INTERMEC TECHNOLOGIES CORPORATION

MOBILE COMPUTER

Model: 1005CP01

Sep 13th 2010
Report No.: SL10050603-ICT-001(Captiva)_RF(FCC_22,24&27)
(This report supersedes NONE)

Modifications made to the product : None

This Test Report is Issued Under the Authority of:	
David Zhang	Bai
David Zhang Compliance Engineer	Leslie Bai Director of Certification

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All Test Data Presented in this report is only applicable to presented Test sample.

EMC Test Report

To: FCC Part 2, 22(H), 24(E), 27(J&L)

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Laboratory Introduction

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Country/Region	Accreditation Body	Scope
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Canada	IC, A2LA, NIST	EMC, RF/Wireless , Telecom
Taiwan	BSMI , NCC , NIST	EMC, RF, Telecom , Safety
Hong Kong	OFTA , NIST	RF/Wireless ,Telecom
Australia	NATA, NIST	EMC, RF, Telecom , Safety
Korea	KCC/RRA, NIST	EMI, EMS, RF , Telecom, Safety
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Mexico	NOM, COFETEL, Caniety	Safety, EMC , RF/Wireless, Telecom
Europe	A2LA, NIST	EMC, RF, Telecom , Safety

Accreditations for Product Certifications

Country	Accreditation Body	Scope
USA	FCC TCB, NIST	EMC , RF , Telecom
Canada	IC FCB , NIST	EMC , RF , Telecom
Singapore	iDA, NIST	EMC , RF , Telecom
EU	NB, NIST	EMC,RF,Safety,Telecom

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1 Executive Summary & EUT information

The purpose of this test programmed was to demonstrate compliance of the Intermec Technologies Corporation Model: 1005CP01 against the current Stipulated Standards. The Mobile Computer have demonstrated compliance with the FCC 22(H):2009 , FCC 24(E):2009 , FCC 27(J&L):2009 , RSS-132 Issue 2 : 2005, RSS-133 Issue 5 : 2009 & RSS-139 Issue 2 : 2009.

The test has demonstrated that this unit complies with stipulated standards.

EUT Information

EUT Description : The Intermec CS40 Mobile Computer is a small, lightweight mobile computer built on the Microsoft® Windows® Mobile 6.1 operating system. This Personal Digital Assistant PDA-style mobile computer supports the latest High Speed Uplink Packet Access (HSUPA).

The CS40 is available with the following features:
- 3.75G UMTS, 802.11b/g, and Bluetooth® radio
- 2.5 GPRS/EGPRS radio
- 256 MB DRAM, 512 MB Flash (approximately 350 MB free for user applications)
- Customer-accessible micro-SD slot for removable memory cards up to 32 GB
- Customer-accessible SIM card slot
- EA11 area imager
- GPS receiver
- Optional 3 megapixel camera

Model No : 1005CP01

Serial No : 200V1000308

Input Power : 5VDC, 1.5A

Maximum Output Power to Antenna

GSM850	: 32.62 dBm
GSM1900	: 29.03 dBm
WCDMA Band V	: 23.62 dBm
WCDMA Band IV	: 23.55 dBm
WCDMA Band II	: 22.72 dBm

Maximum ERP/EIRP

GSM850(Class 4)	: 1.38 W (31.40 dBm)
GPRS850(Class 4)	:1.27 W (31.05 dBm)
EGPRS850(Class E2)	: 0.42 W (26.21 dBm)
GSM1900 (Class 1)	: 0.36 W (25.61 dBm)
GPRS1900 (Class 1)	: 0.30 W (24.82 dBm)
EGPRS1900 (Class E2)	: 0.23 W(23.70dBm)
WCDMA Band V (Class 3)	: 0.30 W (24.76 dBm)
WCDMA Band IV (Class 3)	: 0.14 W (21.38 dBm)
WCDMA Band II (Class 3)	: 0.16 W (22.13 dBm)

Classification Per Stipulated Test Standard : Mobile Device / PCE

2 TECHNICAL DETAILS

Purpose	**Compliance testing of Mobile Computer model 1005CP01 with stipulated standard**
Applicant / Client	**Intermec Technologies Corporation**
Manufacturer	**Intermec Technologies Corporation 6001 36th Avenue West Everett,Washington 98203**
Laboratory performing the tests	**SIEMIC Laboratories**
Test report reference number	**SL10050603-ICT-001(Captiva)_RF(FCC_22,24&27)**
Date EUT received	**Aug 18th 2010**
Standard applied	**See Page 9**
Dates of test (from – to)	**Aug 18th-Sep 09th 2010**
No of Units:	**1**
Equipment Category:	**PCE**
Trade Name:	**Intermec Technologies Corporation**
Model Name:	**1005CP01**
RF Operating Frequency (ies)	**GSM850 : 824.2 ~ 848.8 MHz(TX) / 869.2 ~ 893.8 MHz(RX) GSM1900 : 1850.2 ~ 1909.8 MHz(TX) / 1930.2 ~ 1989.8 MHz(RX) WCDMA Band V : 826.4 ~ 846.6 MHz(TX) / 871.4 ~ 891.6 MHz(RX) WCDMA Band IV :1712.4 ~ 1752.6 MHz(TX) / 2112.4MHz ~ 2152.6MHz(RX) WCDMA Band II : 1852.4 ~ 1907.6 MHz(TX) / 1932.4 ~ 1987.6 MHz(RX)**
Number of Channels:	**N/A**
Modulation:	**GSM / GPRS : GMSK EGPRS : 8PSK WCDMA : QPSK/BPSK**
FCC ID:	**EHA011005CP01**
IC ID:	**1223A-011005CP01**

3 MODIFICATION

NONE

4 TEST SUMMARY

The product was tested in accordance with the following specifications. All testing has been performed according to below product classification:

Mobile Device

Test Results Summary

Test Standard		Description	Pass / Fail
FCC 22(H):2009 FCC 24(E):2009 FCC 27(J&L):2009	RSS-132 Issue 2 : 2005 RSS-133 Issue 5 : 2009 RSS-139 Issue 2 : 2009		
2.1046	N/A	Conducted Output Power	Pass
22.913(a)(2) 27.50(d)(2)	RSS-132(4.4) SRSP-503(5.1.3)	Effective Radiated Power	Pass
24.232(c)	RSS-133 (6.4) RSS-139(6.4) SRSP-510(5.1.2)	Equivalent Isotropic Radiated Power	Pass
22.917(a) 24.238(a)	N/A	Occupied Bandwidth	Pass
22.917(a) 24.238(a) 27.53(g)	RSS-132 (4.5.1) RSS-133 (6.5.1) RSS-139 (6.5.1)	Band Edge Measurement	Pass
22.917(a) 24.238(a) 27.53(g)	RSS-132 (4.5.1) RSS-133 (6.5.1) RSS-139 (6.5.1)	Conducted Spurious Emission	Pass
22.917(a) 24.238(a) 27.53(g)	RSS-132 (4.5.1) RSS-133 (6.5.1) RSS-139 (6.5.1)	Radiated Spurious Emission	Pass
22.355 24.235 27.54	RSS-132(4.3) RSS-133(6.3) RSS-139(6.3)	Frequency Stability	Pass
N/A	RSS-132(4.6) RSS-133(6.6) RSS-139(6.6)	Receiver Spurious Emissions	Pass
ANSI C63.4: 2003/ RSS-Gen Issue 2: 2007 PS: All measurement uncertainties are not taken into consideration for all presented test result.			

Note : Testing was perform by configuring EUT to maximum output power status, the declared output power class for diffent

5 MEASUREMENTS, EXAMINATION AND DERIVED RESULTS

5.1 Conducted Output Power

1. Conducted Measurement
   EUT was set for low , mid, high channel with modulated mode and highest RF output power.
   The spectrum analyzer was connected to the antenna terminal.
2. Conducted Emissions Measurement Uncertainty
   All test measurements carried out are traceable to national standards. The uncertainty of the measurement at a confidence level of approximately 95% (in the case where distributions are normal), with a coverage factor of 2, in the range 30MHz – 40GHz is ±1.5dB.
3. Environmental Conditions

Temperature	23°C
Relative Humidity	50%
Atmospheric Pressure	1019mbar

4. Test Date : Aug 18-Sep 13 2010
   Tested By :David Zhang

Standard Requirement: 47 CFR §2.1046

Procedures:

1. The transmitter output port was connected to base station.
2. Set EUT at maximum power through base station.
3. Select lowest, middle, and highest channels for each band and different test mode.

Test Result: Pass

Conducted Output Power Test Result

5.1.1 GSM Mode

GSM(GMSK)

Frequency Band	Channel No.	Frequency	Conducted Average Power(dBm)
GSM850	Low(128)	824.2	32.62
	Mid(190)	836.4	32.56
	High(251)	848.8	32.42
GSM1900	Low	1850.2	27.53
	Mid	1880.0	27.39
	High	1909.8	27.34

GPRS(GMSK) – MCS4

Frequency Band	Channel No.	Frequency	Conducted Average Power(dBm)
GSM850	Low(128)	824.2	30.98
	Mid(190)	836.4	30.92
	High(251)	848.8	30.76
GSM1900	Low	1850.2	28.95
	Mid	1880.0	29.03
	High	1909.8	28.88

EGPRS(8PSK) – MCS9

Frequency Band	Channel No.	Frequency	Conducted Average Power(dBm)
GSM850	Low(128)	824.2	27.15
	Mid(189)	836.4	26.90
	High(250)	848.8	26.80
GSM1900	Low	1850.2	27.54
	Mid	1880.0	27.38
	High	1909.8	27.32

5.2 UMTS Mode

R99 RMC (12.2kps)

Frequency Band	UL Channel No.	Frequency	Conducted Average Power(dBm)
UMTS850 (Band V)	Low	826.4	23.61
	Mid	836.4	23.49
	High	846.6	23.62
UMTS1900 (Band II)	Low	1852.4	22.62
	Mid	1880.0	22.72
	High	1907.6	22.62
UMTS1700 (Band IV)	Low(1312)	1712.4	23.55
	Mid(1412)	1732.4	23.08
	High(1512)	1752.6	23.05

Rel 6 HSDPA Mode

Frequency Band	Mode	UL Channel No.	Frequency	Conducted Average Power(dBm)
UMTS850 (Band V)	Subtest 1	Low(4132)	826.4	23.64
		Mid(4182)	836.4	23.44
		High(4233)	846.6	23.74
	Subtest 2	Low	826.4	23.21
		Mid	836.4	23.09
		High	846.6	23.36
	Subtest 3	Low	826.4	22.64
		Mid	836.4	22.62
		High	846.6	22.74
	Subtest 4	Low	826.4	21.92
		Mid	836.4	21.96
		High	846.6	21.96
UMTS1900 (Band II)	Subtest 1	Low(9262)	1852.4	22.18
		Mid(9400)	1880.0	22.65
		High(9538)	1907.6	22.51
	Subtest 2	Low	1852.4	22.10
		Mid	1880.0	22.39
		High	1907.6	22.77
	Subtest 3	Low	1852.4	22.01
		Mid	1880.0	22.36
		High	1907.6	22.21
	Subtest 4	Low	1852.4	22.08
		Mid	1880.0	22.31
		High	1907.6	21.95
UMTS1700 (Band IV)	Subtest 1	Low	1712.4	23.13
		Mid	1732.4	22.95
		High	1752.6	23.04
	Subtest 2	Low	1712.4	23.44
		Mid	1732.4	23.21
		High	1752.6	23.19
	Subtest 3	Low	1712.4	23.14
		Mid	1732.4	23.19
		High	1752.6	23.39
	Subtest 4	Low	1712.4	23.15
		Mid	1732.4	23.07
		High	1752.6	23.24

Rel 6 HSPA Mode

Frequency Band	Mode	UL Channel No.	Frequency	Conducted Average Power(dBm)
UMTS850 (Band V)	Subtest 1	Low(4132)	826.4	23.56
		Mid(4182)	836.4	23.35
		High(4233)	846.6	23.58
	Subtest 2	Low	826.4	23.41
		Mid	836.4	23.35
		High	846.6	23.73
	Subtest 3	Low	826.4	23.49
		Mid	836.4	23.41
		High	846.6	23.73
	Subtest 4	Low	826.4	23.39
		Mid	836.4	23.46
		High	846.6	23.44
UMTS1900 (Band II)	Subtest 1	Low(9262)	1852.4	21.99
		Mid(9400)	1880.0	22.30
		High(9538)	1907.6	22.13
	Subtest 2	Low	1852.4	21.82
		Mid	1880.0	22.22
		High	1907.6	22.01
	Subtest 3	Low	1852.4	21.90
		Mid	1880.0	22.24
		High	1907.6	22.02
	Subtest 4	Low	1852.4	21.95
		Mid	1880.0	22.18
		High	1907.6	22.00
UMTS1700 (Band IV)	Subtest 1	Low(1312)	1712.4	23.09
		Mid(1412)	1732.4	23.03
		High(1512)	1752.6	23.31
	Subtest 2	Low(1312)	1712.4	23.59
		Mid(1412)	1732.4	23.30
		High(1512)	1752.6	23.19
	Subtest 3	Low(1312)	1712.4	23.49
		Mid(1412)	1732.4	23.41
		High(1512)	1752.6	23.24
	Subtest 4	Low(1312)	1712.4	23.20
		Mid(1412)	1732.4	23.33
		High(1512)	1752.6	23.21

5.3 Effective Radiated Power and Effective Isotropic Radiated Power

1. Conducted Measurement
   EUT was set for low , mid, high channel with modulated mode and highest RF output power.
   The spectrum analyzer was connected to the antenna terminal.
2. Conducted Emissions Measurement Uncertainty
   All test measurements carried out are traceable to national standards. The uncertainty of the measurement at a confidence level of approximately 95% (in the case where distributions are normal), with a coverage factor of 2, in the range 30MHz – 40GHz is ±1.5dB.
3. Environmental Conditions

Temperature	23°C
Relative Humidity	50%
Atmospheric Pressure	1019mbar

4. Test Date : Aug 18-Sep 13 2010
   Tested By :David Zhang

Standard Requirement: 47 CFR § 22.913(a)(2), §24.232(c), §27.50(d)(2);RSS-132(4.4) , RSS-133 (6.4), RSS-139(6.4).

Procedures:

1. The EUT was switched on and allowed to warm up to its normal operating condition.
2. Measurement was made at a distance of 3 m.
3. The measuring antenna was set to 1 meter away from the ground plain.
4. Maximization of the emissions was carried out by rotating the EUT, and adjusting the antenna azimuth.
5. The test was done in both horizontal and vertical antenna polarizations.
6. The measurement shall be made with the transmitter set to the lowest operating frequency and with the transmitter set to the highest operating frequency.

Sample Calculation: Corrected Amplitude = Raw Amplitude (dBμV/m) + ACF(dB) + Cable Loss(dB)

Test Result: Pass

Cellular Band ERP Test Result

Test Mode / Frequency	Lower Channel Calculated EIRP (dBm)	Middle Channel Calculated EIRP (dBm)	High Channel Calculated EIRP (dBm)	Limit ERP (dBm)
GSM850	31.26	31.32	31.40	39.00
GPRS850	30.84	30.96	31.05	39.00
EGPRS850	26.05	26.12	26.21	39.00
WCDMA Band V	24.59	24.62	24.76	39.00

AWS Band EIRP Test Result

Test Conditions	Lower Channel Calculated EIRP (dBm)	Middle Channel Calculated EIRP (dBm)	High Channel Calculated EIRP (dBm)	Limit ERP (dBm)
WCDMA Band IV	20.77	21.35	21.38	33.00

PCS Band EIRP Test Result

Test Conditions	Lower Channel Calculated EIRP (dBm)	Middle Channel Calculated EIRP (dBm)	High Channel Calculated EIRP (dBm)	Limit EIRP (dBm)
GSM1900	25.07	25.29	25.61	33.00
GPRS1900	24.73	24.82	24.69	33.00
EGPRS1900	23.16	23.40	23.70	33.00
WCDMA Band II	21.51	22.01	22.13	33.00

5.4 Occupied Bandwidth

1. Conducted Measurement
   EUT was set for low , mid, high channel with modulated mode and highest RF output power.
   The spectrum analyzer was connected to the antenna terminal.
2. Environmental Conditions — Temperature 23°C; Relative Humidity 50%; Atmospheric Pressure 1019mbar
3. Conducted Emissions Measurement Uncertainty
   All test measurements carried out are traceable to national standards. The uncertainty of the measurement at a confidence level of approximately 95% (in the case where distributions are normal), with a coverage factor of 2, in the range 30MHz – 40GHz is ±1.5dB.
4. Test Date : Aug 18-Sep 13 2010
   Tested By :David Zhang

Requirement(s): 47 CFR § 22.917(a), § 24.238(a), §27.53(g);

Procedures:

1. The EUT was connected to Spectrum Analyzer and Base Station via power divider.

2. The 99% and 26 dB occupied bandwidth (BW) of the middle channel for the highest RF powers

Results: Pass

Cellular Band Test Result

Test Mode	Channel	Occupied Bandwidth	26 dB Bandwidth
GSM850	Mid	244.49 KHz	318.64 KHz
GPRS850	Mid	244.49 KHz	312.63 KHz
EGPRS850	Mid	244.49 KHz	318.64 KHz
WCDMA Band V	Mid	4.18MHz	4.80MHz

AWS Band Test Result

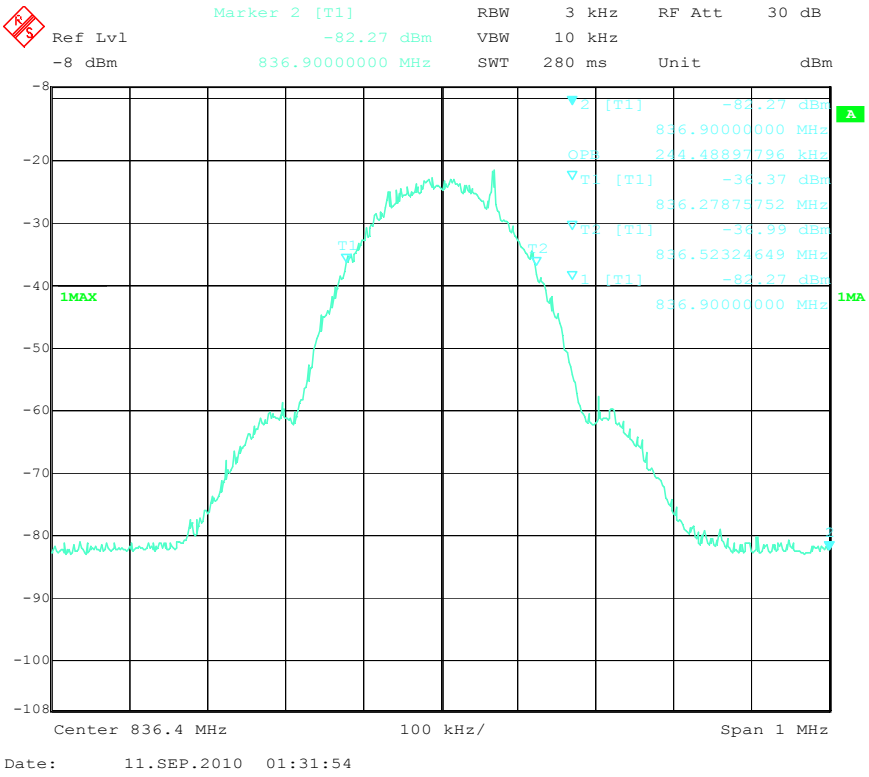
Test Mode	Channel	Occupied Bandwidth	26 dB Bandwidth
WCDMA Band IV	Mid	4.20MHz	4.73MHz

PCS Band Test Result

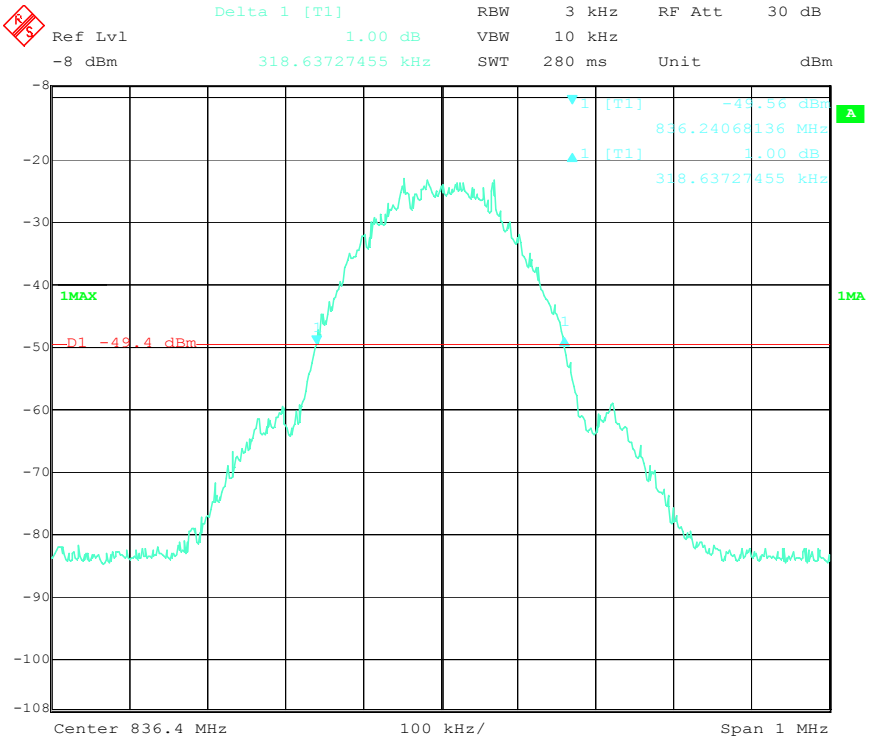
Test Mode	Channel	Occupied Bandwidth	26 dB Bandwidth
GSM1900	Mid	244.49 KHz	304.61 KHz
GPRS1900	Mid	244.49 KHz	322.66 KHz
EGPRS1900	Mid	248.49 KHz	310.64 KHz
WCDMA Band II	Mid	4.18MHz	4.71MHz

Refer to the attached plots

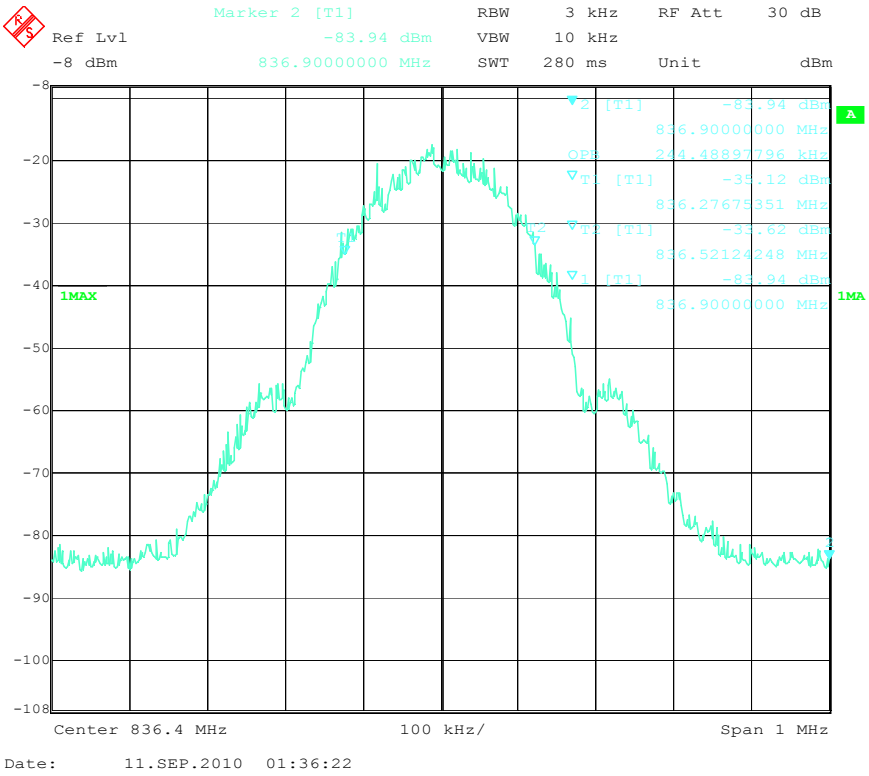
99% Occupied Bandwidth – GSM850, Channel 189, Mid Channel



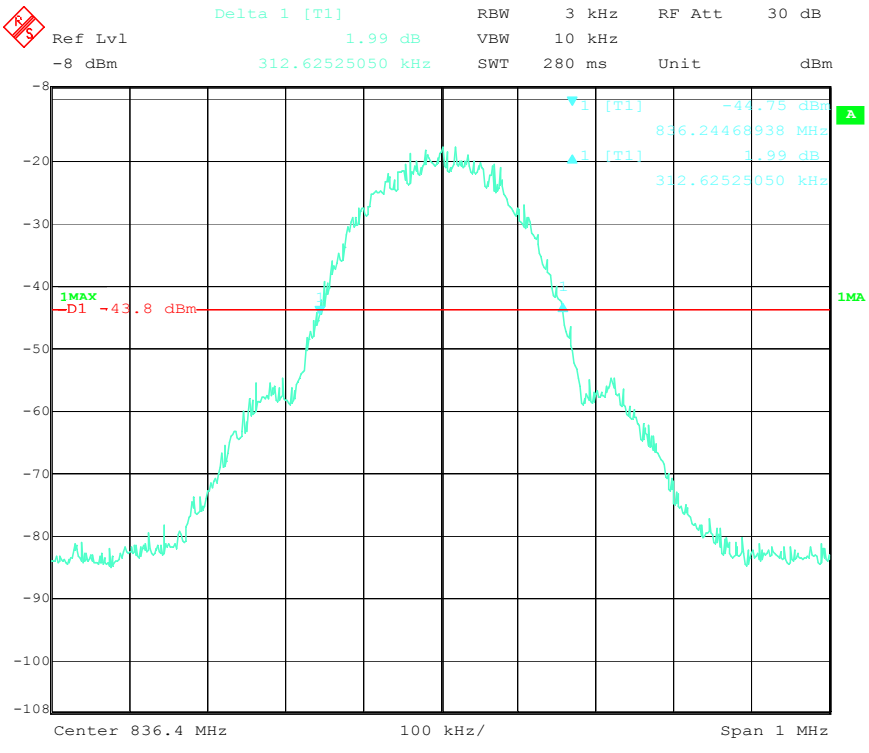
26dB Bandwidth – GSM850, Channel 189, Mid Channel



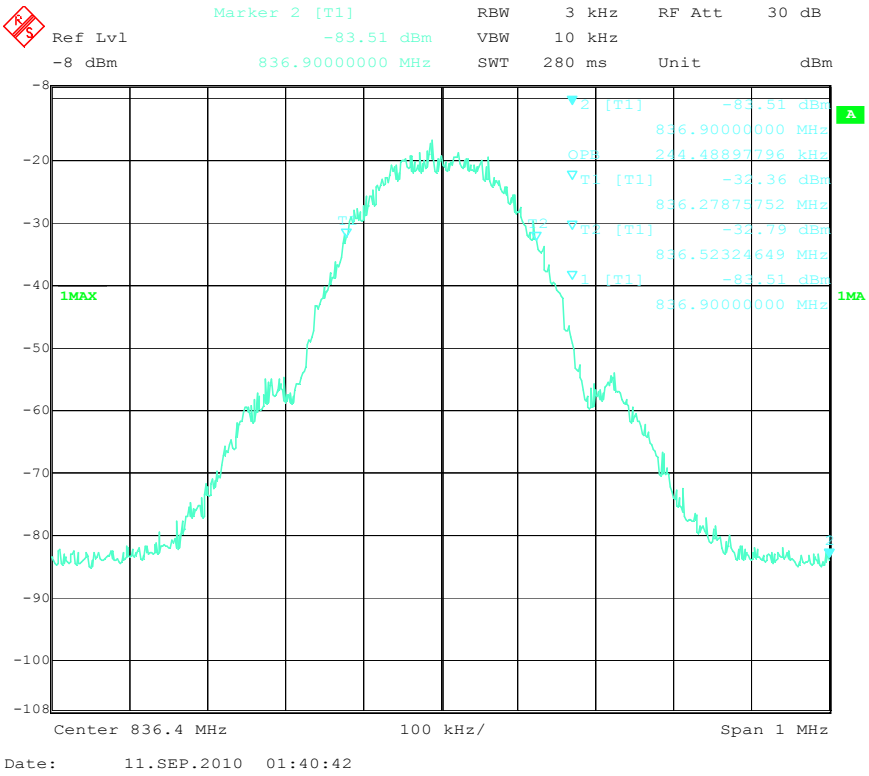
99% Occupied Bandwidth – GPRS850, Channel 189, Mid Channel



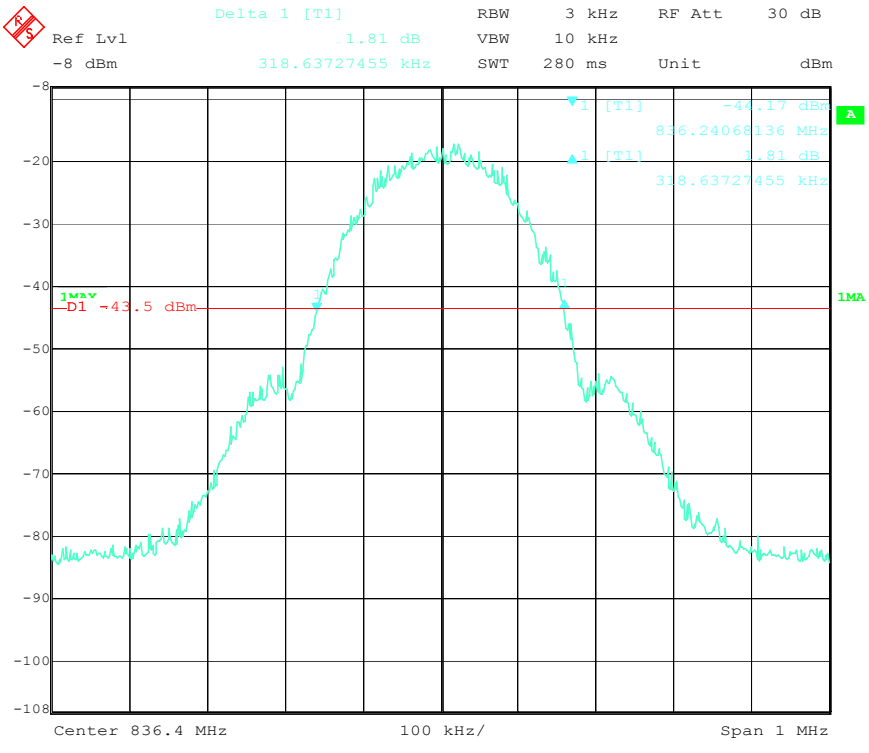
26dB Bandwidth – GPRS850, Channel 189, Mid Channel



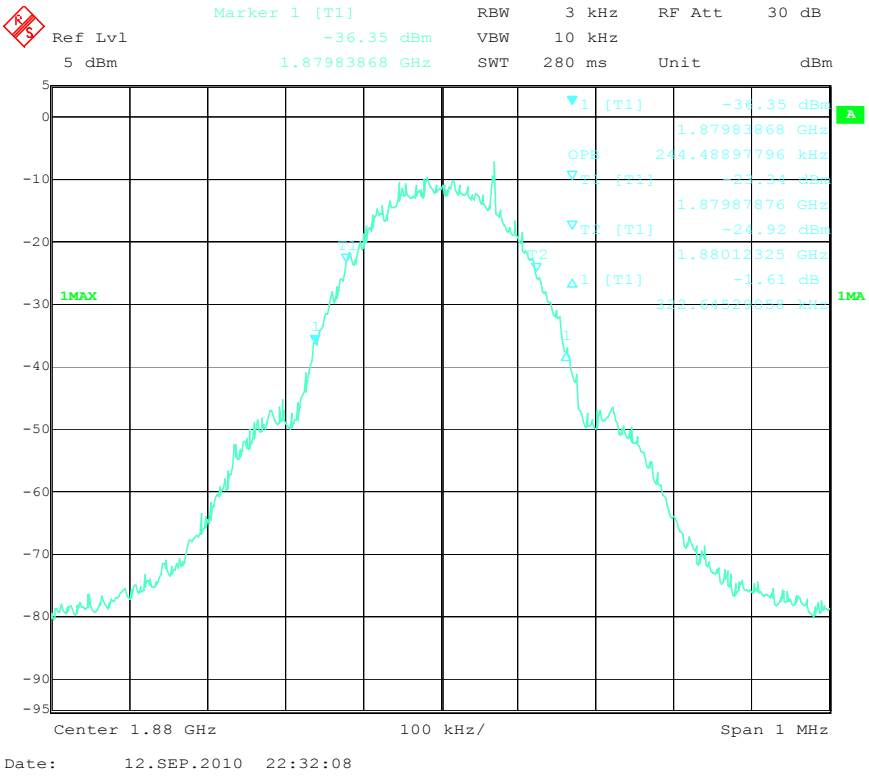
99% Occupied Bandwidth – EGPRS850, Channel 189, Mid Channel



