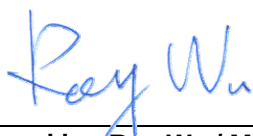


FCC/IC Test Report

EQUIPMENT : Internet Stick
BRAND NAME : Nokia
MODEL NAME : CS-10
FCC ID : PYARD-7
IC ID : 661V-RD7
STANDARD : 47 CFR Part 2, 22(H), 24(E)
RSS-132 Issued 2, RSS-133 Issued 4
CLASSIFICATION : PCS Licensed transmitter (PCB)
Tx/Rx FREQUENCY RANGE : GSM850 : 824.2 ~ 848.8 MHz /
869.2 ~ 893.8 MHz
GSM1900 : 1850.2 ~ 1909.8 MHz /
1930.2 ~ 1989.8 MHz
WCDMA Band V : 826.4 ~ 846.6 MHz /
871.4 ~ 891.6 MHz
MAX. ERP/EIRP POWER : GSM850(GPRS) : 0.80 W
GSM850(EDGE) : 0.30 W
GSM1900(GPRS) : 0.31 W
GSM1900(EDGE) : 0.34 W
WCDMA Band V : 0.08 W
EMISSION DESIGNATOR : GPRS : 248KGXW
EDGE : 260KG7W
WCDMA : 4M14F9W
APPLICANT : Nokia Corporation
Elektroniikkatie 10, PO box., Oulu City, 90571. Finland.

The product sample received on Dec. 16, 2008 and completely tested on Dec. 26, 2008. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.4-2003 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.



Reviewed by: Roy Wu / Manager



SPORTON INTERNATIONAL INC.

No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.

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SUMMARY OF TEST RESULT

Report Section	FCC Rule	IC Rule	Description	Limit	Result
3.1	§2.1046	N/A	Conducted Output Power	N/A	PASS
3.2	§22.913(a)(2)	RSS-132(4.4) SRSP-503(5.1.3)	Effective Radiated Power	< 7 Watts for FCC (<6.3 Watts for IC)	PASS
3.2	§24.232(c)	RSS-133 (6.4) SRSP-510(5.1.2)	Equivalent Isotropic Radiated Power	< 2 Watts	PASS
3.3	§2.1049 §22.917(a) §24.238(a)	N/A	Occupied Bandwidth	N/A	PASS
3.3	§2.1051 §22.917(a) §24.238(a)	RSS-132 (4.5.1) RSS-133 (6.5.1)	Band Edge Measurement	< 43+10log ₁₀ (P[Watts])	PASS
3.4	§2.1051 §22.917(a) §24.238(a)	RSS-132 (4.5.1) RSS-133 (6.5.1)	Conducted Emission	< 43+10log ₁₀ (P[Watts])	PASS
3.5	§2.1053 §22.917(a) §24.238(a)	RSS-132 (4.5.1) RSS-133 (6.5.1)	Field Strength of Spurious Radiation	< 43+10log ₁₀ (P[Watts])	PASS
3.6	§2.1055 §22.355 §24.235	RSS-132(4.3) RSS-133(6.3)	Frequency Stability for Temperature & Voltage	< 2.5 ppm	PASS



REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG8D1611	Rev. 01	Initial issue of report	Dec. 31, 2008

1 General Description

1.1 Applicant

Nokia Corporation

Elektroniikkatie 10, PO box., Oulu City, 90571. Finland.

1.2 Manufacturer

Nokia Corporation

Elektroniikkatie 10, PO box., Oulu City, 90571. Finland.

1.3 Feature of Equipment Under Test

Product Feature & Specification	
Equipment	Internet Stick
Brand Name	Nokia
Model Name	CS-10
Tx Frequency	GSM850 : 824 MHz ~ 849 MHz GSM1900 : 1850 MHz ~ 1910 MHz WCDMA Band V : 824 MHz ~ 849 MHz
Rx Frequency	GSM850 : 869 MHz ~ 894 MHz GSM1900 : 1930 MHz ~ 1990 MHz WCDMA Band V : 869 MHz ~ 894 MHz
Maximum Output Power to Antenna	GSM850 (GPRS 8) : 29.62 dBm GSM1900 (GPRS 8) : 25.92 dBm WCDMA Band V (RMC) : 20.66 dBm
Maximum ERP/EIRP	GSM850 (GPRS 8) : 0.80 W (29.03 dBm) GSM850 (EDGE 8) : 0.30 W (24.84 dBm) GSM1900 (GPRS 8) : 0.31 W (24.86 dBm) GSM1900 (EDGE 8) : 0.34 W (25.26 dBm) WCDMA Band V (RMC) : 0.08 W (19.08 dBm)
Antenna Type	Fixed Internal Antenna
HW Version	1.2
SW Version	2.2
Mechanical Version	2.0
GPRS / EGPRS Multi-slot Class	10
Type of Modulation	GSM / GPRS : GMSK EDGE : 8PSK WCDMA : QPSK HSDPA : QPSK / 16QAM HSUPA : BPSK
Type of Emission	GPRS : 248KGXW EDGE : 260KG7W WCDMA : 4M14F9W
EUT Stage	Production Unit

Remark: The RF power of GPRS/EDGE multi-slot class 8 is larger than GSM and GPRS/EDGE multi-slot class 10, so all the test cases were performed in GPRS/EDGE multi-slot class 8 mode.

Accessories List:

Accessories Specification		
USB Cable	Brand Name	Nokia
	Model Name	CA-150D
	Signal Line Type	0.24 meter non-shielded cable with ferrite core

Remark:

1. The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.
2. For accessories equipped with this EUT, please refer to the appendix of the external photo.

1.4 Testing Site

Test Site	SPORTON INTERNATIONAL INC.		
Test Site Location	No. 52, Hwa Ya 1 st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C TEL: +886-3-327-3456 FAX: +886-3-328-4978		
Test Site No.	Sporton Site No.		FCC/IC Registration No.
	TH02-HY	03CH07-HY	TW1022/4086B-1

1.5 Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ♦ Preliminary Guidance for Receiving Applications for Certification of 3G Device. May 9, 2006.
- ♦ 47 CFR Part 2, 22(H), 24(E)
- ♦ ANSI C63.4-2003
- ♦ ANSI / TIA / EIA-603-C-2004
- ♦ IC RSS-132, RSS-133

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B (DoC), recorded in a separate test report.

1.6 Ancillary Equipment List

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Code
1.	System Simulator	R&S	CMU200	N/A	N/A	Unshielded, 1.8m
2.	Notebook	HP	Presario V3000	N/A	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m

2 Test Configuration of Equipment Under Test

2.1 Test Mode

During all testing, EUT is in link mode with base station emulator at maximum power level. The spurious emission measurements were carried out in semi-anechoic chamber with 3-meter test range, and EUT is rotated on three test planes to find out the worst emission.

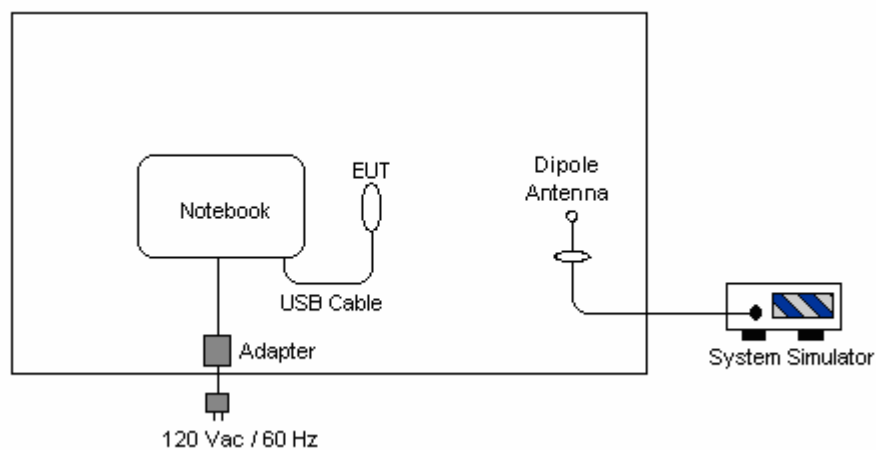
Frequency range investigated for radiated emission is as follows:

1. 30 MHz to 9000 MHz for GSM850 and WCDMA Band V
2. 30MHz to 19000 MHz for GSM1900.

Test Modes		
Band	Radiated TCs	Conducted TCs
GSM 850	■ GPRS Link + USB Cable with NB ■ EDGE Link + USB Cable with NB	■ GPRS Link ■ EDGE Link
GSM 1900	■ GPRS Link + USB Cable with NB ■ EDGE Link + USB Cable with NB	■ GPRS Link ■ EDGE Link
WCDMA Band V	■ WCDMA Link + USB Cable with NB	■ WCDMA Link

Remark: The RF power of GPRS/EDGE multi-slot class 8 is larger than GSM and GPRS/EDGE multi-slot class 10, so all the test cases were performed in GPRS/EDGE multi-slot class 8 mode.

2.2 Connection Diagram of Test System



3 Test Result

3.1 Conducted Output Power Measurement

3.1.1 Description of the Conducted Output Power Measurement

A base station simulator was used to establish communication with the EUT. Its parameters were set to transmit the maximum power on the EUT. The measured power in the radio frequency on the transmitter output terminals shall be reported.

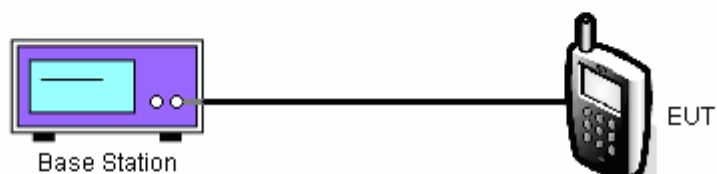
3.1.2 Measuring Instruments

See list of measuring instruments of this test report.

3.1.3 Test 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 modulation.

3.1.4 Test Setup



3.1.5 Test Result of Conducted Output Power

Cellular Band					
Modes		Channel	Frequency (MHz)	Conducted Power	
				(dBm)	(Watts)
GPRS 8		128 (Low)	824.2	29.62	0.92
		189 (Mid)	836.4	29.49	0.89
		251 (High)	848.8	29.57	0.91
EDGE 8		128 (Low)	824.2	25.89	0.39
		189 (Mid)	836.4	25.94	0.39
		251 (High)	848.8	25.96	0.39
WCDMA Band V	12.2k bps	4132 (Low)	826.4	20.66	0.12
		4182 (Mid)	836.4	20.32	0.11
		4233 (High)	846.6	20.38	0.11
	HSDPA Subtest-1	4132 (Low)	826.4	20.65	0.12
		4182 (Mid)	836.4	20.29	0.11
		4233 (High)	846.6	20.30	0.11
	HSDPA Subtest-2	4132 (Low)	826.4	20.63	0.12
		4182 (Mid)	836.4	20.31	0.11
		4233 (High)	846.6	20.33	0.11
	HSDPA Subtest-3	4132 (Low)	826.4	20.21	0.10
		4182 (Mid)	836.4	19.83	0.10
		4233 (High)	846.6	19.97	0.10
	HSDPA Subtest-4	4132 (Low)	826.4	20.14	0.10
		4182 (Mid)	836.4	19.65	0.09
		4233 (High)	846.6	19.74	0.09
	HSUPA Subtest-1	4132 (Low)	826.4	18.80	0.08
		4182 (Mid)	836.4	18.30	0.07
		4233 (High)	846.6	18.40	0.07
	HSUPA Subtest-2	4132 (Low)	826.4	18.20	0.07
		4182 (Mid)	836.4	17.60	0.06
		4233 (High)	846.6	17.90	0.06
	HSUPA Subtest-3	4132 (Low)	826.4	19.50	0.09
		4182 (Mid)	836.4	19.00	0.08
		4233 (High)	846.6	19.30	0.09
	HSUPA Subtest-4	4132 (Low)	826.4	18.40	0.07
		4182 (Mid)	836.4	18.00	0.06
		4233 (High)	846.6	18.20	0.07
	HSUPA Subtest-5	4132 (Low)	826.4	18.20	0.07
		4182 (Mid)	836.4	17.90	0.06
		4233 (High)	846.6	18.20	0.07

PCS Band				
Modes	Channel	Frequency (MHz)	Conducted Power	
			(dBm)	(Watts)
GPRS 8	512 (Low)	1850.2	25.39	0.35
	661 (Mid)	1880.0	25.68	0.37
	810 (High)	1909.8	25.92	0.39
EDGE 8	512 (Low)	1850.2	25.54	0.36
	661 (Mid)	1880.0	25.55	0.36
	810 (High)	1909.8	25.39	0.35

3.2 Effective Radiated Power and Effective Isotropic Radiated Power Measurement

3.2.1 Description of the ERP/EIRP Measurement

ERP/EIRP is measured by substitution method according to ANSI / TIA / EIA-603-C-2004. The ERP of mobile transmitters must not exceed 7 Watts and the EIRP of mobile transmitters are limited to 2 Watts.

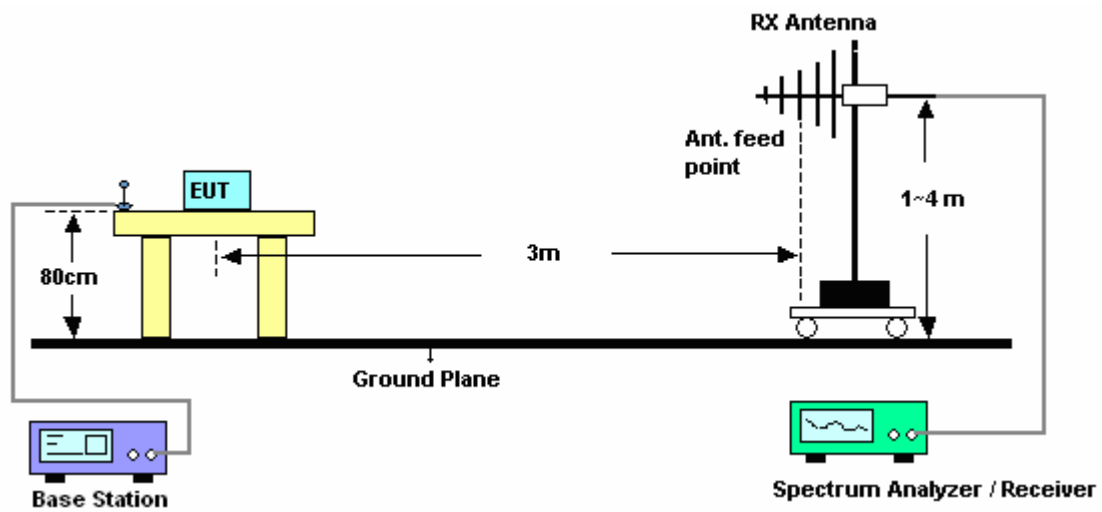
3.2.2 Measuring Instruments

See list of measuring instruments of this test report.

3.2.3 Test Procedures

1. The EUT was placed on an non-conductive rotating platform with 0.8 meter height in a semi-anechoic chamber. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and a spectrum analyzer with RBW= 3MHz,VBW= 3MHz, and peak detector settings.
2. During the measurement, the EUT was enforced in maximum power and linked with a base station. The highest emission was recorded from analyzer power level (LVL) from the 360 degrees rotation of the turntable and the test antenna raised and lowered over a range from 1 to 4 meters in both horizontally and vertically polarized orientations.
3. Effective Isotropic Radiated Power(EIRP) was measured by substitution method according to TIA/EIA-603-C. The EUT was replaced by dipole antenna (substitution antenna) at same location, and then a known power from S.G. was applied into the dipole antenna through a Tx cable, and then recorded the maximum Analyzer reading through raised and lowered the test antenna. The correction factor (in dB) = S.G. - Tx Cable loss + Substitution antenna gain - Analyzer reading. Then the EUT's EIRP was calculated with the correction factor, $EIRP = LVL + \text{Correction factor}$ and $ERP = EIRP - 2.15$.

3.2.4 Test Setup



3.2.5 Test Result of ERP

GSM850 (GPRS) Radiated Power ERP				
Horizontal Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	ERP (dBm)	ERP (W)
824.2	-6.61	33.02	24.26	0.27
836.4	-6.30	35.06	26.61	0.46
848.8	-5.63	36.81	29.03	0.80
Vertical Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	ERP (dBm)	ERP (W)
824.2	-14.73	35.83	18.95	0.08
836.4	-14.72	35.21	18.34	0.07
848.8	-12.94	36.01	20.92	0.12

* ERP = LVL (dBm) + Correction Factor (dB) – 2.15

GSM850 (EDGE) Radiated Power ERP				
Horizontal Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	ERP (dBm)	ERP (W)
824.2	-10.10	33.02	20.77	0.12
836.4	-10.04	35.06	22.87	0.19
848.8	-9.82	36.81	24.84	0.30
Vertical Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	ERP (dBm)	ERP (W)
824.2	-17.83	35.83	15.85	0.04
836.4	-18.49	35.21	14.57	0.03
848.8	-17.96	36.01	15.9	0.04

* ERP = LVL (dBm) + Correction Factor (dB) – 2.15

WCDMA Band V Radiated Power ERP				
Horizontal Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	ERP (dBm)	ERP (W)
826.4	-13.78	33.02	17.09	0.05
836.4	-15.94	35.06	16.97	0.05
846.6	-15.58	36.81	19.08	0.08
Vertical Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	ERP (dBm)	ERP (W)
826.4	-22.25	35.83	11.43	0.01
836.4	-23.30	35.21	9.76	0.01
846.6	-22.38	36.01	11.48	0.01

* ERP = LVL (dBm) + Correction Factor (dB) – 2.15

3.2.6 Test Result of EIRP

GSM1900 (GPRS) Radiated Power EIRP				
Horizontal Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1850.2	-22.68	44.09	21.41	0.14
1880.0	-21.52	45.42	23.90	0.25
1909.8	-18.45	43.31	24.86	0.31
Vertical Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1850.2	-25.46	47.38	21.92	0.16
1880.0	-25.95	47.52	21.57	0.14
1909.8	-24.22	46.57	22.35	0.17

* EIRP = LVL (dBm) + Correction Factor (dB)

GSM1900 (EDGE) Radiated Power EIRP				
Horizontal Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1850.2	-21.05	44.09	23.04	0.20
1880.0	-20.16	45.42	25.26	0.34
1909.8	-18.16	43.31	25.15	0.33
Vertical Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1850.2	-23.10	47.38	24.28	0.27
1880.0	-24.45	47.52	23.07	0.20
1909.8	-23.68	46.57	22.89	0.19

* EIRP = LVL (dBm) + Correction Factor (dB)

)

3.3 Occupied Bandwidth and Band Edge Measurement

3.3.1 Description of Occupied Bandwidth and Band Edge Measurement

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.

The emission bandwidth is defined as the width of the signal between two points, located at the 2 sides of the carrier frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

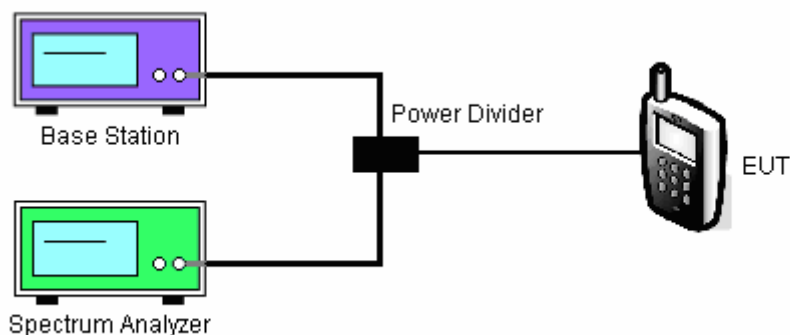
3.3.2 Measuring Instruments

See list of measuring instruments of this test report.

3.3.3 Test 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 low, middle and high channels for the highest RF powers were measured.
3. The band edges of low and high channels for the highest RF powers were measured. Setting RBW as roughly BW/100.
4. The RBW was replaced by 10 kHz, due to the spectrum analyzer IF-Filter including an excess of the limit. A worst case correction factor of $10 \log (1\% \text{ BW/measurement RBW})$ was implemented.

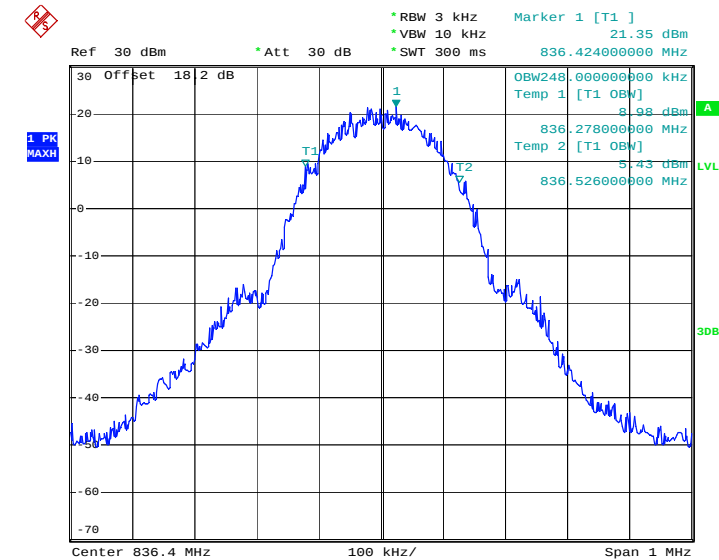
3.3.4 Test Setup



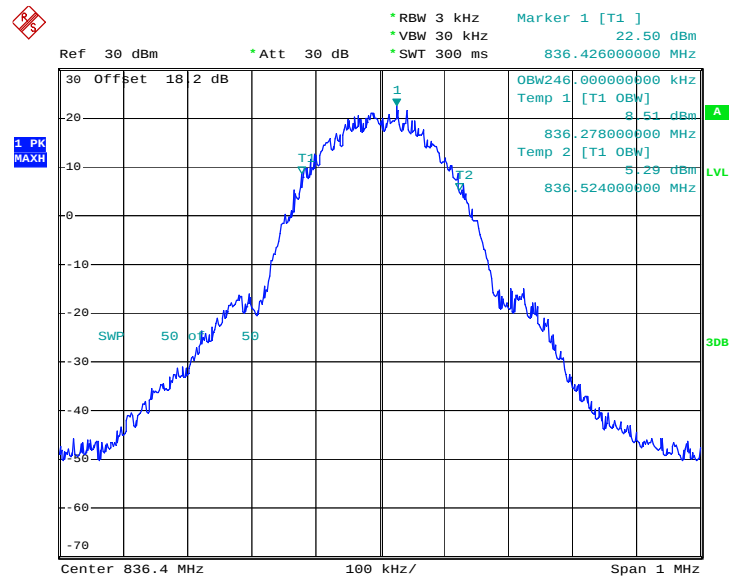
3.3.5 Test Result (Plots) of Occupied Bandwidth

Band :	GSM 850	Power Stage :	High
Test Mode :	GPRS Link		

99% Occupied Bandwidth Plot on Channel 189



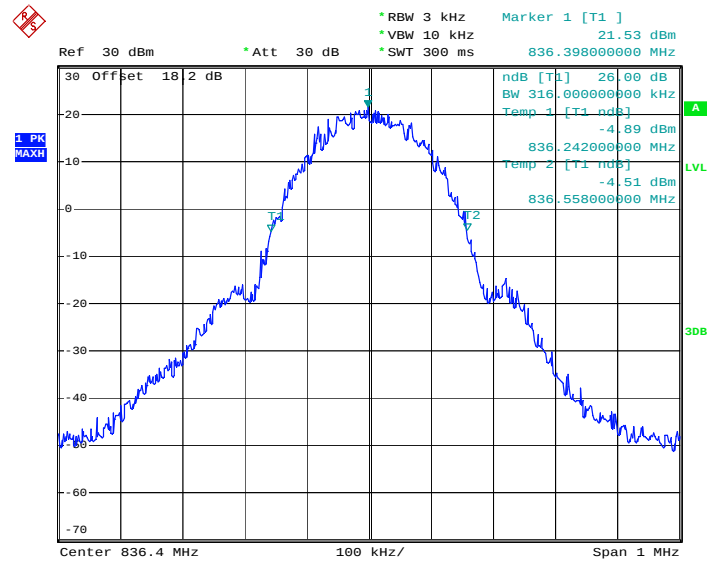
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26dB Bandwidth Plot on Channel 189

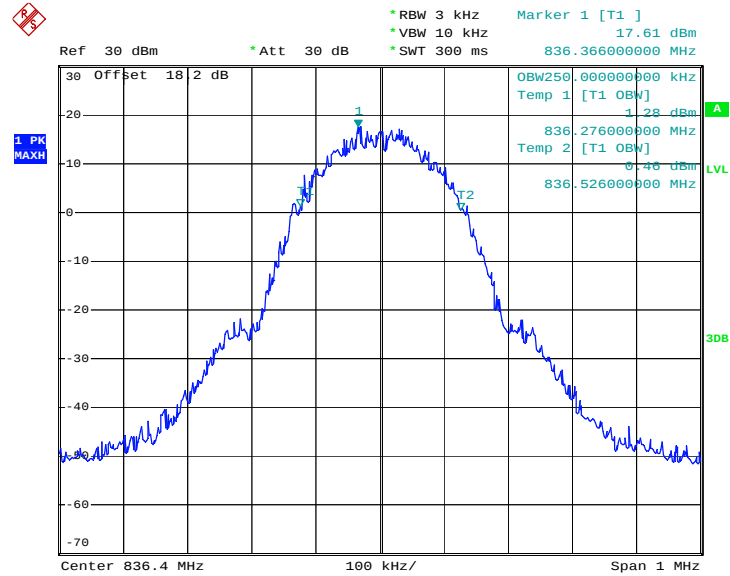


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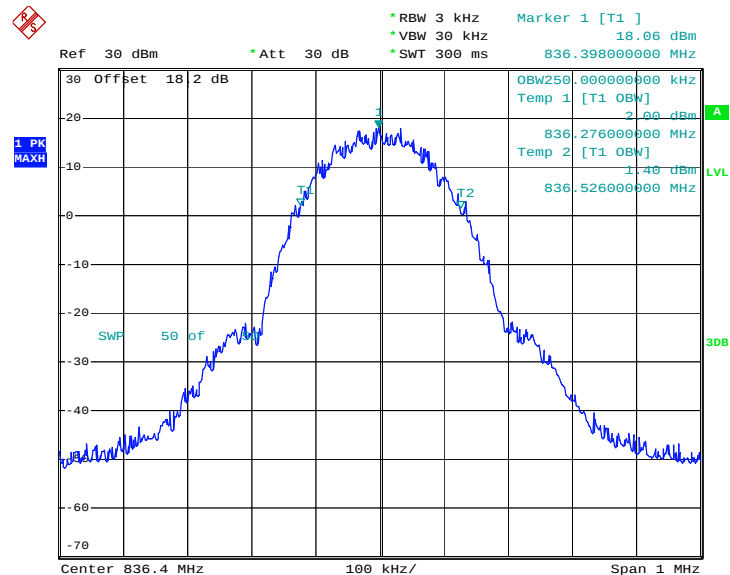


