

FCC REPORT

Applicant: KIMUS TRADING, INC

Address of Applicant: 6436 Shadow CT. Douglasville, GA 30134 USA

Equipment Under Test (EUT)

Product Name: TABLET PC

Model No.: H8336

Trade mark:



FCC ID: 2ACXAH8336

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 Part27

Date of sample receipt: 07 Aug., 2014

Date of Test: 08 Aug., to 15 Aug., 2014

Date of report issued: 18 Aug., 2014

Test Result : PASS *

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

2. Version

Version No.	Date	Description
00	18 Aug., 2014	Original

Prepared by:



Date:

18 Aug., 2014

Report Clerk

Reviewed by:



Date:

18 Aug., 2014

Project Engineer

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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) Part 27.50(d)	Pass
Peak to Average Ratio	Part 2.1046 Part 27.50(d)	
Modulation Characteristics	Part 2.1047	Pass
99% & -26 dB Occupied Bandwidth	Part 2.1049	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:	KIMUS TRADING, INC
Address of Applicant:	6436 Shadow CT. Douglasville, GA 30134 USACHina.
Manufacturer:	KIMUS TRADING, INC
Address of Manufacturer:	6436 Shadow CT. Douglasville, GA 30134 USACHina.

5.2 General Description of E.U.T.

Product Name:	TABLET PC
Model No.:	H8336
Trade mark:	
Operation Frequency range:	GSM 850: 824.20MHz-848.80MHz PCS1900: 1850.20MHz-1909.80MHz WCDMA Band V:826.4MHz-846.6MHz WCDMA Band IV:1712.4 MHz -1752.6 MHz
Modulation type:	GSM/GPRS:GMSK, EGPRS: 8PSK, UMTS:QPSK
Antenna type:	Integral Antenna
Antenna gain:	GSM 850: -0.8 dBi PCS 1900: -0.8 dBi WCDMA 850 : -0.8 dBi WCDMA1700 : -0.8 dBi
AC adapter:	Input:100-240V AC,50/60Hz 0.3A Output:5.0V DC MAX2000mA
Power supply:	Rechargeable Li-ion Battery DC3.7V-1800mAh
Remark:	N.A.

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
WCDMA Band V		WCDMA Band IV	
Channel:	Frequency (MHz)	Channel:	Frequency (MHz)
4132	826.40	1312	1712.40
4133	826.60	1313	1712.60
....			
4182	836.40	1412	1732.40
4183	836.60	1413	1732.60
4184	836.80	1414	1732.80
...	...	...	...
4232	846.40	1512	1752.40
4233	846.60	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:

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 IV		
	Channel	Frequency(MHz)		Channel	Frequency(MHz)
Lowest channel	4132	826.40	Lowest channel	1312	1712.40
Middle channel	4183	836.60	Middle channel	1413	1732.60
Highest channel	4233	846.60	Highest channel	1513	1752.60

5.3 Test modes

Communicate mode (GSM850)	Keep the EUT in communicating mode on GSM 850 band.
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.
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.
Data mode (EGPRS1900)	Keep the EUT in data communicating mode on EGPRS1900 band.
Communicate mode (UMTS 850)	Keep the EUT in communicating mode on UMTS 850 band.
Communicate mode (UMTS 1700)	Keep the EUT in communicating mode on UMTS 1700 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 (HSDPA UMTS 1700)	Keep the EUT in data communicating mode on HSDPA in UMTS 1700. (Sub-test 1~Sub-test 5).
Remark :	Pre-test output power of all modes, and found GSM 850, PCS 1900, UMTS 850 12.2 kbps RMC & UMTS 1700 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.: 572331**

Shenzhen TCT Testing Technology Co., Ltd., Shenzhen EMC Laboratory: Shenzhen Tongce Testing Lab

The 3m Semi-anechoic chamber has been registered and fully described in a report with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files.

● **IC - Registration No.: 10668A-1**

The 3m Semi-anechoic chamber of Shenzhen TCT Testing Technology Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing

● **CNAS - Registration No.: CNAS L6165**

Shenzhen TCT Testing Technology 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 L6165.

5.7 Laboratory Location

Shenzhen Tongce Testing Lab
Address: 1F, Leinuo Watch Building, Fuyong Town, Baoan Dist, Shenzhen, China
Tel: 13410377511
Fax: --

5.8 Test Instruments list

Name	Model No.	Manufacturer	Date of Cal.	Due Date
Test Receiver	ESVD	R&S	July 3, 2014	July 2, 2015
Spectrum Analyzer	FSEM	R&S	July 3, 2014	July 2, 2015
Spectrum Analyzer	FSU	R&S	July 3, 2014	July 2, 2015
Pre-amplifier	8447D	H.P.	July 2, 2014	July 1, 2015
Pre-amplifier	EM30265	EM Electronics Corporation CO.,LTD	July 2, 2014	July 1, 2015
BiConiLog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	July 4, 2014	July 3, 2015
Double -ridged waveguide horn	SCHWARZBECK MESS-ELEKTRONIK	BBHA9120D	July 4, 2014	July 3, 2015
Ultra Broadband ANT	HL562	R&S	July 4, 2014	July 3, 2015
UNIVERSAL RADIO COMMUNICATION TESTER	CMU200	Rohde & Schwarz	July 4, 2014	July 3, 2015
Coaxial Cable	N/A	TCT	July 2, 2014	July 1, 2015
Coaxial Cable	N/A	TCT	July 2, 2014	July 1, 2015
Coaxial Cable	N/A	TCT	July 2, 2014	July 1, 2015
Coaxial Cable	N/A	TCT	July 2, 2014	July 1, 2015
Loop antenna	Laplace instrument	RF300	July 4, 2014	July 3, 2015
Network analyzer	HP	8753D	July 4, 2014	July 3, 2015
DC Power supply	DPS-1303D	King	July 4, 2014	July 3, 2015
Power divider	K240C	Anritsu	July 2, 2014	July 1, 2015
Fading Simulator	ABFS	R&S	July 2, 2014	July 1, 2015
Vector Signal Generator	SMU200A	R&S	July 2, 2014	July 1, 2015
Signal Generator	SMU100A	R&S	July 2, 2014	July 1, 2015
Temperature / humidity chamber	SDJ-80L	Shenzhen Hongjian	July 4, 2014	July 3, 2015

6. System test configuration

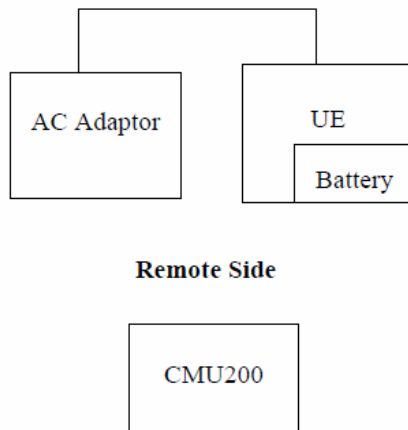
6.1 EUT Configuration

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.

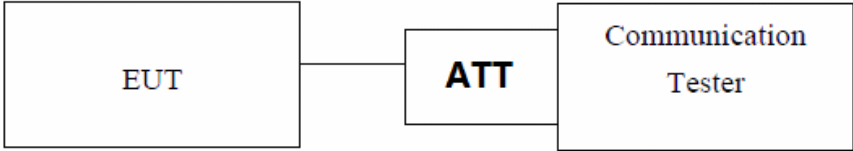
6.3 Configuration of Tested System



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 (GSM850, PCS1900, WCDMA Band V and WCDMA Band IV) with power adaptor, earphone and Data cable. The worst-case H mode for GSM850, PCS1900, UMTS 850 and UMTS 1700.

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:	GSM 850 7W PCS 1900 2W WCDMA Band V: 7W 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

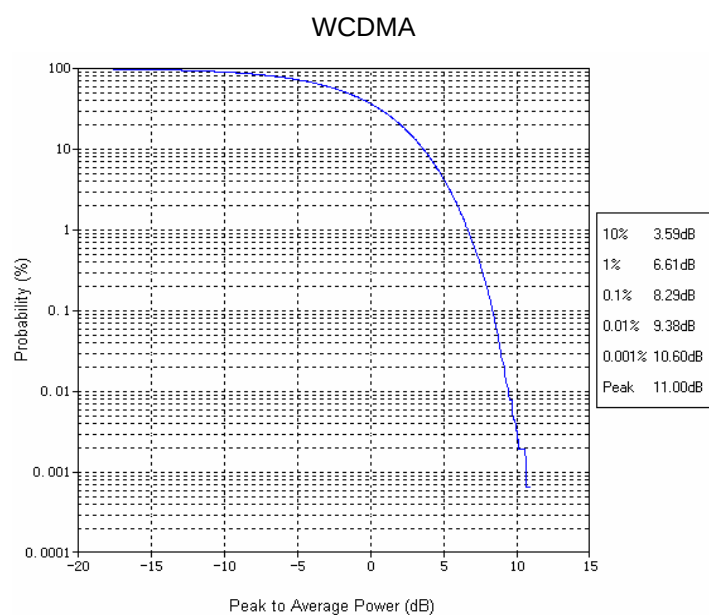
EUT Mode	Channel	Frequency (MHz)	Burst Average power (dBm)	Limit(dBm)	Result
GSM 850	128	824.20	32.32	38.45	Pass
	190	836.60	32.28		
	251	848.80	32.40		
GPRS 850 (1 Uplink slot)	128	824.20	32.23		
	190	836.60	32.01		
	251	848.80	32.12		
GPRS 850 (2 Uplink slots)	128	824.20	31.48		
	190	836.60	31.47		
	251	848.80	31.60		
GPRS 850 (3 Uplink slots)	128	824.20	29.56		
	190	836.60	29.55		
	251	848.80	29.77		
GPRS 850 (4 Uplink slots)	128	824.20	28.33		
	190	836.60	28.34		
	251	848.80	28.55		
PCS 1900	512	1850.20	30.46	33.00	Pass
	661	1880.00	29.91		
	810	1909.80	29.64		
GPRS 1900 (1 Uplink slot)	512	1850.20	30.21		
	661	1880.00	29.60		
	810	1909.80	29.48		
GPRS 1900 (2 Uplink slots)	512	1850.20	29.69		
	661	1880.00	29.20		
	810	1909.80	28.97		
GPRS 1900 (3 Uplink slots)	512	1850.20	27.87		
	661	1880.00	27.44		
	810	1909.80	27.43		
GPRS 1900 (4 Uplink slots)	512	1850.20	26.68		
	661	1880.00	26.28		
	810	1909.80	26.42		

EUT Mode	Channel	Frequency (MHz)	Burst Average power (dBm)	Limit(dBm)	Result
EGPRS 850 (1 Uplink slot)	128	824.20	27.27	38.45	Pass
	190	836.60	27.39		
	251	848.80	27.46		
EGPRS 850 (2 Uplink slots)	128	824.20	26.26		
	190	836.60	26.38		
	251	848.80	26.49		
EGPRS 850 (3 Uplink slots)	128	824.20	24.34		
	190	836.60	24.41		
	251	848.80	24.39		
EGPRS 850 (4 Uplink slots)	128	824.20	22.23		
	190	836.60	23.33		
	251	848.80	23.32		
EGPRS 1900 (1 Uplink slot)	512	1850.20	26.27	33.00	Pass
	661	1880.00	25.84		
	810	1909.80	25.72		
EGPRS 1900 (2 Uplink slots)	512	1850.20	25.02		
	661	1880.00	24.53		
	810	1909.80	24.42		
EGPRS 1900 (3 Uplink slots)	512	1850.20	22.77		
	661	1880.00	22.36		
	810	1909.80	21.24		
EGPRS 1900 (4 Uplink slots)	512	1850.20	21.42		
	661	1880.00	20.97		
	810	1909.80	20.83		

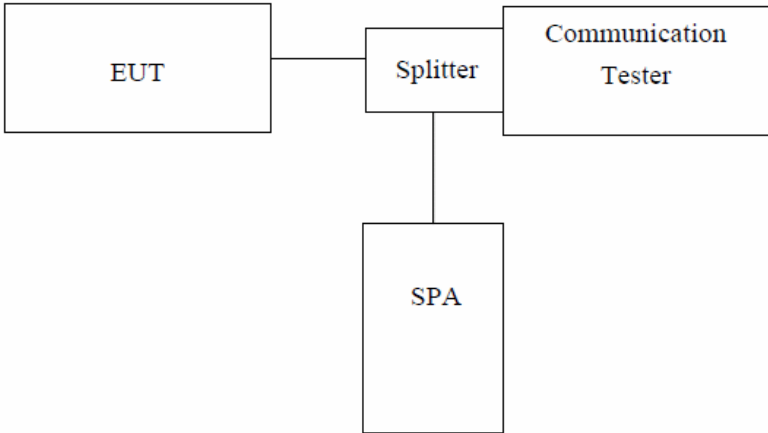
EUT Mode	Channel			EUT Mode	Channel		
WCDMA850	4132	4138	4233	WCDMA1700	1312	1413	1513
	Frequency(MHz)				Frequency(MHz)		
	826.4	836.8	846.6		1712.4	1732.6	1752.6
12.2k	23.54	23.38	23.41	12.2k	21.94	21.87	22.21
64k	23.52	23.37	23.40	64k	21.35	21.57	21.59
144k	22.34	22.57	22.57	144k	20.57	20.59	20.75
384k	23.51	23.14	23.24	384k	21.77	21.81	21.73
HSDPA							
Subtest 1	22.53	22.43	22.42	Subtest 1	20.84	20.86	20.82
Subtest 2	22.19	22.00	22.06	Subtest 2	20.51	20.55	20.80
Subtest 3	20.74	20.46	20.59	Subtest 3	19.07	19.05	19.15
Subtest 4	20.74	20.51	20.60	Subtest 4	19.09	19.13	19.12
HSUPA							
Subtest 1	22.50	22.28	22.36	Subtest 1	20.85	20.84	21.15
Subtest 2	22.51	22.38	22.40	Subtest 2	20.84	20.85	21.20
Subtest 3	20.69	20.43	20.64	Subtest 3	19.09	19.04	19.14
Subtest 4	22.54	22.41	22.41	Subtest 4	20.87	20.87	21.23
Subtest 5	21.68	21.44	21.55	Subtest 5	20.03	20.07	20.32
Limit	38.45dBm			30dBm			
Result	PASS						