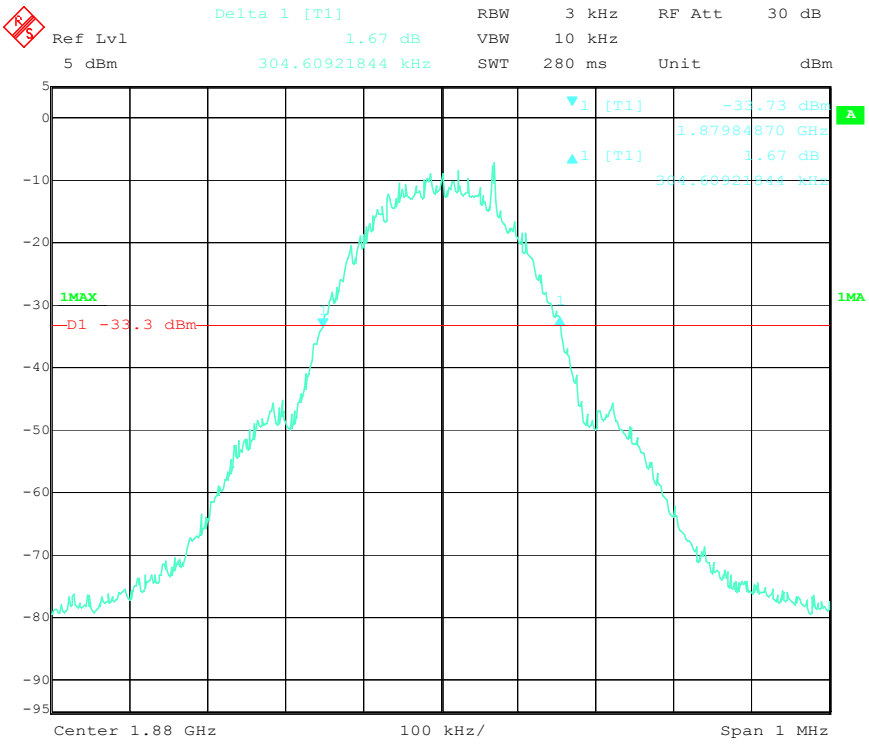
26dB Bandwidth – EGPRS850, Channel 189, Mid Channel



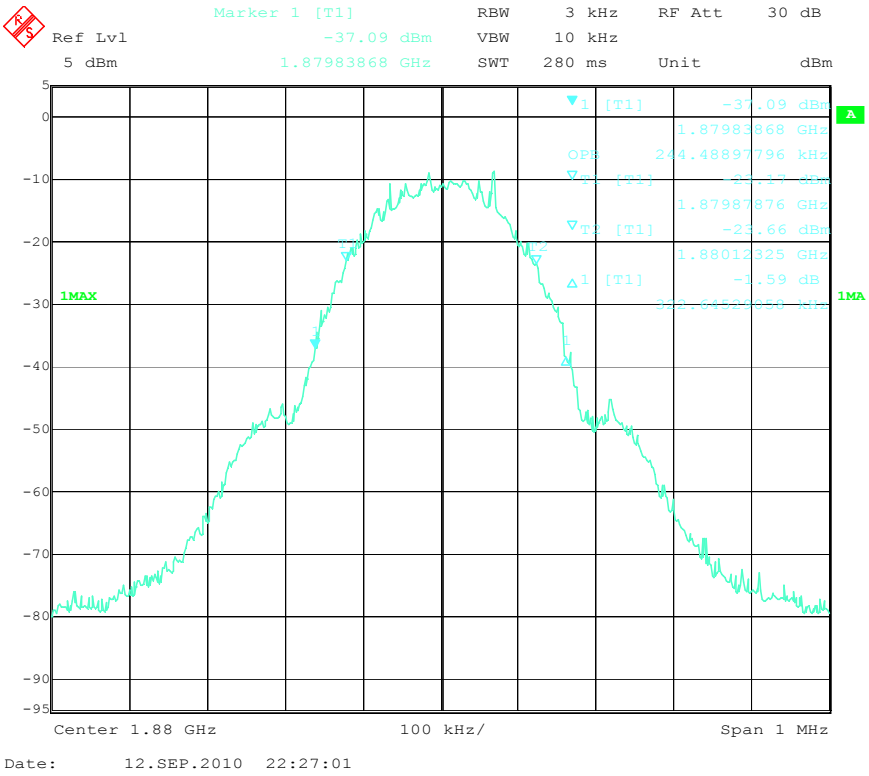
99% Occupied Bandwidth – GSM1900, Channel 661, Mid Channel



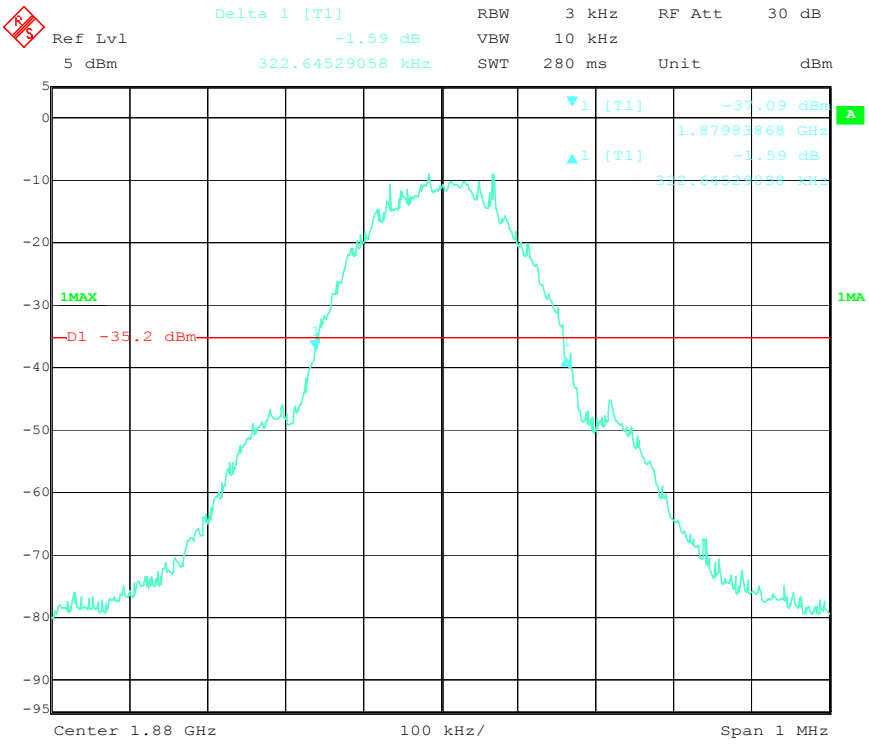
26dB Bandwidth – GSM1900, Channel 661, Mid Channel



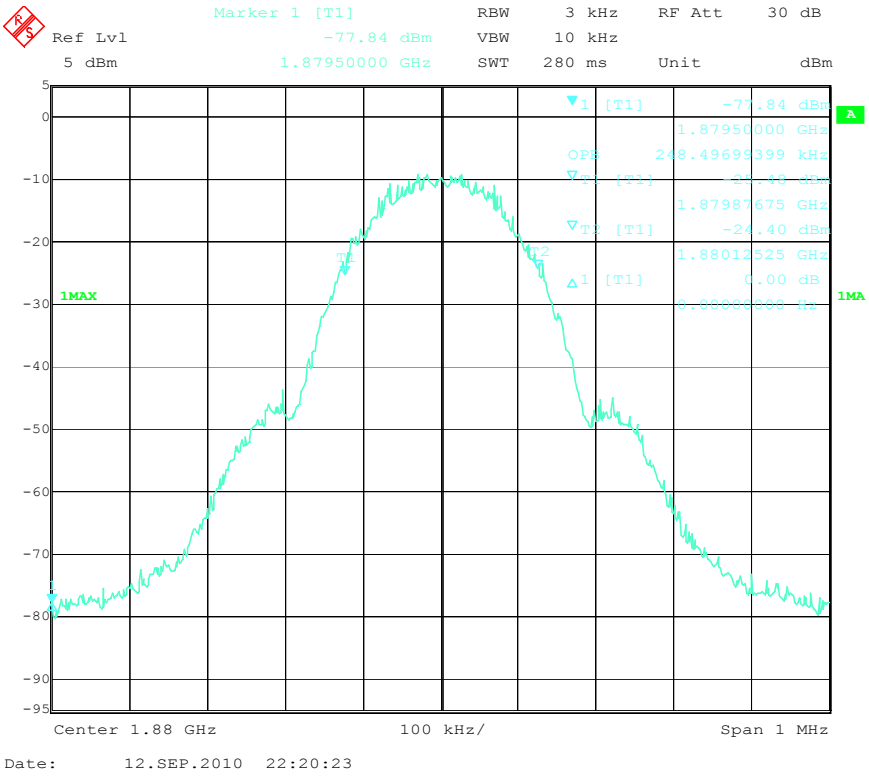
99% Occupied Bandwidth – GPRS1900, Channel 661, Mid Channel



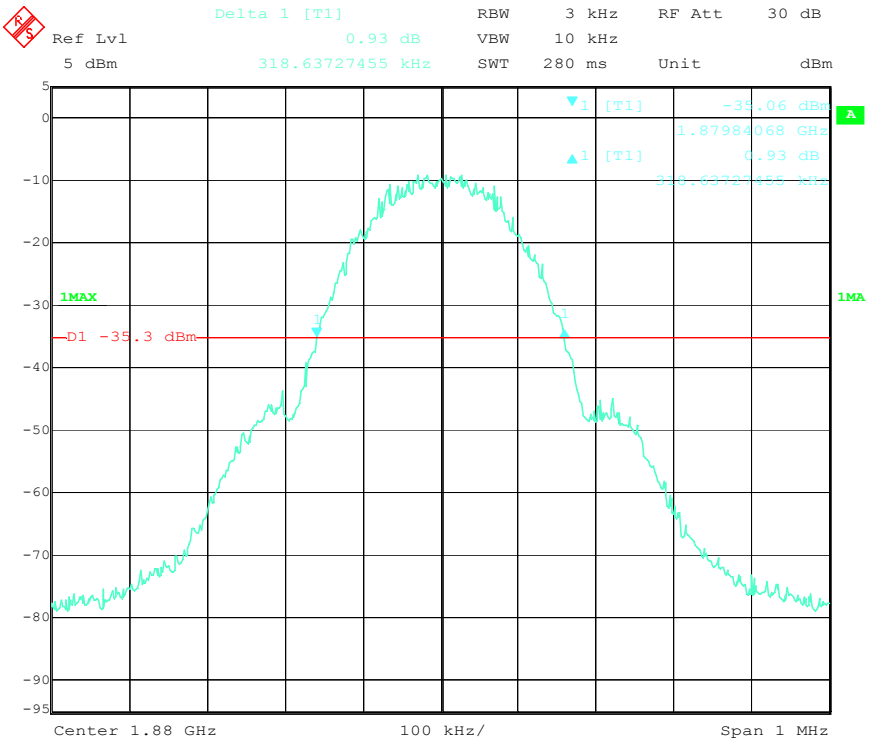
26dB Bandwidth – GPRS1900, Channel 661, Mid Channel



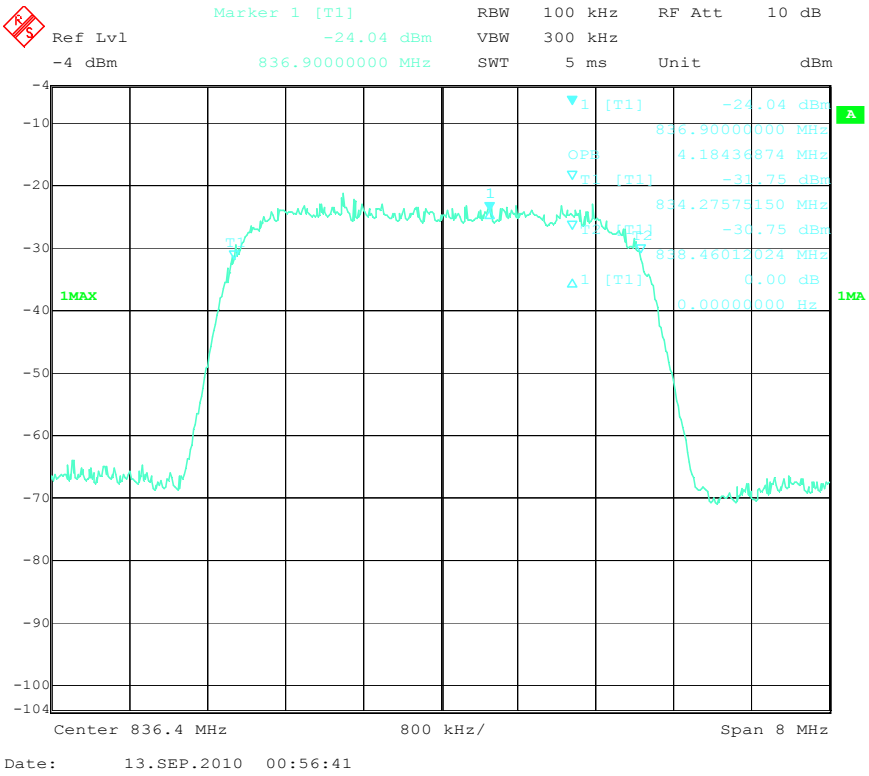
99% Occupied Bandwidth – EGPRS1900, Channel 661, Mid Channel



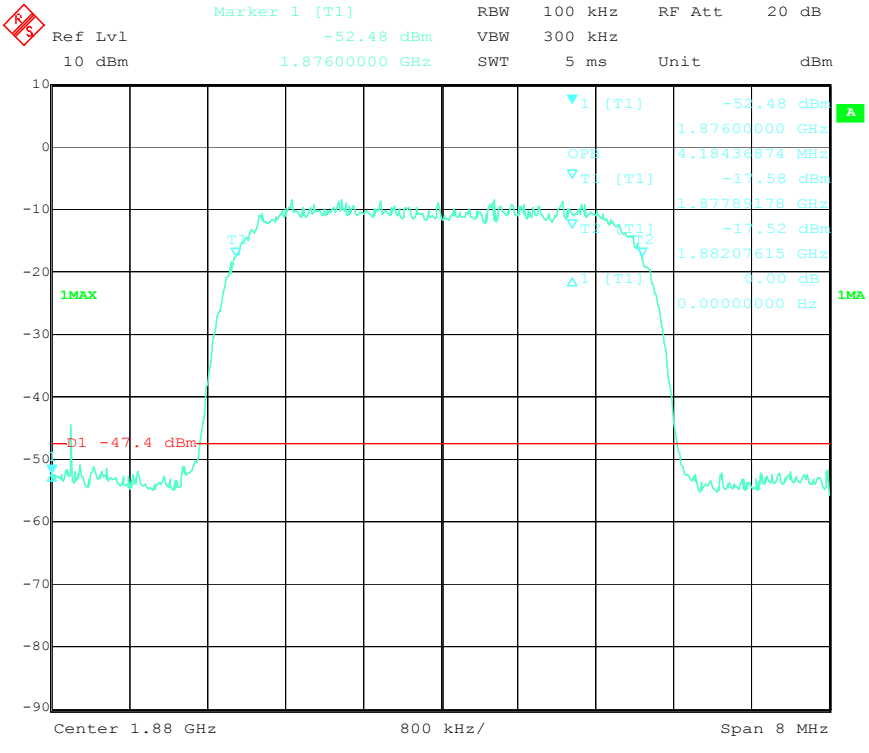
26dB Bandwidth – EGPRS1900, Channel 661, Mid Channel



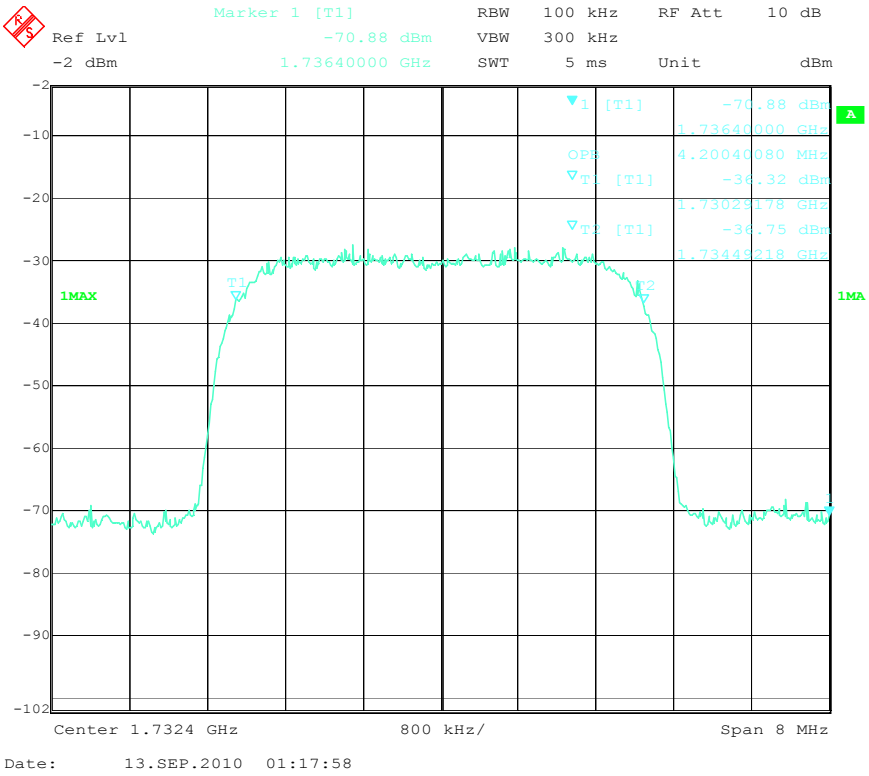
99% Occupied Bandwidth – WCDMA Band V, Channel 4182, Mid Channel



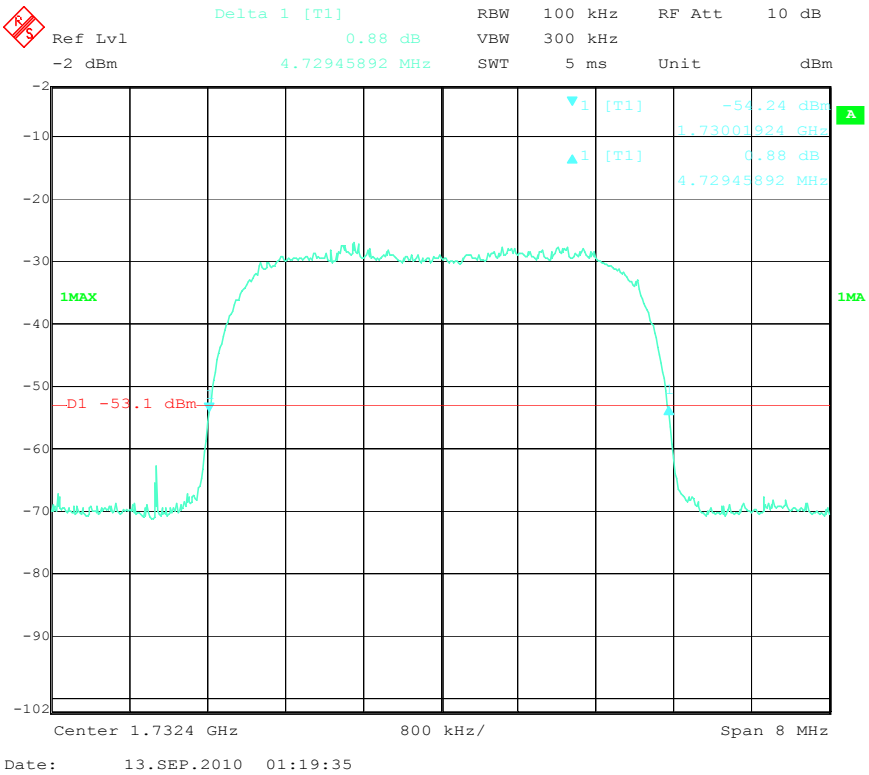
26dB Bandwidth – WCDMA Band V, Channel 4182, Mid Channel



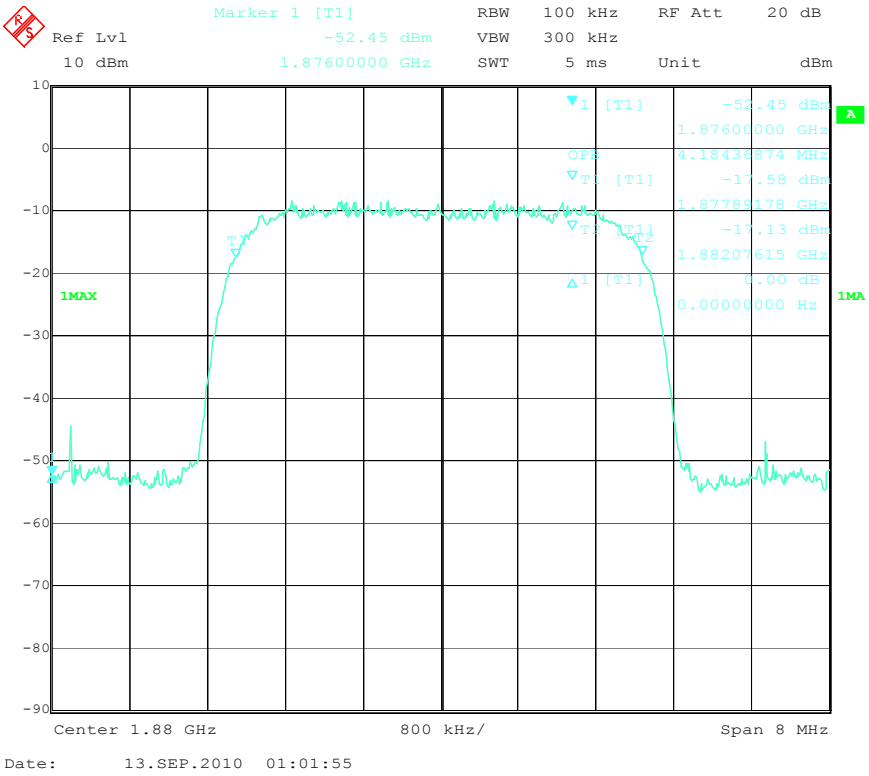
99% Occupied Bandwidth – WCDMA Band IV, Channel 1412, Mid Channel



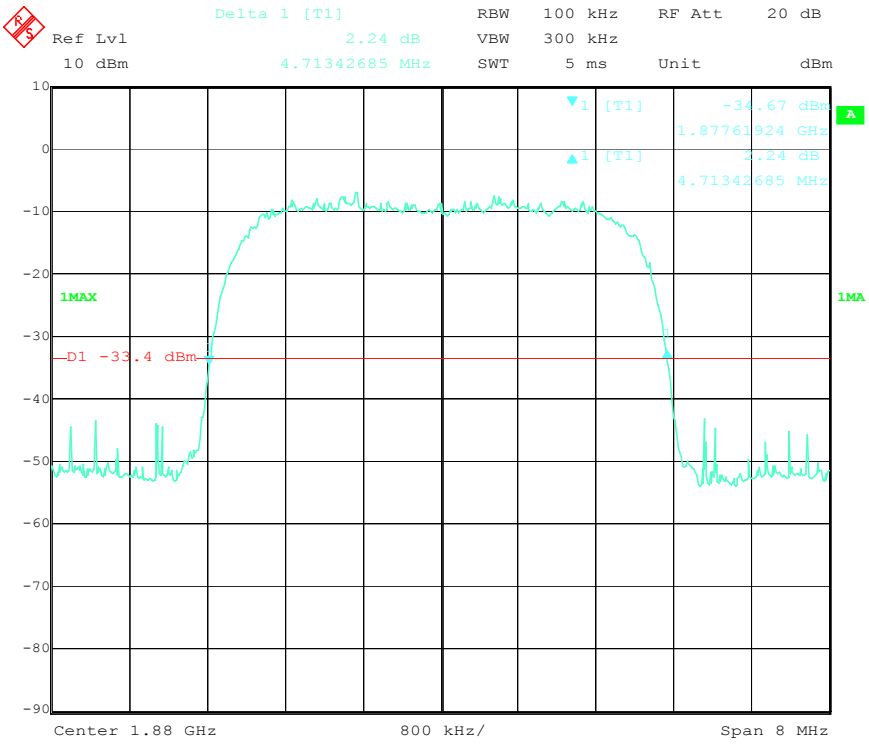
26dB Bandwidth – WCDMA Band IV, Channel 1412, Mid Channel



99% Occupied Bandwidth – WCDMA Band II, Channel 9400, Mid Channel



26dB Bandwidth – WCDMA Band II, Channel 9400, Mid Channel



5.5 Band Edge Test Result

1. Conducted Measurement
   EUT was set for low , mid, high channel with modulated mode and highest RF output power.
   The spectrum analyzer was connected to the antenna terminal.
2. Conducted Emissions Measurement Uncertainty
   All test measurements carried out are traceable to national standards. The uncertainty of the measurement at a confidence level of approximately 95% (in the case where distributions are normal), with a coverage factor of 2, in the range 30MHz – 40GHz is ±1.5dB.
3. Environmental Conditions

Temperature	23°C
Relative Humidity	50%
Atmospheric Pressure	1019mbar

4. Test Date : Aug 18-Sep 13 2010
   Tested By :David Zhang

Standard Requirement: 47 CFR § 22.917(a), § 24.238(a), §27.53(g); RSS-132 (4.5.1), RSS-133 (6.5.1), RSS-139 (6.5.1).

The power of any emission outside of the authorized operating frequency ranges must be lower thanthe transmitter power (P) by a factor of at least 43 + 10 log (P) dB.

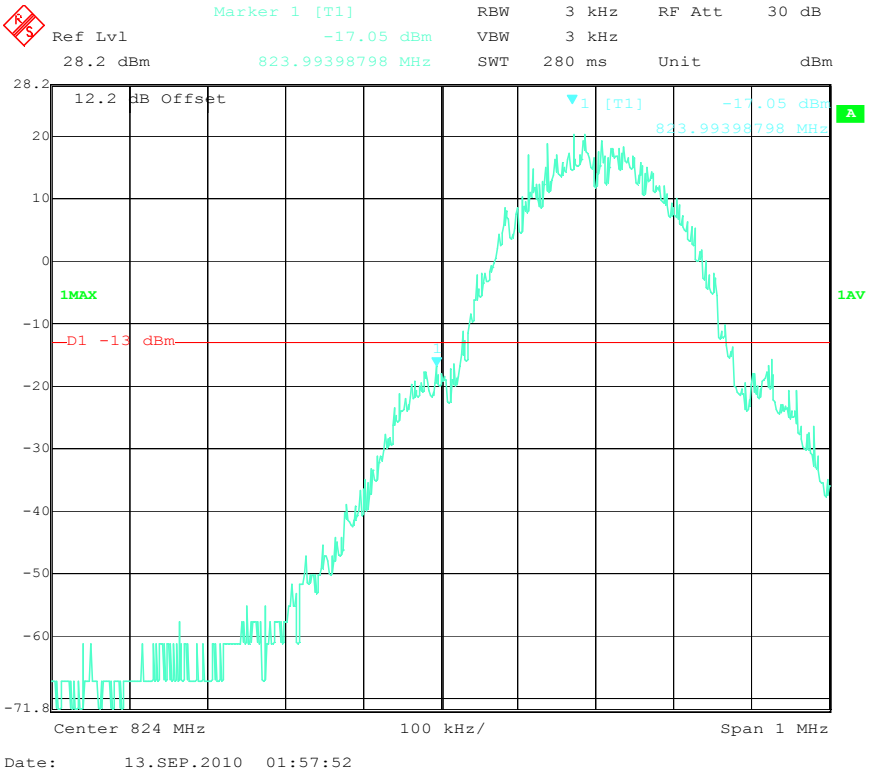
Procedures:

1. The EUT was connected to Spectrum Analyzer and Base Station via power divider.
2. The Band Edges of low and high channels for the highest RF powers were measured. Setting RBW as roughly BW/100.

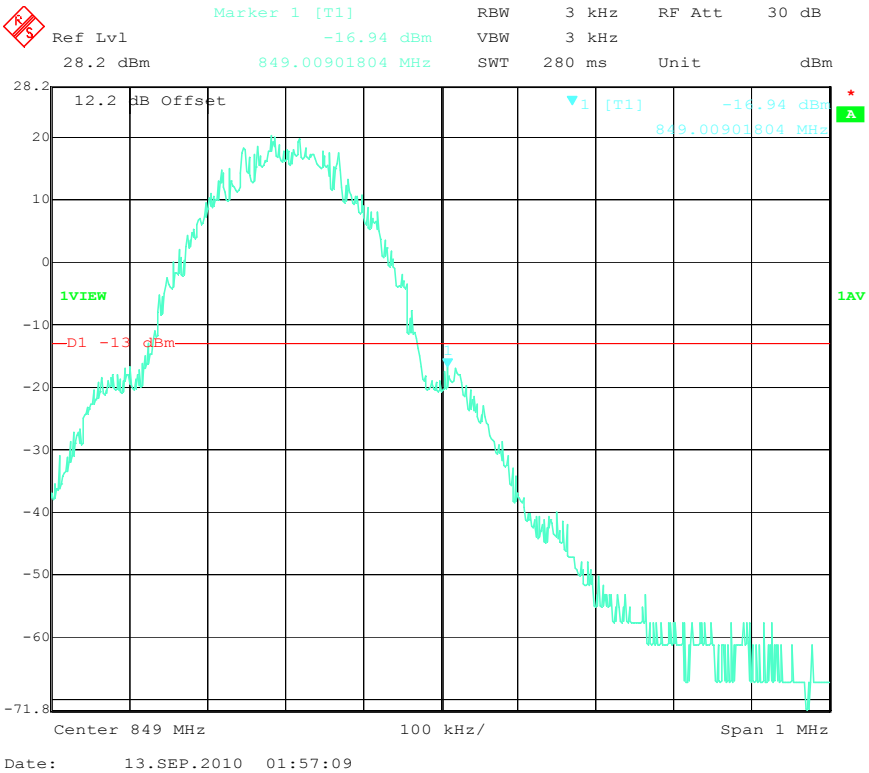
Test Result: Pass

Refer to the attached plots.

