CETECOM ICT Services GmbH
Untertürkheimer Straße 6-10 . D-66117 Saarbrücken Phone: +49 (0) 681-598-0 Fax: -9075
RSC-Laboratory

Accredited testing-laboratory

DAR registration number: DAT-P-176/94-D1

Federal Motor Transport Authority (KBA)
DAR registration number: KBA-P 00070-97

Recognized by the Federal Communications Commission
Anechoic chamber registration no.: 90462 (FCC)
Anechoic chamber registration no.: 3462C-1 (IC)
Certification ID: DE 0001
Accreditation ID: DE 0002

Accredited Bluetooth® Test Facility (BQTF)

Test report no.	**:**	**2-4900-02-09/08**
Type identification	**:**	**MBR W35**
Applicant	**:**	**Ericsson AB**
FCC ID	**:**	**PJWMBRW35**
IC Certification No	**:**	**287X-MBRW35**
Test standards	**:**	**47 CFR Part 15**
		RSS - 210 Issue 7

Table of contents

1 General information

1.1 Notes

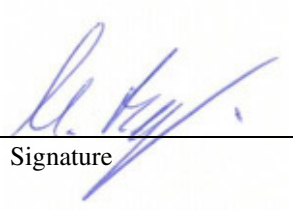
The test results of this test report relate exclusively to the test item specified in 3.1.1. The CETECOM ICT Services GmbH does not assume responsibility for any conclusions and generalisations drawn from the test results with regard to other specimens or samples of the type of the equipment represented by the test item. The test report may only be reproduced or published in full. Reproduction or publication of extracts from the report requires the prior written approval of the CETECOM ICT Services GmbH.

Test laboratory manager:

2009-03-04	**Marco Bertolino**	
Date	Name	Signature

2009-03-04	**Stefan Bös**	
Date	Name	Signature

Technical responsibility for area of testing:

2009-03-04	**Michael Berg**	
Date	Name	Signature

1.2 Testing laboratory

CETECOM ICT Services GmbH

Untertürkheimer Straße 6 - 10
66117 Saarbrücken
Germany
Phone: + 49 681 5 98 - 0
Fax: + 49 681 5 98 - 9075
e-mail: info@ICT.cetecom.de
Internet: http://www.cetecom-ict.de

State of accreditation:	**The test laboratory (area of testing) is accredited according to DIN EN ISO/IEC 17025 DAR registration number: DAT-P-176/94-D1**
Accredited by:	**Federal Motor Transport Authority (KBA) DAR registration number: KBA-P 00070-97**

Testing location, if different from CETECOM ICT Services GmbH:

Name :
Street :
Town :
Country :
Phone :
Fax :

1.3 Details of applicant

Name:	**Ericsson AB PDU RAN Transmission & Home**
Street:	**Datalinjen 3**
Town:	**58112 Linköping**
Country:	**Sweden**
Telephone:	**+46-13-322064**
Fax:	**+46 10 711 5089**
Contact:	**Anders Svensson**
E-mail:	**anders.b.svensson@ericsson.com**
Telephone:	**+46 10 711 5064**

1.4 Application details

Date of receipt of order:	**2008-04-17**
Date of receipt of test item:	**2008-12-02**
Date of start test:	**2009-01-27**
Date of end test:	**2009-02-24**
Persons(s) who have been present during the test:	**-/-**

2 Test standard/s:

47 CFR Part 15	**2008-07**	**Title 47 of the Code of Federal Regulations; Chapter I-Federal Communications Commission subchapter A - general, Part 15-Radio frequency devices**
RSS - 210 Issue 7	**2007-06**	**Spectrum Management and Telecommunications - Radio Standards Specification Low-power Licence-exempt Radiocommunication Devices (All Frequency Bands): Category I Equipment**

3 Technical tests

3.1 Details of manufacturer

Name:	**Ericsson AB PDU RAN Transmission & Home**
Street:	**Datalinjen 3**
Town:	**58112 Linköping**
Country:	**Sweden**

3.1.1 Test item

Kind of test item	:	**Mobile Broadband Router with Module F3507**
Type identification	:	**MBR W35**
S/N serial number	:	**S/N: T710443474** **MAC: 00135E50FA17** **IMEI: 353626-02-002143-7**
HW hardware status	:	**R1A**
SW software status	:	**R12A**
Frequency Band [MHz]	:	**ISM 2.400 - 2.483,5**
Type of Modulation	:	**DSSS & OFDM**
Number of channels	:	**11**
Antenna	:	**Two integrated PCB antennas**
Power Supply	:	**115 V AC by power supply**
Temperature Range	:	**-20 °C to 55 °C**

Max. power radiated: **19.78 dBm (OFDM)**
Max. power conducted: **Not performed!**

FCC ID: **PJWMBRW35**
IC: **287X-MBRW35**

3.1.2 Additional EUT information For IC Canada (appendix 2)

IC Registration Number:	**287X-MBRW35**
Model Name:	**MBR W35**
Manufacturer (complete Address):	**Ericsson AB Datalinjen 3 58112 Linköping Sweden**
Tested to Radio Standards Specification (RSS) No.:	**RSS-210 Issue 7**
Open Area Test Site Industry Canada Number:	**IC 3462C-1**
Frequency Range (or fixed frequency) [MHz]:	**2400 – 2483.5 MHz**
RF: Power [W] (max):	**DSSS: EIRP: 50.00 mW Conducted: Not performed! OFDM: EIRP: 95.06 mW Conducted: Not performed!**
Antenna Type:	**Two integrated PCB antennas**
Occupied Bandwidth (99% BW) [kHz]:	**Not performed!**
Type of Modulation:	**DSSS & OFDM**
Emission Designator (TRC-43):	**Not performed!**
Transmitter Spurious (worst case) [dBµV/m in 3m]:	**42.32**
Receiver Spurious (worst case) [dBµV/m in 3m]:	**41.68**

ATTESTATION:

I attest that the testing was performed or supervised by me; that the test measurements were made in accordance with the above-mentioned departmental standard(s), and that the radio equipment identified in this application has been subject to all applicable test conditions specified in the departmental standards and all of the requirements of the standards have been met.

Signature:

Test engineer: Marco Bertolino Date: 2009-03-04

Signature:

Test engineer: Stefan Bös Date: 2009-03-04

3.1.3 RF Technical Brief Cover Sheet acc. To RSS-102

All Fields must be completed with the requested information or the following codes: N/A for Not Applicable, N/P for Not Performed or N/V for Not Available. Where applicable, check appropriate box.

1. COMPANY NUMBER:	**287X**
2. MODEL NUMBER:	**MBR W35**
3. MANUFACTURER:	**Ericsson AB**
4. TYPE OF EVALUATION:	**(c) RF Evaluation**

- Evaluated against exposure limits: General Public Use ☒ Controlled Use ☐
- Duty cycle used in evaluation: 100 %
- Standard used for evaluation: RSS-102 Issue 2 (2005-11)
- Measurement distance: 0.20 m
- RF value: 0.189 V/m ☐ A/m ☐ W/m^2 ☒

Measured ☐ Computed ☐ Calculated ☒

Declaration of RF Exposure Compliance

ATTESTATION:

I attest that the information provided in this test report is correct; that a Technical Brief was prepared and the information it contains is correct; that the device evaluation was performed or supervised by me; that applicable measurement methods and evaluation methodologies have been followed and that the device meets the SAR and/or RF exposure limits of RSS-102.

Name: Dipl.-Ing. (FH) Marco Bertolino
Title: Engineer
Company: Cetecom ICT Services GmbH

Name: Dipl.-Ing. (FH) Stefan Bös
Title: Projekt engineer
Company: Cetecom ICT Services GmbH

3.1.4 EUT operating modes

EUT operating mode no.*)	Description of operating modes	Additional information
Op. 0	normal mode	normal temperature and power source conditions
Op. 1		low temperature, low power source conditions
Op. 2		low temperature, high power source conditions
Op. 3		high temperature, low power source conditions
Op. 4		high temperature, high power source conditions

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

3.1.5 Extreme conditions testing values

Description	Shortcut	Unit	Value
Nominal Temperature	T_{nom}	°C	**21**
Nominal Humidity	H_{nom}	%	**53**
Nominal Power Source	V_{nom}	V	**115**

Type of power source: AC by power supply

Deviations from these values are reported in chapter 2

4 Summary of Measurement Results and list of all performed test cases

☒ **No deviations from the technical specifications were ascertained**

☐ There were deviations from the technical specifications ascertained

TC identifier	Description	verdict	date	Remark
RF-Testing	FCC Part 15 §15.247 - CANADA RSS-210	passed	2009-03-04	Only delta tests performed!

Test Specification Clause	Test Case	Pass	Fail	Not applicable	Not performed
None	Antenna Gain				Yes
§15.247 (e)	Peak power spectral density				Yes
§15.247(a)(2)	Spectrum Bandwidth of a DSSS System / 6dB BW				Yes
§15.247(a)(2)	Spectrum Bandwidth of a DSSS System / 20dB BW				Yes
§ 15.247 (b)(3)	Maximum output power (conducted)				Yes
§ 15.247 (b)(3)	Max. peak output power (radiated)	Yes			
§15.247 (d)	Band-edge compliance of conducted emissions				Yes
§15.205	Band-edge compliance of radiated emissions				Yes
§15.247 (d)	Spurious Emission - conducted (Transmitter)				Yes
§ 15.209	Spurious Emission - radiated (Transmitter)	Yes			
§ 15.109	Spurious Emissions - radiated (Receiver)	Yes			
§ 15.209	Spurious Emissions - radiated <30 MHz	Yes			
§ 15.107/207	Conducted Emissions <30 MHz				Yes

5 RF measurement testing

5.1 Description of test set-up

5.1.1 Radiated measurements

The radiated measurements are performed in vertical and horizontal plane in the frequency range from 9 kHz to 20 GHz in semi-anechoic chambers. The EUT is positioned on a non-conductive support with a height of 0.80 m above a conductive ground plane that covers the whole chamber.
The receiving antennas are confirmed with specifications ANSI C63.2-1996 clause 15 and ANSI C63.4-2003 clause 4.1.5. These antennas can be moved over the height range between 1.0 m and 4.0 m in order to search for maximum field strength emitted from EUT. The measurement distances between EUT and receiving antennas are indicated in the test set-ups for the various frequency ranges. For each measurement, the EUT is rotated in all three axes until the maximum field strength is received.
The wanted and unwanted emissions are received by spectrum analysers where the detector modes and resolution bandwidths over various frequency ranges are set according to requirement ANSI C63.4-2003 clause 4.2.

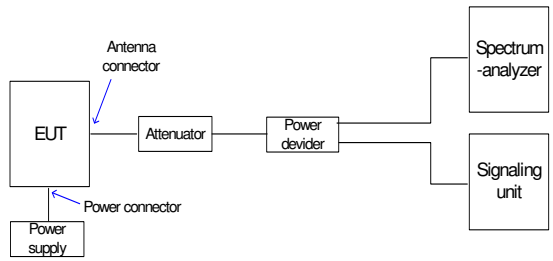
Antennas are confirmed with ANSI C63.2-1996 item 15.

9 kHz - 150 MHz: Quasi Peak measurement, 200 Hz Bandwidth, passive loop antenna.
150 kHz - 30 MHz: Quasi Peak measurement, 9 kHz Bandwidth, passive loop antenna.
30 MHz - 200 MHz: Quasi Peak measurement, 120 kHz Bandwidth, biconical antenna
200MHz - 1GHz: Quasi Peak measurement, 120 kHz Bandwidth, log periodic antenna
>1GHz: Average, RBW 1MHz, VBW 10 Hz, wave guide horn

All measurement settings are according to FCC 15.209 and 15.207

5.1.2 Conducted measurements

The EUT´s RF signal is coupled out by the antenna connector which is supplied by the manufacturer. The signal is connected to the spectrum analyzer. The specific losses for signal path are first checked within a calibration. The measurement readings on the spectrum analyzer are corrected by the specific test set-up loss. The attenuator, power divider, signalling unit and the spectrum analyzer are impedance matched on 50 Ohm.



5.2 Referenced Documents

W3x Series
Fixed Wireless Terminals for WCDMA/HSPA Mobile Networks

Technical Product Description
Software Release R12

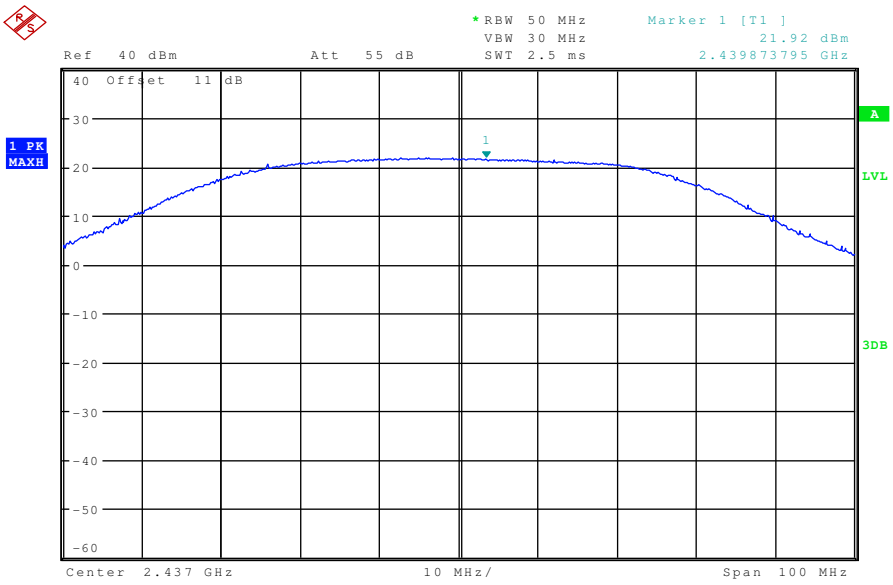
5.3 Additional comments

Antennas:

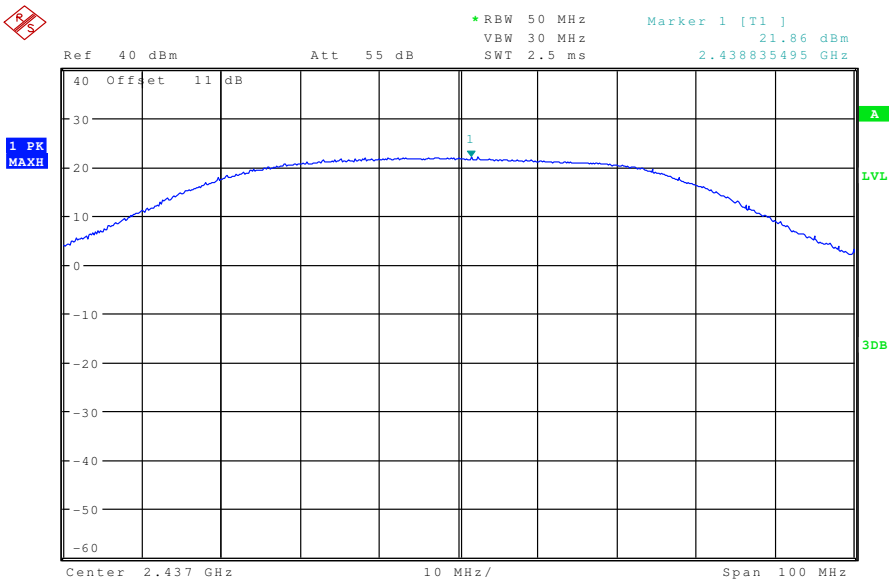
The EUT possess over two integrated PCB antennas of the same kind but 90 degree tilted (one for each polarization). It is not possible that both antennas are in transmitting mode at same time.

Output power verification conducted for both antenna ports:

Port 1:



Port 2:



Port 1 and port 2 show the same behaviour.

<u>WLAN module:</u>

The wireless LAN module has an own module certification.
FCC ID: D6XWL5011S

5.4 Antenna gain

Not performed!

The antenna gain of the complete system is calculated by the difference of radiated power in EIRP and the conducted power of the module.

	low channel	mid channel	high channel
Conducted power [dBm] *(measured)*	--	--	--
Radiated power [dBm] *(measured)*	--	--	--
Gain [dBi] *(calculated)*	--	--	--

5.5 Peak Power Spectral density (digitally modulated systems) §15.247(e)

Not performed!

