GSM TEST REPORT
FROM
RFI GLOBAL SERVICES LTD

Test of: Ericsson AB
RBS 2308 850 MHz

To: FCC Part 22: 2005

Test Report Serial No:
RFI/MPTE1/RP71622JD21A

This Test Report Is Issued Under The Authority Of Andrew Brown, Operations Manager: 	
Tested By: Monika Berenyi 	**Checked By: Michael Derby** 
Report Copy No: PDF01	
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1. Client Information

Company Name:	Ericsson AB
Address:	Lindholmspiren 11 417 56 Göteborg Sweden
Contact Name:	Mr Anders Frick

2. Equipment Under Test (EUT)

The following information has been supplied by the client:

2.1. Identification of Equipment Under Test (EUT)

FCC ID: B5KBKRC16184-7

No.	Unit	Model Number	Serial Number	Revision Number
1	RBS 2308 850 MHz	KRC 161 084/7	AE52998728	R7C

Note The above unit was tested for all conducted measurements at Lindholmen.

No.	Unit	Model Number	Serial Number	Revision Number
2	RBS 2308 850 MHz	KRC 161 084/7	AE53006767	R7C

Note The above unit was tested for radiated spurious emissions at RFI in Basingstoke.

Hardware List - Conducted Measurements at Lindholmen.

Unit	Model Number	Serial Number	Revision Number
Mounting Base	SEB 112 1133/3	B340570457	R3C
Mounting Base PSU	ROA 117 4776/1	B340550630	R2C
IXU-21	BOE 602 15/2	AE52829865	R5C
RRU-M8	KRC 161 084/7	AE52998728	R7C
Digital Radio Access Board 1	ROA 117 5122/1	AE52998717	R2A
Digital Radio Access Board 2	ROA 117 5122/1	AE52998718	R2A
Duplex Filter 1	KRF 102 249/1	T89M101335	R2A
Duplex Filter 2	KRF 102 249/1	T89M101321	R2A
PSU	BML 151 23/2	BR41040620	R2B
Power Interface Board	ROA 117 4775/1	B340606863	R2B
Y Interface Board	ROA 117 4331/1	B340606430	R3A
Radio Interface Board	ROA 117 4799/3	B340599129	R3B

Hardware List - Radiated Measurements at Basingstoke

Unit	Model Number	Serial Number	Revision Number
IXU-21	BOE 602 15/2	AE52831996	R5C
Mounting Base	SEB 112 1133/2	B340570454	R3C
RRU-M19	KRC 161 084/7	AE53006767	R7C

2.2. Description of EUT

The equipment under test is a RBS 2308 GMSK/8PSK base transceiver station operating in the GSM 850 MHz band.

2.3. Modifications Incorporated in EUT

During the course of testing the EUT was not modified.

2.4. Additional Information Related to Testing

Power Supply Requirement:	115V AC / -48V DC		
Intended Operating Environment:	Within GSM Network Coverage		
Equipment Category:	Fixed (Base Station)		
Type of Unit:	GSM 850 MHz Base Transceiver Station		
Interface Ports:	Telecommunication Line – T1 PCM x 2 (G703) TIB – Synchronisation Interface Mains 115 V AC Input -48V DC Supply DVT – RBS Master Control RF x 2		
Transmit Frequency Range	869.0 MHz to 894.0 MHz		
Transmit Channels Tested	**Channel ID**	**Channel Number**	**Channel Frequency (MHz)**
	EDGE/GMSK	128	869.2
	EDGE/GMSK	190	881.6
	EDGE/GMSK	251	893.8
Receive Frequency Range	824.0 MHz to 849.0 MHz		
Declared Maximum Power Output	34.0 dBm		

2.5. Support Equipment – Lindholmen

The following support equipment was used to exercise the EUT during testing at Lindholmen:

Description:	BSC Simulator
Brand Name:	RBS Master 2
Model Name or Number:	LPY 107 1007/1 R1D/A
Serial Number:	0000000263
FCC ID Number:	Not applicable
Cable Length And Type:	3 m, 9 pin, D Type, Shielded
Connected to Port:	G703-1 ABIS
Cable Length And Type:	3 m, 9 pin, D Type, Shielded
Connected to Port:	G703-2 ABIS
Cable Length And Type:	3 m, 9 pin, D type
Connected to Port:	RBS DVT
Cable Length And Type:	2 m, BNC
Connected to Port:	Ext Ref In
Cable Length And Type:	2 m, BNC
Connected to Port:	TRIG Out
Cable Length And Type:	2 m, BNC
Connected to Port:	10 MHz Out
Cable Length And Type:	1.5 m, 9 Way, D Type
Connected to Port:	PC DVT
Cable Length And Type:	1.5 m, 9 Way, D Type
Connected to Port:	PC Ctrl
Cable Length And Type:	2 m, Mains Cable
Connected to Port:	AC Mains In

Support Equipment – Lindholmen (Continued)

Description:	Computer
Brand Name:	Compaq
Model Name or Number:	Evo
Serial Number:	CZC3230BP2
FCC ID Number:	Not applicable
Cable Length And Type:	1.5 m, 9 Pin D Type
Connected to Port:	PC DVT
Cable Length And Type:	1.5 m, 9 Pin D Type
Connected to Port:	PC Ctrl
Cable Length And Type:	2 m, Mains Cable
Connected to Port:	AC Input
Cable Length And Type:	0.3 m, GPIB
Connected to Port:	IEEE Bus
Cable Length And Type:	4 m, 8 Core
Connected to Port:	Network
Cable Length And Type:	5 m, 7 Way
Connected to Port:	Mouse
Cable Length And Type:	5 m, 7 Way
Connected to Port:	Keyboard

2.6. Support Equipment – Basingstoke

The following support equipment was used to exercise the EUT during testing at Basingstoke:

Description:	Laptop PC
Brand Name:	Compaq
Model Name or Number:	EVO N610c
Serial Number:	CNU3390RFR
Cable Length And Type:	None Stated
Connected to Port:	RBS Master

Description:	RBS Master 2
Brand Name:	Ericsson
Model Name or Number:	RBS Master 2
Serial Number:	0000000161
Cable Length And Type:	None Stated
Connected to Port:	PCM Line

3. Test Specification, Methods and Procedures

3.1 Test specification

Reference:	FCC Part 22: 2005 Subpart C (Operational and Technical Requirements)
Title:	Code of Federal Regulations, Part 22 (47CFR) Personal Communication Services.
Comments:	None.
Purpose of Test:	To determine whether the equipment complied with the requirements of the specification for the purposes of certification.

Reference:	FCC Part 2: 2005
Title:	Code of Federal Regulations, Part 2 (47CFR) Frequency allocations and radio treaty matters; General Rules and Regulations
Comments:	None.
Purpose of Test:	To determine whether the equipment complied with the requirements of the specification for the purposes of certification.

3.2 Methods and Procedures

The methods and procedures used were as detailed in:

47CFR: Part 22 (2005)
Title: Federal Communications Commission: Code of Federal Regulations 47:
Public Mobile Services.

47CFR: Part 2 (2005)
Title: Federal Communications Commission: Code of Federal Regulations 47: Telecommunication

ANSI/TIA-603-C-2004
Land Mobile Communications Equipment, Measurements and performance Standards.

ANSI C63.2 (1996)
Title: American National Standard for Instrumentation - Electromagnetic noise and field strength.

ANSI C63.4 (2003)
Title: American National Standard Methods of Measurement of Electromagnetic Emissions from Low Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz.

ANSI C63.5 (2004)
Title: American National Standard for the Calibration of antennas used for Radiated Emission measurements in Electromagnetic Interference (EMI) control.

ANSI C63.7 (2005)
Title: American National Standard Guide for Construction of Open Area Test Sites for performing Radiated Emission Measurements.

CISPR 16-1-1 (2004)
Title: Specification for radio disturbance and immunity measuring apparatus and methods. Part 1. Radio disturbance and immunity measuring apparatus – Measuring Apparatus.

CISPR 16-1-4 (2005)
Title: Specification for radio disturbance and immunity measuring apparatus and methods. Part 1. Radio disturbance and immunity measuring apparatus – Radiated Disturbances.

3.3 Definition of Measurement Equipment

The measurement equipment used complied with the requirements of the standards referenced in the Methods and Procedures section above. Appendix 1 contains a list of the test equipment used.

4. Deviations from the Test Specification

None

5. Operation of the EUT During Testing

5.1. Operating Conditions

During testing at Lindholmen, the EUT was powered by mains supply 115V AC at the RBS 2308. The EUT was tested in a normal laboratory environment.

During testing at Basingstoke, the EUT was powered by mains supply 115V AC and -48V DC supply at the RBS 2308. The EUT was tested in a normal laboratory environment.

5.2. Operating Modes

Conducted measurements at Lindholmen.

The EUT operates in modulation modes 8PSK and GMSK and therefore all tests have been performed in both modes.

There were two transceivers tested, each transceiver has 2 transmitter outputs TX0-TX1 for the first transceiver and TX2-TX3 for the second. This gives a total of 4 transmitters. All transmitters are identical with regards to operating modes

Frequency Stability testing was performed on TX0 and TX2. Modulation Characteristics was performed on TX1 and TX3.

Carrier Output Power, Band Edges, Occupied Bandwidth and Spurious Emissions were tested on all 4 transceivers.

All transmitters TX0, TX1, TX2 and TX3 are identical in all respects. Testing was performed on the specified transmitters to show that they were indeed identical.

Tests were performed on bottom (128), middle (190) and top (251) channels unless stated otherwise for each measurement.

Radiated emissions measurements at Basingstoke.

The base station was set to transmit on two channels, using GMSK and EDGE bottom and middle channels, at full power:

Tx-0 = Bottom Channel GMSK Modulation.
Tx-1 = Middle Channel GMSK Modulation.
Tx-2 = Bottom Channel EDGE Modulation.
Tx-3 = Middle Channel EDGE Modulation.

The reason for choosing this configuration was that it has been defined by the customer as being typical of normal use and likely to be a worst case with regard to EMC.

5.3. Configuration and Peripherals

The EUT was tested in the following configuration:

As a standalone 4 TRX RBS 2308 base transceiver station.

6. Summary of Test Results

Range Of Measurements	Specification Reference	Port Type	Compliancy Status
Transmitter Carrier Output Power	Part 2 of CFR 47: 2005, Section 2.1046(a)	Antenna Terminals	Complied
Transmitter Modulation Characteristics	Part 2 of CFR 47: 2005, Section 2.1047	Antenna Terminals	Complied
Transmitter Frequency Stability (Temperature Variation)	Part 2 & 22 of CFR 47: 2005, Section 2.1055/22.355	Antenna Terminals	Complied
Transmitter Frequency Stability (Voltage Variation)	Part 2 & 22 of CFR 47: 2005, Section 2.1055/22.355	Antenna Terminals	Complied
Transmitter Occupied Bandwidth	Part 2 & 22 of CFR 47: 2005 Sections 2.1049/22.917	Antenna Terminals	Complied
Transmitter Conducted Out of Band Emissions	Part 2 & 22 of CFR 47: 2005 Sections 2.1051/22.917	Antenna Terminals	Complied
Transmitter Conducted Inband Intermodulation	Part 2 & 22 of CFR 47: 2005 Sections 2.1051/22.917	Antenna Terminals	Complied
Transmitter Conducted Emissions at Band Edges	Part 2 & 22 of CFR 47: 2005 Section 2.1051/22.917	Antenna Terminals	Complied
Radiated Spurious Emissions (30 MHz to 10 GHz)	Part 2 & 22 of CFR 47: 2005 Section 2.1053/22.917	Enclosure	Complied

6.1. Location of Tests

All the measurements described in this report were performed at the premises of Ericsson AB, Lindholmspiren 11, 417 56 Göteborg, Sweden and RFI-Global Services Ltd, Ewhurst Park, Ramsdell, Basingstoke, Hampshire, RG26 5RQ, England.

7. Measurements, Examinations and Derived Results

7.1. General Comments

7.1.1. This section contains test results only. Details of the test methods and procedures can be found in section 9 of this report.

7.1.2. Measurement uncertainties are evaluated in accordance with current best practice. Our reported expanded uncertainties are based on standard uncertainties, which are multiplied by an appropriate coverage factor to provide a statistical confidence level of approximately 95%. Please refer to Section 8 for details of measurement uncertainties.

7.2. Transmitter Carrier Output Power: Section 2.1046 (a)

7.2.1. The EUT was configured for Conducted Carrier Output Power Measurements testing as described in Section 9 of this report.

7.2.2. Tests were performed to identify the maximum transmit power in accordance with FCC Part 2.1046(a) for conducted power, with reference to TIA/EIA-603-C.

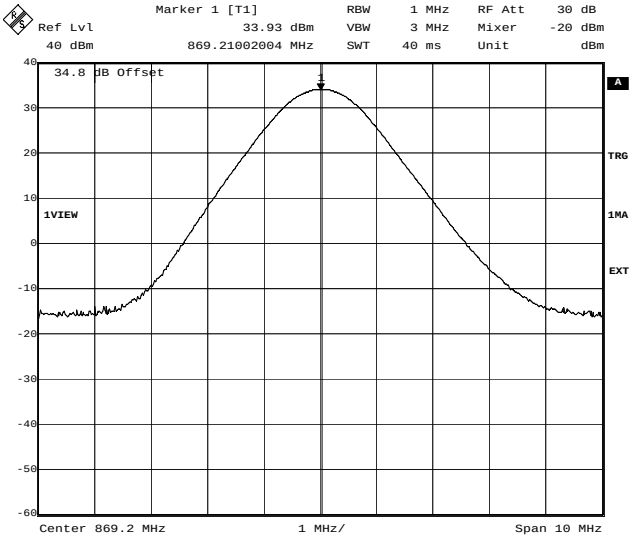
Transmitter Carrier Output Power: Section 2.1046 (a) (Continued)

8PSK – TX0:

Results:

Channel	Frequency (MHz)	Level (dBm)
Bottom	869.21002	33.9
Middle	881.58998	33.9
Top	893.76994	33.8

Transmitter Carrier Output Power: Section 2.1046 (a) (Continued)



Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
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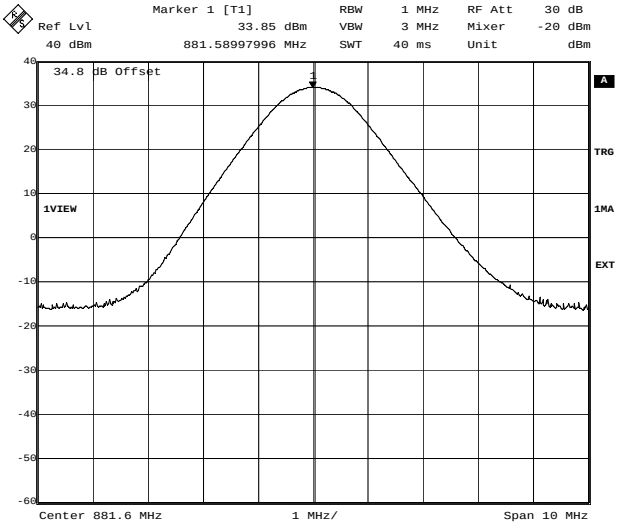

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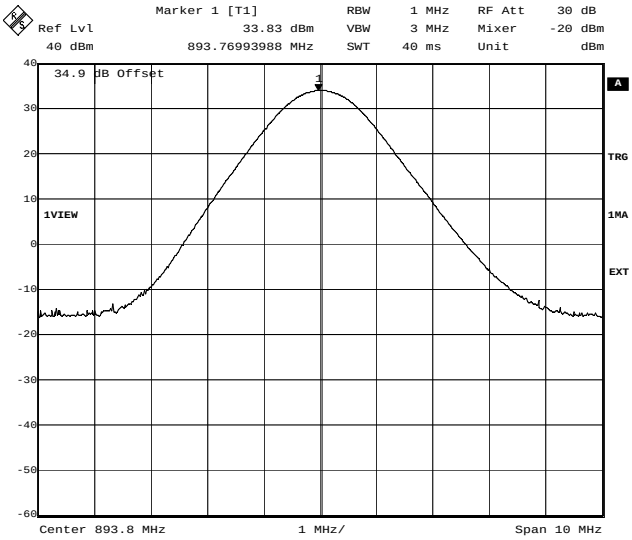

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Date: 24.JUL.2006 15:19:55

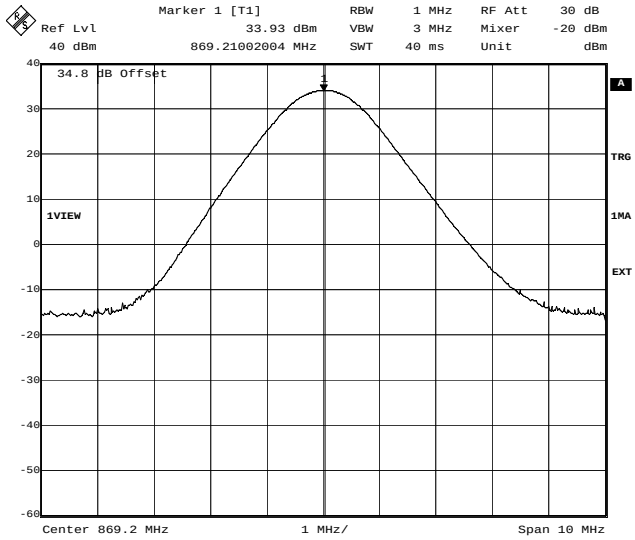
Transmitter Carrier Output Power: Section 2.1046 (a) (Continued)

8PSK – TX1:

Results:

Channel	Frequency (MHz)	Level (dBm)
Bottom	869.21002	33.9
Middle	881.65010	33.9
Top	893.81002	33.9

Transmitter Carrier Output Power: Section 2.1046 (a) (Continued)



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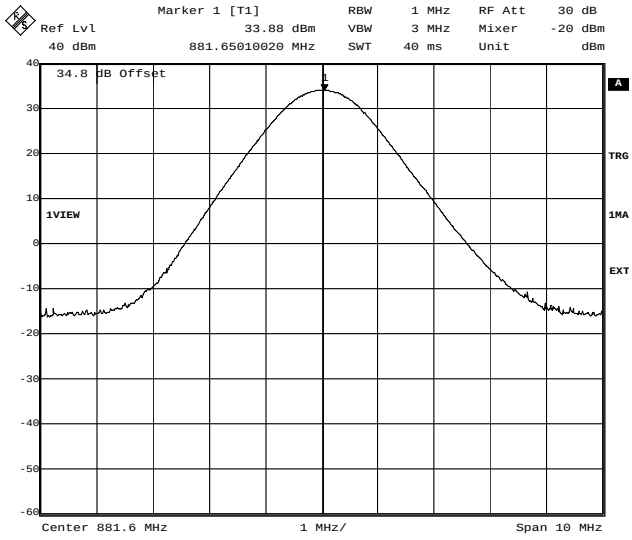

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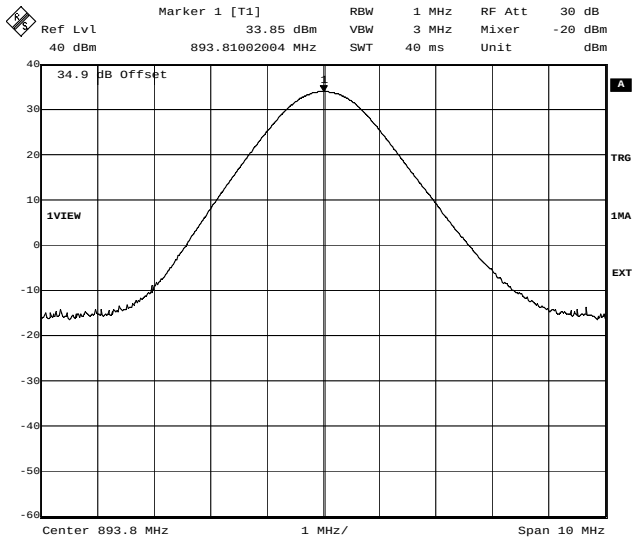

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Date: 24.JUL.2006 15:25:07

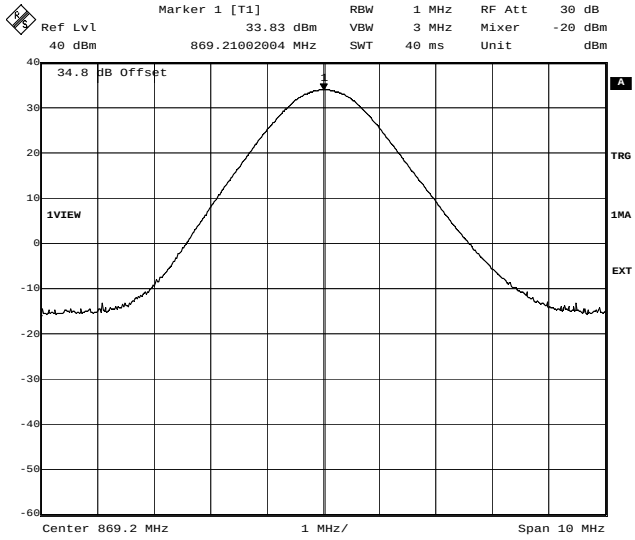
Transmitter Carrier Output Power: Section 2.1046 (a) (Continued)

8PSK – TX2:

Results:

Channel	Frequency (MHz)	Level (dBm)
Bottom	869.21002	33.8
Middle	881.65010	33.9
Top	893.83006	33.8

Transmitter Carrier Output Power: Section 2.1046 (a) (Continued)



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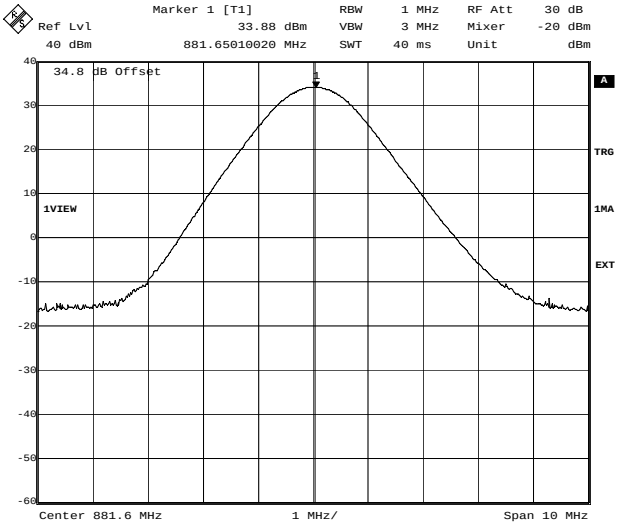

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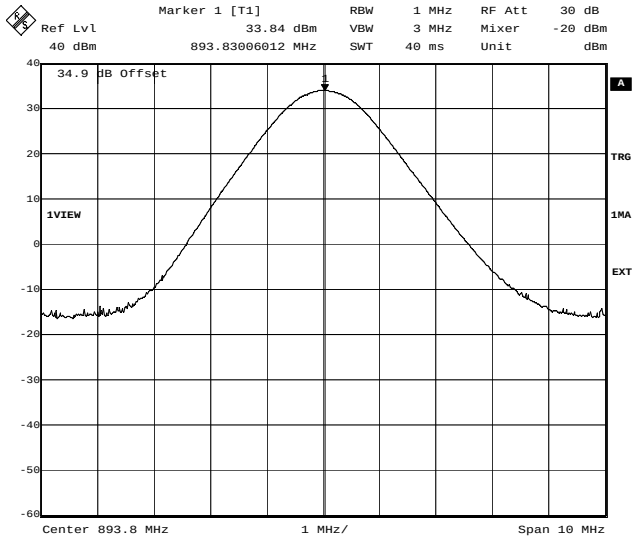

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Date: 24.JUL.2006 14:54:54

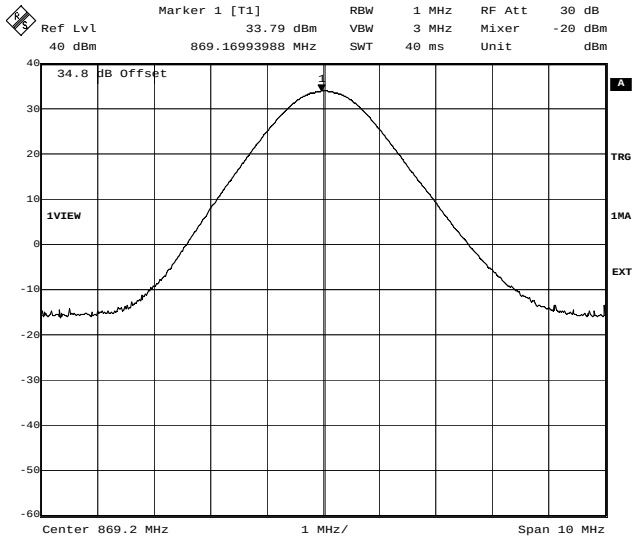
Transmitter Carrier Output Power: Section 2.1046 (a) (Continued)

8PSK – TX3:

Results:

Channel	Frequency (MHz)	Level (dBm)
Bottom	869.13994	33.8
Middle	881.65010	33.8
Top	893.85010	33.8

Transmitter Carrier Output Power: Section 2.1046 (a) (Continued)



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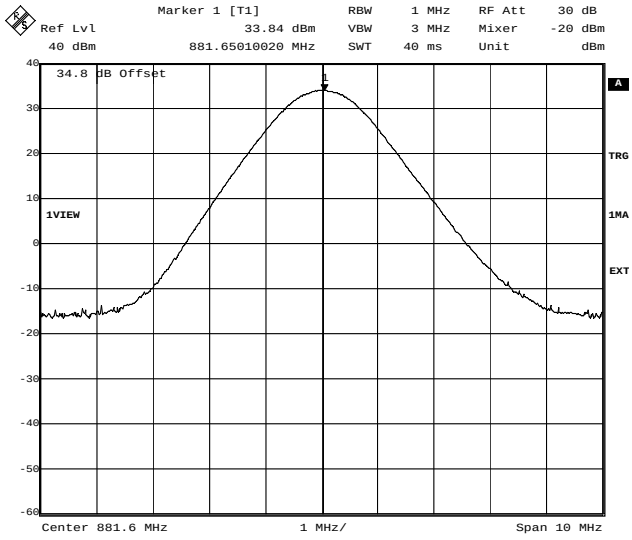

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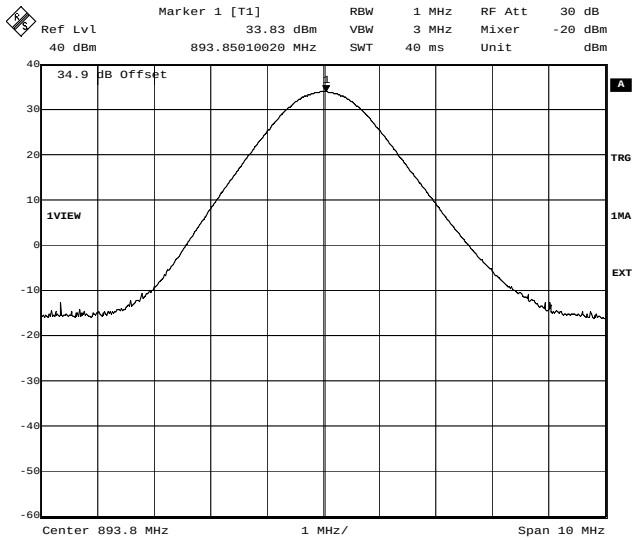

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Date: 24.JUL.2006 15:00:42

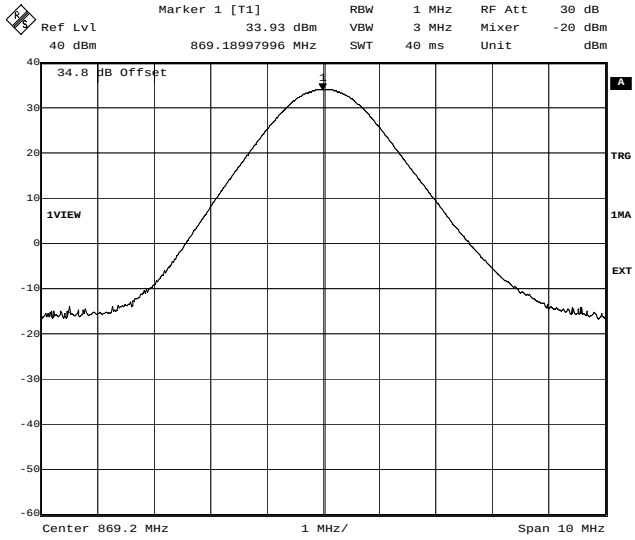
Transmitter Carrier Output Power: Section 2.1046 (a) (Continued)

GMSK – TX0:

Results:

Channel	Frequency (MHz)	Level (dBm)
Bottom	869.18998	33.9
Middle	881.61002	33.9
Top	893.81002	33.8

Transmitter Carrier Output Power: Section 2.1046 (a) (Continued)



Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
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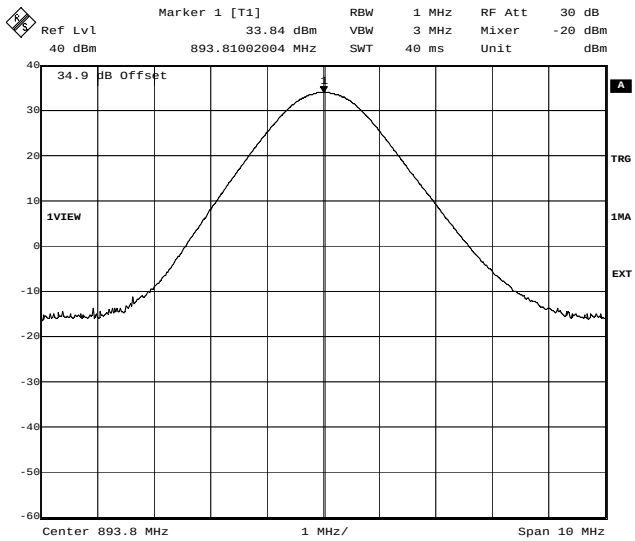

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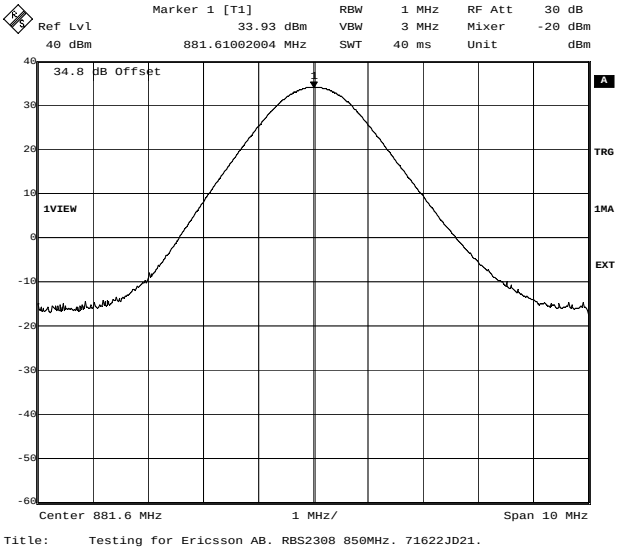

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Date: 24.JUL.2006 14:14:11

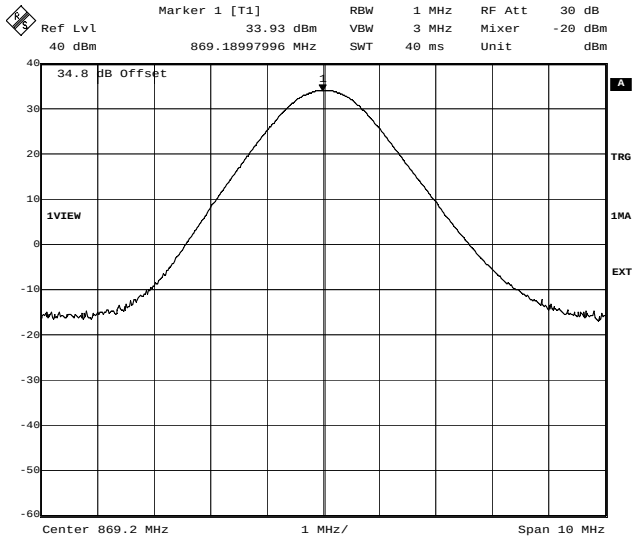
Transmitter Carrier Output Power: Section 2.1046 (a) (Continued)

GMSK – TX1:

Results:

Channel	Frequency (MHz)	Level (dBm)
Bottom	869.18998	33.9
Middle	881.58998	33.9
Top	893.81002	33.9

Transmitter Carrier Output Power: Section 2.1046 (a) (Continued)



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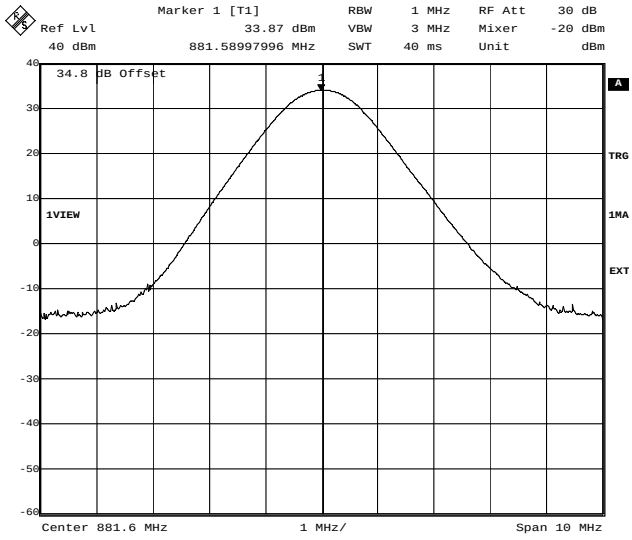

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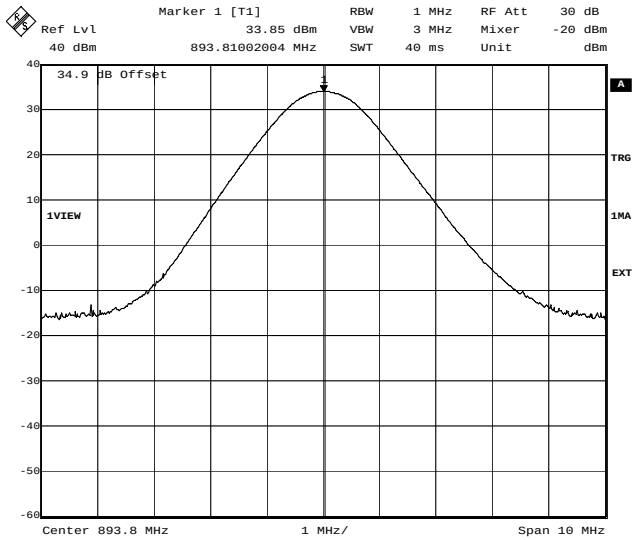

Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
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Date: 24.JUL.2006 14:19:25

Transmitter Carrier Output Power: Section 2.1046 (a) (Continued)

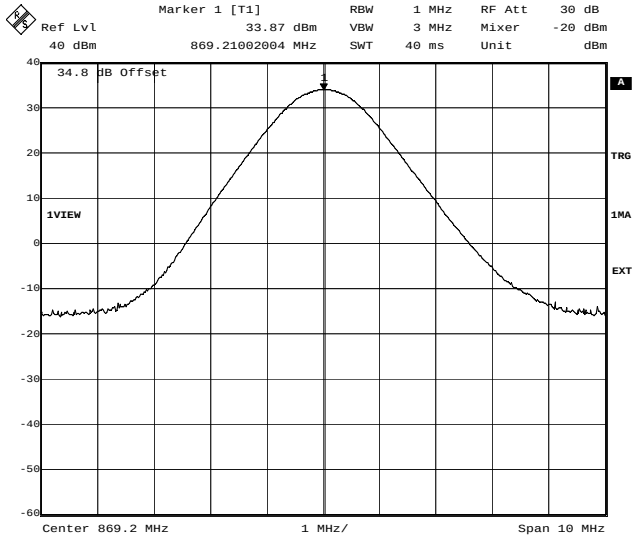
GMSK – TX2:

Results:

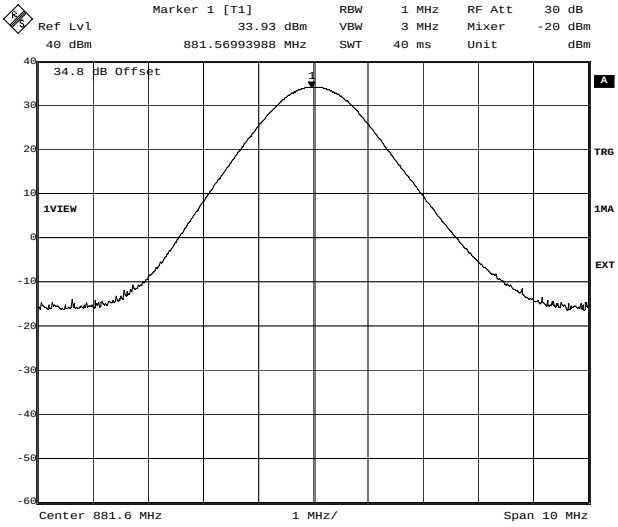
Channel	Frequency (MHz)	Level (dBm)
Bottom	869.21002	33.9
Middle	881.56994	33.9
Top	893.81002	33.9

Test Of: **Ericsson AB**
RBS 2308 850 MHz
To: **FCC Part 22: 2005**

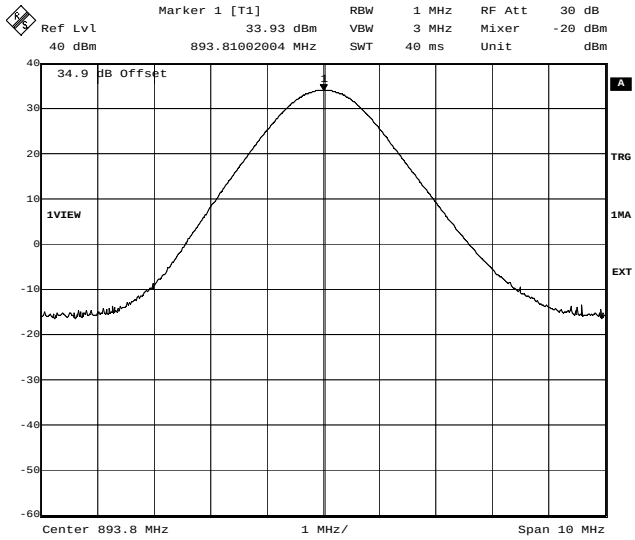
Transmitter Carrier Output Power: Section 2.1046 (a) (Continued)



Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch128. Output Power. GMSK TRX2. +34.0dBm. FCC Part 2.1046(a)
Date: 24.JUL.2006 14:22:29



Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch190. Output Power. GMSK TRX2. +34.0dBm. FCC Part 2.1046(a)
Date: 24.JUL.2006 14:23:52



Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch251. Output Power. GMSK TRX2. +34.0dBm. FCC Part 2.1046(a)
Date: 24.JUL.2006 14:25:02

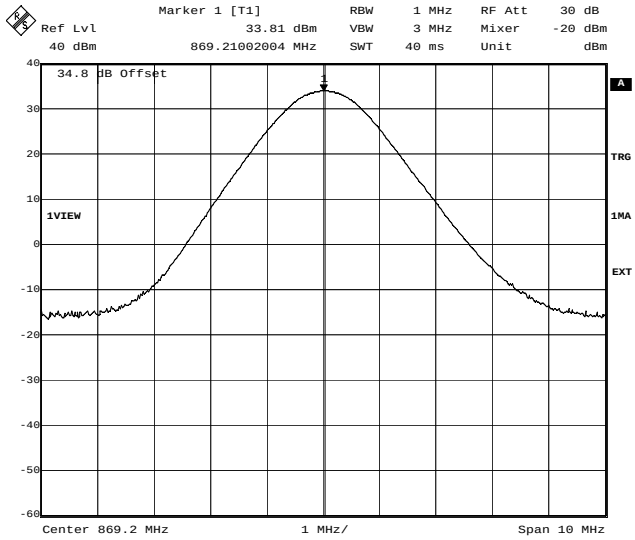
Transmitter Carrier Output Power: Section 2.1046 (a) (Continued)

GMSK – TX3:

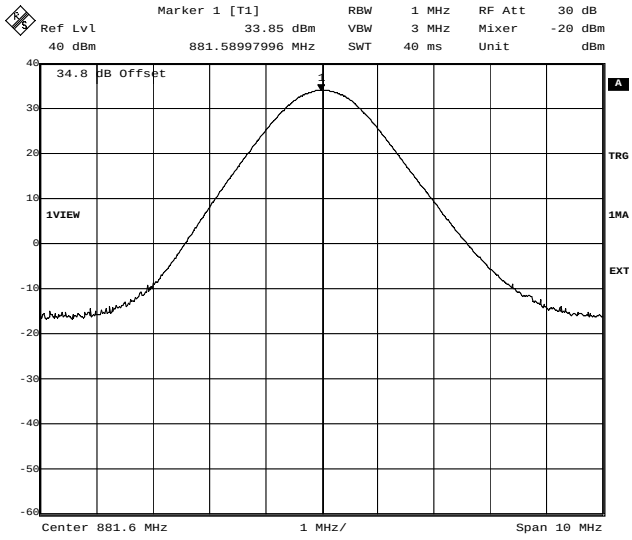
Results:

Channel	Frequency (MHz)	Level (dBm)
Bottom	869.21002	33.8
Middle	881.58998	33.9
Top	893.81002	33.8

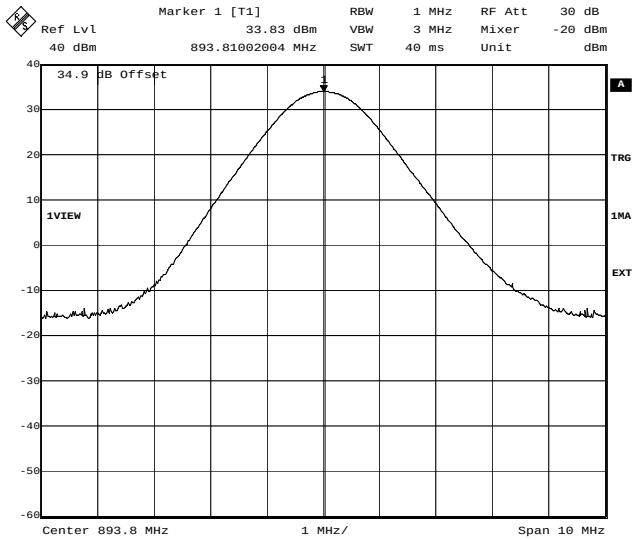
Transmitter Carrier Output Power: Section 2.1046 (a) (Continued)



Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch128. Output Power. GMSK TRX3. +34.0dBm. FCC Part 2.1046(a)
Date: 24.JUL.2006 14:29:31



Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch190. Output Power. GMSK TRX3. +34.0dBm. FCC Part 2.1046(a)
Date: 24.JUL.2006 14:33:55



Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch251. Output Power. GMSK TRX3. +34.0dBm. FCC Part 2.1046(a)
Date: 24.JUL.2006 14:32:44

7.3. Modulation Characteristics: Section 2.1047

7.3.1. The EUT and spectrum analyser were configured for conducted antenna port measurements.

7.3.2. Tests were performed to identify the modulation characteristics in accordance with FCC Part 2.1047, with reference to TIA/EIA-603-C.

7.3.3. Measurements were made at the ARP output connectors.

7.3.4. The output was connected to a spectrum analyser, which was used in GSM BTS analyser mode, via cables and with 30 dB of attenuation in the path.

7.3.5. Testing was performed on the middle channel only.

GMSK	**Phase Error (º)**	
	TX1	TX3
Phase Error	5.75	6.43
Max	6.43	

8PSK	**EVM (% RMS)**	
	TX1	TX3
EVM	2.61	3.21
Max EVM	3.21	

8PSK	**Origin Offset (dB)**	
	TX1	TX3
Origin Offset	38.60	37.85
Max 00	37.85	

7.4. Transmitter Frequency Stability (Temperature Variation): Section 22.355

7.4.1.The EUT and spectrum analyser were configured for conducted antenna port measurements.

7.4.2. Measurements were performed to determine the frequency stability of the fundamental emission from the EUT, when subjected to variation of ambient temperature and variation of supply voltage.

7.4.3. Measurements were made at the ARP output connectors.

7.4.4. The output was connected to a spectrum analyser, which was used in GSM BTS analyser mode, via cables and with 30 dB of attenuation in the path.

7.4.5. Testing was performed for TX0 and TX2 on the Bottom and Top channels

7.4.6. The ambient temperature was varied from -30°C to +50°C in 10°C steps.

7.4.7. All transceivers were active and evenly spaced out in the frequency band to simulate worst case. The measured transceiver was set up to transmit on 1 timeslot and testing was performed over 100 bursts.

7.4.8. The ppm frequency error is calculated using the following formula taken from the TIA/EIA-603-C document.

$$\text{ppm error} = ((MCF_{MHz} / ACF_{MHz}) - 1) * 1000000$$

where,

MCF_{MHz} is the measured carrier frequency in MHz
ACF_{MHz} is the assigned carrier frequency in MHz

7.4.9. The client has stated that the authorised frequency band is:

Lower Band Edge	869.0 MHz
Upper Band Edge	894.0 MHz

Transmitter Frequency Stability (Temperature Variation): Section 22.355 (continued)

Results

Mode: 8PSK – TX0
Channel: 128 (869.2MHz)

Temperature (ºC)	Nominal Frequency (MHz)	Measured Frequency (MHz)	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)	Result
-30	869.2	869.199993	-7	-0.008	1.5	Complied
-20	869.2	869.199991	-9	-0.010	1.5	Complied
-10	869.2	869.200006	6	0.007	1.5	Complied
0	869.2	869.200007	7	0.008	1.5	Complied
10	869.2	869.200008	8	0.009	1.5	Complied
20	869.2	869.200007	7	0.008	1.5	Complied
30	869.2	869.200008	8	0.009	1.5	Complied
40	869.2	869.200008	8	0.009	1.5	Complied
50	869.2	869.200008	8	0.009	1.5	Complied

Mode: 8PSK – TX0
Channel: 251 (893.8 MHz)

Temperature (ºC)	Nominal Frequency (MHz)	Measured Frequency (MHz)	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)	Result
-30	893.8	893.799991	-9	-0.010	1.5	Complied
-20	893.8	893.799991	-9	-0.010	1.5	Complied
-10	893.8	893.799992	-8	-0.009	1.5	Complied
0	893.8	893.800005	5	0.006	1.5	Complied
10	893.8	893.800006	6	0.007	1.5	Complied
20	893.8	893.800007	7	0.008	1.5	Complied
30	893.8	893.800008	8	0.009	1.5	Complied
40	893.8	893.800007	7	0.008	1.5	Complied
50	893.8	893.800008	8	0.009	1.5	Complied

Transmitter Frequency Stability (Temperature Variation): Section 22.355 (continued)

Mode: GMSK – TX0
Channel: 128 (869.2 MHz)

Temperature (ºC)	Nominal Frequency (MHz)	Measured Frequency (MHz)	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)	Result
-30	869.2	869.199989	-11	-0.013	1.5	Complied
-20	869.2	869.199987	-13	-0.015	1.5	Complied
-10	869.2	869.199990	-10	-0.011	1.5	Complied
0	869.2	869.199991	-9	-0.010	1.5	Complied
10	869.2	869.199992	-8	-0.009	1.5	Complied
20	869.2	869.199993	-7	-0.008	1.5	Complied
30	869.2	869.199990	-10	-0.012	1.5	Complied
40	869.2	869.199991	-9	-0.010	1.5	Complied
50	869.2	869.199988	-12	-0.014	1.5	Complied

Mode: GMSK – TX0
Channel: 251 (893.8 MHz)

Temperature (ºC)	Nominal Frequency (MHz)	Measured Frequency (MHz)	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)	Result
-30	893.8	893.799989	-11	-0.012	1.5	Complied
-20	893.8	893.799989	-11	-0.012	1.5	Complied
-10	893.8	893.799988	-12	-0.013	1.5	Complied
0	893.8	893.799990	-10	-0.011	1.5	Complied
10	893.8	893.799992	-8	-0.009	1.5	Complied
20	893.8	893.799991	-9	-0.010	1.5	Complied
30	893.8	893.799992	-8	-0.009	1.5	Complied
40	893.8	893.799989	-11	-0.012	1.5	Complied
50	893.8	893.799989	-11	-0.012	1.5	Complied

Transmitter Frequency Stability (Temperature Variation): Section 22.355 (continued)

Mode: 8PSK – TX2
Channel: 128 (869.2 MHz)

Temperature (ºC)	Nominal Frequency (MHz)	Measured Frequency (MHz)	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)	Result
-30	869.2	869.200014	14	0.016	1.5	Complied
-20	869.2	869.199989	-11	-0.013	1.5	Complied
-10	869.2	869.199994	-6	-0.007	1.5	Complied
0	869.2	869.199995	-5	-0.006	1.5	Complied
10	869.2	869.200006	6	0.007	1.5	Complied
20	869.2	869.199993	-7	-0.008	1.5	Complied
30	869.2	869.199992	-8	-0.009	1.5	Complied
40	869.2	869.199992	-8	-0.009	1.5	Complied
50	869.2	869.200007	7	0.008	1.5	Complied

Mode: 8PSK – TX2
Channel: 251 (893.8 MHz)

Temperature (ºC)	Nominal Frequency (MHz)	Measured Frequency (MHz)	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)	Result
-30	893.8	893.800015	15	0.017	1.5	Complied
-20	893.8	893.799990	-10	-0.011	1.5	Complied
-10	893.8	893.799994	-6	-0.007	1.5	Complied
0	893.8	893.799991	-9	-0.010	1.5	Complied
10	893.8	893.800008	8	0.009	1.5	Complied
20	893.8	893.799991	-9	-0.010	1.5	Complied
30	893.8	893.800008	8	0.009	1.5	Complied
40	893.8	893.800009	9	0.010	1.5	Complied
50	893.8	893.800008	8	0.009	1.5	Complied

Transmitter Frequency Stability (Temperature Variation): Section 22.355 (continued)

Mode: GMSK – TX2
Channel: 128 (869.2 MHz)

Temperature (ºC)	Nominal Frequency (MHz)	Measured Frequency (MHz)	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)	Result
-30	869.2	869.200011	11	0.013	1.5	Complied
-20	869.2	869.199985	-15	-0.017	1.5	Complied
-10	869.2	869.199991	-9	-0.010	1.5	Complied
0	869.2	869.199992	-8	-0.009	1.5	Complied
10	869.2	869.199991	-9	-0.010	1.5	Complied
20	869.2	869.199989	-11	-0.013	1.5	Complied
30	869.2	869.199991	-9	-0.010	1.5	Complied
40	869.2	869.199989	-11	-0.013	1.5	Complied
50	869.2	869.199991	-9	-0.010	1.5	Complied

Mode: GMSK – TX2
Channel: 251 (893.8 MHz)

Temperature (ºC)	Nominal Frequency (MHz)	Measured Frequency (MHz)	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)	Result
-30	893.8	893.800011	11	0.012	1.5	Complied
-20	893.8	893.799986	-14	-0.016	1.5	Complied
-10	893.8	893.799992	-8	-0.009	1.5	Complied
0	893.8	893.799992	-8	-0.009	1.5	Complied
10	893.8	893.799993	-7	-0.008	1.5	Complied
20	893.8	893.799989	-11	-0.012	1.5	Complied
30	893.8	893.799992	-8	-0.009	1.5	Complied
40	893.8	893.799990	-10	-0.011	1.5	Complied
50	893.8	893.799991	-9	-0.010	1.5	Complied

7.5. Transmitter Frequency Stability (Voltage Variation): Section 22.355

7.5.1. The EUT was configured as for frequency stability measurements as described in Appendix 2 of this report.

7.5.2. Tests were performed to identify the maximum frequency error of the EUT with variations in nominal operating voltage.

Mode: 8PSK – TX0
Channel: 128 (869.2 MHz)

Voltage (Vac)	Nominal Frequency (MHz)	Measured Frequency (MHz)	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)	Result
97.75	869.2	869.200007	7	0.008	1.5	Complied
115	869.2	869.200007	7	0.008	1.5	Complied
132.25	869.2	869.200008	8	0.009	1.5	Complied

Mode: 8PSK – TX0
Channel: 251 (893.8 MHz)

Voltage (Vac)	Nominal Frequency (MHz)	Measured Frequency (MHz)	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)	Result
97.75	893.8	893.800009	9	0.010	1.5	Complied
115	893.8	893.800007	7	0.008	1.5	Complied
132.25	893.8	893.800009	9	0.010	1.5	Complied

Mode: GMSK – TX0
Channel: 128 (869.2 MHz)

Voltage (Vac)	Nominal Frequency (MHz)	Measured Frequency (MHz)	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)	Result
97.75	869.2	869.199988	-12	-0.014	1.5	Complied
115	869.2	869.199993	-7	-0.008	1.5	Complied
132.25	869.2	869.199990	-10	-0.012	1.5	Complied

Mode: GMSK – TX0
Channel: 251 (893.8 MHz)

Voltage (Vac)	Nominal Frequency (MHz)	Measured Frequency (MHz)	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)	Result
97.75	893.8	893.799991	-9	-0.010	1.5	Complied
115	893.8	893.799991	-9	-0.010	1.5	Complied
132.25	893.8	893.799990	-10	-0.011	1.5	Complied

Transmitter Frequency Stability (Voltage Variation): Section 22.355 (Continued)

Mode: 8PSK – TX2
Channel: 128 (869.2 MHz)

Voltage (Vac)	Nominal Frequency (MHz)	Measured Frequency (MHz)	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)	Result
97.75	869.2	869.200006	6	-0.007	1.5	Complied
115	869.2	869.199993	-7	-0.008	1.5	Complied
132.25	869.2	869.199992	-8	-0.009	1.5	Complied

Mode: 8PSK – TX2
Channel: 251 (893.8 MHz)

Voltage (Vac)	Nominal Frequency (MHz)	Measured Frequency (MHz)	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)	Result
97.75	893.8	893.799992	-8	-0.009	1.5	Complied
115	893.8	893.799991	-9	-0.010	1.5	Complied
132.25	893.8	893.799993	-7	-0.008	1.5	Complied

Mode: GMSK – TX2
Channel: 128 (869.2 MHz)

Voltage (Vac)	Nominal Frequency (MHz)	Measured Frequency (MHz)	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)	Result
97.75	869.2	869.199992	-8	-0.009	1.5	Complied
115	869.2	869.199989	-11	-0.013	1.5	Complied
132.25	869.2	869.199991	-9	-0.010	1.5	Complied

Mode: GMSK – TX2
Channel: 251 (893.8 MHz)

Voltage (Vac)	Nominal Frequency (MHz)	Measured Frequency (MHz)	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)	Result
97.75	893.8	893.799990	-10	-0.011	1.5	Complied
115	893.8	893.799989	-11	-0.012	1.5	Complied
132.25	893.8	893.799991	-9	-0.010	1.5	Complied

7.6. Transmitter Occupied Bandwidth: Section 2.1049(i)

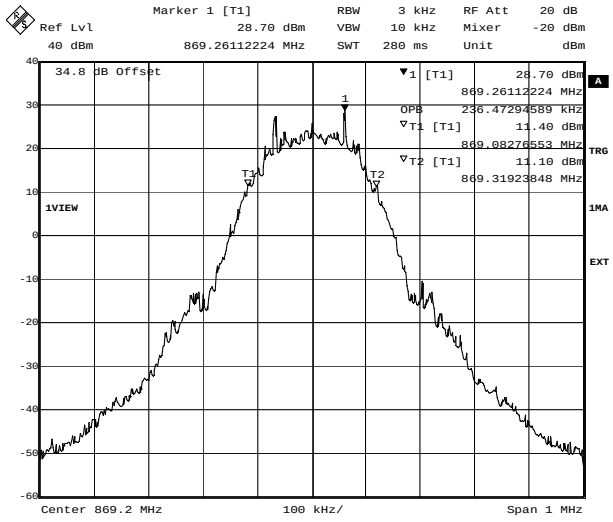
7.6.1. The EUT was configured for Occupied Bandwidth measurements as described in Section 9 of this report.

7.6.2. Tests were performed to identify the maximum bandwidth occupied by the fundamental frequency of the EUT.

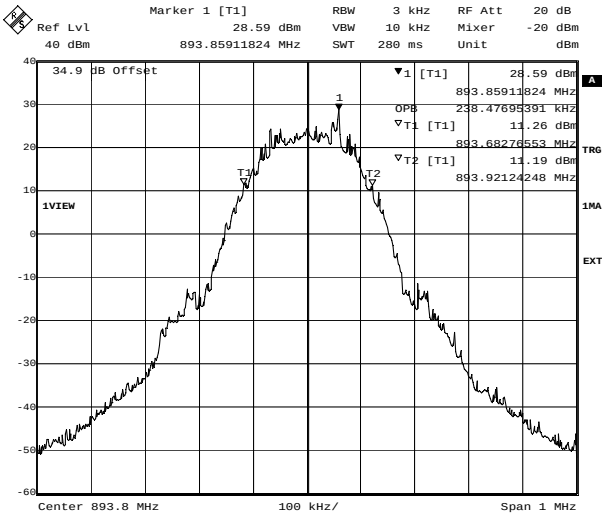
Results: 8PSK – TX0, TX1, TX2 and TX3

TX	Channel	Frequency (MHz)	Resolution Bandwidth (kHz)	Video Bandwidth (kHz)	Occupied Bandwidth (kHz)
TX0	128	869.26112224	3	10	236.473
TX0	251	893.85911824	3	10	238.477
TX1	128	869.13286573	3	10	234.469
TX1	251	893.85911824	3	10	236.473
TX2	128	869.25711423	3	10	232.465
TX2	251	893.85911824	3	10	236.473
TX3	128	869.25911824	3	10	234.469
TX3	251	893.85911824	3	10	236.473

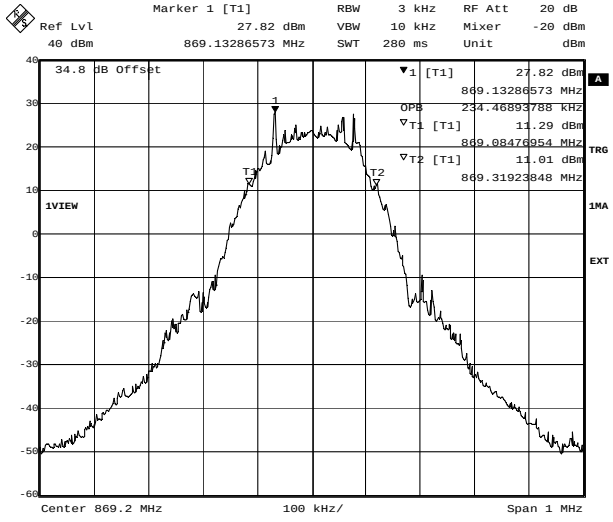
Transmitter Occupied Bandwidth: Section 2.1049(i) (Continued)



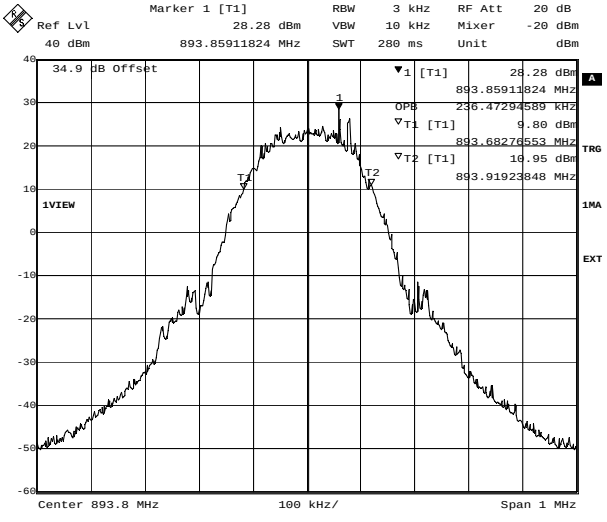
Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch128. OBW 99% Occupied Bandwidth. 8PSK TRX0. +30.7dBm.
FCC Part 2.1049
Date: 25.JUL.2006 12:37:57



Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch251. OBW 99% Occupied Bandwidth. 8PSK TRX0. +30.7dBm.
FCC Part 2.1049
Date: 25.JUL.2006 13:10:23

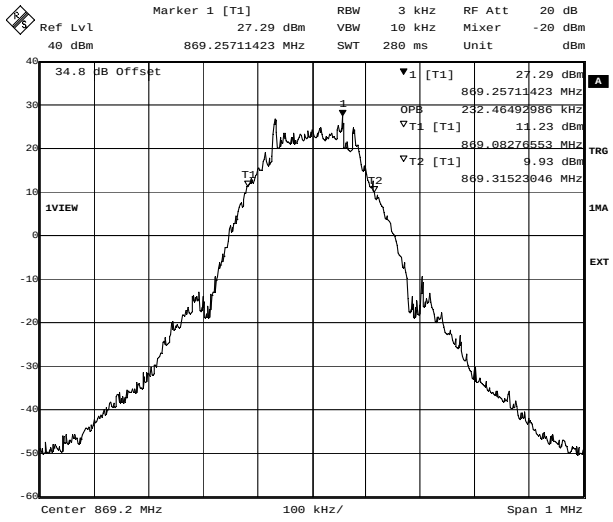


Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch128. OBW 99% Occupied Bandwidth. 8PSK TRX1. +30.7dBm.
FCC Part 2.1049
Date: 25.JUL.2006 13:21:13

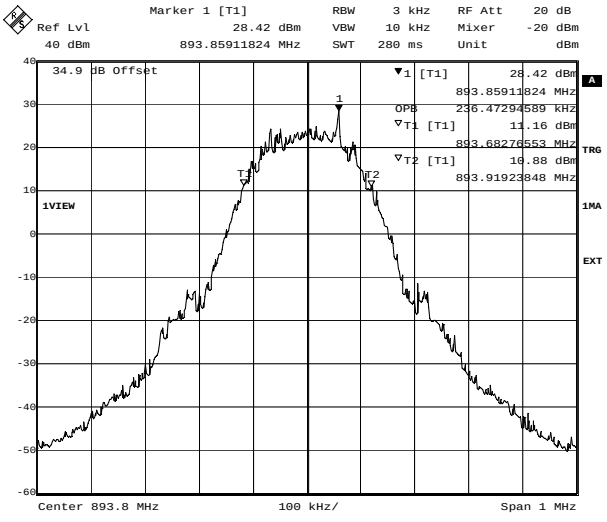


Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch251. OBW 99% Occupied Bandwidth. 8PSK TRX1. +30.7dBm.
FCC Part 2.1049
Date: 25.JUL.2006 13:28:23

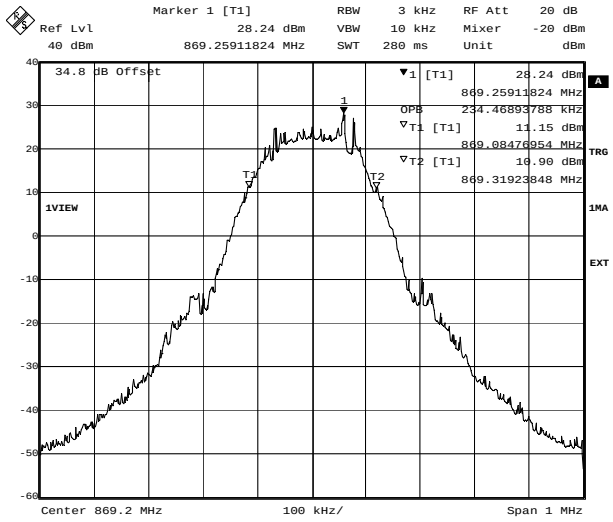
Transmitter Occupied Bandwidth: Section 2.1049(i) (Continued)



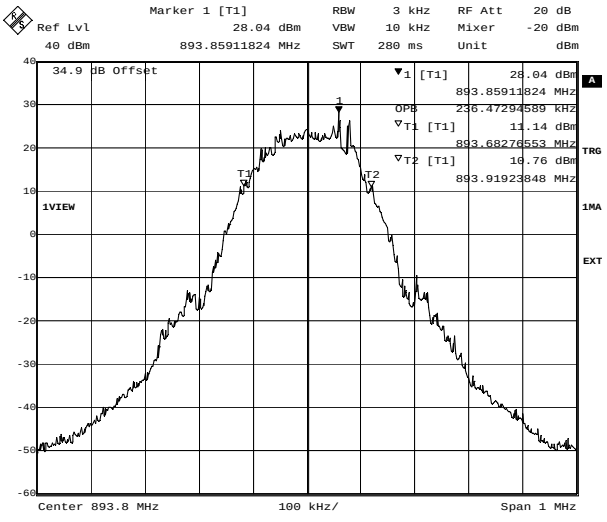
Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch128. OBW 99% Occupied Bandwidth. 8PSK TRX2. +30.7dBm.
FCC Part 2.1049
Date: 25.JUL.2006 13:44:17



Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch251. OBW 99% Occupied Bandwidth. 8PSK TRX2. +30.7dBm.
FCC Part 2.1049
Date: 25.JUL.2006 13:50:28



Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch128. OBW 99% Occupied Bandwidth. 8PSK TRX3. +30.7dBm.
FCC Part 2.1049
Date: 25.JUL.2006 14:04:09



Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch251. OBW 99% Occupied Bandwidth. 8PSK TRX3. +30.7dBm.
FCC Part 2.1049
Date: 25.JUL.2006 14:16:05

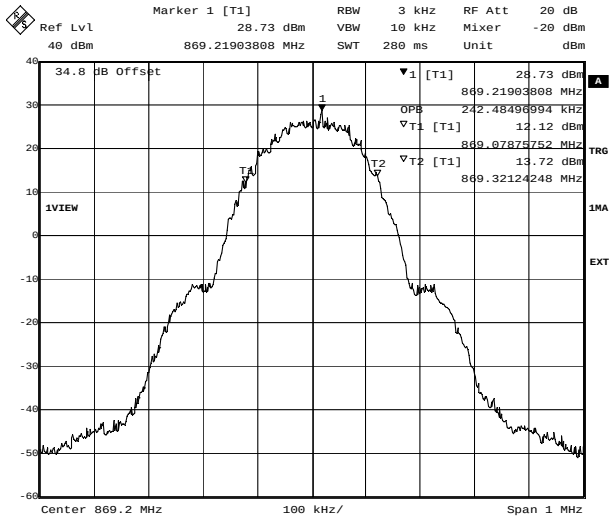
Transmitter Occupied Bandwidth: Section 2.1049(i) (Continued)

Results: GMSK – TX0, TX1, TX2 and TX3

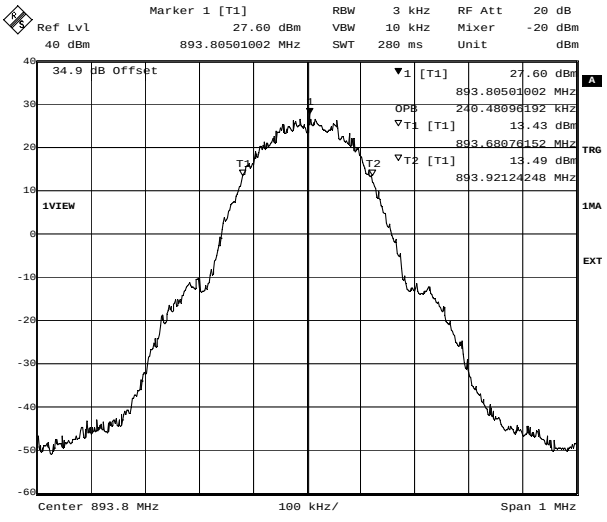
TX	Channel	Frequency (MHz)	Resolution Bandwidth (kHz)	Video Bandwidth (kHz)	Occupied Bandwidth (kHz)
TX0	128	869.21903808	3	10	242.485
TX0	251	893.80501002	3	10	240.481
TX1	128	869.21302605	3	10	240.481
TX1	251	893.82104208	3	10	242.485
TX2	128	869.18897796	3	10	244.489
TX2	251	893.81302605	3	10	240.481
TX3	128	869.17895792	3	10	240.481
TX3	251	893.80701403	3	10	240.481

Test Of: **Ericsson AB**
RBS 2308 850 MHz
To: **FCC Part 22: 2005**

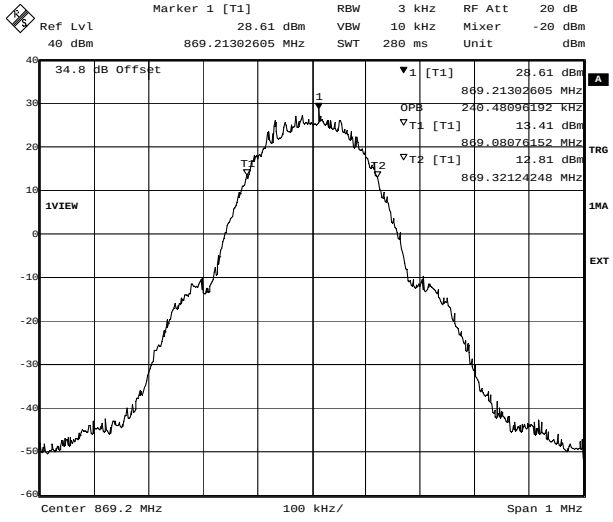
Transmitter Occupied Bandwidth: Section 2.1049(i) (Continued)



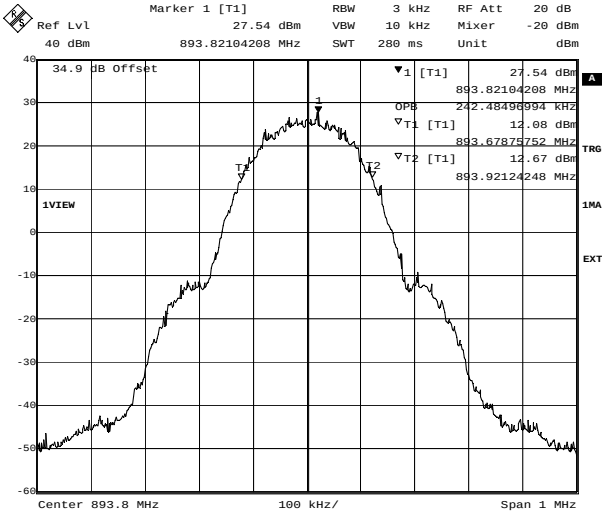
Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch128. OBW 99% Occupied Bandwidth. GMSK TRX0. +34.0dBm.
FCC Part 2.1049
Date: 25.JUL.2006 10:09:25



Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch251. OBW 99% Occupied Bandwidth. GMSK TRX0. +34.0dBm.
FCC Part 2.1049
Date: 25.JUL.2006 10:20:27

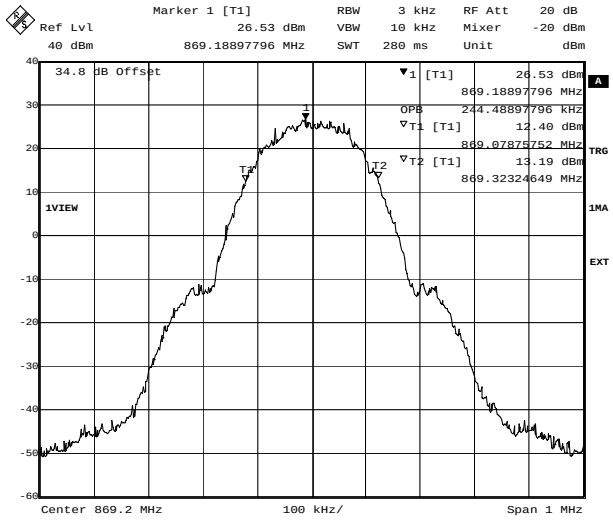


Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch128. OBW 99% Occupied Bandwidth. GMSK TRX1. +34.0dBm.
FCC Part 2.1049
Date: 25.JUL.2006 10:39:44

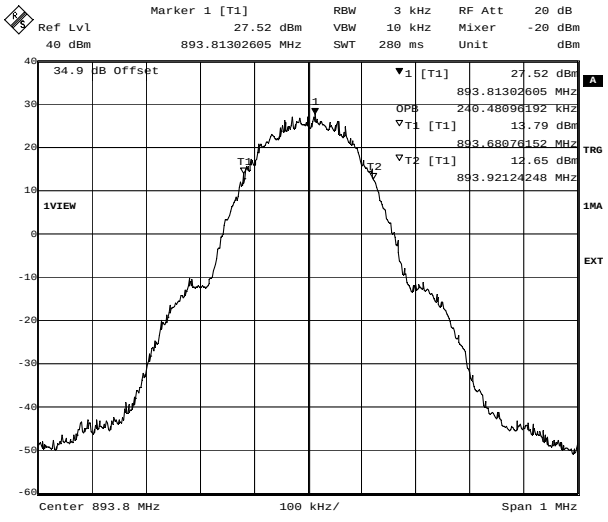


Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch251. OBW 99% Occupied Bandwidth. GMSK TRX1. +34.0dBm.
FCC Part 2.1049
Date: 25.JUL.2006 10:46:37

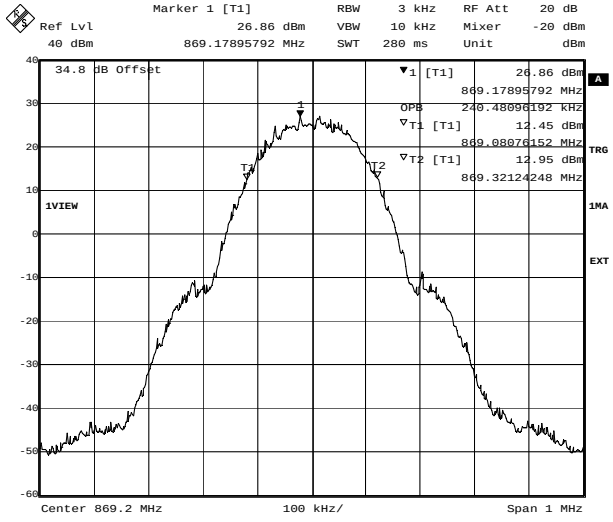
Transmitter Occupied Bandwidth: Section 2.1049(i) (Continued)



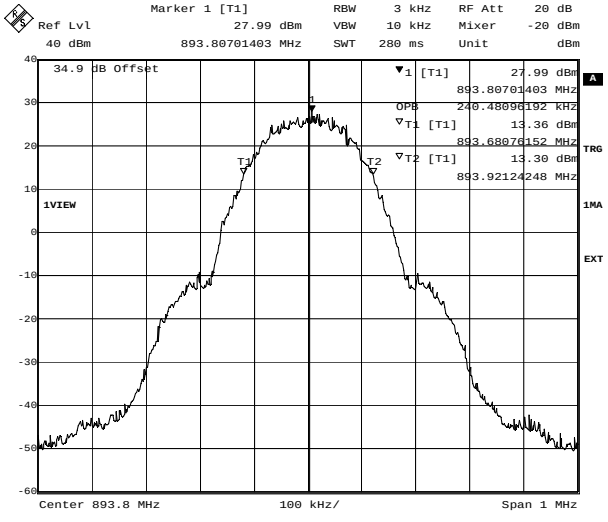
Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch128. OBW 99% Occupied Bandwidth. GMSK TRX2. +34.0dBm.
FCC Part 2.1049
Date: 25.JUL.2006 11:02:53



Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch251. OBW 99% Occupied Bandwidth. GMSK TRX2. +34.0dBm.
FCC Part 2.1049
Date: 25.JUL.2006 11:11:18



Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch128. OBW 99% Occupied Bandwidth. GMSK TRX3. +34.0dBm.
FCC Part 2.1049
Date: 25.JUL.2006 11:22:27



Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch251. OBW 99% Occupied Bandwidth. GMSK TRX3. +34.0dBm.
FCC Part 2.1049
Date: 25.JUL.2006 11:27:57

7.7. Transmitter Conducted Out of Band Emissions: Section 2.1051/22.917

7.7.1. The EUT was configured for conducted emissions testing as described in Section 9 of this report.

7.7.2. Tests were performed to identify the maximum transmitter conducted emission levels.

Note 1:

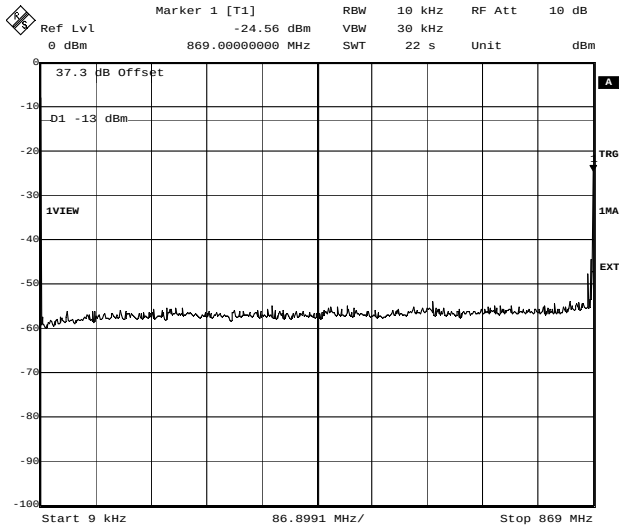
For several of the plots in the range 9kHz to 869MHz, a spurious emission is evident at 3.49MHz which is at worst case 5.2dB below the limit. Although this emission is below the limit it should be noted that it occurs solely due to the internal attenuation in the spectrum analyser being too low and is not a spurious emission coming from the base station itself.

Result: 8PSK, TX0=128 and TX1=153

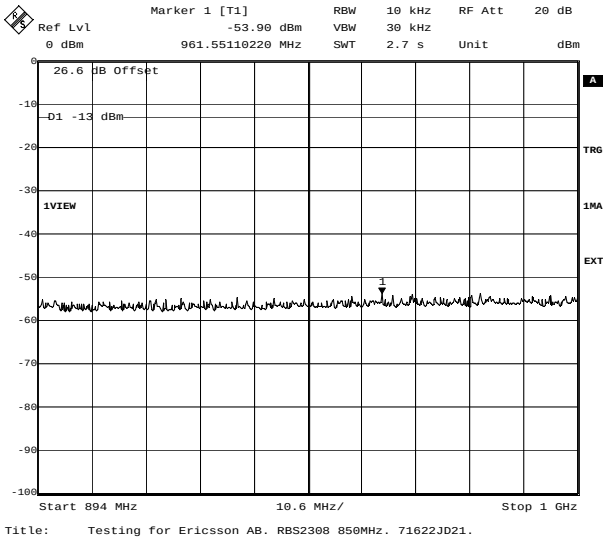
Band	Peak Power (dBm)	Limit (dBm)	Margin (dB)	Results
9 kHz to 869.0 MHz	-24.5	-13.0	11.5	Complied
894.0 MHz to 1.0 GHz	-53.9	-13.0	40.9	Complied
1.0 GHz to 5.0 GHz	-30.8	-13.0	17.8	Complied
5.0 GHz to 10.0 GHz	-26.4	-13.0	13.4	Complied

Test Of: **Ericsson AB**
RBS 2308 850 MHz
To: **FCC Part 22: 2005**

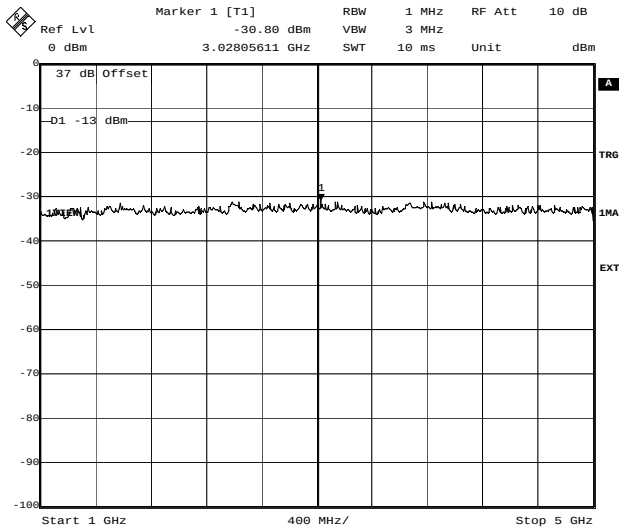
Transmitter Conducted Out of Band Emissions: Section 2.1051/22.917 (Continued)



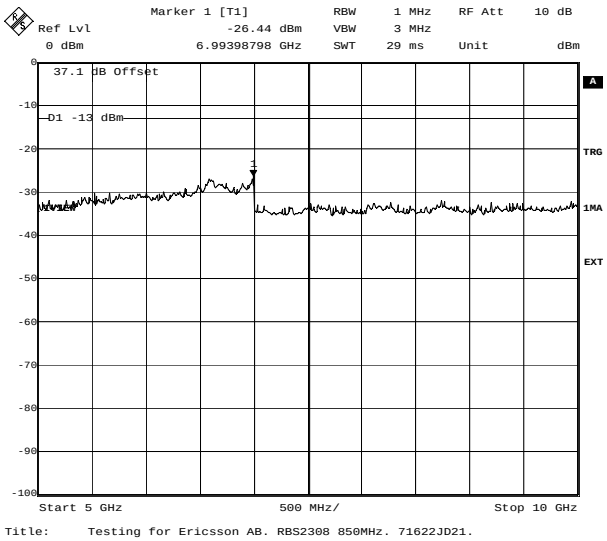
Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch128&153. Conducted Spurious Emissions. 8PSK TRX0&TRX1.
+30.7dBm. FCC Part 22.917
Date: 26.JUL.2006 15:50:50



Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch128&153. Conducted Spurious Emissions. 8PSK TRX0&TRX1.
+30.7dBm. FCC Part 22.917
Date: 26.JUL.2006 15:52:17



Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch128&153. Conducted Spurious Emissions. 8PSK TRX0&TRX1.
+30.7dBm. FCC Part 22.917
Date: 26.JUL.2006 15:53:47



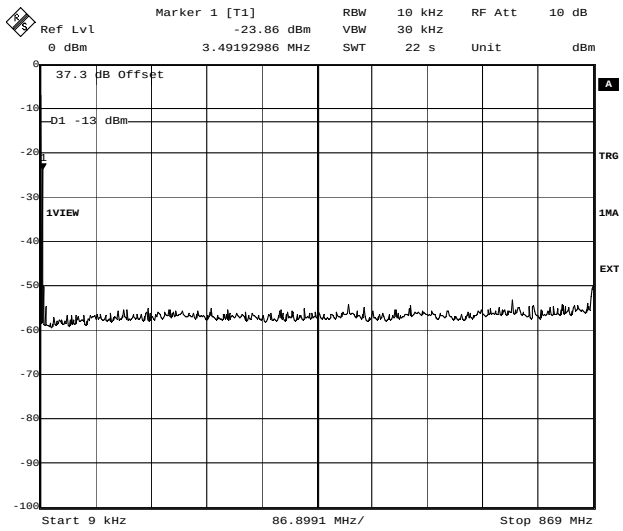
Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch128&153. Conducted Spurious Emissions. 8PSK TRX0&TRX1.
+30.7dBm. FCC Part 22.917
Date: 26.JUL.2006 16:00:03

Transmitter Conducted Out of Band Emissions: Section 2.1051/22.917 (Continued)

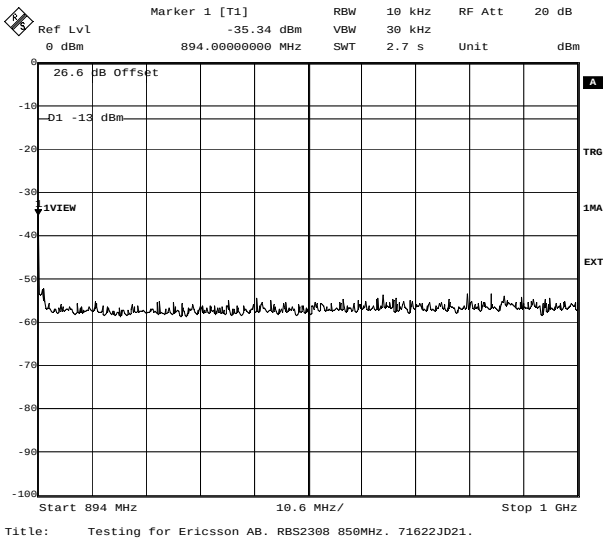
Result: 8PSK, TX0=251 and TX1=226

Band	Peak Power (dBm)	Limit (dBm)	Margin (dB)	Results
9 kHz to 869.0 MHz	-23.8	-13.0	10.8	Complied
894.0 MHz to 1.0 GHz	-35.3	-13.0	22.3	Complied
1.0 GHz to 5.0 GHz	-30.8	-13.0	17.8	Complied
5.0 GHz to 10.0 GHz	-26.7	-13.0	13.7	Complied

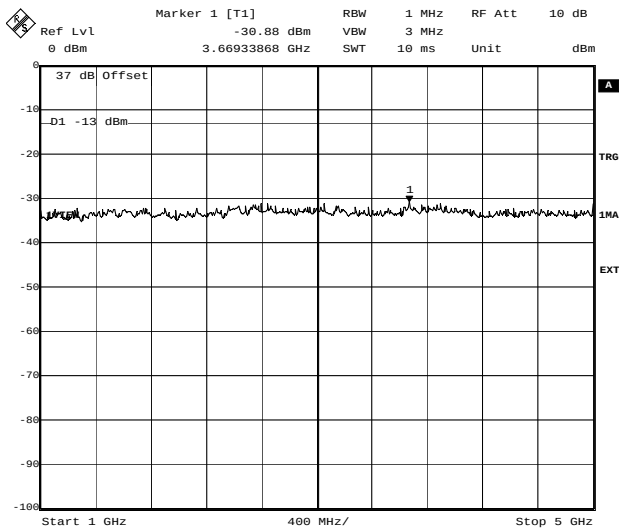
Transmitter Conducted Out of Band Emissions: Section 2.1051/22.917 (Continued)



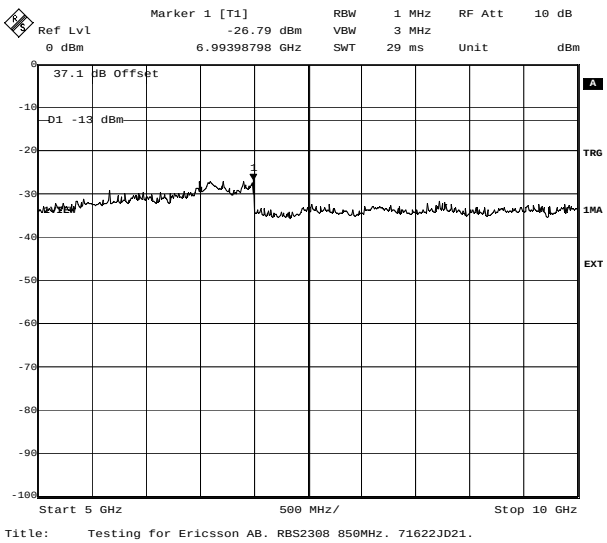
Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch251&226. Conducted Spurious Emissions. 8PSK TRX0&TRX1.
+30.7dBm. FCC Part 22.917
Date: 26.JUL.2006 16:15:43



Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch251&226. Conducted Spurious Emissions. 8PSK TRX0&TRX1.
+30.7dBm. FCC Part 22.917
Date: 26.JUL.2006 16:17:16



Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch251&226. Conducted Spurious Emissions. 8PSK TRX0&TRX1.
+30.7dBm. FCC Part 22.917
Date: 26.JUL.2006 16:18:42



Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch251&226. Conducted Spurious Emissions. 8PSK TRX0&TRX1.
+30.7dBm. FCC Part 22.917
Date: 26.JUL.2006 16:02:10

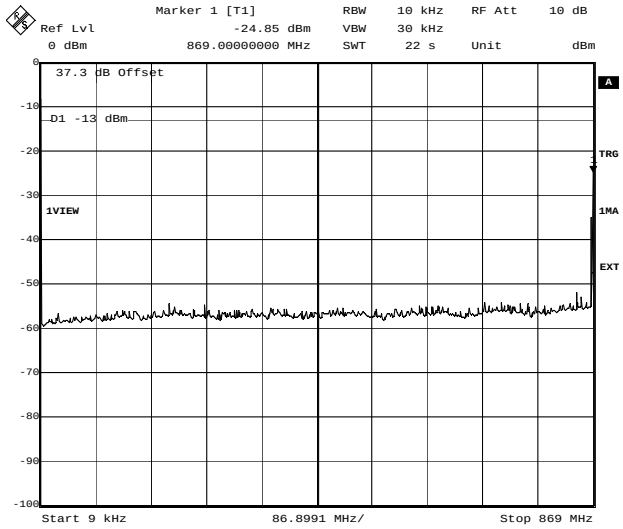
Transmitter Conducted Out of Band Emissions: Section 2.1051/22.917 (Continued)

Result: 8PSK, TX2=128 and TX3=153

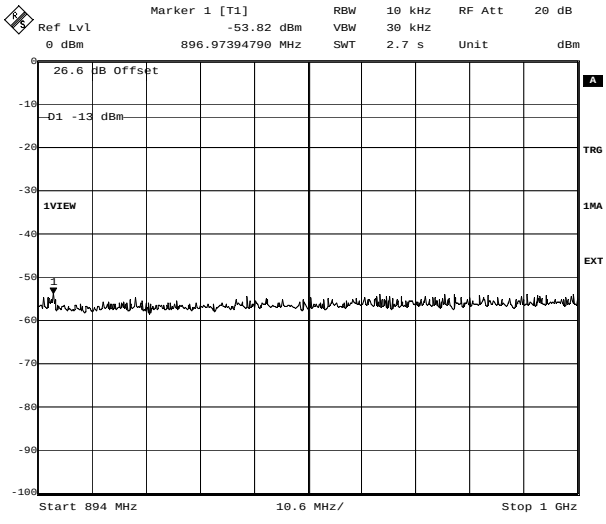
Band	Peak Power (dBm)	Limit (dBm)	Margin (dB)	Results
9 kHz to 869.0 MHz	-24.8	-13.0	11.8	Complied
894.0 MHz to 1.0 GHz	-53.8	-13.0	40.8	Complied
1.0 GHz to 5.0 GHz	-30.5	-13.0	17.5	Complied
5.0 GHz to 10.0 GHz	-26.6	-13.0	13.6	Complied

Test Of: **Ericsson AB**
RBS 2308 850 MHz
To: **FCC Part 22: 2005**

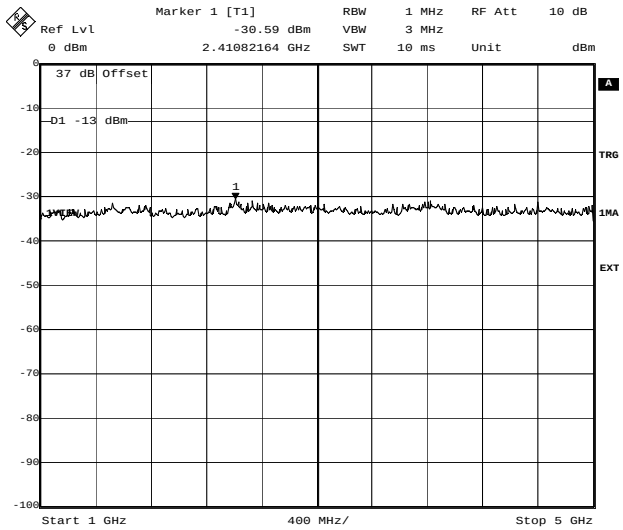
Transmitter Conducted Out of Band Emissions: Section 2.1051/22.917 (Continued)



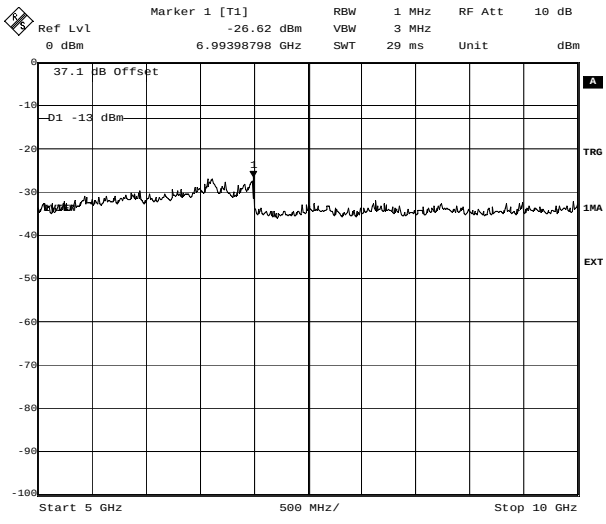
Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch128&153. Conducted Spurious Emissions. 8PSK TRX2&TRX3.
+30.7dBm. FCC Part 22.917
Date: 26.JUL.2006 16:29:10



Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch128&153. Conducted Spurious Emissions. 8PSK TRX2&TRX3.
+30.7dBm. FCC Part 22.917
Date: 26.JUL.2006 16:30:25



Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch128&153. Conducted Spurious Emissions. 8PSK TRX2&TRX3.
+30.7dBm. FCC Part 22.917
Date: 26.JUL.2006 16:31:43



Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch128&153. Conducted Spurious Emissions. 8PSK TRX2&TRX3.
+30.7dBm. FCC Part 22.917
Date: 26.JUL.2006 16:40:49

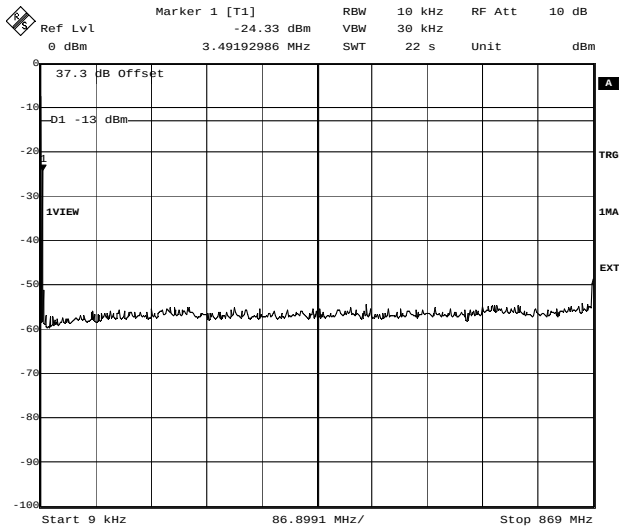
Transmitter Conducted Out of Band Emissions: Section 2.1051/22.917 (Continued)

Result: 8PSK, TX2=251 and TX3=226

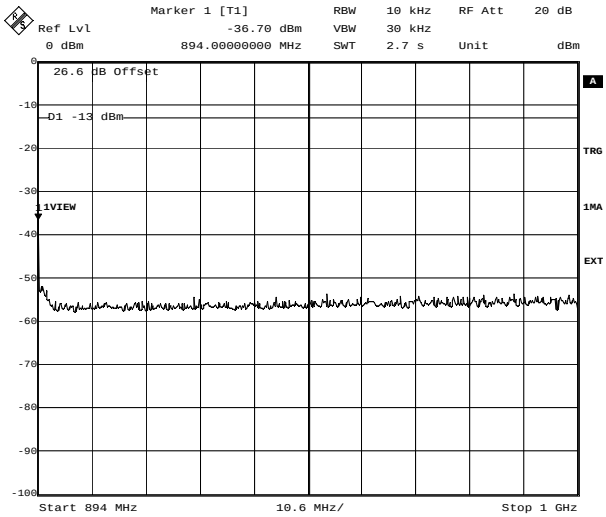
Band	Peak Power (dBm)	Limit (dBm)	Margin (dB)	Results
9 kHz to 869.0 MHz	-24.3	-13.0	11.3	Complied
894.0 MHz to 1.0 GHz	-36.7	-13.0	23.7	Complied
1.0 GHz to 5.0 GHz	-30.3	-13.0	17.3	Complied
5.0 GHz to 10.0 GHz	-26.0	-13.0	13.0	Complied

Test Of: **Ericsson AB**
RBS 2308 850 MHz
To: **FCC Part 22: 2005**

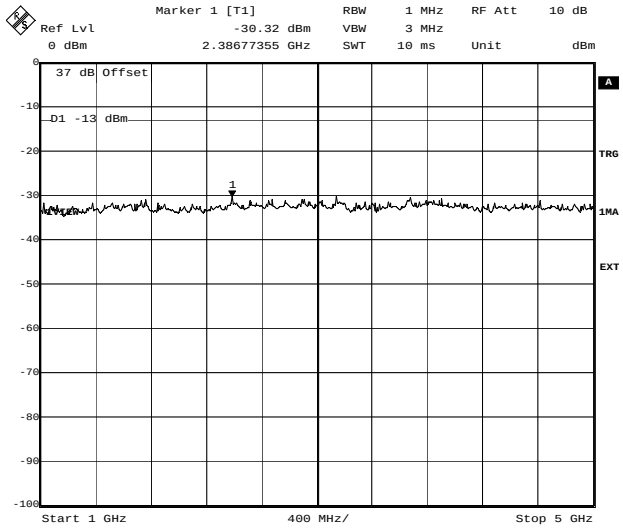
Transmitter Conducted Out of Band Emissions: Section 2.1051/22.917 (Continued)



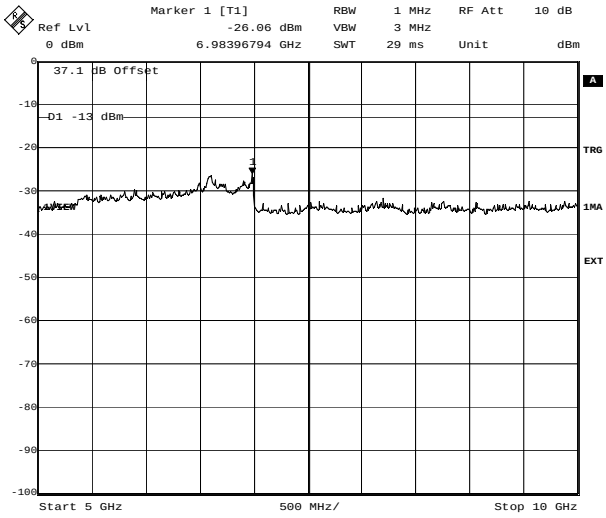
Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch251&226. Conducted Spurious Emissions. 8PSK TRX2&TRX3.
+30.7dBm. FCC Part 22.917
Date: 27.JUL.2006 09:21:37



Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch251&226. Conducted Spurious Emissions. 8PSK TRX2&TRX3.
+30.7dBm. FCC Part 22.917
Date: 27.JUL.2006 09:23:14



Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch251&226. Conducted Spurious Emissions. 8PSK TRX2&TRX3.
+30.7dBm. FCC Part 22.917
Date: 27.JUL.2006 09:25:22



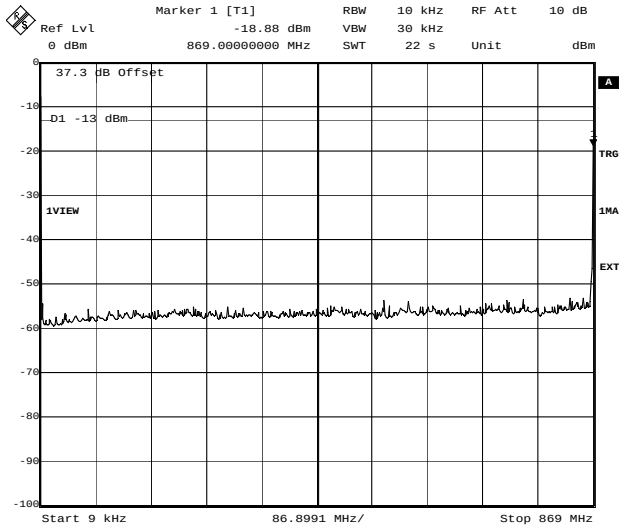
Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch251&226. Conducted Spurious Emissions. 8PSK TRX2&TRX3.
+30.7dBm. FCC Part 22.917
Date: 26.JUL.2006 16:42:32

Transmitter Conducted Out of Band Emissions: Section 2.1051/22.917 (Continued)

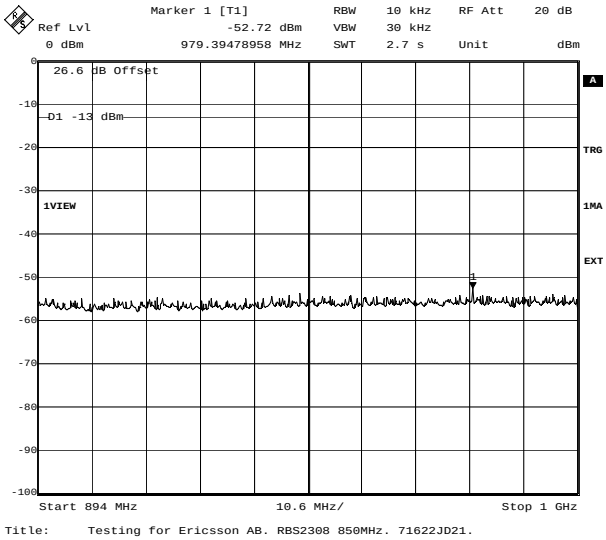
Result: GMSK, TX0=128 and TX1=153

Band	Peak Power (dBm)	Limit (dBm)	Margin (dB)	Results
9 kHz to 869.0 MHz	-18.8	-13.0	5.8	Complied
894.0 MHz to 1.0 GHz	-52.7	-13.0	39.7	Complied
1.0 GHz to 5.0 GHz	-30.8	-13.0	17.8	Complied
5.0 GHz to 10.0 GHz	-26.6	-13.0	13.6	Complied

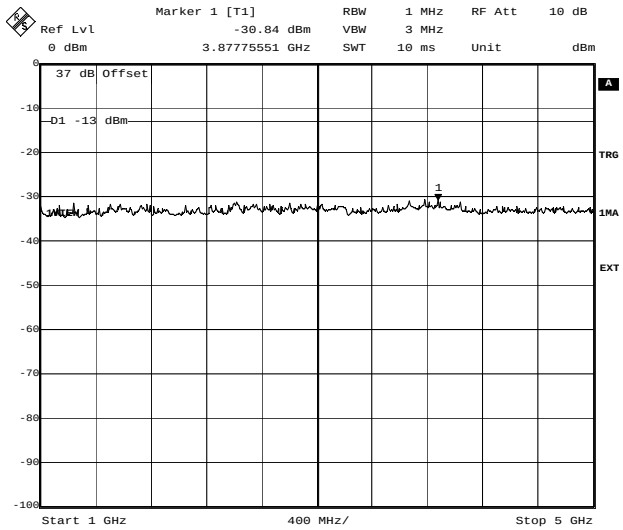
Transmitter Conducted Out of Band Emissions: Section 2.1051/22.917 (Continued)



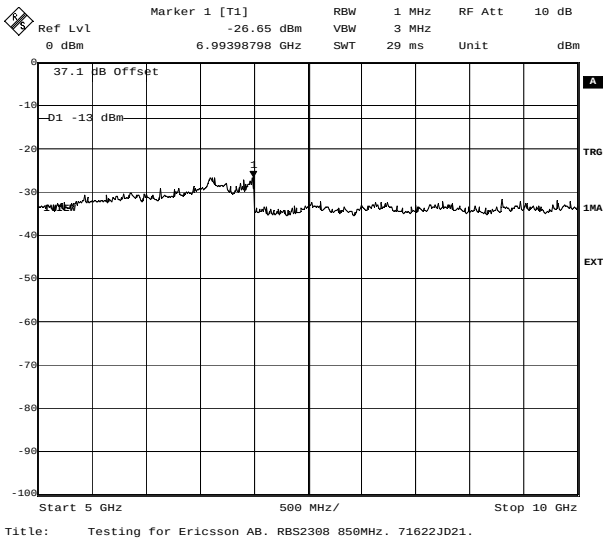
Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch128&153. Conducted Spurious Emissions. GMSK TRX0&TRX1.
+34.0dBm. FCC Part 22.917
Date: 26.JUL.2006 15:14:50



Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch128&153. Conducted Spurious Emissions. GMSK TRX0&TRX1.
+34.0dBm. FCC Part 22.917
Date: 26.JUL.2006 11:24:16



Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch128&153. Conducted Spurious Emissions. GMSK TRX0&TRX1.
+34.0dBm. FCC Part 22.917
Date: 26.JUL.2006 11:26:23



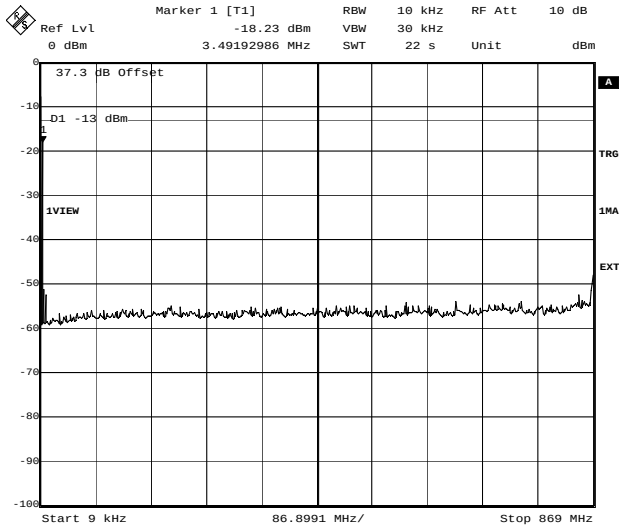
Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch128&153. Conducted Spurious Emissions. GMSK TRX0&TRX1.
+34.0dBm. FCC Part 22.917
Date: 26.JUL.2006 11:34:26

Transmitter Conducted Out of Band Emissions: Section 2.1051/22.917 (Continued)

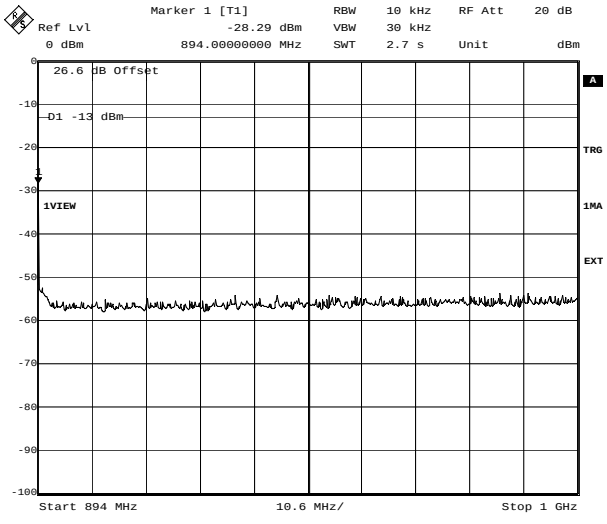
Result: GMSK, TX0=251 and TX1=226

Band	Peak Power (dBm)	Limit (dBm)	Margin (dB)	Results
9 kHz to 869.0 MHz	-18.2	-13.0	5.2	Complied
894.0 MHz to 1.0 GHz	-28.2	-13.0	15.2	Complied
1.0 GHz to 5.0 GHz	-29.9	-13.0	16.9	Complied
5.0 GHz to 10.0 GHz	-26.7	-13.0	13.7	Complied

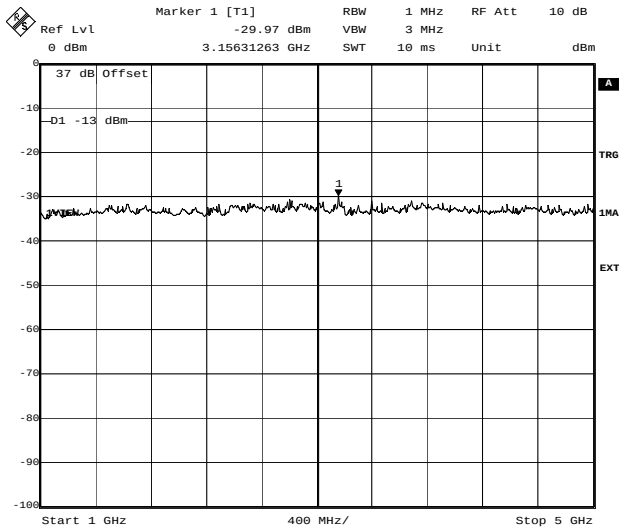
Transmitter Conducted Out of Band Emissions: Section 2.1051/22.917 (Continued)



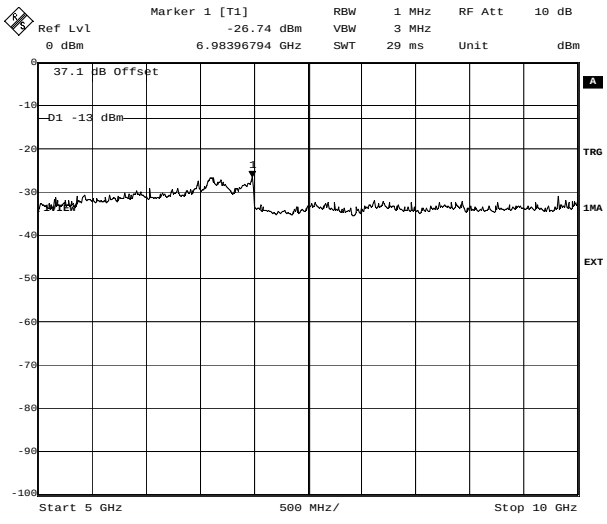
Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch251&226. Conducted Spurious Emissions. GMSK TRX0&TRX1.
+34.0dBm. FCC Part 22.917
Date: 26.JUL.2006 15:17:46



Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch251&226. Conducted Spurious Emissions. GMSK TRX0&TRX1.
+34.0dBm. FCC Part 22.917
Date: 26.JUL.2006 13:26:47



Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch251&226. Conducted Spurious Emissions. GMSK TRX0&TRX1.
+34.0dBm. FCC Part 22.917
Date: 26.JUL.2006 13:28:21



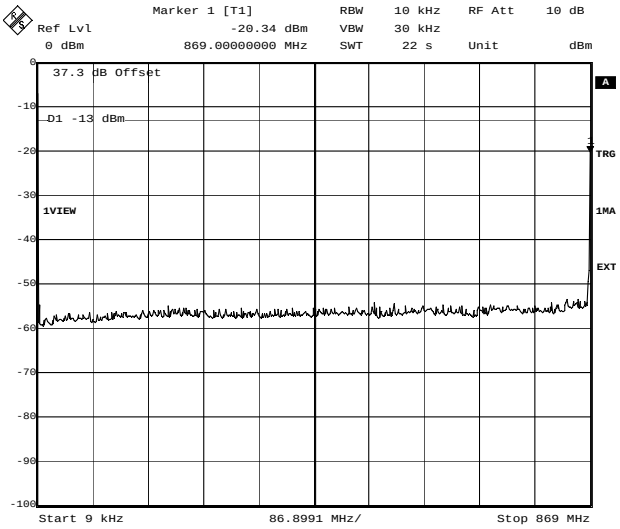
Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch251&226. Conducted Spurious Emissions. GMSK TRX0&TRX1.
+34.0dBm. FCC Part 22.917
Date: 26.JUL.2006 13:43:59

Transmitter Conducted Out of Band Emissions: Section 2.1051/22.917 (Continued)

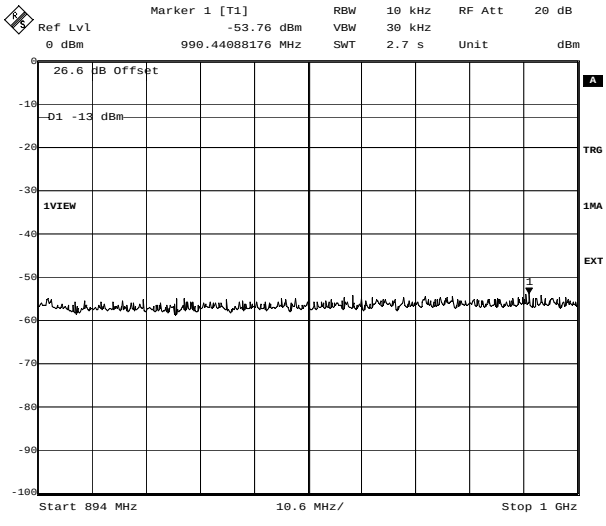
Result: GMSK, TX2=128 and TX3=153

Band	Peak Power (dBm)	Limit (dBm)	Margin (dB)	Results
9 kHz to 869.0 MHz	-20.3	-13.0	7.3	Complied
894.0 MHz to 1.0 GHz	-53.7	-13.0	40.7	Complied
1.0 GHz to 5.0 GHz	-30.9	-13.0	17.9	Complied
5.0 GHz to 10.0 GHz	-26.5	-13.0	13.5	Complied

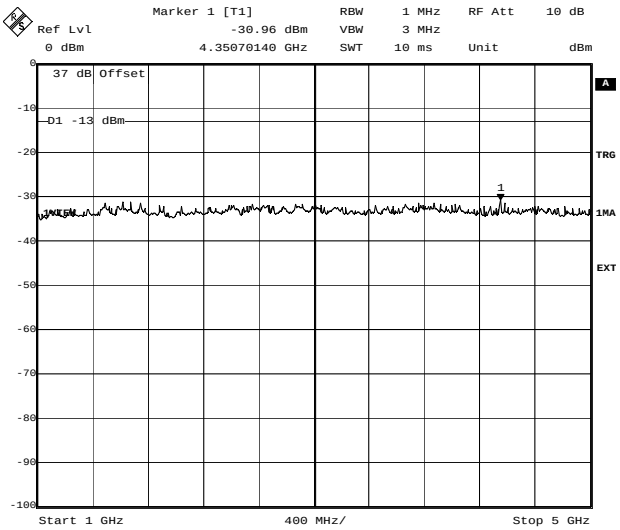
Transmitter Conducted Out of Band Emissions: Section 2.1051/22.917 (Continued)



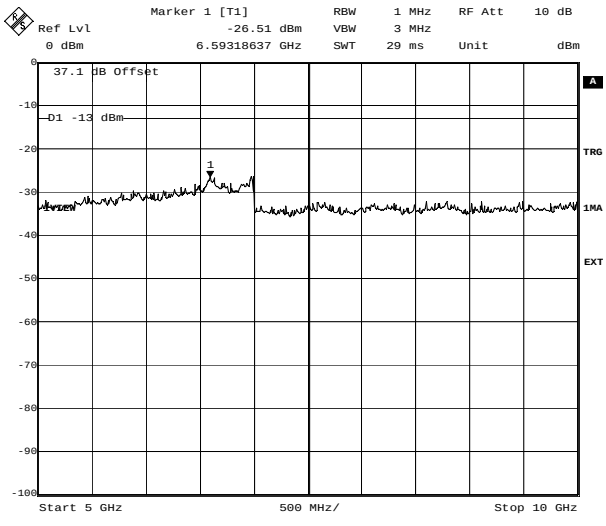
Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch128&153. Conducted Spurious Emissions. GMSK TRX2&TRX3.
+34.0dBm. FCC Part 22.917
Date: 26.JUL.2006 15:03:33



Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch128&153. Conducted Spurious Emissions. GMSK TRX2&TRX3.
+34.0dBm. FCC Part 22.917
Date: 26.JUL.2006 13:59:29



Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch128&153. Conducted Spurious Emissions. GMSK TRX2&TRX3.
+34.0dBm. FCC Part 22.917
Date: 26.JUL.2006 14:00:58



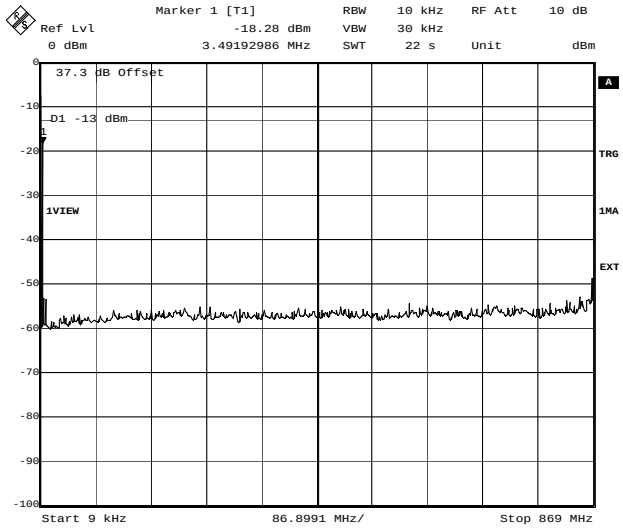
Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch128&153. Conducted Spurious Emissions. GMSK TRX2&TRX3.
+34.0dBm. FCC Part 22.917
Date: 26.JUL.2006 14:42:54

Transmitter Conducted Out of Band Emissions: Section 2.1051/22.917 (Continued)

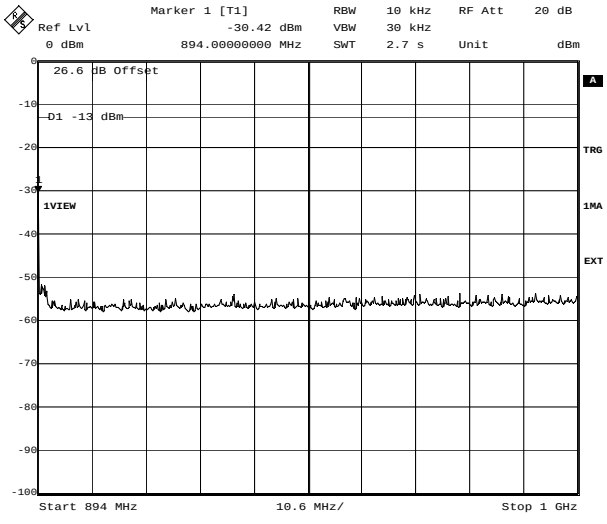
Result: GMSK, TX2=251 and TX3=226

Band	Peak Power (dBm)	Limit (dBm)	Margin (dB)	Results
9 kHz to 869.0 MHz	-18.2	-13.0	5.2	Complied
894.0 MHz to 1.0 GHz	-30.4	-13.0	17.4	Complied
1.0 GHz to 5.0 GHz	-30.3	-13.0	17.3	Complied
5.0 GHz to 10.0 GHz	-26.3	-13.0	13.3	Complied

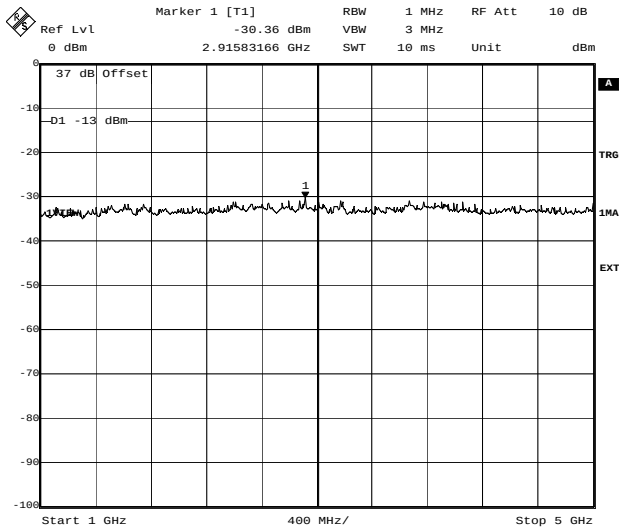
Transmitter Conducted Out of Band Emissions: Section 2.1051/22.917 (Continued)



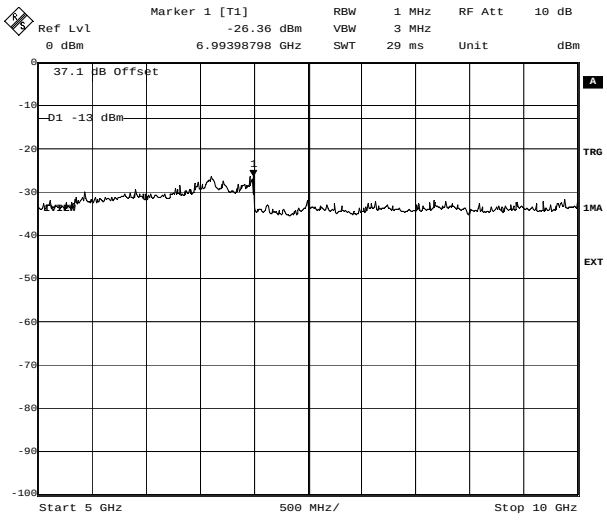
Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch251&226. Conducted Spurious Emissions. GMSK TRX2&TRX3.
+34.0dBm. FCC Part 22.917
Date: 26.JUL.2006 15:06:28



Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch251&226. Conducted Spurious Emissions. GMSK TRX2&TRX3.
+34.0dBm. FCC Part 22.917
Date: 26.JUL.2006 14:34:24



Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch251&226. Conducted Spurious Emissions. GMSK TRX2&TRX3.
+34.0dBm. FCC Part 22.917
Date: 26.JUL.2006 14:35:56



Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch251&226. Conducted Spurious Emissions. GMSK TRX2&TRX3.
+34.0dBm. FCC Part 22.917
Date: 26.JUL.2006 14:38:28

7.8. Transmitter Conducted Intermodulation Responses: Section 2.1051/22.917

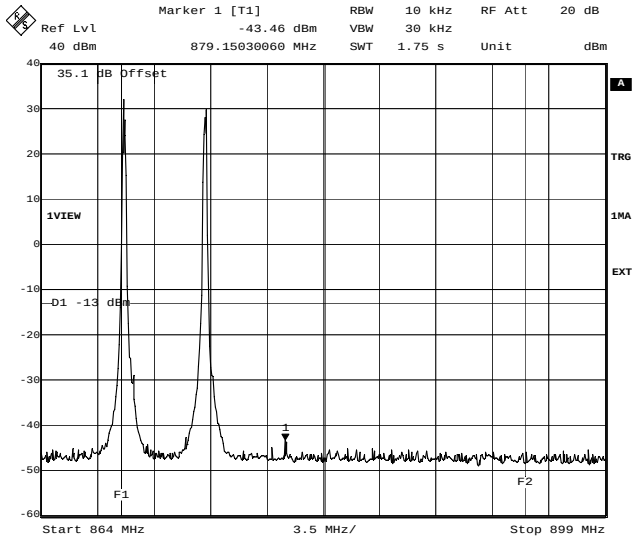
7.8.1. The EUT was configured for conducted emissions testing as described in Section 9 of this report.

7.8.2. Tests were performed to identify the level of any Intermodulation responses present.

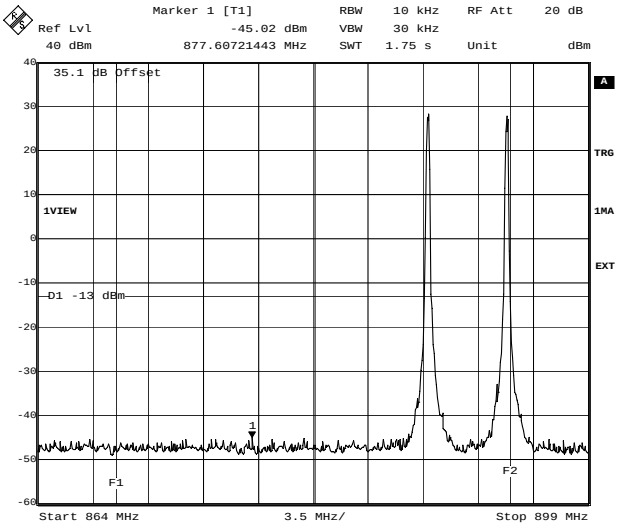
Results: 8PSK, TX0 and TX1

TX	Channel pair	Peak Power Emission (dBm)	Frequency (MHz)	Limit (dBm)	Margin (dB)	Result
TX0/TX1	128 & 153	-43.4	879.15030060	-13.0	30.4	Complied
TX0/TX1	251 & 226	-45.0	877.60721443	-13.0	32.0	Complied

Transmitter Conducted Intermodulation Responses: Section 2.1051/22.917 (Continued)



Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch128&153. TX Inband Intermodulation. 8PSK TRX0&TRX1.
+30.7dBm. FCC Part 22.917
Date: 26.JUL.2006 15:55:49



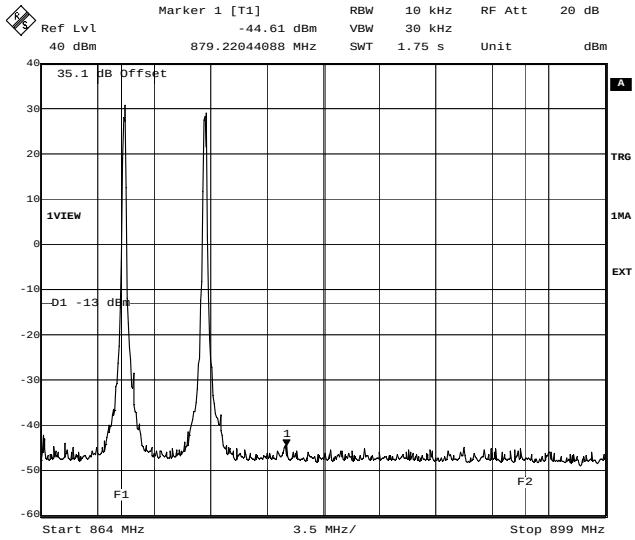
Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch251&226. TX Inband Intermodulation. 8PSK TRX0&TRX1.
+30.7dBm. FCC Part 22.917
Date: 26.JUL.2006 16:20:10

Transmitter Conducted Intermodulation Responses: Section 2.1051/22.917 (Continued)

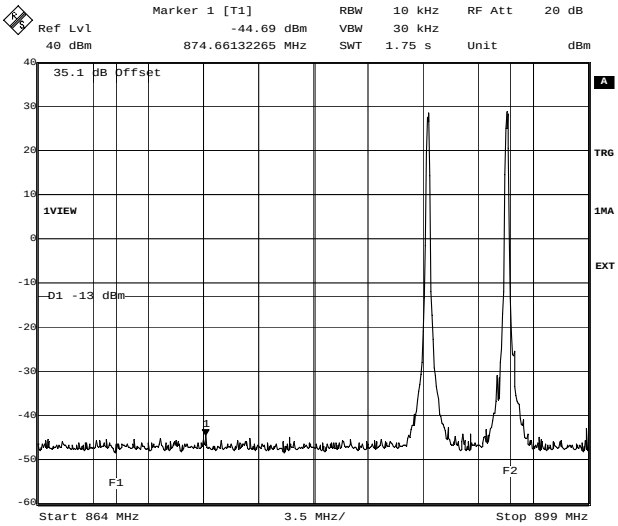
Results: 8PSK, TX2 and TX3

TX	Channel pair	Peak Power Emission (dBm)	Frequency (MHz)	Limit (dBm)	Margin (dB)	Result
TX2/TX3	128 & 153	-44.6	879.22044088	-13.0	31.6	Complied
TX2/TX3	251 & 226	-44.6	874.66132265	-13.0	31.6	Complied

Transmitter Conducted Intermodulation Responses: Section 2.1051/22.917 (Continued)



Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch128&153. TX Inband Intermodulation. 8PSK TRX2&TRX3.
+30.7dBm. FCC Part 22.917
Date: 26.JUL.2006 16:33:04

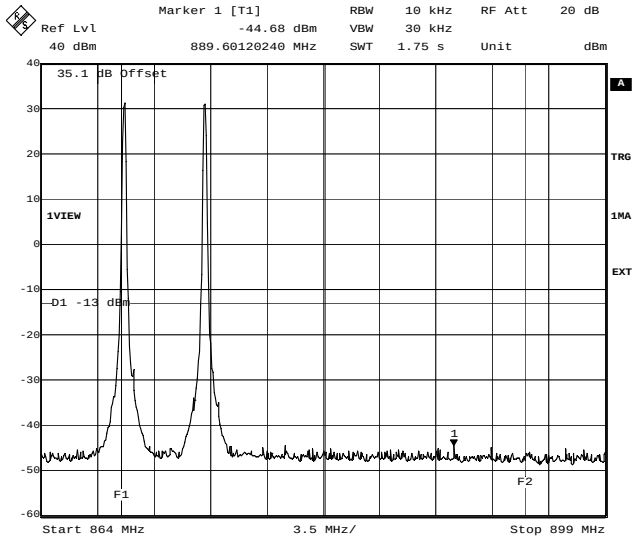


Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch251&226. TX Inband Intermodulation. 8PSK TRX2&TRX3.
+30.7dBm. FCC Part 22.917
Date: 27.JUL.2006 09:26:50

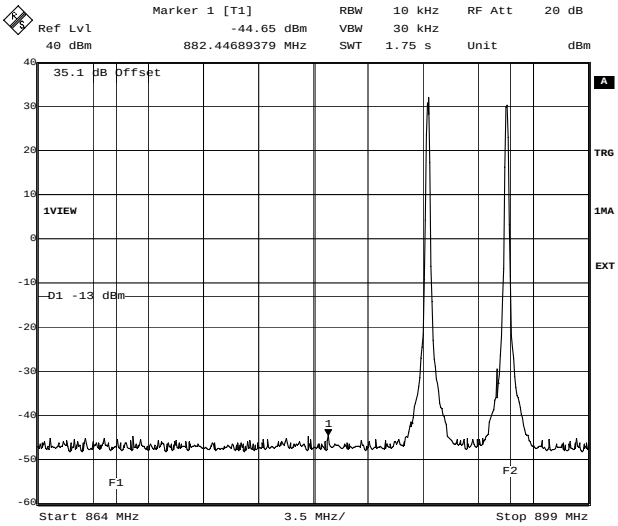
Results: GMSK, TX0 and TX1

TX	Channel pair	Peak Power Emission (dBm)	Frequency (MHz)	Limit (dBm)	Margin (dB)	Result
TX0/TX1	128 & 153	-44.6	889.60120240	-13.0	31.6	Complied
TX0/TX1	251 & 226	-44.6	882.44689379	-13.0	31.6	Complied

Transmitter Conducted Intermodulation Responses: Section 2.1051/22.917 (Continued)



Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch128&153. TX Inband Intermodulation. GMSK TRX0&TRX1.
+34.0dBm. FCC Part 22.917
Date: 26.JUL.2006 11:28:36



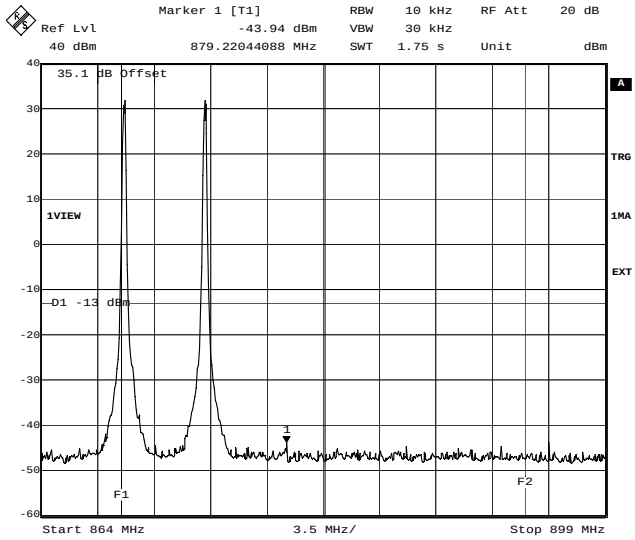
Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch251&226. TX Inband Intermodulation. GMSK TRX0&TRX1.
+34.0dBm. FCC Part 22.917
Date: 26.JUL.2006 13:30:08

Transmitter Conducted Intermodulation Responses: Section 2.1051/22.917 (Continued)

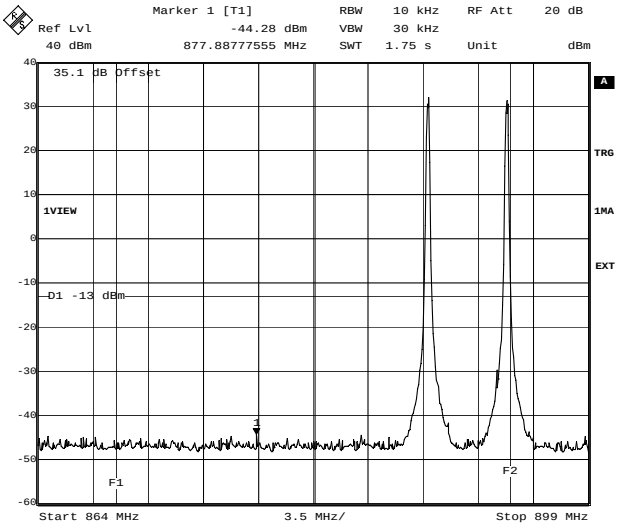
Results: GMSK, TX2 and TX3

TX	Channel pair	Peak Power Emission (dBm)	Frequency (MHz)	Limit (dBm)	Margin (dB)	Result
TX2/TX3	128 & 153	-43.9	879.22044088	-13.0	30.9	Complied
TX2/TX3	251 & 226	-44.2	877.88777555	-13.0	31.2	Complied

Transmitter Conducted Intermodulation Responses: Section 2.1051/22.917 (Continued)



Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch128&153. TX Inband Intermodulation. GMSK TRX2&TRX3.
+34.0dBm. FCC Part 22.917
Date: 26.JUL.2006 14:02:45



Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch251&226. TX Inband Intermodulation. GMSK TRX2&TRX3.
+34.0dBm. FCC Part 22.917
Date: 26.JUL.2006 14:07:05

7.9.Transmitter Conducted Emissions at Band Edges: Section 2.1051/22.917

7.9.1. The EUT was configured for conducted emissions at band edges testing as described in Section 9 of this report.

7.9.2. Tests were performed to identify the maximum conducted band edge emissions.

Results: 8PSK – TX0

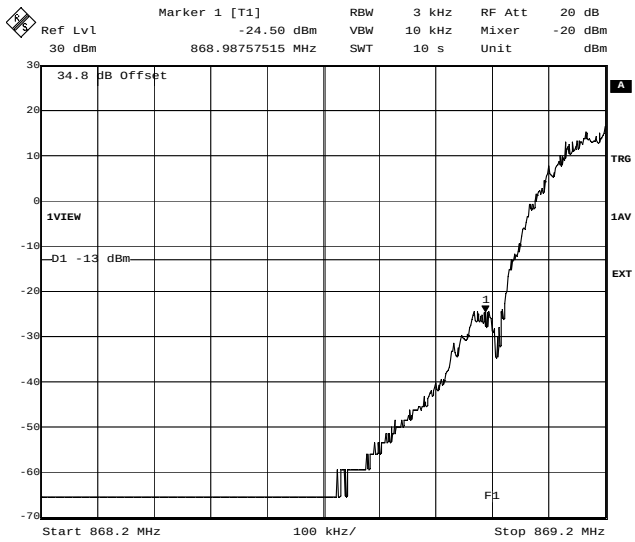
Lower Band Edge

Frequency (MHz)	Output Power (dBm)	ARFCN	Peak Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
869.0	30.7	128	-24.5	-13.0	11.5	Complied

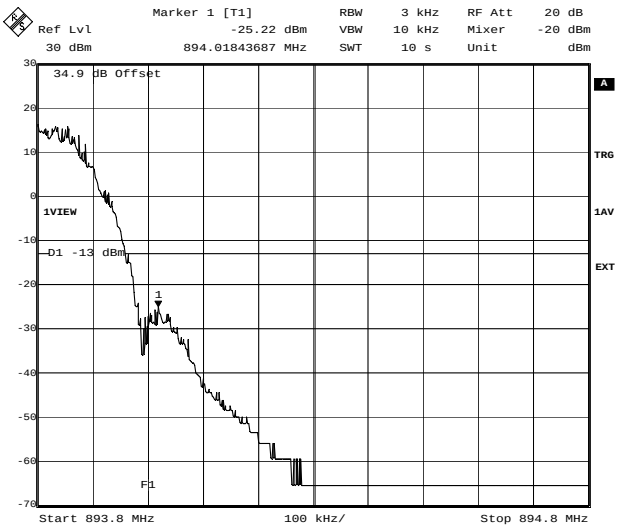
Upper Band Edge

Frequency (MHz)	Output Power (dBm)	ARFCN	Peak Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
894.0	30.7	251	-25.2	-13.0	12.2	Complied

Transmitter Conducted Emissions at Band Edges: Section 2.1051/22.917 (Continued)



Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch128. Band Edges. 8PSK TRX0. +30.7dBm. FCC Part 22.917
Date: 25.JUL.2006 12:31:19



Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch251. Band Edges. 8PSK TRX0. +30.7dBm. FCC Part 22.917
Date: 25.JUL.2006 13:05:48

Transmitter Conducted Emissions at Band Edges: Section 2.1051/22.917 (Continued)

Results: 8PSK – TX1

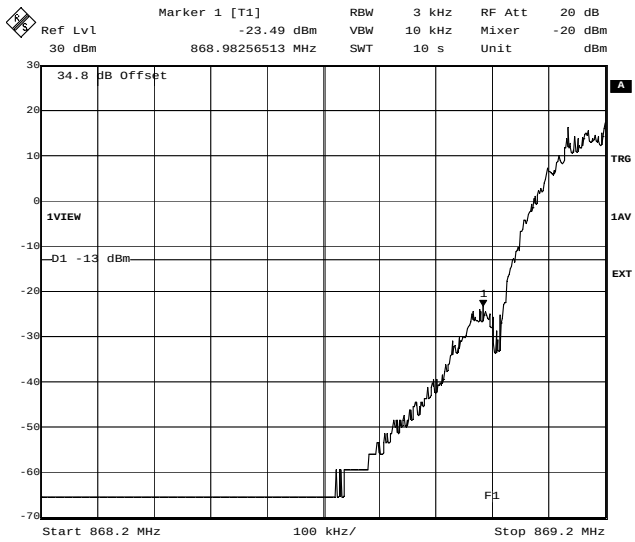
Lower Band Edge

Frequency (MHz)	Output Power (dBm)	ARFCN	Peak Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
869.0	30.7	128	-23.4	-13.0	10.4	Complied

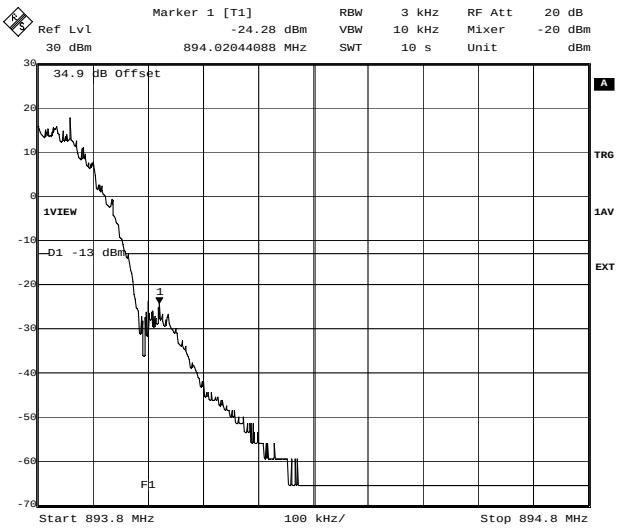
Upper Band Edge

Frequency (MHz)	Output Power (dBm)	ARFCN	Peak Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
894.0	30.7	251	-24.2	-13.0	11.2	Complied

Transmitter Conducted Emissions at Band Edges: Section 2.1051/22.917 (Continued)



Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch128. Band Edges. 8PSK TRX1. +30.7dBm. FCC Part 22.917
Date: 25.JUL.2006 13:17:52



Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch251. Band Edges. 8PSK TRX1. +30.7dBm. FCC Part 22.917
Date: 25.JUL.2006 13:24:03

Transmitter Conducted Emissions at Band Edges: Section 2.1051/22.917 (Continued)

Results: 8PSK – TX2

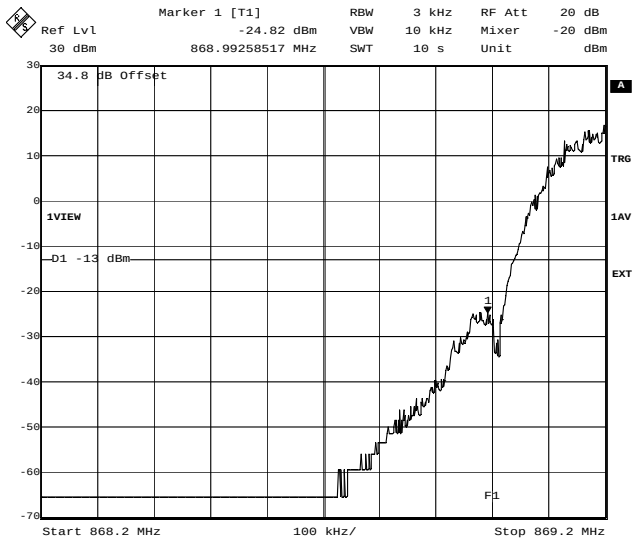
Lower Band Edge

Frequency (MHz)	Output Power (dBm)	ARFCN	Peak Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
869.0	30.7	128	-24.8	-13.0	11.8	Complied

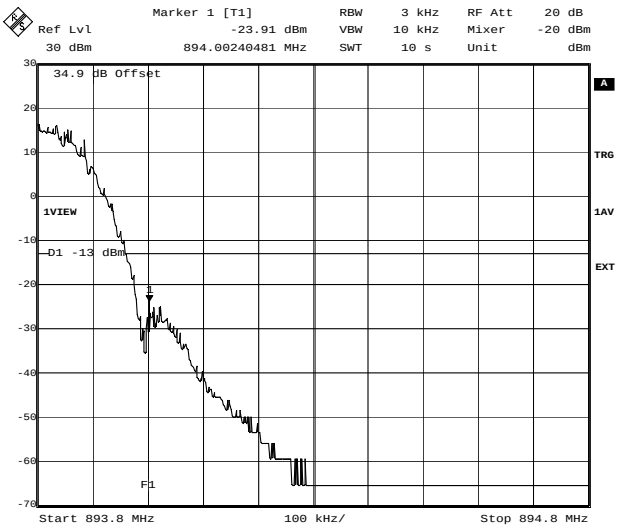
Upper Band Edge

Frequency (MHz)	Output Power (dBm)	ARFCN	Peak Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
894.0	30.7	251	-23.9	-13.0	10.9	Complied

Transmitter Conducted Emissions at Band Edges: Section 2.1051/22.917 (Continued)



Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch128. Band Edges. 8PSK TRX2. +30.7dBm. FCC Part 22.917
Date: 25.JUL.2006 13:40:18



Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch251. Band Edges. 8PSK TRX2. +30.7dBm. FCC Part 22.917
Date: 25.JUL.2006 13:46:29

Transmitter Conducted Emissions at Band Edges: Section 2.1051/22.917 (Continued)

Results: 8PSK – TX3

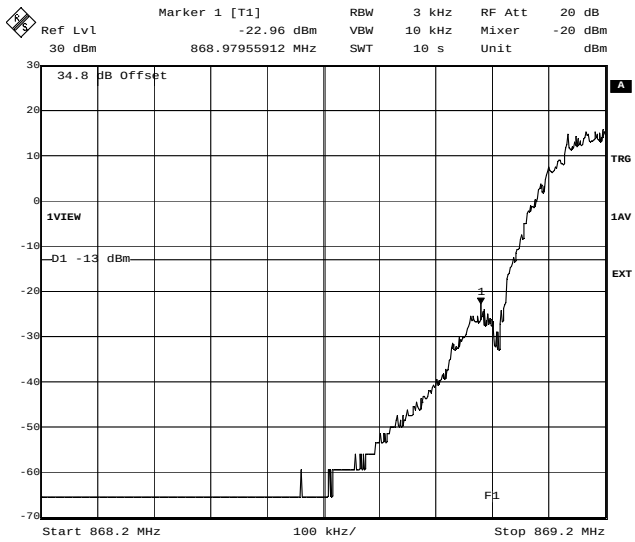
Lower Band Edge

Frequency (MHz)	Output Power (dBm)	ARFCN	Peak Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
869.0	30.7	128	22.9	-13.0	9.9	Complied

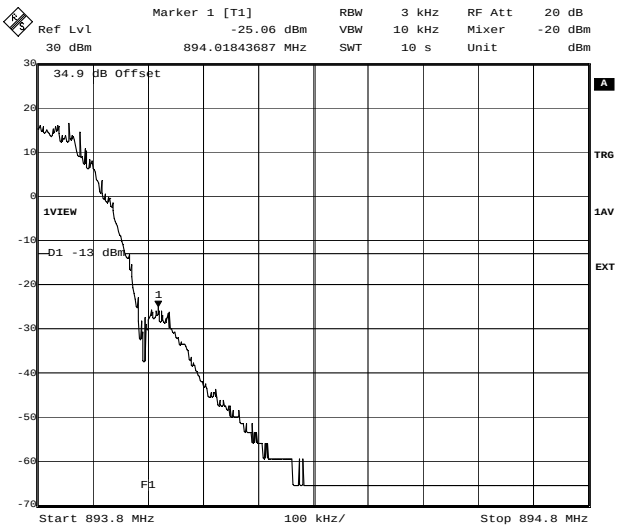
Upper Band Edge

Frequency (MHz)	Output Power (dBm)	ARFCN	Peak Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
894.0	30.7	251	-25.0	-13.0	12.0	Complied

Transmitter Conducted Emissions at Band Edges: Section 2.1051/22.917 (Continued)



Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch128. Band Edges. 8PSK TRX3. +30.7dBm. FCC Part 22.917
Date: 25.JUL.2006 13:59:57



Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch251. Band Edges. 8PSK TRX3. +30.7dBm. FCC Part 22.917
Date: 25.JUL.2006 14:06:34

Transmitter Conducted Emissions at Band Edges: Section 2.1051/22.917 (Continued)

Results: GMSK – TX0

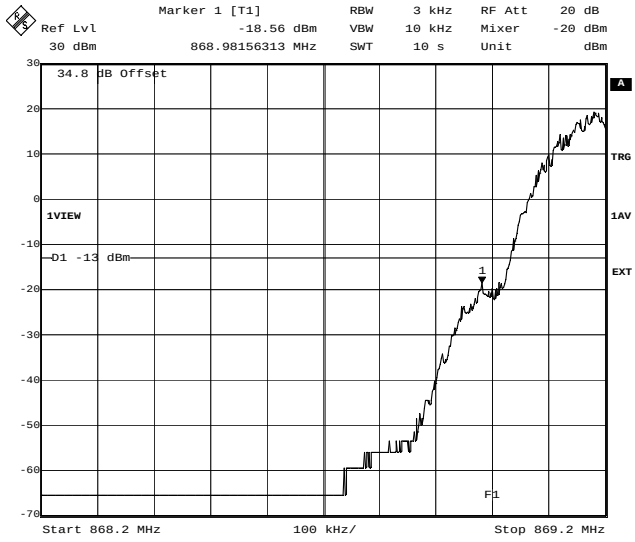
Lower Band Edge

Frequency (MHz)	Output Power (dBm)	ARFCN	Peak Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
869.0	34.0	128	-18.5	-13.0	5.5	Complied

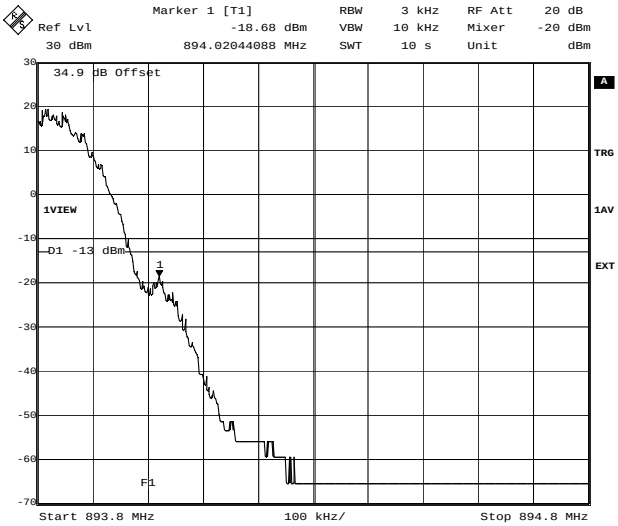
Upper Band Edge

Frequency (MHz)	Output Power (dBm)	ARFCN	Peak Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
894.0	34.0	251	-18.6	-13.0	5.6	Complied

Transmitter Conducted Emissions at Band Edges: Section 2.1051/22.917 (Continued)



Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch128. Band Edges. GMSK TRX0. +34.0dBm. FCC Part 22.917
Date: 25.JUL.2006 10:05:08



Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch251. Band Edges. GMSK TRX0. +34.0dBm. FCC Part 22.917
Date: 25.JUL.2006 10:13:12

Transmitter Conducted Emissions at Band Edges: Section 2.1051/22.917 (Continued)

Results: GMSK – TX1

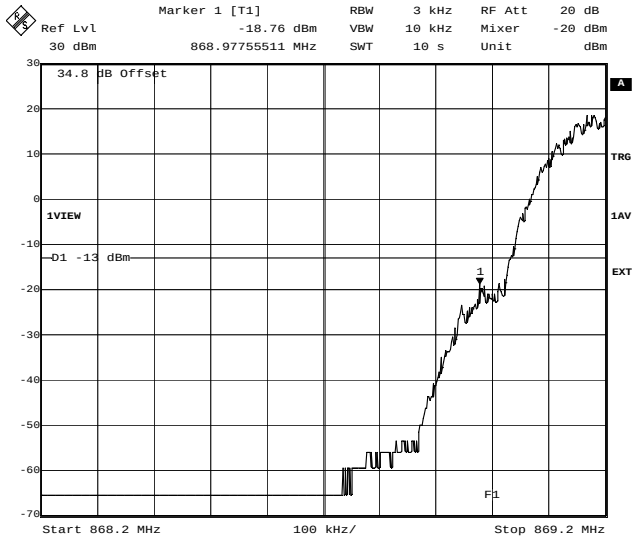
Lower Band Edge

Frequency (MHz)	Output Power (dBm)	ARFCN	Peak Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
869.0	34.0	128	-18.7	-13.0	5.7	Complied

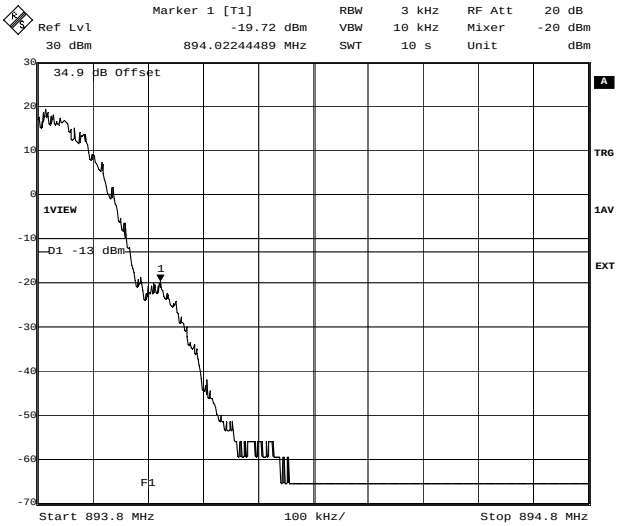
Upper Band Edge

Frequency (MHz)	Output Power (dBm)	ARFCN	Peak Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
894.0	34.0	251	-19.7	-13.0	6.7	Complied

Transmitter Conducted Emissions at Band Edges: Section 2.1051/22.917 (Continued)



Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch128. Band Edges. GMSK TRX1. +34.0dBm. FCC Part 22.917
Date: 25.JUL.2006 10:35:57



Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch251. Band Edges. GMSK TRX1. +34.0dBm. FCC Part 22.917
Date: 25.JUL.2006 10:43:13

Transmitter Conducted Emissions at Band Edges: Section 2.1051/22.917 (Continued)

Results: GMSK – TX2

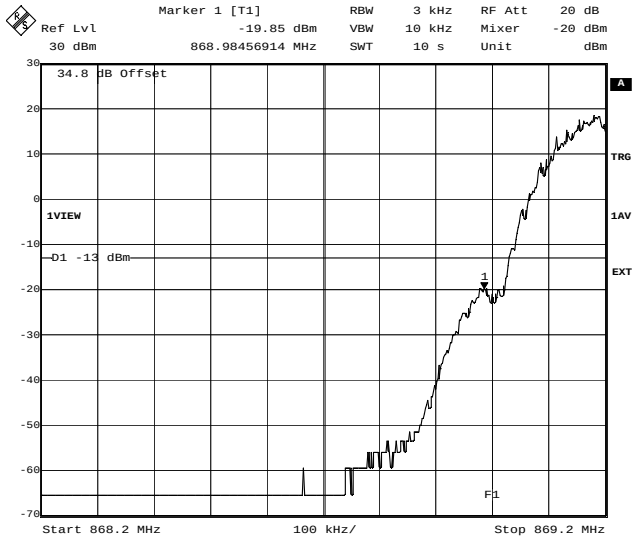
Lower Band Edge

Frequency (MHz)	Output Power (dBm)	ARFCN	Peak Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
869.0	34.0	128	-19.8	-13.0	6.8	Complied

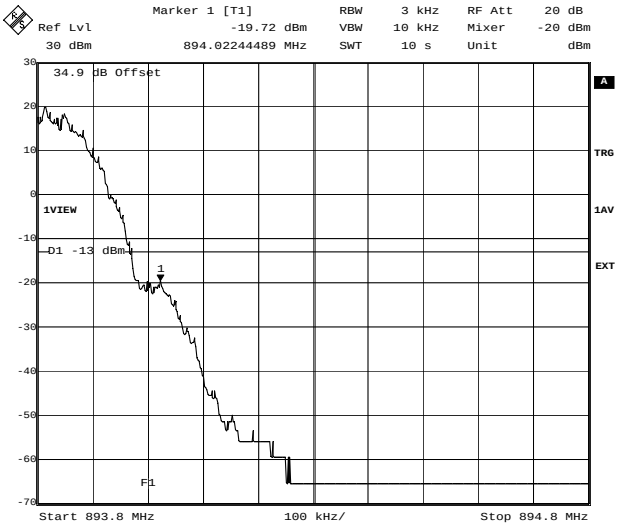
Upper Band Edge

Frequency (MHz)	Output Power (dBm)	ARFCN	Peak Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
894.0	34.0	251	-19.7	-13.0	6.7	Complied

Transmitter Conducted Emissions at Band Edges: Section 2.1051/22.917 (Continued)



Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch128. Band Edges. GMSK TRX2. +34.0dBm. FCC Part 22.917
Date: 25.JUL.2006 11:00:07



Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch251. Band Edges. GMSK TRX2. +34.0dBm. FCC Part 22.917
Date: 25.JUL.2006 11:08:09

Transmitter Conducted Emissions at Band Edges: Section 2.1051/22.917 (Continued)

Results: GMSK – TX3

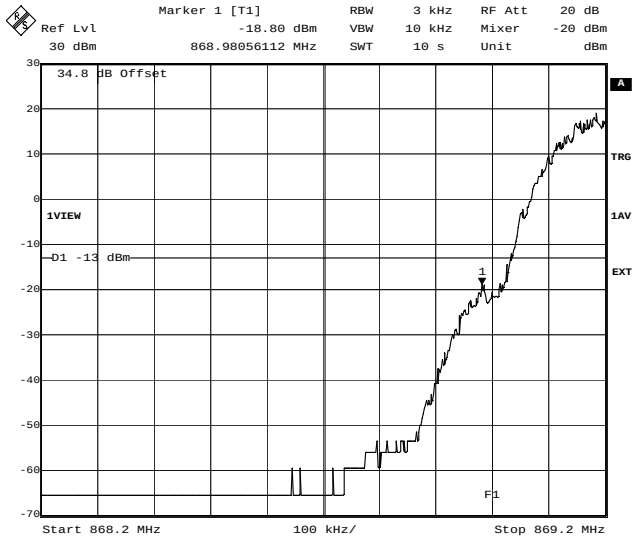
Lower Band Edge

Frequency (MHz)	Output Power (dBm)	ARFCN	Peak Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
869.0	34.0	128	-18.8	-13.0	5.8	Complied

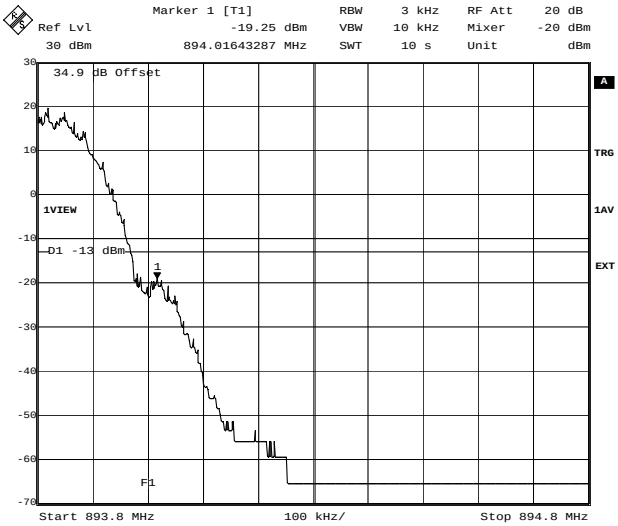
Upper Band Edge

Frequency (MHz)	Output Power (dBm)	ARFCN	Peak Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
894.0	34.0	251	-19.2	-13.0	6.2	Complied

Transmitter Conducted Emissions at Band Edges: Section 2.1051/22.917 (Continued)



Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch128. Band Edges. GMSK TRX3. +34.0dBm. FCC Part 22.917
Date: 25.JUL.2006 11:19:27



Title: Testing for Ericsson AB. RBS2308 850MHz. 71622JD21.
Comment A: Ch251. Band Edges. GMSK TRX3. +34.0dBm. FCC Part 22.917
Date: 25.JUL.2006 11:24:31

7.10. Transmitter Radiated Emissions: Section 2.1053/22.917

Electric Field Strength Measurements of Spurious Emissions and Intermodulation Products: 30 MHz to 10 GHz

7.10.1. The EUT was configured for radiated emissions testing as described in Section 9 of this report.

7.10.2. Tests were performed to identify the field strength of spurious emissions.

7.10.3. Tests were also performed to identify the field strength of any Intermodulation responses present.

Note: the limits on all the following graphs are those stated in FCC Part 15. Using the formula P = (V/m x d)^2/30 which gives a conversion factor of -97.4 dB below 1GHz and -95.2 dB above 1GHz, the field strength limits are equivalent to the following ERP limits:

Quasi-peak limits, 30 to 88 MHz, 40 dBµV/m = -55.2 dBm
Quasi-peak limits, 88 to 216 MHz, 43.5 dBµV/m = -51.7 dBm
Quasi-peak limits, 216 to 960 MHz, 46 dBµV/m = -49.2 dBm
Quasi-peak limits, 960 to 1000 MHz, 54 dBµV/m = -41.2 dBm
Average limit above 1000 MHz, 54 dBµV/m = -43.4 dBm
Average limit above 1000 MHz, 54 dBµV/m = -23.4 dBm

These limits are more stringent than the 13dBm EIRP.

Results:

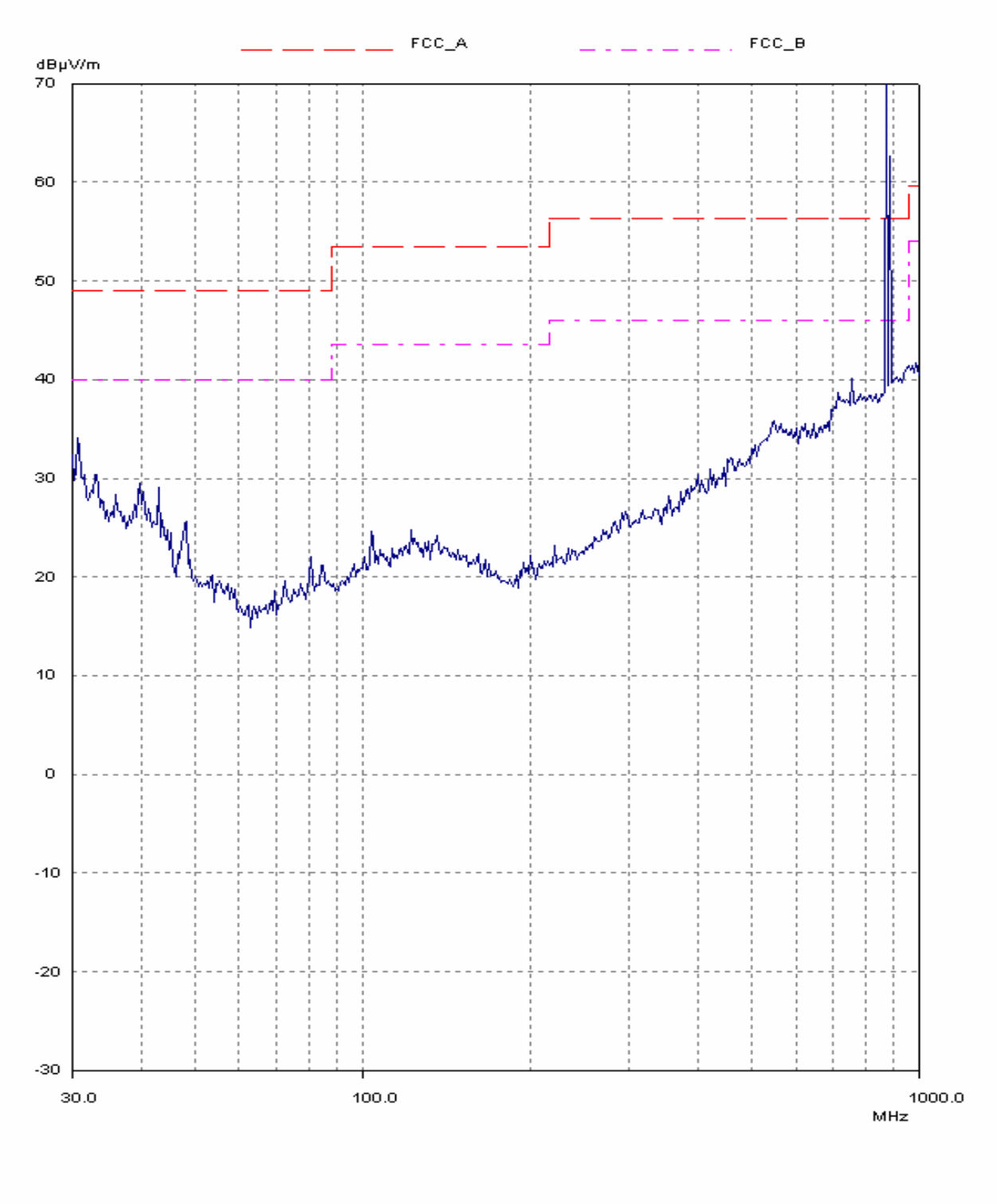
Excluding the fundamental emissions, all other indicated spurious and intermodulation responses were at least 10 dB below the relevant -13dBm limit; therefore no final measurements were performed.

Transmitter Radiated Emissions: Section 2.1053/22.917 (Continued)

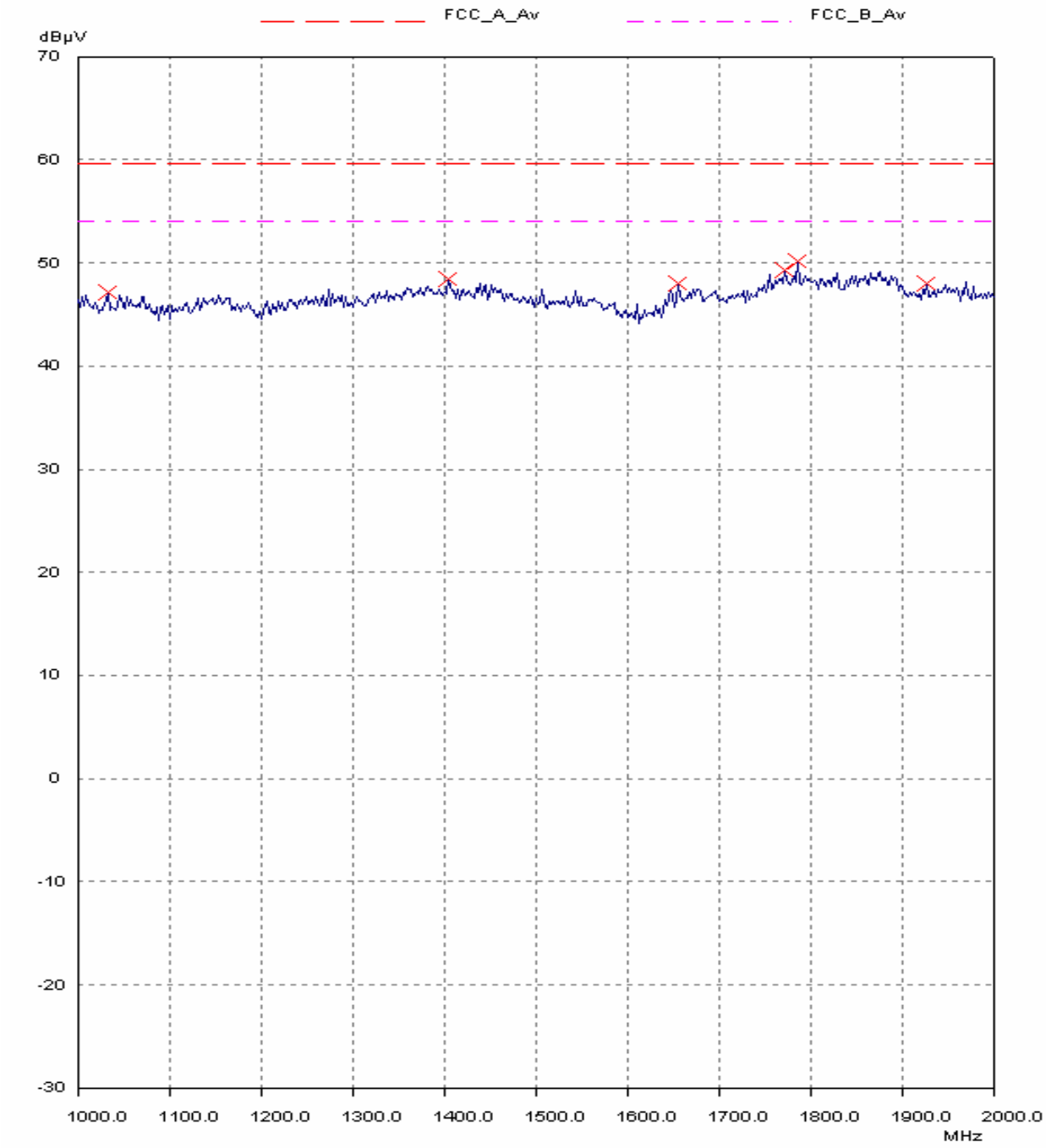
Graph Reference Number	Title
GPH\71622JD21\001	Radiated Emissions Pre-Scan (30.0 MHz to 1000.0 MHz) 115V AC Powered
GPH\71622JD21\002	Radiated Emissions Pre-Scan (1000.0 MHz to 2000.0 MHz) 115V AC Powered
GPH\71622JD21\003	Radiated Emissions Pre-Scan (2000.0 MHz to 4000.0 MHz) 115V AC Powered
GPH\71622JD21\004	Radiated Emissions Pre-Scan (4000.0 MHz to 6000.0 MHz) 115V AC Powered
GPH\71622JD21\005	Radiated Emissions Pre-Scan (6000.0 MHz to 8000.0 MHz) 115V AC Powered
GPH\71622JD21\006	Radiated Emissions Pre-Scan (8000.0 MHz to 12000.0 MHz) 115V AC Powered
GPH\71622JD21\007	Radiated Emissions Pre-Scan (12000.0 MHz to 18000.0 MHz) 115V AC Powered
GPH\71622JD21\008	Radiated Emissions Pre-Scan (18000.0 MHz to 20000.0 MHz) 115V AC Powered
GPH\71622JD21\009	Radiated Emissions Pre-Scan (30.0 MHz to 1000.0 MHz) -48V DC Powered
GPH\71622JD21\010	Radiated Emissions Pre-Scan (1000.0 MHz to 2000.0 MHz) -48V DC Powered
GPH\71622JD21\011	Radiated Emissions Pre-Scan (2000.0 MHz to 4000.0 MHz) -48VDC Powered
GPH\71622JD21\012	Radiated Emissions Pre-Scan (4000.0 MHz to 6000.0 MHz) 115V AC Powered
GPH\71622JD21\013	Radiated Emissions Pre-Scan (6000.0 MHz to 8000.0 MHz) 115V AC Powered
GPH\71622JD21\014	Radiated Emissions Pre-Scan (8000.0 MHz to 12000.0 MHz) 115V AC Powered
GPH\71622JD21\015	Radiated Emissions Pre-Scan (12000.0 MHz to 18000.0 MHz) 115V AC Powered
GPH\71622JD21\016	Radiated Emissions Pre-Scan (18000.0 MHz to 20000.0 MHz) 115V AC Powered

Test Of: Ericsson AB
RBS 2308 850 MHz
To: FCC Part 22: 2005

GPH\71622JD21\001
Radiated Emissions Pre-Scan
(30.0 MHz to 1000.0 MHz) 115V AC Powered

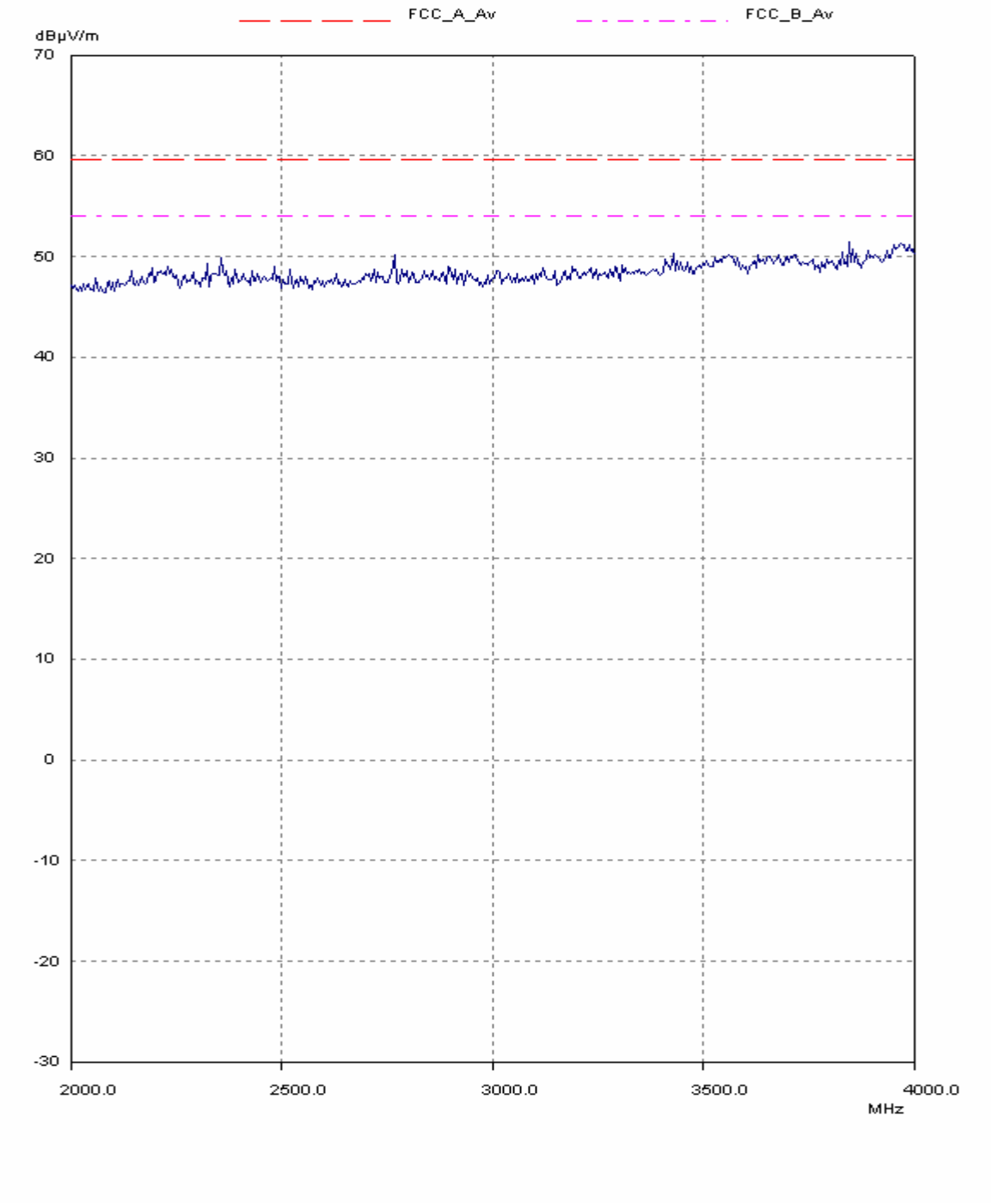


GPH\71622JD21\002
Radiated Emissions Pre-Scan
(1000.0 MHz to 2000.0 MHz) 115V AC Powered



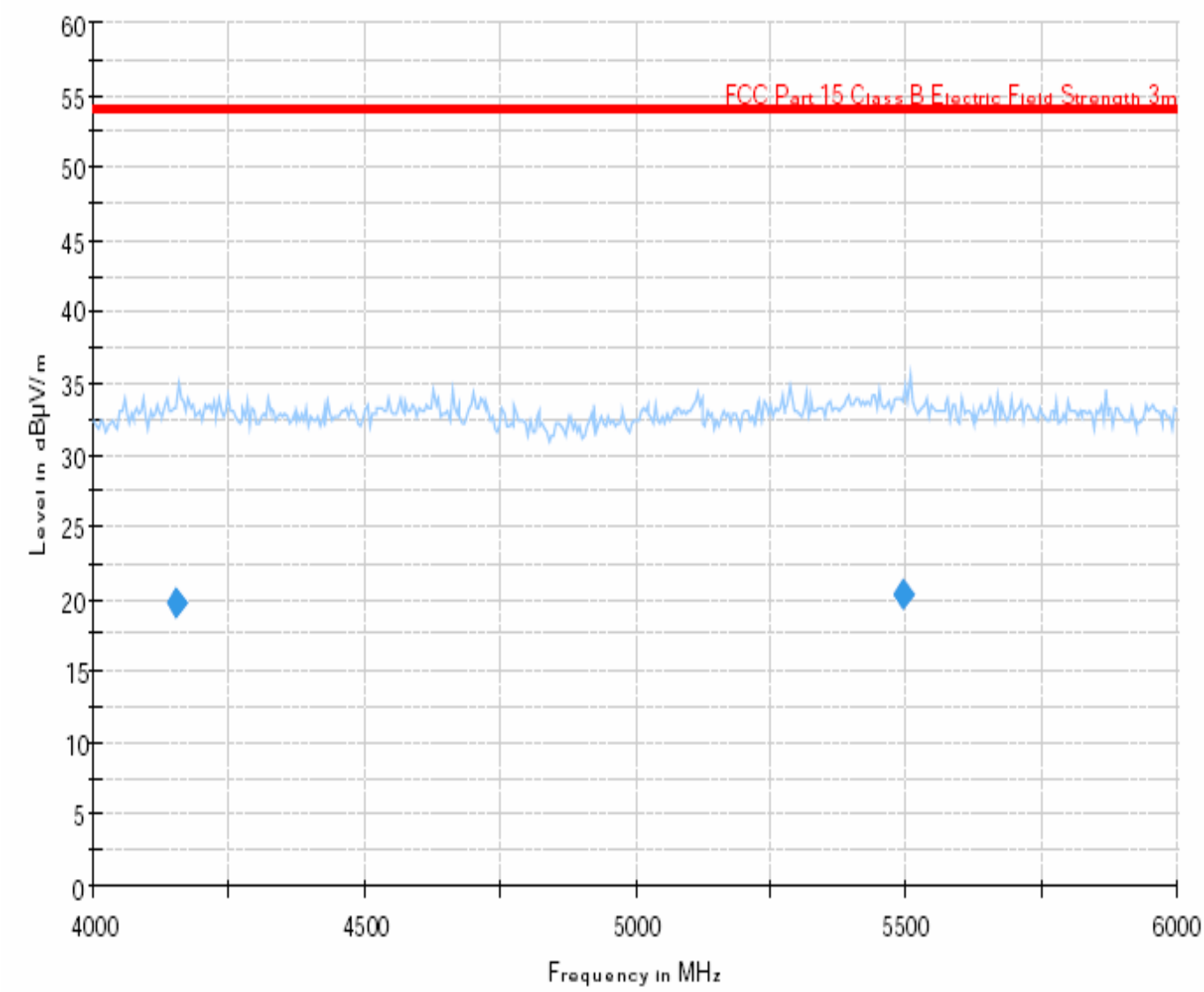
Test Of: Ericsson AB
RBS 2308 850 MHz
To: FCC Part 22: 2005

GPH\71622JD21\003
Radiated Emissions Pre-Scan
(2000.0 MHz to 4000.0 MHz) 115V AC Powered



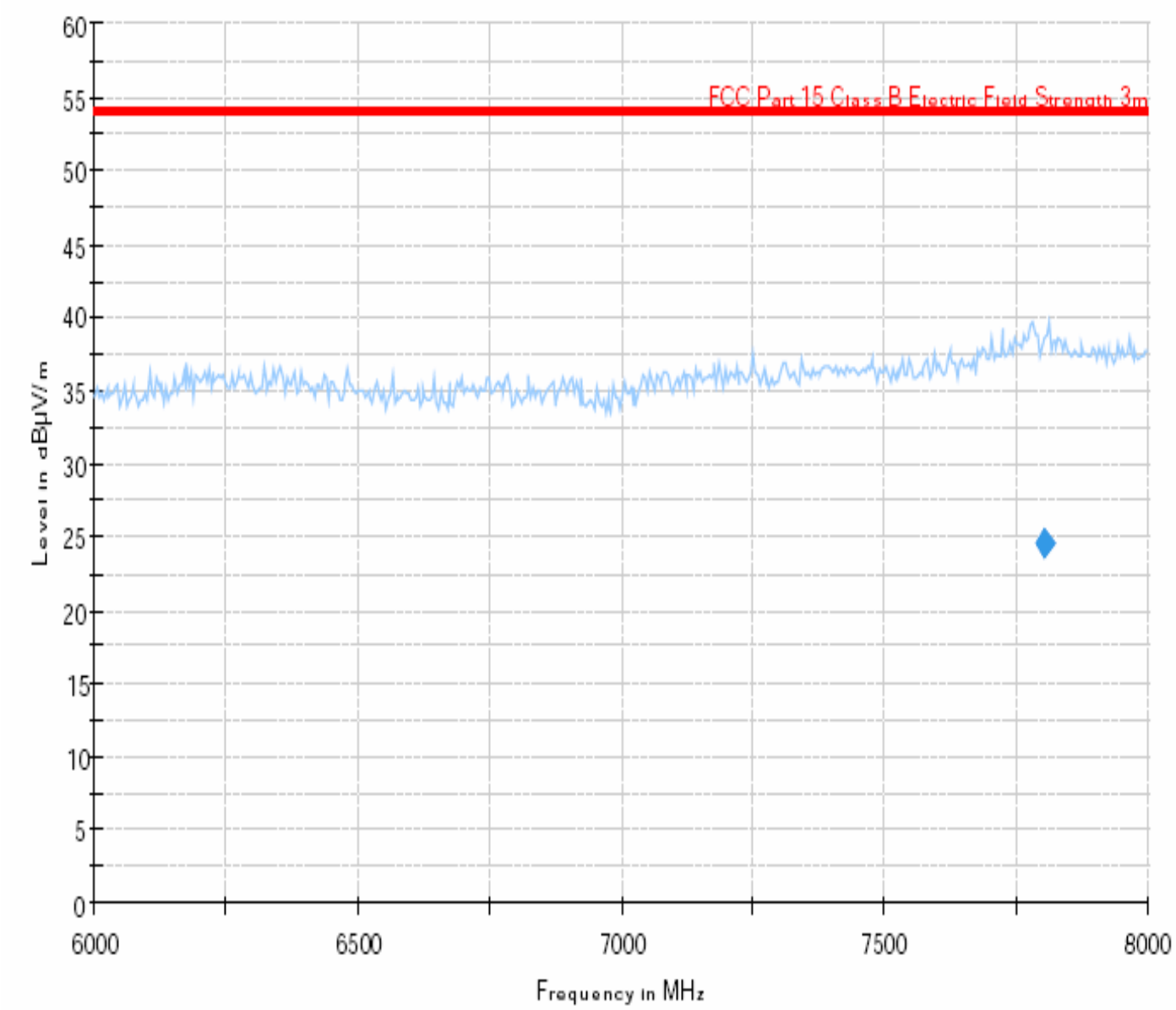
Test Of: Ericsson AB
RBS 2308 850 MHz
To: FCC Part 22: 2005

GPH\71622JD21\004
Radiated Emissions Pre-Scan
(4000.0 MHz to 6000.0 MHz) 115V AC Powered



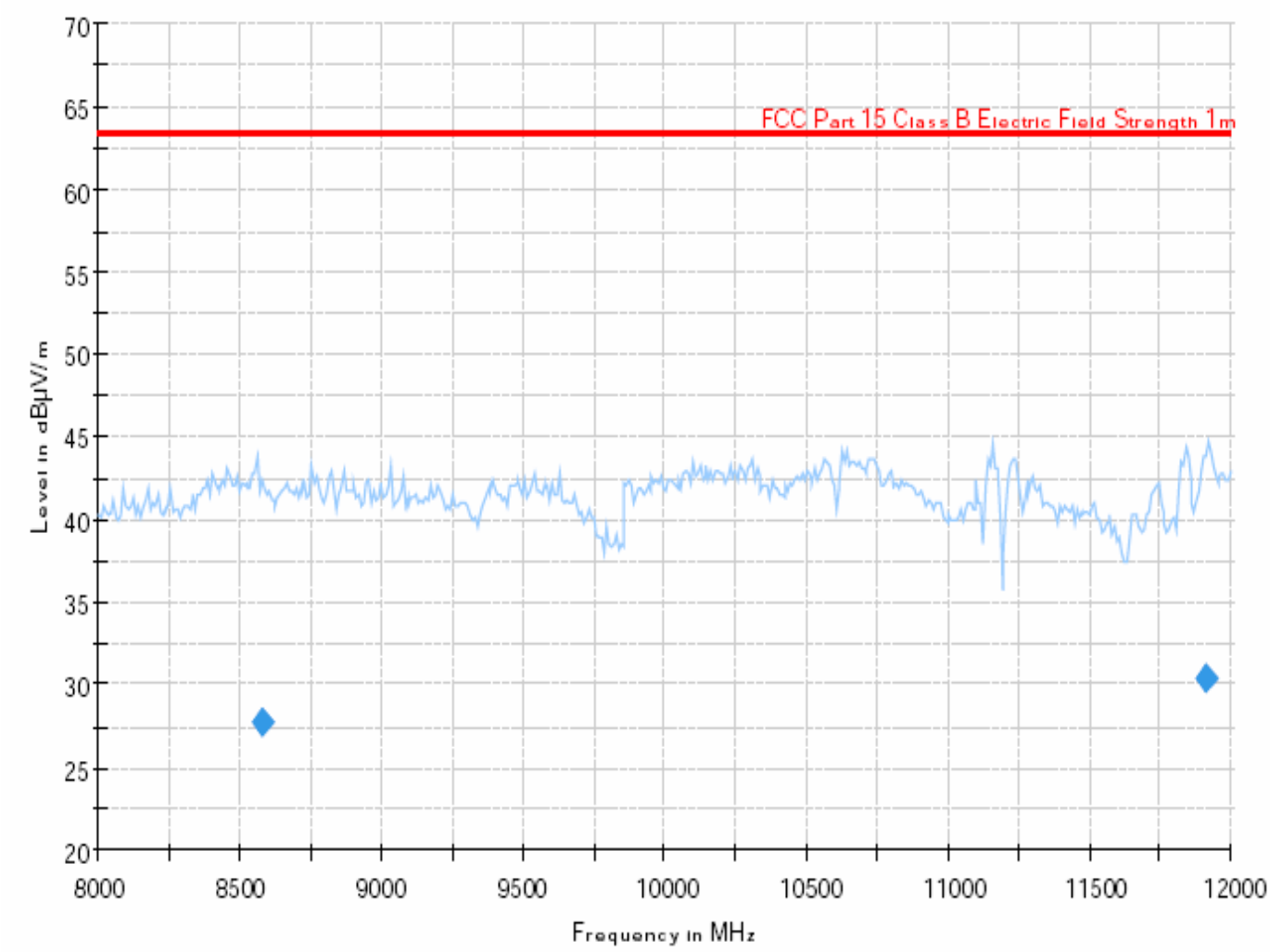
Test Of: Ericsson AB
RBS 2308 850 MHz
To: FCC Part 22: 2005

GPH\71622JD21\005
Radiated Emissions Pre-Scan
(6000.0 MHz to 8000.0 MHz) 115V AC Powered

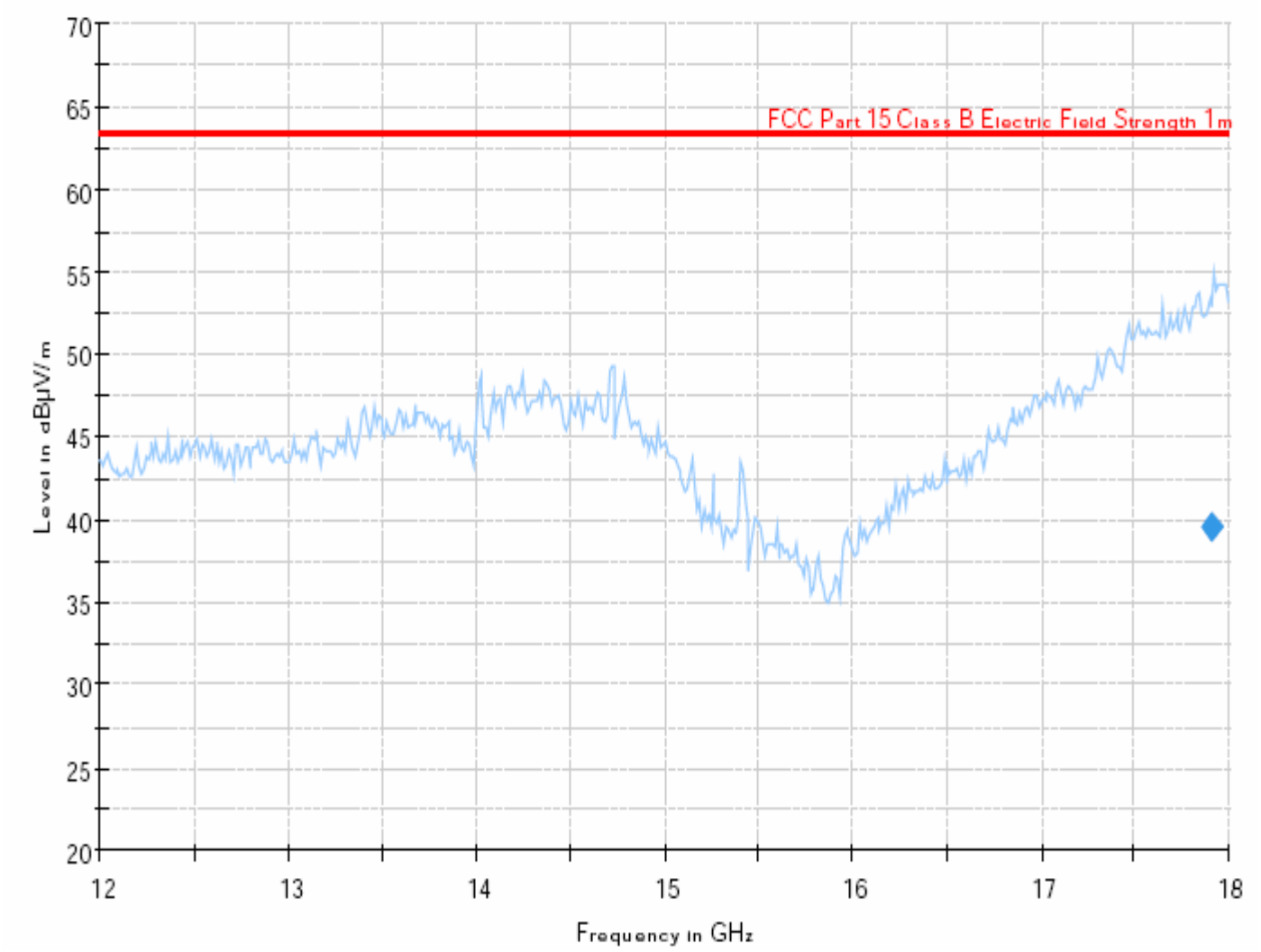


Test Of: **Ericsson AB**
RBS 2308 850 MHz
To: **FCC Part 22: 2005**

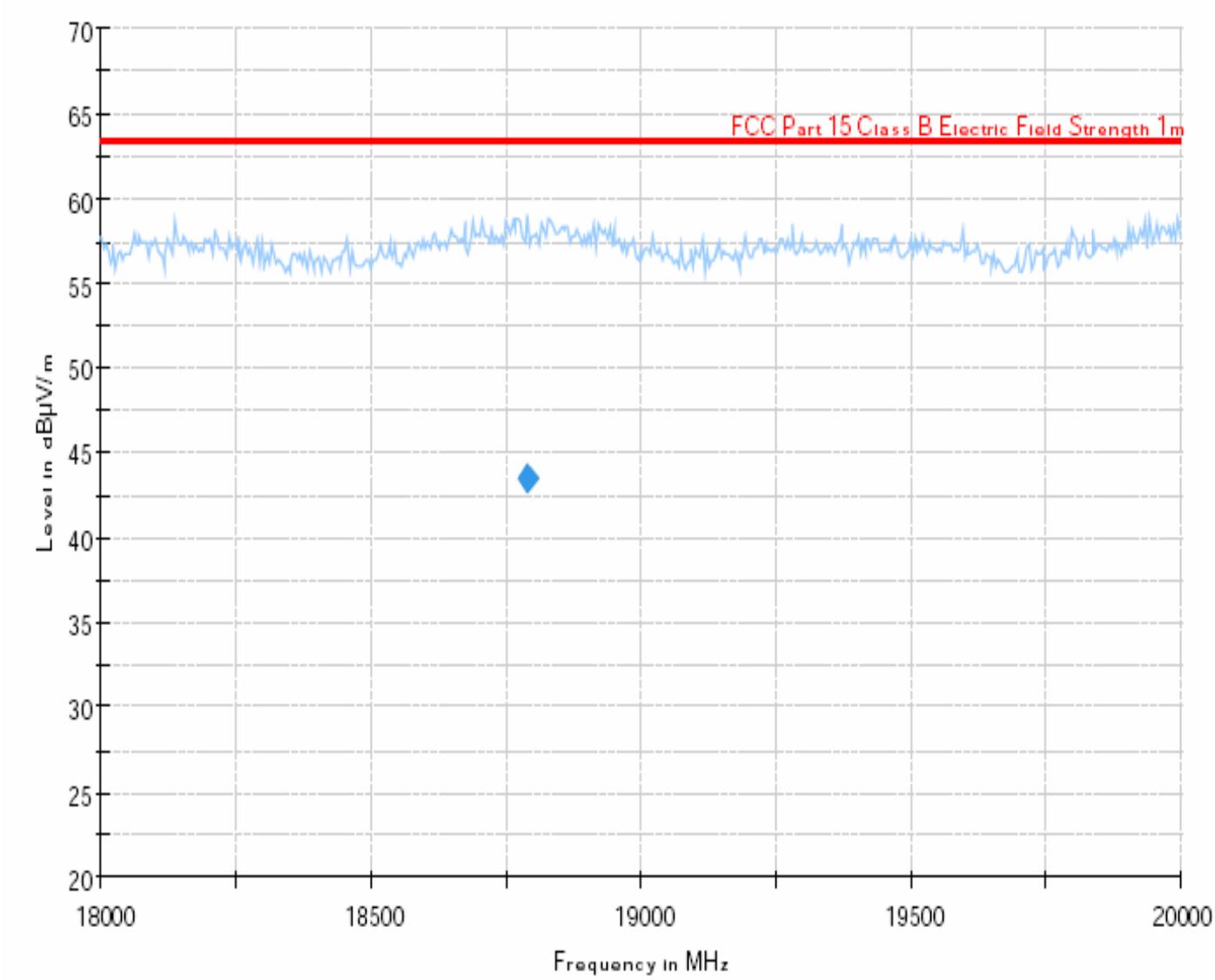
GPH\71622JD21\006
Radiated Emissions Pre-Scan
(8000.0 MHz to 12000.0 MHz) 115V AC Powered



GPH\71622JD21\007
Radiated Emissions Pre-Scan
(12000.0 MHz to 18000.0 MHz) 115V AC Powered

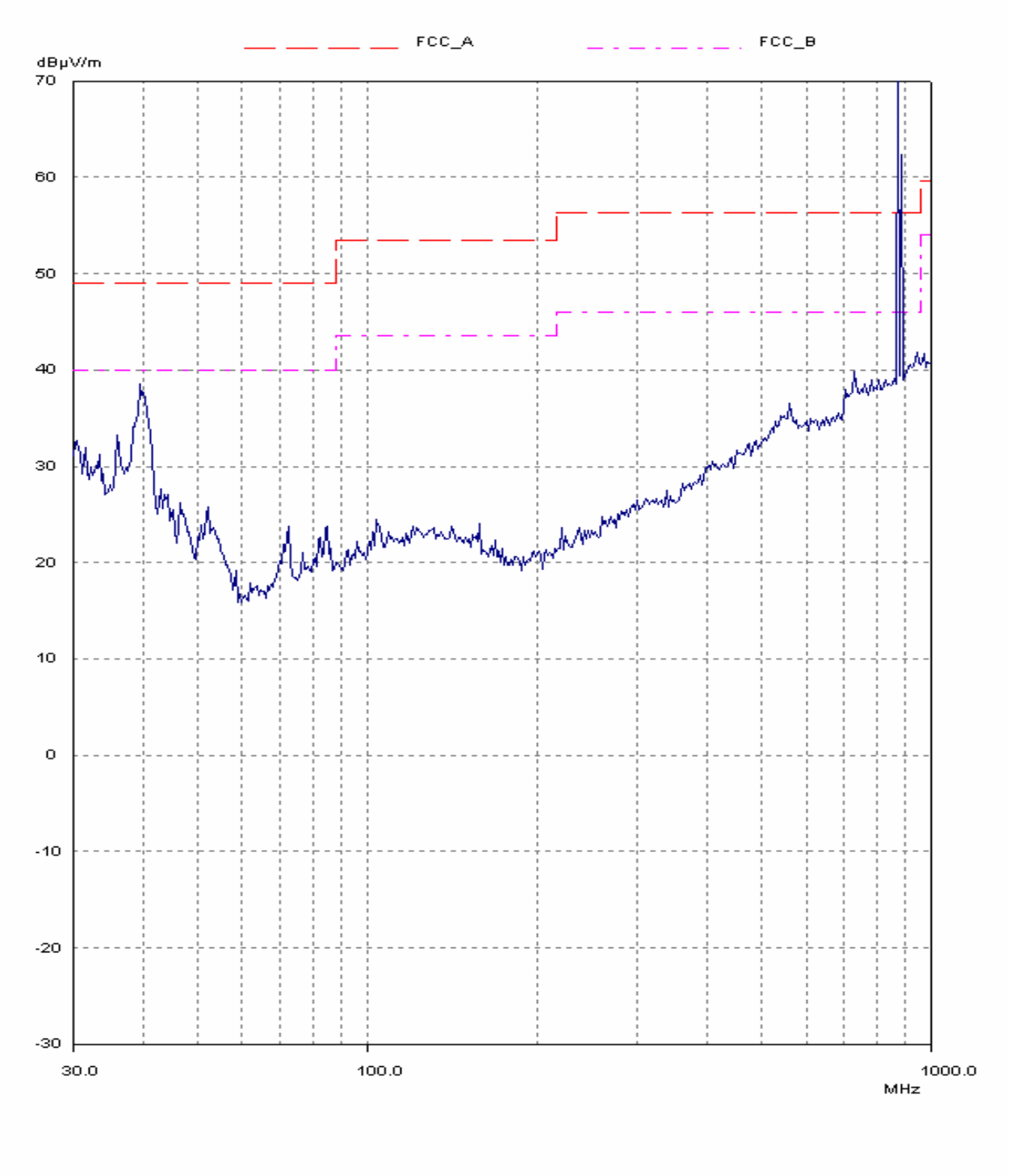


GPH\71622JD21\008
Radiated Emissions Pre-Scan
(18000.0 MHz to 20000.0 MHz) 115V AC Powered



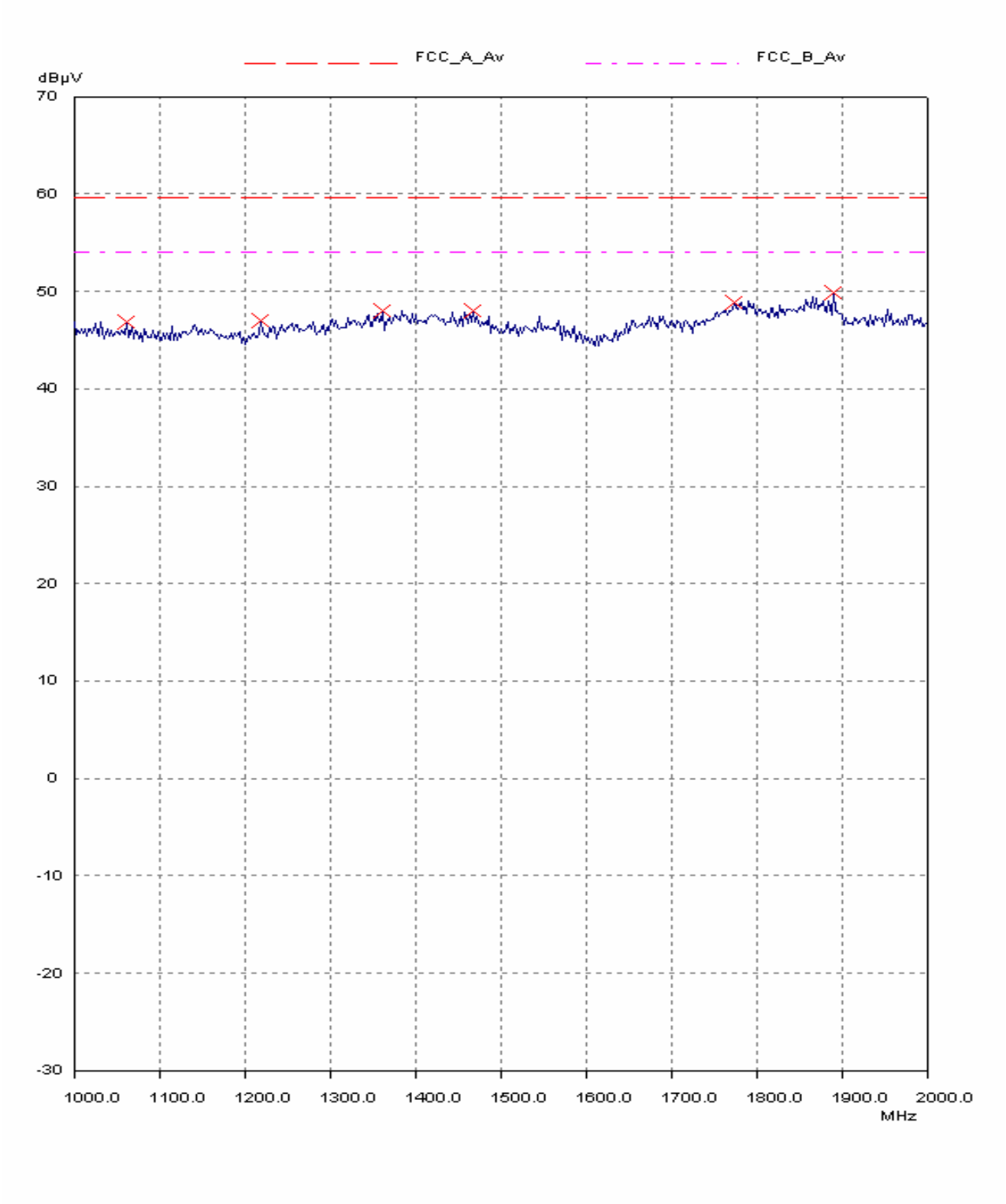
Test Of: Ericsson AB
RBS 2308 850 MHz
To: FCC Part 22: 2005

GPH\71622JD21\009
Radiated Emissions Pre-Scan
(30.0 MHz to 1000.0 MHz) -48V DC Powered



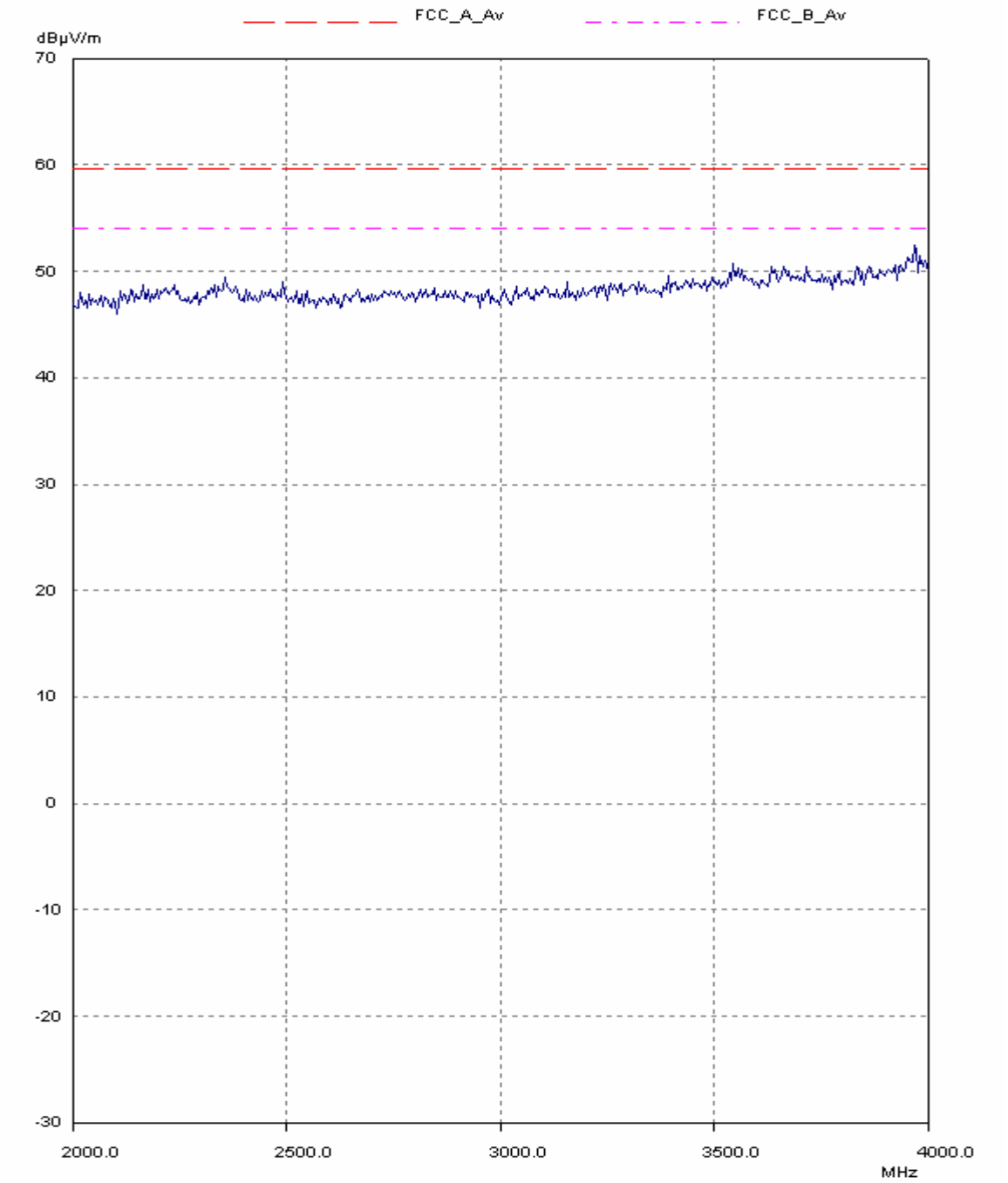
Test Of: **Ericsson AB**
RBS 2308 850 MHz
To: **FCC Part 22: 2005**

GPH\71622JD21\010
Radiated Emissions Pre-Scan
(1000.0 MHz to 2000.0 MHz) -48V DC Powered



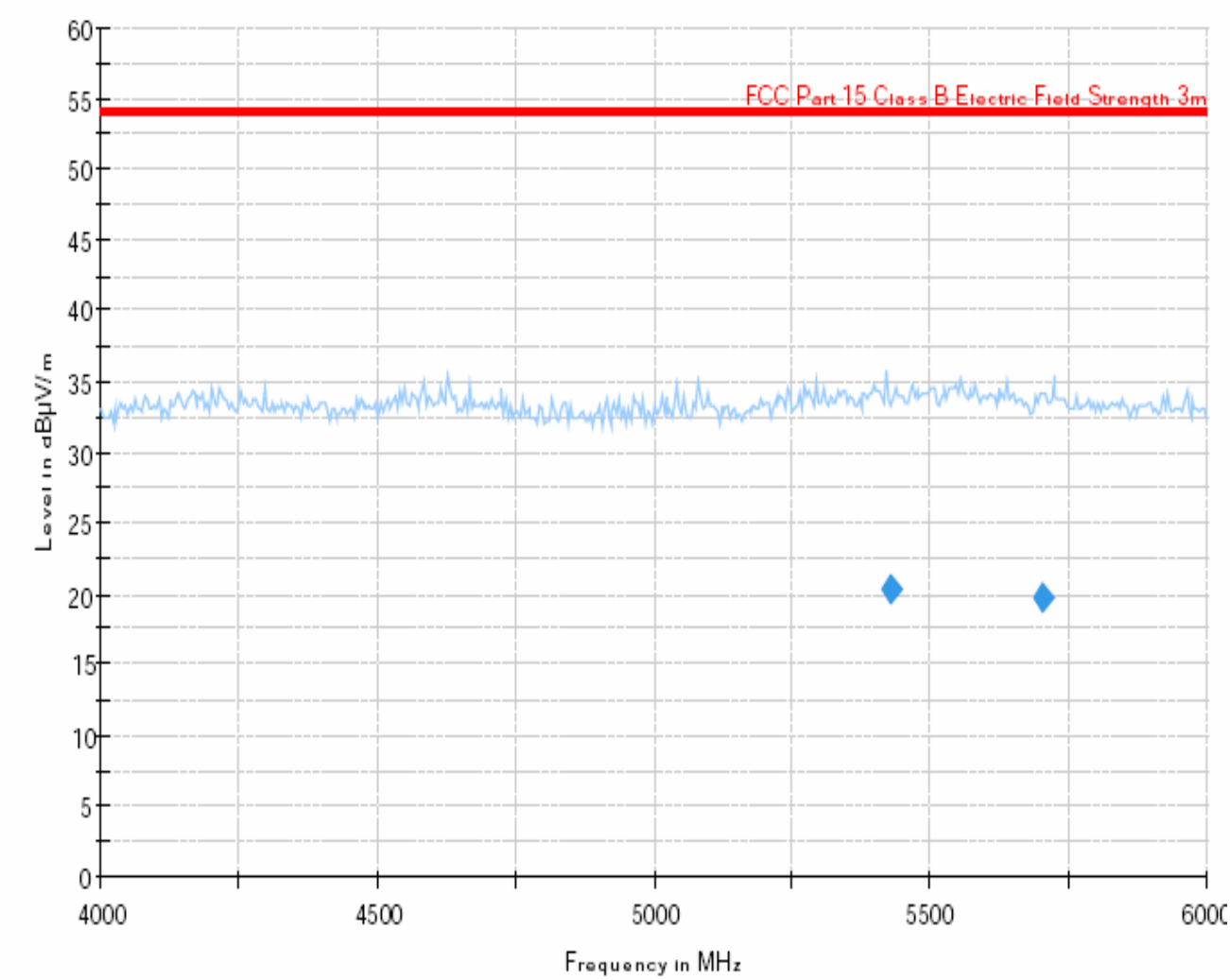
Test Of: **Ericsson AB**
RBS 2308 850 MHz
To: **FCC Part 22: 2005**

GPH\71622JD21\011
Radiated Emissions Pre-Scan
(2000.0 MHz to 4000.0 MHz) -48V DC Powered



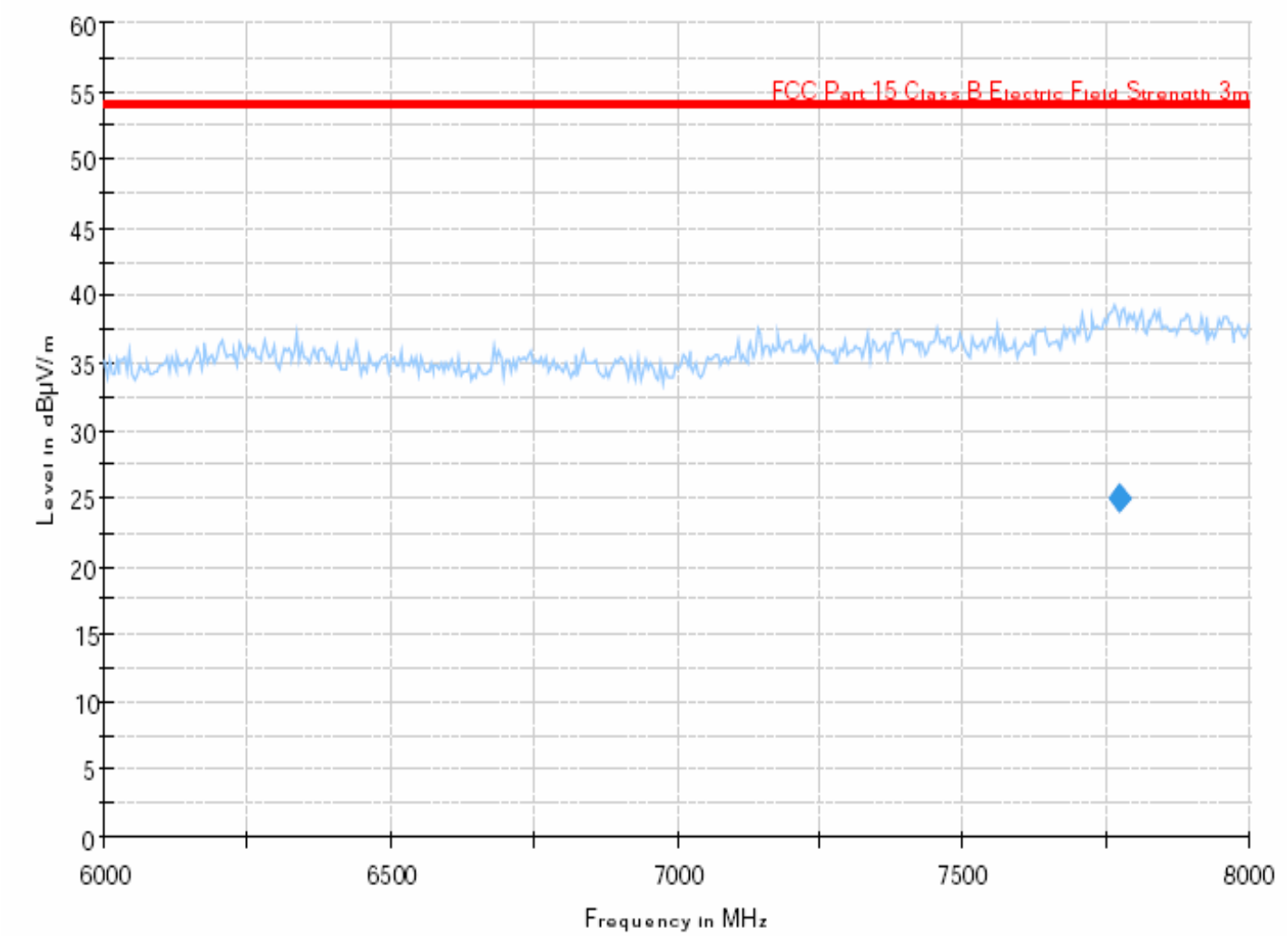
Test Of: Ericsson AB
RBS 2308 850 MHz
To: FCC Part 22: 2005

GPH\71622JD21\012
Radiated Emissions Pre-Scan
(4000.0 MHz to 6000.0 MHz) -48V DC Powered

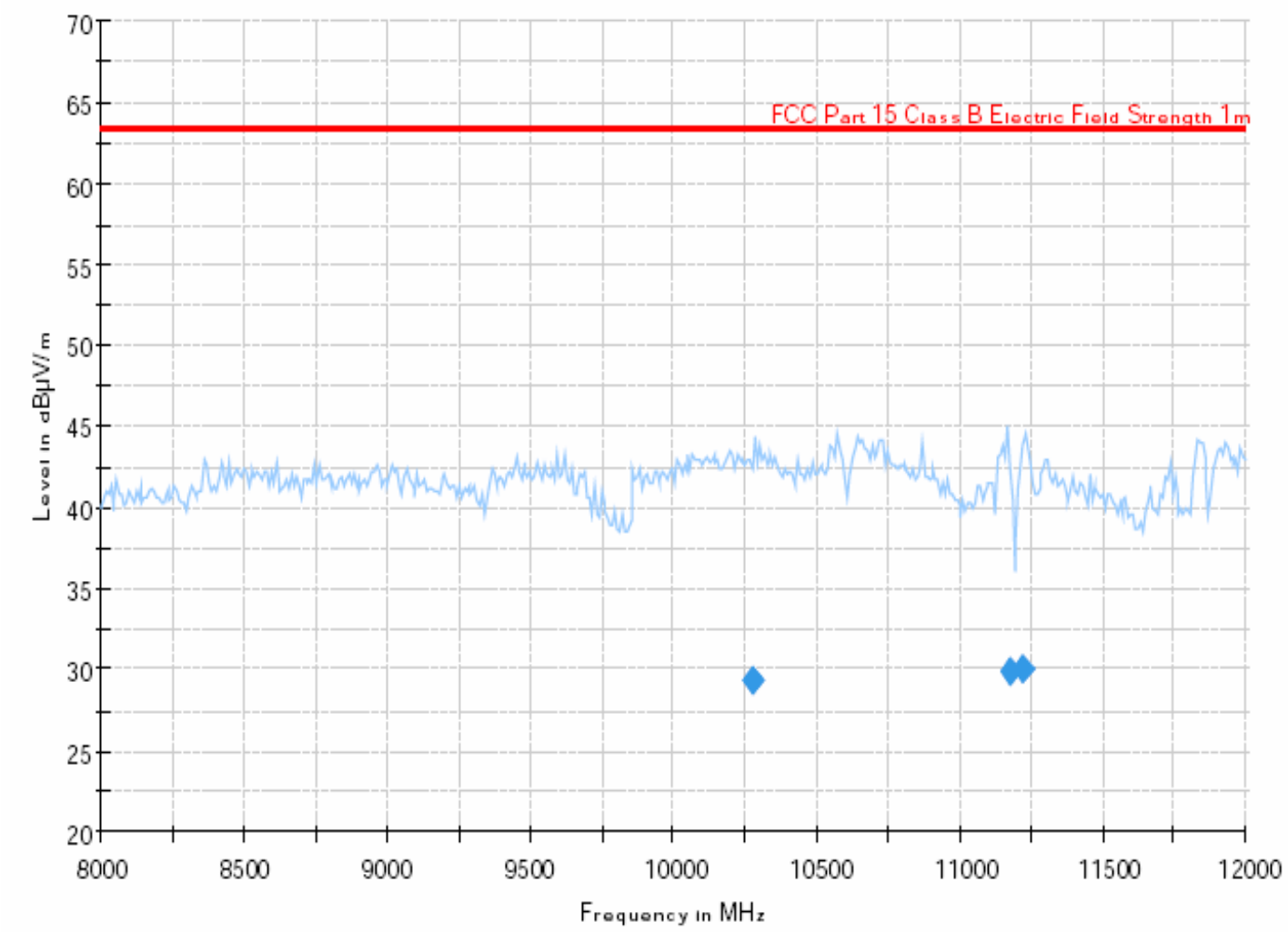


Test Of: Ericsson AB
RBS 2308 850 MHz
To: FCC Part 22: 2005

GPH\71622JD21\013
Radiated Emissions Pre-Scan
(6000.0 MHz to 8000.0 MHz) -48V DC Powered

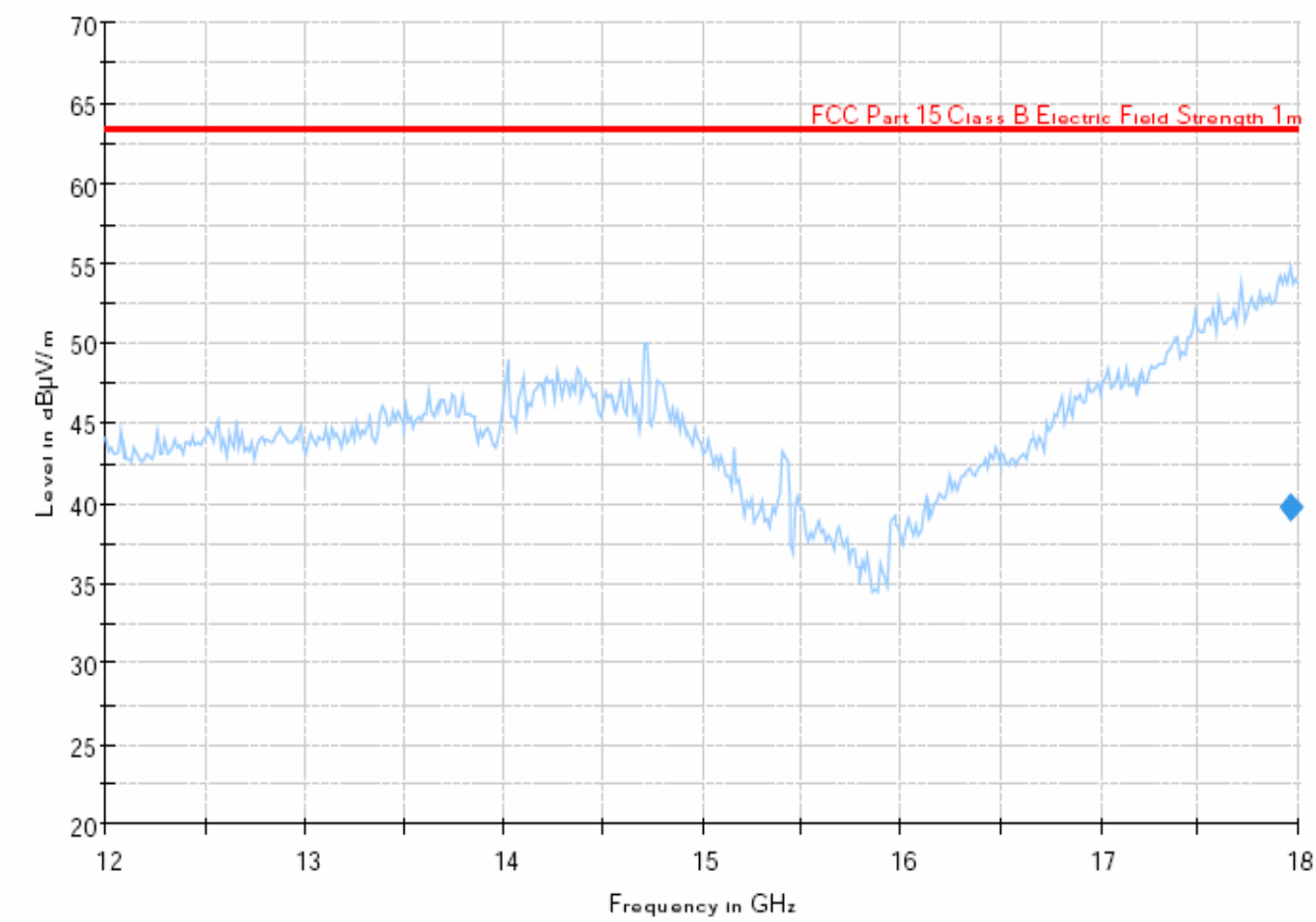


GPH\71622JD21\014
Radiated Emissions Pre-Scan
(8000.0 MHz to 12000.0 MHz) -48V DC Powered

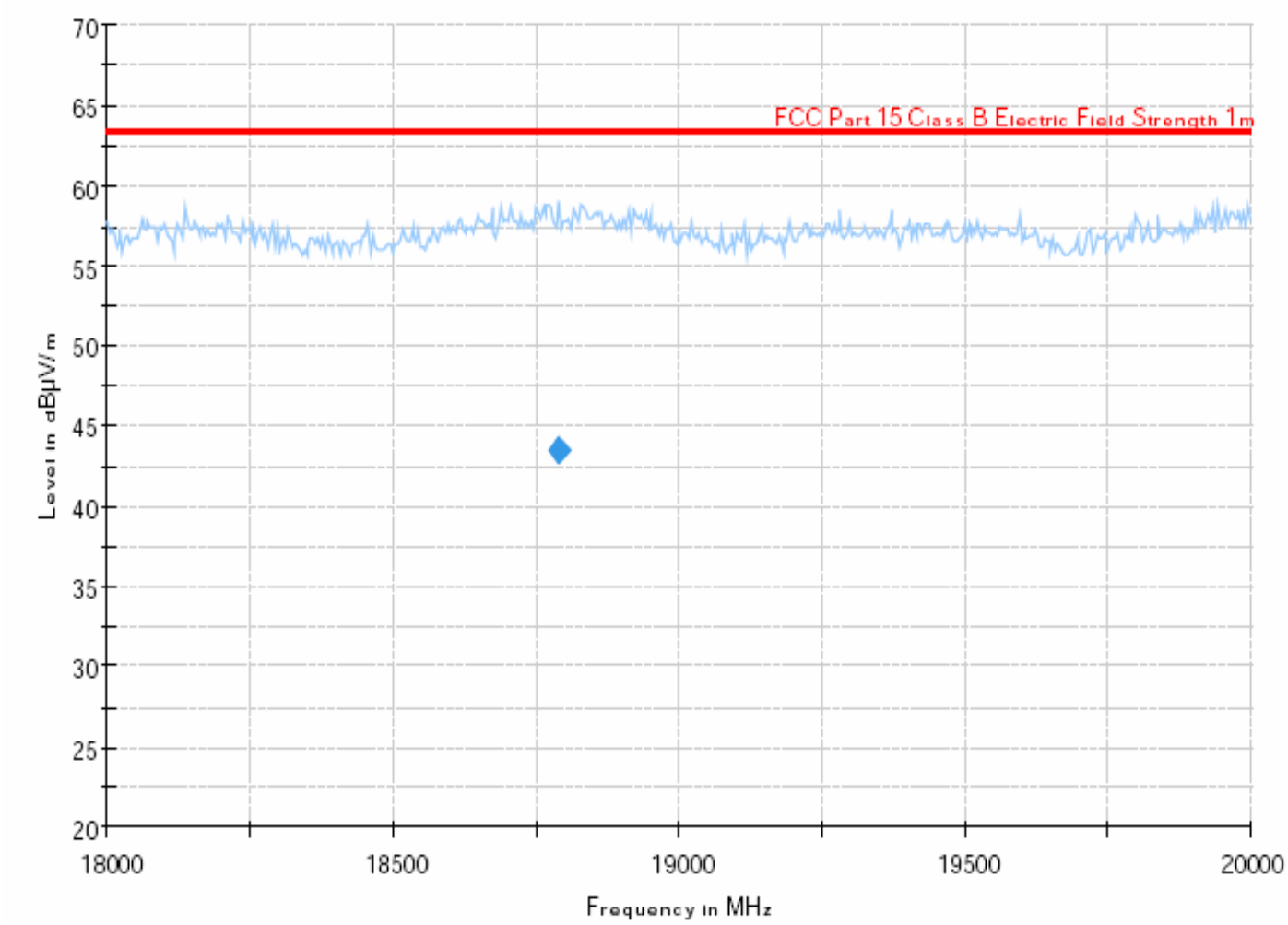


Test Of: Ericsson AB
RBS 2308 850 MHz
To: FCC Part 22: 2005

GPH\71622JD21\015
Radiated Emissions Pre-Scan
(12000.0 MHz to 18000.0 MHz) -48V DC Powered



GPH\71622JD21\016
Radiated Emissions Pre-Scan
(18000.0 MHz to 20000.0 MHz) -48V DC Powered



8. Measurement Uncertainty

8.1. No measurement or test can ever be perfect and the imperfections give rise to error of measurement in the results. Consequently, the result of a measurement is only an approximation to the value of the measurand (the specific quantity subject to measurement) and is only complete when accompanied by a statement of the uncertainty of the approximation.

8.2. The expression of uncertainty of a measurement result allows realistic comparison of results with reference values and limits given in specifications and standards.

8.3. The uncertainty of the result may need to be taken into account when interpreting the measurement results.

8.4. The reported expanded uncertainties below are based on a standard uncertainty multiplied by an appropriate coverage factor, such that a confidence level of approximately 95% is maintained. For the purposes of this document “approximately” is interpreted as meaning “effectively” or “for most practical purposes”.

Measurement Type	**Range**	**Confidence Level**	**Calculated Uncertainty**
Carrier Output Power	869 MHz to 894 MHz	95%	+/- 0.7 dB
Frequency Stability	869 MHz to 894 MHz	95%	+/- 5.0 Hz
Occupied Bandwidth	869 MHz to 894 MHz	95%	+/- 5.0 Hz
Modulation Characteristics	869 MHz to 894 MHz	95%	Phase error +/- 2.1° EVM (rms) <0.5% Origin Offset +/- 0.54 dB
Conducted Out of Band Emissions	9 kHz to 10 GHz	95%	+/- 3.5 dB
Conducted Emissions Inband Intermodulation	869 MHz to 894 MHz	95%	+/- 0.6 dB
Radiated Spurious Emissions	30 MHz to 1000 MHz	95%	+/- 5.26 dB
Radiated Spurious Emissions	1 GHz to 20 GHz	95%	+/- 4.18 dB
Emissions at Band Edges	869 MHz to 894 MHz	95%	+/- 0.6 dB

8.5. The methods used to calculate the above uncertainties are in line with those recommended within the various measurement specifications. Where measurement specifications do not include guidelines for the evaluation of measurement uncertainty, the published guidance of the appropriate accreditation body is followed.

9. Measurement Methods

9.1. Conducted Carrier Output Power

Tests were performed to identify the maximum transmit power in accordance with FCC Part 2.1046 (a) for conducted power, with reference to TIA/EIA-603-C.

Measurements were made at the ARP output connectors and testing was performed on bottom, middle and top channels using both 8PSK and GMSK modulation on TX0, TX1, TX2 and TX3.

The BTS output was connected to the antenna port of the EUT via cables and attenuators. The total loss of the path was measured and entered as a reference level offset into the spectrum analyser to correct for the losses.

The test equipment settings for conducted carrier output power measurements were as follows:

Receiver Function	Setting
Detector Type:	Peak
Mode:	Max Hold
Bandwidth:	1 MHz
Step Size:	Continuous sweep
Sweep Time:	Coupled

9.2. Frequency Stability

The EUT and spectrum analyser were configured for conducted antenna port measurements.

Measurements were performed to determine the frequency stability of the fundamental emission from the EUT, when subjected to variation of ambient temperature and variation of supply voltage.

The output was connected to a spectrum analyser, which was used in GSM BTS analyser mode, via cables and with 30 dB of attenuation in the path.

Testing was done at the ARP output connectors and performed for TX0 and TX2 on the Bottom and Top channels.

The ambient temperature was varied from -30°C to +50°C in 10°C steps.

The AC supply voltage was varied at nominal temperature and the frequency stability was measured from 85% to 115% of the nominal voltage value and at nominal voltage.

All transceivers were active and evenly spaced out in the frequency band to simulate worst case. The measured transceiver was set up to transmit on 1 timeslot and testing was performed over 50 bursts.

The ppm frequency error is calculated using the following formula taken from the TIA/EIA-603-C document.

$$\text{ppm error} = ((MCF_{MHz} / ACF_{MHz}) - 1) * 1000000$$

where,

MCF_{MHz} is the measured carrier frequency in MHz
ACF_{MHz} is the assigned carrier frequency in MHz

9.2.1. The client has stated that the authorised frequency band is:

Lower Band Edge	869.0 MHz
Upper Band Edge	894.0 MHz

9.3. Occupied Bandwidth

The EUT was connected to a spectrum analyser enabled with an Occupied Bandwidth function.

Measurements were performed to determine the Occupied Bandwidth in accordance with FCC Part 2.1049. The Occupied Bandwidth was measured on the bottom, middle and top channels on TX0 to TX3.

The Occupied Bandwidth was measured using the built in occupied bandwidth function of the Rohde and Schwarz FSIQ spectrum analyser. It was set to measure the bandwidth where 99% of the signal power was contained. The analyser settings were set as per those outlined in the FSIQ user manual for this measurement, i.e., RBW <= 1/20 of occupied bandwidth. A value of 3 kHz was used.

9.4. Transmitter Conducted Emissions

Spurious emission measurements at the Antenna port were performed from 9 kHz to 10 times the highest EUT fundamental frequency as used in Section 7.7 of this report.

A spectrum analyser was connected to the antenna port of the EUT via cables, attenuators and filters. The total loss of the path was measured and entered as a reference level offset into the spectrum analyser to correct for the losses.

The limit in the standard states that emissions shall be attenuated by at least 43+10 Log(P) dB below the transmitter power (P), where (P) is the maximum measured fundamental power for the channel under test. This limit always reduces to –13 dBm as such, the limit line presented on the accompanying plots is set to –13 dBm.

The frequency band described above was investigated with the transmitter operating at full power on B and T channels for both GMSK and 8PSK. Any spurious emissions observed were recorded and compared to the –13 dBm limit. The requirement for the emission is to be less than –13 dBm.

The test equipment settings for conducted antenna port measurements were as follows:

Receiver Function	Settings
Detector Type:	Peak
Mode:	Max Hold
Bandwidth:	1 MHz >1GHz
Bandwidth:	10 kHz <1GHz
Step Size:	Continuous sweep
Sweep Time:	Coupled

9.5. Conducted Emissions Inband Intermodulation

Conducted Emissions Inband Intermodulation measurements were performed at the Antenna port.

A spectrum analyser was connected to the antenna port of the EUT via cables and attenuators. The total loss of the path was measured and entered as a reference level offset into the spectrum analyser to correct for the losses.

The base station was set up to transmit on two transmitters. First at bottom ARFCN and bottom ARFCN +25 and then on top ARFCN and top ARFCN -25, 5 MHz apart as this was stated by the client as being worst case for intermodulation purposes.

The limit in the standard states that emissions shall be attenuated by at least 43+10 Log(P) dB below the transmitter power (P), where (P) is the maximum measured fundamental power for the channel under test. This limit always reduces to –13 dBm as such, the limit line presented on the accompanying plots is set to –13 dBm.

Any spurious emissions observed were recorded and compared to the –13 dBm limit. The requirement for the emission is to be less than –13 dBm.

The test equipment settings for conducted antenna port measurements were as follows:

Receiver Function:	**Settings**
Detector Type:	Peak
Mode:	Max Hold
Bandwidth:	10 kHz
Step Size:	Continuous sweep
Sweep Time:	1.75 s

9.6. Transmitter Conducted Emissions at Band Edges

Testing was performed as per transmitter conducted emissions.

The limit in the standard states that emissions shall be attenuated by at least 43+10 Log(P) dB below the transmitter power (P), where (P) is the maximum measured fundamental power for the channel under test. This limit always reduces to -13 dBm as such, the limit line presented on the accompanying plots is set to -13 dBm.

The transmitter power (P) measured at the antenna terminals and used to calculate the out of band emission limit as stated above was measured as 33.4 dBm, using an average detector.

Receiver Function:	**Settings**
Detector Type:	Average
Mode:	Max Hold
Resolution Bandwidth:	3kHz
Sweep Time:	10 s

9.7.Transmitter Radiated Emissions

Radiated emissions measurements were performed in accordance with the standard, against appropriate limits for each detector function.

Initial pre-scans covering the entire measurement band from the lowest generated frequency declared up to 10 times the highest fundamental frequency were performed within a screened chamber in order to identify frequencies on which the EUT was generating interference. This determined the frequencies from the EUT which required further examination.

The radiated scans were performed at 3 m test distance with 1.5 m antenna height in a anechoic lined screened room in the frequency range of 30.0 MHz to 1.0 GHz. Between 1.0 GHz and 20.0 GHz a 1 m test distance was used. A limit line was set to the specifications limit. Excluding the fundamental emissions, all other indicated spurious and intermodulation responses were at least 10 dB below the relevant -13dBm limit; therefore no final measurements were performed.

The limit stated in the standard states that emissions shall be attenuated by at least 43+10 Log (P) dB below the transmitter power (P), where (P) is the maximum measured fundamental power for the channel under test. The limit line was determined by radiating –13 dBm from a dipole located in place of the EUT and measuring the equivalent field strength at the 3 meters. At the shorter test distance of 1 meter all results or limits were corrected using 20log(D1/D2) where D1 and D2 are the respective test distances. See note 1 below.

Measurements were performed at 3 m test distance with 1.5 m antenna height in a screened room in the frequency range of 30 MHz to 20 GHz.

Note 1.

The limits on all the graphs are those stated in FCC Part 15. Using the formula P = (V/m x d)^2/30 which gives a conversion factor of -97.4 dB below 1GHz and -95.2 dB above 1GHz, the field strength limits are equivalent to the following ERP limits:

Quasi-peak limits, 30 to 88 MHz, 40 dBµV/m = -55.2 dBm
Quasi-peak limits, 88 to 216 MHz, 43.5 dBµV/m = -51.7 dBm
Quasi-peak limits, 216 to 960 MHz, 46 dBµV/m = -49.2 dBm
Quasi-peak limits, 960 to 1000 MHz, 54 dBµV/m = -41.2 dBm
Average limit above 1000 MHz, 54 dBµV/m = -43.4 dBm
Average limit above 1000 MHz, 54 dBµV/m = -23.4 dBm

These limits are more stringent than the -13dBm EIRP.

Appendix 1. Test Equipment Used

Test Equipment Used for Testing at Ericsson AB

ID Number	Description	Manufacturer	Model Number	Serial Number
10008562	Rubidium Atomic Clock	Pendulum	GPS-89	171
202052	Calibration Module	Hewlett Packard	N4691-60004	01368
207268	Temperature and Humidity Indicator	Ahlbom	MT8636-HR6	H04070403
207544	Spectrum Analyzer	Rohde & Schwarz	FSIQ 26	100051
80024551	PC	Compaq	EVO	CZC321095H
A04547	Notch Filter 800-900MHz	Ericsson	LPY 108 16/1	1
A19070	Vötsch	VCS 7250/S	Temperature chamber	58566031900020
A19314	Network Analyser Cables	Hewlett Packard	NTC195	50R49
A19315	Network Analyser Cables	Hewlett Packard	NTC195	50R50
RBS1	RBS Master 2	Ericsson	LPY 107 1007/1	263
EK8503	VXI Switch	Hewlett-Packard	HP 75000	3227A03962
GS4338	AC Voltage Supply	Hewlett Packard	6812A	3523A00639
Y02434	Signal Generator	Rohde & Schwarz	SME 03	843098/034
A001	Attenuator, 10dB, 100W	Weinschel Corp.	48-10-34	BC2558
A002	Attenuator, 10dB, 100W	Weinschel Corp.	48-10-43	BL6968
A003	Attenuator, 30dB, 100W	Weinschel Corp.	48-30-33	BJ4350
C001	Cable, 0.25m N-N-type	Suhner	Sucoflex 104E	7738/4E
C002	Cable, 0.25m N-N-type	Suhner	Sucoflex 104E	7743/4E
C003	Cable, 1.0m N-N-type	Suhner	Sucoflex 104E	12377/4E
C004	Cable, 3.0m N-N-type	Rosenberger	4A220BF030M7070	RCL04H8387
C005	Cable, 3.0m N-N-type	Rosenberger	4A220BF030M7070	RCL04H8392
T001	Terminator, 50 ohm, 50W	Weinschel Corp.	M1426	BJ0245
T002	Terminator, 50 ohm, 50W	Weinschel Corp.	M1426	BL3575
RFBox1	RF Modulation Box 850	Ericsson	LPY 108 15/2	1
YI2033	Network Analyser	Hewlett Packard	8720D	US36140166

RFI Test Equipment Used for Testing at Ericsson AB

ID Number	Description	Manufacturer	Model Number	Serial Number
M208	Temperature and Humidity Meter	Rohde & Schwarz	Thermo-Hygro	N/A
M1347	Fluke	73 Series 11	Multimeter	90680080

Appendix 2. Test Configuration Drawings

This appendix contains the following drawings:

Drawing Reference Number	Title
DRG\71622JD21\001	Schematic diagram of the EUT, support equipment and interconnecting cables used for the conducted measurements in Lindholmen.
DRG\71622JD21\002	Schematic diagram of the EUT, support equipment and interconnecting cables used for the radiated measurements in Basingstoke.

Test Of: **Ericsson AB**
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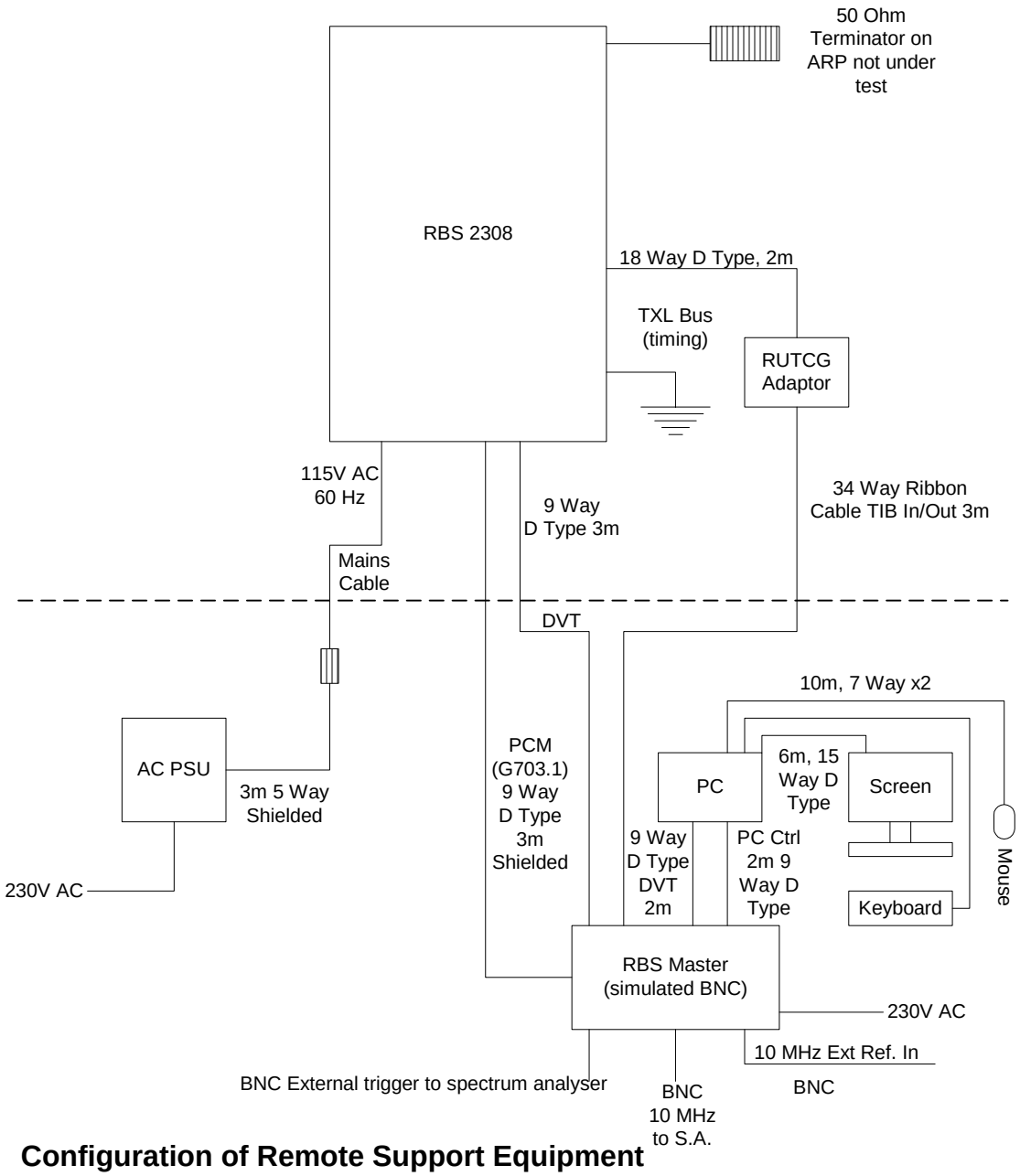
Configuration of EUT and Local Support Equipment
Conducted Measurements



Configuration of Remote Support Equipment

Test Of: Ericsson AB
RBS 2308 850 MHz
To: FCC Part 22: 2005

DRG\71622JD21\002