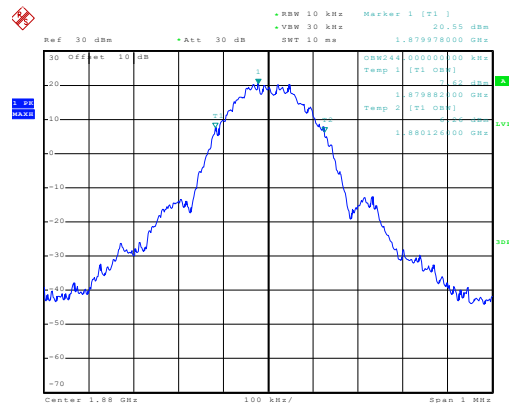
Highest channel

Test Item:	99% Occupancy bandwidth	Test Mode:	EGPRS 1900
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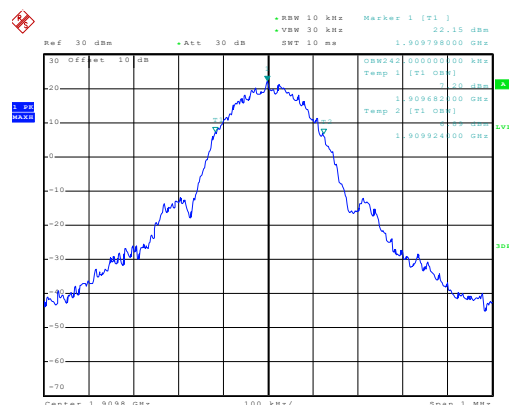
Date: 13.MAY.2014 17:18:32

Lowest channel



Date: 13.MAY.2014 17:18:59

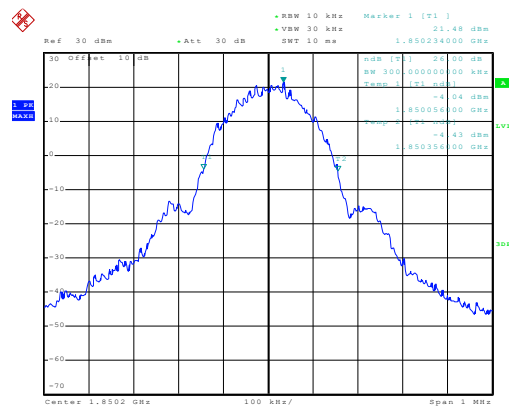
Middle channel



Date: 13.MAY.2014 17:19:26

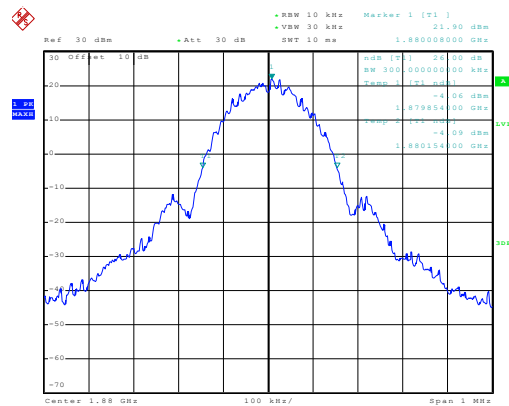
Highest channel

Test Item:	-26dB bandwidth	Test Mode:	EGPRS 1900
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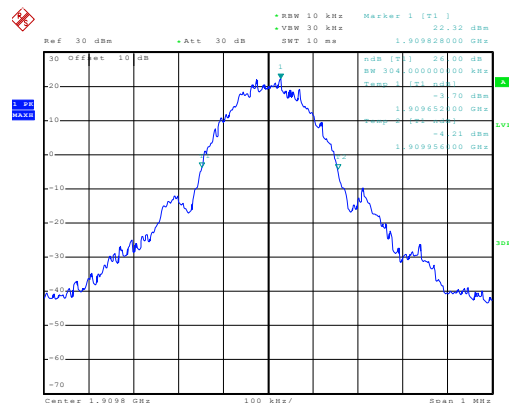
Date: 13.MAY.2014 17:20:56

Lowest channel



Date: 13.MAY.2014 17:20:22

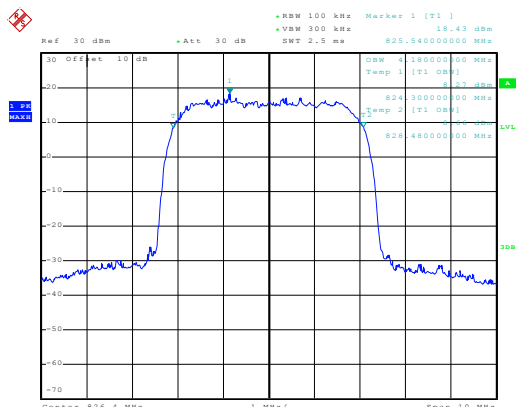
Middle channel



Date: 13.MAY.2014 17:19:59

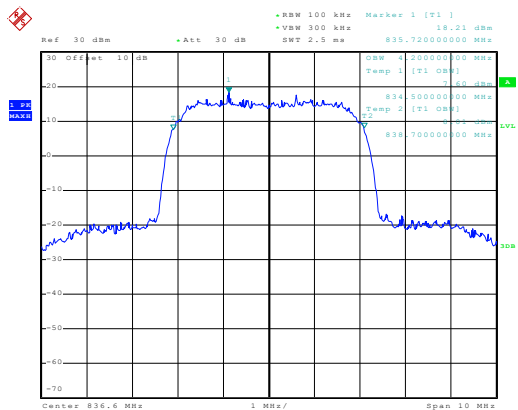
Highest channel

Test Item:	99% Occupy bandwidth	Test Mode:	UMTS 850 12.2k RMC
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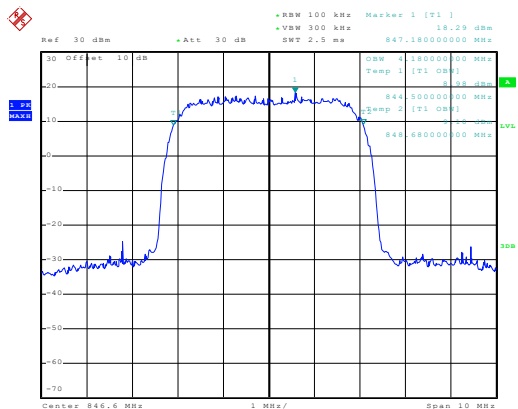
Date: 14.MAY.2014 12:52:38

Lowest channel



Date: 14.MAY.2014 12:53:13

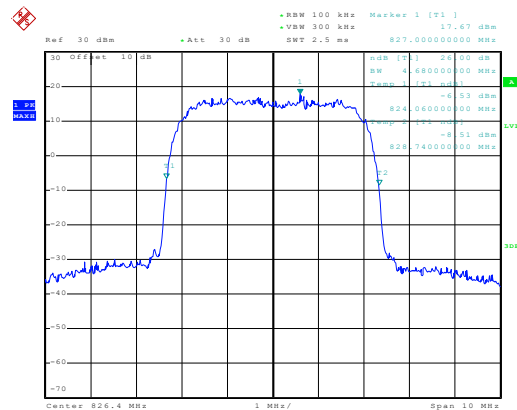
Middle channel



Date: 14.MAY.2014 12:53:59

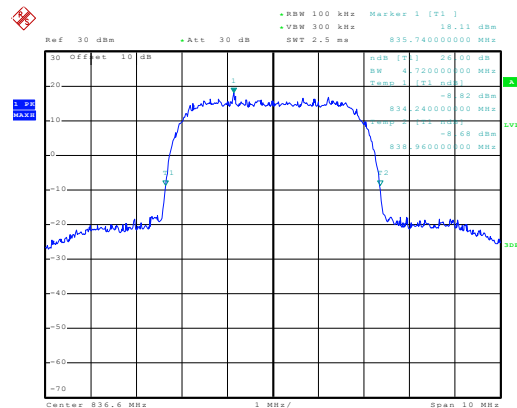
Highest channel

Test Item:	-26dB bandwidth	Test Mode:	UMTS 850 12.2k RMC
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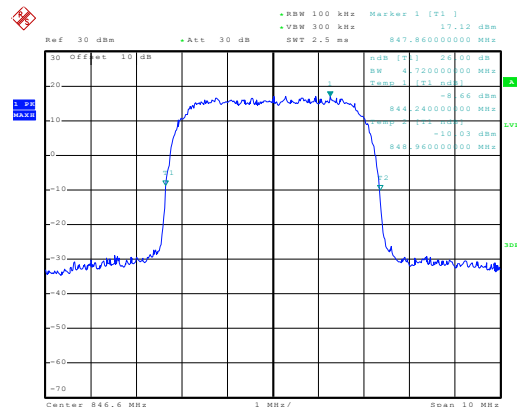
Date: 14.MAY.2014 12:55:38

Lowest channel



Date: 14.MAY.2014 12:54:58

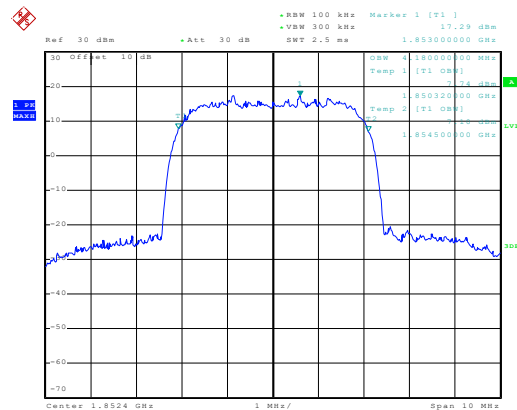
Middle channel



Date: 14.MAY.2014 12:54:26

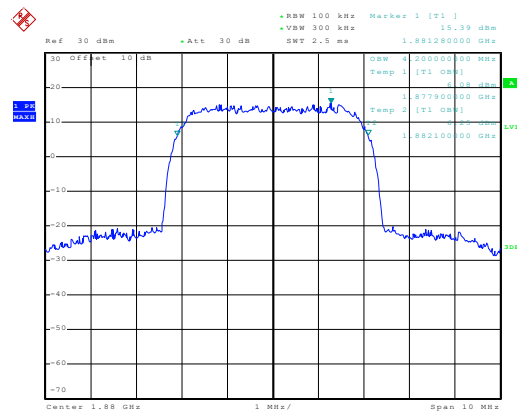
Highest channel

Test Item:	99% Occupy bandwidth	Test Mode:	UMTS 1900 12.2k RMC
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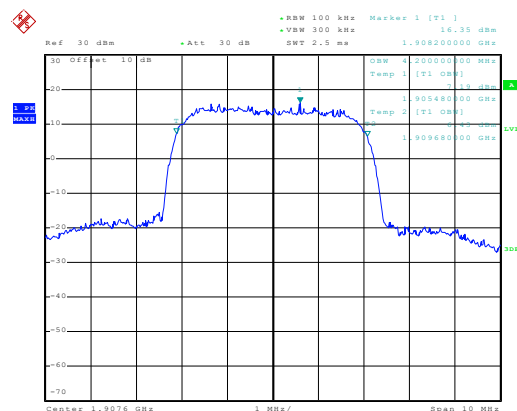
Date: 14.MAY.2014 14:43:48

Lowest channel



Date: 14.MAY.2014 14:44:24

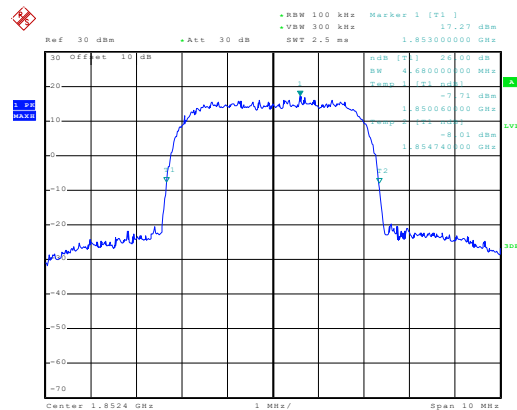
Middle channel



Date: 14.MAY.2014 14:45:06

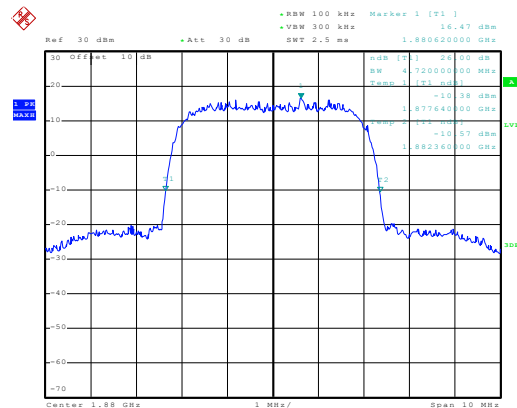
Highest channel

Test Item:	-26dB bandwidth	Test Mode:	UMTS 1900 12.2k RMC
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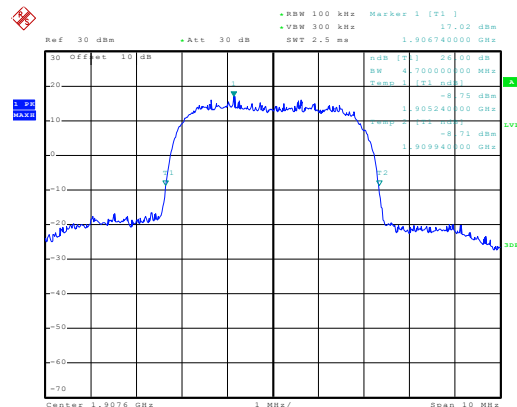
Date: 14.MAY.2014 14:46:36

Lowest channel



Date: 14.MAY.2014 14:46:00

Middle channel

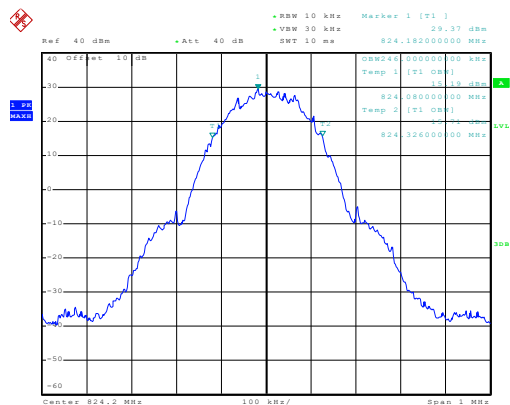


Date: 14.MAY.2014 14:45:28

Highest channel

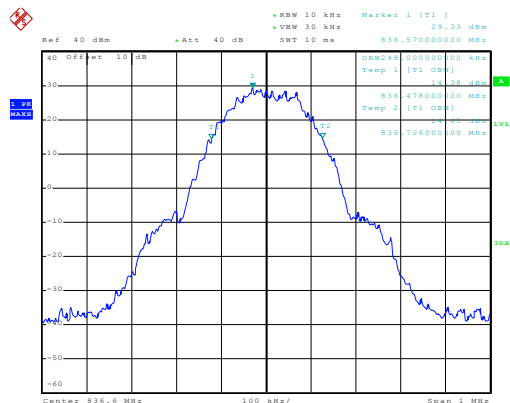
MT 6280 part:

Test Item:	99% Occupy bandwidth	Test Mode:	GPRS 850
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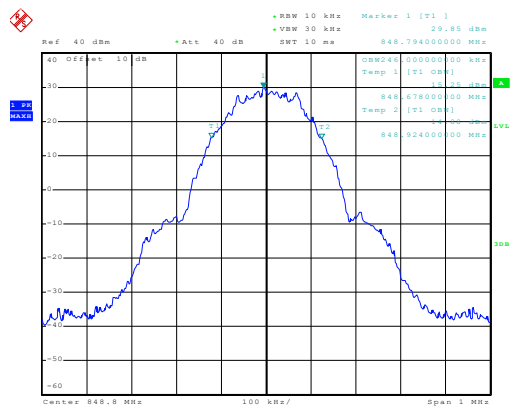
Date: 14.MAY.2014 10:06:27

Lowest channel



Date: 14.MAY.2014 10:07:14

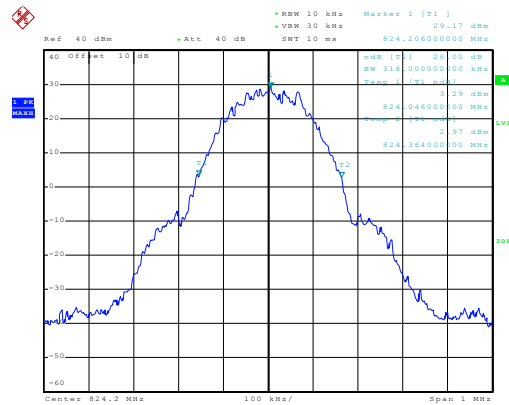
Middle channel



Date: 14.MAY.2014 10:08:29

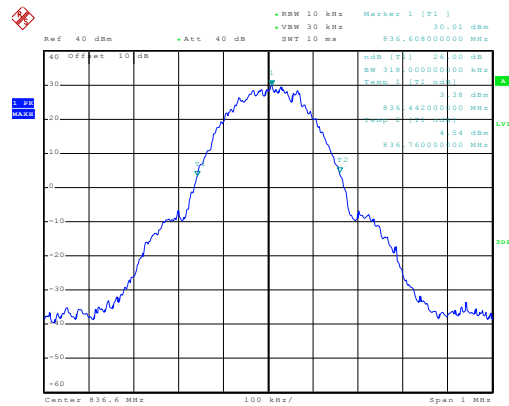
Highest channel

Test Item:	-26dB bandwidth	Test Mode:	GPRS 850
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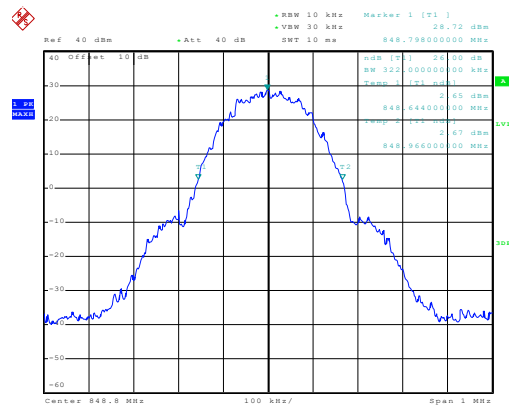
Date: 14.MAY.2014 10:11:15

Lowest channel



Date: 14.MAY.2014 10:10:40

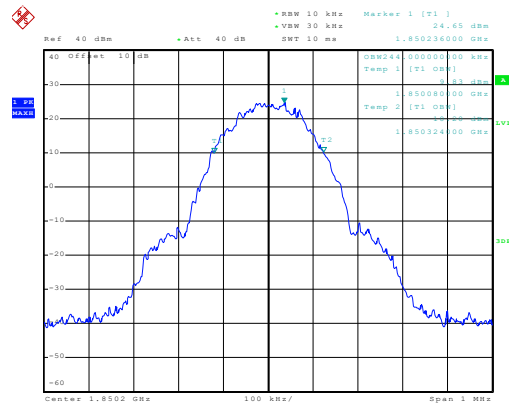
Middle channel



Date: 14.MAY.2014 10:09:57

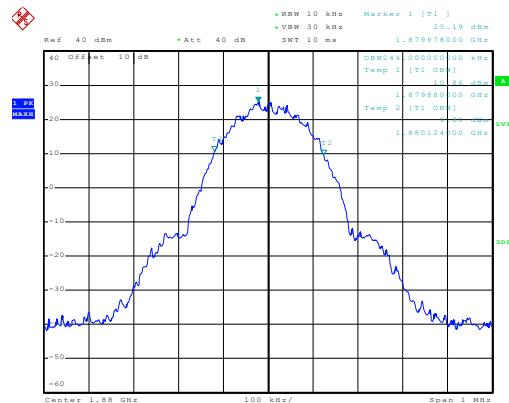
Highest channel

Test Item:	99% Occupancy bandwidth	Test Mode:	GPRS 1900
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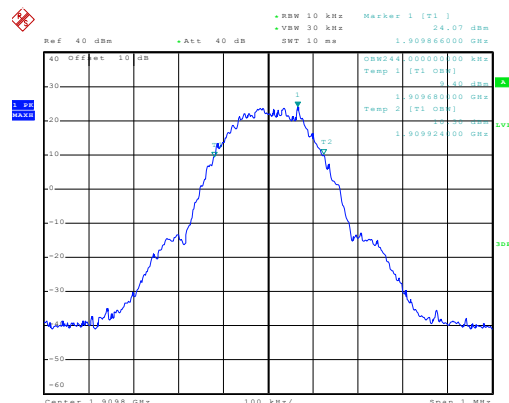
Date: 14.MAY.2014 10:41:49