DSSS

Plot 1: (result calculated by the Signal analyzer FSIQ 26 from Rohde & Schwarz)

Plot 2: (result calculated by the Signal analyzer FSIQ 26 from Rohde & Schwarz)

Plot 3: (result calculated by the Signal analyzer FSIQ 26 from Rohde & Schwarz)

Results: Plot 1: Power density: - dBm/Hz = - dBm / 3 kHz
Plot 2: Power density: - dBm/Hz = - dBm / 3 kHz
Plot 3: Power density: - dBm/Hz = - dBm / 3 kHz

Correction factor from dBm/Hz to dBm/3 kHz is +34,8 dB

OFDM

Plot 1: (result calculated by the Signal analyzer FSIQ 26 from Rohde & Schwarz)

Plot 2: (result calculated by the Signal analyzer FSIQ 26 from Rohde & Schwarz)

Plot 3: (result calculated by the Signal analyzer FSIQ 26 from Rohde & Schwarz)

Results: Plot 1: Power density: - dBm/Hz = - dBm / 3 kHz
Plot 2: Power density: - dBm/Hz = - dBm / 3 kHz
Plot 3: Power density: - dBm/Hz = - dBm / 3 kHz

Correction factor from dBm/Hz to dBm/3 kHz is +34,8 dB

Limits:

Under normal test conditions only	For digitally modulated systems, the peak power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission

5.6 Spectrum Bandwidth of a DSSS System / 6 dB Bandwidth §15.247(a)(2)

Not performed!

DSSS

Plot 1:

Plot 2:

Plot 3:

Results:

Test conditions		6 dB BANDWIDTH [MHz]		
Frequency [MHz]		2412	2437	2462
T_{nom}	V_{nom}			
Measurement uncertainty		±1kHz		

RBW: 100 kHz / VBW 100 kHz

OFDM

Plot 1:

Plot 2:

Plot 3:

Results:

Test conditions		6 dB BANDWIDTH [MHz]		
Frequency [MHz]		2412	2437	2462
T_{nom}	V_{nom}			
Measurement uncertainty		±1kHz		

RBW: 100 kHz / VBW 100 kHz

Limits:

Under normal test conditions only	> 500 kHz

5.7 Spectrum Bandwidth of a DSSS System / 20 dB Bandwidth

Not performed!

DSSS

Plot 1:

Plot 2:

Plot 3:

Results:

Test conditions		20 dB BANDWIDTH [MHz]		
Frequency [MHz]		2412	2437	2462
T_{nom}	V_{nom}			
Measurement uncertainty		±1kHz		

RBW: 100 kHz / VBW 100 kHz

OFDM

Plot 1:

Plot 2:

Plot 3:

Results:

Test conditions		20 dB BANDWIDTH [MHz]		
Frequency [MHz]		2412	2437	2462
T_{nom}	V_{nom}			
Measurement uncertainty		±1kHz		

RBW: 100 kHz / VBW 100 kHz

5.8 Maximum output power (conducted) §15.247 (b) (3)

Not performed!

DSSS

Plot 1:

Plot 2:

Plot 3:

Results:

Test conditions		Max. peak output power [dBm]			
Frequency [MHz]		2412		2437	2462
T_{nom}	V_{nom}	PK			
		PK corrected			
De facto EIRP (Peak) [dBm]					
Antenna gain: [dBi]					
Measurement uncertainty		±3dB			

RBW / VBW: 10 MHz

Remark:

The correction factor is calculated by 10 ×log (measured BW / used BW) [dB]

Limits:

Under normal test conditions only, for frequency range 2400-2483.5 MHz	Max. 1.0 Watt / 30 dBm

OFDM

Plot 1:

Plot 2:

Plot 3:

Results:

Test conditions		**Max. peak output power [dBm]**			
Frequency [MHz]		2412		2437	2462
T_{nom}	V_{nom}	PK			
		PK corrected			
De facto EIRP (Peak) [dBm]					
Antenna gain: [dBi]					
Measurement uncertainty		±3dB			

RBW / VBW: 10 MHz

Remark:

The correction factor is calculated by 10 ×log (measured BW / used BW) [dB]

Limits:

Under normal test conditions only, for frequency range 2400-2483.5 MHz	Max. 1.0 Watt / 30 dBm

MPE calculation

These equations are generally accurate in the far field of an antenna but will over predict power density in the near field, where they could be used for making a "worst case" prediction.

$$S = PG/4\pi R^2$$

where S = power density (in appropriate units, e.g. mW/cm^2)

P = power input to the antenna (in appropriate units e.g. mW)

G = power gain of the antenna in the direction of interest relative to the isotropic radiator

R = distance to the centre of radiation of the antenna (appropriate units e.g. cm)

Or

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

where EIRP = equivalent isotropically radiated power

Calculation:

(Calculated for max. EIRP)

EIRP: 19.78 dBm (95.06 mW)

calculated at distance of 20 cm:

power density = $95.06 / 4\pi 20^2 = 0.0189$ mW/ cm^2

Limit:

1mW/ cm^2 is the reference level for general public exposure according to the OET Bulletin 65, Edition 97-01 Table 1.

5.9 Max. peak output power (radiated) §15.247 (b)(3)

DSSS

Results:

Test conditions		Max. peak output power EIRP [dBm]		
Frequency [MHz]		2412	2437	2462
T_{nom}	V_{nom}	16.75	**16.99**	16.87
Measurement uncertainty		±3dB		

RBW / VBW: 10 MHz
Measured at a distance of 3m

OFDM

Results:

Test conditions		Max. peak output power EIRP [dBm]		
Frequency [MHz]		2412	2437	2462
T_{nom}	V_{nom}	19.22	19.49	**19.78**
Measurement uncertainty		±3dB		

RBW / VBW: 10 MHz
Measured at a distance of 3m

Limits:

Under normal test conditions only, for frequency range 2400-2483.5 MHz	Max. 1.0 Watt

5.10 Band-edge compliance of conducted emissions §15.247 (d)

Not performed!

Plot 1: lowest channel

Plot 2: highest channel

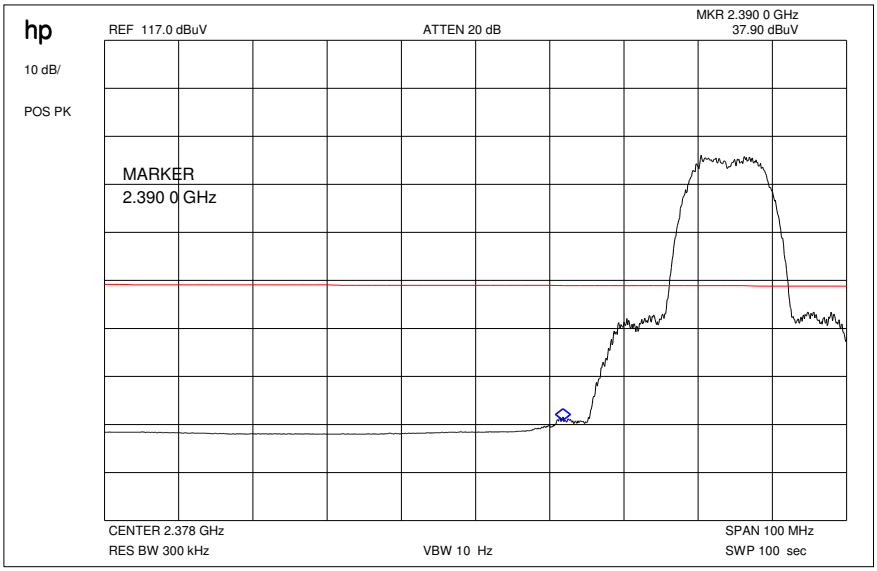
Limits:

Under normal test conditions only	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 5.205(c)).

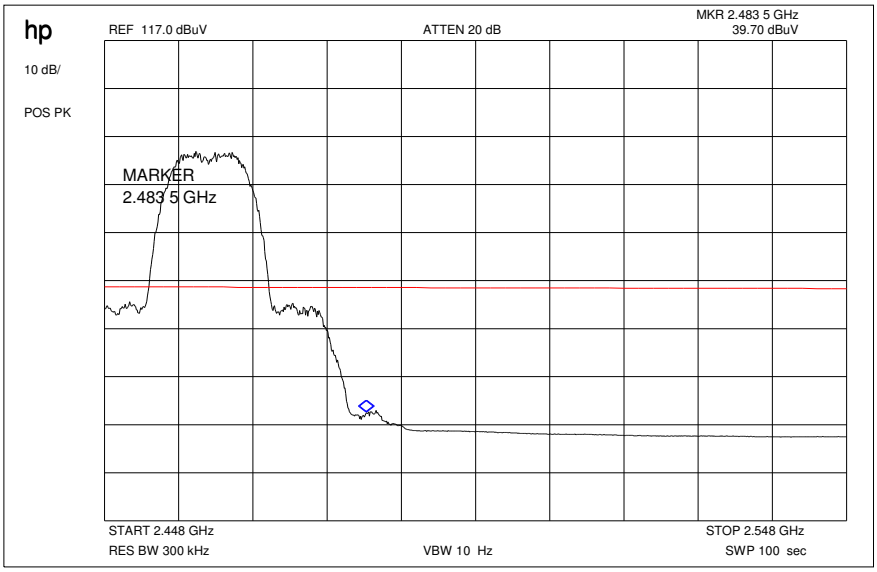
5.11 Band-edge compliance of radiated emissions §15.205

DSSS

Plot 1: b – mode, 11 Mbit/s, channel 1



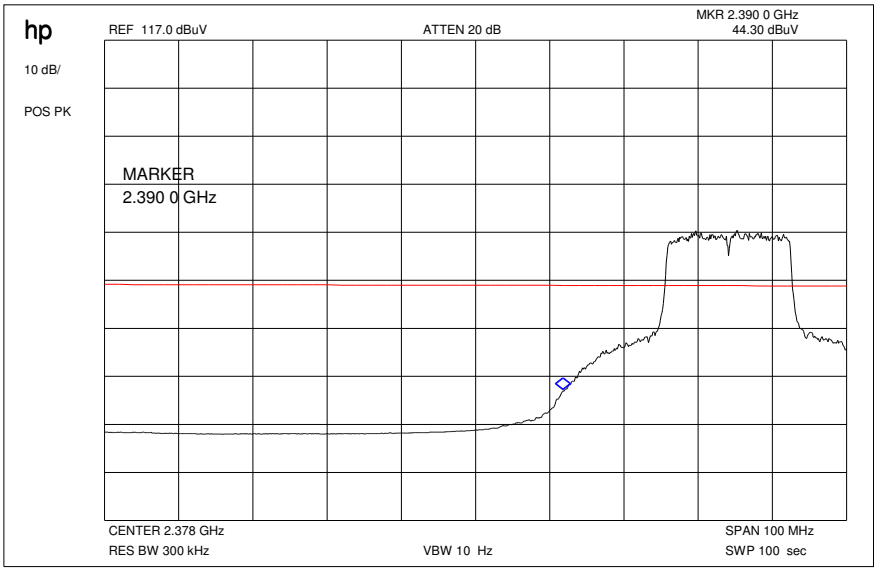
Plot 2: b – mode, 11 Mbit/s, channel 11



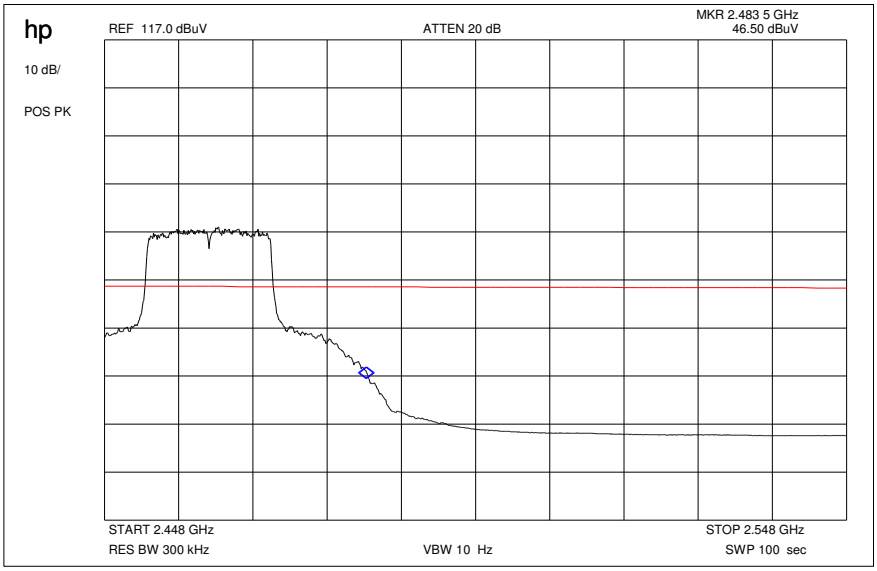
The result of the measurement is passed.

OFDM

Plot 1: g – mode, 54 Mbit/s, channel 1



Plot 2: g – mode, 54 Mbit/s, channel 11



The result of the measurement is passed.

5.12 Spurious Emissions - conducted (Transmitter) §15.247 (c)

Not performed!

DSSS

Plot 1: Lowest Channel

Plot 2: Middle Channel

Plot 3: Highest Channel

Result & Limits:

Emission Limitations					
f [MHz]		amplitude of emission [dBm]	limit max. allowed emission power	actual attenuation below frequency of operation [dB]	results
2412			30 dBm		Operating frequency
			-20 dBc		
2437			30 dBm		Operating frequency
			-20 dBc		
2462			30 dBm		Operating frequency
			-20 dBc		
Measurement uncertainty		± 3dB			

F < 1 GHz: RBW: 100 kHz VBW: 100 kHz
F > 1 GHz: RBW: 1 MHz VBW: 1 MHz

OFDM

Plot 1: Lowest Channel

Plot 2: Middle Channel

Plot 3: Highest Channel

Result & Limits:

Emission Limitations					
f [MHz]		amplitude of emission [dBm]	limit max. allowed emission power	actual attenuation below frequency of operation [dB]	results
2412			30 dBm		Operating frequency
			-20 dBc		
2437			30 dBm		Operating frequency
			-20 dBc		
2462			30 dBm		Operating frequency
			-20 dBc		
Measurement uncertainty		± 3dB			

F < 1 GHz: RBW: 100 kHz VBW: 100 kHz
F > 1 GHz: RBW: 1 MHz VBW: 1 MHz

Under normal test conditions only	In any 100 kHz bandwidth outside the frequency band at least 20dB below the highest level of the desired power. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

Note: For emissions that fall into restricted bands you find the radiated emissions later in the report.

5.13 Spurious Emissions - radiated (Transmitter) §15.209

Antenna 1, b – mode 1 Mbit/s

Plot 1: 0.03 - 1 GHz (lowest channel)

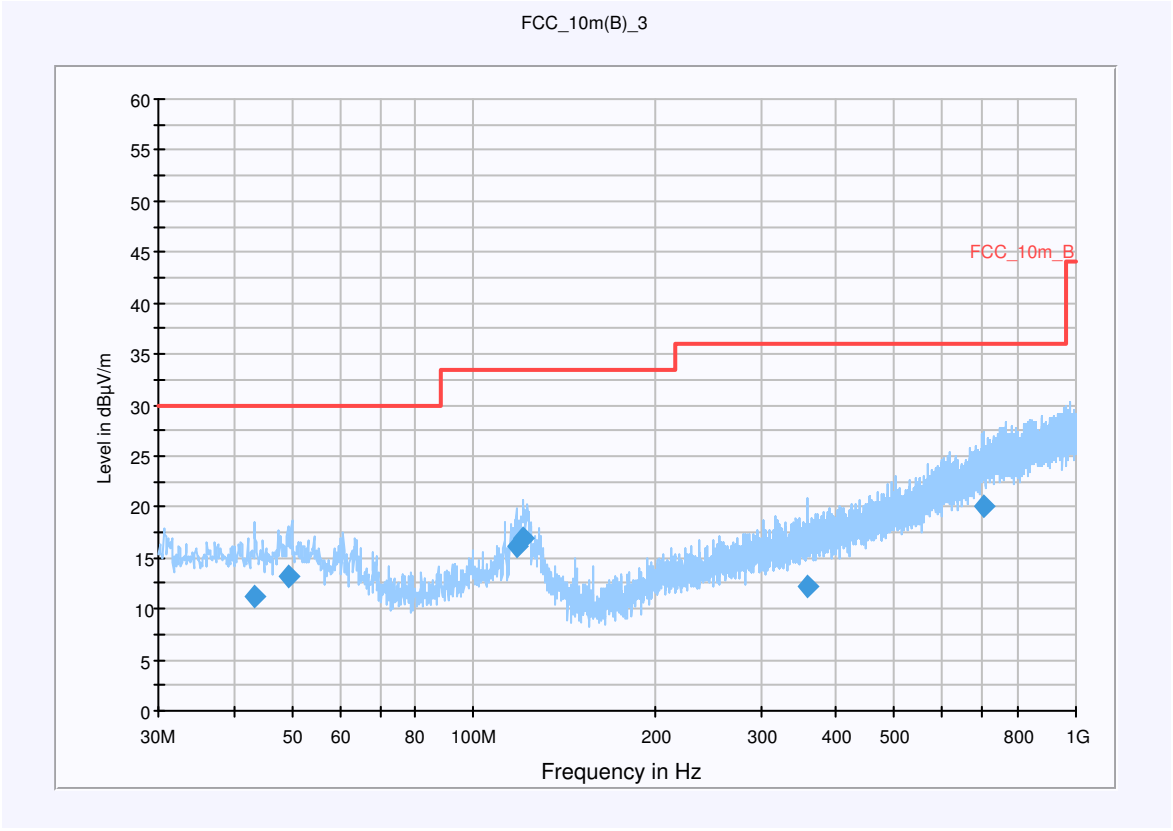
Common Information

EUT:	W35
Serial Number:	T710443474
Test Description:	FCC part 15 class B @ 10 m
Operating Conditions:	Tx mode b, channel 1 + ping
Operator Name:	COA
Comment:	AC: 115 V / 60 Hz

