Test Report

Report Number: 30674061
Project Number: 3067406
November 5, 2004

Testing performed on the

GSM Fixed Wireless Phone
Model: FX1900xg
FCC ID: NJIFW1900
to
FCC Parts 22H, 24E and Part 15 Subpart B

for
CSI Wireless Inc.

A2LA Certificate Number: 1755-01

Test Performed by:	Test Authorized by:
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1.0 Introduction

1.1 Test Summary

FCC RULE	DESCRIPTION OF TEST	RESULT	PAGE
2.1046	RF Power Output	Complies	7
22.913, 24.232	ERP, EIRP	Complies	8
2.1047	Modulation Requirements	Not applicable	-
2.1049	Occupied Bandwidth, Emission Designator	Complies	10
2.1051, 22.901(d), 24.238(a)	Out of Band Emissions at Antenna Terminals	Complies	15
2.1053	Field Strength of Spurious Radiation	Complies	31
2.1055	Frequency Stability vs. Temperature	Complies	34
2.1055	Frequency Stability vs. Voltage	Complies	35
2.1091	RF Exposure evaluation	Complies	36

1.2 Product Description

The FX1900xg is a dual band GSM desktop phone which operates in the 824-849 MHz and 1850-1910 bands.

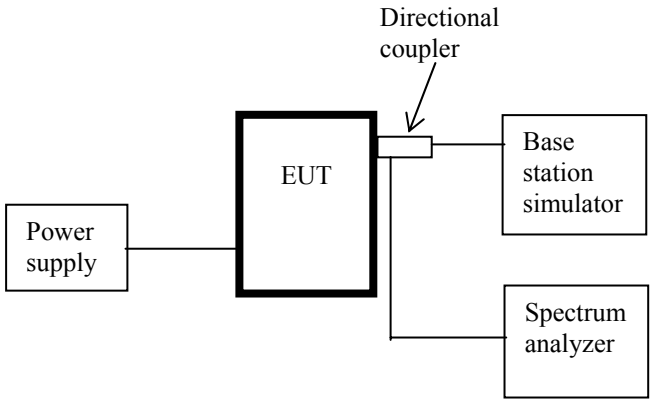
For more information, please refer to the attached product description.

Use of Product	Desktop Phone
Whether quantity (>1) production is planned	Yes
Cellular Phone standards	GSM
RF Output Power	32 dBm (Cell band) 29 dBm (PCS band)
Frequency Range	824-849 MHz; 1850-1910 MHz
Antenna (e) & Gain	0 dBi
Detachable antenna?	Yes
External input	Audio

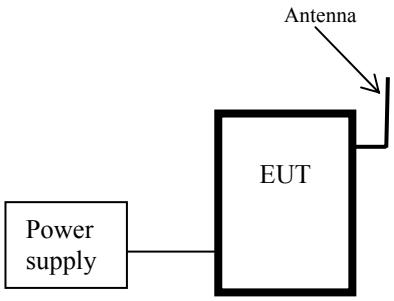
EUT receive date: October 25, 2004
EUT receive condition: The prototype version of the EUT was received in good condition with no apparent damage. As declared by the Applicant it is identical to the production units.
Test start date: October 25, 2004
Test completion date: November 4, 2004

1.3 Test Configuration

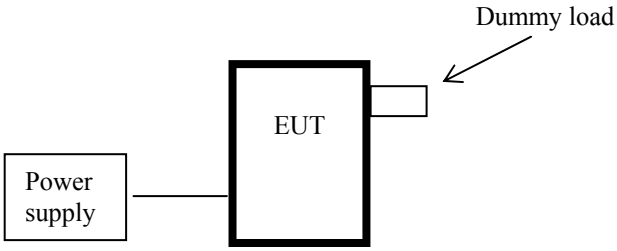
Antenna conducted measurements



ERP/EIRP measurements



Spurious Radiated emission measurements



1.4 Related Submittal(s) Grants

None

2.0 RF Power Output
FCC 2.1046

2.1 Test Procedure

The transmitter output was connected to a Base Station Simulator (BSS). The transmitter conducted output power was recorded from the BSS display.

Tests were performed at three frequencies (low, middle, and high channels) in Cellular in PCS bands.

2.2 Test Equipment

R & S model CMU 200 Universal Radio Communication Tester (Base Station Simulator).

2.3 Test Results

Channel	Frequency MHz	Measured Output Power dBm
Cellular Band		
128	825.2	32.2
189	836.4	32.2
251	848.8	32.3
PCS band		
512	1850.2	29.0
661	1880.0	28.9
810	1909.8	28.9

3.0 Radiated Power

FCC 22.913

The Effective Radiated Power (ERP) of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.

FCC 24.232

The Equivalent Isotropic Radiated Power (EIRP) must not exceed 2 Watts.

3.1 Test Procedure

The EUT was positioned on a non-conductive turntable, 0.8m above the ground plane on an open test site. The radiated emission at the fundamental frequency was measured at 3m distance with a test antenna and spectrum analyzer. During the measurement, the resolution bandwidths of the spectrum analyzer was set to 300 kHz.

The highest emission level was recorded with the rotation of the turntable and the raising and lowering of the test antenna. The spectrum analyzer reading was recorded.

ERP in frequency band 824-849 MHz, and EIRP in frequency band 1851.25-1910 MHz were measured using a substitution method. The EUT was replaced by half-wave dipole (824-849 MHz) or horn antenna (1850-19010 MHz) connected to a signal generator. The spectrum analyzer reading was recorded and ERP/EIRP was calculated as follows:

$$ERP = U_1 - U_2 + V_g, ; \quad EIRP = U_1 - U_2 + V_g + G$$

Where U_1 & U_2 are spectrum analyzer readings in dBuV when measured field strength from EUT & generator accordingly; V_g is the generator output in dBm; G is the transmitting antenna gain.

3.2 Test Equipment

EMCO 3148 Log Periodic Antenna
EMCO 3115 Horn Antenna
CDI Robert's Antenna
Hewlett Packard 83732A signal generator
Rohde & Schwarz FSP 40 Spectrum Analyzer

3.3 Test Results

Complies	Refer to the data below

Frequency MHz	**SA Reading (EUT) dB(uV)**	**SA Reading (Signal Gen & Tuned Dipole) dB(uV)**	**Signal Generator Power dBm**	**ERP (EUT) dBm**
Cellular Band				
824.2	108.4	86.0	9.6	32.0
836.4	108.4	85.5	9.6	32.5
848.8	109.0	86.2	9.6	32.4
PCS Band				
Frequency MHz	**SA Reading (EUT) dB(uV)**	**SA Reading (Signal Gen & Horn Antenna) dB(uV)**	**Signal Gen. Power + Horn Antenna Gain dBm**	**EIRP (EUT) dBm**
1850.2	100.9	86.7	9.4	30.6
1880.0	100.1	86.7	9.4	29.8
1909.8	100.1	86.7	9.4	29.8

4.0 Occupied Bandwidth

FCC 2.1049

4.1 Test Procedure

A calibrated directional coupler was used to connect a BSS and a spectrum analyzer to the transmitter output The Occupied Bandwidth (defined as the 99% Power Bandwidth) was measured with the FSP 40 Spectrum Analyzer.

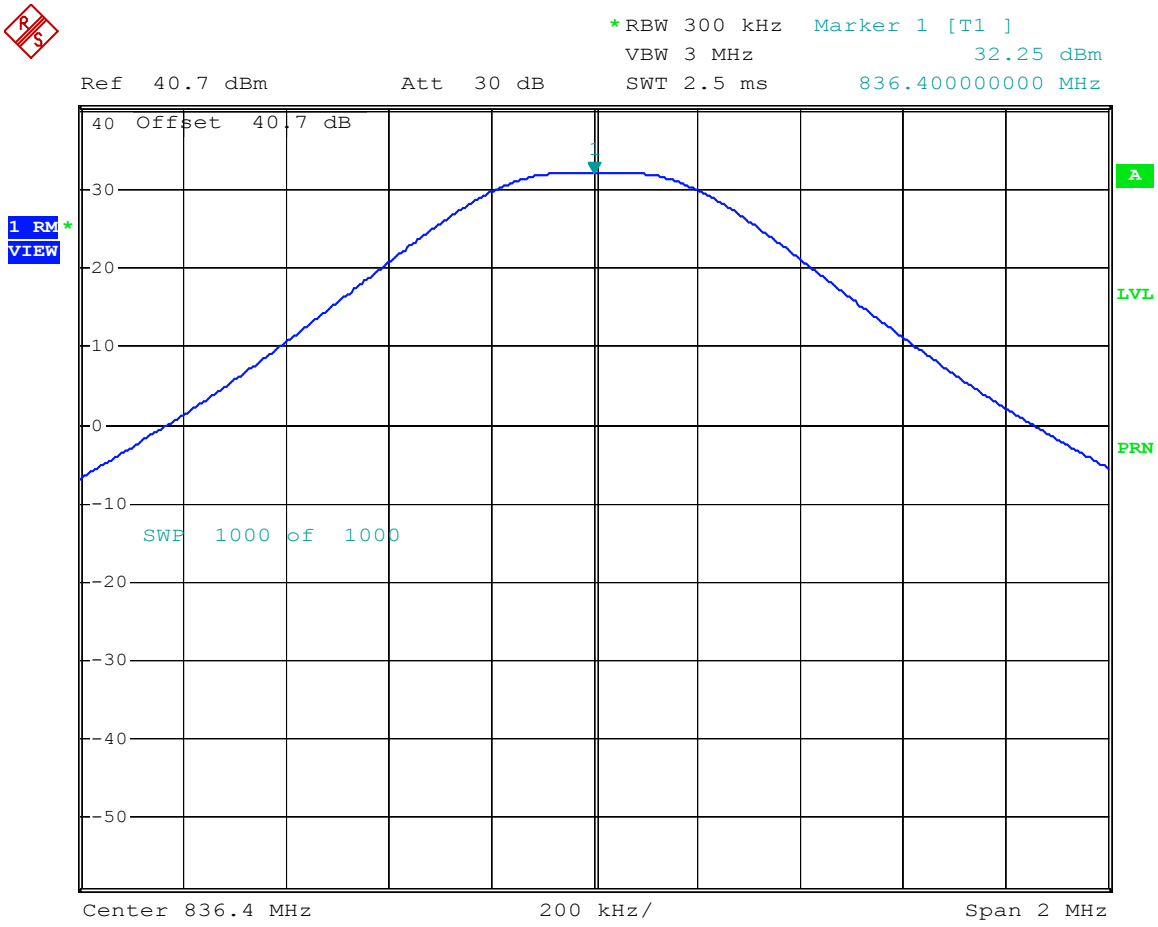
4.2 Test Equipment

Rohde & Schwarz model CMU 200 Universal Radio Communication Tester (Base Station Simulator).
Rohde & Schwarz FSP 40 Spectrum Analyzer.
Directional Coupler

4.3 Test Results

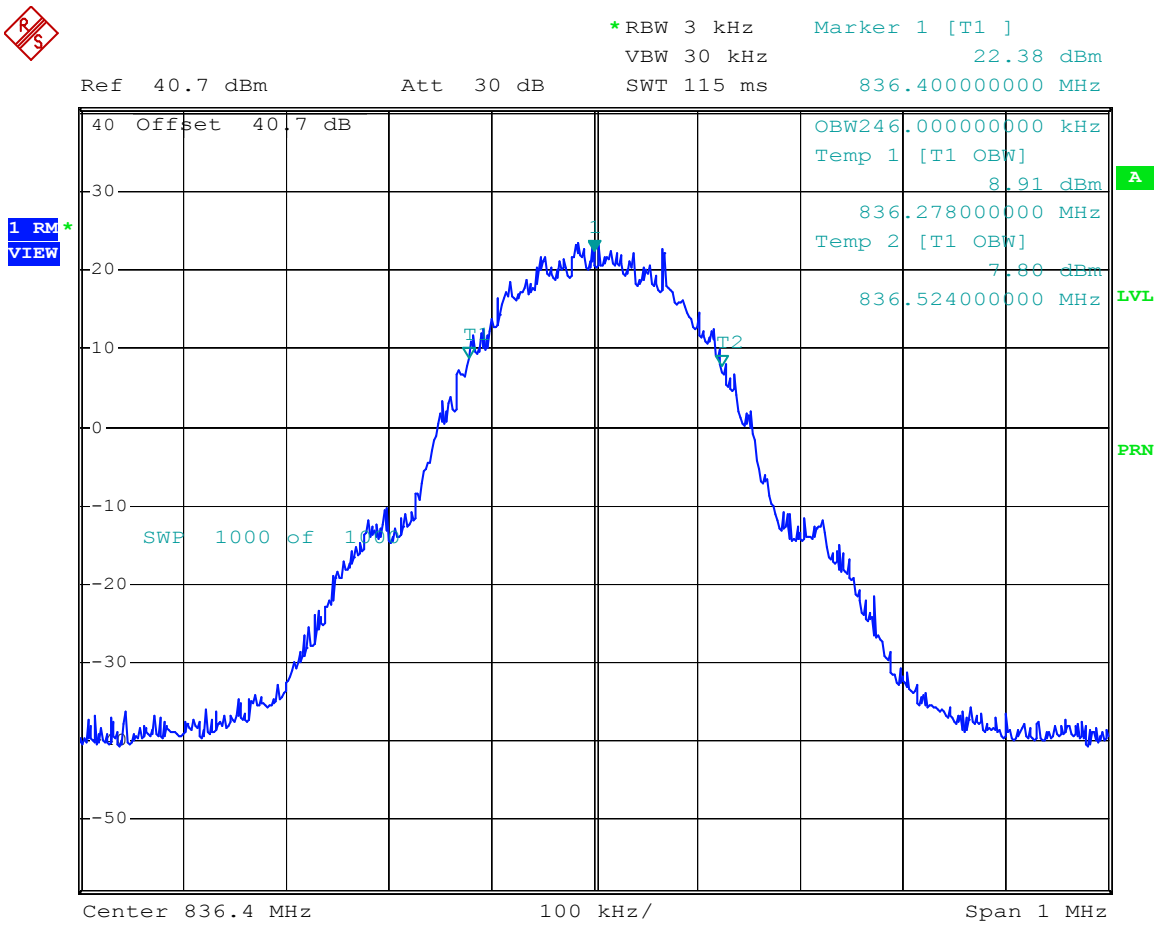
Refer to attached plots 4.1 - 4.4. The Emission Designator was determined as 250KGXW.