Peak to Average Ratio for AWS band:

Test data



6.6 Occupy Bandwidth

Test Requirement:	FCC part 22.913(a) and FCC part 24.232(b)
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

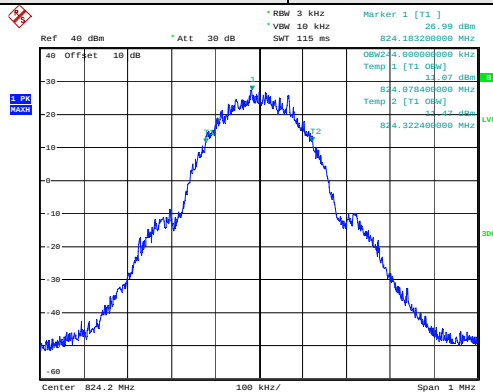
Measurement Data

EUT Mode	Channel	Frequency (MHz)	99% Occupy bandwidth (kHz)	-26dB bandwidth (kHz)
GSM 850	128	824.2	244	311
	190	836.6	243	314
	251	848.8	241	314
EGPRS850	128	824.2	256	302
	190	836.6	252	325
	251	848.8	254	292
PCS 1900	512	1850.2	246	314
	661	1880.0	242	320
	810	1909.8	243	318
EGPRS1900	512	1850.2	246	306
	661	1880.0	247	307
	810	1909.8	250	314
UMTS850 12.2k RMC	4132	824.40	4136	4680
	4183	836.00	4160	4656
	4233	846.60	4168	4672
UMTS1700 12.2k RMC	1312	1712.40	4160	4696
	1437	1732.60	4160	4688
	1537	1752.60	4152	4688
UMTS850 HSDPA	4132	824.40	4144	4656
	4183	836.00	4160	4696
	4233	846.60	4184	4680
UMTS1700 HSDPA	1312	1712.40	4152	4696
	1437	1732.60	4152	4696
	1537	1752.60	4160	4680
UMTS850 HSUPA	4132	824.40	4136	4696
	4183	836.00	4160	4680
	4233	846.60	4176	4672
UMTS1700 HSUPA	1312	1712.40	4168	4696
	1437	1732.60	4184	4712
	1537	1752.60	4176	4704

Note: GSM & GPRS use the same modulation technical (GMSK), and with the same channels, so the 99% OBW and the -26dB of GPRS not performed.

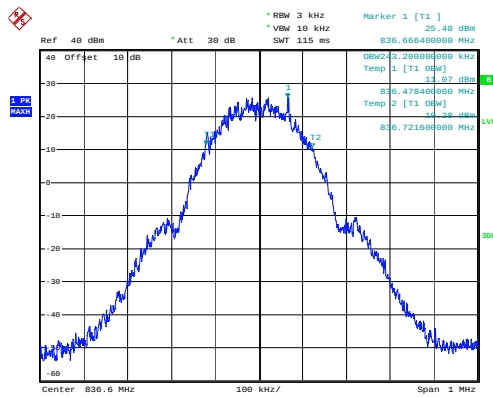
Test plot as follows:

Test Item:	99% Occupy bandwidth	Test Mode:	GSM850
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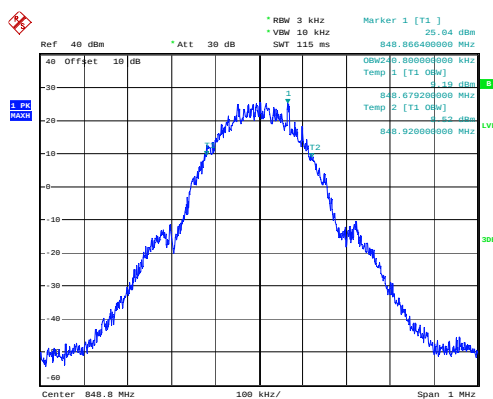
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Lowest channel



Date: 13.AUG.2014 10:46:35

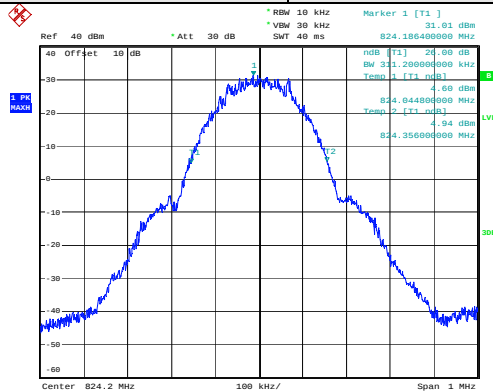
Middle channel



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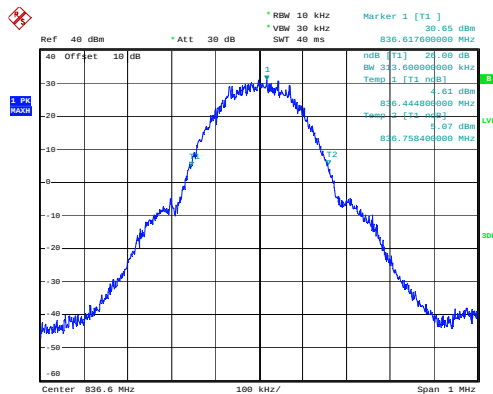
Highest channel

Test Item:	-26dB bandwidth	Test Mode:	GSM850
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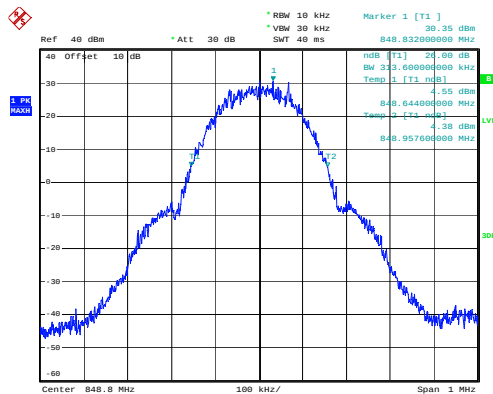
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Lowest channel



Date: 13.AUG.2014 10:48:32

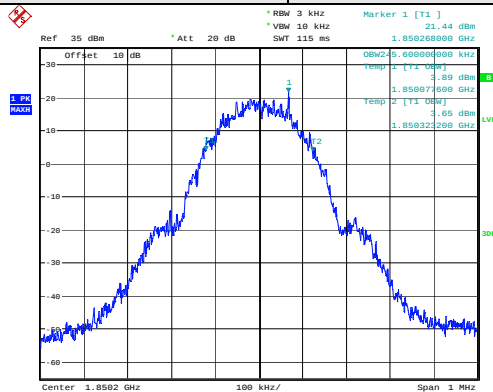
Middle channel



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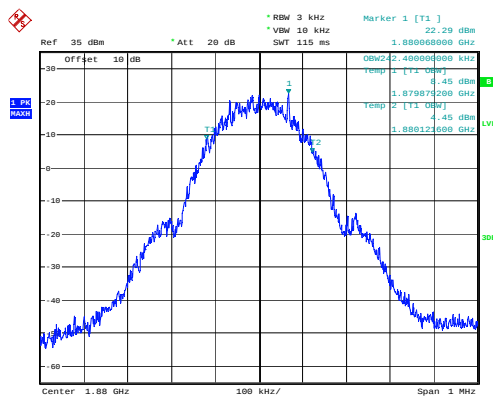
Highest channel

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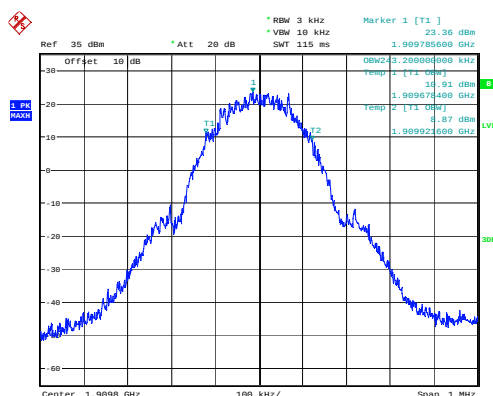
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Lowest channel



Date: 13.AUG.2014 11:06:16

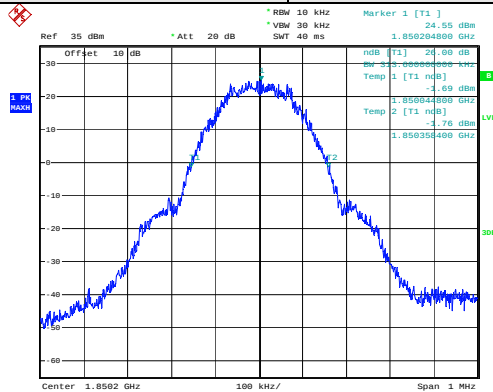
Middle channel



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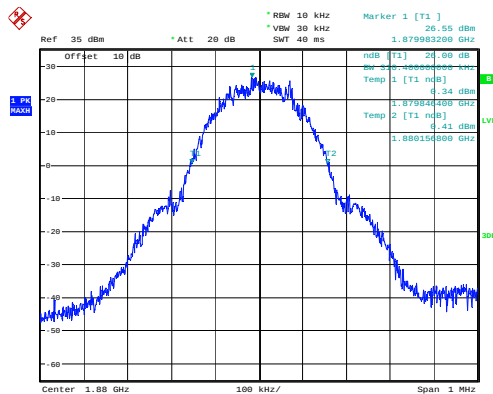
Highest channel

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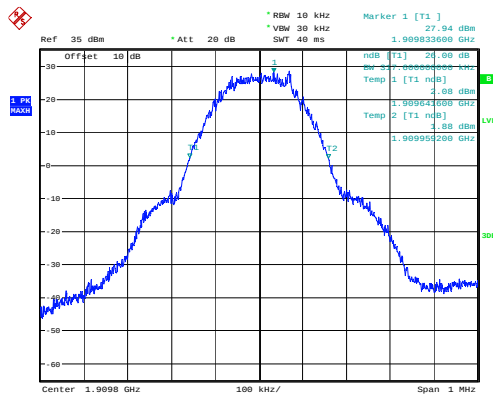
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Lowest channel



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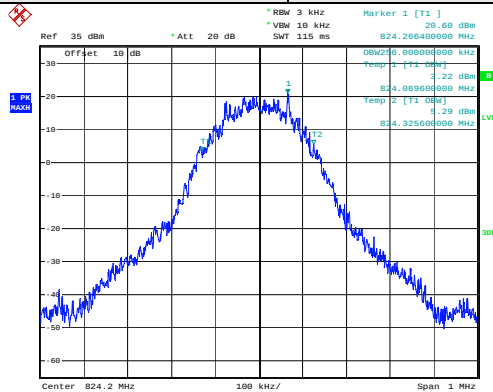
Middle channel



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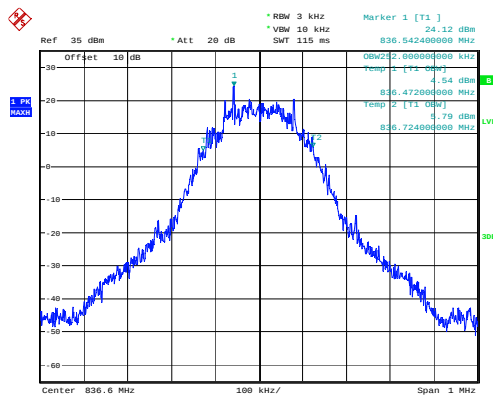
Highest channel

Test Item:	99% Occupancy bandwidth	Test Mode:	EGPRS850
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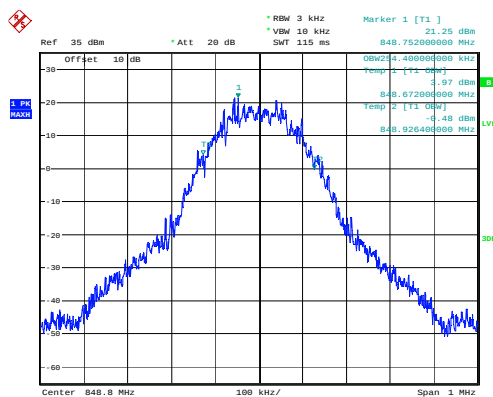
Date: 13.AUG.2014 15:17:04

