AT4 wireless S.A.
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MÁLAGA, C.I.F. A29 507 456
Registro Mercantil Tomo 3693 Libro 2604
Folio 174 Hoja MA3729

TEST REPORT

REFERENCE STANDARD:

FCC Rules and Regulations 47 CFR Part 15, Subpart B

FCC Rules and Regulations 47 CFR Part 15, Subpart B: Limits and methods of measurements for radio frequency devices. Unintentional radiators.

NIE ..... :	27229REM.002
Approved by (name / position & signature) ..... :	Juan Carlos Soler Consultant
Elaboration date ..... :	2009-07-15

Juan Carlos Soler Claros
Firmado digitalmente por Juan Carlos Soler Claros
Fecha: 2009.07.20 10:59:06 +02'00'

Identification of item tested ..... :	Wireless Module
Trademark ..... :	Ericsson
Model and/or type reference ..... :	F3307
Other identification of the product ..... :	FCC ID: VV7-MBMF33072 Type number: KRD 131 16/02 Final HW version: R1 Final SW version: R1G05
Features ..... :	QUAD BAND GSM/GPRS/EGPRS class 10, WCDMA Bands I/VIII, HSDPA Cat. 8, HSUPA Cat. 5
Description ..... :	3.5G Wireless PCI Express Module

Applicant ..... :	Ericsson AB
Address ..... :	Lindholmspiren 11 Gothenburg, Sweden SE-41756
CIF/NIF/Passport ..... :	N/A
Contact person ..... :	Jonas Rinman
Telephone / Fax ..... :	+46 10 717 5061 / +46 10 712 6033
e-mail: ..... :	jonas.rinman@ericsson.com

Test samples supplier .....:	Ericsson AB
Address.....:	Lindholmspiren 11
	Gothenburg, Sweden
	SE-41756
CIF/NIF/Passport .....:	N/A
Contact person:.....:	Jonas Rinman
Telephone / Fax.....:	+46 10 717 5061 / +46 10 712 6033
e-mail: .....:	jonas.rinman@ericsson.com
Manufacturer .....:	Ericsson AB
Address.....:	Lindholmspiren 11
	Gothenburg, Sweden
	SE-41756
CIF/NIF/Passport .....:	N/A
Telephone / Fax.....:	+46 10 717 5061 / +46 10 712 6033
Test method requested .....:	
Standard .....:	FCC Rules and Regulations 47 CFR Part 15
Test procedure.....:	PEEM001; PEEM002
Report template No. .....:	FDT08_11

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Competences and guarantees

This certificate of conformity was issued in accordance with the decision Nº 3/2000 of the Joint Committee established under the Agreement on Mutual Recognition between the European Community and the United States of America. By this decision, AT4 wireless can act as Conformity Assessment Body (CAB) on Electromagnetic Compatibility. This Certificate applies to the samples listed at technical reports.

This laboratory is designed by the Federal Communications Commission (ES0004)

AT4 wireless is a testing laboratory competent to carry out the tests described in this report.

In order to assure the traceability to other national and international laboratories, AT4 wireless has a calibration and maintenance programme for its measurement equipment.

AT4 wireless guarantees the reliability of the data presented in this report, which is the result of the measurements and the tests performed to the item under test on the date and under the conditions stated on the report and, it is based on the knowledge and technical facilities available at AT4 wireless at the time of performance of the test.

AT4 wireless is liable to the client for the maintenance of the confidentiality of all information related to the item under test and the results of the test.

General conditions

1. This report is only referred to the item that has undergone the test.
2. This report does not constitute or imply on its own an approval of the product by the Certification Bodies or competent Authorities.
3. This document is only valid if complete; no partial reproduction can be made without previous written permission of AT4 wireless.
4. This test report cannot be used partially or in full for publicity and/or promotional purposes without previous written permission of AT4 wireless and the Accreditation Bodies.

Uncertainty

Uncertainty (factor k=2) was calculated according to the following AT4 wireless's internal documents:

1. PODT000: Procedure for the measure uncertainty calculation.

Usage of samples

Samples undergoing test have been selected by: Ericsson AB

Sample S/01 is composed of the following elements:

Control Nº	Description	Model	Serial Nº	Date of reception
27229/04	Wireless Module	F3307	Final Hw Version: R1 Final Sw Version: R1G05 Type number: KRD 131 16/02 IMEI: 004401700342260	2009-07-07

Auxiliary elements:

Control Nº	Description	Model	Serial Nº	Date of reception
28940/41	Cradle	---	---	2009-02-20
28940/55	Support (Box)	42W3831	---	2009-02-20
28940/56	Antenna	---	---	2009-02-20
28940/57	Support	---	---	2009-02-20

Samples S/01 has undergone the next test(s):

1. Continuous conducted emission, power leads:
   - Standard: FCC Rules and Regulations 47 CFR Part 15
   - Method: FCC Rules and Regulations 47 CFR Part 15, Subpart B (Class B)
2. Radiated emission, electromagnetic field:
   - Standard: FCC Rules and Regulations 47 CFR Part 15
   - Method: FCC Rules and Regulations 47 CFR Part 15, Subpart B (Class B)

Testing period

The performed test started on 2009-07-09 and finished on the 2009-07-13.

The tests have been performed at AT4 wireless.

Environmental conditions

In the control chamber, the following limits were not exceeded during the test:

Temperature	Min. = 15 ºC Max. = 35 ºC
Relative humidity	Min. = 20 % Max. = 80 %
Shielding effectiveness	> 100 dB
Electric insulation	> 10 kΩ
Reference resistance to earth	< 0,5 Ω

In the semianechoic chamber (21 meters x 11 meters x 8 meters), the following limits were not exceeded during the test.

Temperature	Min. = 15 ºC Max. = 30 ºC
Relative humidity	Min. = 45 % Max. = 60 %
Air pressure	Min. = 860 mbar Max. = 1060 mbar
Shielding effectiveness	> 100 dB
Electric insulation	> 10 kΩ
Reference resistance to earth	< 0,5 Ω
Normal site attenuation (NSA)	< ±4 dB at 10 m distance between item under test and receiver antenna, (30 MHz to 1000 MHz)
Field homogeneity	More than 75% of illuminated surface is between 0 and 6 dB (26 MHz to 1000 MHz).

In the chamber for conducted measurements, the following limits were not exceeded during the test:

Temperature	Min. = 15 ºC Max. = 30 ºC
Relative humidity	Min. = 45 % Max. = 60 %
Air pressure	Min. = 860 mbar Max. = 1060 mbar
Shielding effectiveness	> 100 dB
Electric insulation	> 10 kΩ
Reference resistance to earth	< 0,5 Ω

Summary

Considering the results of the performed test according to standard **FCC Rules and Regulations 47 CFR Part 15, Subpart B,** the items under test are **IN COMPLIANCE** with the requested specifications specified in the standard.