Lowest channel



Date: 14.MAY.2014 10:42:40

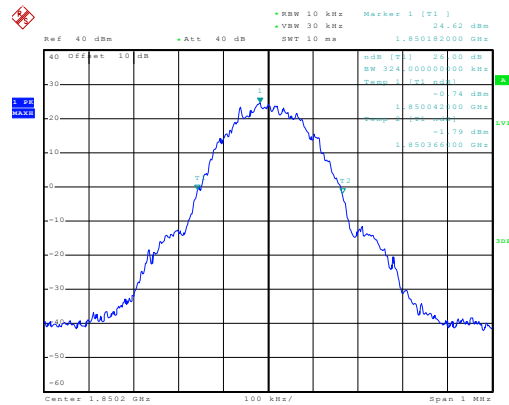
Middle channel



Date: 14.MAY.2014 10:43:21

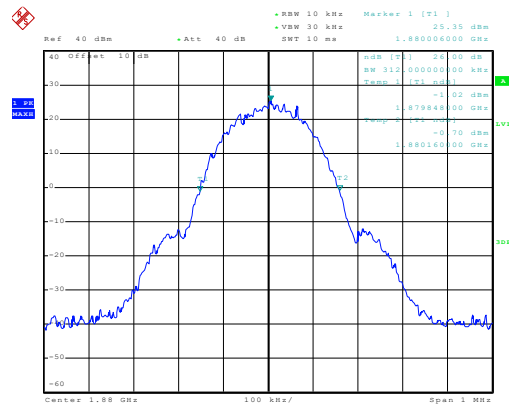
Highest channel

Test Item:	-26dB bandwidth	Test Mode:	GPRS 1900
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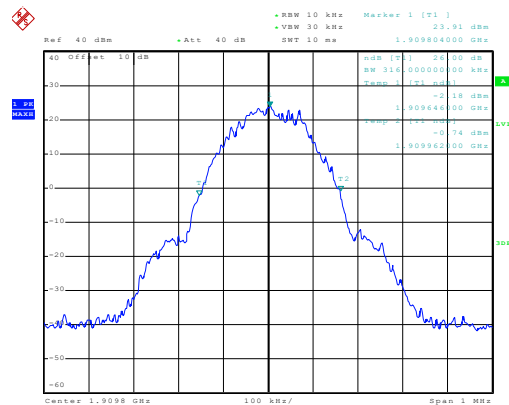
Date: 14.MAY.2014 10:44:50

Lowest channel



Date: 14.MAY.2014 10:44:19

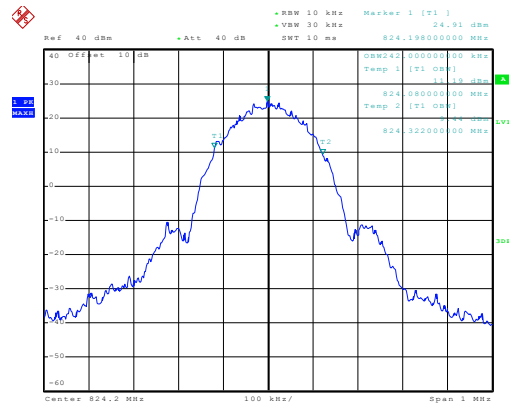
Middle channel



Date: 14.MAY.2014 10:43:46

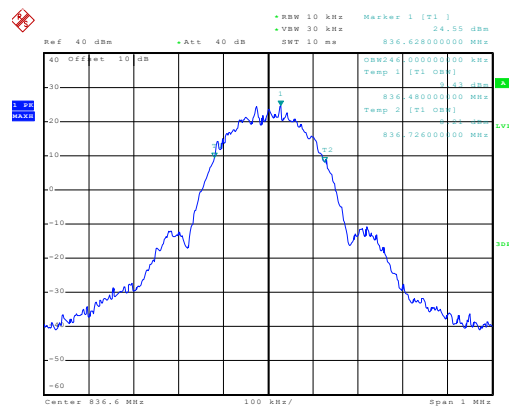
Highest channel

Test Item:	99% Occupy bandwidth	Test Mode:	EGPRS 850
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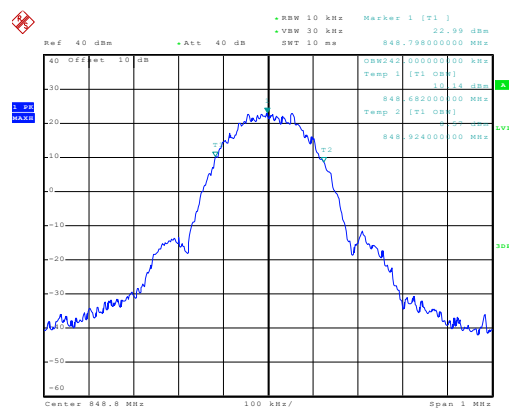
Date: 14 MAY 2014 10:25:13

Lowest channel



Date: 14 MAY 2014 10:25:57

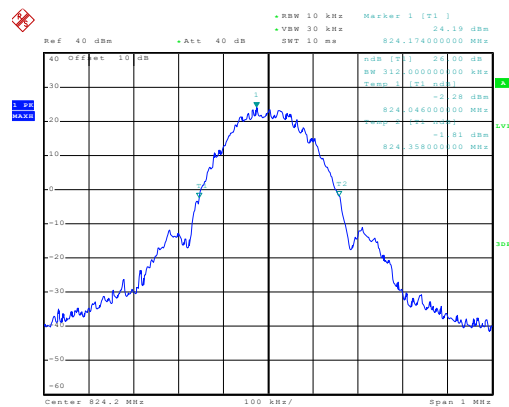
Middle channel



Date: 14 MAY 2014 10:26:33

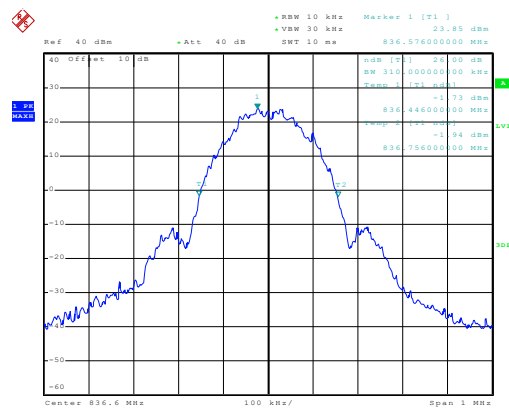
Highest channel

Test Item:	-26dB bandwidth	Test Mode:	EGPRS 850
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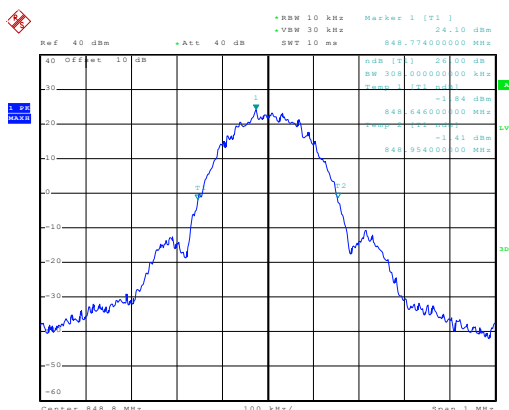
Date: 14.MAY.2014 10:28:32

Lowest channel



Date: 14.MAY.2014 10:27:58

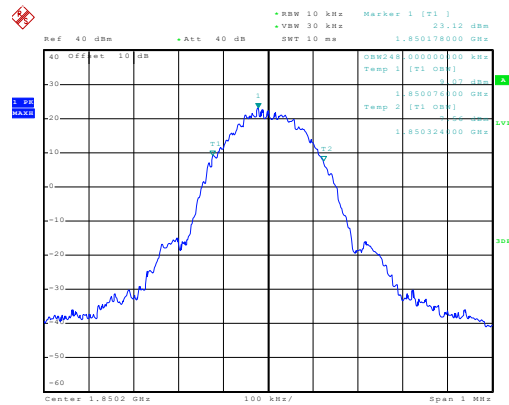
Middle channel



Date: 14.MAY.2014 10:27:15

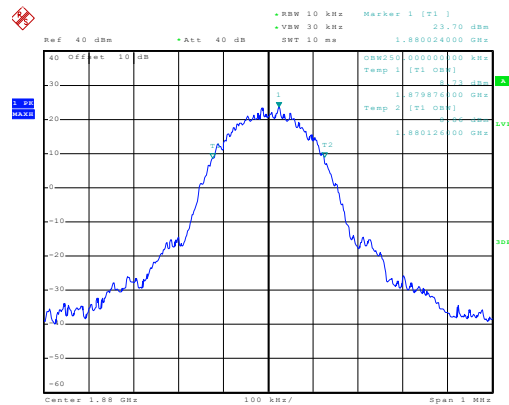
Highest channel

Test Item:	99% Occupancy bandwidth	Test Mode:	EGPRS 1900
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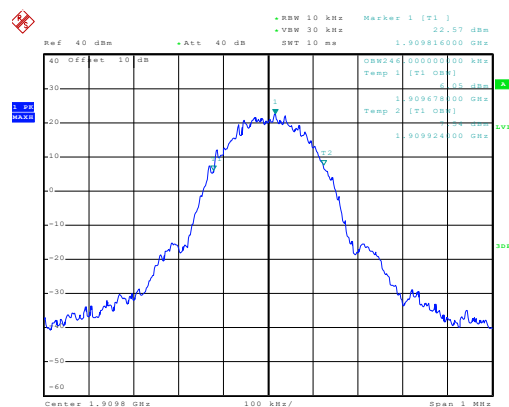
Date: 14.MAY.2014 10:33:32

Lowest channel



Date: 14.MAY.2014 10:34:05

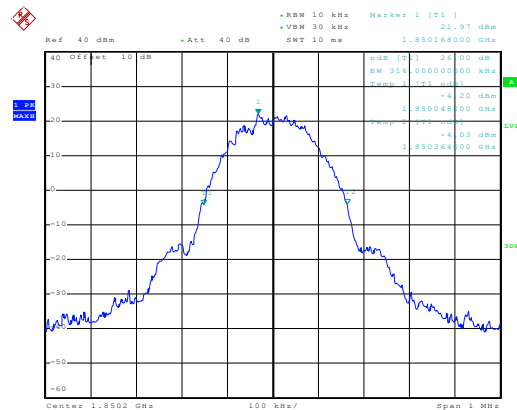
Middle channel



Date: 14.MAY.2014 10:34:44

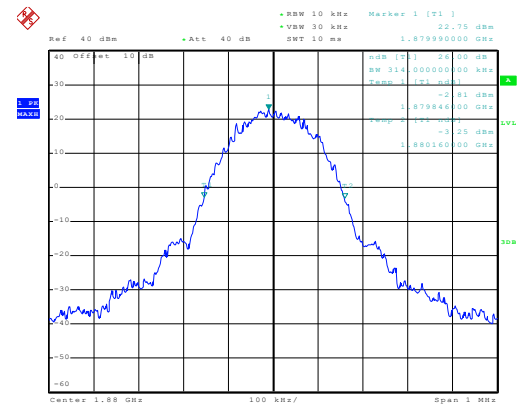
Highest channel

Test Item:	-26dB bandwidth	Test Mode:	EGPRS 1900
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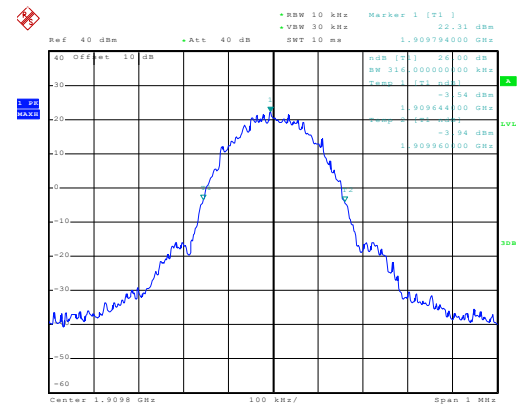
Date: 14.MAY.2014 10:36:21

Lowest channel



Date: 14.MAY.2014 10:35:42

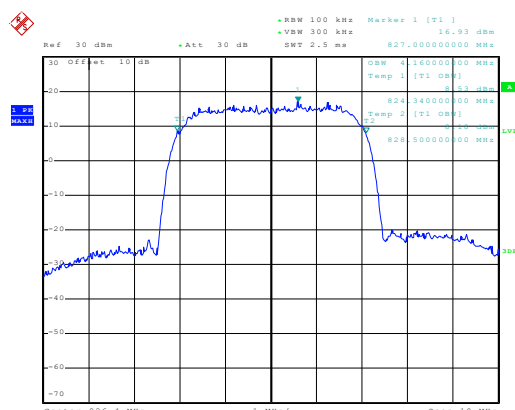
Middle channel



Date: 14.MAY.2014 10:35:14

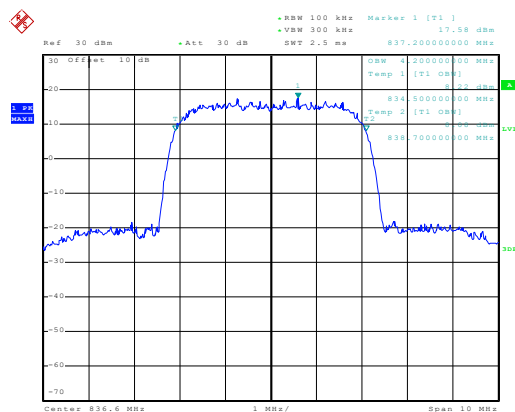
Highest channel

Test Item:	99% Occupy bandwidth	Test Mode:	UMTS 850 12.2k RMC
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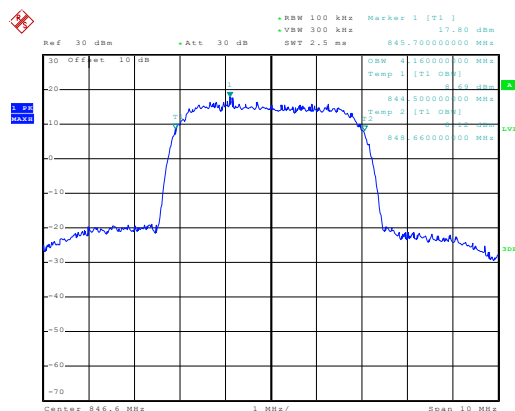
Date: 14.MAY.2014 12:00:50

Lowest channel



Date: 14.MAY.2014 12:01:31

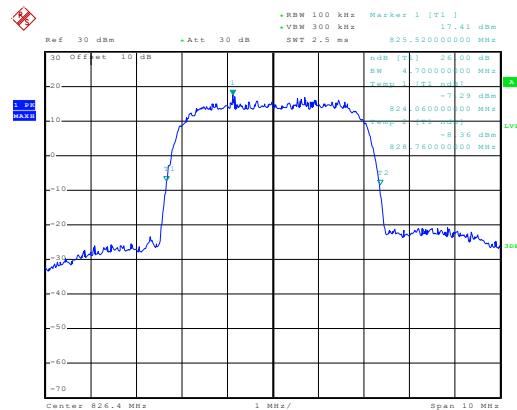
Middle channel



Date: 14.MAY.2014 12:05:05

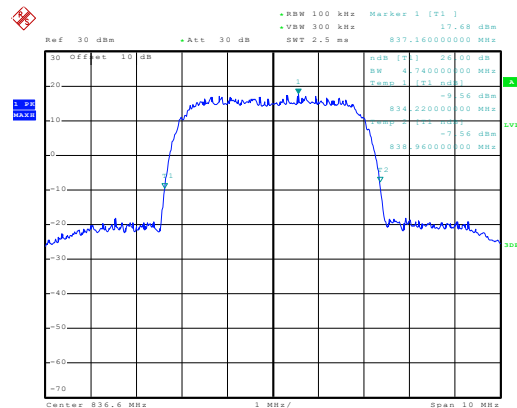
Highest channel

Test Item:	-26dB bandwidth	Test Mode:	UMTS 850 12.2k RMC
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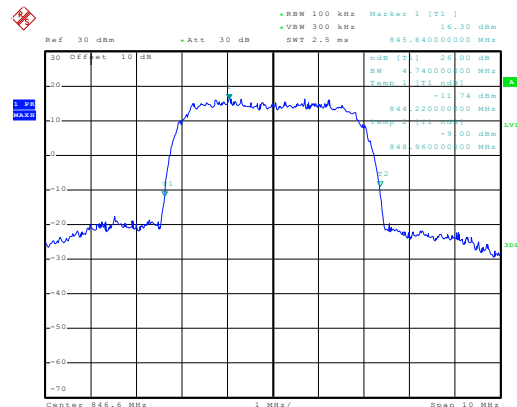
Date: 14.MAY.2014 12:10:21

Lowest channel



Date: 14.MAY.2014 12:09:44

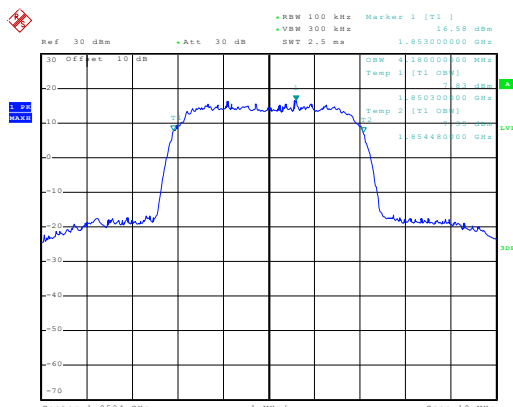
Middle channel



Date: 14.MAY.2014 12:09:09

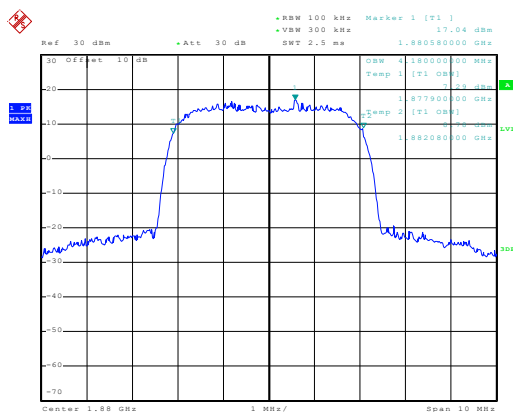
Highest channel

Test Item:	99% Occupy bandwidth	Test Mode:	UMTS 1900 12.2k RMC
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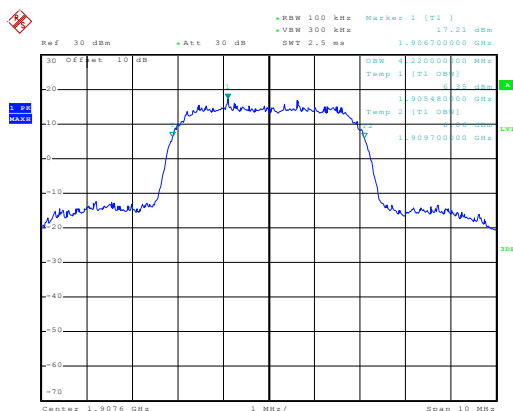
Date: 14.MAY.2014 11:12:05

