PARTIAL TEST REPORT
No.: 2-20795417b/11-C1

According to:
FCC Regulations
Part 22 & Part 24
IC Regulations
RSS-132, Issue 2
RSS-133, Issue 5

for

Option NV

GSM/(E)GPRS/W-CDMA/WLAN Wireless Router GlobeSurfer III+ (GS0361)

FCC ID: NCMOGS0361
IC: 2734A-GS0361

Laboratory Accreditation and Listings			
DAkkS Deutsche Akkreditierungsstelle D-PL-12047-01-01	Reg. No.: 736496 MRA US-EU 0003	Industry Canada Reg. No.: 3462D-1 Reg. No.: 3462D-2	Voluntary Controls for Electromagnetic Emissions Reg. No.: R-2665, R-2666 C-2914, T-1967, G-301
WiFi ALLIANCE AUTHORIZED RF LABORATORY	CTIA Authorized Test Lab LAB CODE 20011130-00		
accredited according to DIN EN ISO/IEC 17025			

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1. Summary of test results

The test results apply exclusively to the test samples as presented in chapter 3.1. The CETECOM GmbH does not assume responsibility for any conclusions and generalizations taken in conjunction with other specimens or samples of the type of the item presented to tests.

The presented GSM 850/900/1800/ 1900 device incorporates a already FCC CFR47 Part 22H and Part 24E approved GSM/W-CDMA Module Type GTM661W with FCC ID No. NCMOMO6612.

According applicants declaration no technical modifications on module GTM661W apply so initial grant should be fulfilled in present product. Nevertheless because of the implementation of an integrated antenna as well as second different transmitter in same housing, the radiated spurious out-of-band emissions and radiated power were tested again for compliance against standards. Conducted tests have not been performed, so initial test reports should be used therefore.

Because of incorporation of 3 different wireless technologies (GSM or W-CDMA and WLAN) which can work also simultanously and their antennas are situated less then 20cm each other, tests have been made by activating at least 2 different wireless technologies. Pls. compare chapter operating modes for details.

Following tests have been performed to show compliance with applicable FCC Part 2, Part 22, Subpart H and Part 24, Subpart E (Broadband PCS) of the FCC CFR 47 Rules and according IC RSS-132, RSS-133 rules.

1.1. TESTS OVERVIEW FCC Part 15/22/24 and Canada IC Standards (RSS)

TEST CASES	PORT	REFERENCES & LIMITS			EUT set-up	EUT opera-ting mode	Results
		FCC Standard	RSS Section	Limits			
TX-Mode							
RF POWER (conducted)	Antenna terminal (conducted)	§2.1046	--	N/A	--	--	Not performed 1.)
RF-POWER radiated (ERP/EIRP)	Cabinet	§2.1046 §22.913(a)(2) §24.232(c)	RSS-132: 4.4 SRSP-503: 5.1.3 RSS-133:4.1/6.4 SRSP-510: 5.1.2	FCC: < 7 Watt (ERP) IC: < 6.3 Watt (ERP) < 2 Watt (EIRP)	1+2	1+2+3+4 +6+8+9	Passed
SPURIOUS EMISSIONS (conducted)	Antenna terminal (conducted)	§2.1051 §22.917(a)(b) §24.238(a)(b)	RSS-132: 4.5.1.1 RSS-133: 6.5.1(a)(i)	43+10log(P) dBc	--	--	Not performed 1.)
99% OCCUPIED BANDWIDTH	Antenna terminal (conducted)	§2.202 §2.1049	RSS-Gen:4.6.1	99% Power	--	--	Not performed 1.)

SPURIOUS EMISSIONS (radiated)	Cabinet + Intercon necting cables (radiated)	§15.209(a)	RSS-Gen: 4.11+7.2.5. Table 6	2400/F(kHz) µV/m 24000/F(kHz) µV/m 30 µV/m	Remark 2	Remark 2	Passed Remark 2
		§2.1053(a) §2.1057(a)(1) §22.917(a)(b) §24.238(a)(b)	RSS-132: 4.5.1.1 RSS-133: 6.5.1(a)(i) 6.5.1(b)	43+10log(P) dBc	1+2+3	1+2+3+4 +5+6+7	Passed
FREQUENCY STABILITY	Antenna terminal (conducted)	§22.355, table C-1 §24.235 §2.1055(a)(1)	RSS-132: 4.3 RSS-133: 6.3 RSS-Gen, Issue 3: Chapter 4.7	< 2.5ppm <0.1 ppm	--	--	Not performed[1.)]

Remark: 1.) Tests not performed, see initial certification/results for GSM/WCDMA Wireless Module, test report FG0N2627, Rev. 01, dated April 20.2011 by Sporton International Inc and test report FG140819 dated April 29, 2011.

Remark: 2.) See separate test report TR_2_20795417c_11 for measurements according Part 15, Subpart B and C.

RX Mode							
AC-Power Lines Conducted Emissions	AC-Power lines	§15.107	RSS-Gen, Issue 3: Chapter 7.2.4	FCC §15.107 class B limits §15.207 limits IC: Table 4, Chapter 7.2.4	Remark 2	Remark 2	Passed Remark 2
RECEIVER Radiated emissions	Cabinet + Intercon necting cables (radiated)	§15.109 §15.33 §15.35	RSS-132, Issue 2: Chapter 4.6 RSS-Gen, Issue 3: Chapter 6.1 RSS-133, Issue 5: 6.6	FCC 15.109 class B limits IC-limits: Table 2, Chapter 6.1	Remark 2	Remark 2	Passed Remark 2

Remark: 2.) See separate test report TR_2_20795417c_11 for measurements according Part 15, Subpart B.

The current version of the test report 2-20795417b/11-C1 dated 2011-07-07, replaces the test report 2-20795417b/11 dated 2011-05-27. The replaced test report is herewith invalid.

ATTESTATION:

I declare that all measurements were performed by me or under my supervision and that all measurements have been performed and are correct to my best knowledge and belief to Industry Canada standards. All requirements as shown in above table are met in accordance with enumerated standards.

Dipl.-Ing. W. Richter
Responsible for testsection

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Dipl.-Ing. C. Lorenz
Responsible for test report

2. Administrative Data

2.1. Identification of the testing laboratory

Company name: Address:	CETECOM GmbH Im Teelbruch 116 45219 Essen - Kettwig Germany
Responsible for testing laboratory:	Dipl.-Ing. W. Richter
Deputy:	Dipl.-Ing. J. Schmitt
Laboratory accreditations/Listings:	DAkkS-Registration No. D-PL-12047-01-01 FCC-Registration No.: 736496, MRA US-EU 0003 IC-Registration No. 3462D-1, 3462D-2 VCCI Registration No. R-2665,R-2666,C-2914,T-1967,G-301

2.2. Test location

2.2.1. Test laboratory "CTC"

Company name:	see chapter 2.1. Identification of the testing laboratory

2.3. Organizational items

Order No.:	20795417
Responsible for test report and project leader:	Dipl.-Ing. C. Lorenz
Receipt of EUT:	2011-05-02
Date(s) of test:	2011-05-03 to 2011-05-21
Date of report:	2011-07-07
Version of template: 11.01 _All.Dotm	

2.4. Applicant's details

Applicant's name:	Option NV
Address:	Gaston Geenslaan 14 3001 Leuven Belgium
Contact person:	Mr. Paul Vandeneede

2.5. Manufacturer's details

Manufacturer's name:	please see Applicant's details
Address:	please see Applicant's details

3. Equipment under test (EUT)

3.1. Additional declaration and description of main EUT

Main function	GSM/(E)GPRS/W-CDMA/WLAN Wireless Router		
Type	GS0361 with integrated GSM/W-CDMA module GTM661W (MO6612)		
GSM Frequency range (US/Canada -bands)	GSM 850: 824 – 849MHz (Uplink), 869-894MHz (Downlink) GSM1900: 1850-1910MHz (Uplink), 1930-1990MHz (Downlink) FDD Band 2: 1852.4–1907.6 MHz (Uplink), 1930-1990MHz (Downlink) FDD Band 5: 826.4-846.6 MHz (Uplink), 869-894MHz (Downlink)		
Type of modulation	GSM-mode: GMSK GPRS-Mode: 8-PSK FDD-Mode Release99: QPSK FDD Mode Release 5+6: 16QAM additionally		
Number of channels (USA/Canada -bands)	GSM 850: 128 – 251, 125 channels GSM1900: 512 – 810, 300 channels FDD Band 2: UARFCN range 9262 – 9400 – 9538 FDD Band 5: UARFCN range 4132 – 4183 – 4233		
EMISSION DESIGNATOR(S)	248KGXW(GMSK) 244KG7W (8-PSK)4M16F9W (W-CDMA/ FDD Mode) Remark: bandwidth was not tested, here information only for reference		
Antenna Type	☒ Integrated ☐ External, no RF- connector ☒ External, separate RF-connector: max. 2dBi gain of external antenna		
MAX PEAK Output Power: Radiated	GSM 850: 32.85 dBm GSM1900: 30.74 dBm GPRS 850: 31.50 dBm GPRS 1900: 31.01 dBm E-GPRS 850: 29.05 dBm E-GPRS 1900: 30.26 dBm W-CDMA Band II: 29.62 dBm W-CDMA Band IV: 25.77 dBm		
MAX PEAK Output Power: Conducted	GSM 1900 EDGE1900 FDD2/5	Not tested, see initial certification reports of internal GSM/W-CDMA module, remark 1	
FCC-ID	NCMOGS0361		
IC	2734A-GS0361		
Installed option	☒ GSM and W-CDMA transmitters ☒ WLAN transmitter ☒ File server and router for PC-equipment		
Power supply	5V DC – supplied over separate AC/DC adapter		
Special EMI components	--		
EUT sample type	☐ Production	☐ Pre-Production	☒ Engineering

Remark: 1.) see initial certification/results for GSM/WCDMA Wireless Module, test report FG0N2627, Rev. 01, dated April 20.2011 by Sporton International Inc and test report FG140819 dated April 29, 2011.

3.2. EUT: Type, S/N etc. and short descriptions used in this test report

Short description*)	EUT	Type	S/N serial number	HW hardware status	SW software status
EUT A	GSM/(E)GPRS/W-CDMA/WLAN Wireless Router GlobeSurfer III+	GS0361	IMEI: 004401441414485	2.2	R1N79 Modem-firmware: 1.8.4.0
EUT B	GSM/(E)GPRS/W-CDMA/WLAN Wireless Router GlobeSurfer III+	GS0361	IMEI: 004401441414469	2.2	R1N79 Modem-firmware: 1.8.4.0
EUT C	Phihong AC/DC adapter for GlobesurferIII+	PSA15R-050P	CTC#1	Input: AC100-240V AC Output: DC 5.0 V DC 2.0A	--
EUT D	External antenna	Joymaxx CAF-6540FMXX	#1	2.0dB Gain	--
EUT E	Phihong AC/DC adapter for GlobesurferIII+	PSA15R-050P	CTC#2	Input: AC100-240V AC Output: DC 5.0 V DC 2.0A	

*) EUT short description is used to simplify the identification of the EUT in this test report.

3.3. Auxiliary Equipment (AE): Type, S/N etc. and short descriptions

AE short descrip-tion *)	Auxiliary Equipment	Type	S/N serial number	HW hardware status	SW software status
AE 1	Notebook	Dell D610	CTC #4	--	Windows XP
AE 2	IOMEGA External HD	GDHDU2	XRAA41B565	1TByte	--
AE 3	AC/DC adapter	For AE2	G100902058517	Input: 100-240 V AC/ 1.0A/50-60Hz Output: 12V DC 1.5A	--
AE 4	All-in-1 USB Card Reader + 2GB Compact Flash card	--	060929	--	--
AE 5	Notebook	HP 2133	CNU8520NKS	--	Windows XP
AE 6	Telephone/Facsimile machine (POTS)	Samsung SF-3100	B6BKC01068L	--	--
AE 7	Analogue (POTS) handset	Belgacom Maestro 2005	11056062	--	--

*) AE short description is used to simplify the identification of the auxiliary equipment in this test report.

3.4.EUT set-ups

EUT set-up no.*)	Combination of EUT and AE	Remarks
Set. 1	EUT A + EUT C + AE1 + AE 6	Set-up with internal antenna
Set. 2	EUT A + EUT C+ EUT D + AE 1 + AE 6	Set-up with External antenna
Set. 3	EUT B + EUT E + AE 2+ AE 3 + AE 5 + AE 6	2’nd set-up with internal antenna.

*) EUT set-up no. is used to simplify the identification of the EUT set-up in this test report.

3.5. Configuration of cables used for testing

Cable number	Item	Type	S/N serial number	HW hardware status	Cable length
1	RJ25 POTS analogue telephone cable	--	--	--	2m
2	USB cable	shielded	--	--	1.5m
3	RJ45 LAN cable1 [1.)]	shielded	--	--	2m

Remark:--

3.6. EUT operating modes

EUT operating mode no.*)	Description of operating modes	Additional information
op. 1	GSM 850 TCH mode TCH=128/192/251	A communication link is established between the mobile station and the test simulator. The transmitter is operated at its maximum rated output power: 33 dBm (power class 4; power control level 5). The input signal to the receiver is modulated with normal test modulation. The wanted RF input signal level to the receiver of the mobile station is set to a level to provide a stable communication link.
op. 2	GSM 1900 TCH mode TCH=512/661/810	A communication link is established between the mobile station and the test simulator. The transmitter is operated at its maximum rated output power: 30 dBm (power class 1; power control level 0). The input signal to the receiver is modulated with normal test modulation. The wanted RF input signal level to the receiver of the mobile station is set to a level to provide a stable communication link
op. 3	FDD-Mode 2 Traffic mode	A communication link is established between the mobile station (UE) and the test simulator. The transmitter is operated on its maximum rated output power class: 21 dBm or 24dBm. The input signal to the receiver is modulated with normal test modulation. The wanted RF input signal level to the receiver of the mobile station is set to a level to provide a stable communication link according Table E5.1/Table E5.1A as described in 3GPP TS34.121, Annex E.
op. 4	FDD-Mode 5 Traffic mode	A communication link is established between the mobile station (UE) and the test simulator. The transmitter is operated on its maximum rated output power class: 21 dBm or 24dBm. The input signal to the receiver is modulated with normal test modulation. The wanted RF input signal level to the receiver of the mobile station is set to a level to provide a stable communication link according Table E5.1/Table E5.1A as described in 3GPP TS34.121, Annex E.
op. 5	WLAN transmitter On	WLAN transmitter is switched-on during normal GSM/FDD call. WLAN Transmitter is set on channel 1, b-Mode, 2Mbit as maximum power mode. Continuos bearer mode with minimum time TX-time of 20ms is set. Nominal EIRP power 22.3 dBm measured in a separate step.
op. 6	Router mode (IT-equipment peripheral)	Continuous PING command from PC to router over LAN(RJ45) cable
op. 7	File server mode (IT-equipment - peripheral)	Router is acting like File Server, exchanging continuously data to the notebook over LAN control/signal line. Continuous PING command from PC to the router additionally over LAN(RJ45) cable.

op. 8	GPRS Mode.	A data communication link is established between the mobile station and the test simulator. The transmitter is operated at its maximum rated output according its Power class: i.e Power class 4 for GSM850 and and Power class 1 for PCS1900. Slot3 is activated. The input signal to the receiver is modulated with normal CS1 test modulation. The wanted RF input signal level to the receiver of the mobile station is set to a level to provide a stable communication link.
op. 9	E-GPRS Mode	A data communication link is established between the mobile station and the test simulator. The transmitter is operated at its maximum rated output according its Power class: E1, E2 or E3. The input signal to the receiver is modulated with normal MCS5 test modulation. The wanted RF input signal level to the receiver of the mobile station is set to a level to provide a stable communication link.

*) EUT operating mode no. is used to simplify the test report

3.7. Parameter Settings on mobile phone and base station CMU200

Following settings apply to the MS during the measurements in **GSM/(E)GPRS**-Mode only:

Parameter	Traffic Mode	Idle Mode
Traffic Channels mobile station (EUT)	GSM 850 TCH_{MS}= 128/ 192 /251 GSM 1900 TCH_{MS} = 512 / 681 / 810	--
maximum power level (PCL)	GSM 850: PCL = 5 (2 Watt) GSM 1900: PCL = 0 (1 Watt)	--
Modulation	GSM: GMSK-Modulation Scheme EDGE: 8-PSK Modulation Scheme	--
DTX	off	--
Bitstream	PRBS 2E9-1 (pseudo-random-sequence) – CCITT 0.153	
Timeslot	3	
Hopping	off	
Timeslot (slot mode)	GSM-Mode: single GPRS-Mode: maximum allowed uplink slots no. according MS class	
Maximum data transmission rate, single time slot	GSM: 17,6 kBit/s Slot EDGE: 59,2 kBit/s Slot	
Speech transcoding (Traffic Mode)	Full rate Version 1	
Mode	BCCH and TCH	
BCCH – base station (CMU,CMD)	GSM 850: 180 GSM 1900: 651	
TCH – base station (CMD, CMU)	auto	
Power level TCH – base station (used timeslot level)	- 70 dBm	
Power level BCCH – base station (control channel level)	- 80 dBm	
External attenuation RF/AF-Input/Output	Accord. calibration prior to measurements	
Mobile Country Code	310	310
BS_AG_BLKS_RES	Not applicable	0
Paging reorganisation		Off (0)
Signalling channel		SDCCH
Location Update		Auto
Cell access		Disabled (barred)

Following settings apply to the UE (EUT) during the measurements in **FDD-Mode** only:

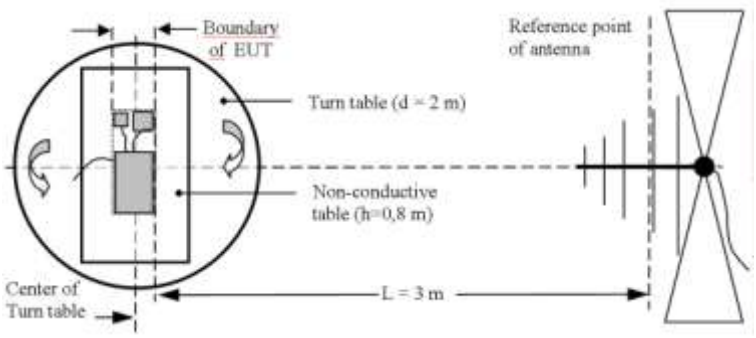
Parameter	Traffic Mode	Idle Mode
UARFCN UE Uplink (EUT) (according TS34.108)	FDD 2 = 9262/ 9400/ 9538 FDD 5 = 4132/ 4183/ 4233	--
UARFCN Node B (downlink) (according TS34.108)	FDD 2 = 9663/ 9800/ 9937 FDD 5 = 4358/ 4040/ 4457	
UE power class	Class 3 (+24dBm), Class 4 (+21dBm) nominal	
HSDPA UE category/ HSUPA category	No information	
Maximum power	FDD 2/5 12.2kbps RMC -> all TPC bits up ("1")	--
Modulation	12.2kbps RMC-mode: QPSK-Modulation Scheme	--
Compression mode	Off	--
Node B Downlink physical channels settings	According Table E.5.1/E.5.1A in 3GPP TS34.121	
External attenuation RF/AF-Input/Output	Accord. Set-up calibration prior to measurements	

4. DESCRIPTION OF TEST SET-UP's

4.1. Test set-up for radiated measurements

MEASUREMENT METHOD (30 MHz<f <1 GHz):

An EMI analyzer together with a broadband antenna was used in order to identify the emissions from the EUT by positioning the antenna close to the EUT surfaces. The interconnecting cables and equipment position were varied in order to maximize the emissions. Then most critical frequencies are recorded for further investigations. Based on the exploratory measurements, the most critical frequencies are re-measured by maintaining the EUT's operating mode, cable position, etc. The EUT was placed on a non-conductive support of 0.8 m height. By rotating the turntable angle in the range 0 to 360 degree, the EUT itself either over 3-orthogonal axis (not defined usage position) or 2-orthogonal axis (defined usage position) and the measurement antenna height from 1 meter to 4 meters, the maximized emissions are recorded. The measurements are performed for both polarizations of the measuring antenna: horizontal and vertical.

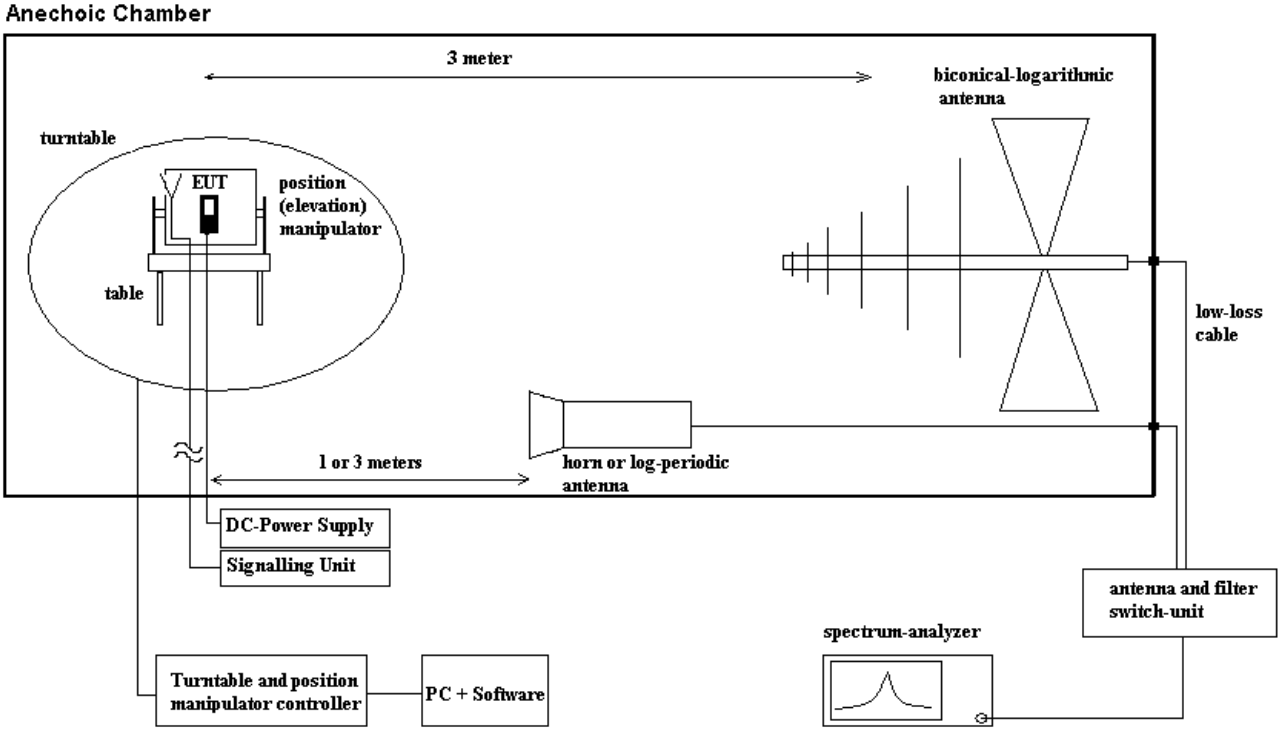


MEASUREMENT METHOD (1GHz<f <26.5 GHz):

The EUT and accessories are placed on a non-conducting tipping table of 0.8 meter height (semi-anechoic chamber) or 1.55m height (fully-anechoic chamber) which is situated in the middle of the turntable. The turntable can rotate the device under test 360 degree, the tipping table can rotate the device from laid to standing position. This way the device under test can be rotated in all three orthogonal planes in order to maximize the detected emissions. The turn- and tipping table are controlled by a controller unit. All positions manipulations are software controlled from a operator PC.
The measurements are performed for both receiving antenna polarisations: vertical and horizontal.

Up to 18GHz a measurement distance of 3 meters is used, above 18GHz the distance is 1 meter. A biconical-logarithmic antenna up to 1 GHz and a logarithmic-periodic antenna for frequencies above 1 GHz up to 26.5GHz is used. For frequencies above 26.5GHz a horn antenna is used, pls. compare the equipment list for more details.

The EUT is powered either by a external DC-supply with nominal voltage or a AC/DC power supply as accessory. The communication signalling (if necessary for operation) is performed from outside the chamber with a communication test simulator (CMU200 from Rohde&Schwarz) and a signalling antenna place near the EUT.



Schematic: radiated measurements test set-up

5. Measurements

5.1. RF power output - radiated

REFERENCES

FCC: §2.1046 (conducted), §22.913(a)(2), § 24.232(c)
IC: RSS-132:4.4 + SRSP 503:5.1.3 for GSM 850; RSS-133:4.1/6.4 + SRSP-510:5.1.2 for GSM 1900

- Maximum Power Output of the mobile phone should be determined while measured conducted and radiated way.

MOBILE PHONE/BASE STATION SETTINGS

- according 3.7

TEST METHOD

The measurements were made at the upper, center, and lower carrier traffic frequencies of each of the supported operating band. Choosing three TX-carrier frequencies of the mobile phone, should be sufficient to demonstrate compliance.
The measurements were performed by using the **substitution method** (ANSI/TIA/EIA 603-C-2004) with a spectrum-analyzer. This method can be described like follows:

1.) choosing of suitable spectrum-analyzer settings for performing the measurements. This settings of the spectrum analyzer must be maintained for both stages of the measurements: EUT emission measurements and also for measurements of the substituted level.

Parameter	Setting for GSM measurements	Settings for UTRA/FDD measurements
$RBW\|_{3dB}$	3 MHz	10 MHz
VBW	10 MHz	10 MHz
Span	20MHz	50 MHz
Detector Mode	Positive max-hold	Positive max-hold
Average	off	off
Sweep Time	coupled	coupled

2.) The maximum level of the peak power was recorded, while the emissions were maximized by rotating the EUT in three orthogonal axes, which was situated on a non-conductive turntable of 1.55 m height ($P_{MEAS,1}$). This was performed for both measuring antenna polarisations (vertical/horizontal), the maximum of both values is used for further measurements and final substitution ($P_{MEAS,\,1,\,MAX}$).
3.) As the maximum emission is recorded, the EUT is replaced by a frequency dependant suitable antenna, which is connected to a RF-signal generator, which is transmitting on the determined worst-case frequency as determined in step 2.
4.) The RF-signal level of the signal generator is adjusted as long the same worst-case level determined first step is measured at the spectrum analyzer ($P_{SMHU}=P_{MEAS,1,\,MAX}$)
5.) Than the RF-signal cable is disconnected from the antenna and connected to a power-level meter. The level is determined ($P_{MEAS,2}$).
6.) The final result is calculated by adding the ERP/EIRP gain of the antenna which substitutes the EUT.
$P_{EUT,SUBST} = P_{MEAS,2} + G_{ANTENNA}$

RESULTS (RADIATED)

SET-UP 1, OP. MODE 1+6+8+9

Channel/ Frequency (MHz)		Peak Output Power (dBm)			Antenna Polarisation for maximum Power	Verdict
		PK	AV			
GSM 850	Channel 128/ 824.2 MHz	32.85	--	ERP-Value	H	Passed
	Channel 192/ 837.0 MHz	--	--			
	Channel 251/ 848.8 MHz	--	--			
GPRS 850	Channel 128/ 824.2 MHz	31.50	--		V	Passed
	Channel 192/ 837.0 MHz	--	--			
	Channel 251/ 848.8 MHz	--	--			
E-GPRS 850	Channel 128/ 824.2 MHz	29.05	--		V	Passed
	Channel 192/ 837.0 MHz	--	--			
	Channel 251/ 848.8 MHz	--	--			

Remark: only worst-case channel(s) tested, reference values as taken from initial test reports.

UTRA/FDD RESULTs (radiated)

SET-UP 1, OP.MODE 3/ 4 + 6

Channel/ Frequency (MHz)		Peak Output Power (dBm)		Antenna Polarisation for maximum Power	Verdict
Band 2	UARFCN 9262 / 1852.4 MHz	29.62	EIRP-Value	V	Passed
	UARFCN 9400 / 1880 MHz	--			
	UARFCN 9538 / 1907.6 MHz	--			
Band 5	UARFCN 4132 / 826.4 MHz	25.77	ERP-Value	H	Passed
	UARFCN 4185 / 837 MHz	--			
	UARFCN 4233 / 846.6 MHz	--			

Remark: only worst-case channel(s) tested, reference values as taken from initial test reports.

SET-UP 2, OP-MODE 3/ 4 + 6

Channel/ Frequency (MHz)		Peak Output Power (dBm)		Antenna Polarisation for maximum Power	Verdict
Band 2	UARFCN 9262 / 1852.4 MHz	28.04	EIRP-Value	V	Passed
	UARFCN 9400 / 1880 MHz	--			
	UARFCN 9538 / 1907.6 MHz	--			
Band 5	UARFCN 4132 / 826.4 MHz	23.20	ERP-Value	H	Passed
	UARFCN 4185 / 837 MHz	--			
	UARFCN 4233 / 846.6 MHz	--			

Remark: only worst-case channel(s) tested, reference values as taken from initial test reports

SET-UP 1, OP. MODE 2 +6+8+9

Channel/ Frequency (MHz)		Peak Output Power (dBm)			Antenna Polarisation for maximum Power	Verdict
		PK	AV			
GSM 1900	Channel 512/ 1850.2 MHz	--	--	EIRP-Value	V	Passed
	Channel 661/ 1880.0 MHz	30.74	--			
	Channel 810/ 1909.8 MHz	--	--			
GPRS1900	Channel 512/ 1850.2 MHz	--	--		V	Passed
	Channel 661/ 1880.0 MHz	31.01	--			
	Channel 810/ 1909.8 MHz	--	--			
E-GPRS 1900	Channel 512/ 1850.2 MHz	30.26	--		H	Passed
	Channel 661/ 1880.0 MHz	--	--			
	Channel 810/ 1909.8 MHz	--	--			

Remark: only worst-case channel(s) tested, reference values as taken from initial test reports

AMBIENT ENVIRONMENTAL CONDITIONS

Temperature	21.8 °C
Relative Humidity	29 %
Air pressure	1002 hPa

TEST EQUIPMENT

Used equipment (see reference in the annex)
Antennas #549, #439, FAR Chamber#443, FSEK #264, CMU200 #546, #016+ B6366 + #060 B6363

5.2. Emission limits (Spurious emissions radiated)

REFERENCES

FCC: §2.1051-conducted, §2.1053(a)-radiated, §2.1057(a)(1), §22.917(a)(b); §24.238(a)(b)
IC: RSS-132: 4.5.1.1, RSS-133: 6.5.1(a)(i) 6.5.1(b)

„the power of emissions shall be attenuated below the transmitter output power (p) by at least least 43+10Log(P) dB“

FREQUENCY RANGE

The spectrum was scanned from 30 MHz to the 10th harmonic of the highest frequency generated within the equipment. The used detector is peak.

The specification that all emissions shall be attenuated below the transmitter power (P) by at least 43 + 10 log (P) dB, translates in the relevant power range of the mobile phone (1 to 0.001 W) to a constant limit of -13 dBm.

DESCRIPTION OF SET-UP

- see radiated set-up in chapter 4.1

SETTINGS ON MOBILE PHONE

The measurements were made at the upper, middle, and lower carrier frequencies of the operating band. Choosing three representative TX-carrier frequencies of the mobile phone within each operable GSM band, should be sufficient to demonstrate compliance with the emissions limits outside and adjacent to the frequency blocks.
The individual settings were made according chapter 3.7

TEST METHOD FOR RADIATED MEASUREMENTS:

By rotating the EUT in three orthogonal planes, the emissions were recorded with Peak-Detector and Hold-Max function of the spectrum-analyzer. If the harmonic could not be detected above the noise floor, the ambient level was recorded. Measurement distance is 3m for frequencies up to 18GHz and 1m for frequencies greater then 18GHz.

SETTINGS OF SPECTRUM-ANALYSER

Frequency range	RBW (resolution bandwidth)	VBW (video bandwidth)
BAND-EDGE compliance: 1MHz immediately adjacent to the frequency blocks	1% from applicants stated/measured emission bandwidth	3..10 times the RBW
More than 1 MHz outside and adjacent the frequency blocks	1 MHz	3..10 MHz

5.2.1. Results Radiated

5.2.1.1. GMSK 850 Mode (Set-up 1, Op. mode 1+ 5 + 6)

Lowest channel 128 (maximum value for carrier in GSM850 band): re-tests band-edge compliance and spurious out-of-band

Transmitting channel/ frequency: TX = 824.2 MHz							
Sweep frequency range: [MHz]	Diagram number (H/V)	Frequency of emission [MHz]	Worst-Level Polarisation	Transducer factor [dB]	Result [dBm]	Limit [dBm]	Verdict
Sweep 1 [2.)]	8.01/ 8.02	--[1.)]	H V	--	< -27.0 (no relevant peaks found)	-13	Passed [2.)]
Sweep 2 [4.)]	8.03/ 8.04	823.98	V	--	< -14.64 (PK)		Passed [4.)]
Sweep 4	8.05/ 8.06	1649.0	V	--	-25.5		Passed [5.)]
Sweep 5	8.07/ 8.08	--	H	--	< -29.0 (no relevant peaks found)		Passed

Remarks: see diagrams enclosed in chapter 8
1.) only results near 20dB to the limit are referenced or noise level
2.) GSM TX-carrier on the diagram
4.) Band-Edge compliance
5.) WLAN Transmitter was switched-on (Channel 1) in an effort to detect intermodulation products

Middle channel 192: not tested, not maximum power value in GSM850 Band during initial tests/certification

Highest channel 251: only band-edge compliance re-tested

Transmitting channel/ frequency: TX = 849.8 MHz							
Sweep frequency range: [MHz]	Diagram number (H/V)	Frequency of emission [MHz]	Worst-Level Polarisation	Transducer factor [dB]	Result [dBm]	Limit [dBm]	Verdict
Sweep 1 [2.)]	--	--	--	--	--	-13	Passed [2.)]
Sweep 3 [4.)]	8.09/ 8.10	849.02	V	--	-13.83 (PK)		Passed [4.)]
Sweep 4	--	--		--			Passed
Sweep 5	--	--		--			Passed
	--	--					Passed

Remarks: see diagrams enclosed in chapter 8
4.) Band-Edge compliance

5.2.1.1. GSM 1900 Mode (Set-up 1, Op, Mode 2+5+6)

Lowest channel 512: only band-edge compliance re-tested

Transmitting channel/ frequency: TX = 1850,2 MHz							
Sweep frequency range: [MHz]	Diagram number (H/V)	Frequency of emission [MHz]	Worst-Level Polarisation	Transducer factor [dB]	Result [dBm]	Limit [dBm]	Verdict
Sweep 1	--	--	--	--		-13	NT
Sweep 2	--	--	--	--			NT
Sweep 3 [4.)]	8.15/ 8.16	1850.0	--	--	-30.68		Passed [4.)]
Sweep 5	--	--	--	--			NT
	--	--	--	--			
Sweep 6	--	--	--	--			NT
Sweep 7	--	--	--	--			NT

Remark: 4.) Band-Edge compliance
5.) not tested, no more harmonics could be detected
see diagrams enclosed in chapter 8

Middle channel 661: (maximum value for carrier in GSM1900 band): re-tests spurious emissions out-of-band

Transmitting channel/ frequency: TX = 1880,0 MHz							
Sweep frequency range: [MHz]	Diagram number (H/V)	Frequency of emission [MHz]	Worst-Level Polarisation	Transducer factor [dB]	Result [dBm]	Limit [dBm]	Verdict
Sweep 1	8.11/ 8.12	--[1.)]	--	--	< - 29.97 (no relevant peaks found)	-13	Passed
Sweep 2	8.13/ 8.14	1349.9	H	--	-26.19		Passed [2.) 5.)]
Sweep 5	8.19/ 8.20	5639.1	H	--	-42.19		Passed
Sweep 6	--	--	--	--	--	--	NT [6.)]
Sweep 7	--	--	--	--	--	--	NT [6.)]