NOTE: The results presented in this Test Report apply only to the particular item under test established in page 1 of this document, as presented for test on the date(s) shown in section, "USAGE OF SAMPLES, TESTING PERIOD AND ENVIRONMENTAL CONDITIONS".

Remarks and comments

The tests have been realized by the technical personnel: José Carlos Luque Muñoz.

The total uncertainty of the measurement system for the measured radio disturbance characteristics of EUT from 150 kHz to 30 MHz is I = ± 3,60 dB for quasi-peak measurements, I = ± 3,48 dB for peak measurements (k = 2).

The total uncertainty of the measurement system for the measured radio disturbance characteristics of EUT from 30 MHz to 1 GHz is I = ± 4,57 dB for quasi-peak measurements, I = ± 4,48 dB for peak measurements (k = 2) and from 1 to 12,75 GHz is I = ± 3,43 dB for average and peak measurements.

Testing veredicts

Not applicable	:	NA
Pass	:	P
Fail	:	F
Not measured	:	NM

APPENDIX A

Test Result

APPENDIX A CONTENT:

DESCRIPTION OF THE OPERATION MODES

The operation modes described in this paragraph constitute a functionality of the sample under test for itself. Every operation mode takes a failure criteria for the immunity test that they were applying to it and a monitoring to guarantee performance of the same ones.

In the following table appears the operation modes used by the samples tested to that it refers the present test report.

OPERATION MODE	DESCRIPTION
OM#01	EUT ON. Idle 850 MHz. Power supply 3,5Vdc.
OM#02	EUT ON. TCH 850 MHz. Power supply 3,5Vdc.
OM#03	EUT ON. IDLE 1900 MHz. Power supply 3,5Vdc.
OM#04	EUT ON. TCH 1900 MHz. Power supply 3,5Vdc.

RADIATED EMISSION. ELECTROMAGNETIC FIELD MEASURE.

LIMITS:	Product standard :	FCC RULES AND REGULATIONS 47 CFR PART 15, SUBPART B.
	Test standard :	Part 15, Subpart B of FCC Rules.

LIMITS OF INTERFERENCE CLASS B

The applied limit for radiated emissions, 3 m distance, according with the requirements of FCC Rules and Regulations 47 CFR Part 15, Subpart B in the frequency range 30 MHz to 12,5 GHz, for Class B equipment, which is a transmitter in a band over 500 MHz, was:

Frequency range (MHz)	**Limit for 3 m (µV/m)**	**Limit for 3 m (dBµV/m)**
30 to 88	100	40
88 to 216	150	43,52
216 to 960	200	46,02
Above 960	500	53,98

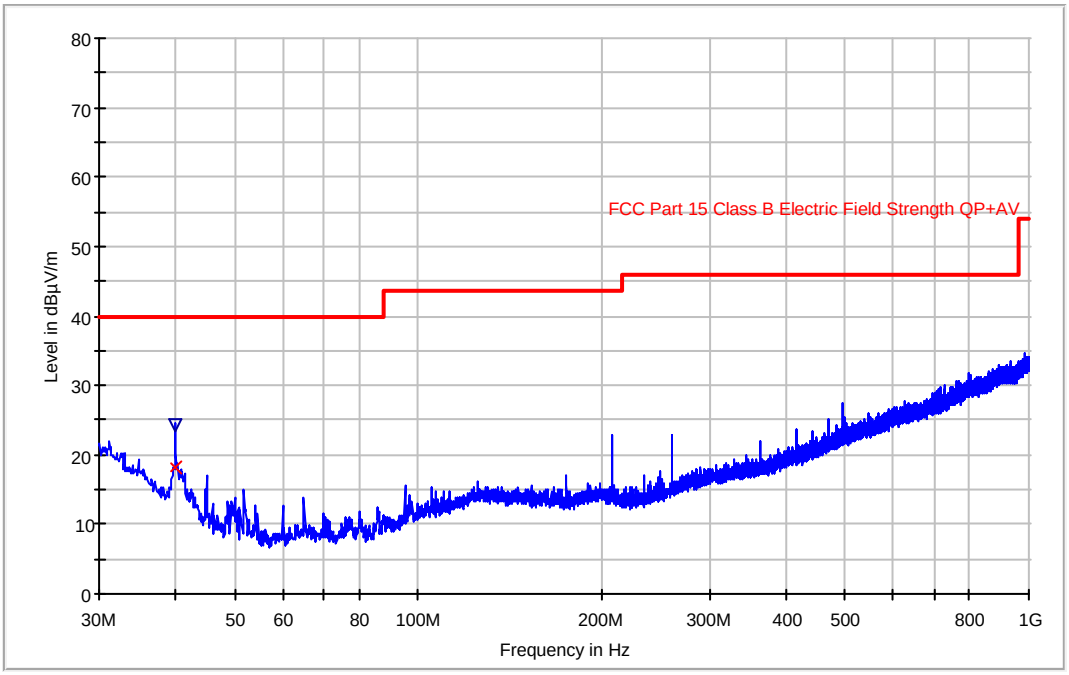
TESTED SAMPLES:	S/01
TESTED OPERATION MODES:	OM#01 & 03.
TEST RESULTS :	**CR**mmnn: CR, Radiation Condition; mm: Sample number; nn: Operation mode, xx: Polarisation.

CRmmnn	**Description**	**Result**
CR0101	EUT ON. Idle 850 MHz. Range 30 - 1000 MHz.	P
CR0103	EUT ON. Idle 1900 MHz. Range 30 - 1000 MHz.	P
CR0101PH	EUT ON. Idle 850 MHz. Range 1 – 12.5 GHz. Horizontal polarisation	P
CR0101PV	EUT ON. Idle 850 MHz. Range 1 – 12.5 GHz. Vertical polarisation.	P
CR0103PH	EUT ON. Idle 1900 MHz.Range 1 – 12.5 GHz. Horizontal polarisation	P
CR0103PV	EUT ON. Idle 1900 MHz. Range 1 – 12.5 GHz. Vertical polarisation.	P

Radiated Emission: CR0101 (30MHz to 1GHz)

Project:	27229REM.001
Company:	ERICSSON AB
Sample:	S/01
Operation Mode:	OM#01
Date:	2009-07-09 19:29
Setup:	EMI radiated
Mode:	EBP ON. Idle 850MHz.