Lowest channel



Date: 13.AUG.2014 15:16:28

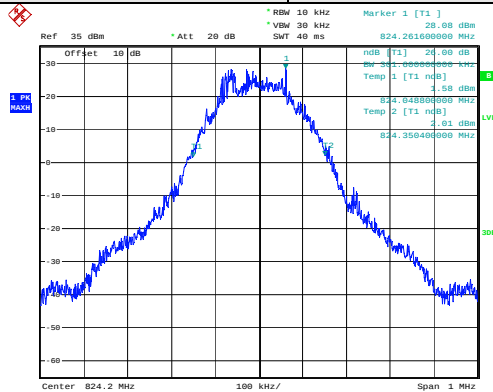
Middle channel



Date: 13.AUG.2014 15:15:44

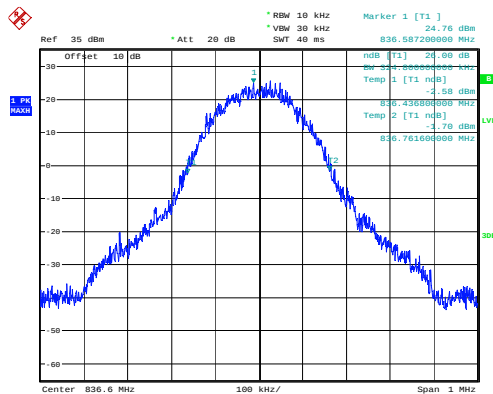
Highest channel

Test Item:	-26dB bandwidth	Test Mode:	EGPRS850
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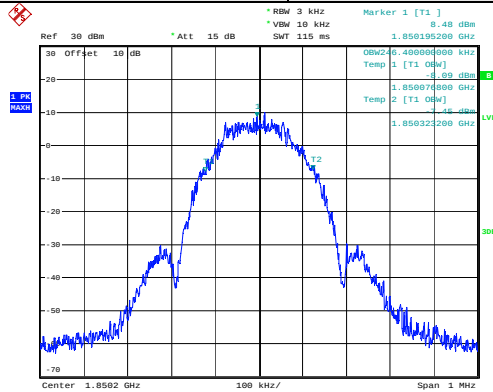


Date: 13.AUG.2014 15:13:43

Lowest channel

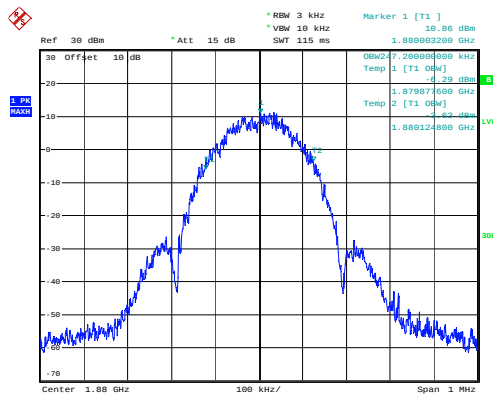


Test Item:	99% Occupy bandwidth	Test Mode:	EGPRS 1900
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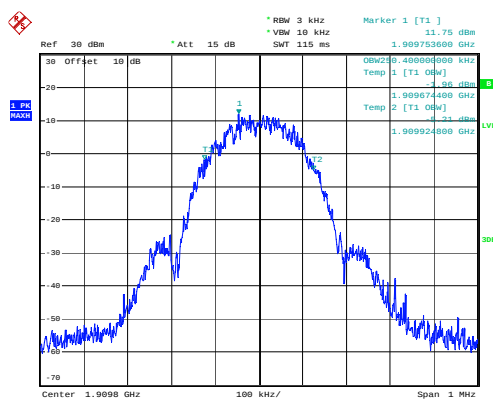
Date: 13.AUG.2014 15:22:10

Lowest channel



Date: 13.AUG.2014 15:23:22

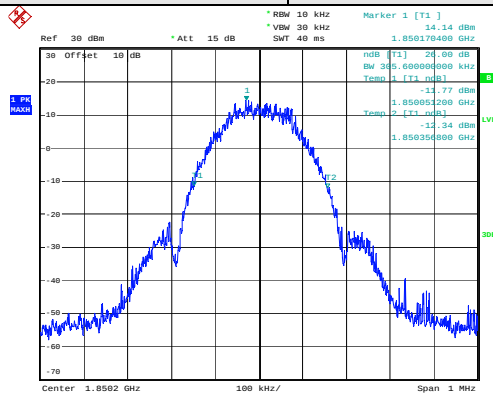
Middle channel



Date: 13.AUG.2014 15:22:46

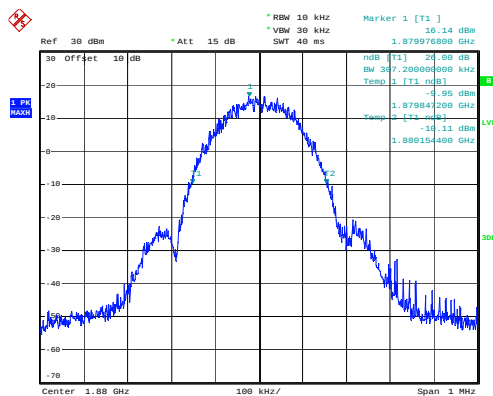
Highest channel

Test Item:	-26dB bandwidth	Test Mode:	EGPRS 1900
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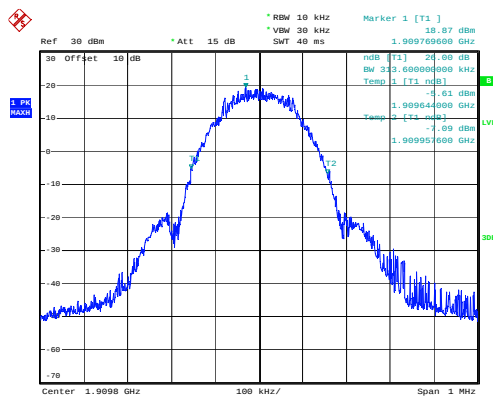
Date: 13.AUG.2014 15:24:32

Lowest channel



Date: 13.AUG.2014 15:24:06

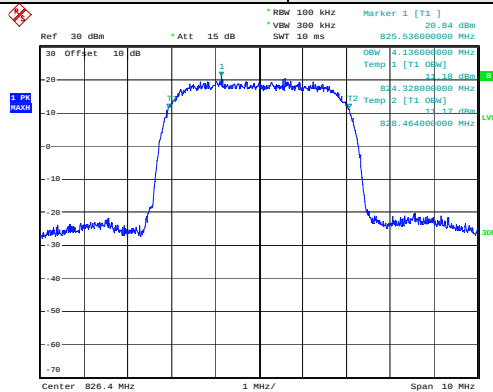
Middle channel



Date: 13.AUG.2014 15:25:56

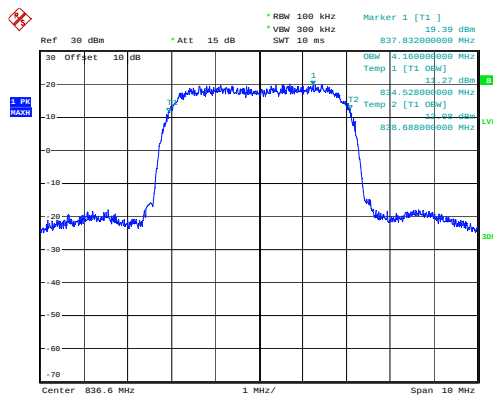
Highest channel

Test Item:	99% Occupancy bandwidth	Test Mode:	UMTS 850 12.2k RMC
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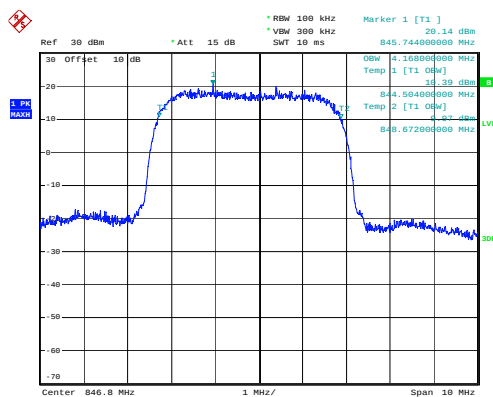
Date: 13.AUG.2014 11:15:11

Lowest channel



Date: 13.AUG.2014 11:18:50

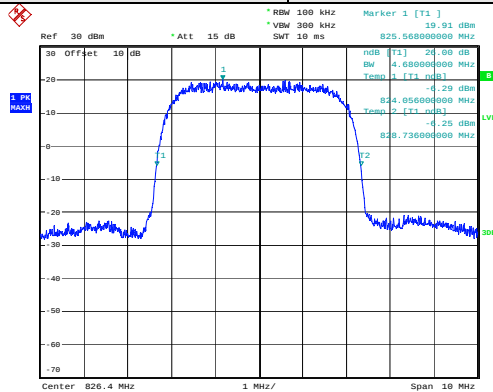
Middle channel



Date: 13.AUG.2014 11:16:42

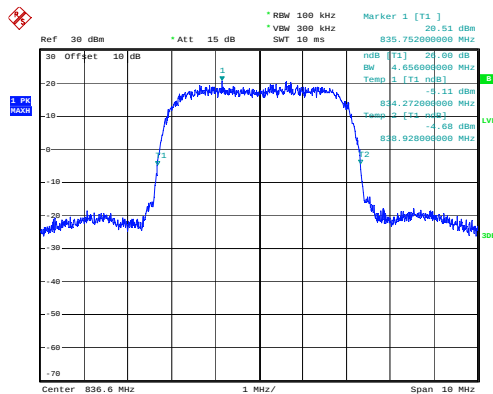
Highest channel

Test Item:	-26dB bandwidth	Test Mode:	UMTS 850 12.2k RMC
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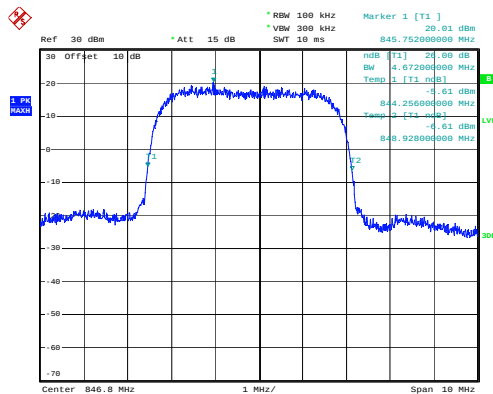
Date: 13.AUG.2014 11:19:28

Lowest channel



Date: 13.AUG.2014 11:19:08

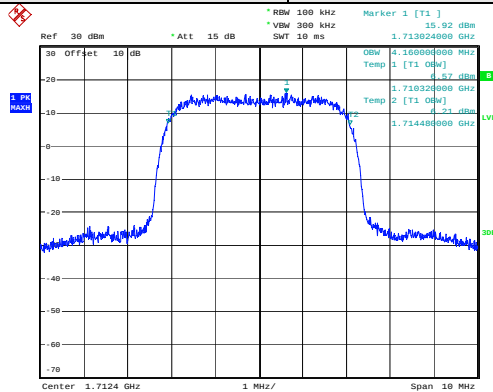
Middle channel



Date: 13.AUG.2014 11:19:49

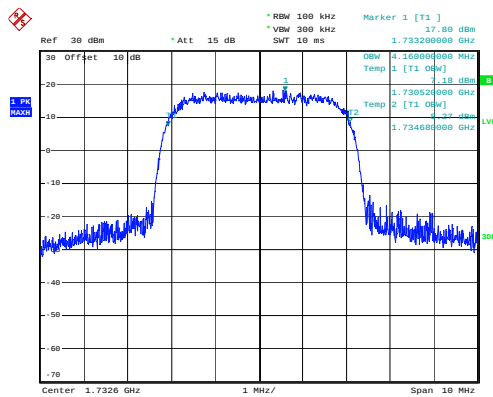
Highest channel

Test Item:	99% Occupancy bandwidth	Test Mode:	UMTS 1700 12.2k RMC
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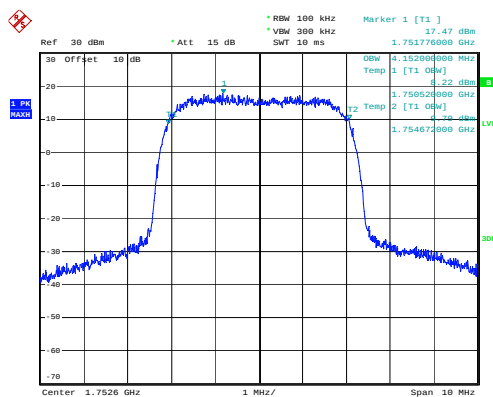
Date: 13.AUG.2014 14:45:33

Lowest channel



Date: 13.AUG.2014 14:45:02

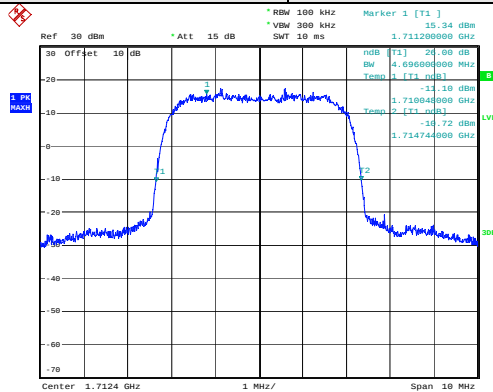
Middle channel



Date: 13.AUG.2014 14:44:27

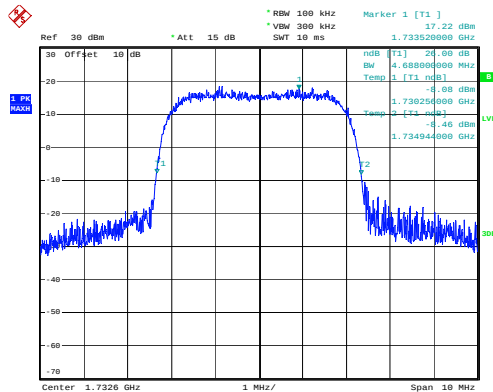
Highest channel

Test Item:	-26dB bandwidth	Test Mode:	UMTS 1700 12.2k RMC
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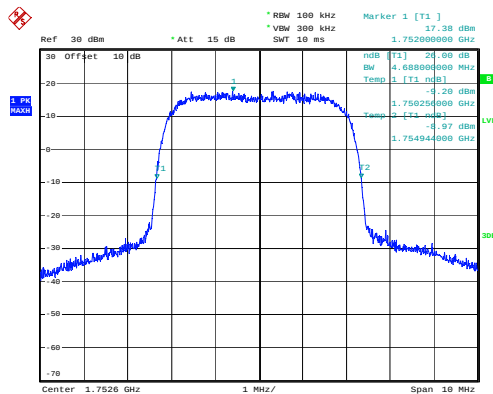
Date: 13.AUG.2014 14:42:07