Scan Setup: STAN_Fin [EMI radiated]

Hardware Setup:	Electric Field (NOS)
Level Unit:	dBµV/m

Subrange	Detectors	IF Bandwidth	Meas. Time	Receiver
30 MHz - 1 GHz	QuasiPeak	120 kHz	15 s	Receiver



Final Result 1

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Antenna height (cm)	Polarity	Turntable position (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Comment
43.346050	11.2	15000.000	120.000	98.0	V	219.0	13.5	18.8	30.0	
49.417200	13.2	15000.000	120.000	150.0	V	245.0	13.5	16.8	30.0	
117.777500	16.1	15000.000	120.000	142.0	V	26.0	10.7	17.4	33.5	
120.893850	16.9	15000.000	120.000	136.0	V	0.0	10.5	16.6	33.5	
357.478350	12.2	15000.000	120.000	98.0	H	5.0	16.6	23.8	36.0	
702.843250	20.1	15000.000	120.000	112.0	H	88.0	23.1	15.9	36.0	

Hardware Setup: EMI radiated\Electric Field (NOS) - [EMI radiated]

Subrange 1

Frequency Range:	30 MHz - 2 GHz
Receiver:	Receiver [ESCI 3] @ GPIB0 (ADR 20), SN 100083/003, FW 4.32
Signal Path:	without Notch FW 1.0
Antenna:	VULB 9163 SN 9163-295, FW --- Correction Table (vertical): VULP6113 Correction Table (horizontal): VULP6113 Correction Table: Cable_EN_1GHz (0109)
Antenna Tower:	Tower [EMCO 2090 Antenna Tower] @ GPIB0 (ADR 8), FW REV 3.12
Turntable:	Turntable [EMCO Turntable] @ GPIB0 (ADR 9), FW REV 3.12

EMC 32 Version 6.30.10 + Service Pack 2

Plot 2: 1 - 12 GHz (lowest channel)

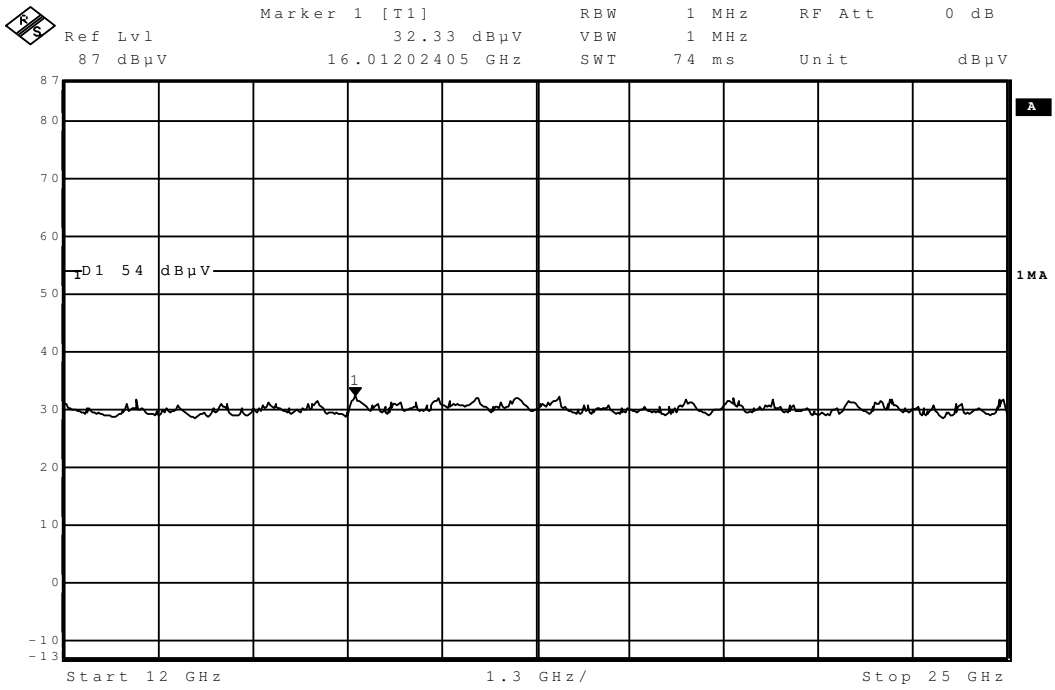
CETECOM ICT Services GmbH

Projekt- Nr.:2-4900-02-09/08

EUT:	W35	Polarisation:	Horizontal
Manufacturer:	Ericsson	Battery:	AC/DC Power Supply
IMEI:	Channel 1/ b mode / 1 Mbps	HW:	
Operator:	MUY	SW:	
Start of Test :	20.02.2009 09:42:57	Vmin:	
Standard:	FCC_15_407_2400	Vnom:	115
Signalling Unit:	Laptop	Vmax:	
Transducer-File:	C:\Spurious_neu\Messparameter\FCC_15_407_2400\Transducer_FCC_15_407_2400.xls		
Start Freq. [MHz]:	1000	Stop Freq. [MHz]	12000

The carrier signal is notched with a 2.4 GHz band rejection filter.

Plot 3: 12 - 25 GHz (valid for all channels)



Plot 4: 0.03 - 1 GHz (middle channel)

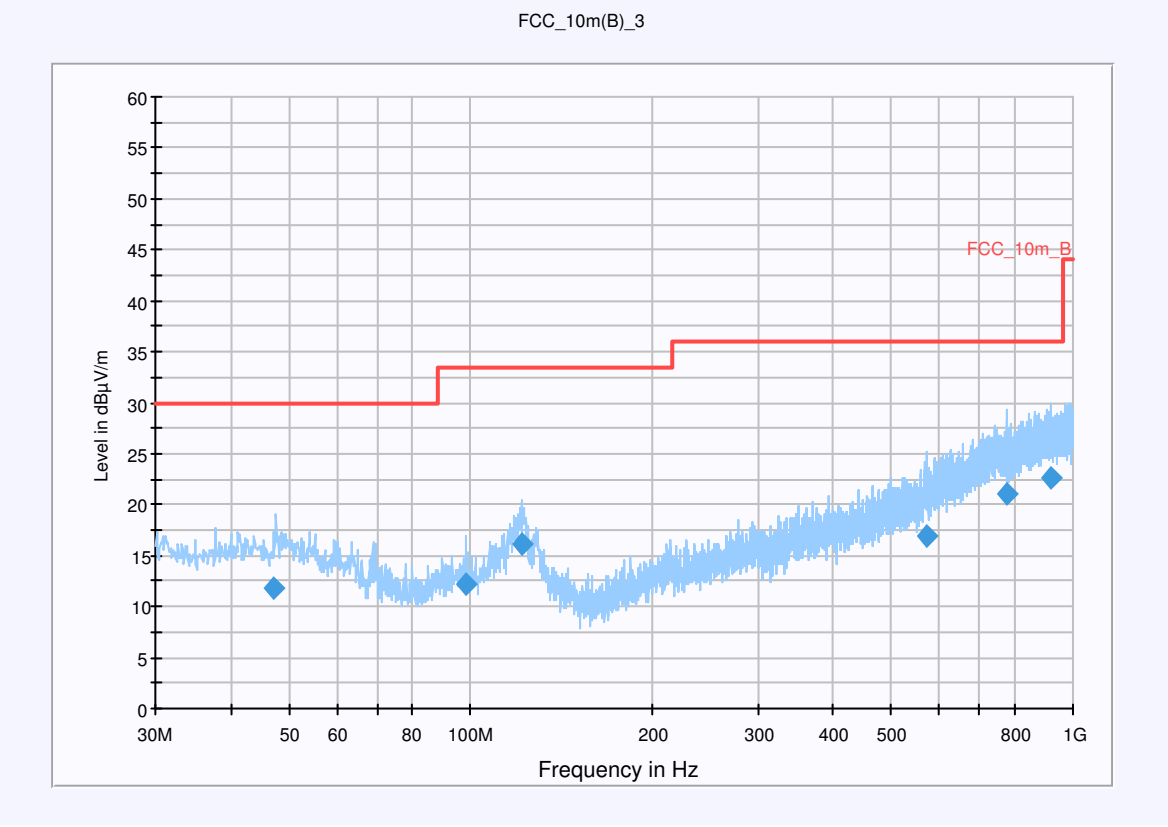
Common Information

EUT:	W35
Serial Number:	T710443474
Test Description:	FCC part 15 class B @ 10 m
Operating Conditions:	Tx mode b, channel 6 + ping
Operator Name:	COA
Comment:	AC: 115 V / 60 Hz

Scan Setup: STAN_Fin [EMI radiated]

Hardware Setup:	Electric Field (NOS)
Level Unit:	dBµV/m

Subrange	Detectors	IF Bandwidth	Meas. Time	Receiver
30 MHz - 1 GHz	QuasiPeak	120 kHz	15 s	Receiver



Final Result 1

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Antenna height (cm)	Polarity	Turntable position (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Comment
47.246150	11.7	15000.000	120.000	98.0	V	2.0	13.5	18.3	30.0	
98.415200	12.1	15000.000	120.000	216.0	V	78.0	12.1	21.4	33.5	
121.371650	16.2	15000.000	120.000	128.0	V	2.0	10.4	17.3	33.5	
571.861100	16.9	15000.000	120.000	216.0	V	143.0	20.5	19.1	36.0	
779.331150	21.1	15000.000	120.000	216.0	V	116.0	24.2	14.9	36.0	
917.213900	22.7	15000.000	120.000	190.0	V	39.0	25.8	13.3	36.0	

Hardware Setup: EMI radiated\Electric Field (NOS) - [EMI radiated]

Subrange 1

Frequency Range:	30 MHz - 2 GHz
Receiver:	Receiver [ESCI 3] @ GPIB0 (ADR 20), SN 100083/003, FW 4.32
Signal Path:	without Notch FW 1.0
Antenna:	VULB 9163 SN 9163-295, FW --- Correction Table (vertical): VULP6113 Correction Table (horizontal): VULP6113 Correction Table: Cable_EN_1GHz (0109)
Antenna Tower:	Tower [EMCO 2090 Antenna Tower] @ GPIB0 (ADR 8), FW REV 3.12
Turntable:	Turntable [EMCO Turntable] @ GPIB0 (ADR 9), FW REV 3.12

EMC 32 Version 6.30.10 + Service Pack 2

Plot 5: 1 - 12 GHz (middle channel)

CETECOM ICT Services GmbH

Projekt- Nr.:2-4900-2_08

EUT:	W35	Polarisation:	Horizontal
Manufacturer:	Ericsson	Battery:	AC/DC Power Supply
IMEI:	Channel 6/b mode / 1 Mbps	HW:	
Operator:	MUY	SW:	
Start of Test :	20.02.2009 09:38:47	Vmin:	
Standard:	FCC_15_407_2400	Vnom:	115
Signalling Unit:	CMU200	Vmax:	
Transducer-File:	C:\Spurious_neu\Messparameter\FCC_15_407_2400\Transducer_FCC_15_407_2400.xls		
Start Freq. [MHz]:	1000	Stop Freq. [MHz]	12000

The carrier signal is notched with a 2.4 GHz band rejection filter.

Plot 6: 0.03 - 1 GHz (highest channel)

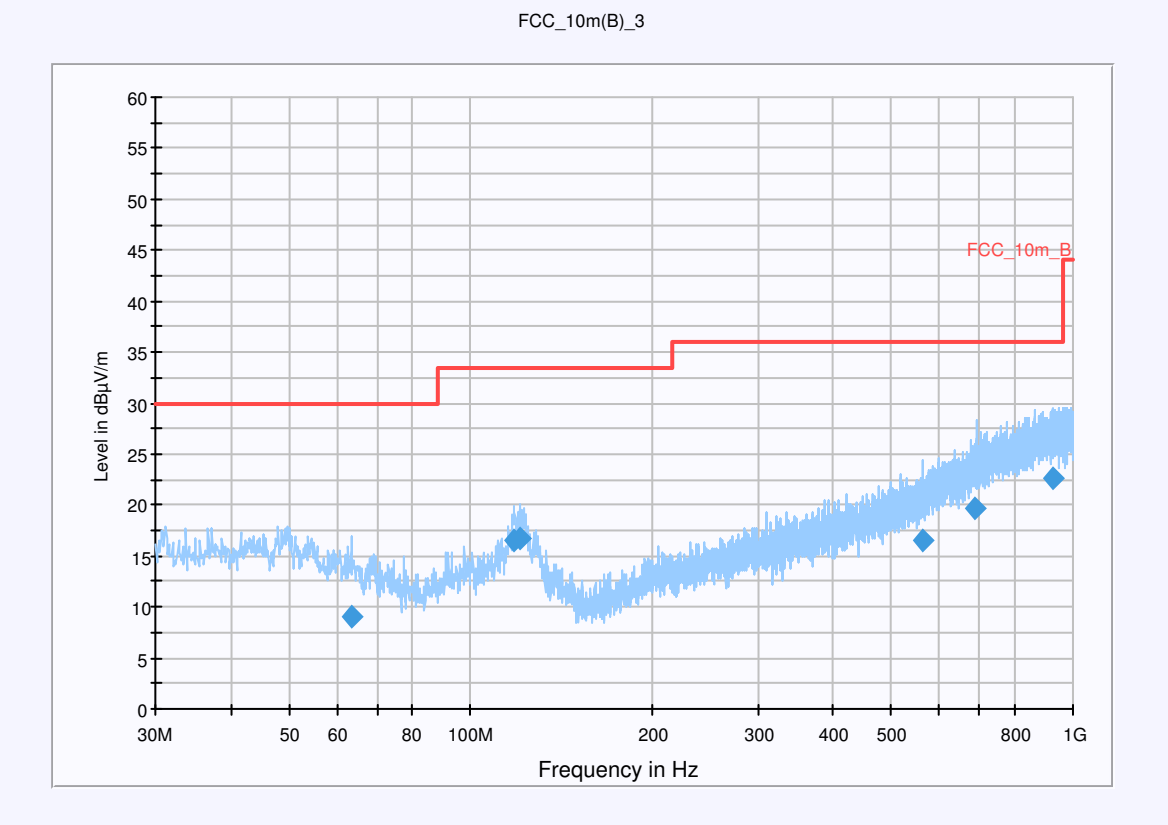
Common Information

EUT:	W35
Serial Number:	T710443474
Test Description:	FCC part 15 class B @ 10 m
Operating Conditions:	Tx mode b, channel 11 + ping
Operator Name:	COA
Comment:	AC: 115 V / 60 Hz

Scan Setup: STAN_Fin [EMI radiated]

Hardware Setup:	Electric Field (NOS)
Level Unit:	dBµV/m

Subrange	Detectors	IF Bandwidth	Meas. Time	Receiver
30 MHz - 1 GHz	QuasiPeak	120 kHz	15 s	Receiver



Final Result 1

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Antenna height (cm)	Polarity	Turntable position (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Comment
63.463050	9.1	15000.000	120.000	116.0	V	272.0	11.0	20.9	30.0	
117.995850	16.5	15000.000	120.000	139.0	V	0.0	10.7	17.0	33.5	
121.189750	16.7	15000.000	120.000	149.0	V	1.0	10.4	16.8	33.5	
563.627850	16.6	15000.000	120.000	220.0	V	167.0	20.3	19.4	36.0	
689.429150	19.7	15000.000	120.000	220.0	V	144.0	22.7	16.3	36.0	
922.849550	22.6	15000.000	120.000	220.0	H	181.0	25.8	13.4	36.0	

Hardware Setup: EMI radiated\Electric Field (NOS) - [EMI radiated]

Subrange 1

Frequency Range:	30 MHz - 2 GHz
Receiver:	Receiver [ESCI 3] @ GPIB0 (ADR 20), SN 100083/003, FW 4.32
Signal Path:	without Notch FW 1.0
Antenna:	VULB 9163 SN 9163-295, FW --- Correction Table (vertical): VULP6113 Correction Table (horizontal): VULP6113 Correction Table: Cable_EN_1GHz (0109)
Antenna Tower:	Tower [EMCO 2090 Antenna Tower] @ GPIB0 (ADR 8), FW REV 3.12
Turntable:	Turntable [EMCO Turntable] @ GPIB0 (ADR 9), FW REV 3.12

EMC 32 Version 6.30.10 + Service Pack 2

Plot 7: 1 - 12 GHz (highest channel)

CETECOM ICT Services GmbH

Projekt- Nr.:2-4900-2_08

EUT:	W35	Polarisation:	Horizontal
Manufacturer:	Ericsson	Battery:	AC/DC Power Supply
IMEI:	Channel 11/ b mode 1 Mbps	HW:	
Operator:	MUY	SW:	
Start of Test :	20.02.2009 09:33:17	Vmin:	
Standard:	FCC_15_407_2400	Vnom:	115
Signalling Unit:	CMU200	Vmax:	
Transducer-File:	C:\Spurious_neu\Messparameter\FCC_15_407_2400\Transducer_FCC_15_407_2400.xls		
Start Freq. [MHz]:	1000	Stop Freq. [MHz]	12000

The carrier signal is notched with a 2.4 GHz band rejection filter.