Band :	GSM 850	Power Stage :	High
Test Mode :	EDGE Link		

99% Occupied Bandwidth Plot on Channel 189



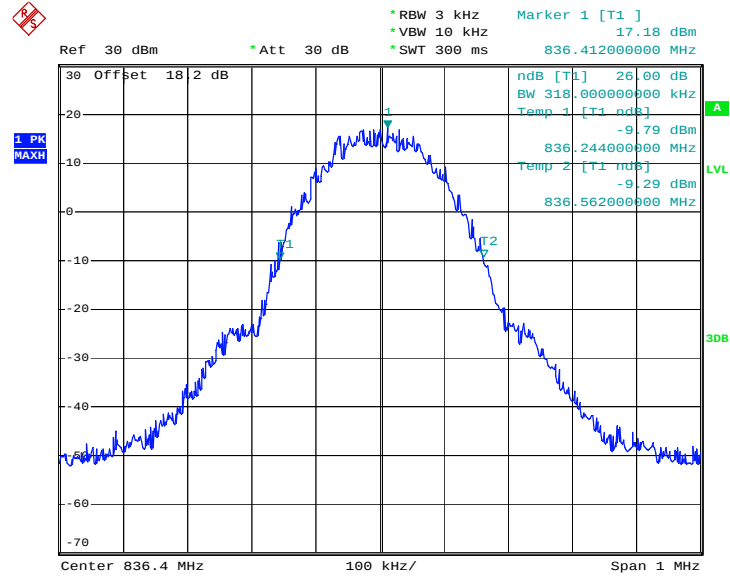
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26dB Bandwidth Plot on Channel 189

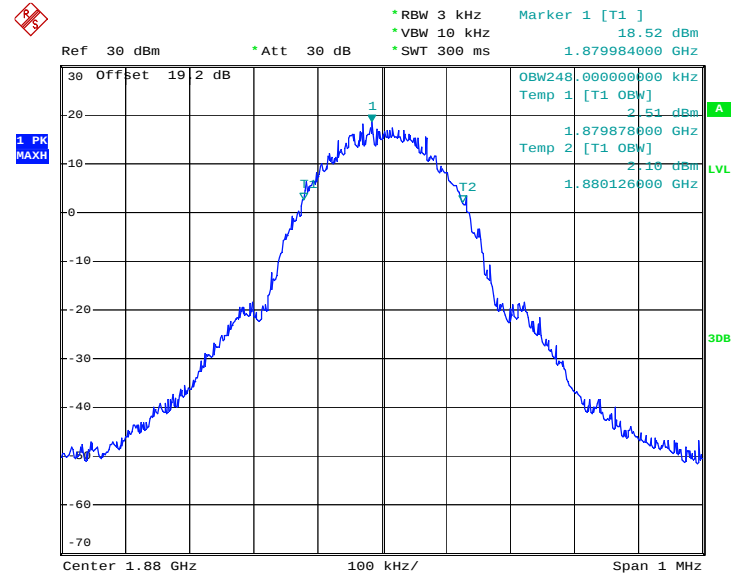


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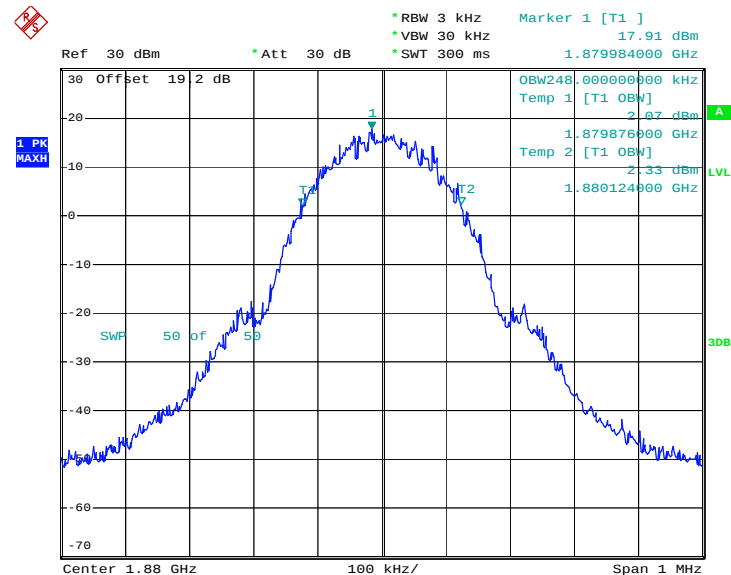


Band :	GSM 1900	Power Stage :	High
Test Mode :	GPRS Link		

99% Occupied Bandwidth Plot on Channel 661



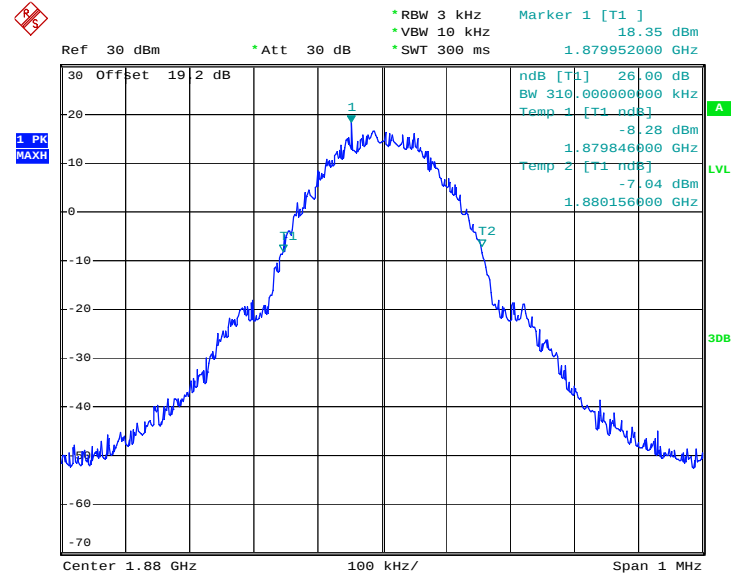
Date: 25.DEC.2008 19:57:14



Date: 25.DEC.2008 18:42:05



26dB Bandwidth Plot on Channel 661

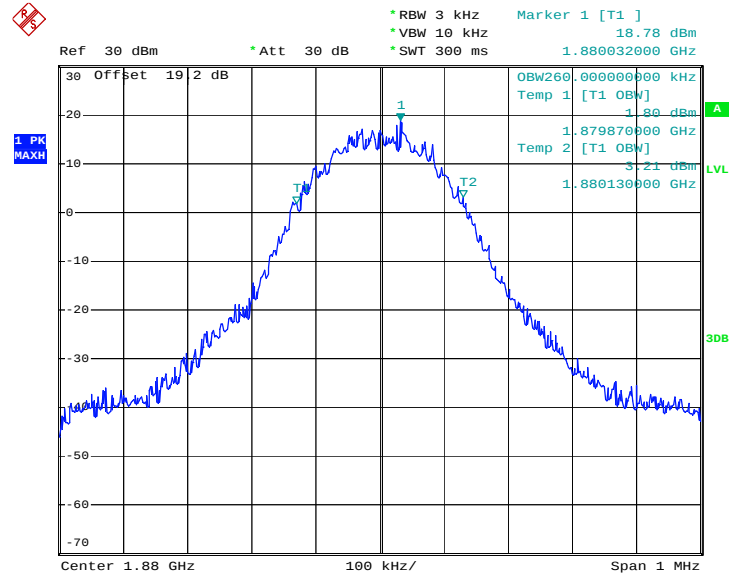


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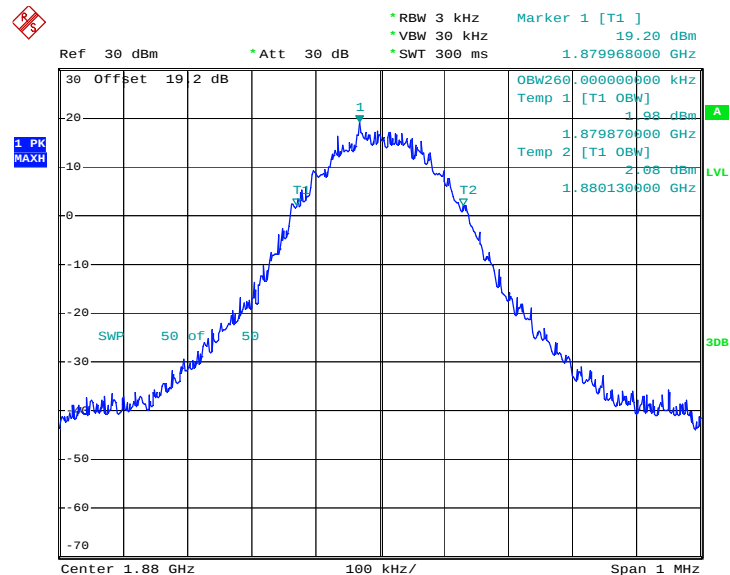


Band :	GSM 1900	Power Stage :	High
Test Mode :	EDGE Link		

99% Occupied Bandwidth Plot on Channel 661



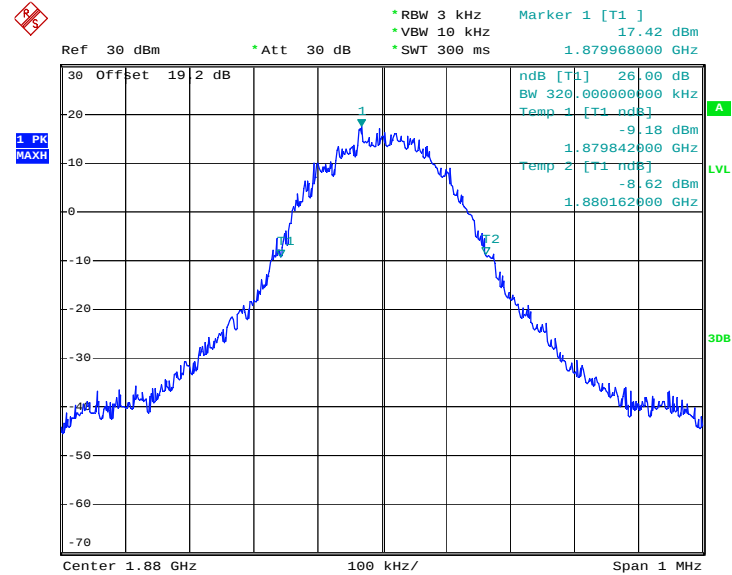
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Date: 25.DEC.2008 21:02:33



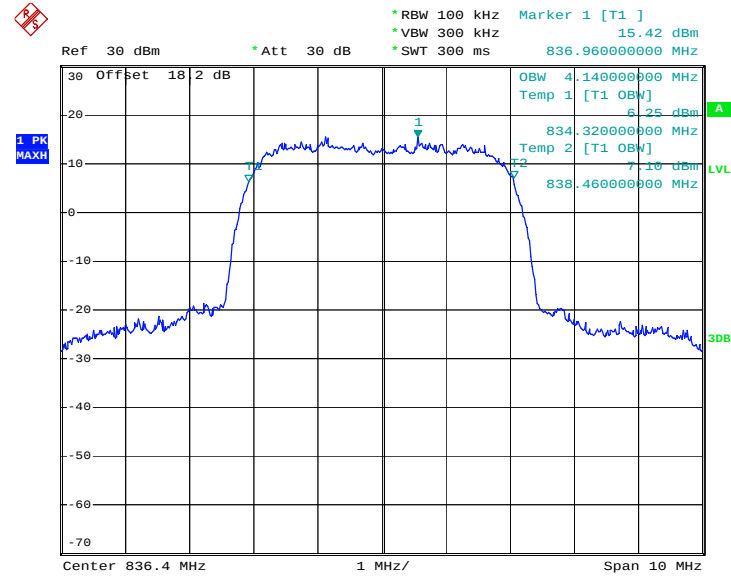
26dB Bandwidth Plot on Channel 661



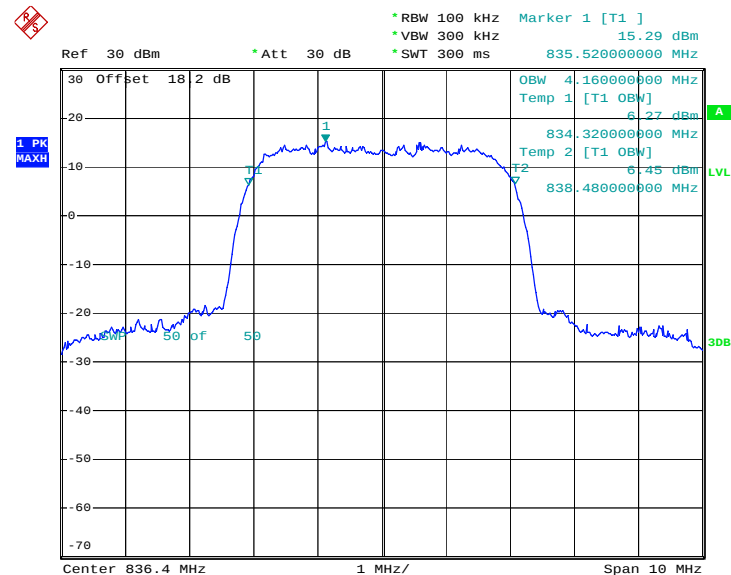
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Band :	WCDMA Band V	Power Stage :	High
Test Mode :	WCDMA Link		

99% Occupied Bandwidth Plot on Channel 4182

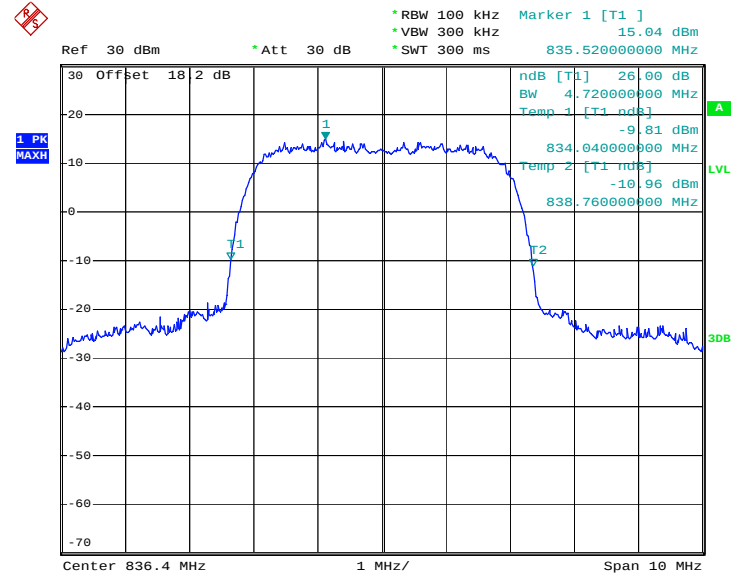
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Date: 25.DEC.2008 22:58:41



26dB Bandwidth Plot on Channel 4182

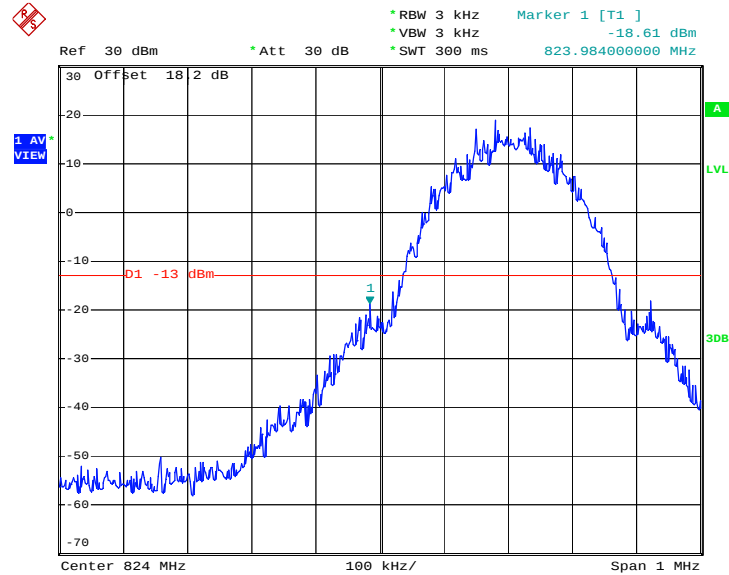


Date: 25.DEC.2008 22:54:56

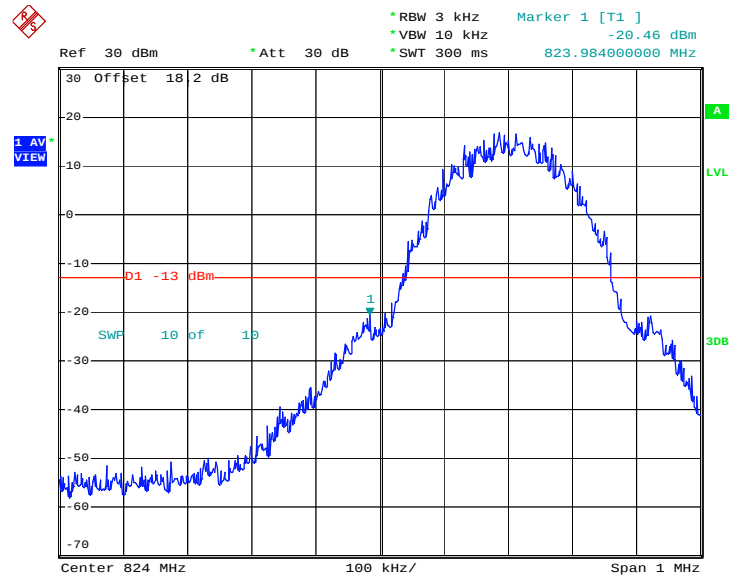
3.3.6 Test Result (Plots) of Conducted Band Edges