Lowest channel



Date: 13.AUG.2014 14:42:44

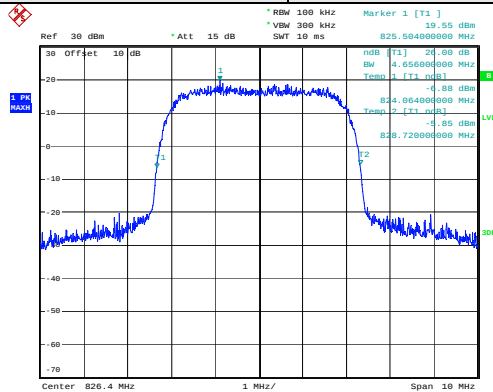
Middle channel



Date: 13.AUG.2014 14:44:03

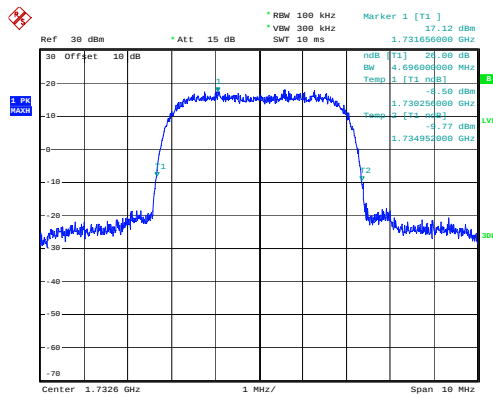
Highest channel

Test Item:	-26dB bandwidth	Test Mode:	UMTS 850 HSDPA
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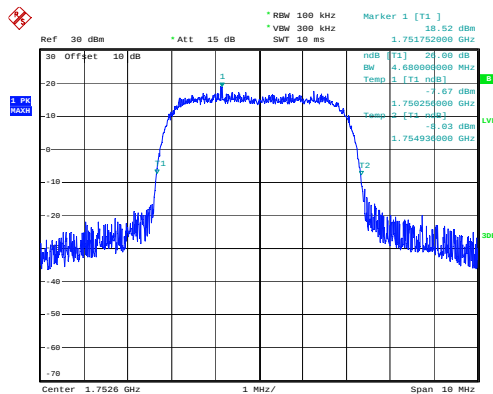
Date: 13.AUG.2014 11:24:55

Lowest channel



Date: 13.AUG.2014 14:49:34

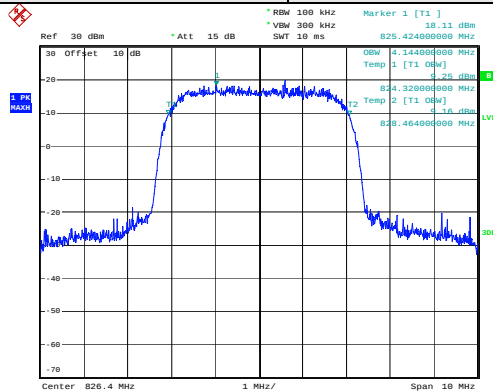
Middle channel



Date: 13.AUG.2014 14:50:03

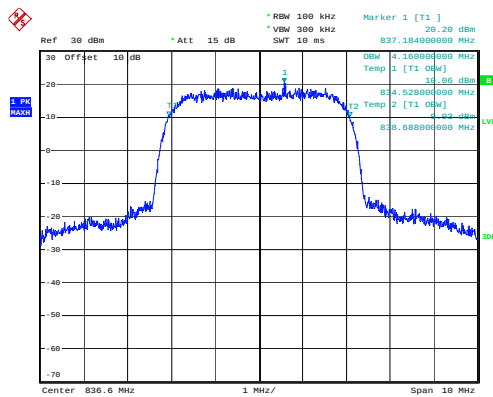
Highest channel

Test Item:	99% Occupancy bandwidth	Test Mode:	UMTS 850 HSDPA
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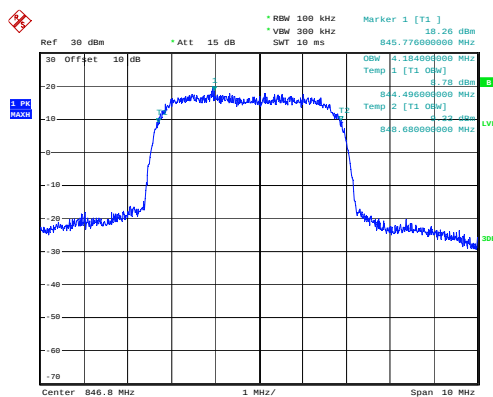
Date: 13.AUG.2014 11:23:19

Lowest channel



Date: 13.AUG.2014 11:23:45

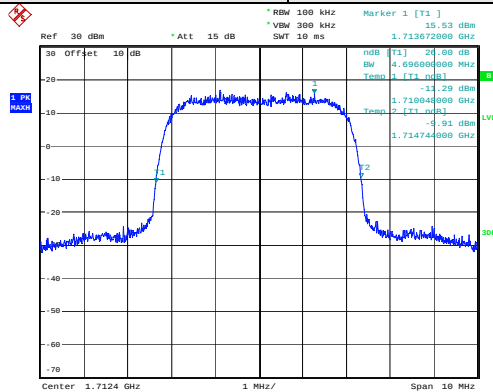
Middle channel



Date: 13.AUG.2014 11:22:55

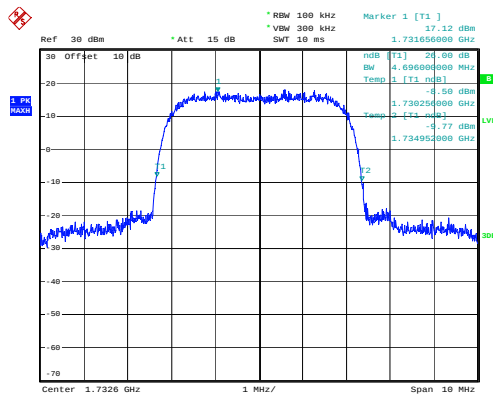
Highest channel

Test Item:	-26dB bandwidth	Test Mode:	UMTS 1700 HSDPA
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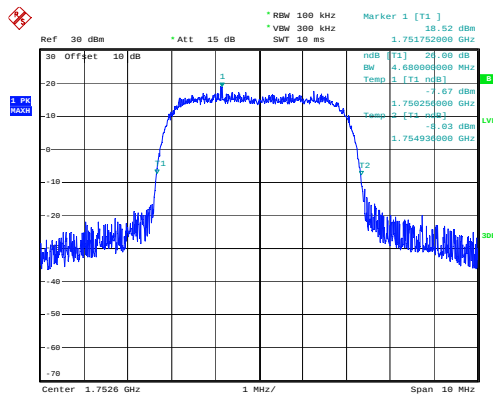
Date: 13.AUG.2014 14:49:02

Lowest channel



Date: 13.AUG.2014 14:49:34

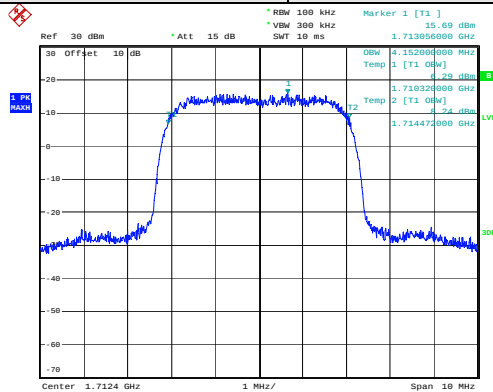
Middle channel



Date: 13.AUG.2014 14:50:03

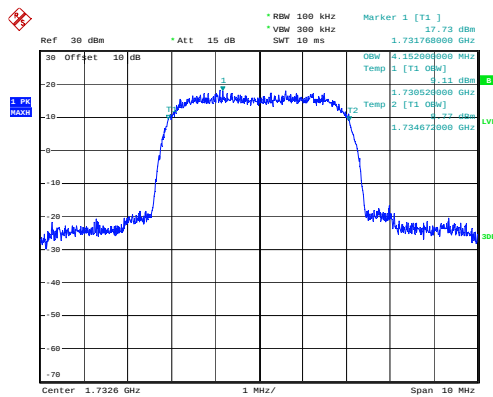
Highest channel

Test Item:	99% Occupancy bandwidth	Test Mode:	UMTS 1700 HSDPA
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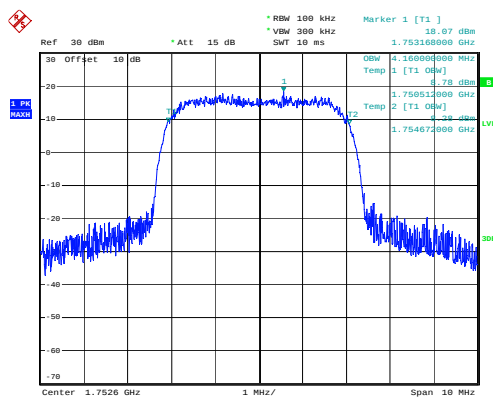
Date: 13.AUG.2014 14:51:12

Lowest channel



Date: 13.AUG.2014 14:50:42

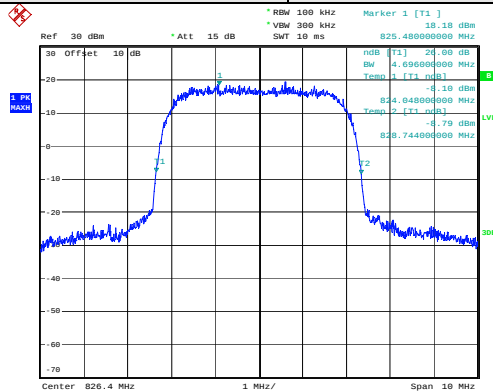
Middle channel



Date: 13.AUG.2014 14:50:22

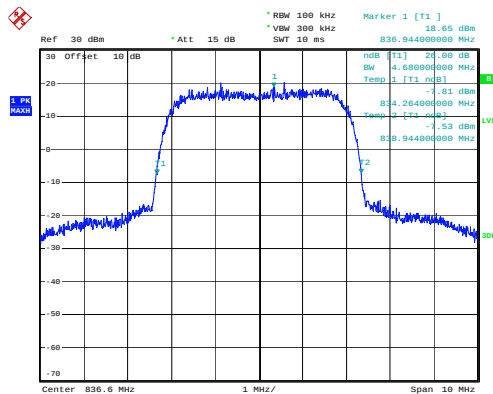
Highest channel

Test Item:	-26dB bandwidth	Test Mode:	UMTS 850 HSUPA
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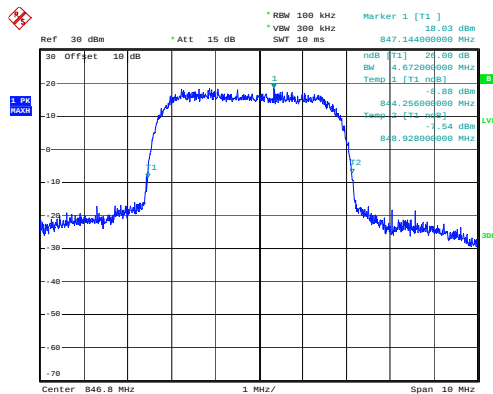
Date: 13.AUG.2014 11:26:04

Lowest channel



Date: 13.AUG.2014 11:26:49

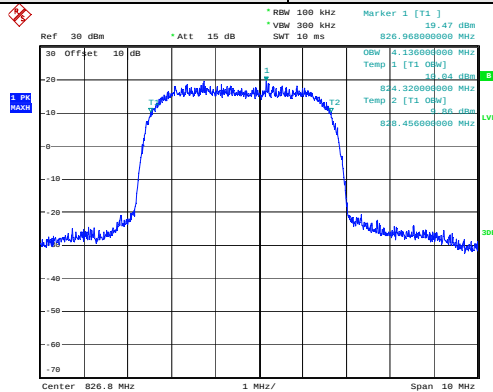
Middle channel



Date: 13.AUG.2014 11:26:27

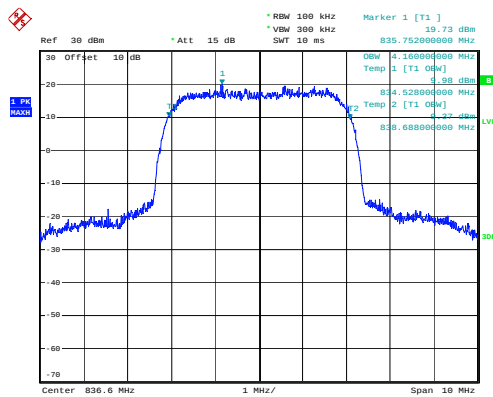
Highest channel

Test Item:	99% Occupancy bandwidth	Test Mode:	UMTS 850 HSUPA
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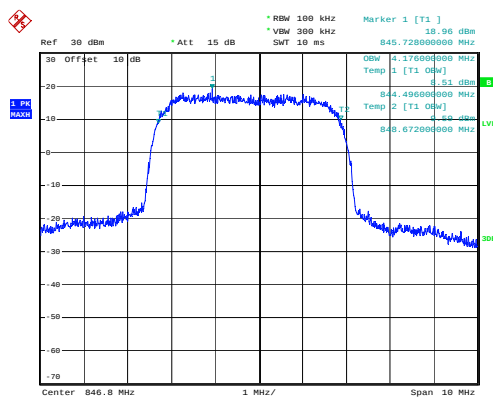
Date: 13.AUG.2014 11:28:58