Results:

SPURIOUS EMISSIONS LEVEL §15.209								
2412 MHz			2437 MHz			2462 MHz		
F [MHz]	Detector	Level [dBµV/m]	F [MHz]	Detector	Level [dBµV/m]	F [MHz]	Detector	Level [dBµV/m]
No critical peaks detected.			No critical peaks detected.			No critical peaks detected.		
Measurement uncertainty			±3 dB					

f < 1 GHz : RBW/VBW: 100 kHz f ≥ 1GHz : RBW/VBW: 1 MHz

Limits: § 15.247 (c)

In any 100 kHz bandwidth outside the frequency band at least 20dB below the highest level of the desired power. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

Limits: § 15.109

Frequency (MHz)	**Field strength (dBµV/m)**	**Measurement distance (m)**
30 - 88	30.0	10
88 - 216	33.5	10
216 - 960	36.0	10
above 960	54.0	3

Antenna 1, g – mode 54 Mbit/s

Plot 1: 0.03 - 1 GHz (lowest channel)

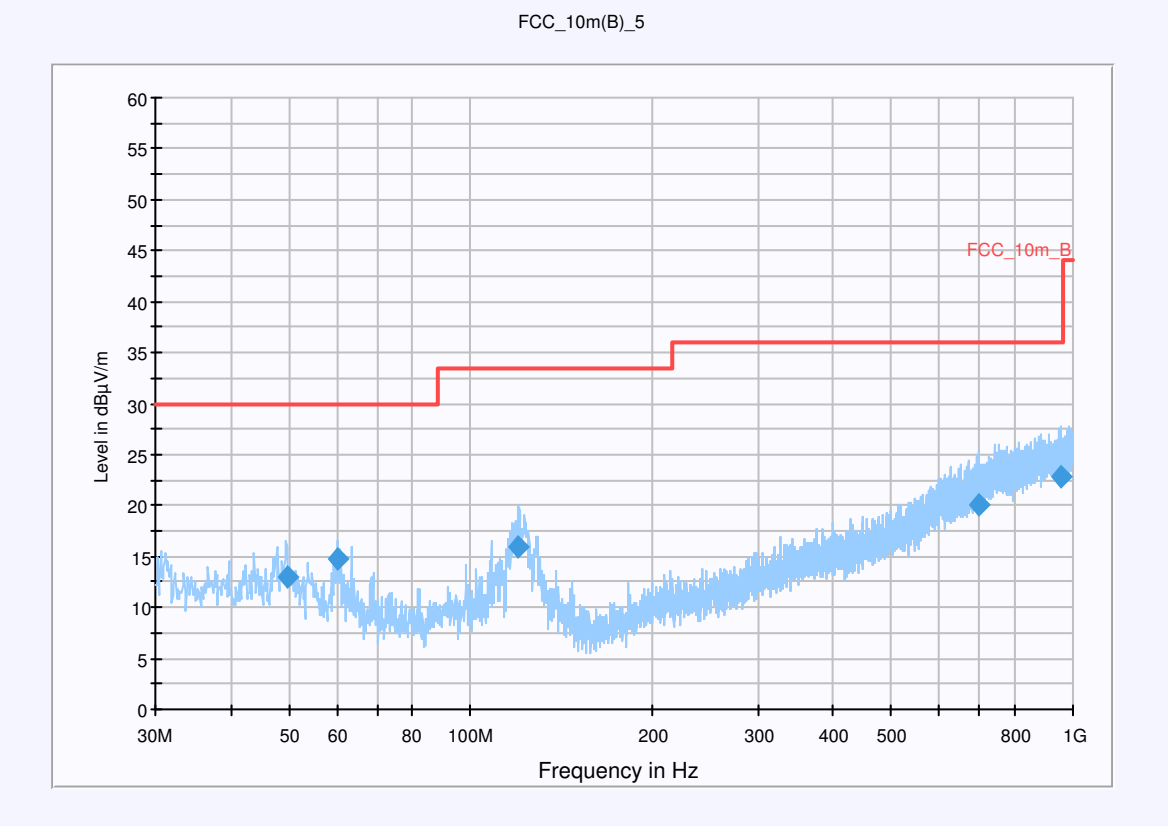
Common Information

EUT:	W35
Serial Number:	T710443474
Test Description:	FCC part 15 class B @ 10 m
Operating Conditions:	Tx mode g, channel 11 + ping
Operator Name:	COA
Comment:	AC: 115 V / 60 Hz

Scan Setup: STAN_Fin [EMI radiated]

Hardware Setup:	Electric Field (NOS)
Level Unit:	dBµV/m

Subrange	Detectors	IF Bandwidth	Meas. Time	Receiver
30 MHz - 1 GHz	QuasiPeak	120 kHz	15 s	Receiver



Final Result 1

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Antenna height (cm)	Polarity	Turntable position (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Comment
49.560000	13.0	15000.000	120.000	220.0	V	282.0	13.5	17.0	30.0	
60.240000	14.7	15000.000	120.000	115.0	V	192.0	11.8	15.3	30.0	
120.360000	15.9	15000.000	120.000	142.0	V	12.0	10.5	17.6	33.5	
699.480000	20.0	15000.000	120.000	137.0	H	102.0	23.0	16.0	36.0	
954.000000	22.9	15000.000	120.000	220.0	V	-1.0	25.9	13.1	36.0	

Hardware Setup: EMI radiated\Electric Field (NOS) - [EMI radiated]

Subrange 1

Frequency Range:	30 MHz - 2 GHz
Receiver:	Receiver [ESCI 3] @ GPIB0 (ADR 20), SN 100083/003, FW 4.32
Signal Path:	without Notch FW 1.0
Antenna:	VULB 9163 SN 9163-295, FW --- Correction Table (vertical): VULP6113 Correction Table (horizontal): VULP6113 Correction Table: Cable_EN_1GHz (0109)
Antenna Tower:	Tower [EMCO 2090 Antenna Tower] @ GPIB0 (ADR 8), FW REV 3.12
Turntable:	Turntable [EMCO Turntable] @ GPIB0 (ADR 9), FW REV 3.12

EMC 32 Version 6.30.10 + Service Pack 2

Plot 2: 1 - 12 GHz (lowest channel)

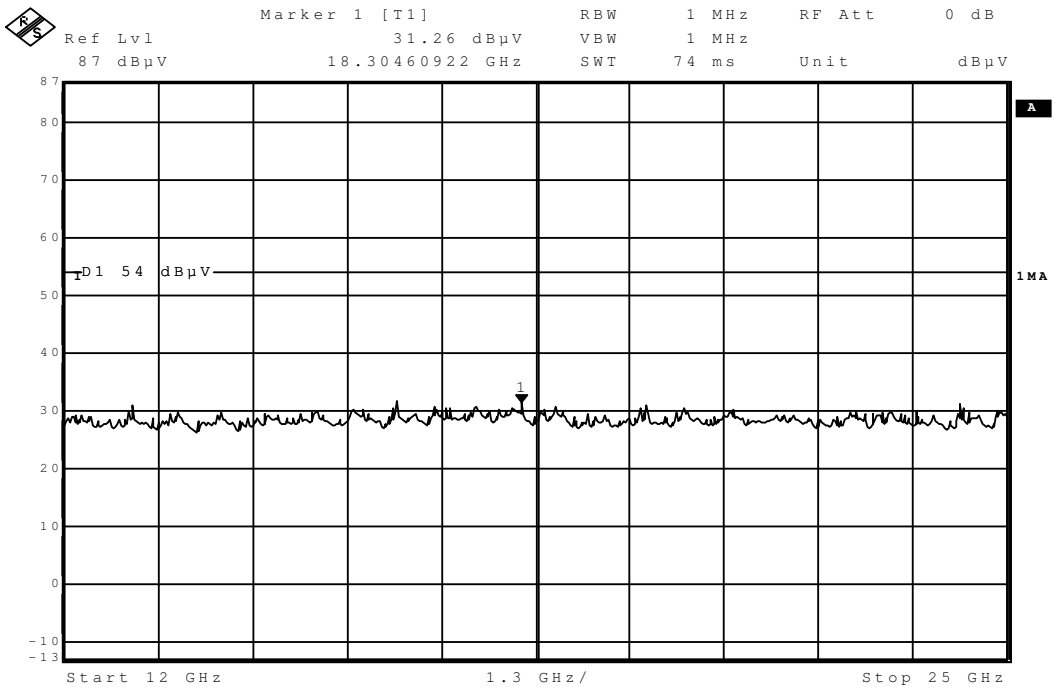
CETECOM ICT Services GmbH

Projekt- Nr.:2-4900-2_08

EUT:	W35	Polarisation:	Horizontal
Manufacturer:	Ericsson	Battery:	AC/DC Power Supply
IMEI:	Channel 1/g mode / 54 Mbps	HW:	
Operator:	MUY	SW:	
Start of Test :	20.02.2009 09:12:45	Vmin:	
Standard:	FCC_15_407_2400	Vnom:	115
Signalling Unit:	CMU200	Vmax:	
Transducer-File:	C:\Spurious_neu\Messparameter\FCC_15_407_2400\Transducer_FCC_15_407_2400.xls		
Start Freq. [MHz]:	1000	Stop Freq. [MHz]	12000

The carrier signal is notched with a 2.4 GHz band rejection filter.

Plot 3: 12 - 25 GHz (valid for all channels)



Plot 4: 0.03 - 1 GHz (middle channel)

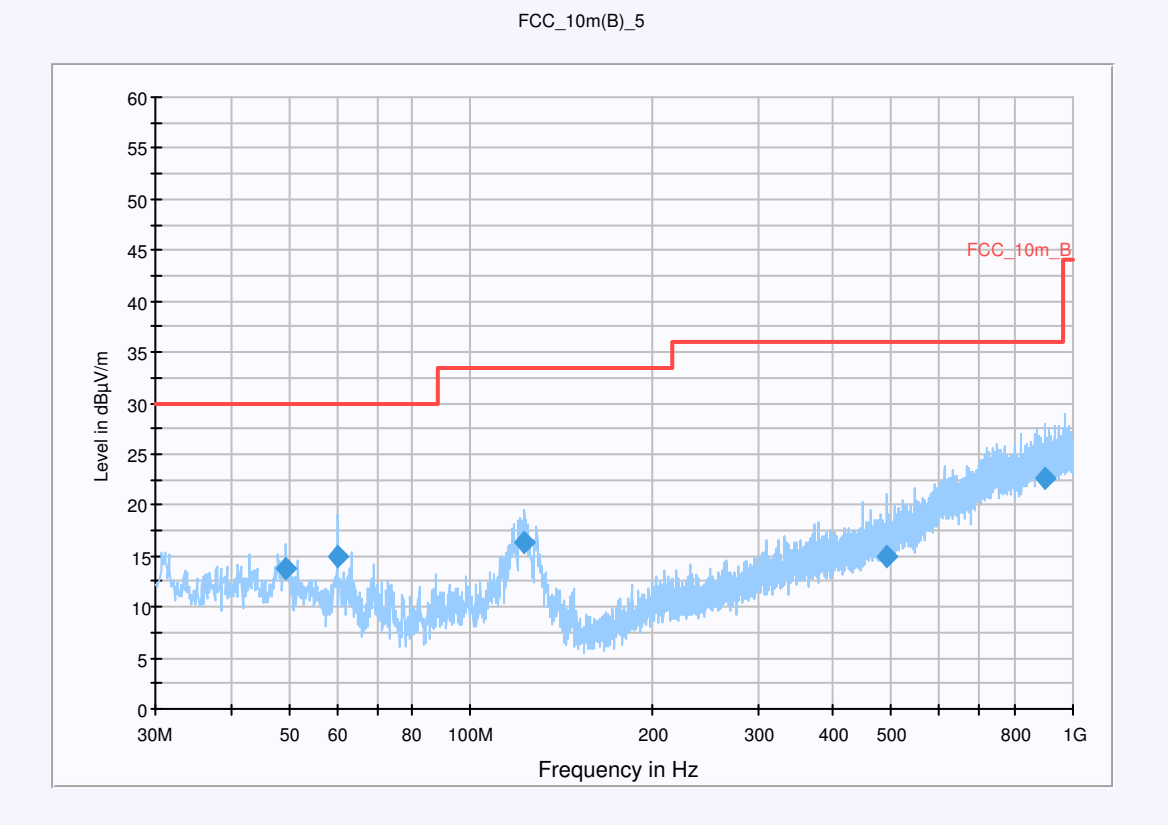
Common Information

EUT:	W35
Serial Number:	T710443474
Test Description:	FCC part 15 class B @ 10 m
Operating Conditions:	Tx mode g, channel 6 + ping
Operator Name:	COA
Comment:	AC: 115 V / 60 Hz

Scan Setup: STAN_Fin [EMI radiated]

Hardware Setup:	Electric Field (NOS)
Level Unit:	dBµV/m

Subrange	Detectors	IF Bandwidth	Meas. Time	Receiver
30 MHz - 1 GHz	QuasiPeak	120 kHz	15 s	Receiver



Final Result 1

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Antenna height (cm)	Polarity	Turntable position (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Comment
49.320000	13.7	15000.000	120.000	144.0	V	10.0	13.5	16.3	30.0	
60.240000	14.9	15000.000	120.000	120.0	V	-1.0	11.8	15.1	30.0	
122.520000	16.4	15000.000	120.000	120.0	V	268.0	10.3	17.1	33.5	
492.000000	14.9	15000.000	120.000	210.0	H	10.0	18.9	21.1	36.0	
897.960000	22.6	15000.000	120.000	148.0	V	261.0	25.7	13.4	36.0	

Hardware Setup: EMI radiated\Electric Field (NOS) - [EMI radiated]

Subrange 1

Frequency Range:	30 MHz - 2 GHz
Receiver:	Receiver [ESCI 3] @ GPIB0 (ADR 20), SN 100083/003, FW 4.32
Signal Path:	without Notch FW 1.0
Antenna:	VULB 9163 SN 9163-295, FW --- Correction Table (vertical): VULP6113 Correction Table (horizontal): VULP6113 Correction Table: Cable_EN_1GHz (0109)
Antenna Tower:	Tower [EMCO 2090 Antenna Tower] @ GPIB0 (ADR 8), FW REV 3.12
Turntable:	Turntable [EMCO Turntable] @ GPIB0 (ADR 9), FW REV 3.12

EMC 32 Version 6.30.10 + Service Pack 2

Plot 5: 1 - 12 GHz (middle channel)

CETECOM ICT Services GmbH

Projekt- Nr.:2-4900-2_08

EUT:	W35	Polarisation:	Horizontal
Manufacturer:	Ericsson	Battery:	AC/DC Power Supply
IMEI:	Channel 6/g mode / 54 Mbps	HW:	
Operator:	MUY	SW:	
Start of Test :	20.02.2009 09:19:56	Vmin:	
Standard:	FCC_15_407_2400	Vnom:	115
Signalling Unit:	CMU200	Vmax:	
Transducer-File:	C:\Spurious_neu\Messparameter\FCC_15_407_2400\Transducer_FCC_15_407_2400.xls		
Start Freq. [MHz]:	1000	Stop Freq. [MHz]	12000

The carrier signal is notched with a 2.4 GHz band rejection filter.