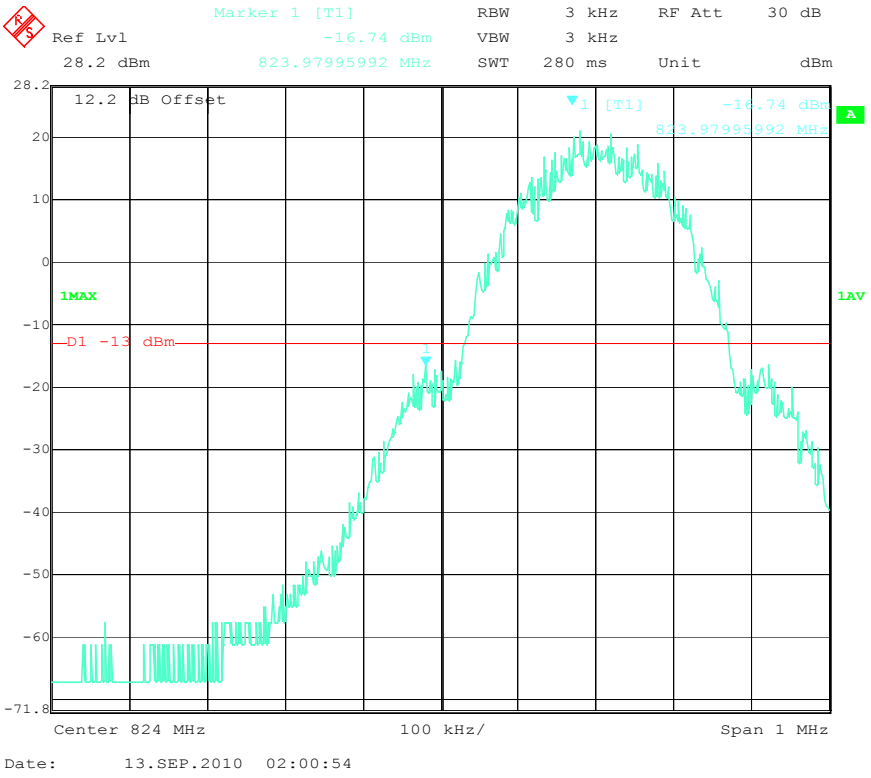
Lower Band Edge Plot – GSM850, Channel 128, Low Channel



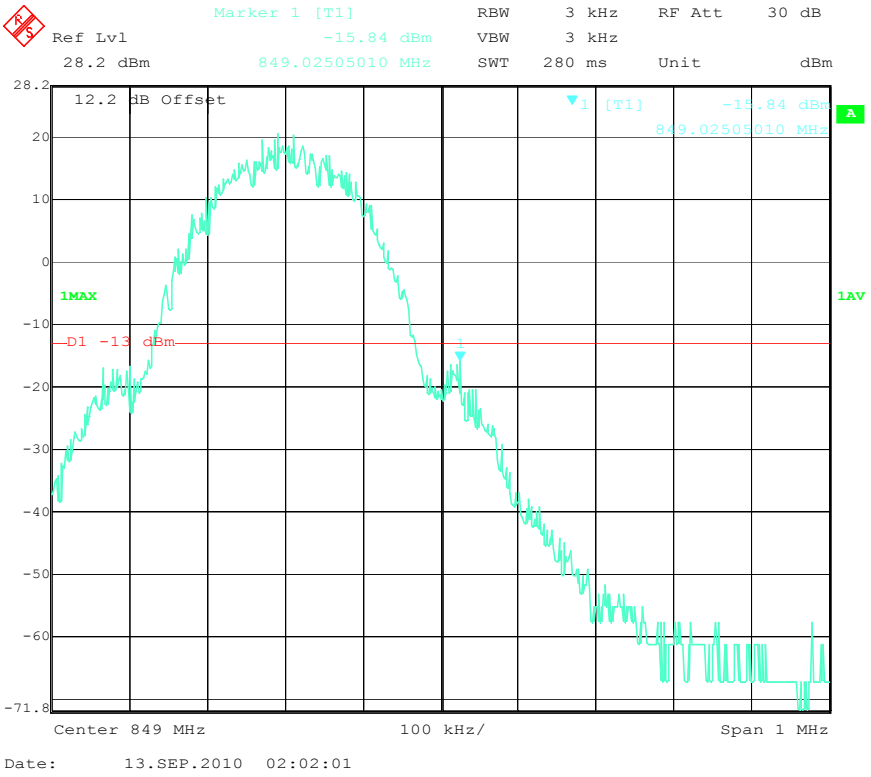
Higher Band Edge Plot – GSM850, Channel 251, High Channel



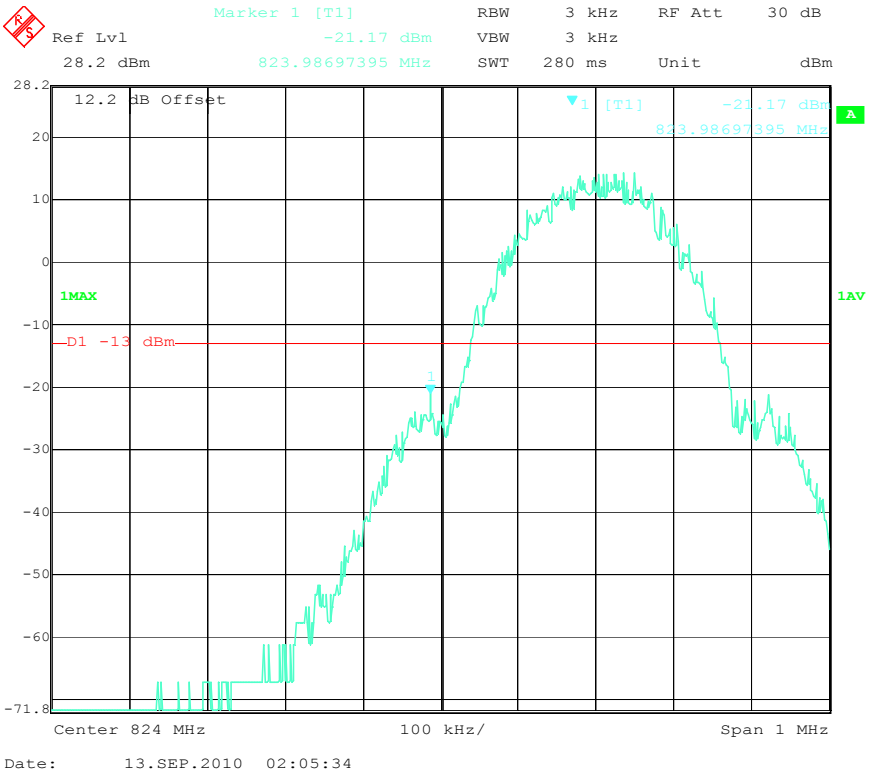
Lower Band Edge Plot – GPRS850, Channel 128, Low Channel



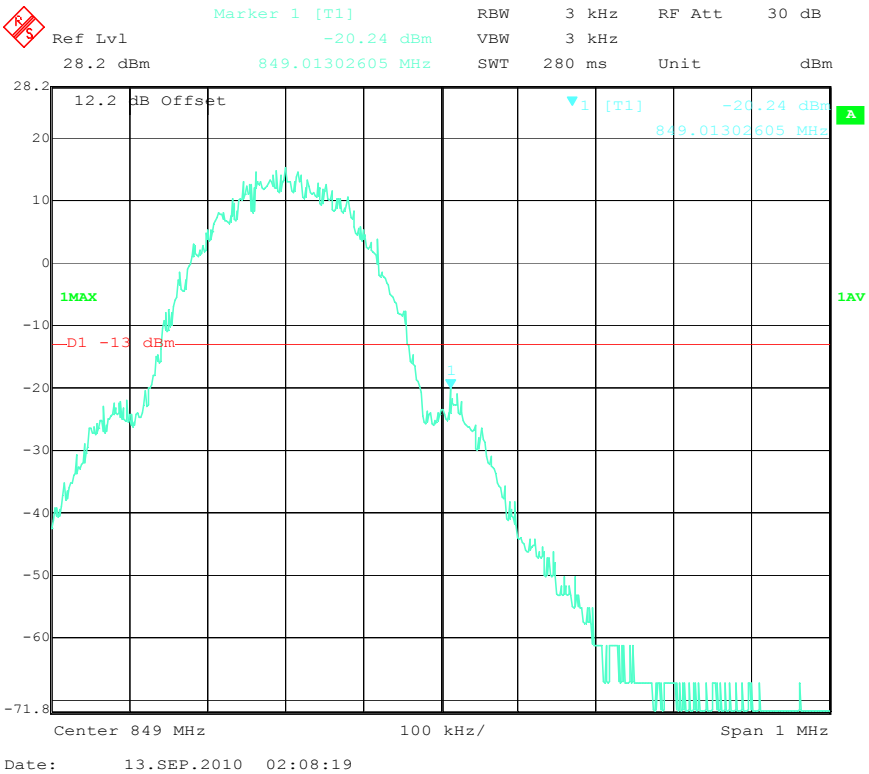
Higher Band Edge Plot – GPRS850, Channel 251, High Channel



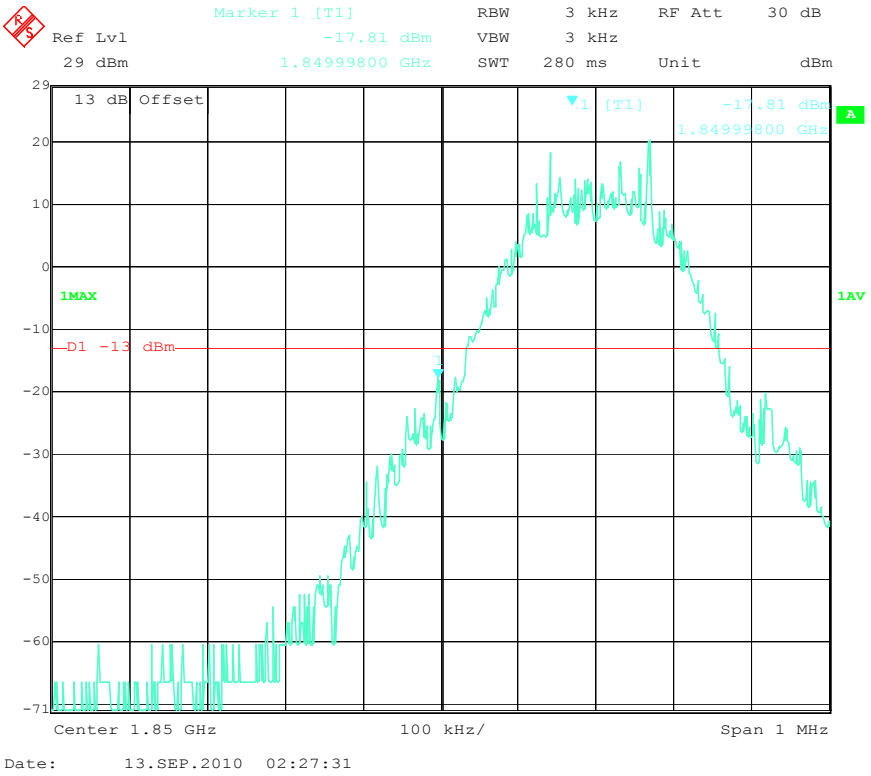
Lower Band Edge Plot – EGPRS850, Channel 128, Low Channel



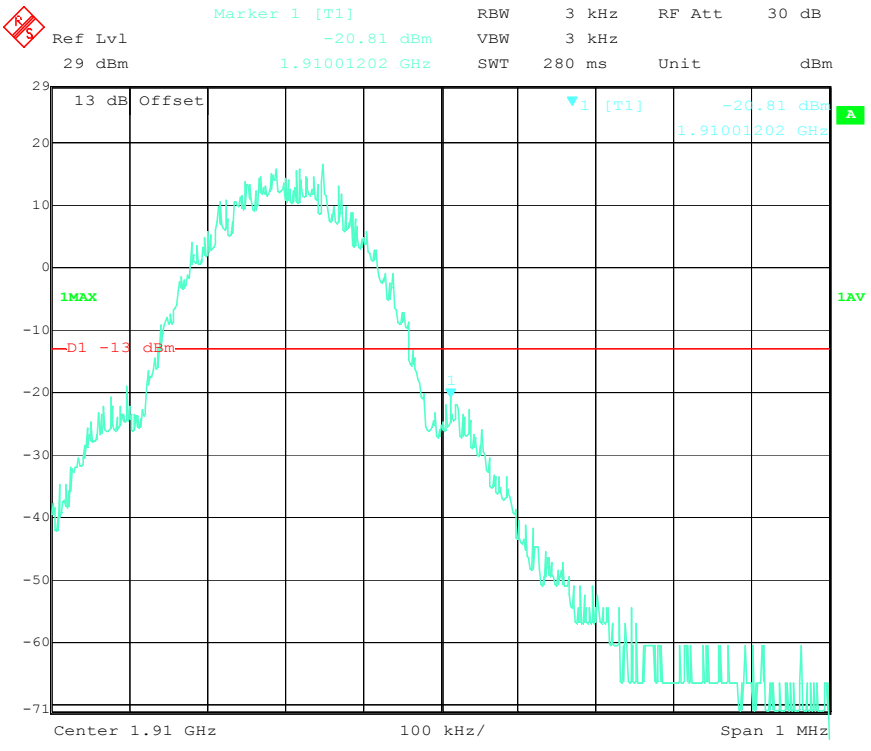
Higher Band Edge Plot – EGPRS850, Channel 251, High Channel



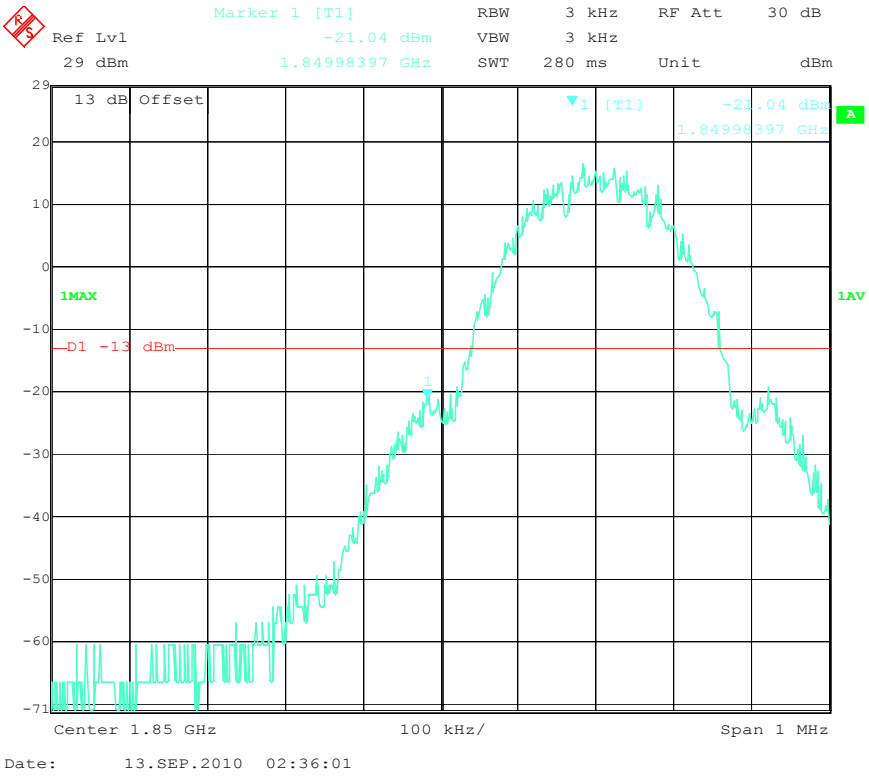
Lower Band Edge Plot – GSM1900, Channel 512, Low Channel



Higher Band Edge Plot – GSM1900, Channel 810, High Channel

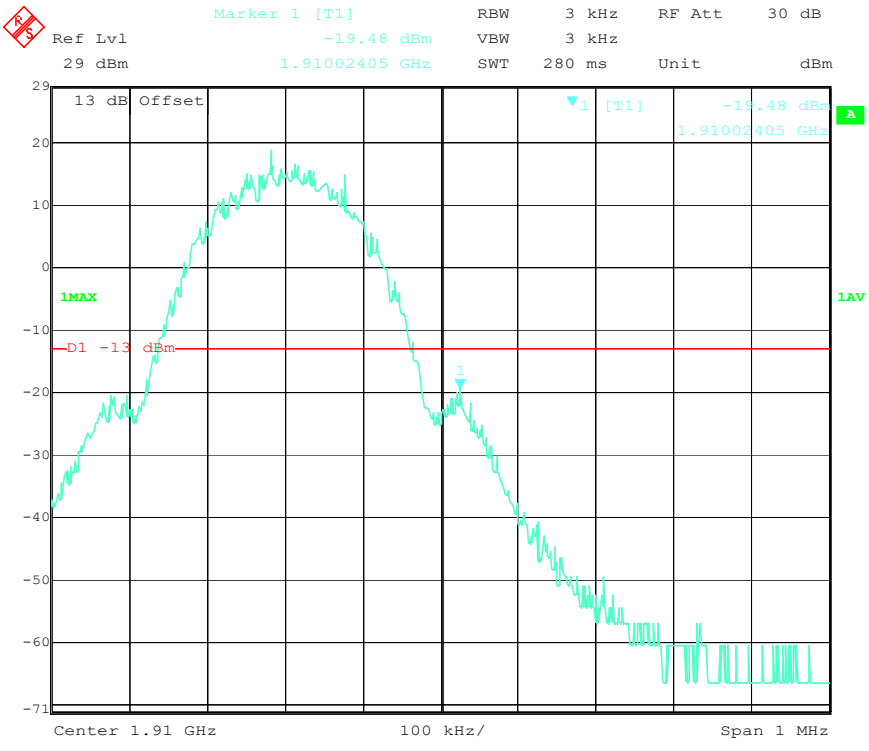


Lower Band Edge Plot – GPRS1900, Channel 512, Low Channel



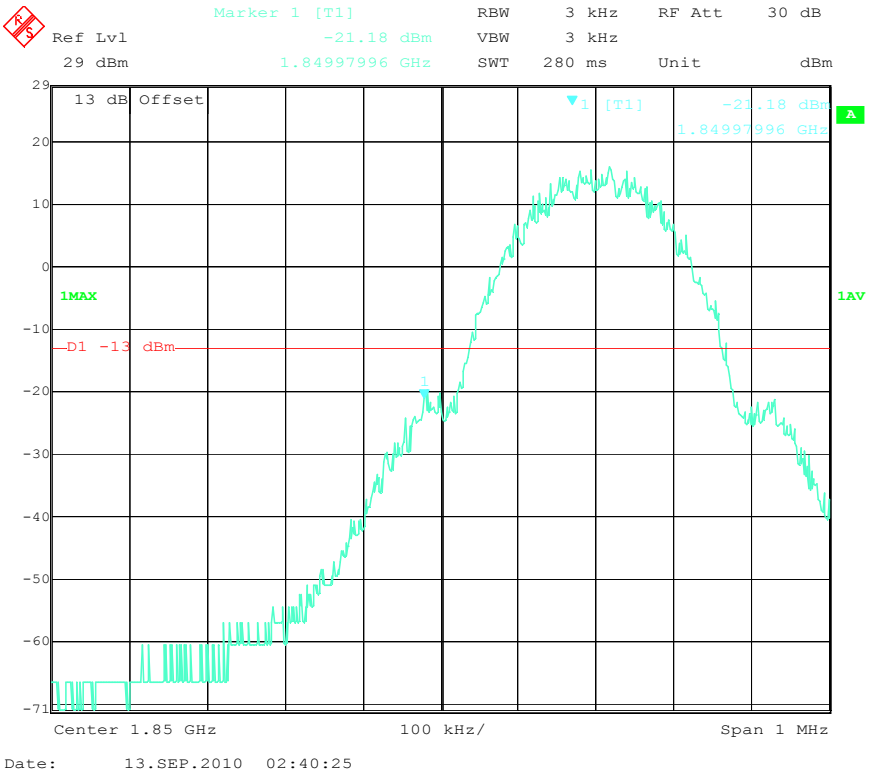
Date: 13.SEP.2010 02:36:01

Higher Band Edge Plot – GPRS1900, Channel 810, High Channel

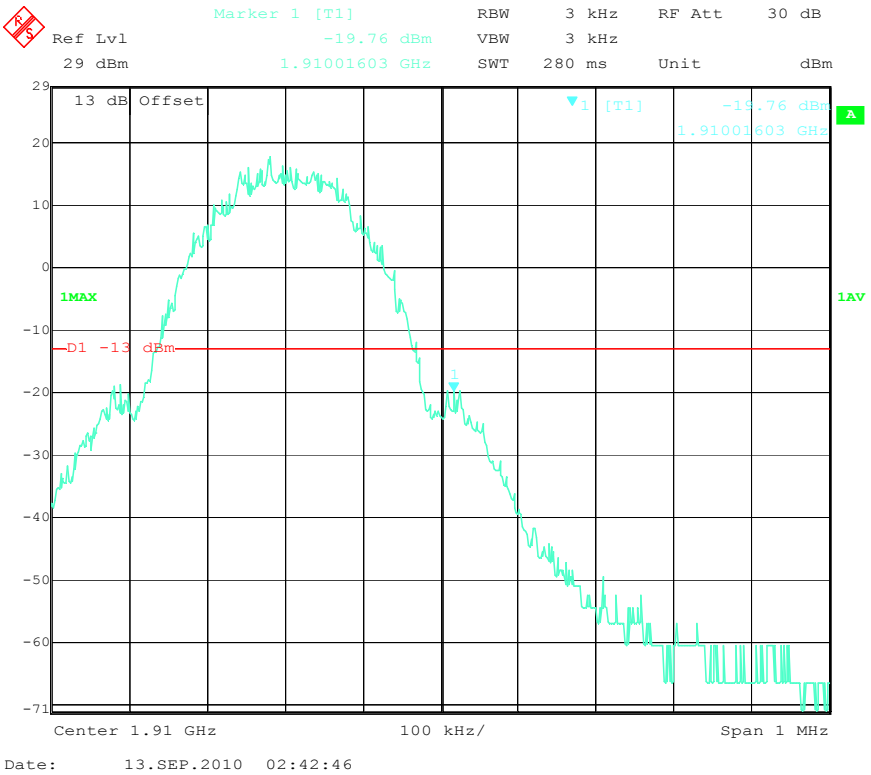


Date: 13.SEP.2010 02:37:56

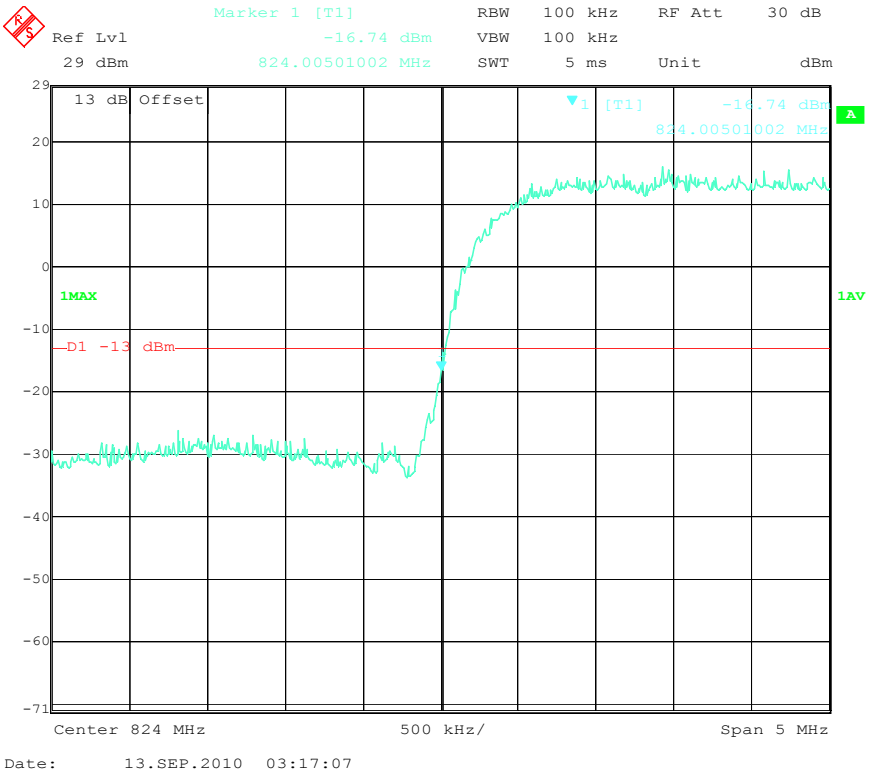
Lower Band Edge Plot – EGPRS1900, Channel 512, Low Channel



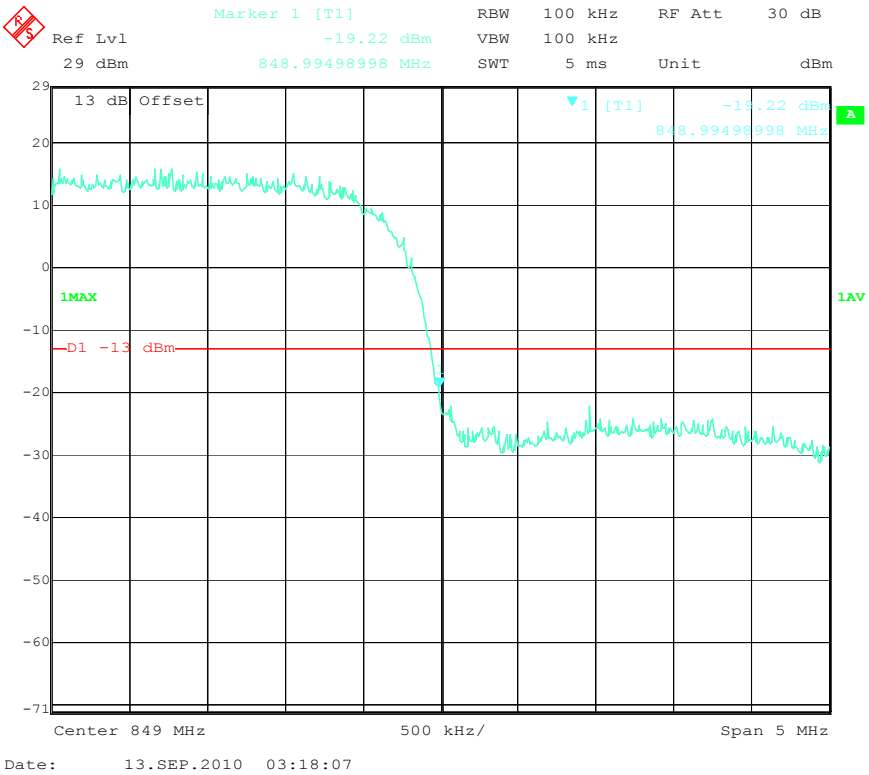
Higher Band Edge Plot – EGPRS1900, Channel 810, High Channel



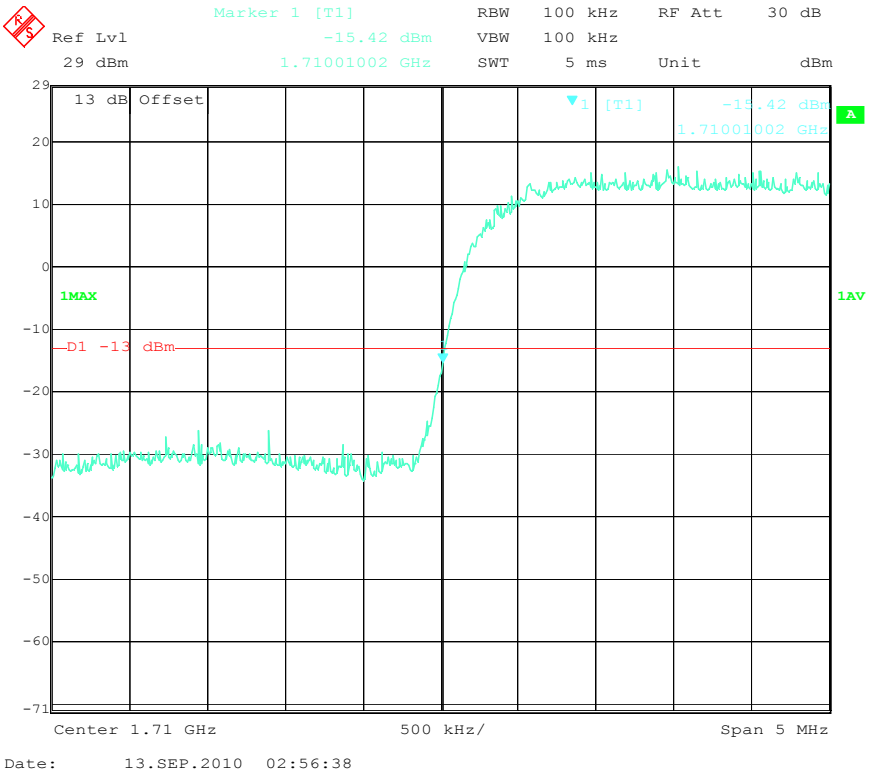
Lower Band Edge Plot – WCDMA Band V, Channel 4132, Low Channel



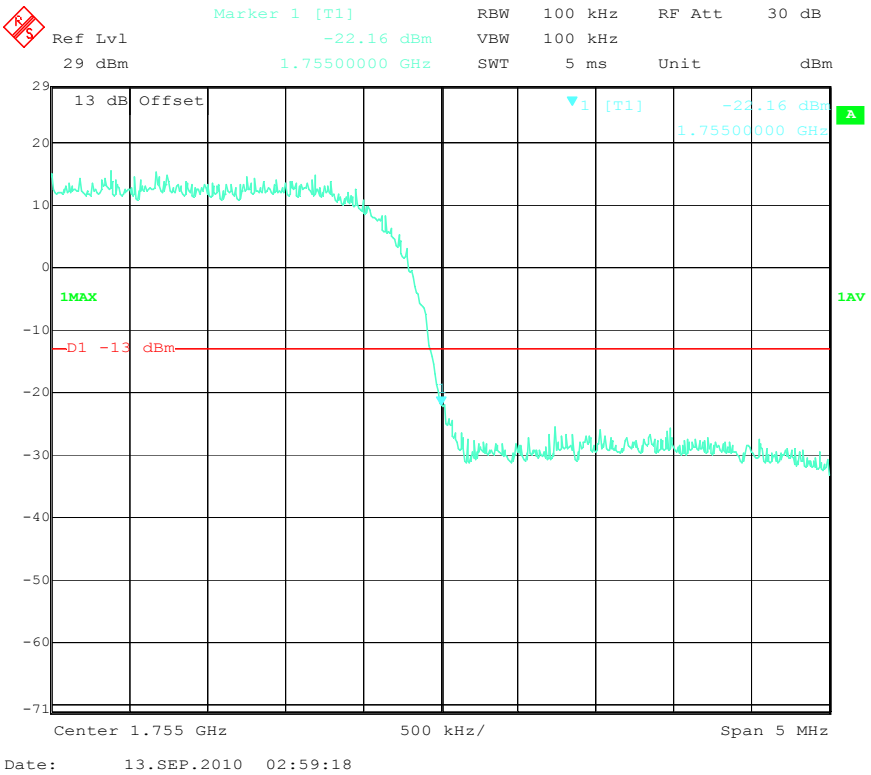
Higher Band Edge Plot – WCDMA Band V, Channel 4233, High Channel



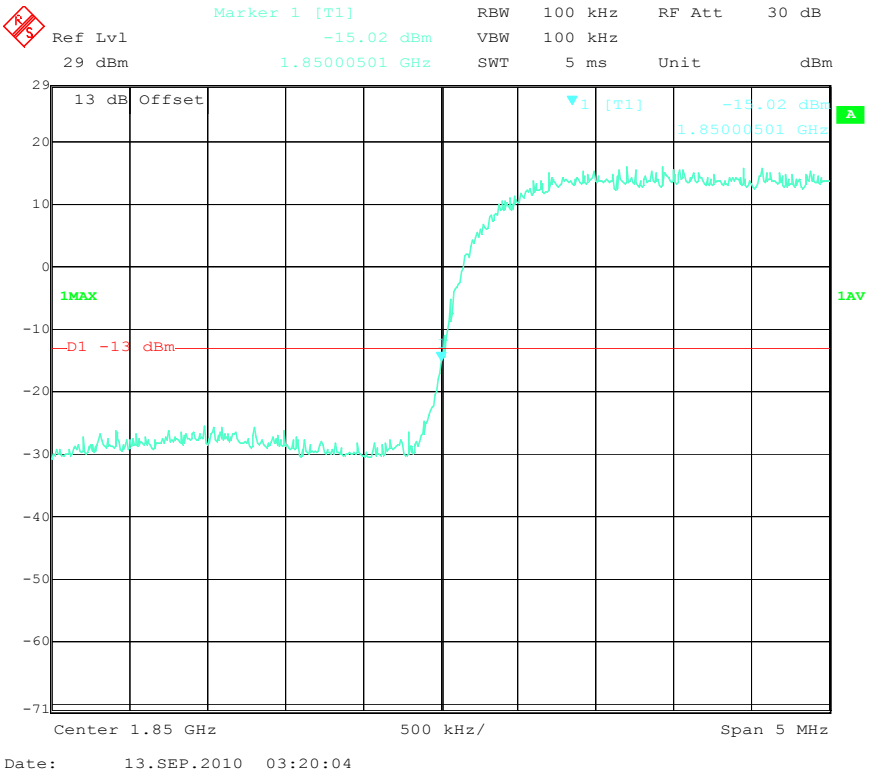
Lower Band Edge Plot – WCDMA Band IV, Channel 1312, Low Channel



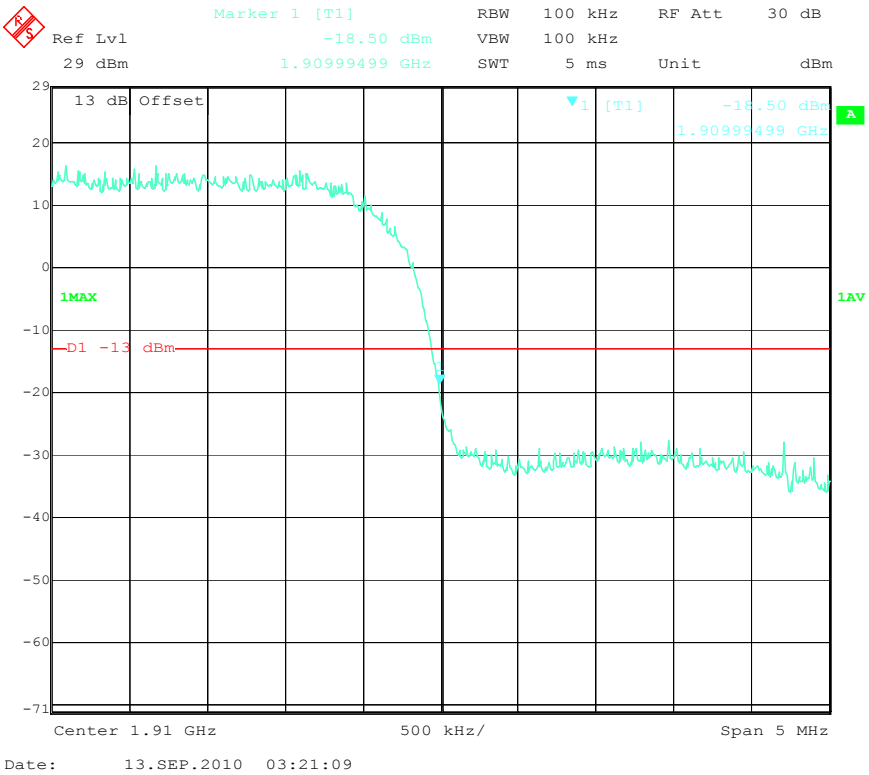
Higher Band Edge Plot – WCDMA Band IV, Channel 1513, High Channel



Lower Band Edge Plot – WCDMA Band II, Channel 9262, Low Channel



Higher Band Edge Plot – WCDMA Band II, Channel 9538, High Channel



5.6 Antenna Port Emission

1. Conducted Measurement
   EUT was set for low , mid, high channel with modulated mode and highest RF output power.
   The spectrum analyzer was connected to the antenna terminal.
2. Conducted Emissions Measurement Uncertainty
   All test measurements carried out are traceable to national standards. The uncertainty of the measurement at a confidence level of approximately 95% (in the case where distributions are normal), with a coverage factor of 2, in the range 30MHz – 40GHz is ±1.5dB.
3. Environmental Conditions

Temperature	23°C
Relative Humidity	50%
Atmospheric Pressure	1019mbar

4. Test Date : Aug 18-Sep 13 2010
   Tested By :David Zhang

Standard Requirement: 47 CFR § 22.917(a), § 24.238(a), §27.53(g); RSS-132 (4.5.1), RSS-133 (6.5.1), RSS-139 (6.5.1).