Lowest channel



Date: 13.AUG.2014 11:28:16

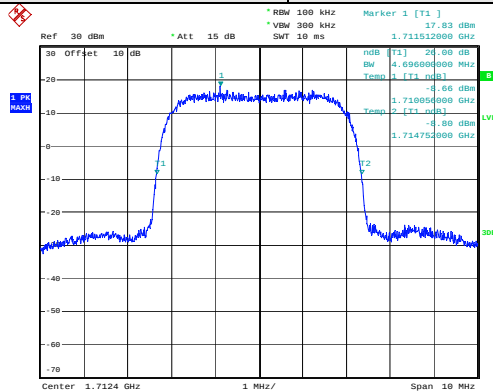
Middle channel



Date: 13.AUG.2014 11:28:38

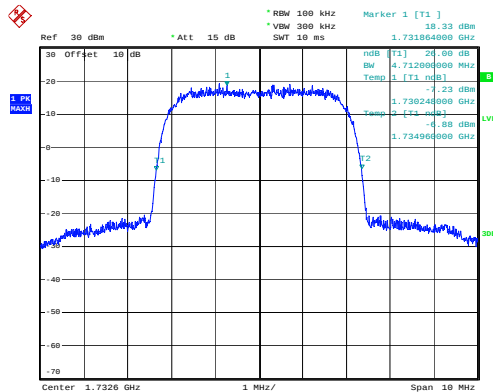
Highest channel

Test Item:	-26dB bandwidth	Test Mode:	UMTS 1700 HSUPA
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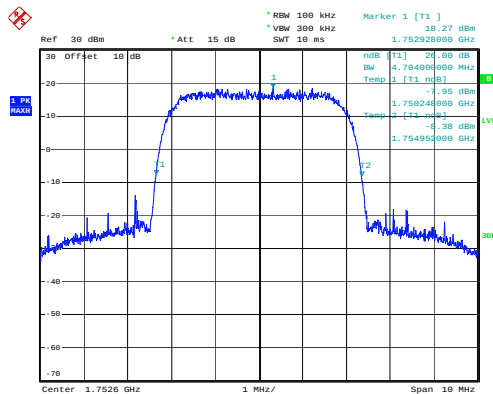
Date: 13.AUG.2014 15:05:19

Lowest channel



Date: 13.AUG.2014 15:04:49

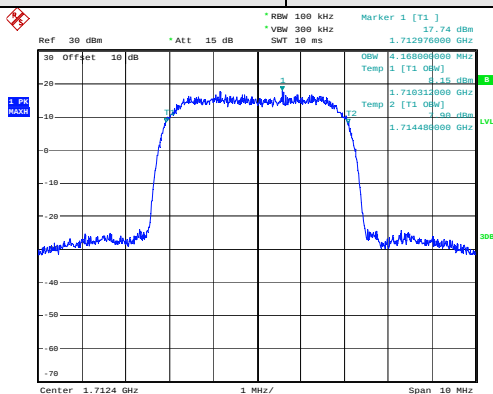
Middle channel



Date: 13.AUG.2014 14:53:58

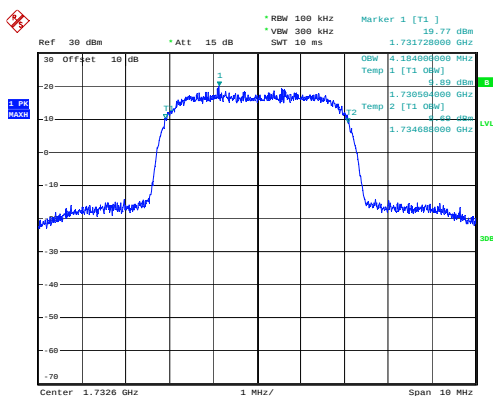
Highest channel

Test Item:	99% Occupancy bandwidth	Test Mode:	UMTS 1700 HSUPA
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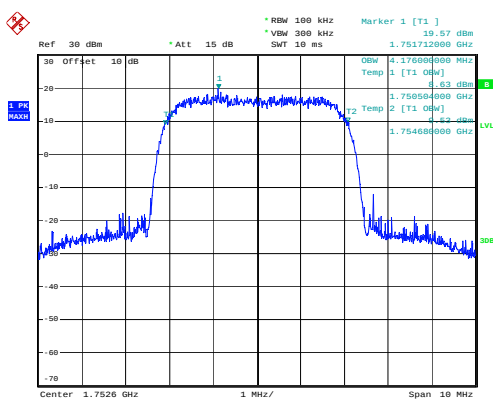
Date: 13.AUG.2014 14:51:57

Lowest channel



Date: 13.AUG.2014 14:52:22

Middle channel



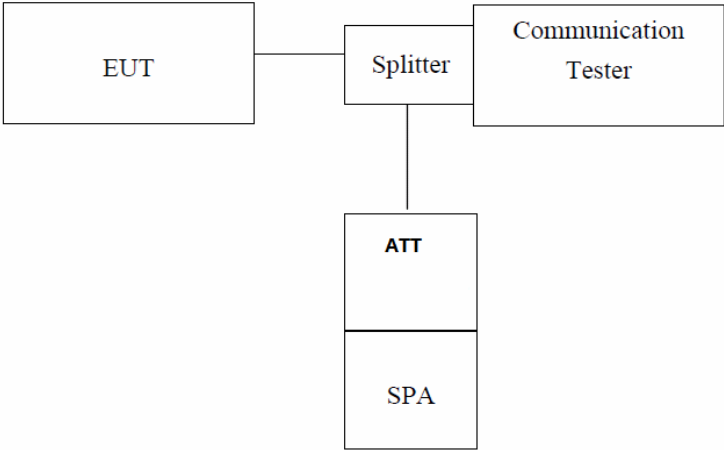
Date: 13.AUG.2014 14:52:45

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.

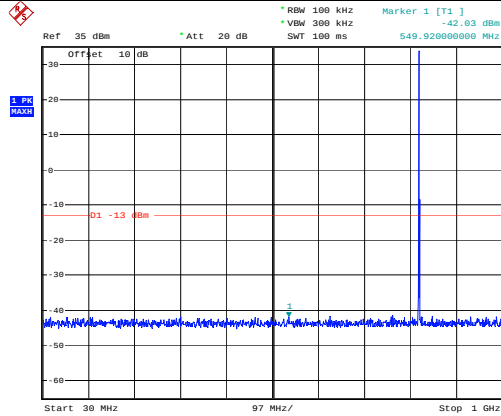
6.8 Out of band emission at antenna terminals

Test Requirement:	FCC part22.917(a), FCC part24.238(a) and FCC part27.53(h)
Test Method:	FCC part2.1051
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:

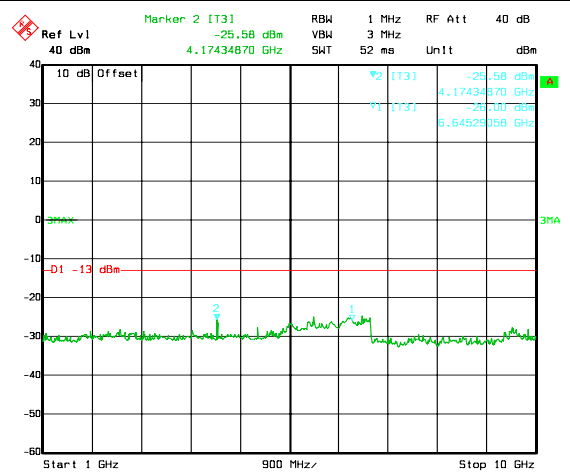
Spurious emission

Test Mode:	GSM850	Test Channel:	Lowest channel
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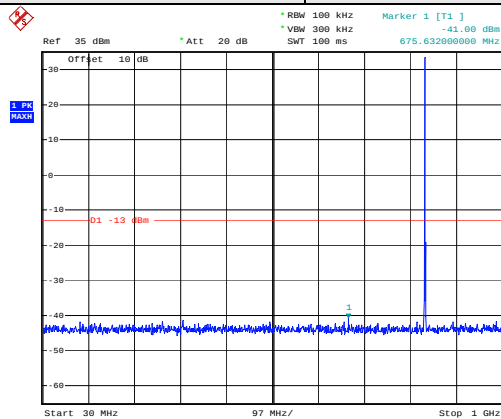
Date: 13.AUG.2014 11:10:44

30MHz~1GHz



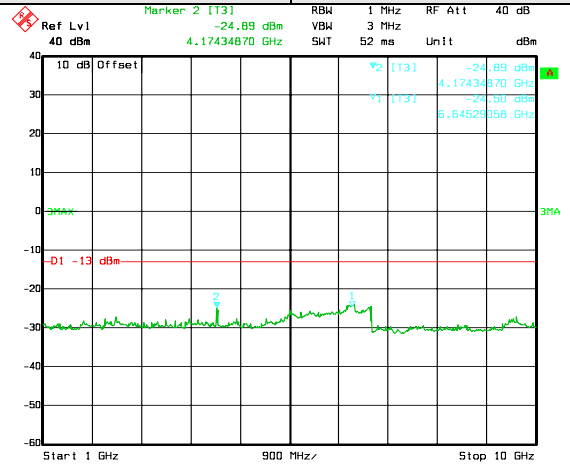
1GHz~10GHz

Test Mode:	GSM850	Test Channel:	Middle channel
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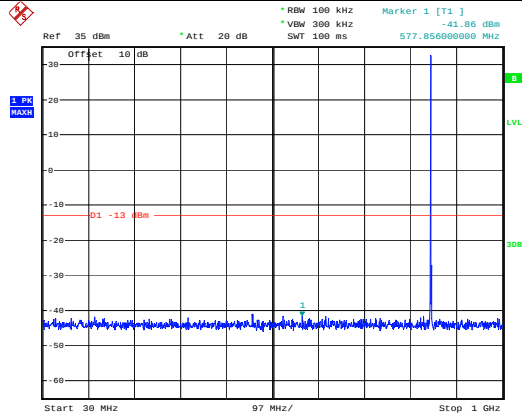
Date: 13.AUG.2014 11:11:04

30MHz~1GHz



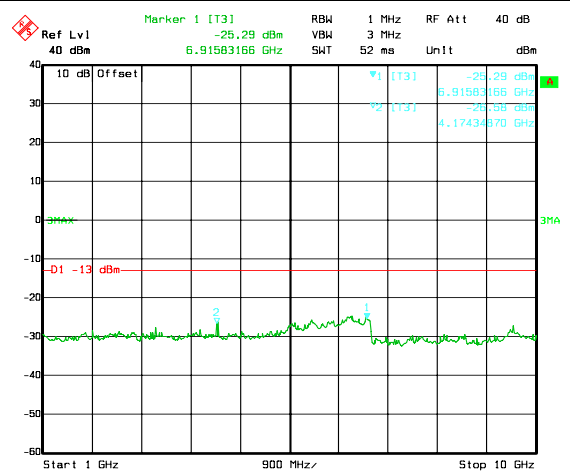
1GHz~10GHz

Test Mode:	GSM850	Test Channel:	Highest channel
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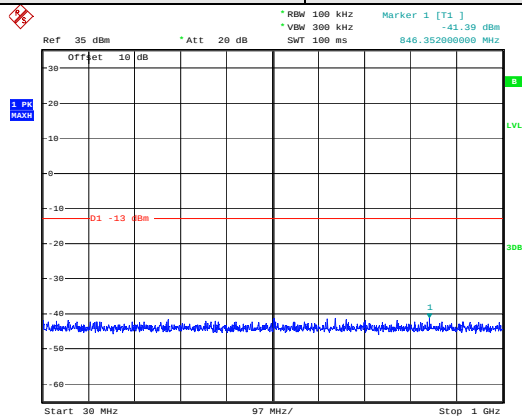
Date: 13.AUG.2014 11:11:19

30MHz~1GHz



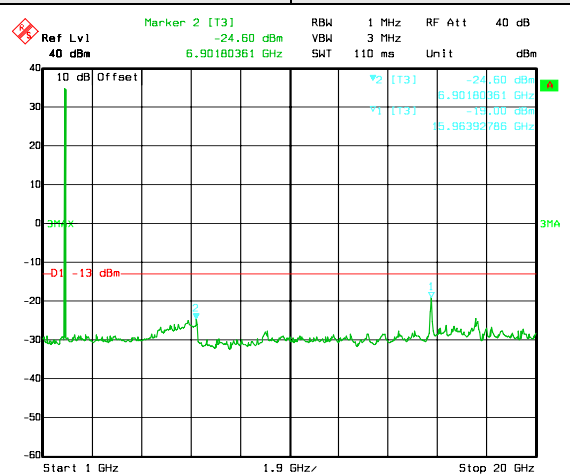
1GHz~10GHz

Test Mode:	PCS1900	Test Channel:	Lowest channel
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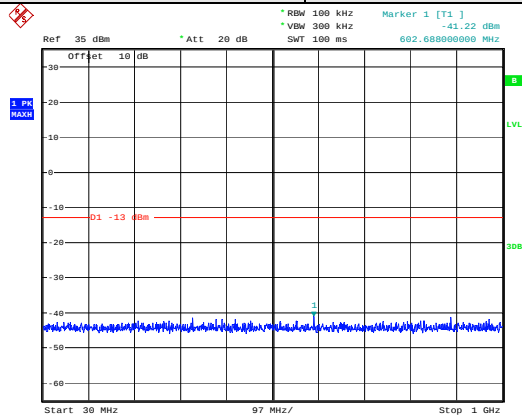
Date: 13.AUG.2014 11:09:49