Lowest channel



Date: 14.MAY.2014 11:12:43

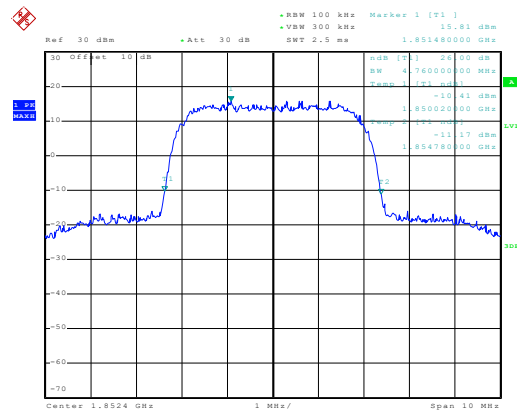
Middle channel



Date: 14.MAY.2014 11:13:54

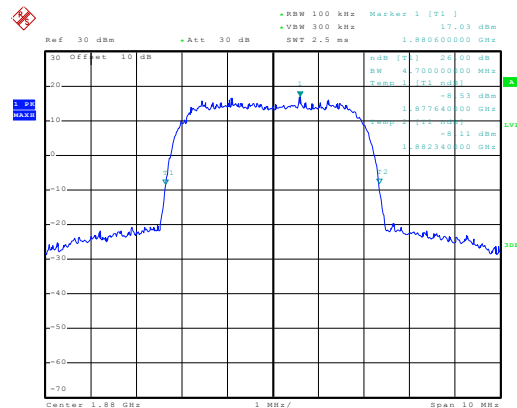
Highest channel

Test Item:	-26dB bandwidth	Test Mode:	UMTS 1900 12.2k RMC
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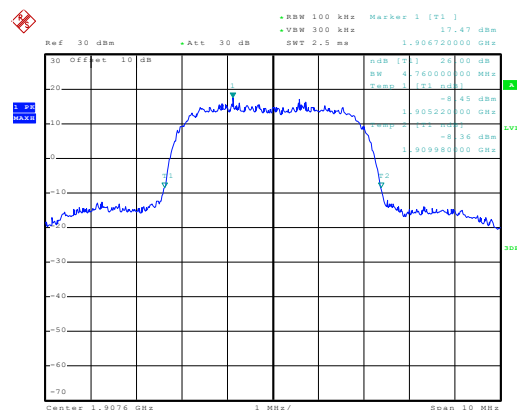
Date: 14.MAY.2014 11:15:32

Lowest channel



Date: 14.MAY.2014 11:14:52

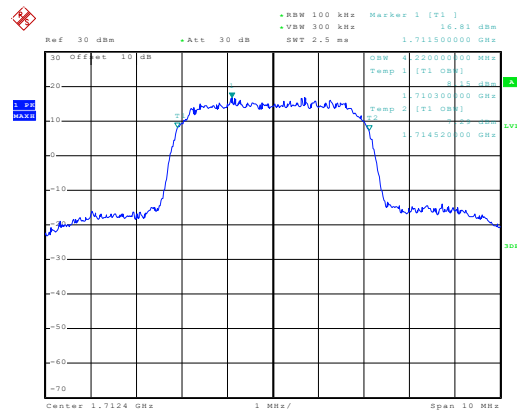
Middle channel



Date: 14.MAY.2014 11:14:20

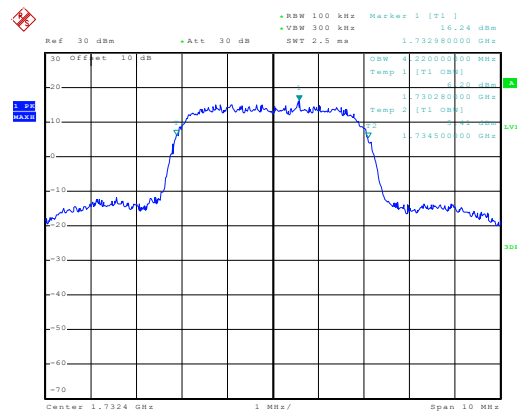
Highest channel

Test Item:	99% Occupy bandwidth	Test Mode:	UMTS 1700 12.2k RMC
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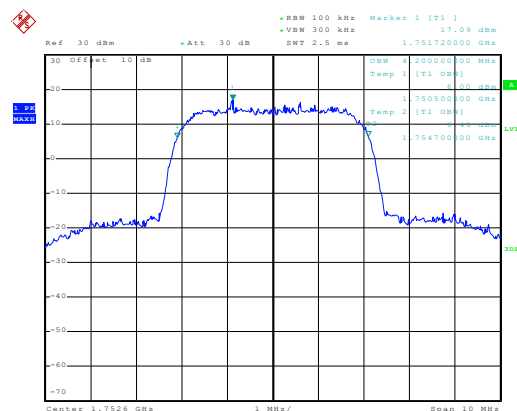
Date: 14.MAY.2014 11:32:48

Lowest channel



Date: 14.MAY.2014 11:33:21

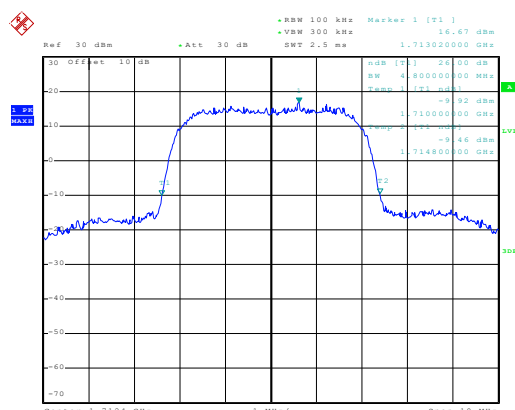
Middle channel



Date: 14.MAY.2014 11:34:14

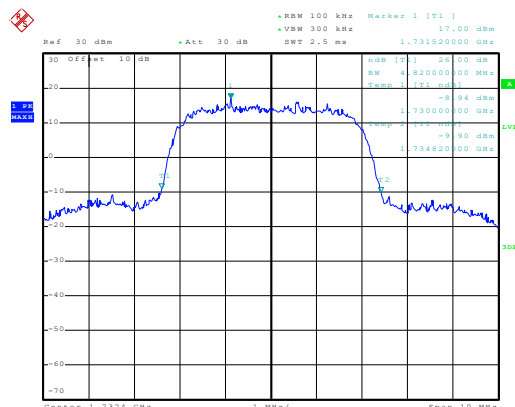
Highest channel

Test Item:	-26dB bandwidth	Test Mode:	UMTS 1700 12.2k RMC
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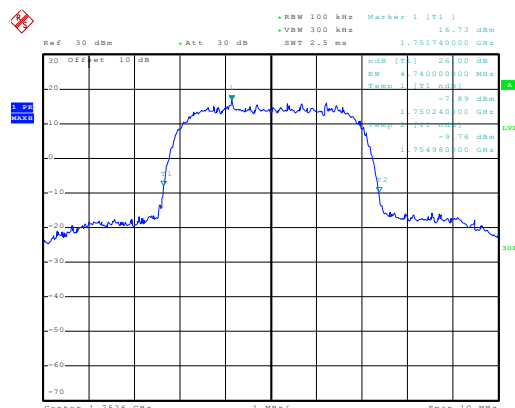
Date: 14.MAY.2014 11:35:54

Lowest channel



Date: 14.MAY.2014 11:35:15

Middle channel



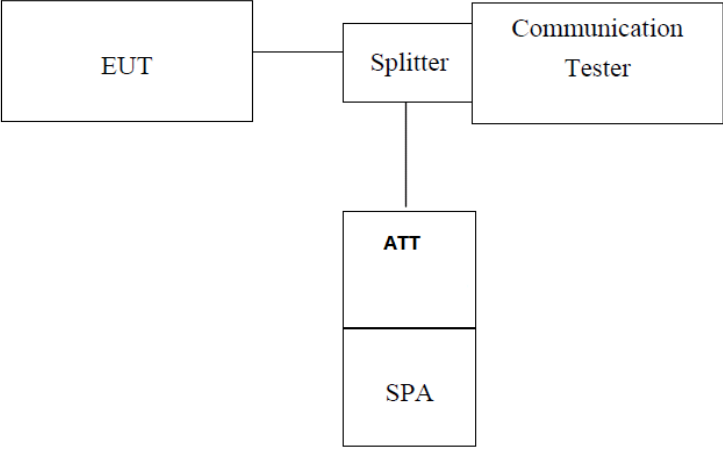
Date: 14.MAY.2014 11:34:40

Highest channel

6.7 Modulation Characteristic

According to FCC § 2.1047(d), Part 22H & 24E & 27L there is no specific requirement for digital modulation, therefore modulation characteristic is not presented.

6.8 Out of band emission at antenna terminals

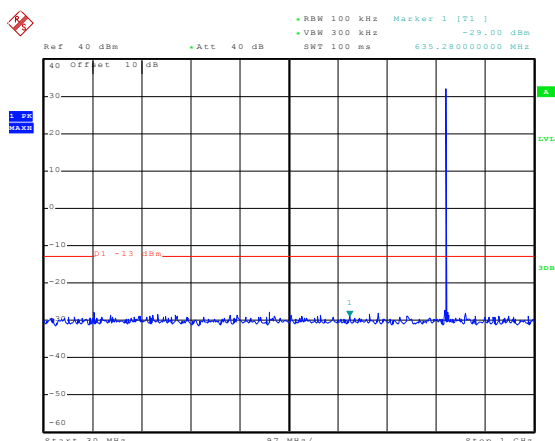
Test Requirement:	FCC part 22.917(a) , FCC part 24.238(a) and FCC part 27.53(h)
Test Method:	FCC part 2.1051
Limit:	-13dBm
Test setup:	 <i>Note: Measurement setup for testing on Antenna connector</i>
Test Procedure:	1 The RF output of the transceiver was connected to a spectrum analyzer through appropriate 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 plots as follows:

MT 6276part

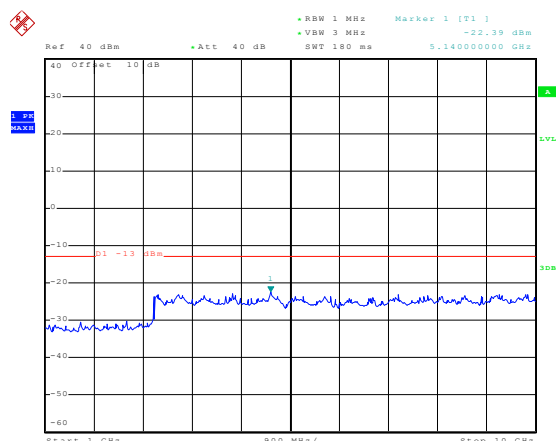
Spurious emission

Test Mode:	GPRS850	Test Channel:	Lowest channel
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Date: 13.MAY.2014 16:31:02

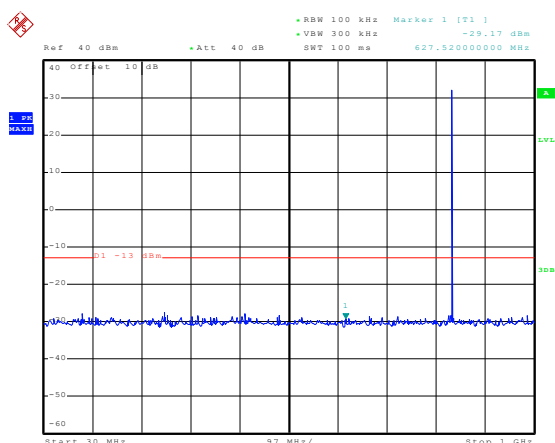
30MHz~1GHz



Date: 13.MAY.2014 16:32:06

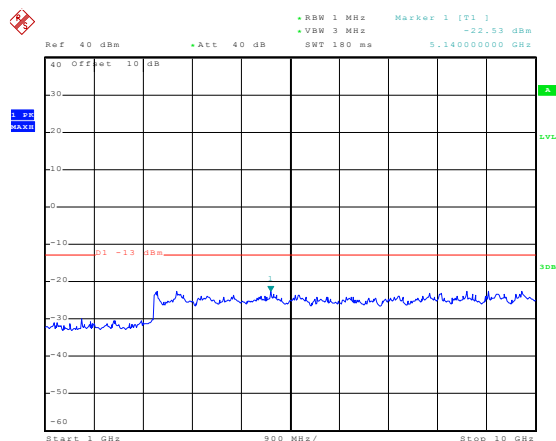
1GHz~10GHz

Test Mode:	GPRS50	Test Channel:	Middle channel
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Date: 13.MAY.2014 16:33:45

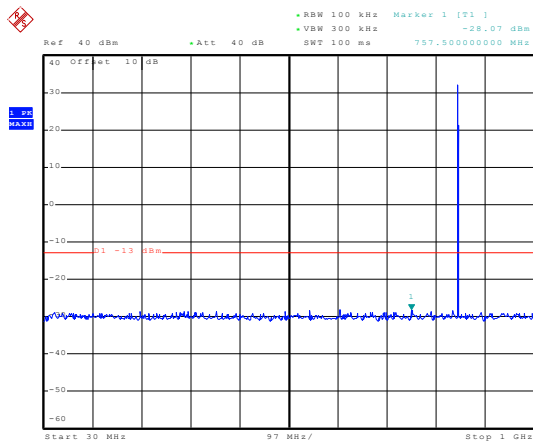
30MHz~1GHz



Date: 13.MAY.2014 16:32:59

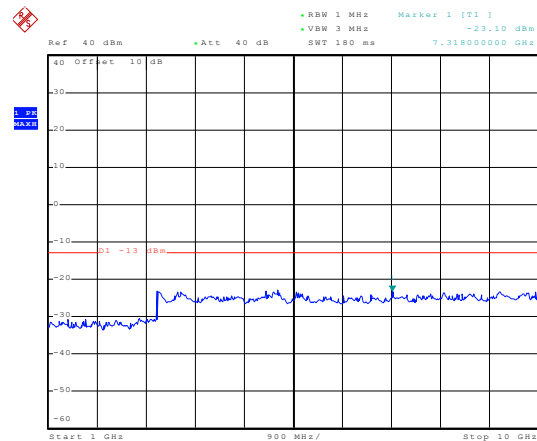
1GHz~10GHz

Test Mode:	GPRS850	Test Channel:	Highest channel
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Date: 13.MAY.2014 16:34:37

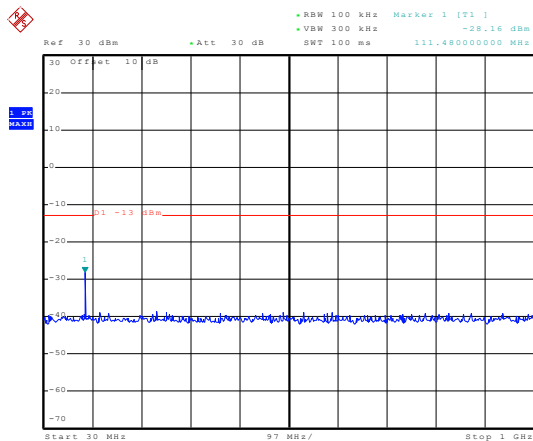
30MHz~1GHz



Date: 13.MAY.2014 16:35:38

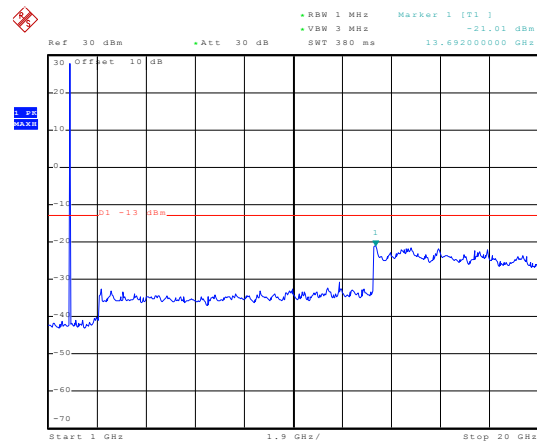
1GHz~10GHz

Test Mode:	GPRS1900	Test Channel:	Lowest channel
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Date: 13.MAY.2014 17:13:50

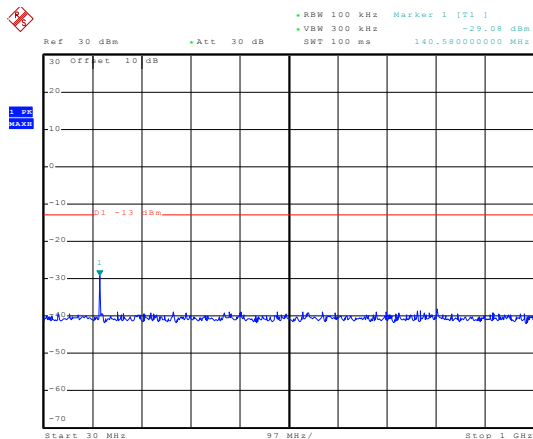
30MHz~1GHz



Date: 13.MAY.2014 17:14:48

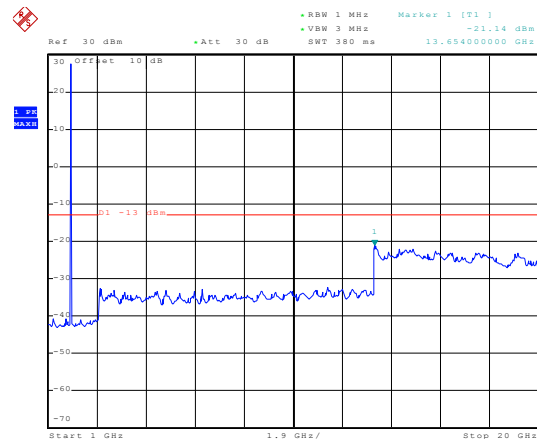
1GHz~20GHz

Test Mode:	GPRS1900	Test Channel:	Middle channel
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Date: 13.MAY.2014 17:13:05

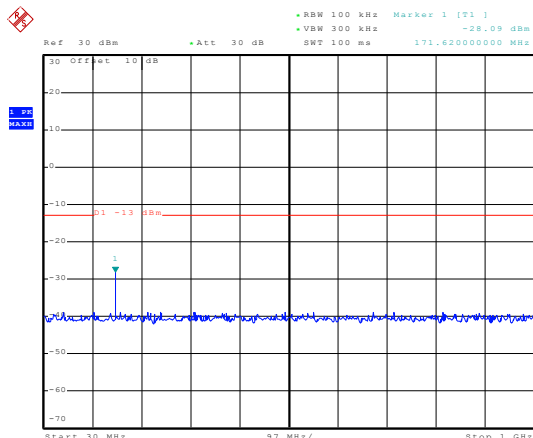
30MHz~1GHz



Date: 13.MAY.2014 17:12:35

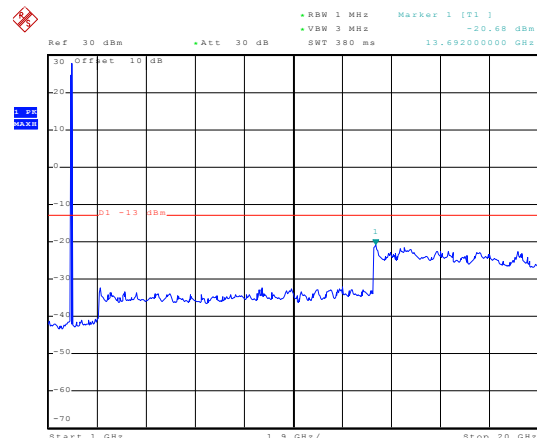
1GHz~20GHz

Test Mode:	GPRS1900	Test Channel:	Highest channel
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Date: 13.MAY.2014 17:13:31