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least 43 + 10 log (P) dB.

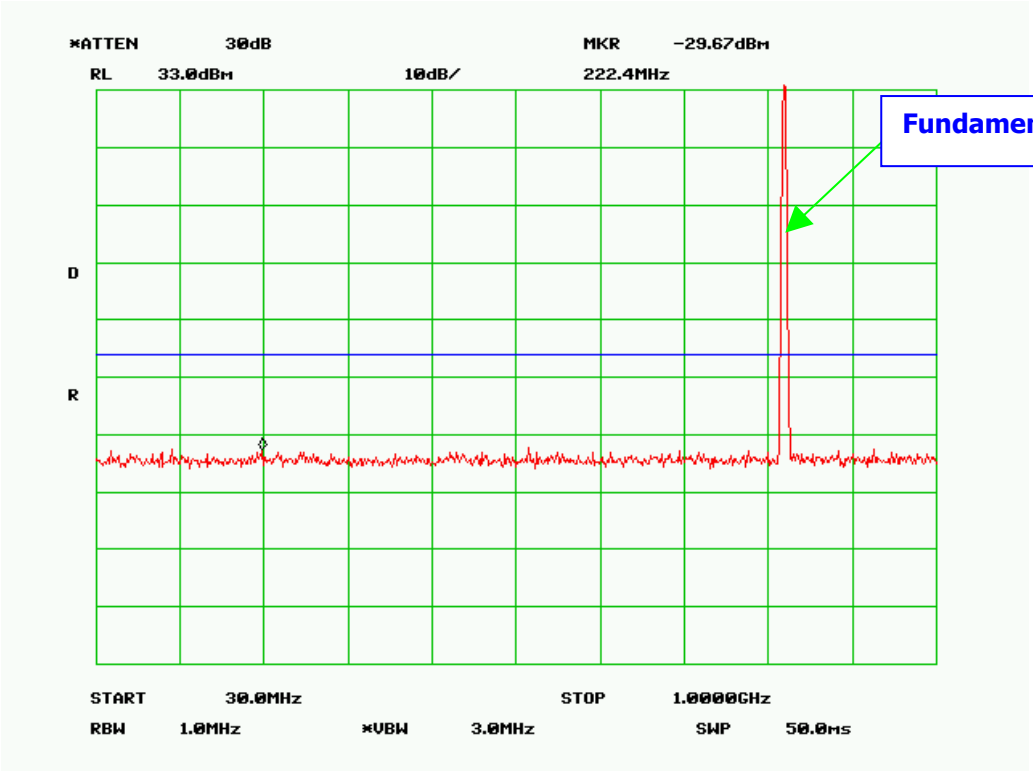
It is measured by means of a calibrated spectrum analyzer and scanned from 30 MHz up to a frequency including its 10th harmonic.

Procedures:
1. The EUT was connected to spectrum analyzer and base station via power divider.
2. The middle channel for the highest RF power within the transmitting frequency was measured.
3. The conducted spurious emission for the whole frequency range was taken.

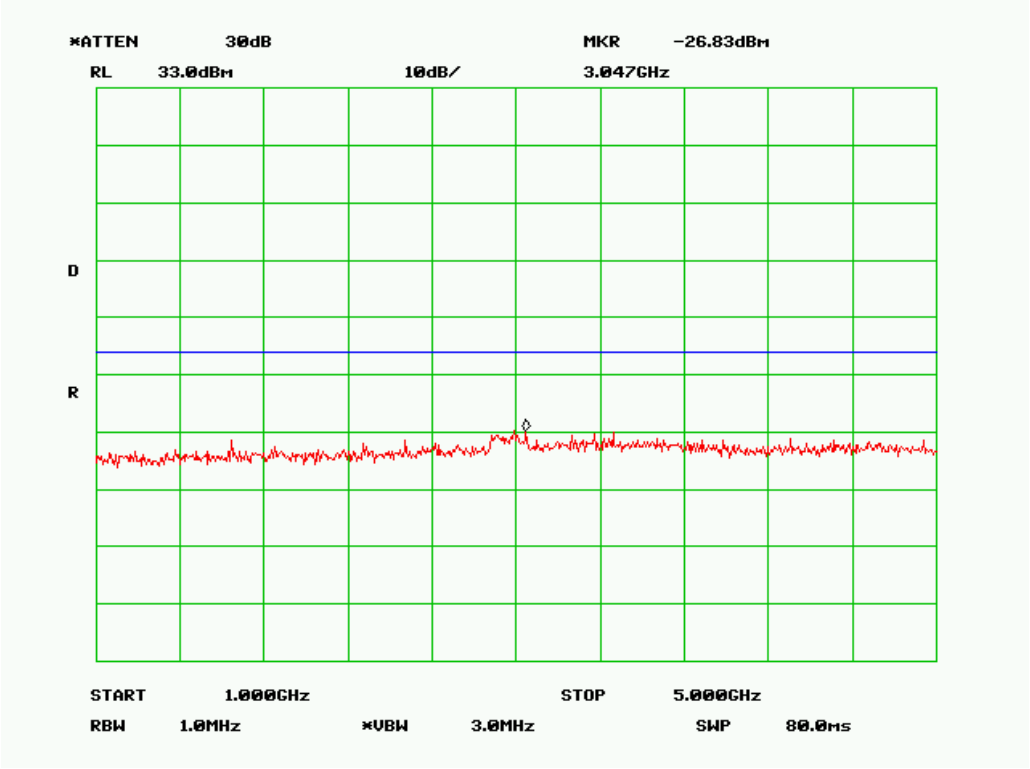
Test Result: Pass

Refer to the attached plots.

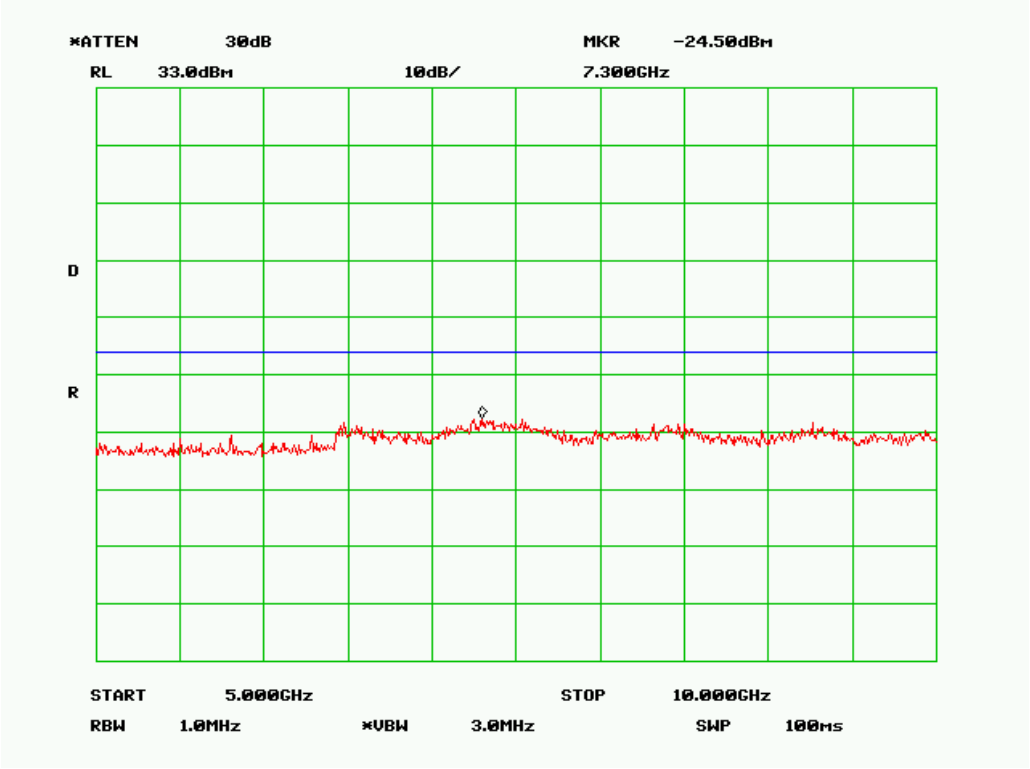
Configuration Mode : GSM850 , Channel 189, Mid channel



Plot-1

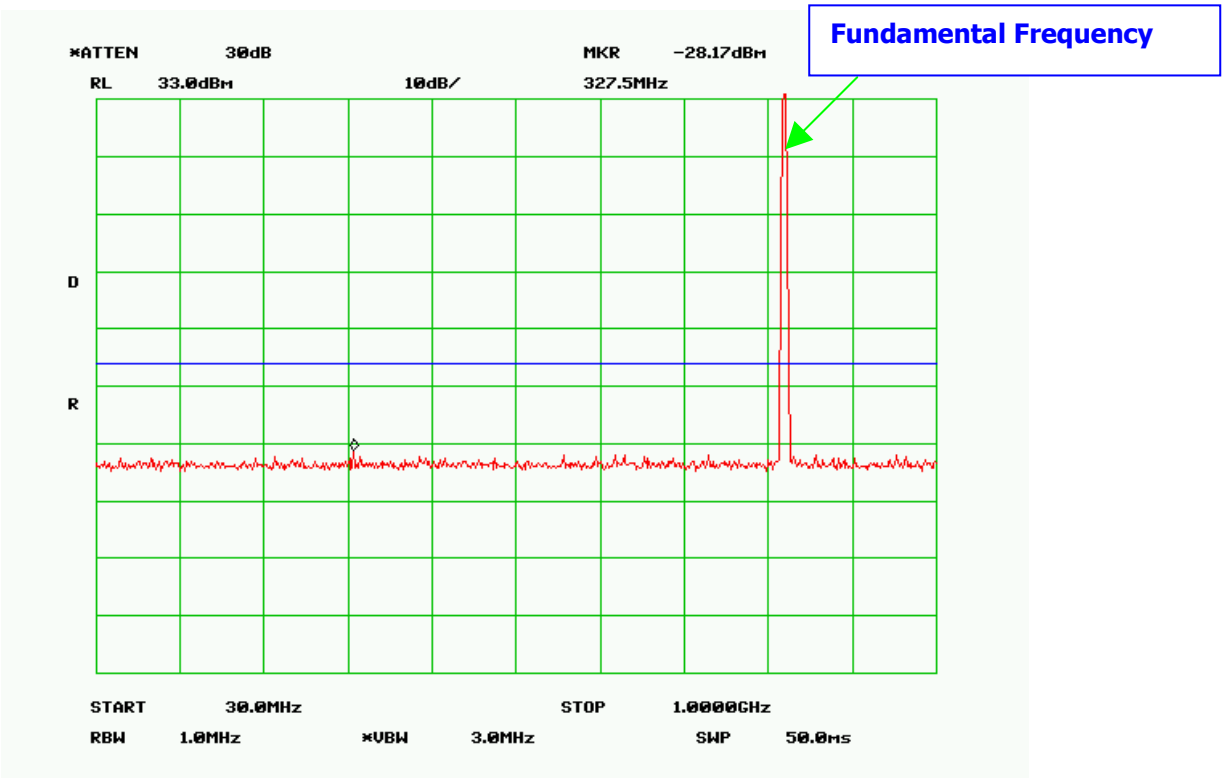


Plot-2

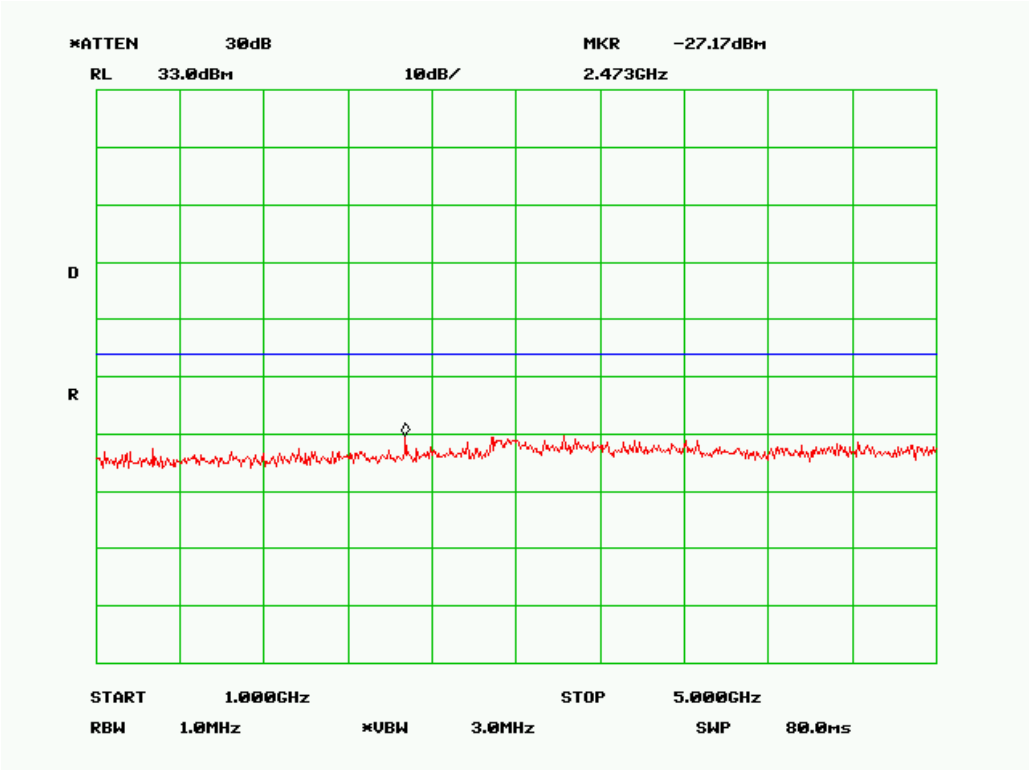


Plot -3

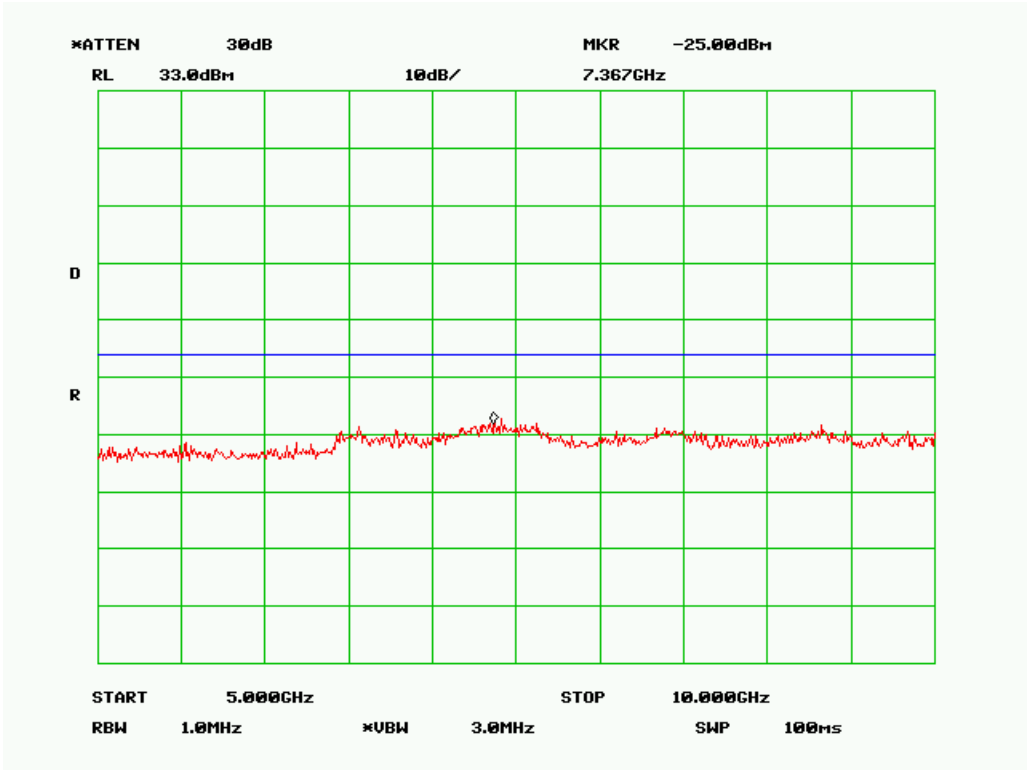
Configuration Mode : GPRS850 , Channel 189, Mid channel



Plot-1

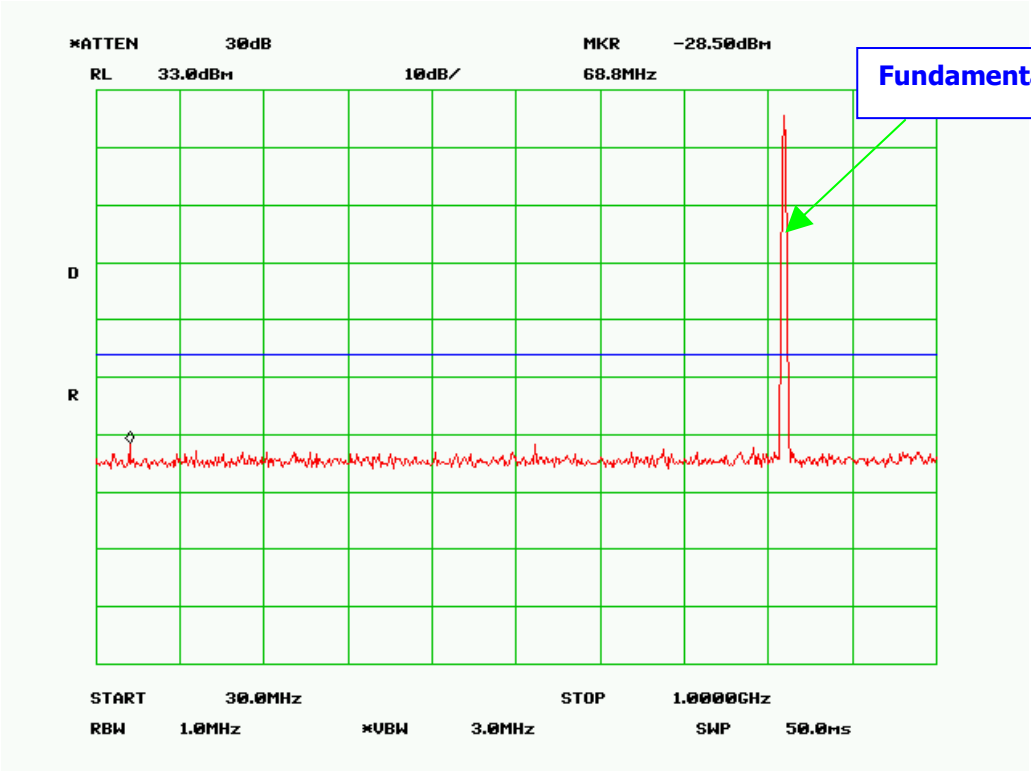

*ATTEN 30dB
MKR -27.17dBm
RL 33.0dBm
10dB/
2.473GHz
D
R
START 1.000GHz
STOP 5.000GHz
RBW 1.0MHz
*VBW 3.0MHz
SWP 80.0ms

Plot-2

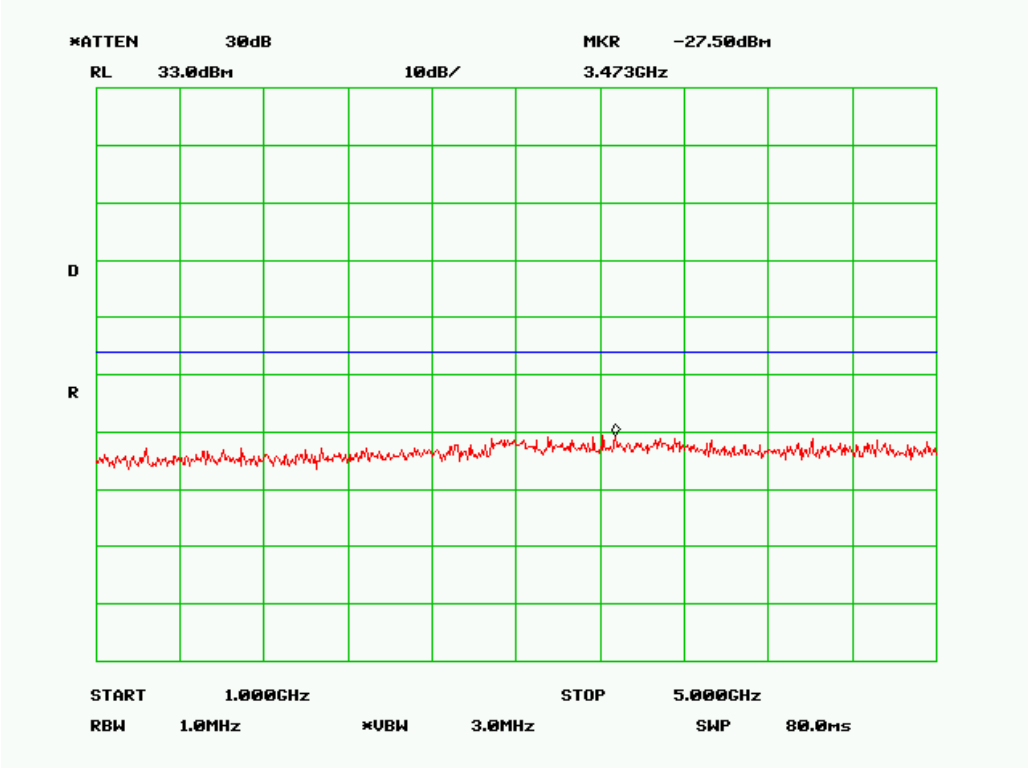

*ATTEN 30dB
MKR -25.00dBm
RL 33.0dBm
10dB/
7.367GHz
D
R
START 5.000GHz
STOP 10.000GHz
RBW 1.0MHz
*VBW 3.0MHz
SWP 100ms

Plot-3

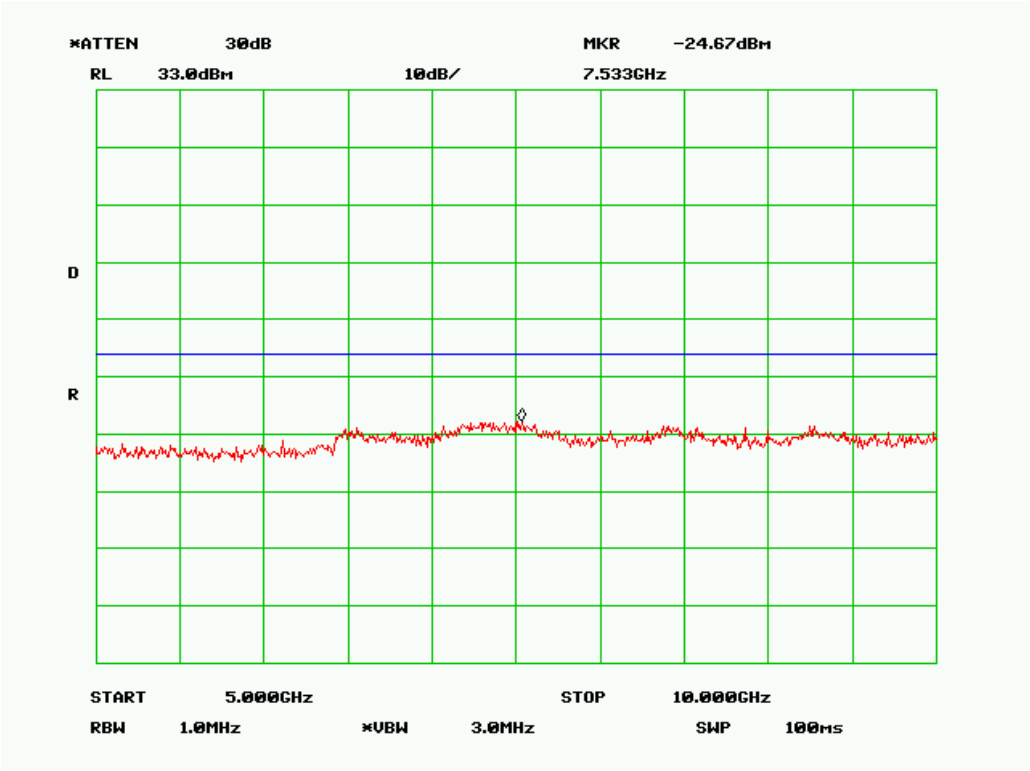
Configuration Mode : :EGPRS850 , Channel 189, Mid channel



Plot-1

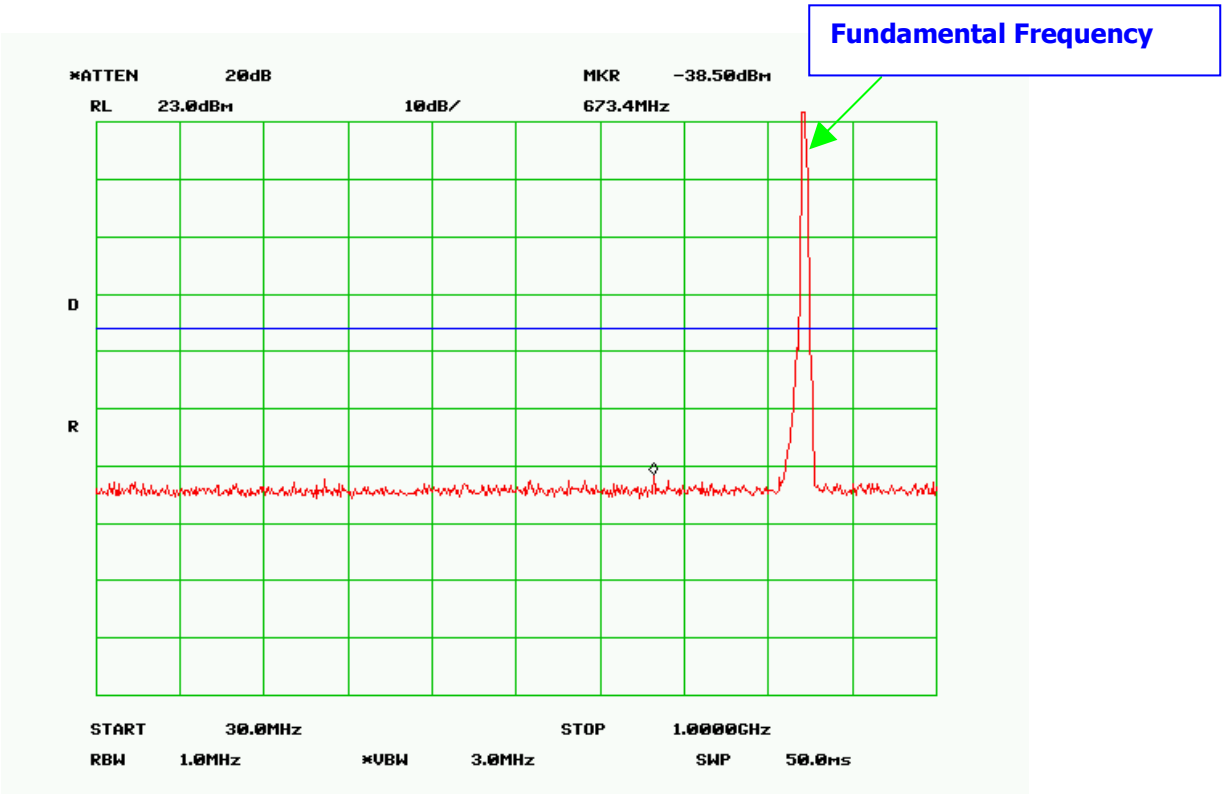


Plot-2

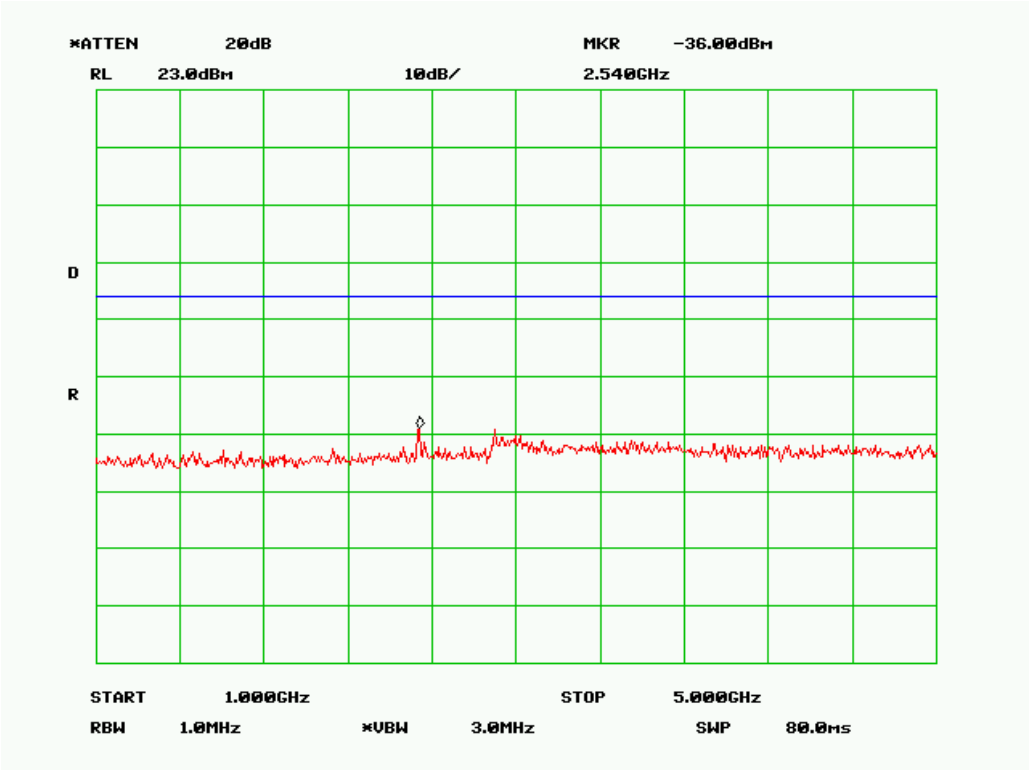


Plot -3

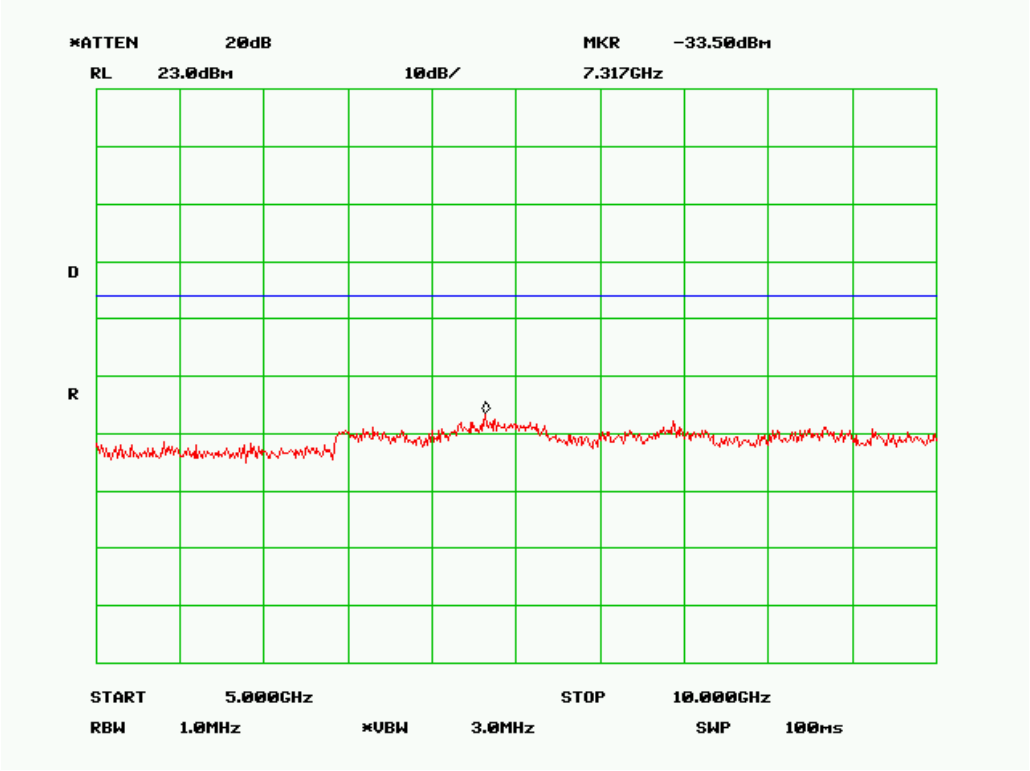
Configuration Mode : WCDMA Band V , Channel 4182, Mid channel