30MHz~1GHz



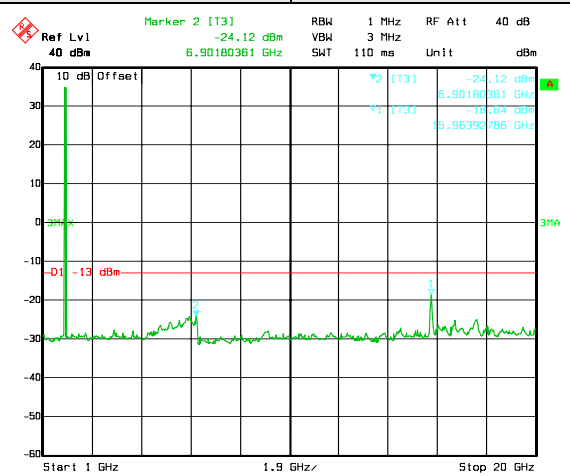
1GHz~20GHz

Test Mode:	PCS1900	Test Channel:	Middle channel
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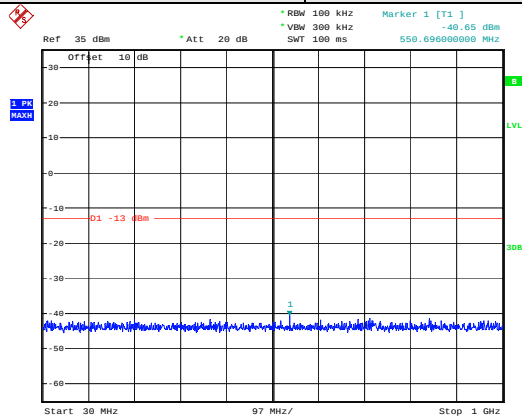
Date: 13.AUG.2014 11:10:04

30MHz~1GHz



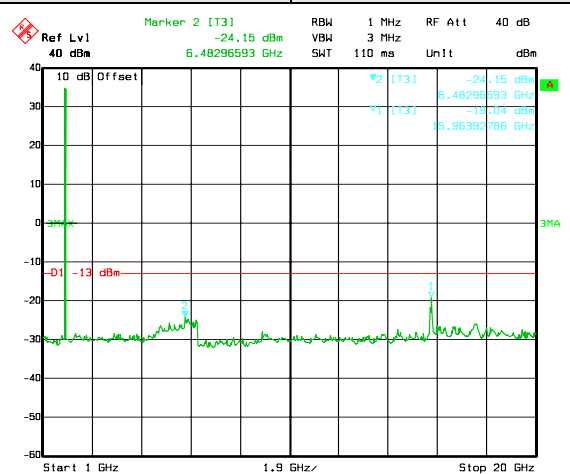
1GHz~20GHz

Test Mode:	PCS1900	Test Channel:	Highest channel
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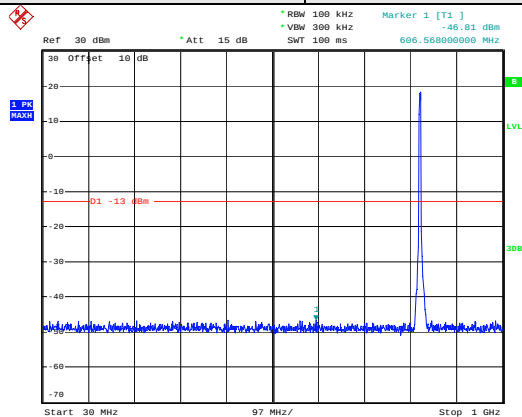
Date: 13.AUG.2014 11:09:31

30MHz~1GHz



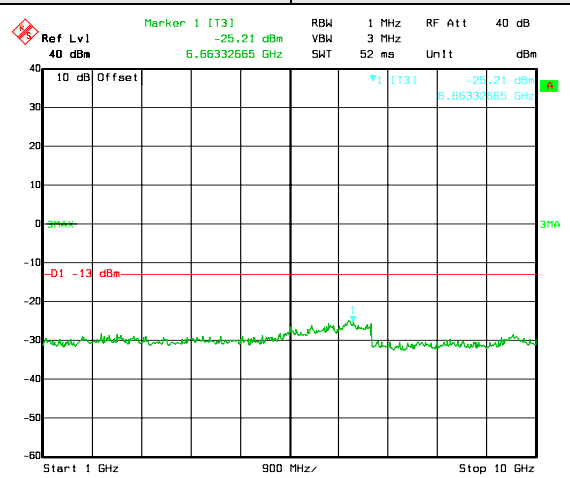
1GHz~20GHz

Test Mode:	UMTS 850 12.2k RMC	Test Channel:	Lowest channel
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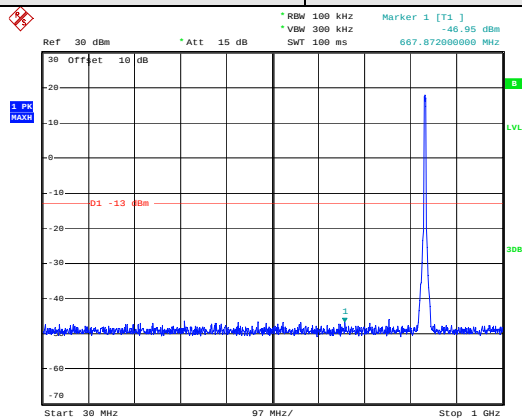
Date: 13.AUG.2014 11:29:27

30MHz~1GHz



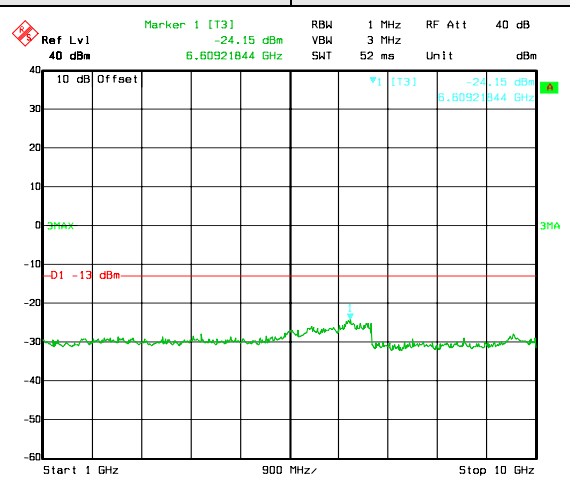
1GHz~9GHz

Test Mode:	UMTS 850 12.2k RMC	Test Channel:	Middle channel
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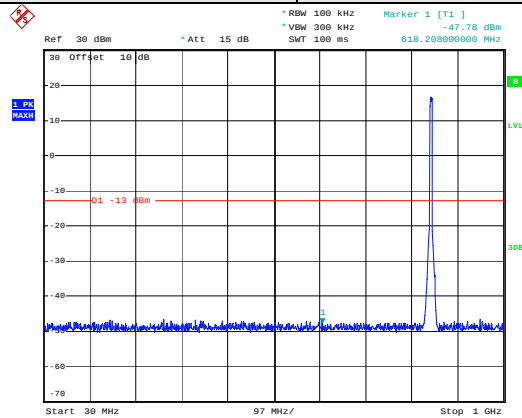
Date: 13.AUG.2014 11:30:01

30MHz~1GHz



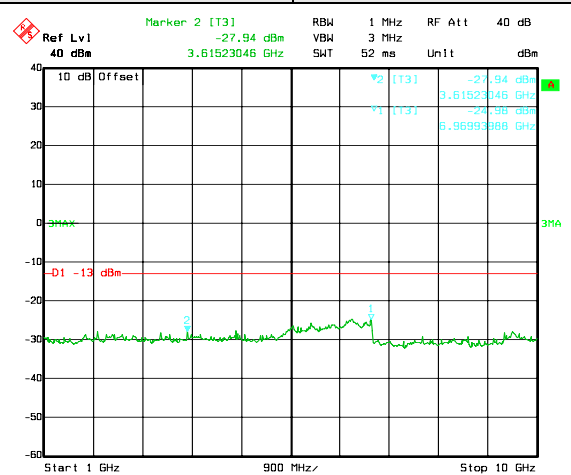
1GHz~9GHz

Test Mode:	UMTS 850 12.2k RMC	Test Channel:	Highest channel
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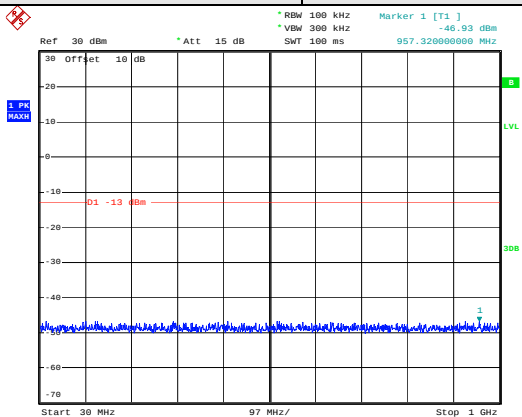
Date: 13.AUG.2014 11:29:47

30MHz~1GHz



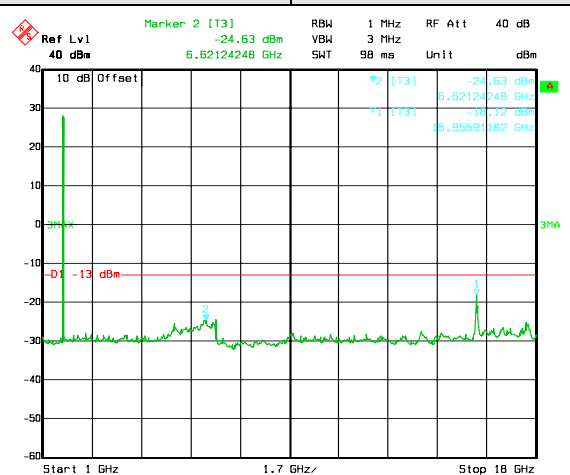
1GHz~9GHz

Test Mode:	UMTS 1700 12.2k RMC	Test Channel:	Lowest channel
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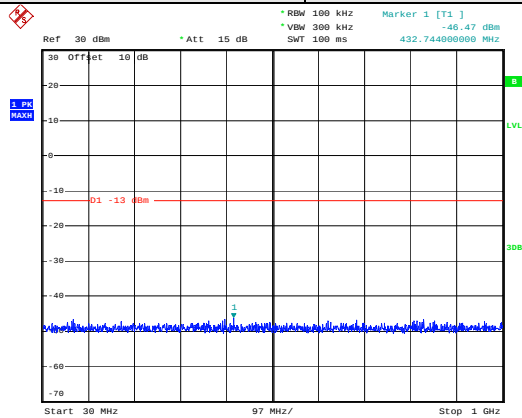
Date: 13.AUG.2014 14:47:44

30MHz~1GHz



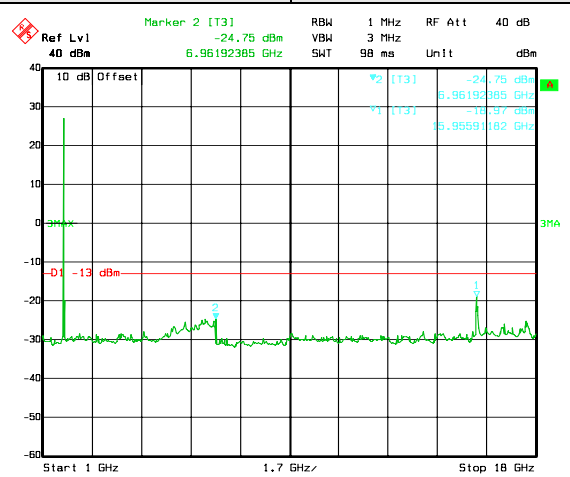
1GHz~18GHz

Test Mode:	UMTS 1700 12.2k RMC	Test Channel:	Middle channel
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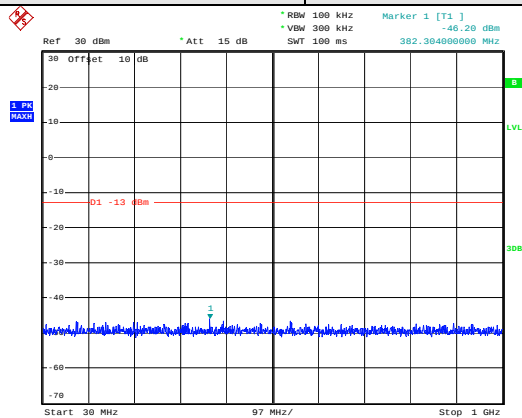
Date: 13.AUG.2014 14:47:11