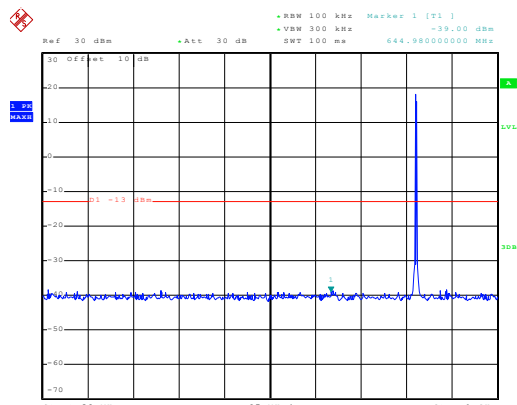
30MHz~1GHz



Date: 13.MAY.2014 17:11:54

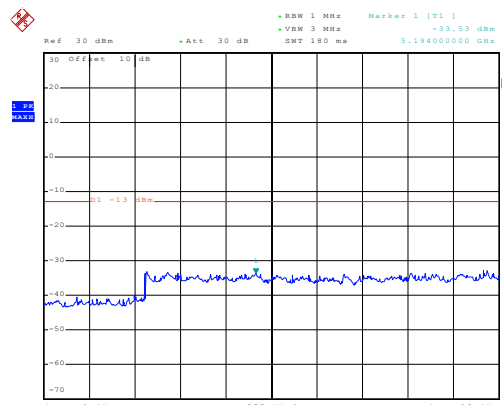
1GHz~20GHz

Test Mode:	UMTS 850 12.2k RMC	Test Channel:	Lowest channel
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Date: 14.MAY.2014 13:03:00

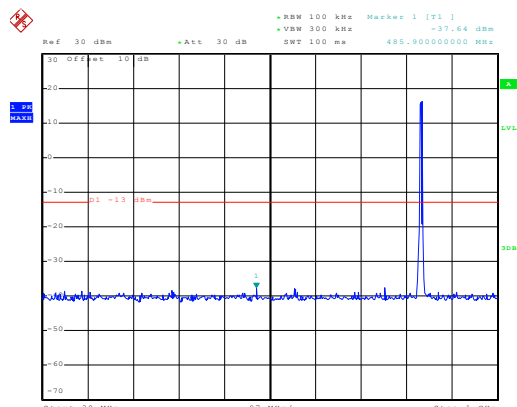
30MHz~1GHz



Date: 14.MAY.2014 13:03:41

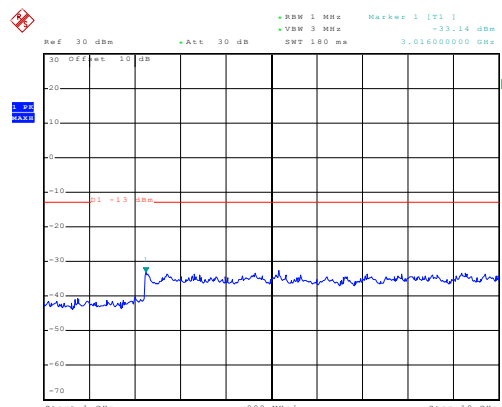
1GHz~10GHz

Test Mode:	UMTS 850 12.2k RMC	Test Channel:	Middle channel
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Date: 14.MAY.2014 13:02:26

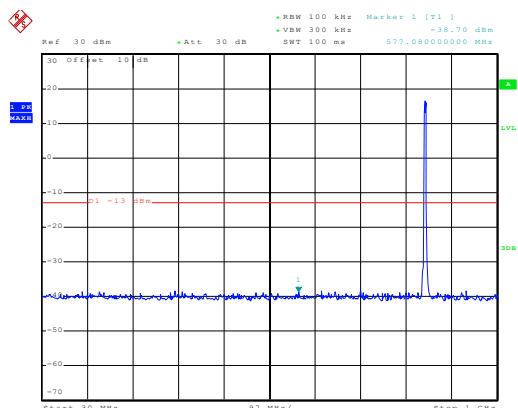
30MHz~1GHz



Date: 14.MAY.2014 13:01:29

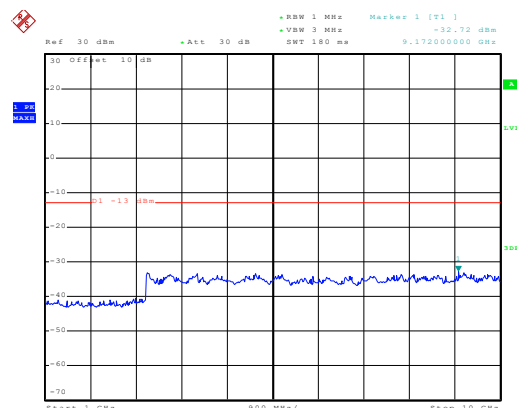
1GHz~10GHz

Test Mode:	UMTS 850 12.2k RMC	Test Channel:	Highest channel
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Date: 14.MAY.2014 12:59:33

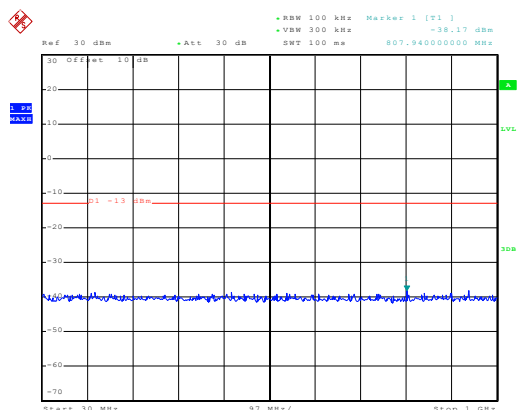
30MHz~1GHz



Date: 14.MAY.2014 13:00:31

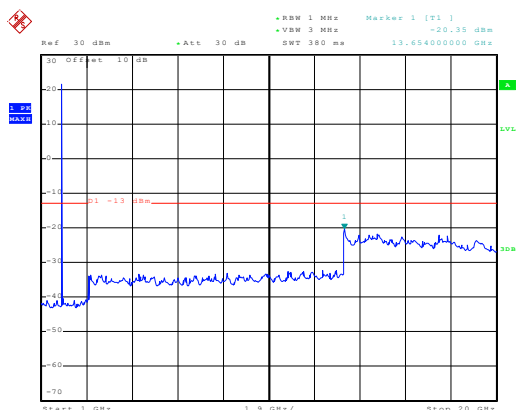
1GHz~10GHz

Test Mode:	UMTS 1900 12.2k RMC	Test Channel:	Lowest channel
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Date: 14.MAY.2014 14:52:10

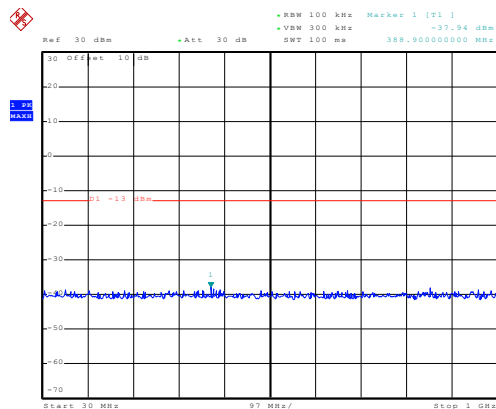
30MHz~1GHz



Date: 14.MAY.2014 14:53:10

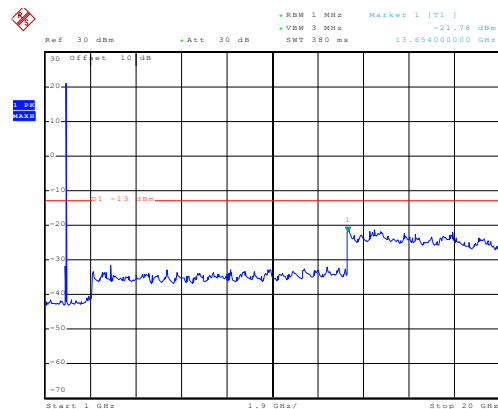
1GHz~20GHz

Test Mode:	UMTS 1900 12.2k RMC	Test Channel:	Middle channel
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Date: 14.MAY.2014 14:51:12

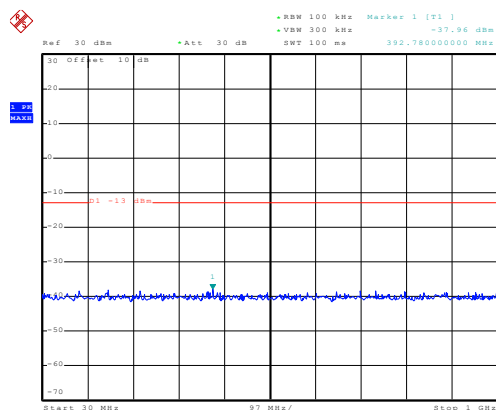
30MHz~1GHz



Date: 14.MAY.2014 14:50:31

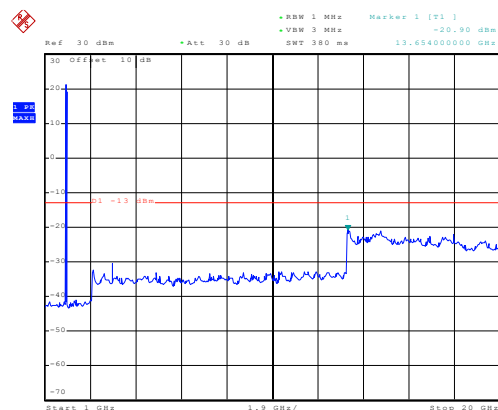
1GHz~20GHz

Test Mode:	UMTS 1900 12.2k RMC	Test Channel:	Highest channel
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Date: 14.MAY.2014 14:49:12

30MHz~1GHz

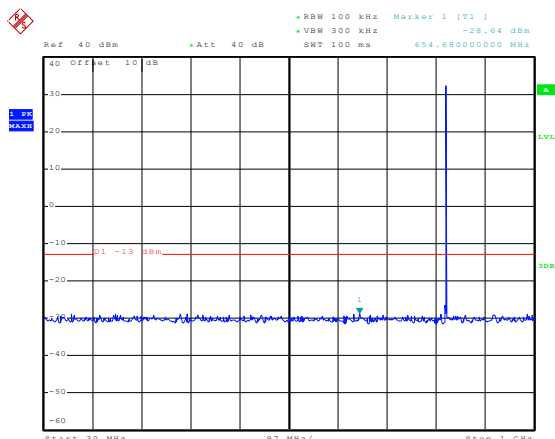


Date: 14.MAY.2014 14:49:52

1GHz~20GHz

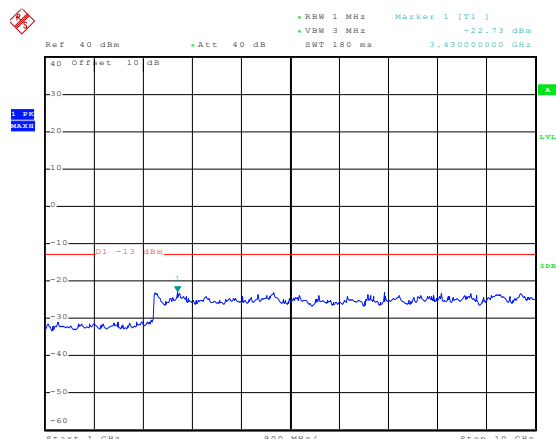
MT 6280 part
Spurious emission

Test Mode:	GPRS850	Test Channel:	Lowest channel
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Date: 14.MAY.2014 10:21:05

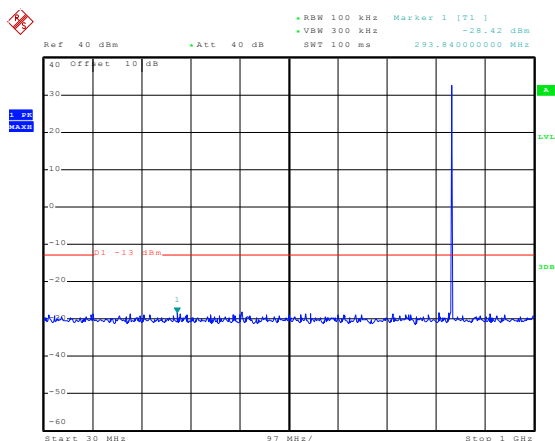
30MHz~1GHz



Date: 14.MAY.2014 10:21:46

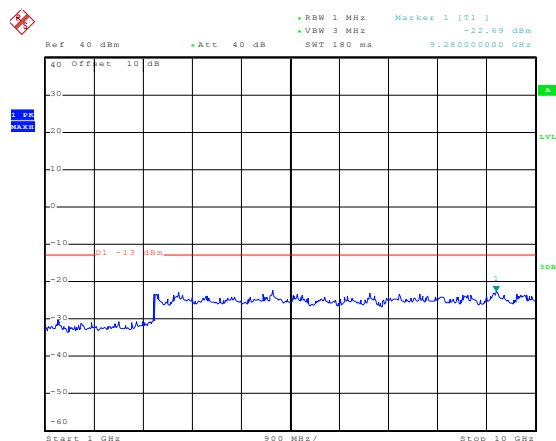
1GHz~10GHz

Test Mode:	GPRS850	Test Channel:	Middle channel
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Date: 14.MAY.2014 10:20:21

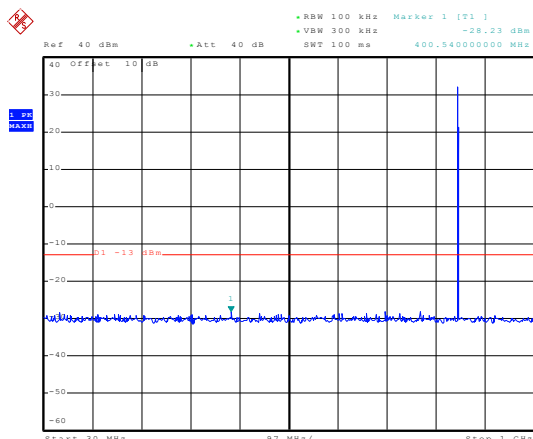
30MHz~1GHz



Date: 14.MAY.2014 10:19:28

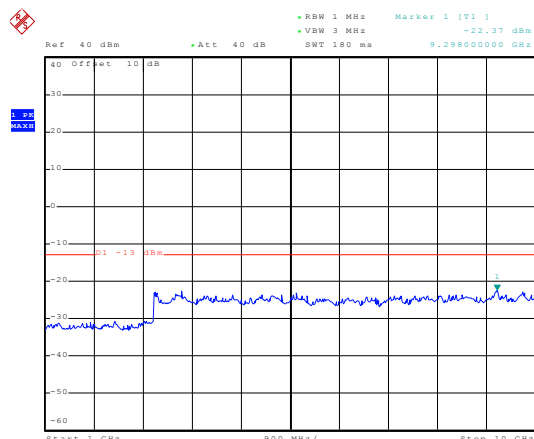
1GHz~10GHz

Test Mode:	GPRS850	Test Channel:	Highest channel
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Date: 14.MAY.2014 10:18:06

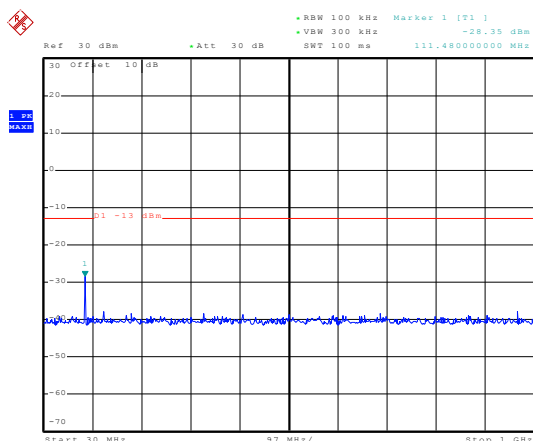
30MHz~1GHz



Date: 14.MAY.2014 10:18:50

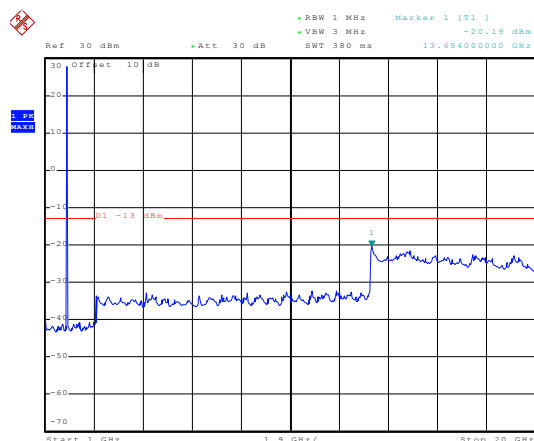
1GHz~10GHz

Test Mode:	GPRS1900	Test Channel:	Lowest channel
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Date: 14.MAY.2014 10:50:55

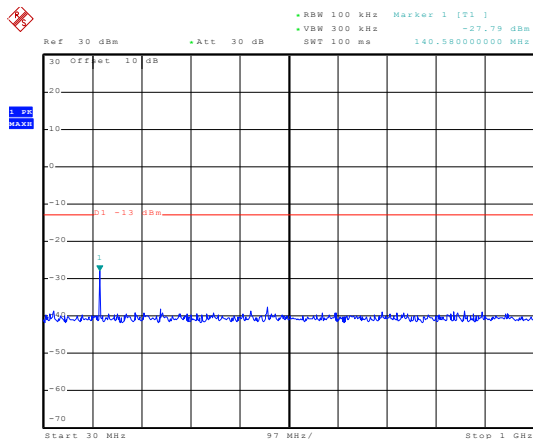
30MHz~1GHz



Date: 14.MAY.2014 10:51:29

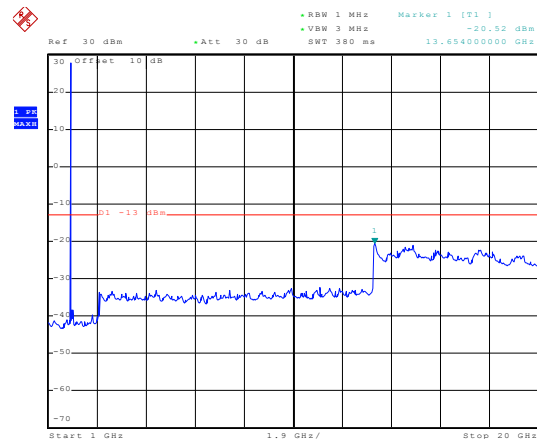
1GHz~20GHz

Test Mode:	GPRS1900	Test Channel:	Middle channel
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Date: 14.MAY.2014 10:50:20

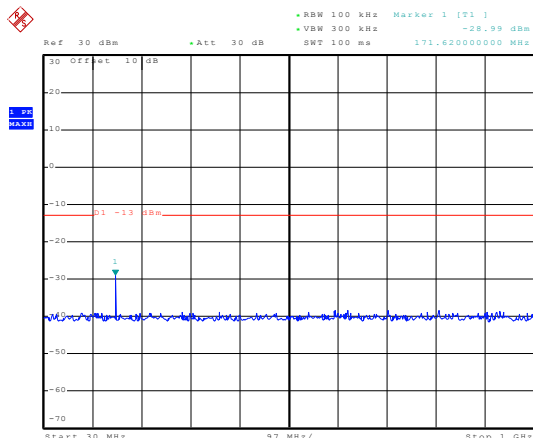
30MHz~1GHz



Date: 14.MAY.2014 10:49:51

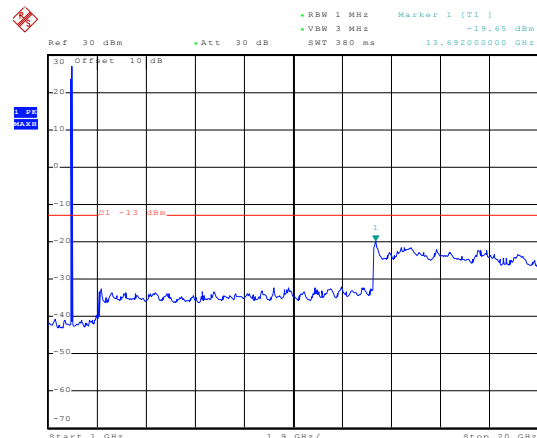
1GHz~20GHz

Test Mode:	GPRS1900	Test Channel:	Highest channel
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Date: 14.MAY.2014 10:48:22