Plot-1

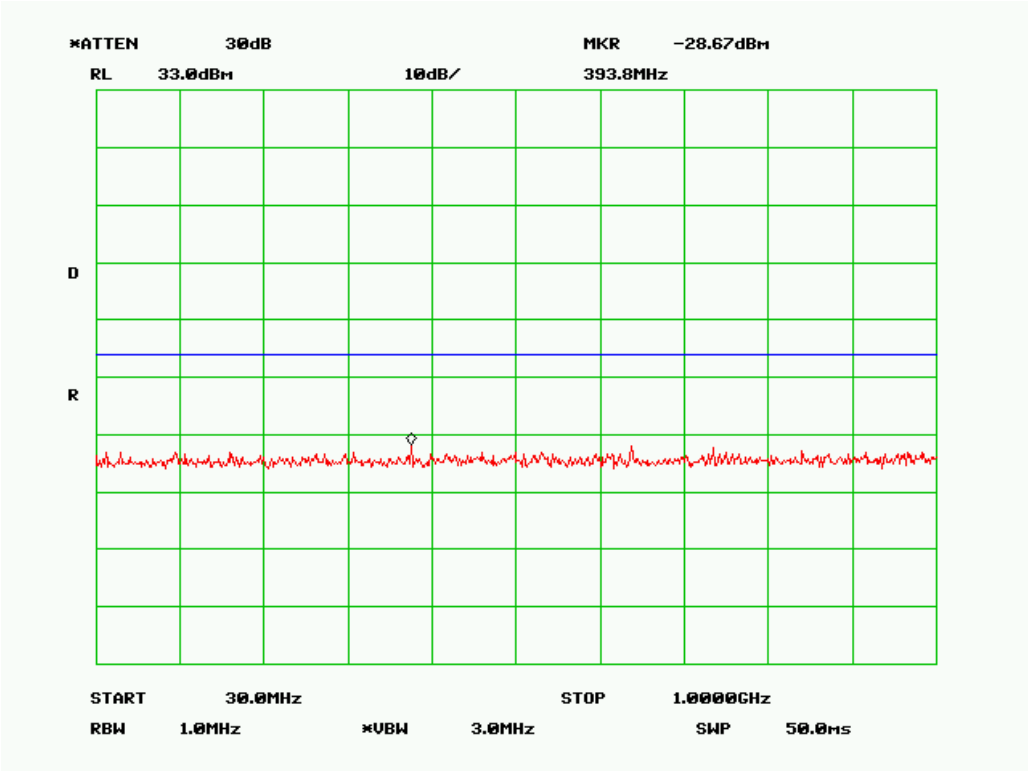

*ATTEN 20dB
MKR -36.00dBm
RL 23.0dBm
10dB/
2.540GHz
D
R
START 1.000GHz
STOP 5.000GHz
RBW 1.0MHz
*VBW 3.0MHz
SWP 80.0ms

Plot-2

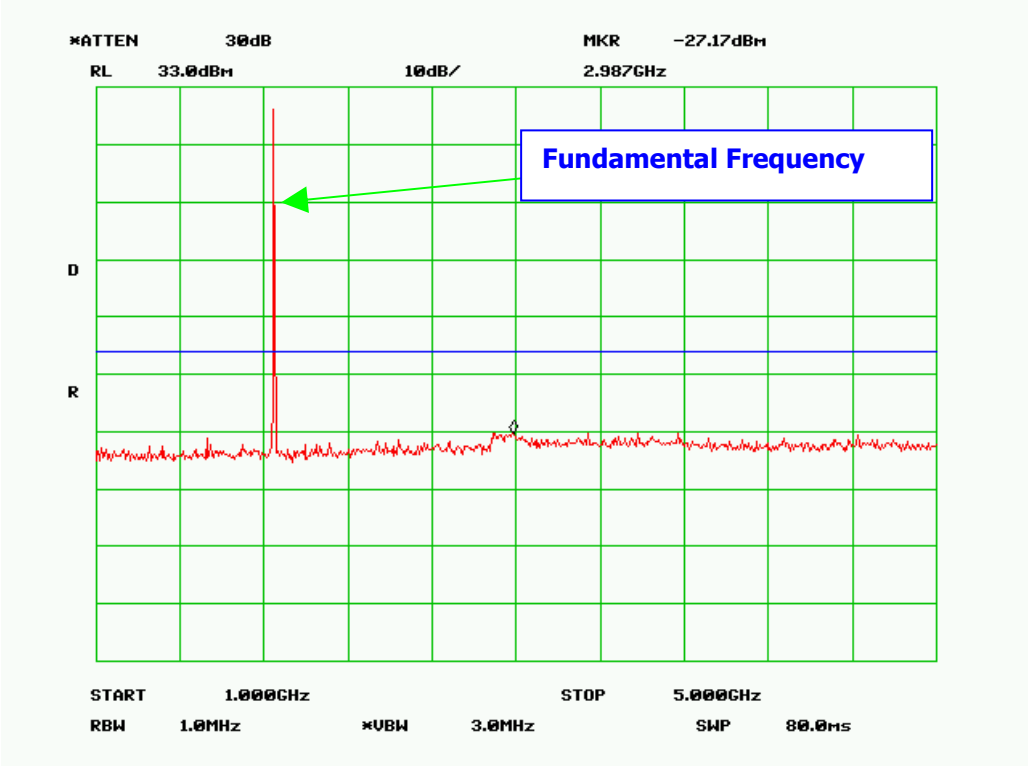

*ATTEN 20dB
MKR -33.50dBm
RL 23.0dBm
10dB/
7.317GHz
D
R
START 5.000GHz
STOP 10.000GHz
RBW 1.0MHz
*VBW 3.0MHz
SWP 100ms

Plot-3

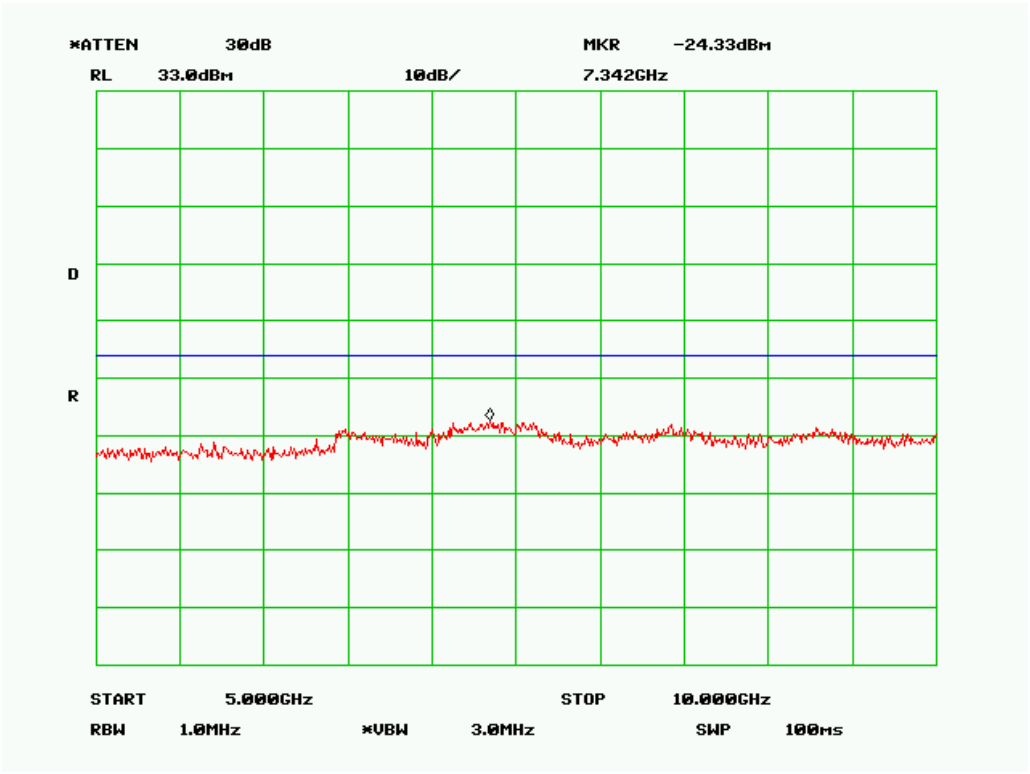
Configuration Mode : GSM1900, Channel 661, Mid channel



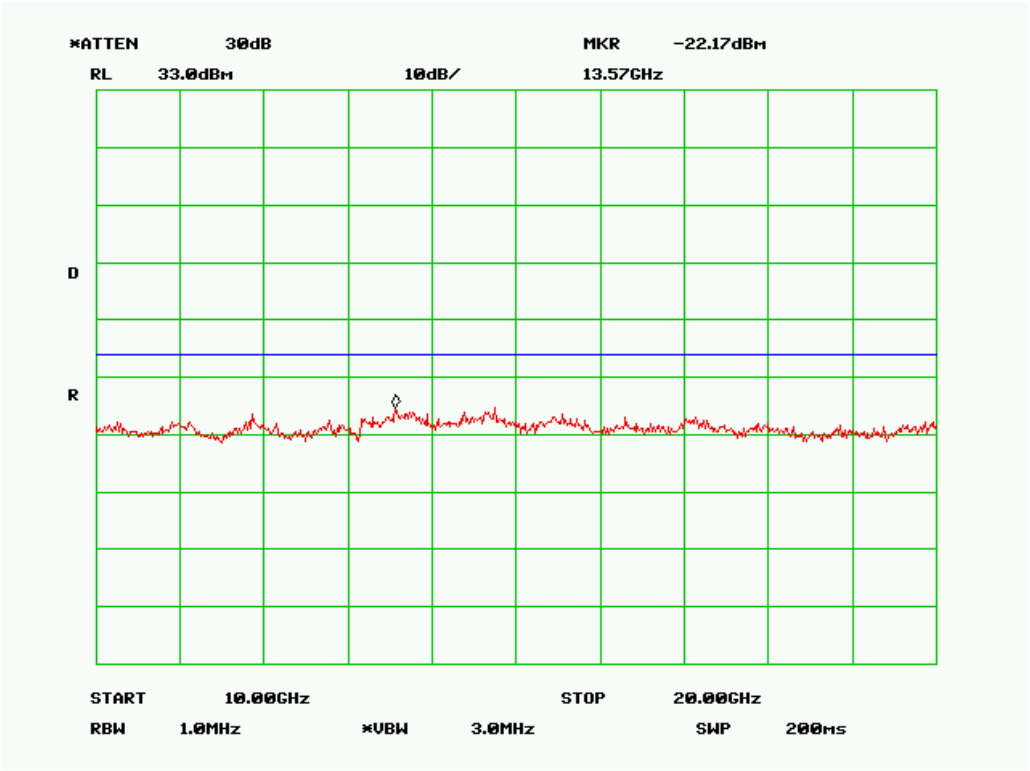
Plot-1



Plot-2

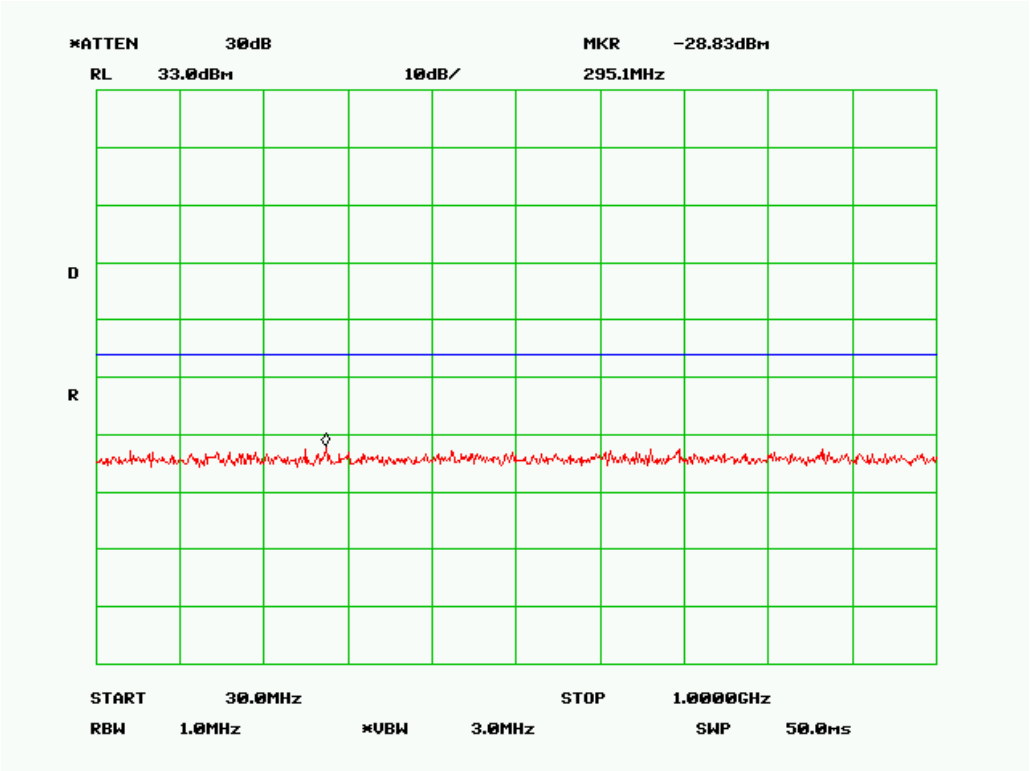

*ATTEN 30dB
MKR -24.33dBm
RL 33.0dBm
10dB/
7.342GHz
D
R
START 5.000GHz
STOP 10.000GHz
RBW 1.0MHz
*VBW 3.0MHz
SWP 100ms

Plot-3

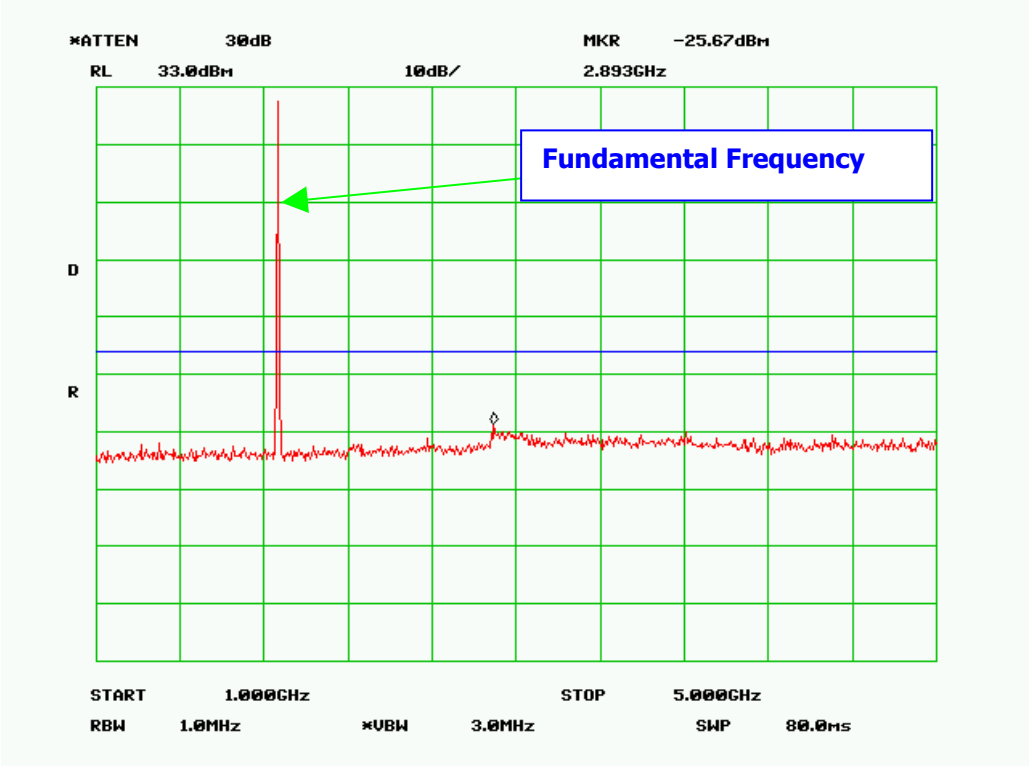

*ATTEN 30dB
MKR -22.17dBm
RL 33.0dBm
10dB/
13.57GHz
D
R
START 10.00GHz
STOP 20.00GHz
RBW 1.0MHz
*VBW 3.0MHz
SWP 200ms

Plot-4

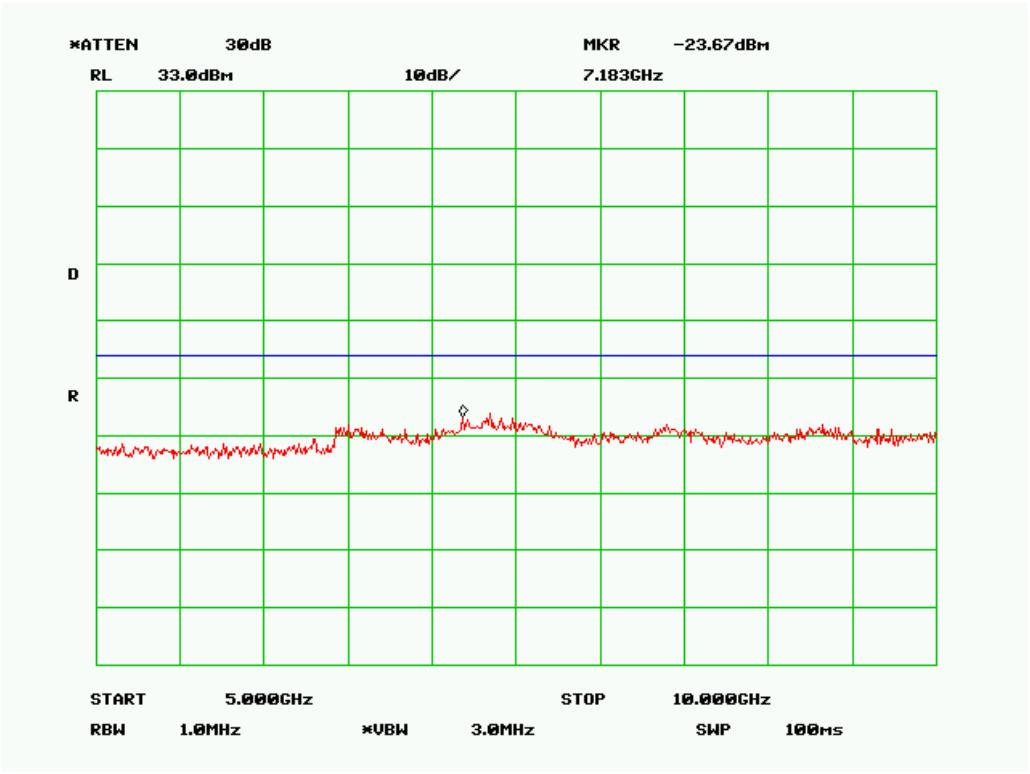
Configuration Mode : GPRS1900, Channel 661, Mid channel



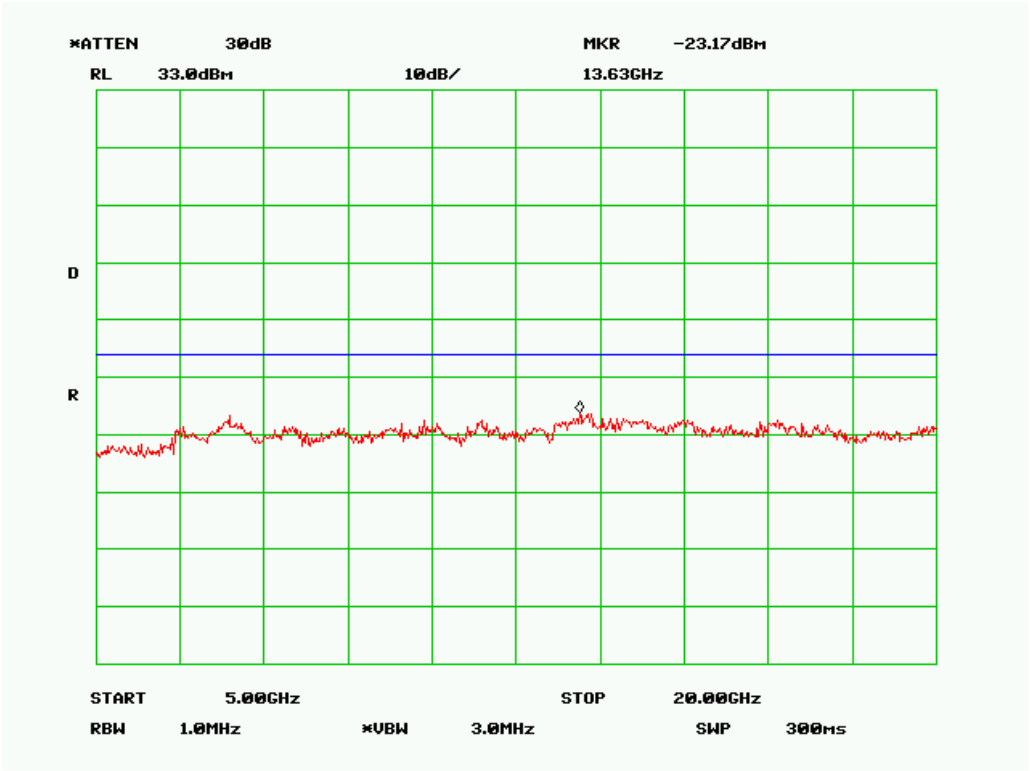
Plot-1



Plot-2

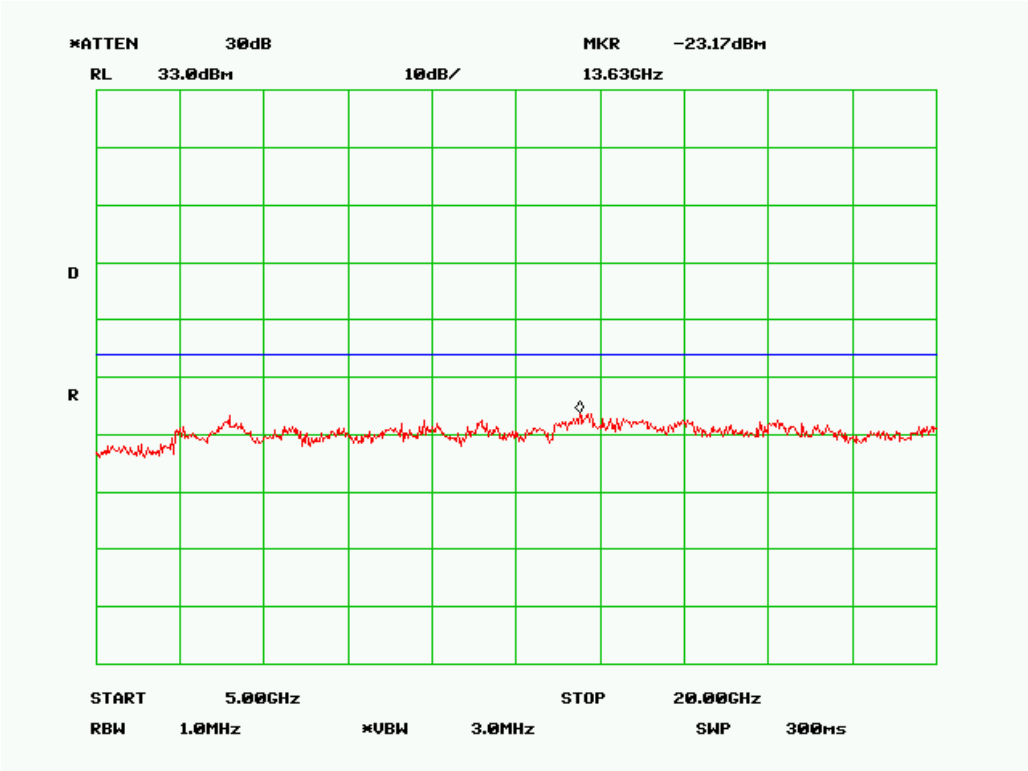

*ATTEN 30dB
MKR -23.67dBm
RL 33.0dBm
10dB/
7.183GHz
D
R
START 5.000GHz
STOP 10.000GHz
RBW 1.0MHz
*VBW 3.0MHz
SWP 100ms

Plot-3

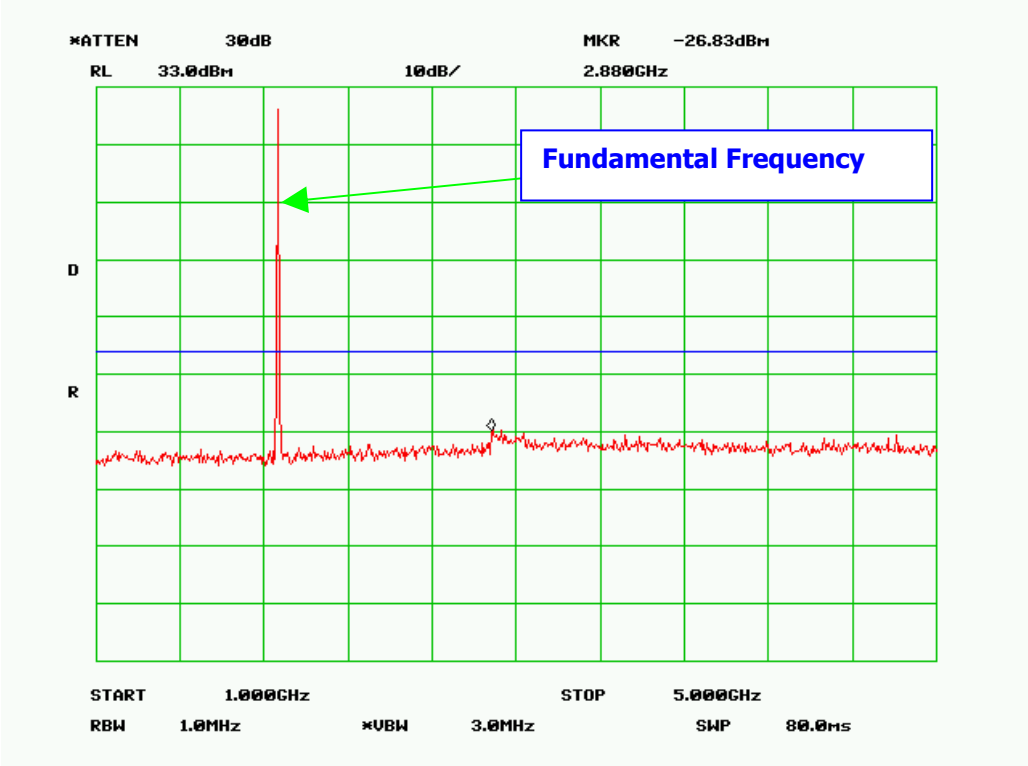

*ATTEN 30dB
MKR -23.17dBm
RL 33.0dBm
10dB/
13.63GHz
D
R
START 5.00GHz
STOP 20.00GHz
RBW 1.0MHz
*VBW 3.0MHz
SWP 300ms

Plot-4

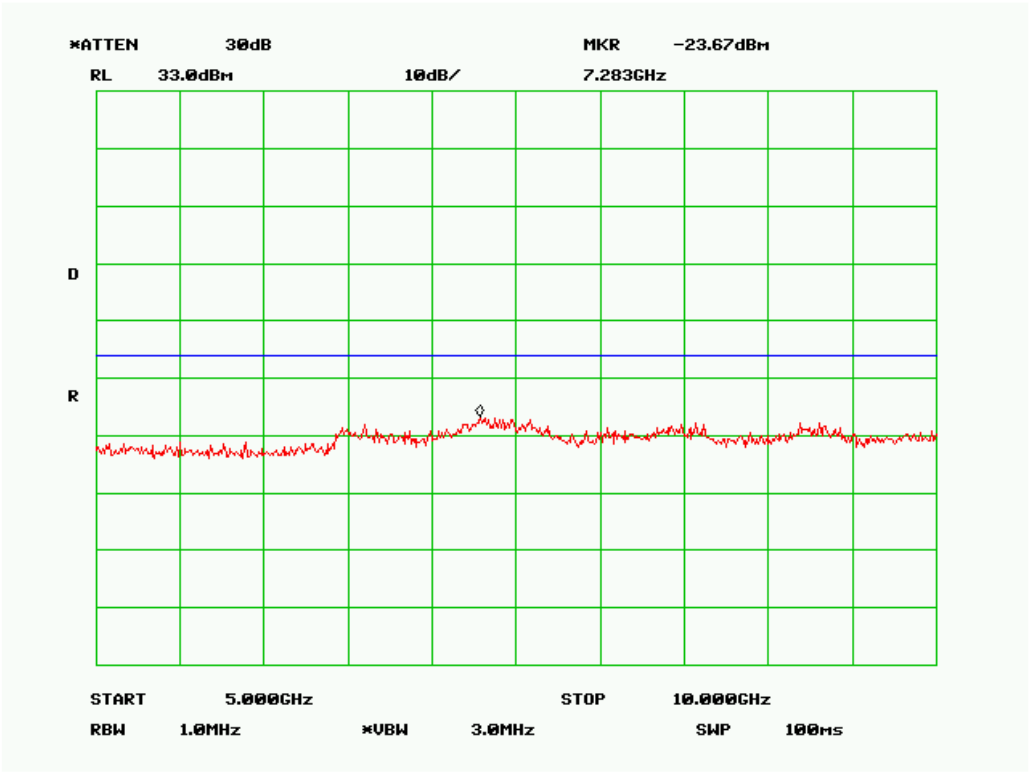
Configuration Mode : EGPRS1900, Channel 661, Mid channel