30MHz~1GHz



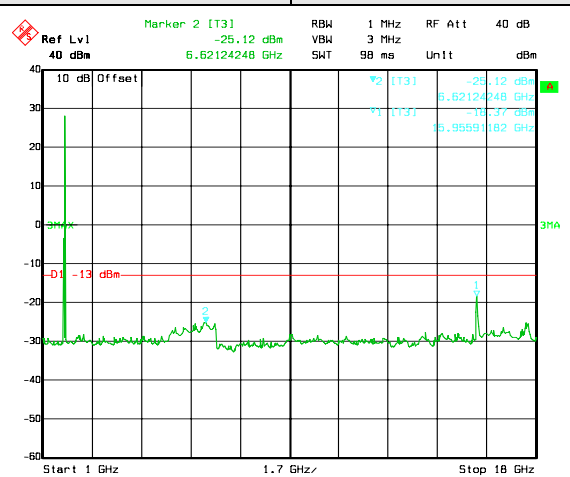
1GHz~18GHz

Test Mode:	UMTS 1700 12.2k RMC	Test Channel:	Highest channel
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Date: 13.AUG.2014 14:46:58

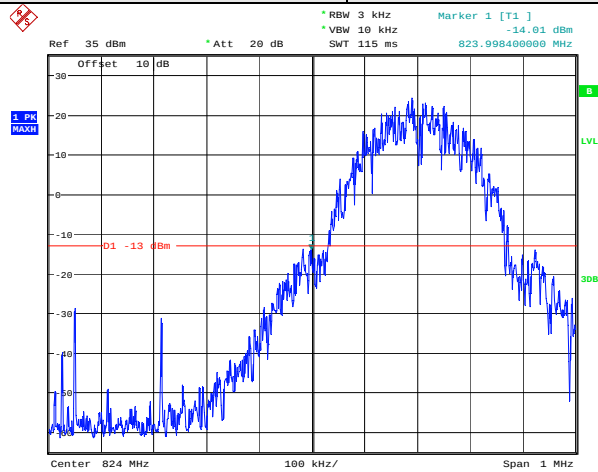
30MHz~1GHz



1GHz~18GHz

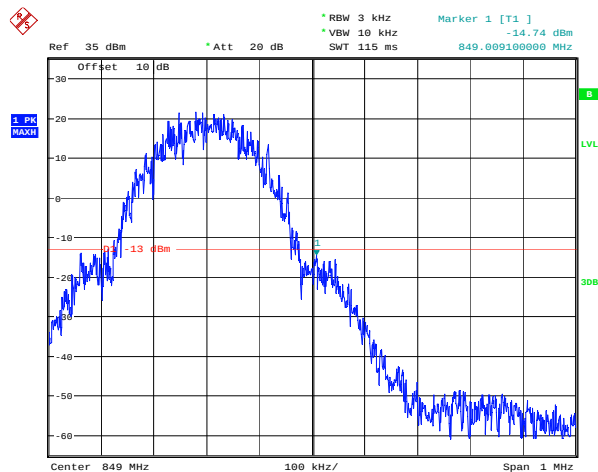
Band edge emission:

Test Mode:	GSM850
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Date: 13.AUG.2014 11:01:40

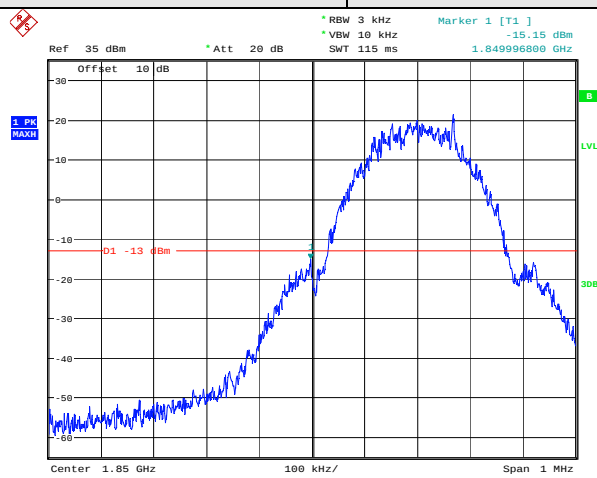
Lowest channel



Date: 13.AUG.2014 10:59:59

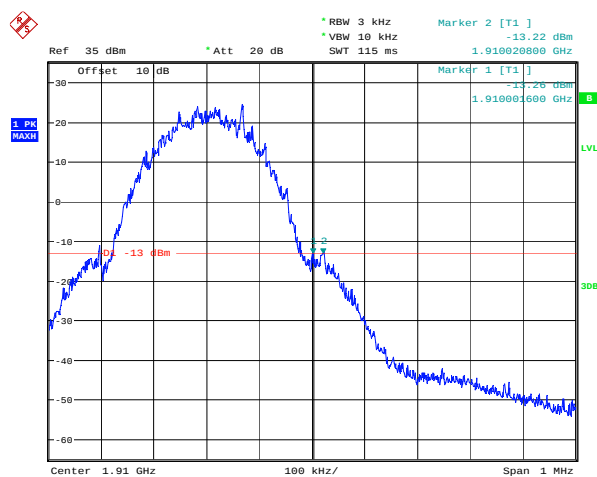
Highest channel

Test Mode:	PCS1900
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Date: 13.AUG.2014 11:02:59

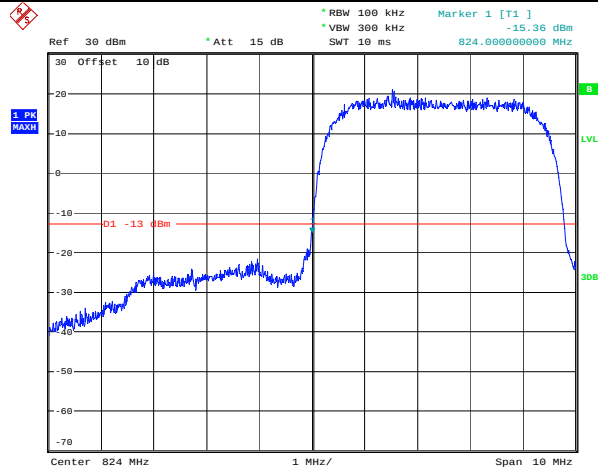
Lowest channel



Date: 13.AUG.2014 11:04:02

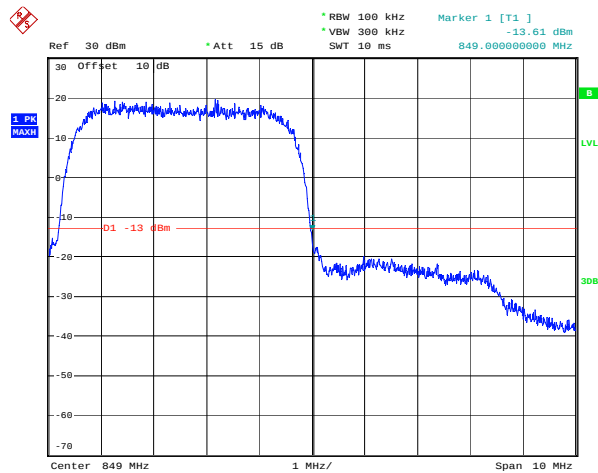
Highest channel

Test Mode:	UMTS850 12.2k RMC
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Date: 13.AUG.2014 11:20:19

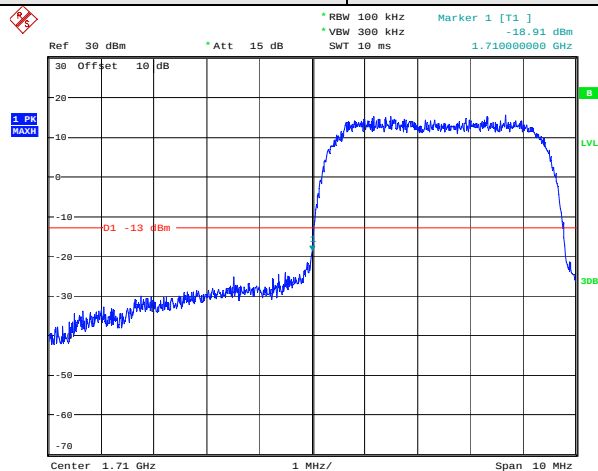
Lowest channel



Date: 13.AUG.2014 11:20:04

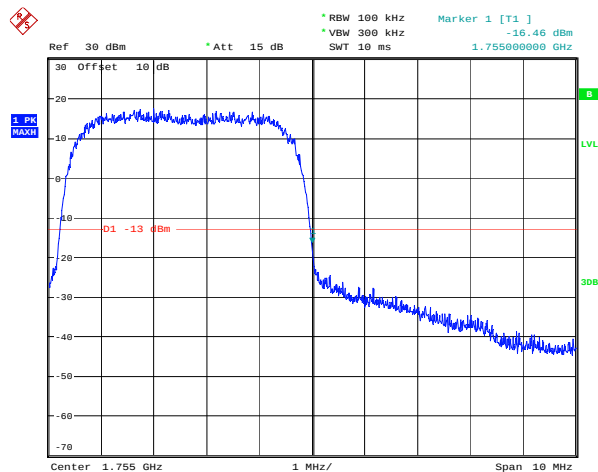
Highest channel

Test Mode:	UMTS 1700 12.2k RMC
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Date: 13.AUG.2014 14:45:50

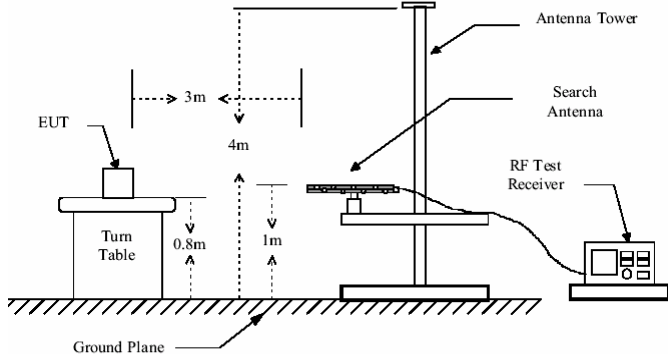
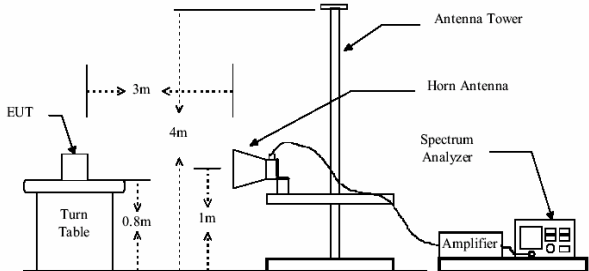
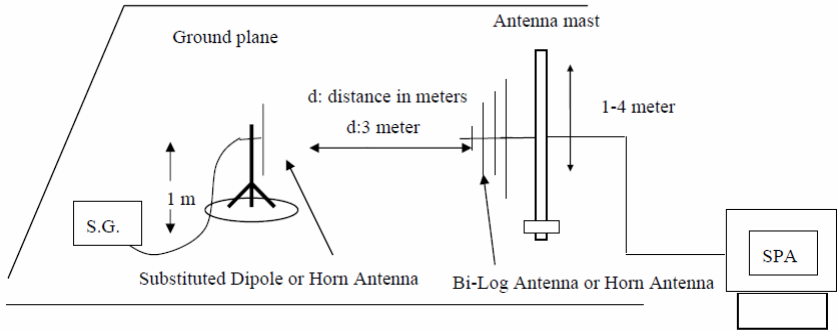
Lowest channel



Date: 13.AUG.2014 14:46:21

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 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)

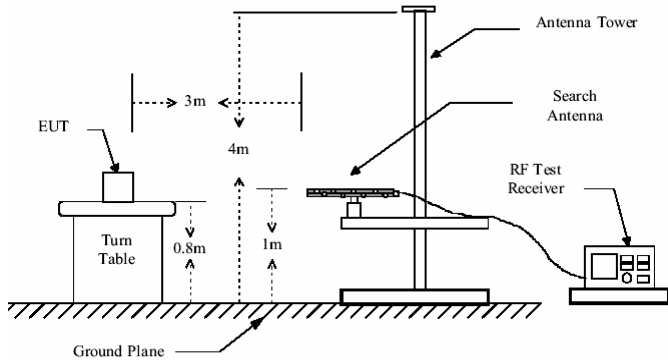
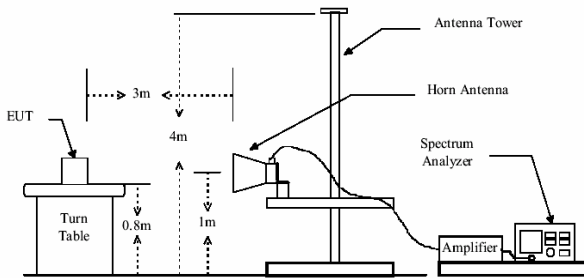
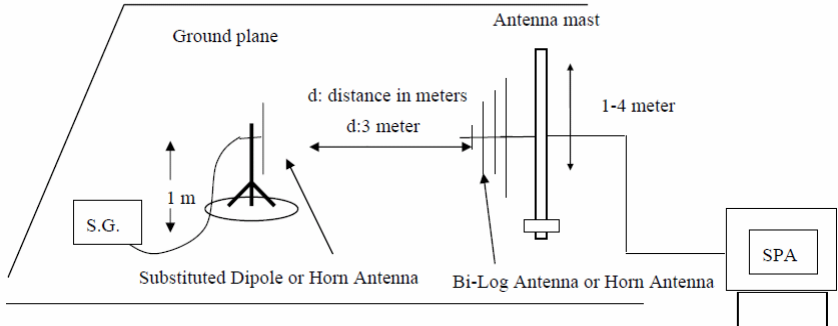
EUT mode	Channel	EUT Pol.	Antenna Pol.	ERP(dBm)	Limit (dBm)	Result
GSM850	251	H	V	31.26	38.45	Pass
			H	31.41		
		E1	V	30.12		
			H	30.24		
		E2	V	30.25		
			H	30.27		
EGPRS 850	251	H	V	25.15		
			H	25.06		
		E1	V	25.14		
			H	25.04		
		E2	V	25.08		
			H	25.01		