Remark: 1.) only results near 20dB to the limit are referenced or noise level
2.) Peaks from Set-up, BCCH of Base station
3.) Worst-Case search because critical frequency
5.) WLAN Transmitter was switched-on (Channel 1) in an effort to detect intermodulation products
6.) not final tested, no harmonics could be detected during pre-test
see diagrams enclosed in chapter 8

Highest channel 810: only band-edge compliance re-tested

Transmitting channel/ frequency: TX = 1908,8 MHz							
Sweep frequency range: [MHz]	Diagram number (H/V)	Frequency of emission [MHz]	Worst-Level Polarisation	Transducer factor [dB]	Result [dBm]	Limit [dBm]	Verdict
Sweep 1	--	--	--	--	--	-13	NT
Sweep 2	--	--	--	--	--		NT
Sweep 4	8.17/ 8.18	1910.0	H	--	-31.50		Passed 4.)
Sweep 5	--	--	--	--	--		NT
	--	--	--	--	--		
Sweep 6	--	--	--	--	--		NT
Sweep 7	--	--	--	--	--		NT

Remark: 4.) Band-Edge compliance
see diagrams enclosed in chapter 8

5.2.1.2. FDD Band II Mode (Set-up 1, Op. Mode 3+5+6)

Lowest channel 9262: spurious emissions out-of-band and band-edge compliance re-tested

Transmitting channel/ frequency: TX = 1850,2 MHz							
Sweep frequency range: [MHz]	Diagram number (H/V)	Frequency of emission [MHz]	Worst-Level Polarisation	Transducer factor [dB]	Result [dBm]	Limit [dBm]	Verdict
Sweep 1	--	--	--	--	--	-13	NT 1.)
Sweep 2	8.39/ 8.40	--		--	< -20.0 (no relevant peaks found)		Passed
Sweep 3	8.41/ 8.42	3696.9	V	--	-44.46		Passed
Sweep 4	--	--	--	--	--		NT 5.)
Sweep 5	--	--	--	--	--		NT 5.)
Sweep 6	8.35/ 8.36	1849.9	V	--	-28.62		Passed 4.)

Remark:
1.) not final tested, no relevant emissions could be detected during pre-test
4.) Band-Edge compliance
5.) not tested, no more harmonics could be detected
6.) WLAN Transmitter was switched-on (Channel 1) in an effort to detect intermodulation products
see diagrams enclosed in chapter 8

Middle channel 9400: not tested, not maximum power value in FDD II band during initial tests/certification

Transmitting channel/ frequency: TX = 1880,0 MHz							
Sweep frequency range: [MHz]	Diagram number (H/V)	Frequency of emission [MHz]	Worst-Level Polarisation	Transducer factor [dB]	Result [dBm]	Limit [dBm]	Verdict
Sweep 1	--	--	--	--	--	-13	--
Sweep 2	--	--	--	--	--		--
Sweep 5	--	--	--	--	--		--
Sweep 6	--	--	--	--	--		--
Sweep 7	--	--	--	--	--		--

Remark:

Highest channel 9538: only band-edge compliance re-tested

Transmitting channel/ frequency: TX = 1908,8 MHz							
Sweep frequency range: [MHz]	Diagram number (H/V)	Frequency of emission [MHz]	Worst-Level Polarisation	Transducer factor [dB]	Result [dBm]	Limit [dBm]	Verdict
Sweep 1	--	--	--	--	--	-13	NT
Sweep 2	--	--	--	--	--		NT
Sweep 4	--	--	--	--	--		NT
Sweep 5	--	--	--	--	--		NT
Sweep 6	--	--	--	--	--		NT
Sweep 7	8.37/ 8.38	1910.0	H	--	-32.82		Passed [4.)]

Remark: 4.) Band-Edge compliance
see diagrams enclosed in chapter 8

5.2.1.3. FDD Band V Mode (Set-up 2, Op. Mode 4+5+6)

Lowest channel 4132: spurious emissions out-of-band and band-edge compliance re-tested

Transmitting channel/ frequency: TX = 1850,2 MHz							
Sweep frequency range: [MHz]	Diagram number (H/V)	Frequency of emission [MHz]	Worst-Level Polarisation	Transducer factor [dB]	Result [dBm]	Limit [dBm]	Verdict
Sweep 1	8.21	80.519 119.391 251.430	H	--	-32.6 -37.0 -32.9	-13	Passed 2.)
	8.22	82.485 109.654 123.211 136.914	V	--	-36.2 -35.3 -36.6 -33.2		Passed 2.)
Sweep 2	8.23/ 8.24	--	V	--	< -21.0 (no relevant peaks found)		Passed 6.)
Sweep 3	8.25/ 8.26	--	--	--	< -33.87 (no relevant peaks found)		Passed
Sweep 4	8.27/8.28	823.96	V		-36.81		Passed 4.)

Remark:
2.) GSM TX-carrier on the diagram
4.) Band-Edge compliance
6.) WLAN Transmitter was switched-on (Channel 1) in an effort to detect intermodulation products
see diagrams enclosed in chapter 8

Middle channel 4183: not tested, not maximum power value in FDD V band during initial tests/certification

Highest channel 4233: only band-edge compliance re-tested

Transmitting channel/ frequency: TX = 1908,8 MHz							
Sweep frequency range: [MHz]	Diagram number (H/V)	Frequency of emission [MHz]	Worst-Level Polarisation	Transducer factor [dB]	Result [dBm]	Limit [dBm]	Verdict
Sweep 1	--	--	--	--	--	-13	NT
	--	--	--	--	--		NT
Sweep 2	--	--	--	--	--		NT
Sweep 3	--	--	--	--	--		NT
Sweep 5	8.29/ 8.30	849.02	V	--	-36.27		Passed 4.)

Remark: 4.) Band-Edge compliance
see diagrams enclosed in chapter 8

Set-up 3, Op. mode 4+5+7

Lowest channel 4132: band-edge compliance + Out-of-band emissions re-tested

Transmitting channel=4132							
Sweep frequency range: [MHz]	Diagram number (H/V)	Frequency of emission [MHz]	Worst-Level Polarisation	Transducer factor [dB]	Result [dBm]	Limit [dBm]	Verdict
Sweep 1	8.50/ 8.51	994.09	V	--	-27.87	-13	Passed 2.)
Sweep 2	8.52/ 8.53	1083.0 2002.8	H V	--	-28.49 -25.51		Passed
Sweep 3	8.54/ 8.55	5990.0	H	--	-41.23		Passed
Sweep 4	8.31/ 8.32	823.97	V	--	-36.79		Passed 4.)

Remark:
2.) GSM/FDD TX-carrier on the diagram
4.) Band-Edge compliance
6.) WLAN Transmitter was switched-on (Channel 1) in an effort to detect intermodulation products
7.) diagram 8.55a shows emissions from PC set-up only, EUT was powered off
see diagrams enclosed in chapter 8

Middle channel 4183: not tested, not maximum power value in FDD V band during initial tests/certification

Highest channel 4233: only band-edge compliance re-tested

Transmitting channel=4233							
Sweep frequency range: [MHz]	Diagram number (H/V)	Frequency of emission [MHz]	Worst-Level Polarisation	Transducer factor [dB]	Result [dBm]	Limit [dBm]	Verdict
Sweep 1	--	--	--	--	--	-13	NT
Sweep 2	--	--	--	--	--		NT
Sweep 3	--	--	--	--	--		NT
Sweep 5	8.33/ 8.34	849.03	V	--	-36.96		Passed 4.)

Remark:
4.) Band-Edge compliance
6.) WLAN Transmitter was switched-on (Channel 1) in an effort to detect intermodulation products
see diagrams enclosed in chapter 8

AMBIENT ENVIRONMENTAL CONDITIONS

Temperature	23.6°C
Relative Humidity	46 %
Air pressure	1011 hPa

TEST EQUIPMENT

Used equipment (see reference in the annex)
Signalling : 546 Antenna 18GHz : #549 FSEK #264 Switch Unit FAR, FAR-A.#443 #060 B6363

6. Measurement uncertainties

The reported uncertainties are calculated based on the standard uncertainty multiplied with the appropriate coverage factor **k**, such that a confidence level of approximately 95% is achieved.

For uncertainty determination, each component used in the concrete measurement set-up was taken in account and it's contribution to the overall uncertainty according it's statistical distribution calculated.

Thus, following table shows expectable uncertainties for each measurement type performed.

Measurement	Frequency range	Calculated uncertainty based on a confidence level of 95%	Remarks:
RF-Power Output conducted	9 kHz .. 20 GHz	1 dB	--
RF-Power Output radiated	30 MHz .. 4 GHz	3,17 dB	Substitution method
Conducted RF-emissions on antenna ports	9 kHz .. 20 GHz	1 dB	--
Radiated RF-emissions enclosure	150 kHz .. 30 MHz	5 dB	Magnetic field
	30 MHz .. 1 GHz	4,2 dB	E-Field
	1GHz .. 19 GHz	3.17 dB	Substitution method
Occupied bandwidth	9 kHz .. 4 GHz	0,1272 ppm (Delta Marker method)	Frequency error
		1 dB	Power
Emission bandwidth	9 kHz .. 4 GHz	0,1272 ppm (Delta Marker method)	Frequency error
		1 dB	Power
Frequency stability	9 kHz .. 20 GHz	0,0636 ppm	--
Conducted emission on AC-mains port (U_{CISPR})	9 kHz .. 150 kHz	4 dB	--
	150 kHz .. 30 MHz	3.6 dB	

Table : measurement uncertainties valid for conducted/radiated measurements

7. Instruments and Ancillary

7.1. Used equipment "CTC"

The "Ref.-No" in the left column of the following tables allows the clear identification of the laboratory equipment.

7.1.1. Test software and firmware of equipment

Ref.-No.	Equipment	Type	Serial-No.	Version of Firmware or Software during the test
001	Emi Test Receiver	ESS	825132/017	Firm.= 1.21 , OTP=2.0, GRA=2.0
012	Signal Generator (EMS-cond.)	SMY 01	839069/027	Firm.= V 2.02
013	Power Meter (EMS cond.)	NRVD	839111/003	Firm.= V 1.51
017	Digital Radiocommunication Tester	CMD 60 M	844365/014	Firmware = V 3.52 .22.01.99, DECT = D2.87 13.01.99
053	Audio Analyzer	UPA3	860612/022	Firm. V 4.3
119	RT Harmonics Analyzer dig. Flickermeter	B10	G60547	Firm.= V 3.1DHG
140	Signal Generator	SMHU	831314/006	Firm.= 3.21
261	Thermal Power Sensor	NRV-Z55	825083/0008	EPROM-Datum 02.12.04, SE EE 1 B
262	Power Meter	NRV-S	825770/0010	Firm.= 2.6
263	Signal Generator	SMP 04	826190/0007	Firm.=3.21
264	Spectrum Analyzer	FSEK 30	826939/005	Bios=2.1, Analyzer= 3.20
295	Racal Digital Radio Test Set	6103	1572	UNIT Firmware= 4.04, SW-Main=4.04, SW-BBP=1.04, SW-DSP=1.02, Hardboot=1.02, Softboot=2.02
298	Univ. Radio Communication Tester	CMU 200	832221/091	R&S Test Firmware =3.53 /3.54 (current Testsoftw. f. all band used
323	Digital Radiocommunication Tester	CMD 55	825878/0034	Firm.= 3.52 .22.01.99
331	Climatic Test Chamber -40/+80 Grad	HC 4055	43146	TSI 1.53
335	System-CTC-EMS-Conducted	System EMS Conducted	-	EMC 32 V 8.40
340	Digital Radiocommunication Tester	CMD 55	849709/037	Firm.= 3.52 .22.01.99
355	Power Meter	URV 5	891310/027	Firm.= 1.31
365	10V Insertion Unit 50 Ohm	URV5-Z2	100880	Eprom Data = 31.03.08
366	Ultra Compact Simulator	UCS 500 M4	V0531100594	Firm. UCS 500=001925/3.06a02, rc=ISMIEC 4.10
371	Bluetooth Tester	CBT32	100153	CBT V5,30+ SW-Option K55
377	Emi Test Receiver	ESCS 30	100160	Firm.= 2.30, OTP= 02.01, GRA= 02.36
378	Broadband RF Field Monitor	RadiSense III	03D00013SNO-08	Firm.= V.03D13
383	Signal Generator	SME 03	842 828 /034	Firm.= 4.61
389	Digital Multimeter	Keithley 2000	0583926	Firm. = A13 (Mainboard) A02 (Display)
392	Radio Communication Tester	MT8820A	6K00000788	Firm.= 4.50 #005, IPL=4.01#001,OS=4.02#001, GSM=4.41#013, W-CDMA= 4.54#004, scenario= 4.52#002
441	CTC-SAR-EMI Cable Loss	System EMI field (SAR) Cable	-	EMC 32 Version 8.40
442	CTC-SAR-EMS	System EMS field (SAR)	-	EMC 32 Version 8.40
443	CTC-FAR-EMI-RSE	System CTC-FAR-EMI-RSE	-	Spuri 7.2.5 or EMC 32 Ver. 8.40
444	CTC-FAR-EMS field	System-EMS-Field (FAR)	-	EMC 32 Version 8.40
460	Univ. Radio Communication Tester	CMU 200	108901	R&S Test Firmware Base=5.14, GSM=5.14 WCDMA=5.14 (current Testsoftw.,f. all band to be used,
489	Emi Test Receiver	ESU40	1000-30	Firmware=4.43 SP3, Bios=V5.1-16-3, Spec. =01.00
491	ESD Simulator dito	ESD dito	dito307022	V 2.30
524	Voltage Drop Simulator	VDS 200	0196-16	Software Nr: 000037 Version V4.20a01
526	Burst Generator	EFT 200 A	0496-06	Software Nr. 000034 Version V2.32
527	Micro Pulse Generator	MPG 200 B	0496-05	Software-Nr. 000030 Version V2.43
528	Load Dump Simulator	LD 200B	0496-06	Software-Nr. 000031 Version V2.35a01
546	Univ. Radio Communication Tester	CMU 200	106436	R&S Test Firmware Base=5.14, GSM=5.14 WCDMA=5.14 (current Testsoftw.,f. all band to be used
547	Univ. Radio Communication Tester	CMU 200	835390/014	R&S Test Firmware Base=V5.1403 (current Testsoftw., f. all band used, GSM = 5.14 WCDMA: = 5.14
584	Spectrum Analyzer	FSU 8	100248	2.82_SP3
594	Univ. Radio Communication Tester	CMW500	101757	Firmware Base=2.0.20.9, LTE=2.0.20.8. CDMA= 2.0.10
597	Univ. Radio Communication Tester	CMU 200	100347	R&S Test Firmware Base=5.01, GSM=5.02 WCDMA= not installed, Mainboard= µP1=V.850
598	Spectrum Analyzer	FSEM 30 (Reserve)	831259/013	Firmware Bios 3.40 , Analyzer 3.40 Sp 2

7.1.2. Single instruments and test systems

Ref.-No.	Equipment	Type	Serial-No.	Manufacturer	Interval of calibration	Remark	Cal due
001	Emi Test Receiver	ESS	825132/017	Rohde & Schwarz	12 M	-	31.03.2012
005	AC - LISN (50 Ohm/50µH, test site 1)	ESH2-Z5	861741/005	Rohde & Schwarz	24/12 M	-	31.03.2012
007	DC - LISN (50 Ohm/5µH)	ESH3-Z6	892563/002	Rohde & Schwarz	24/12 M	-	31.03.2012
009	Power Meter (EMS-radiated)	NRV	863056/017	Rohde & Schwarz	24 M	-	31.03.2013
016	Line Impedance Simulating Network	Op. 24-D	B6366	Spitzenberger+Spies	36 M	-	31.03.2013
020	Horn Antenna 18 GHz (Subst 1)	3115	9107-3699	EMCO	36/12 M	-	31.03.2013
021	Loop Antenna (H-Field)	6502	9206-2770	EMCO	36 M	-	31.03.2013
030	Loop Antenna (H-field)	HFH-Z2	879604/026	Rohde & Schwarz	36 M	-	31.03.2012
033	RF-current probe (100kHz-30MHz)	ESH2-Z1	879581/18	Rohde & Schwarz	24 M	-	31.03.2013
060	power amplifier (DC-2kHz)	PAS 5000	B6363	Spitzenberger+Spies	-	3	
066	notch filter (WCDMA; FDD1)	WRCT 1900/2200-5/40-10EEK	5	Wainwright GmbH	12 M	1c	30.06.2012
099	passive voltage probe	ESH2-Z3	299.7810.52	Rohde & Schwarz	36 M	-	31.03.2012
100	passive voltage probe	Probe TK 9416	without	Schwarzbeck	36 M	-	31.03.2012
110	USB-LWL-Converter	OLS-1	-	Ing. Büro Scheiba	-	4	
119	RT Harmonics Analyzer dig. Flickermeter	B10	G60547	BOCONSULT	36 M	-	31.03.2013
134	horn antenna 18 GHz (Subst 2)	3115	9005-3414	EMCO	12 M	-	31.03.2012
136	adjustable dipole antenna (Dipole 1)	3121C-DB4	9105-0697	EMCO	12 M	-	31.03.2012
140	Signal Generator	SMHU	831314/006	Rohde & Schwarz	24 M	-	31.03.2012
248	attenuator	SMA 6dB 2W	-	Radiall	pre-m	2	
249	attenuator	SMA 10dB 10W	-	Radiall	pre-m	2	
252	attenuator	N 6dB 12W	-	Radiall	pre-m	2	
256	attenuator	SMA 3dB 2W	-	Radiall	pre-m	2	
257	hybrid	4031C	04491	Narda	pre-m	2	
260	hybrid coupler	4032C	11342	Narda	pre-m	2	
261	Thermal Power Sensor	NRV-Z55	825083/0008	Rohde & Schwarz	24/12 M	-	31.03.2012
262	Power Meter	NRV-S	825770/0010	Rohde & Schwarz	24 M	-	31.03.2012
263	Signal Generator	SMP 04	826190/0007	Rohde & Schwarz	36 M	-	31.03.2013
264	Spectrum Analyzer	FSEK 30	826939/005	Rohde & Schwarz	12 M	-	31.03.2014
265	peak power sensor	NRV-Z33, Model 04	840414/009	Rohde & Schwarz	24 M	-	31.03.2012
266	peak power sensor	NRV-Z31, Model 04	843383/016	Rohde & Schwarz	24 M	-	31.03.2012
267	notch filter GSM 850	WRCA 800/960-6EEK	9	Wainwright GmbH	pre-m	2	
268	AC/DC power supply	EA 3050-A	9823636	Elektro Automatik	pre-m	2	
270	termination	1418 N	BB6935	Weinschel	pre-m	2	
271	termination	1418 N	BE6384	Weinschel	pre-m	2	
272	attenuator (20 dB) 50 W	Model 47	BF6239	Weinschel	pre-m	2	
273	attenuator (10 dB) 100 W	Model 48	BF9229	Weinschel	pre-m	2	
274	attenuator (10 dB) 50 W	Model 47 (10 dB) 50 W	BG0321	Weinschel	pre-m	2	
275	DC-Block	Model 7003 (N)	C5129	Weinschel	pre-m	2	
276	DC-Block	Model 7006 (SMA)	C7061	Weinschel	pre-m	2	
279	power divider	1515 (SMA)	LH855	Weinschel	pre-m	2	
287	pre-amplifier 25MHz - 4GHz	AMF-2D-100M4G-35-10P	379418	Miteq	12 M	1c	30.06.2012
291	high pass filter GSM 850/900	WHJ 2200-4EE	14	Wainwright GmbH	12 M	1c	30.06.2012
298	Univ. Radio Communication Tester	CMU 200	832221/091	Rohde & Schwarz	pre-m	3	
300	AC LISN (50 Ohm/50µH, 1-phase)	ESH3-Z5	892 239/020	Rohde & Schwarz	24/12 M	-	31.03.2012
301	attenuator (20 dB) 50W, 18GHz	47-20-33	AW0272	Lucas Weinschel	pre-m	2	
302	horn antenna 40 GHz (Meas 1)	BBHA9170	155	Schwarzbeck	36 M	-	31.03.2014
303	horn antenna 40 GHz (Subst 1)	BBHA9170	156	Schwarzbeck	36 M	-	31.03.2014
331	Climatic Test Chamber -40/+80 Grad	HC 4055	43146	Heraeus Vötsch	24 M	-	30.11.2012
341	Digital Multimeter	Fluke 112	81650455	Fluke	24 M	-	31.03.2012
342	Digital Multimeter	Voltcraft M-4660A	IB 255466	Voltcraft	24 M	-	31.03.2013
347	laboratory site	radio lab.	-	-	-	5	
348	laboratory site	EMI conducted	-	-	-	5	
354	DC - Power Supply 40A	NGPE 40/40	448	Rohde & Schwarz	pre-m	2	
355	Power Meter	URV 5	891310/027	Rohde & Schwarz	24 M	-	31.03.2012
356	power sensor	NRV-Z1	882322/014	Rohde & Schwarz	24 M	-	31.03.2013
357	power sensor	NRV-Z1	861761/002	Rohde & Schwarz	24 M	-	31.03.2013
373	V-Network 5µH/50 Ohm	ESH3-Z6	100535	Rohde & Schwarz	24/12 M	-	31.03.2012
376	Horn Antenna 6 GHz	BBHA9120 E	BBHA 9120 E 179	Schwarzbeck	12 M	-	31.03.2012
377	Emi Test Receiver	ESCS 30	100160	Rohde & Schwarz	12 M	-	31.03.2012
389	Digital Multimeter	Keithley 2000	0583926	Keithley	24 M	-	31.03.2013
392	Radio Communication Tester	MT8820A	6K00000788	Anritsu	12 M	-	31.03.2012
431	Model 7405	Near-Field Probe Set	9305-2457	EMCO	-	4	
441	CTC-SAR-EMI Cable Loss	System EMI field (SAR) Cable	-	CETECOM	12 M	5	31.08.2011
443	CTC-FAR-EMI-RSE	System CTC-FAR-EMI-RSE	-	ETS-Lindgren/CETECOM	12 M	5	30.06.2012
448	notch filter WCDMA_FDD II	WRCT 1850.0/2170.0-5/40-10SSK	5	Wainwright Instruments GmbH	12 M	1c	30.06.2012
449	notch filter WCDMA FDD V	WRCT 824.0/894.0-5/40-8SSK	1	Wainwright	12 M	1c	30.06.2012
454	Oscilloscope	HM 205-3	9210 P 29661	Hameg	-	4	

Ref.-No.	Equipment	Type	Serial-No.	Manufacturer	Interval of calibration	Remark	Cal due
456	DC-Power supply 0-5 A	EA 3013 S	207810	Elektro Automatik	pre-m	2	
459	DC -Power supply 0-5 A , 0-32 V	EA-PS 2032-50	910722	Elektro Automatik	pre-m	2	
460	Univ. Radio Communication Tester	CMU 200	108901	Rohde & Schwarz	12 M	-	31.03.2012
463	Universal source	HP3245A	2831A03472	Agilent	-	4	
466	Digital Multimeter	Fluke 112	89210157	Fluke USA	24 M	-	31.03.2012
467	Digital Multimeter	Fluke 112	89680306	Fluke USA	24 M	-	31.03.2012
468	Digital Multimeter	Fluke 112	90090455	Fluke USA	24 M	-	31.03.2012
477	ReRadiating GPS-System	AS-47	-	Automotive Cons. Fink	-	3	
480	power meter (Fula)	NRVS	838392/031	Rohde & Schwarz	24 M	-	31.03.2013
482	filter matrix	Filter matrix SAR 1	-	CETECOM (Brl)	-	1d	
484	pre-amplifier 2,5 - 18 GHz	AMF-5D-02501800-25-10P	1244554	Miteq	12 M	-	30.07.2012
487	System CTC NSA-Verification SAR-EMI	System EMI field (SAR) NSA	-	ETS Lindgren/CETECOM	12 M	-	30.09.2011
489	Emi Test Receiver	ESU40	1000-30	Rohde & Schwarz	12 M	-	31.03.2012
512	notch filter GSM 850	WRCA 800/960-02/40-6EEK	SN 24	Wainwrght	12 M	1c	30.06.2012
517	relais switch matrix	HF Relais Box Keithley System	SE 04	Keithley	pre-m	2	
523	Digital Multimeter	L4411A	MY46000154	Agilent	24 M	-	31.03.2013
529	6 dB Broadband resistive power divider	Model 1515	LH 855	Weinschel	pre-m	2	
547	Univ. Radio Communication Tester	CMU 200	835390/014	Rohde & Schwarz	12 M	-	31.03.2012
548	Digital-Barometer	GBP 2300	without	Greisinger GmbH	36/12 M	-	31.03.2012
549	Log.Per-Antenna	HL025	1000060	Rohde & Schwarz	36/12 M	-	31.03.2012
552	high pass filter 2,8-18GHz	WHKX 2.8/18G-10SS	4	Wainwright	12 M	1c	30.07.2012
558	System CTC FAR S-VSWR	System CTC FAR S-VSWR	-	CTC	24 M	-	31.08.2011
574	Biconilog Hybrid Antenna	BTA-L	980026L	Frankonia	36/12 M	-	30.03.2013
584	Spectrum Analyzer	FSU 8	100248	Rohde & Schwarz	12 M	-	31.03.2012
594	Univ. Radio Communication Tester	CMW500	101757	Rohde & Schwarz	24 M	-	31.03.2012
597	Univ. Radio Communication Tester	CMU 200	100347	Rohde & Schwarz	12 M	-	31.03.2012
598	Spectrum Analyzer	FSEM 30 (Reserve)	831259/013	Rohde & Schwarz	24 M	-	13.01.2013
600	power meter	NRVD (Reserve)	834501/018	Rohde & Schwarz	24 M	-	31.03.2013
601	medium-sensitivity diode sensor	NRV-Z5 (Reserve)	8435323/003	Rohde & Schwarz	24 M	-	12.01.2013
602	peak power sensor	NRV-Z32 (Reserve)	835080	Rohde & Schwarz	24 M	-	12.01.2013
608	UltraLog-Antenna	HL 562	830547/009	Rohde & Schwarz	36/12 M	-	31.03.2014
611	DC power supply	E3632A	KR 75305854	Agilent	pre-m	2	
612	DC power supply	E3632A	MY 40001321	Agilent	pre-m	2	
613	Attenuator	R416120000 20dB 10W	Lot. 9828	Radiall	pre-m	2	

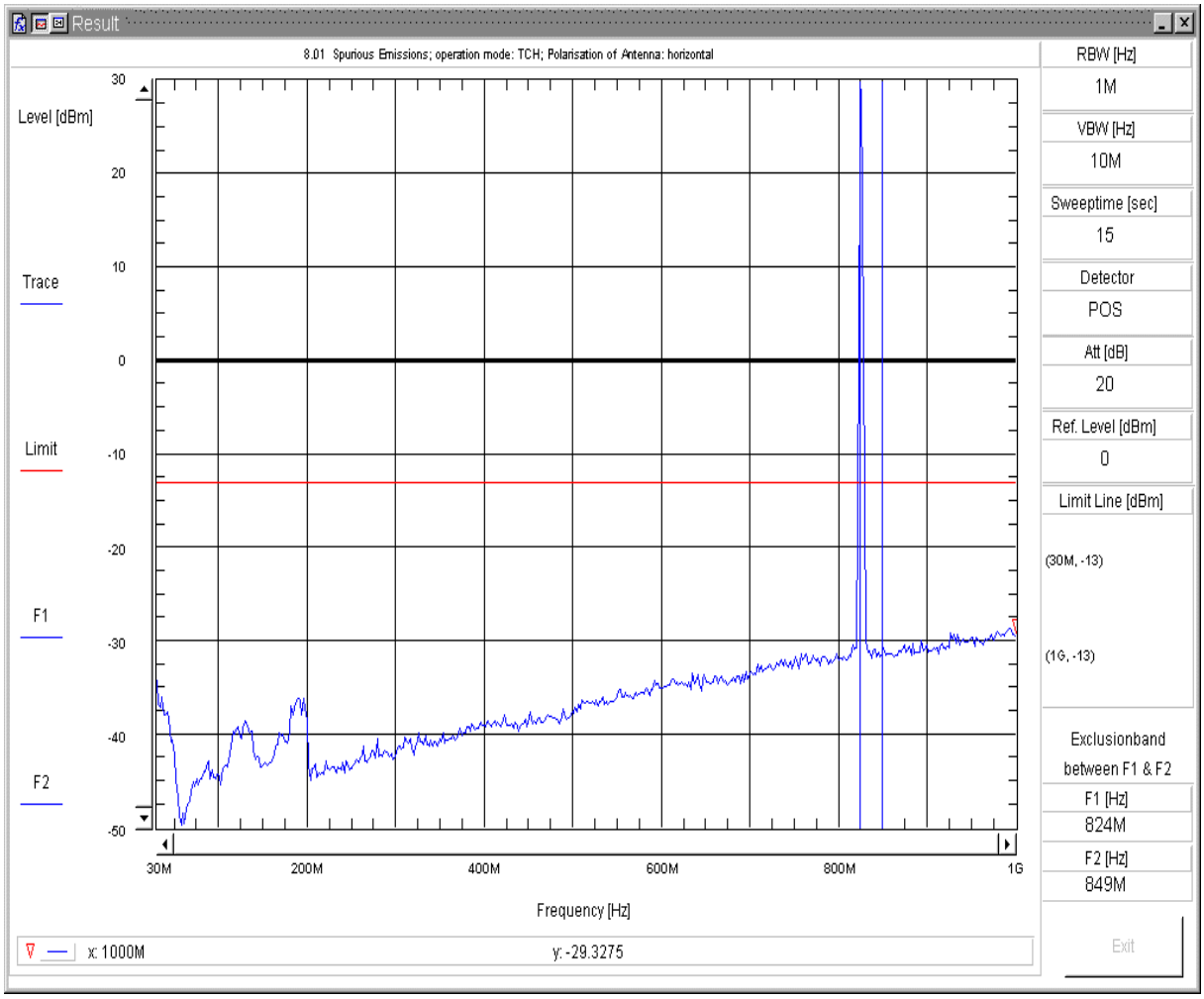
7.1.3. Legend

Note / remarks		Calibrated during system calibration:
	1a	System CTC-SAR-EMS (Ref.-No. 442)
	1b	System-CTC-EMS-Conducted (Ref.-No. 335)
	1c	System CTC-FAR-EMI-RSE (Ref.-No . 443)
	1d	System CTC-SAR-EMI (Ref.-No . 441)
	1e	System CTC-OATS (EMI radiated) (Ref.-No. 337)
	1 f	System CTC-CTIA-OTA (Ref.-No . 420)
	1 g	System CTC-FAR-EMS (Ref.-No . 444)
	2	Calibration or equipment check immediately before measurement
	3	Regulatory maintained equipment for functional check or support purpose
	4	Ancillary equipment without calibration e.g. mechanical equipment or monitoring equipment
	5	Test System

Interval of calibration	12 M	12 month
	24 M	24 month
	36 M	36 month
	24/12 M	Calibration every 24 months, between this every 12 months internal validation
	36/12 M	Calibration every 36 months, between this every 12 months internal validation
	Pre-m	Check before starting the measurement
	-	Without calibration

8. Diagrams - Radiated spurious (out-of-band emissions & band-edges emissions)

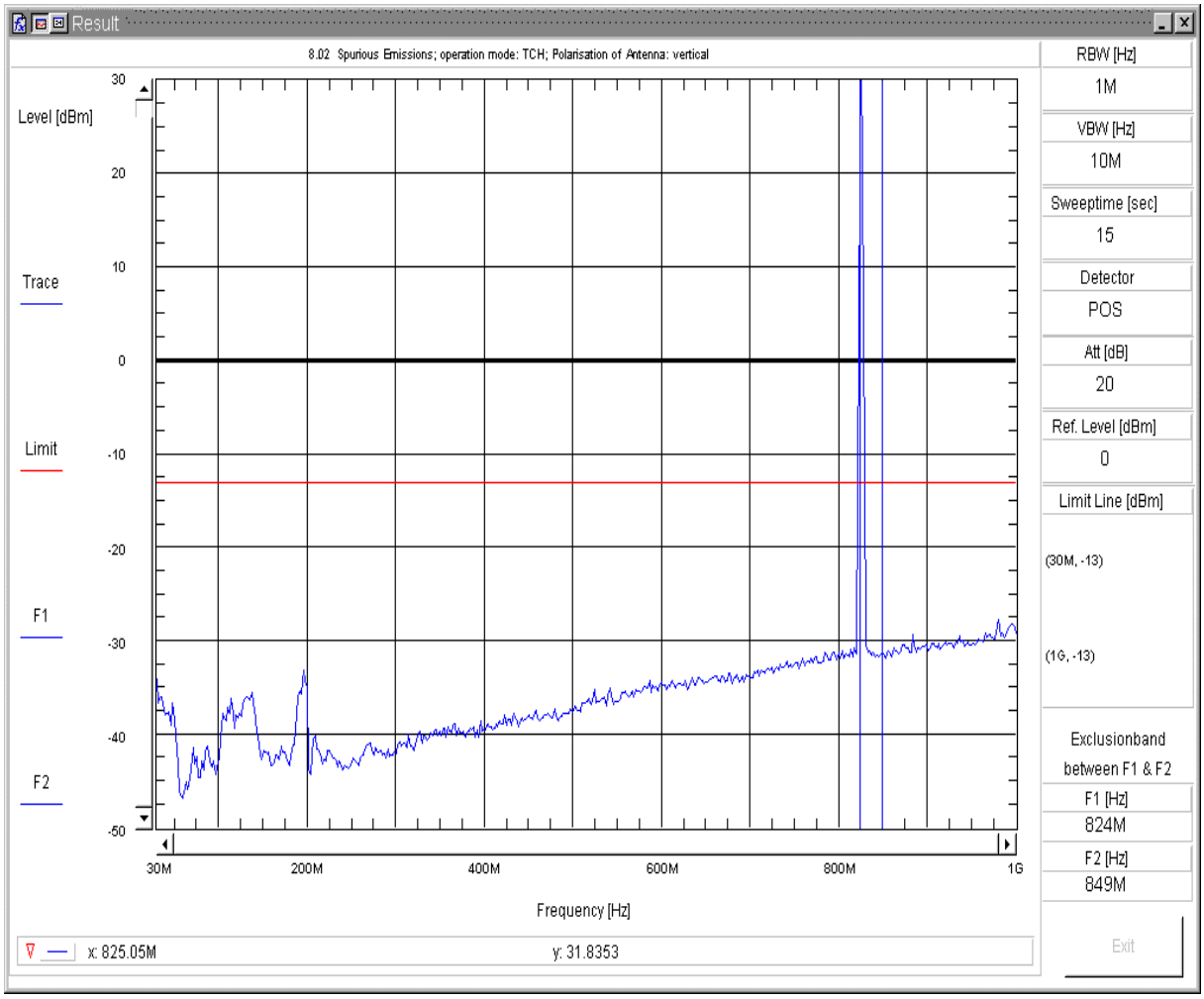
8.1. GSM850 band



8.01 Radiated Spurious Emission

Transducer: c:\vee_user\spuri_V7\FCC_Part_22.917_(GSM_850)\TD_TX_H
Sweepnr: Sweep1
Pol. of Antenna: horizontal
EUT Position: EUT_vertical+horizontal
EUT OP Mode: FCC_Part_22.917_(GSM_850) TCH
EUT Description: Globesurfer III Wireless Router
EUT add. Info:
EUT Hardware:
EUT Software:
EUT Config:
EUT S/N: IMEI:004401441414485
Battery: AC/DC Charger; Nominal Voltage; 110V VAC/ 60Hz
Remark: Channel 1 GSM850; WLAN-on bMode 2MBit Ch1; Telephone analog active+ping active over LAN
Operator: Lor
Testing Site: Fully Anechoic Room (FAR); CETECOM Essen