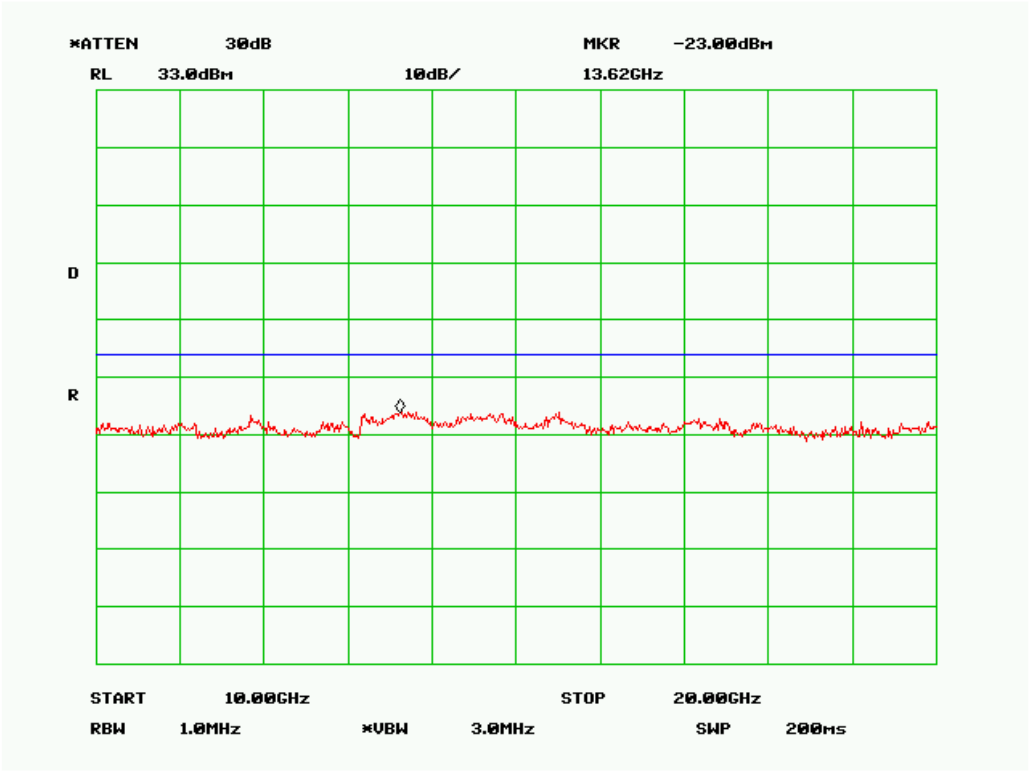
Plot-1



Plot-2

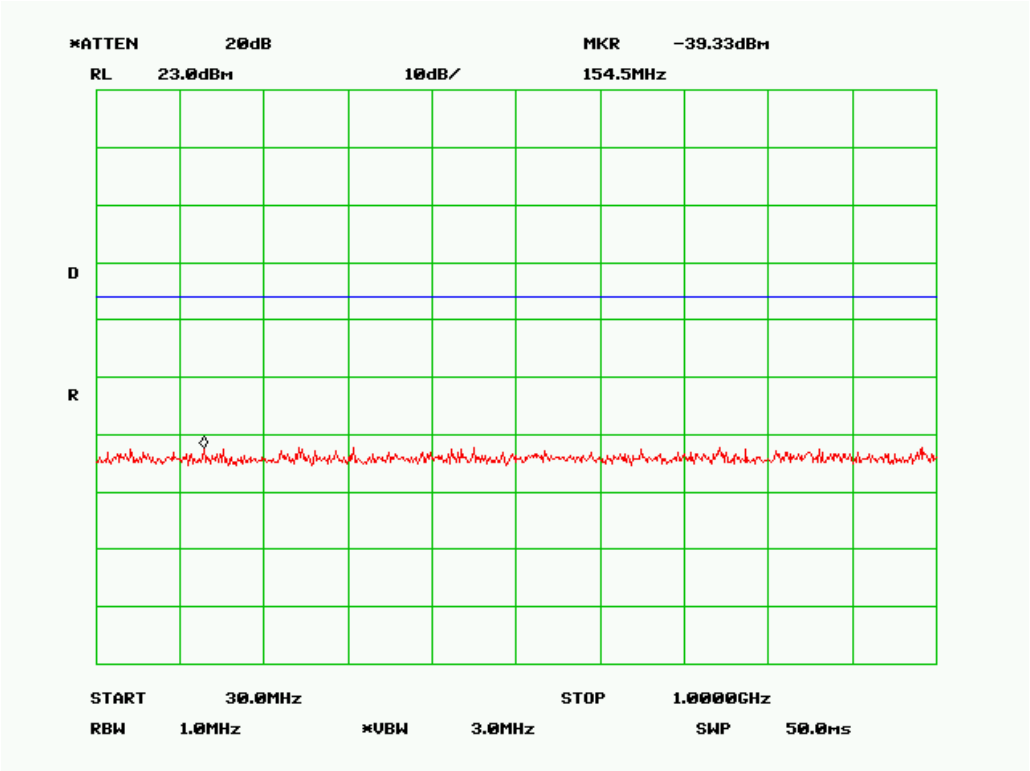

*ATTEN 30dB
MKR -23.67dBm
RL 33.0dBm
10dB/
7.283GHz
D
R
START 5.000GHz
STOP 10.000GHz
RBW 1.0MHz
*VBW 3.0MHz
SWP 100ms

Plot-3

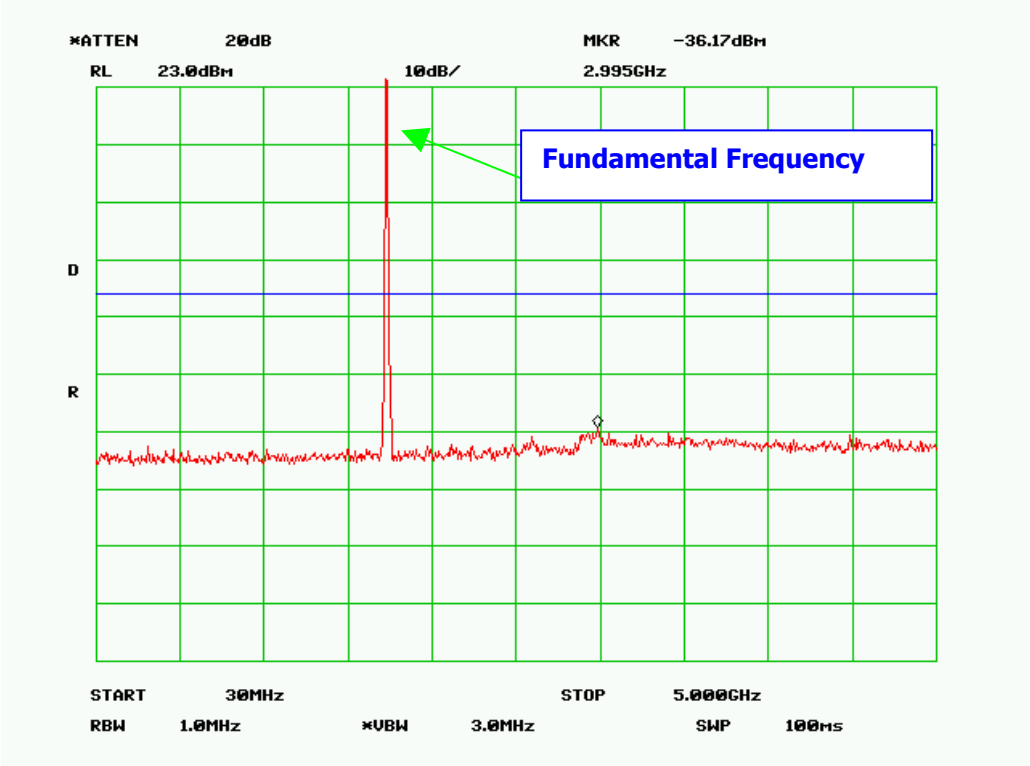

*ATTEN 30dB
MKR -23.00dBm
RL 33.0dBm
10dB/
13.62GHz
D
R
START 10.00GHz
STOP 20.00GHz
RBW 1.0MHz
*VBW 3.0MHz
SWP 200ms

Plot-4

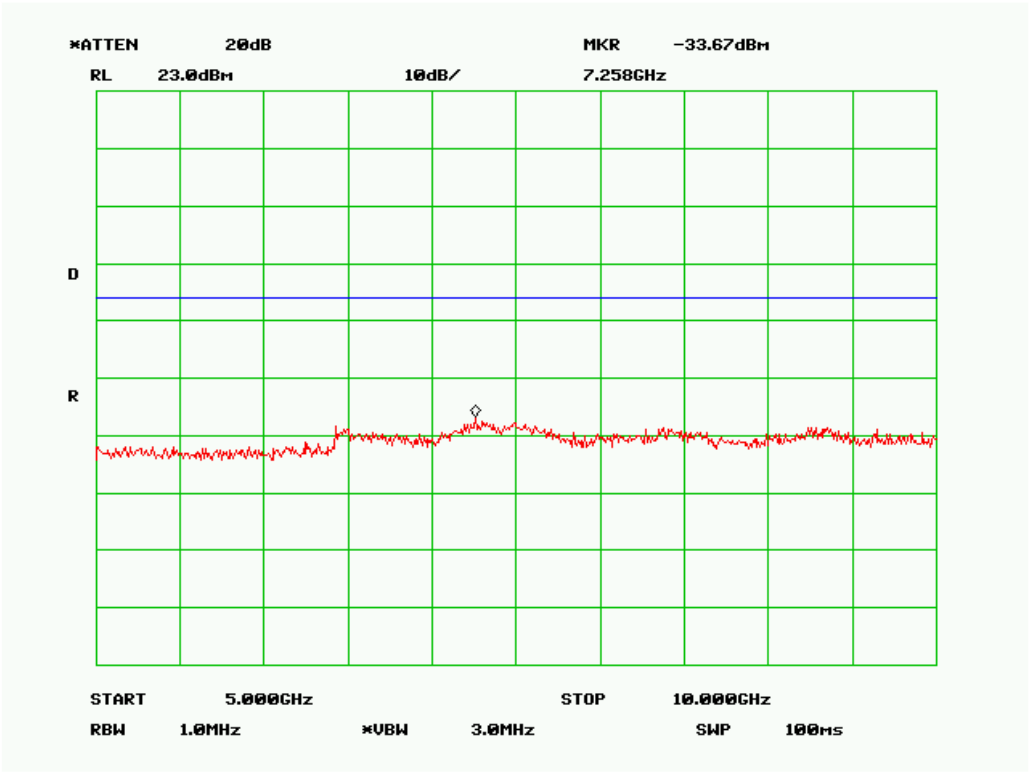
Configuration Mode : WCDMA Band IV, Channel 1412, Mid channel



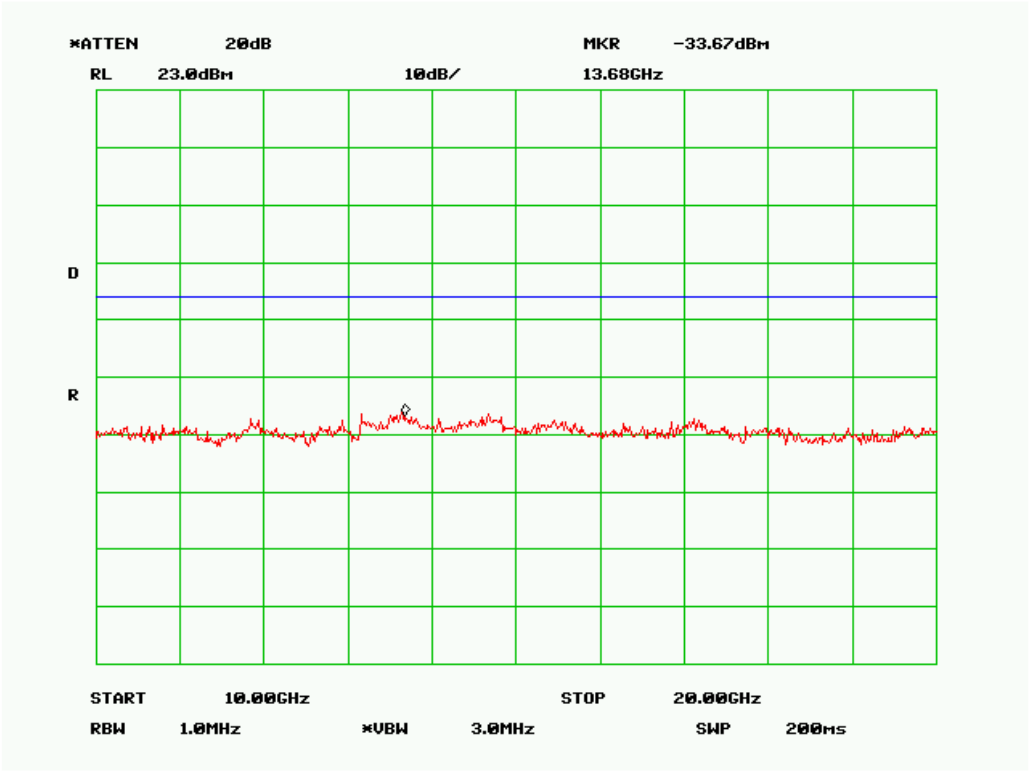
Plot-1



Plot-2

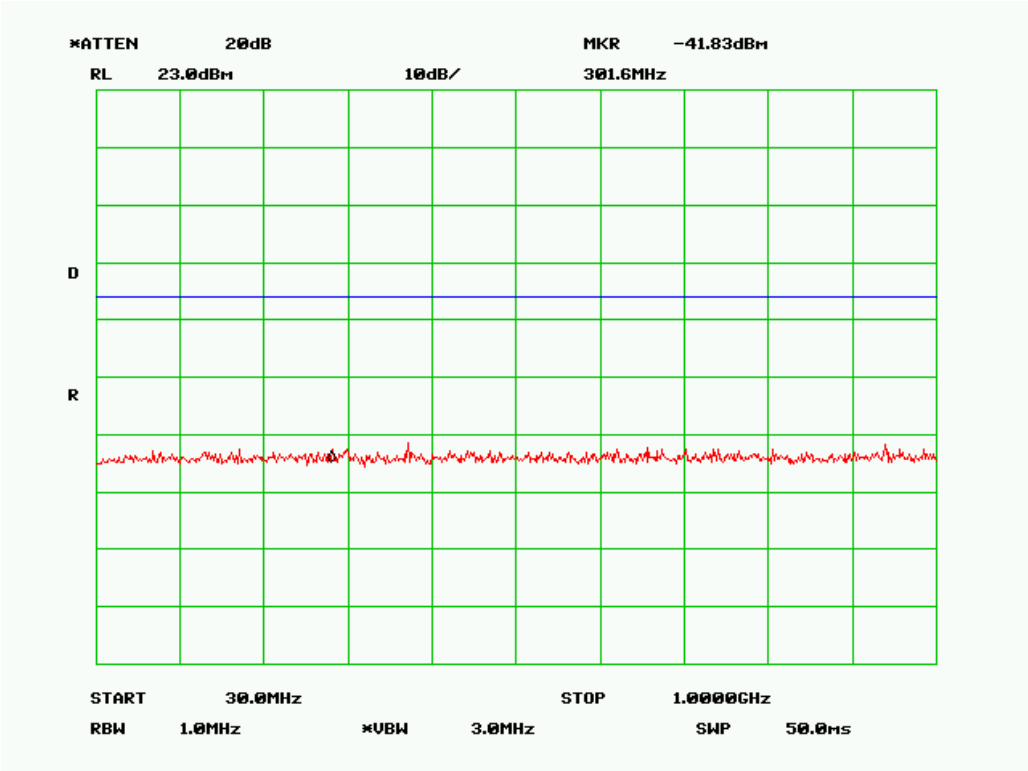

*ATTEN 20dB
MKR -33.67dBm
RL 23.0dBm
10dB/
7.258GHz
D
R
START 5.000GHz
STOP 10.000GHz
RBW 1.0MHz
*VBW 3.0MHz
SWP 100ms

Plot-3

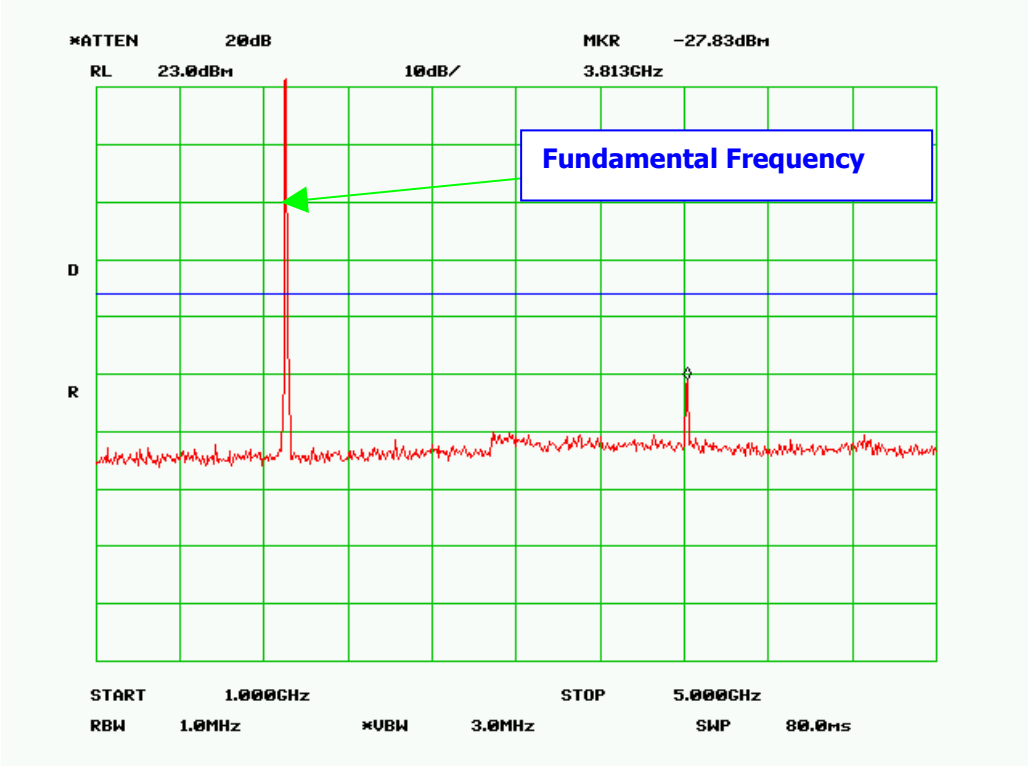

*ATTEN 20dB
MKR -33.67dBm
RL 23.0dBm
10dB/
13.68GHz
D
R
START 10.00GHz
STOP 20.00GHz
RBW 1.0MHz
*VBW 3.0MHz
SWP 200ms

Plot-4

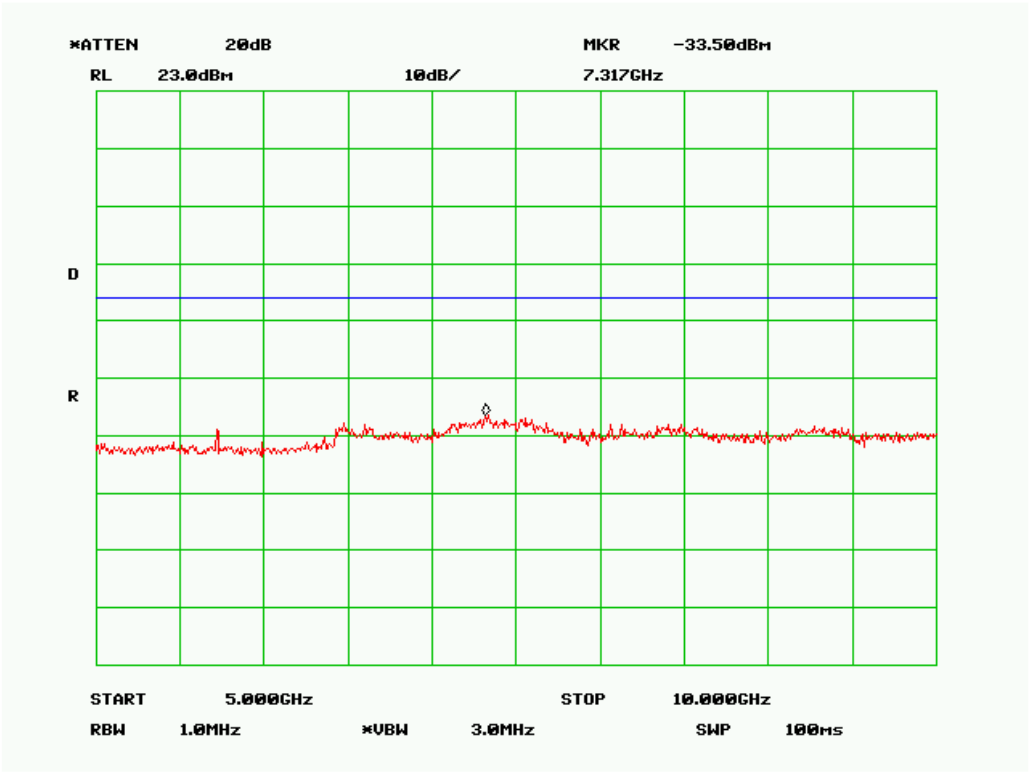
Configuration Mode : WCDMA Band II, Channel 9400, Mid channel



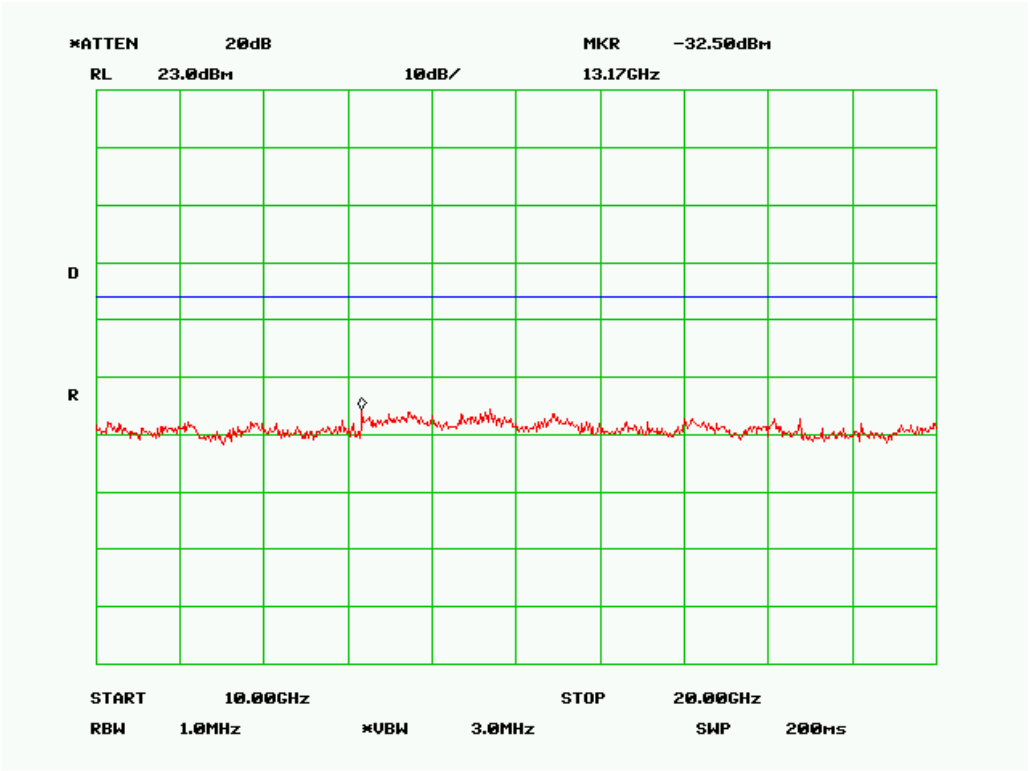
Plot-1



Plot-2


*ATTEN 20dB
MKR -33.50dBm
RL 23.0dBm
10dB/
7.317GHz
D
R
START 5.000GHz
STOP 10.000GHz
RBW 1.0MHz
*VBW 3.0MHz
SWP 100ms

Plot-3


*ATTEN 20dB
MKR -32.50dBm
RL 23.0dBm
10dB/
13.17GHz
D
R
START 10.00GHz
STOP 20.00GHz
RBW 1.0MHz
*VBW 3.0MHz
SWP 200ms

Plot-4

5.7 Radiated Spurious Emissions

1. All possible modes of operation were investigated. Only the 6 worst case emissions measured, using the correct CISPR detectors, are reported. All other emissions were relatively insignificant.
2. A "-ve" margin indicates a PASS as it refers to the margin present below the limit line at the particular frequency.
3. Radiated Emissions Measurement Uncertainty
   All test measurements carried out are traceable to national standards. The uncertainty of the measurement at a confidence level of approximately 95% (in the case where distributions are normal), with a coverage factor of 2, in the range 1GHz – 40GH is +6.0dB (for EUTs < 0.5m X 0.5m X 0.5m).
4. Environmental Conditions

Temperature	23°C
Relative Humidity	50%
Atmospheric Pressure	1019mbar

Test Date : Aug 18-Sep 13 2010
Tested By :David Zhang

Standard Requirement: 47 CFR § 22.917(a), § 24.238(a), §27.53(g); RSS-132 (4.5.1), RSS-133 (6.5.1), RSS-139 (6.5.1).

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least 43 + 10 log (P) dB. The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

Procedures: Equipment was setup in a semi-anechoic chamber. For measurements above 1 GHz an average measurement was taken with a 10Hz video bandwidth. The EUT was tested at low, mid and high with the highest output power. An emission was scan up to 10th harmonic of the operating frequency.

Sample Calculation:

EUT Field Strength = Raw Amplitude (dBμV/m) – Amplifier Gain (dB) + Antenna Factor (dB) + Cable Loss (dB) + Filter Attenuation (dB, if used)

Test Result: Pass

Configuration Mode: GSM850, Channel 189, Mid channel

Frequency (GHz)	Reading (dBm)	Direction (degree)	Height (m)	Polarity (H/V)	Antenna Loss (dB)	Cable Loss (dB)	Amplifier (dB)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)
1.648	-76.32	131	1.0	H	25.70	2.52	0	-48.10	-13	-35.10
4.919	-77.45	154	1.1	V	32.20	4.49	0	-40.76	-13	-27.76
6.663	-73.98	215	1.0	H	34.50	6.19	0	-33.29	-13	-20.29
7.939	-73.91	279	1.0	H	36.10	7.01	0	-30.80	-13	-17.80

Note: Emission was scanned up to 9GHz; no emissions were detected above the noise floor which was at least 20dB below the specification limit

Configuration Mode: GPRS850, Channel 189, Mid channel

Frequency (GHz)	Reading (dBm)	Direction (degree)	Height (m)	Polarity (H/V)	Antenna Loss (dB)	Cable Loss (dB)	Amplifier (dB)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)
1.648	-76.62	131	1.0	H	25.70	2.52	0	-48.40	-13	-35.40
6.663	-74.06	119	1.0	H	34.50	6.19	0	-33.37	-13	-20.37
7.131	-73.89	215	1.0	H	35.10	6.18	0	-32.61	-13	-19.61
8.802	-74.93	157	1.1	V	37.80	6.54	0	-30.59	-13	-17.59

Note: Emission was scanned up to 9GHz; no emissions were detected above the noise floor which was at least 20dB below the specification limit

Configuration Mode: EGPRS850, Channel 189, Mid channel

Frequency (GHz)	Reading (dBm)	Direction (degree)	Height (m)	Polarity (H/V)	Antenna Loss (dB)	Cable Loss (dB)	Amplifier (dB)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)
2.924	-78.63	262	1.0	H	28.80	3.27	0	-46.56	-13	-33.56
3.787	-77.62	131	1.0	V	31.20	3.79	0	-42.63	-13	-29.63
6.663	-73.72	215	1.0	H	34.50	6.19	0	-33.03	-13	-20.03
6.933	-73.77	105	1.1	V	34.50	6.19	0	-33.08	-13	-20.08

Note: Emission was scanned up to 9GHz; no emissions were detected above the noise floor which was at least 20dB below the specification limit

Configuration Mode: GSM1900, Channel 661, Mid channel

Frequency (GHz)	Reading (dBm)	Direction (degree)	Height (m)	Polarity (H/V)	Antenna Loss (dB)	Cable Loss (dB)	Amplifier (dB)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)
1.648	-76.32	131	1.0	H	25.70	2.52	0	-48.1	-13	-35.10
4.919	-77.45	154	1.1	V	32.20	4.49	0	-40.76	-13	-27.76
6.663	-73.98	215	1.0	H	34.50	6.19	0	-33.29	-13	-20.29
7.939	-73.91	215	1.0	H	36.10	7.01	0	-30.8	-13	-17.80

Note: Emission was scanned up to 20GHz; no emissions were detected above the noise floor which was at least 20dB below the specification limit

Configuration Mode: GPRS1900, Channel 661, Mid channel

Frequency (GHz)	Reading (dBm)	Direction (degree)	Height (m)	Polarity (H/V)	Antenna Loss (dB)	Cable Loss (dB)	Amplifier (dB)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)
1.648	-76.32	169	1.0	H	25.70	2.52	0	-48.10	-13	-35.10
6.663	-73.98	215	1.0	H	34.50	6.19	0	-33.29	-13	-20.29
7.939	-73.91	78	1.0	H	36.10	7.01	0	-30.80	-13	-17.80
4.919	-77.45	180	1.1	V	32.20	4.49	0	-40.76	-13	-27.76

Note: Emission was scanned up to 20GHz; no emissions were detected above the noise floor which was at least 20dB below the specification limit

Configuration Mode: EGPRS1900, Channel 661, Mid channel

Frequency (GHz)	Reading (dBm)	Direction (degree)	Height (m)	Polarity (H/V)	Antenna Loss (dB)	Cable Loss (dB)	Amplifier (dB)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)
6.953	-73.37	203	1.0	H	34.50	6.19	0	-32.68	-13	-19.68
8.714	-74.36	121	1.0	V	37.80	6.54	0	-30.02	-13	-17.02
13.677	-73.24	209	1.0	V	43.90	7.27	0	-22.07	-13	-9.07
17.079	-74.89	110	1.1	V	43.70	9.18	0	-22.01	-13	-9.01

Note: Emission was scanned up to 20GHz; no emissions were detected above the noise floor which was at least 20dB below the specification limit

Configuration Mode: WCDMA Band V, Channel 4182, Mid channel

Frequency (GHz)	Reading (dBm)	Direction (degree)	Height (m)	Polarity (H/V)	Antenna Loss (dB)	Cable Loss (dB)	Amplifier (dB)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)
3.207	-78.92	236	1.0	V	30.30	3.59	0	-45.03	-13	-32.03
6.643	-73.76	112	1.0	H	34.50	6.19	0	-33.07	-13	-20.07
6.983	-73.71	189	1.0	V	34.50	6.19	0	-33.02	-13	-20.02
8.621	-74.20	77	1.1	H	37.80	6.54	0	-29.86	-13	-16.86

Note: Emission was scanned up to 20GHz; no emissions were detected above the noise floor which was at least 20dB below the specification limit

Configuration Mode: WCDMA Band IV, Channel 1412, Mid channel

Frequency (GHz)	Reading (dBm)	Direction (degree)	Height (m)	Polarity (H/V)	Antenna Loss (dB)	Cable Loss (dB)	Amplifier (dB)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)
6.671	-73.25	129	1.0	H	34.50	6.19	0	-32.56	-13	-19.56
8.152	-74.42	131	1.0	H	36.60	7.13	0	-30.69	-13	-17.69
11.153	-74.49	204	1.0	H	40.40	7.41	0	-26.68	-13	-13.68
14.034	-73.40	112	1.1	V	45.30	7.55	0	-20.55	-13	-7.55

Note: Emission was scanned up to 20GHz; no emissions were detected above the noise floor which was at least 20dB below the specification limit

Configuration Mode: WCDMA Band II, Channel 9400, Mid channel

Frequency (GHz)	Reading (dBm)	Direction (degree)	Height (m)	Polarity (H/V)	Antenna Loss (dB)	Cable Loss (dB)	Amplifier (dB)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)
7.314	-73.50	105	1.0	H	35.10	6.18	0	-32.22	-13	-19.22
7.914	-74.33	163	1.0	V	36.10	7.01	0	-31.22	-13	-18.22
13.557	-73.38	112	1.0	H	43.90	7.27	0	-22.21	-13	-9.21
17.119	-75.23	206	1.1	V	43.70	9.18	0	-22.35	-13	-9.35

Note: Emission was scanned up to 20GHz; no emissions were detected above the noise floor which was at least 20dB below the specification limit

5.8 Frequency Stability

Requirement(s): 47 CFR §22.355, §22.235, §27.54; RSS-132(4.3), RSS-133(6.3), RSS-139(6.3).