FCC class B Bilog Hibrida



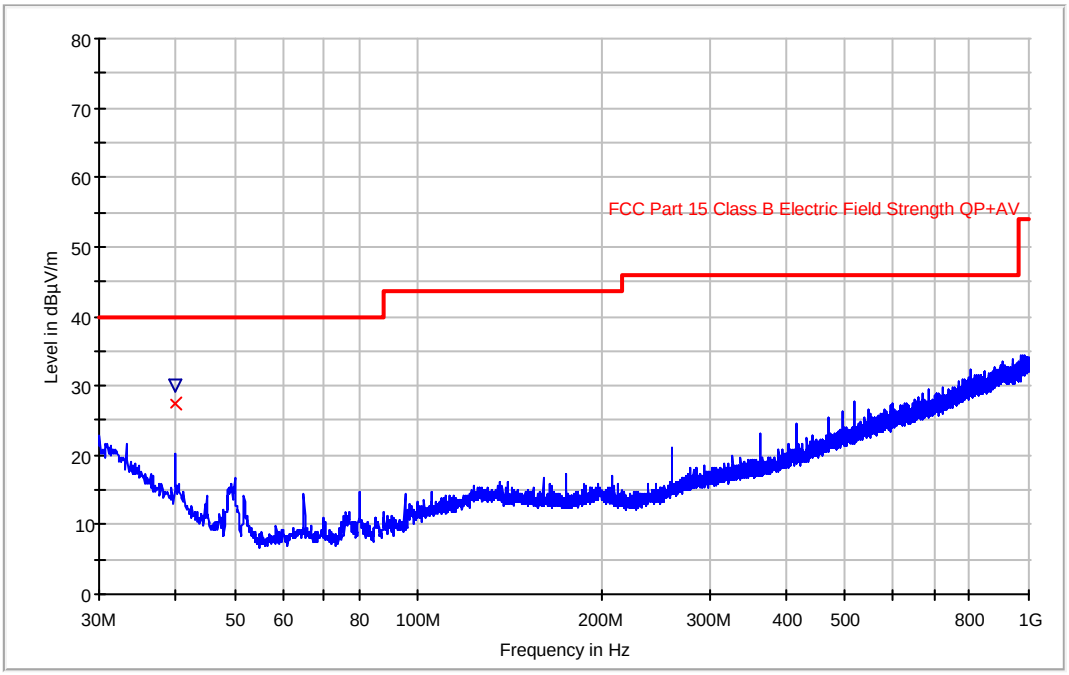
Maximized

Frequency (MHz)	QuasiPeak (dBµV/m)	MaxPeak (dBµV/m)	Antenna height (cm)	Polarity	Turntable position (deg)
40.000000	18.3	24.4	100.00	V	206.0

Radiated Emission: CR0103 (30MHz to 1GHz)

Project:	27229REM.001
Company:	ERICSSON AB
Sample:	S/01
Operation Mode:	OM#03
Date:	2009-07-09 19:54
Setup:	EMI radiated
Mode:	EUT ON. Idle 1900MHz.

FCC class B Bilog Hibrida



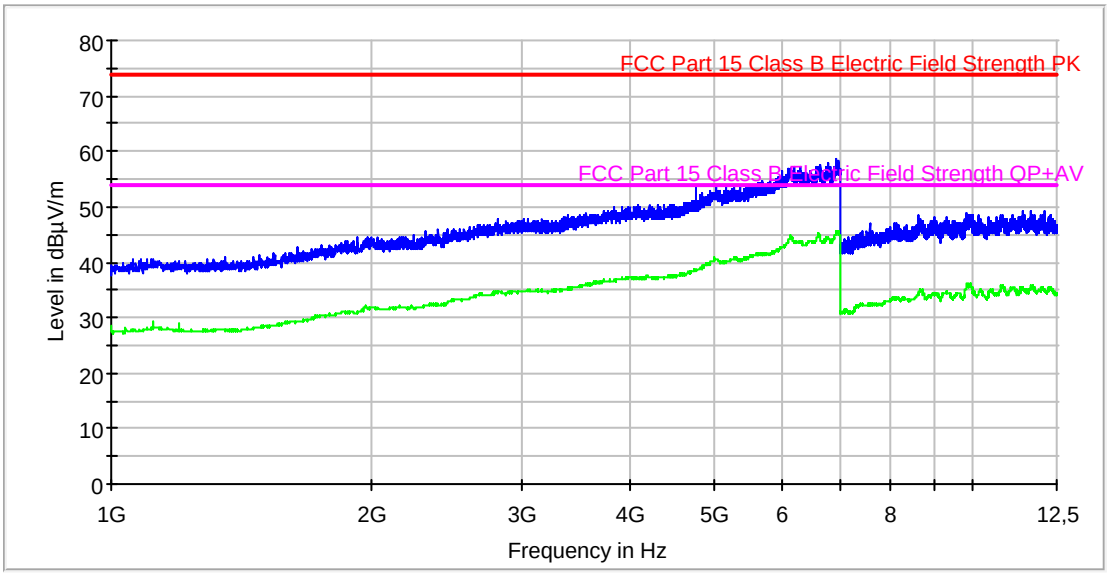
Maximized

Frequency (MHz)	QuasiPeak (dBµV/m)	MaxPeak (dBµV/m)	Antenna height (cm)	Polarity	Turntable position (deg)
40.000000	27.4	30.1	101.00	V	202.0

Radiated Emission: CR0101 (1GHz to 12.5GHz Horizontal polarisation)

Proyecto:	27229REM.001
Empresa:	ERICSSON AB
Muestra:	S/01
Modo operacion:	OM#01
Fecha:	2009-07-09 20:39
Setup:	EMI radiated
Mode:	EUT ON.Idle 850MHz. Horizontal polarization.

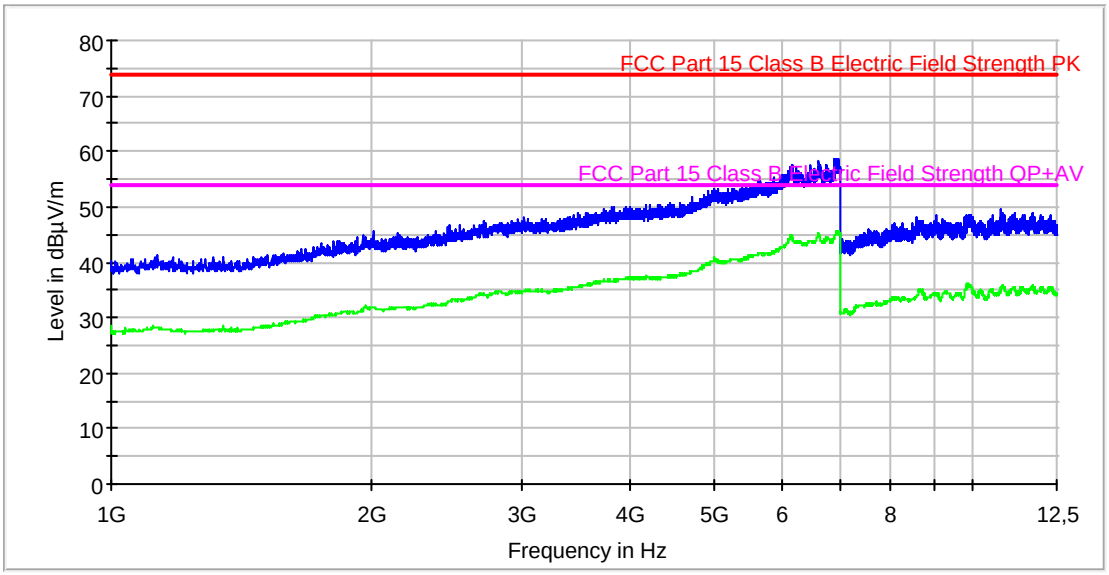
FCC 1-12.5GHz clase B



Radiated Emission: CR0101 (1GHz to 12.5GHz Vertical polarisation)

Proyecto:	27229REM.001
Empresa:	ERICSSON AB
Muestra	S/01
Modo operacion:	OM#01
Fecha:	2009-07-09 20:34
Setup:	EMI radiated
Mode:	EUT ON. Idle 850MHz. Vertical polarization.

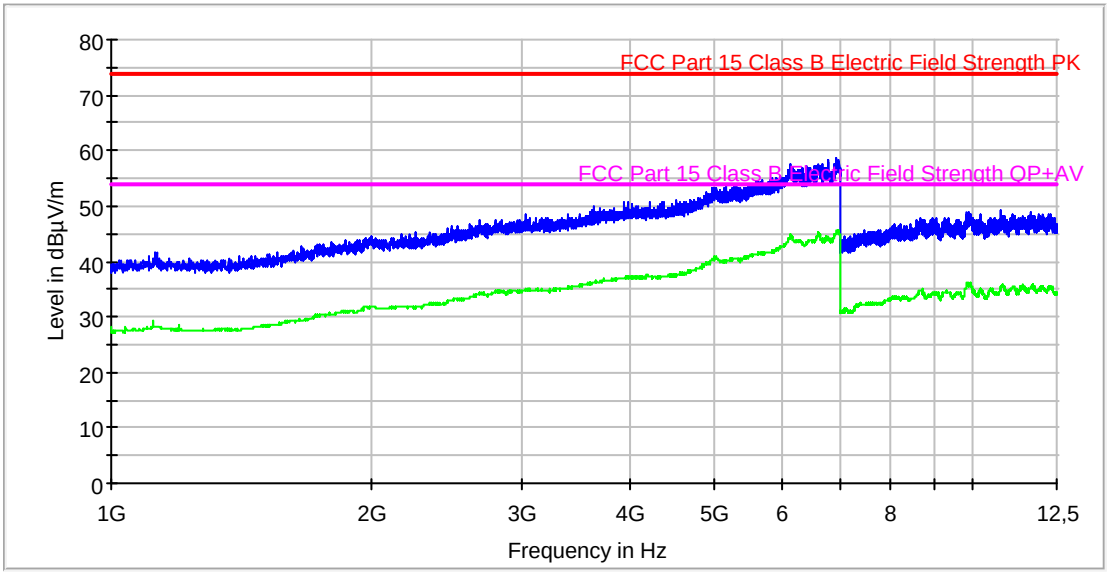
FCC 1-12.5GHz clase B



Radiated Emission: CR0103 (1GHz to 12.5GHz Horizontal polarisation)

Proyecto:	27229REM.001
Empresa:	ERICSSON AB
Muestra:	S/01
Modo operacion:	OM#03
Fecha:	2009-07-09 20:44
Setup:	EMI radiated
Mode:	EUT ON.Idle 1900MHz . Horziontal polarization.

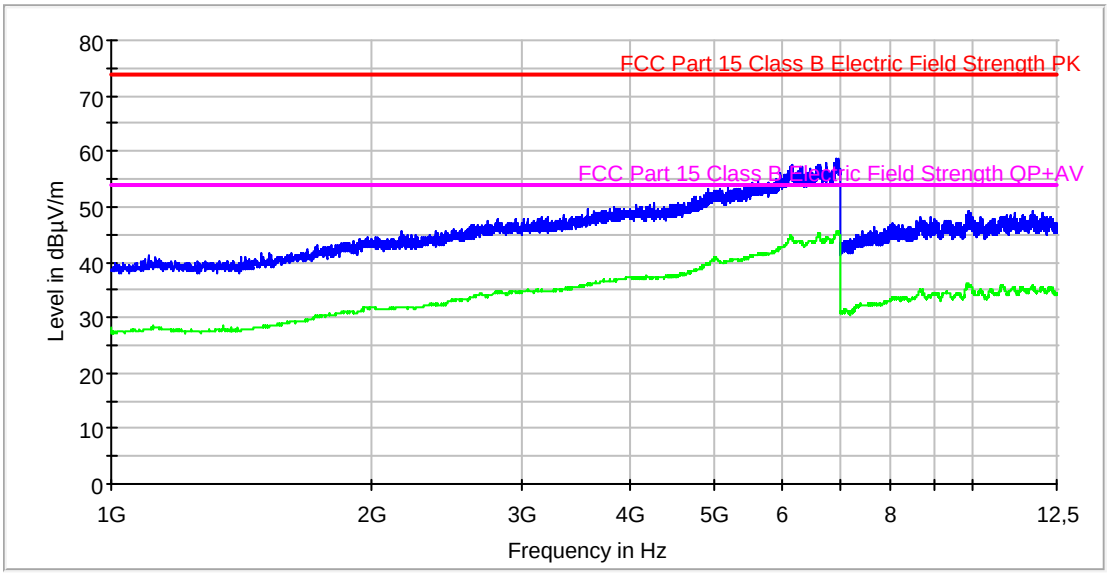
FCC 1-12.5GHz clase B



Radiated Emission: CR0103 (1GHz to 12.5GHz Vertical polarisation)

Proyecto:	27229REM.001
Empresa:	ERICSSON AB
Muestra:	S/01
Modo operacion:	OM#03
Fecha:	2009-07-09 20:48
Setup:	EMI radiated
Mode:	EUT ON.Idle 1900MHz. Vertical polarization.

FCC 1-12.5GHz clase B



CONTINUOUS CONDUCTED EMISSION ON POWER LEADS

LIMITS:	Product standard :	FCC RULES AND REGULATIONS 47 CFR PART 15, SUBPART B.
	Test standard :	Part 15, Subpart B of FCC Rules

CLASS B

The applied limit for continuous conducted emissions in power leads, according with the requirements of FCC Rules and Regulations 47 CFR Part 15, Subpart B in the frequency range 0,15 to 30 MHz, for Class B equipment was:

Frequency range (MHz)	**Limit (dBµV)**	
	Quasi-peak	**Average**
0,15 to 0,5	66-56	56-46
0,5 to 5	56	46
5 to 30	60	50

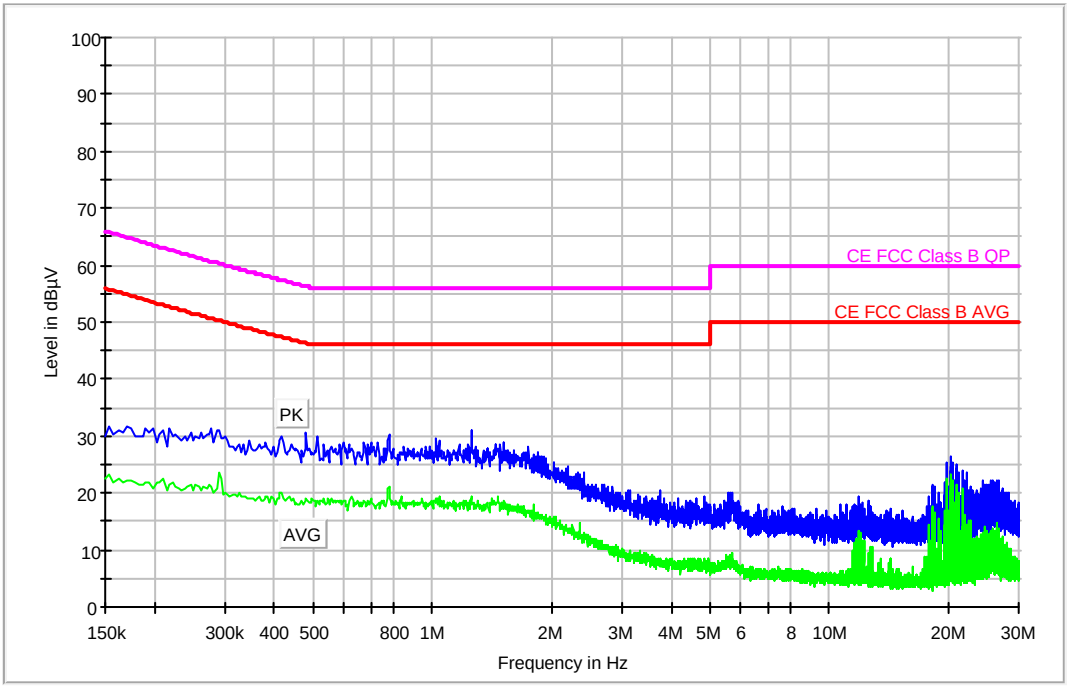
TESTED SAMPLES:	S/01
TESTED OPERATION MODES:	OM#01 to OM#04
TEST RESULTS :	CCmmnnhh: CC, Conducted Condition; mm: Sample number; nn: Operation mode; hh: wire

CCmmnnhh	**Description**	**Result**
CC0101PO	Positive wire noise	P
CC0101NE	Negative wire noise	P
CC0102PO	Positive wire noise	P
CC0102NE	Negative wire noise	P
CC0103PO	Positive wire noise	P
CC0103NE	Negative wire noise	P
CC0104PO	Positive wire noise	P
CC0104NE	Negative wire noise	P

Continuous Conducted emission : CC0101PO	Detector : Peak / Average / Cuasi-peak

Project: 27229REM.001
Company: Ericsson AB
Sample: S/01
Operation Mode: OM#01
Date: 2009-07-13 16:06
Setup: EMI conducted
Mode: EUT ON.IDLE 850MHz. Positive noise.

EC FCC Clase B ESPI CC



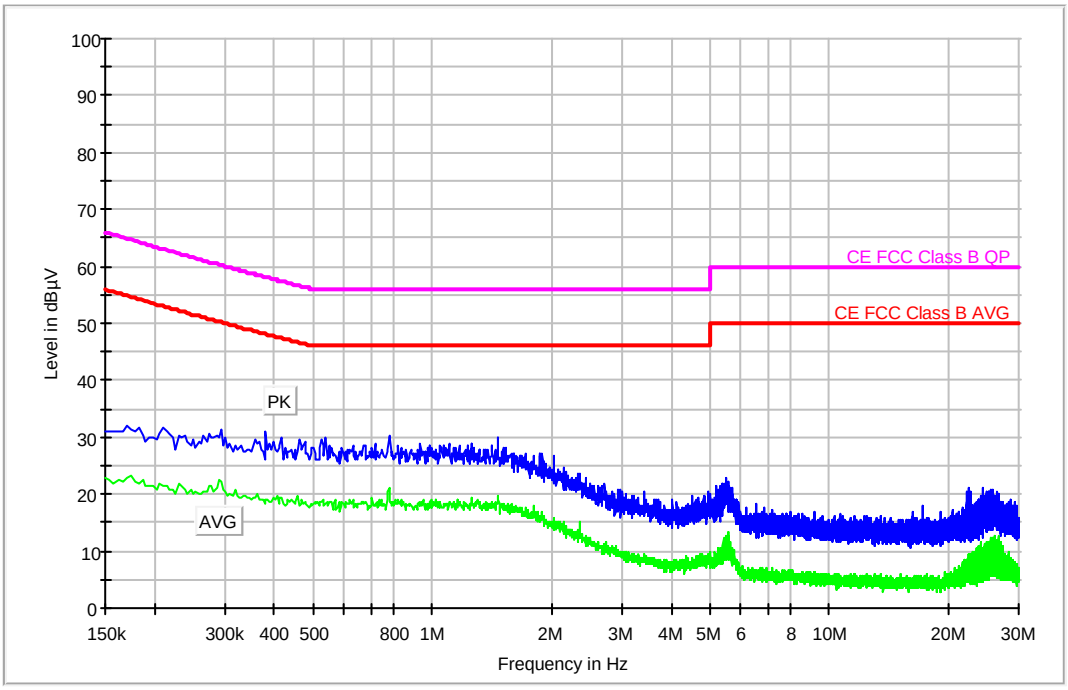
Max PK-AVG

Frequency (MHz)	MaxPeak-ClearWrite (dBµV)	Average-ClearWrite (dBµV)	Comment
0.482000	30.5	19.0	
0.778000	30.2	21.2	
1.026000	29.6	19.0	
1.258000	31.1	19.3	
1.442000	28.6	18.4	
1.510000	29.0	17.5	
19.710000	25.2	22.5	
20.258000	26.4	23.2	
20.322000	24.7	21.8	
20.382000	25.4	22.2	
20.810000	25.2	21.6	
20.870000	24.2	19.5	

Continuous Conducted emission : CC0101NE	Detector : Peak / Average / Cuasi-peak

Project: 27229REM.001
Company: Ericsson AB
Sample: S/01
Operation Mode: OM#01
Date: 2009-07-13 16:02
Setup: EMI conducted
Mode: EUT ON.IDLE 850MHz. Negative noise.

EC FCC Clase B ESPI CC



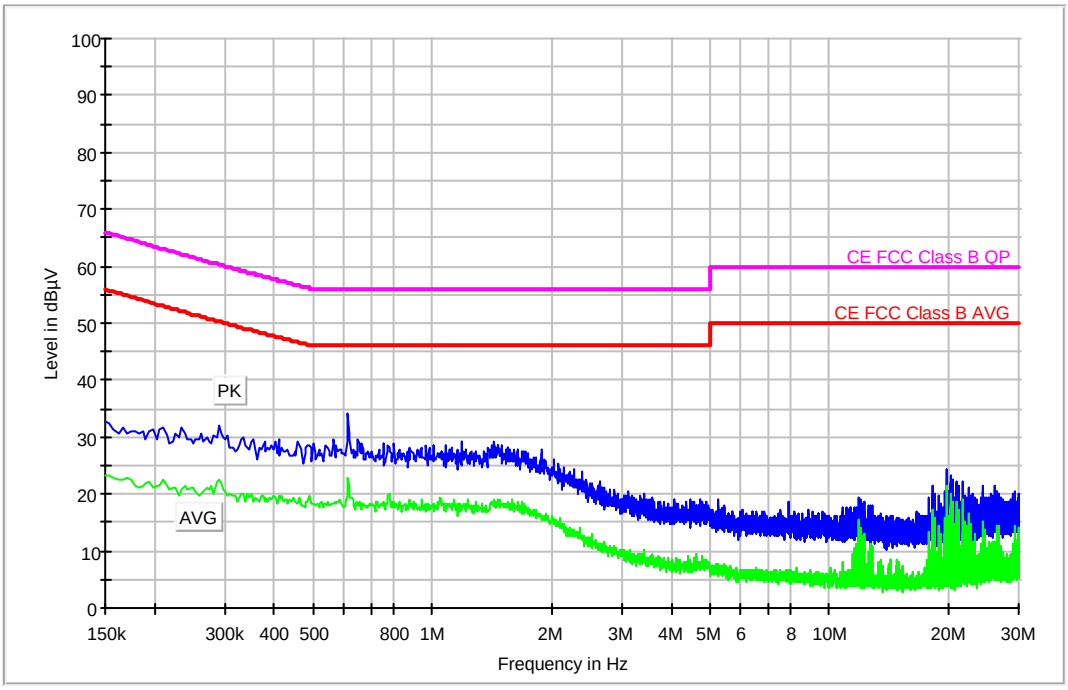
Max PK-AVG

Frequency (MHz)	MaxPeak-ClearWrite (dBµV)	Average-ClearWrite (dBµV)	Comment
0.538000	30.1	18.2	
0.778000	30.4	21.1	
1.462000	29.9	19.8	
1.862000	27.1	15.9	
1.898000	27.2	15.6	
2.030000	26.7	15.8	
5.198000	21.5	8.2	
5.318000	21.4	8.5	
5.398000	21.9	10.6	
5.474000	22.8	12.7	
5.578000	22.2	12.6	
24.406000	21.2	7.4	

Continuous Conducted emission : CC0102PO	Detector : Peak / Average / Cuasi-peak

Project: 27229REM.001
Company: Ericsson AB
Sample: S/01
Operation Mode: OM#02
Date: 2009-07-13 17:01
Setup: EMI conducted
Mode: EUT ON. TCH 850MHz. Positive noise.

EC FCC Clase B ESPI CC



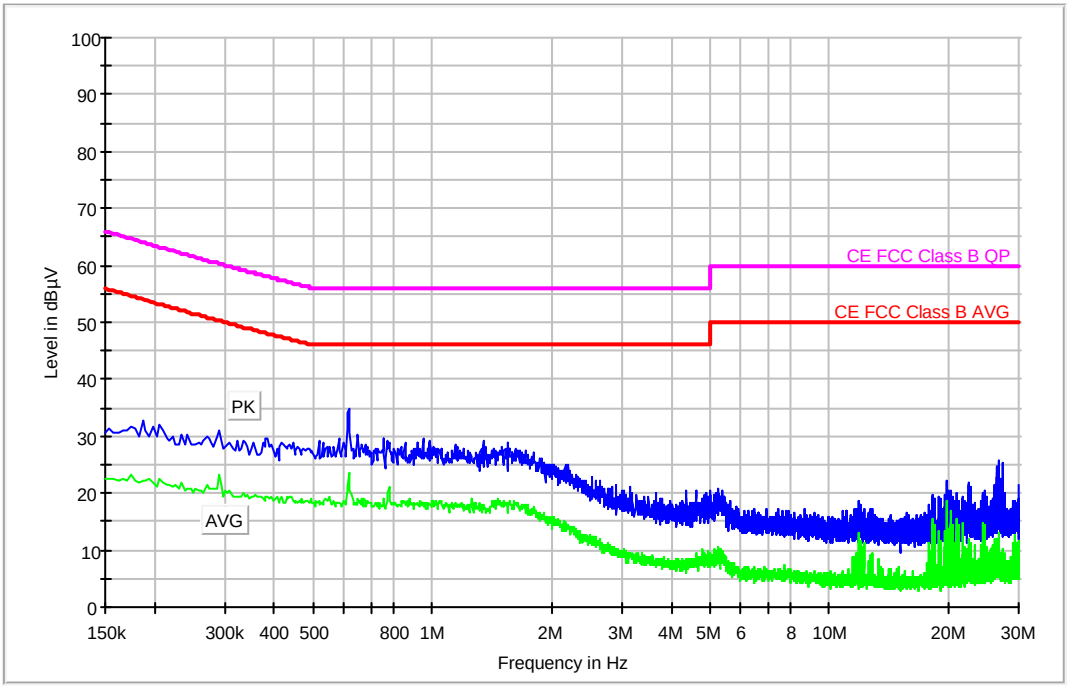
Max PK-AVG

Frequency (MHz)	MaxPeak-ClearWrite (dBµV)	Average-ClearWrite (dBµV)	Comment
0.290000	32.0	22.5	
0.614000	34.0	23.0	
1.082000	28.6	18.0	
1.186000	29.1	18.1	
1.434000	29.1	18.9	
1.894000	27.8	16.0	
2.642000	22.3	10.8	
19.710000	24.2	21.5	
20.262000	23.3	19.6	
20.382000	22.6	18.7	
20.810000	22.2	18.7	
21.666000	22.2	18.9	

Continuous Conducted emission : CC0102NE	Detector : Peak / Average / Cuasi-peak

Project: 27229REM.001
Company: Ericsson AB
Sample: S/01
Operation Mode: OM#02
Date: 2009-07-13 17:08
Setup: EMI conducted
Mode: EUT ON. TCH 850MHz. Negative noise.

EC FCC Clase B ESPI CC



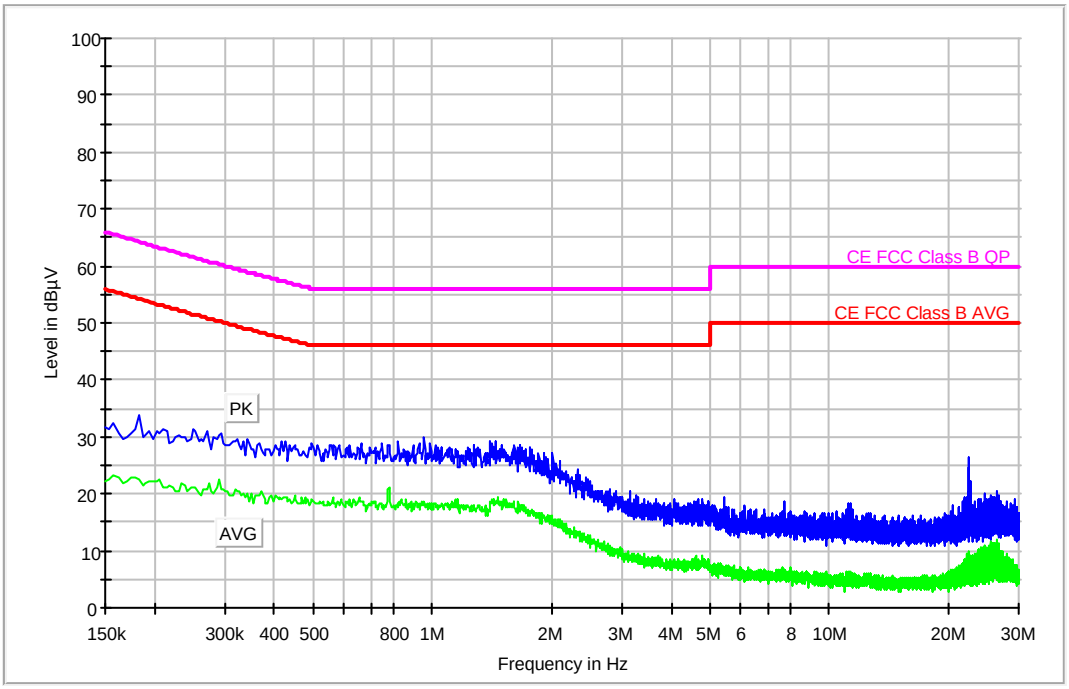
Max PK-AVG

Frequency (MHz)	MaxPeak-ClearWrite (dBµV)	Average-ClearWrite (dBµV)	Comment
0.618000	35.0	23.6	
0.650000	30.2	19.0	
0.754000	29.7	18.9	
0.770000	29.1	18.6	
0.950000	29.4	18.3	
1.342000	29.1	17.8	
1.550000	28.9	18.2	
26.458000	24.5	8.4	
26.542000	24.7	8.9	
26.638000	24.3	10.6	
26.738000	25.6	9.2	
27.318000	25.3	6.8	

Continuous Conducted emission : CC0103PO	Detector : Peak / Average / Cuasi-peak

Project: 27229REM.001
Company: Ericsson AB
Sample: S/01
Operation Mode: OM#03
Date: 2009-07-13 17:13
Setup: EMI conducted
Mode: EUT ON.IDLE 1900MHz. Positive noise.

EC FCC Clase B ESPI CC



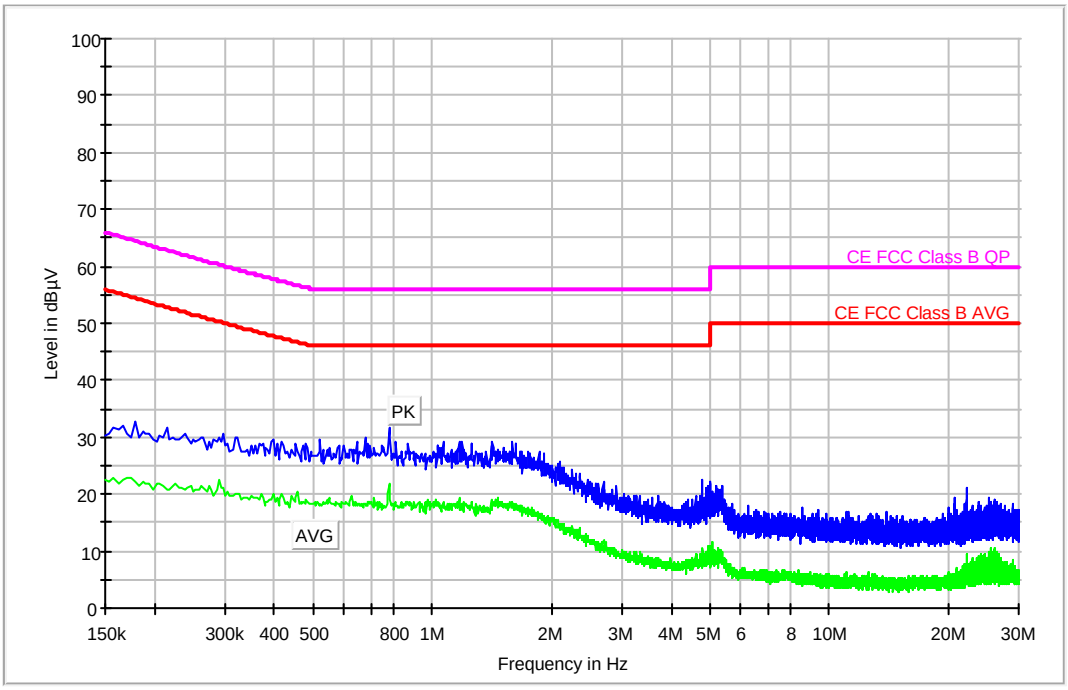
Max PK-AVG

Frequency (MHz)	MaxPeak-ClearWrite (dBµV)	Average-ClearWrite (dBµV)	Comment
0.822000	29.1	18.2	
0.954000	29.8	18.5	
1.270000	28.7	18.0	
1.398000	29.3	17.6	
1.658000	28.5	18.1	
1.762000	28.1	16.6	
2.002000	27.3	16.0	
2.318000	24.2	13.4	
3.154000	20.4	8.3	
22.314000	26.5	6.1	
22.562000	24.5	6.8	
22.626000	22.1	8.8	

Continuous Conducted emission : CC0103NE	Detector : Peak / Average / Cuasi-peak

Project: 27229REM.001
Company: Ericsson AB
Sample: S/01
Operation Mode: OM#03
Date: 2009-07-13 17:18
Setup: EMI conducted
Mode: EUT ON.IDLE 1900MHz. Negative noise.

EC FCC Clase B ESPI CC



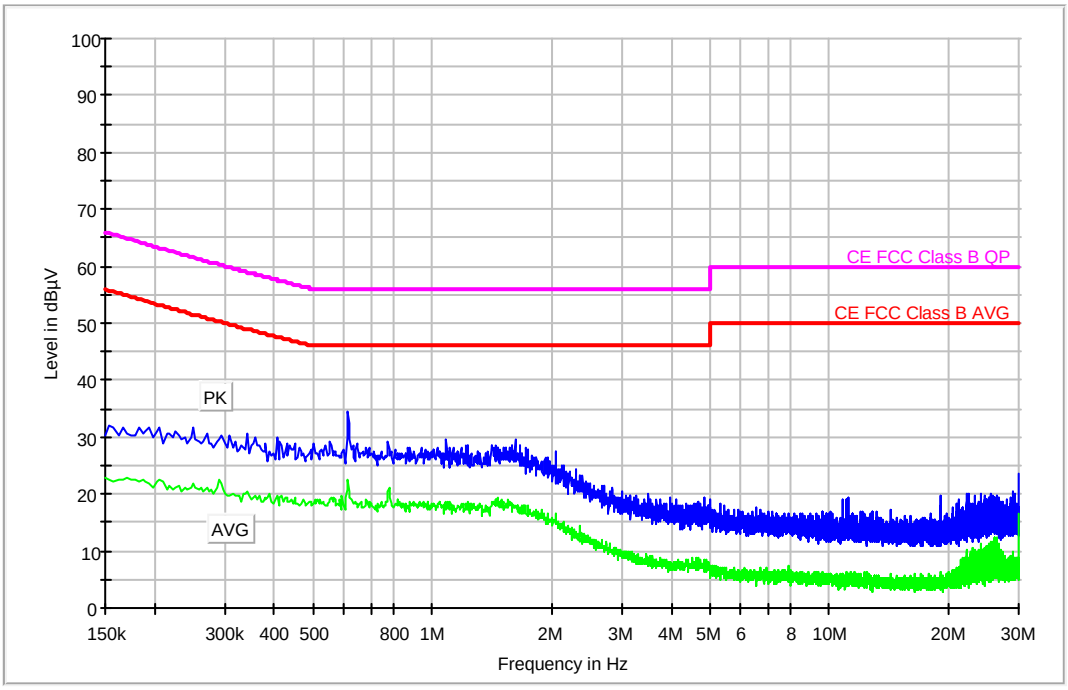
Max PK-AVG

Frequency (MHz)	MaxPeak-ClearWrite (dBµV)	Average-ClearWrite (dBµV)	Comment
0.522000	29.6	18.1	
0.778000	31.6	21.9	
1.066000	29.1	18.5	
1.170000	29.4	19.3	
1.258000	29.0	18.7	
1.594000	29.3	18.6	
2.086000	25.8	14.6	
2.694000	22.2	11.8	
2.918000	21.5	9.6	
4.806000	22.6	10.7	
5.018000	22.2	11.0	
5.370000	21.6	9.2	

Continuous Conducted emission : CC0104PO	Detector : Peak / Average / Cuasi-peak

Project: 27229REM.001
Company: Ericsson AB
Sample: S/01
Operation Mode: OM#04
Date: 2009-07-13 17:22
Setup: EMI conducted
Mode: EUT ON.TCH 1900MHz. Positive noise.

EC FCC Clase B ESPI CC



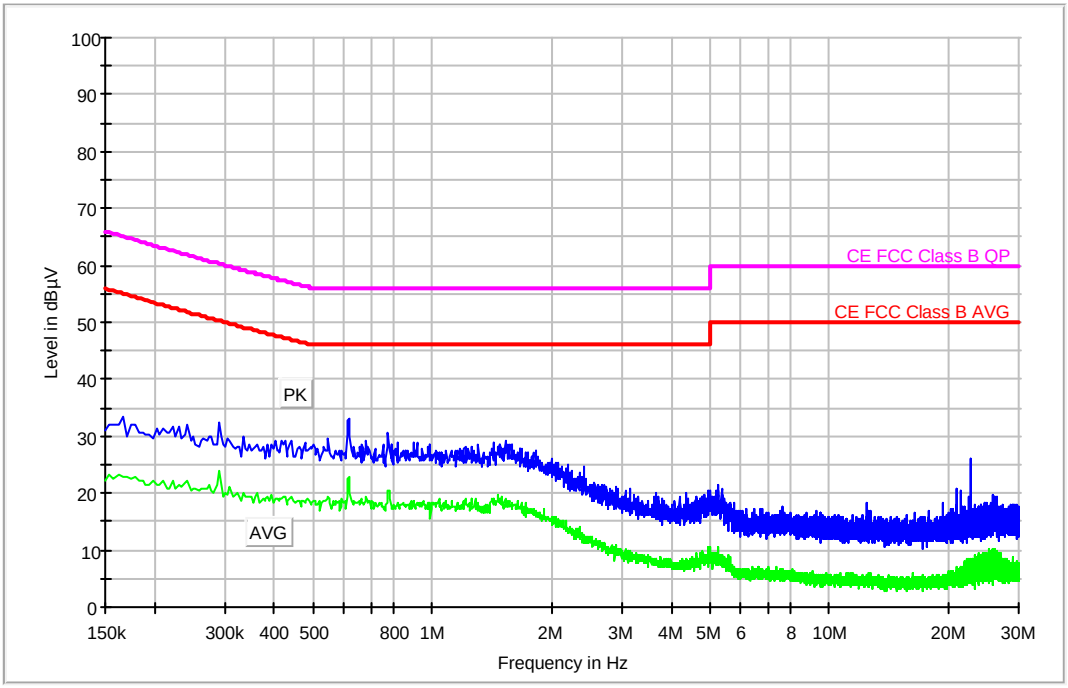
Max PK-AVG

Frequency (MHz)	MaxPeak-ClearWrite (dBµV)	Average-ClearWrite (dBµV)	Comment
0.614000	34.6	22.7	
0.774000	29.3	20.3	
1.086000	29.7	17.2	
1.618000	29.5	17.5	
1.730000	28.1	16.7	
2.042000	27.6	16.5	
2.294000	24.3	13.5	
2.822000	21.2	10.2	
22.122000	20.1	5.8	
24.090000	20.1	11.4	
29.090000	20.3	8.4	
30.000000	23.5	16.6	

Continuous Conducted emission : CC0104NE	Detector : Peak / Average / Cuasi-peak

Project: 27229REM.001
Company: Ericsson AB
Sample: S/01
Operation Mode: OM#04
Date: 2009-07-13 17:26
Setup: EMI conducted
Mode: EUT ON.TCH 1900MHz. Negative noise.

EC FCC Clase B ESPI CC



Max PK-AVG

Frequency (MHz)	MaxPeak-ClearWrite (dBµV)	Average-ClearWrite (dBµV)	Comment
0.290000	32.2	24.0	
0.618000	33.3	23.0	
0.774000	30.8	20.5	
0.914000	28.9	18.2	
1.526000	29.2	19.0	
2.190000	25.2	13.6	
2.402000	24.5	11.6	
3.154000	20.8	8.2	
5.242000	21.4	7.8	
5.346000	20.8	8.1	
20.846000	20.9	5.3	
22.574000	26.2	6.6	

APPENDIX B: Pictures