EUT mode	Channel	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
PCS1900	512	H	V	28.38	33.00	Pass
			H	25.72		
		E1	V	28.11		
			H	25.23		
		E2	V	28.86		
			H	25.08		
EGPRS 1900	512	H	V	23.74		
			H	18.83		
		E1	V	23.54		
			H	18.33		
		E2	V	23.56		
			H	18.65		

EUT mode	Channel	EUT Pol.	Antenna Pol.	ERP(dBm)	Limit (dBm)	Result
UMTS 850 12.2k RMC	4132	H	V	22.15	38.45	Pass
			H	21.25		
		E1	V	21.92		
			H	21.89		
		E2	V	21.75		
			H	20.23		

EUT mode	Channel	EUT Pol.	Antenna Pol.	EIRP(dBm)	Limit (dBm)	Result
UMTS 1700 12.2k RMC	1513	H	V	17.03	30.00	Pass
			H	18.31		
		E1	V	17.95		
			H	18.18		
		E2	V	17.82		
			H	18.96		

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. $\text{ERP / EIRP} = \text{S.G. output (dBm)} + \text{Antenna Gain(dB/dBi)} - \text{Cable Loss (dB)}$
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, other modes were not test.
Test results:	Passed

Measurement Data (worst case)

Test mode:	GSM850		Test channel:	Lowest
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1648.40	Vertical	-38.57	-13.00	Pass
2472.60	V	-43.48		
3296.80	V	-42.12		
4121.00	V	-43.18		
4945.20	V	-41.86		
5769.40	V	-40.94		
1648.40	Horizontal	-38.84	-13.00	Pass
2472.60	H	-42.87		
3296.80	H	-47.88		
4121.00	H	-43.52		
4945.20	H	-44.62		
5769.40	H	-38.57		
Test mode:	GSM850		Test channel:	Middle
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
1673.20	Vertical	-36.44	-13.00	Pass
2509.80	V	-46.84		
3346.40	V	-45.63		
4183.00	V	-44.65		
5019.60	V	-41.96		
5856.20	V	-38.16		
1673.20	Horizontal	-39.84	-13.00	Pass
2509.80	H	-44.64		
3346.40	H	-47.78		
4183.00	H	-43.52		
5019.60	H	-40.87		
5856.20	H	-38.96		

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	-31.92	-13.00	Pass
2546.40	V	-45.67		
3395.20	V	-44.49		
4244.00	V	-45.28		
5092.80	V	-40.69		
5941.60	V	-39.65		
1697.60	Horizontal	-33.24	-13.00	Pass
2546.40	H	-48.39		
3395.20	H	-48.43		
4244.00	H	-44.20		
5092.80	H	-40.74		
5941.60	H	-38.66		
Test mode:	PCS1900		Test channel:	Lowest
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3700.40	Vertical	-61.00	-13.00	Pass
5550.60	V	-35.68		
7400.80	V	-33.56		
9251.00	V	-33.87		
11101.20	V	---		
12951.40	V	---		
3700.40	Horizontal	-48.52	-13.00	Pass
5550.60	H	-37.08		
7400.80	H	-37.76		
9251.00	H	-33.24		
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	-45.68	-13.00	Pass
5640.00	V	-37.11		
7520.00	V	-36.99		
9400.00	V	-33.60		
11280.00	V	---		
13160.00	V	---		
3760.00	Horizontal	-46.36	-13.00	Pass
5640.00	H	-34.99		
7520.00	H	-37.78		
9400.00	H	-33.85		
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	-45.27	-13.00	Pass
5729.40	V	-40.63		
7639.20	V	-38.78		
9549.00	V	-34.06		
11458.80	V	---		
13368.60	V	---		
3819.60	Horizontal	-46.43	-13.00	Pass
5729.40	H	-41.03		
7639.20	H	-37.73		
9549.00	H	-34.46		
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	-51.63	-13.00	Pass
2479.20	V	-44.36		
3305.60	V	-49.52		
4132.00	V	-46.35		
4958.40	V	---		
5784.80	V	---		
1652.80	Horizontal	-51.73	-13.00	Pass
2479.20	H	-46.58		
3305.60	H	-47.90		
4132.00	H	-43.94		
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	-53.15	-13.00	Pass
2508.00	V	-54.54		
3344.00	V	-48.25		
4180.00	V	-45.68		
5016.00	V	---		
5852.00	V	---		
1672.00	Horizontal	-50.11	-13.00	Pass
2508.00	H	-43.70		
3344.00	H	-48.04		
4180.00	H	-44.21		
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	-44.21	-13.00	Pass
2539.80	V	-44.15		
3386.40	V	-48.43		
4233.00	V	-44.57		
5079.60	V	---		
5926.20	V	---		
1693.20	Horizontal	-46.27	-13.00	Pass
2539.80	H	-47.14		
3386.40	H	-48.59		
4233.00	H	-44.00		
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.

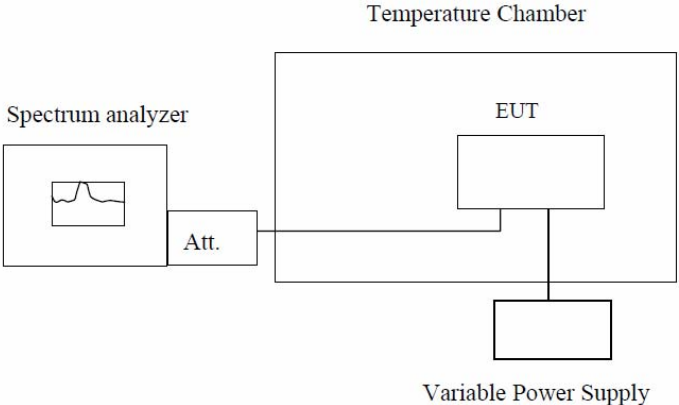
Test mode:	UMTS 1700 12.2k RMC		Test channel:	Lowest
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3424.80	Vertical	-48.49	-13.00	Pass
5137.20	V	-35.85		
6849.60	V	-37.25		
8562.00	V	-33.90		
10274.40	V	---		
3424.80	Horizontal	-46.96	-13.00	Pass
5137.20	H	-39.18		
6849.60	H	-33.65		
8562.00	H	-33.48		
10274.40	H	---		
Test mode:	UMTS 1700 12.2k RMC		Test channel:	Middle
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3465.20	Vertical	-48.51	-13.00	Pass
5197.80	V	-40.43		
6930.40	V	-37.34		
8663.00	V	-33.81		
10395.60	V	---		
3465.20	Horizontal	-48.17	-13.00	Pass
5197.80	H	-42.50		
6930.40	H	-37.32		
8663.00	H	-33.20		
10395.60	H	---		

Test mode:	UMTS 1700 12.2k RMC		Test channel:	Highest
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
3505.20	Vertical	-44.47	-13.00	Pass
5257.80	V	-40.28		
7010.40	V	-37.50		
8763.00	V	-33.18		
10515.60	V	---		
3505.20	Horizontal	-48.52	-13.00	Pass
5257.80	H	-39.93		
7010.40	H	-36.27		
8763.00	H	-33.26		
10515.60	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.

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:

Measurement Data:

Reference Frequency: GSM850 Middle channel=190 channel=836.6MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.70	-30	130	0.155391	2.5	Pass
	-20	100	0.119531		
	-10	95	0.113555		
	0	102	0.121922		
	10	101	0.120727		
	20	96	0.114750		
	30	85	0.101602		
	40	97	0.115945		
	50	82	0.098016		
Reference Frequency: PCS1900 Middle channel=661 channel=1880MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error			Result
		Hz	ppm		
3.70	-30	125	0.066489	2.5	Pass
	-20	113	0.060106		
	-10	95	0.050532		
	0	86	0.045745		
	10	72	0.038298		
	20	96	0.051064		
	30	100	0.053191		
	40	86	0.045745		
	50	95	0.050532		

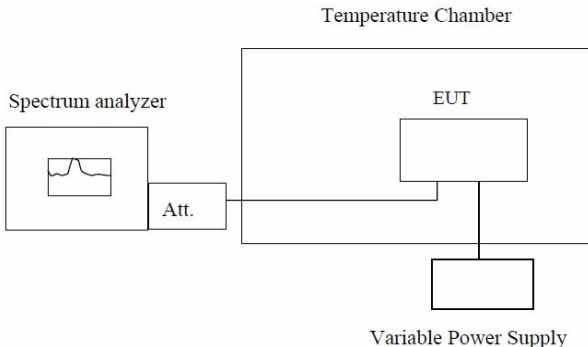
Reference Frequency: EGPRS 850 Middle channel=190 channel=836.6MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.70	-30	104	0.124313	2.5	Pass
	-20	96	0.114750		
	-10	86	0.102797		
	0	95	0.113555		
	10	88	0.105188		
	20	68	0.081281		
	30	75	0.089649		
	40	92	0.109969		
	50	68	0.081281		
Reference Frequency: EGPRS 1900 Middle channel=661 channel=1880MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error			Result
		Hz	ppm		
3.70	-30	98	0.052128	2.5	Pass
	-20	84	0.044681		
	-10	76	0.040426		
	0	58	0.030851		
	10	90	0.047872		
	20	81	0.043085		
	30	63	0.033511		
	40	84	0.044681		
	50	76	0.040426		

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	100	0.119531	2.5	Pass
	-20	112	0.133875		
	-10	98	0.117141		
	0	87	0.103992		
	10	68	0.081281		
	20	52	0.062156		
	30	64	0.076500		
	40	77	0.092039		
	50	82	0.098016		
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	102	0.058871	2.5	Pass
	-20	98	0.056562		
	-10	78	0.045019		
	0	69	0.039825		
	10	85	0.049059		
	20	90	0.051945		
	30	85	0.049059		
	40	74	0.04271		
	50	68	0.039247		

Reference Frequency: UMTS850 HSDPA 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	60	0.071719		
	-10	58	0.069328		
	0	49	0.058570		
	10	85	0.101602		
	20	63	0.075305		
	30	74	0.088453		
	40	89	0.106383		
	50	94	0.112360		
Reference Frequency: UMTS1700 HSDPA Middle channel=1413 channel=1732.6MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.70	-30	103	0.059448	2.5	Pass
	-20	108	0.062334		
	-10	95	0.054831		
	0	76	0.043865		
	10	38	0.021932		
	20	95	0.054831		
	30	61	0.035207		
	40	86	0.049636		
	50	74	0.042710		

Reference Frequency: UMTS850 HSUPA Middle channel=4183 channel=836.6MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.70	-30	100	0.119531	2.5	Pass
	-20	80	0.095625		
	-10	74	0.088453		
	0	68	0.081281		
	10	95	0.113555		
	20	93	0.111164		
	30	84	0.100406		
	40	75	0.089649		
	50	68	0.081281		
Reference Frequency: UMTS1700 HSUPA Middle channel=1413 channel=1732.6MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
3.70	-30	98	0.056562	2.5	Pass
	-20	94	0.054254		
	-10	67	0.038670		
	0	89	0.051368		
	10	76	0.043865		
	20	48	0.027704		
	30	79	0.045596		
	40	68	0.039247		
	50	88	0.050791		

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):

Reference Frequency: GSM850 Middle channel=190 channel=836.6MHz					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.25	90	0.107578	2.5	Pass
	3.70	67	0.080086		
	3.40	85	0.101602		
Reference Frequency: PCS1900 Middle channel=661 channel=1880MHz					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.25	67	0.035638	2.5	Pass
	3.70	94	0.050000		
	3.40	86	0.045745		
Reference Frequency: EGPRS 850 Middle channel= 190 channel=836.6MHz					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.25	84	0.100406	2.5	Pass
	3.70	80	0.095625		
	3.40	67	0.080086		
Reference Frequency: EGPRS 1900 Middle channel= 661 channel=1880MHz					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.25	66	0.035106	2.5	Pass
	3.70	69	0.036702		
	3.40	79	0.042021		

Reference Frequency: UMTS 850 12.2k RMC Middle channel=4183 channel=836.6MHz					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.25	79	0.094430	2.5	Pass
	3.70	85	0.101602		
	3.40	67	0.080086		
Reference Frequency: UMTS 1700 12.2k RMC Middle channel=1413 channel=1732.6MHz					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.25	85	0.049059	2.5	Pass
	3.70	76	0.043865		
	3.40	90	0.051945		
Reference Frequency: UMTS 850 HSDPA Middle channel=4183 channel=836.6MHz					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.25	83	0.099211	2.5	Pass
	3.70	76	0.090844		
	3.40	82	0.098016		
Reference Frequency: UMTS 1700 HSDPA Middle channel=1413 channel=1732.6MHz					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.25	65	0.037516	2.5	Pass
	3.70	83	0.047905		
	3.40	96	0.055408		

Reference Frequency: UMTS 850 HSUPA Middle channel=4183 channel=836.6MHz					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.25	94	0.112360	2.5	Pass
	3.70	86	0.102797		
	3.40	87	0.103992		
Reference Frequency: UMTS 1700 HSUPA Middle channel=1413 channel=1732.6MHz					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
25	4.25	76	0.043865	2.5	Pass
	3.70	95	0.054831		
	3.40	90	0.051945		

-----End of report-----