Plot 4.1



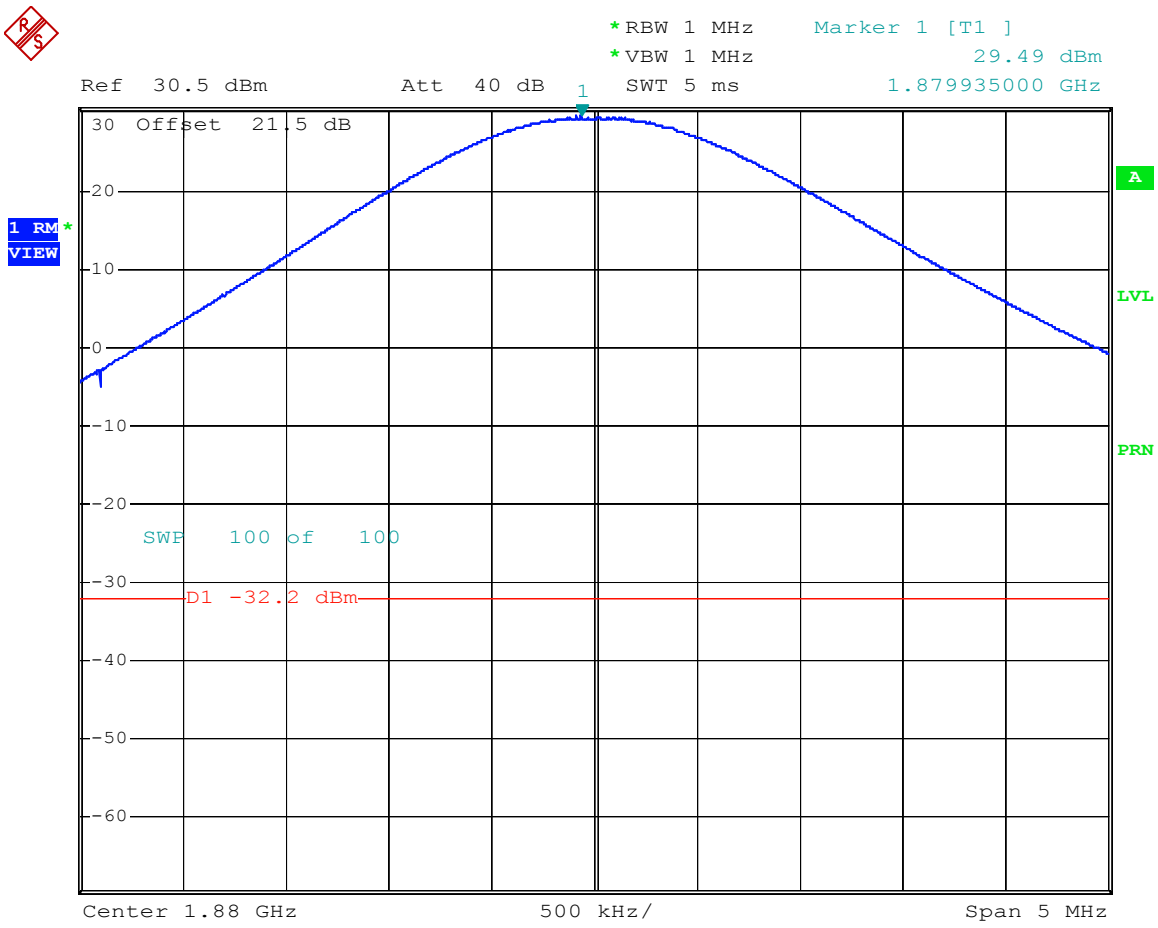
Comment: Reference level, GSM 850, Ch 189
Date: 26.OCT.2004 12:30:06

Plot 4.2



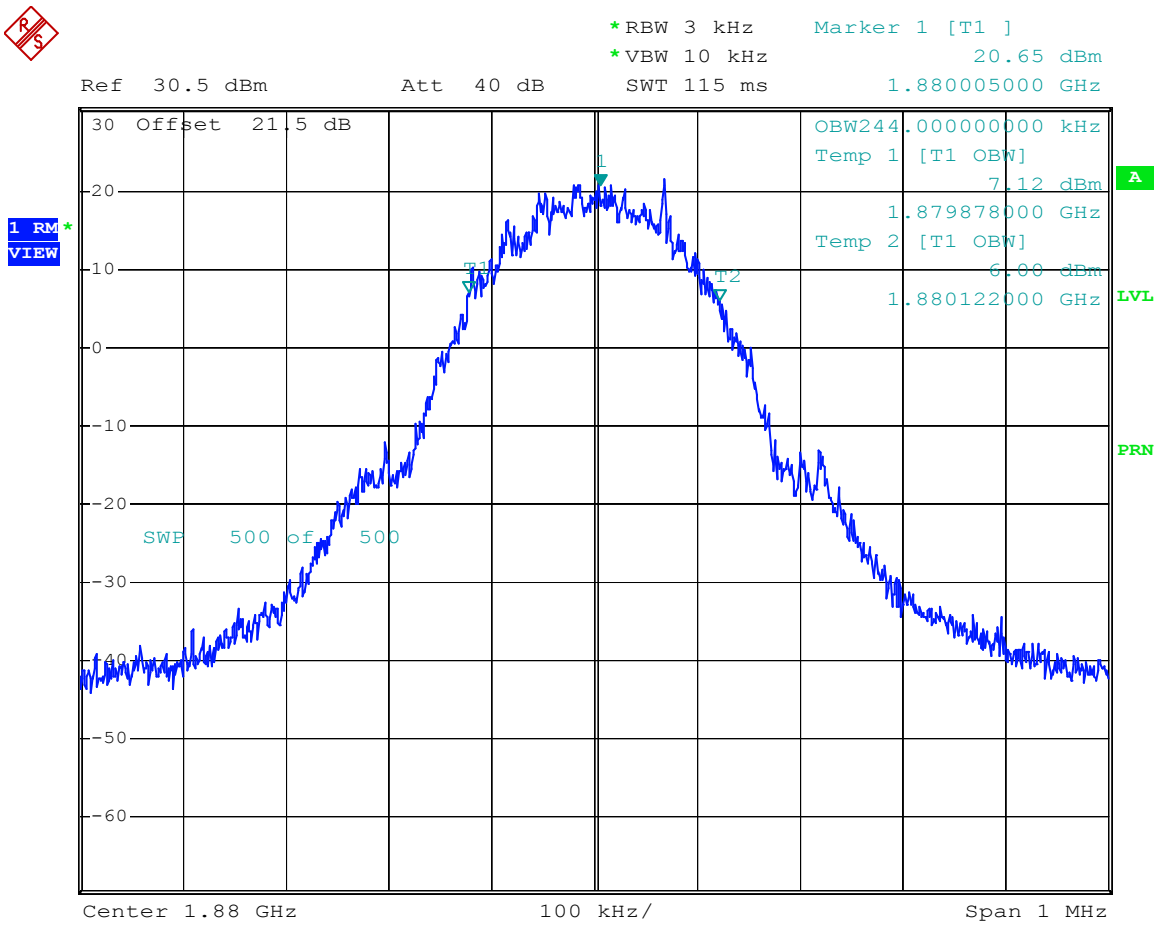
Comment: Occupied bandwidth, GSM 850, Ch 189
Date: 26.OCT.2004 12:33:52

Plot 4.3



Comment: Reference level, GSM 1900, Ch 661
Date: 26.OCT.2004 15:50:48

Plot 4.4



Comment: Occupied bandwidth, GSM 1900, Ch 661
Date: 26.OCT.2004 16:15:39

5.0 Out of Band Emissions at Antenna Terminals

FCC 22.901(d), 22.901(d), 22.917(f), 24.238(a)

Out of Band Emissions:

The mean power of emissions must be attenuated below the mean power of the unmodulated carrier (P) on any frequency outside the frequency band by at least (43 + 10 log P) dB.

5.1 Test Procedure

A calibrated directional coupler was used to connect a BSS and a spectrum analyzer to the transmitter output The antenna conducted emissions were measured with the FSP 40 Spectrum Analyzer.
Sufficient scans were taken to show the out-of-band emissions up to 10th harmonic.

For frequencies within 1 MHz above and below the band-edge frequencies, the spectrum analyzer resolution bandwidth (RBW) of 3 kHz was used. If for frequencies more than 1 MHz above and below the band-edge frequencies the RBW less than 1 MHz was used, The Bandwidth Correction Factor of 10Log(1 MHz/RBW) was applied.

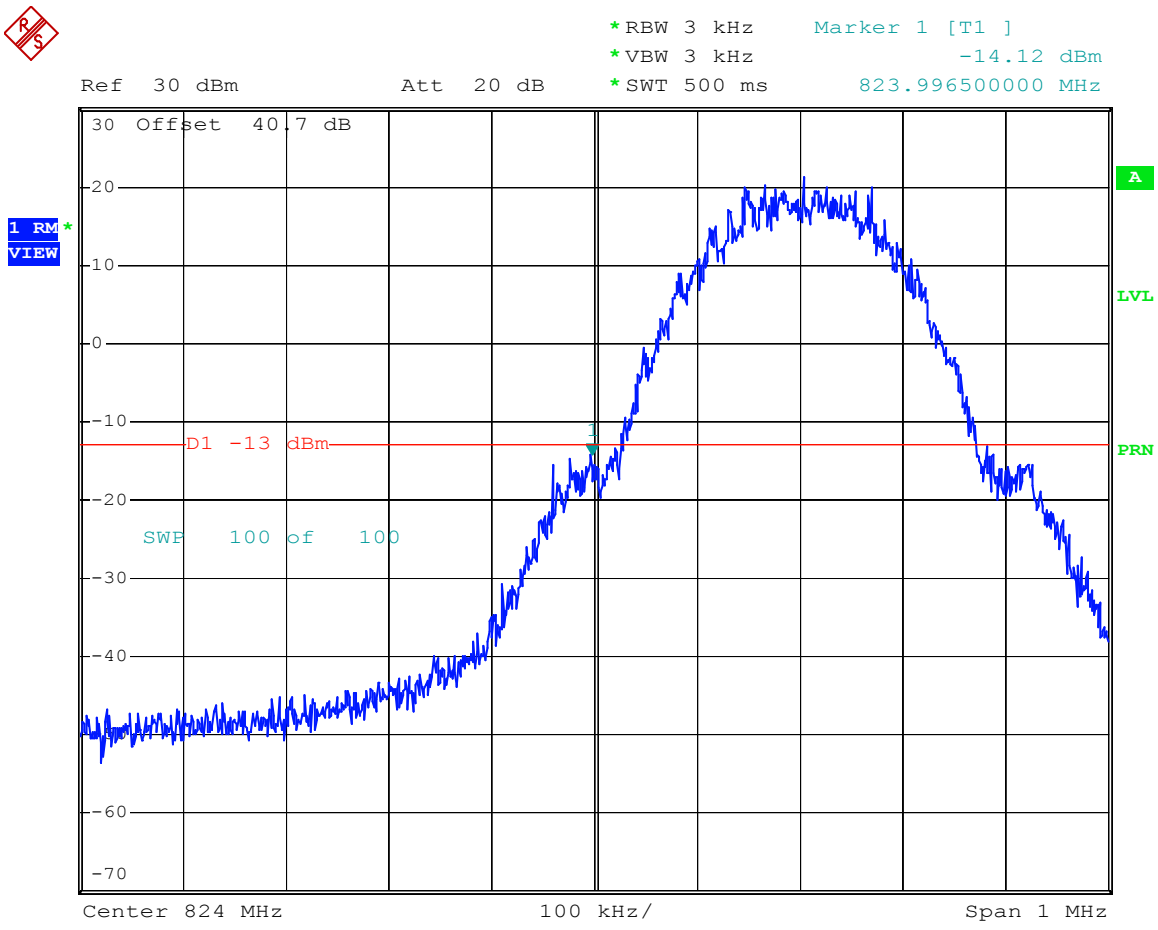
5.2 Test Equipment

Rohde & Schwarz model CMU 200 Universal Radio Communication Tester (Base Station Simulator).
Rohde & Schwarz FSP 40 Spectrum Analyzer.
Directional Coupler