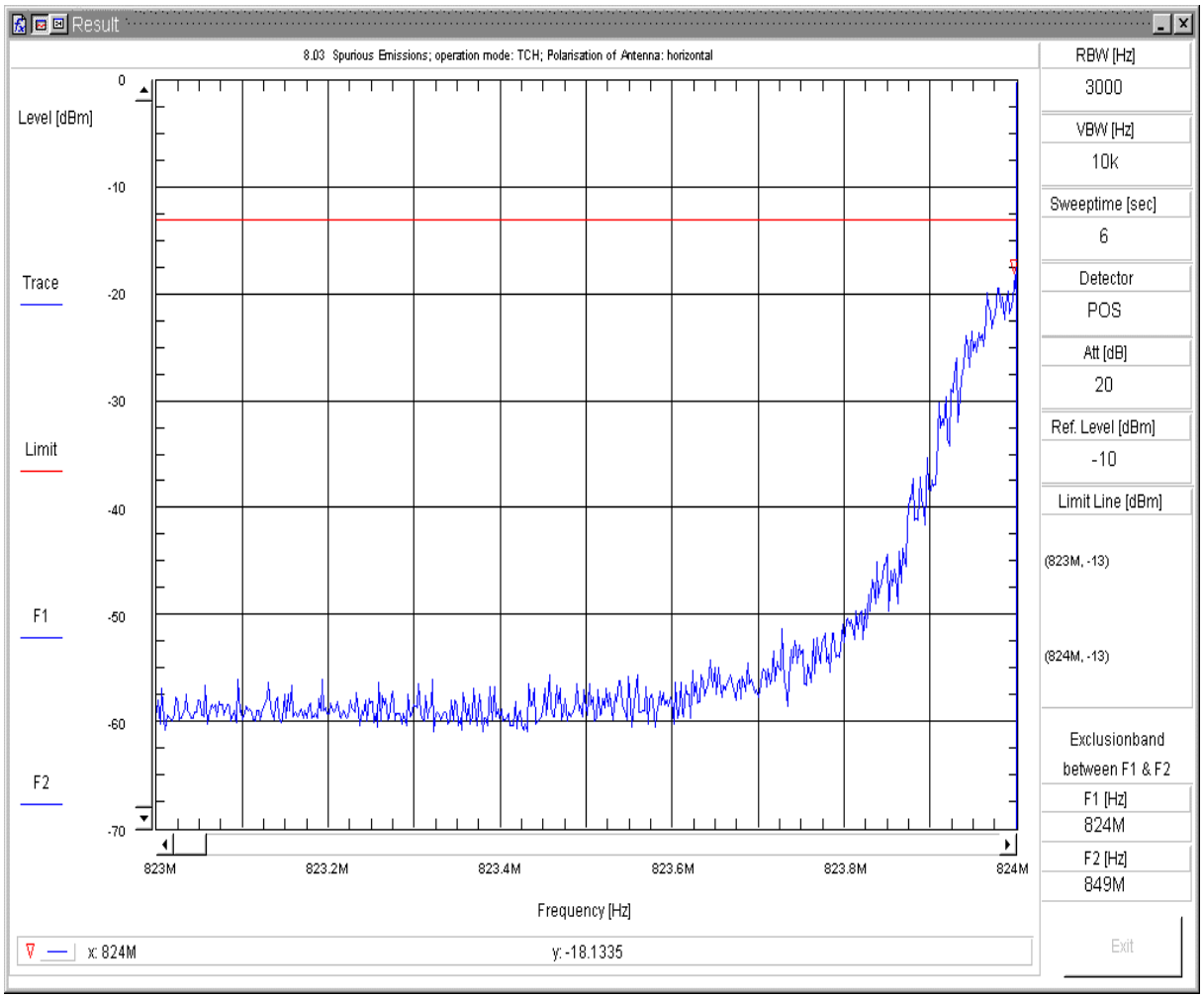
Tue 03/May/2011 10:14:01pff Spurious Emissions V7.2.5



8.02 Radiated Spurious Emission

Transducer: c:\vee_user\spuri_V7\FCC_Part_22.917_(GSM_850)\TD_TX_V
Sweepnr: Sweep1
Pol. of Antenna: vertikal
EUT Position: EUT_vertical+horizontal
EUT OP Mode: FCC_Part_22.917_(GSM_850) TCH
EUT Description: Globesurfer III Wireless Router
EUT add. Info:
EUT Hardware:
EUT Software:
EUT Config:
EUT S/N: IMEI:004401441414485
Battery: AC/DC Charger; Nominal Voltage; 110V VAC/ 60Hz
Remark: Channel 1 GSM850; WLAN-on bMode 2MBit Ch1; Telephone analog active; ping active over LAN
Operator: Lor
Testing Site: Fully Anechoic Room (FAR); CETECOM Essen

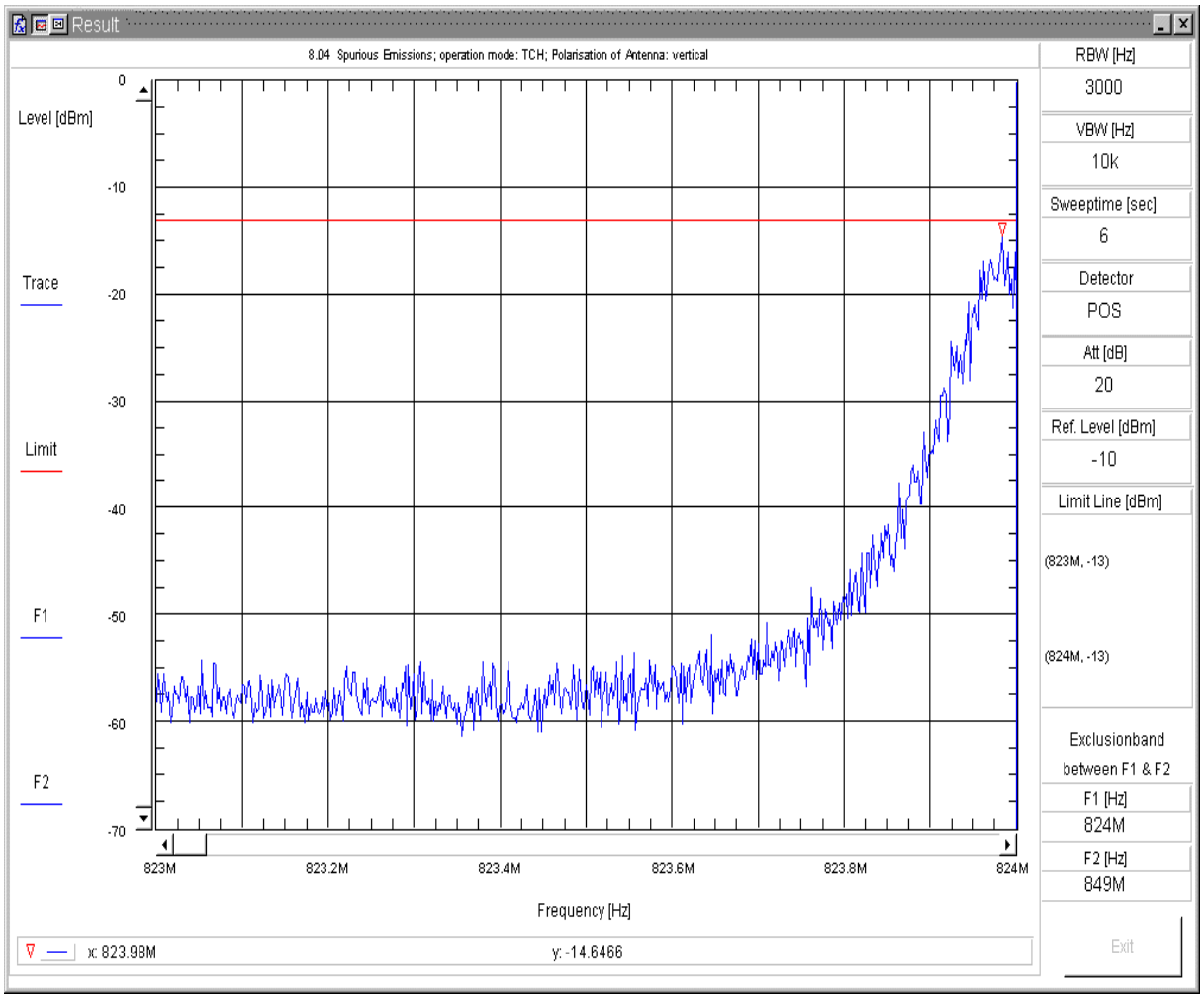
Tue 03/May/2011 10:20:51ppf Spurious Emissions V7.2.5



8.03 Radiated Spurious Emission

Transducer: c:\vee_user\spuri_V7\FCC_Part_22.917_(GSM_850)\TD_TX_H
Sweepnr: Sweep2
Pol. of Antenna: horizontal
EUT Position: EUT_vertical+horizontal
EUT OP Mode: FCC_Part_22.917_(GSM_850) TCH
EUT Description: Globesurfer III Wireless Router
EUT add. Info:
EUT Hardware:
EUT Software:
EUT Config:
EUT S/N: IMEI:004401441414485
Battery: AC/DC Charger; Nominal Voltage; 110V VAC/ 60Hz
Remark: Channel 1 GSM850; WLAN-on bMode 2MBit Ch1; Telephone analog active +ping active on LAN
Operator: Lor
Testing Site: Fully Anechoic Room (FAR); CETECOM Essen

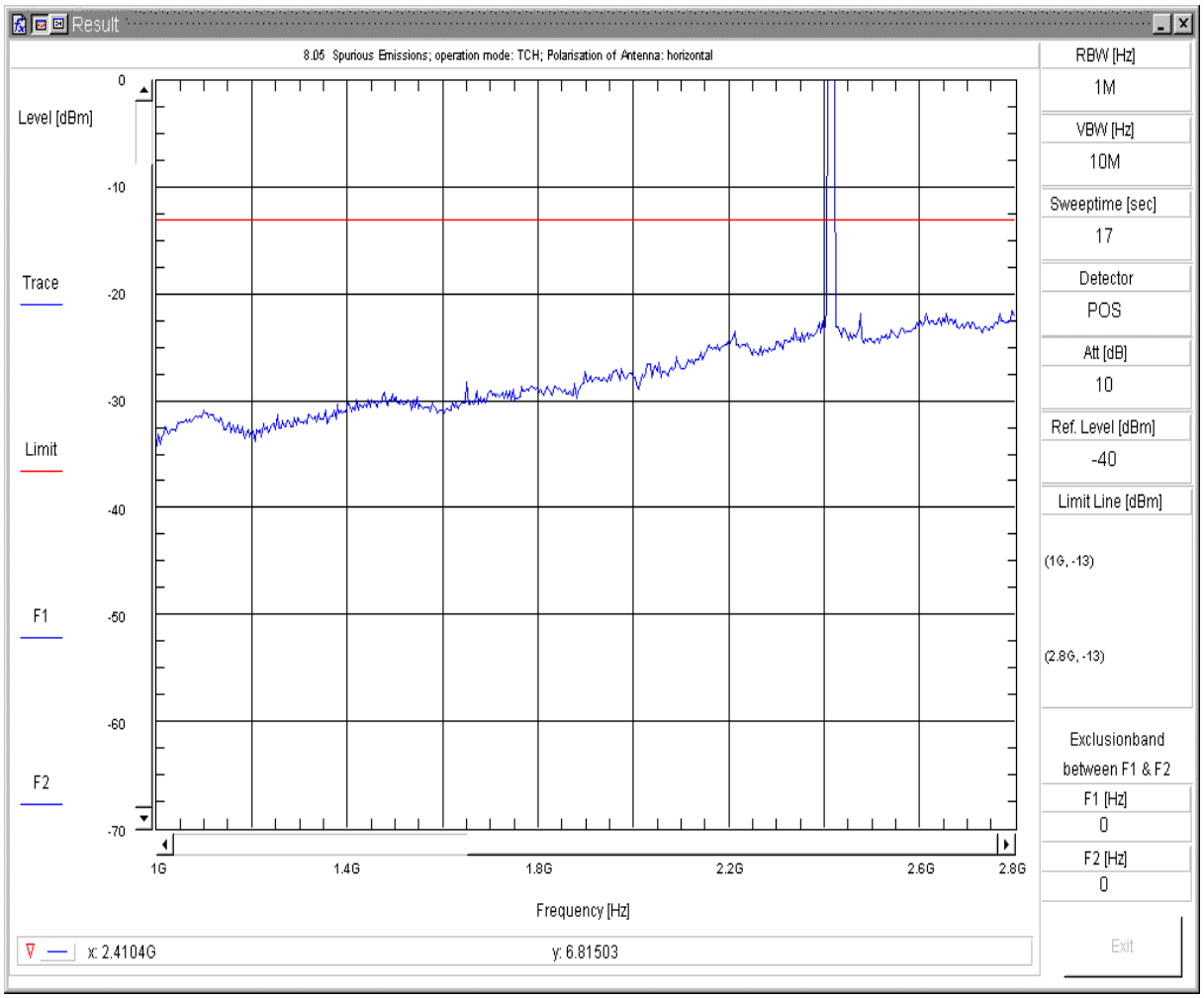
Tue 03/May/2011 10:25:39ppf Spurious Emissions V7.2.5



8.04 Radiated Spurious Emission

Transducer: c:\vee_user\spuri_V7\FCC_Part_22.917_(GSM_850)\TD_TX_V
Sweepnr: Sweep2
Pol. of Antenna: vertikal
EUT Position: EUT_vertical+horizontal
EUT OP Mode: FCC_Part_22.917_(GSM_850) TCH
EUT Description: Globesurfer III Wireless Router
EUT add. Info:
EUT Hardware:
EUT Software:
EUT Config:
EUT S/N: IMEI:004401441414485
Battery: AC/DC Charger; Nominal Voltage; 110V VAC/ 60Hz
Remark: hannel 1 GSM850; WLAN-on bMode 2MBit Ch1; Telephone analog active +ping active on LAN
Operator: Lor
Testing Site: Fully Anechoic Room (FAR); CETECOM Essen

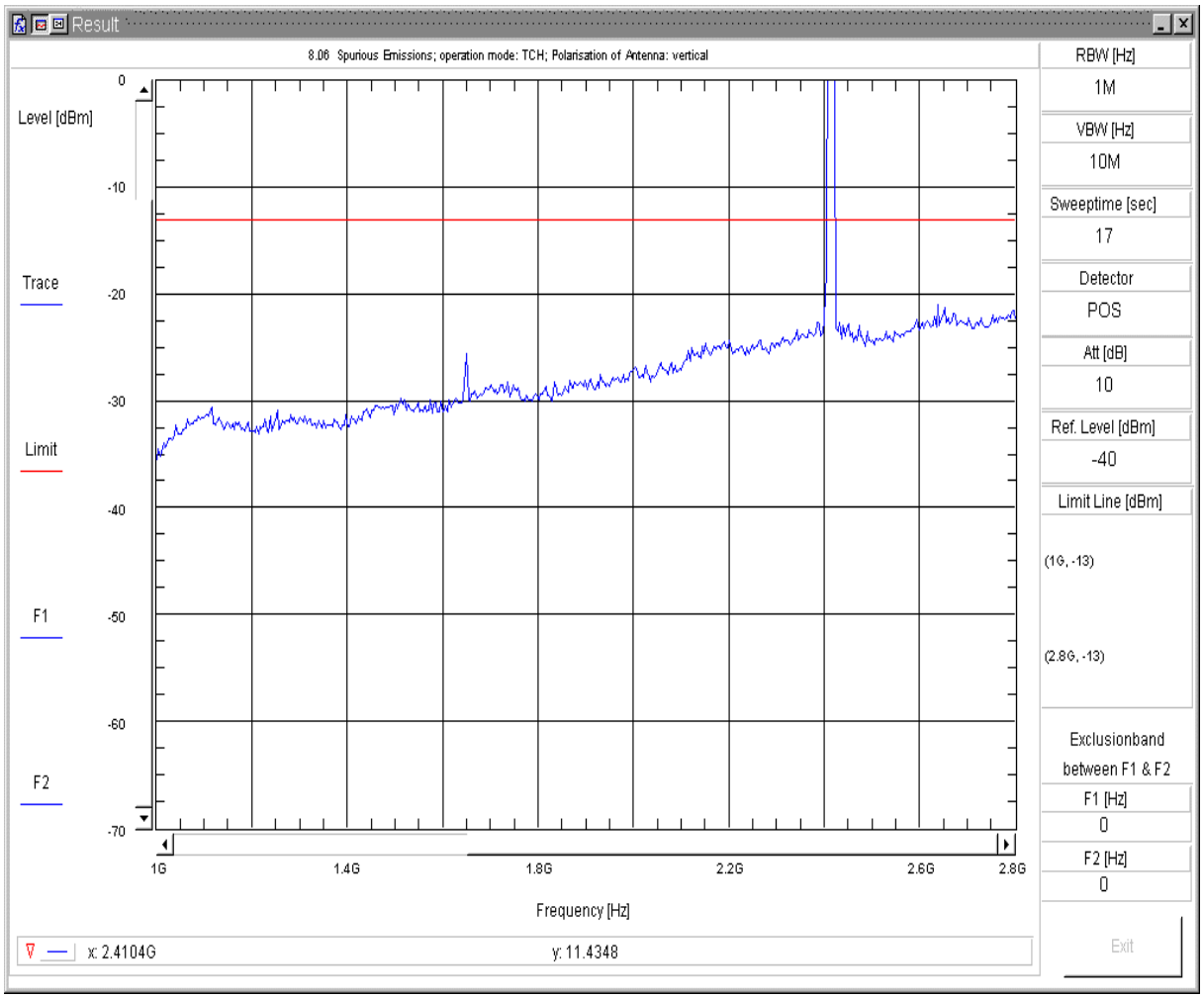
Tue 03/May/2011 10:28:46ppf Spurious Emissions V7.2.5



8.05 Radiated Spurious Emission

Transducer: c:\vee_user\spuri_V7\FCC_Part_22.917_(GSM_850)\TD_TX_H
Sweepnr: Sweep4
Pol. of Antenna: horizontal
EUT Position: EUT_vertical+horizontal
EUT OP Mode: FCC_Part_22.917_(GSM_850) TCH
EUT Description: Globesurfer III Wireless Router
EUT add. Info:
EUT Hardware:
EUT Software:
EUT Config:
EUT S/N: IMEI:004401441414485
Battery: AC/DC Charger; Nominal Voltage; 110V VAC/ 60Hz
Remark: hannel 1 GSM850; WLAN-on bMode 2MBit Ch1; Telephone analog active +ping active on LAN
Remark 2: WLAN Carrier Ch. 1 on 2413MHz on diagram
Operator: Lor
Testing Site: Fully Anechoic Room (FAR); CETECOM Essen

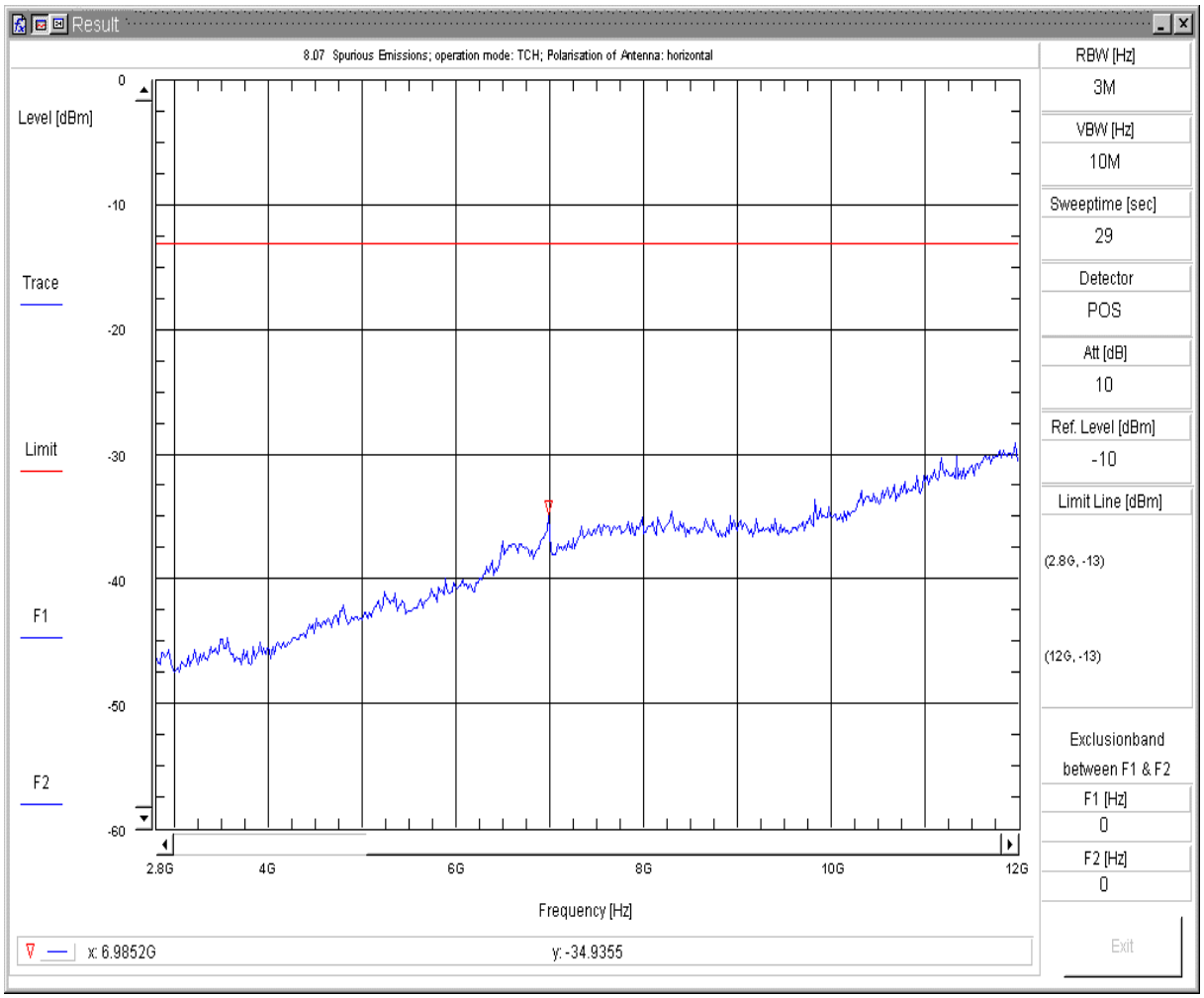
Tue 03/May/2011 10:32:55fp Spurious Emissions V7.2.5



8.06 Radiated Spurious Emission

Transducer: c:\vee_user\spuri_V7\FCC_Part_22.917_(GSM_850)\TD_TX_V
Sweepnr: Sweep4
Pol. of Antenna: vertikal
EUT Position: EUT_vertical+horizontal
EUT OP Mode: FCC_Part_22.917_(GSM_850) TCH
EUT Description: Globesurfer III Wireless Router
EUT add. Info:
EUT Hardware:
EUT Software:
EUT Config:
EUT S/N: IMEI:004401441414485
Battery: AC/DC Charger; Nominal Voltage; 110V VAC/ 60Hz
Remark: hannel 1 GSM850; WLAN-on bMode 2MBit Ch1; Telephone analog active +ping active on LAN
Remark 2: WLAN Carrier Ch.1 on 2413MHz on diagram !
Operator: Lor
Testing Site: Fully Anechoic Room (FAR); CETECOM Essen

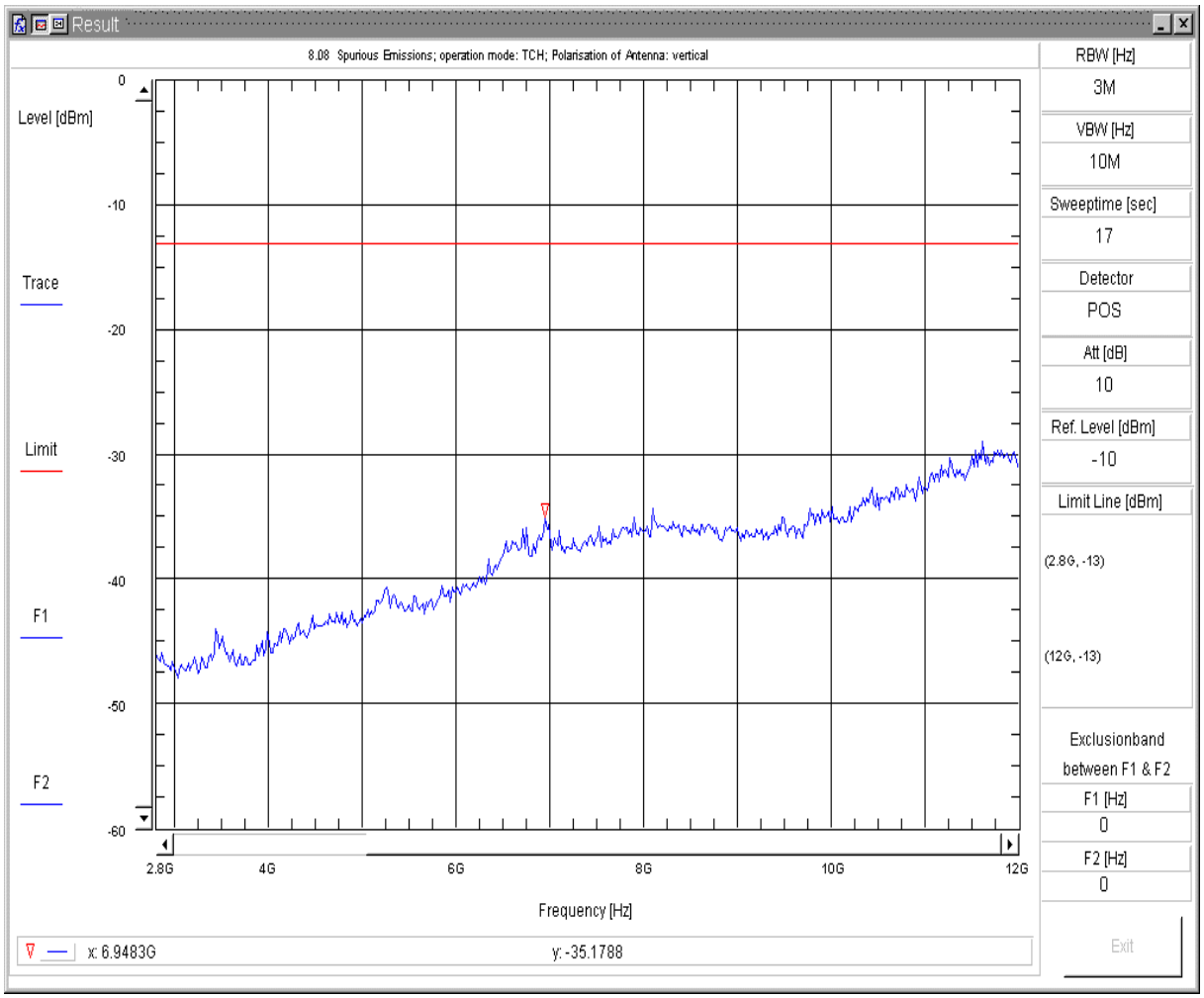
Tue 03/May/2011 10:58:06pp Spurious Emissions V7.2.5



8.07 Radiated Spurious Emission

Transducer: c:\vee_user\spuri_V7\FCC_Part_22.917_(GSM_850)\TD_TX_H
Sweepnr: Sweep5
Pol. of Antenna: horizontal
EUT Position: EUT_vertical+horizontal
EUT OP Mode: FCC_Part_22.917_(GSM_850) TCH
EUT Description: Globesurfer III Wireless Router
EUT add. Info:
EUT Hardware:
EUT Software:
EUT Config:
EUT S/N: IMEI:004401441414485
Battery: AC/DC Charger; Nominal Voltage; 110V VAC/ 60Hz
Remark: hannel 1 GSM850; WLAN-on bMode 2MBit Ch1; Telephone analog active +ping active on LAN
Operator: Lor
Testing Site: Fully Anechoic Room (FAR); CETECOM Essen

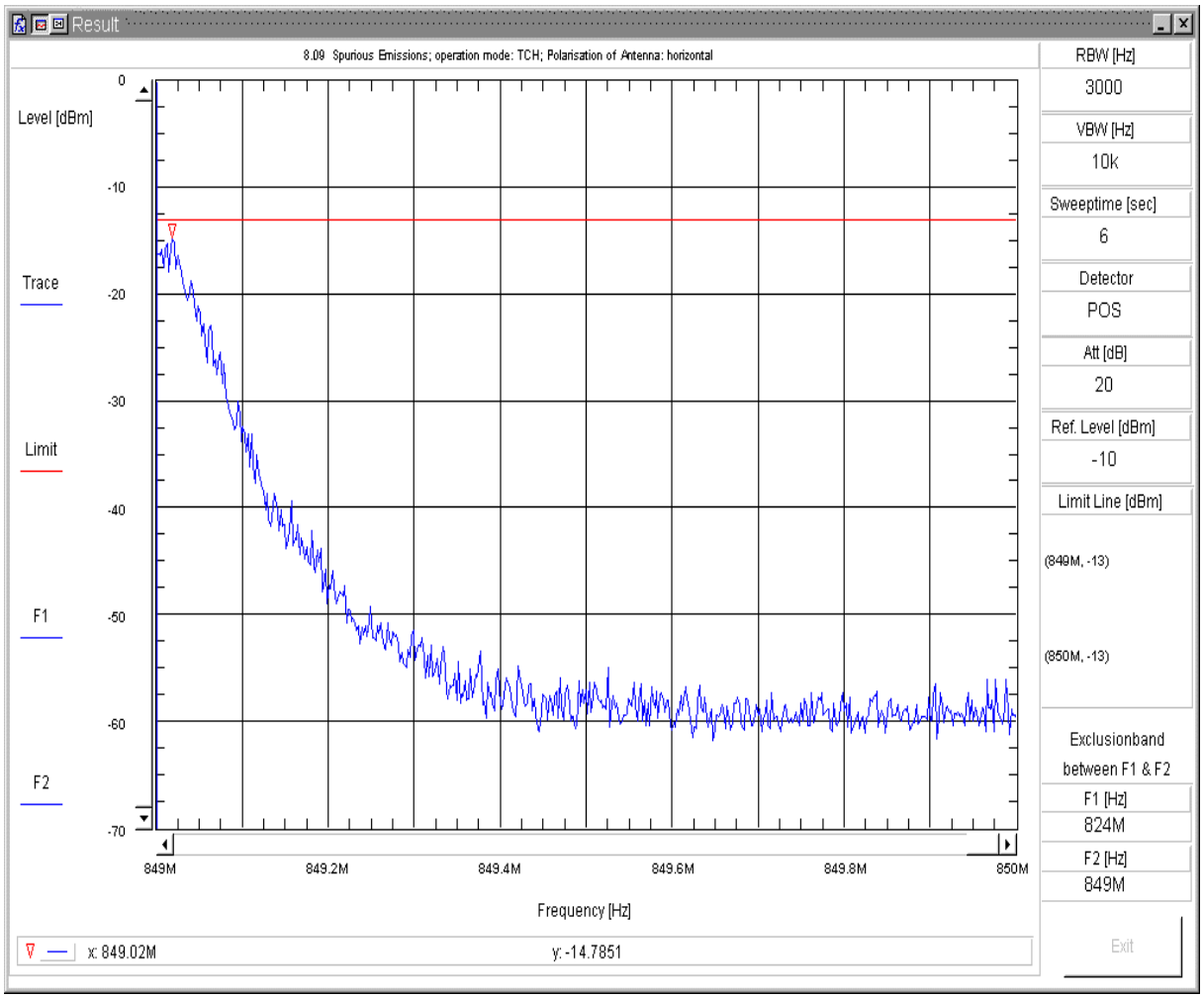
Tue 03/May/2011 10:39:56pf Spurious Emissions V7.2.5



8.08 Radiated Spurious Emission

Transducer: c:\vee_user\spuri_V7\FCC_Part_22.917_(GSM_850)\TD_TX_V
Sweepnr: Sweep5
Pol. of Antenna: vertikal
EUT Position: EUT_vertical+horizontal
EUT OP Mode: FCC_Part_22.917_(GSM_850) TCH
EUT Description: Globesurfer III Wireless Router
EUT add. Info:
EUT Hardware:
EUT Software:
EUT Config:
EUT S/N: IMEI:004401441414485
Battery: AC/DC Charger; Nominal Voltage; 110V VAC/ 60Hz
Remark: Channel 1 GSM850; WLAN-on bMode 2MBit Ch1; Telephone analog active +ping active on LAN
Operator: Lor
Testing Site: Fully Anechoic Room (FAR); CETECOM Essen

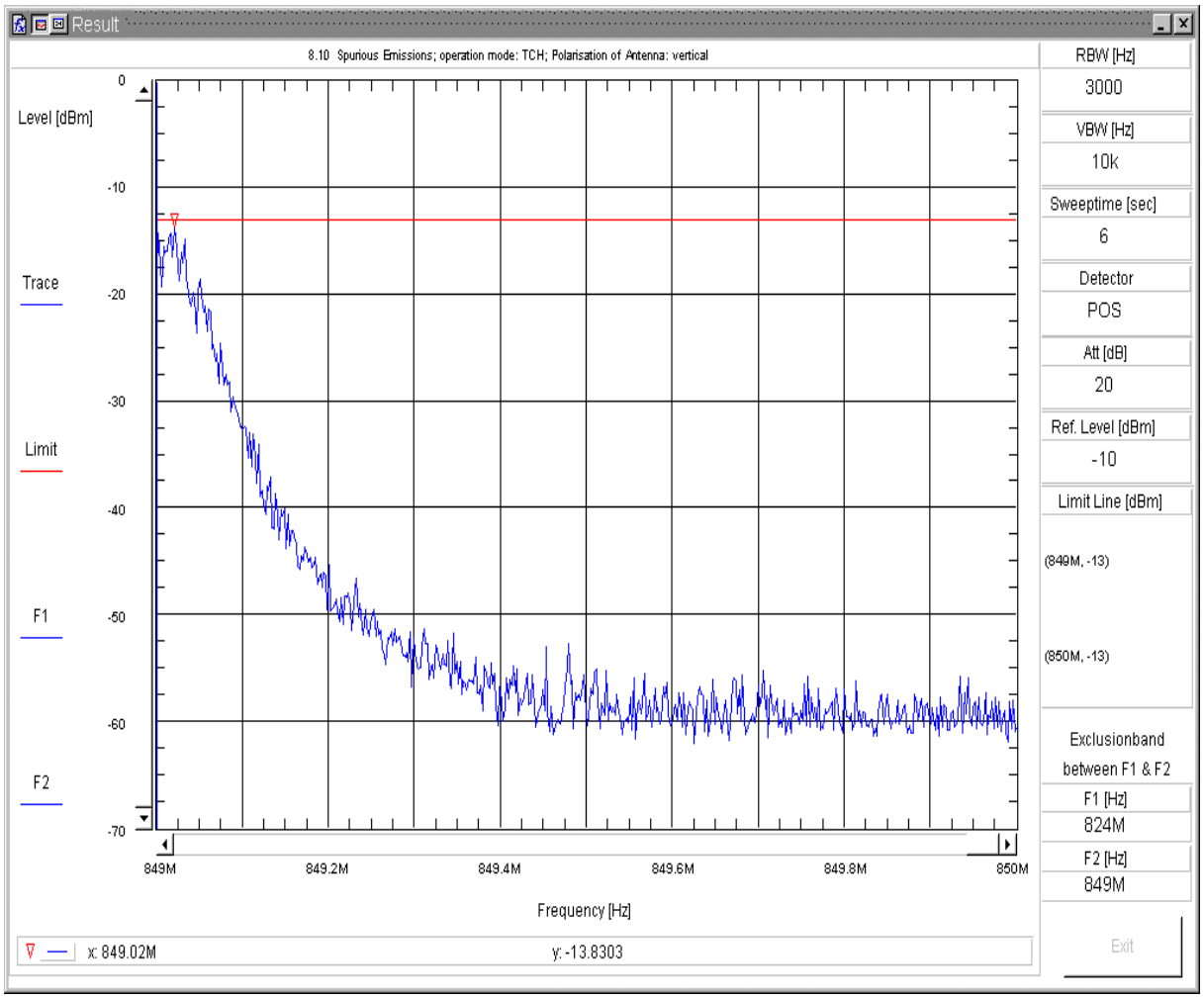
Tue 03/May/2011 10:50:39ff Spurious Emissions V7.2.5



8.09 Radiated Spurious Emission

Transducer: c:\vee_user\spuri_V7\FCC_Part_22.917_(GSM_850)\TD_TX_H
Sweepnr: Sweep3
Pol. of Antenna: horizontal
EUT Position: EUT_vertical+horizontal
EUT OP Mode: FCC_Part_22.917_(GSM_850) TCH
EUT Description: Globesurfer III Wireless Router
EUT add. Info:
EUT Hardware:
EUT Software:
EUT Config:
EUT S/N: IMEI:004401441414485
Battery: AC/DC Charger; Nominal Voltage; 110V VAC/ 60Hz
Remark: hannel 1 GSM850; WLAN-on bMode 2MBit Ch1; Telephone analog active +ping active on LAN
Operator: Lor
Testing Site: Fully Anechoic Room (FAR); CETECOM Essen