Band :	GSM850	Power Stage :	High
Test Mode :	GPRS Link		

Lower Band Edge Plot on Channel 128



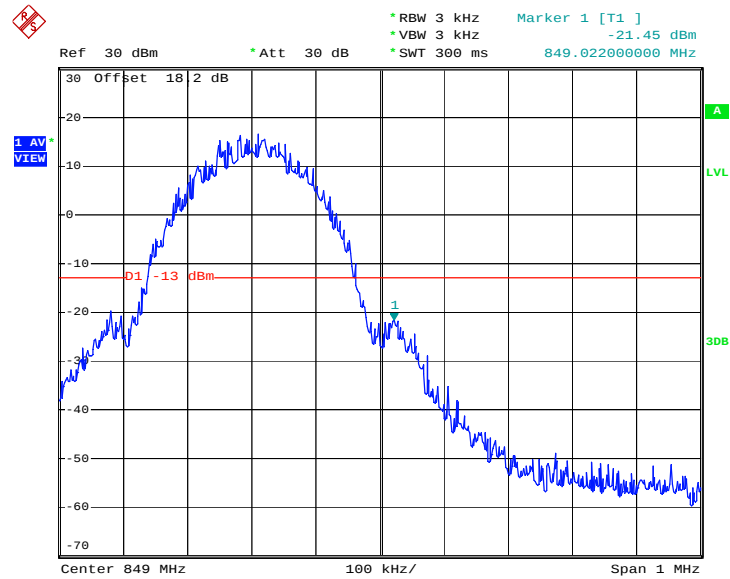
Date: 25.DEC.2008 17:40:08



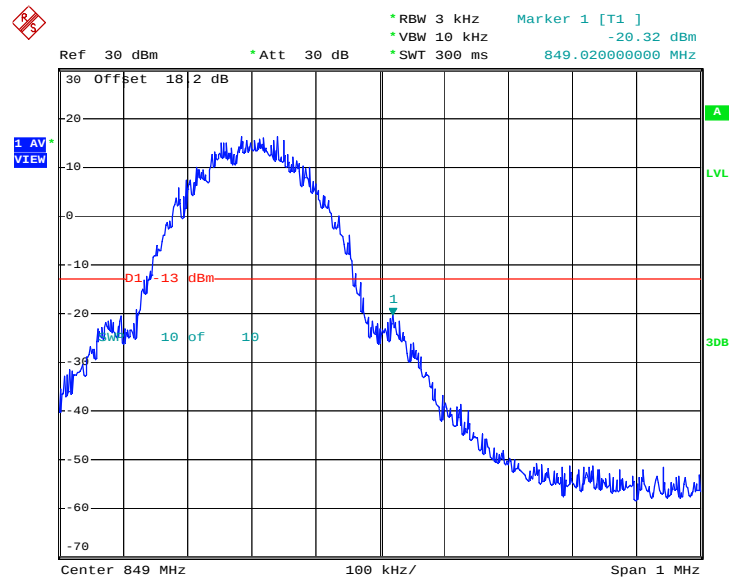
Date: 25.DEC.2008 17:36:18



Higher Band Edge Plot on Channel 251



Date: 25.DEC.2008 17:38:07

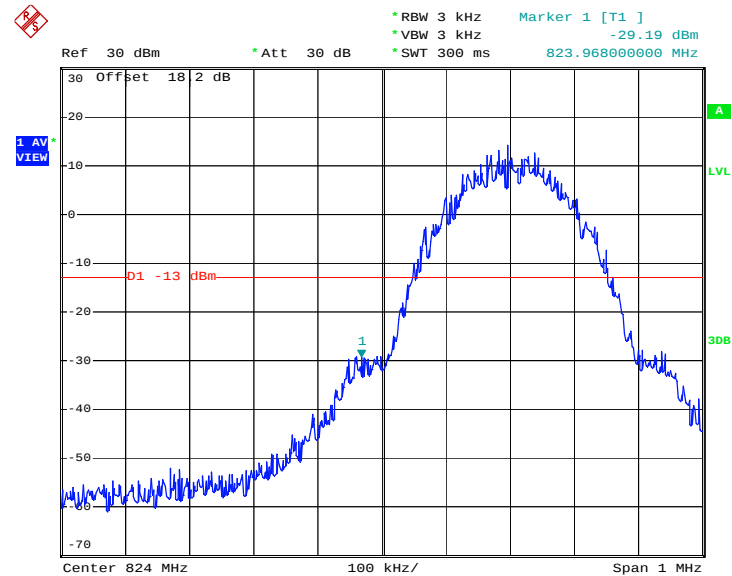


Date: 25.DEC.2008 17:37:12

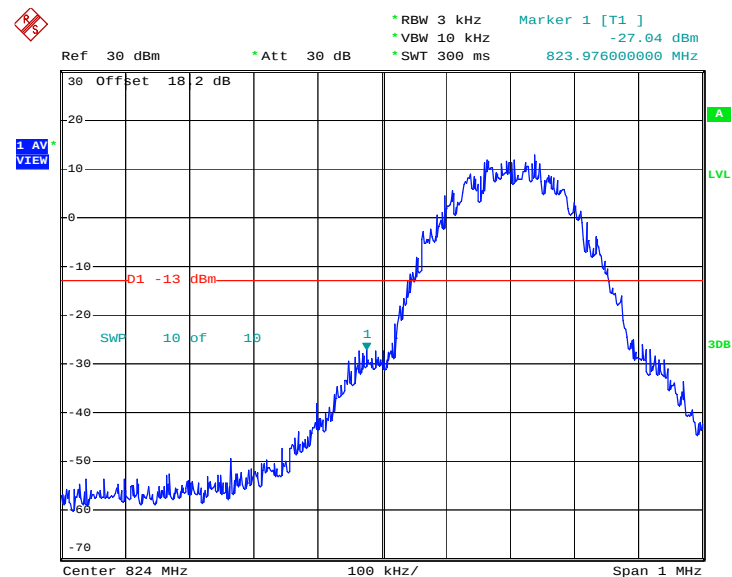


Band :	GSM850	Power Stage :	High
Test Mode :	EDGE Link		

Lower Band Edge Plot on Channel 128

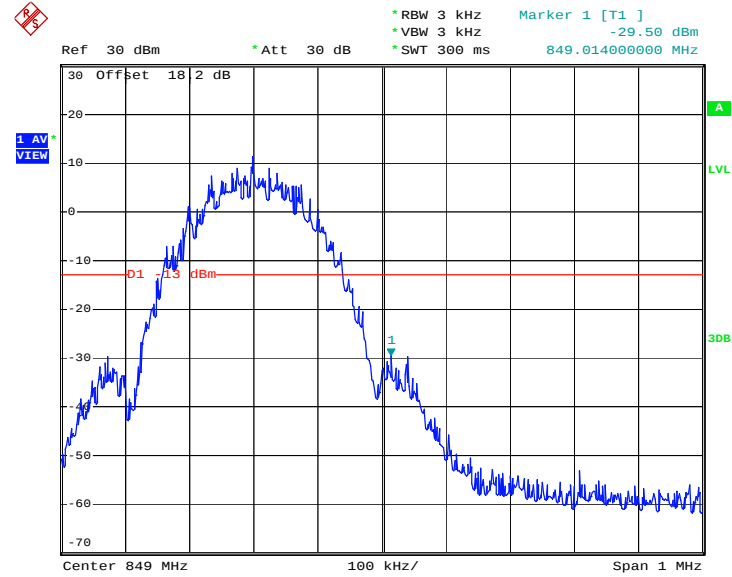


Date: 25.DEC.2008 22:10:12

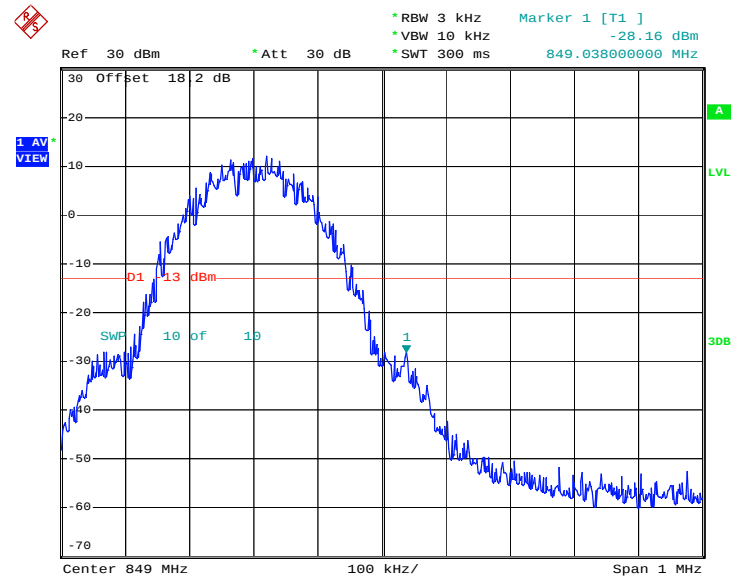


Date: 25.DEC.2008 22:06:24

Higher Band Edge Plot on Channel 251



Date: 25.DEC.2008 22:17:05

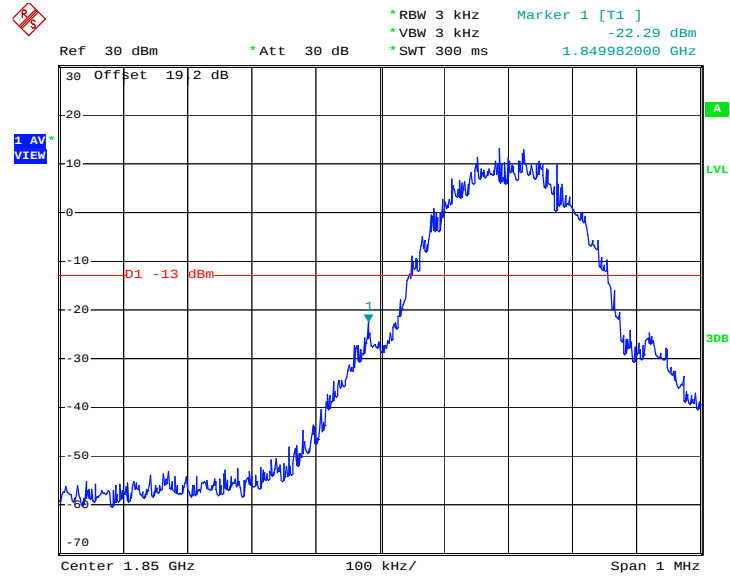


Date: 25.DEC.2008 22:08:11

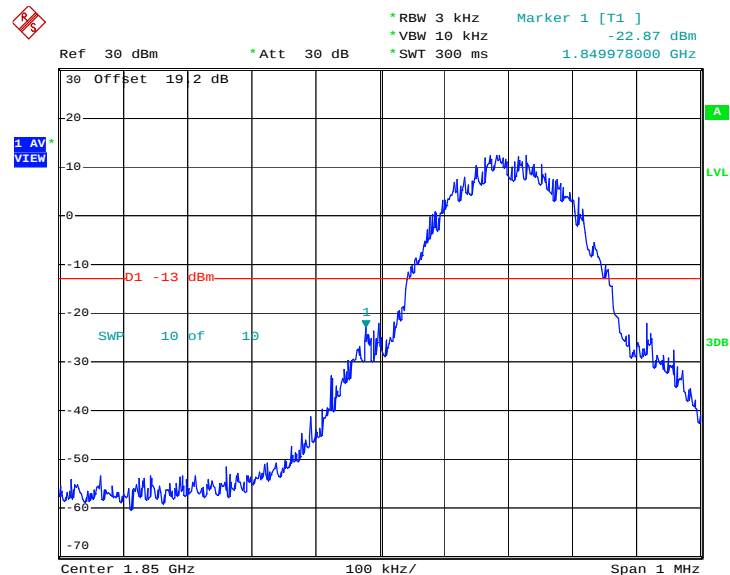


Band :	GSM1900	Power Stage :	High
Test Mode :	GPRS Link		

Lower Band Edge Plot on Channel 512

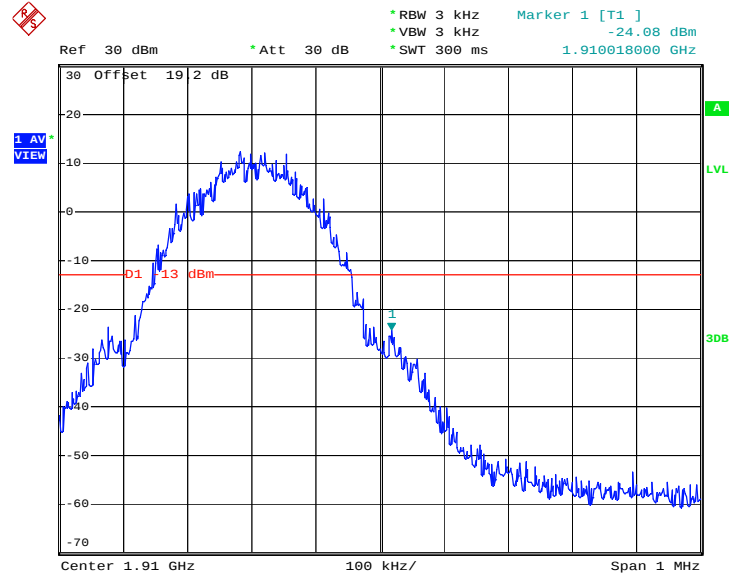


Date: 25.DEC.2008 19:26:27

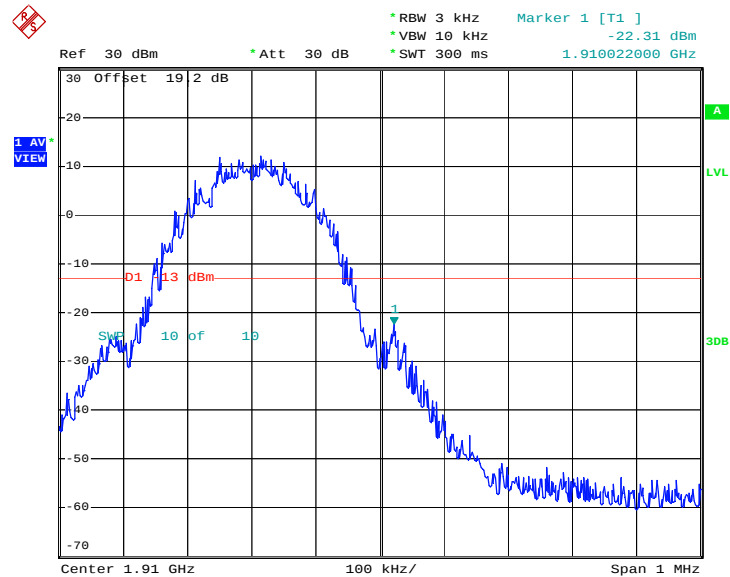


Date: 25.DEC.2008 18:44:15

Higher Band Edge Plot on Channel 810



Date: 25.DEC.2008 19:24:37

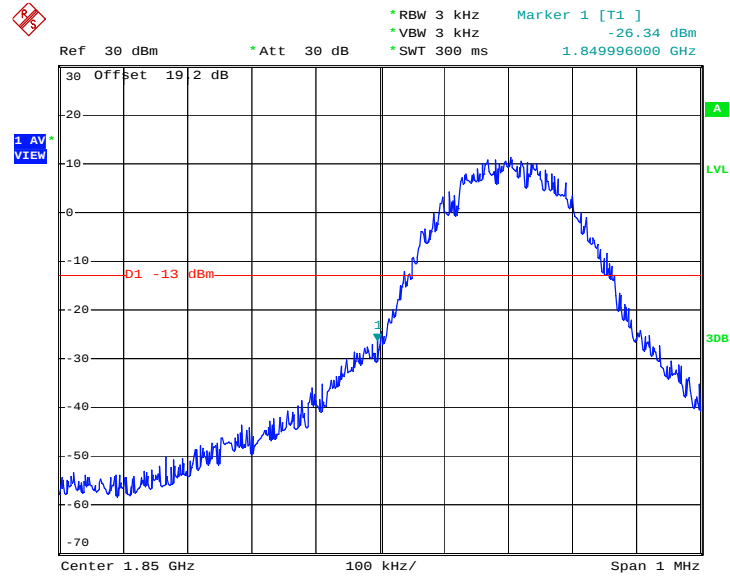


Date: 25.DEC.2008 19:24:04

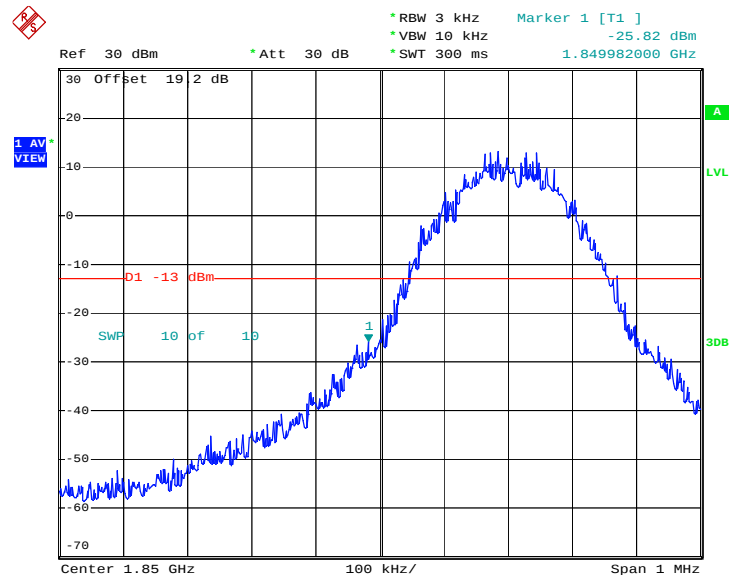


Band :	GSM1900	Power Stage :	High
Test Mode :	EDGE Link		

Lower Band Edge Plot on Channel 512

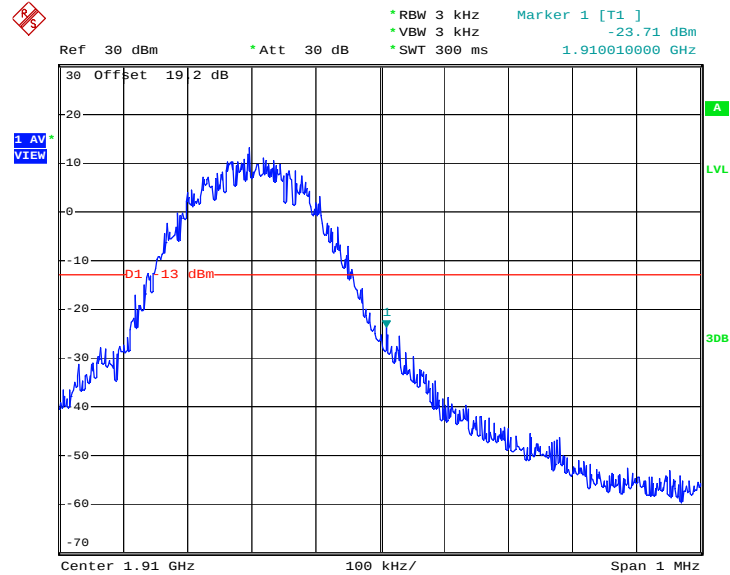


Date: 25.DEC.2008 20:39:30

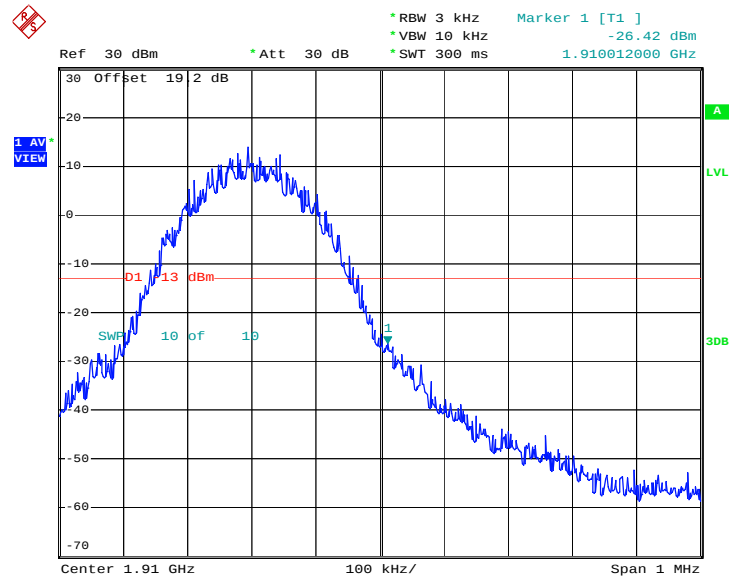


Date: 25.DEC.2008 20:37:55

Higher Band Edge Plot on Channel 810



Date: 25.DEC.2008 20:40:13

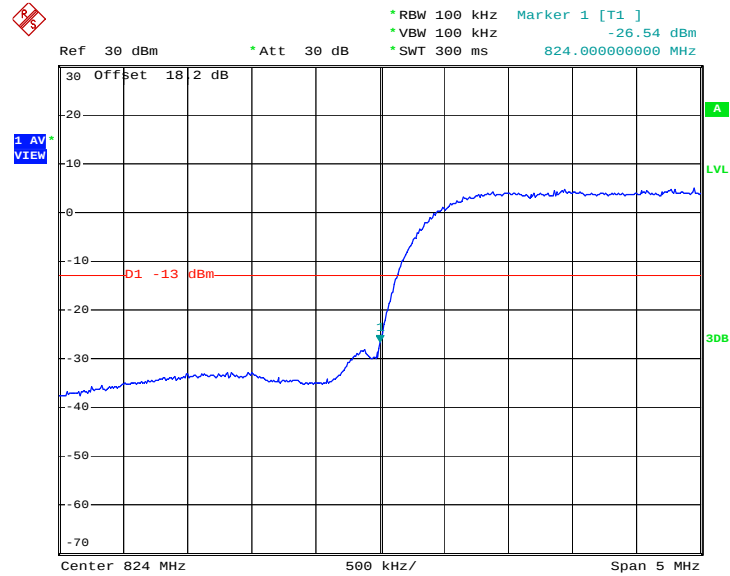


Date: 25.DEC.2008 20:37:01

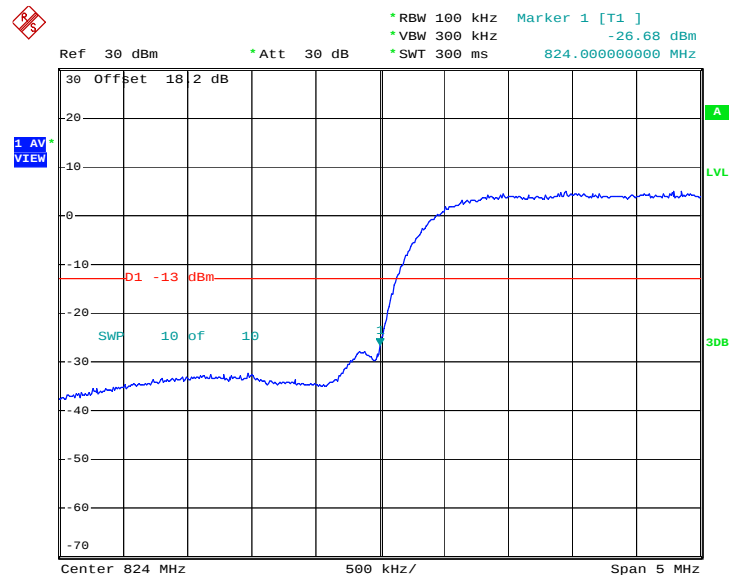


Band :	WCDMA Band V	Power Stage :	High
Test Mode :	WCDMA Link		

Lower Band Edge Plot on Channel 4132

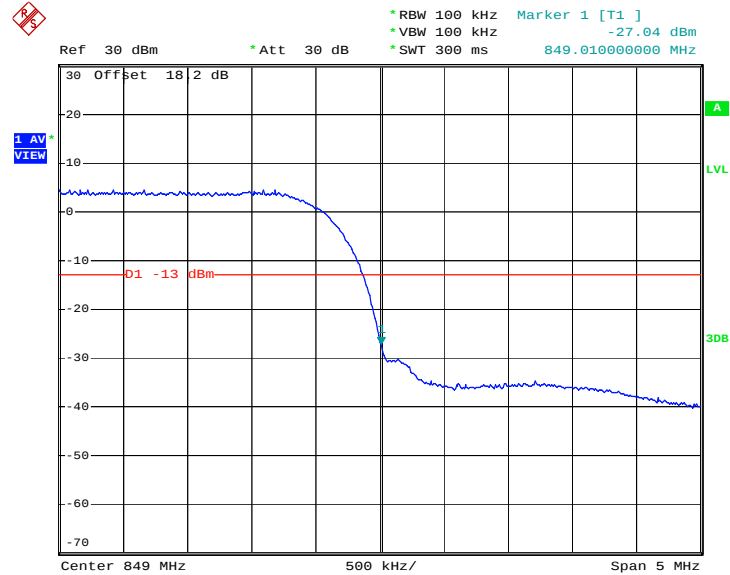


Date: 26.DEC.2008 02:31:12

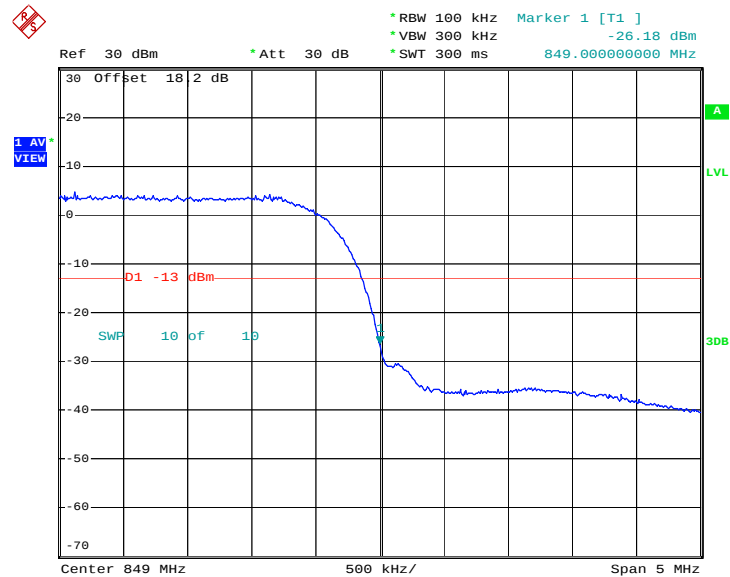


Date: 25.DEC.2008 23:40:47

Higher Band Edge Plot on Channel 4233



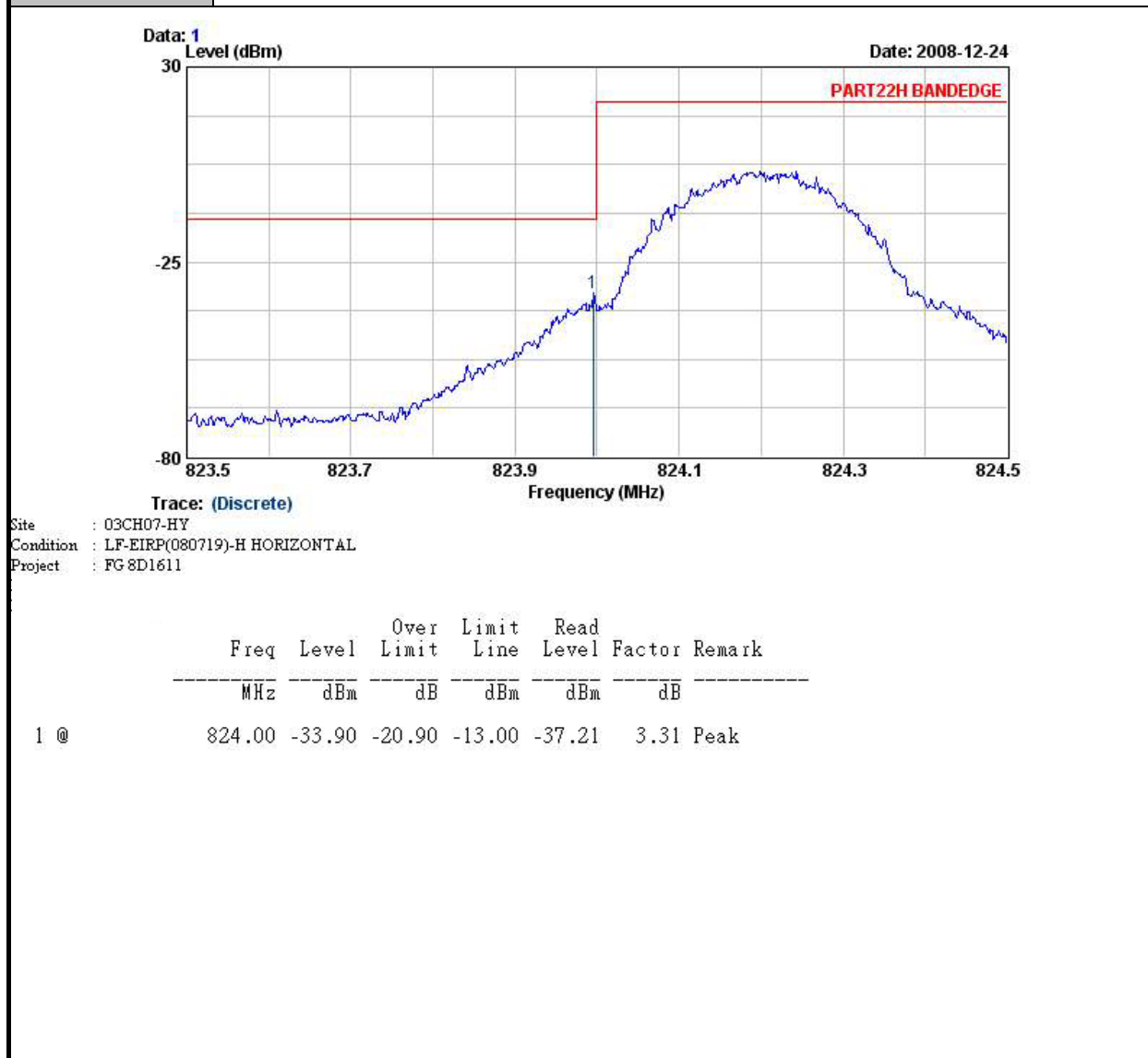
Date: 26.DEC.2008 02:31:45



Date: 25.DEC.2008 23:40:11

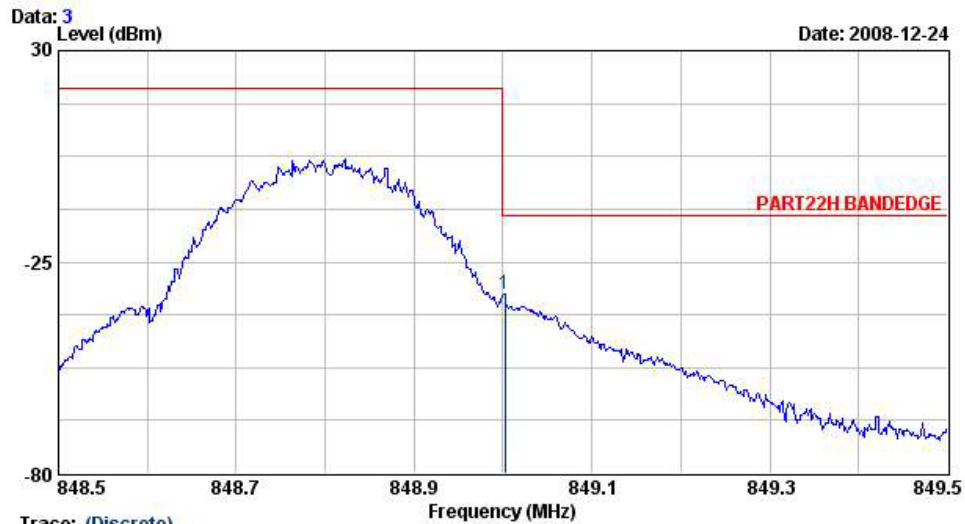
3.3.7 Test Result (Plots) of Radiated Band Edges

Band :	GSM850	Temperature :	21~23°C
Test Mode :	GPRS Link	Relative Humidity :	49~51%
Test Engineer :	Kay Wu	Polarization :	Horizontal
Remark :	Lower Band Edge Plot on Channel 128		





Band :	GSM850	Temperature :	21~23°C
Test Mode :	GPRS Link	Relative Humidity :	49~51%
Test Engineer :	Kay Wu	Polarization :	Horizontal
Remark :	Higher Band Edge Plot on Channel 251		

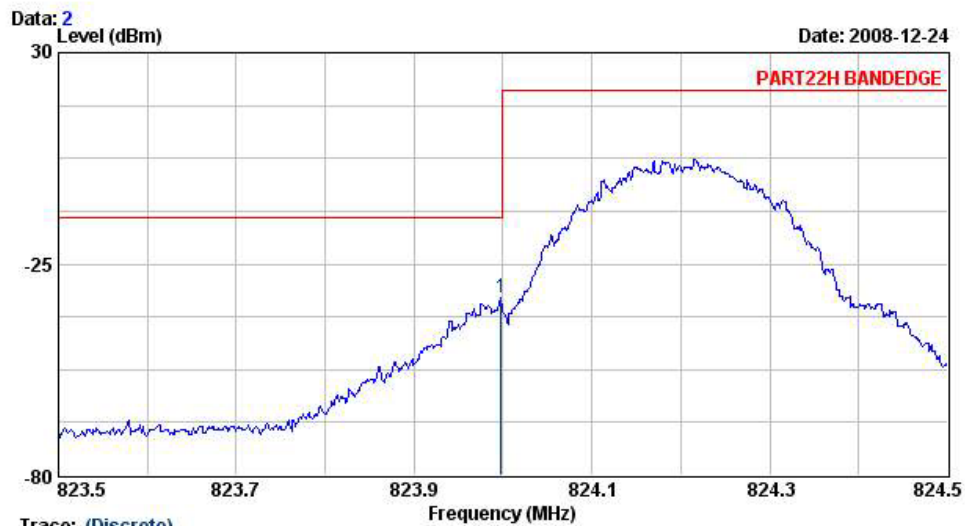


Site : 03CH07-HY
Condition : LF-EIRP(080719)-H HORIZONTAL
Project : FG-8D1611

	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Remark
	MHz	dBm	dB	dBm	dBm	dB	
1 @	849.00	-33.40	-20.40	-13.00	-36.94	3.54	Peak



Band :	GSM850	Temperature :	21~23°C
Test Mode :	GPRS Link	Relative Humidity :	49~51%
Test Engineer :	Kay Wu	Polarization :	Vertical
Remark :	Lower Band Edge Plot on Channel 128		

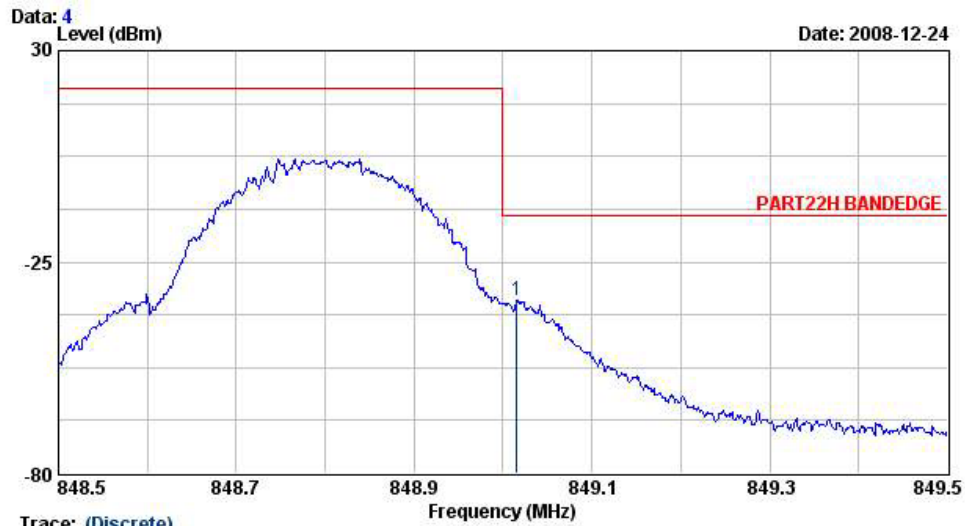


Site : 03CH07-HY
Condition : LF-EIRP(080719)-V VERTICAL
Project : FG-8D1611

	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Remark
	MHz	dBm	dB	dBm	dBm	dB	
1 @	824.00	-33.98	-20.98	-13.00	-38.28	4.30	Peak