5.3 Test Results

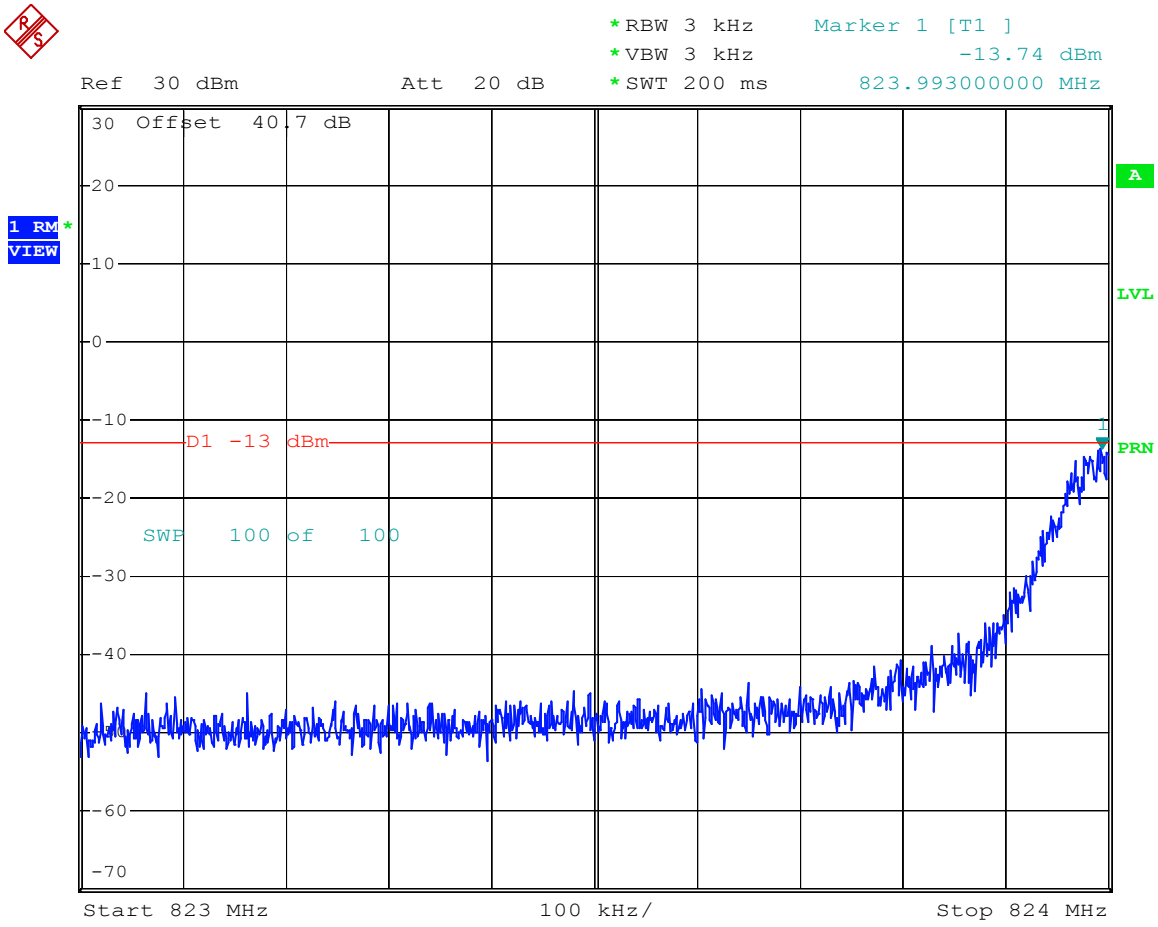
Complies	Refer to the following plots 5.1 – 5.15

Plot 5.1



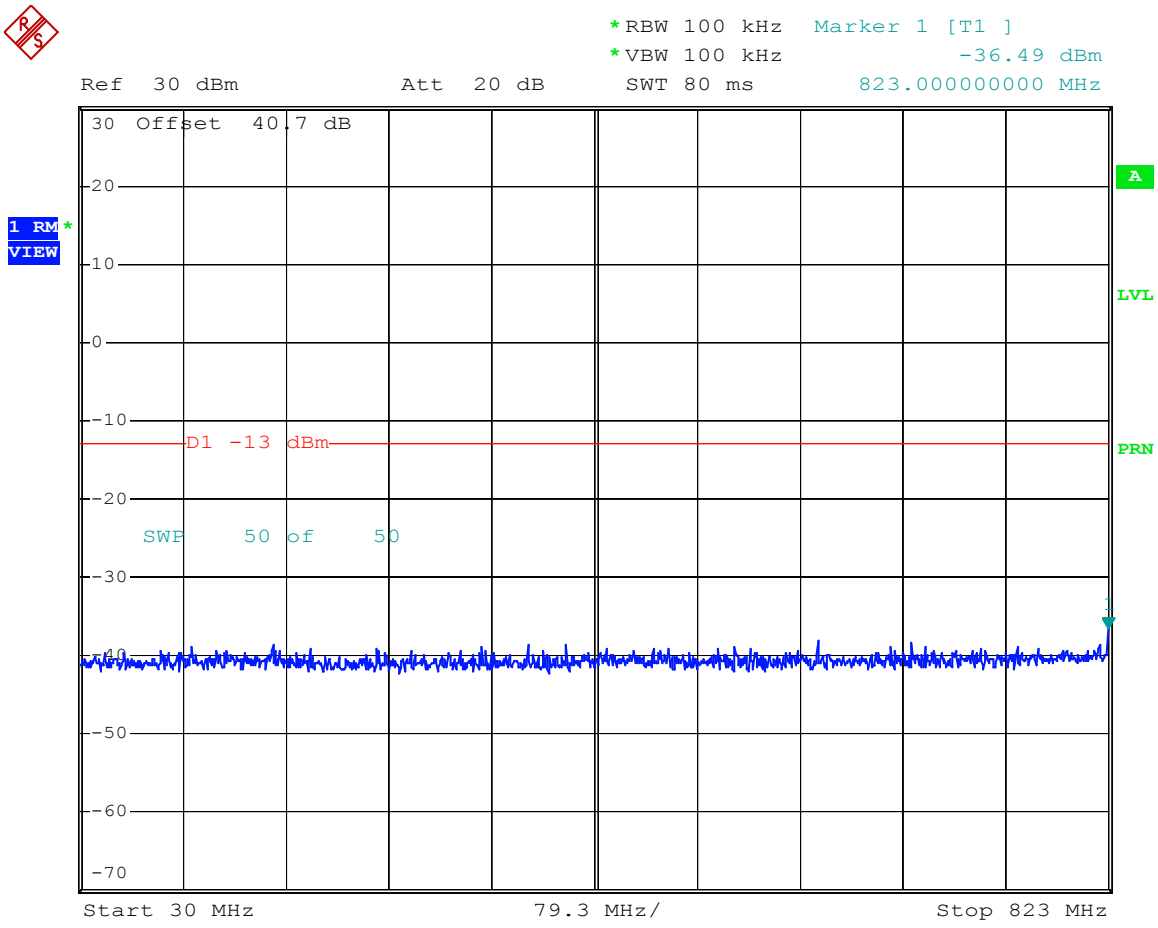
Comment: Lower band-edge, GSM 850, Ch 128
Date: 26.OCT.2004 13:13:16

Plot 5.2



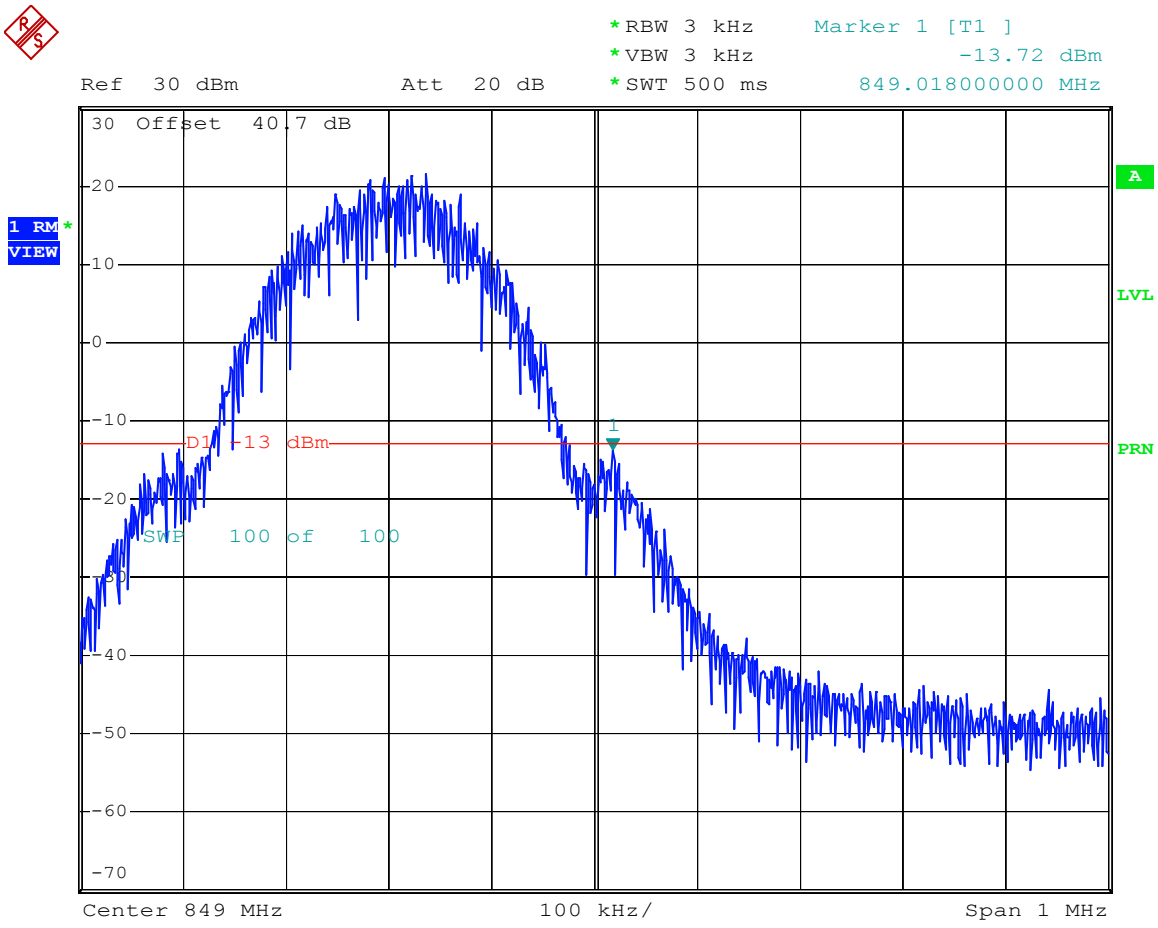
Comment: Out-of-band, GSM 850, Ch 128
Date: 26.OCT.2004 13:27:37