Procedures: A communication link was established between EUT and base station. The frequency error was monitored and measured by base station under variation of ambient temperature and variation of primary supply voltage..

Limit: The frequency stability of the transmitter shall be maintained within ±0.00025% (±2.5ppm) of the center frequency.

Environmental Conditions	Temperature	-10 ~ 50°C
	Relative Humidity	50%
	Atmospheric Pressure	1019mbar

Test Date : Sep 06 2010
Tested By : David Zhang

Results: Pass

Frequency Stability versus Temperature: The Frequency tolerance of the carrier signal shall be maintained within ± 0.00025% of the operating frequency over a temperature variation of -10ºC to +50ºC at normal supply voltage.

Test Result for GSM850, Channel 189 (mid channel)

Temperature (ºC)	Freq. Drift (Hz)	Freq. Deviation (Limit: ppm)	Pass/Fail
50	-13	<2.5	Pass
40	-8	<2.5	Pass
30	-11	<2.5	Pass
20	-9	<2.5	
10	-8	<2.5	Pass
0	-15	<2.5	Pass
-10	-13	<2.5	Pass
-20	N/A	<2.5	N/A
-30	N/A	<2.5	N/A

Note : Manufacturer declares that operating temperature range of EUT is -10 ~ +50ºC.

Frequency Stability versus Input Voltage: The The Frequency tolerance of the carrier signal shall be maintained within ± 0.00025% of the operating frequency , the frequency of the transmitter was measured at 85% and at 115% of the rated power supply voltage at 20ºC environmental temperature.

Measured Voltage ±15% of nominal (DC)	Freq. Drift (Hz)	Freq. Deviation (Limit: 0.01%)	Pass/Fail
3.30	-11	<2.5	Pass
3.70	-6	<2.5	Pass
4.25	-9	<2.5	Pass

Test Result for GPRS850, Channel 189 (mid channel)

Temperature (ºC)	Freq. Drift (Hz)	Freq. Deviation (Limit: ppm)	Pass/Fail
50	-6	<2.5	Pass
40	-3	<2.5	Pass
30	-3	<2.5	Pass
20	-5	<2.5	
10	-3	<2.5	Pass
0	-5	<2.5	Pass
-10	-5	<2.5	Pass
-20	N/A	<2.5	N/A
-30	N/A	<2.5	N/A

Note : Manufacturer declares that operating temperature range of EUT is -10 ~ +50ºC.

Frequency Stability versus Input Voltage: The The Frequency tolerance of the carrier signal shall be maintained within ± 0.00025% of the operating frequency , the frequency of the transmitter was measured at 85% and at 115% of the rated power supply voltage at 20ºC environmental temperature.

Measured Voltage ±15% of nominal (DC)	Freq. Drift (Hz)	Freq. Deviation (Limit: 0.01%)	Pass/Fail
3.30	-5	<2.5	Pass
3.70	-4	<2.5	Pass
4.25	-4	<2.5	Pass

Test Result for EGPRS850, Channel 189 (mid channel)

Temperature (ºC)	Freq. Drift (Hz)	Freq. Deviation (Limit: ppm)	Pass/Fail
50	-15	<2.5	Pass
40	-11	<2.5	Pass
30	-7	<2.5	Pass
20	-14	<2.5	
10	-8	<2.5	Pass
0	-14	<2.5	Pass
-10	-16	<2.5	Pass
-20	N/A	<2.5	N/A
-30	N/A	<2.5	N/A

Note : Manufacturer declares that operating temperature range of EUT is -10 ~ +50ºC.

Frequency Stability versus Input Voltage: The The Frequency tolerance of the carrier signal shall be maintained within ± 0.00025% of the operating frequency , the frequency of the transmitter was measured at 85% and at 115% of the rated power supply voltage at 20ºC environmental temperature.

Measured Voltage ±15% of nominal (DC)	Freq. Drift (Hz)	Freq. Deviation (Limit: 0.01%)	Pass/Fail
3.30	-14	<2.5	Pass
3.70	-16	<2.5	Pass
4.25	-13	<2.5	Pass

Test Result for GSM1900, Channel 661 (mid channel)

Temperature (ºC)	Freq. Drift (Hz)	Freq. Deviation (Limit: ppm)	Pass/Fail
50	-21	<2.5	Pass
40	-19	<2.5	Pass
30	-23	<2.5	Pass
20	-18	<2.5	
10	-17	<2.5	Pass
0	-15	<2.5	Pass
-10	-24	<2.5	Pass
-20	N/A	<2.5	N/A
-30	N/A	<2.5	N/A

Note : Manufacturer declares that operating temperature range of EUT is -10 ~ +50ºC.

Frequency Stability versus Input Voltage: The The Frequency tolerance of the carrier signal shall be maintained within ± 0.00025% of the operating frequency , the frequency of the transmitter was measured at 85% and at 115% of the rated power supply voltage at 20ºC environmental temperature.

Measured Voltage ±15% of nominal (DC)	Freq. Drift (Hz)	Freq. Deviation (Limit: 0.01%)	Pass/Fail
3.30	-23	<2.5	Pass
3.70	-20	<2.5	Pass
4.25	-17	<2.5	Pass

Test Result for GPRS1900, Channel 661 (mid channel)

Temperature (ºC)	Freq. Drift (Hz)	Freq. Deviation (Limit: ppm)	Pass/Fail
50	-15	<2.5	Pass
40	-16	<2.5	Pass
30	-12	<2.5	Pass
20	-14	<2.5	
10	-6	<2.5	Pass
0	-14	<2.5	Pass
-10	-18	<2.5	Pass
-20	N/A	<2.5	N/A
-30	N/A	<2.5	N/A

Note : Manufacturer declares that operating temperature range of EUT is -10 ~ +50ºC.

Frequency Stability versus Input Voltage: The The Frequency tolerance of the carrier signal shall be maintained within ± 0.00025% of the operating frequency , the frequency of the transmitter was measured at 85% and at 115% of the rated power supply voltage at 20ºC environmental temperature.

Measured Voltage ±15% of nominal (DC)	Freq. Drift (Hz)	Freq. Deviation (Limit: 0.01%)	Pass/Fail
3.30	-15	<2.5	Pass
3.70	-16	<2.5	Pass
4.25	-21	<2.5	Pass

Test Result for EGPRS1900, Channel 661 (mid channel)

Temperature (ºC)	Freq. Drift (Hz)	Freq. Deviation (Limit: ppm)	Pass/Fail
50	-35	<2.5	Pass
40	-26	<2.5	Pass
30	-21	<2.5	Pass
20	-33	<2.5	
10	-27	<2.5	Pass
0	-34	<2.5	Pass
-10	-35	<2.5	Pass
-20	N/A	<2.5	N/A
-30	N/A	<2.5	N/A

Note : Manufacturer declares that operating temperature range of EUT is -10 ~ +50ºC.

Frequency Stability versus Input Voltage: The The Frequency tolerance of the carrier signal shall be maintained within ± 0.00025% of the operating frequency , the frequency of the transmitter was measured at 85% and at 115% of the rated power supply voltage at 20ºC environmental temperature.

Measured Voltage ±15% of nominal (DC)	Freq. Drift (Hz)	Freq. Deviation (Limit: 0.01%)	Pass/Fail
3.30	-42	<2.5	Pass
3.70	-35	<2.5	Pass
4.25	-37	<2.5	Pass

Test Result for WCDMA Band V, Channel 4182 (mid channel)

Temperature (ºC)	Freq. Drift (Hz)	Freq. Deviation (Limit: ppm)	Pass/Fail
50	-17	<2.5	Pass
40	-10	<2.5	Pass
30	-15	<2.5	Pass
20	-13	<2.5	
10	-9	<2.5	Pass
0	-17	<2.5	Pass
-10	-15	<2.5	Pass
-20	N/A	<2.5	N/A
-30	N/A	<2.5	N/A

Note : Manufacturer declares that operating temperature range of EUT is -10 ~ +50ºC.

Frequency Stability versus Input Voltage: The The Frequency tolerance of the carrier signal shall be maintained within ± 0.00025% of the operating frequency , the frequency of the transmitter was measured at 85% and at 115% of the rated power supply voltage at 20ºC environmental temperature.

Measured Voltage ±15% of nominal (DC)	Freq. Drift (Hz)	Freq. Deviation (Limit: 0.01%)	Pass/Fail
3.30	-14	<2.5	Pass
3.70	-10	<2.5	Pass
4.25	-18	<2.5	Pass

Test Result for WCDMA Band IV, Channel 1412 (mid channel)

Temperature (ºC)	Freq. Drift (Hz)	Freq. Deviation (Limit: ppm)	Pass/Fail
50	-42	<2.5	Pass
40	-35	<2.5	Pass
30	-27	<2.5	Pass
20	-38	<2.5	Pass
10	-21	<2.5	Pass
0	-32	<2.5	Pass
-10	-27	<2.5	Pass
-20	N/A	<2.5	N/A
-30	N/A	<2.5	N/A

Note : Manufacturer declares that operating temperature range of EUT is -10 ~ +50ºC.

Frequency Stability versus Input Voltage: The The Frequency tolerance of the carrier signal shall be maintained within ± 0.00025% of the operating frequency , the frequency of the transmitter was measured at 85% and at 115% of the rated power supply voltage at 20ºC environmental temperature.

Measured Voltage ±15% of nominal (DC)	Freq. Drift (Hz)	Freq. Deviation (Limit: 0.01%)	Pass/Fail
3.30	-35	<2.5	Pass
3.70	-32	<2.5	Pass
4.25	-38	<2.5	Pass

Test Result for WCDMA Band II, Channel 9400 (mid channel)

Temperature (ºC)	Freq. Drift (Hz)	Freq. Deviation (Limit: ppm)	Pass/Fail
50	45	<2.5	Pass
40	37	<2.5	Pass
30	31	<2.5	Pass
20	42	<2.5	
10	41	<2.5	Pass
0	39	<2.5	Pass
-10	47	<2.5	Pass
-20	N/A	<2.5	N/A
-30	N/A	<2.5	N/A

Note : Manufacturer declares that operating temperature range of EUT is -10 ~ +50ºC.

Frequency Stability versus Input Voltage: The The Frequency tolerance of the carrier signal shall be maintained within ± 0.00025% of the operating frequency , the frequency of the transmitter was measured at 85% and at 115% of the rated power supply voltage at 20ºC environmental temperature.

Measured Voltage ±15% of nominal (DC)	Freq. Drift (Hz)	Freq. Deviation (Limit: 0.01%)	Pass/Fail
3.30	39	<2.5	Pass
3.70	38	<2.5	Pass
4.25	43	<2.5	Pass

5.9 Receiver Spurious Emissions

1. Conducted Measurement
EUT was set for low , mid, high channel with modulated mode and highest RF output power.
The spectrum analyzer was connected to the antenna terminal.

2 Conducted Emissions Measurement Uncertainty
All test measurements carried out are traceable to national standards. The uncertainty of the measurement at a confidence level of approximately 95% (in the case where distributions are normal), with a coverage factor of 2, in the range 30MHz – 40GHz is ±1.5dB.

3 Environmental Conditions

Temperature	23°C
Relative Humidity	50%
Atmospheric Pressure	1019mbar

4 Test Date : Aug 18-Sep 13 2010
Tested By :David Zhang

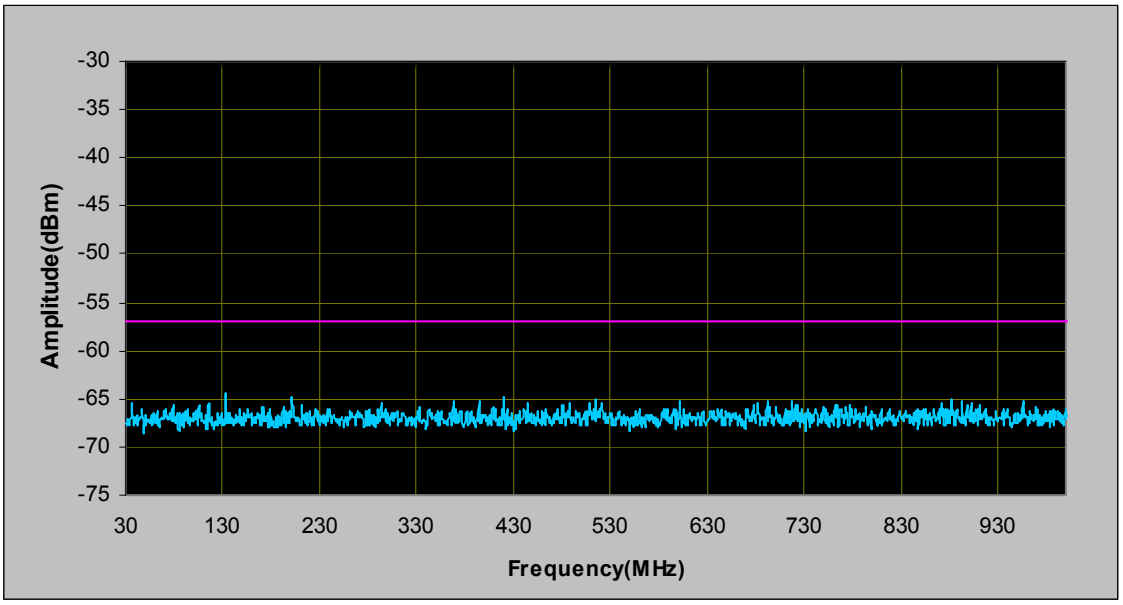
Standard Requirement: RSSGen(4.8)

Procedures: The conducted spurious emissions were measured conducted using a spectrum analyzer at mid channels. the search for spurious emissions shall be from the lowest frequency internally generated or used in the receiver (e.g. local oscillator, intermediate or carrier frequency), or 30 MHz, whichever is the higher, to at least 3 times the highest tuneable or local oscillator frequency, whichever is the higher, without exceeding 40 GHz. Receiver spurious emissions at any discrete frequency shall not exceed 2 nanowatts in the band 30-1000 MHz, or 5 nanowatts above 1 GHz..

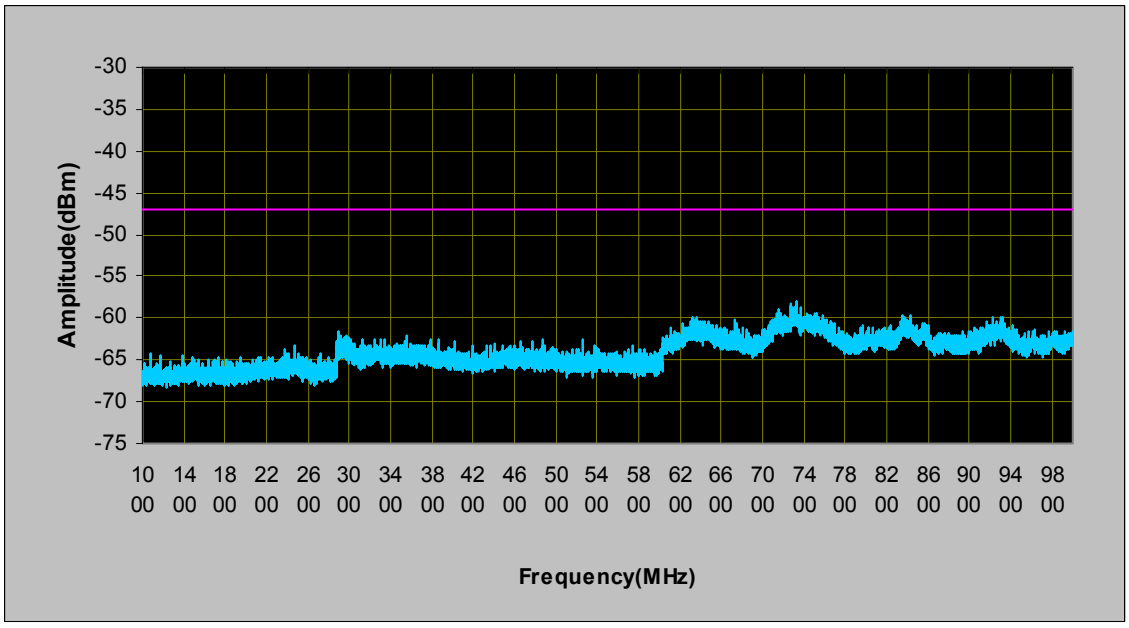
Test Result: Pass

Note : All test modes were verified, but only the worst cast test results measured under GPRS850(mid channel) and WCDMA Band II (mid channel) mode were shown.

Configuration mode : GPRS850, channel 189

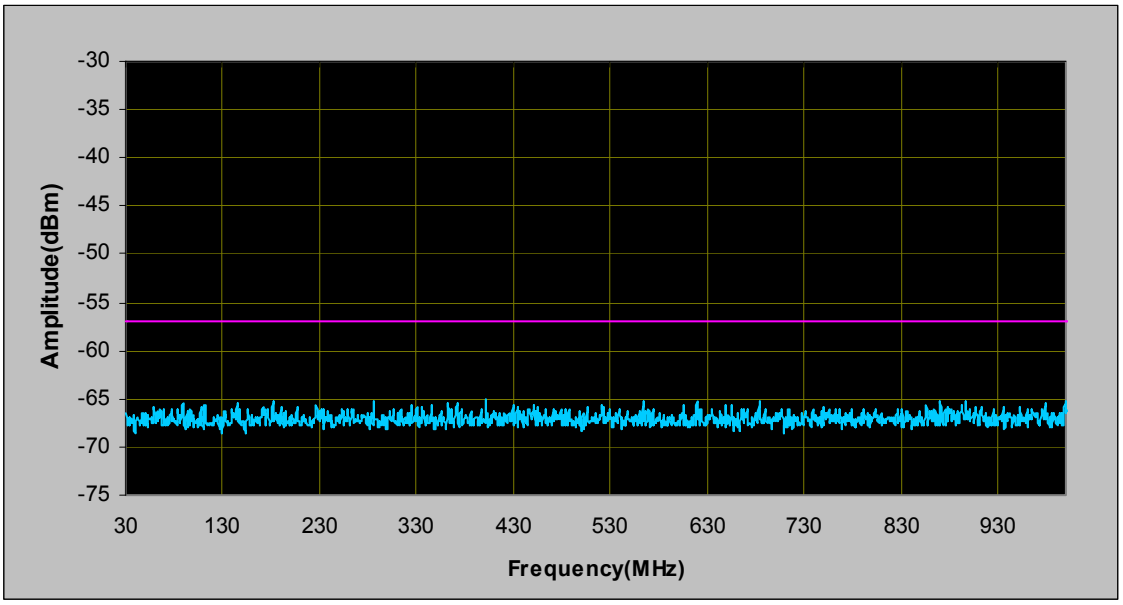


Receiver Spurious Emission (GPRS850, channel 189) Plot- 1

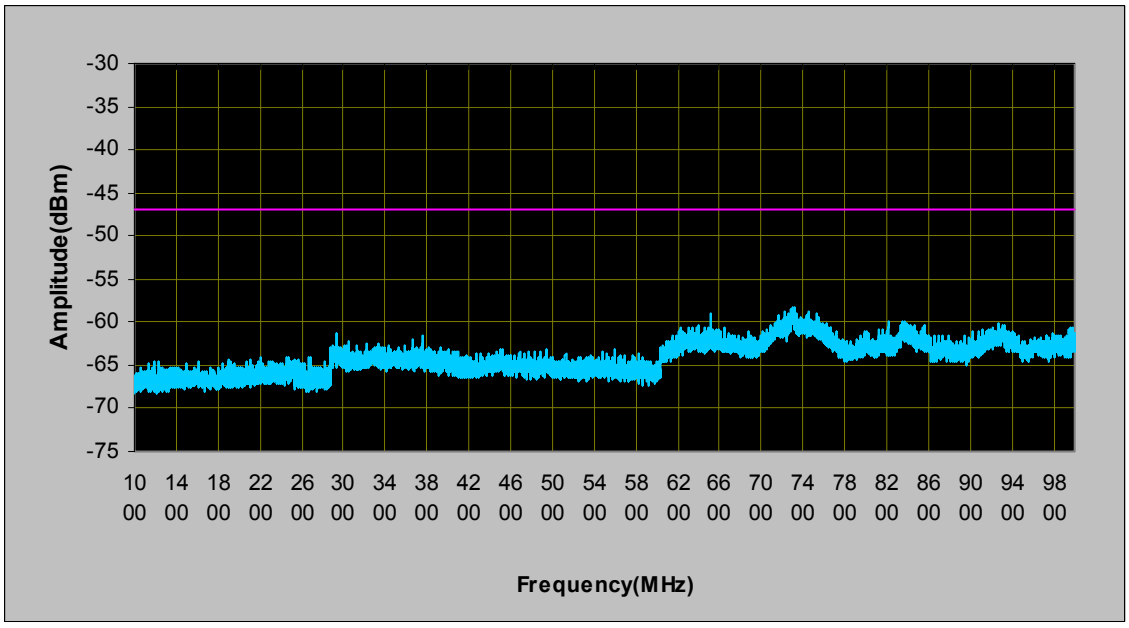


Receiver Spurious Emission (GPRS850, channel 189) Plot- 2

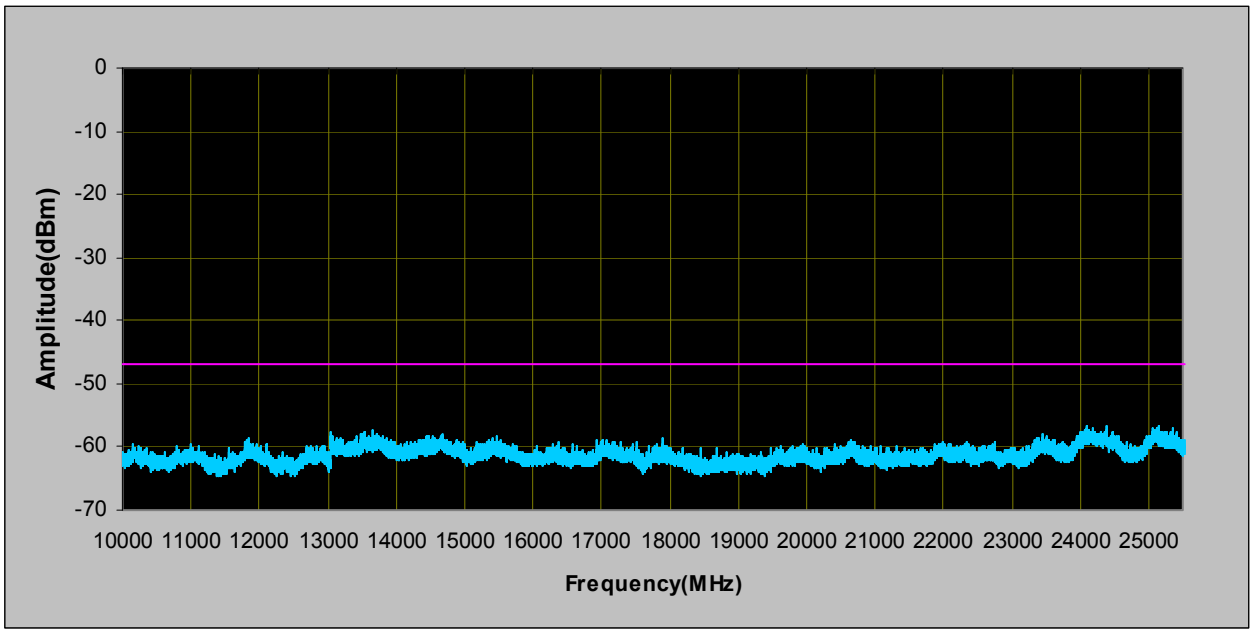
Configuration mode : WCDMA Band II, channel 9400



Receiver Spurious Emission (WCDMA Band II, channel 9400) Plot- 1



Receiver Spurious Emission (WCDMA Band II, channel 9400) Plot- 2



Receiver Spurious Emission (WCDMA Band II, channel 9400) Plot- 3

Annex A. TEST INSTRUMENT & METHOD

Annex A.i. TEST INSTRUMENTATION & GENERAL PROCEDURES

Instrument	Model	Calibration Due
AC Conducted Emissions		
R&S EMI Test Receiver	ESIB40	05/19/2011
R&S LISN	ESH2-Z5	05/18/2011
CHASE LISN	MN2050B	05/18/2011
Universal Radio Communication Tester	CMU200	02/22/2012
Radiated Emissions		
Spectrum Analyzer	8564E	05/19/2011
EMI Receiver	ESIB 40	05/18/2011
R&S LISN	ESH2-Z5	05/18/2011
CHASE LISN	MN2050B	05/19/2011
Antenna(1 ~18GHz)	3115	6/2/2011
Antenna (30MHz~2GHz)	JB1	6/1/2011
Chamber	3m	12/4/2010
Pre-Amplifier(1 ~ 26GHz)	8449	5/17/2011
Horn Antenna (18~40GHz)	AH-840	7/23/2013
Microwave Pre-Amp (18~40GHz)	PA-840	Every 2000 Hours
Universal Radio Communication Tester	CMU200	02/22/2011
Signal Analyzer	FSIQ7	5/5/2011
Temperature/Humidity Chamber	1007H	6/1/2012

Note: Functional Verification

Annex A.ii. CONDUCTED EMISSIONS TEST DESCRIPTION

Test Set-up

1. The EUT and supporting equipment were set up in accordance with the requirements of the standard on top of a 1.5m x 1m x 0.8m high, non-metallic table, as shown in Annex B.

2. The power supply for the EUT was fed through a 50Ω/50μH EUT LISN, connected to filtered mains.

3. The RF OUT of the EUT LISN was connected to the EMI test receiver via a low-loss coaxial cable.

4. All other supporting equipments were powered separately from another main supply.

Test Method

1. The EUT was switched on and allowed to warm up to its normal operating condition.

2. A scan was made on the NEUTRAL line (for AC mains) or Earth line (for DC power) over the required frequency range using an EMI test receiver.

3. High peaks, relative to the limit line, were then selected.

4. The EMI test receiver was then tuned to the selected frequencies and the necessary measurements made with a receiver bandwidth setting of 10 KHz. For FCC tests, only Quasi-peak measurements were made; while for CISPR/EN tests, both Quasi-peak and Average measurements were made.

5. Steps 2 to 4 were then repeated for the LIVE line (for AC mains) or DC line (for DC power).

Sample Calculation Example

At 20 MHz limit = 250 μV = 47.96 dBμV

Transducer factor of LISN, pulse limiter & cable loss at 20 MHz = 11.20 dB

Q-P reading obtained directly from EMI Receiver = 40.00 dBμV
(Calibrated for system losses)

Therefore, Q-P margin = 47.96 – 40.00 = 7.96 i.e. **7.96 dB below limit**

Annex A. iii RADIATED EMISSIONS TEST DESCRIPTION

EUT Characterisation

EUT characterisation, over the frequency range from 30MHz to 1GHz (for FCC tests, until the 5th harmonic for operating frequencies ≥ 108MHz), was done in order to minimise radiated emissions testing time while still maintaining high confidence in the test results.

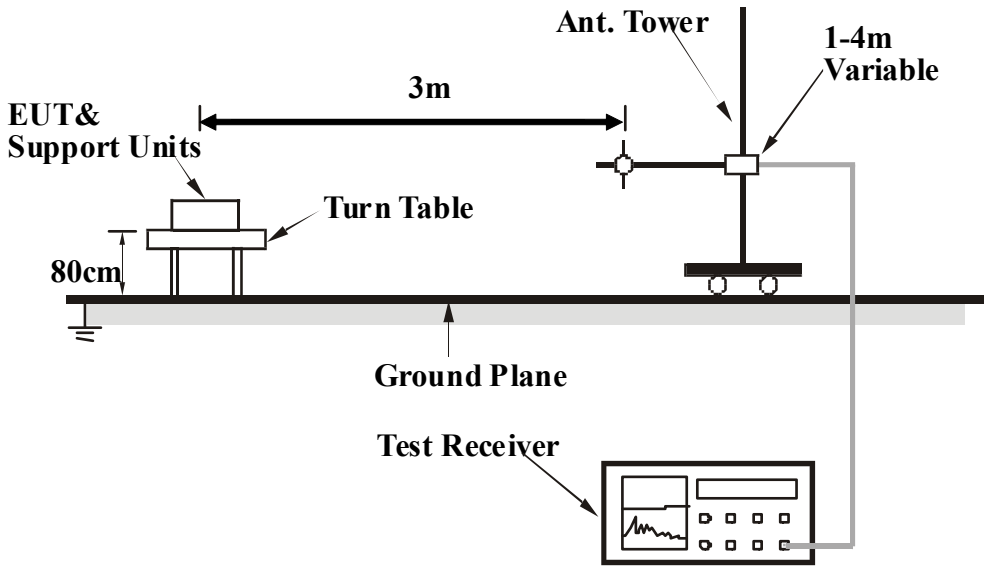
The EUT was placed in the chamber, at a height of about 0.8m on a turntable. Its radiated emissions frequency profile was observed, using a spectrum analyzer /receiver with the appropriate broadband antenna placed 3m away from the EUT. Radiated emissions from the EUT were maximised by rotating the turntable manually, changing the antenna polarisation and manipulating the EUT cables while observing the frequency profile on the spectrum analyzer / receiver. Frequency points at which maximum emissions occurred, clock frequencies and operating frequencies were then noted for the formal radiated emissions test at the Open Area Test Site (OATS).

Test Set-up

1. The EUT and supporting equipment were set up in accordance with the requirements of the standard on top of a 1.5m X 1.0m X 0.8m high, non-metallic table as shown in Annex B.

2. The filtered power supply for the EUT and supporting equipment were tapped from the appropriate power sockets located on the turntable.

3. The relevant broadband antenna was set at the required test distance away from the EUT and supporting equipment boundary.



Test Method

The following procedure was performed to determine the maximum emission axis of EUT:
1. With the receiving antenna is H polarization, rotate the EUT in turns with three orthogonal axes to determine the axis of maximum emission.
2. With the receiving antenna is V polarization, rotate the EUT in turns with three orthogonal axes to determine the axis of maximum emission.
3. Compare the results derived from above two steps. So, the axis of maximum emission from EUT was determined and the configuration was used to perform the final measurement.

Final Radiated Emission Measurement
1. Setup the configuration according to figure 1. Turn on EUT and make sure that it is in normal function.

2. For emission frequencies measured below 1 GHz, a pre-scan is performed in a shielded chamber to determine the accurate frequencies of higher emissions will be checked on a open test site. As the same purpose, for emission frequencies measured above 1 GHz, a pre-scan also be performed with a 1 meter measuring distance before final test.

3. For emission frequencies measured below and above 1 GHz, set the spectrum analyzer on a 100 kHz and 1 MHz resolution bandwidth respectively for each frequency measured in step 2.

4. The search antenna is to be raised and lowered over a range from 1 to 4 meters in horizontally polarized orientation. Position the highness when the highest value is indicated on spectrum analyzer, then change the orientation of EUT on test table over a range from 0 ◦ to 360 ◦ with a speed as slow as possible, and keep the azimuth that highest emission is indicated on the spectrum analyzer. Vary the antenna position again and record the highest value as a final reading.

5. Repeat step 4 until all frequencies need to be measured were complete.

6. Repeat step 5 with search antenna in vertical polarized orientations.

During the radiated emission test, the Spectrum Analyzer was set with the following configurations:

Frequency Band (MHz)	Function	Resolution bandwidth	Video Bandwidth
30 to 1000	Peak	100 kHz	100 kHz
Above 1000	Peak	1 MHz	1 MHz
	Average	1 MHz	10 Hz

Sample Calculation Example

The field strength is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain (if any) from the measured reading. For the limit is employed average value, therefore the peak value can be transferred to average value by subtracting the duty factor. The basic equation with a sample calculation is as follows:

Peak = Reading + Corrected Factor

Where:
Corr. Factor = Antenna Factor + Cable Factor - Amplifier Gain (if any)
And the average value is

Average = Peak Value + Duty Factor or
Set RBW = 1MHz, VBW = 10Hz.