Tue 03/May/2011 11:06:41ppf Spurious Emissions V7.2.5

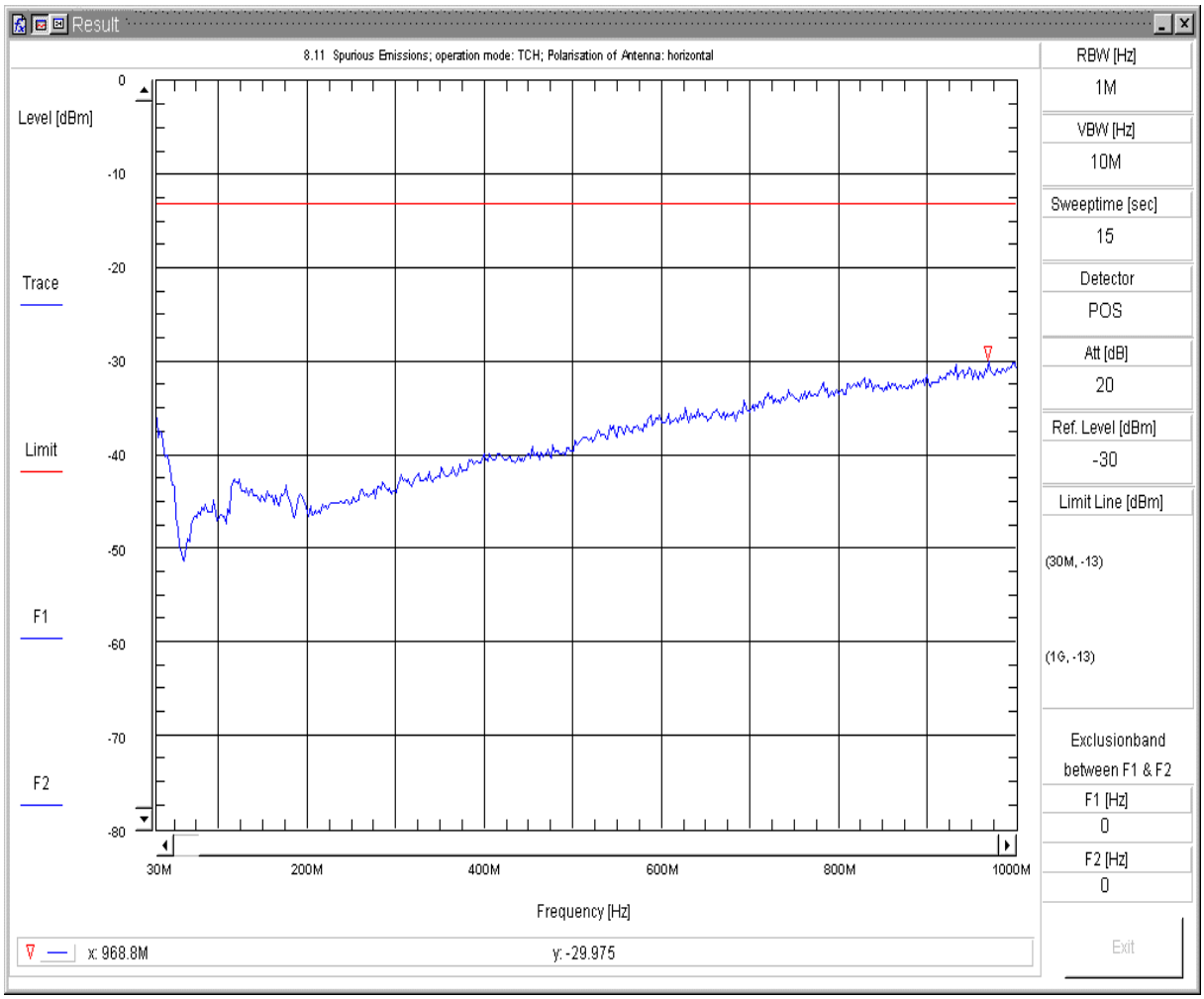


8.10 Radiated Spurious Emission

Transducer: c:\vee_user\spuri_V7\FCC_Part_22.917_(GSM_850)\TD_TX_V
Sweepnr: Sweep3
Pol. of Antenna: vertikal
EUT Position: EUT_vertical+horizontal
EUT OP Mode: FCC_Part_22.917_(GSM_850) TCH
EUT Description: Globesurfer III Wireless Router
EUT add. Info:
EUT Hardware:
EUT Software:
EUT Config:
EUT S/N: IMEI:004401441414485
Battery: AC/DC Charger; Nominal Voltage; 110V VAC/ 60Hz
Remark: hannel 1 GSM850; WLAN-on bMode 2MBit Ch1; Telephone analog active +ping active on LAN
Operator: Lor
Testing Site: Fully Anechoic Room (FAR); CETECOM Essen

Tue 03/May/2011 11:09:42ppf Spurious Emissions V7.2.5

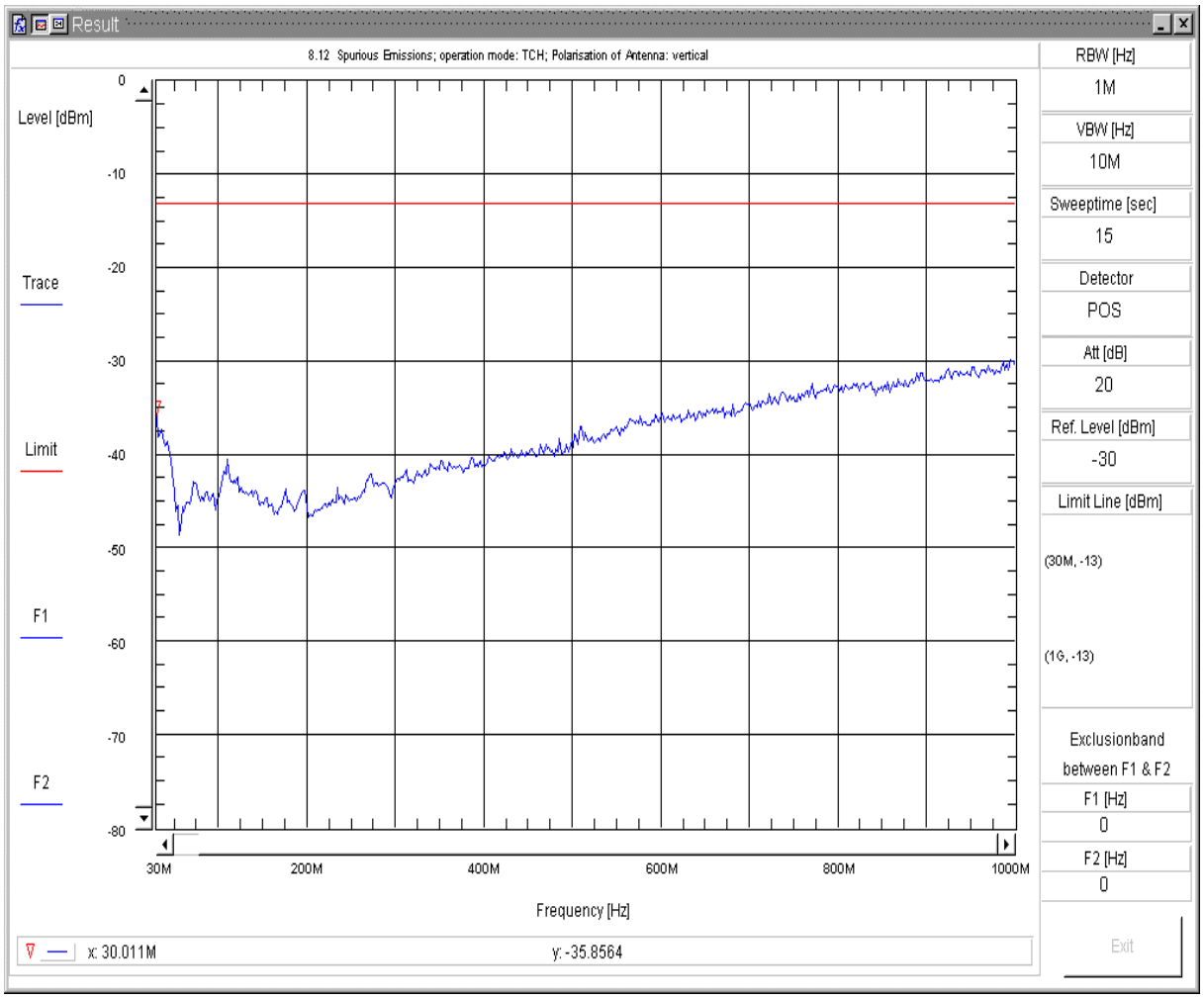
8.2. GSM1900 band



8.11 Radiated Spurious Emission

Transducer: c:\vee_user\spuri_V7\FCC_Part_24.238_(GSM_1900)\TD_TX_H
Sweepnr: Sweep1
Pol. of Antenna: horizontal
EUT Position: EUT_vertical+horizontal
EUT OP Mode: FCC_Part_24.238_(GSM_1900) TCH
EUT Description: Globesurfer 3.5 Wireless Router
EUT add. Info: +Phihong Power Supply + External analogue Telephone/FAX
EUT Hardware:
EUT Software:
EUT Config:
EUT S/N: IMEI:004401441414485
Battery: AC/DC Charger; Nominal Voltage; 110V VAC/ 60Hz
Remark: Ch. 661, WLAN Ch.1 2MBit, PSTN-line active, Ping to notebook over LAN
Operator: Lor
Testing Site: Fully Anechoic Room (FAR); CETECOM Essen

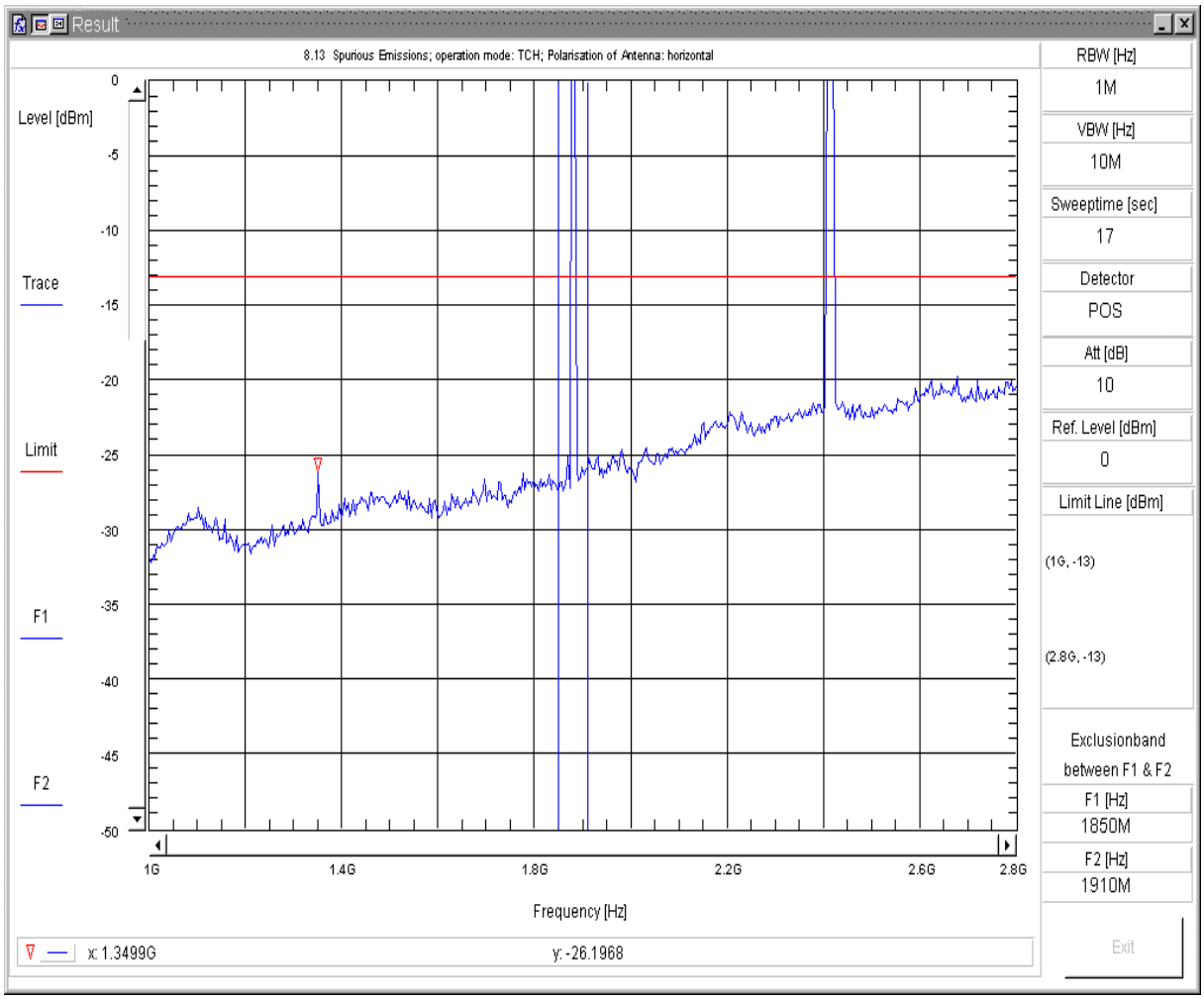
Tue 03/May/2011 11:54:22ppf Spurious Emissions V7.2.5



8.12 Radiated Spurious Emission

Transducer: c:\vee_user\spuri_V7\FCC_Part_24.238_(GSM_1900)\TD_TX_V
Sweepnr: Sweep1
Pol. of Antenna: vertikal
EUT Position: EUT_vertical+horizontal
EUT OP Mode: FCC_Part_24.238_(GSM_1900) TCH
EUT Description: Globesurfer 3.5 Wireless Router
EUT add. Info: +Phihong Power Supply + External analogue Telephone/FAX
EUT Hardware:
EUT Software:
EUT Config:
EUT S/N: IMEI:004401441414485
Battery: AC/DC Charger; Nominal Voltage; 110V VAC/ 60Hz
Remark: Ch. 661, WLAN Ch.1 2MBit, PSTN-line active, Ping to notebook over LAN
Operator: Lor
Testing Site: Fully Anechoic Room (FAR); CETECOM Essen

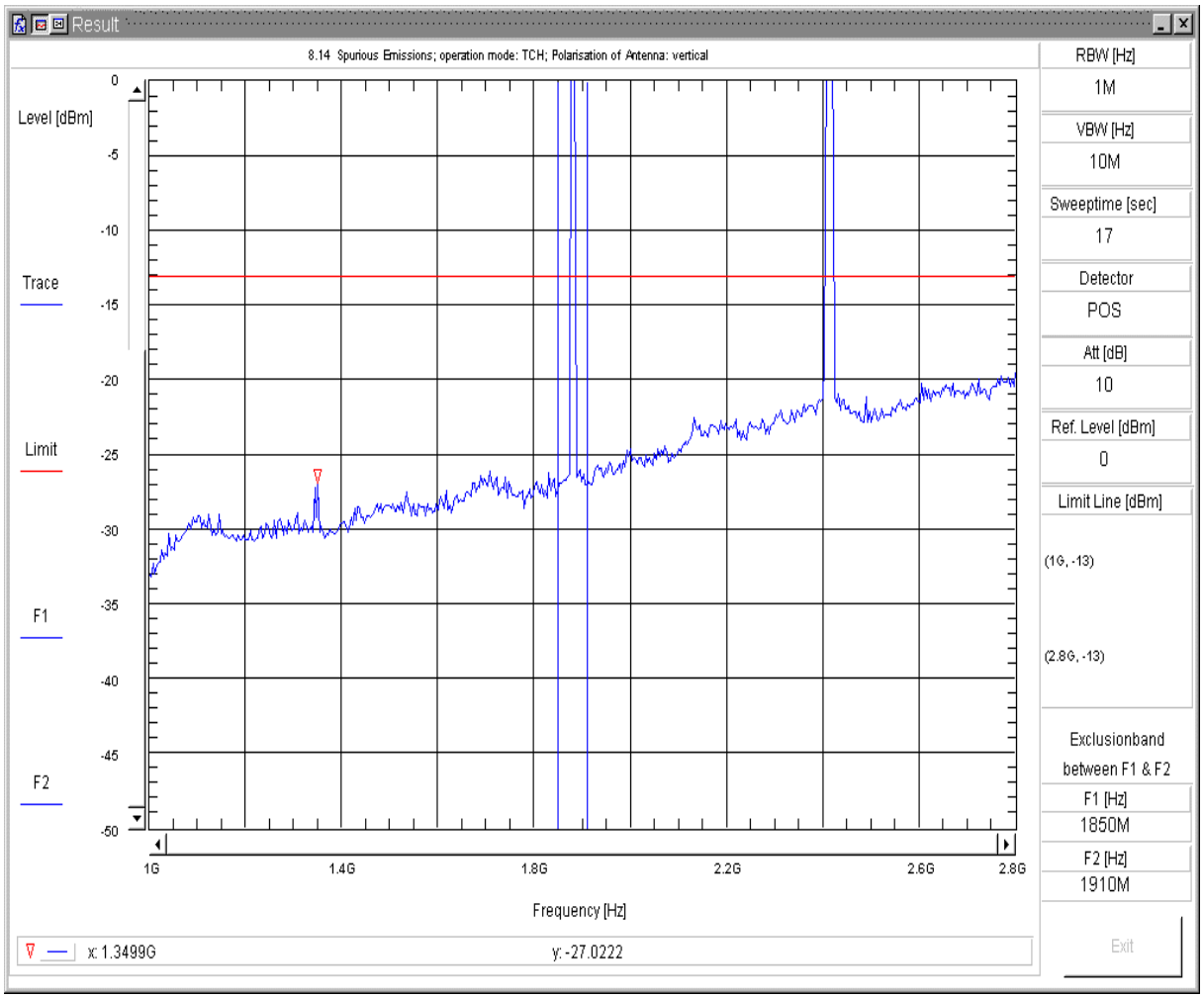
Tue 03/May/2011 12:54:54ppf Spurious Emissions V7.2.5



8.13 Radiated Spurious Emission

Transducer: c:\vee_user\spuri_V7\FCC_Part_24.238_(GSM_1900)\TD_TX_H
Sweepnr: Sweep2
Pol. of Antenna: horizontal
EUT Position: EUT_vertical+horizontal
EUT OP Mode: FCC_Part_24.238_(GSM_1900) TCH
EUT Description: Globesurfer 3.5 Wireless Router
EUT add. Info: +Phihong Power Supply + External analogue Telephone/FAX
EUT Hardware:
EUT Software:
EUT Config:
EUT S/N: IMEI:004401441414485
Battery: AC/DC Charger; Nominal Voltage; 110V VAC/ 60Hz
Remark: Ch. 661, WLAN Ch.1 2MBit, PSTN-line active, Ping to notebook over LAN
Operator: Lor
Testing Site: Fully Anechoic Room (FAR); CETECOM Essen

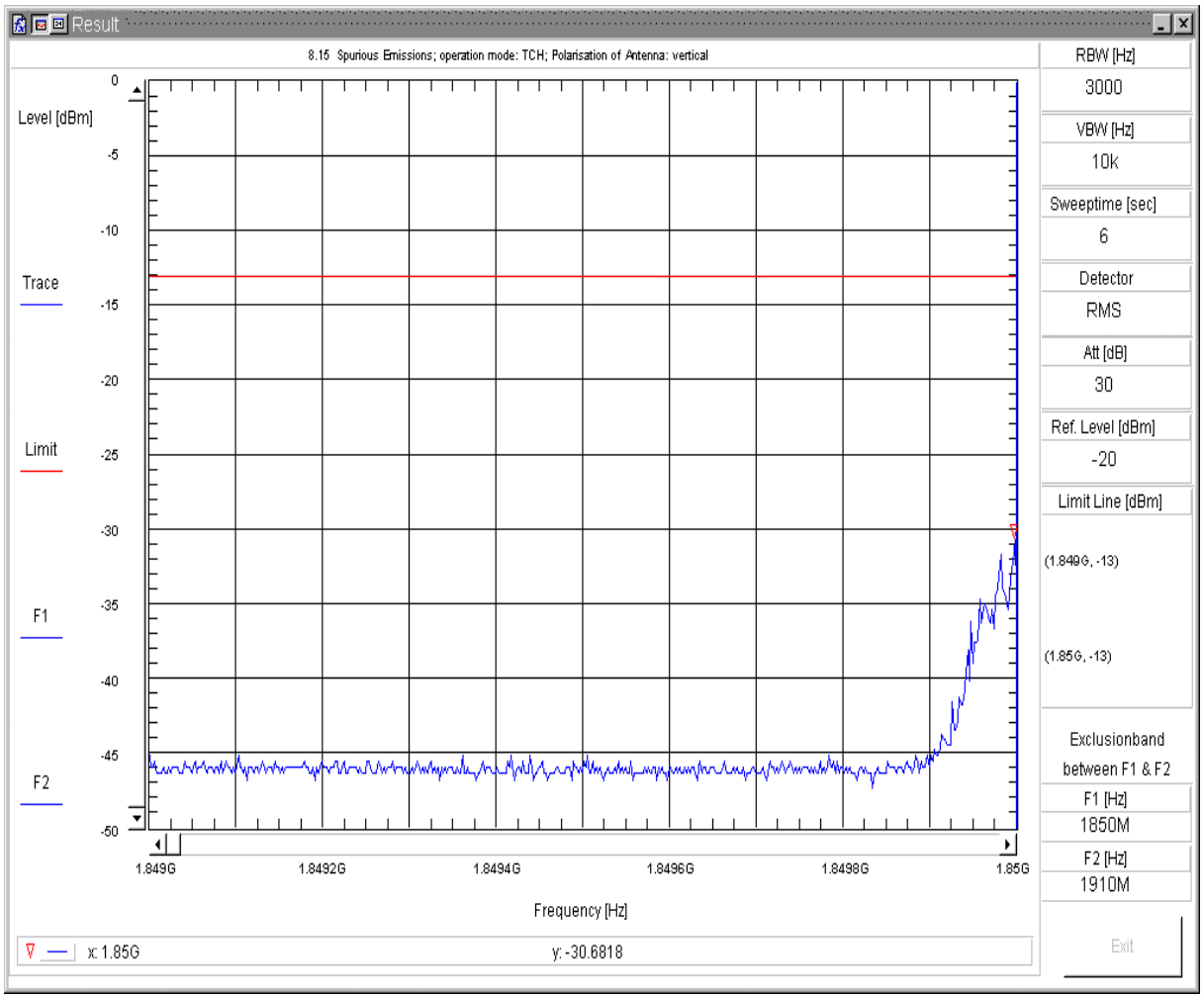
Tue 03/May/2011 12:59:12pp Spurious Emissions V7.2.5



8.14 Radiated Spurious Emission

Transducer: c:\vee_user\spuri_V7\FCC_Part_24.238_(GSM_1900)\TD_TX_V
Sweepnr: Sweep2
Pol. of Antenna: vertikal
EUT Position: EUT_vertical+horizontal
EUT OP Mode: FCC_Part_24.238_(GSM_1900) TCH
EUT Description: Globesurfer 3.5 Wireless Router
EUT add. Info: +Phihong Power Supply + External analogue Telephone/FAX
EUT Hardware:
EUT Software:
EUT Config:
EUT S/N: IMEI:004401441414485
Battery: AC/DC Charger; Nominal Voltage; 110V VAC/ 60Hz
Remark: Ch. 661, WLAN Ch.1 2MBit, PSTN-line active, Ping to notebook over LAN
Operator: Lor
Testing Site: Fully Anechoic Room (FAR); CETECOM Essen

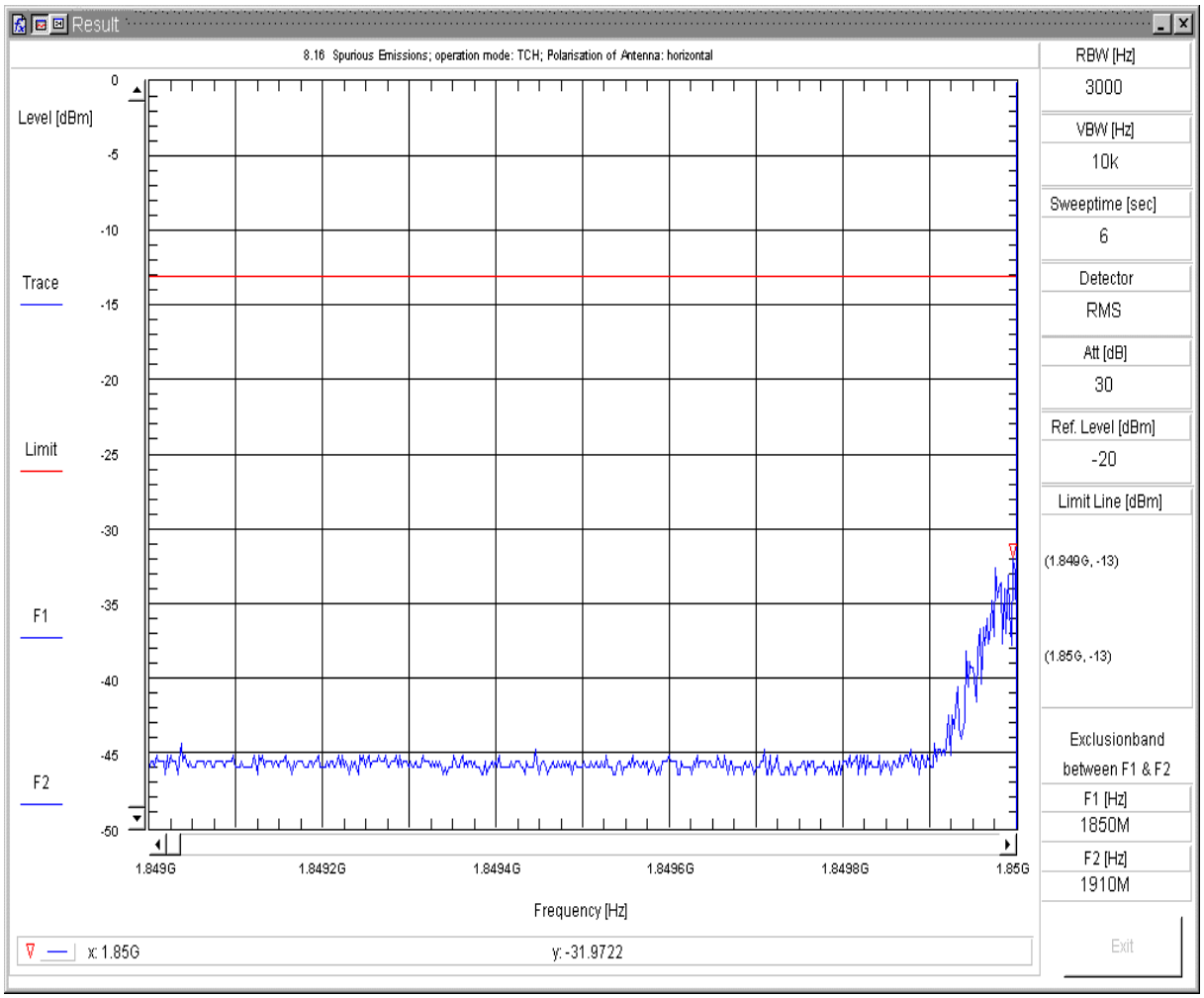
Tue 03/May/2011 13:07:36pp Spurious Emissions V7.2.5



8.15 Radiated Spurious Emission

Transducer: c:\vee_user\spuri_V7\FCC_Part_24.238_(GSM_1900)\TD_TX_V
Sweepnr: Sweep3
Pol. of Antenna: vertikal
EUT Position: EUT_vertical+horizontal
EUT OP Mode: FCC_Part_24.238_(GSM_1900) TCH
EUT Description: Globesurfer 3.5 Wireless Router
EUT add. Info: +Phihong Power Supply + External analogue Telephone/FAX
EUT Hardware:
EUT Software:
EUT Config:
EUT S/N: IMEI:004401441414485
Battery: AC/DC Charger; Nominal Voltage; 110V VAC/ 60Hz
Remark: Ch. 661, WLAN Ch.1 2MBit, PSTN-line active, Ping to notebook over LAN
Operator: Lor
Testing Site: Fully Anechoic Room (FAR); CETECOM Essen

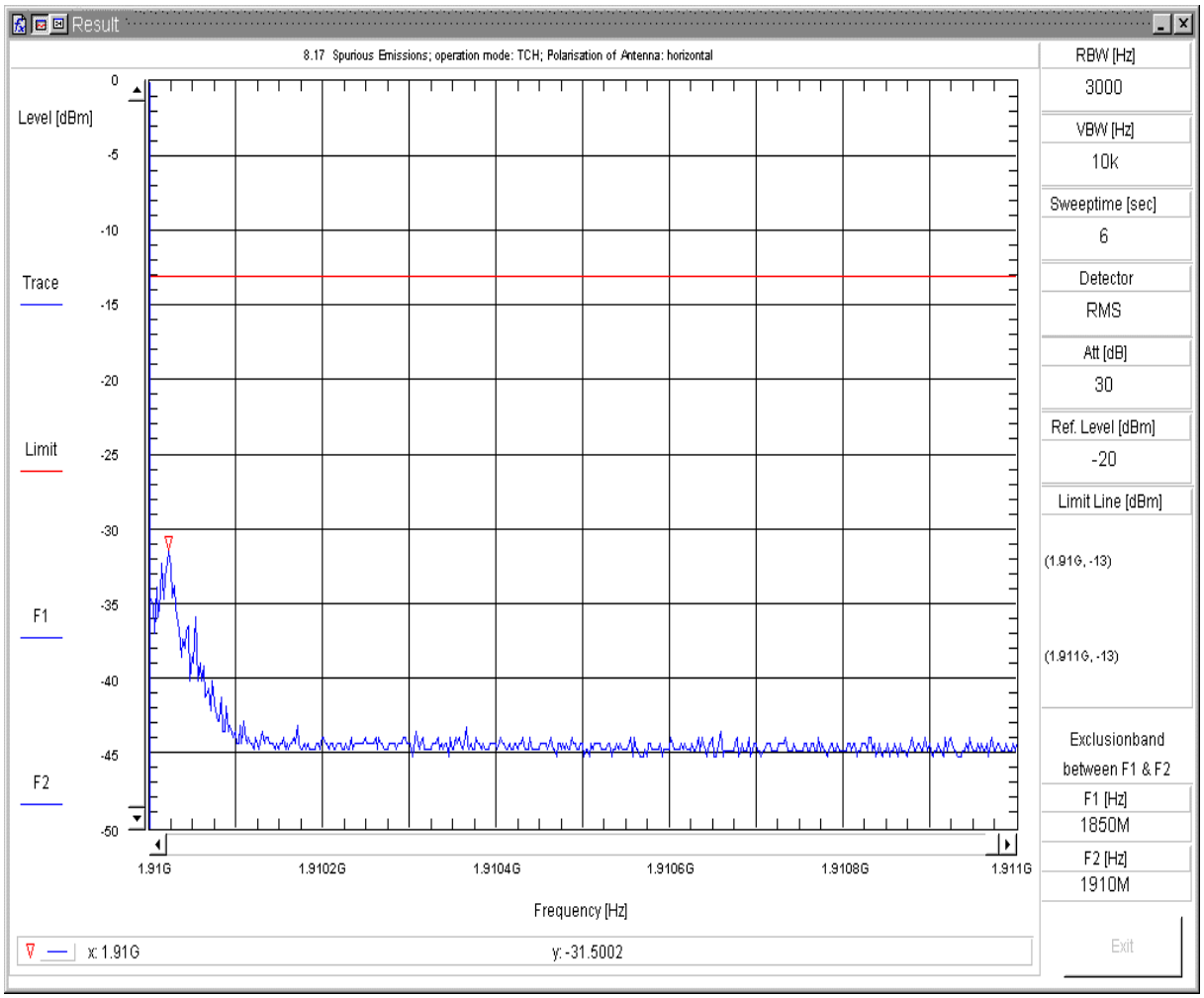
Tue 03/May/2011 13:14:32pp Spurious Emissions V7.2.5



8.16 Radiated Spurious Emission

Transducer: c:\vee_user\spuri_V7\FCC_Part_24.238_(GSM_1900)\TD_TX_H
Sweepnr: Sweep3
Pol. of Antenna: horizontal
EUT Position: EUT_vertical+horizontal
EUT OP Mode: FCC_Part_24.238_(GSM_1900) TCH
EUT Description: Globesurfer 3.5 Wireless Router
EUT add. Info: +Phihong Power Supply + External analogue Telephone/FAX
EUT Hardware:
EUT Software:
EUT Config:
EUT S/N: IMEI:004401441414485
Battery: AC/DC Charger; Nominal Voltage; 110V VAC/ 60Hz
Remark: Ch. 661, WLAN Ch.1 2MBit, PSTN-line active, Ping to notebook over LAN
Operator: Lor
Testing Site: Fully Anechoic Room (FAR); CETECOM Essen

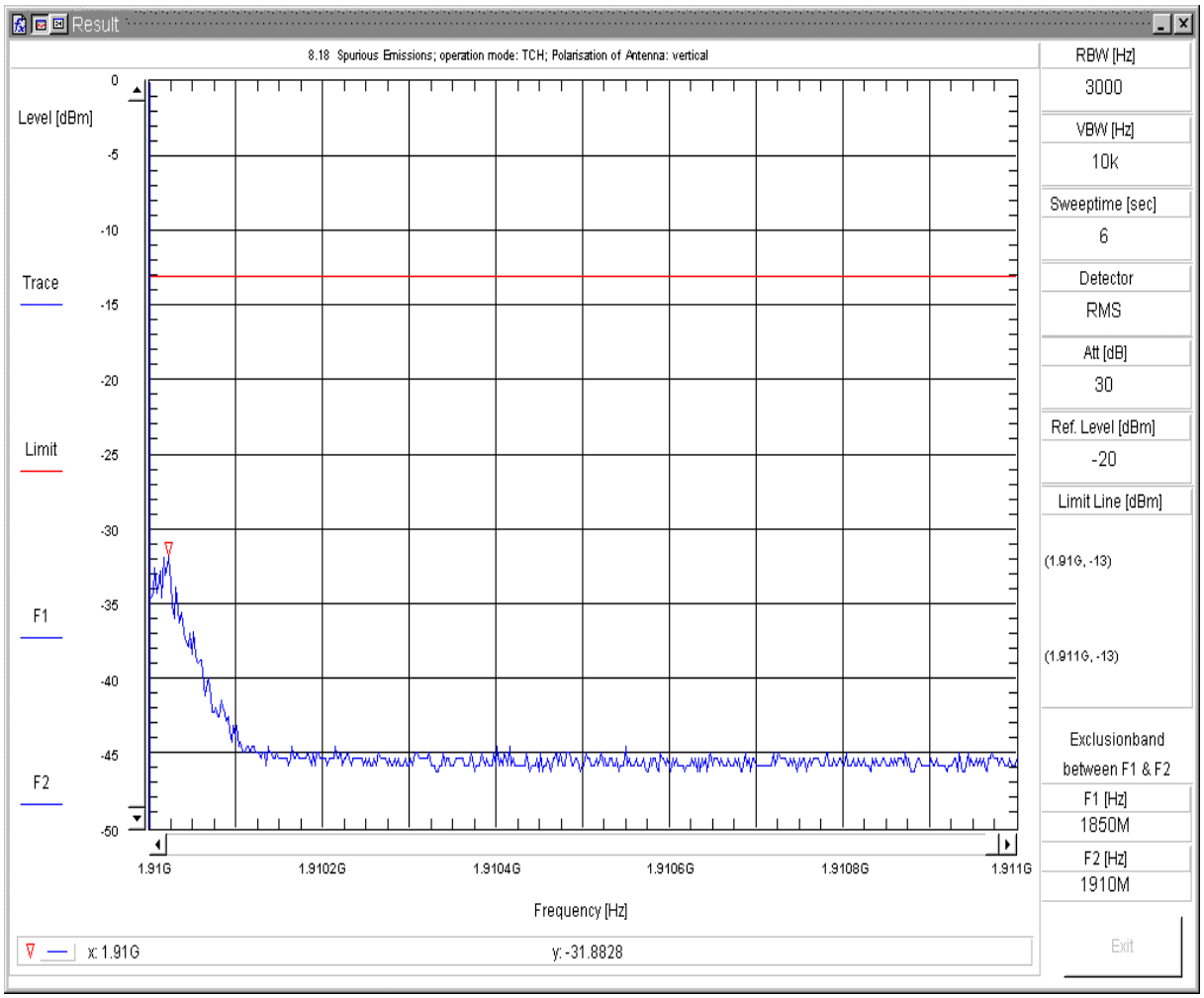
Tue 03/May/2011 13:19:12fp Spurious Emissions V7.2.5



8.17 Radiated Spurious Emission

Transducer: c:\vee_user\spuri_V7\FCC_Part_24.238_(GSM_1900)\TD_TX_H
Sweepnr: Sweep4
Pol. of Antenna: horizontal
EUT Position: EUT_vertical+horizontal
EUT OP Mode: FCC_Part_24.238_(GSM_1900) TCH
EUT Description: Globesurfer 3.5 Wireless Router
EUT add. Info: +Phihong Power Supply + External analogue Telephone/FAX
EUT Hardware:
EUT Software:
EUT Config:
EUT S/N: IMEI:004401441414485
Battery: AC/DC Charger; Nominal Voltage; 110V VAC/ 60Hz
Remark: Ch. 661, WLAN Ch.1 2MBit, PSTN-line active, Ping to notebook over LAN
Operator: Lor
Testing Site: Fully Anechoic Room (FAR); CETECOM Essen