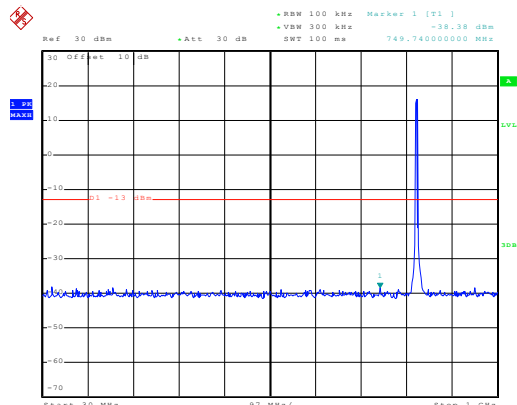
30MHz~1GHz



Date: 14.MAY.2014 10:49:15

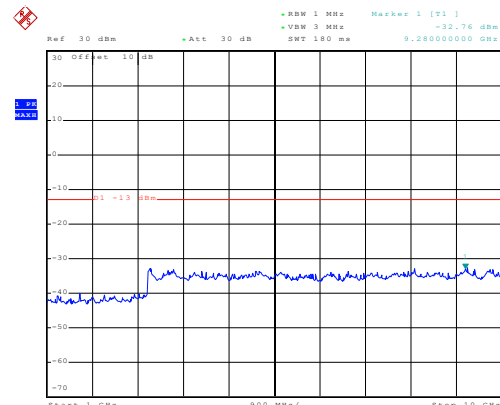
1GHz~20GHz

Test Mode:	UMTS 850 12.2k RMC	Test Channel:	Lowest channel
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Date: 14.MAY.2014 12:19:21

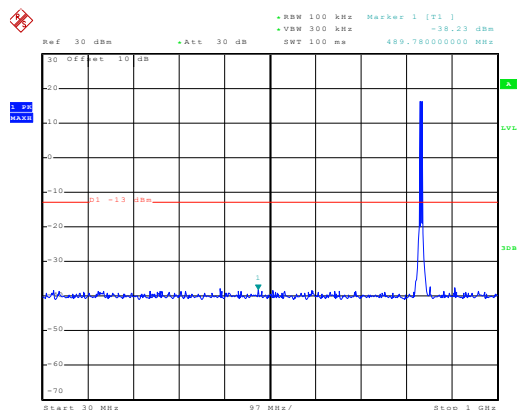
30MHz~1GHz



Date: 14.MAY.2014 12:20:18

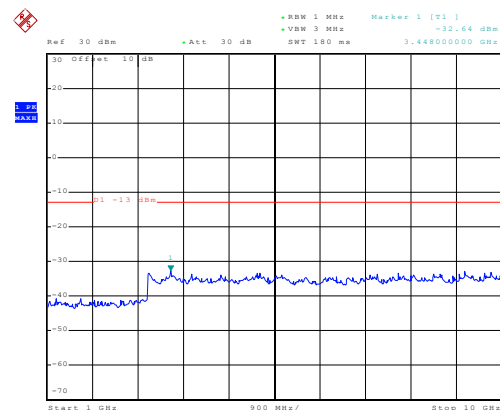
1GHz~10GHz

Test Mode:	UMTS 850 12.2k RMC	Test Channel:	Middle channel
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Date: 14.MAY.2014 12:18:37

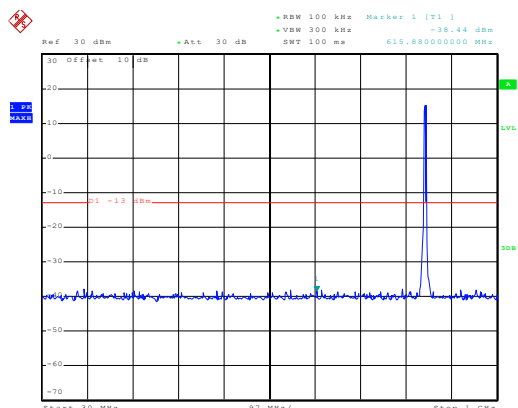
30MHz~1GHz



Date: 14.MAY.2014 12:17:32

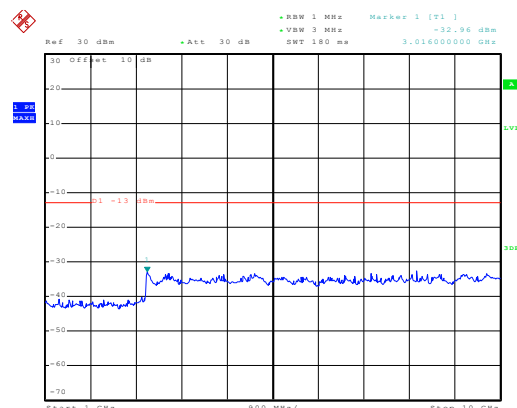
1GHz~10GHz

Test Mode:	UMTS 850 12.2k RMC	Test Channel:	Highest channel
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Date: 14.MAY.2014 12:15:52

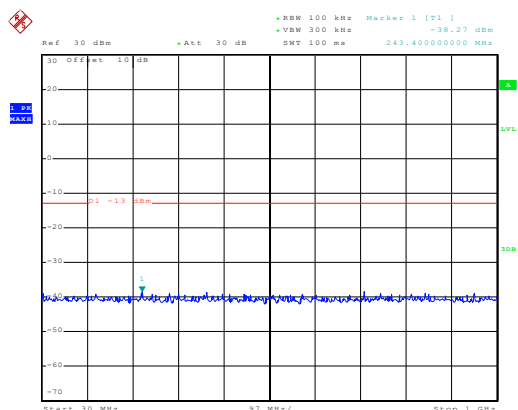
30MHz~1GHz



Date: 14.MAY.2014 12:16:57

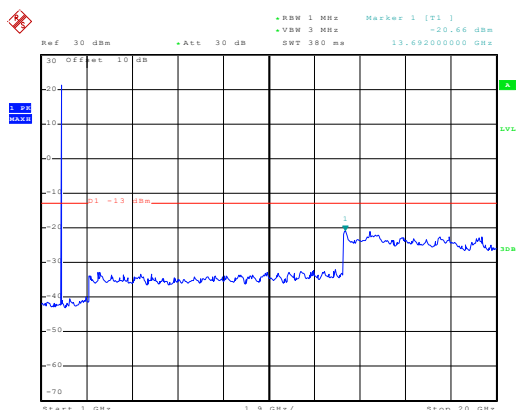
1GHz~10GHz

Test Mode:	UMTS 1900 12.2k RMC	Test Channel:	Lowest channel
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Date: 14.MAY.2014 11:22:04

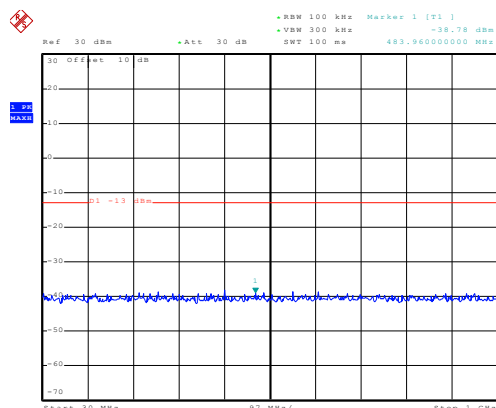
30MHz~1GHz



Date: 14.MAY.2014 11:22:53

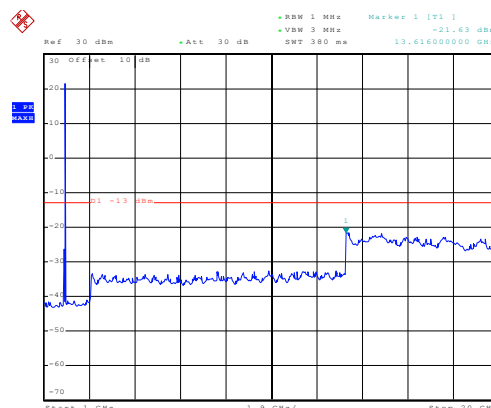
1GHz~20GHz

Test Mode:	UMTS 1900 12.2k RMC	Test Channel:	Middle channel
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Date: 14.MAY.2014 11:21:36

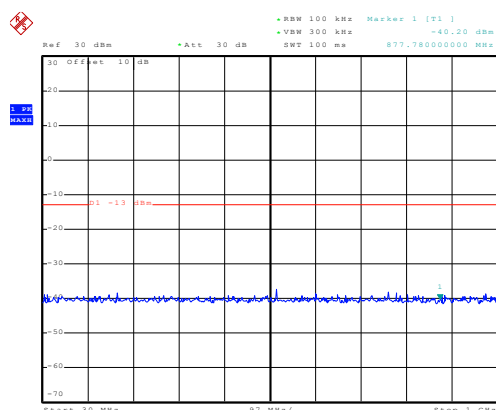
30MHz~1GHz



Date: 14.MAY.2014 11:21:02

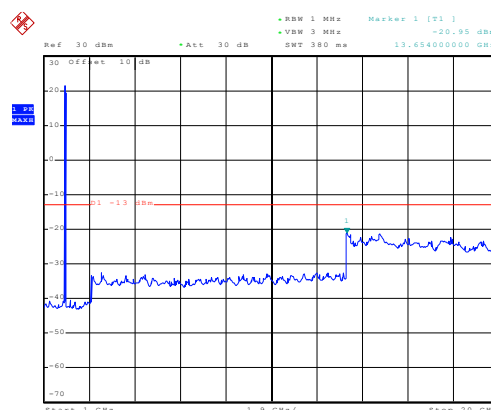
1GHz~20GHz

Test Mode:	UMTS 1900 12.2k RMC	Test Channel:	Highest channel
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Date: 14.MAY.2014 11:19:35

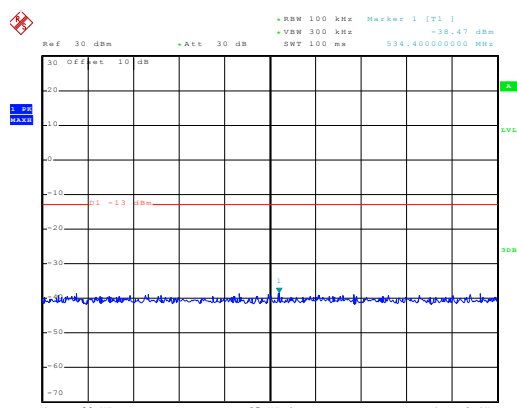
30MHz~1GHz



Date: 14.MAY.2014 11:20:13

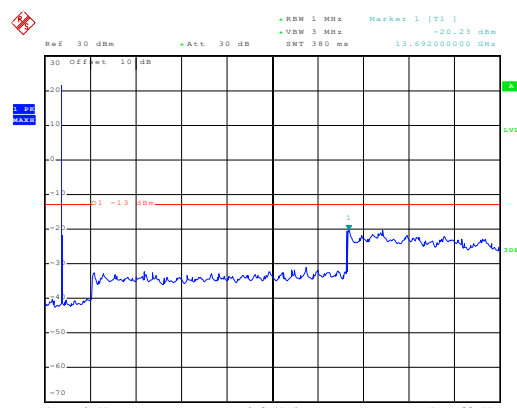
1GHz~20GHz

Test Mode:	UMTS 1700 12.2k RMC	Test Channel:	Lowest channel
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Date: 14.MAY.2014 11:43:00

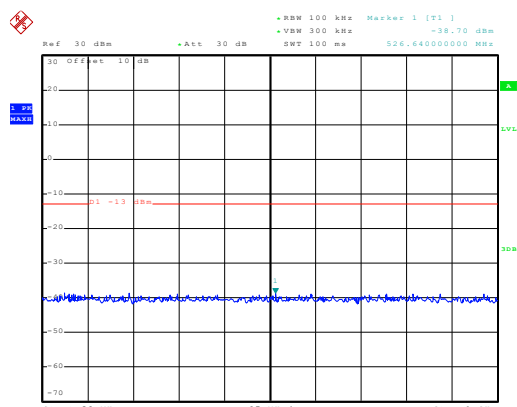
30MHz~1GHz



Date: 14.MAY.2014 11:46:03

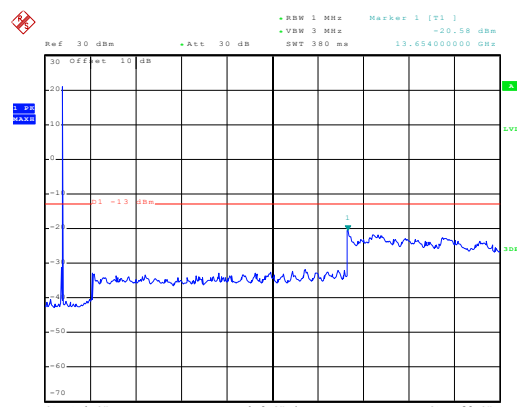
1GHz~20GHz

Test Mode:	UMTS 1700 12.2k RMC	Test Channel:	Middle channel
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Date: 14.MAY.2014 11:42:28

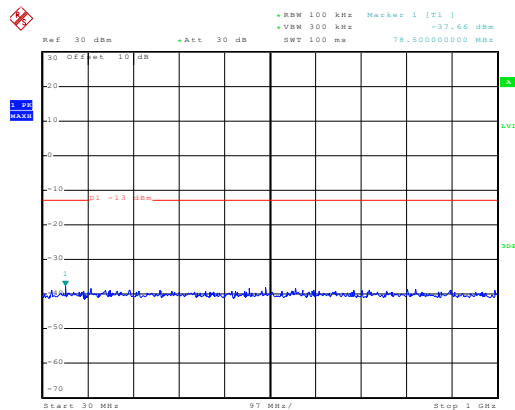
30MHz~1GHz



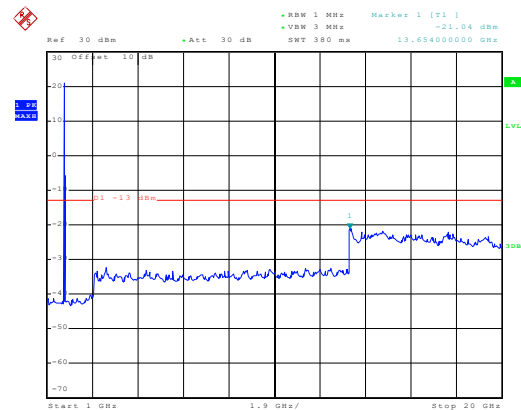
Date: 14.MAY.2014 11:40:36

1GHz~20GHz

Test Mode:	UMTS 1700 12.2k RMC	Test Channel:	Highest channel
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Date: 14.MAY.2014 11:38:49

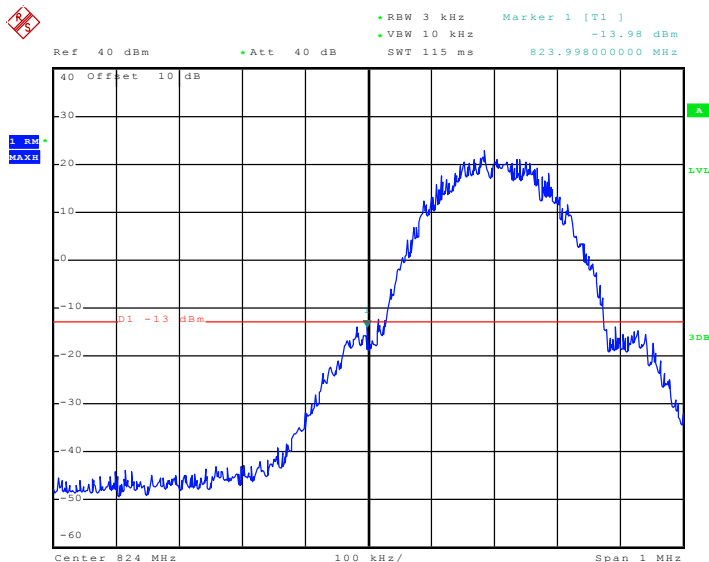


Date: 14.MAY.2014 11:39:34

MT 6276 part

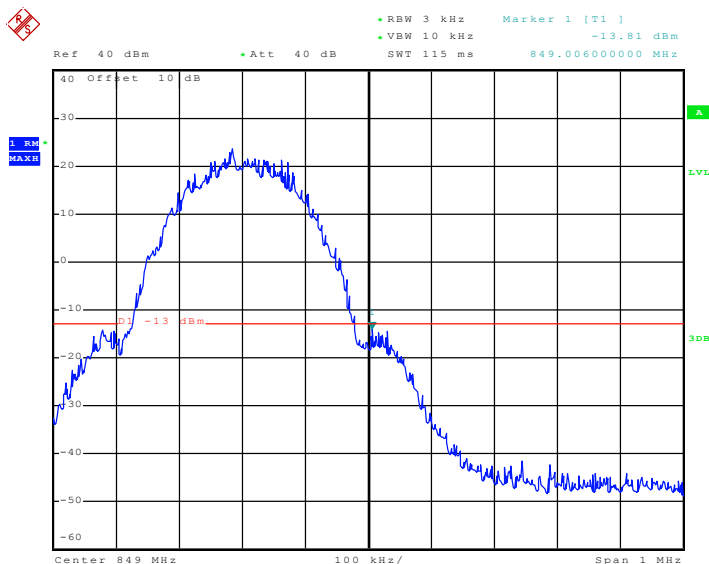
Band edge emission:

Test Mode:	GPRS850
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Date: 13.MAY.2014 16:29:13

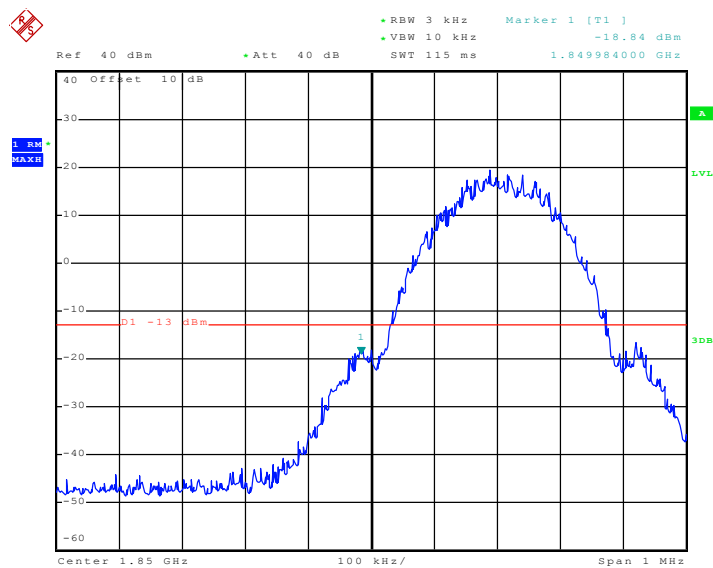
Lowest channel



Date: 13.MAY.2014 16:27:31

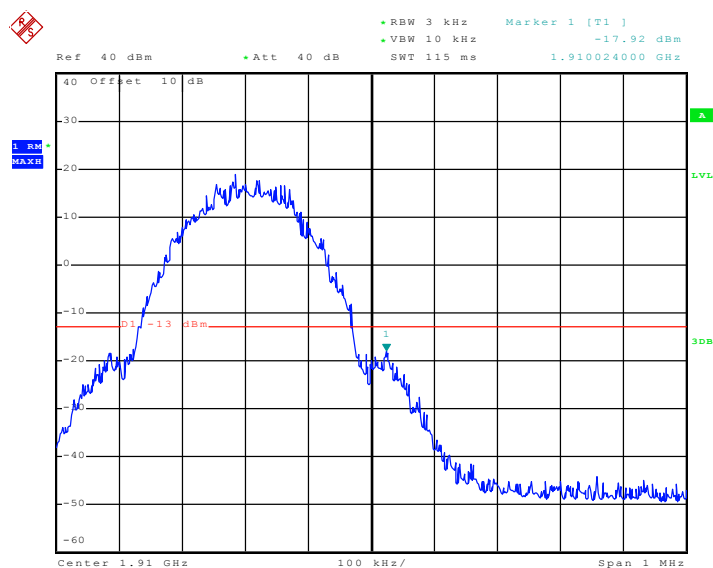
Highest channel

Test Mode:	GPRS1900
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Date: 13.MAY.2014 17:09:11