Band :	GSM850	Temperature :	21~23°C
Test Mode :	GPRS Link	Relative Humidity :	49~51%
Test Engineer :	Kay Wu	Polarization :	Vertical
Remark :	Higher Band Edge Plot on Channel 251		

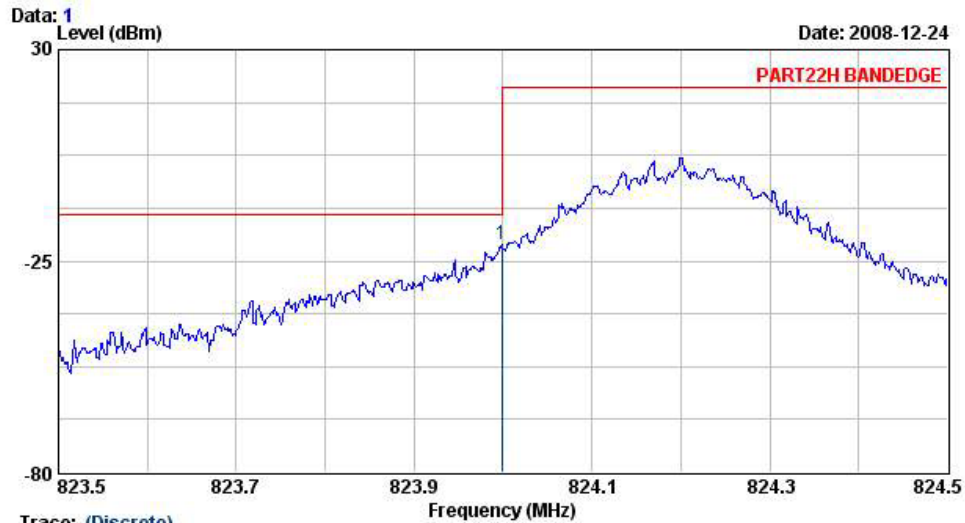


Site : 03CH07-HY
Condition : LF-EIRP(080719)-V VERTICAL
Project : FG-8D1611

	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Remark
	MHz	dBm	dB	dBm	dBm	dB	
1 @	849.02	-35.12	-22.12	-13.00	-39.58	4.46	Peak



Band :	GSM850	Temperature :	21~23°C
Test Mode :	EDGE Link	Relative Humidity :	49~51%
Test Engineer :	Kay Wu	Polarization :	Horizontal
Remark :	Lower Band Edge Plot on Channel 128		

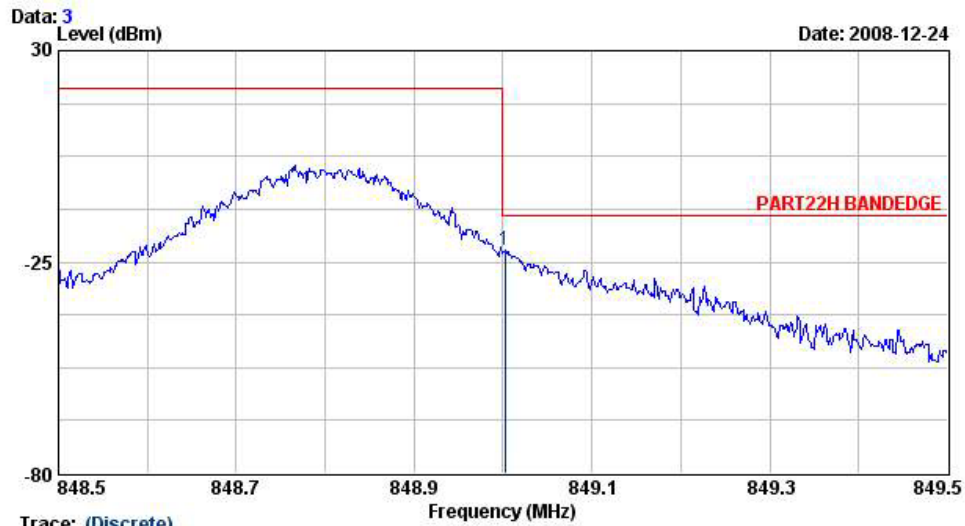


Site : 03CH07-HY
Condition : LF-EIRP(080719)-H HORIZONTAL
Project : FG8D1611

	Freq	Level	Over	Limit	Read		
	MHz	dBm	Limit	Line	Level	Factor	Remark
			dB	dBm	dBm	dB	
1 @	824.00	-20.69	-7.69	-13.00	-24.00	3.31	Peak



Band :	GSM850	Temperature :	21~23°C
Test Mode :	EDGE Link	Relative Humidity :	49~51%
Test Engineer :	Kay Wu	Polarization :	Horizontal
Remark :	Higher Band Edge Plot on Channel 251		



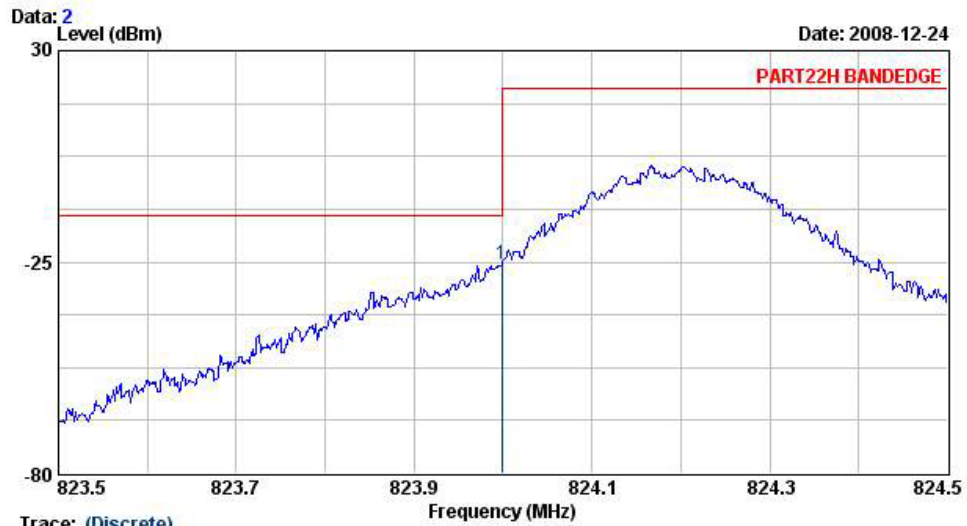
Trace: (Discrete)

Site : 03CH07-HY
Condition : LF-EIRP(080719)-H HORIZONTAL
Project : FG-8D1611

	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Remark
	MHz	dBm	dB	dBm	dBm	dB	
1 @	849.00	-22.12	-9.12	-13.00	-25.66	3.54	Peak



Band :	GSM850	Temperature :	21~23°C
Test Mode :	EDGE Link	Relative Humidity :	49~51%
Test Engineer :	Kay Wu	Polarization :	Vertical
Remark :	Lower Band Edge Plot on Channel 128		

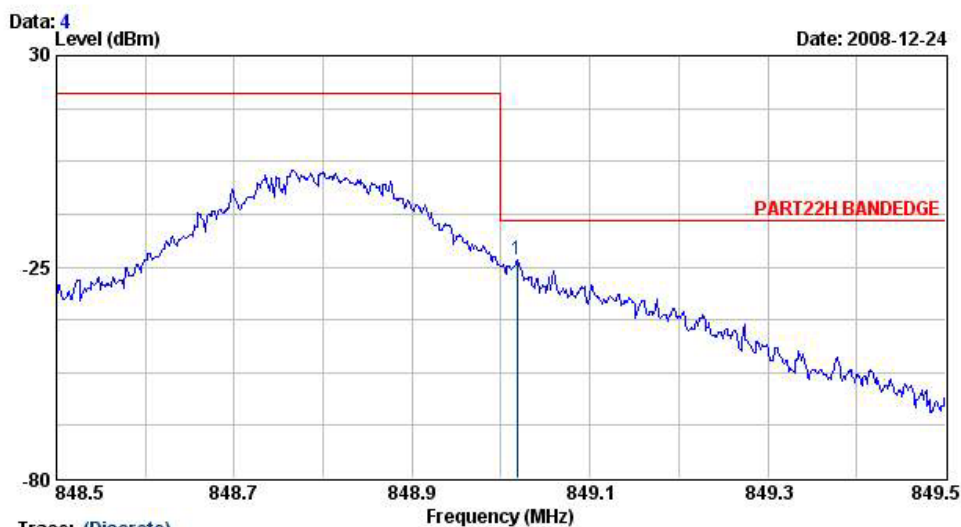


Site : 03CH07-HY
Condition : LF-EIRP(080719)-V VERTICAL
Project : FG-8D1611

	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Remark
	MHz	dBm	dB	dBm	dBm	dB	
1	824.00	-25.74	-12.74	-13.00	-30.05	4.30	Peak



Band :	GSM850	Temperature :	21~23°C
Test Mode :	EDGE Link	Relative Humidity :	49~51%
Test Engineer :	Kay Wu	Polarization :	Vertical
Remark :	Higher Band Edge Plot on Channel 251		

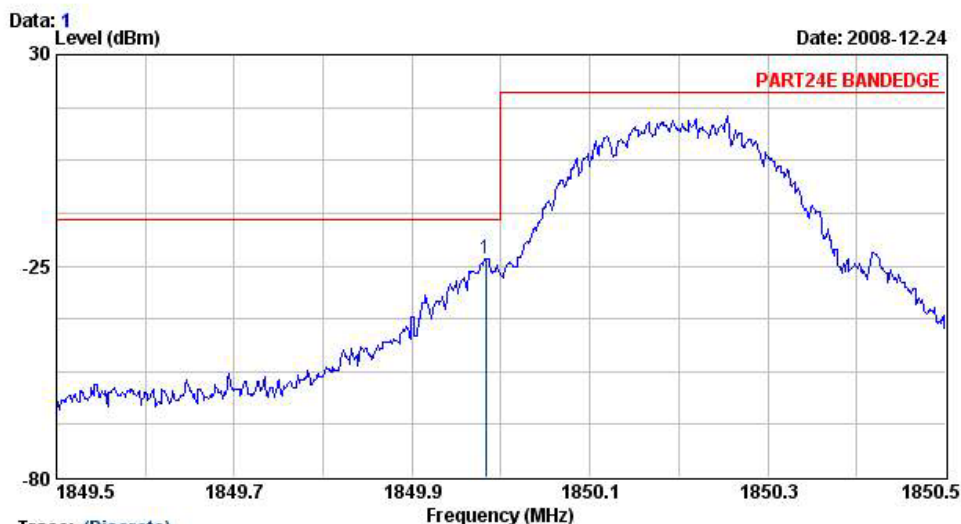


Site : 03CH07-HY
Condition : LF-EIRP(080719)-V VERTICAL
Project : FG-8D1611

	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Remark
	MHz	dBm	dB	dBm	dBm	dB	
1 @	849.02	-23.22	-10.22	-13.00	-27.68	4.46	Peak



Band :	GSM1900	Temperature :	21~23°C
Test Mode :	GPRS Link	Relative Humidity :	49~51%
Test Engineer :	Kay Wu	Polarization :	Horizontal
Remark :	Lower Band Edge Plot on Channel 512		

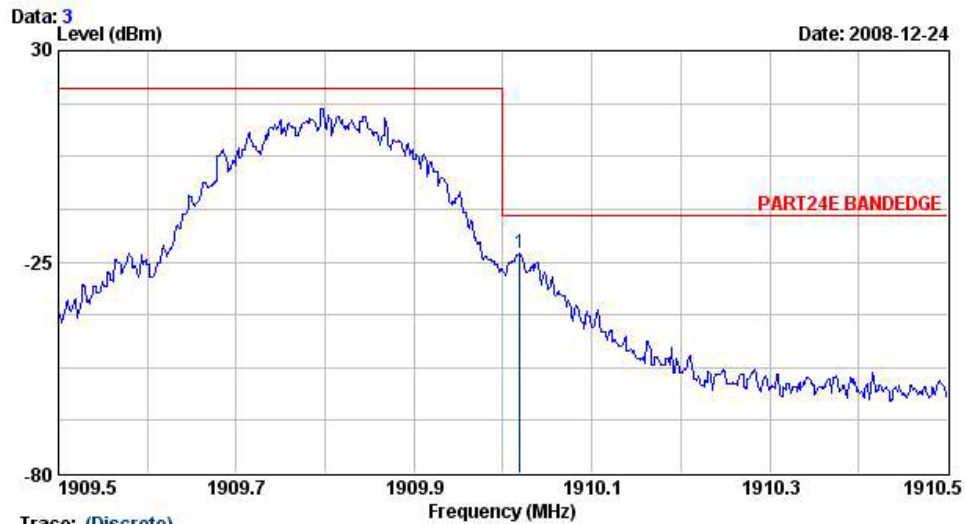


Site : 03CH07-HY
Condition : HF-EIRP(080306) HORIZONTAL
Project : FG-8D1611

	Freq	Level	Over	Limit	Read		
	MHz	dBm	Limit	Line	Level	Factor	Remark
			dB	dBm	dBm	dB	
1 @	1849.98	-23.01	-10.01	-13.00	-31.80	8.79	Peak



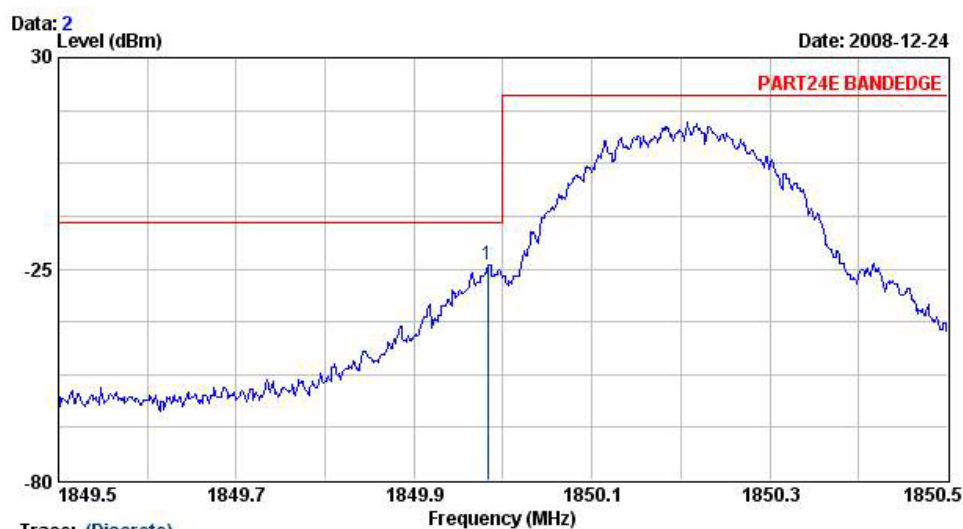
Band :	GSM1900	Temperature :	21~23°C
Test Mode :	GPRS Link	Relative Humidity :	49~51%
Test Engineer :	Kay Wu	Polarization :	Horizontal
Remark :	Higher Band Edge Plot on Channel 810		



	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Remark
	MHz	dBm	dB	dBm	dBm	dB	
1 @	1910.02	-22.58	-9.58	-13.00	-31.72	9.14	Peak



Band :	GSM1900	Temperature :	21~23°C
Test Mode :	GPRS Link	Relative Humidity :	49~51%
Test Engineer :	Kay Wu	Polarization :	Vertical
Remark :	Lower Band Edge Plot on Channel 512		

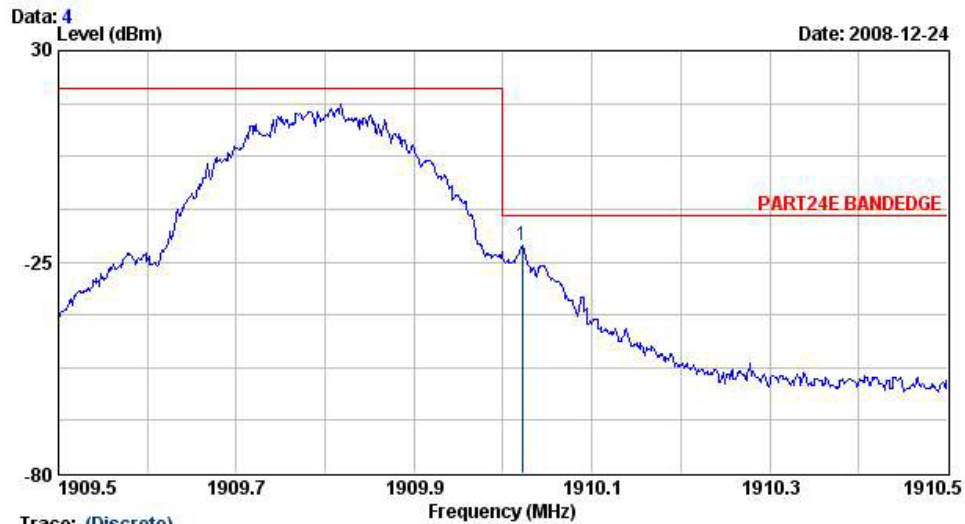


Site : 03CH07-HY
Condition : HF-EIRP(080306) VERTICAL
Project : FG-8D1611

	Freq	Level	Over	Limit	Read		
	MHz	dBm	Limit	Line	Level	Factor	Remark
			dB	dBm	dBm	dB	
1	1849.98	-23.85	-10.85	-13.00	-34.95	11.09	Peak



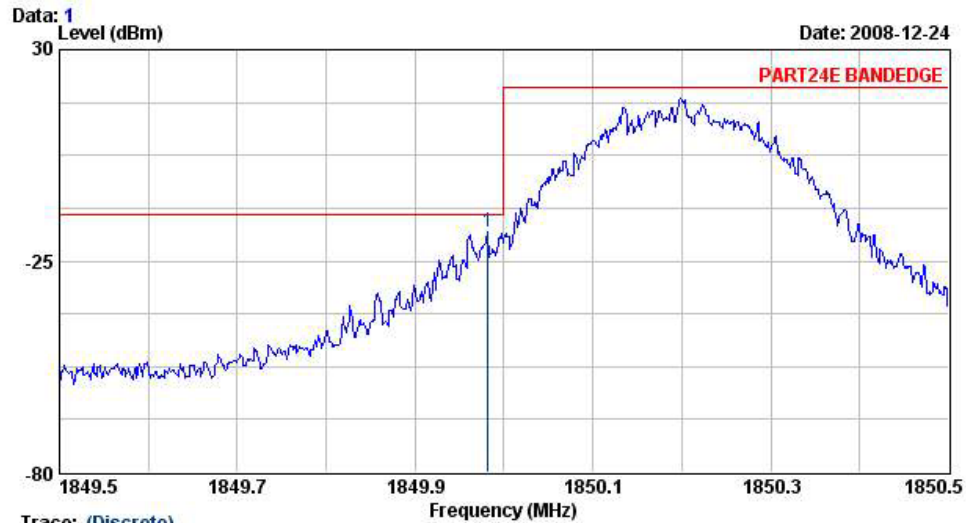
Band :	GSM1900	Temperature :	21~23°C
Test Mode :	GPRS Link	Relative Humidity :	49~51%
Test Engineer :	Kay Wu	Polarization :	Vertical
Remark :	Higher Band Edge Plot on Channel 810		



	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Remark
	MHz	dBm	dB	dBm	dBm	dB	
1 @	1910.02	-20.73	-7.73	-13.00	-32.19	11.47	Peak



Band :	GSM1900	Temperature :	21~23°C
Test Mode :	EDGE Link	Relative Humidity :	49~51%
Test Engineer :	Kay Wu	Polarization :	Horizontal
Remark :	Lower Band Edge Plot on Channel 512		

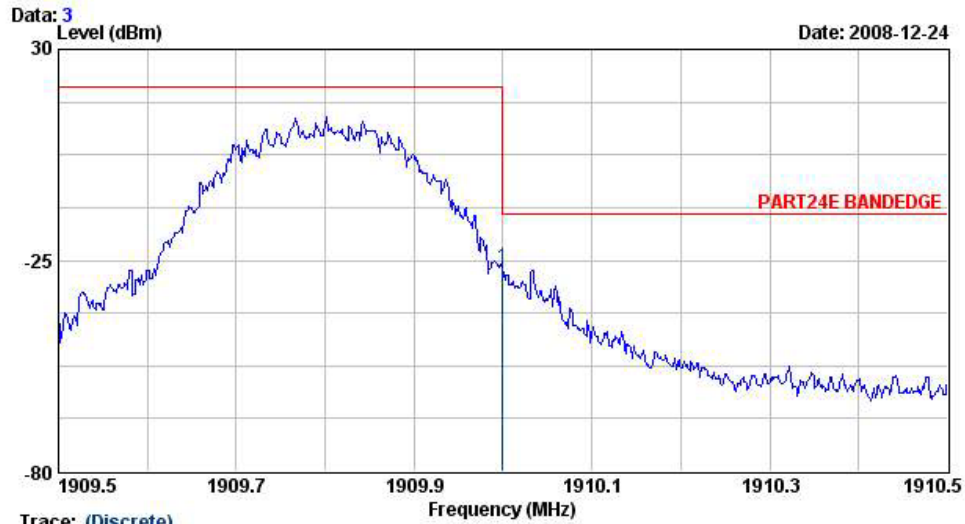


Site : 03CH07-HY
Condition : HF-EIRP(080306) HORIZONTAL
Project : FG8D1611

	Freq	Level	Over	Limit	Read		
	MHz	dBm	Limit	Line	Level	Factor	Remark
			dB	dBm	dBm	dB	
1 @	1849.98	-17.34	-4.34	-13.00	-26.13	8.79	Peak



Band :	GSM1900	Temperature :	21~23°C
Test Mode :	EDGE Link	Relative Humidity :	49~51%
Test Engineer :	Kay Wu	Polarization :	Horizontal
Remark :	Higher Band Edge Plot on Channel 810		

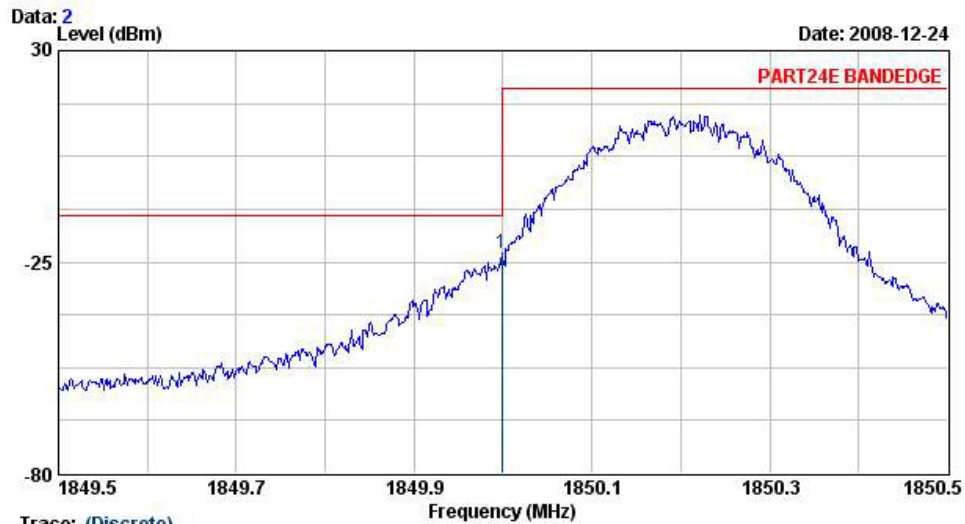


Site : 03CH07-HY
Condition : HF-EIRP(080306) HORIZONTAL
Project : FG-8D1611

	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Remark
	MHz	dBm	dB	dBm	dBm	dB	
1 @	1910.00	-27.04	-14.04	-13.00	-36.17	9.14	Peak



Band :	GSM1900	Temperature :	21~23°C
Test Mode :	EDGE Link	Relative Humidity :	49~51%
Test Engineer :	Kay Wu	Polarization :	Vertical
Remark :	Lower Band Edge Plot on Channel 512		

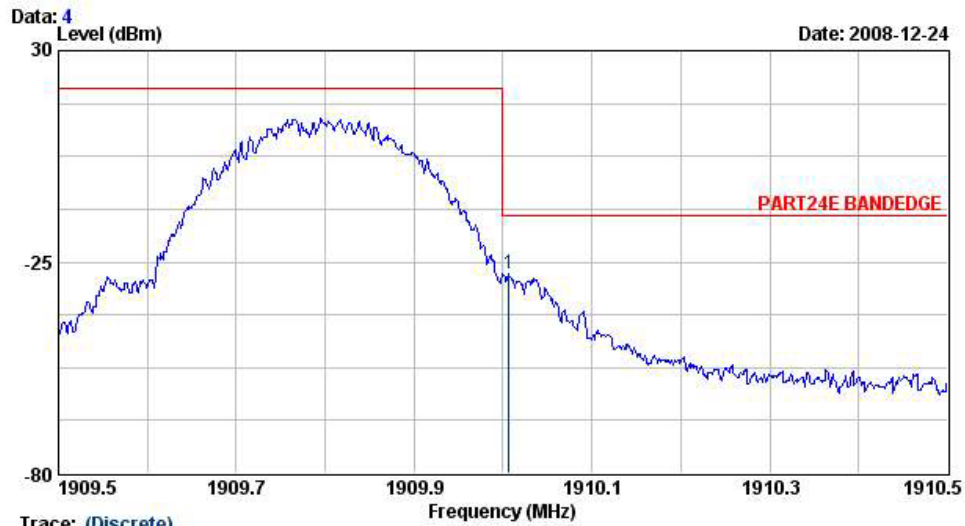


Site : 03CH07-HY
Condition : HF-EIRP(080306) VERTICAL
Project : FG-8D1611

	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Remark
	MHz	dBm	dB	dBm	dBm	dB	
1 @	1850.00	-22.83	-9.83	-13.00	-33.92	11.09	Peak



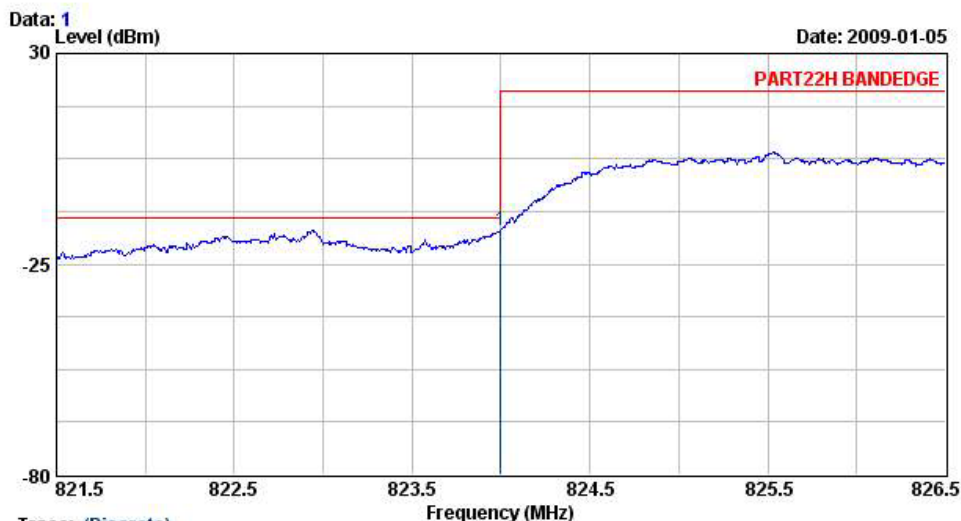
Band :	GSM1900	Temperature :	21~23°C
Test Mode :	EDGE Link	Relative Humidity :	49~51%
Test Engineer :	Kay Wu	Polarization :	Vertical
Remark :	Higher Band Edge Plot on Channel 810		



	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Remark
	MHz	dBm	dB	dBm	dBm	dB	
1 @	1910.01	-28.15	-15.15	-13.00	-39.62	11.47	Peak



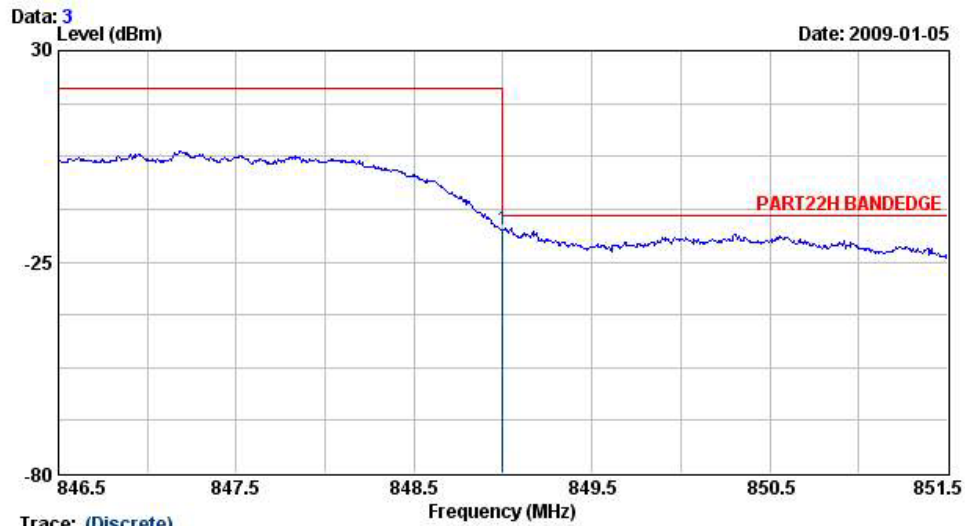
Band :	WCDMA	Temperature :	21~23°C
Test Mode :	RMC Link	Relative Humidity :	49~51%
Test Engineer :	Kay Wu	Polarization :	Horizontal
Remark :	Lower Band Edge Plot on Channel 4132		



Site : 03CH07-HY
Condition : LF-EIRP(080719)-H HORIZONTAL
Project : FG 8D1611

	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Remark
	MHz	dBm	dB	dBm	dBm	dB	
1 @	824.00	-16.18	-3.18	-13.00	-19.49	3.31	Peak

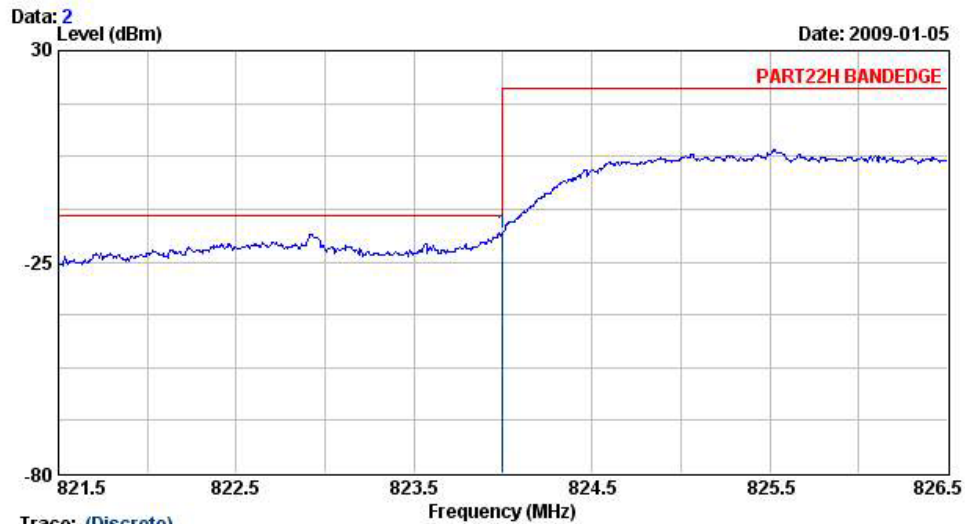
Band :	WCDMA	Temperature :	21~23°C
Test Mode :	RMC Link	Relative Humidity :	49~51%
Test Engineer :	Kay Wu	Polarization :	Horizontal
Remark :	Higher Band Edge Plot on Channel 4233		



Site : 03CH07-HY
Condition : LF-EIRP(080719)-H HORIZONTAL
Project : FG-8D1611

	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Remark
	MHz	dBm	dB	dBm	dBm	dB	
1	849.00	-16.65	-3.65	-13.00	-20.20	3.54	Peak

Band :	WCDMA	Temperature :	21~23°C
Test Mode :	RMC Link	Relative Humidity :	49~51%
Test Engineer :	Kay Wu	Polarization :	Vertical
Remark :	Lower Band Edge Plot on Channel 4132		

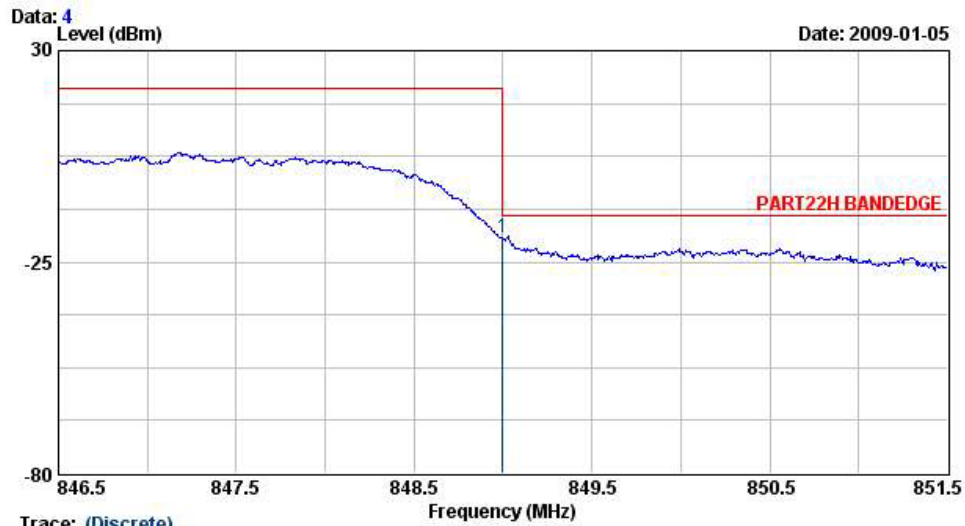


Site : 03CH07-HY
Condition : LF-EIRP(080719)-V VERTICAL
Project : FG-8D1611

	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Remark
	MHz	dBm	dB	dBm	dBm	dB	
1	824.00	-17.47	-4.47	-13.00	-21.77	4.30	Peak



Band :	WCDMA	Temperature :	21~23°C
Test Mode :	RMC Link	Relative Humidity :	49~51%
Test Engineer :	Kay Wu	Polarization :	Vertical
Remark :	Higher Band Edge Plot on Channel 4233		



Site : 03CH07-HY
Condition : LF-EIRP(080719)-V VERTICAL
Project : FG-8D1611

	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Remark
	MHz	dBm	dB	dBm	dBm	dB	
1	849.00	-18.82	-5.82	-13.00	-23.28	4.46	Peak

3.4 Conducted Emission Measurement

3.4.1 Description of Conducted Emission Measurement

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.

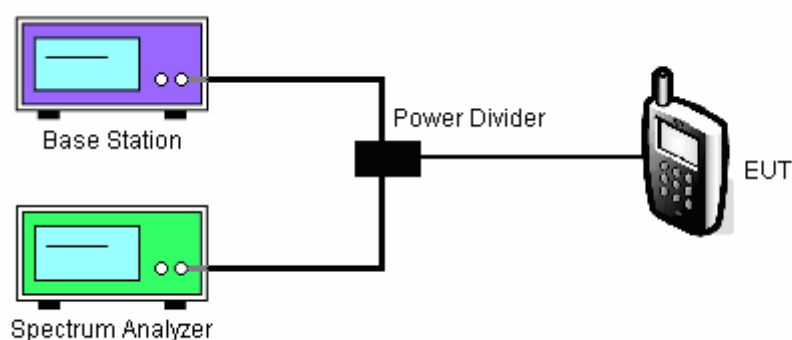
3.4.2 Measuring Instruments

See list of measuring instruments of this test report.

3.4.3 Test 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.

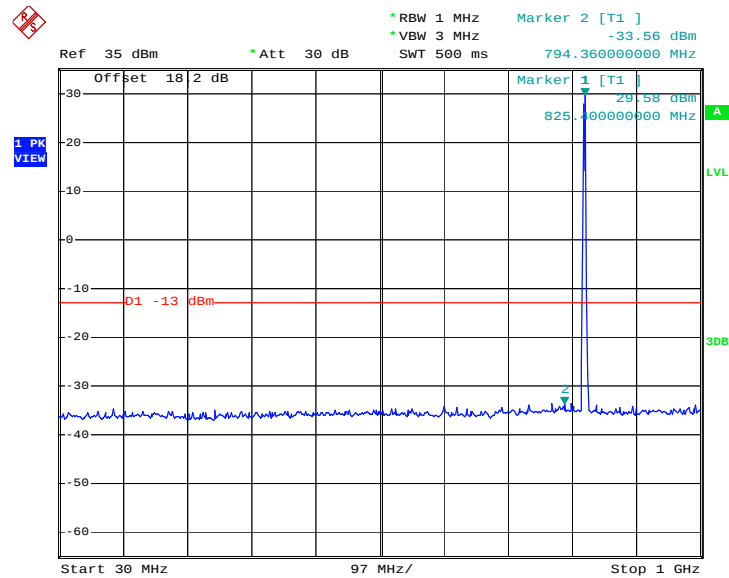
3.4.4 Test Setup



3.4.5 Test Result of Conducted Emission

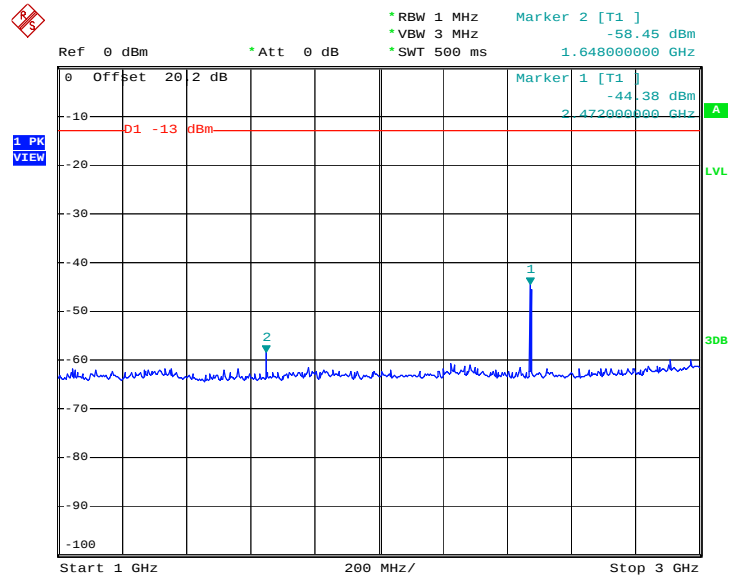
Band :	GSM850	Channel :	CH128
Test Mode :	GPRS Link		

Conducted Emission Plot between 30M-1G



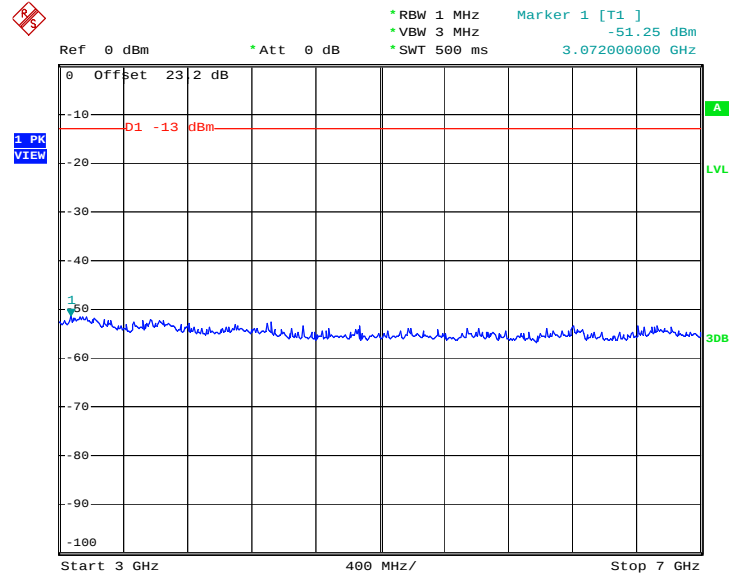
Date: 27.DEC.2008 13:54:50

Conducted Emission Plot between 1GHz ~ 3GHz



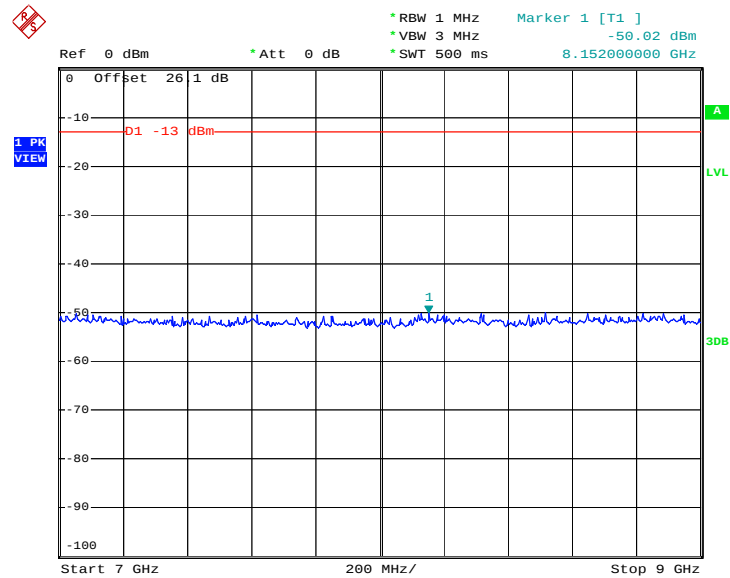
Date: 27.DEC.2008 13:58:32

Conducted Emission Plot between 3GHz ~ 7GHz



Date: 27.DEC.2008 13:59:23

Conducted Emission Plot between 7GHz ~ 9GHz

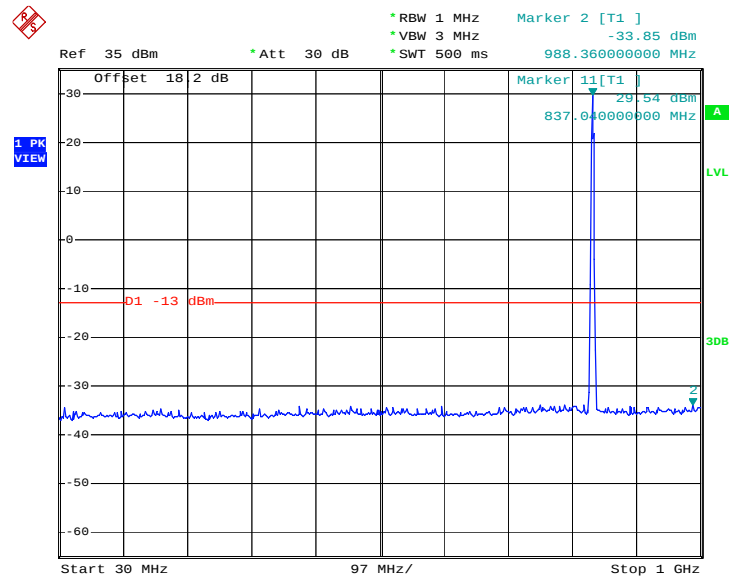


Date: 27.DEC.2008 14:00:50



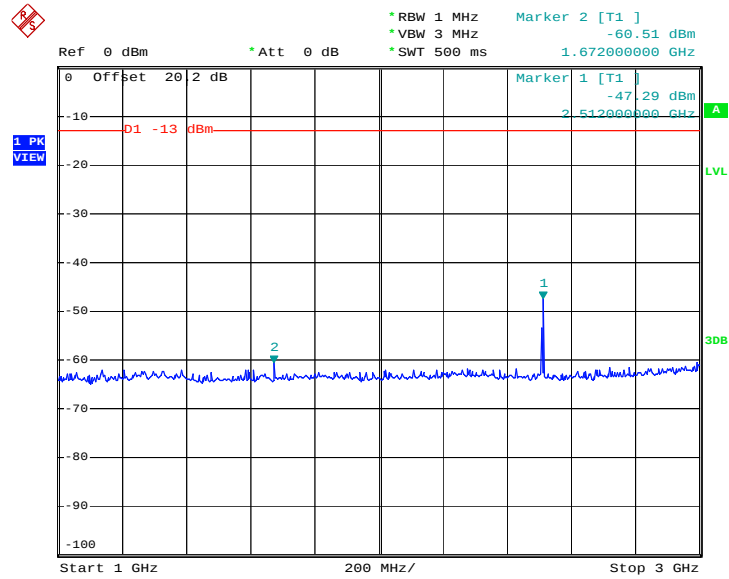
Band :	GSM850	Channel :	CH189
Test Mode :	GPRS Link		

Conducted Emission Plot between 30M-1G



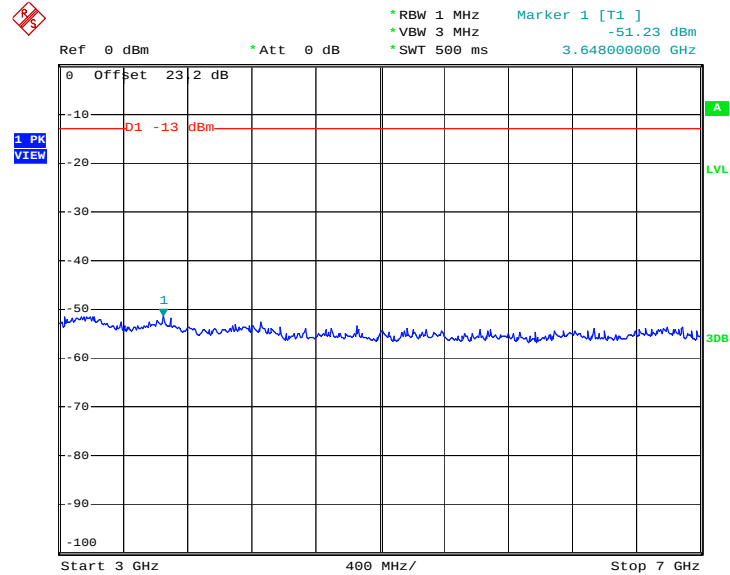
Date: 25.DEC.2008 17:52:35

Conducted Emission Plot between 1GHz ~ 3GHz



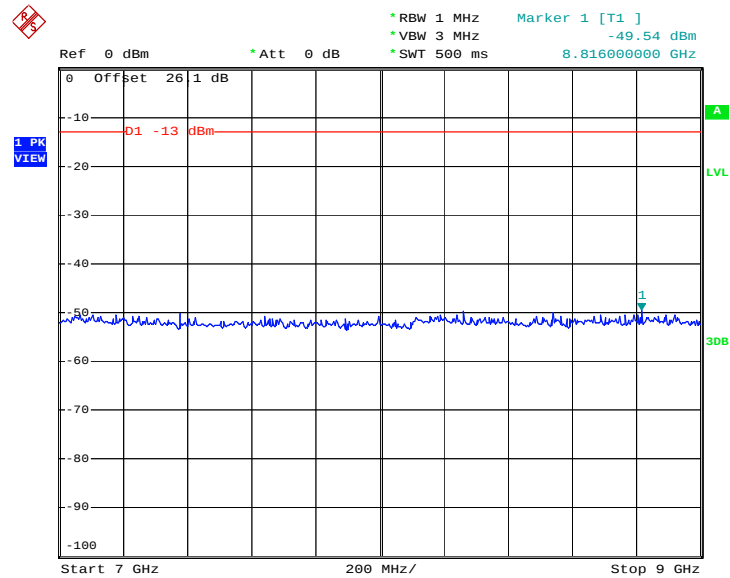
Date: 25.DEC.2008 17:56:37

Conducted Emission Plot between 3GHz ~ 7GHz



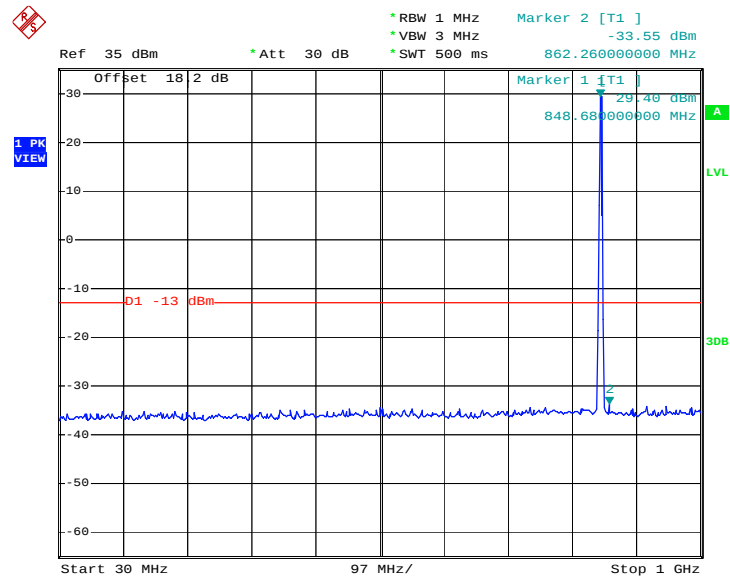
Date: 25.DEC.2008 17:57:32

Conducted Emission Plot between 7GHz ~ 9GHz



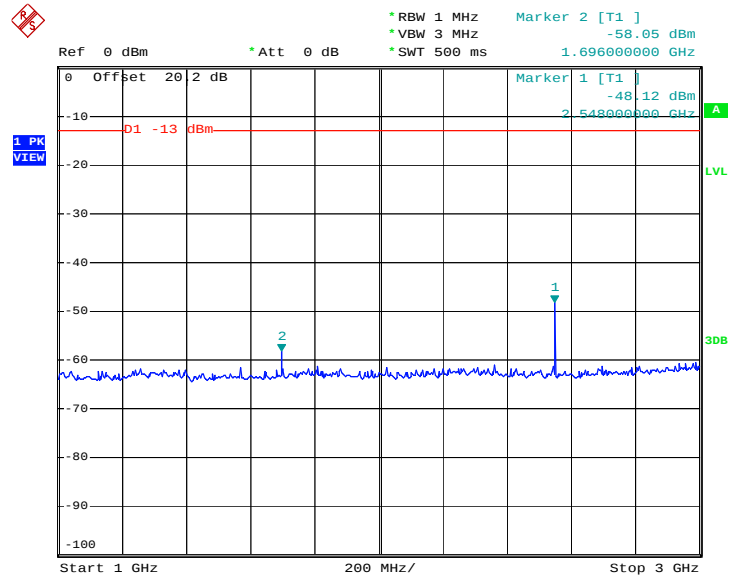
Date: 25.DEC.2008 17:58:41

Band :	GSM850	Channel :	CH251
Test Mode :	GPRS Link		

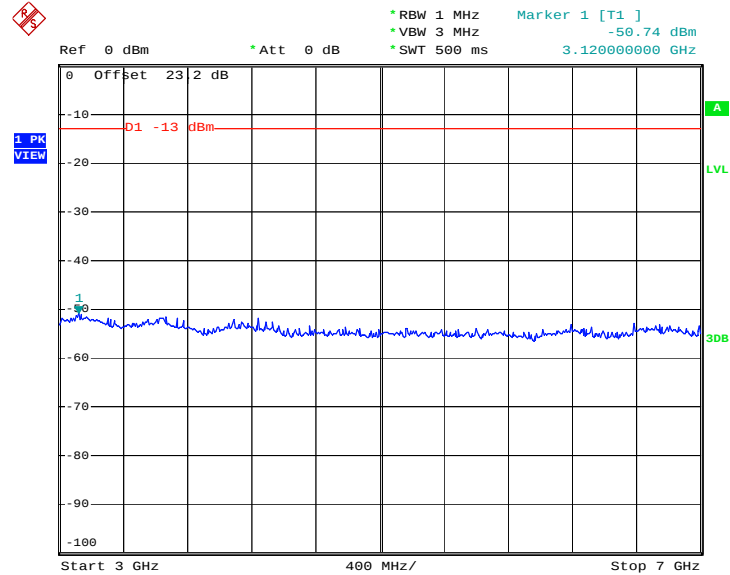
Conducted Emission Plot between 30M-1G


Date: 27.DEC.2008 13:55:27

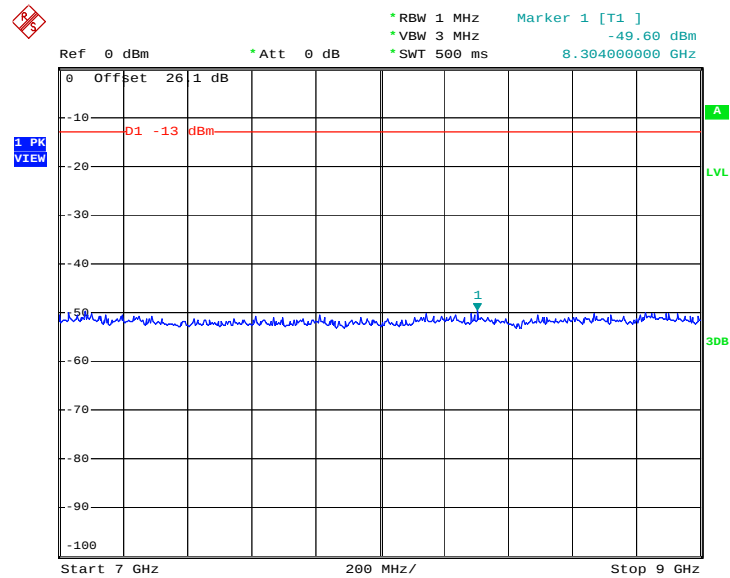
Conducted Emission Plot between 1GHz ~ 3GHz



Date: 27.DEC.2008 13:57:32

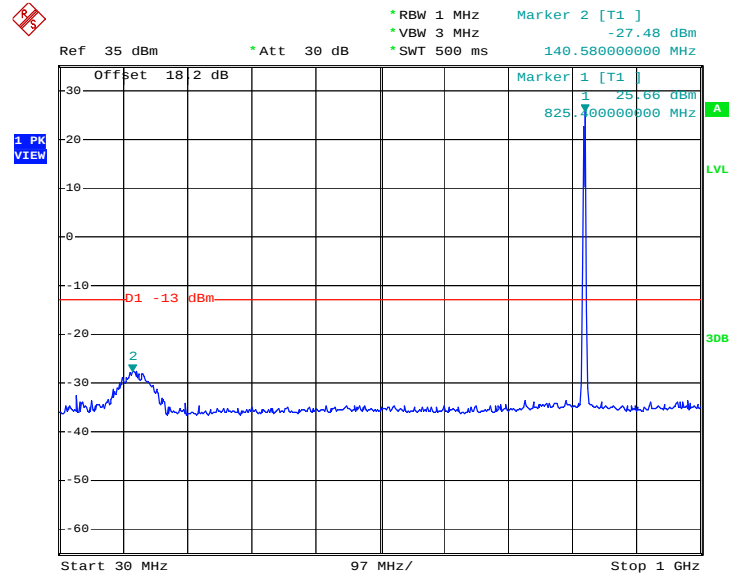
Conducted Emission Plot between 3GHz ~ 7GHz


Date: 27.DEC.2008 13:59:53

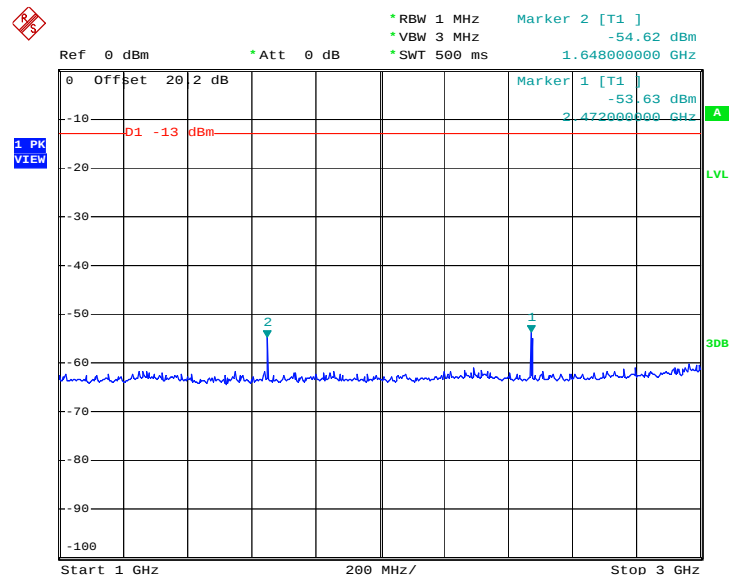
Conducted Emission Plot between 7GHz ~ 9GHz


Date: 27.DEC.2008 14:00:31

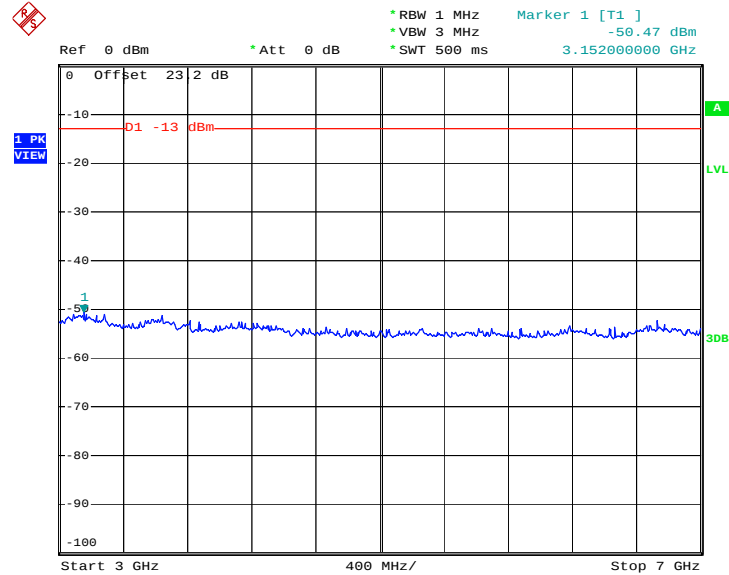
Band :	GSM850	Channel :	CH128
Test Mode :	EDGE Link		

Conducted Emission Plot between 30M-1G


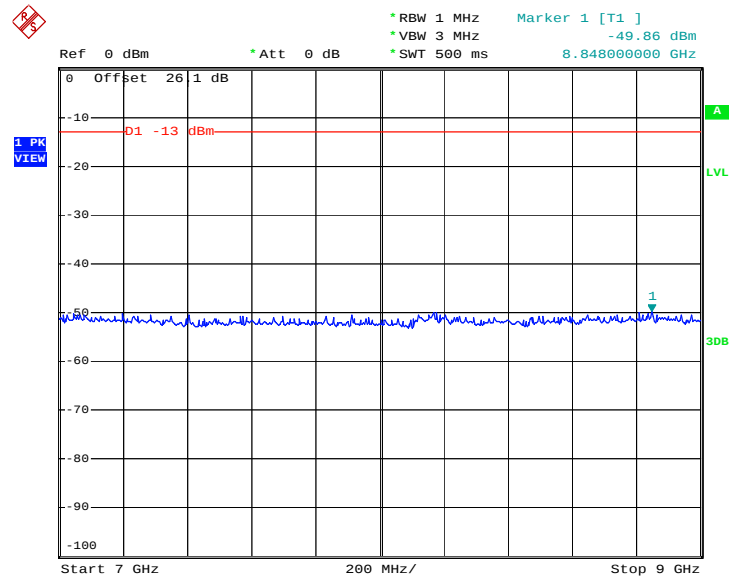
Date: 27.DEC.2008 14:21:08

Conducted Emission Plot between 1GHz ~ 3GHz


Date: 27.DEC.2008 14:11:11

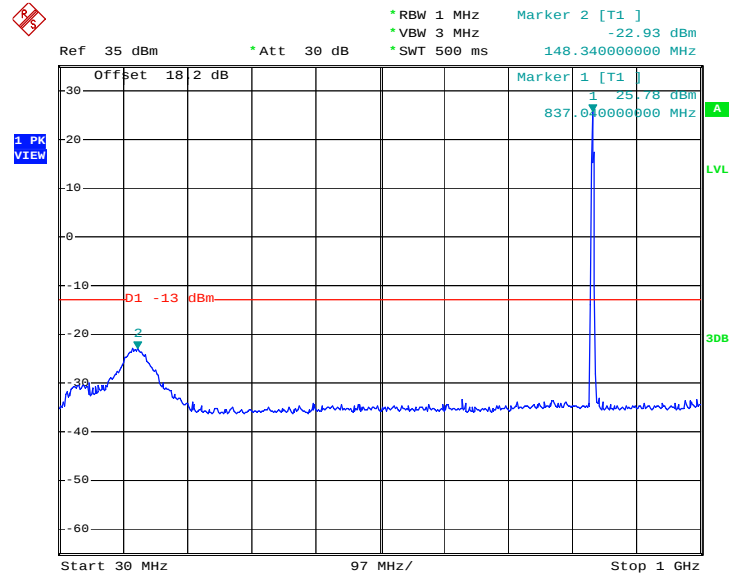
Conducted Emission Plot between 3GHz ~ 7GHz


Date: 27.DEC.2008 14:10:36

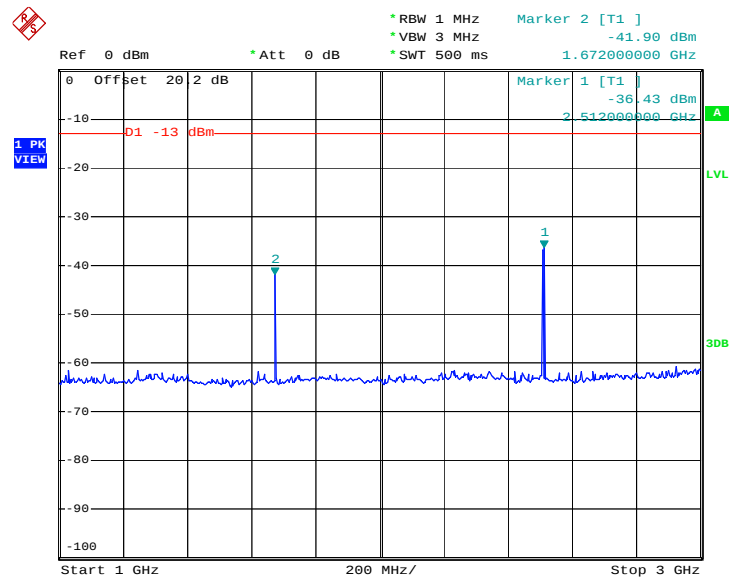
Conducted Emission Plot between 7GHz ~ 9GHz


Date: 27.DEC.2008 14:09:03

Band :	GSM850	Channel :	CH189
Test Mode :	EDGE Link		

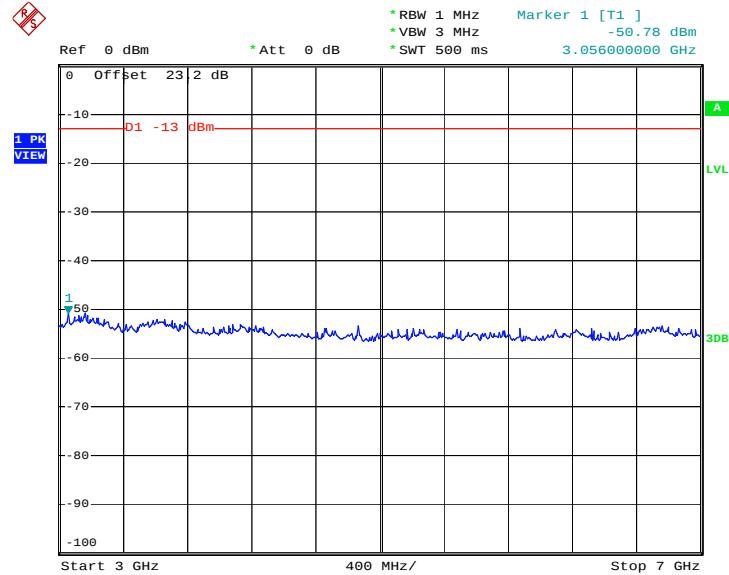
Conducted Emission Plot between 30M-1G


Date: 25.DEC.2008 21:44:38

Conducted Emission Plot between 1GHz ~ 3GHz


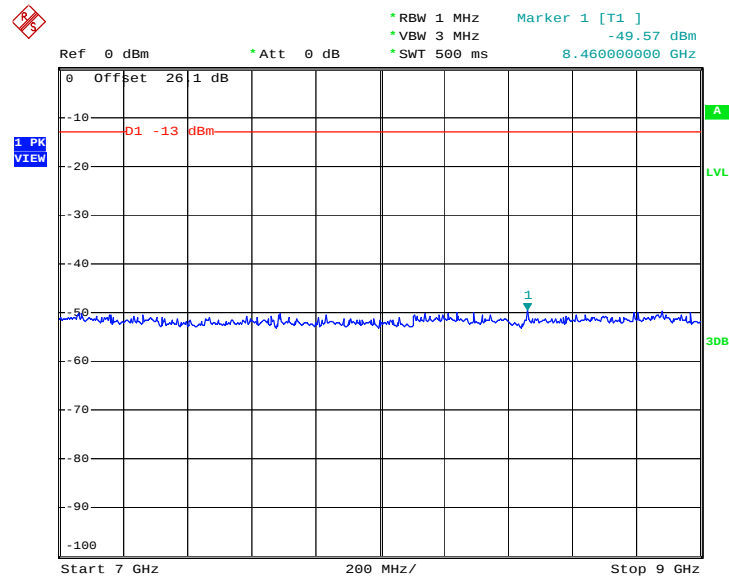
Date: 26.DEC.2008 02:04:09

Conducted Emission Plot between 3GHz ~ 7GHz



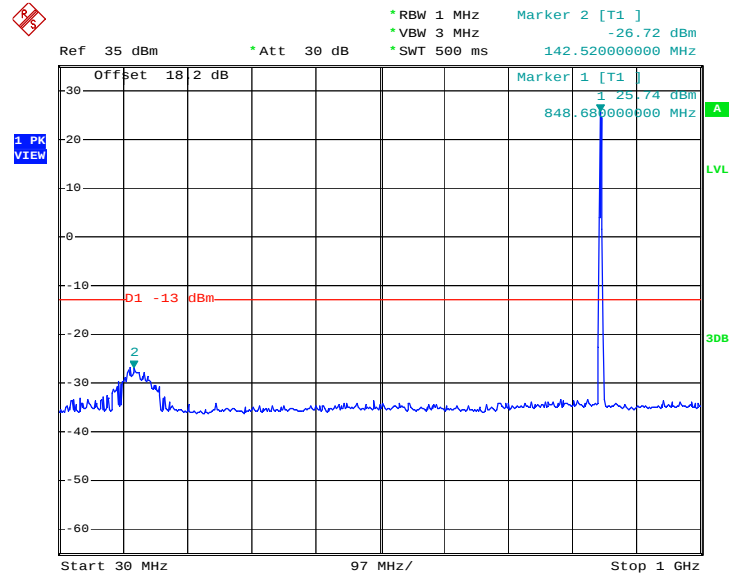
Date: 25.DEC.2008 21:48:25

Conducted Emission Plot between 7GHz ~ 9GHz

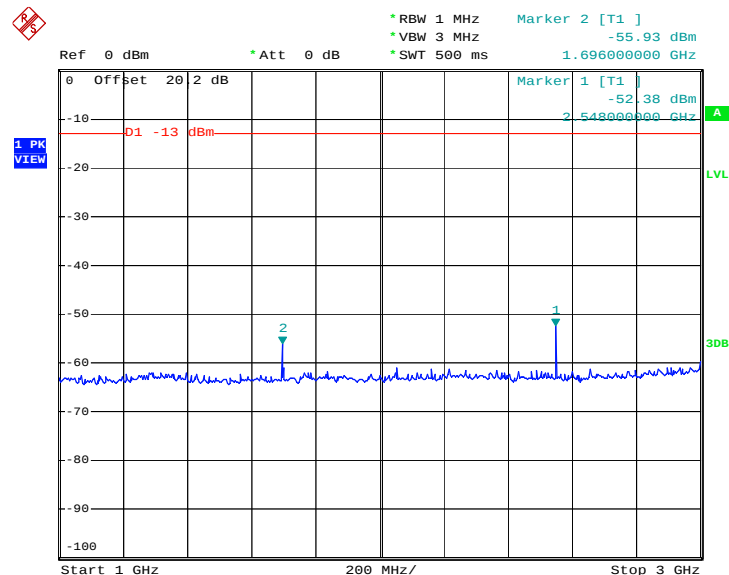


Date: 25.DEC.2008 21:47:47

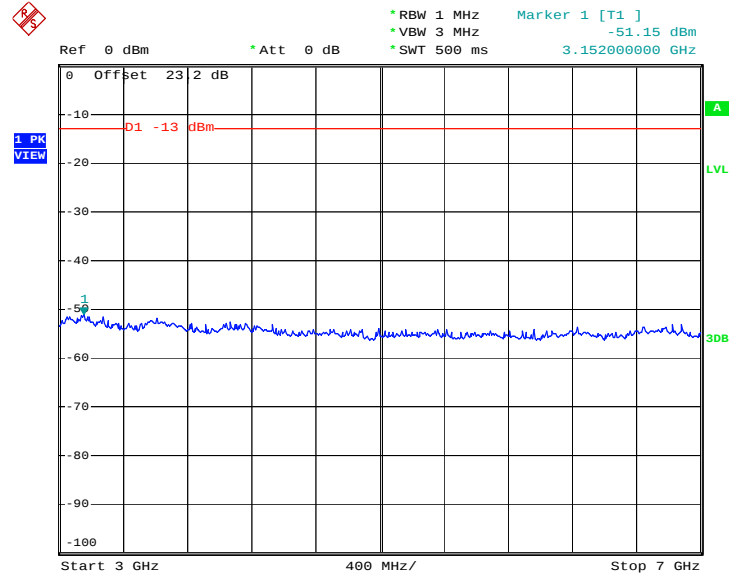
Band :	GSM850	Channel :	CH251
Test Mode :	EDGE Link		

Conducted Emission Plot between 30M-1G


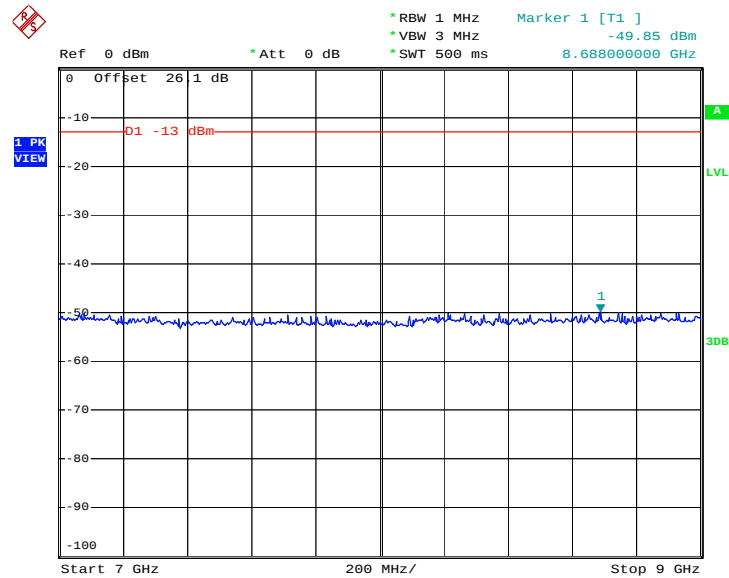
Date: 27.DEC.2008 14:15:50

Conducted Emission Plot between 1GHz ~ 3GHz


Date: 27.DEC.2008 14:11:32

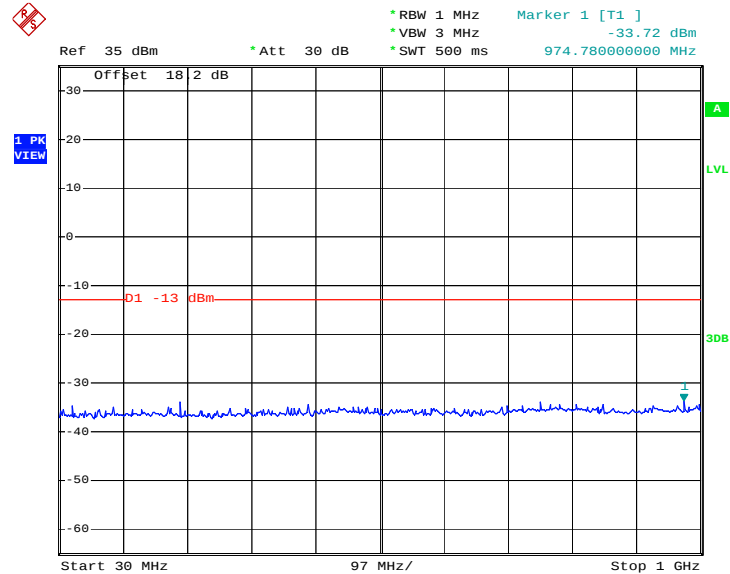
Conducted Emission Plot between 3GHz ~ 7GHz


Date: 27.DEC.2008 14:10:05

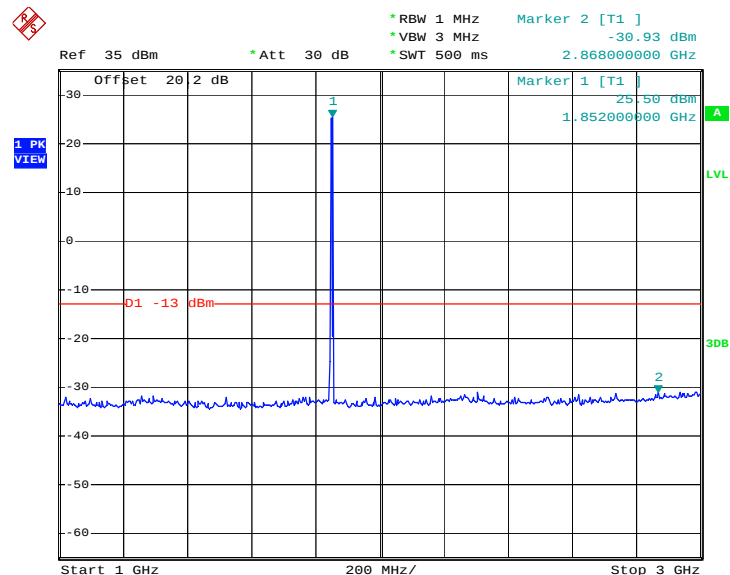
Conducted Emission Plot between 7GHz ~ 9GHz


Date: 27.DEC.2008 14:09:26

Band :	GSM1900	Channel :	CH512
Test Mode :	GPRS Link		

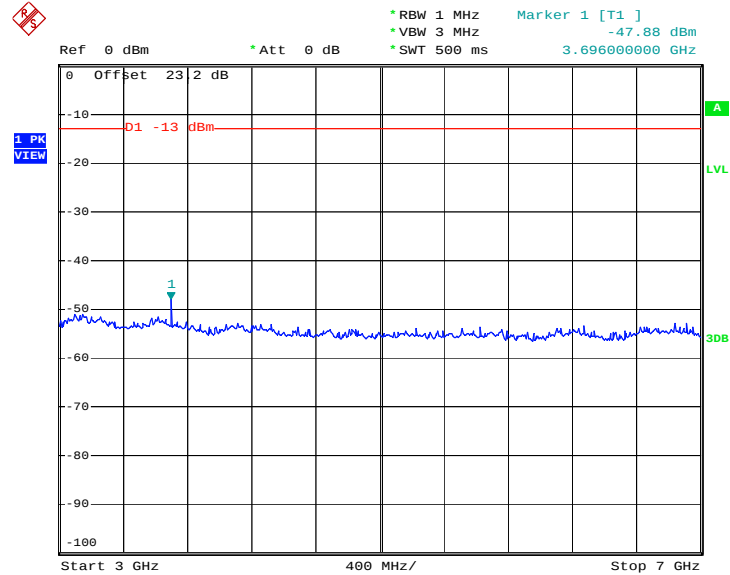
Conducted Emission Plot between 30M-1G


Date: 27.DEC.2008 14:46:27

Conducted Emission Plot between 1GHz ~ 3GHz


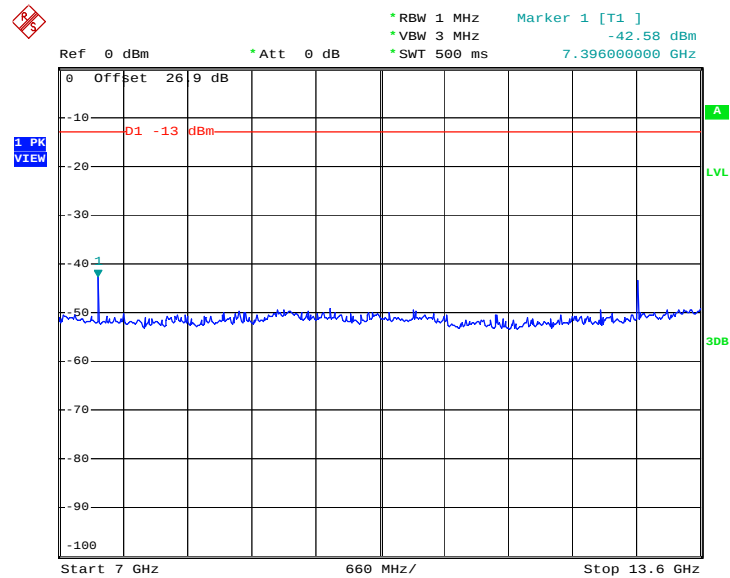
Date: 27.DEC.2008 14:45:30

Conducted Emission Plot between 3G-7G

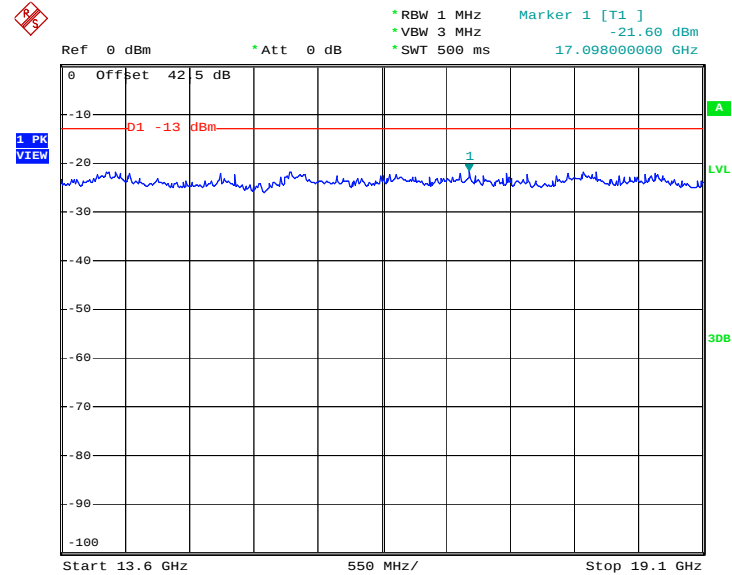


Date: 27.DEC.2008 14:41:55

Conducted Emission Plot between 7G-13.6G

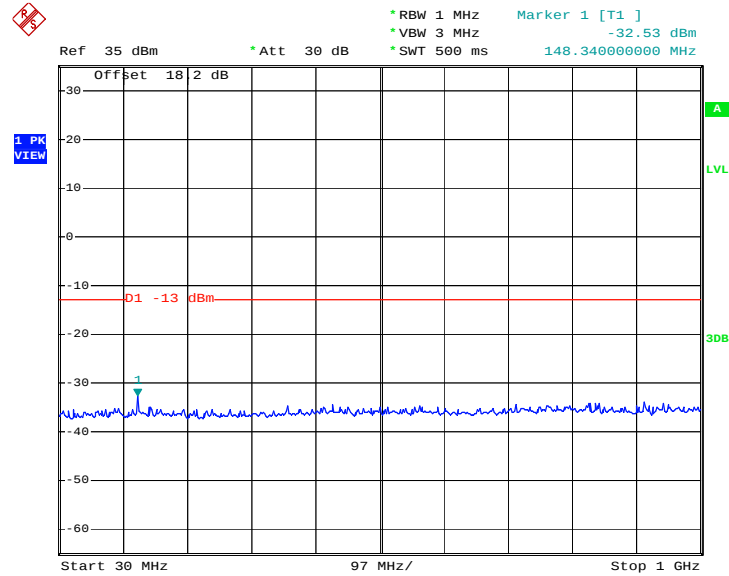


Date: 27.DEC.2008 14:40:53

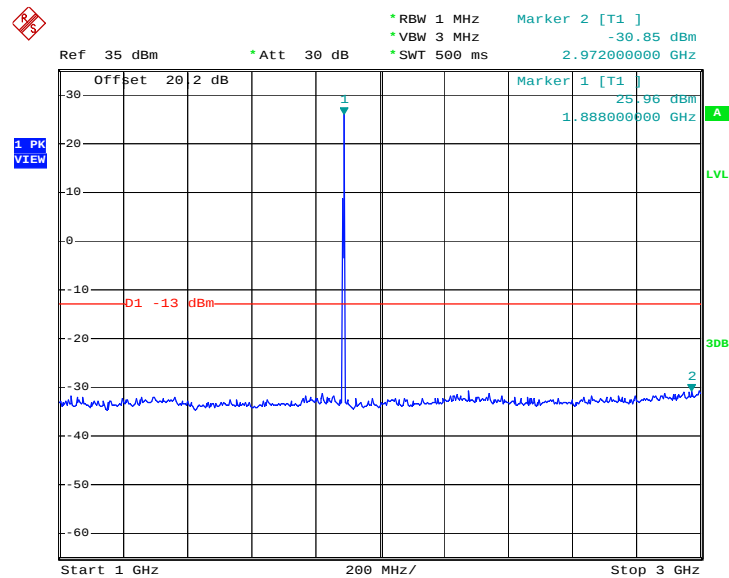
Conducted Emission Plot between 13.6G-19.1G


Date : 27.DEC.2008 14:39:21

Band :	GSM1900	Channel :	CH661
Test Mode :	GPRS Link		

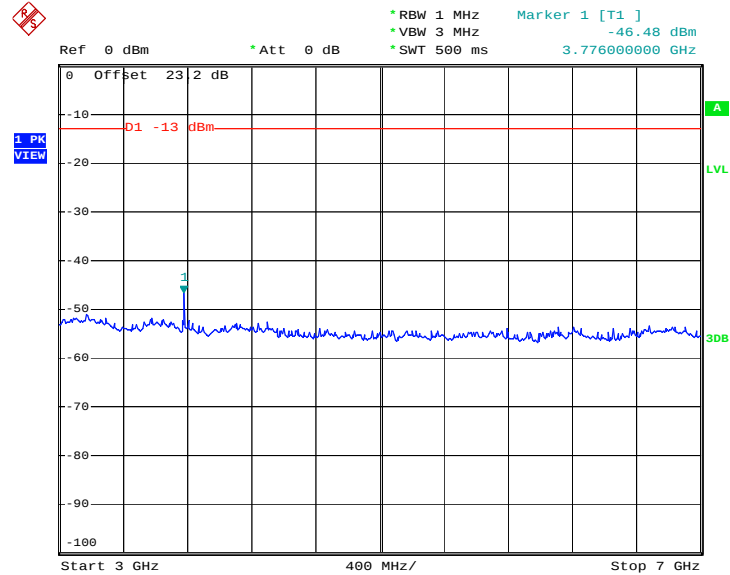
Conducted Emission Plot between 30M-1G


Date: 25.DEC.2008 19:36:11

Conducted Emission Plot between 1GHz ~ 3GHz


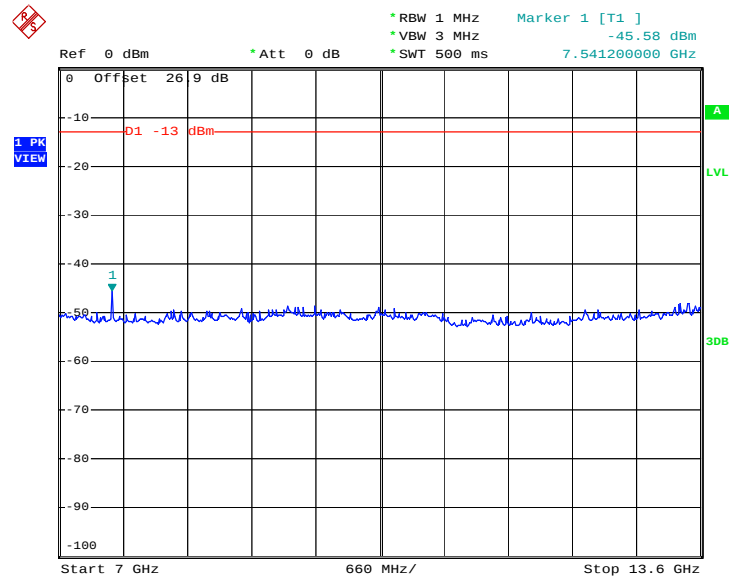
Date: 25.DEC.2008 19:38:48

Conducted Emission Plot between 3G-7G



Date: 25.DEC.2008 19:41:15

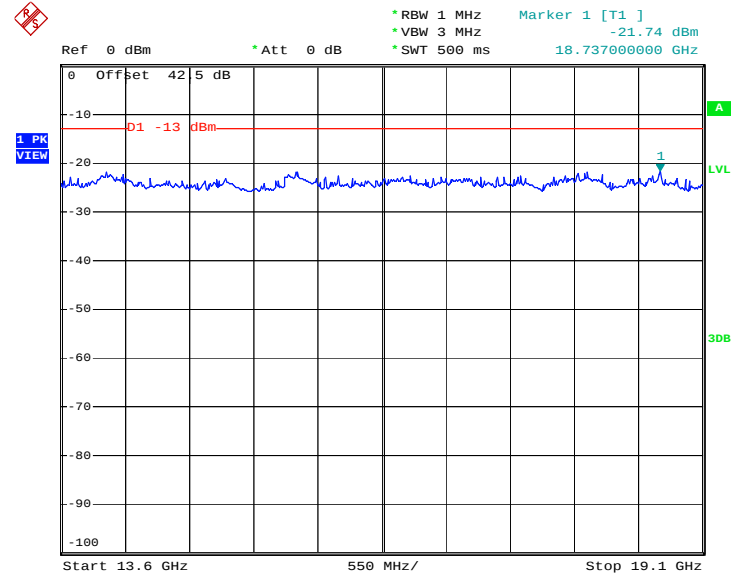
Conducted Emission Plot between 7G-13.6G



Date: 25.DEC.2008 19:42:09

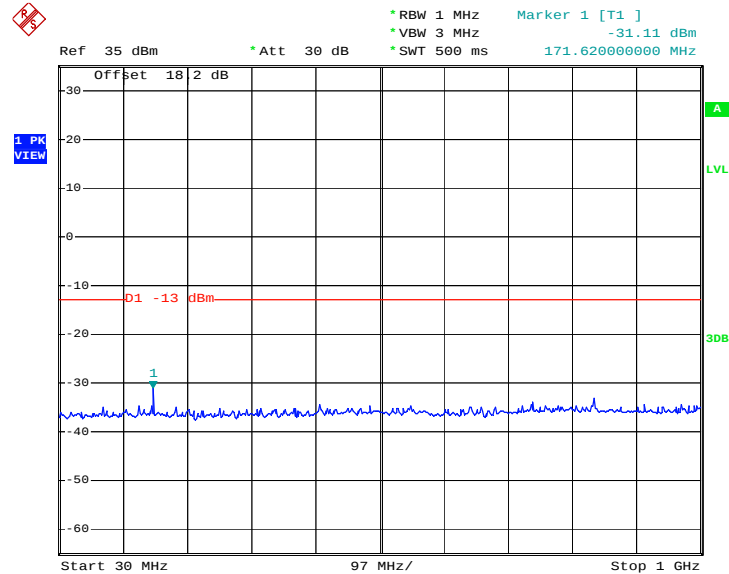


Conducted Emission Plot between 13.6G-19.1G

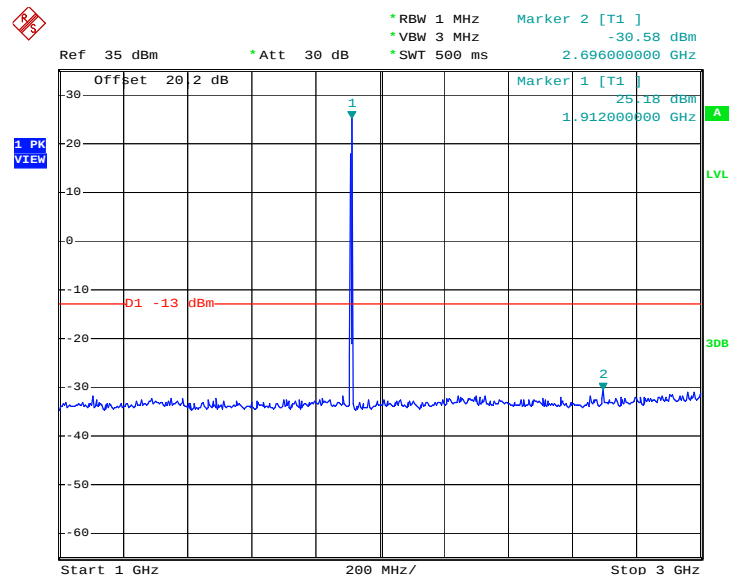


Date: 25.DEC.2008 19:51:20

Band :	GSM1900	Channel :	CH810
Test Mode :	GPRS Link		

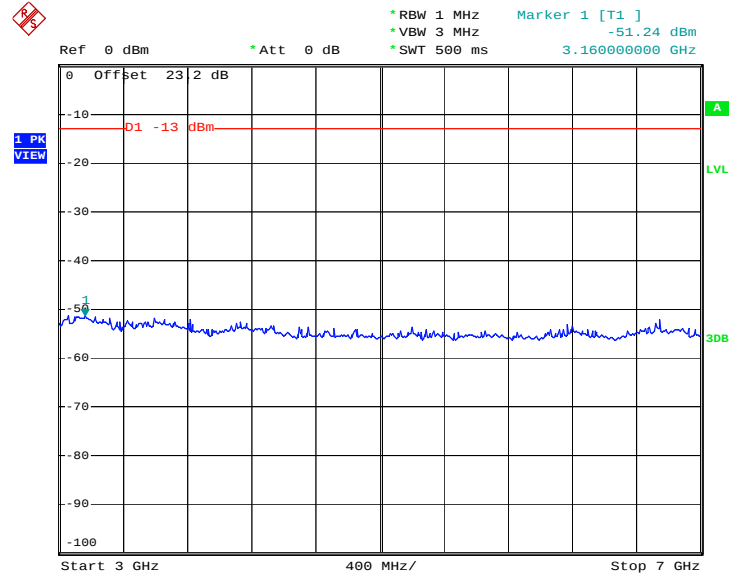
Conducted Emission Plot between 30M-1G


Date: 27.DEC.2008 14:47:05

Conducted Emission Plot between 1GHz ~ 3GHz


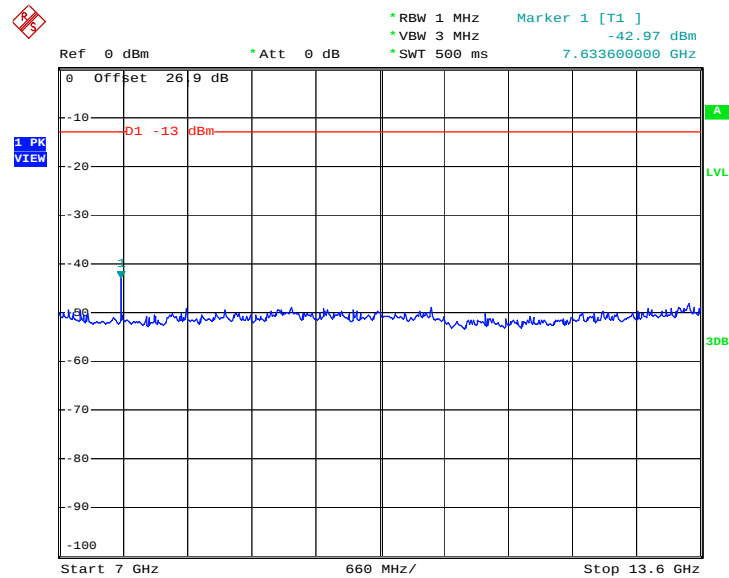
Date: 27.DEC.2008 14:44:34

Conducted Emission Plot between 3G-7G



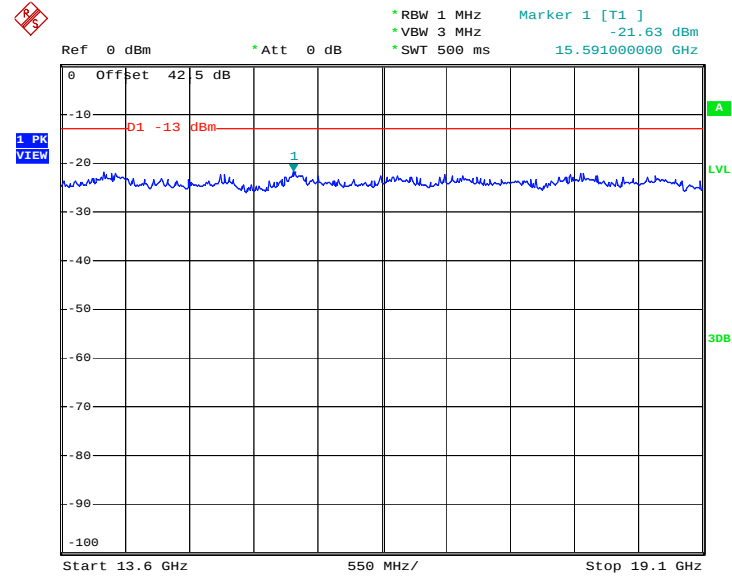
Date: 27.DEC.2008 14:42:16

Conducted Emission Plot between 7G-13.6G



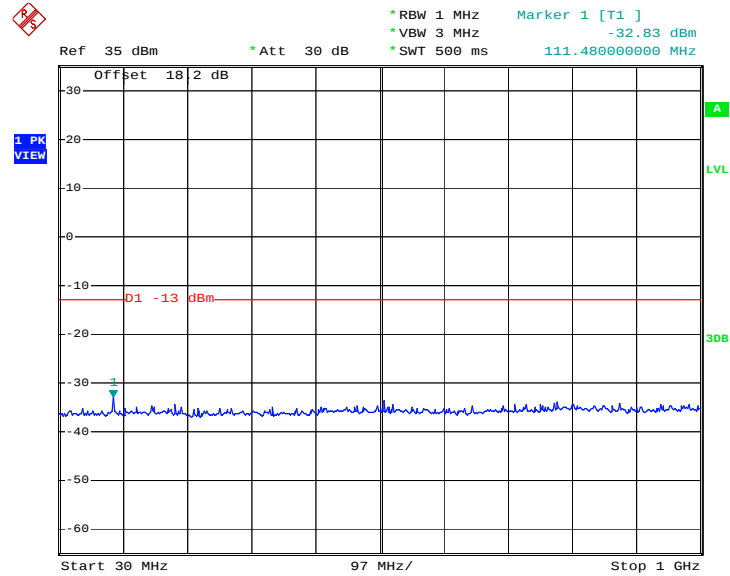
Date: 27.DEC.2008 14:40:31

Conducted Emission Plot between 13.6G-19.1G

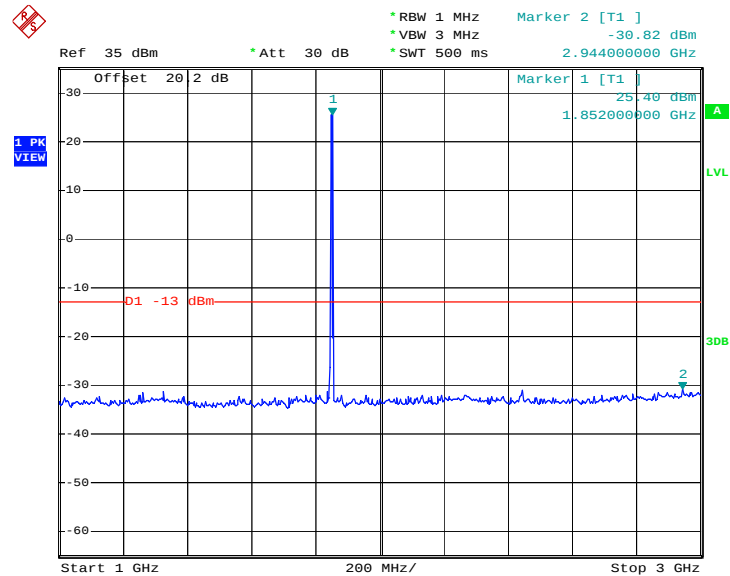


Date: 27.DEC.2008 14:39:42

Band :	GSM1900	Channel :	CH512
Test Mode :	EDGE Link		

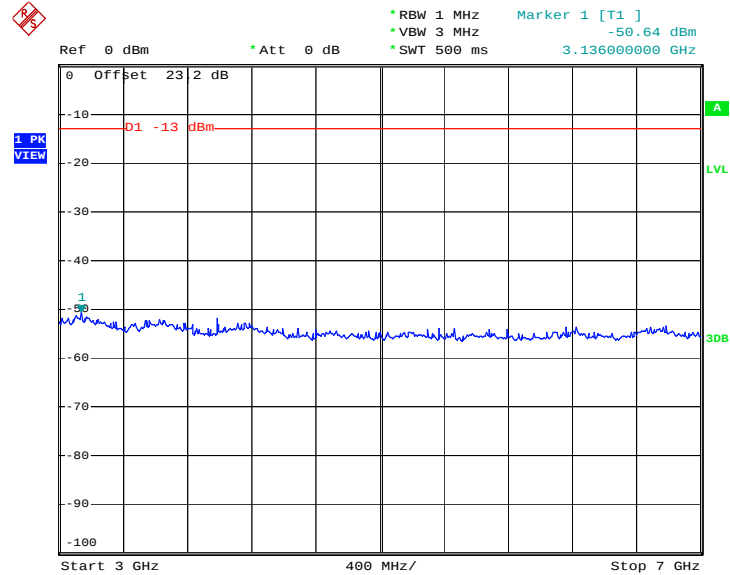
Conducted Emission Plot between 30M-1G


Date: 27.DEC.2008 14:25:54

Conducted Emission Plot between 1GHz ~ 3GHz


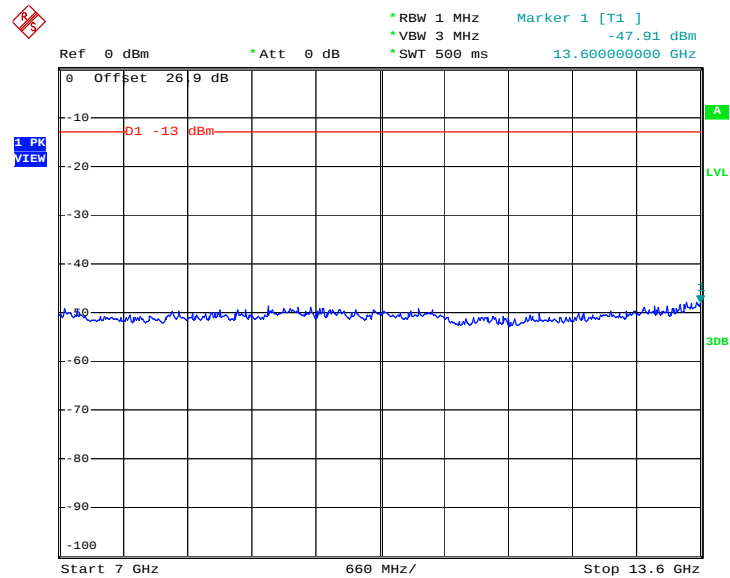
Date: 27.DEC.2008 14:29:36

Conducted Emission Plot between 3G-7G



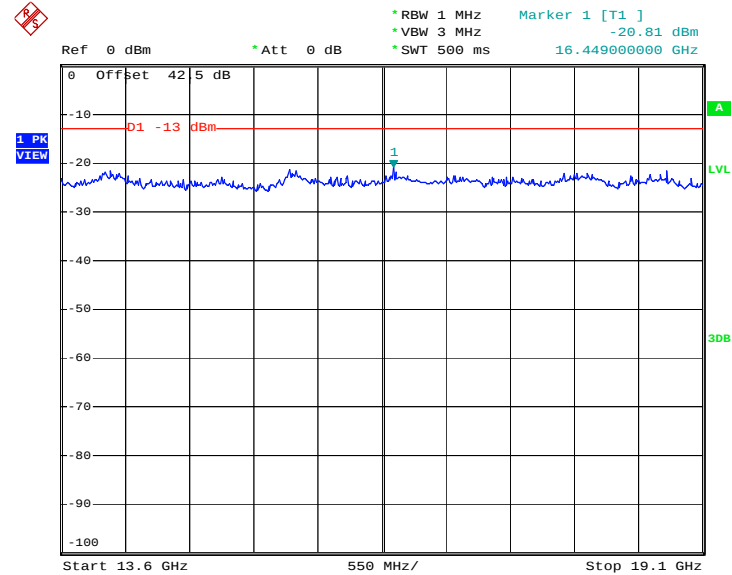
Date: 27.DEC.2008 14:32:29

Conducted Emission Plot between 7G-13.6G



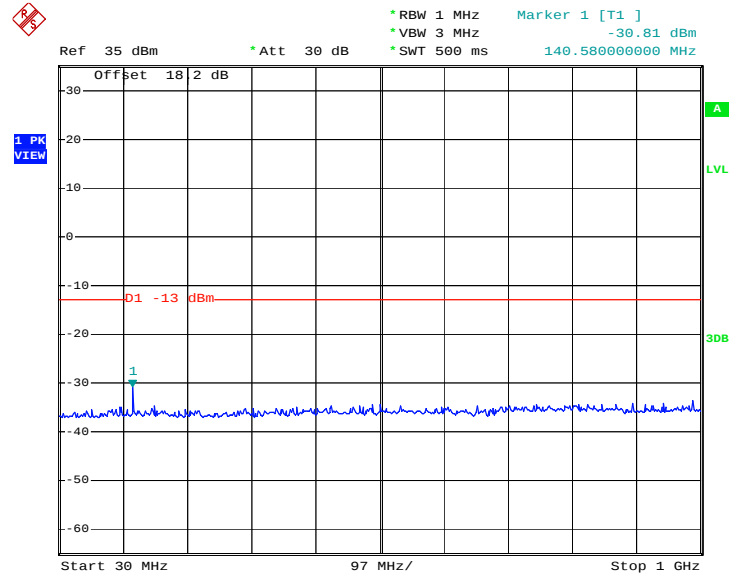
Date: 27.DEC.2008 14:33:19

Conducted Emission Plot between 13.6G-19.1G

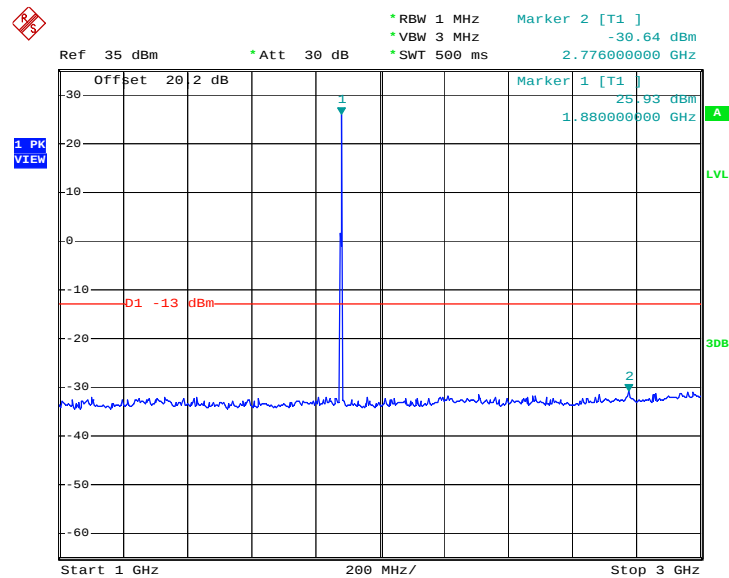


Date: 27.DEC.2008 14:35:06

Band :	GSM1900	Channel :	CH661
Test Mode :	EDGE Link		

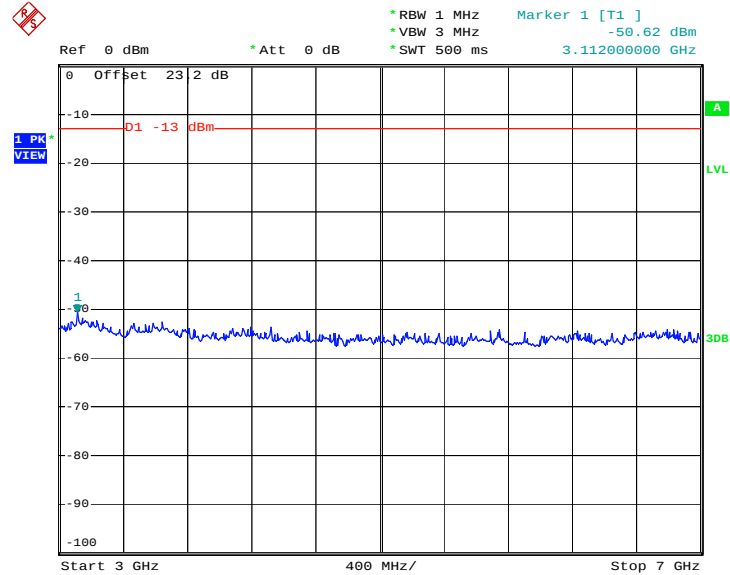
Conducted Emission Plot between 30M-1G


Date: 25.DEC.2008 20:52:29

Conducted Emission Plot between 1GHz ~ 3GHz


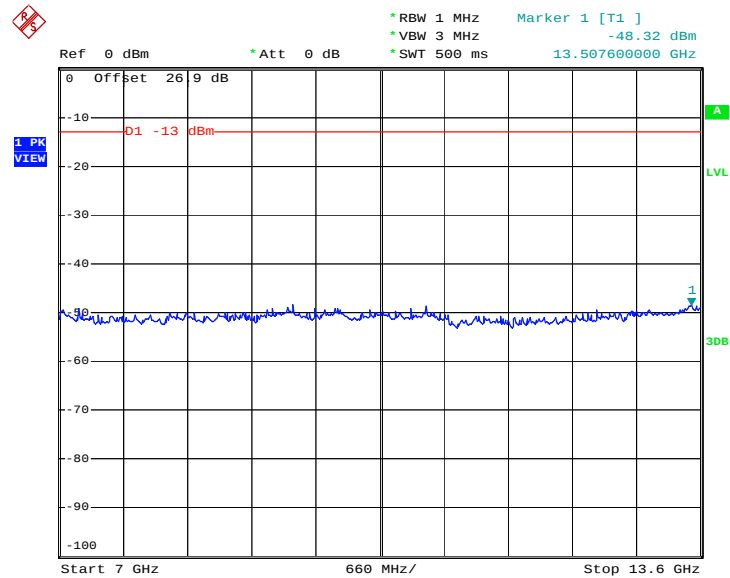
Date: 25.DEC.2008 20:53:35

Conducted Emission Plot between 3G-7G



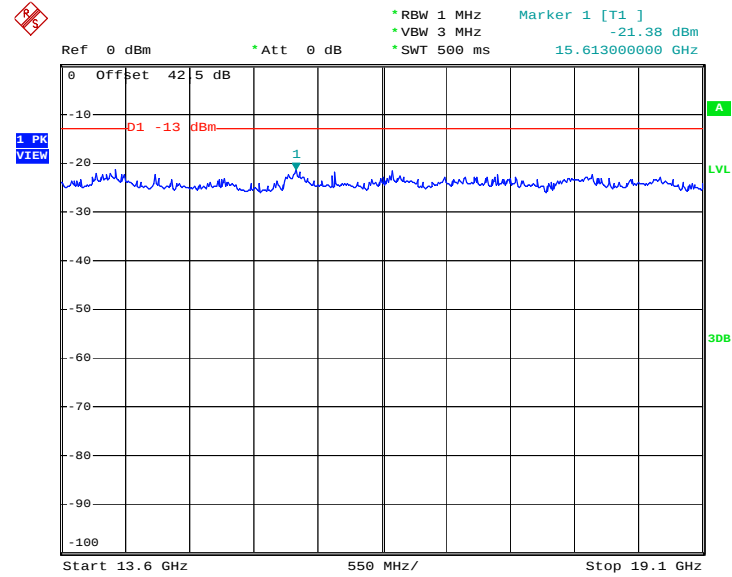
Date: 25.DEC.2008 20:54:17

Conducted Emission Plot between 7G-13.6G



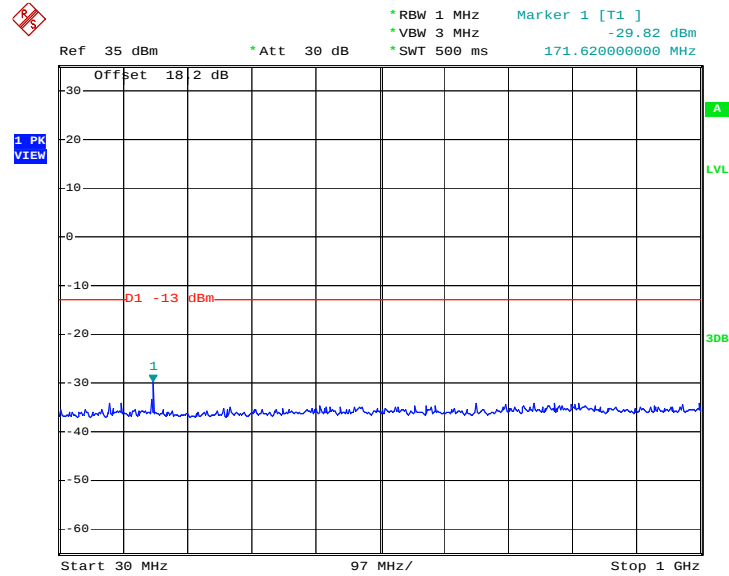
Date: 25.DEC.2008 20:54:58

Conducted Emission Plot between 13.6G-19.1G

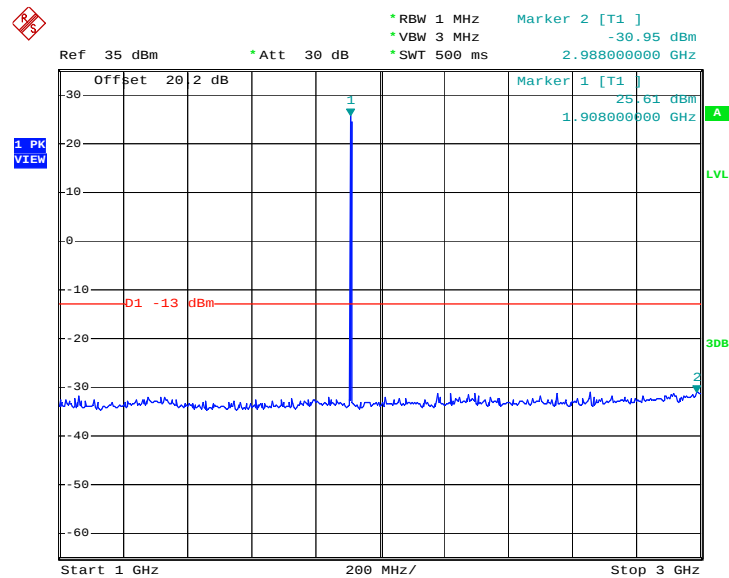


Date: 25.DEC.2008 20:55:30

Band :	GSM1900	Channel :	CH810
Test Mode :	EDGE Link		

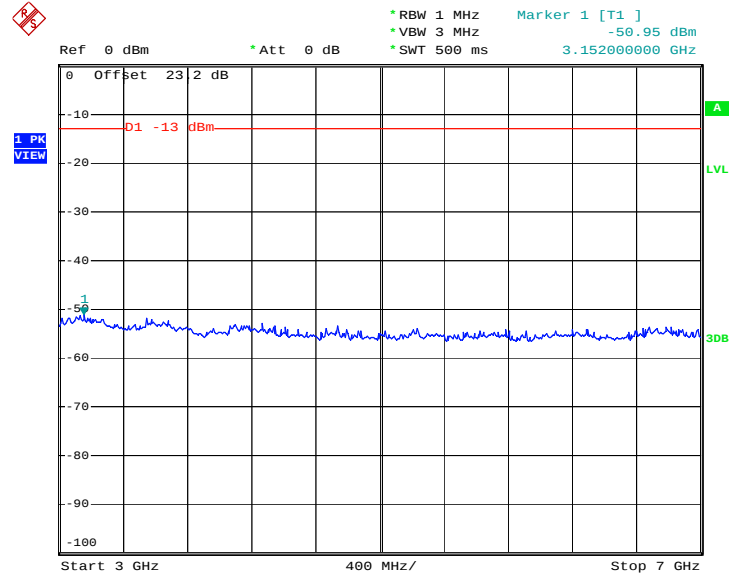
Conducted Emission Plot between 30M-1G


Date: 27.DEC.2008 14:26:13

Conducted Emission Plot between 1GHz ~ 3GHz


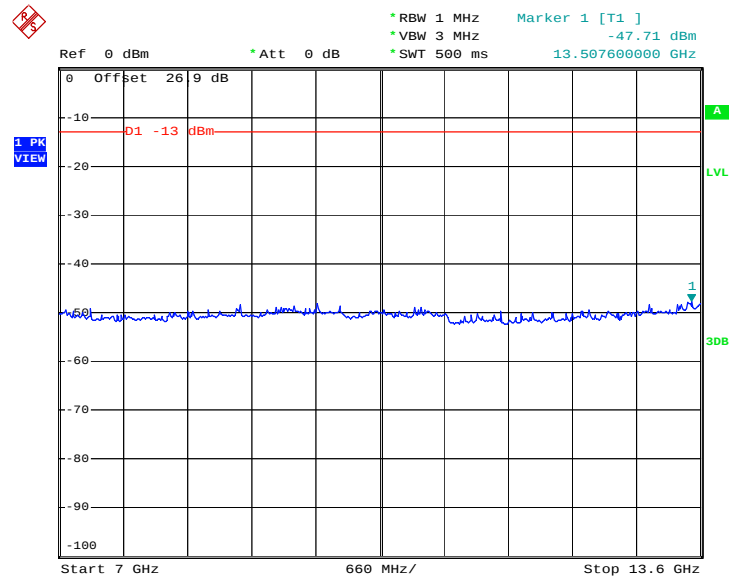
Date: 27.DEC.2008 14:30:27

Conducted Emission Plot between 3G-7G



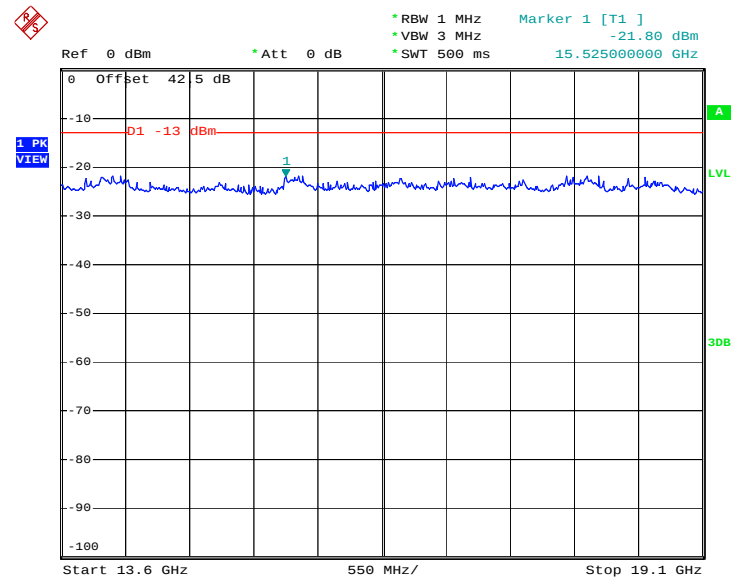
Date: 27.DEC.2008 14:31:45

Conducted Emission Plot between 7G-13.6G



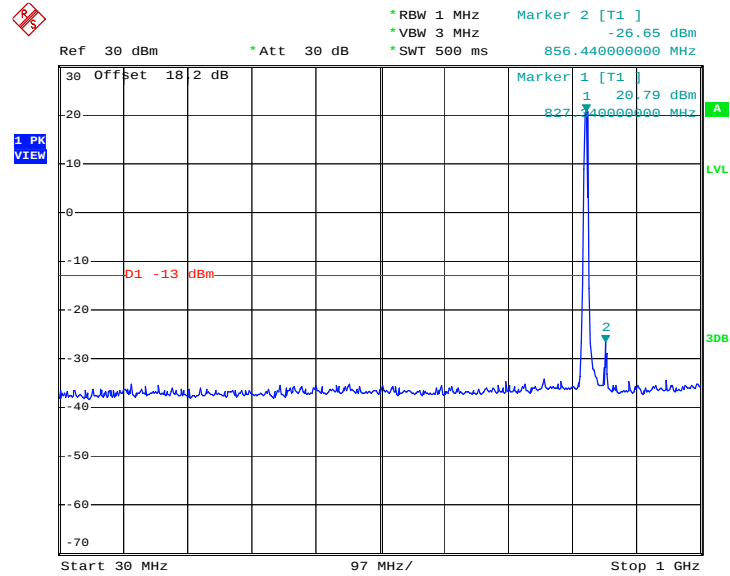
Date: 27.DEC.2008 14:33:51

Conducted Emission Plot between 13.6G-19.1G

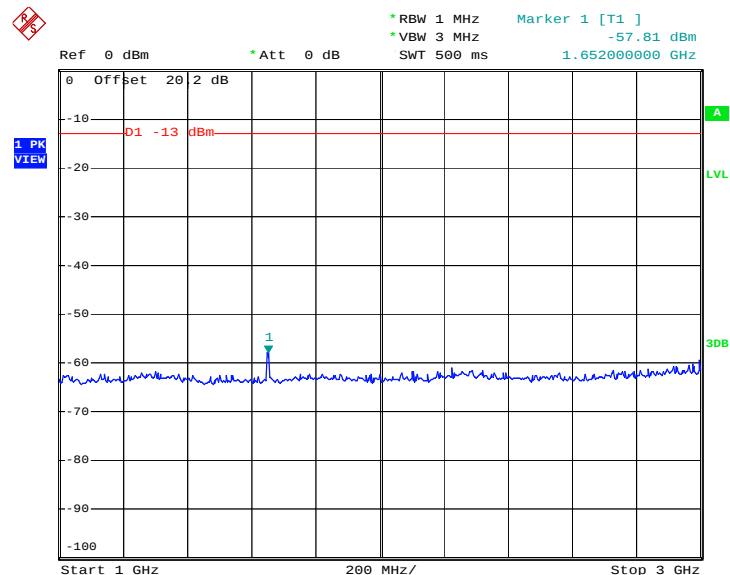


Date: 27.DEC.2008 14:34:45

Band :	WCDMA Band V	Channel :	CH4132
Test Mode :	WCDMA Link		

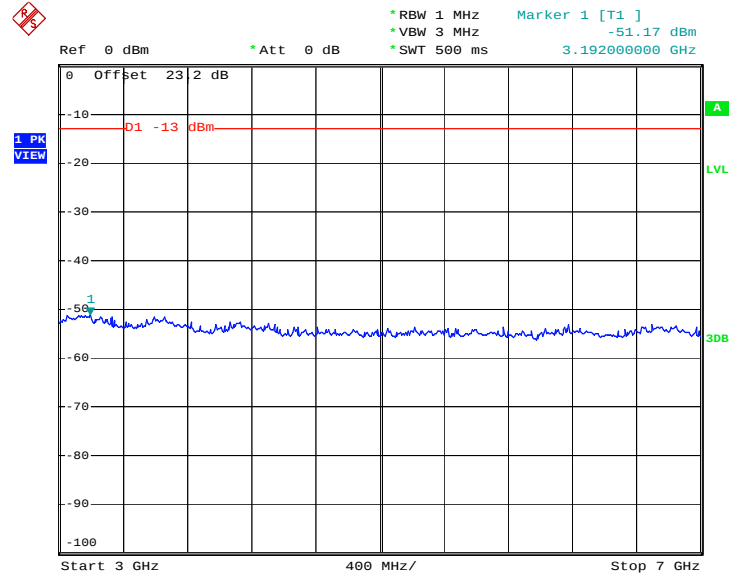
Conducted Emission Plot between 30M-1G


Date: 27.DEC.2008 14:54:36

Conducted Emission Plot between 1GHz ~ 3GHz


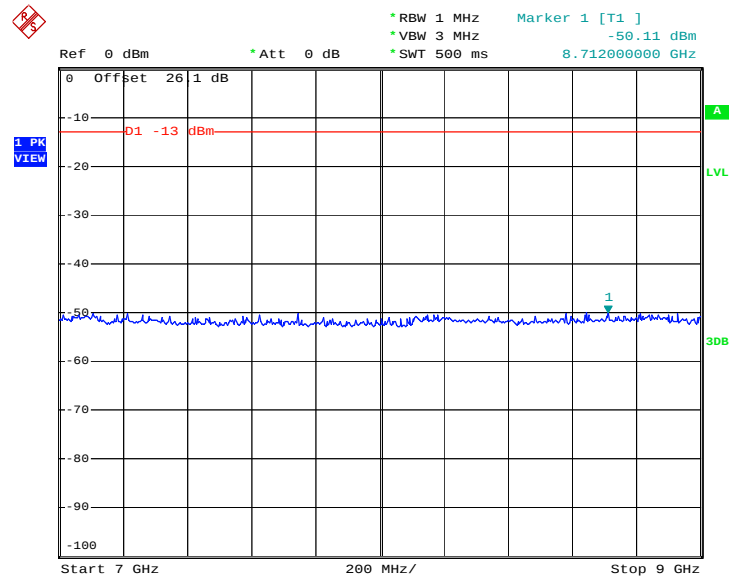
Date: 27.DEC.2008 14:56:58

Conducted Emission Plot between 3GHz ~ 7GHz



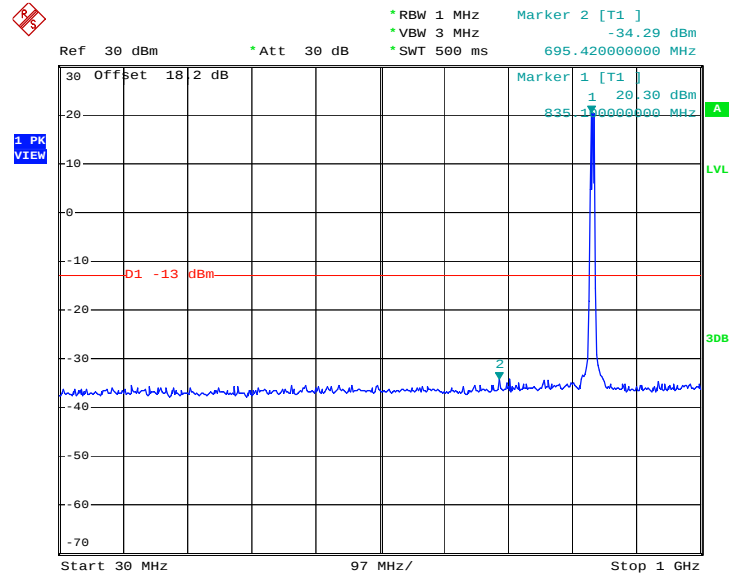
Date: 27.DEC.2008 15:01:21

Conducted Emission Plot between 7GHz ~ 9GHz

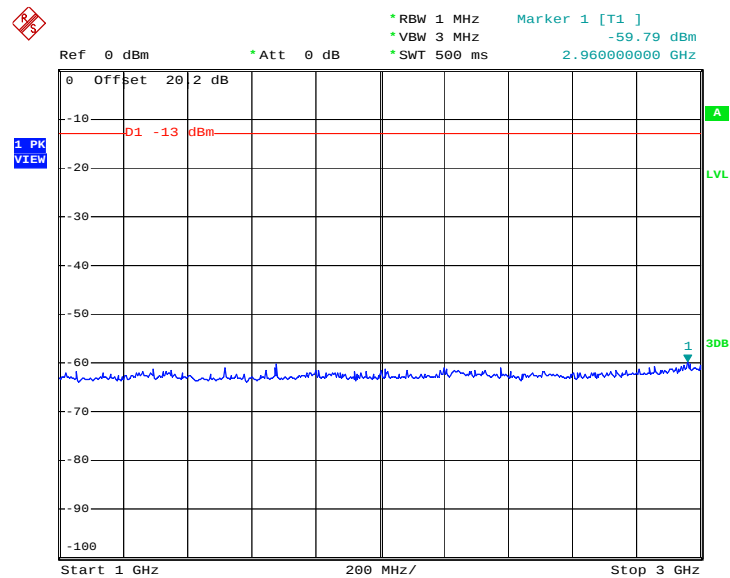


Date: 27.DEC.2008 15:03:12

Band :	WCDMA Band V	Channel :	CH4182
Test Mode :	WCDMA Link		

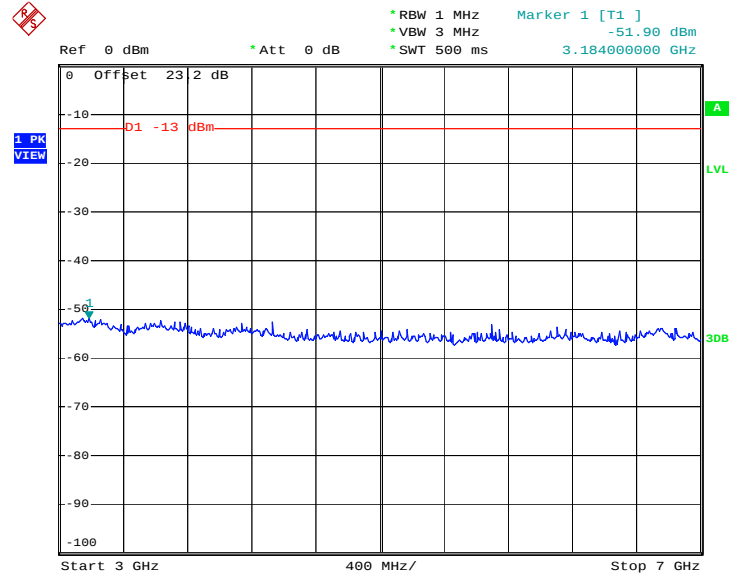
Conducted Emission Plot between 30M-1G


Date: 25.DEC.2008 23:14:42

Conducted Emission Plot between 1GHz ~ 3GHz


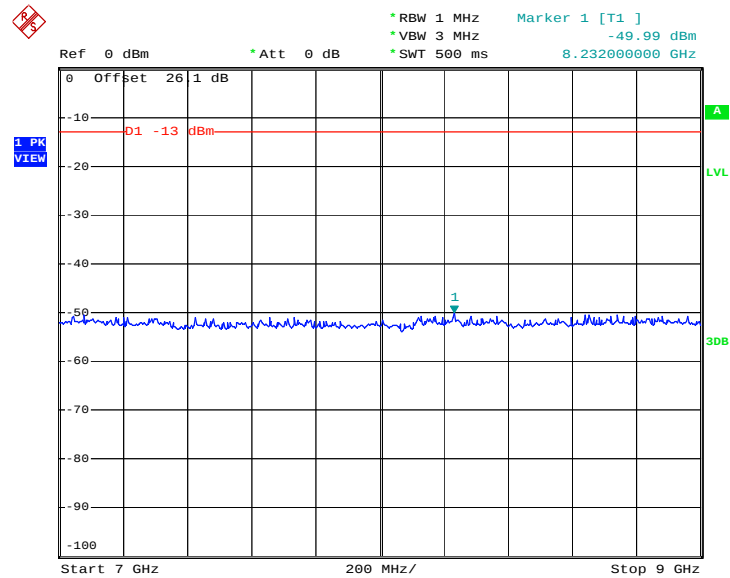
Date: 27.DEC.2008 15:00:07

Conducted Emission Plot between 3GHz ~ 7GHz



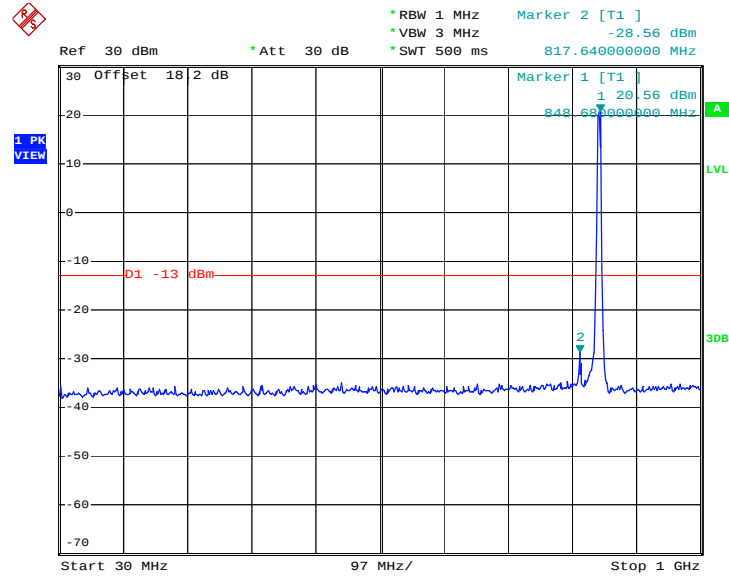
Date: 25.DEC.2008 23:18:13

Conducted Emission Plot between 7GHz ~ 9GHz

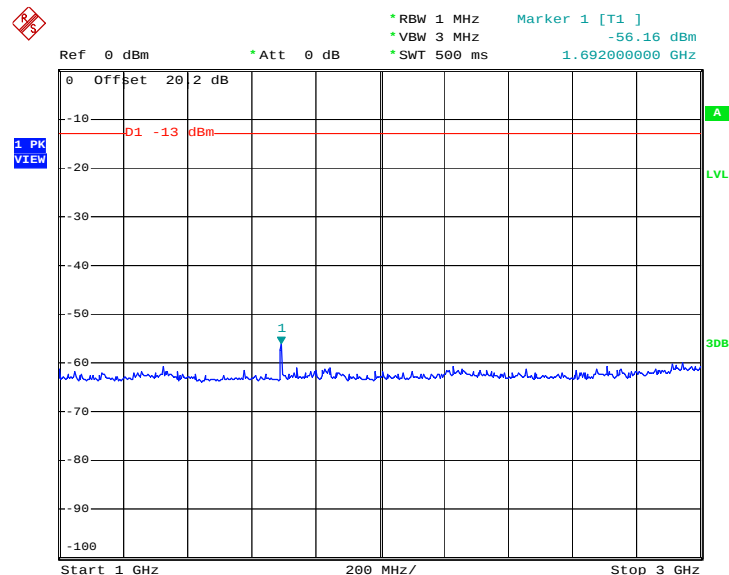


Date: 25.DEC.2008 23:18:59

Band :	WCDMA Band V	Channel :	CH4233
Test Mode :	WCDMA Link		

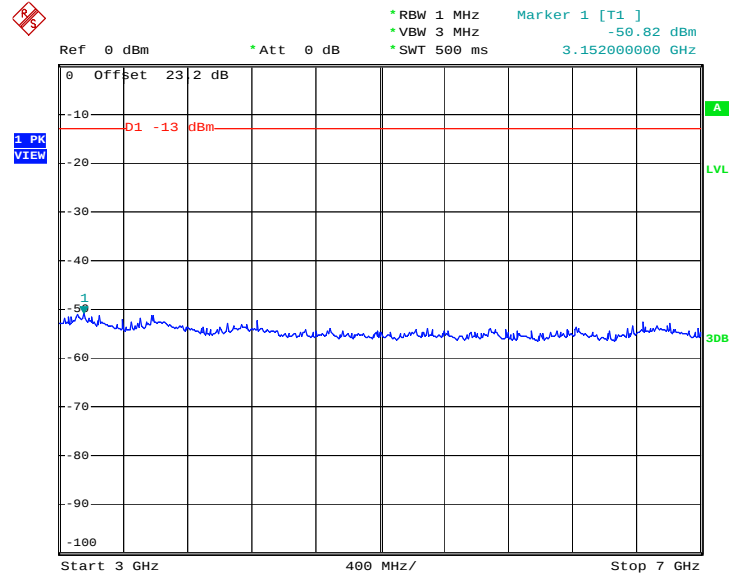
Conducted Emission Plot between 30M-1G


Date: 27.DEC.2008 14:55:15

Conducted Emission Plot between 1GHz ~ 3GHz


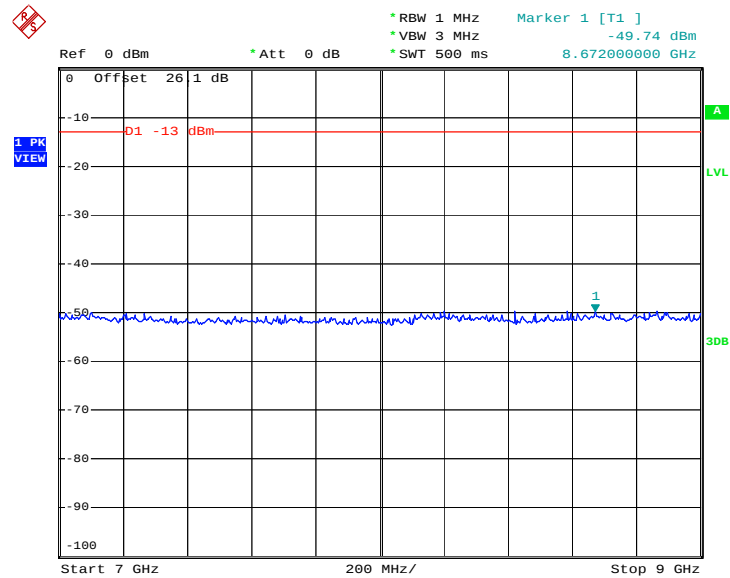
Date: 27.DEC.2008 14:58:24

Conducted Emission Plot between 3GHz ~ 7GHz



Date: 27.DEC.2008 15:01:42

Conducted Emission Plot between 7GHz ~ 9GHz



Date: 27.DEC.2008 15:02:49