Plot 6: 0.03 - 1 GHz (highest channel)

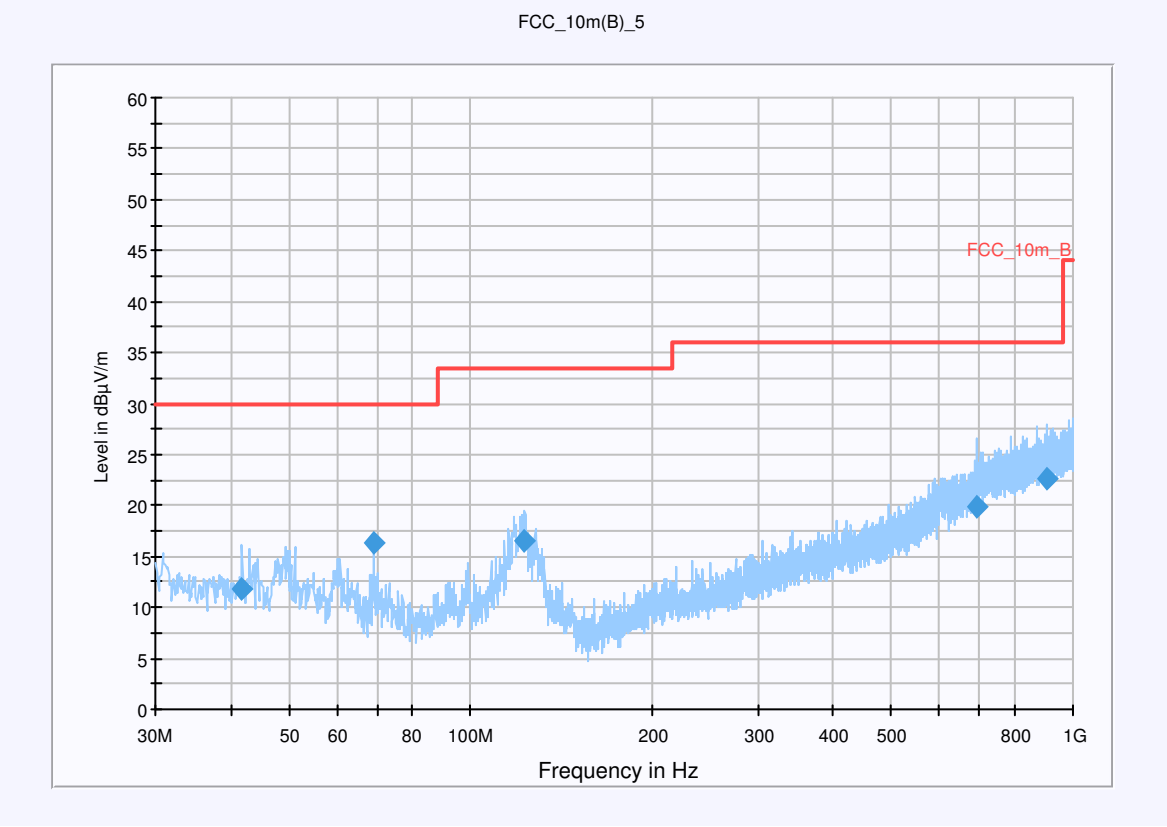
Common Information

EUT:	W35
Serial Number:	T710443474
Test Description:	FCC part 15 class B @ 10 m
Operating Conditions:	Tx mode g, channel 1 + ping
Operator Name:	COA
Comment:	AC: 115 V / 60 Hz

Scan Setup: STAN_Fin [EMI radiated]

Hardware Setup:	Electric Field (NOS)
Level Unit:	dBµV/m

Subrange	Detectors	IF Bandwidth	Meas. Time	Receiver
30 MHz - 1 GHz	QuasiPeak	120 kHz	15 s	Receiver



Final Result 1

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Antenna height (cm)	Polarity	Turntable position (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Comment
41.760000	11.7	15000.000	120.000	98.0	V	-1.0	13.5	18.3	30.0	
69.000000	16.3	15000.000	120.000	190.0	V	102.0	9.8	13.7	30.0	
123.000000	16.5	15000.000	120.000	122.0	V	0.0	10.3	17.0	33.5	
690.840000	19.8	15000.000	120.000	220.0	V	178.0	22.8	16.2	36.0	
904.800000	22.7	15000.000	120.000	220.0	V	192.0	25.7	13.3	36.0	

Hardware Setup: EMI radiated\Electric Field (NOS) - [EMI radiated]

Subrange 1

Frequency Range:	30 MHz - 2 GHz
Receiver:	Receiver [ESCI 3] @ GPIB0 (ADR 20), SN 100083/003, FW 4.32
Signal Path:	without Notch FW 1.0
Antenna:	VULB 9163 SN 9163-295, FW --- Correction Table (vertical): VULP6113 Correction Table (horizontal): VULP6113 Correction Table: Cable_EN_1GHz (0109)
Antenna Tower:	Tower [EMCO 2090 Antenna Tower] @ GPIB0 (ADR 8), FW REV 3.12
Turntable:	Turntable [EMCO Turntable] @ GPIB0 (ADR 9), FW REV 3.12

EMC 32 Version 8.10.00

Plot 7: 1 - 12 GHz (highest channel)

CETECOM ICT Services GmbH

Projekt- Nr.:2-4900-2_08

EUT:	W35	Polarisation:	Horizontal
Manufacturer:	Ericsson	Battery:	AC/DC Power Supply
IMEI:	Channel 11/g mode / 54 Mbps	HW:	
Operator:	MUY	SW:	
Start of Test :	20.02.2009 09:27:10	Vmin:	
Standard:	FCC_15_407_2400	Vnom:	115
Signalling Unit:	CMU200	Vmax:	
Transducer-File:	C:\Spurious_neu\Messparameter\FCC_15_407_2400\Transducer_FCC_15_407_2400.xls		
Start Freq. [MHz]:	1000	Stop Freq. [MHz]	12000

The carrier signal is notched with a 2.4 GHz band rejection filter.

Results:

SPURIOUS EMISSIONS LEVEL §15.209								
2412 MHz			2437 MHz			2462 MHz		
F [MHz]	Detector	Level [dBµV/m]	F [MHz]	Detector	Level [dBµV/m]	F [MHz]	Detector	Level [dBµV/m]
No critical peaks detected.			No critical peaks detected.			No critical peaks detected.		
Measurement uncertainty		±3 dB						

f < 1 GHz : RBW/VBW: 100 kHz f ≥ 1GHz : RBW/VBW: 1 MHz

Limits: § 15.247 (c)

In any 100 kHz bandwidth outside the frequency band at least 20dB below the highest level of the desired power. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

Limits: § 15.109

Frequency (MHz)	**Field strength (dBµV/m)**	**Measurement distance (m)**
30 - 88	30.0	10
88 - 216	33.5	10
216 - 960	36.0	10
above 960	54.0	3

5.14 Spurious Emissions - radiated (Receiver) §15.109 / 209

Plot 1: 0.03 - 1 GHz vertical / horizontal (receiver)

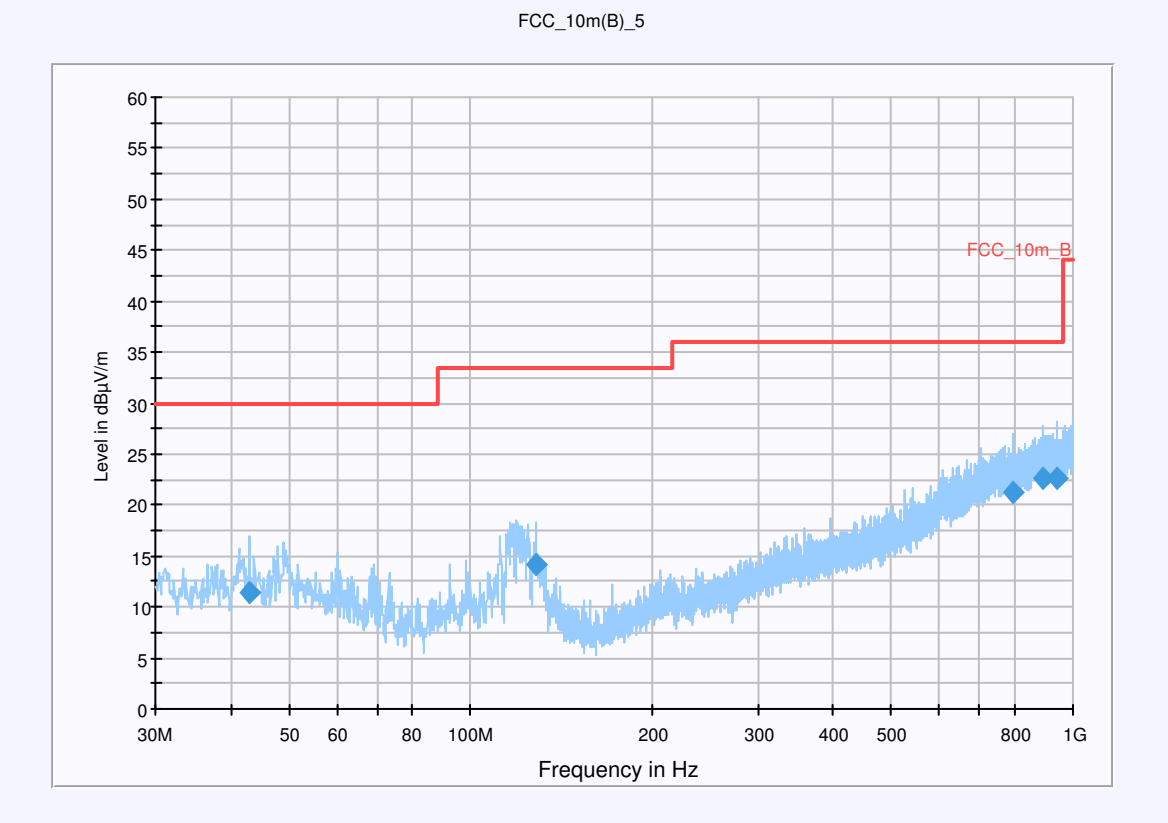
Common Information

EUT:	W35
Serial Number:	T710443474
Test Description:	FCC part 15 class B @ 10 m
Operating Conditions:	Rx
Operator Name:	COA
Comment:	AC: 115 V / 60 Hz

Scan Setup: STAN_Fin [EMI radiated]

Hardware Setup:	Electric Field (NOS)
Level Unit:	dBµV/m

Subrange	Detectors	IF Bandwidth	Meas. Time	Receiver
30 MHz - 1 GHz	QuasiPeak	120 kHz	15 s	Receiver



Final Result 1

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Antenna height (cm)	Polarity	Turntable position (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Comment
42.960000	11.4	15000.000	120.000	220.0	V	261.0	13.5	18.6	30.0	
128.280000	14.2	15000.000	120.000	205.0	V	-1.0	9.8	19.3	33.5	
796.800000	21.1	15000.000	120.000	220.0	V	10.0	24.3	14.9	36.0	
890.880000	22.6	15000.000	120.000	220.0	H	192.0	25.6	13.4	36.0	
939.360000	22.7	15000.000	120.000	110.0	V	185.0	25.8	13.3	36.0	

Hardware Setup: EMI radiated\Electric Field (NOS) - [EMI radiated]

Subrange 1

Frequency Range:	30 MHz - 2 GHz
Receiver:	Receiver [ESCI 3] @ GPIB0 (ADR 20), SN 100083/003, FW 4.32
Signal Path:	without Notch FW 1.0
Antenna:	VULB 9163 SN 9163-295, FW --- Correction Table (vertical): VULP6113 Correction Table (horizontal): VULP6113 Correction Table: Cable_EN_1GHz (0109)
Antenna Tower:	Tower [EMCO 2090 Antenna Tower] @ GPIB0 (ADR 8), FW REV 3.12
Turntable:	Turntable [EMCO Turntable] @ GPIB0 (ADR 9), FW REV 3.12

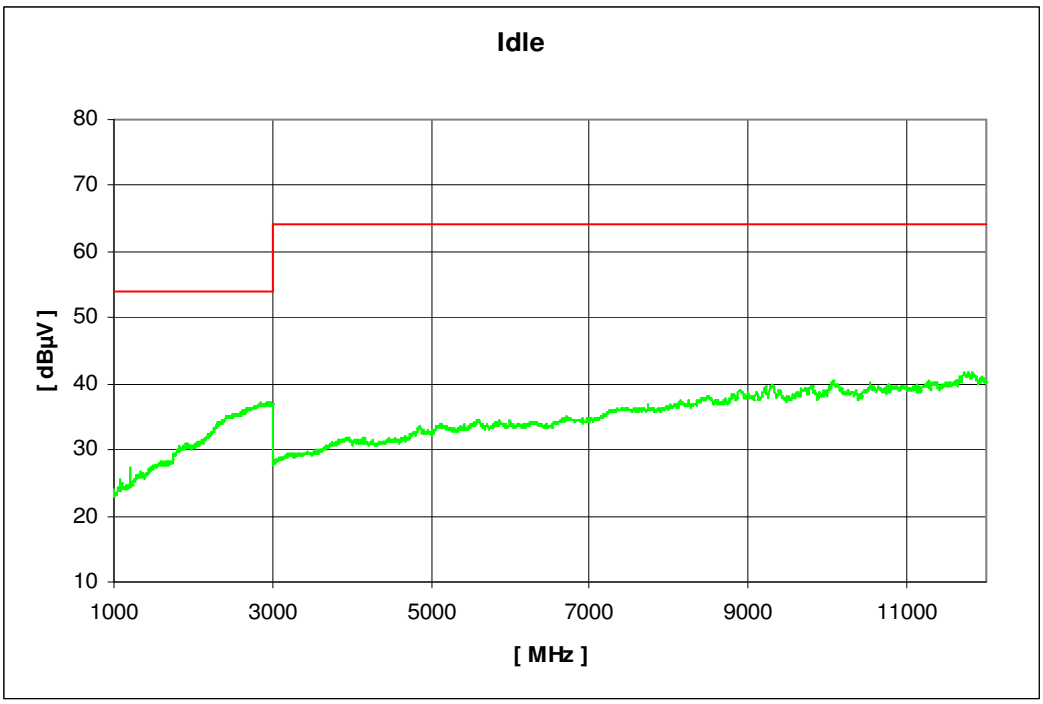
EMC 32 Version 8.10.00

Plot 2: 1 - 12 GHz vertical / horizontal (receiver)

CETECOM ICT Services GmbH

Projekt- Nr.:2-4900-2_08

EUT:	W35	Polarisation:	Horizontal
Manufacturer:	Ericsson	Battery:	AC/DC Power Supply
IMEI:	Idle	HW:	
Operator:	MUY	SW:	
Start of Test :	20.02.2009 10:28:47	Vmin:	
Standard:	FCC_15_407_2400	Vnom:	115
Signalling Unit:	CMU200	Vmax:	
Transducer-File:	C:\Spurious_neu\Messparameter\FCC_15_407_2400\Transducer_FCC_15_407_2400.xls		
Start Freq. [MHz]:	1000	Stop Freq. [MHz]	12000



Results:

Spurious Emissions level [dBµV/m]		
f[MHz]	Detector	Level [dBµV/m]
No critical peaks detected.		
Measurement uncertainty	±3 dB	

f < 1 GHz : RBW/VBW: 100 kHz f ≥ 1GHz : RBW/VBW: 1 MHz
See above plots

Measurement distance see table

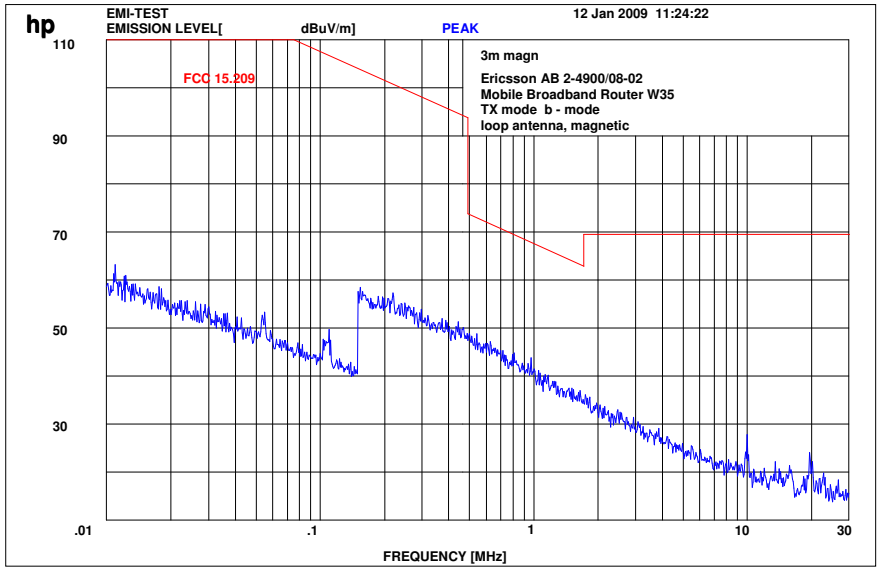
Limits: § 15.109

Frequency (MHz)	**Field strength (dBµV/m)**	**Measurement distance (m)**
30 - 88	30.0	10
88 - 216	33.5	10
216 - 960	36.0	10
above 960	54.0	3

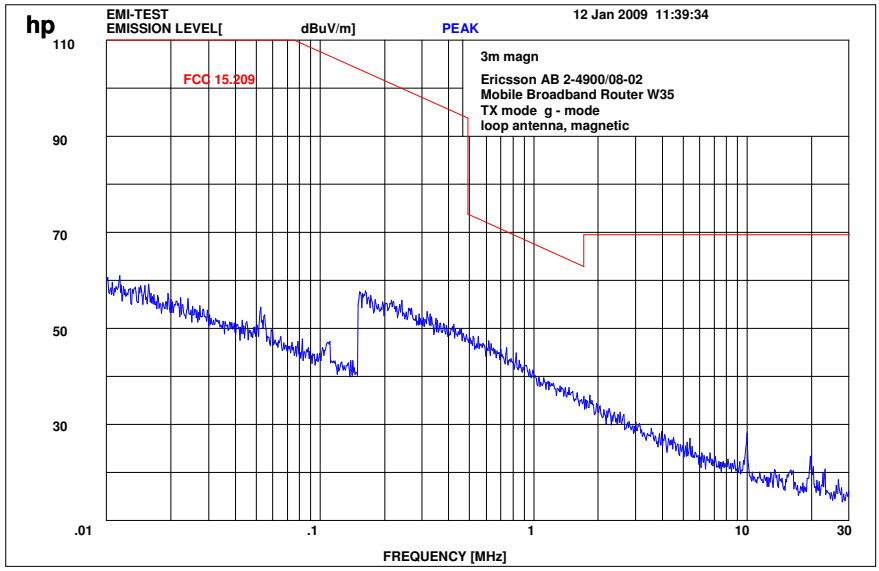
5.15 Spurious Emissions - radiated < 30 MHz §15.209

Measured at 3 m distance.
Values recalculated with 40 dB/decade according to FCC rules.