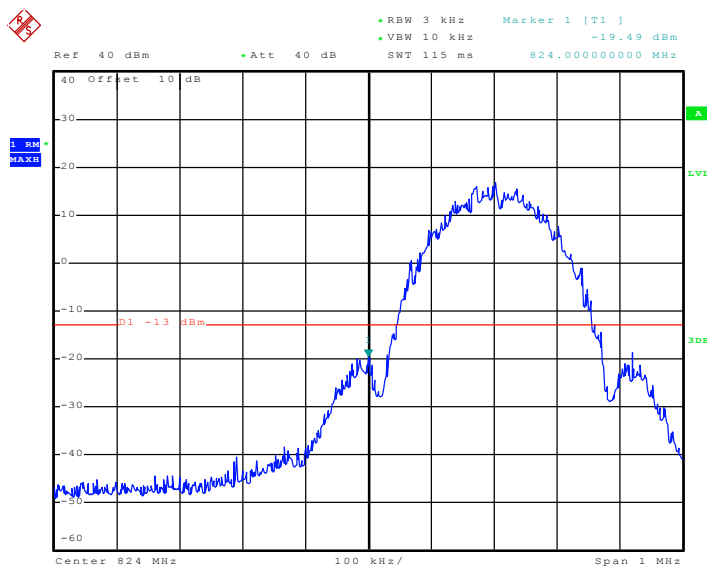
Lowest channel



Date: 13.MAY.2014 17:09:54

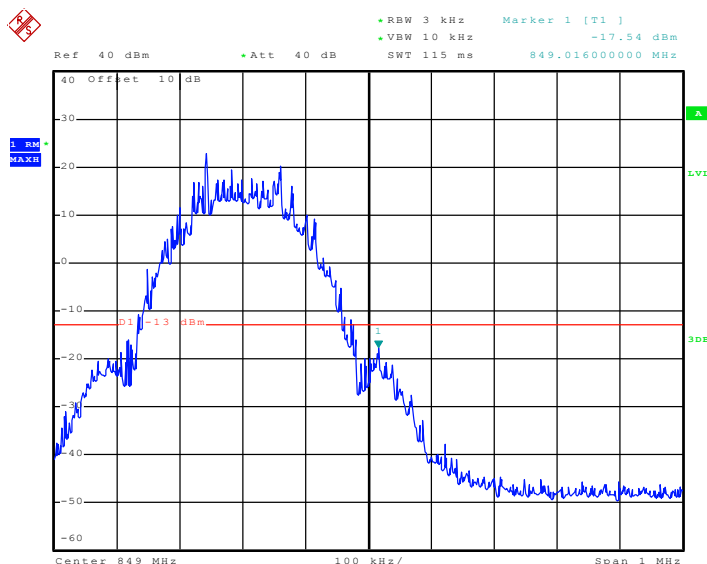
Highest channel

Test Mode:	EGPRS850
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Date: 13.MAY.2014 16:45:53

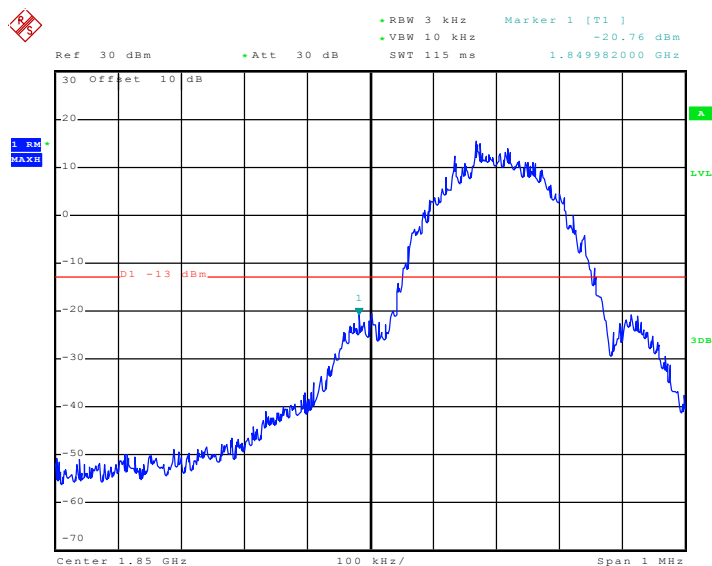
Lowest channel



Date: 13.MAY.2014 16:46:49

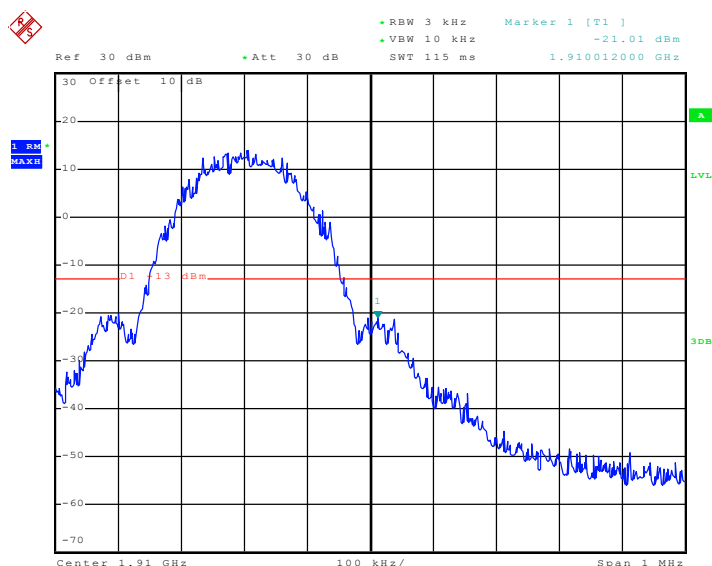
Highest channel

Test Mode:	EGPRS1900
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Date: 13.MAY.2014 17:23:54

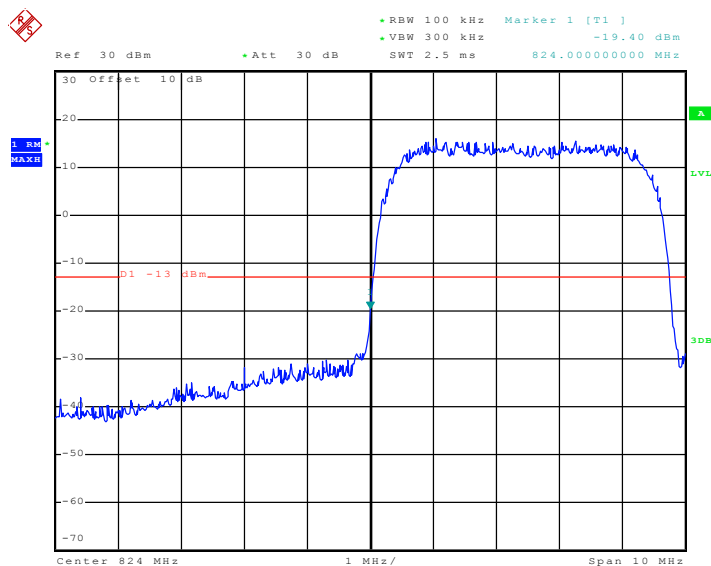
Lowest channel



Date: 13.MAY.2014 17:24:56

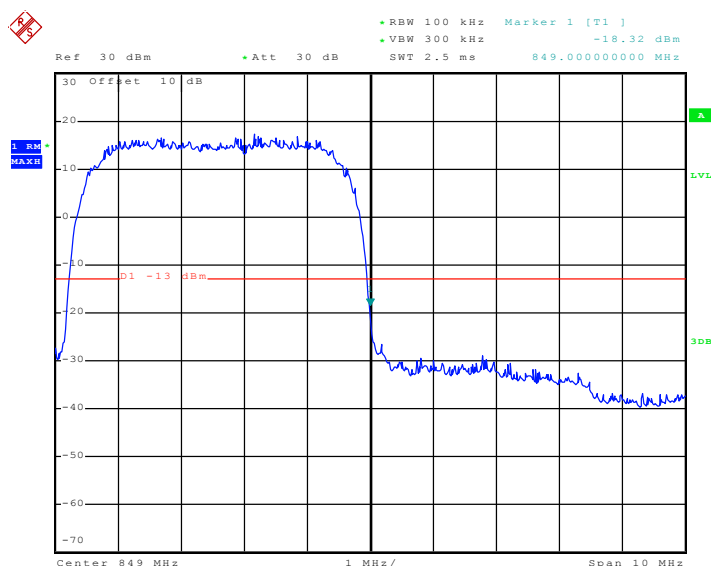
Highest channel

Test Mode:	UMTS850 12.2k RMC
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Date: 14.MAY.2014 12:57:07

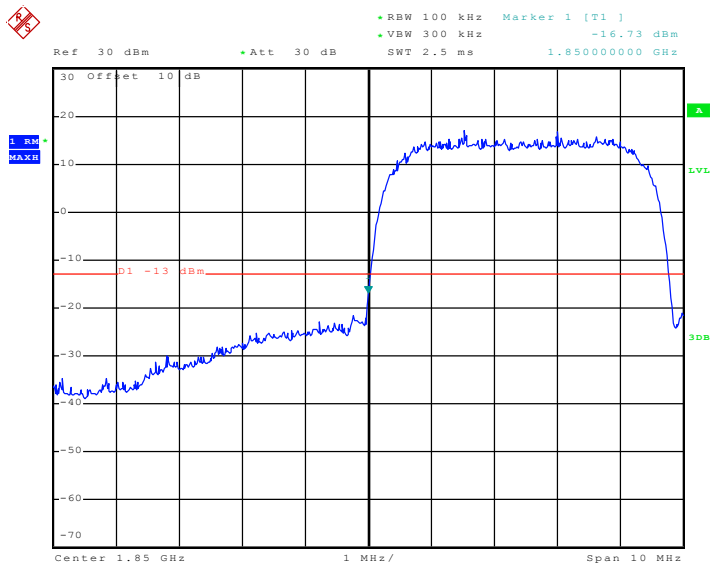
Lowest channel



Date: 14.MAY.2014 12:57:47

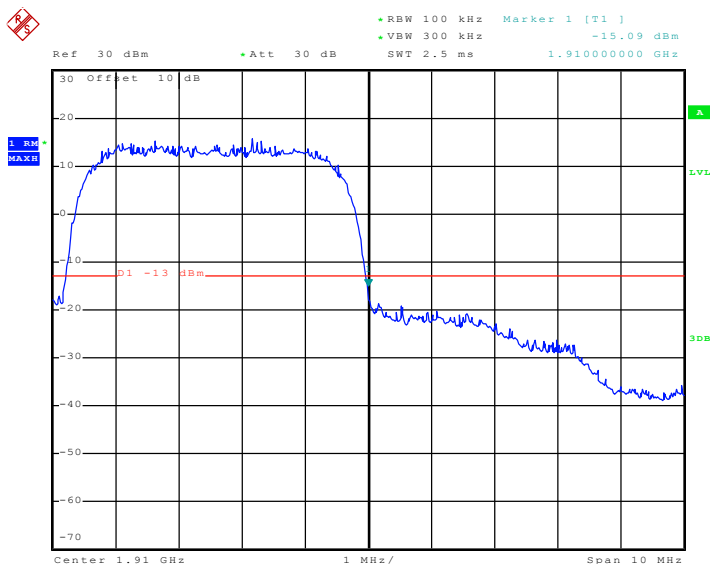
Highest channel

Test Mode:	UMTS 1900 12.2k RMC
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Date: 14.MAY.2014 14:47:41

Lowest channel



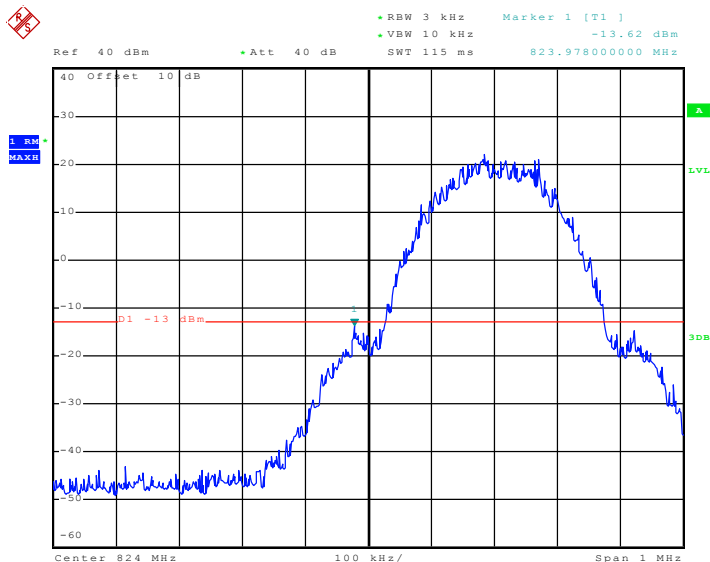
Date: 14.MAY.2014 14:48:22

Highest channel

MT 6280 part

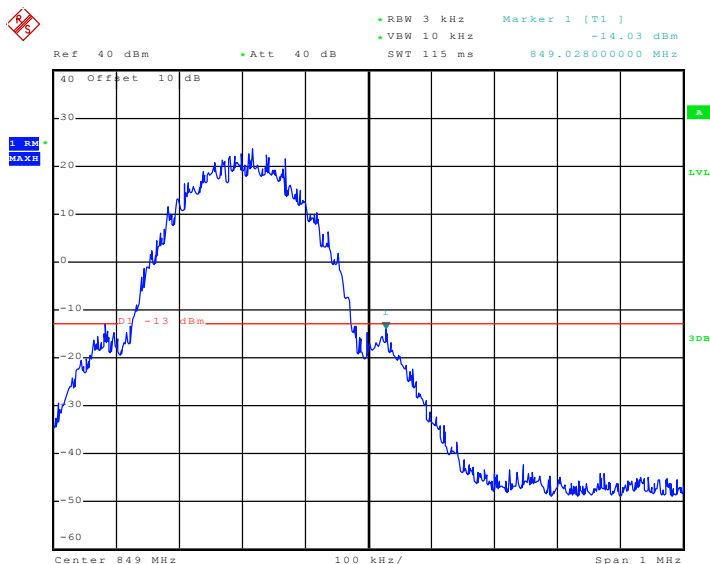
Band edge emission:

Test Mode:	GPRS850
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Date: 14.MAY.2014 10:15:05

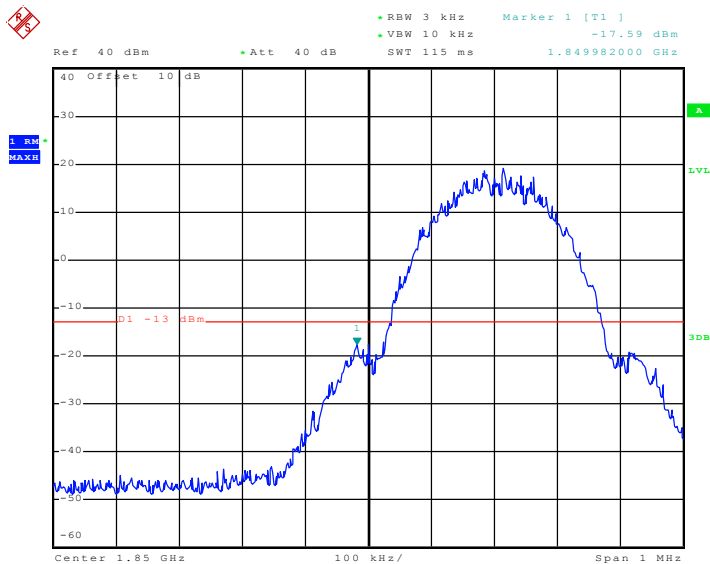
Lowest channel



Date: 14.MAY.2014 10:16:57

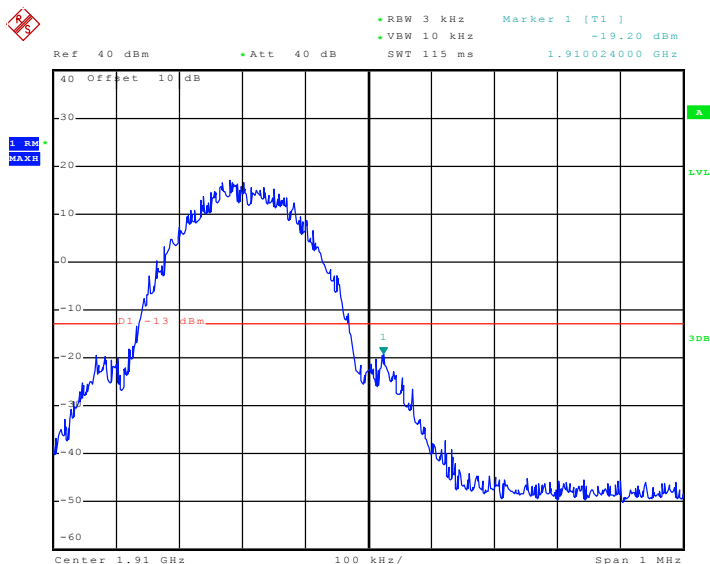
Highest channel

Test Mode:	GPRS1900
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Date: 14.MAY.2014 10:46:17

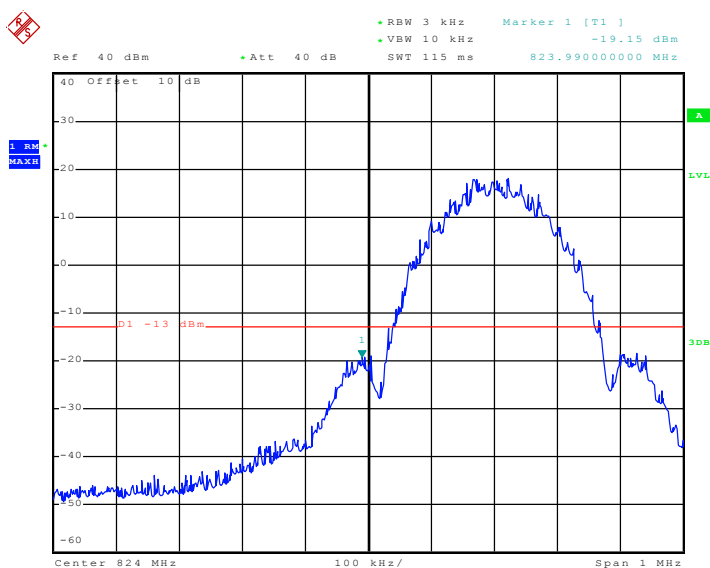
Lowest channel



Date: 14.MAY.2014 10:47:10

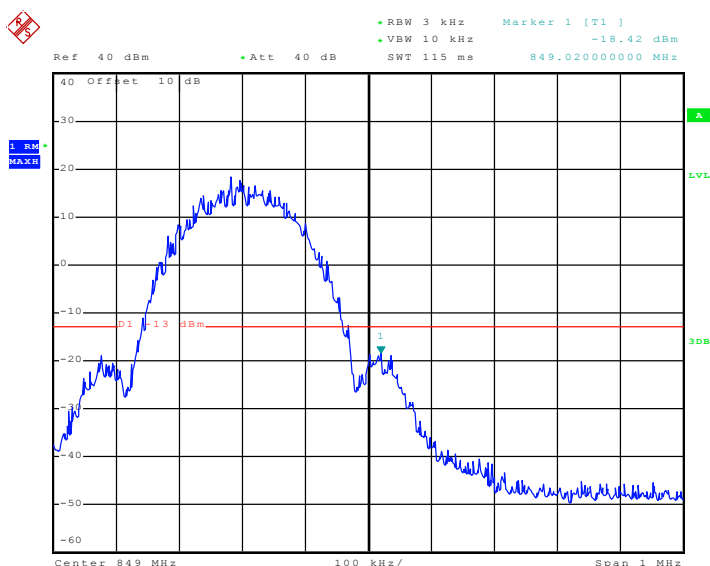
Highest channel

Test Mode:	EGPRS850
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Date: 14.MAY.2014 10:30:05

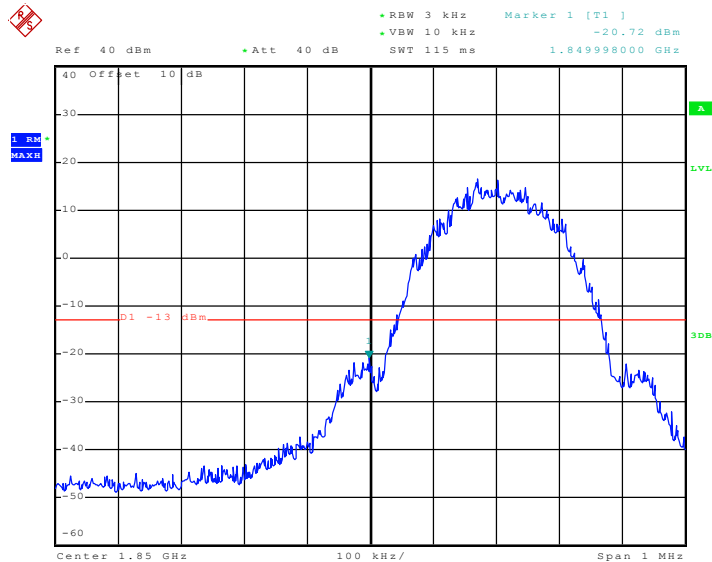
Lowest channel



Date: 14.MAY.2014 10:30:53

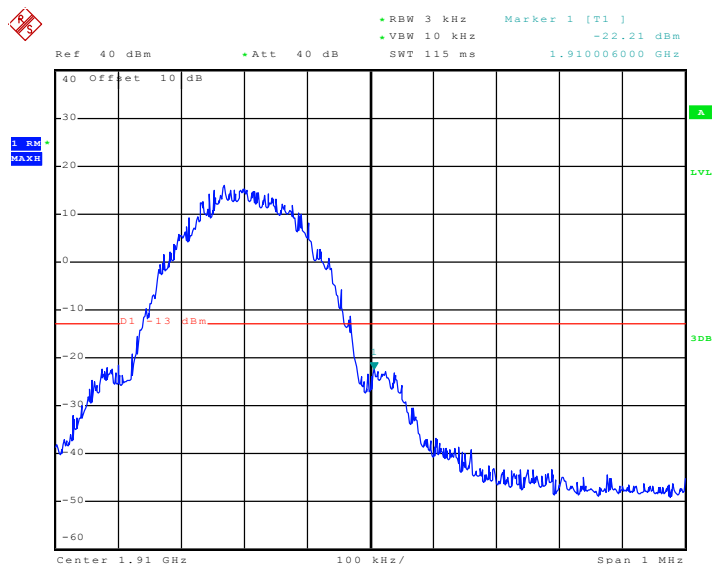
Highest channel

Test Mode:	EGPRS1900
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Date: 14.MAY.2014 10:38:30

Lowest channel

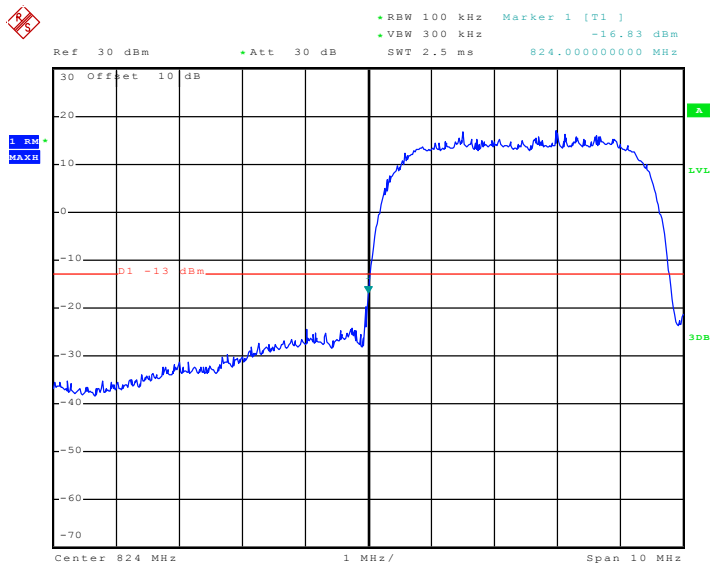


Date: 14.MAY.2014 10:39:26

Highest channel

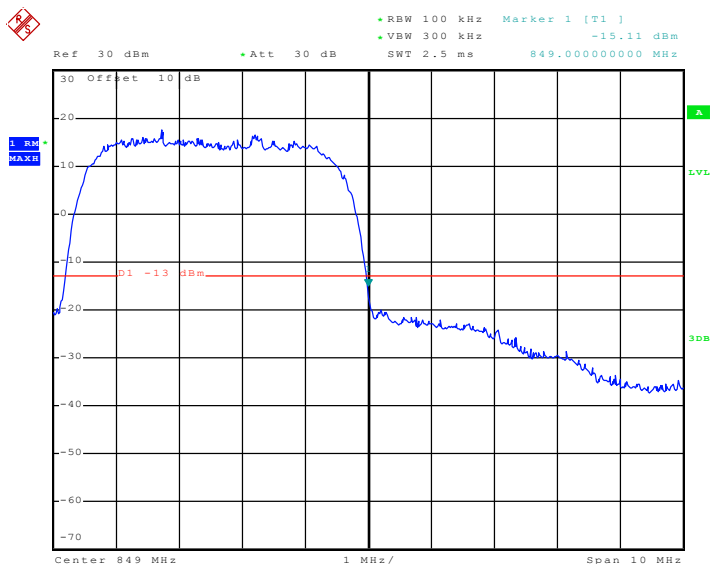
Test Mode:

UMTS850 12.2k RMC



Date: 14.MAY.2014 12:12:49

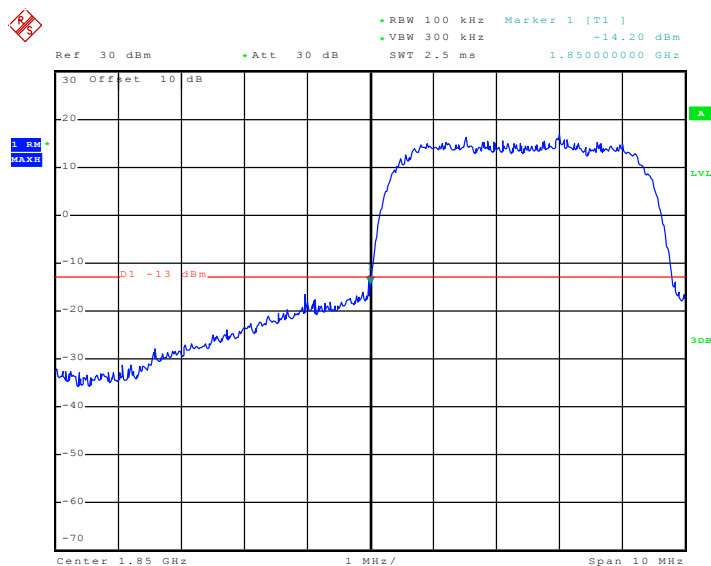
Lowest channel



Date: 14.MAY.2014 12:14:45

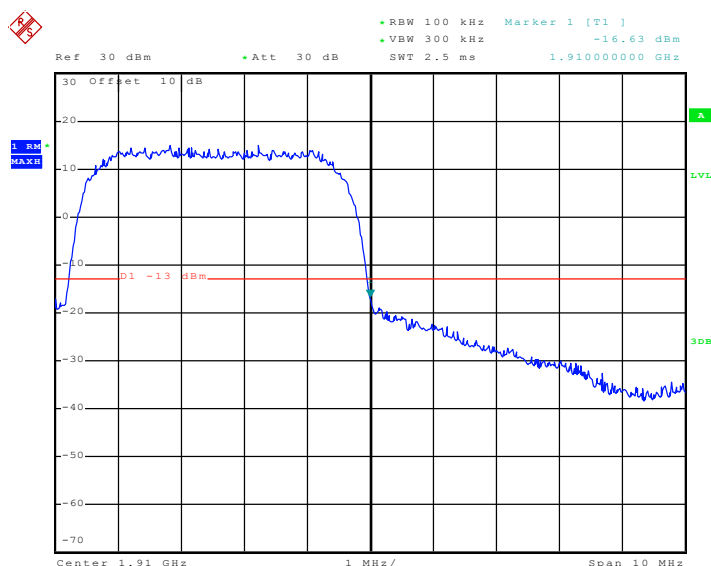
Highest channel

Test Mode:	UMTS1900 12.2k RMC
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Date: 4.SEP.2014 16:59:34

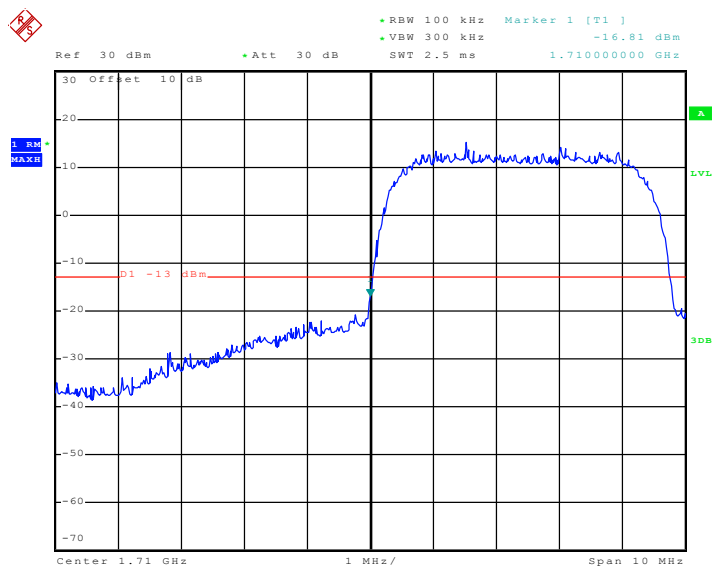
Lowest channel



Date: 4.SEP.2014 17:00:07

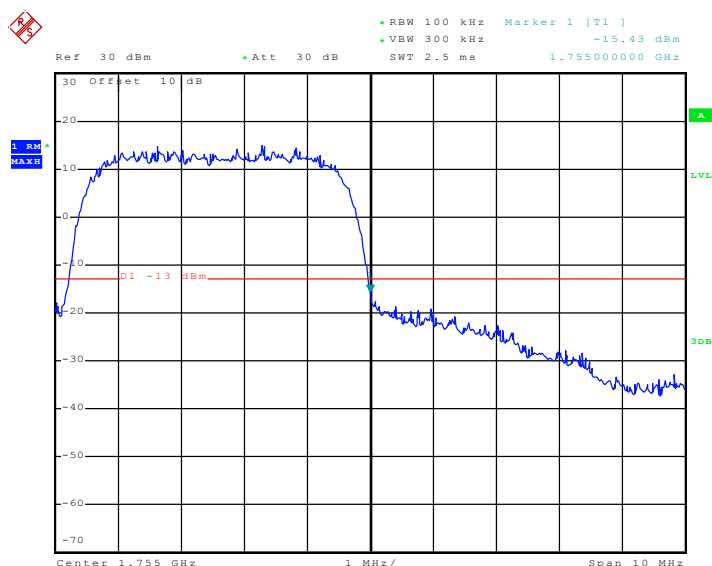
Highest channel

Test Mode:	UMTS1700 12.2k RMC
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Date: 4.SEP.2014 17:01:47

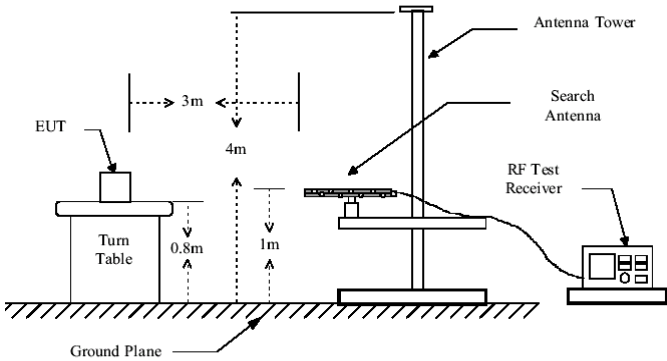
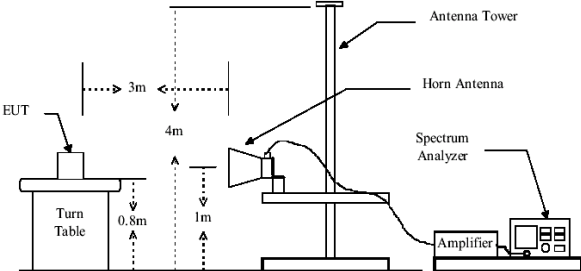
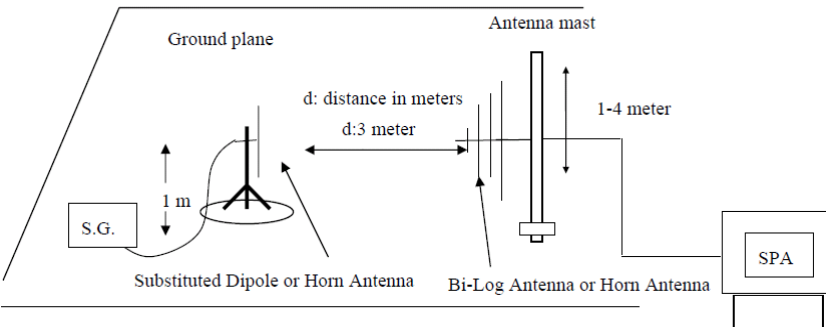
Lowest channel



Date: 4.SEP.2014 17:02:27

Highest channel

6.9 ERP, EIRP Measurement

Test Requirement:	FCC part 22.913(a), FCC part 24.232(b) and FCC part 27.50(d)
Test Method:	FCC part 2.1046
Limit:	GSM850 7W ERP PCS1900 2W EIRP WCDMA Band V: 7W ERP WCDMA Band II: 2W EIRP WCDMA Band IV: 1W 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: $\text{ERP} = \text{S.G. output (dBm)} + \text{Antenna Gain (dBd)} - \text{Cable Loss (dB)}$ 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: $\text{EIRP} = \text{S.G. output (dBm)} + \text{Antenna Gain (dBi)} - \text{Cable Loss (dB)}$ 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 (worst case)

MT 6276part:

EUT mode	Channel	EUT Pol.	Antenna Pol.	ERP(dBm)	Limit (dBm)	Result
GSM850	190	H	V	30.89	38.45	Pass
			H	22.03		
		E1	V	30.75		
			H	21.95		
		E2	V	30.15		
			H	21.57		
EGPRS 850	128	H	V	29.06		
			H	19.26		
		E1	V	28.41		
			H	19.05		
		E2	V	28.51		
			H	18.88		

EUT mode	Channel	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
PCS1900	810	H	V	27.85	33.00	Pass
			H	27.36		
		E1	V	27.51		
			H	27.12		
		E2	V	26.98		
			H	26.77		
EGPRS 1900	810	H	V	26.68		
			H	25.78		
		E1	V	26.54		
			H	25.45		
		E2	V	26.24		
			H	25.28		

EUT mode	Channel	EUT Pol.	Antenna Pol.	ERP(dBm)	Limit (dBm)	Result
UMTS 850 12.2k RMC	4233	H	V	17.31	38.45	Pass
			H	7.75		
		E1	V	17.23		
			H	7.68		
		E2	V	17.19		
			H	7.42		
EUT mode	Channel	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
UMTS 1900 12.2k RMC	9262	H	V	20.41	33.00	Pass
			H	18.77		
		E1	V	20.15		
			H	18.65		
		E2	V	19.58		
			H	18.36		

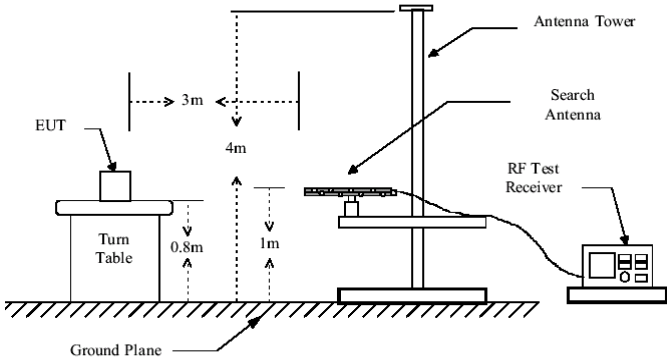
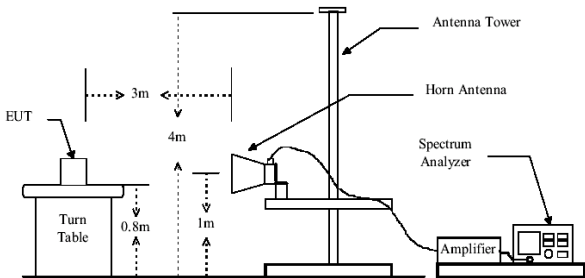
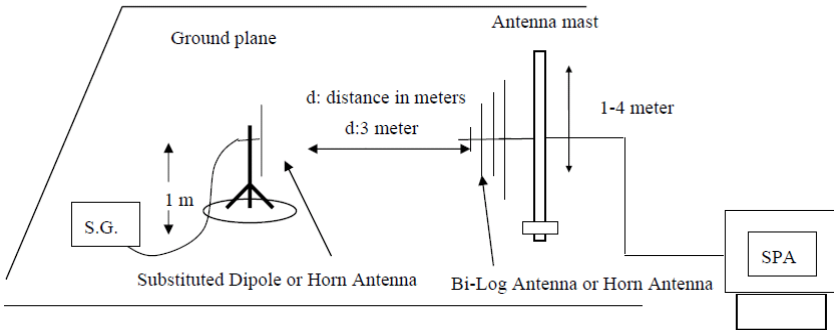
MT 6280 part:

EUT mode	Channel	EUT Pol.	Antenna Pol.	ERP(dBm)	Limit (dBm)	Result
GSM850	190	H	V	33.00	38.45	Pass
			H	25.28		
		E1	V	32.87		
			H	25.14		
		E2	V	32.66		
			H	25.04		
EGPRS 850	128	H	V	30.91		
			H	22.36		
		E1	V	30.85		
			H	22.24		
		E2	V	30.66		
			H	22.10		

EUT mode	Channel	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
PCS1900	512	H	V	26.63	33.00	Pass
			H	22.55		
		E1	V	26.52		
			H	22.48		
		E2	V	26.34		
			H	22.19		
EGPRS 1900	661	H	V	25.07		
			H	23.98		
		E1	V	24.89		
			H	23.75		
		E2	V	24.15		
			H	23.25		

EUT mode	Channel	EUT Pol.	Antenna Pol.	ERP(dBm)	Limit (dBm)	Result
UMTS 850 12.2k RMC	4233	H	V	19.96	38.45	Pass
			H	12.41		
		E1	V	19.82		
			H	12.33		
		E2	V	19.73		
			H	12.18		
EUT mode	Channel	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
UMTS 1900 12.2k RMC	9262	H	V	19.53	33.00	Pass
			H	17.59		
		E1	V	19.45		
			H	17.22		
		E2	V	19.25		
			H	17.17		
UMTS 1700 12.2k RMC	1412	H	V	20.42	30.00	Pass
			H	13.90		
		E1	V	20.24		
			H	13.75		
		E2	V	20.11		
			H	13.69		

6.10 Field strength of spurious radiation measurement

Test Requirement:	FCC part 22.917(a), FCC part 24.238(a) and FCC part 27.53(h)
Test Method:	FCC part 2.1053
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 GPRS 850, GPRS 1900, UMTS RMC 850 UMTS RMC 1700 and UMTS RMC 1900 for Radiated spurious emission test, other modes were not test.
Test results:	Passed

Measurement Data (worst case)

Below 1GHz:

The emission levels of below 1 GHz are very lower than the limit so not show in this report.

Above 1GHz

MT 6276 part:

Test mode:	GPRS 850		Test channel:	Lowest
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1648.40	Vertical	-26.40	-13.00	Pass
2472.60	V	-23.68		
3296.80	V	-47.15		
4121.00	V	-30.18		
1648.40	Horizontal	-28.77		
2472.60	H	-28.58		
3296.80	H	-43.44		
4121.00	H	-41.04		
Test mode:	GPRS 850		Test channel:	Middle
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1673.20	Vertical	-29.14	-13.00	Pass
2509.80	V	-24.92		
3346.40	V	-43.52		
4183.00	V	-29.72		
1673.20	Horizontal	-33.06		
2509.80	H	-30.06		
3346.40	H	-43.98		
4183.00	H	-20.46		
Test mode:	GPRS 850		Test channel:	Highest
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1697.60	Vertical	-33.17	-13.00	Pass
2546.40	V	-24.59		
3395.20	V	-45.55		
4244.00	V	-28.04		
5092.80	V	-41.28		
1697.60	Horizontal	-41.83		
2546.40	H	-30.65		
3395.20	H	-44.06		
4244.00	H	-24.78		
5092.80	H	-39.53		

Remark :

1. The emission behavior belongs to narrowband spurious emission.

Test mode:	GPRS 1900		Test channel:	Lowest
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3760.00	Vertical	-42.04	-13.00	Pass
5640.00	V	-35.82		
7520.00	V	-36.81		
9400.00	V	-35.62		
3760.00	Horizontal	-40.16		
5640.00	H	-35.12		
7520.00	H	-38.62		
9400.00	H	-34.74		
Test mode:	GPRS 1900		Test channel:	Middle
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3760.00	Vertical	-42.04	-13.00	Pass
5640.00	V	-35.82		
7520.00	V	-36.81		
9400.00	V	-35.62		
3760.00	Horizontal	-40.16		
5640.00	H	-35.12		
7520.00	H	-38.62		
9400.00	H	-34.74		
Test mode:	GPRS 1900		Test channel:	Highest
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1697.60	Vertical	-33.17	-13.00	Pass
2546.40	V	-24.59		
3395.20	V	-45.55		
4244.00	V	-28.04		
5092.80	V	-41.28		
1697.60	Horizontal	-41.83		
2546.40	H	-30.65		
3395.20	H	-44.06		
4244.00	H	-24.78		
5092.80	H	-39.53		

Remark :

1. The emission behavior belongs to narrowband spurious emission.

Test mode:	UMTS850 12.2k RMC		Test channel:	Lowest
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1652.80	Vertical	-31.36	-13.00	Pass
2479.20	V	-43.43		
1652.80	Horizontal	-30.48		
2479.20	H	-39.89		
Test mode:	UMTS850 12.2k RMC		Test channel:	Middle
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1673.20	Vertical	-31.71	-13.00	Pass
2509.80	V	-43.47		
1673.20	Horizontal	-31.50		
2509.80	H	-46.11		
Test mode:	UMTS850 12.2k RMC		Test channel:	Highest
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1693.20	Vertical	-28.59	-13.00	Pass
2539.80	V	-42.66		
1693.20	Horizontal	-29.09		
2539.80	H	-46.11		

Remark :

1. The emission behavior belongs to narrowband spurious emission.

Test mode:	UMTS 1900 12.2k RMC		Test channel:	Lowest
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3704.80	Vertical	-42.22	-13.00	Pass
5557.20	V	-35.67		
7409.60	V	-40.25		
9262.00	V	-29.56		
3704.80	Horizontal	-40.16		
5557.20	H	-37.89		
7409.60	H	-41.2		
9262.00	H	-32.56		
Test mode:	UMTS 1900 12.2k RMC		Test channel:	Middle
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3760.00	Vertical	-40.99	-13.00	Pass
5640.00	V	-36.01		
7520.00	V	-41.52		
9400.00	V	-34.57		
3760.00	Horizontal	-37.38		
5640.00	H	-36.25		
7520.00	H	-35.61		
9400.00	H	-34.24		
Test mode:	UMTS 1900 12.2k RMC		Test channel:	Highest
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3815.20	Vertical	-36.54	-13.00	Pass
5722.80	V	-37.49		
7630.40	V	-41.52		
9538.00	V	-33.25		
3815.20	Horizontal	-34.27		
5722.80	H	-39.25		
7630.40	H	-34.51		
9538.00	H	-32.72		

Remark :

1. The emission behavior belongs to narrowband spurious emission.

MT 6280 part:

Test mode:	GPRS 850		Test channel:	Lowest
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1648.40	Vertical	-45.36	-13.00	Pass
2472.60	V	-18.56		
3296.80	V	-44.90		
4121.00	V	-27.11		
4945.20	V	-45.69		
5769.40	V	-35.15		
1648.40	Horizontal	-43.26		
2472.60	H	-16.35		
3296.80	H	-44.35		
4121.00	H	-21.25		
4945.20	H	-45.24		
5769.40	H	-33.94		
Test mode:	GPRS 850		Test channel:	Middle
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1673.20	Vertical	-43.43	-13.00	Pass
2509.80	V	-16.65		
3346.40	V	-46.48		
4183.00	V	-21.25		
5019.60	V	-39.36		
5856.20	V	-38.66		
1673.20	Horizontal	-43.33		
2509.80	H	-17.41		
3346.40	H	-48.52		
4183.00	H	-22.54		
5019.60	H	-43.62		
5856.20	H	-37.24		

Remark :

1. The emission behavior belongs to narrowband spurious emission.

Test mode:	GPRS 850		Test channel:	Highest
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1697.60	Vertical	-48.27	-13.00	Pass
2546.40	V	-17.62		
3395.20	V	-38.84		
4244.00	V	-26.11		
5092.80	V	-46.58		
5941.60	V	-45.62		
1697.60	Horizontal	-46.11		
2546.40	H	-17.23		
3395.20	H	-49.52		
4244.00	H	-21.89		
5092.80	H	-38.94		
5941.60	H	-37.65		

Remark :

1. The emission behavior belongs to narrowband spurious emission.

Test mode:	GPRS 1900		Test channel:	Lowest
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3700.40	Vertical	-49.05	-13.00	Pass
5550.60	V	-43.95		
7400.80	V	-37.19		
3700.40	Horizontal	-49.39		
5550.60	H	-45.92		
7400.80	H	-38.08		
Test mode:	GPRS 1900		Test channel:	Middle
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3760.00	Vertical	-50.26	-13.00	Pass
5640.00	V	-44.16		
7520.00	V	-39.80		
3760.00	Horizontal	-49.31		
5640.00	H	-40.80		
7520.00	H	-38.51		
Test mode:	GPRS 1900		Test channel:	Highest
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3819.60	Vertical	-49.66	-13.00	Pass
5729.40	V	-43.28		
7639.20	V	-38.51		
3819.60	Horizontal	-49.43		
5729.40	H	-43.34		
7639.20	H	-38.87		

Remark :

1. The emission behavior belongs to narrowband spurious emission.

Test mode:	UMTS850 12.2k RMC		Test channel:	Lowest
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1652.80	Vertical	-39.66	-13.00	Pass
2479.20	V	-37.39		
3305.60	V	-38.83		
4132.00	V	-46.56		
4958.40	V	-43.58		
5784.80	V	-42.63		
1652.80	Horizontal	-50.31		
2479.20	H	-34.21		
3305.60	H	-31.51		
4132.00	H	-42.83		
4958.40	H	-44.25		
5784.80	H	-41.43		
Test mode:	UMTS850 12.2k RMC		Test channel:	Middle
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1673.20	Vertical	-41.25	-13.00	Pass
2509.80	V	-39.41		
3346.40	V	-33.54		
4183.00	V	-38.24		
5019.60	V	-44.52		
5856.20	V	-41.23		
1673.20	Horizontal	-52.35		
2509.80	H	-39.53		
3346.40	H	-36.01		
4183.00	H	-43.42		
5019.60	H	-41.25		
5856.20	H	-38.52		

Test mode:	UMTS850 12.2k RMC		Test channel:	Highest
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1693.20	Vertical	-38.57	-13.00	Pass
2539.80	V	-29.73		
3386.40	V	37.57		
4233.00	V	-4580		
5079.60	V	-42.35		
5926.20	V	-39.54		
1693.20	Horizontal	-44.96		
2539.80	H	-30.49		
3386.40	H	-33.8		
4233.00	H	-42.15		
5079.60	H	-41.52		
5926.20	H	-38.74		

Remark :

1. The emission behavior belongs to narrowband spurious emission.

Test mode:	UMTS 1900 12.2k RMC		Test channel:	Lowest
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3704.80	Vertical	-35.03	-13.00	Pass
5557.20	V	-36.74		
3704.80	Horizontal	-31.25		
5557.20	H	-33.41		
Test mode:	UMTS 1900 12.2k RMC		Test channel:	Middle
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3760.00	Vertical	-35.05	-13.00	Pass
5640.00	V	-31.98		
3760.00	Horizontal	-33.49		
5640.00	H	-28.54		
Test mode:	UMTS 1900 12.2k RMC		Test channel:	Highest
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3815.20	Vertical	-35.28	-13.00	Pass
5722.80	V	-31.65		
3815.20	Horizontal	-32.38		
5722.80	H	-27.26		

Remark :

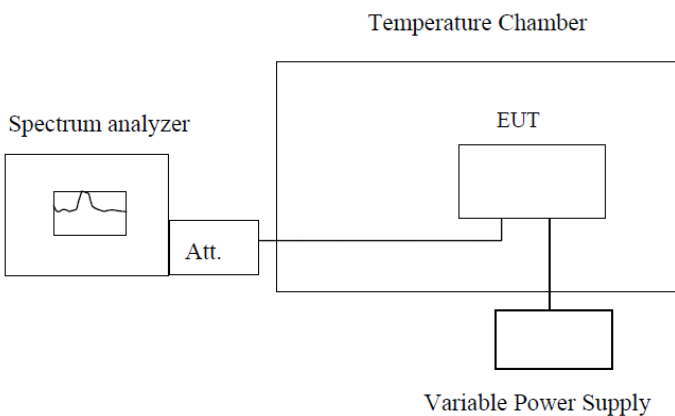
1.The emission behavior belongs to narrowband spurious emission.

Test mode:	UMTS 1700 12.2k RMC		Test channel:	Lowest
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3424.40	Vertical	-41.63	-13.00	Pass
5136.60	V	-35.64		
11986.80	V	-29.81		
3424.40	Horizontal	-34.37		
5136.60	H	-35.61		
11986.80	H	-26.86		
Test mode:	UMTS 1700 12.2k RMC		Test channel:	Middle
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3464.80	Vertical	-41.48	-13.00	Pass
5197.20	V	-30.17		
12126.80	V	-30.28		
3464.80	Horizontal	-37.12		
5197.20	H	-32.22		
12126.80	H	-32.54		
Test mode:	UMTS 1700 12.2k RMC		Test channel:	Highest
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3505.20	Vertical	-39.68	-13.00	Pass
5257.80	V	-33.18		
12268.20	V	-27.03		
3505.20	Horizontal	-34.85		
5257.80	H	-33.82		
12268.20	H	-27.66		

Remark :

1.The emission behavior belongs to narrowband spurious emission.

6.11 Frequency stability V.S. Temperature measurement

Test Requirement:	FCC Part 2.1055(a)(1)(b)
Test Method:	FCC Part 2.1055(a)(1)(b)
Limit:	2.5 ppm
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°C operating frequency as reference frequency. 5. Turn EUT off and set the chamber temperature to -30°C. After the temperature stabilized for approximately 30 minutes recorded the frequency. 6. Repeat step measure with 10°C increased per stage until the highest temperature of +50°C reached
Test Instruments:	Refer to section 5.8 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed
Remark:	All three channels of all modulations have been tested, but only the worst channel and the worst modulation show in this test item.

Measurement Data—MT 6276 part

Reference Frequency: GPRS 850 Middle channel=190 channel=836.6MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.70	-30	140	0.167344	2.5	Pass
	-20	132	0.157781		
	-10	101	0.120727		
	0	115	0.137461		
	10	98	0.117141		
	20	133	0.158977		
	30	114	0.136266		
	40	106	0.126703		
	50	96	0.114750		
Reference Frequency: GPRS1900 Middle channel=661 channel=1880MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error			Result
		Hz	ppm		
3.70	-30	150	0.079787	2.5	Pass
	-20	173	0.092021		
	-10	134	0.071277		
	0	116	0.061702		
	10	125	0.066489		
	20	110	0.058511		
	30	138	0.073404		
	40	124	0.065957		
	50	156	0.082979		

Reference Frequency: EGPRS 850 Middle channel=190 channel=836.6MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.70	-30	128	0.153000	2.5	Pass
	-20	120	0.143438		
	-10	88	0.105188		
	0	69	0.082477		
	10	60	0.071719		
	20	71	0.084867		
	30	73	0.087258		
	40	107	0.127899		
	50	126	0.150610		
Reference Frequency: EGPRS 1900 Middle channel=661 channel=1880MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error			Result
		Hz	ppm		
3.70	-30	119	0.063298	2.5	Pass
	-20	97	0.051596		
	-10	65	0.034574		
	0	78	0.041489		
	10	115	0.061170		
	20	92	0.048936		
	30	65	0.034574		
	40	122	0.064894		
	50	87	0.046277		

Reference Frequency: UMTS850 12.2k RMC Middle channel=4183 channel=836.6MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.70	-30	85	0.101602	2.5	Pass
	-20	71	0.084867		
	-10	86	0.102797		
	0	92	0.109969		
	10	69	0.082477		
	20	115	0.137461		
	30	86	0.102797		
	40	90	0.107578		
	50	88	0.105188		
Reference Frequency: UMTS1900 12.2k RMC Middle channel=9400 channel=1880MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.70	-30	125	0.066489	2.5	Pass
	-20	136	0.072340		
	-10	135	0.071809		
	0	59	0.031383		
	10	64	0.034043		
	20	91	0.048404		
	30	87	0.046277		
	40	99	0.052660		
	50	114	0.060638		

Measurement Data—MT 6280 part

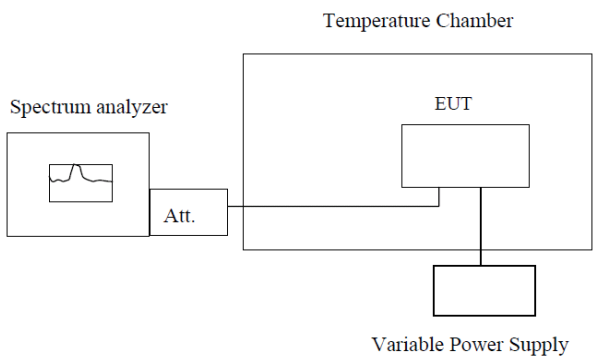
Reference Frequency: GPRS 850 Middle channel=190 channel=836.6MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.70	-30	104	0.124313	2.5	Pass
	-20	121	0.144633		
	-10	121	0.144633		
	0	150	0.179297		
	10	88	0.105188		
	20	123	0.147024		
	30	124	0.148219		
	40	146	0.174516		
	50	86	0.102797		
Reference Frequency: GPRS1900 Middle channel=661 channel=1880MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error			Result
		Hz	ppm		
3.70	-30	120	0.063830	2.5	Pass
	-20	163	0.086702		
	-10	144	0.076596		
	0	106	0.056383		
	10	115	0.061170		
	20	104	0.055319		
	30	139	0.073936		
	40	126	0.067021		
	50	151	0.080319		

Reference Frequency: EGPRS 850 Middle channel=190 channel=836.6MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.70	-30	113	0.135071	2.5	Pass
	-20	105	0.125508		
	-10	79	0.094430		
	0	58	0.069328		
	10	66	0.078891		
	20	73	0.087258		
	30	57	0.068133		
	40	97	0.115945		
	50	106	0.126703		
Reference Frequency: EGPRS 1900 Middle channel=661 channel=1880MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error			Result
		Hz	ppm		
3.70	-30	89	0.047340	2.5	Pass
	-20	107	0.056915		
	-10	65	0.034574		
	0	98	0.052128		
	10	125	0.066489		
	20	102	0.054255		
	30	85	0.045213		
	40	132	0.070213		
	50	83	0.044149		

Reference Frequency: UMTS850 12.2k RMC Middle channel=4183 channel=836.6MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.70	-30	95	0.113555	2.5	Pass
	-20	81	0.096820		
	-10	76	0.090844		
	0	102	0.121922		
	10	59	0.070524		
	20	125	0.149414		
	30	91	0.108774		
	40	100	0.119531		
	50	93	0.111164		
Reference Frequency: UMTS1900 12.2k RMC Middle channel=9400 channel=1880MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.70	-30	135	0.071809	2.5	Pass
	-20	147	0.078191		
	-10	114	0.060638		
	0	91	0.048404		
	10	46	0.024468		
	20	93	0.049468		
	30	78	0.041489		
	40	109	0.057979		
	50	104	0.055319		

Reference Frequency: UMTS1700 12.2k RMC Middle channel=1413 channel=1732.6MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.70	-30	128	0.073877	2.5	Pass
	-20	65	0.037516		
	-10	79	0.045596		
	0	81	0.046751		
	10	79	0.045596		
	20	92	0.053099		
	30	106	0.061180		
	40	89	0.051368		
	50	95	0.054831		

6.12 Frequency stability V.S. Voltage measurement

Test Requirement:	FCC Part 2.1055(d)(1)(2)
Test Method:	FCC Part 2.1055(d)(1)(2)
Limit:	2.5ppm
Test setup:	 Note : Measurement setup for testing on Antenna connector
Test procedure:	1. Set chamber temperature to 25°C. 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 specify 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, and all channels have been tested, only shows the worst channel data in this report.
Test results:	Passed

Measurement Data (the worst channel):

MT 6276 part:

Reference Frequency: GPRS 850 Middle channel=190 channel=836.6MHz					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.25	110	0.131485	2.5	Pass
	3.70	85	0.101602		
	3.40	56	0.066938		
Reference Frequency: GPRS 1900 Middle channel=661 channel=1880MHz					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.25	78	0.041489	2.5	Pass
	3.70	95	0.050532		
	3.40	82	0.043617		
Reference Frequency: EGPRS 850 Middle channel= 190 channel=836.6MHz					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.25	68	0.081281	2.5	Pass
	3.70	59	0.070524		
	3.40	101	0.120727		
Reference Frequency: EGPRS 1900 Middle channel= 661 channel=1880MHz					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.25	94	0.050000	2.5	Pass
	3.70	87	0.046277		
	3.40	69	0.036702		

Reference Frequency: UMTS 850 12.2k RMC Middle channel=4183 channel=836.6MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.25	89	0.106383	2.5	Pass
	3.70	75	0.089649		
	3.40	93	0.111164		
Reference Frequency: UMTS 1900 12.2k RMC Middle channel=9400 channel=1880MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.25	74	0.039362	2.5	Pass
	3.70	96	0.051064		
	3.40	102	0.054255		

MT 6280 part:

Reference Frequency: GPRS 850 Middle channel=190 channel=836.6MHz					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.25	95	0.113555	2.5	Pass
	3.70	103	0.123117		
	3.40	85	0.101602		
Reference Frequency: GPRS 1900 Middle channel=661 channel=1880MHz					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.25	112	0.059574	2.5	Pass
	3.70	89	0.047340		
	3.40	93	0.049468		
Reference Frequency: EGPRS 850 Middle channel= 190 channel=836.6MHz					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.25	87	0.103992	2.5	Pass
	3.70	96	0.114750		
	3.40	78	0.093235		
Reference Frequency: EGPRS 1900 Middle channel= 661 channel=1880MHz					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.25	102	0.054255	2.5	Pass
	3.70	107	0.056915		
	3.40	98	0.052128		

Reference Frequency: UMTS 850 12.2k RMC Middle channel=4183 channel=836.6MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.25	93	0.111164	2.5	Pass
	3.70	107	0.127899		
	3.40	114	0.136266		
Reference Frequency: UMTS 1900 12.2k RMC Middle channel=9400 channel=1880MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.25	110	0.058511	2.5	Pass
	3.70	136	0.072340		
	3.40	89	0.047340		
Reference Frequency: UMTS1700 12.2k RMC Middle channel=1413 channel=1732.6MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.25	77	0.044442	2.5	Pass
	3.70	68	0.039247		
	3.40	61	0.035207		