Plot 5.3



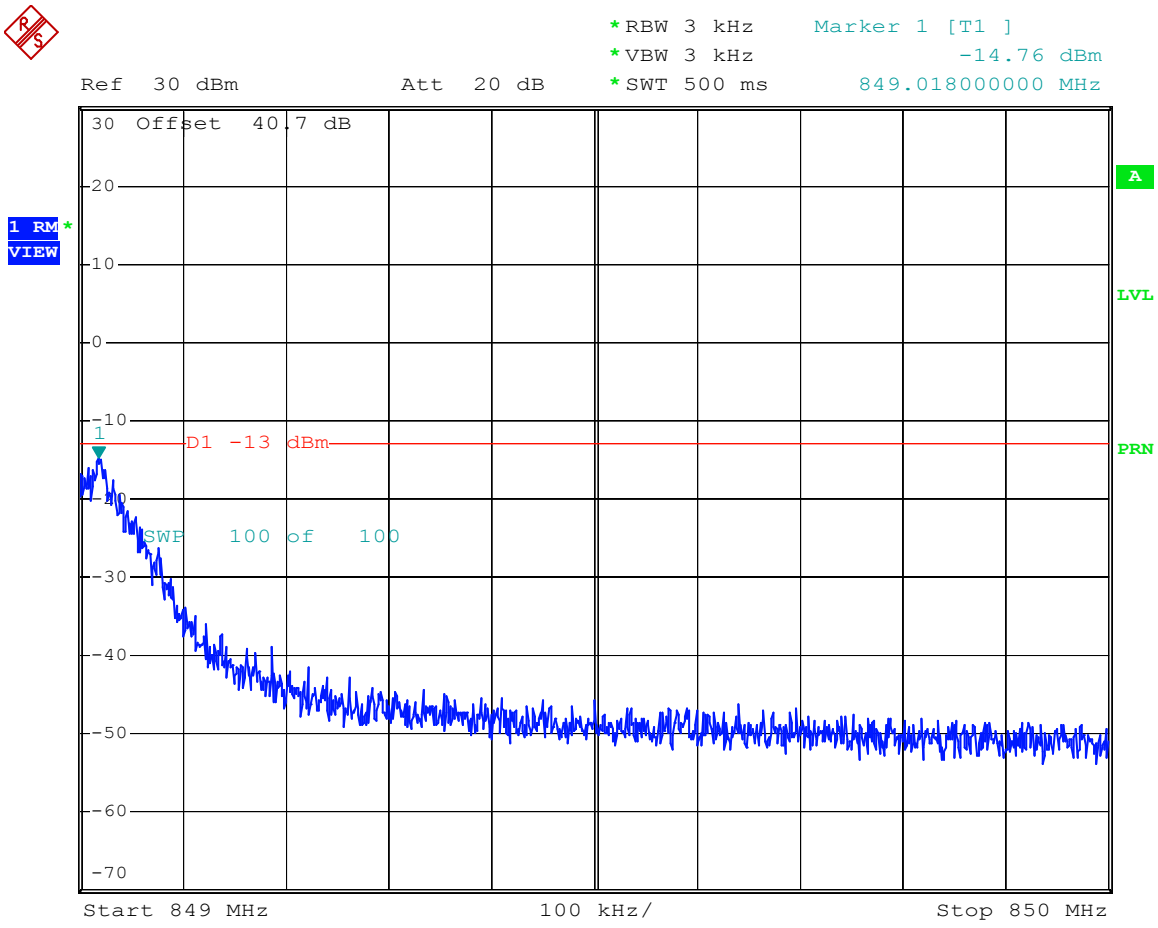
Comment: Out-of-band, GSM 850, Ch 128
Date: 26.OCT.2004 13:29:20

Plot 5.4



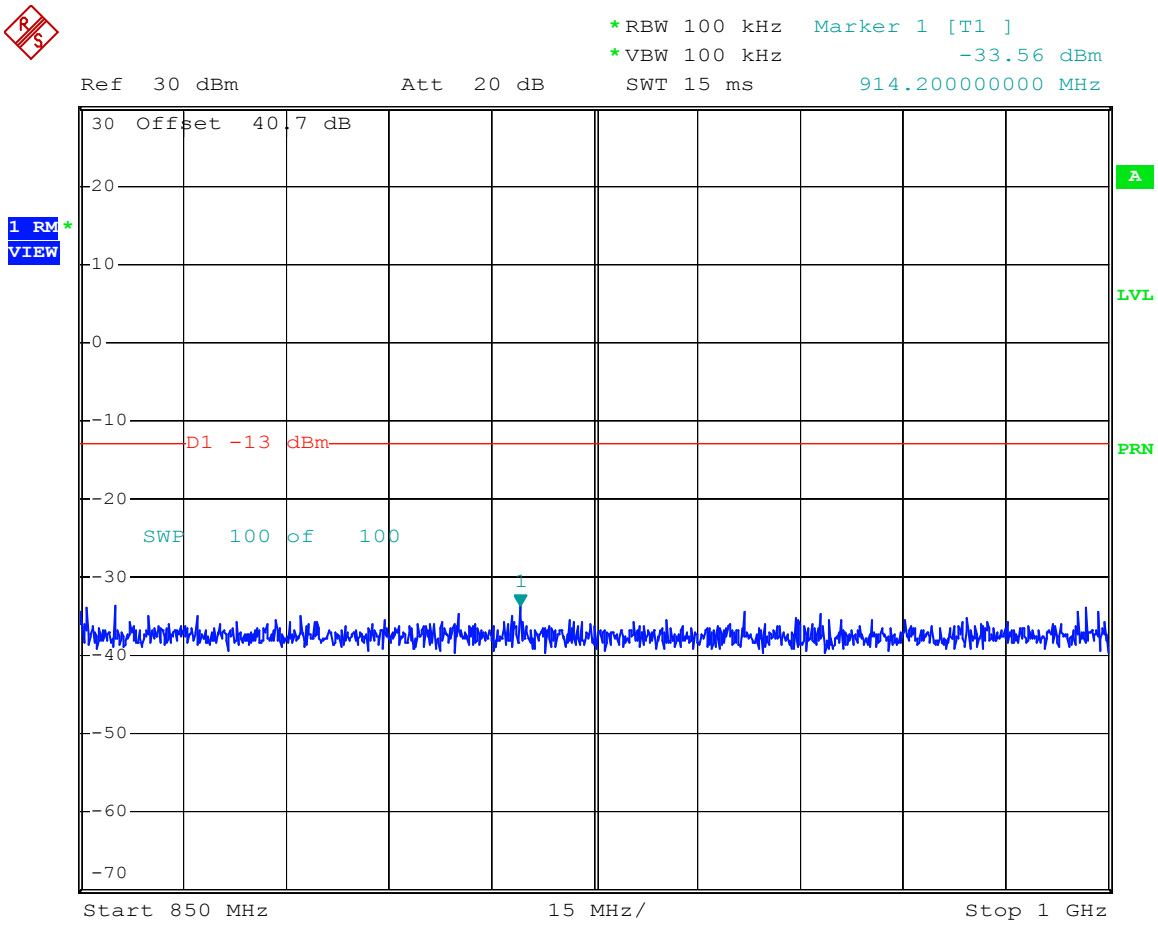
Comment: Upper band-edge, GSM 850, Ch 251
Date: 26.OCT.2004 14:48:51

Plot 5.5



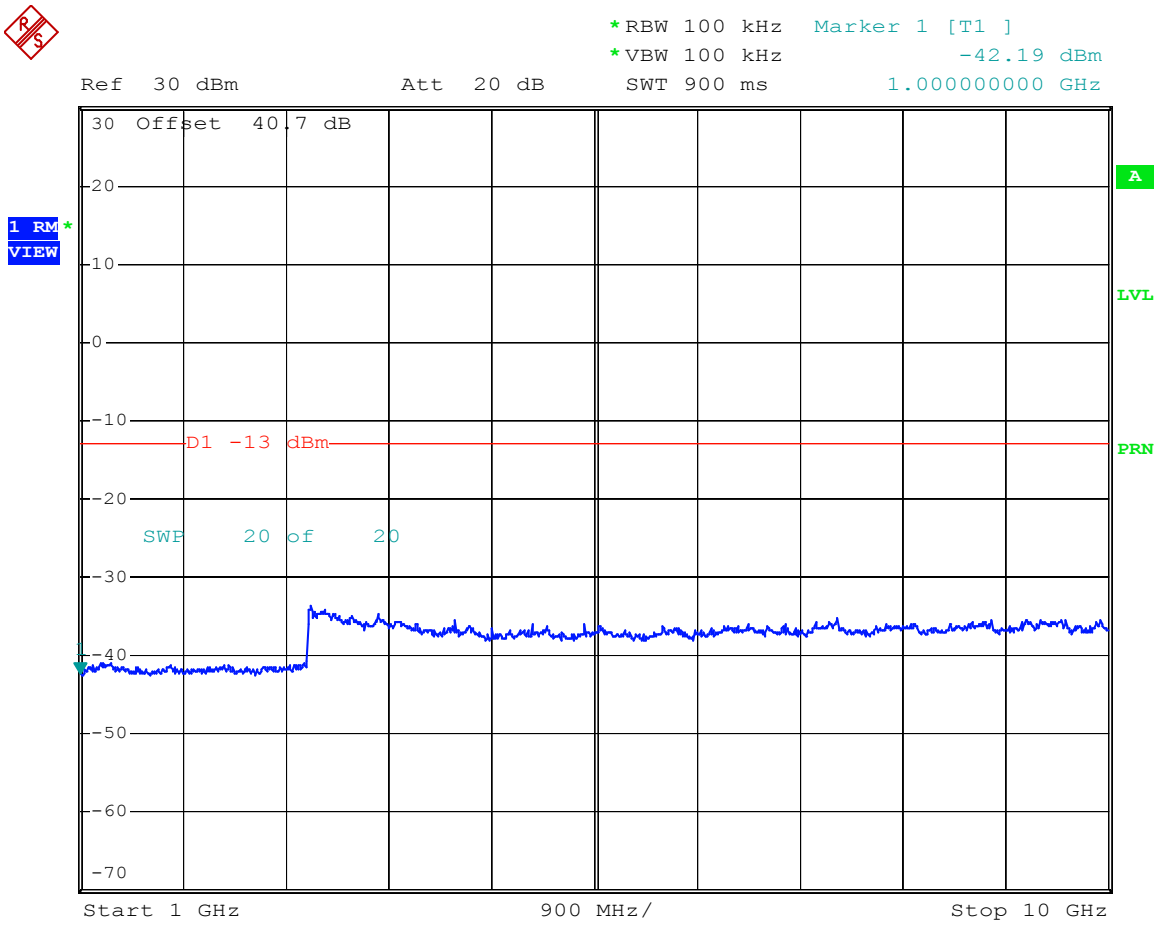
Comment: Out-of-band, GSM 850, Ch 251
Date: 26.OCT.2004 14:52:49

Plot 5.6



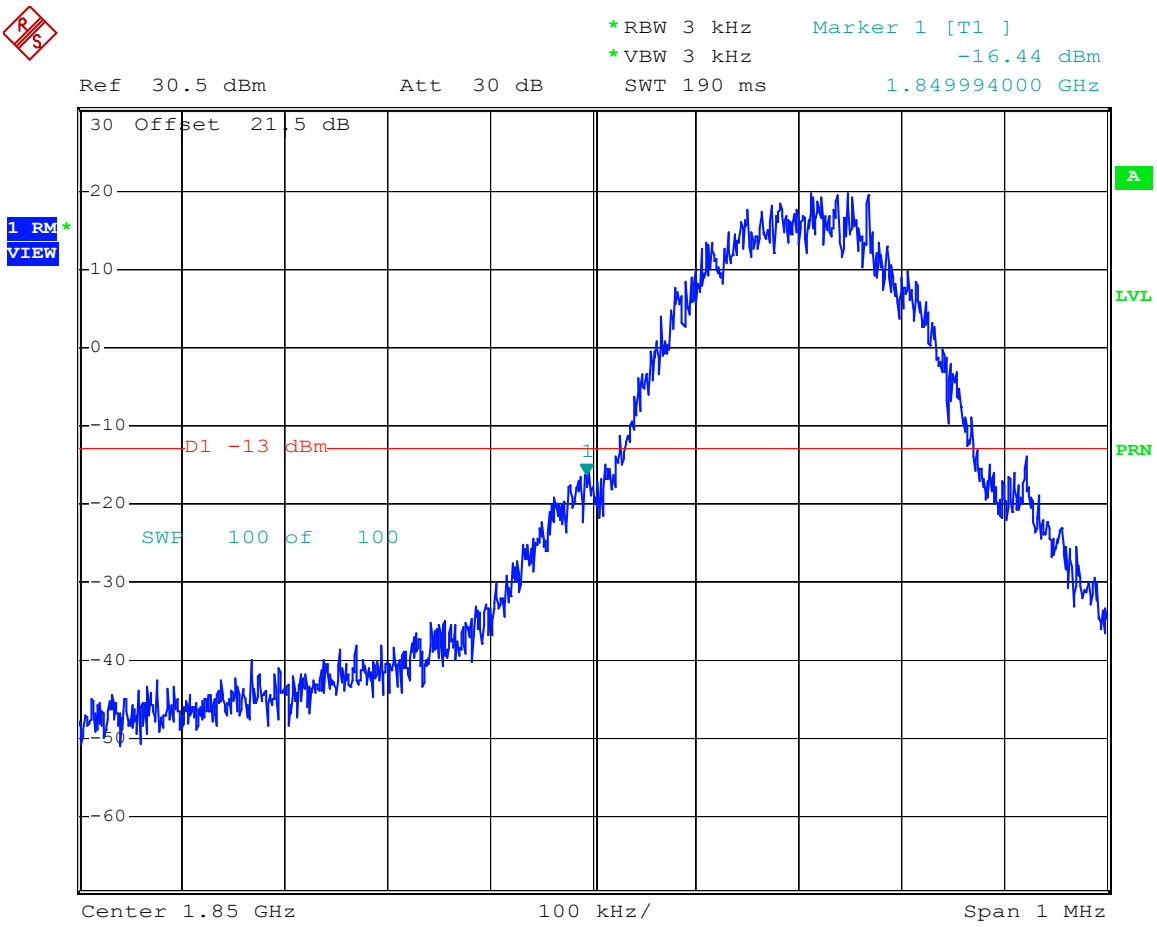
Comment: Out-of-band, GSM 850, Ch 251
Date: 26.OCT.2004 14:54:35

Plot 5.7



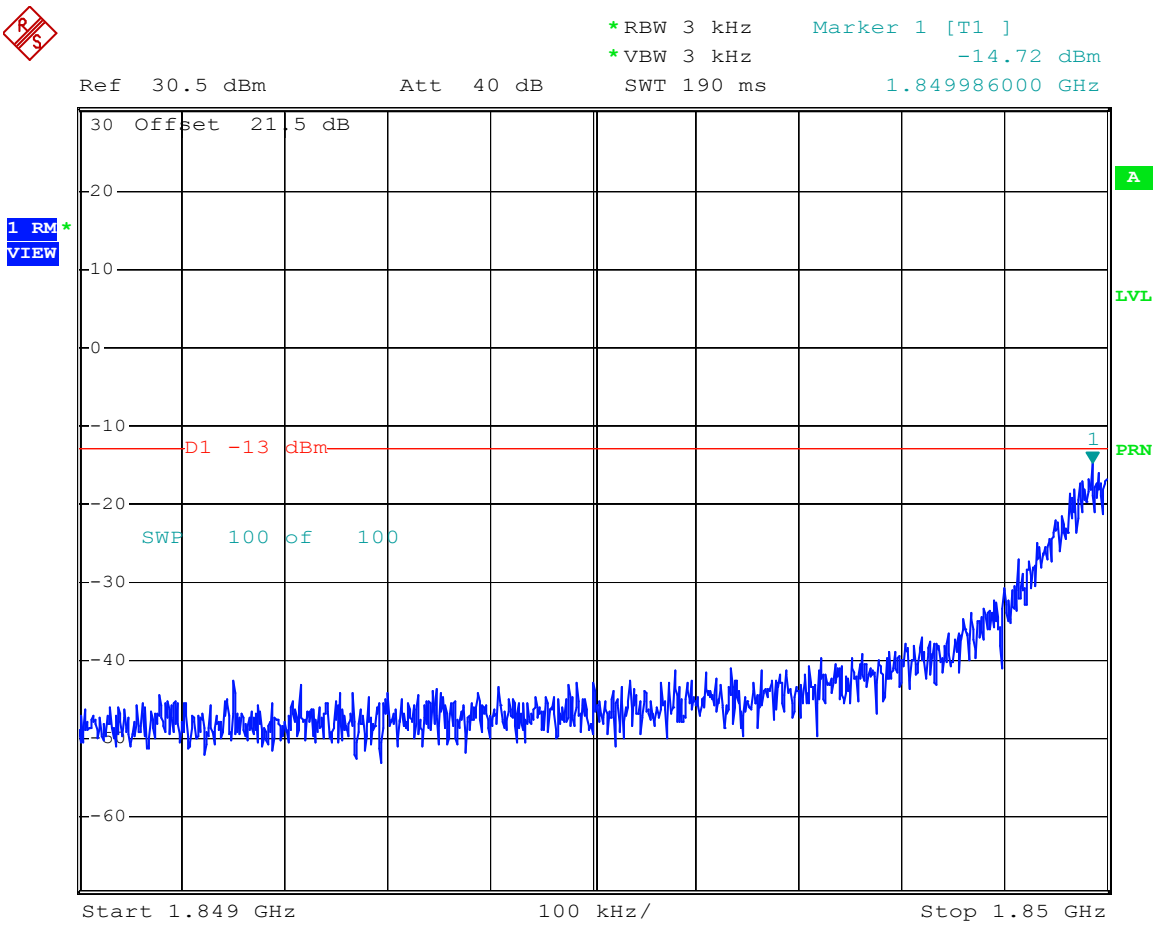
Comment: Out-of-band, GSM 850, Ch 251
Date: 26.OCT.2004 14:56:03

Plot 5.8



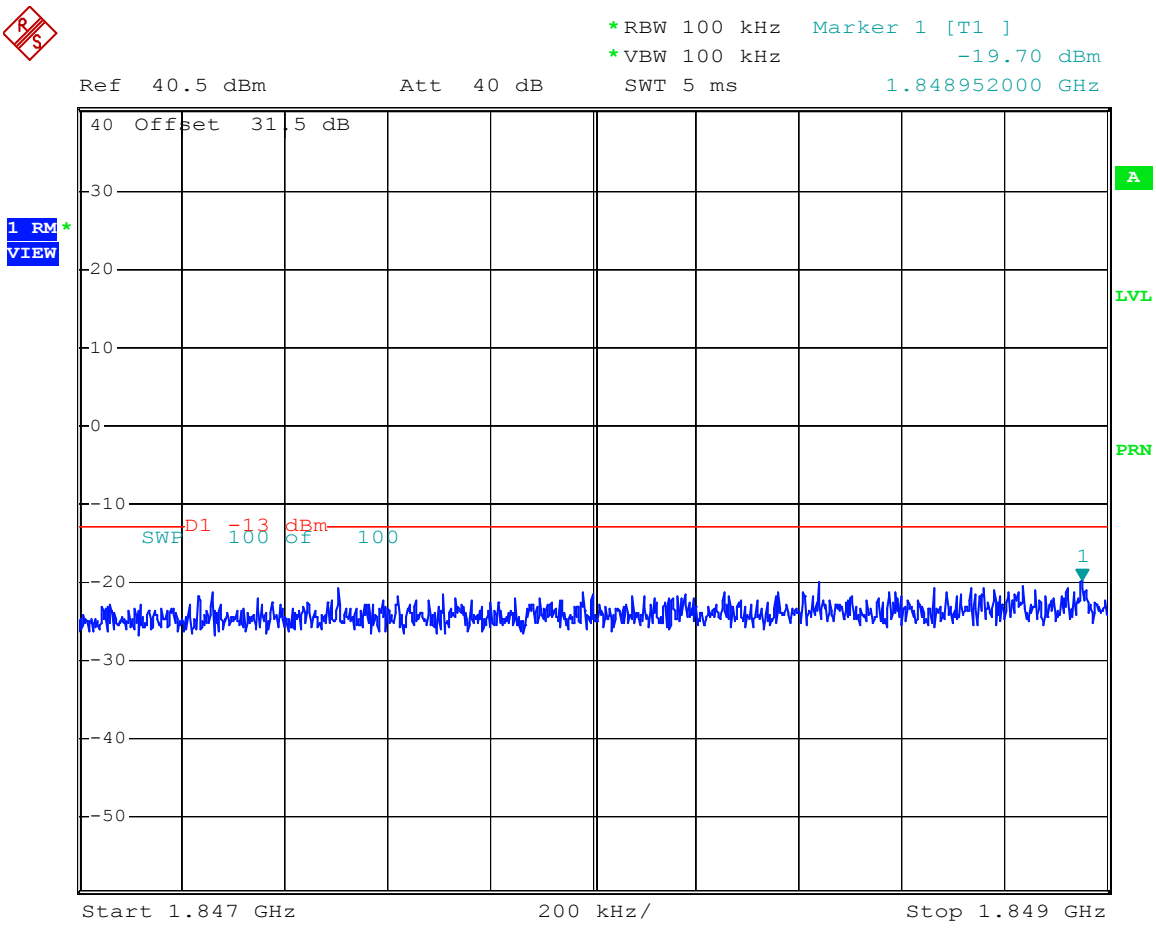
Comment: Lower band-edge, GSM 1900, Ch 512
Date: 26.OCT.2004 16:20:06

Plot 5.9



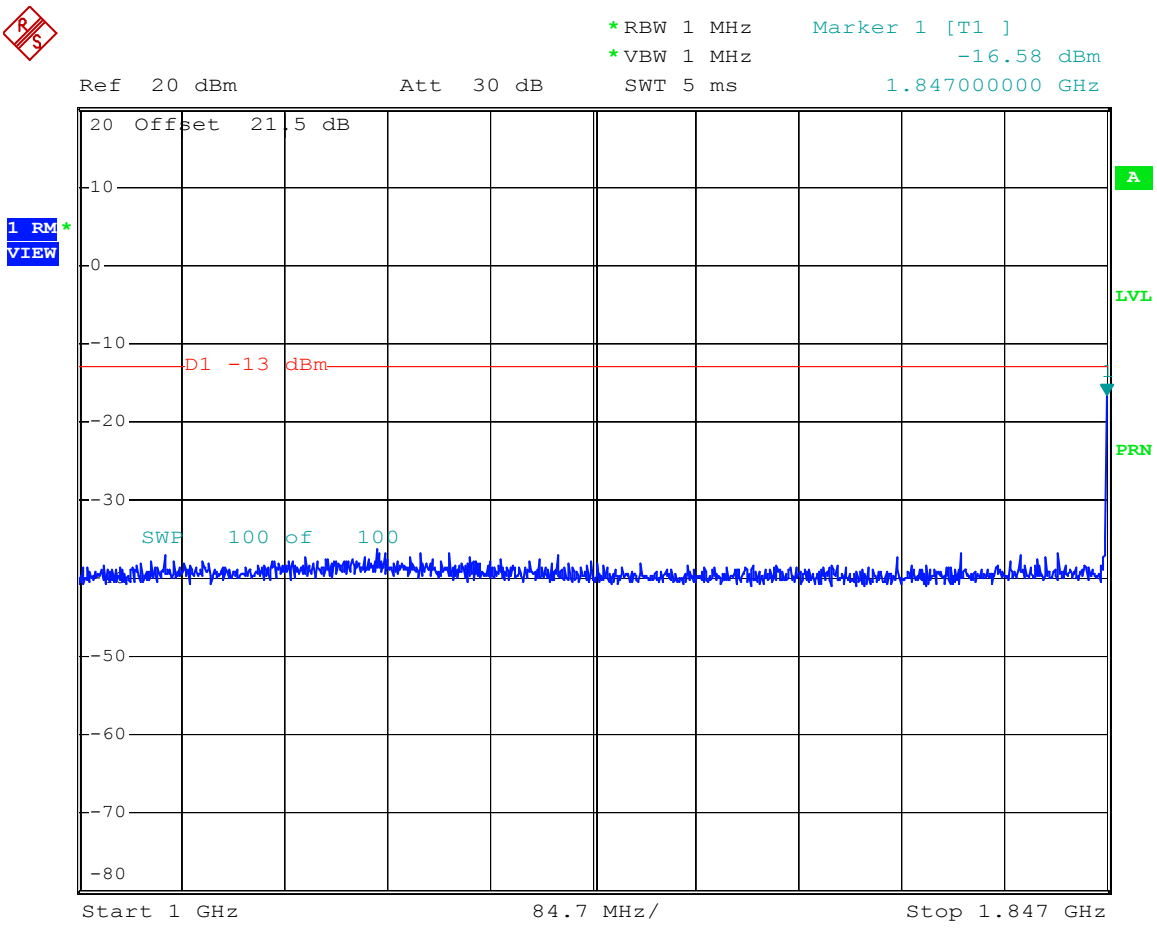
Comment: Out-of-band, GSM 1900, Ch 512
Date: 26.OCT.2004 16:21:52

Plot 5.10



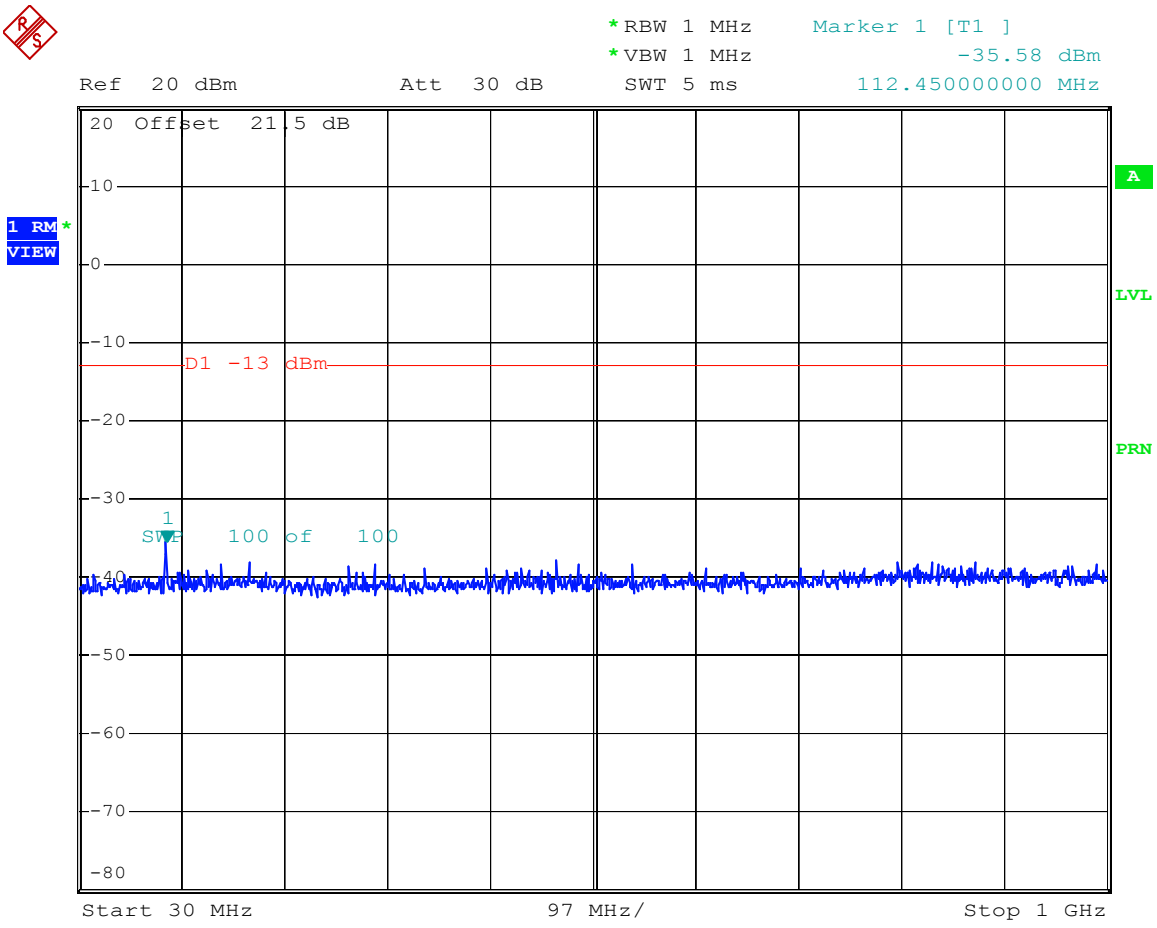
Comment: Out-of-band, GSM 1900, Ch 512, add BCF=10 dB
Date: 26.OCT.2004 16:34:04

Plot 5.11



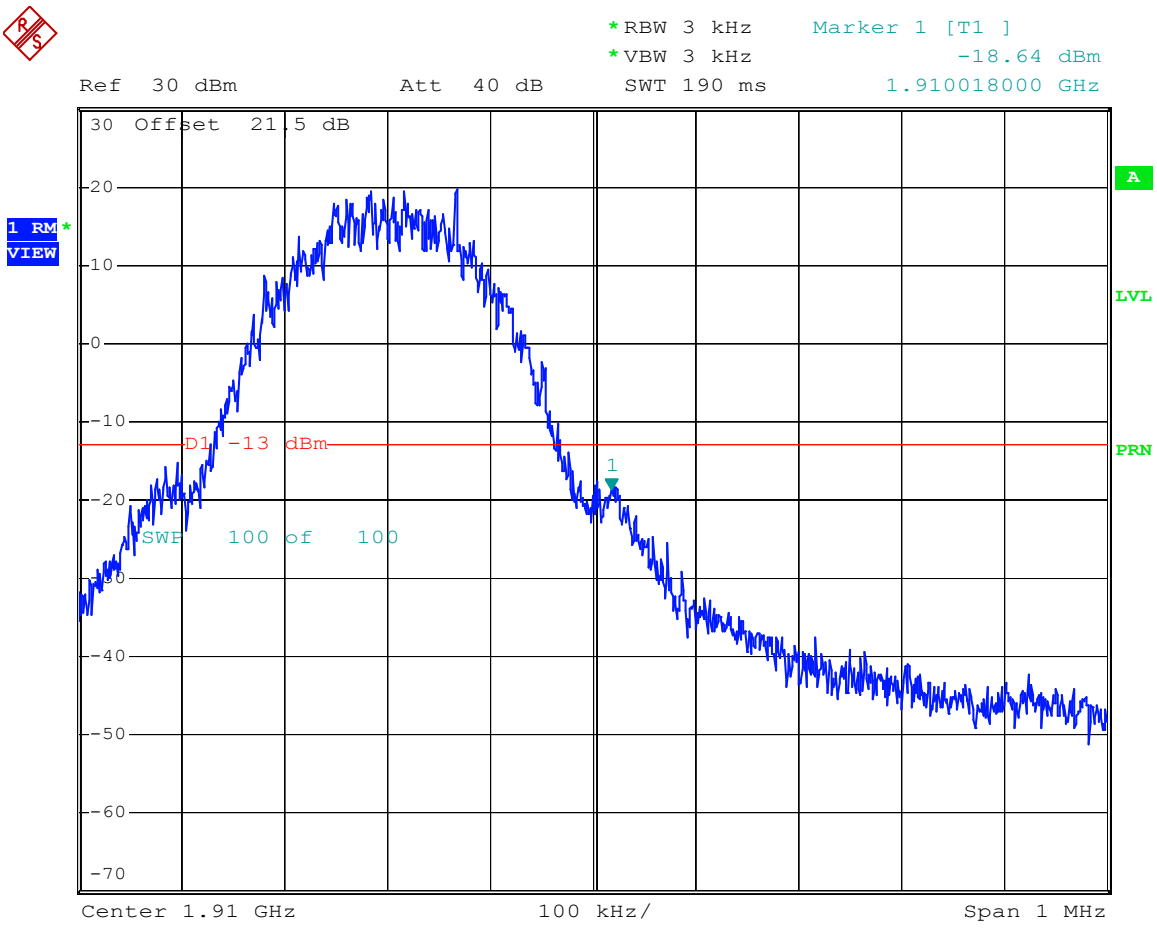
Comment: Out-of-band, GSM 1900, Ch 512
Date: 26.OCT.2004 16:36:40

Plot 5.12



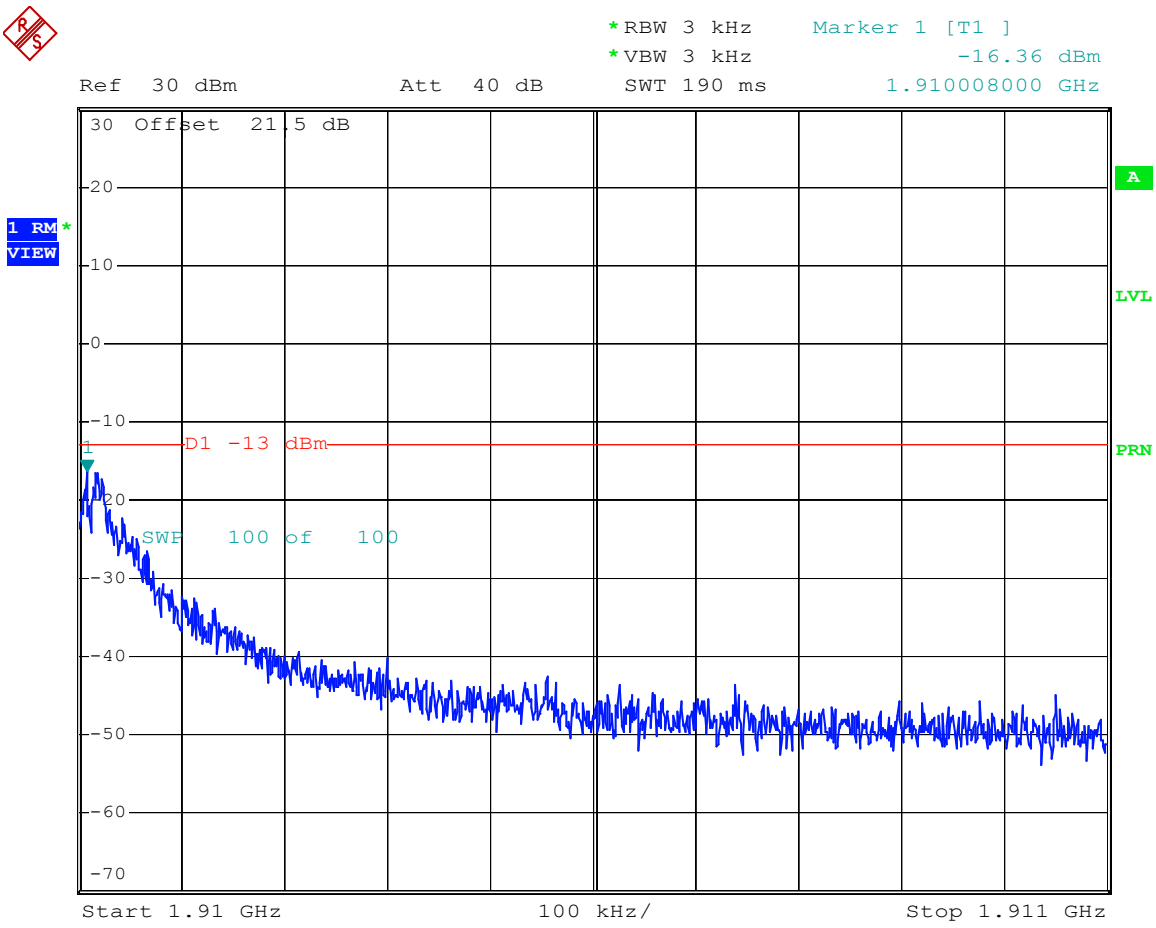
Comment: Out-of-band, GSM 1900, Ch 512
Date: 26.OCT.2004 16:37:56

Plot 5.13



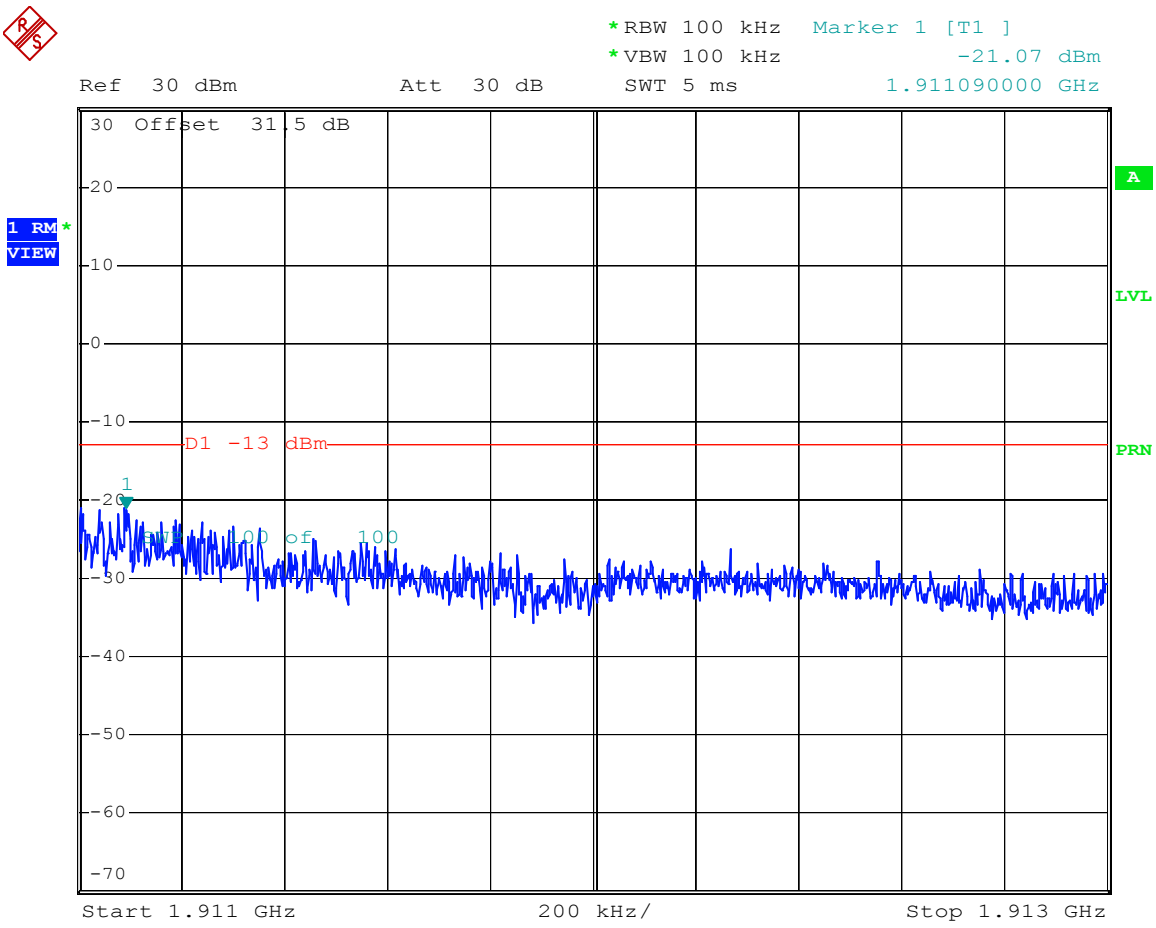
Comment: Upper band-edge, GSM 1900, Ch 810
Date: 26.OCT.2004 16:56:17

Plot 5.14



Comment: Out-of-band, GSM 1900, Ch 810
Date: 26.OCT.2004 16:58:15

Plot 5.15



Comment: Out-of-band, GSM 1900, Ch 810, add BCF=10 dB
Date: 26.OCT.2004 17:00:47

6.0 Field Strength of Spurious Radiation

FCC 2.1053, 22.901(d), 24.238(a)

6.1 Test Procedure

The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. The EUT was powered from fully charged battery.

The frequency range up to tenth harmonic of each of the three fundamental frequency (low, middle, and high channels) for each band (cellular and PCS) was investigated. The tests were performed with the EUT placed on three orthogonal axes. The worst case of emissions was reported.

For spurious emissions attenuation, the substitution method was used. On each frequency where the Field Strength was found above 63.4 dBuV/m (which corresponds to ERP = -33 dBm), the EUT was substituted by a reference antenna (half-wave dipole - below 1 GHz, or Horn antenna - above 1GHz), connected to a signal generator. The signal generator output was adjusted to obtain the same reading as from EUT. The ERP/EIRP at the spurious emissions frequency was calculated as in section 3. The spurious emissions attenuation was calculated as the difference between ERP/EIRP at the fundamental frequency (see section 3) and at the spurious emissions frequency.

6.2 Test Equipment

EMCO 3115 Horn Antennas
Hewlett Packard 83732A signal generator
Rohde & Schwarz FSP 40 Spectrum Analyzer

6.3 Test Results

Spurious Emissions
(Measured by Substitution Method)

Frequency	Antenna Polariz.	SA Reading (EUT)	Mode	Signal Generator Output required to have the same SA Reading as from EUT	ERP*	ERP Limit	ERP Margin
MHz		dB(µV)		V_gdBm	dBm	dBm	dBm
Channel 824.2 MHz							
1648.4	V	41.7	GSM	-39.2	-32.8	-13.0	-19.8
2472.6	V	42.5	GSM	-34.8	-27.3	-13.0	-14.3
3296.8	V	44.5	GSM	-30.8	-23.1	-13.0	-10.1
4121.0	V	46.9	GSM	-27.3	-19.1	-13.0	-6.1
4945.2	V	43.5	GSM	-28.9	-20.2	-13.0	-7.2
5769.4	V	20.0	GSM	-51.8	-42.5	-13.0	-29.5
6593.6	V	20.0	GSM	-49.9	-40.1	-13.0	-27.1
7417.8	V	20.0	GSM	-47.1	-37.9	-13.0	-24.9
8242.0	V	20.0	GSM	-45.0	-35.5	-13.0	-22.5
Channel 836.4 MHz							
1672.8	V	40.8	GSM	-40.1	-33.7	-13.0	-20.7
2509.2	V	40.8	GSM	-36.5	-29.0	-13.0	-16.0
3345.6	V	42.3	GSM	-33.0	-25.3	-13.0	-12.3
4182.0	V	45.3	GSM	-28.9	-20.7	-13.0	-7.7
5018.4	V	43.6	GSM	-28.8	-20.1	-13.0	-7.1
5854.8	V	20.0	GSM	-51.8	-42.5	-13.0	-29.5
6691.2	V	20.0	GSM	-49.9	-40.1	-13.0	-27.1
7527.6	V	20.0	GSM	-47.1	-37.9	-13.0	-24.9
8364.0	V	20.0	GSM	-45.0	-35.5	-13.0	-22.5
Channel 848.8 MHz							
1697.6	V	43.0	GSM	-37.9	-31.5	-13.0	-18.5
2546.4	V	40.5	GSM	-36.8	-29.3	-13.0	-16.3
3395.2	V	42.2	GSM	-33.1	-25.4	-13.0	-12.4
4244.0	V	46.1	GSM	-28.1	-19.9	-13.0	-6.9
5092.8	V	45.7	GSM	-26.7	-18.0	-13.0	-5.0
5941.6	V	20.0	GSM	-51.8	-42.5	-13.0	-29.5
6790.4	V	20.0	GSM	-49.9	-40.1	-13.0	-27.1
7639.2	V	20.0	GSM	-47.1	-37.9	-13.0	-24.9
8488.0	V	24.5	GSM	-40.5	-31.0	-13.0	-18

* ERP is calculated as: $ERP_{(dBm)} = \mathbf{V_{g(dBm)} + G_{(dBd)}}$

Frequency	Antenna Polariz.	SA Reading (EUT)	Mode	Signal Generator Output required to have the same SA Reading as from EUT	EIRP*	EIRP Limit	EIRP Margin
MHz		dB(µV)		V_gdBm	dBm	dBm	dBm
Channel 1850.2 MHz							
3700.4	V	40.8	GSM	-34.1	-24.3	-13.0	-11.3
5550.6	V	48.2	GSM	-24.2	-13.2	-13.0	-0.2
7400.8	V	30.0	GSM	-39.5	-28.1	-13.0	-15.1
9251.0	V	30.0	GSM	-37.0	-25.2	-13.0	-12.2
11101.2	V	30.0	GSM	-34.5	-22.0	-13.0	-9.0
12951.4	V	30.0	GSM	-34.3	-21.5	-13.0	-8.5
14801.6	V	30.0	GSM	-34.0	-21.1	-13.0	-8.1
16651.8	V	30.0	GSM	-30.0	-15.2	-13.0	-2.2
18502.0	V	26.0	GSM	-28.0	-17.9	-13.0	-4.9
Channel 1880 MHz							
3760.0	V	41.3	GSM	-33.6	-23.8	-13.0	-10.8
5640.0	V	45.9	GSM	-26.3	-15.2	-13.0	-2.2
7520.0	V	29.0	GSM	-40.0	-28.6	-13.0	-15.6
9400.0	V	22.0	GSM	-44.8	-33.0	-13.0	-20.0
11280.0	V	19.0	GSM	-45.4	-33.0	-13.0	-20.0
13160.0	V	19.0	GSM	-45.2	-32.5	-13.0	-19.5
15040.0	V	30.0	GSM	-33.9	-20.0	-13.0	-7.0
16920.0	V	30.0	GSM	-29.8	-16.4	-13.0	-3.4
18800.0	V	26.0	GSM	-28.0	-17.9	-13.0	-4.9
Channel 1909.8 MHz							
3819.6	V	44.5	GSM	-30.4	-20.6	-13.0	-7.6
5729.4	V	41.3	GSM	-30.9	-19.7	-13.0	-6.7
7639.2	V	31.2	GSM	-37.8	-26.4	-13.0	-13.4
9549.0	V	21.7	GSM	-45.1	-33.3	-13.0	-20.3
11458.8	V	19.5	GSM	-44.9	-32.5	-13.0	-19.5
13368.6	V	19.5	GSM	-44.7	-32.4	-13.0	-19.4
15278.4	V	30.0	GSM	-33.9	-18.6	-13.0	-5.6
17188.2	V	30.0	GSM	-29.8	-17.3	-13.0	-4.3
19098.0	V	26.0	GSM	-28.0	-17.9	-13.0	-4.9

* EIRP is calculated as: $EIRP_{(dBm)} = V_{g(dBm)} + G_{(dBi)}$

Test Result:	Complies

7.0 Frequency Stability vs Temperature

FCC 2.1055

7.1 Test Procedure

The EUT was powered from AC/DC adapter and placed inside the temperature chamber. After the temperature stabilized for approximately 20 minutes, the transmitting frequency was recorded. The difference between assigned channel frequency and real frequency was measured by a BSS.

7.2 Test Result

Temperature (°C)	GSM850 Channel 189, 836.4 MHz	GSM1900 Channel 661, 1880 MHz
	Difference Hz	Difference Hz
-30	-57	-83
-20	-54	-81
-10	-53	-73
0	-49	-72
10	-45	-63
20	-47	-73
30	-49	-75
40	-53	-78
50	-58	-87

8.0 Frequency Stability vs Voltage

FCC 2.1055

8.1 Test Procedure

Since the EUT may be used with a power adaptor and with a internal battery, frequency stability was measured when the EUT was powered from AC and DC at the nominal voltages and at 85% and 115% of the nominal voltages. The difference between assigned channel frequency and real frequency was measured by a BSS.

8.2 Test Result

Voltage	GSM850 Channel 189, 836.4 MHz	GSM1900 Channel 661, 1880 MHz
	Difference Hz	Difference Hz
138 VAC	-51	-77
120 VAC	-47	-73
102 VAC	-52	-74
5.52 VDC	-53	-67
4.8 VDC	-47	-73
4.3 VDC *	-44	-65

* The end point of the battery voltage according to the specification of the battery

9.0 RF Exposure Evaluation

FCC 2.1091

The EUT is a device used in mobile applications. The maximum EIRP is 1.78 W without taken into account the Duty Cycle, which is 1/8 for GSM devices. To show compliance with RF Exposure Requirement, the Power Density was calculated using the formula:

$$S = EIRP/ 4\pi D^2$$

where: S is Power Density in W/m^2
D is the distance from the antenna.

The distance, where S = MPE,

$$D_{min} = \sqrt{(EIRP)/4\pi(MPE)}$$

For general population/uncontrolled exposure MPE = 10 W/m^2
Therefore, D_{min} = 0.12 m

In conclusion, the EUT meets the FCC Part 2.1091 MPE requirements at 0.2 m.

10.0 Radiated Emissions from digital parts and receiver

FCC 15.109

10.1 Radiated Emission Limits

The following radiated emission limits apply to Class B unintentional radiators:

Radiated Emissions Limits, Section 15.109

Frequency **(MHz)**	**Class B at 3 m (µV/m)**	**Class B at 10m (dBµV/m)**
30-88	100	40.0
88-216	150	43.5
216-960	200	46.0
Above 960	500	54.0

Note: Three sets of units are commonly used for EMI measurement, decibels below one milliwatt (-dBm), decibels above a microvolt (dBµV), and microvolts (µV). To convert between them, use the following formulas: 20 LOG$_{10}$ (µV) = dBµV, dBm = dBµV-107.

10.2 Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain (if any) from the measured reading. The basic equation with a sample calculation is as follows:

FS = RA + AF + CF - AG
Where FS = Field Strength in dB(μV/m)
RA = Receiver Amplitude (including preamplifier) in dB(μV)
CF = Cable Attenuation Factor in dB
AF = Antenna Factor in dB
AG = Amplifier Gain in dB

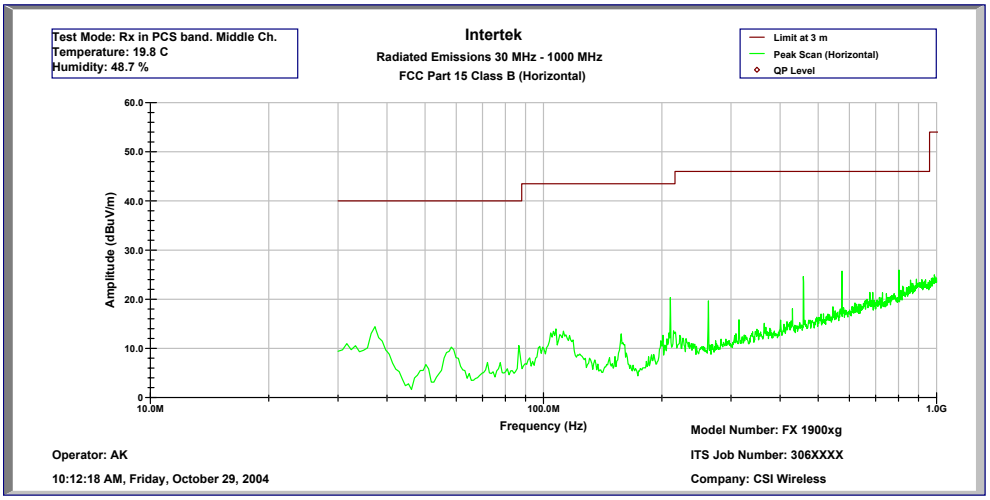
Assume a receiver reading of 52.0 dB(μV) is obtained. The antennas factor of 7.4 dB(1/m) and cable factor of 1.6 dB is added. The amplifier gain of 29 dB is subtracted, giving field strength of 32 dB(μV/m). This value in dB(μV/m) was converted to its corresponding level in μV/m.
RA = 52.0 dB(μV)
AF = 7.4 dB(1/m)
CF = 1.6 dB
AG = 29.0 dB
FS = 52.0+7.4+1.6-29.0 = 32 dB(μV/m)
Level in μV/m = Common Antilogarithm [(32 dBμV/m)/20] = 39.8 μV/m

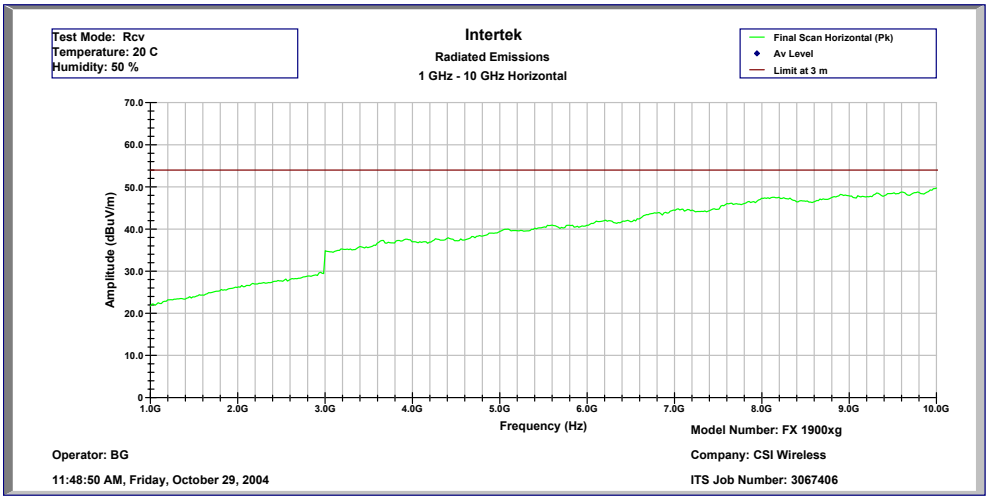
10.3 Test Results

Test Result:	Complies by 14.6 dB

Frequency range investigated is from 30 MHz to 10000 MHz.

10.3 Test Results (Continued)





Radiated Emissions 30 MHz – 10000 MHz

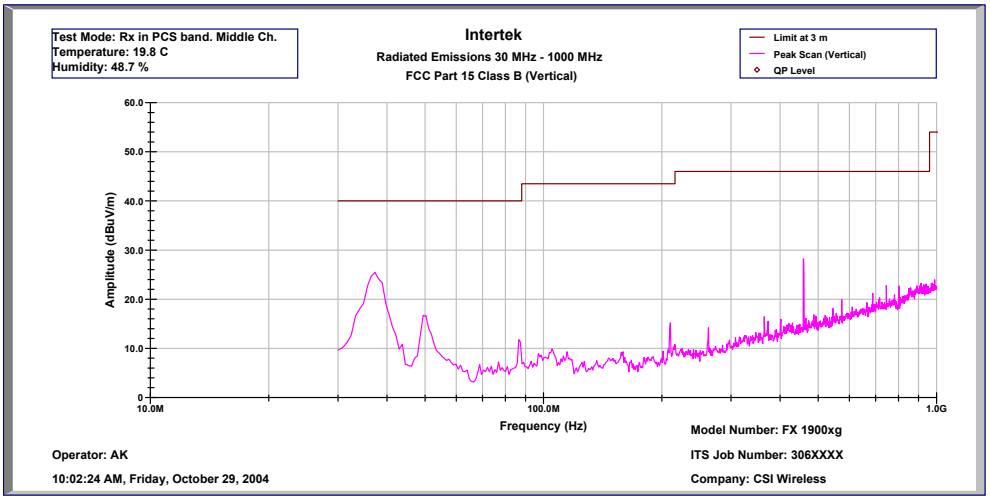
FCC Class B (Horizontal)

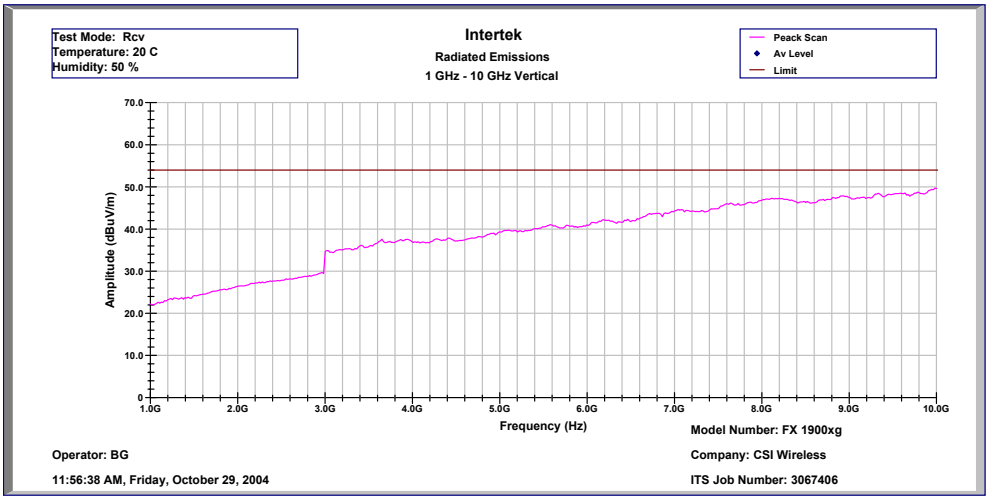
EUT Model Number: GSM Desktop Phone | ITS Job Number: 3067406

Operator: AK & BG | Test Date: October 29, 2004

Frequency	Pk FS	Limit@3m	Margin	RA	AG	CF	AF
MHz	dB(uV/m)	dB(uV/m)	dB	dB(uV)	dB	dB	dB(1/m)
210.26	20.4	43.5	-23.1	36.7	32.2	5.1	10.8
216.00	20.3	43.5	-23.2	29.1	32.2	5.1	11.2
262.80	19.6	46.0	-26.4	34.0	32.2	5.4	12.5
458.42	24.6	46.0	-21.4	33.7	32.3	6.2	17.1
574.82	25.7	46.0	-20.3	32.3	32.5	6.7	19.2
802.77	25.9	46.0	-20.1	29.5	32.4	7.3	21.6

10.3 Test Results (Continued)





Radiated Emissions 30 MHz – 5000 MHz

FCC Class B (Vertical)

EUT Model Number: GSM Desktop Phone	ITS Job Number: 3067406
Company: CSI Wireless	Test Date: October 29, 2004
Operator: AK & BG	

Frequency	Pk FS	Limit@3m	Margin	RA	AG	CF	AF
MHz	dB(uV/m)	dB(uV/m)	dB	dB(uV)	dB	dB	dB(1/m)
37.27	25.4	40.0	-14.6	46.0	32.4	3.8	8.0
49.40	16.7	40.0	-23.3	38.9	32.4	3.9	6.2
86.58	11.8	40.0	-28.2	33.0	32.3	4.3	6.8
210.26	15.2	43.5	-28.3	31.6	32.2	5.1	10.7
459.23	28.2	46.0	-17.8	38.0	32.3	6.2	16.4
988.68	24.0	54.0	-30.0	24.9	31.2	8.3	21.9

11.0 Line Conducted Emissions,
FCC 15.107

11.1 Test Procedure

Test procedure described in the ANSI C63.4 Standard was employed.
The EUT was connected to the charger, that was connected to the AC line through the LISNs.
Both HOT and NEUTRAL leads were tested.

11.2 Test Equipment

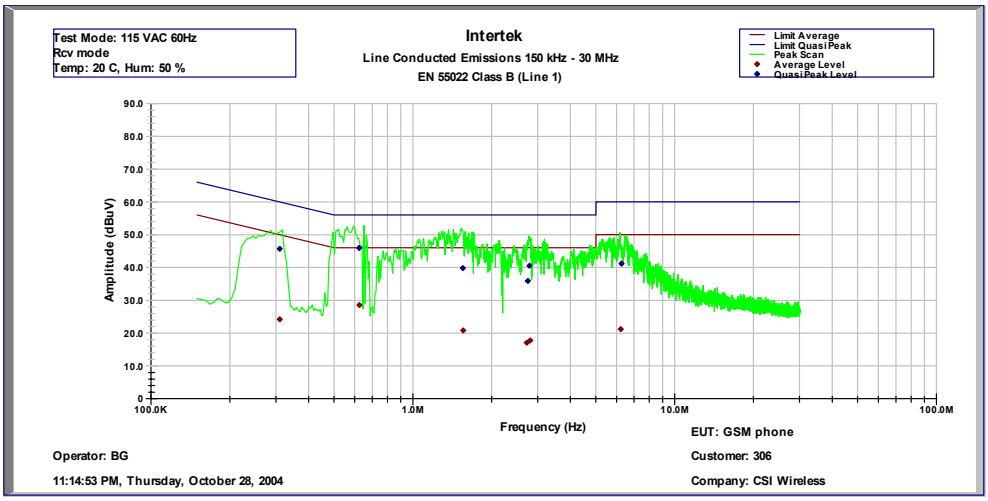
HP8568B Spectrum Analyzer
FCC LISN

11.3 Test Results

Test Result:	Complies by 4.2 dB

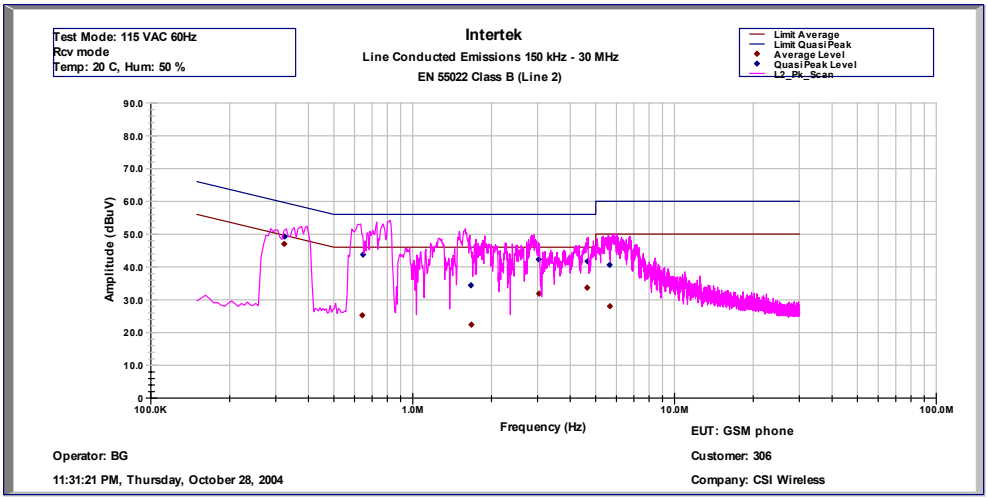
See the attached plots.

11.3 Test Results (Continued)



Intertek						
Line Conducted Emissions 150 kHz - 30 MHz						
EN 55022 Class B (Line 1)						
Operator: BG	Model Number: GSM phone					
ITS Job Number: 3067406						
October 28, 2004	Company: CSI Wireless					
Frequency MHz	**Av Level (dBuV)**	**QP Level (dBuV)**	**Av Limit (dBuV)**	**QP Limit (dBuV)**	**Av Margin (dB)**	**QP Margin (dB)**
0.310	24.2	45.7	51.4	61.4	-27.2	-15.7
0.624	28.5	46	46.0	56.0	-17.5	-10.0
1.55	20.8	39.8	46.0	56.0	-25.2	-16.2
2.73	17.1	35.9	46.0	56.0	-28.9	-20.1
2.79	17.7	40.5	46.0	56.0	-28.3	-15.5
6.22	21.2	41.2	50.0	60.0	-28.8	-18.8
Test Mode: 115 VAC 60Hz						
Rcv mode, PCS band, middle channel						
Temp: 20 C, Hum: 50 %						

11.3 Test Results (Continued)



Intertek						
Line Conducted Emissions 150 kHz - 30 MHz						
EN 55022 Class B (Line 2)						
Operator: BG	Model Number: GSM Desktop phone					
ITS Job Number: 3067406						
October 28, 2004	Company: CSI Wireless					
Frequency	**Av Level**	**QP Level**	**Av Limit**	**QP Limit**	**Av Margin**	**QP Margin**
MHz	**(dBuV)**	**(dBuV)**	**(dBuV)**	**(dBuV)**	**(dB)**	**(dB)**
0.323	47.0	49.2	51.0	61.0	-4.0	-11.8
0.642	25.2	43.8	46.0	56.0	-20.8	-12.2
1.67	22.4	34.4	46.0	56.0	-23.6	-21.6
3.03	31.9	42.3	46.0	56.0	-14.1	-13.7
4.64	33.7	41.7	46.0	56.0	-12.3	-14.3
5.65	28.0	40.6	50.0	60.0	-22.0	-19.4
Test Mode: 115 VAC 60Hz						
Rcv mode, PCS band, middle channel						
Temp: 20 C, Hum: 50 %						

12.0 List of Test Equipment

Measurement equipment used for compliance testing utilized the equipment on the following list:

Equipment	Manufacturer	Model/Type	Serial #	Cal Int	Cal Due
Base Station Simulator	Rohde & Schwarz	CMU-200	652478	12	11/6/04
EMI Receiver	Rhode-Schwarz	FSP-40	100030	12	9/15/05
Spectrum Analyzer Display w/85650 QP Adapter$_{LC\ Room}$	Hewlett Packard	8568A	2134A02584 2521AB1021	12	11/18/04
Signal Generator	Hewlett Packard	83732A	322A00119	12	3/04/05
Double-ridged Horn Antenna	EMCO	3115	9170-3712	12	6/18/05
Double-ridged Horn Antenna	EMCO	3115	8812-3049	12	4/14/05
Dipole Antenna	CDI	Roberts	331	12	2/09/05
BI-Log Antenna	EMCO	3143	9509-1164	12	4/06/05
Pre-Amplifier	Sonoma Inst.	310	185634	12	3/25/05
Pre-Amplifier	Miteq	AMF-4D-001180-24-10P	799159	12	3/25/05
RF Filter Section	Hewlett Packard	85460A	3448A00267	12	9/10/05
EMI Receiver	Hewlett Packard	8546A	3710A00373	12	9/10/05
LISN	FCC	FCC-LISN-50-50-M-H	2011	12	2/10/05

13.0 Document History

Revision/ Job Number	Writer Initials	Date	Change
1.0 / 3067406	BG	November 5, 2004	Original document