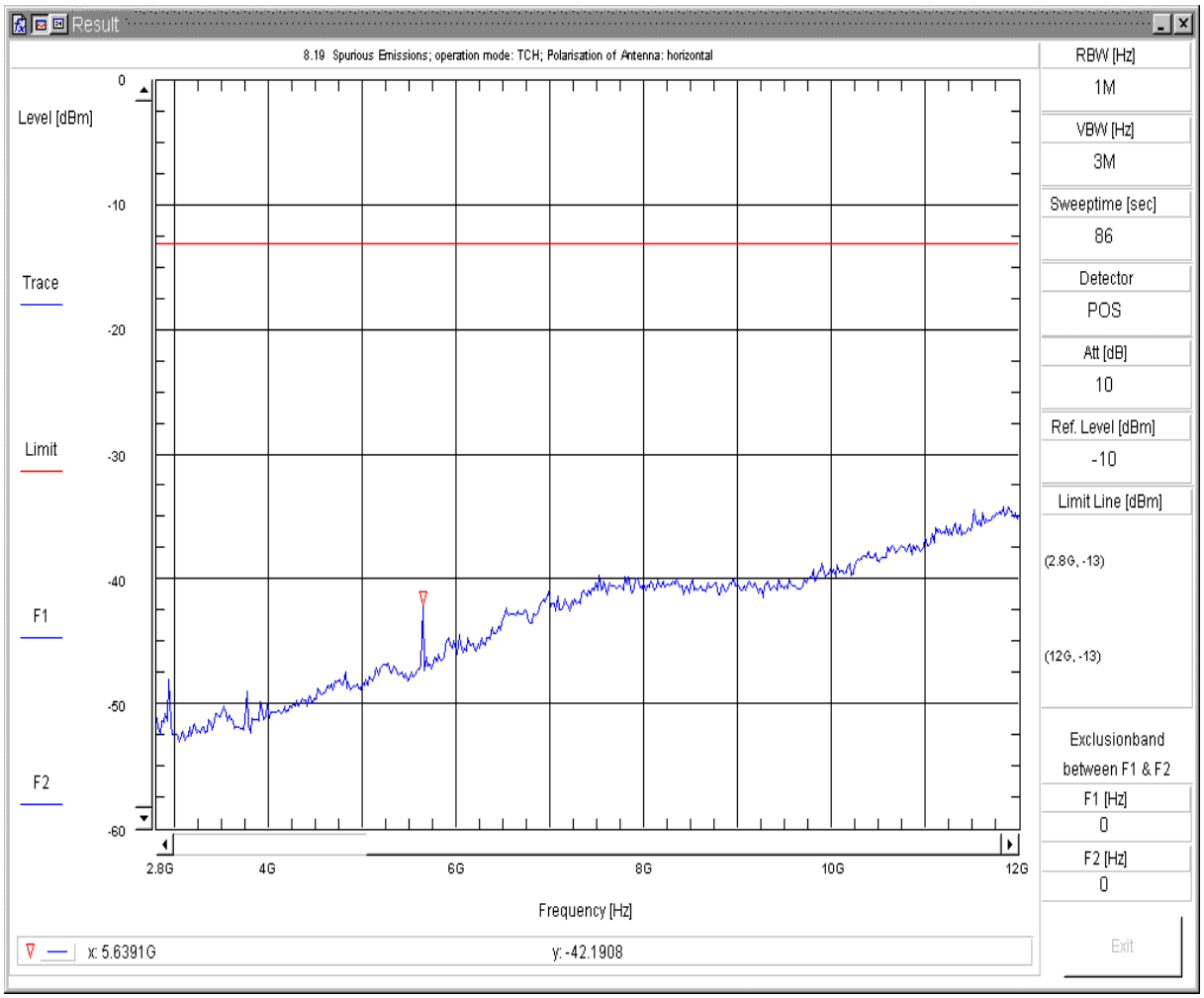
Tue 03/May/2011 13:27:47fp Spurious Emissions V7.2.5



8.18 Radiated Spurious Emission

Transducer: c:\vee_user\spuri_V7\FCC_Part_24.238_(GSM_1900)\TD_TX_V
Sweepnr: Sweep4
Pol. of Antenna: vertikal
EUT Position: EUT_vertical+horizontal
EUT OP Mode: FCC_Part_24.238_(GSM_1900) TCH
EUT Description: Globesurfer 3.5 Wireless Router
EUT add. Info: +Phihong Power Supply + External analogue Telephone/FAX
EUT Hardware:
EUT Software:
EUT Config:
EUT S/N: IMEI:004401441414485
Battery: AC/DC Charger; Nominal Voltage; 110V VAC/ 60Hz
Remark: Ch. 661, WLAN Ch.1 2MBit, PSTN-line active, Ping to notebook over LAN
Operator: Lor
Testing Site: Fully Anechoic Room (FAR); CETECOM Essen

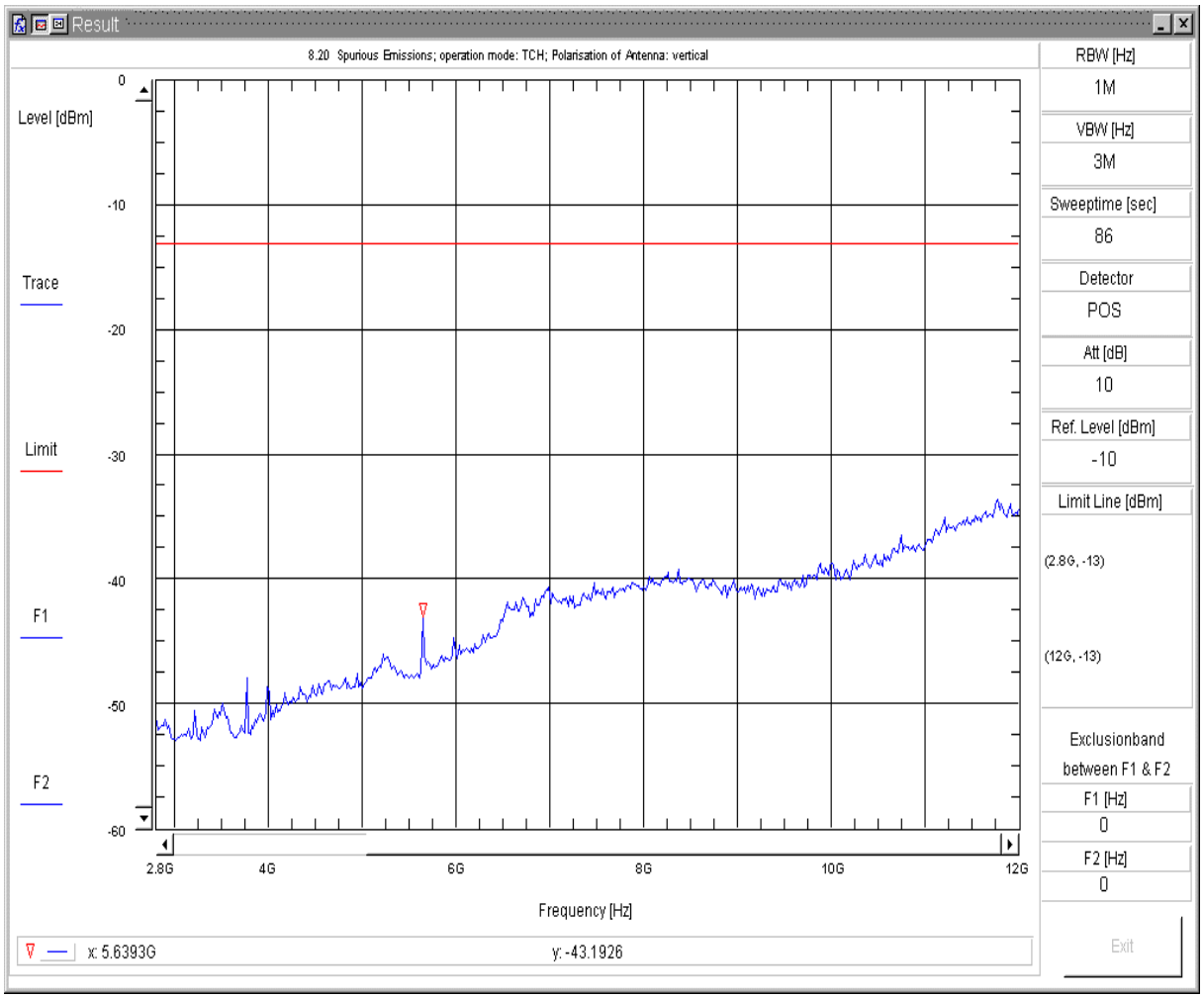
Tue 03/May/2011 13:32:43pp Spurious Emissions V7.2.5



8.19 Radiated Spurious Emission

Transducer: c:\vee_user\spuri_V7\FCC_Part_24.238_(GSM_1900)\TD_TX_H
Sweepnr: Sweep5
Pol. of Antenna: horizontal
EUT Position: EUT_vertical+horizontal
EUT OP Mode: FCC_Part_24.238_(GSM_1900) TCH
EUT Description: Globesurfer 3.5 Wireless Router
EUT add. Info: +Phihong Power Supply + External analogue Telephone/FAX
EUT Hardware:
EUT Software:
EUT Config:
EUT S/N: IMEI:004401441414485
Battery: AC/DC Charger; Nominal Voltage; 110V VAC/ 60Hz
Remark: Ch. 661, WLAN Ch.1 2MBit, PSTN-line active, Ping to notebook over LAN
Operator: Lor
Testing Site: Fully Anechoic Room (FAR); CETECOM Essen

Tue 03/May/2011 12:08:14pp Spurious Emissions V7.2.5

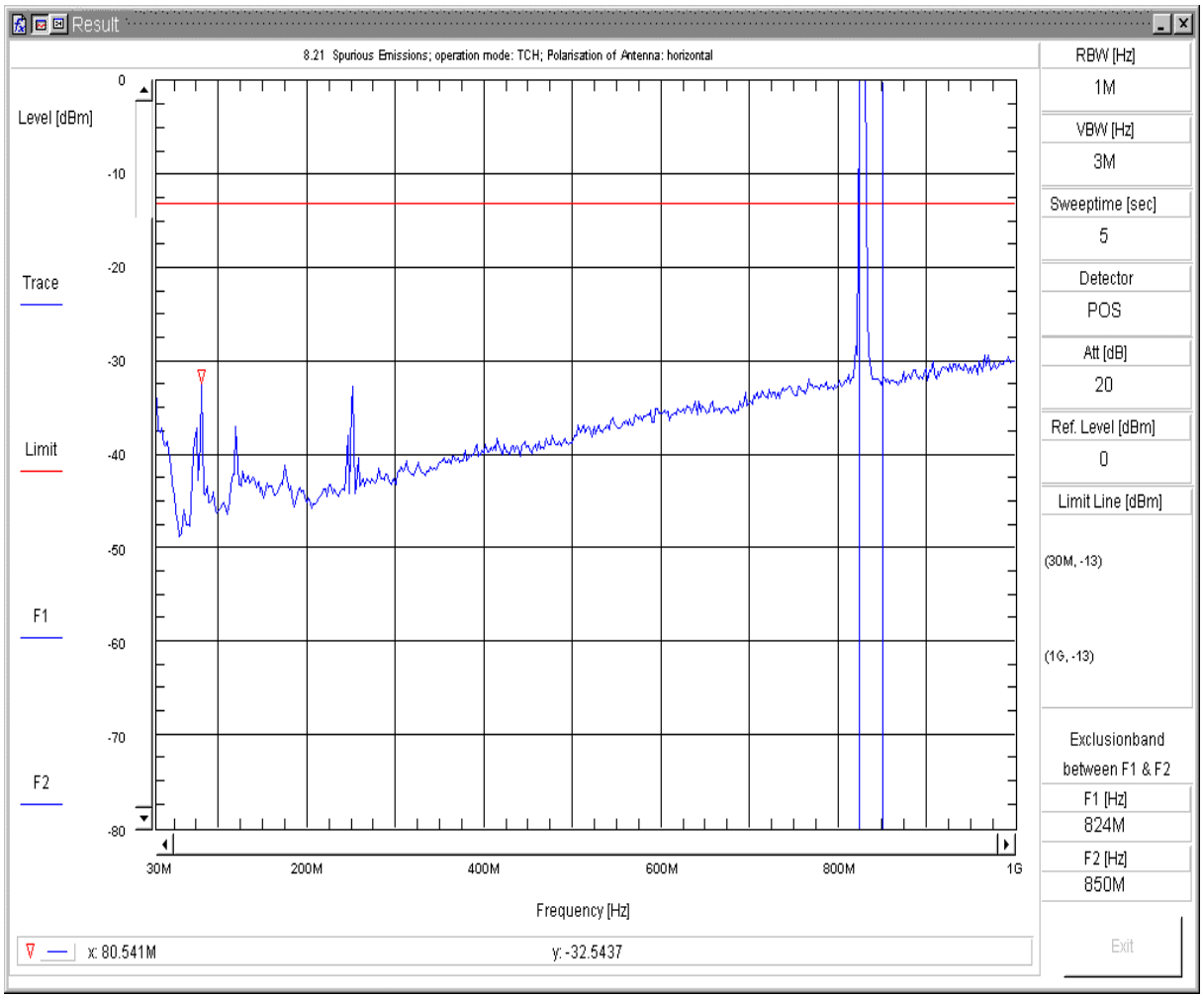


8.20 Radiated Spurious Emission

Transducer: c:\vee_user\spuri_V7\FCC_Part_24.238_(GSM_1900)\TD_TX_V
Sweepnr: Sweep5
Pol. of Antenna: vertikal
EUT Position: EUT_vertical+horizontal
EUT OP Mode: FCC_Part_24.238_(GSM_1900) TCH
EUT Description: Globesurfer 3.5 Wireless Router
EUT add. Info: +Phihong Power Supply + External analogue Telephone/FAX
EUT Hardware:
EUT Software:
EUT Config:
EUT S/N: IMEI:004401441414485
Battery: AC/DC Charger; Nominal Voltage; 110V VAC/ 60Hz
Remark: Ch. 661, WLAN Ch.1 2MBit, PSTN-line active, Ping to notebook over LAN
Operator: Lor
Testing Site: Fully Anechoic Room (FAR); CETECOM Essen

Tue 03/May/2011 12:31:30fp Spurious Emissions V7.2.5

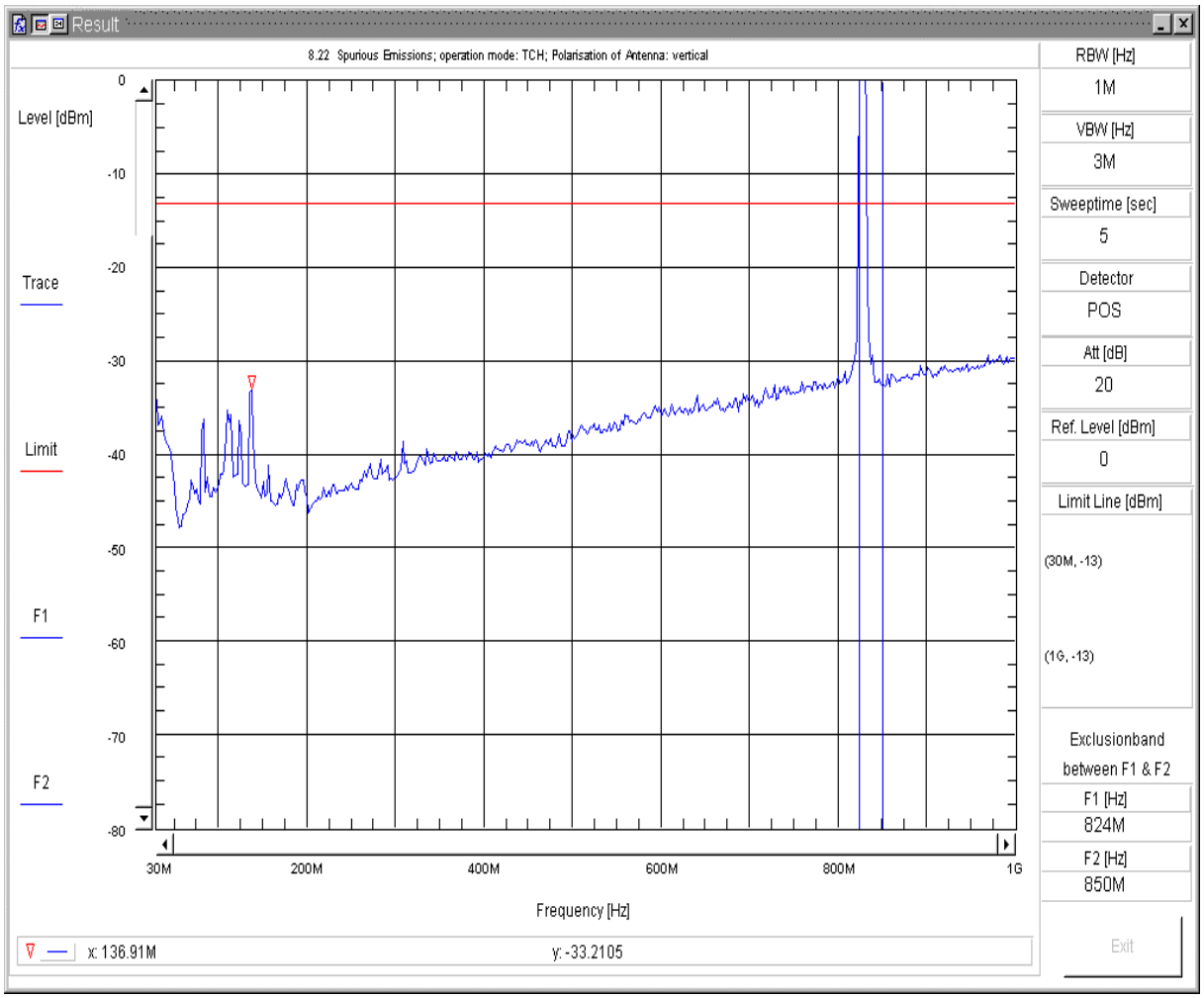
8.3. FDD Band V



8.21 Radiated Spurious Emission

Transducer: c:\vee_user\spuri_V7\FCC_Part_22_(WCDMA_FDD_V)\TD_TX_H
Sweepnr: Sweep1
Pol. of Antenna: horizontal
EUT Position: EUT_vertical+horizontal
EUT OP Mode: FCC_Part_22_(WCDMA_FDD_V) TCH
EUT Description: Globesurfer 3.5 Wireless Router + External antenna
EUT add. Info: +Phihong Power Supply + External analogue Telephone/FAX
EUT Hardware:
EUT Software:
EUT Config:
EUT S/N: IMEI:004401441414485
Battery: AC/DC Charger; Nominal Voltage; 110V VAC/ 60Hz
Remark: FDD5, Ch.4132; WLAN Ch1. 2MBit, Ping on LAN, analogue telephone on PSTN active
Operator: Lor
Testing Site: Fully Anechoic Room (FAR); CETECOM Essen

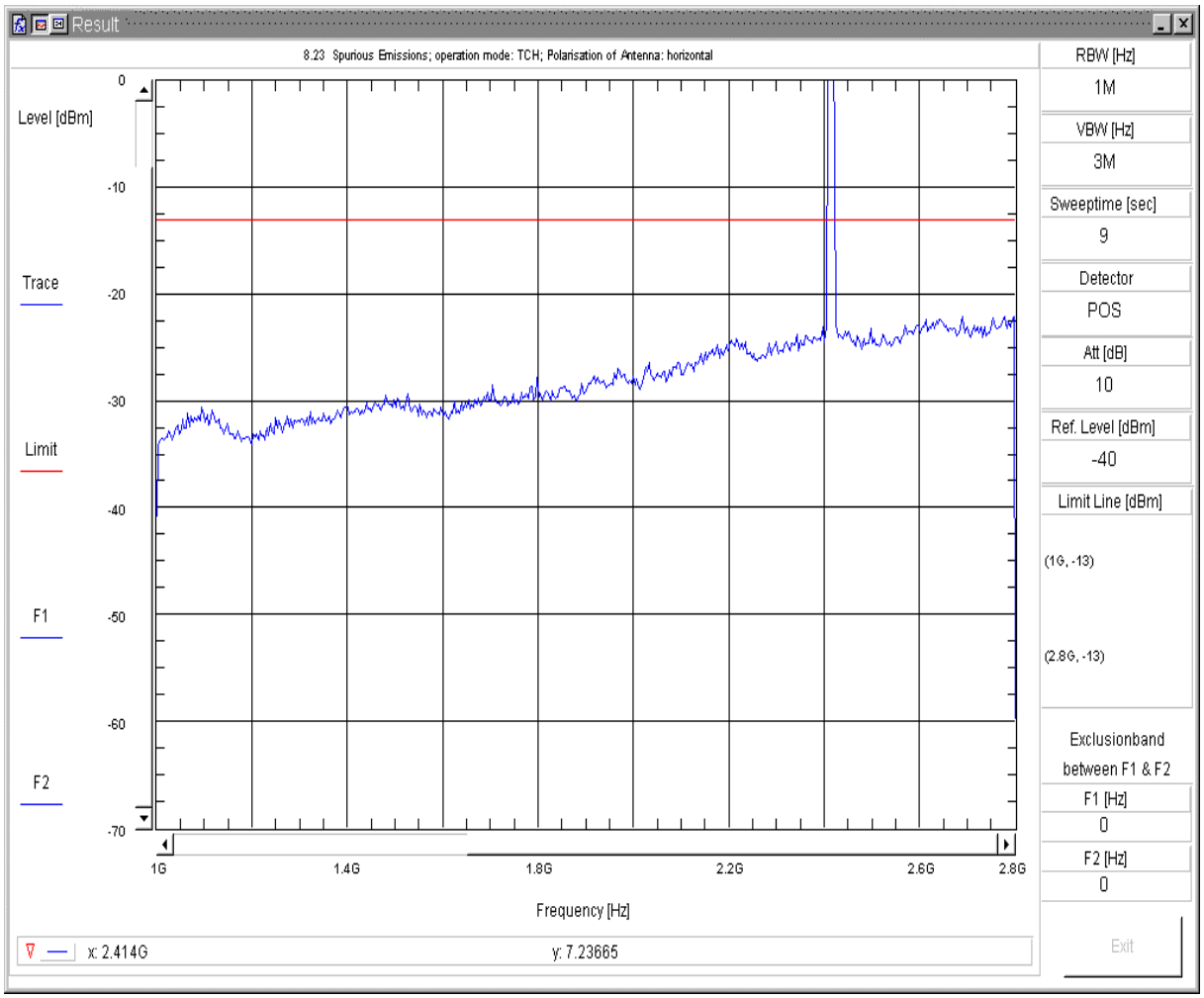
Tue 03/May/2011 14:00:24ppf Spurious Emissions V7.2.5



8.22 Radiated Spurious Emission

Transducer: c:\vee_user\spuri_V7\FCC_Part_22_(WCDMA_FDD_V)\TD_TX_V
Sweepnr: Sweep1
Pol. of Antenna: vertikal
EUT Position: EUT_vertical+horizontal
EUT OP Mode: FCC_Part_22_(WCDMA_FDD_V) TCH
EUT Description: Globesurfer 3.5 Wireless Router+External antenna
EUT add. Info: +Phihong Power Supply + External analogue Telephone/FAX
EUT Hardware:
EUT Software:
EUT Config:
EUT S/N: IMEI:004401441414485
Battery: AC/DC Charger; Nominal Voltage; 110V VAC/ 60Hz
Remark: FDD5, Ch.4132; WLAN Ch1. 2MBit, Ping on LAN, analogue telephone on PSTN active
Operator: Lor
Testing Site: Fully Anechoic Room (FAR); CETECOM Essen

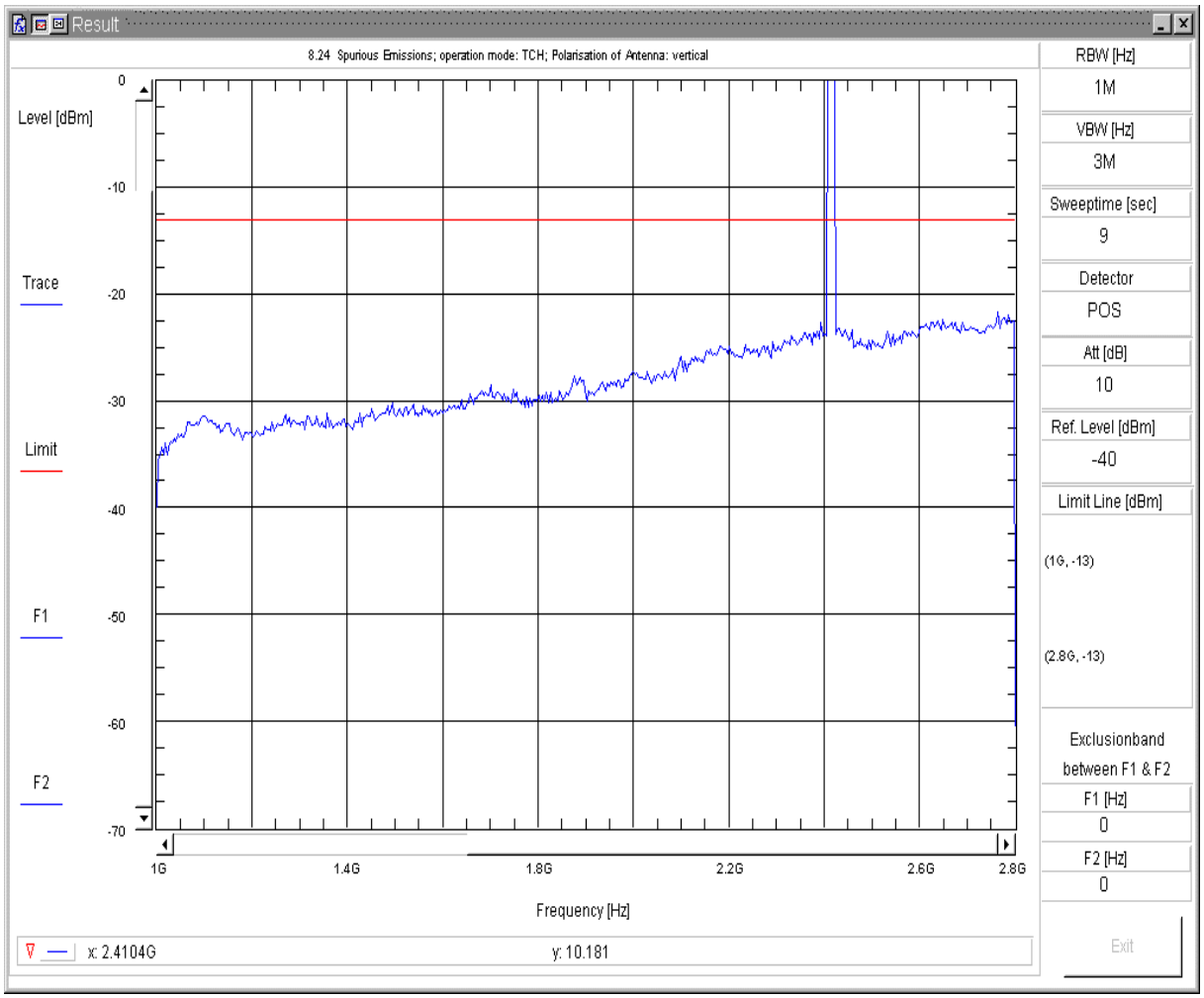
Tue 03/May/2011 14:04:29ppf Spurious Emissions V7.2.5



8.23 Radiated Spurious Emission

Transducer: c:\vee_user\spuri_V7\FCC_Part_22_(WCDMA_FDD_V)\TD_TX_H
Sweepnr: Sweep2
Pol. of Antenna: horizontal
EUT Position: EUT_vertical+horizontal
EUT OP Mode: FCC_Part_22_(WCDMA_FDD_V) TCH
EUT Description: Globesurfer 3.5 Wireless Router
EUT add. Info: +Phihong Power Supply + External analogue Telephone/FAX
EUT Hardware:
EUT Software:
EUT Config:
EUT S/N: IMEI:004401441414485
Battery: AC/DC Charger; Nominal Voltage; 110V VAC/ 60Hz
Remark: FDD5, Ch.4132; WLAN Ch1. 2MBit, Ping on LAN, analogue telephone on PSTN active
Operator: Lor
Testing Site: Fully Anechoic Room (FAR); CETECOM Essen

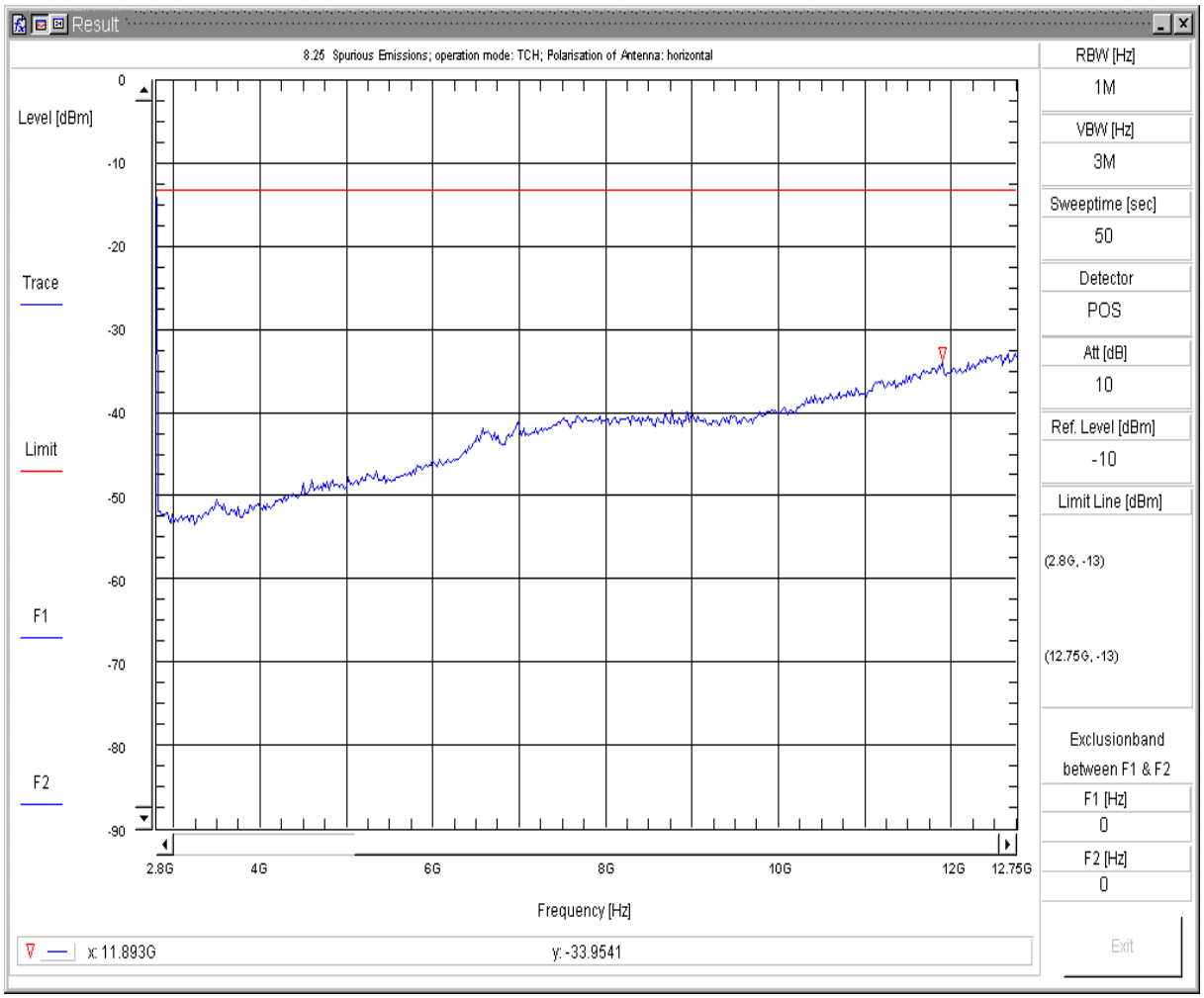
Tue 03/May/2011 14:08:08ff Spurious Emissions V7.2.5



8.24 Radiated Spurious Emission

Transducer: c:\vee_user\spuri_V7\FCC_Part_22_(WCDMA_FDD_V)\TD_TX_V
Sweepnr: Sweep2
Pol. of Antenna: vertikal
EUT Position: EUT_vertical+horizontal
EUT OP Mode: FCC_Part_22_(WCDMA_FDD_V) TCH
EUT Description: Globesurfer 3.5 Wireless Router
EUT add. Info: +Phihong Power Supply + External analogue Telephone/FAX
EUT Hardware:
EUT Software:
EUT Config:
EUT S/N: IMEI:004401441414485
Battery: AC/DC Charger; Nominal Voltage; 110V VAC/ 60Hz
Remark: FDD5, Ch.4132; WLAN Ch1. 2MBit, Ping on LAN, analogue telephone on PSTN active
Operator: Lor
Testing Site: Fully Anechoic Room (FAR); CETECOM Essen

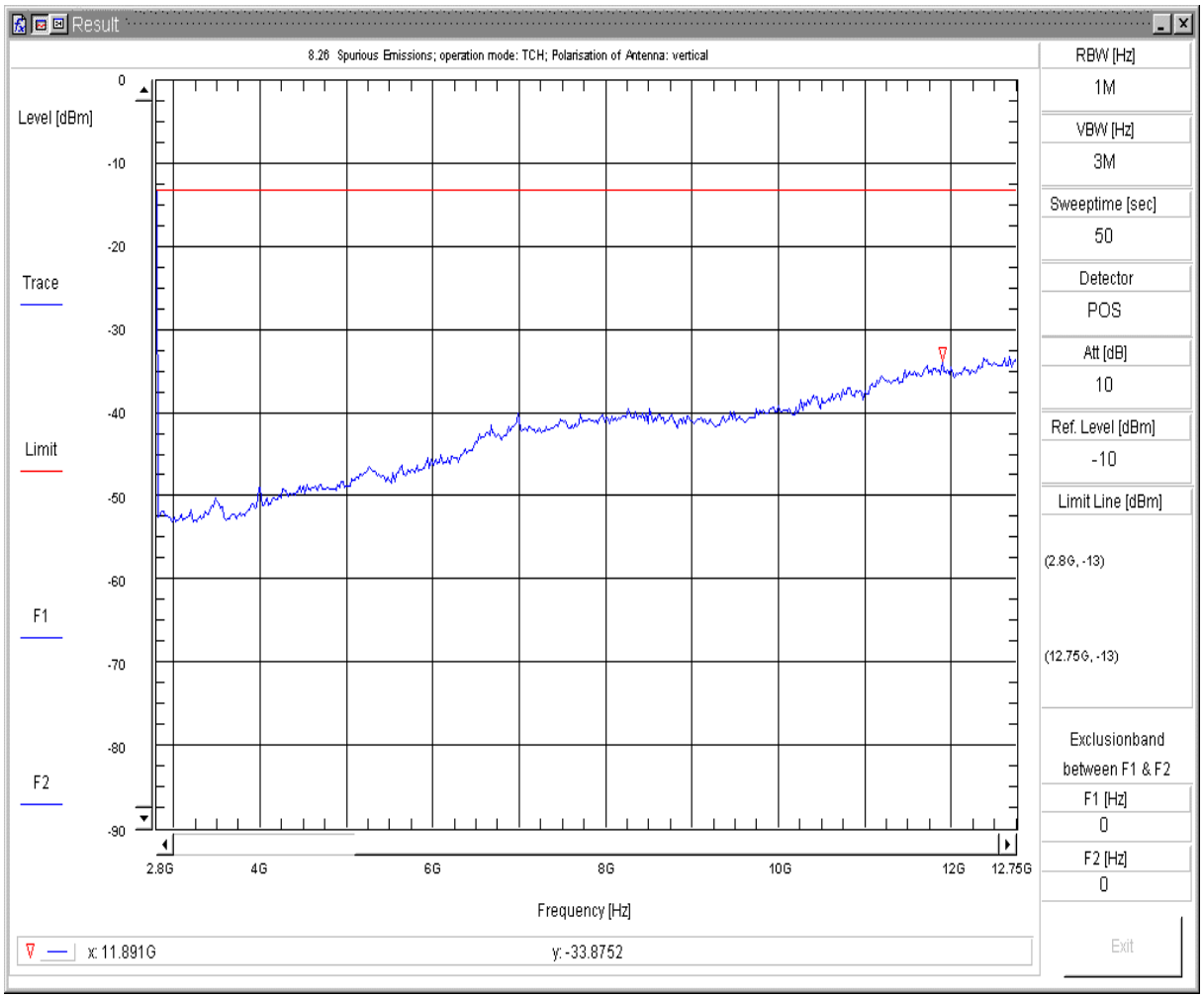
Tue 03/May/2011 14:13:21ff Spurious Emissions V7.2.5



8.25 Radiated Spurious Emission

Transducer: c:\vee_user\spuri_V7\FCC_Part_22_(WCDMA_FDD_V)\TD_TX_H
Sweepnr: Sweep3
Pol. of Antenna: horizontal
EUT Position: EUT_vertical+horizontal
EUT OP Mode: FCC_Part_22_(WCDMA_FDD_V) TCH
EUT Description: Globesurfer 3.5 Wireless Router
EUT add. Info: +Phihong Power Supply + External analogue Telephone/FAX
EUT Hardware:
EUT Software:
EUT Config:
EUT S/N: IMEI:004401441414485
Battery: AC/DC Charger; Nominal Voltage; 110V VAC/ 60Hz
Remark: FDD5, Ch.4132; WLAN Ch1. 2MBit, Ping on LAN, analogue telephone on PSTN active
Operator: Lor
Testing Site: Fully Anechoic Room (FAR); CETECOM Essen

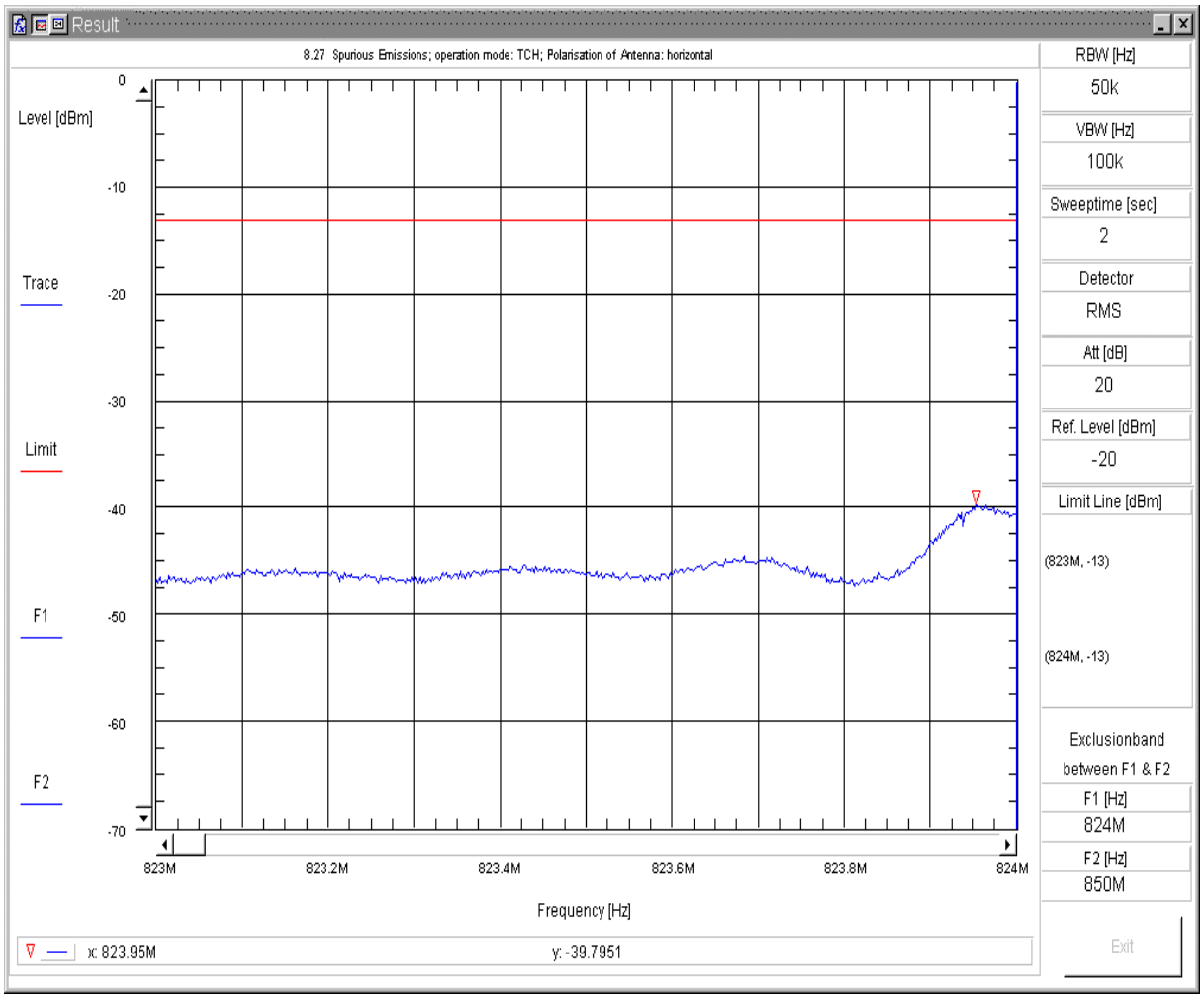
Tue 03/May/2011 14:18:39ff Spurious Emissions V7.2.5



8.26 Radiated Spurious Emission

Transducer: c:\vee_user\spuri_V7\FCC_Part_22_(WCDMA_FDD_V)\TD_TX_V
Sweepnr: Sweep3
Pol. of Antenna: vertikal
EUT Position: EUT_vertical+horizontal
EUT OP Mode: FCC_Part_22_(WCDMA_FDD_V) TCH
EUT Description: Globesurfer 3.5 Wireless Router
EUT add. Info: +Phihong Power Supply + External analogue Telephone/FAX
EUT Hardware:
EUT Software:
EUT Config:
EUT S/N: IMEI:004401441414485
Battery: AC/DC Charger; Nominal Voltage; 110V VAC/ 60Hz
Remark: FDD5, Ch.4132; WLAN Ch1. 2MBit, Ping on LAN, analogue telephone on PSTN active
Operator: Lor
Testing Site: Fully Anechoic Room (FAR); CETECOM Essen

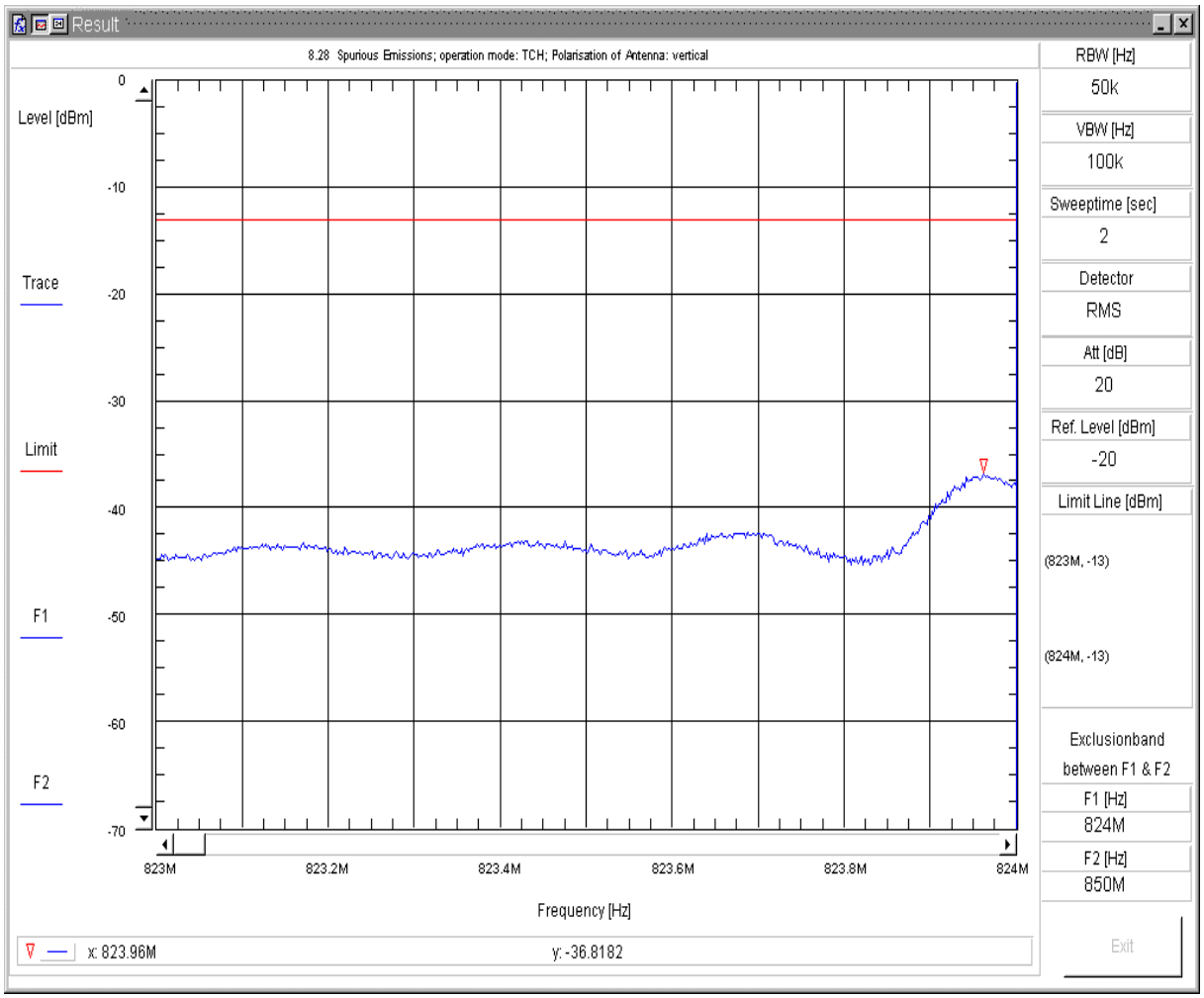
Tue 03/May/2011 14:34:02ff Spurious Emissions V7.2.5



8.27 Radiated Spurious Emission

Transducer: c:\vee_user\spuri_V7\FCC_Part_22_(WCDMA_FDD_V)\TD_TX_H
Sweepnr: Sweep4
Pol. of Antenna: horizontal
EUT Position: EUT_vertical+horizontal
EUT OP Mode: FCC_Part_22_(WCDMA_FDD_V) TCH
EUT Description: Globesurfer 3.5 Wireless Router+External antenna
EUT add. Info: +Phihong Power Supply + External analogue Telephone/FAX
EUT Hardware:
EUT Software:
EUT Config:
EUT S/N: IMEI:004401441414485
Battery: AC/DC Charger; Nominal Voltage; 110V VAC/ 60Hz
Remark: FDD5, Ch.4132; WLAN Ch1. 2MBit, Ping on LAN, analogue telephone on PSTN active
Operator: Lor
Testing Site: Fully Anechoic Room (FAR); CETECOM Essen

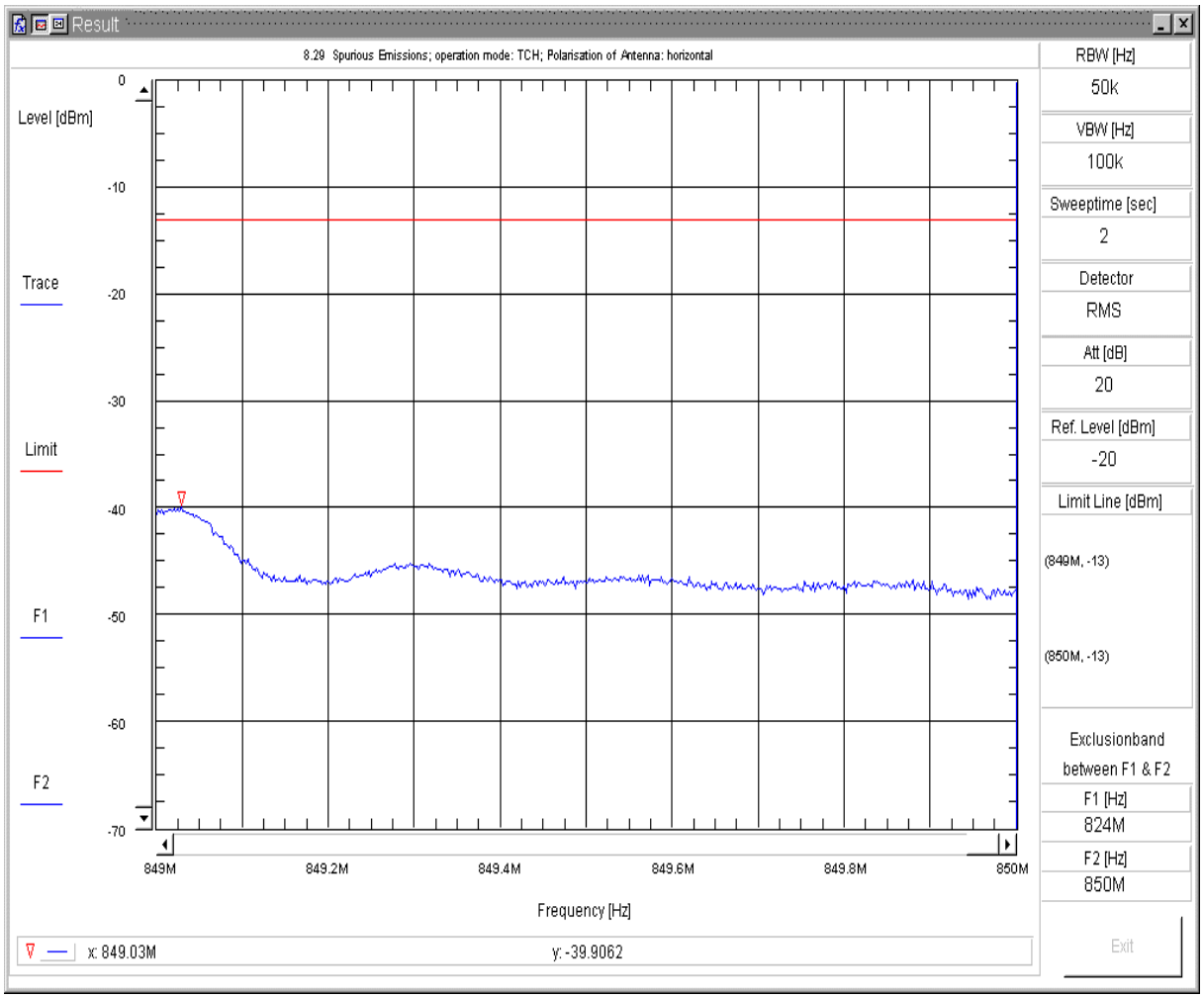
Tue 03/May/2011 14:49:54fp Spurious Emissions V7.2.5



8.28 Radiated Spurious Emission

Transducer: c:\vee_user\spuri_V7\FCC_Part_22_(WCDMA_FDD_V)\TD_TX_V
Sweepnr: Sweep4
Pol. of Antenna: vertikal
EUT Position: EUT_vertical+horizontal
EUT OP Mode: FCC_Part_22_(WCDMA_FDD_V) TCH
EUT Description: Globesurfer 3.5 Wireless Router+External antenna
EUT add. Info: +Phihong Power Supply + External analogue Telephone/FAX
EUT Hardware:
EUT Software:
EUT Config:
EUT S/N: IMEI:004401441414485
Battery: AC/DC Charger; Nominal Voltage; 110V VAC/ 60Hz
Remark: FDD5, Ch.4132; WLAN Ch1. 2MBit, Ping on LAN, analogue telephone on PSTN active
Operator: Lor
Testing Site: Fully Anechoic Room (FAR); CETECOM Essen

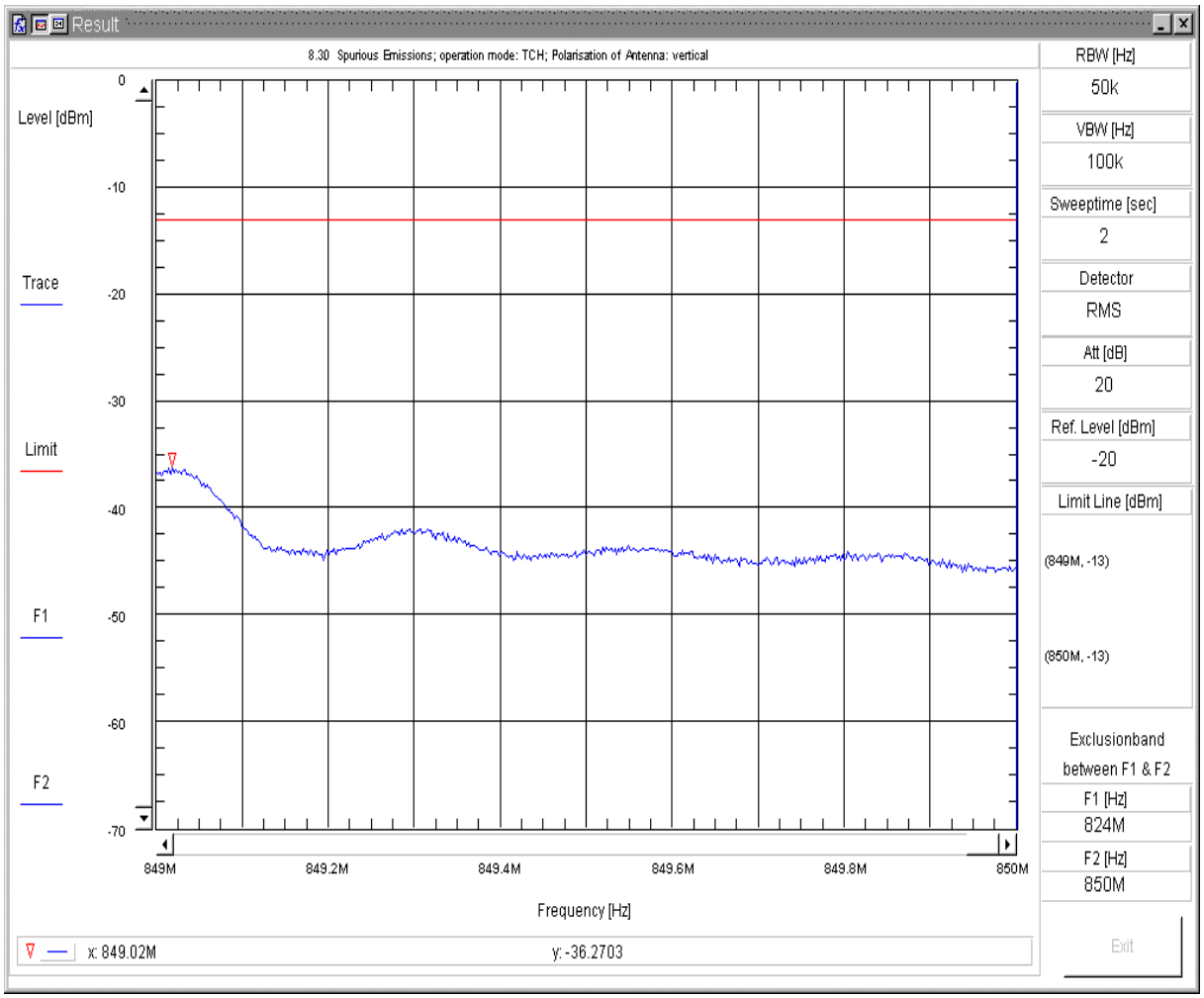
Tue 03/May/2011 14:52:35ff Spurious Emissions V7.2.5



8.29 Radiated Spurious Emission

Transducer: c:\vee_user\spuri_V7\FCC_Part_22_(WCDMA_FDD_V)\TD_TX_H
Sweepnr: Sweep5
Pol. of Antenna: horizontal
EUT Position: EUT_vertical+horizontal
EUT OP Mode: FCC_Part_22_(WCDMA_FDD_V) TCH
EUT Description: Globesurfer 3.5 Wireless Router+External antenna
EUT add. Info: +Phihong Power Supply + External analogue Telephone/FAX
EUT Hardware:
EUT Software:
EUT Config:
EUT S/N: IMEI:004401441414485
Battery: AC/DC Charger; Nominal Voltage; 110V VAC/ 60Hz
Remark: FDD5, Ch.4132; WLAN Ch1. 2MBit, Ping on LAN, analogue telephone on PSTN active
Operator: Lor
Testing Site: Fully Anechoic Room (FAR); CETECOM Essen

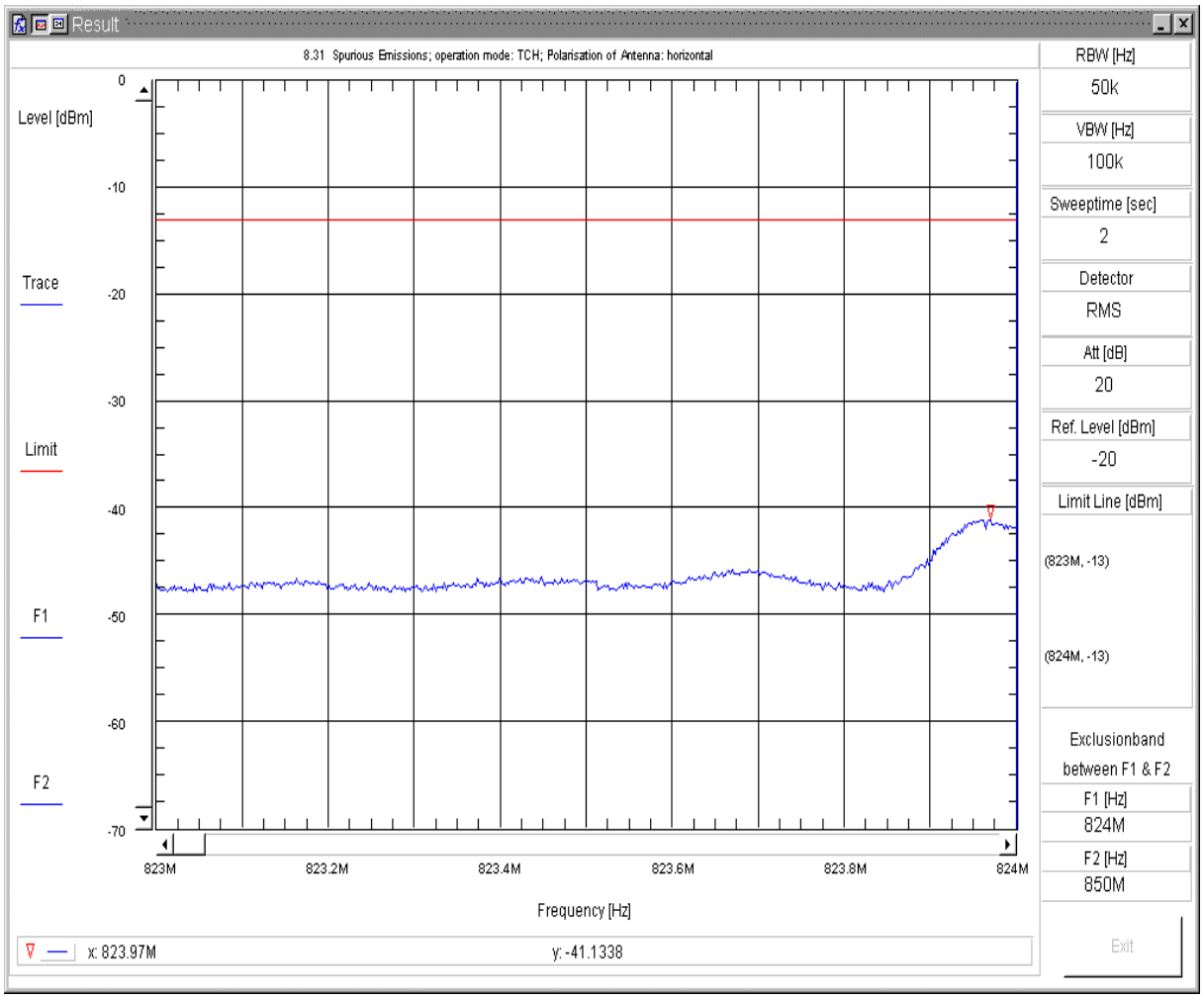
Tue 03/May/2011 14:55:44fp Spurious Emissions V7.2.5



8.30 Radiated Spurious Emission

Transducer: c:\vee_user\spuri_V7\FCC_Part_22_(WCDMA_FDD_V)\TD_TX_V
Sweepnr: Sweep5
Pol. of Antenna: vertikal
EUT Position: EUT_vertical+horizontal
EUT OP Mode: FCC_Part_22_(WCDMA_FDD_V) TCH
EUT Description: Globesurfer 3.5 Wireless Router+External Antenna
EUT add. Info: +Phihong Power Supply + External analogue Telephone/FAX
EUT Hardware:
EUT Software:
EUT Config:
EUT S/N: IMEI:004401441414485
Battery: AC/DC Charger; Nominal Voltage; 110V VAC/ 60Hz
Remark: FDD5, Ch.4132; WLAN Ch1. 2MBit, Ping on LAN, analogue telephone on PSTN active
Operator: Lor
Testing Site: Fully Anechoic Room (FAR); CETECOM Essen

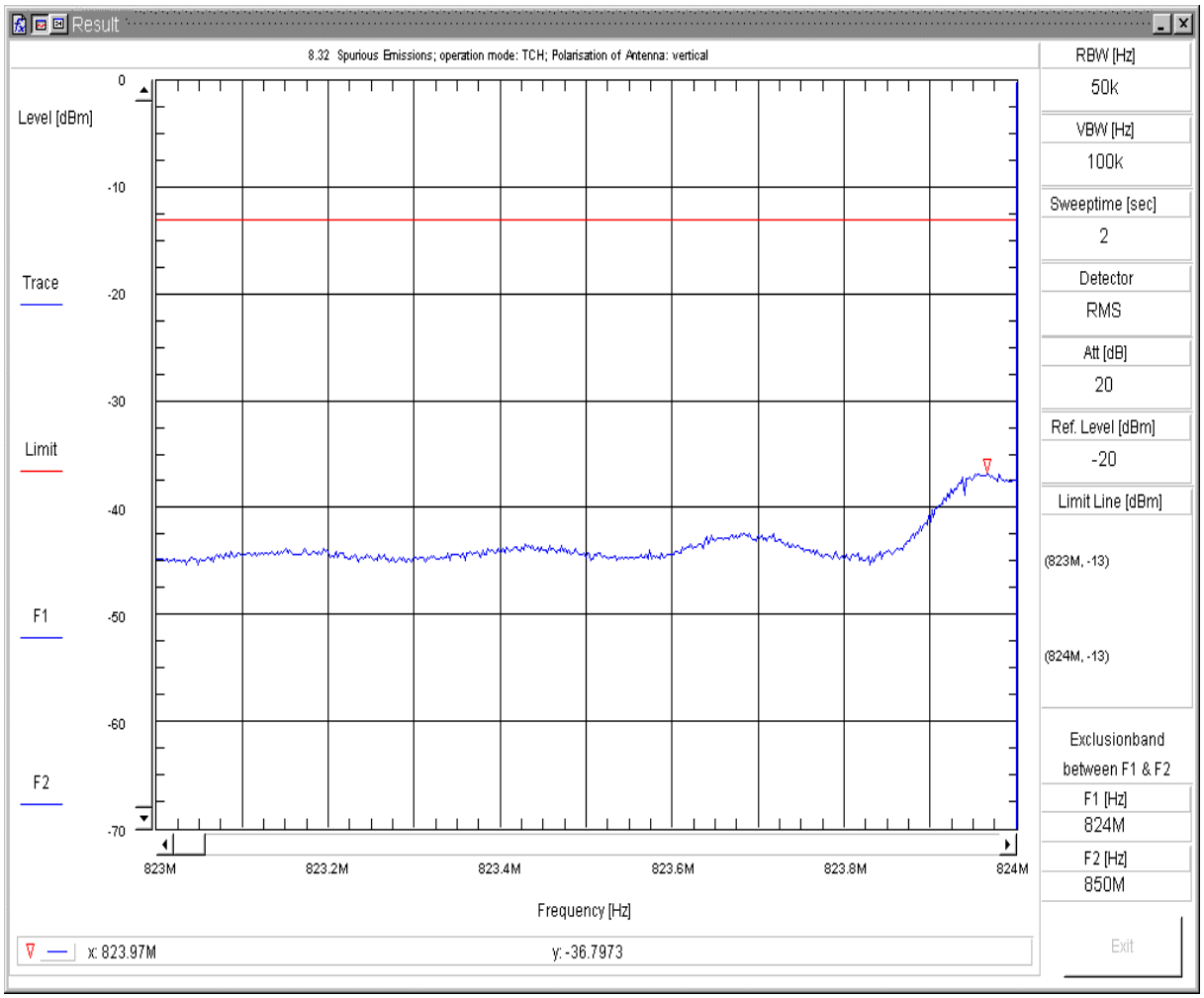
Tue 03/May/2011 14:58:26ff Spurious Emissions V7.2.5



8.31 Radiated Spurious Emission

Transducer: c:\vee_user\spuri_V7\FCC_Part_22_(WCDMA_FDD_V)\TD_TX_H
Sweepnr: Sweep4
Pol. of Antenna: horizontal
EUT Position: EUT_vertical+horizontal
EUT OP Mode: FCC_Part_22_(WCDMA_FDD_V) TCH
EUT Description: Globesurfer 3.5 Wireless Router
EUT add. Info: +Phihong Power Supply + External analogue Telephone/FAX
EUT Hardware:
EUT Software:
EUT Config:
EUT S/N: IMEI:004401441414485
Battery: AC/DC Charger; Nominal Voltage; 110V VAC/ 60Hz
Remark: FDD5, Ch.4132; WLAN Ch1. 2MBit, Ping on LAN, analogue telephone on PSTN active
Operator: Lor
Testing Site: Fully Anechoic Room (FAR); CETECOM Essen

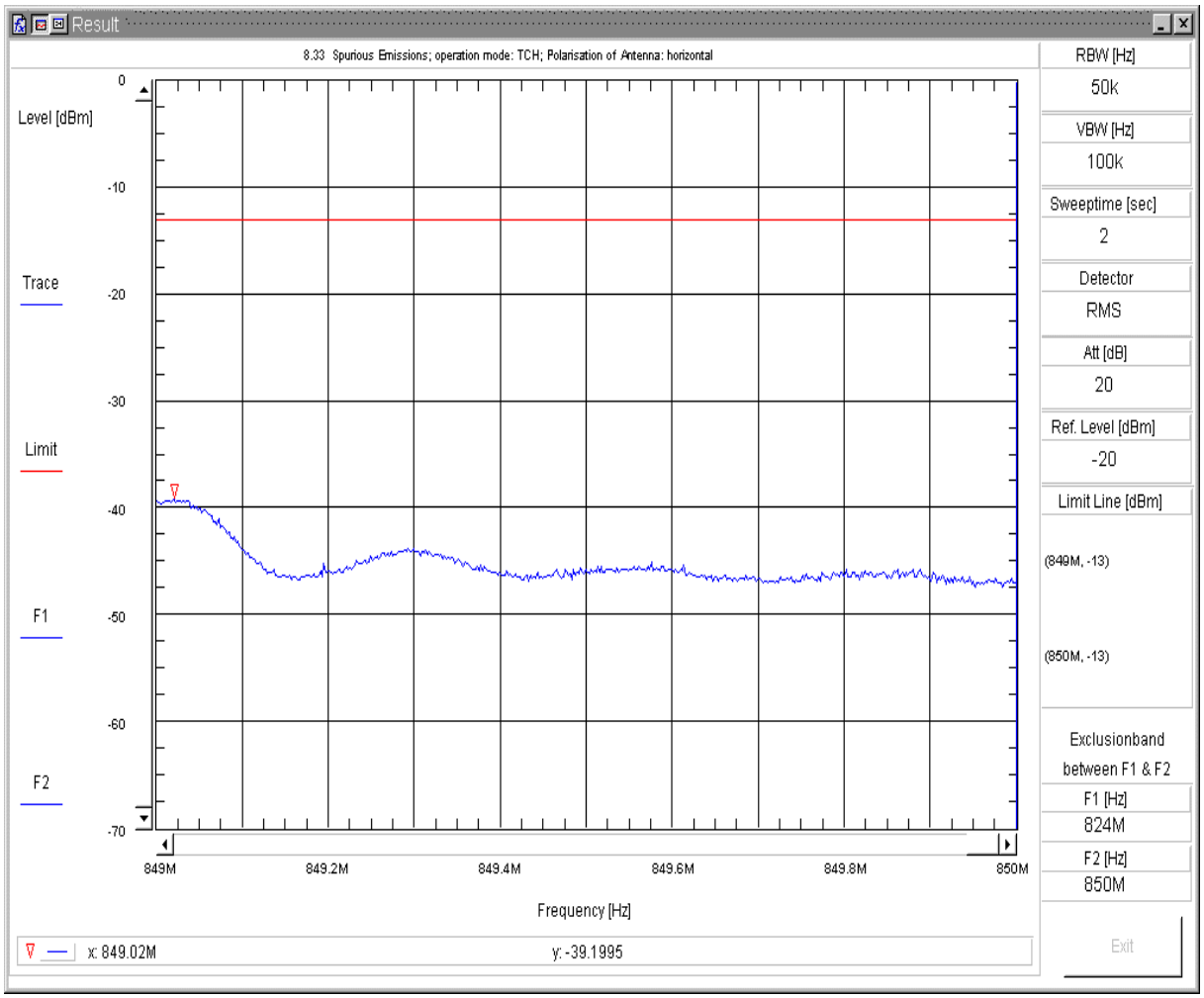
Tue 03/May/2011 15:47:58fp Spurious Emissions V7.2.5



8.32 Radiated Spurious Emission

Transducer: c:\vee_user\spuri_V7\FCC_Part_22_(WCDMA_FDD_V)\TD_TX_V
Sweepnr: Sweep4
Pol. of Antenna: vertikal
EUT Position: EUT_vertical+horizontal
EUT OP Mode: FCC_Part_22_(WCDMA_FDD_V) TCH
EUT Description: Globesurfer 3.5 Wireless Router
EUT add. Info: +Phihong Power Supply + External analogue Telephone/FAX
EUT Hardware:
EUT Software:
EUT Config:
EUT S/N: IMEI:004401441414485
Battery: AC/DC Charger; Nominal Voltage; 110V VAC/ 60Hz
Remark: FDD5, Ch.4132; WLAN Ch1. 2MBit, Ping on LAN, analogue telephone on PSTN active
Operator: Lor
Testing Site: Fully Anechoic Room (FAR); CETECOM Essen

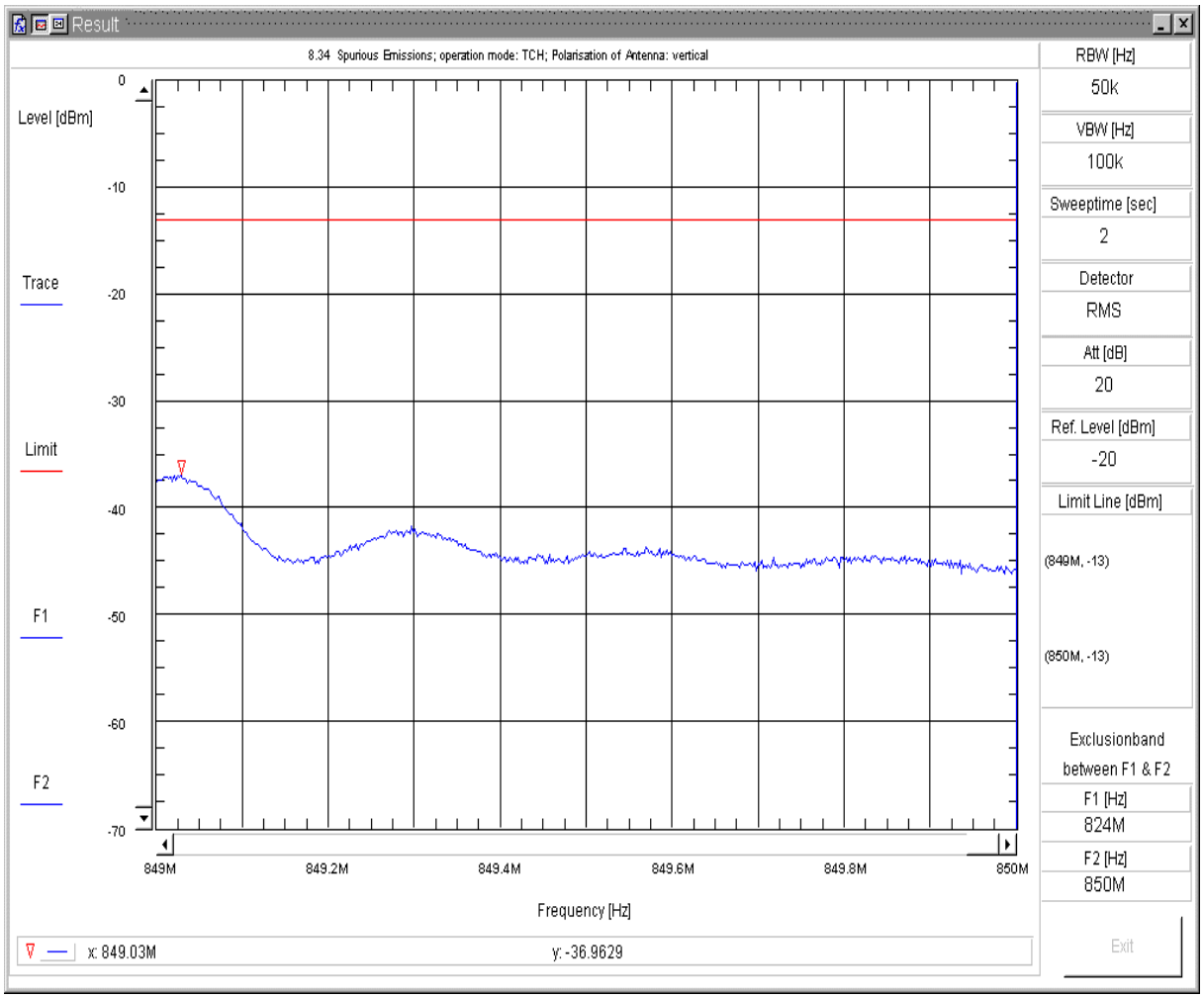
Tue 03/May/2011 15:50:34ff Spurious Emissions V7.2.5



8.33 Radiated Spurious Emission

Transducer: c:\vee_user\spuri_V7\FCC_Part_22_(WCDMA_FDD_V)\TD_TX_H
Sweepnr: Sweep5
Pol. of Antenna: horizontal
EUT Position: EUT_vertical+horizontal
EUT OP Mode: FCC_Part_22_(WCDMA_FDD_V) TCH
EUT Description: Globesurfer 3.5 Wireless Router
EUT add. Info: +Phihong Power Supply + External analogue Telephone/FAX
EUT Hardware:
EUT Software:
EUT Config:
EUT S/N: IMEI:004401441414485
Battery: AC/DC Charger; Nominal Voltage; 110V VAC/ 60Hz
Remark: FDD5, Ch.4132; WLAN Ch1. 2MBit, Ping on LAN, analogue telephone on PSTN active
Operator: Lor
Testing Site: Fully Anechoic Room (FAR); CETECOM Essen

Tue 03/May/2011 15:55:15fp Spurious Emissions V7.2.5

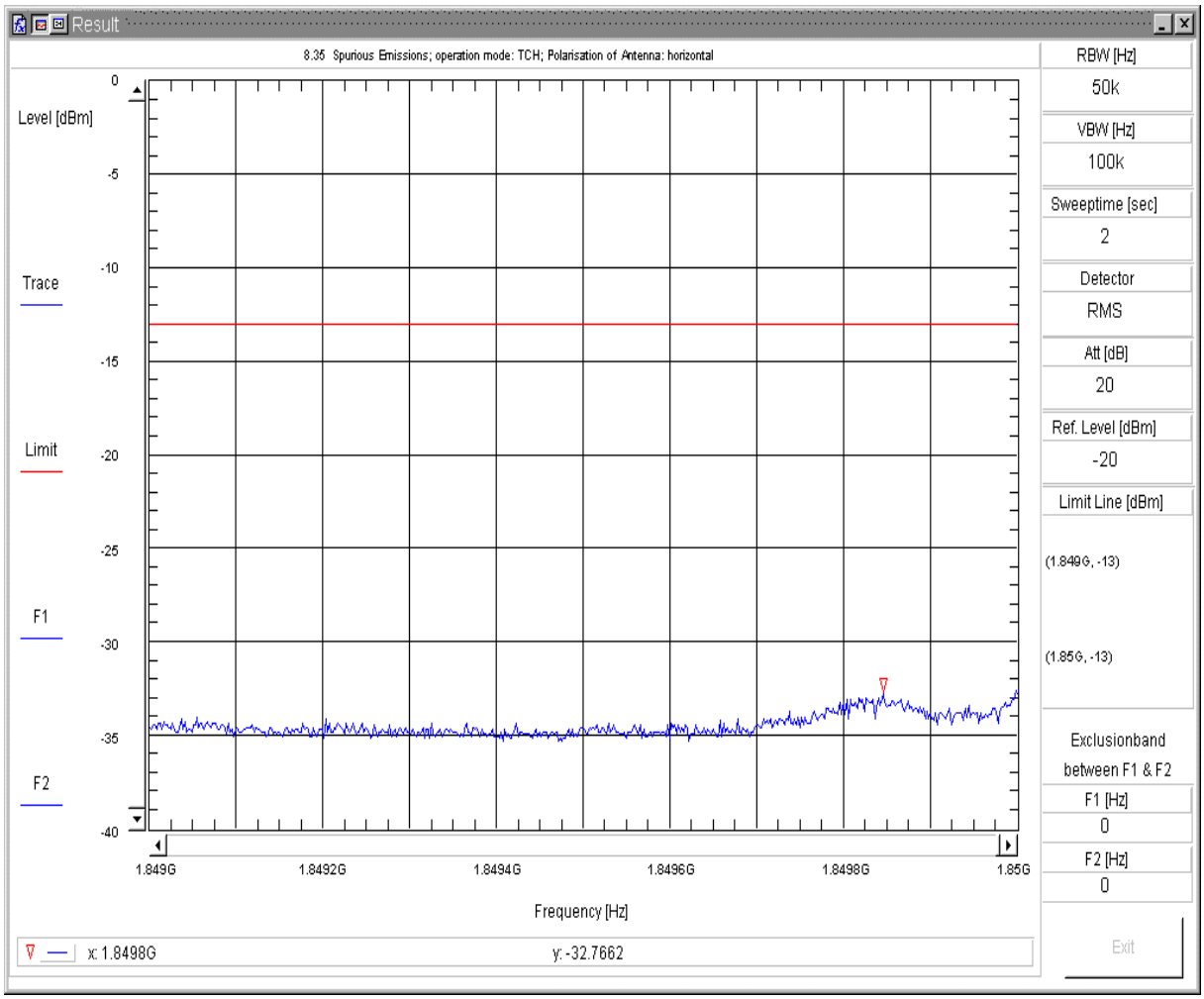


8.34 Radiated Spurious Emission

Transducer: c:\vee_user\spuri_V7\FCC_Part_22_(WCDMA_FDD_V)\TD_TX_V
Sweepnr: Sweep5
Pol. of Antenna: vertikal
EUT Position: EUT_vertical+horizontal
EUT OP Mode: FCC_Part_22_(WCDMA_FDD_V) TCH
EUT Description: Globesurfer 3.5 Wireless Router
EUT add. Info: +Phihong Power Supply + External analogue Telephone/FAX
EUT Hardware:
EUT Software:
EUT Config:
EUT S/N: IMEI:004401441414485
Battery: AC/DC Charger; Nominal Voltage; 110V VAC/ 60Hz
Remark: FDD5, Ch.4132; WLAN Ch1. 2MBit, Ping on LAN, analogue telephone on PSTN active
Operator: Lor
Testing Site: Fully Anechoic Room (FAR); CETECOM Essen

Tue 03/May/2011 15:57:58ff Spurious Emissions V7.2.5

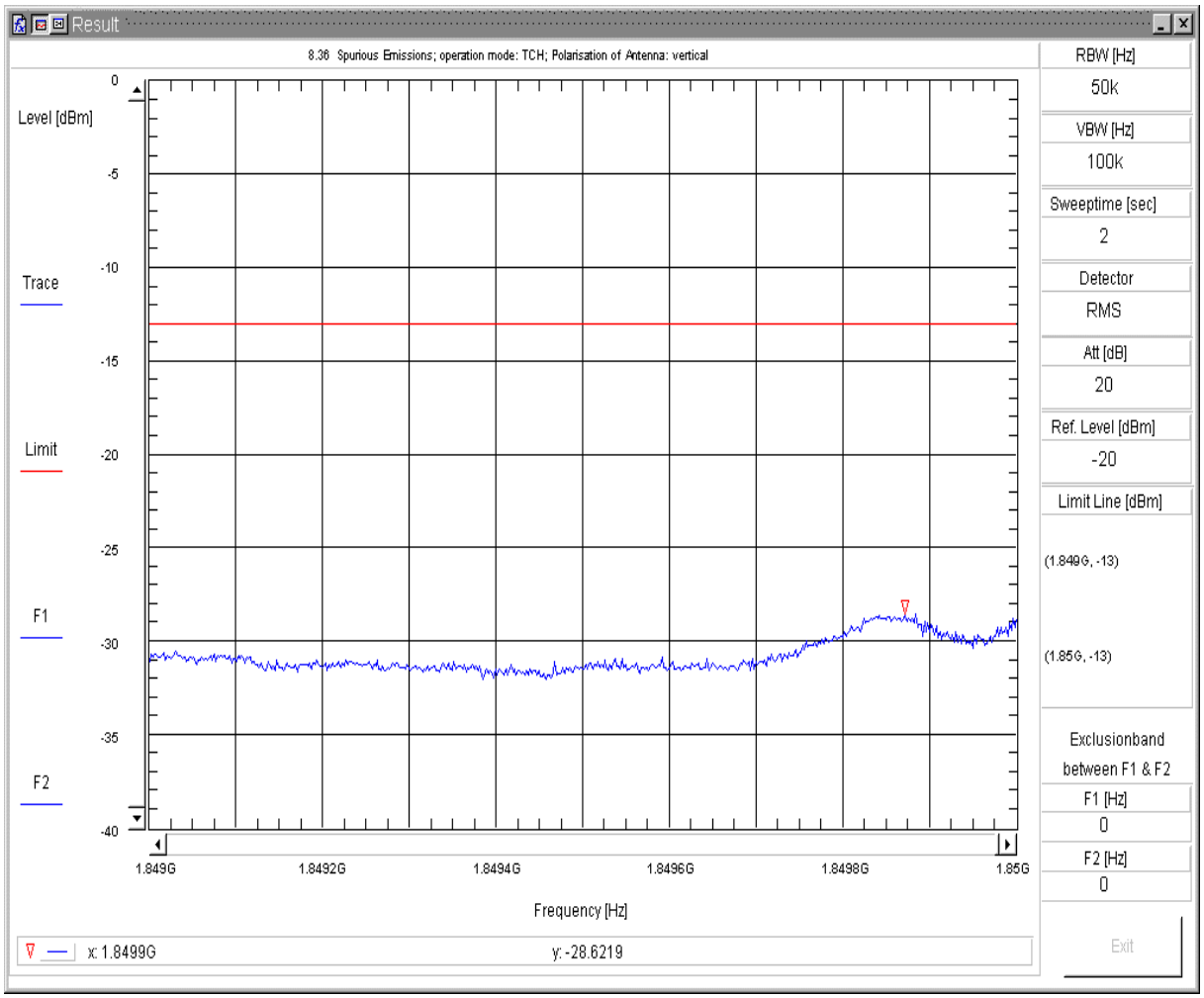
8.4. FDD band II



8.35 Radiated Spurious Emission

Transducer: c:\vee_user\spuri_V7\FCC_Part_24_(WCDMA_FDD_II)\TD_TX_H
Sweepnr: Sweep6
Pol. of Antenna: horizontal
EUT Position: EUT_vertical+horizontal
EUT OP Mode: FCC_Part_24_(WCDMA_FDD_II) TCH
EUT Description: Globesurfer 3.5 Wireless Router
EUT add. Info: +Phihong Power Supply + External analogue Telephone/FAX
EUT Hardware:
EUT Software:
EUT Config:
EUT S/N: IMEI:004401441414485
Battery: AC/DC Charger; Nominal Voltage; 110V VAC/ 60Hz
Remark: FDD2, Ch.9262; WLAN Ch1. 2MBit, Ping on LAN, analogue telephone on PSTN active
Operator: Lor
Testing Site: Fully Anechoic Room (FAR); CETECOM Essen

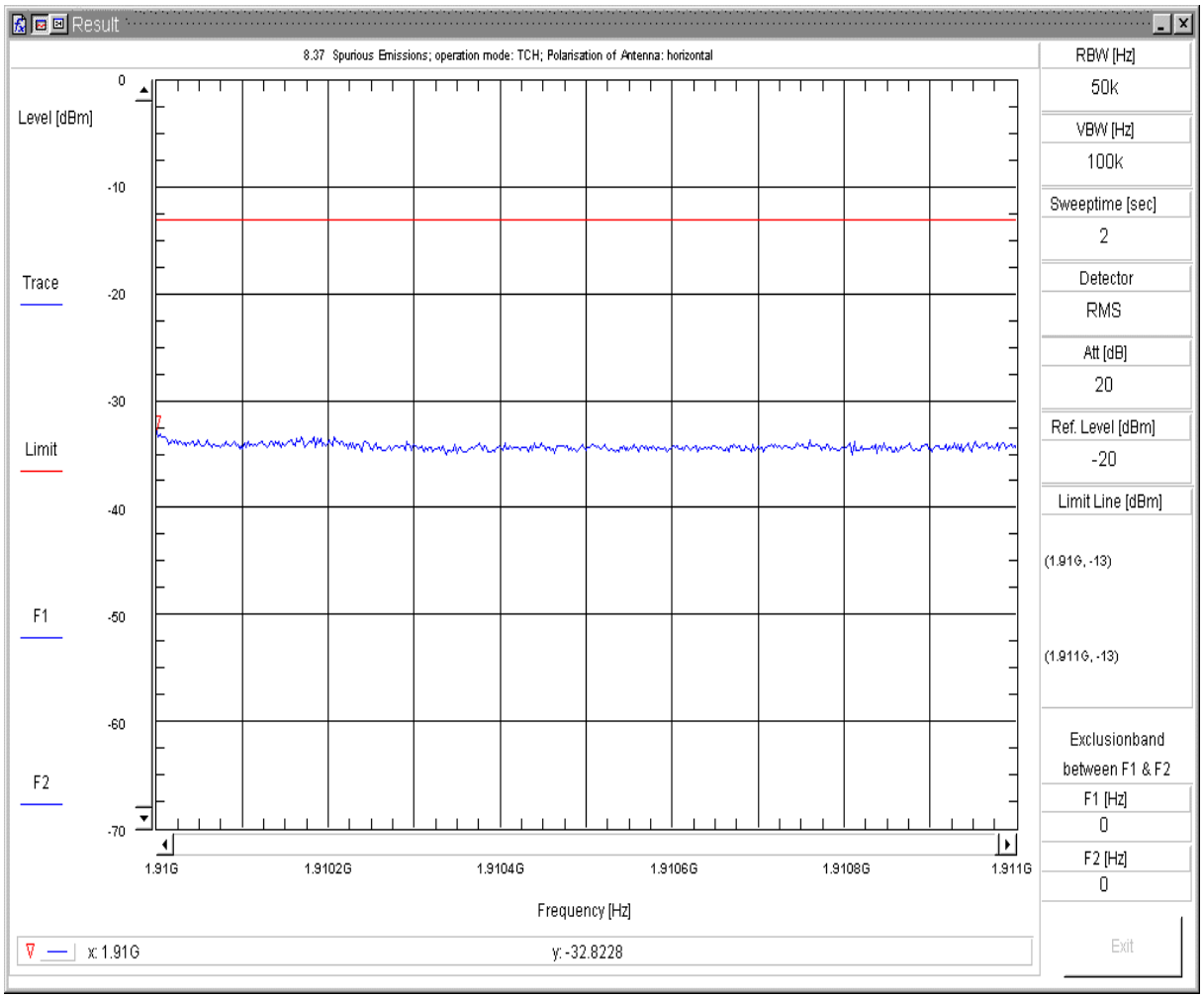
Tue 03/May/2011 16:10:50ff Spurious Emissions V7.2.5



8.36 Radiated Spurious Emission

Transducer: c:\vee_user\spuri_V7\FCC_Part_24_(WCDMA_FDD_II)\TD_TX_V
Sweepnr: Sweep6
Pol. of Antenna: vertikal
EUT Position: EUT_vertical+horizontal
EUT OP Mode: FCC_Part_24_(WCDMA_FDD_II) TCH
EUT Description: Globesurfer 3.5 + AC Adapter Phihong
EUT add. Info: +Analogue PSTN Telephone/FAX
EUT Hardware:
EUT Software:
EUT Config: Internal antenna
EUT S/N: 0044014441414485
Battery: AC/DC Charger; Nominal Voltage; 110 V AC/60Hz
Remark: FDD II Voice; channel 9262; WLAN-on bMode 2MBit Ch1; Telephone analog active +ping active on LAN
Operator: Lor
Testing Site: Fully Anechoic Room (FAR); CETECOM Essen

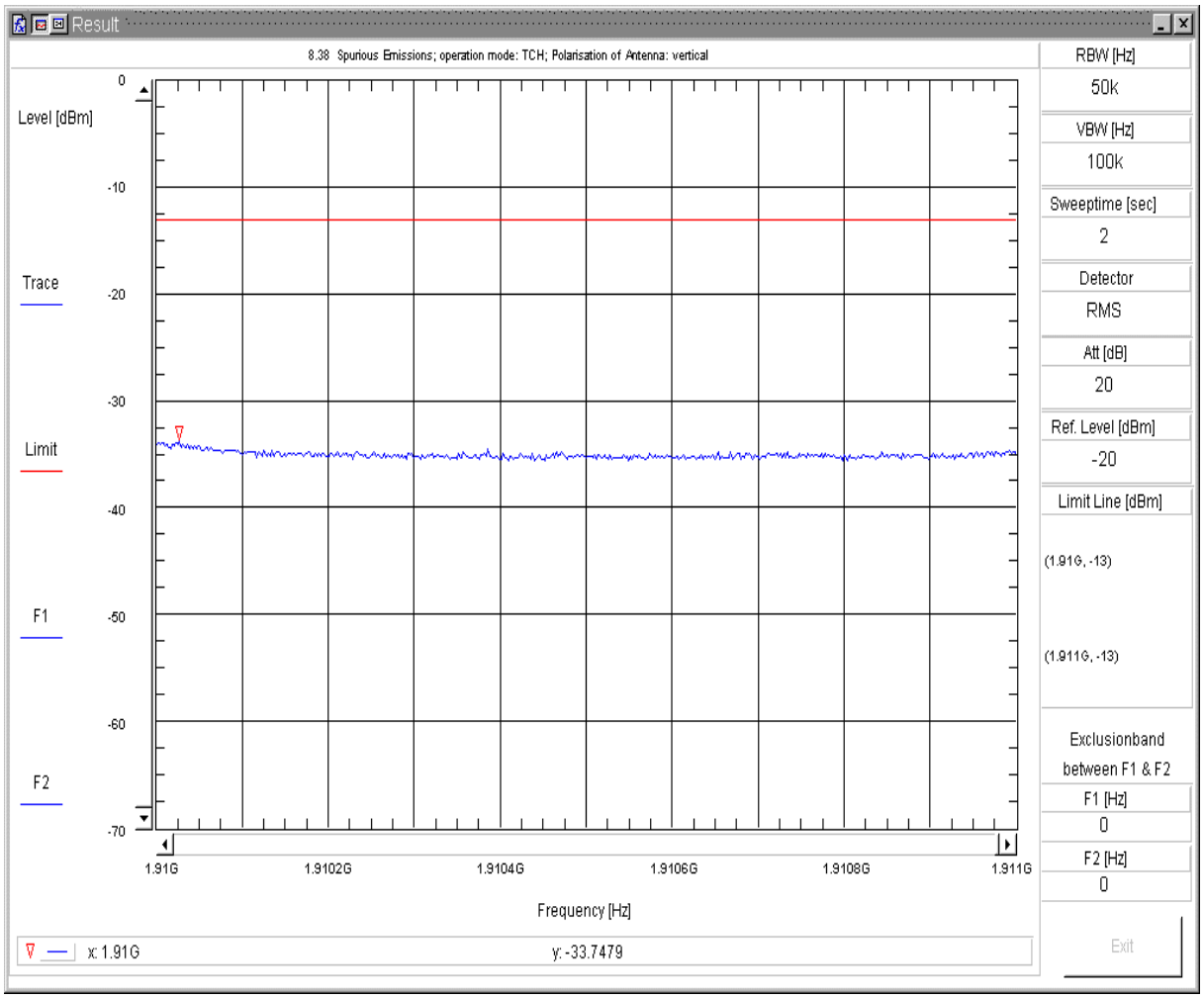
Wed 04/May/2011 07:17:54ff Spurious Emissions V7.2.5



8.37 Radiated Spurious Emission

Transducer: c:\vee_user\spuri_V7\FCC_Part_24_(WCDMA_FDD_II)\TD_TX_H
Sweepnr: Sweep7
Pol. of Antenna: horizontal
EUT Position: EUT_vertical+horizontal
EUT OP Mode: FCC_Part_24_(WCDMA_FDD_II) TCH
EUT Description: Globesurfer 3.5 + AC Adapter Phihong
EUT add. Info: +Analogue PSTN Telephone/FAX
EUT Hardware:
EUT Software:
EUT Config: Internal antenna
EUT S/N: 0044014441414485
Battery: AC/DC Charger; Nominal Voltage; 110 V AC/60Hz
Remark: FDDII; Channel 9538; WLAN-on bMode 2MBit Ch1; Telephone analog active +ping active on LAN
Operator: Lor
Testing Site: Fully Anechoic Room (FAR); CETECOM Essen

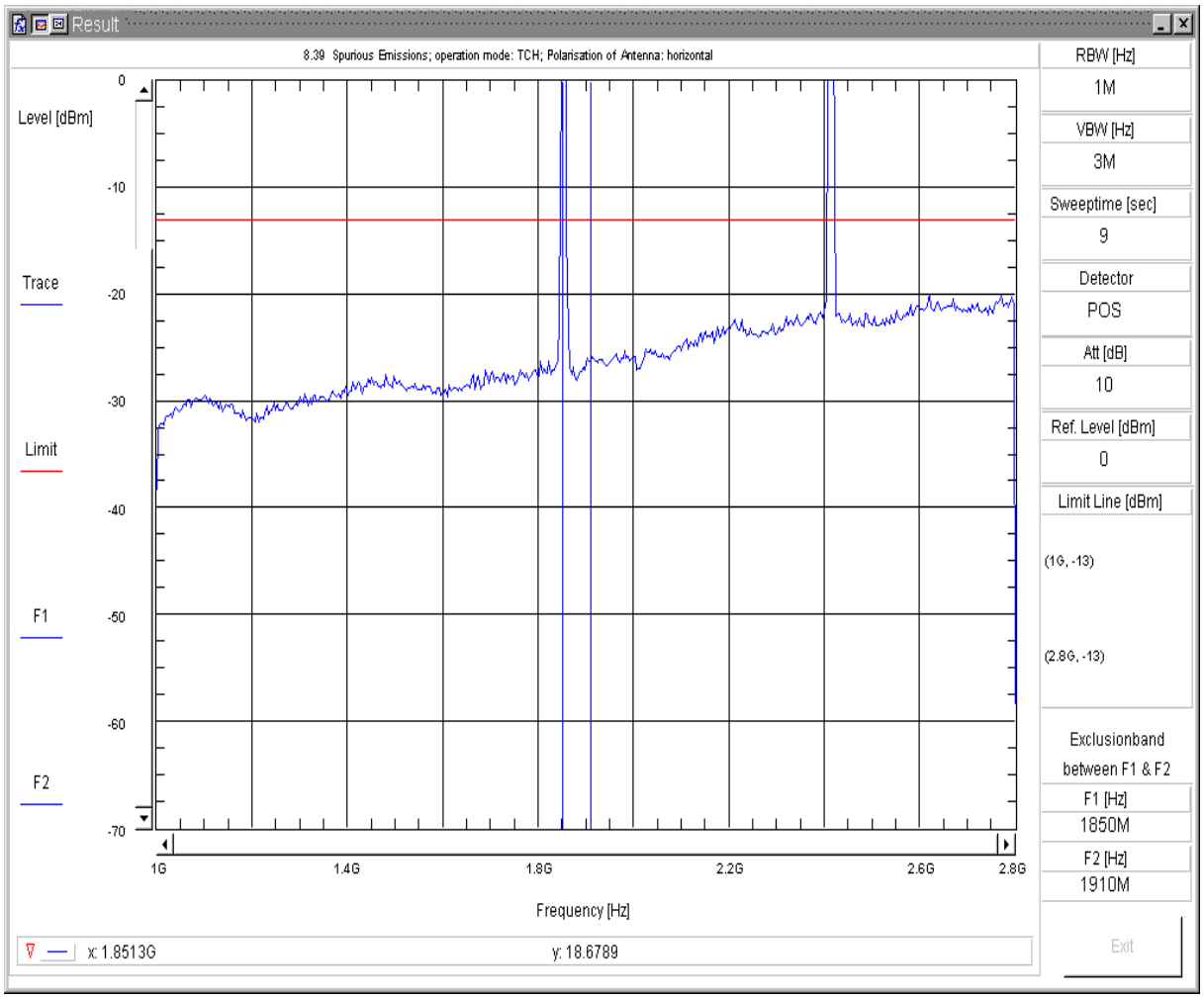
Wed 04/May/2011 07:23:43ff Spurious Emissions V7.2.5



8.38 Radiated Spurious Emission

Transducer: c:\vee_user\spuri_V7\FCC_Part_24_(WCDMA_FDD_II)\TD_TX_V
Sweepnr: Sweep7
Pol. of Antenna: vertikal
EUT Position: EUT_vertical+horizontal
EUT OP Mode: FCC_Part_24_(WCDMA_FDD_II) TCH
EUT Description: Globesurfer 3.5 + AC Adapter Phihong
EUT add. Info: +Analogue PSTN Telephone/FAX
EUT Hardware:
EUT Software:
EUT Config: Internal antenna
EUT S/N: 0044014441414485
Battery: AC/DC Charger; Nominal Voltage; 110 V AC/60Hz
Remark: FDDII; Channel 9538; WLAN-on bMode 2MBit Ch1; Telephone analog active +ping active on LAN
Operator: Lor
Testing Site: Fully Anechoic Room (FAR); CETECOM Essen

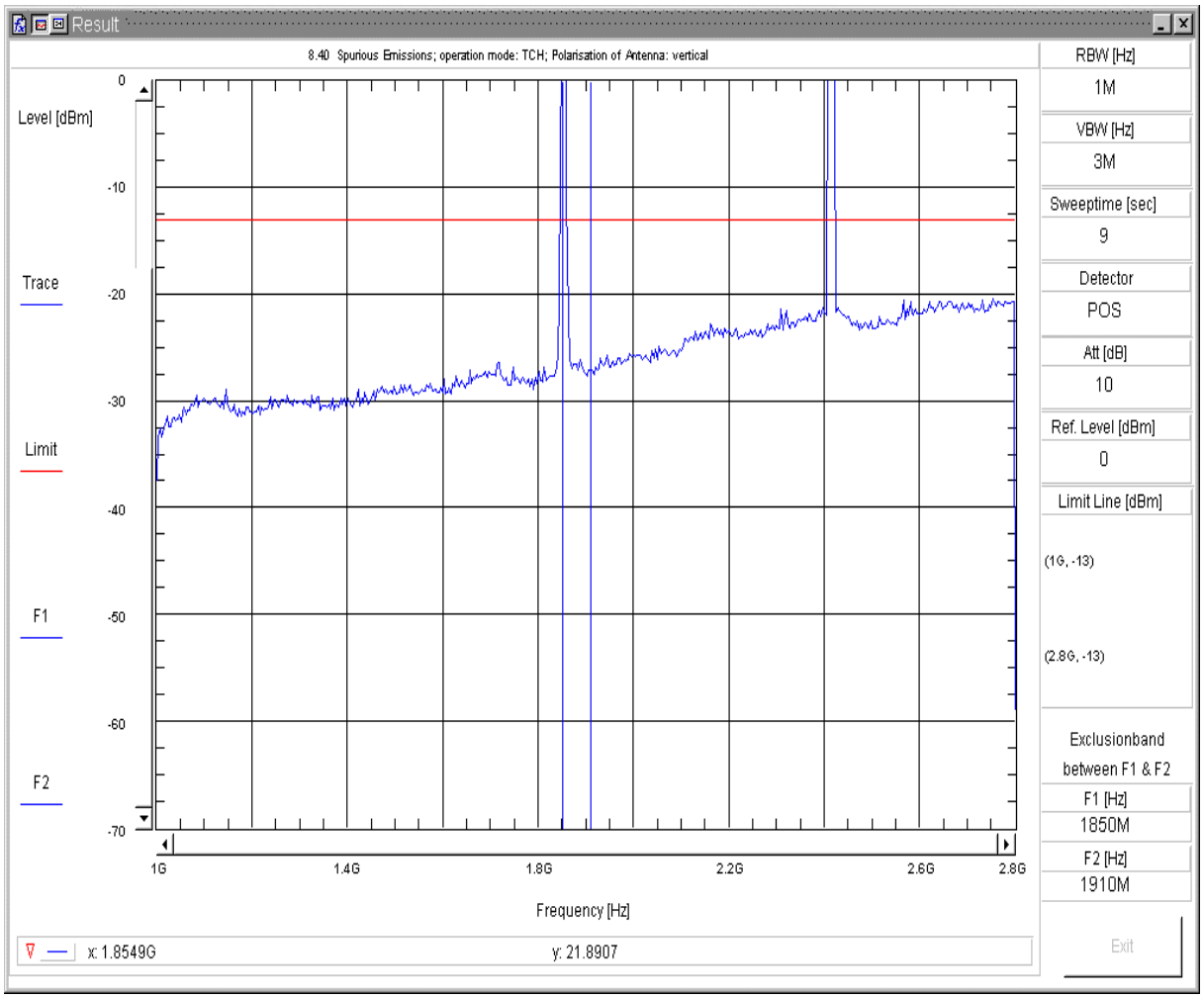
Wed 04/May/2011 07:32:18ff Spurious Emissions V7.2.5



8.39 Radiated Spurious Emission

Transducer: c:\vee_user\spuri_V7\FCC_Part_24_(WCDMA_FDD_II)\TD_TX_H
Sweepnr: Sweep2
Pol. of Antenna: horizontal
EUT Position: EUT_vertical+horizontal
EUT OP Mode: FCC_Part_24_(WCDMA_FDD_II) TCH
EUT Description: Globesurfer 3.5 + AC Adapter Phihong
EUT add. Info: +Analogue PSTN Telephone/FAX
EUT Hardware:
EUT Software:
EUT Config: Internal antenna
EUT S/N: 0044014441414485
Battery: AC/DC Charger; Nominal Voltage; 110 V AC/60Hz
Remark: FDDII; Channel 9242; WLAN-on bMode 2MBit Ch1; Telephone analog active +ping active on LAN
Operator: Lor
Testing Site: Fully Anechoic Room (FAR); CETECOM Essen

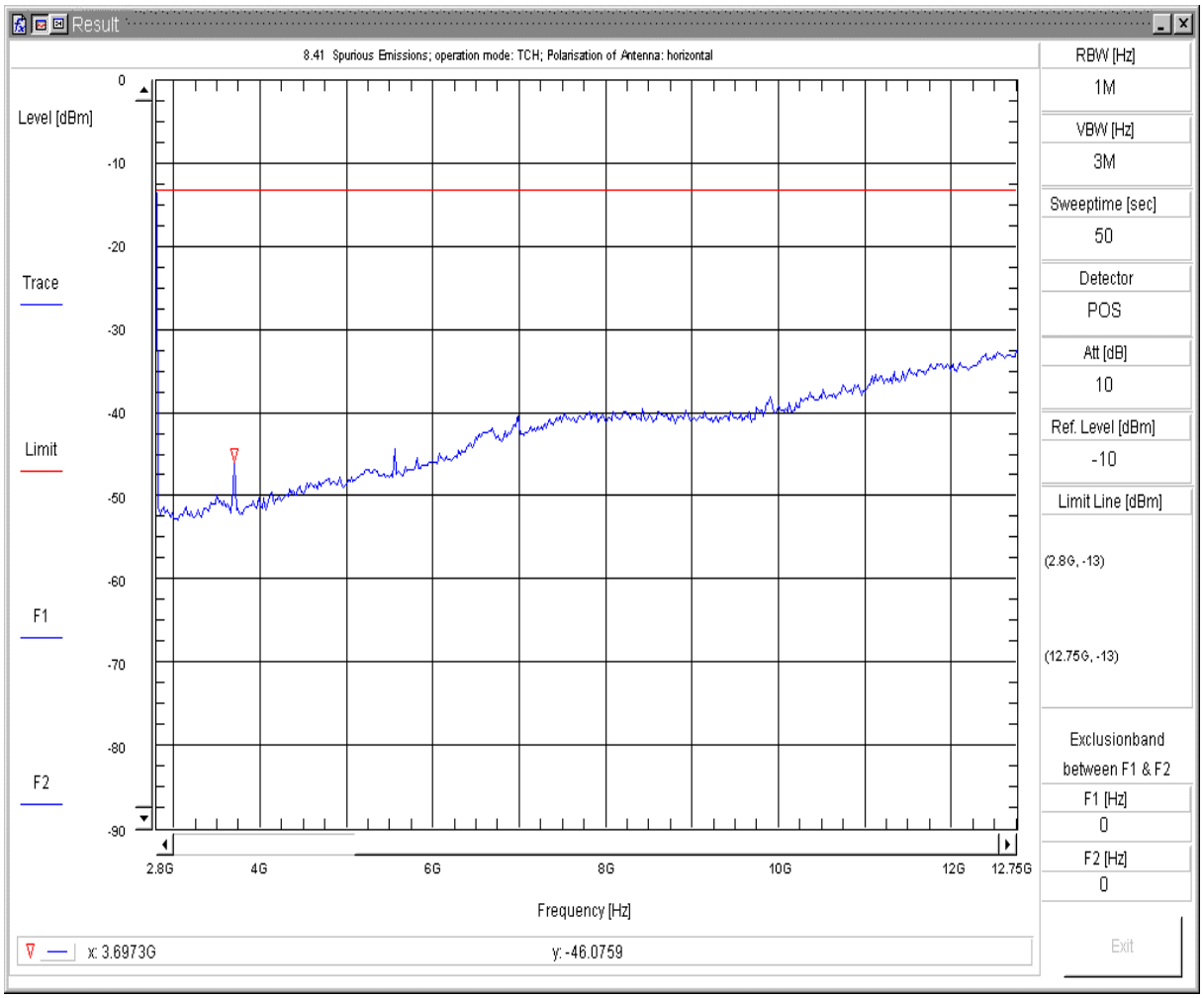
Wed 04/May/2011 07:49:18ff Spurious Emissions V7.2.5



8.40 Radiated Spurious Emission

Transducer: c:\vee_user\spuri_V7\FCC_Part_24_(WCDMA_FDD_II)\TD_TX_V
Sweepnr: Sweep2
Pol. of Antenna: vertikal
EUT Position: EUT_vertical+horizontal
EUT OP Mode: FCC_Part_24_(WCDMA_FDD_II) TCH
EUT Description: Globesurfer 3.5 + AC Adapter Phihong
EUT add. Info: +Analogue PSTN Telephone/FAX
EUT Hardware:
EUT Software:
EUT Config: Internal antenna
EUT S/N: 0044014441414485
Battery: AC/DC Charger; Nominal Voltage; 110 V AC/60Hz
Remark: FDDII; Channel 9242; WLAN-on bMode 2MBit Ch1; Telephone analog active +ping active on LAN
Operator: Lor
Testing Site: Fully Anechoic Room (FAR); CETECOM Essen

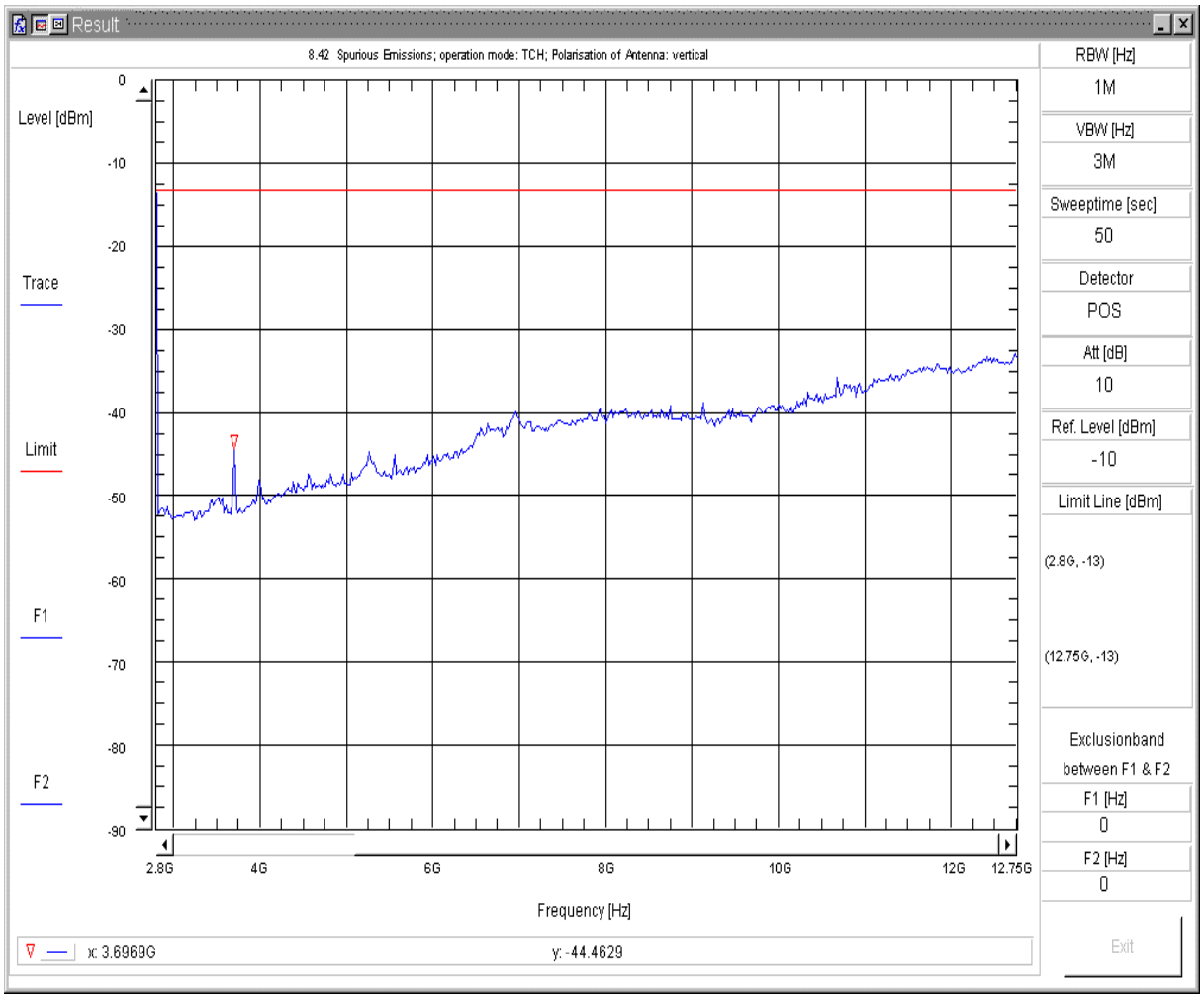
Wed 04/May/2011 07:58:08ff Spurious Emissions V7.2.5



8.41 Radiated Spurious Emission

Transducer: c:\vee_user\spuri_V7\FCC_Part_24_(WCDMA_FDD_II)\TD_TX_H
Sweepnr: Sweep3
Pol. of Antenna: horizontal
EUT Position: EUT_vertical+horizontal
EUT OP Mode: FCC_Part_24_(WCDMA_FDD_II) TCH
EUT Description: Globesurfer 3.5 + AC Adapter Phihong
EUT add. Info: +Analogue PSTN Telephone/FAX
EUT Hardware:
EUT Software:
EUT Config: Internal antenna
EUT S/N: 0044014441414485
Battery: AC/DC Charger; Nominal Voltage; 110 V AC/60Hz
Remark: FDDII; Channel 9262; WLAN-on bMode 2MBit Ch1; Telephone analog active +ping active on LAN
Operator: Lor
Testing Site: Fully Anechoic Room (FAR); CETECOM Essen

Wed 04/May/2011 08:03:55fp Spurious Emissions V7.2.5

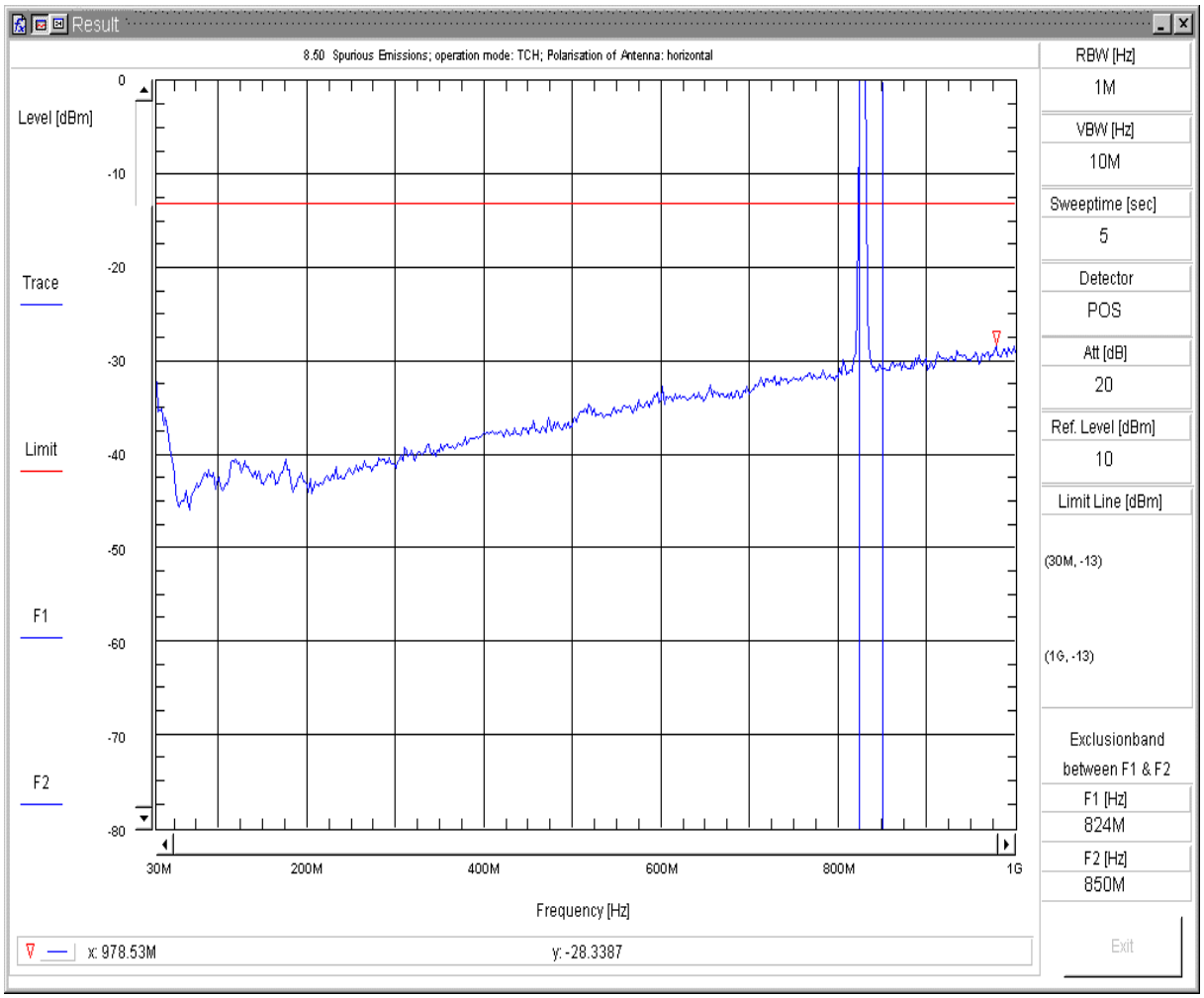


8.42 Radiated Spurious Emission

Transducer: c:\vee_user\spuri_V7\FCC_Part_24_(WCDMA_FDD_II)\TD_TX_V
Sweepnr: Sweep3
Pol. of Antenna: vertikal
EUT Position: EUT_vertical+horizontal
EUT OP Mode: FCC_Part_24_(WCDMA_FDD_II) TCH
EUT Description: Globesurfer 3.5 + AC Adapter Phihong
EUT add. Info: +Analogue PSTN Telephone/FAX
EUT Hardware:
EUT Software:
EUT Config: Internal antenna
EUT S/N: 0044014441414485
Battery: AC/DC Charger; Nominal Voltage; 110 V AC/60Hz
Remark: FDDII; Channel 9262; WLAN-on bMode 2MBit Ch1;
Operator: Lor
Testing Site: Fully Anechoic Room (FAR); CETECOM Essen

Wed 04/May/2011 08:25:33pf Spurious Emissions V7.2.5

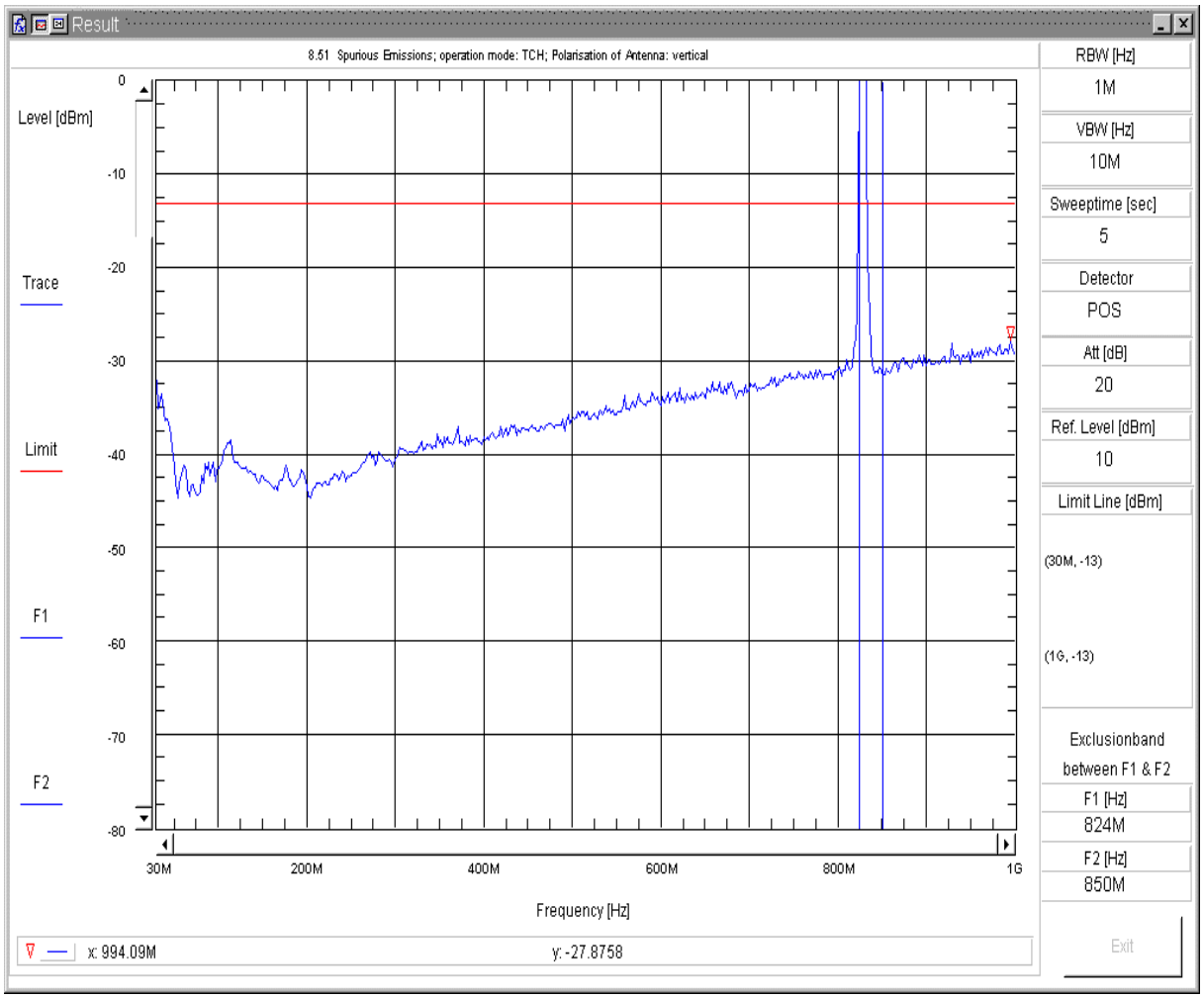
8.5. FDD band V (Internal Antenna; Out-of-band emissions)



8.50 Radiated Spurious Emission

Transducer: c:\vee_user\spuri_V7\FCC_Part_22_(WCDMA_FDD_V)\TD_TX_H
Sweepnr: Sweep1
Pol. of Antenna: horizontal
EUT Position: EUT_vertical+horizontal
EUT OP Mode: FCC_Part_22_(WCDMA_FDD_V) TCH
EUT Description: Globesurfer 3.5 + AC/DC Adapter
EUT add. Info: + PSTN Telephone + Notebookl
EUT Hardware:
EUT Software:
EUT Config:
EUT S/N:
Battery: AC/DC Charger; Nominal Voltage; 110 V AC/ 60Hz
Remark: Channel 4132, Internal antenna
Operator: Lor
Testing Site: Fully Anechoic Room (FAR); CETECOM Essen

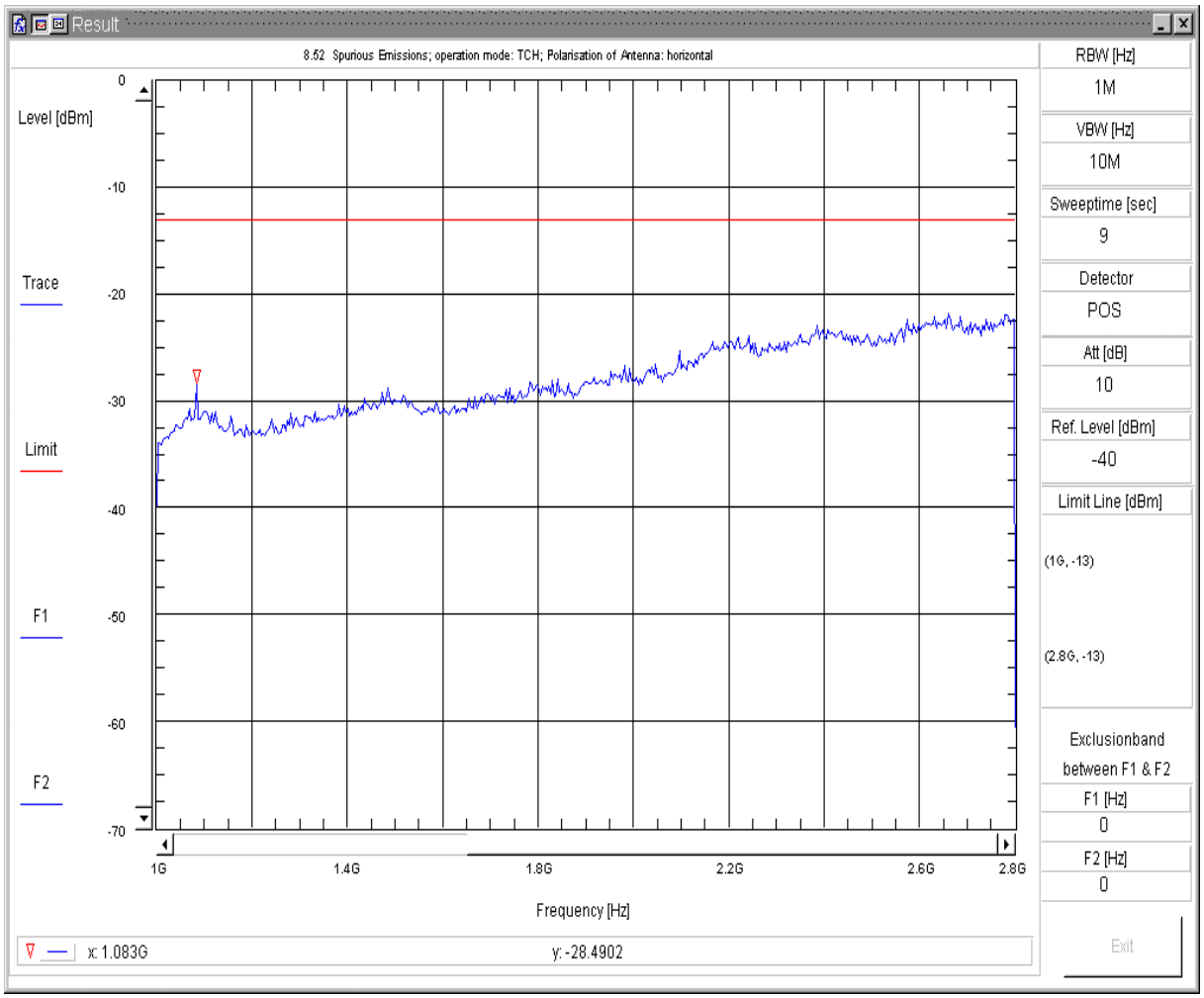
Sat 21/May/2011 17:12:58ppp Spurious Emissions V7.2.5



8.51 Radiated Spurious Emission

Transducer: c:\vee_user\spuri_V7\FCC_Part_22_(WCDMA_FDD_V)\TD_TX_V
Sweepnr: Sweep1
Pol. of Antenna: vertikal
EUT Position: EUT_vertical+horizontal
EUT OP Mode: FCC_Part_22_(WCDMA_FDD_V) TCH
EUT Description: Globesurfer 3.5 + AC/DC Adapter
EUT add. Info: + PSTN Telephone + Notebook
EUT Hardware:
EUT Software:
EUT Config:
EUT S/N:
Battery: AC/DC Charger; Nominal Voltage; 110 V AC/ 60Hz
Remark: channel 4132/ Internal Antenna
Operator: Lor
Testing Site: Fully Anechoic Room (FAR); CETECOM Essen

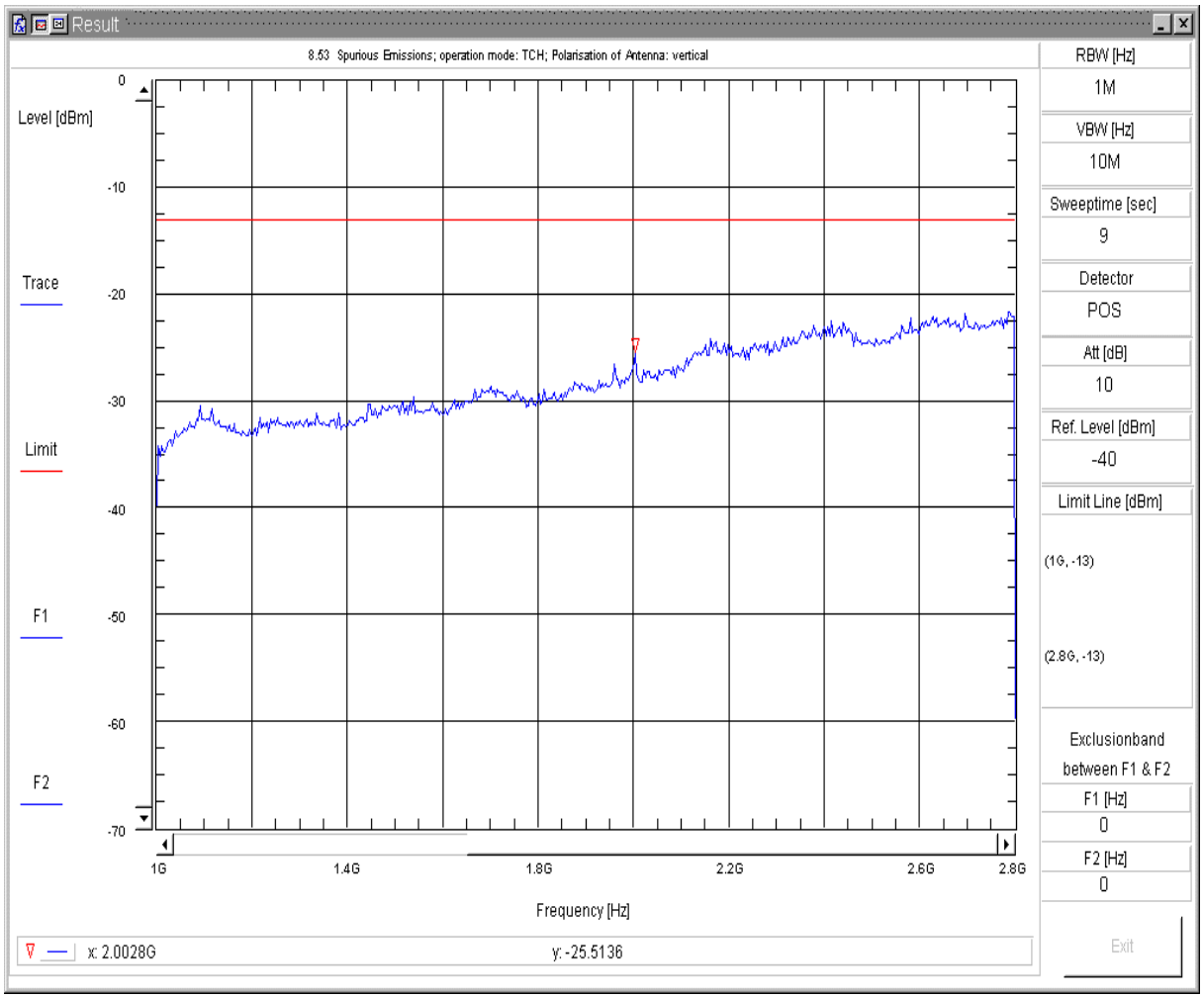
Sat 21/May/2011 17:16:51ppf Spurious Emissions V7.2.5



8.52 Radiated Spurious Emission

Transducer: c:\vee_user\spuri_V7\FCC_Part_22_(WCDMA_FDD_V)\TD_TX_H
Sweepnr: Sweep2
Pol. of Antenna: horizontal
EUT Position: EUT_vertical+horizontal
EUT OP Mode: FCC_Part_22_(WCDMA_FDD_V) TCH
EUT Description: Globesurfer 3.5 + AC/DC Adapter
EUT add. Info: + PSTN Telephone + Notebook
EUT Hardware:
EUT Software:
EUT Config:
EUT S/N:
Battery: AC/DC Charger; Nominal Voltage; 110 V AC/ 60Hz
Remark: channel 4132/ Internal Antenna
Operator: Lor
Testing Site: Fully Anechoic Room (FAR); CETECOM Essen

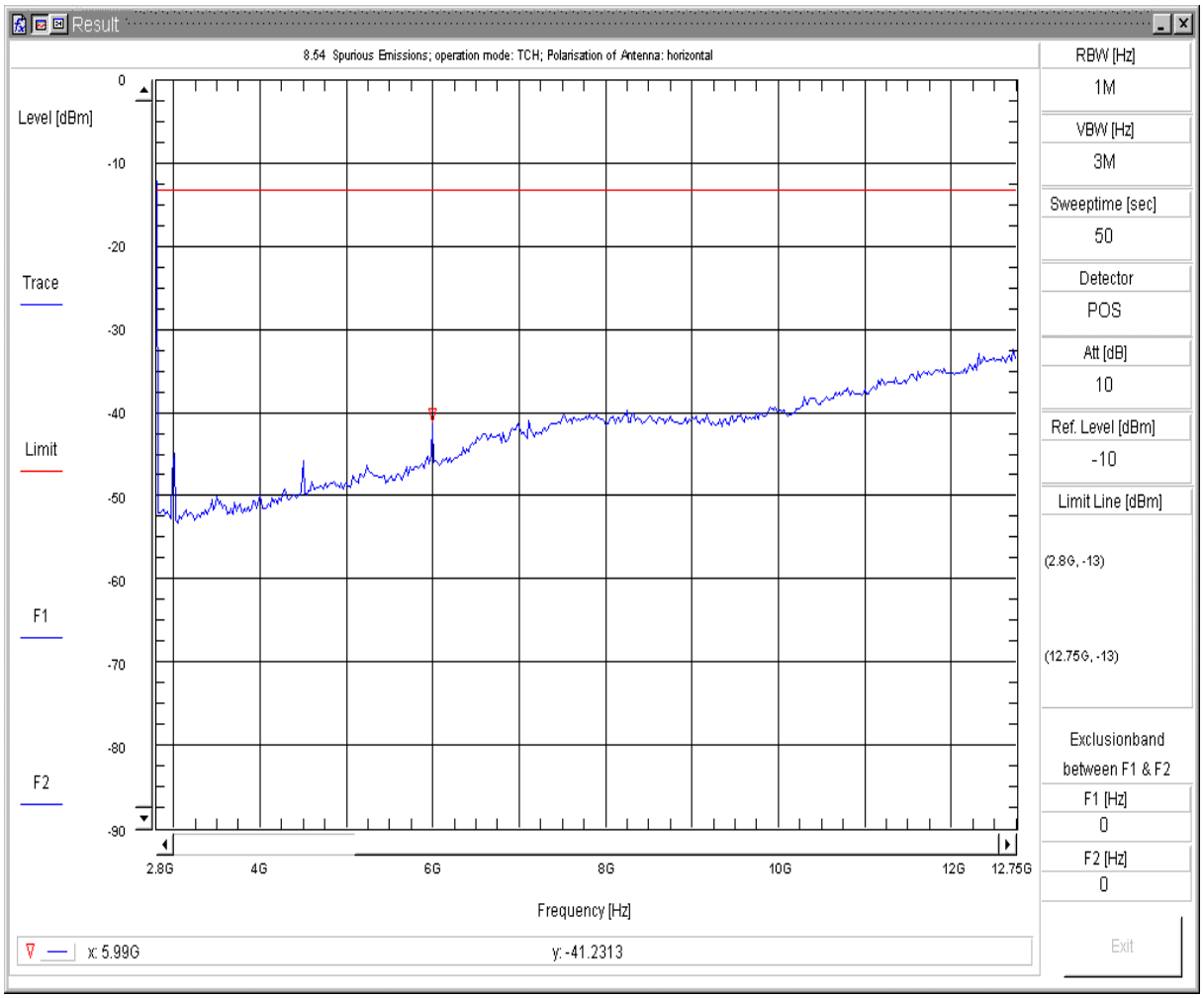
Sat 21/May/2011 17:20:49ff Spurious Emissions V7.2.5



8.53 Radiated Spurious Emission

Transducer: c:\vee_user\spuri_V7\FCC_Part_22_(WCDMA_FDD_V)\TD_TX_V
Sweepnr: Sweep2
Pol. of Antenna: vertikal
EUT Position: EUT_vertical+horizontal
EUT OP Mode: FCC_Part_22_(WCDMA_FDD_V) TCH
EUT Description: Globesurfer 3.5 + AC/DC Adapter
EUT add. Info: + PSTN Telephone + Notebook
EUT Hardware:
EUT Software:
EUT Config:
EUT S/N:
Battery: AC/DC Charger; Nominal Voltage; 110 V AC/ 60Hz
Remark: channel 4132/ Internal Antenna
Operator: Lor
Testing Site: Fully Anechoic Room (FAR); CETECOM Essen

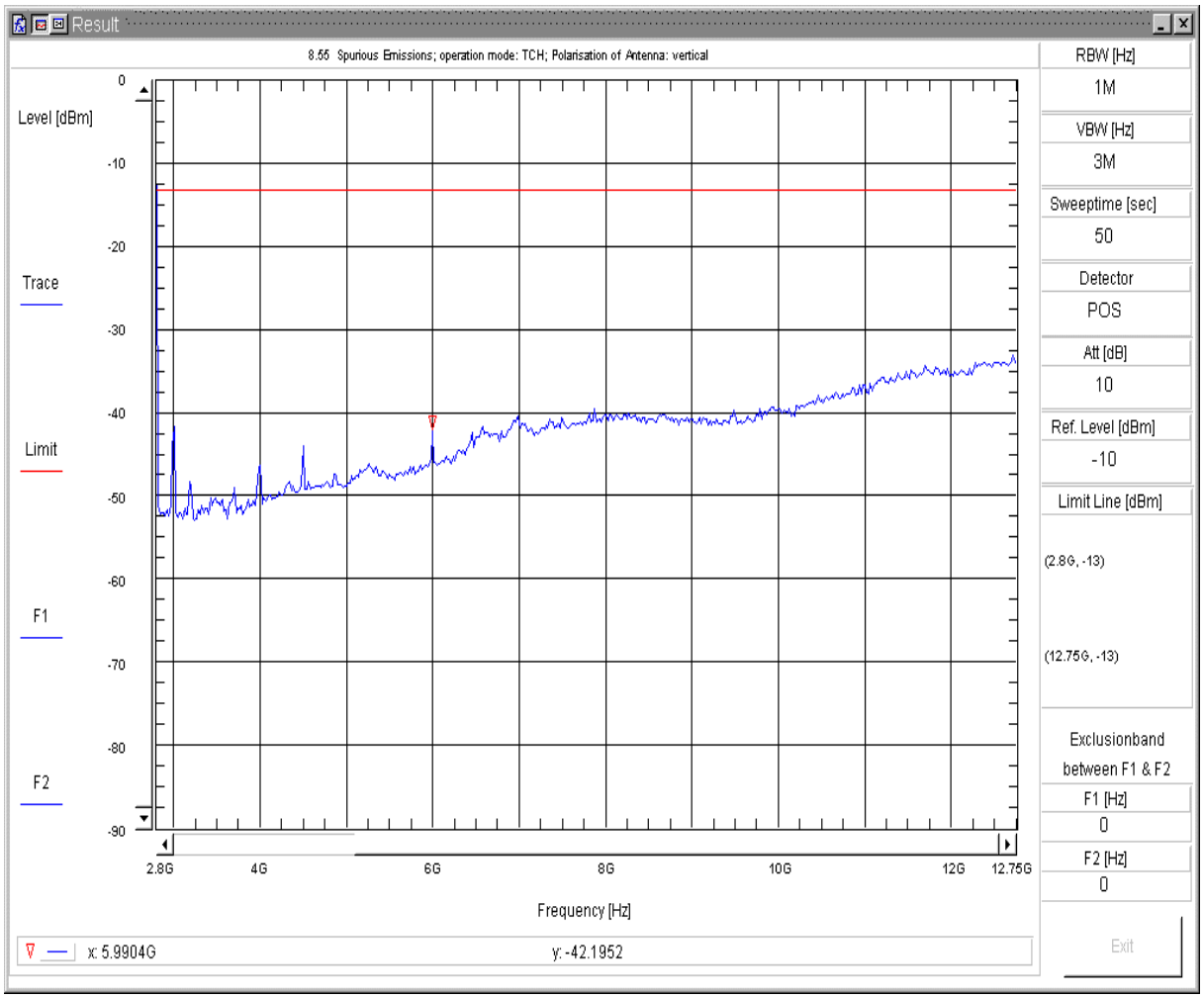
Sat 21/May/2011 17:25:46ff Spurious Emissions V7.2.5



8.54 Radiated Spurious Emission

Transducer: c:\vee_user\spuri_V7\FCC_Part_22_(WCDMA_FDD_V)\TD_TX_H
Sweepnr: Sweep3
Pol. of Antenna: horizontal
EUT Position: EUT_vertical+horizontal
EUT OP Mode: FCC_Part_22_(WCDMA_FDD_V) TCH
EUT Description: Globesurfer 3.5 + AC/DC Adapter
EUT add. Info: + PSTN Telephone + Notebook
EUT Hardware:
EUT Software:
EUT Config:
EUT S/N:
Battery: AC/DC Charger; Nominal Voltage; 110 V AC/ 60Hz
Remark: channel 4132/ Internal Antenna
Operator: Lor
Testing Site: Fully Anechoic Room (FAR); CETECOM Essen

Sat 21/May/2011 17:31:17ff Spurious Emissions V7.2.5

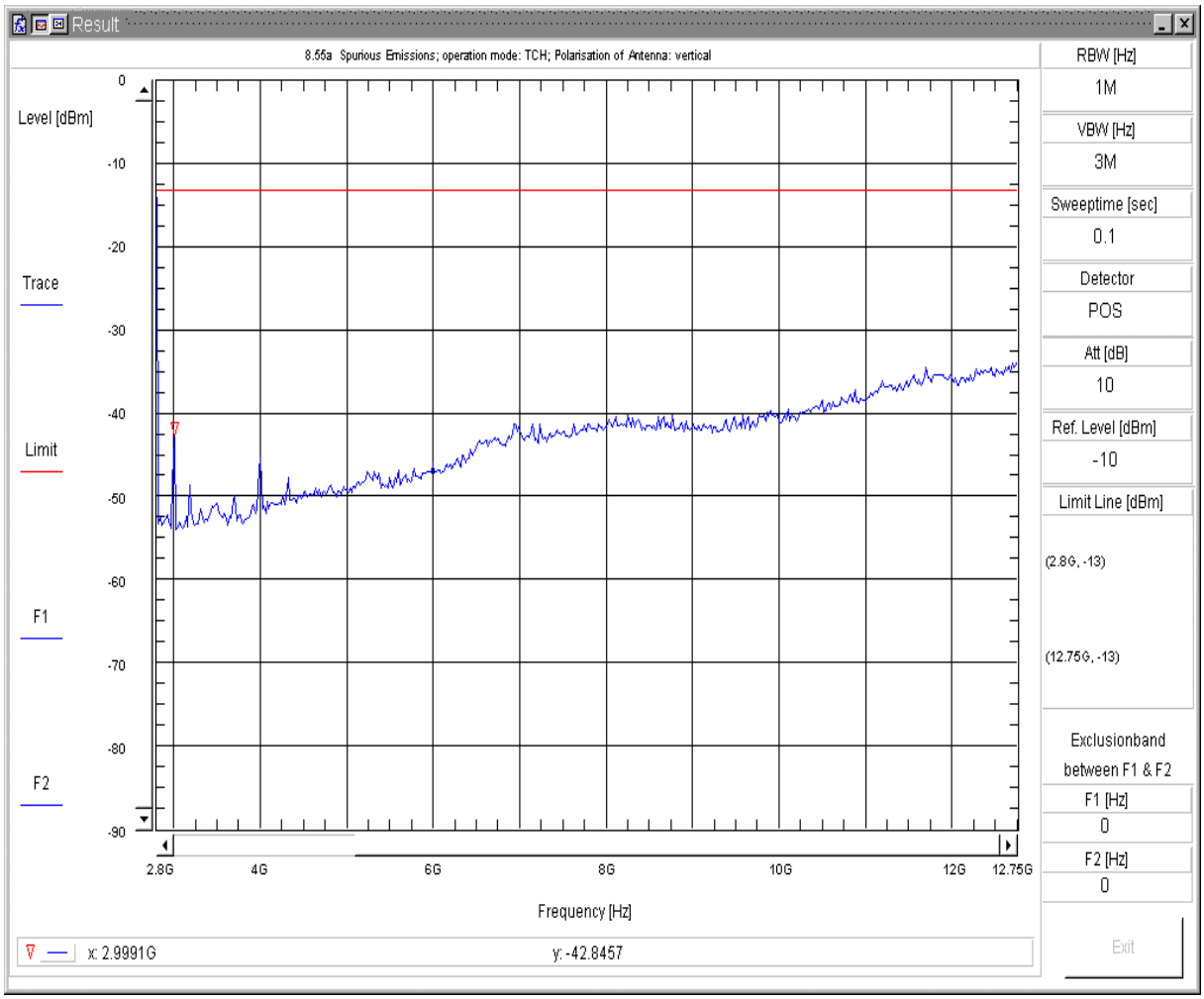


8.55 Radiated Spurious Emission

Transducer: c:\vee_user\spuri_V7\FCC_Part_22_(WCDMA_FDD_V)\TD_TX_V
Sweepnr: Sweep3
Pol. of Antenna: vertikal
EUT Position: EUT_vertical+horizontal
EUT OP Mode: FCC_Part_22_(WCDMA_FDD_V) TCH
EUT Description: Globesurfer 3.5 + AC/DC Adapter
EUT add. Info: + PSTN Telephone + Notebook
EUT Hardware:
EUT Software:
EUT Config:
EUT S/N:
Battery: AC/DC Charger; Nominal Voltage; 110 V AC/ 60Hz
Remark: channel 4132/ Internal Antenna
Operator: Lor
Testing Site: Fully Anechoic Room (FAR); CETECOM Essen

Sat 21/May/2011 17:46:24ff Spurious Emissions V7.2.5

8.6. Measurement of notebook and external hardisk without main EUT



8.55a Radiated Spurious Emission

Transducer: c:\vee_user\spuri_V7\FCC_Part_22_(WCDMA_FDD_V)\TD_TX_V
Sweepnr: Sweep3
Pol. of Antenna: vertikal
EUT Position: EUT_vertical+horizontal
EUT OP Mode: FCC_Part_22_(WCDMA_FDD_V) TCH
EUT Description: Globesurfer 3.5 + AC/DC Adapter
EUT add. Info: + PSTN Telephone
EUT Hardware:
EUT Software:
EUT Config:
EUT S/N:
Battery: AC/DC Charger; Nominal Voltage; 110 V AC/ 60Hz
Remark: Notebook alone + AC/DC Adapter
Operator: Lor
Testing Site: Fully Anechoic Room (FAR); CETECOM Essen

Sat 21/May/2011 18:05:34ff Spurious Emissions V7.2.5