Note:
If the measured frequencies are fall in the restricted frequency band, the limit employed must be quasi peak value when frequencies are below or equal to 1 GHz. And the measuring instrument is set to quasi peak detector function.

Annex B EUT AND TEST SETUP PHOTOGRAPHS

Please see the attachment

Annex C. TEST SETUP AND SUPPORTING EQUIPMENT

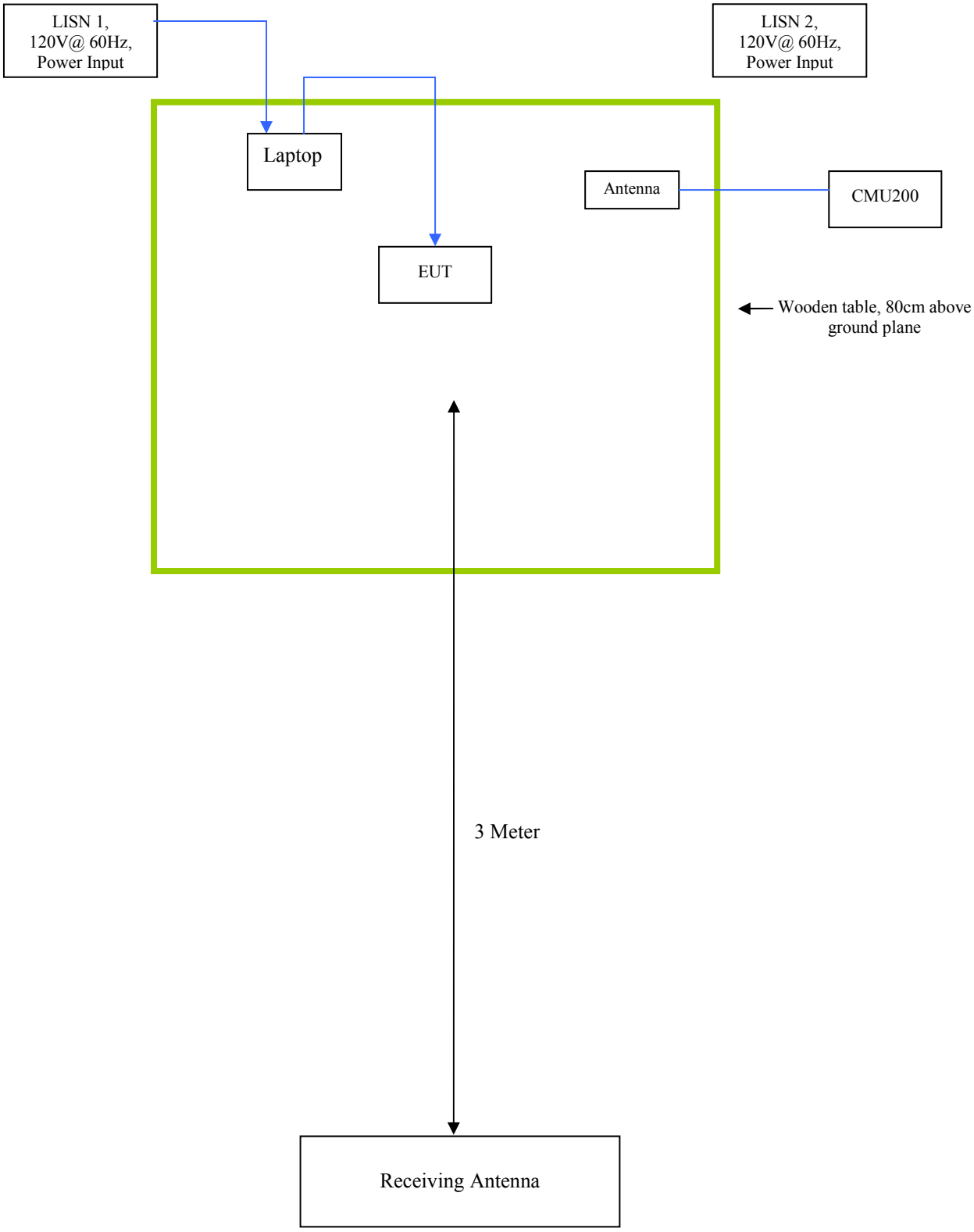
EUT TEST CONDITIONS

Annex C. i. SUPPORTING EQUIPMENT DESCRIPTION

The following is a description of supporting equipment and details of cables used with the EUT.

Equipment Description (Including Brand Name)	Model & Serial Number	Cable Description (List Length, Type & Purpose)
PC Laptop / DELL	Latitude D600	Shielded USB Cable < 1 meter (From PC to EUT)

Block Configuration Diagram for Radiated Emission



Annex C.ii. EUT OPERATING CONDITIONS

The following is the description of how the EUT is exercised during testing.

Test	Description Of Operation
Emissions Testing	The EUT was communicating with base station and set to work at maximum output power.
Others Testing	The EUT was communicating with base station and set to work at maximum output power.

Annex D User Manual, Block Diagram, Circuit Diagram

Please see attachment

Annex E. SIEMIC ACCREDITATION CERTIFICATES

SIEMIC ACCREDITATION DETAILS: A2LA Certificate Number: 2742.01

THE AMERICAN ASSOCIATION FOR LABORATORY ACCREDITATION

ACCREDITED LABORATORY

A2LA has accredited

SIEMIC LABORATORIES
San Jose, CA

for technical competence in the field of

Electrical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 *General Requirements for the Competence of Testing and Calibration Laboratories*. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (*refer to joint ISO-ILAC-IAF Communique dated 18 June 2005*).

Presented this 11th day of July 2008.

President
For the Accreditation Council
Certificate Number 2742.01
Valid to September 30, 2010

For the tests or types of tests to which this accreditation applies, please refer to the laboratory's Electrical Scope of Accreditation.

THE AMERICAN ASSOCIATION FOR LABORATORY ACCREDITATION

ACCREDITED PRODUCT CERTIFICATION BODY

A2LA has accredited

SIEMIC INC.
San Jose, CA

for technical competence as a

Product Certification Body

This product certification body is accredited in accordance with the recognized International Standard ISO/IEC Guide 65:1996 *General requirements for bodies operating product certification systems*. This accreditation demonstrates technical competence for a defined scope and the operation of a quality management system for a Telecommunications Certification Body (TCB) meeting FCC (U.S.), IDA (Singapore) and IC (Canada) requirements.

Presented this 9th day of January 2009.

President
For the Accreditation Council
Certificate Number: 2742.02
Valid to: September 30, 2010

For the product certification schemes to which this accreditation applies, please refer to the certification body's Scope of Accreditation.

SCOPE OF ACCREDITATION TO ISO/IEC GUIDE 65:1996

SIEMIC INC.
2206 Ringwood Ave.
San Jose, CA 95131
Mr. Snell Leong (Authorized Representative) Phone: 408 526 1188
www.siemic.com

PRODUCT CERTIFICATION CONFORMITY ASSESSMENT BODY (CAB)

Valid to: September 30, 2010 Certificate Number: 2742.02

In recognition of the successful completion of the A2LA Certification Body Accreditation Program evaluation, including the US Federal Communications Commission (FCC), Industry Canada (IC) and Singapore (IDA) requirements for the indicated types of product certifications, accreditation is granted to this organization to perform the following product certification schemes:

Economy	Scope
Federal Communication Commission - (FCC)	
Unlicensed Radio Frequency Devices	A1, A2, A3, A4
Licensed Radio Frequency Devices	B1, B2, B3, B4
Telephone Terminal Equipment	C

**Please refer to FCC TCB Program Roles and Responsibilities, v04, released February 14, 2008 detailing scope, roles and responsibilities: http://www.fcc.gov/oet/ea/FCC-Overview-TCB-Program.pdf*

Industry Canada - (IC)	
Radio	All Radio Standards Specifications (RSS) in Category I Equipment Standards List Radio

**Please refer to Industry Canada (IC) website at: http://www.ic.gc.ca/epic/site/smt-gst.nsf/en/h_sf03542e.html*

IDA – Singapore	
Line Terminal Equipment	All Technical Specifications for Line Terminal Equipment – Table 1 of IDA MRA Recognition Scheme: 2008, Annex 2
Radio-Communication Equipment	All Technical Specifications for Radio-Communication Equipment – Table 2 of IDA MRA Recognition Scheme: 2008, Annex 2

**Please refer to Info-Communication Development Authority (IDA) Singapore website at: http://www.ida.gov.sg/doc/Policies%20and%20Regulation/Policies_and_Regulation_Level2/20080609145318/MRARecScheme.pdf*

SIEMIC ACCREDITATION DETAILS: FCC Test Site Registration No. 783147

FEDERAL COMMUNICATIONS COMMISSION

Laboratory Division
7435 Oakland Mills Road
Columbia, MD 21046

December 20, 2007

Registration Number: 783147

SIEMIC Laboratories
2206 Ringwood Avenue,
San Jose, CA 95131

Attention: Leslie Bai

Re: Measurement facility located at San Jose
3 & 10 meter site
Date of Renewal: December 20, 2007

Dear Sir or Madam:

Your request for renewal of the registration of the subject measurement facility has been received. The information submitted has been placed in your file and the registration has been renewed. The name of your organization will remain on the list of facilities whose measurement data will be accepted in conjunction with applications for Certification under Parts 15 or 18 of the Commission's Rules. Please note that the file must be updated for any changes made to the facility and the registration must be renewed at least every three years.

Measurement facilities that have indicated that they are available to the public to perform measurement services on a fee basis may be found on the FCC website www.fcc.gov under E-Filing, OET Equipment Authorization Electronic Filing, Test Firms.

Sincerely,

Phyllis Parrish
Industry Analyst

SIEMIC ACCREDITATION DETAILS: Industry of Canada CAB ID : US0160

UNITED STATES DEPARTMENT OF COMMERCE
National Institute of Standards and Technology
Gaithersburg, Maryland 20899-

March 4, 2009

Mr. Leslie Bai
SIEMIC, Inc.
2206 Ringwood Avenue
San Jose, CA 95131

Dear Mr. Bai:

NIST is pleased to inform you that your laboratory has been recognized by Industry Canada (IC), under the Asia Pacific Economic Cooperation for Telecommunications Equipment Mutual Recognition Arrangement (APEC Tel MRA). Your laboratory is now designated to act as a Conformity Assessment Body (CAB) under Appendix B, **Phase I** Procedures, of the APEC Tel MRA. The pertinent information about your laboratory's designation is as follows:

CAB Name:	SIEMIC, Inc.
Physical Location:	2206 Ringwood Avenue, San Jose, CA 95131 USA
Identification No.:	US0160
Recognized Scope:	CS-03 Part I, II, V, VI, VII and VIII

You may submit test data to IC to verify that the equipment to be imported into Canada satisfies the applicable requirements. The designation of your organization will remain in force as long as its accreditation for the designated scope remains valid and comply with the designation requirements.

Recognized CABs are listed on the NIST website at http://ts.nist.gov/mra. Please contact Ms. Ramona Saar at (301) 975-5521 or ramona.saar@nist.gov if you have any questions.

Sincerely,

David F. Alderman
Group Leader, Standards Coordination and Conformity Group
Standards Services Division

Enclosure

cc: CAB Program Manager

NIST

SIEMIC ACCREDITATION DETAILS: Industry of Canada Test Site Registration No. 4842-1

Industry Canada Industrie Canada

May 27, 2010

OUR FILE: 46405-4842
Submission No: 140856

Siemic Inc.
2206 Ringwood Ave
San Jose, CA, 95131
USA

Attention: Snell Leong

Dear Sir/Madame:

The Bureau has received your application for the renewal of a 3m alternative test site. Be advised that the information received was satisfactory to Industry Canada. The following number(s) is now associated to the site(s) for which registration / renewal was sought (**4842A-1**). Please reference the appropriate site number in the body of test reports containing measurements performed on the site. In addition, please keep for your records the following information;

- Your primary code is: **4842**

- The company number associated to the site(s) located at the above address is: **4842A**

Furthermore, to obtain or renew a unique site number, the applicant shall demonstrate that the site has been accredited to ANSI C63.4-2003 or later. A scope of accreditation indicating the accreditation by a recognized accreditation body to ANSI C63.4-2003 or later shall be accepted. Please indicate in a letter the previous assigned site number if applicable and the type of site (example: 3 metre OATS or 3 metre chamber). If the test facility is not accredited to ANSI C63.4-2003 or later, the test facility shall submit test data demonstrating full compliance with the ANSI standard. The Bureau will evaluate the filing to determine if recognition shall be granted.

The frequency for re-validation of the test site and the information that is required to be filed or retained by the testing party shall comply with the requirements established by the accrediting organization. However, in all cases, test site re-validation shall occur on an interval not to exceed two years. There is no fee or form associated with an OATS filing. OATS submissions are encouraged to be submitted electronically to the Bureau using the following URL;
http://strategis.ic.gc.ca/epic/internet/inceb-bhst.nsf/en/h_tt00052e.html.

If you have any questions, you may contact the Bureau by e-mail at certification.bureau@ic.gc.ca Please reference our file and submission number above for all correspondence.

Yours sincerely,

Dalwinder Gill
For: Wireless Laboratory Manager
Certification and Engineering Bureau
3701 Carling Ave., Building 94
P.O. Box 11490, Station "H"
Ottawa, Ontario K2H 8S2
Email: dalwinder.gill@ic.gc.ca
Tel. No. (613) 998-8363
Fax. No. (613) 990-4752

SIEMIC ACCREDITATION DETAILS: FCC DOC CAB Recognition : US1109

FEDERAL COMMUNICATIONS COMMISSION

Laboratory Division
7435 Oakland Mills Road
Columbia, MD 21046

August 28, 2008

Siemic Laboratories
2206 Ringwood Ave.,
San Jose, CA 95131

Attention: Leslie Bai

Re: Accreditation of Siemic Laboratories
Designation Number: US1109
Test Firm Registration #: 540430

Dear Sir or Madam:

We have been notified by American Association for Laboratory Accreditation that Siemic Laboratories has been accredited as a Conformity Assessment Body (CAB).

At this time Siemic Laboratories is hereby designated to perform compliance testing on equipment subject to Declaration Of Conformity (DOC) and Certification under Parts 15 and 18 of the Commission's Rules.

This designation will expire upon expiration of the accreditation or notification of withdrawal of designation.

Sincerely,

George Tannahill

George Tannahill
Electronics Engineer

SIEMIC ACCREDITATION DETAILS: Australia CAB ID : US0160

UNITED STATES DEPARTMENT OF COMMERCE
National Institute of Standards and Technology
Gaithersburg, Maryland 20899-

November 20, 2008

Mr. Leslie Bai
SIEMIC, Inc.
2206 Ringwood Avenue
San Jose, CA 95131

Dear Mr. Bai:

NIST is pleased to inform you that your laboratory has been recognized by the Australian Communications and Media Authority (ACMA) under the Asia Pacific Economic Cooperation for Telecommunications Equipment Mutual Recognition Arrangement (APEC Tel MRA). Your laboratory is now designated to act as a Conformity Assessment Body (CAB) under Appendix B, **Phase I** Procedures, of the APEC Tel MRA. The pertinent information about your laboratory's designation is as follows:

CAB Name:	Siemic, Inc.
Physical Location:	2206 Ringwood Avenue, San Jose, CA 95131
Identification No.:	US0160
Recognized Scope:	EMC: AS/NZS 4251.1 (until 5/31/2009), AS/NZS 4251.2 (until 5/31/2009), AS/NZS CISPR 11, AS/NZS CISPR 14.1, AS/NZS CISPR 22, AS/NZS 61000.6.3, AS/NZS 61000.6.4 Radiocommunications: AS/NZS 4281, AS/NZS 4268, AS/NZS 4280.1, AS/NZS 4280.2, AS/NZS 4295, AS/NZS 4582, AS/NZS 4583, AS/NZS 4769.1, AS/NZS 4769.2, AS/NZS 4770, AS/NZS 4771 Telecommunications: AS/ACIF S002:05, AS/ACIF S003:06, AS/ACIF S004:06, AS/ACIF S006:01, AS/ACIF S016:01, AS/ACIF S031:01, AS/ACIF S038:01, AS/ACIF S040:01, AS/ACIF S041:05, AS/ACIF S043.2:06, AS/NZS 60950.1

You may submit test data to ACMA to verify that the equipment to be imported into Australia satisfies the applicable requirements. The designation of your organization will remain in force as long as its accreditation for the designated scope remains valid and comply with the designation requirements. Recognized CABs are listed on the NIST website at http://ts.nist.gov/mra. Please contact Ms. Ramona Saar, at (301) 975-5521 or ramona.saar@nist.gov if you have questions.

Sincerely,

David F. Alderman

David F. Alderman
Group Leader, Standards Coordination and Conformity Group
Standards Services Division

Enclosure

cc: Snell Leong, Siemic, Inc.; Ramona Saar, NIST

NIST

SIEMIC ACCREDITATION DETAILS: Korea CAB ID: US0160

UNITED STATES DEPARTMENT OF COMMERCE
National Institute of Standards and Technology
Gaithersburg, Maryland 20899

October 1, 2008

Mr. Leslie Bai
SIEMIC, Inc.
2206 Ringwood Avenue
San Jose, CA 95131

Dear Mr. Bai:

NIST is pleased to inform you that your laboratory has been recognized by the Radio Research Agency (RRA) Korea Communications Commission (KCC) under the Asia Pacific Economic Cooperation for Telecommunications Equipment Mutual Recognition Arrangement (APEC Tel MRA). Your laboratory is now designated to act as a Conformity Assessment Body (CAB) under Appendix B, **Phase I** Procedures, of the APEC Tel MRA. The pertinent information about your laboratory's designation is as follows:

CAB Name:	SIEMIC, Inc.
Physical Location:	2206 Ringwood Avenue, San Jose, CA 95131
Identification No.:	US0160
Recognized Scope:	**EMI:** KCC Notice 2008-39, RRL Notice 2008-3: CA Procedures for EMI KN22: Test Method for EMI **EMS:** KCC Notice 2008-38, RRL Notice 2008-4: CA Procedures for EMS KN24, KN-61000-4-2, -4-3, -4-4, -4-5, -4-6, -4-8, -4-11: Test Method for EMS **Wireless:** RRL Notice 2008-26, RRL Notice 2008-2, RRL Notice 2008-10, RRL Notice 2007-49, RRL Notice 2007-20, RRL Notice 2007-21, RRL Notice 2007-80, RRL Notice 2004-68 **Wired:** President Notice 20664, RRL Notice 2007-30, RRL Notice 2008-7 with attachments 1, 3, 5, 6 President Notice 20664, RRL Notice 2008-7 with attachment 4

You may submit test data to RRA/KCC to verify that the equipment to be imported into Korea satisfies the applicable requirements. The designation of your organization will remain in force as long as its accreditation for the designated scope remains valid and comply with the designation requirements.

Recognized CABs are listed on the NIST website at http://ts.nist.gov/mra. If you have any questions please contact Ramona Saar at (301) 975-5521 or ramona.saar@nist.gov.

Sincerely,

David F. Alderman
Group Leader, Standards Coordination and Conformity Group
Standards Services Division

Enclosure

cc: Ramona Saar

NIST

SIEMIC ACCREDITATION DETAILS: Taiwan BSMI Accreditation No. SL2-IN-E-1130R

UNITED STATES DEPARTMENT OF COMMERCE
National Institute of Standards and Technology
Gaithersburg, Maryland 20899

May 3, 2006

Mr. Leslie Bai
SIEMIC Laboratories
2206 Ringwood Avenue
San Jose, CA 95131

Dear Mr. Bai:

I am pleased to inform you that your laboratory has been recognized by the Chinese Taipei's Bureau of Standards, Metrology, and Inspection (BSMI) under the Asia Pacific Economic Cooperation (APEC) Mutual Recognition Arrangement (MRA). Your laboratory is now designated to act as a Conformity Assessment Body (CAB) under Appendix B, **Phase I** Procedures, of the APEC Tel MRA. You may submit test data to BSMI to verify that the equipment to be imported into Chinese Taipei satisfies the applicable requirements. The designation of your organization will remain in force as long as its accreditation for the designated scope remains valid and comply with the designation requirements. The pertinent designation information is as follows:

- BSMI number: **SL2-IN-E-1130R** (Must be applied to the test reports)
- U.S Identification No: **US0160**
- Scope of Designation: **CNS 13438**
- Authorized signatory: **Mr. Leslie Bai**

The names of all recognized CABs will be posted on the NIST website at http://ts.nist.gov/mra. If you have any questions, please contact Mr. Dhillon at 301-975-5521. We appreciate your continued interest in our international conformity assessment activities.

Sincerely,

David F. Alderman
Group Leader, Standards Coordination and Conformity Group

cc: Jogindar Dhillon

NIST

SIEMIC ACCREDITATION DETAILS: Taiwan NCC CAB ID: US0160

UNITED STATES DEPARTMENT OF COMMERCE
National Institute of Standards and Technology
Gaithersburg, Maryland 20899-

November 25, 2008

Mr. LeslieBai
SIEMIC, Inc.
2206 Ringwood Avenue
San Jose, CA 95131

Dear Mr. Bai:

NIST is pleased to inform you that your laboratory has been recognized by the National Communications Commission (NCC) for the requested scope expansion under the Asia Pacific Economic Cooperation for Telecommunications Equipment Mutual Recognition Arrangement (APEC Tel MRA). Your laboratory is designated to act as a Conformity Assessment Body (CAB) under Appendix B, **Phase I** Procedures, of the APEC Tel MRA. The pertinent information about your laboratory's designation is as follows:

CAB Name:	SIEMIC, Inc.
Physical Location:	2206 Ringwood Avenue, San Jose, CA 95131
Identification No.:	US0160
Current Scope:	LP0002
Additional Scope:	PSTN01, ADSL01, ID0002, IS6100 and CNS 14336

You may submit test data to NCC to verify that the equipment to be imported into China satisfies the applicable requirements. The designation of your organization will remain in force as long as its accreditation for the designated scope remains valid and comply with the designation requirements.

Recognized CABs are listed on the NIST website at http://ts.nist.gov/mra. If you have any questions please contact Ramona Saar at (301) 975-5521 or ramona.saar@nist.gov.

Sincerely,

David F. Alderman
Group Leader, Standards Coordination and Conformity Group
Standards Services Division

Enclosure

cc: Ramona Saar

NIST

SIEMIC ACCREDITATION DETAILS: Mexico NOM Recognition

CANIETI

CÁMARA NACIONAL DE LA INDUSTRIA ELECTRÓNICA, DE TELECOMUNICACIONES E INFORMÁTICA

Laboratorio Valentin V. Rivero

México D.F. a 16 de octubre de 2006.

LESLIE BAI
DIRECTOR OF CERTIFICATION
SIEMIC LABORATORIES, INC.
ACCESSING GLOBAL MARKETS
P R E S E N T E

En contestación a su escrito de fecha 5 de septiembre del año en curso, le comento que estamos muy interesados en su intención de firmar un Acuerdo de Reconocimiento Mutuo, para lo cual adjunto a este escrito encontrara el Acuerdo en idioma Inglés y español prellenado de los cuales le pido sea revisado y en su caso corregido, para que si esta de acuerdo poder firmarlo para mandarlo con las autoridades Mexicanas para su visto bueno y así poder ejercer dicho acuerdo.

Aprovecho este escrito para mencionarle que nuestro intermediario gestor será la empresa Isabel de México, S. A. de C. V., empresa que ha colaborado durante mucho tiempo con nosotros en lo relacionado a la evaluación de la conformidad y que cuenta con amplia experiencia en la gestoría de la certificación de cumplimiento con Normas Oficiales Mexicanas de producto en México.

Me despido de usted enviándole un cordial saludo y esperando sus comentarios al Acuerdo que nos ocupa.

Atentamente.

Ing. Faustino Gómez González
Gerente Técnico del Laboratorio de
CANIETI.

Calzada "I"
Heroes de Churubusco
09100 México, D.F.
Tel. 5604-0936 con 12 líneas
Fax 5604-0982
www.canieti.org

SIEMIC ACCREDITATION DETAILS: Hong Kong OFTA CAB ID : US0160

UNITED STATES DEPARTMENT OF COMMERCE
National Institute of Standards and Technology
Gaithersburg, Maryland 20899-

December 8, 2008

Mr. Leslie Bai
SIEMIC, Inc.
2206 Ringwood Avenue
San Jose, CA 95131

Dear Mr. Bai:

NIST is pleased to inform you that your laboratory has been recognized by the Office of the Telecommunications Authority (OFTA) under the Asia Pacific Economic Cooperation for Telecommunications Equipment Mutual Recognition Arrangement (APEC Tel MRA). Your laboratory is now designated to act as a Conformity Assessment Body (CAB) under Appendix B, **Phase I** Procedures, of the APEC Tel MRA. The pertinent information about your laboratory's designation is as follows:

CAB Name:	SIEMIC, Inc.
Physical Location:	2206 Ringwood Avenue, San Jose, California 95131 USA
Identification No.:	US0160
Recognized Scope:	**Radio:** HKTA 1002, 1007, 1008, 1010, 1015, 1016, 1020, 1022, 1026, 1027, 1029, 1030, 1031, 1032, 1033, 1034, 1035, 1036, 1037, 1039, 1041, 1042, 1043, 1044, 1046, 1047, 1048, 1049, 1051 **Telecom:** HKTA 2011, 2012, 2013, 2014, 2017, 2018, 2022, 2024, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033

You may submit test data to OFTA to verify that the equipment to be imported into Hong Kong satisfies the applicable requirements. The designation of your organization will remain in force as long as its accreditation for the designated scope remains valid and comply with the designation requirements.

Recognized CABs are listed on the NIST website at http://ts.nist.gov/mra. If you have any questions please contact Ramona Saar at (301) 975-5521 or ramona.saar@nist.gov.

Sincerely,

David F. Alderman

David F. Alderman
Group Leader, Standards Coordination and Conformity Group
Standards Services Division

Enclosure

cc: Ramona Saar

NIST

SIEMIC ACCREDITATION DETAILS: Australia ACMA CAB ID: US0160

UNITED STATES DEPARTMENT OF COMMERCE
National Institute of Standards and Technology
Gaithersburg, Maryland 20899-

November 20, 2008

Mr. Leslie Bai
SIEMIC, Inc.
2206 Ringwood Avenue
San Jose, CA 95131

Dear Mr. Bai:

NIST is pleased to inform you that your laboratory has been recognized by the Australian Communications and Media Authority (ACMA) under the Asia Pacific Economic Cooperation for Telecommunications Equipment Mutual Recognition Arrangement (APEC Tel MRA). Your laboratory is now designated to act as a Conformity Assessment Body (CAB) under Appendix B, **Phase I** Procedures, of the APEC Tel MRA. The pertinent information about your laboratory's designation is as follows:

CAB Name:	Siemic, Inc.
Physical Location:	2206 Ringwood Avenue, San Jose, CA 95131
Identification No.:	US0160
Recognized Scope:	EMC: AS/NZS 4251.1 (until 5/31/2009), AS/NZS 4251.2 (until 5/31/2009), AS/NZS CISPR 11, AS/NZS CISPR 14.1, AS/NZS CISPR 22, AS/NZS 61000.6.3, AS/NZS 61000.6.4 Radiocommunications: AS/NZS 4281, AS/NZS 4268, AS/NZS 4280.1, AS/NZS 4280.2, AS/NZS 4295, AS/NZS 4582, AS/NZS 4583, AS/NZS 4769.1, AS/NZS 4769.2, AS/NZS 4770, AS/NZS 4771 Telecommunications: AS/ACIF S002:05, AS/ACIF S003:06, AS/ACIF S004:06, AS/ACIF S006:01, AS/ACIF S016:01, AS/ACIF S031:01, AS/ACIF S038:01, AS/ACIF S040:01, AS/ACIF S041:05, AS/ACIF S043.2:06, AS/NZS 60950.1

You may submit test data to ACMA to verify that the equipment to be imported into Australia satisfies the applicable requirements. The designation of your organization will remain in force as long as its accreditation for the designated scope remains valid and comply with the designation requirements. Recognized CABs are listed on the NIST website at http://ts.nist.gov/mra. Please contact Ms. Ramona Saar, at (301) 975-5521 or ramona.saar@nist.gov if you have questions.

Sincerely,

David F. Alderman

David F. Alderman
Group Leader, Standards Coordination and Conformity Group
Standards Services Division

Enclosure

cc: Snell Leong, Siemic, Inc.; Ramona Saar, NIST

NIST

SIEMIC ACCREDITATION DETAILS: Australia NATA Recognition

Leslie Bai
SIEMIC, Inc.
2206 Ringwood Avenue
San Jose, CA 95131

November 4, 2008

Under Australian government legislation, the Australian Communications and Media Authority (ACMA) has determined the National Association of Testing Authorities, Australia (NATA) as an accreditation body as per Section 409(1) of the Telecommunications Act 1997 (Cth). Pursuant to Section 409(2) of the Telecommunications Act 1997 (Cth), I am pleased to advise that your laboratory has been determined as a Recognised Testing Authority (RTA).

This determination has been made on the basis of your accreditation by A2LA accreditation no. 2742.01 and the Mutual Recognition Agreement between NATA and A2LA. It is effective from 11 July 2008. RTA status applies only to the following standards and is contingent upon their continued inclusion in your laboratory's scope of accreditation.

AS/ACIF S002, AS/ACIF S003, AS/ACIF S004,
AS/ACIF S006, AS/ACIF S016, AS/ACIF S031,
AS/ACIF S038, AS/ACIF S041 and
AS/ACIF S043.2

As an RTA, your laboratory has the following obligations:
1. the laboratory shall continue to meet all of the accreditation criteria of A2LA;
2. the authorised representative of the laboratory shall notify NATA of changes to the staff or operations of the laboratory which would affect the performance of the tests for which the laboratory has been determined;
3. compliance of equipment shall be reported on test reports bearing the A2LA logo/endorsement.

Current information on the Australian Communications and Media Authority and regulatory requirements for telecommunications products within Australia can be obtained from the ACMA's web-site at "http://www.acma.gov.au". Further information about NATA may be gained by visiting "http://www.nata.asn.au".

Please note that AS/ACIF S040 and New Zealand standards do not form part of the RTA scheme.

Your RTA listing will appear on the NATA website shortly.

Kind Regards

Chris Norton.
Senior Scientific Officer
Measurement Science and Technology
National Association of Testing Authorities (NATA)
71-73 Flemington Road
North Melbourne Vic 3051
Australia
Ph: +61 3 9329 1633 Fx: +61 3 9326 5148
E-Mail: Christopher.Norton@nata.asn.au
Internet: www.nata.asn.au

SIEMIC ACCREDITATION DETAILS: VCCI Radiated Test Site Registration No. R-3083

VCCI Council

CERTIFICATE

Company: SIEMIC Inc.
<Member No. 3081 >

Facility: SIEMIC Inc.
(Radiation 3 meter site)

Location of Facility:
2206 Ringwood Avenue, San Jose, CA 95131 USA

This is to certify that the following measuring facility has been registered in accordance with the Rules for Voluntary Control Measures

Registration No.: R-3083
Date of Registration: June 12 , 2009
This Certificate is valid until September 30 , 2010

VCCI Council

SIEMIC ACCREDITATION DETAILS: VCCI Conducted (Main Port) Test Site Registration No. C-3421

VCCI Council

CERTIFICATE

Company: SIEMIC Inc.

<Member No. 3081 >

Facility: SIEMIC Inc.

(Main Ports Conducted Interference Measurement)

Location of Facility:

2206 Ringwood Avenue, San Jose, CA 95131 USA

This is to certify that the following measuring facility has been registered in accordance with the Rules for Voluntary Control Measures

Registration No.: C-3421

Date of Registration: June 12 , 2009

This Certificate is valid until September 30 , 2010

VCCI Council

SIEMIC ACCREDITATION DETAILS: VCCI Conducted (Telecom Port) Test Site Registration No. T-1597

VCCI Council

CERTIFICATE

Company: SIEMIC Inc.

<Member No. 3081 >

Facility: SIEMIC Inc.

(Telecominication Ports Conducted Interference Measurement)

Location of Facility:

2206 Ringwood Avenue, San Jose, CA 95131 USA

This is to certify that the following measuring facility has been registered in accordance with the Rules for Voluntary Control Measures

Registration No.: T-1597

Date of Registration: June 12 , 2009

This Certificate is valid until September 30 , 2010

VCCI Council