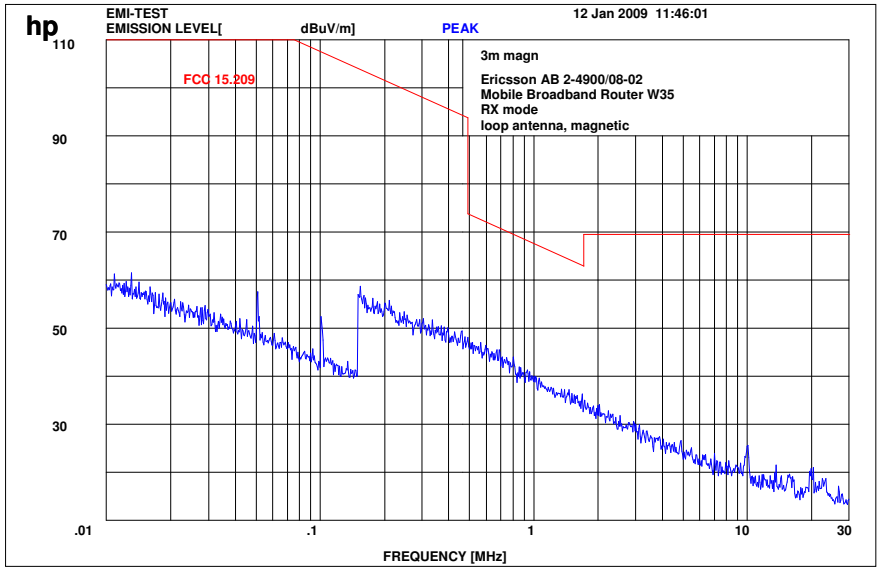
Plot 1: TX mode, b – mode 11 Mbit/s



Plot 2: TX mode, g – mode 54 Mbit/s



Plot 3: RX mode



Limits:

Frequency (MHz)	Field strength (µV/m)	Measurement distance (m)
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30.0	30 / 29.5 dBµV/m	30
30 - 88	100 / 40 dBµV/m	3
88 - 216	150 / 43.5 dBµV/m	3
216 - 960	200 / 46 dBµV/m	3
above 960	54 dBµV/m	3

5.16 Conducted Emissions < 30 MHz §15.107/207

Not performed!

Plot 1: CISPR 22

We measured in TX and RX mode, L1 and N floating and grounded, max value was hold.

Limits:

Under normal test conditions only	See plots

6 Test equipment and ancillaries used for tests

To simplify the identification on each page of the test equipment used, on each page of the test report, each item of test equipment and ancillaries such as cables are identified (numbered) by the Test Laboratory, below.

All reported calibration intervals are calibrations according to the EN/ISO/IEC 17025 standard. These calibrations were performed from an accredited external calibration laboratory.
Additional to these calibrations the laboratory performed comparison measurements with other calibrated systems and performed a weekly chamber inspection.
All used devices are connected with a 10 MHz external reference.
According to the manufacturers' instruction is it possible to establish a calibration interval for the FSP unit of 24 month, if the device has an external 10 MHz reference.

Anechoic chamber C:

No	Equipment/Type	Manuf.	Serial Nr.	Inv. No. Cetecom	Last Calibration	Frequency (months)	Next Calibration
1	Anechoic chamber	MWB	87400/02	300000996	Monthly verification		
2	System-Rack 85900	HP I.V.	*	300000222	n.a.		
3	Measurement System 1						
4	Spektrum Analyzer 8566B	HP	3138A07614	300001207	13.12.2007	24	13.12.2009
5	Spektrum Analyzer Display 85662A	HP	3144A28627	300001208	13.12.2007	24	13.12.2009
6	Quasi-Peak-Adapter 85650A	HP	2811A01204	300002308	13.12.2007	24	13.12.2009
7	RF-Preselector 85685A	HP	2837A00778	300002448	13.12.2007	24	13.12.2009
8	PC Vectra VL	HP		300001688	n.a.		
9	Software EMI	HP		300000983	n.a.		
10	Measurement System 2						
11	FSP 30	R&S	100886	300003575	25.08.2008	24	25.08.2010
12	PC	F+W			n.a.		
13	TILE	TILE			n.a.		
14	Biconical antenna	EMCO	S/N: 860 942/003		Monthly verification (System cal.)		
15	Log. Period. Antenna 3146	EMCO	2130	300001603	Monthly verification (System cal.)		
16	Double Ridged Antenna HP 3115P	EMCO	3088	300001032	Monthly verification (System cal.)		
17	Active Loop Antenna 6502	EMCO	2210	300001015	Monthly verification (System cal.)		
18	Power Supply 6032A	HP	2818A03450	300001040	12.05.2007	36	12.05.2010
19	Busisolator	Kontron		300001056	n.a.		
20	Leitungsteiler 11850C	HP		300000997	Monthly verification (System cal.)		
21	Power attenuator 8325	Byrd	1530	300001595	Monthly verification (System cal.)		
22	Band reject filter WRCG1855/1910	Wainwright	7	300003350	Monthly verification (System cal.)		
23	Band reject filter WRCG2400/2483	Wainwright	11	300003351	Monthly verification (System cal.)		

System Rack Room 005 :

No	Equipment/Type	Manuf.	Serial Nr.	Inv. No. Cetecom	Last Calibration	Frequency (months)	Next Calibration
1	FSP 30	R&S	100886	300003575	25.08.2008	24	25.08.2010
2	CBT	R&S	100313	300003516	03.09.2008	24	03.09.2010
3	Switch Matrix	HP		300000929	n.a.		
4	Power Supply	HP	3041A00544	300002270	13.05.2007	36	13.05.2010
5	Signal Generator	R&S	836206/0092	300002680	30.05.2007	36	30.05.2010

Signalling Units:

No	Equipment/Type	Manuf.	Serial Nr.	Inv. No. Cetecom	Last Calibration	Frequency (months)	Next Calibration
1	CBT	R&S	100313	300003516	03.09.2008	24	03.09.2010
2	CBT	R&S	100185	300003416	27.08.2008	24	27.08.2010
3	CMU-200	R&S	103992	300003231	04.06.2008	12	04.06.2009
4	CMU-200	R&S	106240	300003321	27.08.2008	24	27.08.2010
5	CMU-200	R&S	832221/0055	300002862	20.03.2008	24	20.03.2010

Climatic Box:

No	Equipment/Type	Manuf.	Serial Nr.	Inv. No. Cetecom	Last Calibration	Frequency (months)	Next Calibration
1	Climatic box VT 4002	Heraeus Vötsch	58566046820010	300003019	11.05.2007	24	11.05.2009
2	Climatic box CTS T-40/50	CTS	064023	300003540	03.01.2007	24	03.01.2009

SRD Laboratory Room 002:

No	Equipment/Type	Manuf.	Serial Nr.	Inv. No. Cetecom	Last Calibration	Frequency (months)	Next Calibration
1	System Controller PSM 12	R&S	835259/007	3000002681-00xx	n.a.		
2	Memory Extension PSM-K10	R&S	To 1	3000002681	n.a.		
3	Operating Software PSM-B2	R&S	To 1	3000002681	n.a.		
4	19'' Monitor		22759020-ED	3000002681	n.a.		
5	Mouse		LZE 0095/6639	3000002681	n.a.		
6	Keyboard		G00013834L461	3000002681	n.a.		
7	Spectrum Analyser FSIQ 26	R&S	835540/018	3000002681-0005	10.01.2008	24	10.01.2010
8	Tracking Generator FSIQ-B10	R&S	835107/015	3000002681	s.No.7		
10	RF-Generator SMIQ03 (B1 Signal)	R&S	835541/056	3000002681-0002	26.08.2008	36	26.08.2011
11	Modulation Coder SMIQ-B20	R&S	To 10	3000002681	s.No.10		
12	Data Generator SMIQ-B11	R&S	To 10	3000002681	s.No.10		
13	RF Rear Connection SMIQ-B19	R&S	To 10	3000002681	s.No.10		
14	Fast CPU SM-B50	R&S	To 10	3000002681	s.No.10		
15	FM Modulator SM-B5	R&S	835676/033	3000002681	s.No.10		
16	RF-Generator SMIQ03 (B2 Signal)	R&S	835541/055	3000002681-0001	25.08.2008	36	25.08.2011
17	Modulation Coder SMIQ-B20	R&S	To 16	3000002681	s.No.16		
18	Data Generator SMIQ-B11	R&S	To 16	3000002681	s.No.16		
19	RF Rear Connection SMIQ-B19	R&S	To 16	3000002681	s.No.16		
20	Fast CPU SM-B50	R&S	To 16	3000002681	s.No.16		
21	FM Modulator SM-B5	R&S	836061/022	3000002681	s.No.16		
22	RF-Generator SMP03 (B3 Signal)	R&S	835133/011	3000002681-0003	26.08.2008	36	26.08.2011
23	Attenuator SMP-B15	R&S	835136/014	3000002681	S.No.22		
24	RF Rear Connection SMP-B19	R&S	834745/007	3000002681	S.No.22		
25	Power Meter NRVD	R&S	835430/044	3000002681-0004	26.08.2008	24	26.08.2010
26	Power Sensor NRVD-Z1	R&S	833894/012	3000002681-0013	26.08.2008	24	26.08.2010
27	Power Sensor NRVD-Z1	R&S	833894/011	3000002681-0010	26.08.2008	24	26.08.2010
28	Rubidium Standard RUB	R&S		3000002681-0009	27.08.2008	24	27.08.2010
29	Switching and Signal Conditioning Unit SSCU	R&S	338864/003	3000002681-0006	Verified with path compensation		
30	Laser Printer HP Deskjet 2100	HP	N/A	3000002681-0011	n.a.		
31	19'' Rack	R&S	11138363000004	3000002681	n.a.		
32	RF-cable set	R&S	N/A	3000002681	n.a.		
33	IEEE-cables	R&S	N/A	3000002681	n.a.		
34	Sampling System FSIQ-B70	R&S	835355/009	3000002681	s.No.7		
35	RSP programmable attenuator	R&S	834500/010	3000002681-0007	26.08.2008	24	26.08.2010
36	Signalling Unit	R&S	838312/011	3000002681	n.a.		
37	NGPE programmable Power Supply for EUT	R&S	192.033.41	3000002681			
39	Power Splitter 6005-3	Inmet Corp.	none	300002841	23.12.2006	24	23.12.2008
40	SMA Cables SPS-1151-985-SPS	Insulated Wire	different	different	n.a.		
41	CBT32 with EDR Signalling Unit	R&S					
42	Coupling unit	Narda	N/A	--	n.a.		
43	2xSwitch Matrix PSU	R&S	872584/021	300001329	n.a.		
44	RF-cable set	R&S	N/A	different	n.a.		
45	IEEE-cables	R&S	N/A	--	n.a.		

Note: 3000002681-00xx inventoried as a system

SRD Laboratory Room 005:

No	Equipment/Type	Manuf.	Serial Nr.	Inv. No. Cetecom	Last Calibration	Frequency (months)	Next Calibration
1	Spektrum Analyzer 8566B	HP	2747A05275	300000219	18.01.2008	24	18.01.2010
2	Spektrum Analyzer Display 85662A	HP	2816A16497	300001690	23.01.2008	24	23.01.2010
3	Quasi-Peak-Adapter 85650A	HP	2811A01135	300000216	23.01.2008	24	23.01.2010
4	Power Supply	Heiden	003202	300001187	12.05.2007	36	12.05.2010
5	Power Supply	Heiden	1701	300001392	12.05.2007	36	12.05.2010

SRD Laboratory Room 011:

No	Equipment/Type	Manuf.	Serial Nr.	Inv. No. Cetecom	Last Calibration	Frequency (months)	Next Calibration
1	NRP Power Meter	R&S	100212	300003780	27.02.2008	24	27.02.2010

Anechoic chamber F:

No	Equipment/Type	Manuf.	Serial Nr.	Inv. No. Cetecom	Last Calibration	Frequency (months)	Next Calibration
1	Control Computer	F+W	FW0502032	300003303	-/-	-/-	-/-
2	Trilog Antenna	9163-295	-/-	-/-	30.04.2008	24	30.04.2010
3	Amplifier - 0518C-138	Veritech Micro-wave Inc.	-/-	-/-	-/-	-/-	-/-
4	Switch - 3488A	HP		300000368	-/-	-/-	-/-
5	EMI Test receiver - ESCI	R&S	100083	300003312	31.01.2007	24	31.01.2009
6	Turntable Controller - 1061 3M	EMCO	1218	300000661	-/-	-/-	-/-
7	Tower Controller 1051 Controller	EMCO	1262	300000625	-/-	-/-	-/-
8	Tower - 1051	EMCO	1262	300000625	-/-	-/-	-/-
10	Ultra Notch-Filter Rejected band Ch. 62	WRCD	9	-/-	-/-	-/-	-/-

7 Photographs of the Test Set-up

Photo 1:

Photo 2:

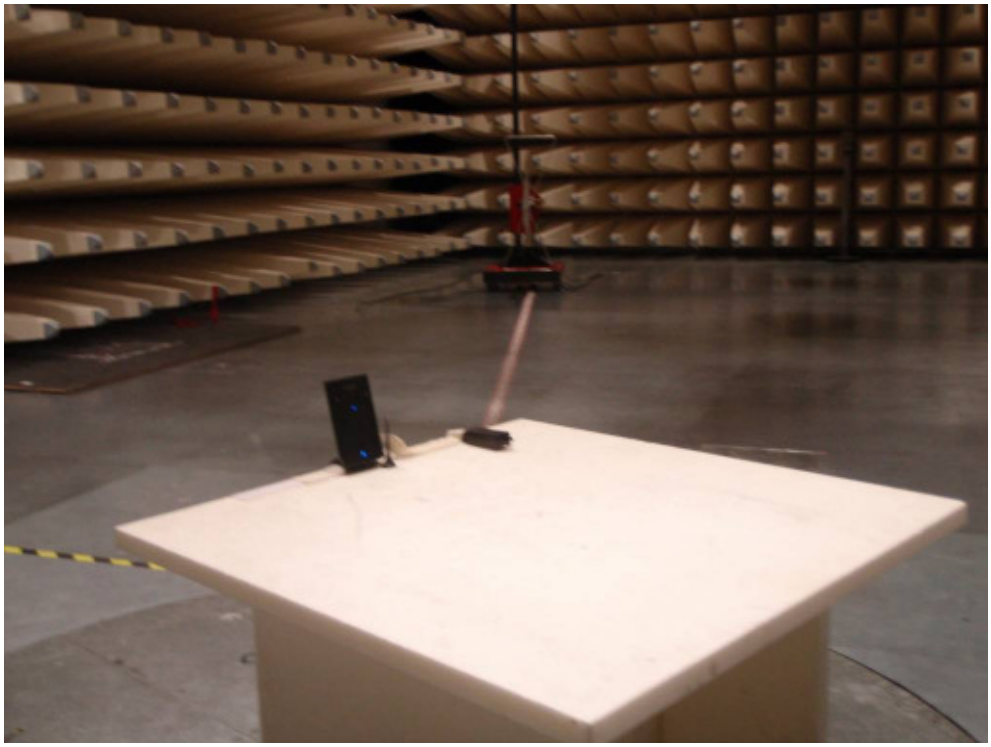


Photo 3:

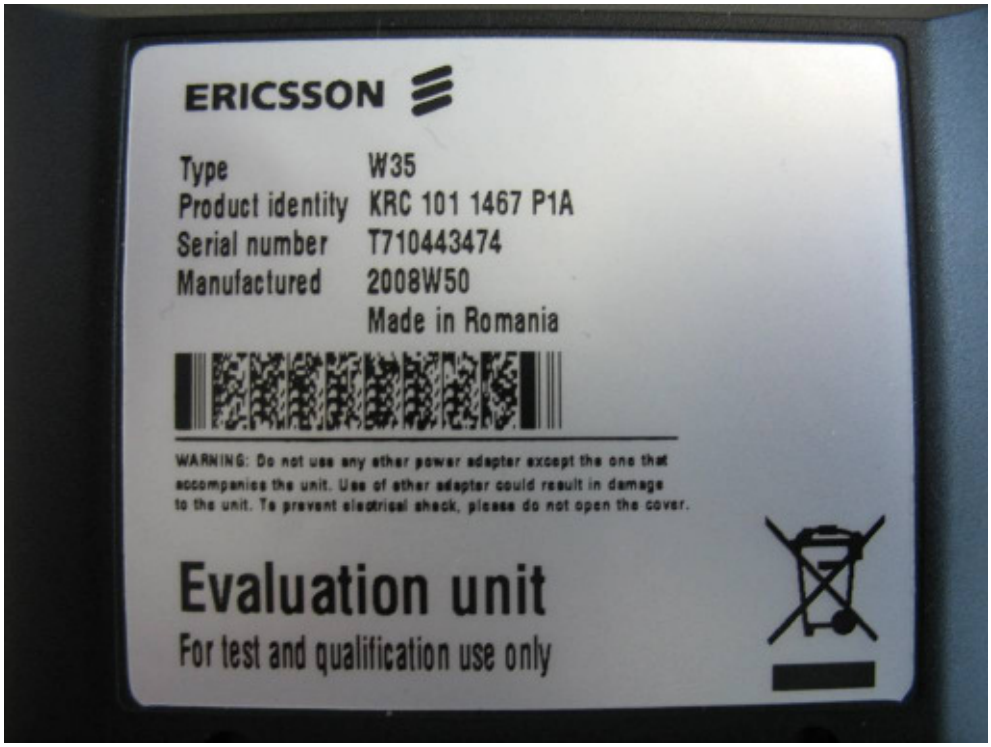


Photo 4:

8 Photographs of the EUT

Photo 1:

Photo 2:

Photo 3:

Photo 4:

Photo 5:

Photo 6:

Photo 7:

Photo 8:

Photo 9:

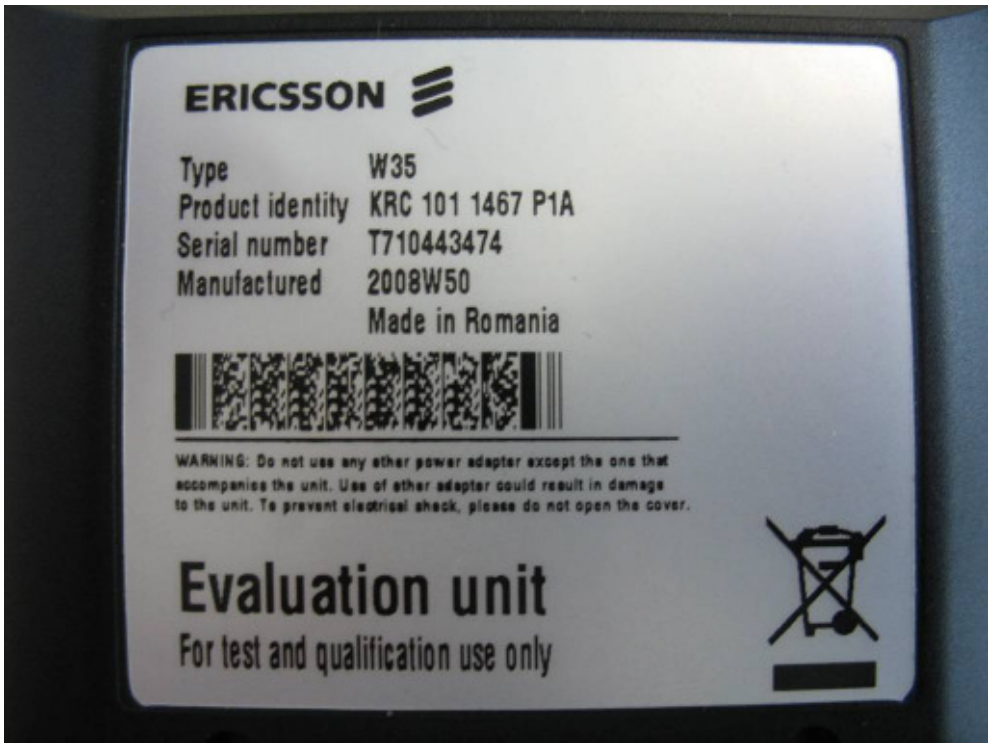


Photo 10:

Photo 11:

Photo 12:

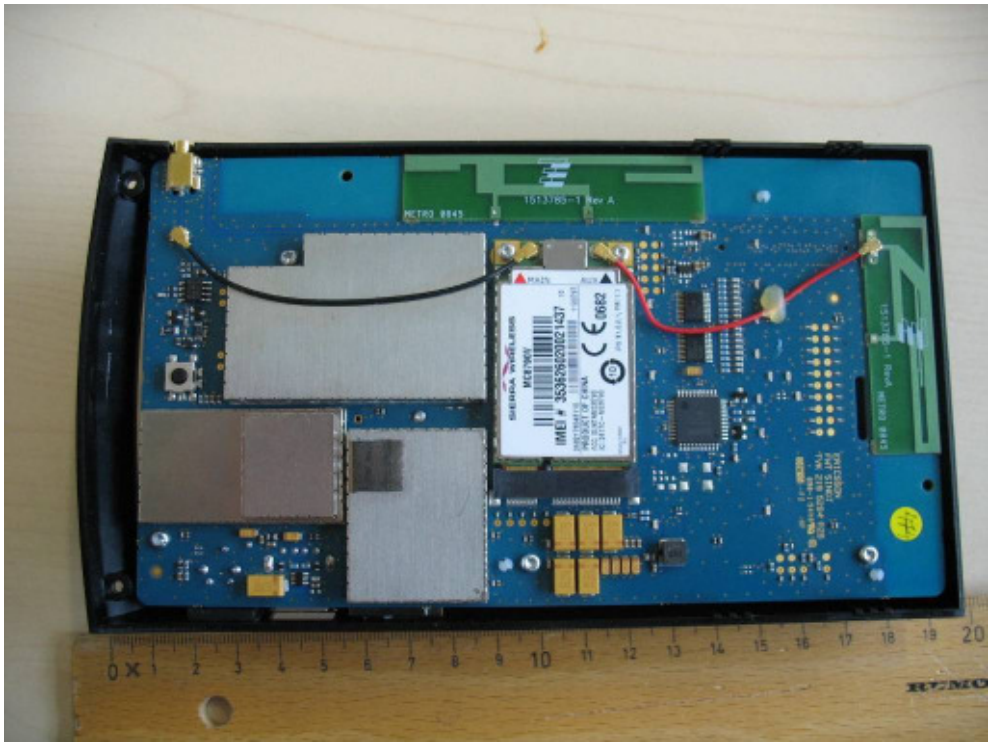


Photo 13:

Photo 14: WWAN-Antenna

Photo 15: WWAN-Antenna

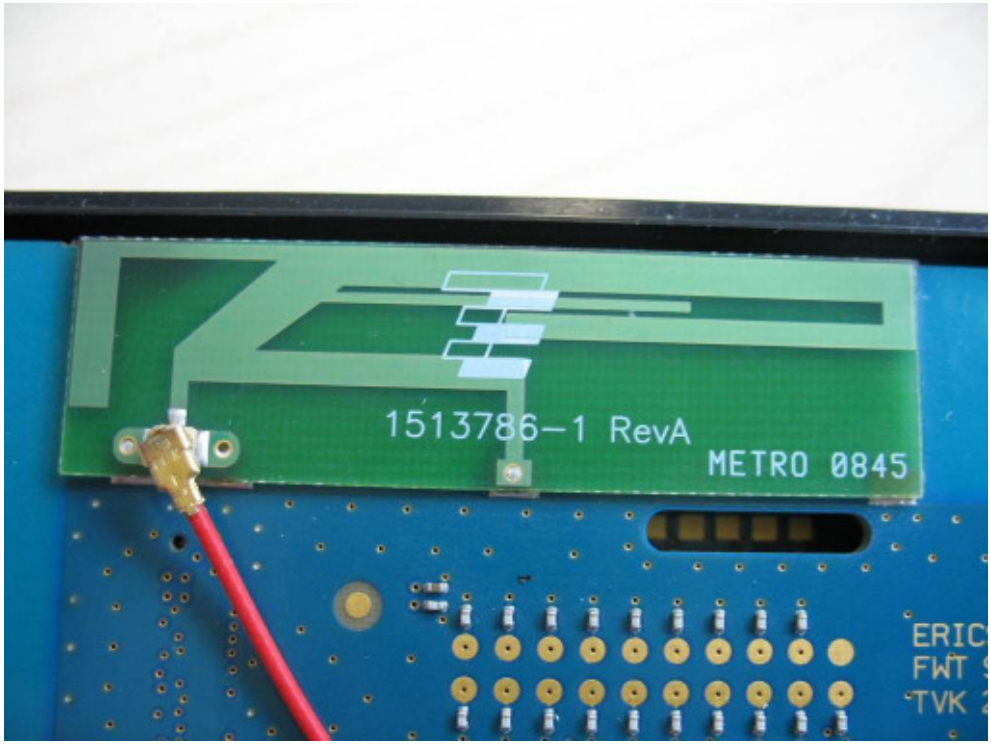


Photo 16:

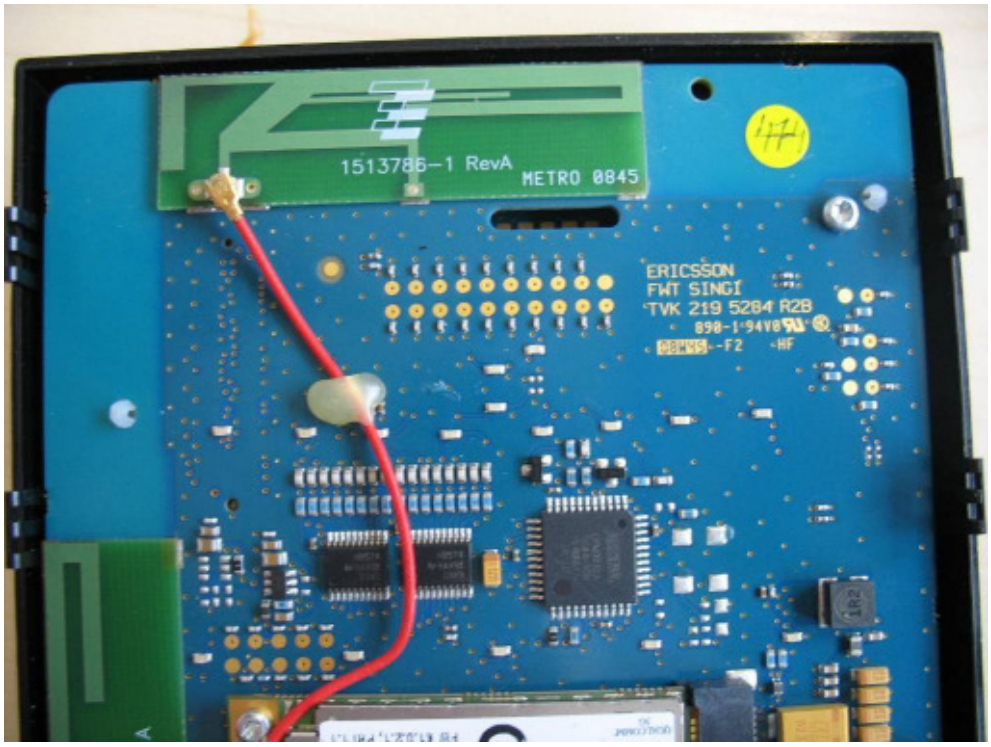


Photo 17:

Photo 18:

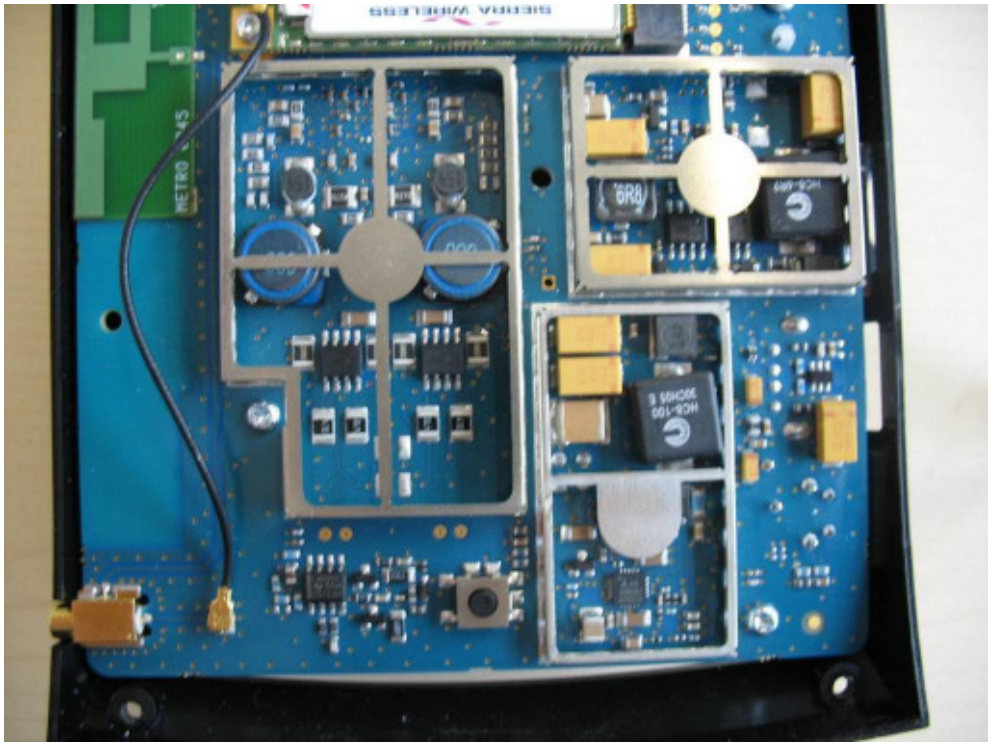


Photo 19:

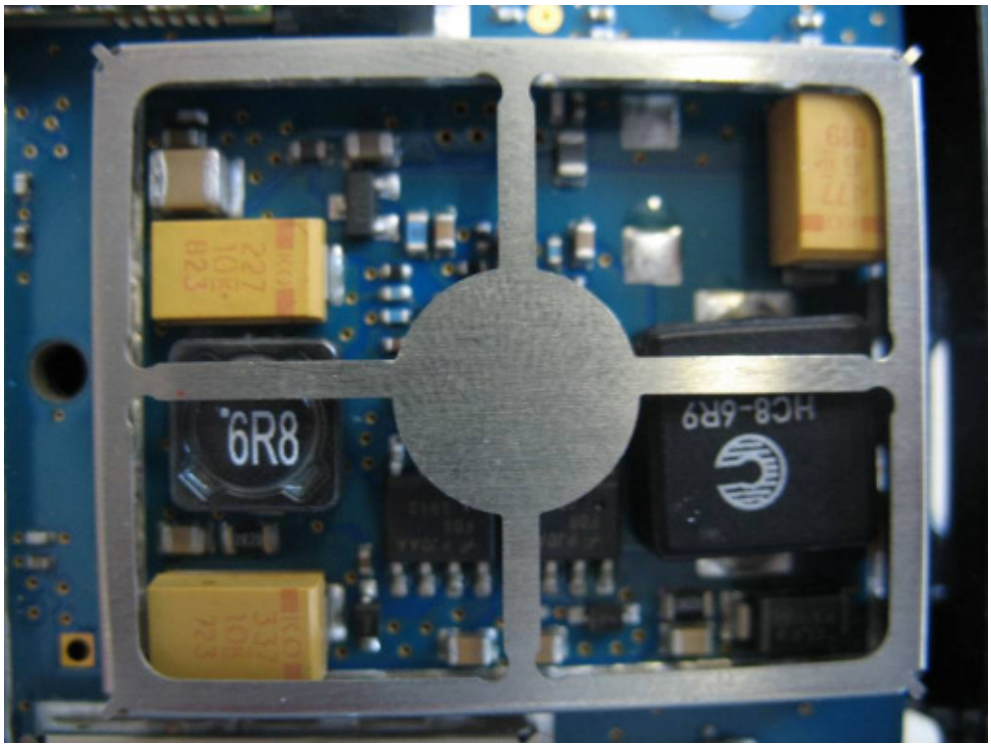


Photo 20:

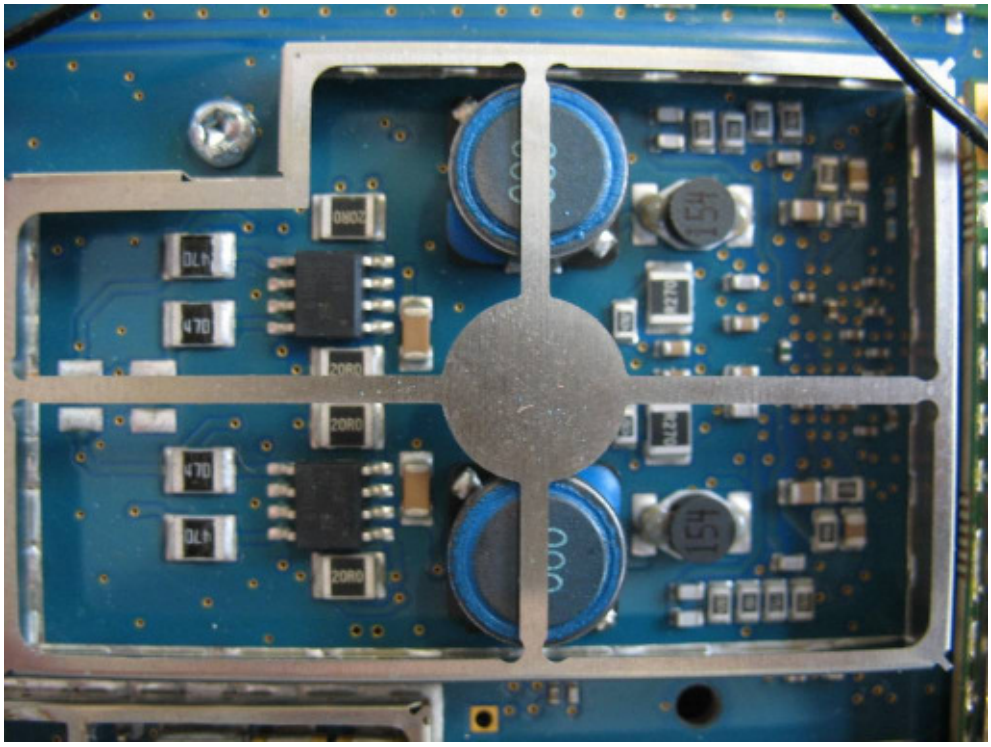


Photo 21:

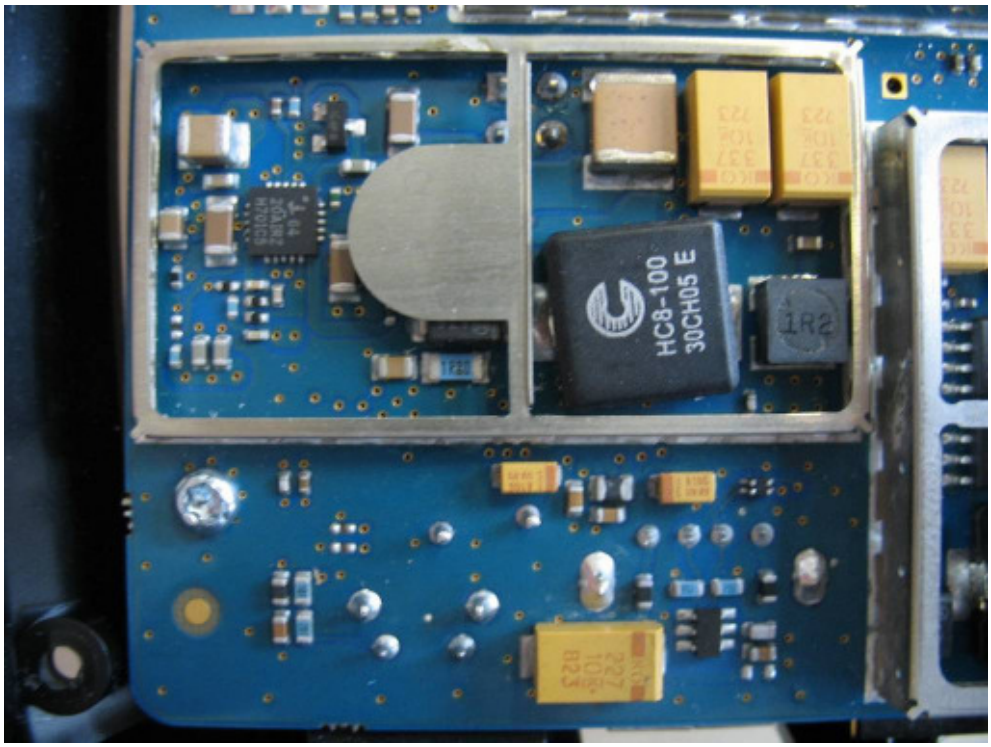


Photo 22:

Photo 23:

Photo 24:

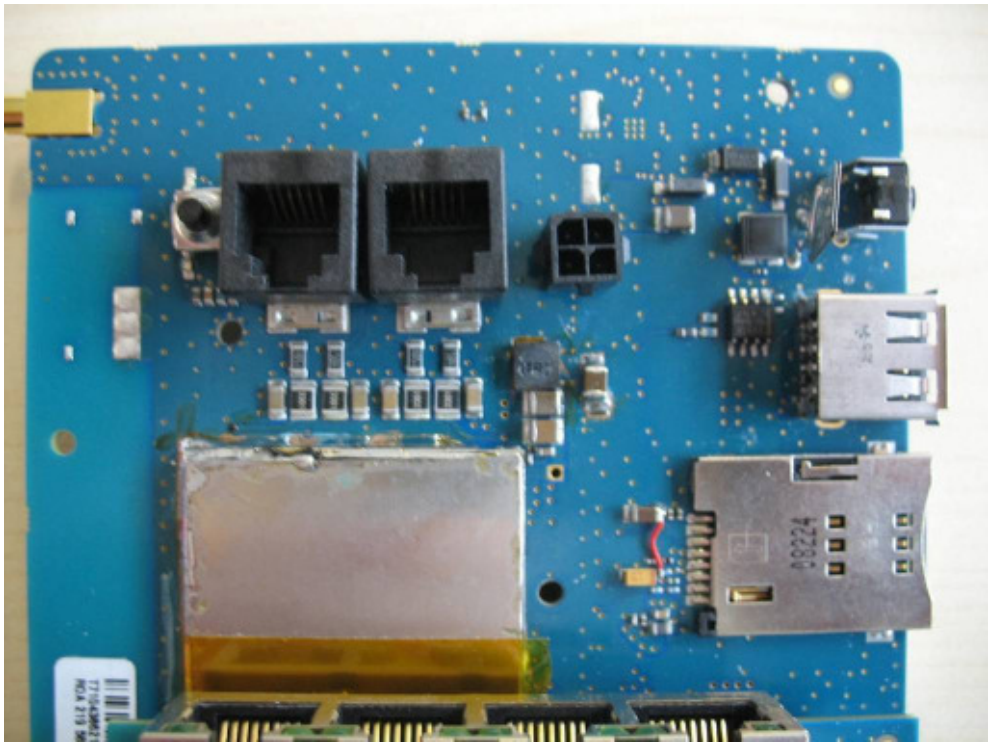


Photo 25: (WLAN-Antenna)

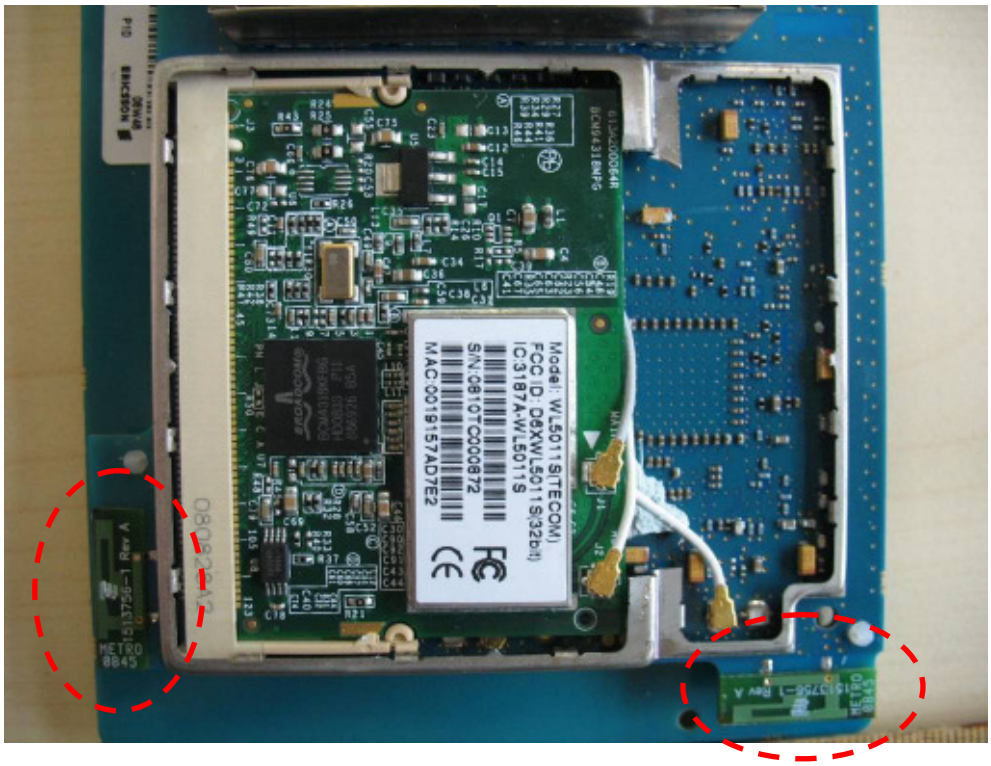


Photo 26:

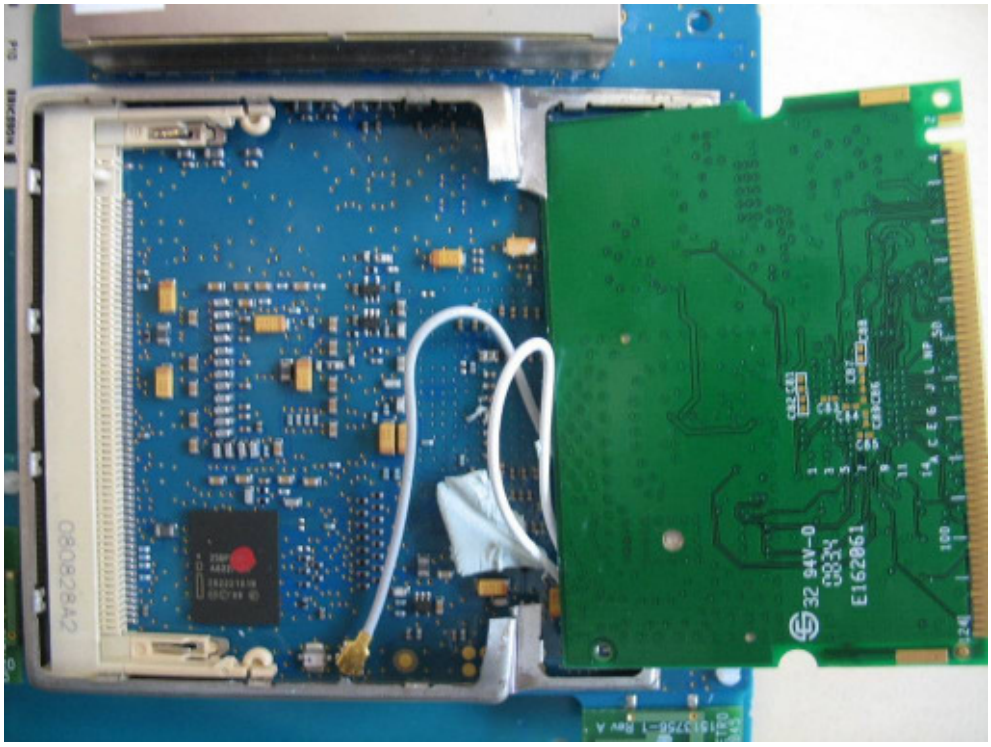
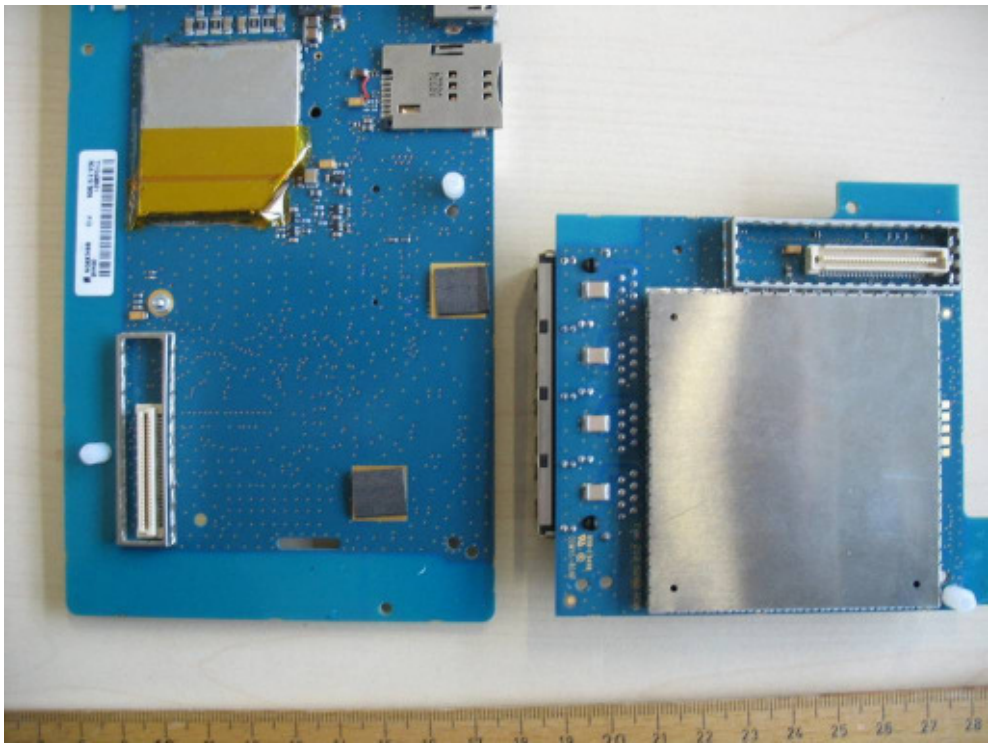


Photo 27:



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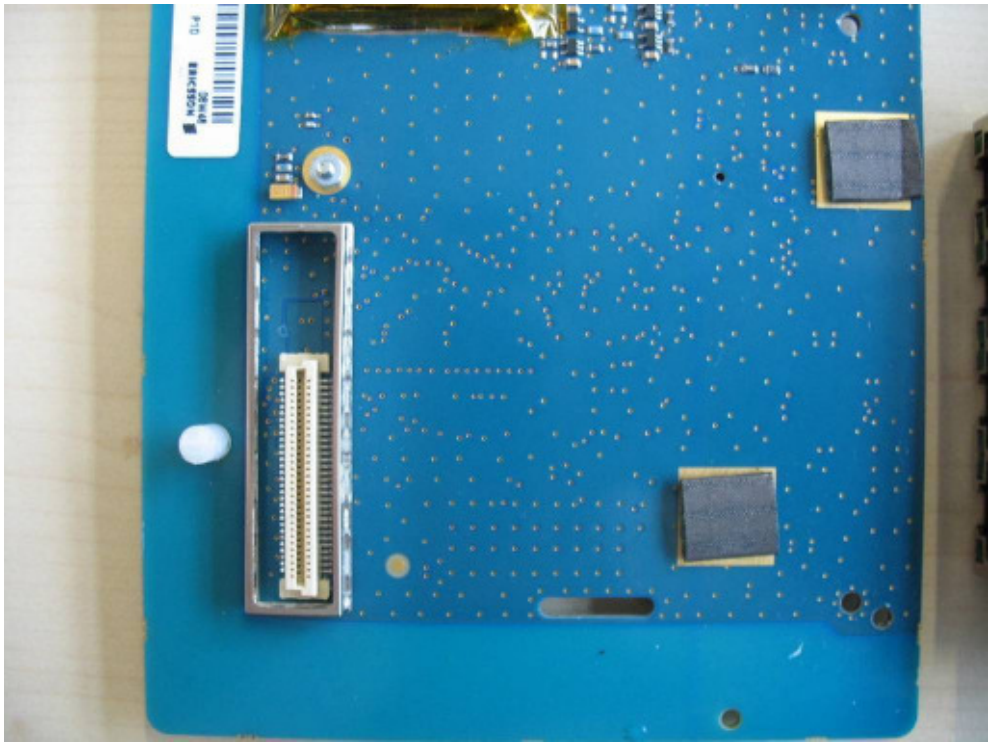

Photo 29: