GSM TEST REPORT
FROM
RFI GLOBAL SERVICES LTD

Test of: Ericsson AB
RBS 2109 1900 MHz

To: FCC Part 24: 2003

Test Report Serial No:
RFI/MPTE2/RP46314JD11

Supersedes Test Report Serial No:
RFI/MPTE1/RP46314JD11

This Test Report Is Issued Under The Authority Of Richard Jacklin, Operations Director:  pp	
Tested By: Monika Berenyi 	**Checked By: Alan McHale** 
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Test Of: Ericsson AB
RBS 2109 1900 MHz
To: FCC Part 24: 2003

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1. Client Information

Company Name:	Ericsson AB
Address:	Lindholmspiren 11 417 56 Göteborg Sweden
Contact Name:	Mr Jan-Olof Johansson

2. Equipment Under Test (EUT)

The following information has been supplied by the client:

2.1. Identification Of Equipment Under Test (EUT)

FCC ID: B5KAKRC161028-4

No.	Unit	Model Number	Serial Number	Revision Number
1	RBS 2109 1900MHz	KRC 161 028/4	AE51444005	R1G

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

No.	Unit	Model Number	Serial Number	Revision Number
1	RBS 2109 1900MHz	KRC 161 028/4	AE51358951	R1F

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 1133/2	S952040555	R1A
Mounting Base PSU	ROA 117 4776/1	S952022738	R2A
IXU-21	BOE 602 15/2	AE51349570	R3D
RRU-H19	KRC 161 028/4	AE51444005	R1G
Radio Access Board 1	ROA 219 5750/1	AE51431102	R2C
Digital Radio Board 1	ROA 117 4767/3	AE51370521	R1B
Duplex Filter 1	KRF 102 254/1	T89H700065	R1C
Duplex Filter 2	KRF 102 254/2	T89H800038	R1C
Heater	BPC 111 25/1	X031009587	R3D
PSU	BML 151 23/2	X701019220	R1B
Power Interface Board	ROA 117 4775/1	B340118543	R2A
Ground Plane Extender	TVK2195259	N/A	R1A
Y Interface Board	ROA 117 4831/1	B340149533	R2A
Radio Interface Board	ROA 117 4799/3	B340142355	R2A

Hardware List - Radiated Measurements at Basingstoke

Unit	Model Number	Serial Number	Revision Number
IXU-21	BOE 602 15/2	AE50998795	R4A
MBU-01	SEB 112 1133/3	B340252474	R3A

2.2. Description Of EUT

The equipment under test is a RBS 2109 GMSK/8PSK base transceiver station operating in the GSM 1900 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 1900 MHz Base Transceiver Station		
Interface Ports:	Telecommunication Line – E1 or T1 PCM x 1 (G703) TIB – Synchronisation Interface Mains 115 V AC Input DVT – RBS Master Control RF x 2		
Transmit Frequency Range	1930.0 MHz to 1990.0 MHz		
Transmit Channels Tested	**Channel ID**	**Channel Number**	**Channel Frequency (MHz)**
	EDGE/GMSK	512	1930.2
	EDGE/GMSK	513	1930.4
	EDGE/GMSK	661	1960.0
	EDGE/GMSK	809	1989.6
	EDGE/GMSK	810	1989.8
Receive Frequency Range	1850 MHz to 1910 MHz		
Declared Maximum Power Output	+41.5 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:	0000000044
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
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:	J07M040-00
Serial Number:	CNUY3390RFR
Cable Length And Type:	USB 1.5m
Connected to Port:	USB Port of RBS Master 2

Description:	RBS Master 2
Brand Name:	Ericsson AB
Model Name or Number:	LPY 107 1007/1
Serial Number:	00167
Cable Length And Type:	10m
Connected to Port:	9 Pin D-Connector, Serial Cable 15m Shielded (x2)

3. Test Specification, Methods and Procedures

3.1 Test specification

Reference:	FCC Part 24: 2003 Subpart E (Broadband PCS)
Title:	Code of Federal Regulations, Part 24 (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: 2003
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 24 (2003)
Title: Federal Communications Commission: Code of Federal Regulations 47: Public Mobile Services.

47CFR: Part 2 (2003)
Title: Federal Communications Commission: Code of Federal Regulations 47: Telecommunication

ANSI/TIA-603-B-2002
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 (2001)
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 (1998)
Title: American National Standard for the Calibration of antennas used for Radiated Emission measurements in Electromagnetic Interference (EMI) control.

ANSI C63.7 (1988)
Title: American National Standard Guide for Construction of Open Area Test Sites for performing Radiated Emission Measurements.

CISPR 16-1 (1999)
Title: Specification for radio disturbance and immunity measuring apparatus and methods Part 1 Radio disturbance and immunity measuring apparatus.

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, the EUT was powered by mains supply 115V AC at the RBS 2109. The EUT was tested in a normal laboratory environment.

5.2. Operating Modes

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

The BTS has 2 transmitters, TX0 and TX1. All transmitters are identical with regards to operating modes.

All testing was performed on both TX0 and TX1, which are identical in all respects. Testing was performed on the specified TXs to show that they were indeed identical.

Tests were performed on bottom (512), middle (661) and top (810) channels unless stated otherwise for each measurement.

The ARFCNs tested at Band Edges needed to have their power levels reduced by 2 dB for GMSK modulation in order to fulfil the requirements. The ARFCNs adjacent to these channels were also tested to show that the requirements were met for these ARFCNs at full output power.

5.3. Configuration And Peripherals

The EUT was tested in the following configuration:

As a standalone 2 TRX RBS 2109 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: 2003, Section 2.1046(a)	Antenna Terminals	Complied
Transmitter Modulation Characteristics	Part 2 of CFR 47: 2003, Section 2.1047	Antenna Terminals	Complied
Transmitter Frequency Stability (Temperature Variation)	Part 2 & 24 of CFR 47: 2003, Section 2.1055/24.235	Antenna Terminals	Complied
Transmitter Frequency Stability (Voltage Variation)	Part 2 & 24 of CFR 47: 2003, Section 2.1055/24.235	Antenna Terminals	Complied
Transmitter Occupied Bandwidth	Part 2 & 24 of CFR 47: 2003 Sections 2.1049/24.238	Antenna Terminals	Complied
Transmitter Conducted Out of Band Emissions	Part 2 & 24 of CFR 47: 2003 Sections 2.1051/24.238	Antenna Terminals	Complied
Transmitter Conducted Inband Intermodulation	Part 2 & 24 of CFR 47: 2003 Sections 2.1051/24.238	Antenna Terminals	Complied
Transmitter Conducted Emissions at Band Edges	Part 2 & 24 of CFR 47: 2003 Section 2.1051/24.238	Antenna Terminals	Complied
Electric Field Strength, Spurious Emissions (30.0 MHz to 20.0 GHz)	Part 2 & 24 of CFR 47: 2003 Section 2.1053/24.238	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 as 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_603B.

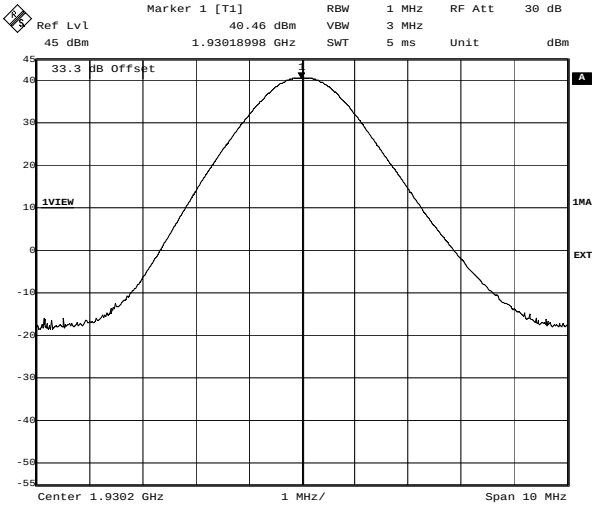
Transmitter Carrier Output Power: Section 2.1046 (a) (Continued)

8PSK – TX0:

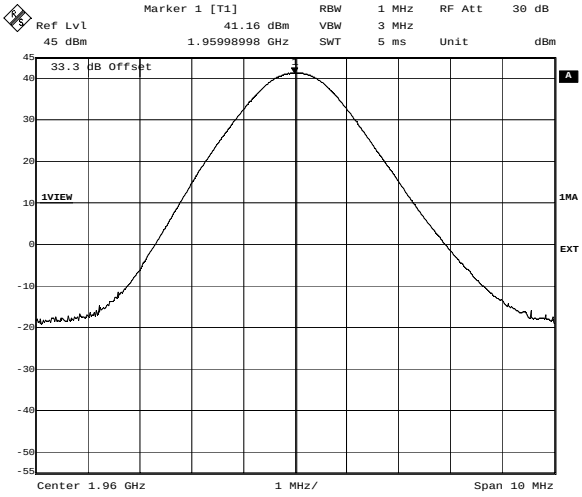
Results:

Channel	Frequency (MHz)	Level (dBm)
Bottom	1930.18998	40.5
Middle	1959.98998	41.2
Top	1989.87014	40.6

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



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch512. Output Power. 8PSK TRX0. +38.2dBm. FCC Part 2.1046(a)
Date: 25.NOV.2004 16:16:57



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Comment A: Ch661. Output Power. 8PSK TRX0. +38.2dBm. FCC Part 2.1046(a)
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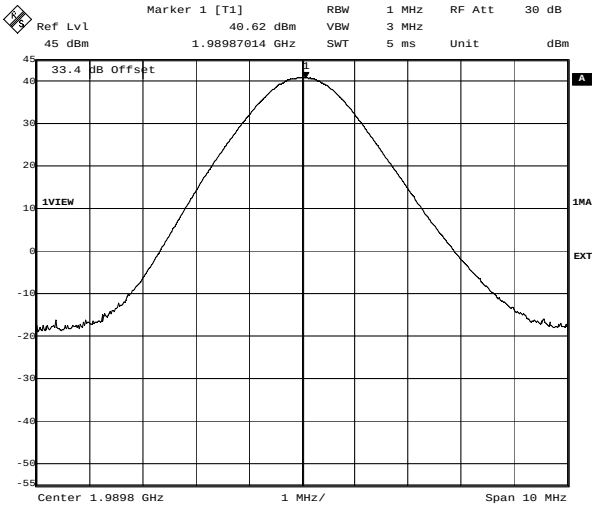

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Comment A: Ch810. Output Power. 8PSK TRX0. +38.2dBm. FCC Part 2.1046(a)
Date: 25.NOV.2004 16:20:27

Test Of: Ericsson AB
RBS 2109 1900 MHz
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Transmitter Carrier Output Power: Section 2.1046 (a) (Continued)

8PSK – TX1:

Results:

Channel	Frequency (MHz)	Level (dBm)
Bottom	1930.18998	40.6
Middle	1959.96994	41.2
Top	1989.74990	40.7

Test Of: **Ericsson AB**
RBS 2109 1900 MHz
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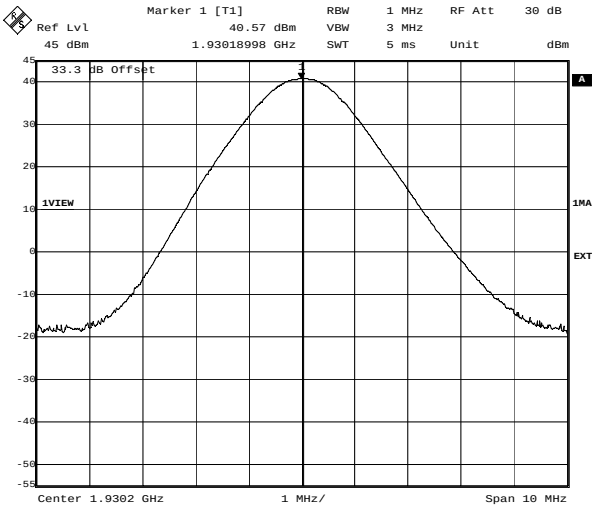
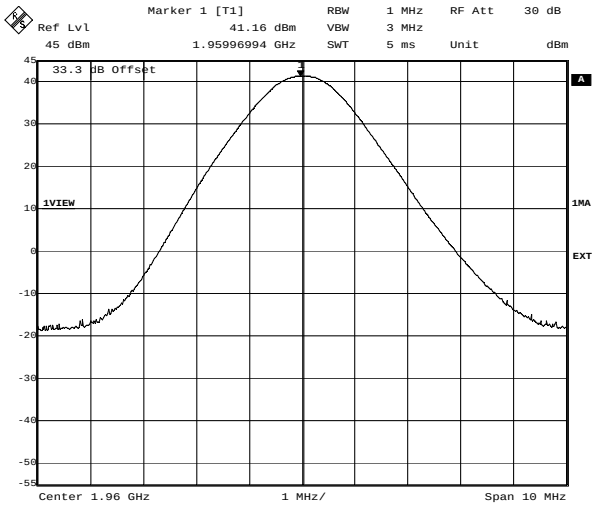
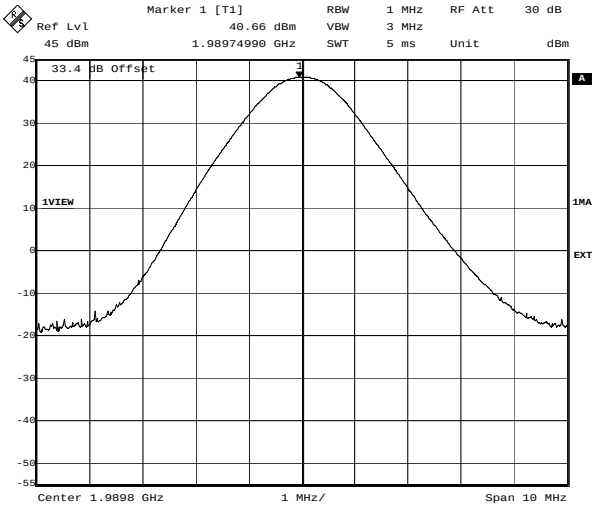
Transmitter Carrier Output Power: Section 2.1046 (a) (Continued)



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch512. Output Power. 8PSK TRX1. +38.2dBm. FCC Part 2.1046(a)
Date: 25.NOV.2004 16:37:36



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch661. Output Power. 8PSK TRX1. +38.2dBm. FCC Part 2.1046(a)
Date: 25.NOV.2004 16:39:04



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch810. Output Power. 8PSK TRX1. +38.2dBm. FCC Part 2.1046(a)
Date: 25.NOV.2004 16:40:38

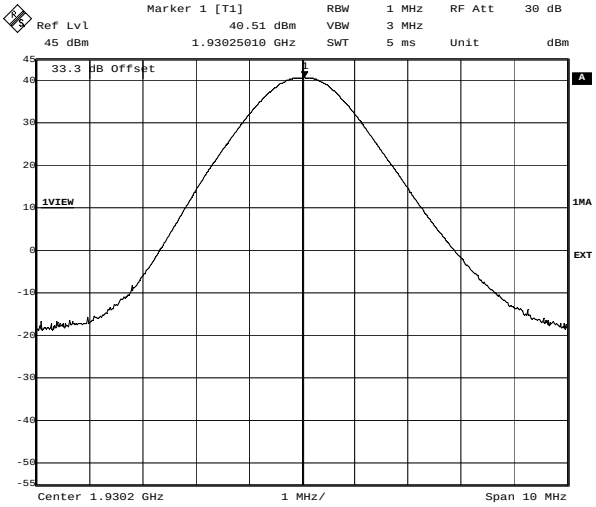
Transmitter Carrier Output Power: Section 2.1046 (a) (Continued)

GMSK – TX0:

Results:

Channel	Frequency (MHz)	Level (dBm)
Bottom	1930.25010	40.5
Middle	1960.01002	41.1
Top	1989.76994	40.6

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



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
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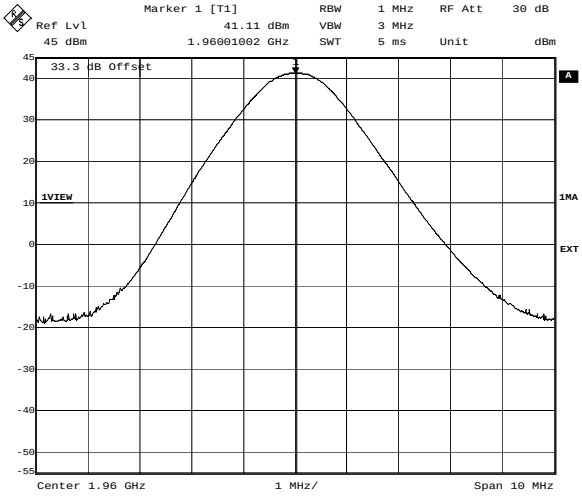

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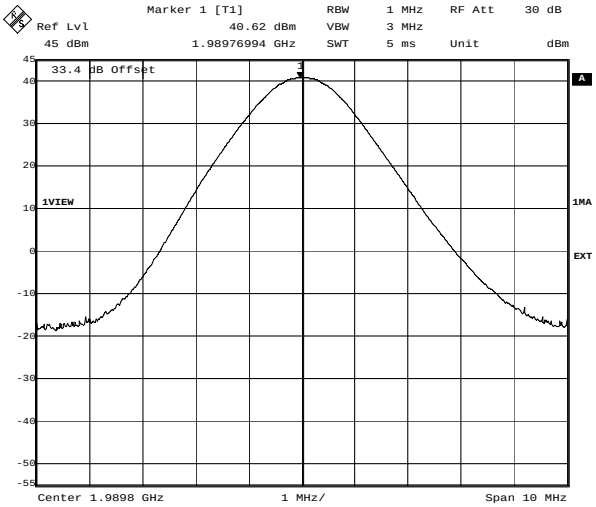

Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch810. Output Power. GMSK TRX0. +41.5dBm. FCC Part 2.1046(a)
Date: 25.NOV.2004 16:11:18

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

GMSK – TX1:

Results:

Channel	Frequency (MHz)	Level (dBm)
Bottom	1930.21002	40.5
Middle	1959.98998	41.3
Top	1989.83006	40.7

Test Of: **Ericsson AB**
RBS 2109 1900 MHz
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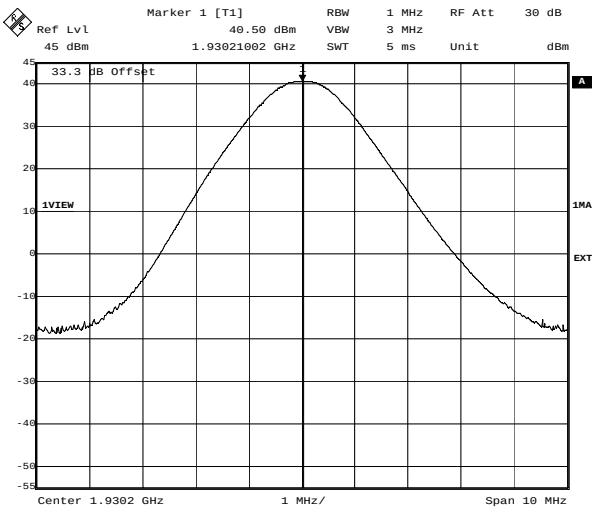
Transmitter Carrier Output Power: Section 2.1046 (a) (Continued)



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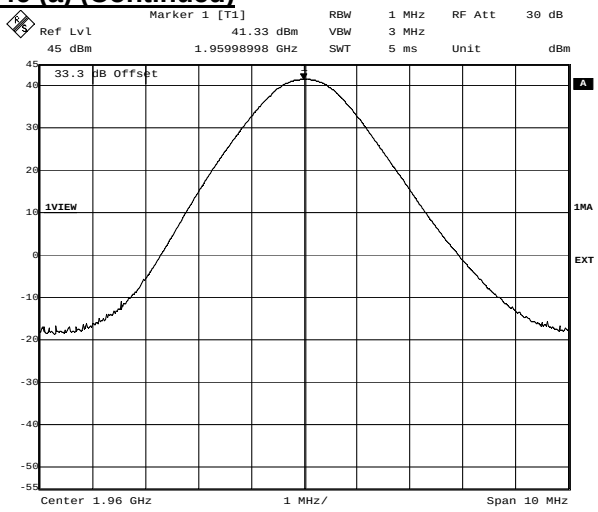

Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
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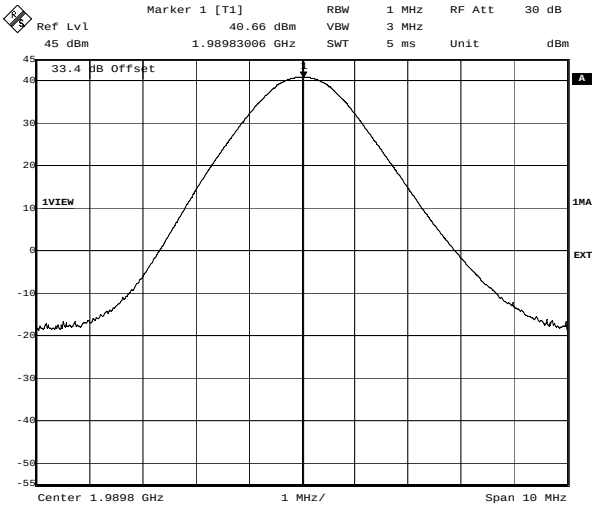


Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch810. Output Power. GMSK TRX1. +41.5dBm. FCC Part 2.1046(a)
Date: 25.NOV.2004 16:32:46

7.3. Modulation Characteristics: Section 2.1047

7.3.1. The EUT and spectrum analyser were configured as 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_603B.

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)**	
	Tx0	Tx1
Phase Error	5.30	8.32
Max	8.32	

8PSK	**EVM (% RMS)**	
	Tx0	Tx1
EVM	2.76	2.74
Max EVM	2.76	

8PSK	**Origin Offset (dB)**	
	Tx0	Tx1
Origin Offset	41.23	41.17
Max OO	41.17	

7.4. Transmitter Frequency Stability (Temperature Variation): Section 24.235

7.4.1. The EUT was configured as for frequency stability measurements as described in Section 9 of this report.

7.4.2. Tests were performed to identify the maximum frequency error of the EUT with variations in temperature.

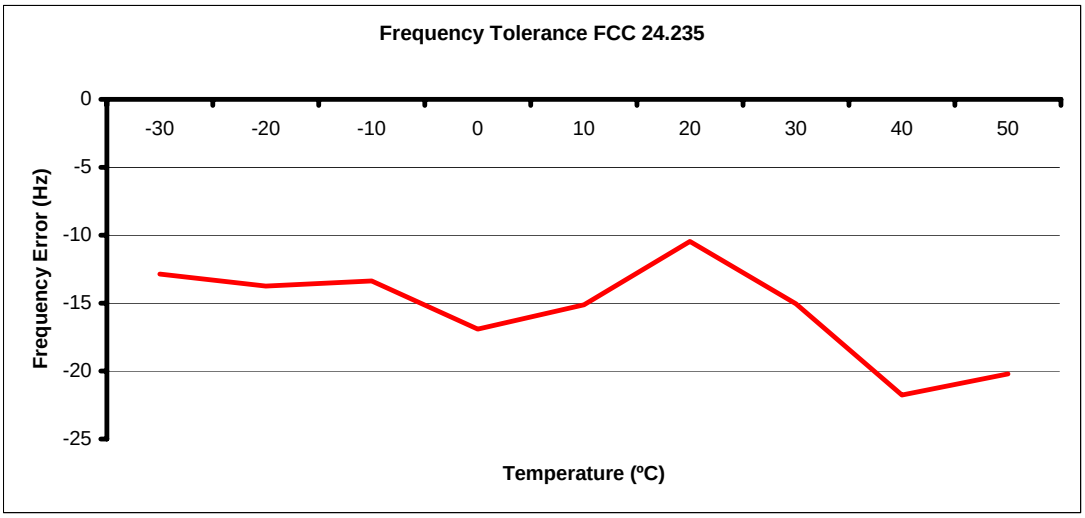
Transmitter Frequency Stability (Temperature Variation): Section 24.235 (continued)

Results

Mode: 8PSK – TX0
Channel: 512 (1930.2MHz)

Temperature (ºC)	Measured Frequency (MHz)	Lower Band Edge limit (MHz)	Frequency Error (Hz)	Margin (MHz)	Result
-30	1930.19998715	1930.0	-12.85	0.19998715	Complied
-20	1930.19998625	1930.0	-13.75	0.19998625	Complied
-10	1930.19998663	1930.0	-13.37	0.19998663	Complied
0	1930.19998308	1930.0	-16.92	0.19998308	Complied
10	1930.19998489	1930.0	-15.11	0.19998489	Complied
20	1930.19998954	1930.0	-10.46	0.19998954	Complied
30	1930.19998495	1930.0	-15.05	0.19998495	Complied
40	1930.19997824	1930.0	-21.76	0.19997824	Complied
50	1930.19997979	1930.0	-20.21	0.19997979	Complied

Frequency Variation From 1930.2 MHz

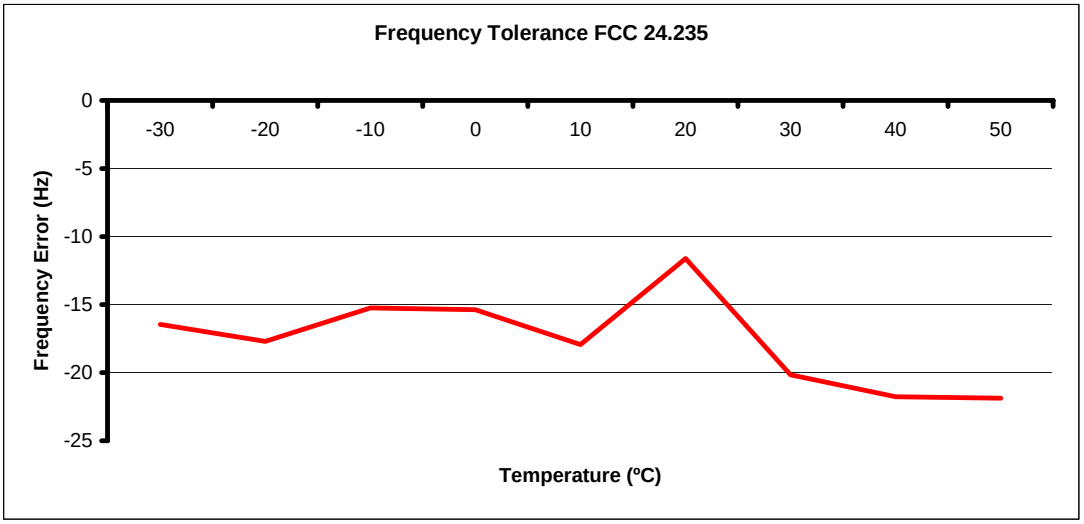


Transmitter Frequency Stability (Temperature Variation): Section 24.235 (continued)

Mode: 8PSK – TX0
Channel: 810 (1989.8 MHz)

Temperature (ºC)	Measured Frequency (MHz)	Upper Band Edge limit (MHz)	Frequency Error (Hz)	Margin (MHz)	Result
-30	1989.79998353	1990.0	-16.47	0.20001647	Complied
-20	1989.79998231	1990.0	-17.69	0.20001769	Complied
-10	1989.79998476	1990.0	-15.24	0.20001524	Complied
0	1989.79998463	1990.0	-15.37	0.20001537	Complied
10	1989.79998205	1990.0	-17.95	0.20001795	Complied
20	1989.79998838	1990.0	-11.62	0.20001162	Complied
30	1989.79997985	1990.0	-20.15	0.20002015	Complied
40	1989.79997824	1990.0	-21.76	0.20002176	Complied
50	1989.79997811	1990.0	-21.89	0.20002189	Complied

Frequency Variation From 1989.8 MHz



Test Of: Ericsson AB
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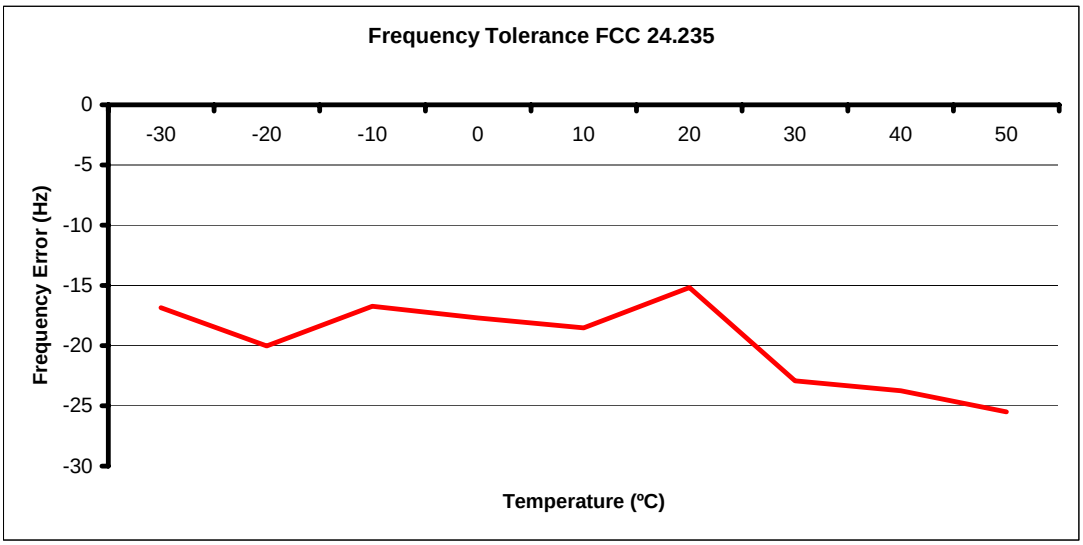
Transmitter Frequency Stability (Temperature Variation): Section 24.235 (continued)

Mode: GMSK – TX0
Channel: 512 (1930.2 MHz)

Temperature (ºC)	Measured Frequency (MHz)	Lower Band Edge limit (MHz)	Frequency Error (Hz)	Margin (MHz)	Result
-30	1930.19998315	1930.0	-16.85	0.19998315	Complied
-20	1930.19997998	1930.0	-20.02	0.19997998	Complied
-10	1930.19998328	1930.0	-16.72	0.19998328	Complied
0	1930.19998231	1930.0	-17.69	0.19998231	Complied
10	1930.19998147	1930.0	-18.53	0.19998147	Complied
20	1930.19998483	1930.0	-15.17	0.19998483	Complied
30	1930.19997708	1930.0	-22.92	0.19997708	Complied
40	1930.19997624	1930.0	-23.76	0.19997624	Complied
50	1930.19997449	1930.0	-25.51	0.19997449	Complied

Frequency Variation From 1930.2 MHz



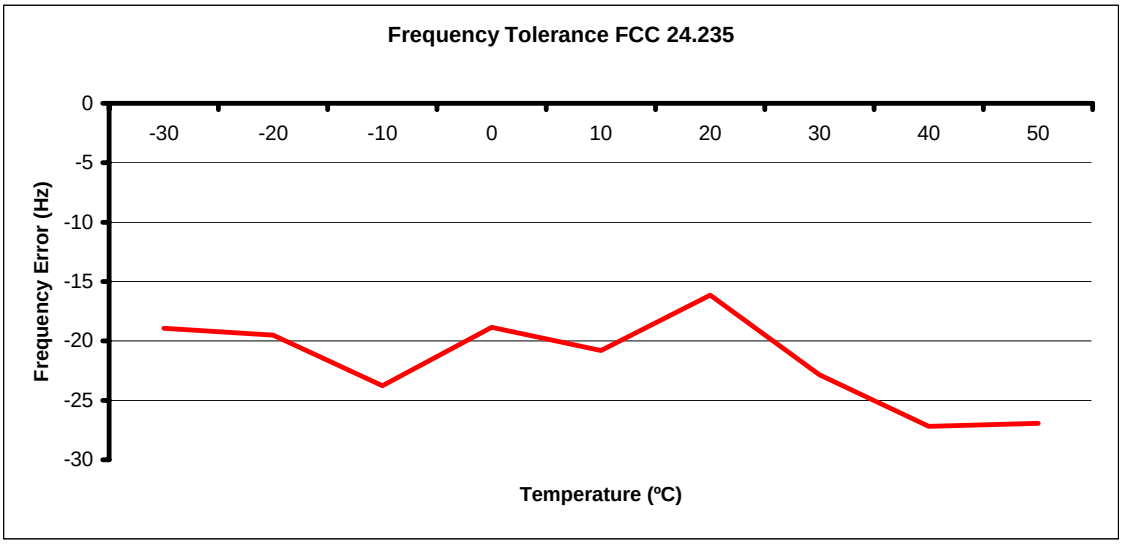
Test Of: Ericsson AB
RBS 2109 1900 MHz
To: FCC Part 24: 2003

Transmitter Frequency Stability (Temperature Variation): Section 24.235 (continued)

Mode: GMSK – TX0
Channel: 810 (1989.8 MHz)

Temperature (ºC)	Measured Frequency (MHz)	Upper Band Edge limit (MHz)	Frequency Error (Hz)	Margin (MHz)	Result
-30	1989.79998108	1990.0	-18.92	0.20001892	Complied
-20	1989.79998050	1990.0	-19.50	0.20001950	Complied
-10	1989.79997624	1990.0	-23.76	0.20002376	Complied
0	1989.79998115	1990.0	-18.85	0.20001885	Complied
10	1989.79997921	1990.0	-20.79	0.20002079	Complied
20	1989.79998386	1990.0	-16.14	0.20001614	Complied
30	1989.79997714	1990.0	-22.86	0.20002286	Complied
40	1989.79997282	1990.0	-27.18	0.20002718	Complied
50	1989.79997307	1990.0	-26.93	0.20002693	Complied

Frequency Variation From 1989.8 MHz

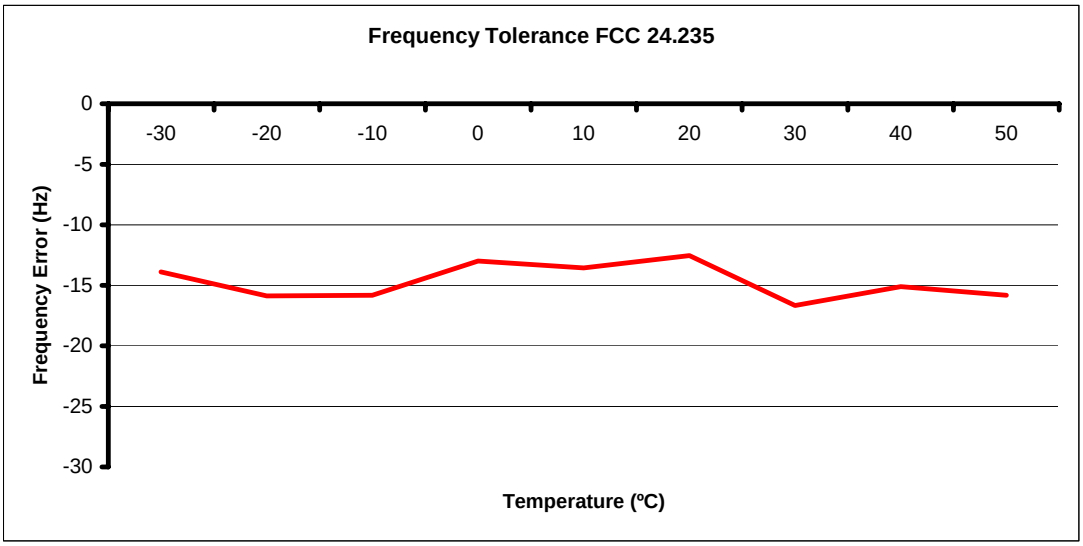


Transmitter Frequency Stability (Temperature Variation): Section 24.235 (continued)

Mode: 8PSK – TX1
Channel: 512 (1930.2 MHz)

Temperature (ºC)	Measured Frequency (MHz)	Lower Band Edge limit (MHz)	Frequency Error (Hz)	Margin (MHz)	Result
-30	1930.19998612	1930.0	-13.88	0.19998612	Complied
-20	1930.19998412	1930.0	-15.88	0.19998412	Complied
-10	1930.19998418	1930.0	-15.82	0.19998418	Complied
0	1930.19998702	1930.0	-12.98	0.19998702	Complied
10	1930.19998644	1930.0	-13.56	0.19998644	Complied
20	1930.19998747	1930.0	-12.53	0.19998747	Complied
30	1930.19998334	1930.0	-16.66	0.19998334	Complied
40	1930.19998489	1930.0	-15.11	0.19998489	Complied
50	1930.19998418	1930.0	-15.82	0.19998418	Complied

Frequency Variation From 1930.2 MHz

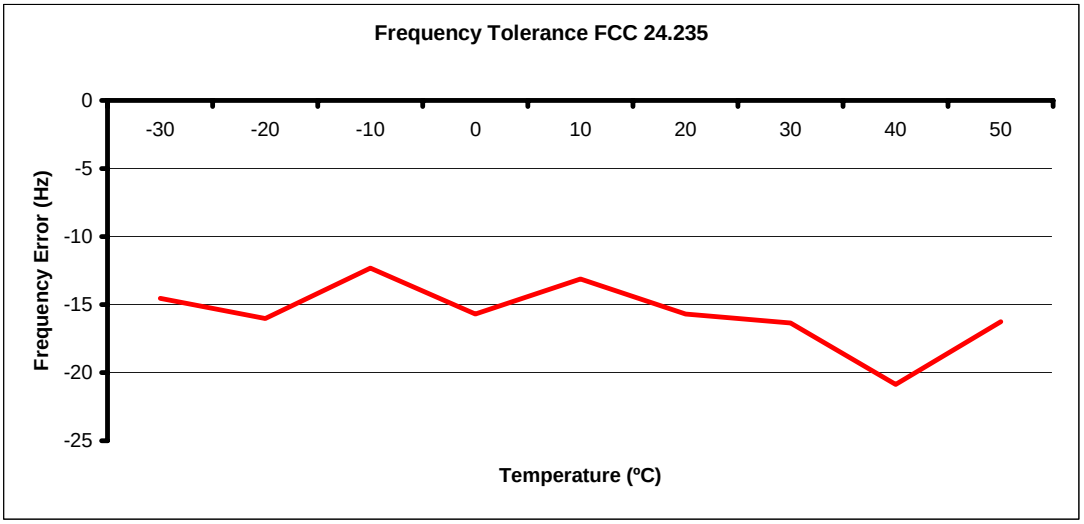


Transmitter Frequency Stability (Temperature Variation): Section 24.235 (continued)

Mode: 8PSK – TX1
Channel: 810 (1989.8 MHz)

Temperature (ºC)	Measured Frequency (MHz)	Upper Band Edge limit (MHz)	Frequency Error (Hz)	Margin (MHz)	Result
-30	1989.79998547	1990.0	-14.53	0.20001453	Complied
-20	1989.79998399	1990.0	-16.01	0.20001601	Complied
-10	1989.79998767	1990.0	-12.33	0.20001233	Complied
0	1989.79998431	1990.0	-15.69	0.20001569	Complied
10	1989.79998689	1990.0	-13.11	0.20001311	Complied
20	1989.79998431	1990.0	-15.69	0.20001569	Complied
30	1989.79998366	1990.0	-16.34	0.20001634	Complied
40	1989.79997914	1990.0	-20.86	0.20002086	Complied
50	1989.79998373	1990.0	-16.27	0.20001627	Complied

Frequency Variation From 1989.8 MHz



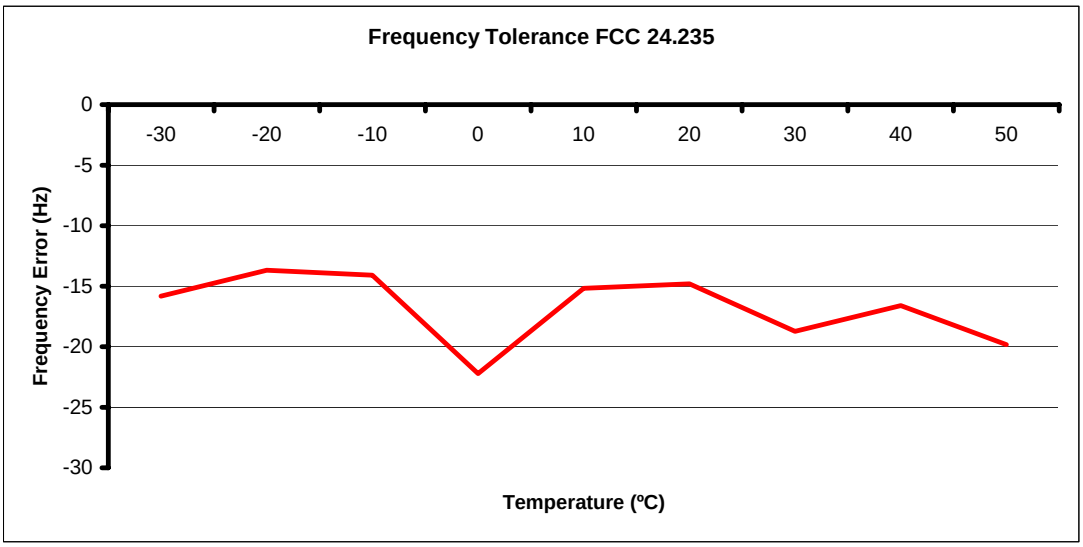
Test Of: Ericsson AB
RBS 2109 1900 MHz
To: FCC Part 24: 2003

Transmitter Frequency Stability (Temperature Variation): Section 24.235 (continued)

Mode: GMSK – TX1
Channel: 512 (1930.2 MHz)

Temperature (ºC)	Measured Frequency (MHz)	Lower Band Edge limit (MHz)	Frequency Error (Hz)	Margin (MHz)	Result
-30	1930.19998418	1930.0	-15.82	0.19998418	Complied
-20	1930.19998631	1930.0	-13.69	0.19998631	Complied
-10	1930.19998592	1930.0	-14.08	0.19998592	Complied
0	1930.19997779	1930.0	-22.21	0.19997779	Complied
10	1930.19998483	1930.0	-15.17	0.19998483	Complied
20	1930.19998521	1930.0	-14.79	0.19998521	Complied
30	1930.19998127	1930.0	-18.73	0.19998127	Complied
40	1930.19998341	1930.0	-16.59	0.19998341	Complied
50	1930.19998018	1930.0	-19.82	0.19998018	Complied

Frequency Variation From 1930.2 MHz

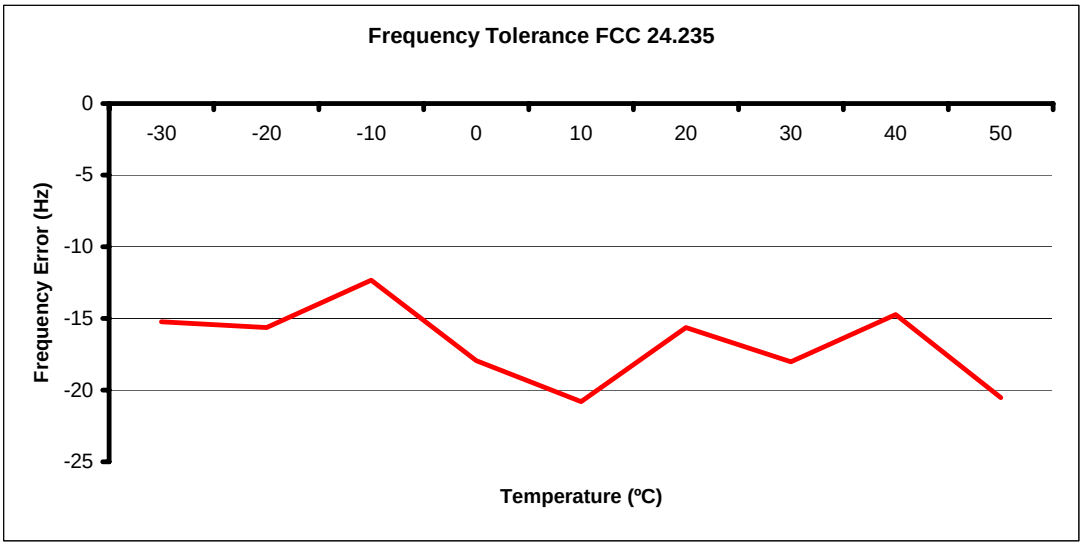


Transmitter Frequency Stability (Temperature Variation): Section 24.235 (continued)

Mode: GMSK – TX1
Channel: 810 (1989.8 MHz)

Temperature (ºC)	Measured Frequency (MHz)	Upper Band Edge limit (MHz)	Frequency Error (Hz)	Margin (MHz)	Result
-30	1989.79998476	1990.0	-15.24	0.20001524	Complied
-20	1989.79998437	1990.0	-15.63	0.20001563	Complied
-10	1989.79998767	1990.0	-12.33	0.20001233	Complied
0	1989.79998205	1990.0	-17.95	0.20001795	Complied
10	1989.79997921	1990.0	-20.79	0.20002079	Complied
20	1989.79998437	1990.0	-15.63	0.20001563	Complied
30	1989.79998197	1990.0	-18.03	0.20001803	Complied
40	1989.79998528	1990.0	-14.72	0.20001472	Complied
50	1989.79997947	1990.0	-20.53	0.20002053	Complied

Frequency Variation From 1989.8 MHz



7.5. Transmitter Frequency Stability (Voltage Variation): Section 24.235

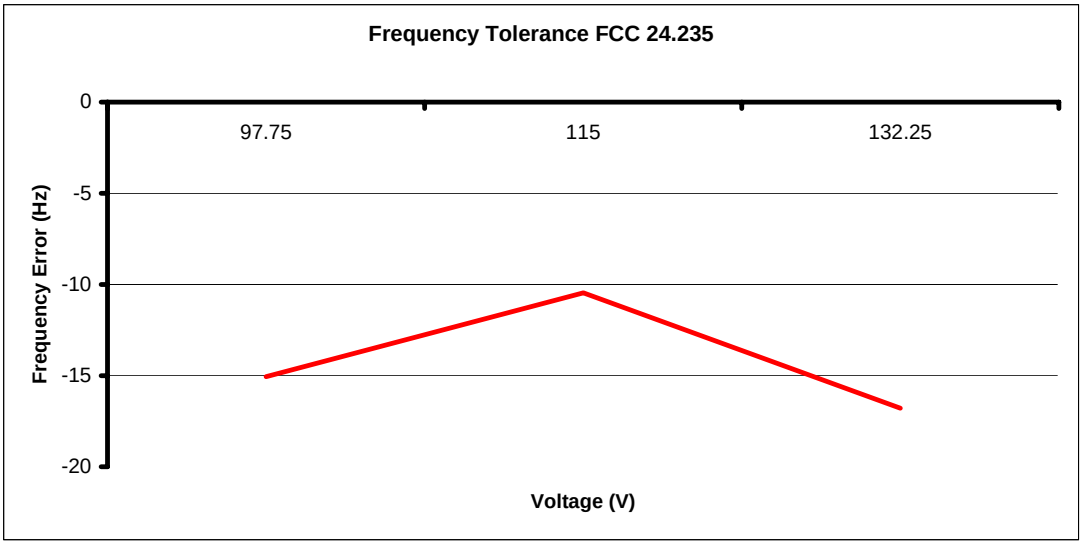
7.5.1. The EUT was configured as for frequency stability measurements as described in Section 9 of this report.

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: 512 (1930.2 MHz)

Supply Voltage (AC V)	Measured Frequency (MHz)	Lower Band Edge limit (MHz)	Frequency Error (Hz)	Margin from Band Edge (MHz)	Result
97.75	1930.19998495	1930.0	-15.05	0.19998495	Complied
115	1930.19998954	1930.0	-10.46	0.19998954	Complied
132.25	1930.19998321	1930.0	-16.79	0.19998321	Complied

Frequency Variation From 1930.2 MHz

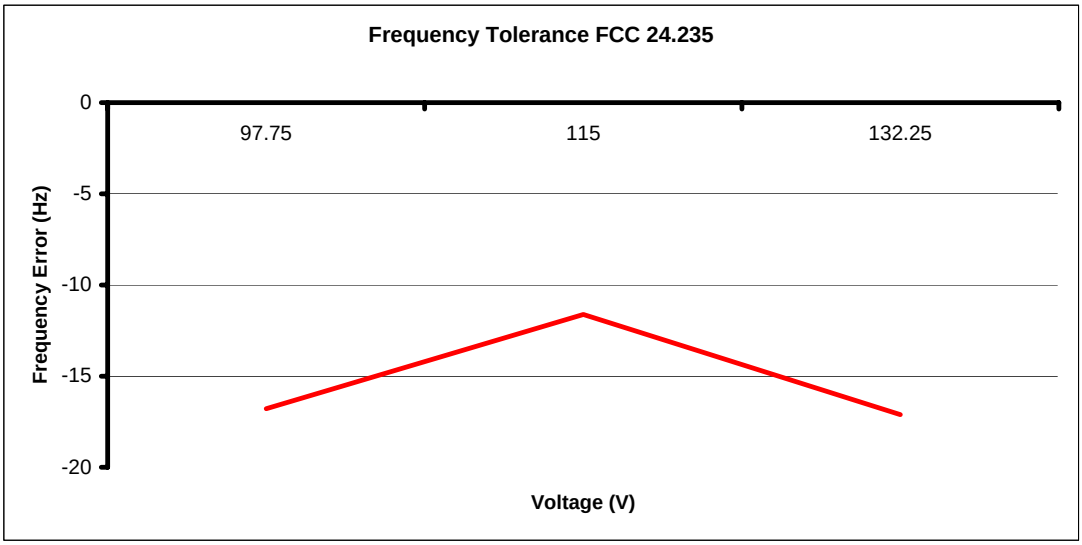


Transmitter Frequency Stability (Voltage Variation): Section 24.235 (Continued)

Mode: 8PSK – TX0
Channel: 810 (1989.8 MHz)

Supply Voltage (AC V)	Measured Frequency (MHz)	Upper Band Edge limit (MHz)	Frequency Error (Hz)	Margin from Band Edge (MHz)	Result
97.75	1989.79998321	1990.0	-16.79	0.20001679	Complied
115	1989.79998838	1990.0	-11.62	0.20001162	Complied
132.25	1989.79998289	1990.0	-17.11	0.20001711	Complied

Frequency Variation From 1989.8 MHz



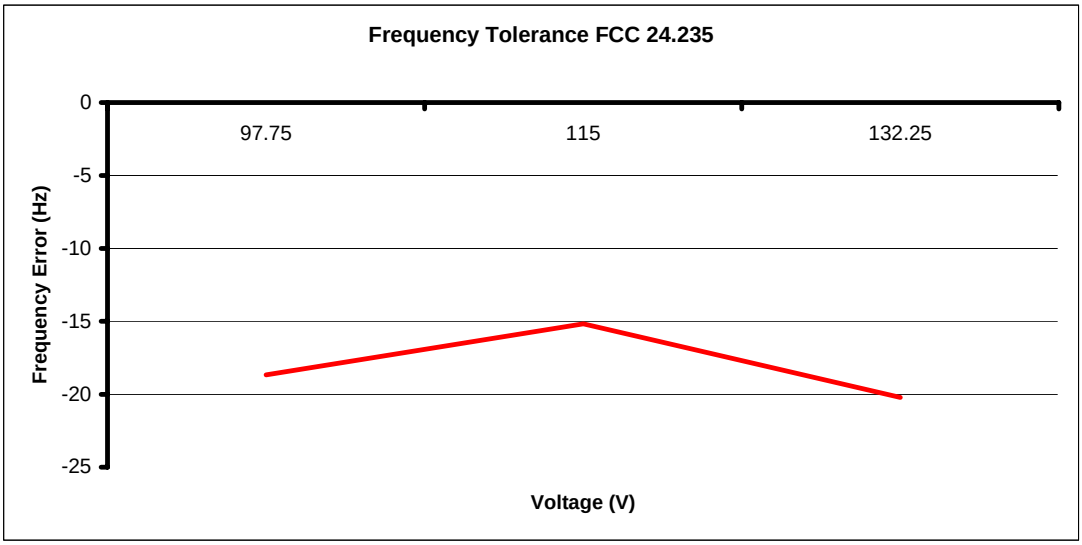
Test Of: Ericsson AB
RBS 2109 1900 MHz
To: FCC Part 24: 2003

Transmitter Frequency Stability (Voltage Variation): Section 24.235 (Continued)

Mode: GMSK – TX0
Channel: 512 (1930.2 MHz)

Supply Voltage (AC V)	Measured Frequency (MHz)	Lower Band Edge limit (MHz)	Frequency Error (Hz)	Margin from Band Edge (MHz)	Result
97.75	1930.19998134	1930.0	-18.66	0.19998134	Complied
115	1930.19998483	1930.0	-15.17	0.19998483	Complied
132.25	1930.19997979	1930.0	-20.21	0.19997979	Complied

Frequency Variation From 1930.2 MHz

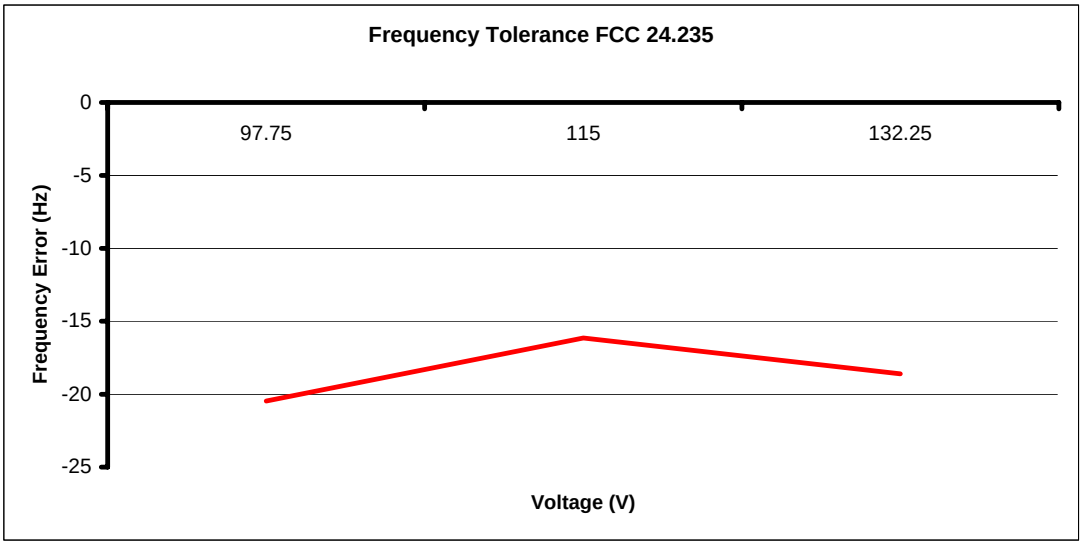


Transmitter Frequency Stability (Voltage Variation): Section 24.235 (Continued)

Mode: GMSK – TX0
Channel: 810 (1989.8 MHz)

Supply Voltage (AC V)	Measured Frequency (MHz)	Upper Band Edge limit (MHz)	Frequency Error (Hz)	Margin from Band Edge (MHz)	Result
97.75	1989.79997953	1990.0	-20.47	0.20002047	Complied
115	1989.79998386	1990.0	-16.14	0.20001614	Complied
132.25	1989.79998140	1990.0	-18.60	0.20001860	Complied

Frequency Variation From 1989.8 MHz



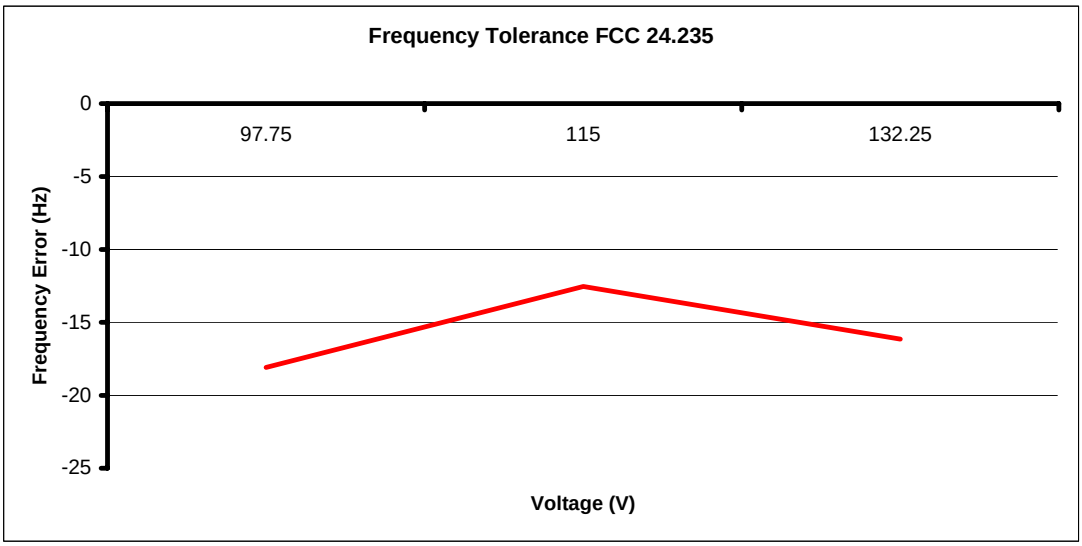
Test Of: Ericsson AB
RBS 2109 1900 MHz
To: FCC Part 24: 2003

Transmitter Frequency Stability (Voltage Variation): Section 24.235 (Continued)

Mode: 8PSK – TX1
Channel: 512 (1930.2 MHz)

Supply Voltage (AC V)	Measured Frequency (MHz)	Lower Band Edge limit (MHz)	Frequency Error (Hz)	Margin from Band Edge (MHz)	Result
97.75	1930.19998192	1930.0	-18.08	0.19998192	Complied
115	1930.19998747	1930.0	-12.53	0.19998747	Complied
132.25	1930.19998386	1930.0	-16.14	0.19998386	Complied

Frequency Variation From 1930.2 MHz

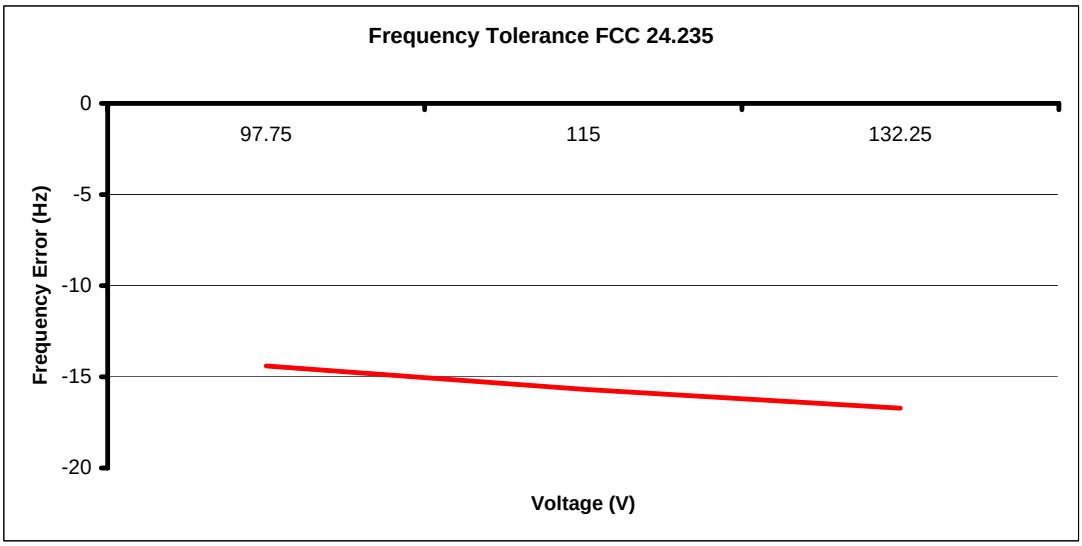


Transmitter Frequency Stability (Voltage Variation): Section 24.235 (Continued)

Mode: 8PSK – TX1
Channel: 810 (1989.8 MHz)

Supply Voltage (AC V)	Measured Frequency (MHz)	Upper Band Edge limit (MHz)	Frequency Error (Hz)	Margin from Band Edge (MHz)	Result
97.75	1989.79998560	1990.0	-14.40	0.20001440	Complied
115	1989.79998431	1990.0	-15.69	0.20001569	Complied
132.25	1989.79998328	1990.0	-16.72	0.20001672	Complied

Frequency Variation From 1989.8 MHz



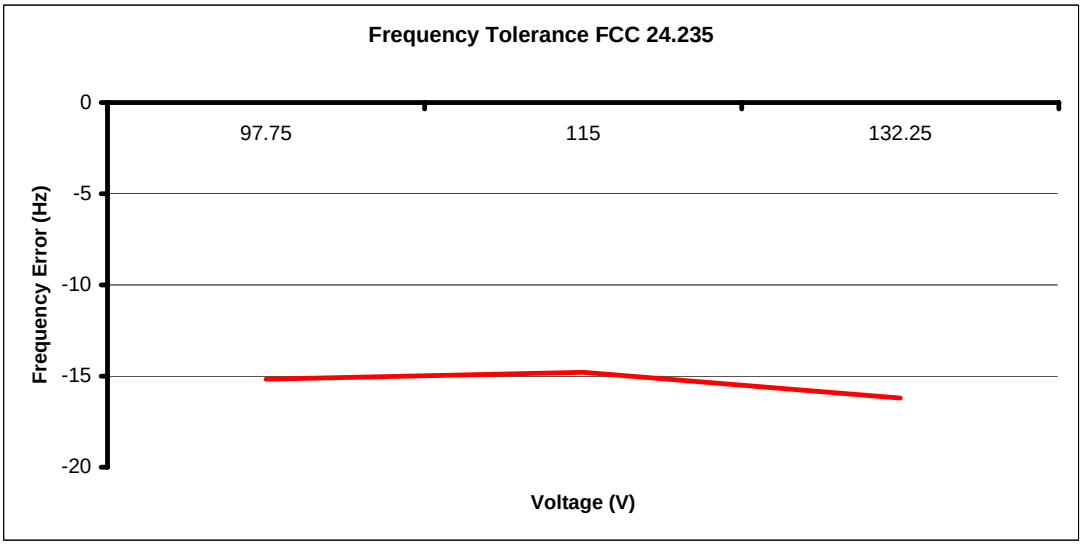
Test Of: Ericsson AB
RBS 2109 1900 MHz
To: FCC Part 24: 2003

Transmitter Frequency Stability (Voltage Variation): Section 24.235 (Continued)

Mode: GMSK – TX1
Channel: 512 (1930.2 MHz)

Supply Voltage (AC V)	Measured Frequency (MHz)	Lower Band Edge limit (MHz)	Frequency Error (Hz)	Margin from Band Edge (MHz)	Result
97.75	1930.19998483	1930.0	-15.17	0.19998483	Complied
115	1930.19998521	1930.0	-14.79	0.19998521	Complied
132.25	1930.19998379	1930.0	-16.21	0.19998379	Complied

Frequency Variation From 1930.2 MHz

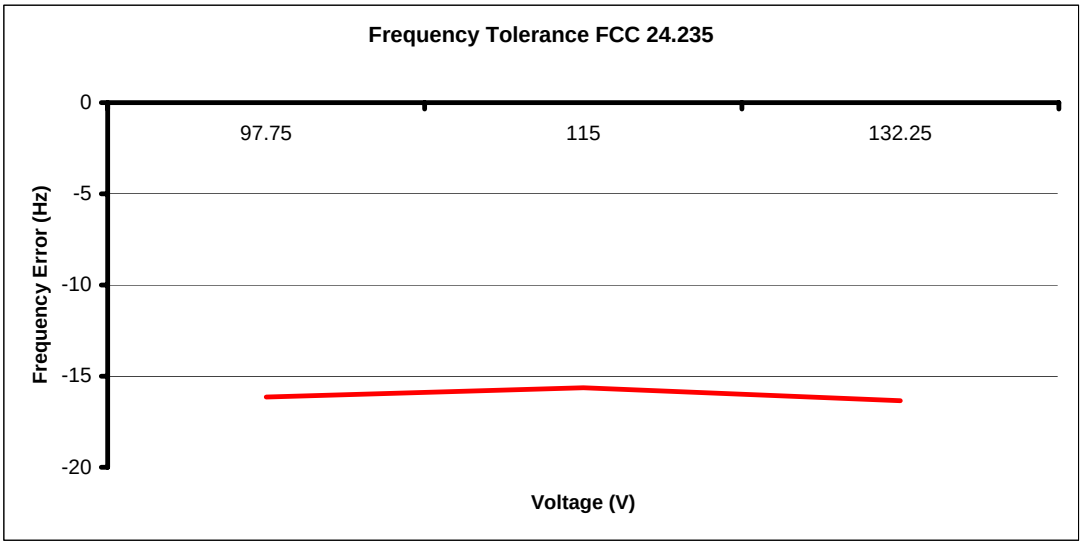


Transmitter Frequency Stability (Voltage Variation): Section 24.235 (Continued)

Mode: GMSK – TX1
Channel: 810 (1989.8 MHz)

Supply Voltage (AC V)	Measured Frequency (MHz)	Upper Band Edge limit (MHz)	Frequency Error (Hz)	Margin from Band Edge (MHz)	Result
97.75	1989.79998386	1990.0	-16.14	0.20001614	Complied
115	1989.79998437	1990.0	-15.63	0.20001563	Complied
132.25	1989.79998366	1990.0	-16.34	0.20001634	Complied

Frequency Variation From 1989.8 MHz



7.6. Transmitter Occupied Bandwidth: Section 2.1049(i)

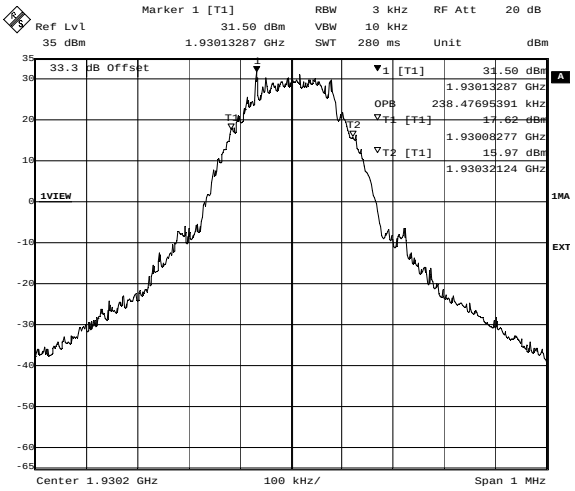
7.6.1. The EUT was configured as for Occupied Bandwidth measurements as described in Section 9 of this report.

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

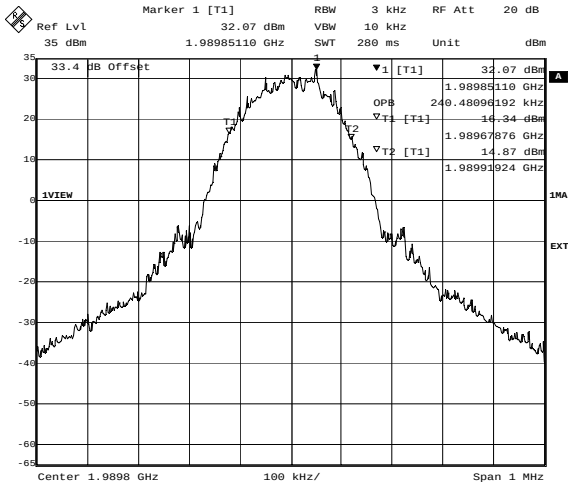
Results: 8PSK – TX0 and TX1

TX	Channel	Frequency (MHz)	Resolution Bandwidth (kHz)	Video Bandwidth (kHz)	Occupied Bandwidth (kHz)
TX0	512	1930.13287	3	10	238.477
TX0	810	1989.85110	3	10	240.481
TX1	512	1930.24910	3	10	238.477
TX1	810	1989.84910	3	10	240.481

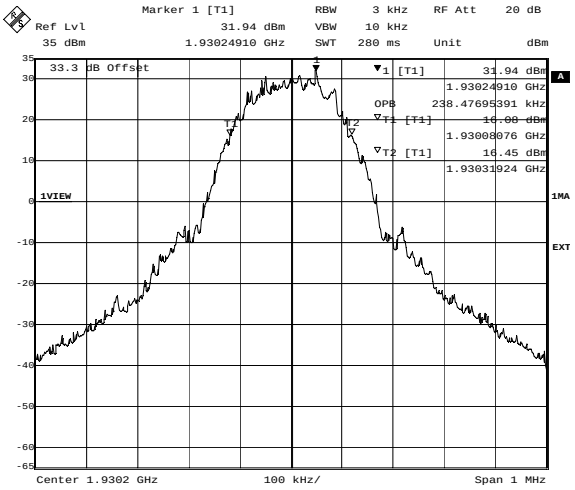
Transmitter Occupied Bandwidth: Section 2.1049(i) (Continued)



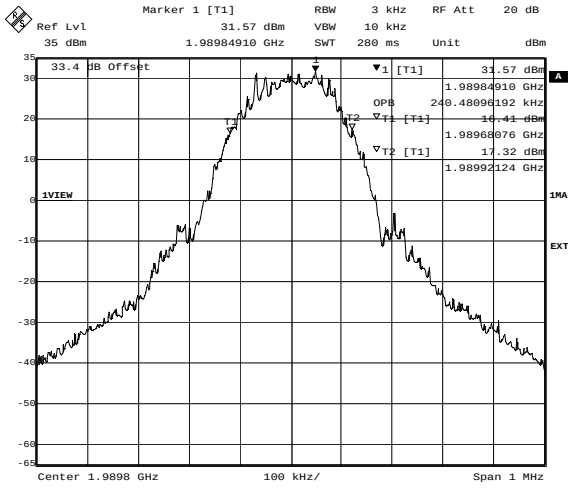
Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch512. OBW 99% Occupied Bandwidth. 8PSK TRX0. +38.2dBm.
FCC Part 2.1049
Date: 26.NOV.2004 13:34:36



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch810. OBW 99% Occupied Bandwidth. 8PSK TRX0. +38.2dBm.
FCC Part 2.1049
Date: 26.NOV.2004 13:42:43



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch512. OBW 99% Occupied Bandwidth. 8PSK TRX1. +38.2dBm.
FCC Part 2.1049
Date: 26.NOV.2004 15:02:48



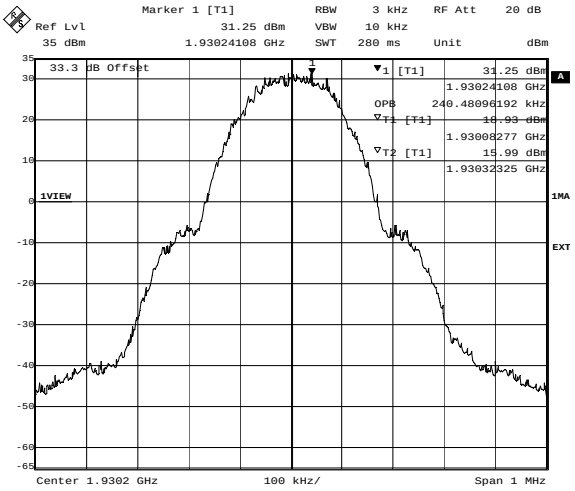
Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch810. OBW 99% Occupied Bandwidth. 8PSK TRX1. +38.2dBm.
FCC Part 2.1049
Date: 26.NOV.2004 15:06:09

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

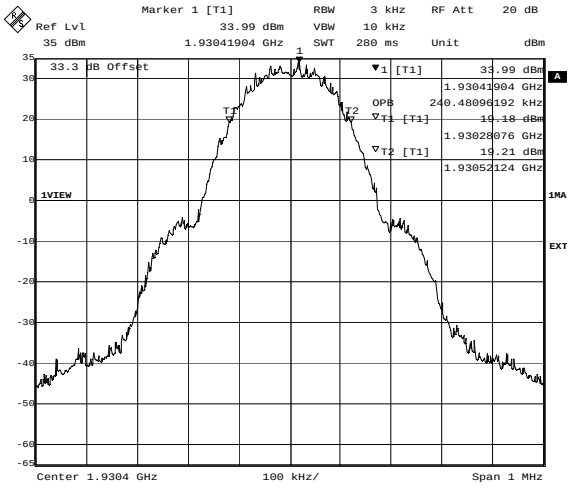
Results: GMSK – TX0 and TX1

TX	Channel	Frequency (MHz)	Resolution Bandwidth (kHz)	Video Bandwidth (kHz)	Occupied Bandwidth (kHz)
TX0	512	1930.24108	3	10	240.481
TX0	513	1930.41904	3	10	240.481
TX0	809	1989.62505	3	10	240.481
TX0	810	1989.81703	3	10	240.481
TX1	512	1930.19098	3	10	242.485
TX1	513	1930.41703	3	10	240.481
TX1	809	1989.58096	3	10	240.481
TX1	810	1989.80501	3	10	240.481

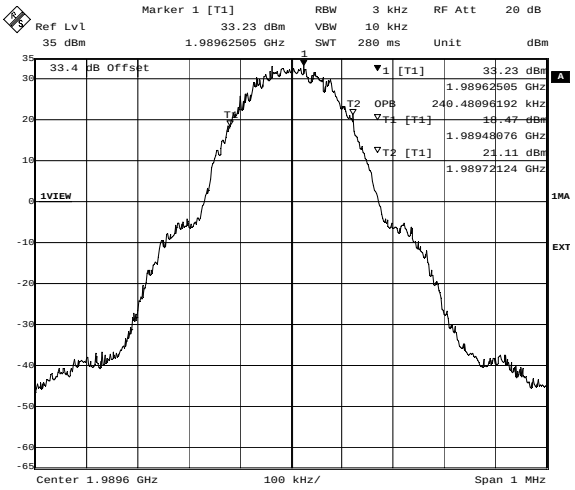
Transmitter Occupied Bandwidth: Section 2.1049(i) (Continued)



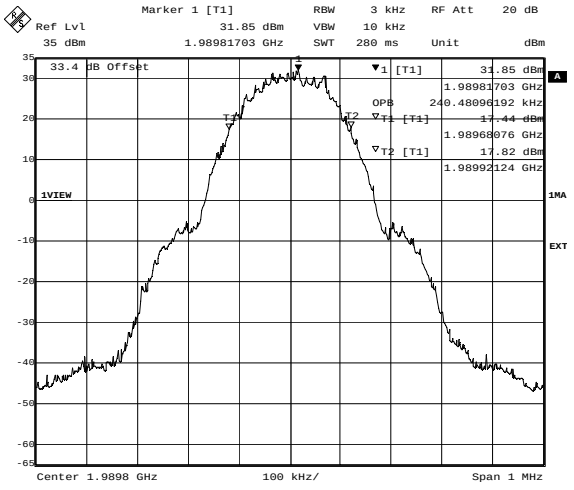
Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch512. OBW 99% Occupied Bandwidth. GMSK TRX0. +39.5dBm.
FCC Part 2.1049
Date: 26.NOV.2004 11:22:50



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch513. OBW 99% Occupied Bandwidth. GMSK TRX0. +41.5dBm.
FCC Part 2.1049
Date: 26.NOV.2004 11:29:22



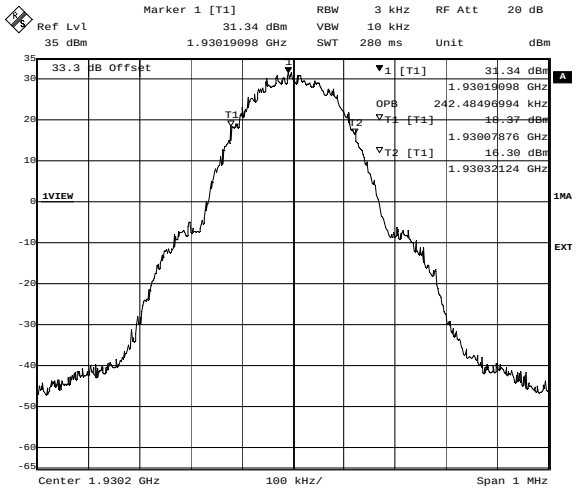
Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch809. OBW 99% Occupied Bandwidth. GMSK TRX0. +41.5dBm.
FCC Part 2.1049
Date: 26.NOV.2004 12:54:48



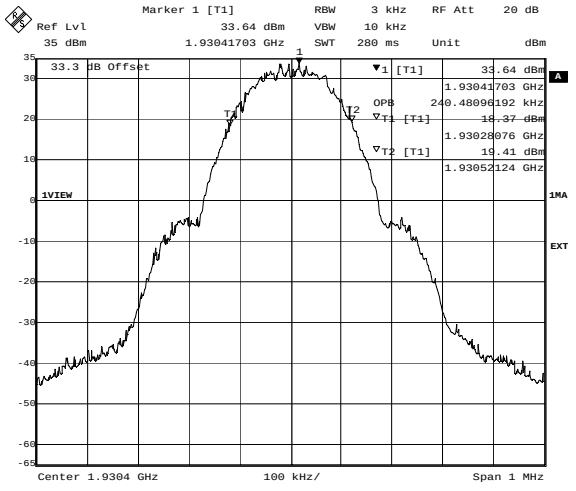
Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch810. OBW 99% Occupied Bandwidth. GMSK TRX0. +39.5dBm.
FCC Part 2.1049
Date: 26.NOV.2004 12:50:01

Test Of: **Ericsson AB**
RBS 2109 1900 MHz
To: **FCC Part 24: 2003**

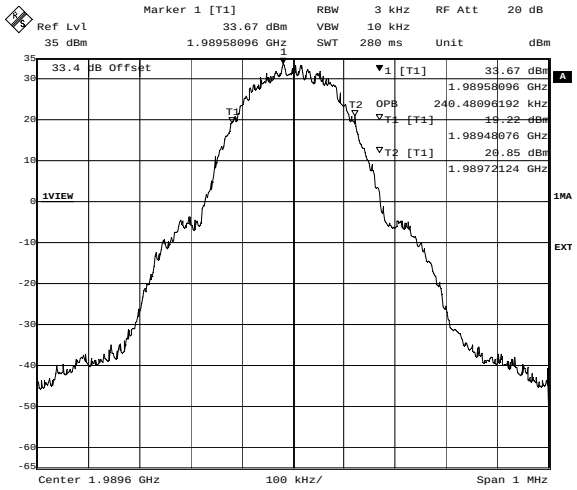
Transmitter Occupied Bandwidth: Section 2.1049(i) (Continued)



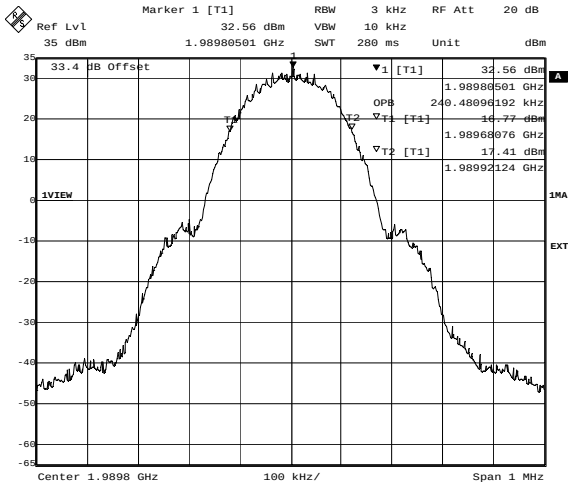
Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch512. OBW 99% Occupied Bandwidth. GMSK TRX1. +39.5dBm.
FCC Part 2.1049
Date: 26.NOV.2004 13:58:20



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch513. OBW 99% Occupied Bandwidth. GMSK TRX1. +41.5dBm.
FCC Part 2.1049
Date: 26.NOV.2004 14:01:53



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch809. OBW 99% Occupied Bandwidth. GMSK TRX1. +41.5dBm.
FCC Part 2.1049
Date: 26.NOV.2004 14:17:12



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch810. OBW 99% Occupied Bandwidth. GMSK TRX1. +39.5dBm.
FCC Part 2.1049
Date: 26.NOV.2004 14:13:21

7.7. Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a)

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

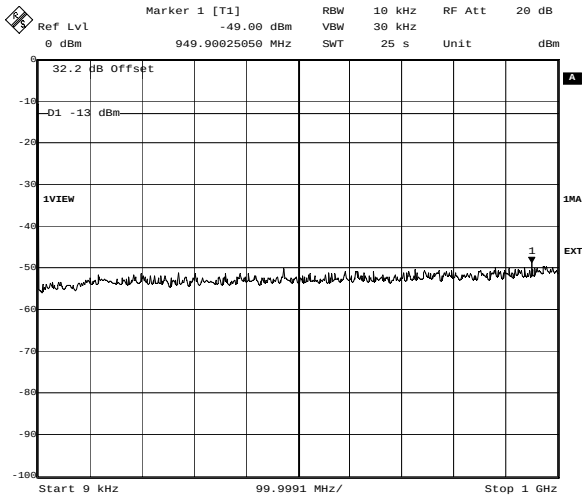
7.7.2. Tests were performed to identify the maximum transmitter conducted emission levels.

Result: 8PSK, TX0=512 and TX1=537

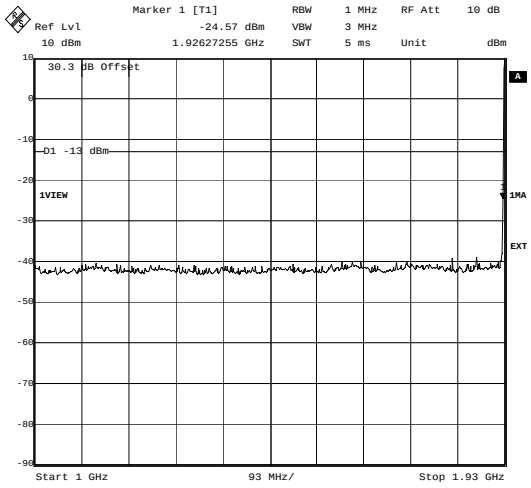
Band	Peak Power (dBm)	Limit (dBm)	Margin (dB)	Results
0.09 MHz to 1.0 GHz	-49.0	-13.0	36.0	Complied
1.0 GHz to 1.92627 GHz	-24.5	-13.0	11.5	Complied
1.99 GHz to 2.5 GHz	-36.5	-13.0	23.5	Complied
2.5 GHz to 10.0 GHz	-32.5	-13.0	19.5	Complied
10.0 GHz to 20.0 GHz	-29.3	-13.0	16.3	Complied

Test Of: **Ericsson AB**
RBS 2109 1900 MHz
To: **FCC Part 24: 2003**

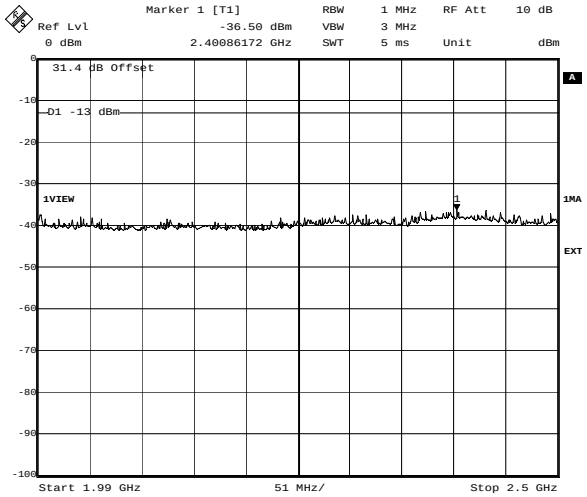
Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)



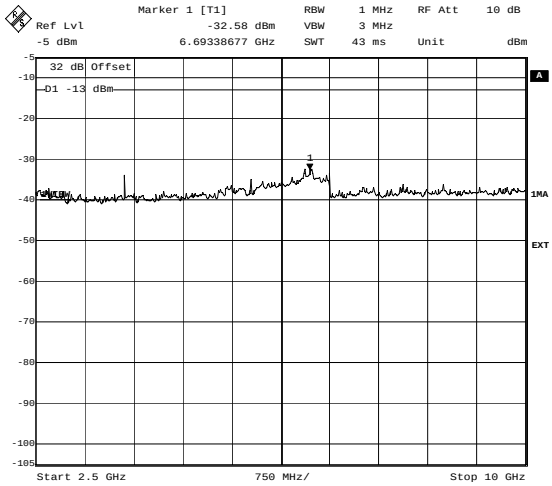
Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch512&537. Conducted Spurious Emissions. 8PSK TRX0&TRX1.
+38.2dBm. FCC Part 24.238
Date: 2.DEC.2004 08:45:11



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch512&537. Conducted Spurious Emissions. 8PSK TRX0&TRX1.
+38.2dBm. FCC Part 24.238
Date: 29.NOV.2004 14:22:43

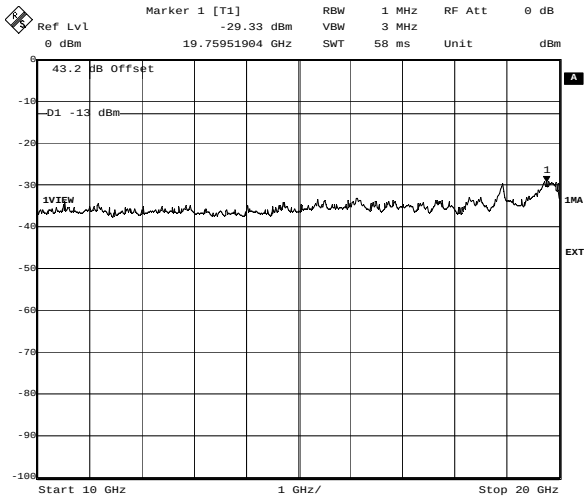


Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch512&537. Conducted Spurious Emissions. 8PSK TRX0&TRX1.
+38.2dBm. FCC Part 24.238
Date: 29.NOV.2004 16:03:48



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD011.
Comment A: Ch512&537. Conducted Spurious Emissions. 8PSK TRX0&TRX1.
+38.2dBm. FCC Part 24.238
Date: 29.NOV.2004 10:33:47

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch512&537. Conducted Spurious Emissions. 8PSK TRX0&TRX1.
+38.2dBm. FCC Part 24.238
Date: 29.NOV.2004 11:39:49

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)

Results: 8PSK, TX0=512 and TX1=537 (Continued)

1st 1 MHz block immediately outside adjacent frequency block.

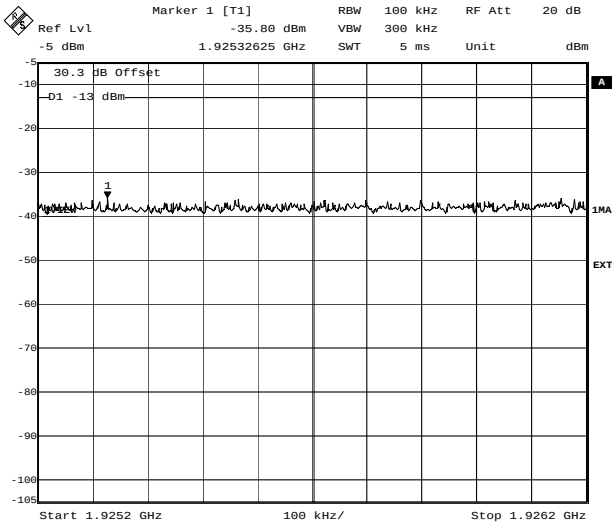
First Band: 1925.2 to 1926.2 MHz

100 kHz Strip Number	Peak Power (nW/100kHz)	100 kHz Strip Number	Peak Power (nW/100kHz)
1	198.642	6	223.208
2	262.961	7	216.314
3	198.084	8	207.678
4	225.837	9	216.821
5	192.326	10	244.665
Total Peak Power:		2186.536 nW/MHz	

Band (MHz)	Peak Power (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Status
1925.2 to 1926.2	-26.6	-13.0	13.6	Complied

Test Of: **Ericsson AB**
RBS 2109 1900 MHz
To: **FCC Part 24: 2003**

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch512&537. Conducted Spurious Emissions. 8PSK TRX0&TRX1.
+38.2dBm. FCC Part 24.238
Date: 29.NOV.2004 14:24:29

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)

Results: 8PSK, TX0=512 and TX1=537 (Continued)

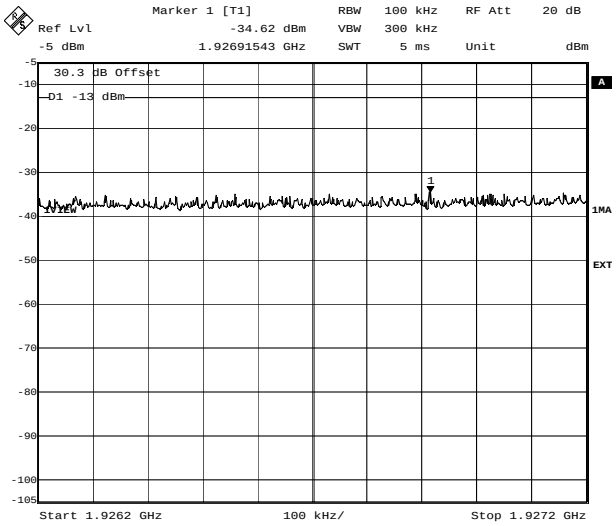
2nd 1 MHz block immediately outside adjacent frequency block.

Second Band: 1926.2 to 1927.2 MHz

100 kHz Strip Number	Peak Power (nW/100kHz)	100 kHz Strip Number	Peak Power (nW/100kHz)
1	274.795	6	308.780
2	287.834	7	310.957
3	266.806	8	345.185
4	301.070	9	313.442
5	268.185	10	316.688
Total Peak Power:		2993.742 nW/MHz	

Band (MHz)	Peak Power (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Status
1926.2 to 1927.2	-25.2	-13.0	12.2	Complied

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch512&537. Conducted Spurious Emissions. 8PSK TRX0&TRX1.
+38.2dBm. FCC Part 24.238
Date: 29.NOV.2004 14:27:03

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)

Results: 8PSK, TX0=512 and TX1=537 (Continued)

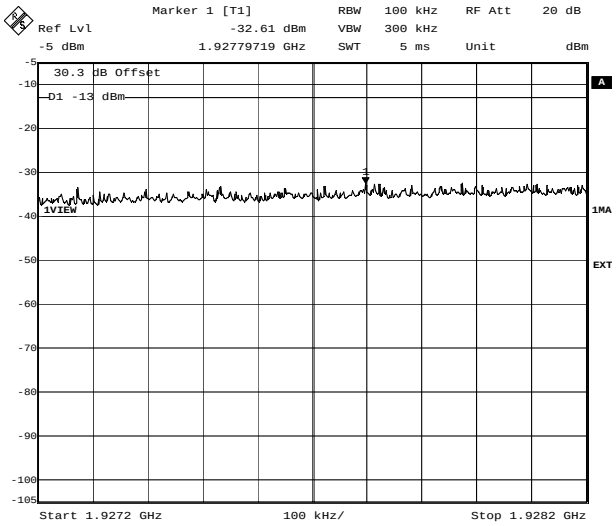
3rd 1 MHz block immediately outside adjacent frequency block.

Third Band: 1927.2 to 1928.2 MHz

100 kHz Strip Number	Peak Power (nW/100kHz)	100 kHz Strip Number	Peak Power (nW/100kHz)
1	429.364	6	548.260
2	397.065	7	512.267
3	354.192	8	534.320
4	464.507	9	513.468
5	417.468	10	505.832
Total Peak Power:		4676.743 nW/MHz	

Band (MHz)	Peak Power (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Status
1927.2 to 1928.2	-23.3	-13.0	10.3	Complied

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch512&537. Conducted Spurious Emissions. 8PSK TRX0&TRX1.
+38.2dBm. FCC Part 24.238
Date: 29.NOV.2004 14:31:43

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)

Results: 8PSK, TX0=512 and TX1=537 (Continued)

4th 1 MHz block immediately outside adjacent frequency block.

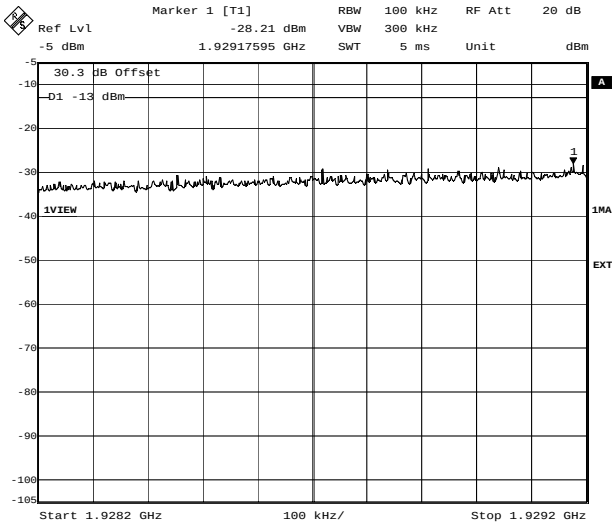
Fourth Band: 1928.2 to 1929.2 MHz

100 kHz Strip Number	Peak Power (nW/100kHz)	100 kHz Strip Number	Peak Power (nW/100kHz)
1	563.883	6	1158.000
2	630.956	7	1086.000
3	813.257	8	1150.000
4	767.018	9	1233.000
5	751.376	10	1510.000
Total Peak Power:		9663.490 nW/MHz	

Band (MHz)	Peak Power (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Status
1928.2 to 1929.2	-20.1	-13.0	7.1	Complied

Test Of: **Ericsson AB**
RBS 2109 1900 MHz
To: **FCC Part 24: 2003**

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch512&537. Conducted Spurious Emissions. 8PSK TRX0&TRX1.
+38.2dBm. FCC Part 24.238
Date: 29.NOV.2004 14:35:24

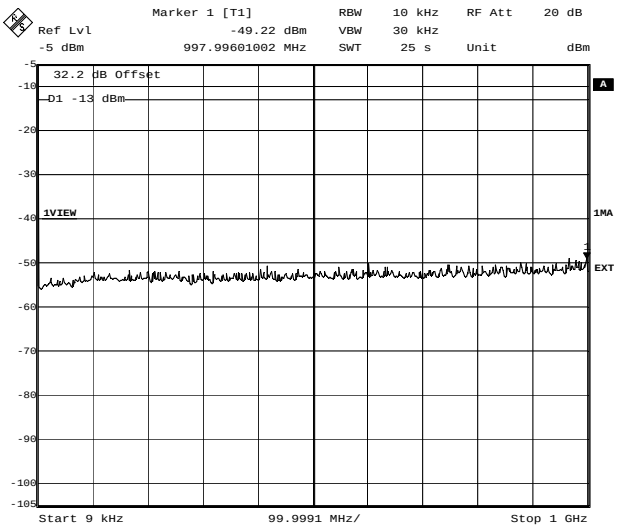
Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)

Result: 8PSK, TX0=810 and TX1=785

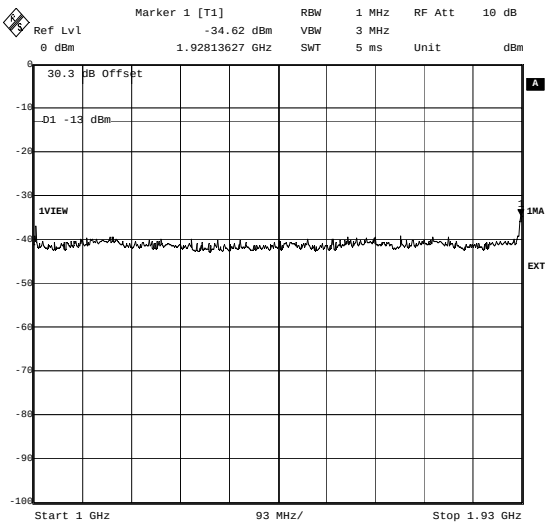
Band	Peak Power (dBm)	Limit (dBm)	Margin (dB)	Results
0.09 MHz to 1.0 GHz	-49.2	-13.0	36.2	Complied
1.0 GHz to 1.93 GHz	-34.6	-13.0	21.6	Complied
1.99306 GHz to 2.5 GHz	-29.1	-13.0	16.1	Complied
2.5 GHz to 10.0 GHz	-31.8	-13.0	18.8	Complied
10.0 GHz to 20.0 GHz	-29.3	-13.0	16.3	Complied

Test Of: **Ericsson AB**
RBS 2109 1900 MHz
To: **FCC Part 24: 2003**

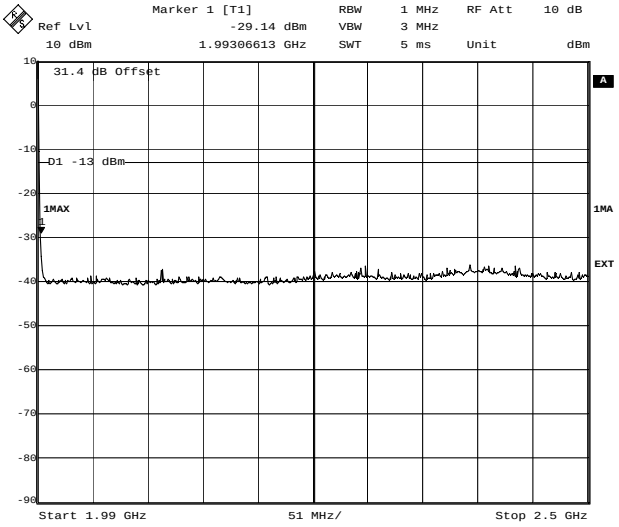
Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)



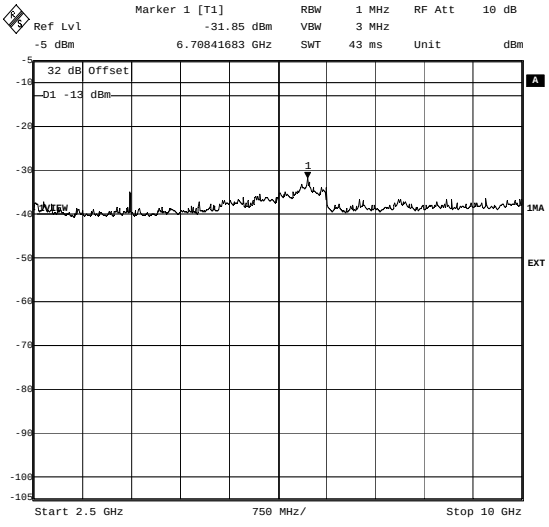
Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch810&785. Conducted Spurious Emissions. 8PSK TRX0&TRX1.
+38.2dBm. FCC Part 24.238
Date: 29.NOV.2004 11:20:11



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch810&785. Conducted Spurious Emissions. 8PSK TRX0&TRX1.
+38.2dBm. FCC Part 24.238
Date: 29.NOV.2004 14:38:50

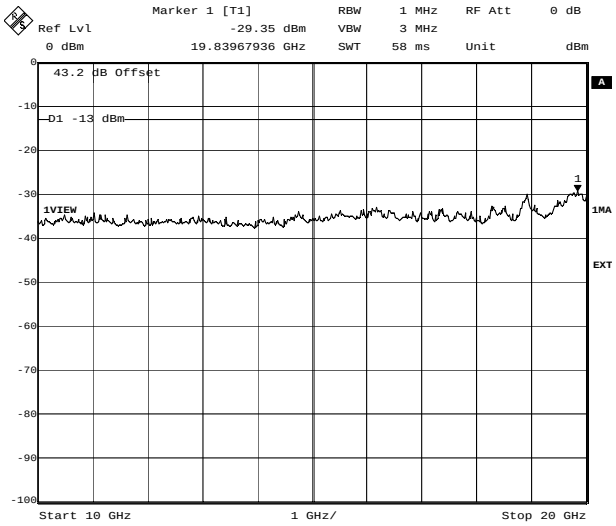


Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch810&785. Conducted Spurious Emissions. 8PSK TRX0&TRX1.
+38.2dBm. FCC Part 24.238
Date: 29.NOV.2004 15:50:23



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD011.
Comment A: Ch810&785. Conducted Spurious Emissions. 8PSK TRX0&TRX1.
+38.2dBm. FCC Part 24.238
Date: 29.NOV.2004 10:35:26

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch810&785. Conducted Spurious Emissions. 8PSK TRX0&TRX1.
+38.2dBm. FCC Part 24.238
Date: 29.NOV.2004 11:41:04

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)

Results: 8PSK, TX0=810 and TX1=785(Continued)

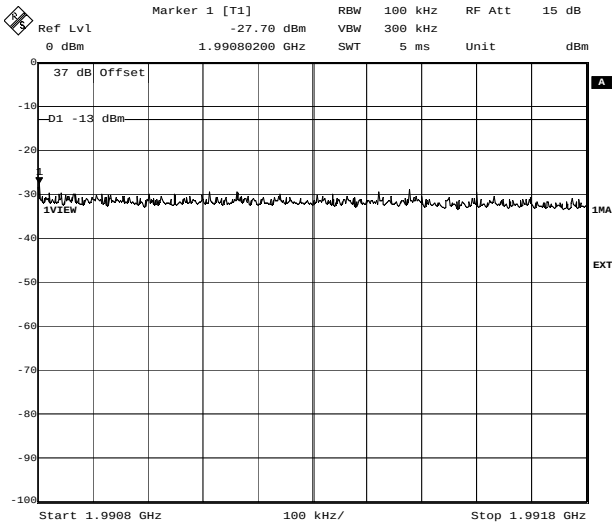
1st 1 MHz block immediately outside adjacent frequency block.

First Band: 1990.8 to 1991.8 MHz

100 kHz Strip Number	Peak Power (nW/100kHz)	100 kHz Strip Number	Peak Power (nW/100kHz)
1	1697.000	6	994.445
2	948.951	7	1207.000
3	997.244	8	836.244
4	1117.000	9	1079.000
5	989.336	10	792.399
Total Peak Power:		10658.619 nW/MHz	

Band (MHz)	Peak Power (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Status
1990.8 to 1991.8	-19.7	-13.0	6.7	Complied

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch810&785. Conducted Spurious Emissions. 8PSK TRX0&TRX1.
+38.2dBm. FCC Part 24.238
Date: 29.NOV.2004 15:54:27

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)

Results: 8PSK, TX0=810 and TX1=785 (Continued)

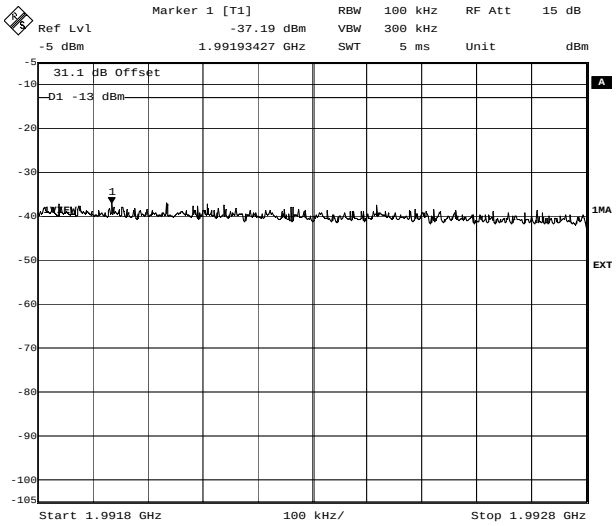
2nd 1 MHz block immediately outside adjacent frequency block.

Second Band: 1991.8 to 1992.8 MHz

100 kHz Strip Number	Peak Power (nW/100kHz)	100 kHz Strip Number	Peak Power (nW/100kHz)
1	179.112	6	127.908
2	190.801	7	168.770
3	189.199	8	133.852
4	182.413	9	120.975
5	152.177	10	127.370
Total Peak Power:		1572.577 nW/MHz	

Band (MHz)	Peak Power (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Status
1991.8 to 1992.8	-28.0	-13.0	15.0	Complied

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch810&785. Conducted Spurious Emissions. 8PSK TRX0&TRX1.
+38.2dBm. FCC Part 24.238
Date: 29.NOV.2004 15:57:07

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)

Results: 8PSK, TX0=810 and TX1=785 (Continued)

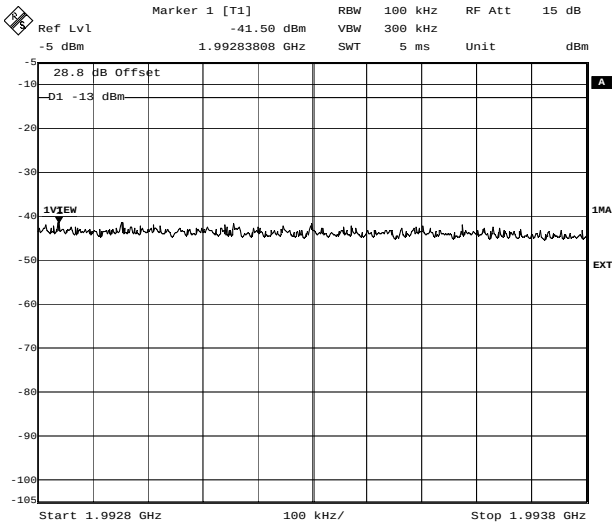
3rd 1 MHz block immediately outside adjacent frequency block.

Third Band: 1992.8 to 1993.8 MHz

100 kHz Strip Number	Peak Power (nW/100kHz)	100 kHz Strip Number	Peak Power (nW/100kHz)
1	70.767	6	57.000
2	70.602	7	54.647
3	60.549	8	60.266
4	65.536	9	55.162
5	63.333	10	45.889
Total Peak Power:		603.751 nW/MHz	

Band (MHz)	Peak Power (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Status
1992.8 to 1993.8	-32.1	-13.0	19.1	Complied

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch810&785. Conducted Spurious Emissions. 8PSK TRX0&TRX1.
+38.2dBm. FCC Part 24.238
Date: 29.NOV.2004 15:59:55

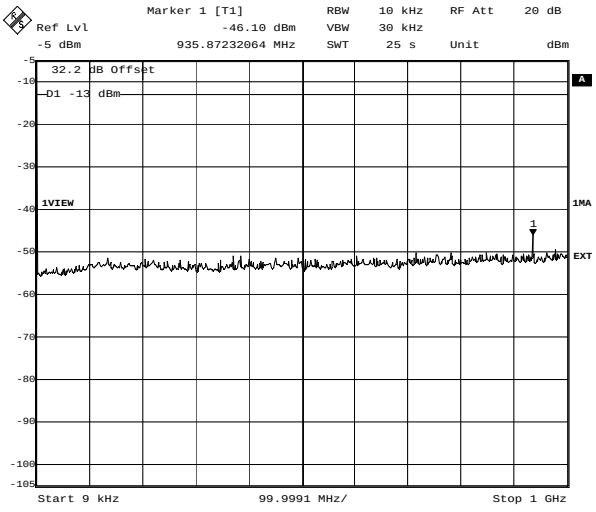
Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)

Result: 8PSK, TX0=537 and TX1=512

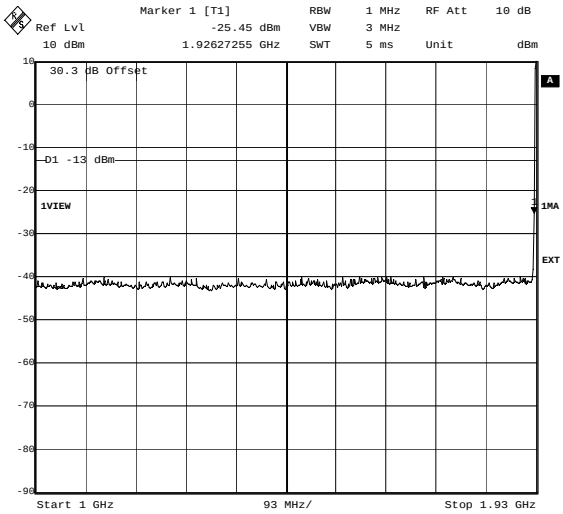
Band	Peak Power (dBm)	Limit (dBm)	Margin (dB)	Results
0.09 MHz to 1.0 GHz	-46.1	-13.0	33.1	Complied
1.0 GHz to 1.92627 GHz	-25.4	-13.0	12.4	Complied
1.99 GHz to 2.5 GHz	-35.7	-13.0	22.7	Complied
2.5 GHz to 10.0 GHz	-32.8	-13.0	19.8	Complied
10.0 GHz to 20.0 GHz	-29.0	-13.0	16.0	Complied

Test Of: **Ericsson AB**
RBS 2109 1900 MHz
To: **FCC Part 24: 2003**

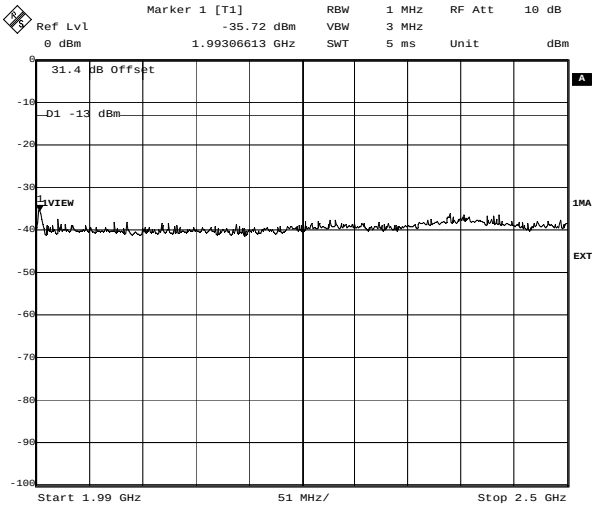
Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)



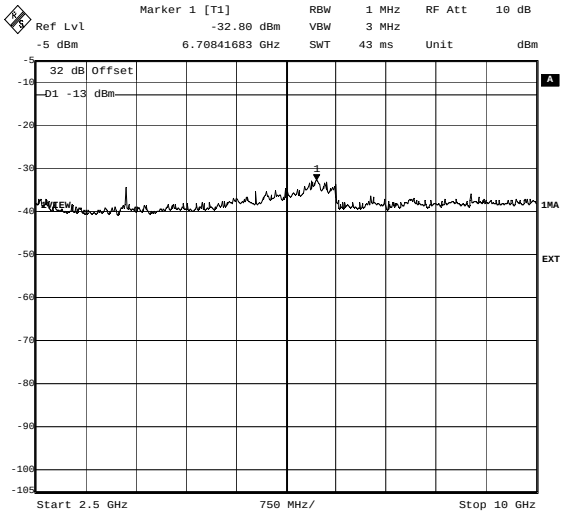
Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch537&512. Conducted Spurious Emissions. 8PSK TRX0&TRX1.
+38.2dBm. FCC Part 24.238
Date: 29.NOV.2004 11:06:13



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch537&512. Conducted Spurious Emissions. 8PSK TRX0&TRX1.
+38.2dBm. FCC Part 24.238
Date: 29.NOV.2004 13:50:22

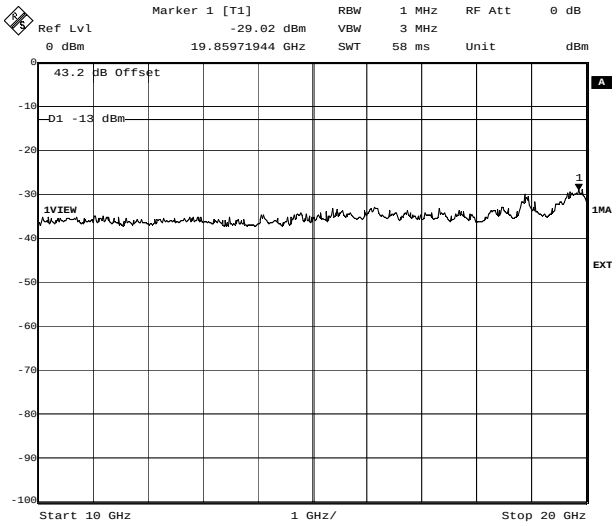


Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch537&512. Conducted Spurious Emissions. 8PSK TRX0&TRX1.
+38.2dBm. FCC Part 24.238
Date: 30.NOV.2004 09:14:03



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD011.
Comment A: Ch537&512. Conducted Spurious Emissions. 8PSK TRX0&TRX1.
+38.2dBm. FCC Part 24.238
Date: 29.NOV.2004 10:51:10

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch537&512. Conducted Spurious Emissions. 8PSK TRX0&TRX1.
+38.2dBm. FCC Part 24.238
Date: 29.NOV.2004 11:49:58

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)

Results: 8PSK, TX0=537 and TX1=512 (Continued)

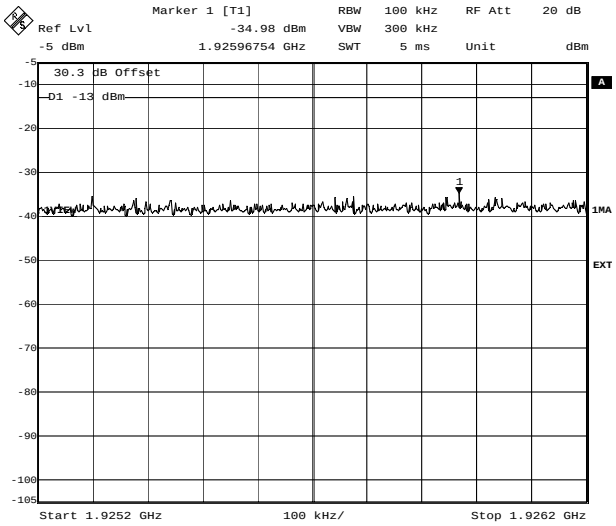
1st 1 MHz block immediately outside adjacent frequency block.

First Band: 1925.2 to 1926.2 MHz

100 kHz Strip Number	Peak Power (nW/100kHz)	100 kHz Strip Number	Peak Power (nW/100kHz)
1	271.469	6	277.381
2	246.967	7	196.882
3	214.599	8	317.579
4	220.404	9	259.779
5	192.957	10	214.398
Total Peak Power:		2412.415 nW/MHz	

Band (MHz)	Peak Power (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Status
1925.2 to 1926.2	-26.1	-13.0	13.1	Complied

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch537&512. Conducted Spurious Emissions. 8PSK TRX0&TRX1.
+38.2dBm. FCC Part 24.238
Date: 29.NOV.2004 13:51:57

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)

Results: 8PSK, TX0=537 and TX1=512 (Continued)

2nd 1 MHz block immediately outside adjacent frequency block.

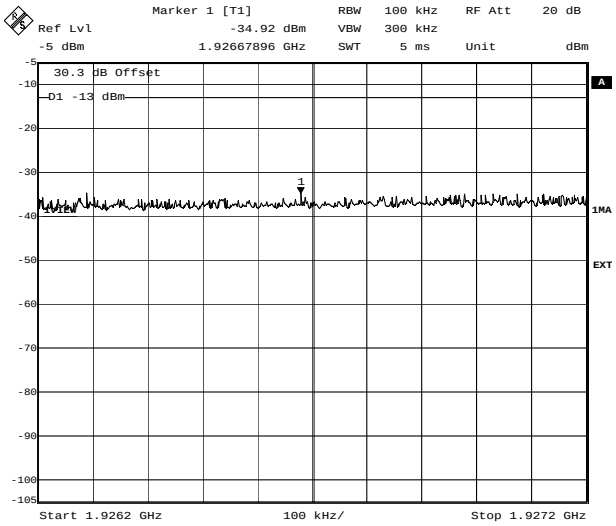
Second Band: 1926.2 to 1927.2 MHz

100 kHz Strip Number	Peak Power (nW/100kHz)	100 kHz Strip Number	Peak Power (nW/100kHz)
1	316.836	6	257.961
2	254.124	7	279.860
3	226.366	8	300.788
4	238.444	9	315.503
5	322.223	10	298.543
Total Peak Power:		2810.648 nW/MHz	

Band (MHz)	Peak Power (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Status
1926.2 to 1927. 2	-25.5	-13.0	12.5	Complied

Test Of: **Ericsson AB**
RBS 2109 1900 MHz
To: **FCC Part 24: 2003**

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch537&512. Conducted Spurious Emissions. 8PSK TRX0&TRX1.
+38.2dBm. FCC Part 24.238
Date: 29.NOV.2004 14:06:41

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)

Results: 8PSK, TX0=537 and TX1=512 (Continued)

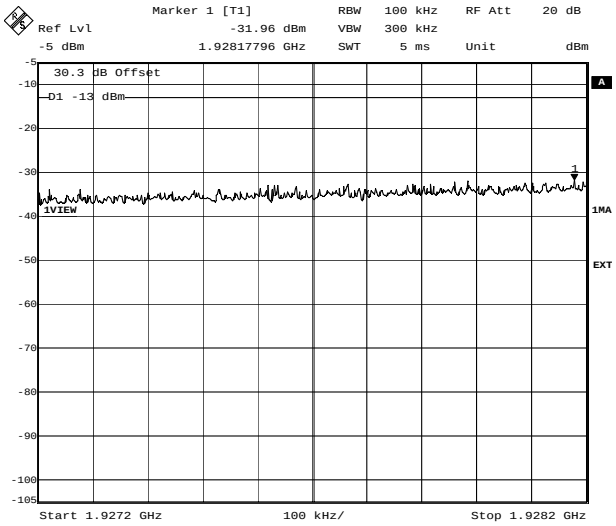
3rd 1 MHz block immediately outside adjacent frequency block.

Third Band: 1927.2 to 1928.2 MHz

100 kHz Strip Number	Peak Power (nW/100kHz)	100 kHz Strip Number	Peak Power (nW/100kHz)
1	381.928	6	520.733
2	294.791	7	505.358
3	369.784	8	614.624
4	391.709	9	557.581
5	497.608	10	636.893
Total Peak Power:		4711.009 nW/MHz	

Band (MHz)	Peak Power (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Status
1927.2 to 1928.2	-23.2	-13.0	10.2	Complied

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch537&512. Conducted Spurious Emissions. 8PSK TRX0&TRX1.
+38.2dBm. FCC Part 24.238
Date: 29.NOV.2004 14:10:01

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)

Results: 8PSK, TX0=537 and TX1=512 (Continued)

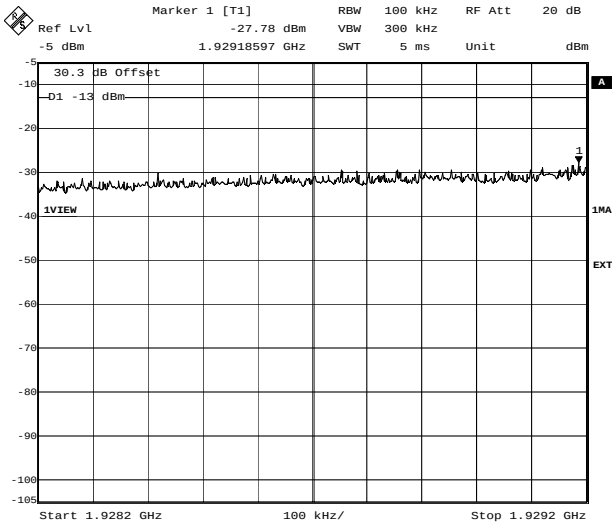
4th 1 MHz block immediately outside adjacent frequency block.

Fourth Band: 1928.2 to 1929.2 MHz

100 kHz Strip Number	Peak Power (nW/100kHz)	100 kHz Strip Number	Peak Power (nW/100kHz)
1	691.284	6	1072.000
2	609.750	7	1080.000
3	918.985	8	1106.000
4	837.607	9	1012.000
5	881.058	10	1666.000
Total Peak Power:		9874.684 nW/MHz	

Band (MHz)	Peak Power (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Status
1928.2 to 1929.2	-20.0	-13.0	7.0	Complied

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch537&512. Conducted Spurious Emissions. 8PSK TRX0&TRX1.
+38.2dBm. FCC Part 24.238
Date: 29.NOV.2004 14:13:44

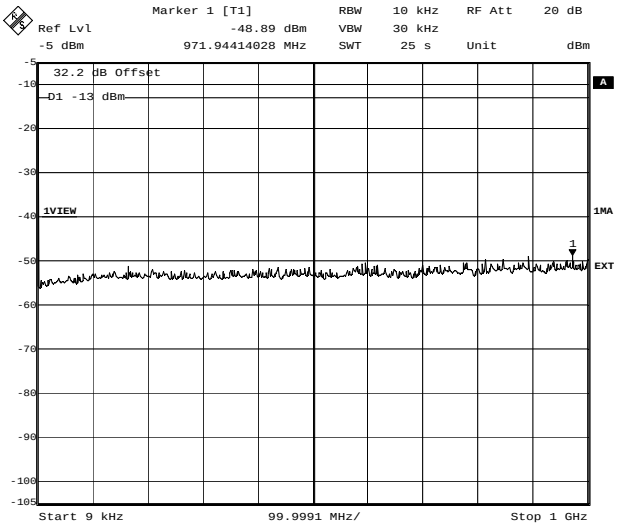
Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)

Result: 8PSK, TX0=785 and TX1=810

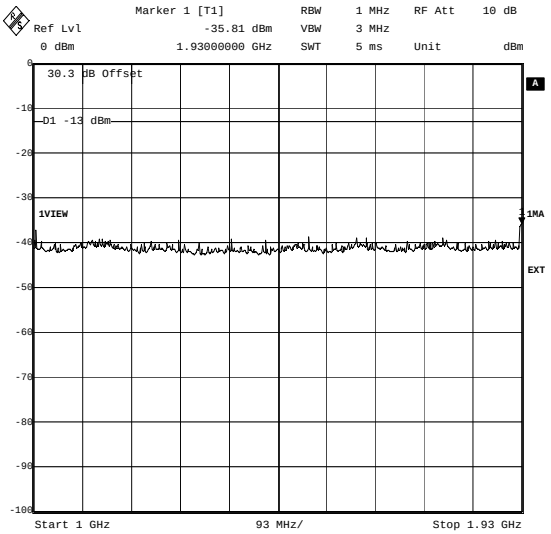
Band	Peak Power (dBm)	Limit (dBm)	Margin (dB)	Results
0.09 MHz to 1.0 GHz	-48.8	-13.0	35.8	Complied
1.0 GHz to 1.93 GHz	-35.8	-13.0	22.8	Complied
1.99306 GHz to 2.5 GHz	-26.6	-13.0	13.6	Complied
2.5 GHz to 10.0 GHz	-32.5	-13.0	19.5	Complied
10.0 GHz to 20.0 GHz	-29.0	-13.0	16.0	Complied

Test Of: **Ericsson AB**
RBS 2109 1900 MHz
To: **FCC Part 24: 2003**

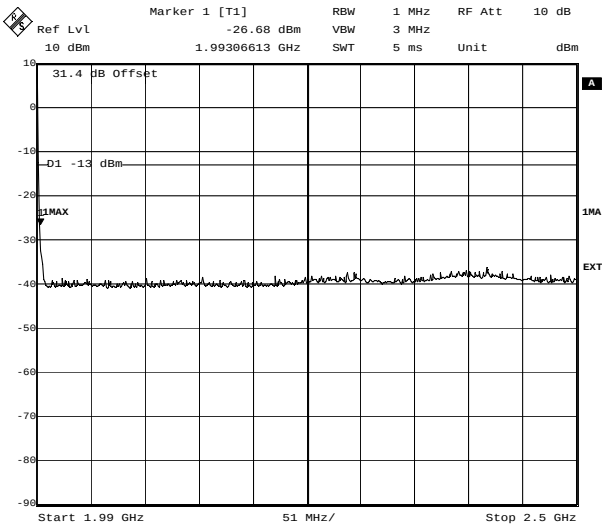
Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)



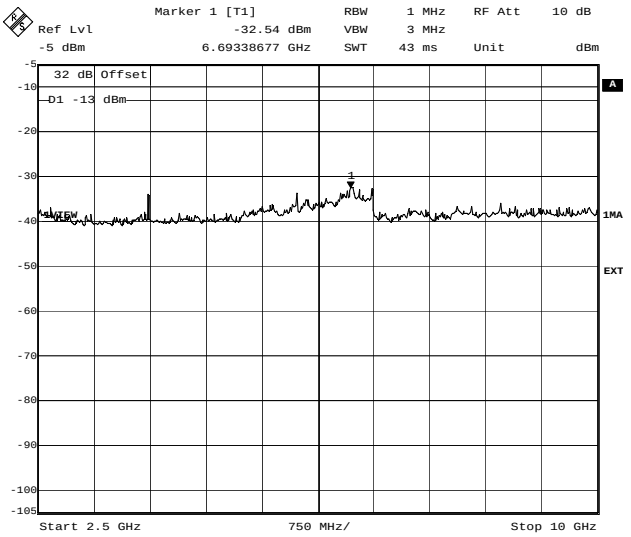
Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch785&810. Conducted Spurious Emissions. 8PSK TRX0&TRX1.
+38.2dBm. FCC Part 24.238
Date: 29.NOV.2004 11:07:49



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch785&810. Conducted Spurious Emissions. 8PSK TRX0&TRX1.
+38.2dBm. FCC Part 24.238
Date: 29.NOV.2004 14:17:11



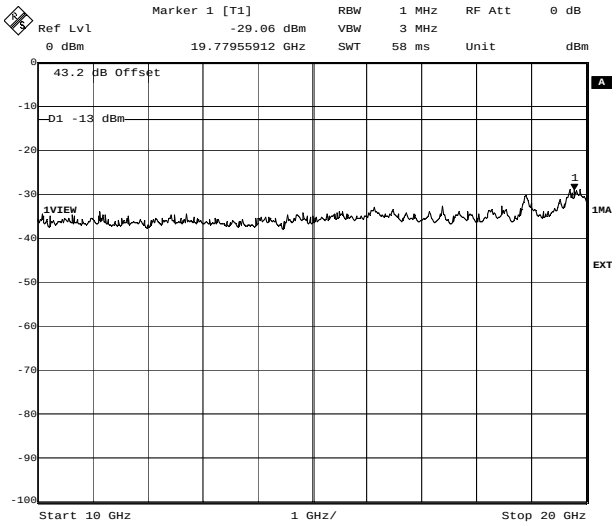
Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch785&810. Conducted Spurious Emissions. 8PSK TRX0&TRX1.
+38.2dBm. FCC Part 24.238
Date: 30.NOV.2004 08:47:10



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD011.
Comment A: Ch785&810. Conducted Spurious Emissions. 8PSK TRX0&TRX1.
+38.2dBm. FCC Part 24.238
Date: 29.NOV.2004 10:52:21

Test Of: **Ericsson AB**
RBS 2109 1900 MHz
To: **FCC Part 24: 2003**

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch785&810. Conducted Spurious Emissions. 8PSK TRX0&TRX1.
+38.2dBm. FCC Part 24.238
Date: 29.NOV.2004 11:52:56

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)

Results: 8PSK, TX0=785 and TX1=810 (Continued)

1st 1 MHz block immediately outside adjacent frequency block.

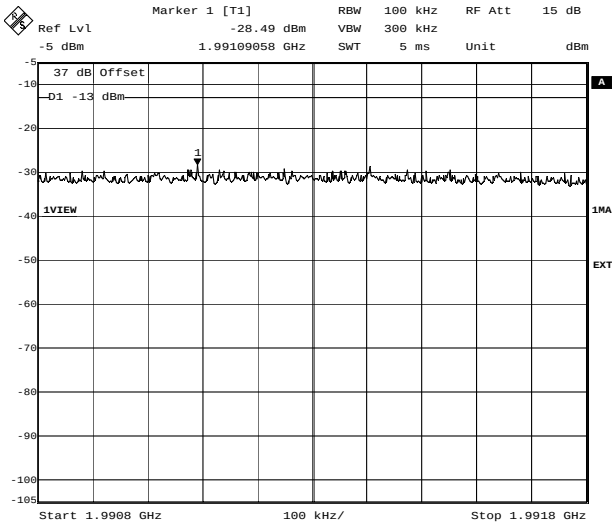
First Band: 1990.8 to 1991.8 MHz

100 kHz Strip Number	Peak Power (nW/100kHz)	100 kHz Strip Number	Peak Power (nW/100kHz)
1	1032.000	6	1008.000
2	1052.000	7	1274.000
3	1416.000	8	1084.000
4	1110.000	9	955.856
5	1141.000	10	938.996
Total Peak Power:		11011.852 nW/MHz	

Band (MHz)	Peak Power (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Status
1990.8 to 1991.8	-19.5	-13.0	6.5	Complied

Test Of: **Ericsson AB**
RBS 2109 1900 MHz
To: **FCC Part 24: 2003**

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch785&810. Conducted Spurious Emissions. 8PSK TRX0&TRX1.
+38.2dBm. FCC Part 24.238
Date: 30.NOV.2004 08:50:21

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)

Results: 8PSK, TX0=785 and TX1=810 (Continued)

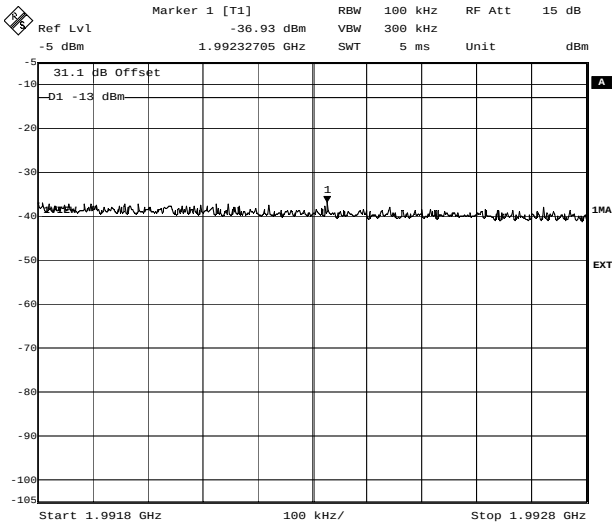
2nd 1 MHz block immediately outside adjacent frequency block.

Second Band: 1991.8 to 1992.8 MHz

100 kHz Strip Number	Peak Power (nW/100kHz)	100 kHz Strip Number	Peak Power (nW/100kHz)
1	191.786	6	202.587
2	183.355	7	152.463
3	170.358	8	139.745
4	180.121	9	140.532
5	168.612	10	156.075
Total Peak Power:		1685.634 nW/MHz	

Band (MHz)	Peak Power (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Status
1991.8 to 1992.8	27.7	-13.0	14.7	Complied

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch785&810. Conducted Spurious Emissions. 8PSK TRX0&TRX1.
+38.2dBm. FCC Part 24.238
Date: 30.NOV.2004 08:54:13

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)

Results: 8PSK, TX0=785 and TX1=810 (Continued)

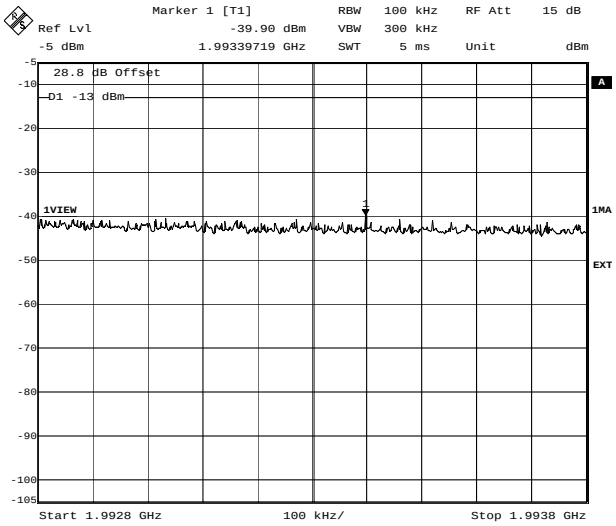
3rd 1 MHz block immediately outside adjacent frequency block.

Third Band: 1992.8 to 1993.8 MHz

100 kHz Strip Number	Peak Power (nW/100kHz)	100 kHz Strip Number	Peak Power (nW/100kHz)
1	80.155	6	102.399
2	78.044	7	80.607
3	85.386	8	76.238
4	75.280	9	60.408
5	80.909	10	69.194
Total Peak Power:		788.620 nW/MHz	

Band (MHz)	Peak Power (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Status
1992.8 to 1993.8	-31.0	-13.0	18.0	Complied

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch785&810. Conducted Spurious Emissions. 8PSK TRX0&TRX1.
+38.2dBm. FCC Part 24.238
Date: 30.NOV.2004 09:10:10

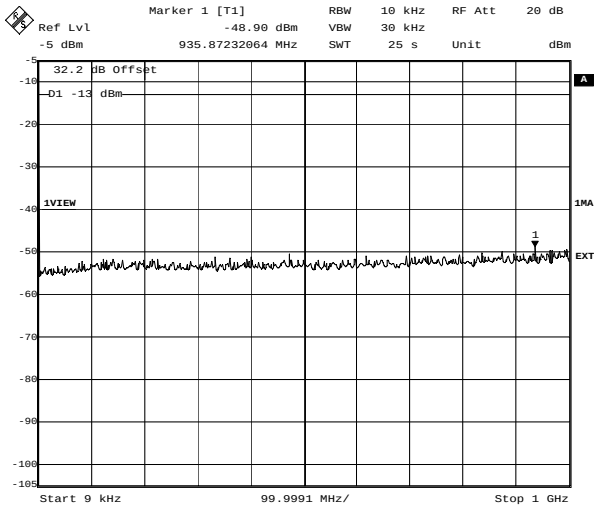
Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)

Result: GMSK, TX0=513 and TX1=538

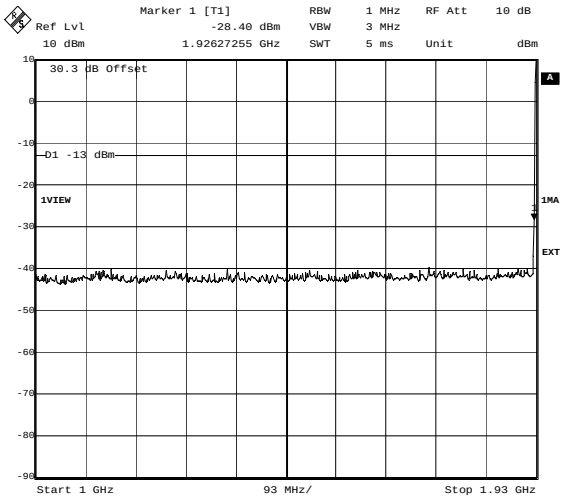
Band	Peak Power (dBm)	Limit (dBm)	Margin (dB)	Results
0.09 MHz to 1.0 GHz	-48.9	-13.0	35.9	Complied
1.0 GHz to 1.92627 GHz	-28.4	-13.0	15.4	Complied
1.99 GHz to 2.5 GHz	-35.6	-13.0	22.6	Complied
2.5 GHz to 10.0 GHz	-31.9	-13.0	18.9	Complied
10.0 GHz to 20.0 GHz	-28.4	-13.0	15.4	Complied

Test Of: **Ericsson AB**
RBS 2109 1900 MHz
To: **FCC Part 24: 2003**

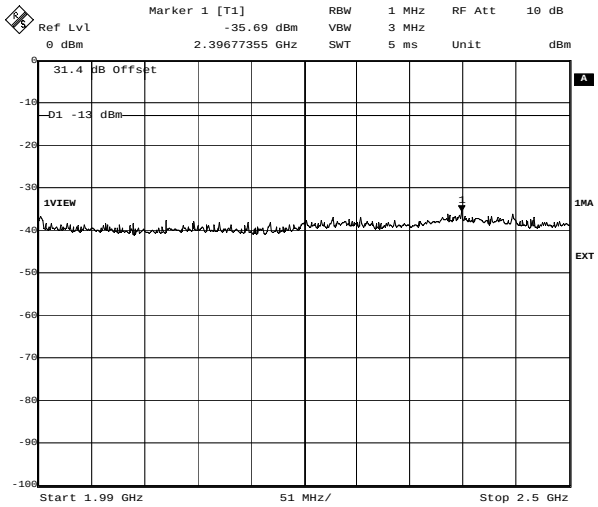
Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)



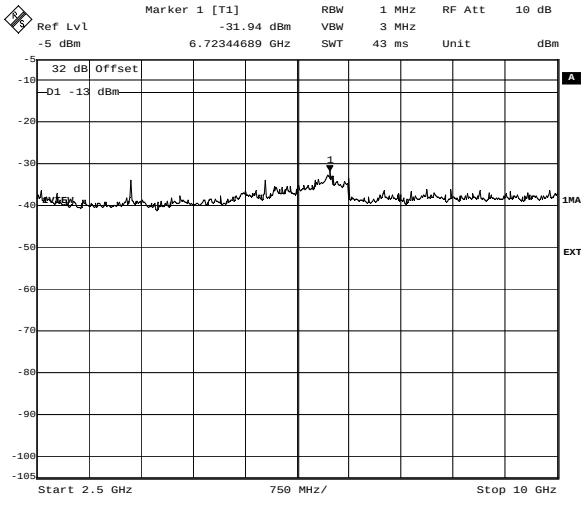
Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch513&538. Conducted Spurious Emissions. GMSK TRX0&TRX1.
+41.5dBm. FCC Part 24.238
Date: 29.NOV.2004 11:21:35



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch513&538. Conducted Spurious Emissions. GMSK TRX0&TRX1.
+41.5dBm. FCC Part 24.238
Date: 29.NOV.2004 12:49:52



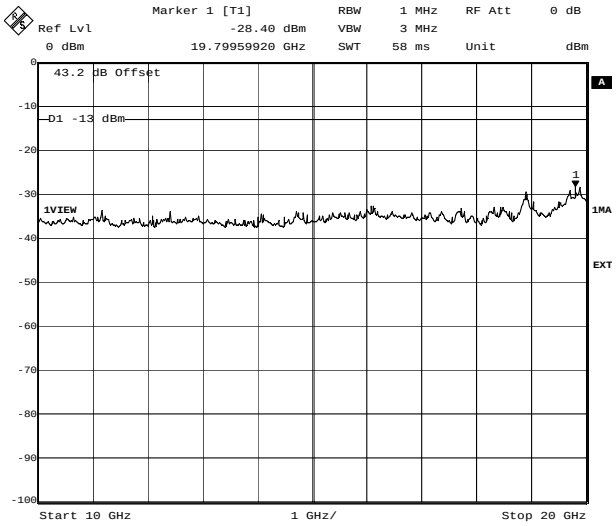
Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch513&538. Conducted Spurious Emissions. GMSK TRX0&TRX1.
+41.5dBm. FCC Part 24.238
Date: 29.NOV.2004 15:40:52



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD011.
Comment A: Ch513&538. Conducted Spurious Emissions. GMSK TRX0&TRX1.
+41.5dBm. FCC Part 24.238
Date: 29.NOV.2004 10:36:58

Test Of: **Ericsson AB**
RBS 2109 1900 MHz
To: **FCC Part 24: 2003**

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch513&538. Conducted Spurious Emissions. GMSK TRX0&TRX1.
+41.5dBm. FCC Part 24.238
Date: 29.NOV.2004 11:42:29

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)

Results: GMSK, TX0=513 and TX1=538 (Continued)

1st 1 MHz block immediately outside adjacent frequency block.

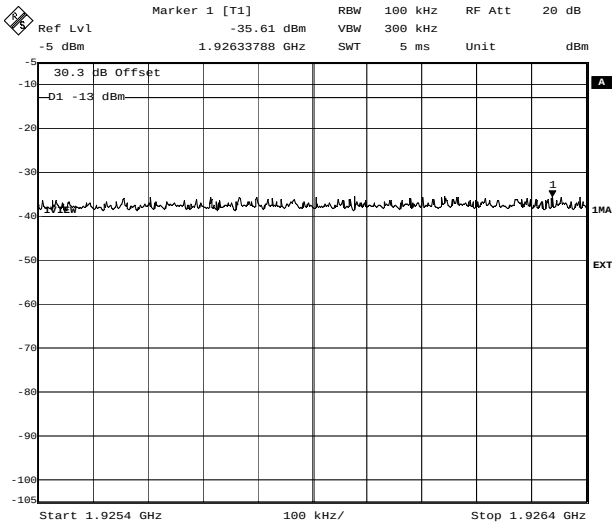
First Band: 1925.4 to 1926.4 MHz

100 kHz Strip Number	Peak Power (nW/100kHz)	100 kHz Strip Number	Peak Power (nW/100kHz)
1	215.303	6	2676.181
2	238.444	7	243.180
3	256.155	8	273.768
4	263.825	9	246.967
5	237.664	10	274.538
Total Peak Power:		2517.025 nW/MHz	

Band (MHz)	Peak Power (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Status
1925.4 to 1926.4	-25.9	-13.0	12.9	Complied

Test Of: **Ericsson AB**
RBS 2109 1900 MHz
To: **FCC Part 24: 2003**

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch513&538. Conducted Spurious Emissions. GMSK TRX0&TRX1.
+41.5dBm. FCC Part 24.238
Date: 29.NOV.2004 12:52:33

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)

Results: GMSK, TX0=513 and TX1=538 (Continued)

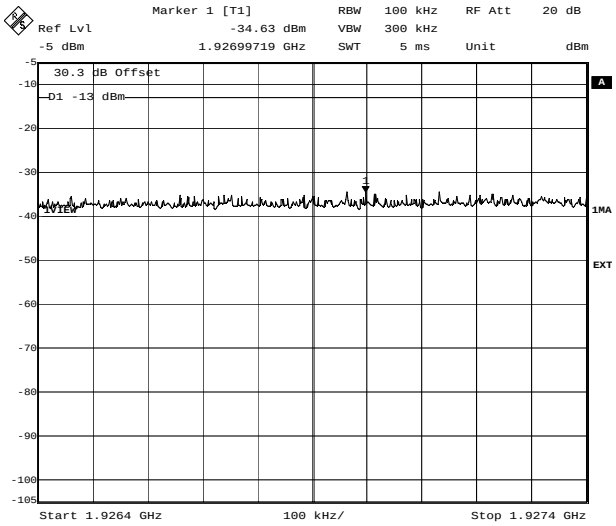
2nd 1 MHz block immediately outside adjacent frequency block.

Second Band: 1926.4 to 1927.4 MHz

100 kHz Strip Number	Peak Power (nW/100kHz)	100 kHz Strip Number	Peak Power (nW/100kHz)
1	271.724	6	337.197
2	251.049	7	310.229
3	295.206	8	340.051
4	293.139	9	309.359
5	282.758	10	272.999
Total Peak Power:		2963.711 nW/MHz	

Band (MHz)	Peak Power (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Status
1926.4 to 1927.4	-25.2	-13.0	12.2	Complied

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch513&538. Conducted Spurious Emissions. GMSK TRX0&TRX1.
+41.5dBm. FCC Part 24.238
Date: 29.NOV.2004 12:56:10

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)

Results: GMSK, TX0=513 and TX1=538 (Continued)

3rd 1 MHz block immediately outside adjacent frequency block.

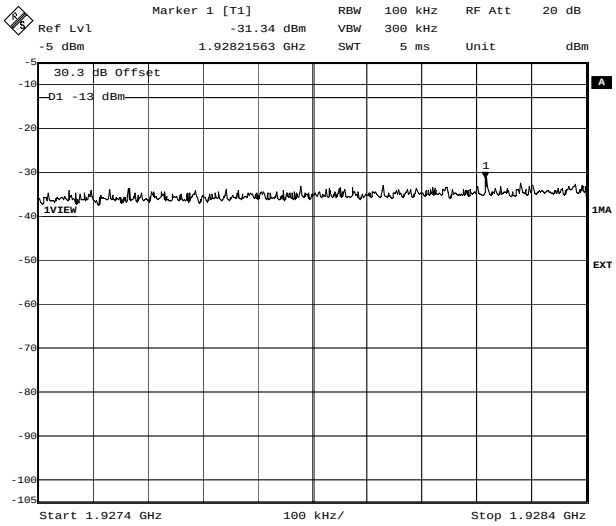
Third Band: 1927.4 to 1928.4 MHz

100 kHz Strip Number	Peak Power (nW/100kHz)	100 kHz Strip Number	Peak Power (nW/100kHz)
1	359.203	6	444.295
2	409.720	7	492.509
3	375.016	8	440.772
4	384.620	9	733.988
5	457.170	10	504.176
Total Peak Power:		4601.469 nW/MHz	

Band (MHz)	Peak Power (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Status
1927.4 to 1928.4	-23.3	-13.0	10.3	Complied

Test Of: **Ericsson AB**
RBS 2109 1900 MHz
To: **FCC Part 24: 2003**

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch513&538. Conducted Spurious Emissions. GMSK TRX0&TRX1.
+41.5dBm. FCC Part 24.238
Date: 29.NOV.2004 13:00:50

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)

Results: GMSK, TX0=513 and TX1=538 (Continued)

4th 1 MHz block immediately outside adjacent frequency block.

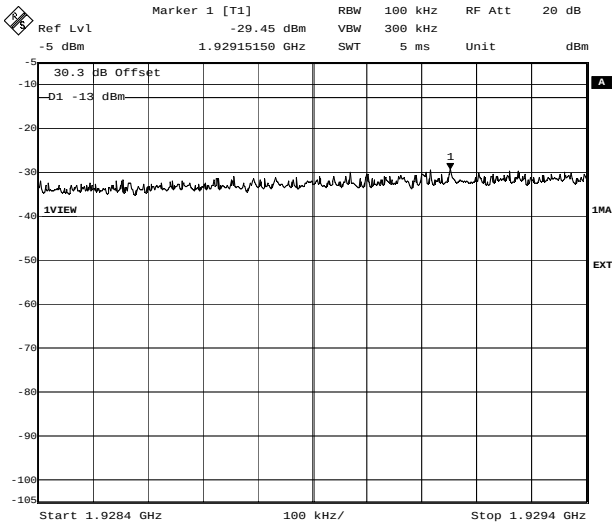
Fourth Band: 1928.4 to 1929.4 MHz

100 kHz Strip Number	Peak Power (nW/100kHz)	100 kHz Strip Number	Peak Power (nW/100kHz)
1	614.049	6	997.936
2	631.547	7	870.397
3	613.474	8	1134.000
4	789.245	9	1006.000
5	717.674	10	946.945
Total Peak Power:		8321.267 nW/MHz	

Band (MHz)	Peak Power (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Status
1928.4 to 1929.4	-20.7	-13.0	7.7	Complied

Test Of: **Ericsson AB**
RBS 2109 1900 MHz
To: **FCC Part 24: 2003**

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch513&538. Conducted Spurious Emissions. GMSK TRX0&TRX1.
+41.5dBm. FCC Part 24.238
Date: 29.NOV.2004 13:04:00

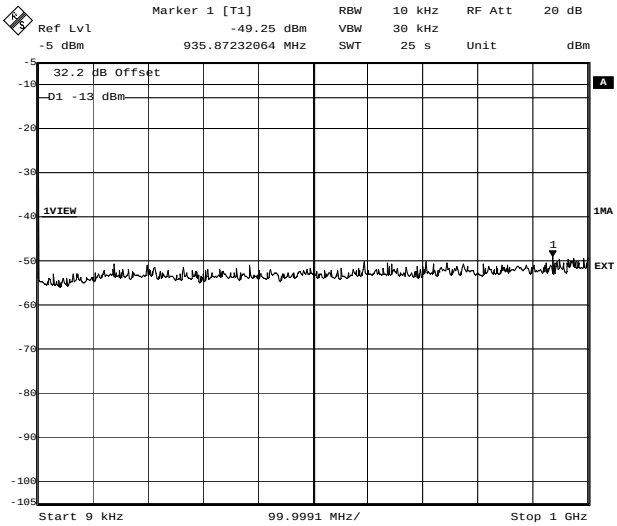
Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)

Result: GMSK, TX0=809 and TX1=784

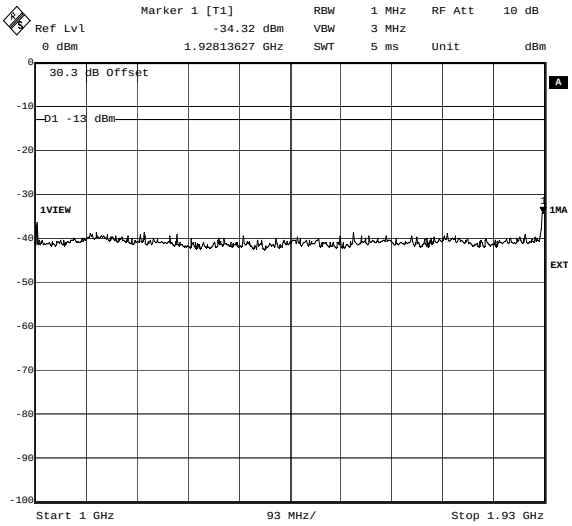
Band	Peak Power (dBm)	Limit (dBm)	Margin (dB)	Results
0.09 MHz to 1.0 GHz	-49.2	-13.0	36.2	Complied
1.0 GHz to 1.93 GHz	-34.3	-13.0	21.3	Complied
1.99204 GHz to 2.5 GHz	-26.5	-13.0	13.5	Complied
2.5 GHz to 10.0 GHz	-32.2	-13.0	19.2	Complied
10.0 GHz to 20.0 GHz	-29.1	-13.0	16.1	Complied

Test Of: **Ericsson AB**
RBS 2109 1900 MHz
To: **FCC Part 24: 2003**

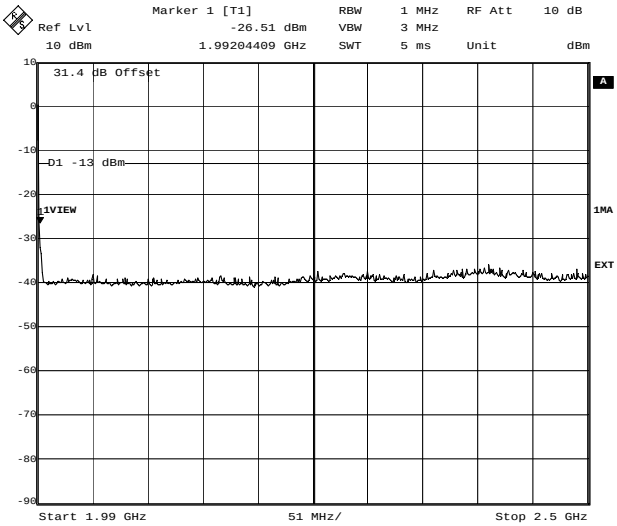
Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)



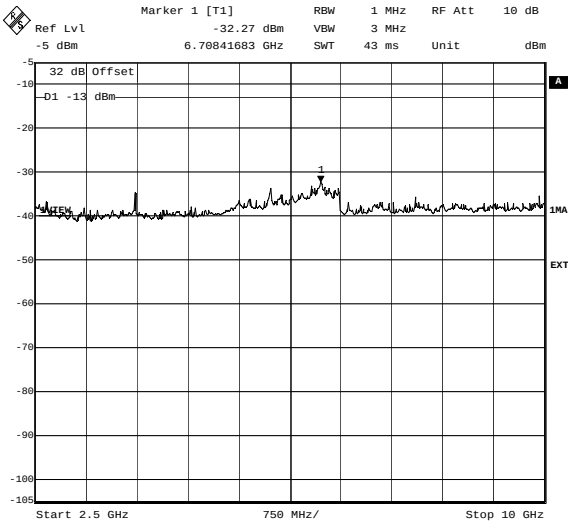
Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch809&784. Conducted Spurious Emissions. GMSK TRX0&TRX1.
+41.5dBm. FCC Part 24.238
Date: 29.NOV.2004 11:22:43



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch809&784. Conducted Spurious Emissions. GMSK TRX0&TRX1.
+41.5dBm. FCC Part 24.238
Date: 29.NOV.2004 13:09:30

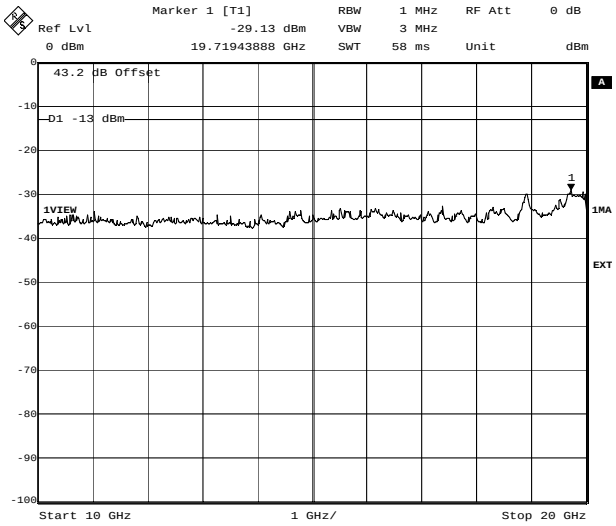


Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch809&784. Conducted Spurious Emissions. GMSK TRX0&TRX1.
+41.5dBm. FCC Part 24.238
Date: 29.NOV.2004 15:30:02



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch809&784. Conducted Spurious Emissions. GMSK TRX0&TRX1.
+41.5dBm. FCC Part 24.238
Date: 29.NOV.2004 10:38:11

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch809&784. Conducted Spurious Emissions. GMSK TRX0&TRX1.
+41.5dBm. FCC Part 24.238
Date: 29.NOV.2004 11:43:39

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)

Results: GMSK, TX0=809 and TX1=784 (Continued)

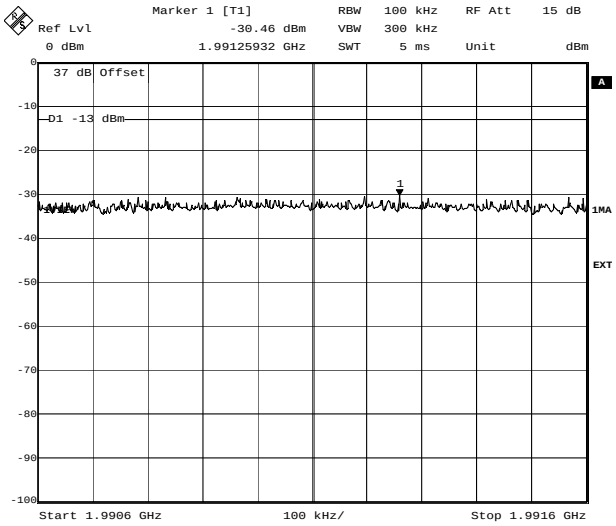
1st 1 MHz block immediately outside adjacent frequency block.

First Band: 1990.6 to 1991.6 MHz

100 kHz Strip Number	Peak Power (nW/100kHz)	100 kHz Strip Number	Peak Power (nW/100kHz)
1	663.227	6	844.508
2	817.655	7	900.462
3	807.382	8	756.149
4	836.244	9	724.942
5	733.135	10	797.611
Total Peak Power:		7881.315 nW/MHz	

Band (MHz)	Peak Power (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Status
1990.6 to 1991.6	-21.0	-13.0	8.0	Complied

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch809&784. Conducted Spurious Emissions. GMSK TRX0&TRX1.
+41.5dBm. FCC Part 24.238
Date: 29.NOV.2004 15:34:05

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)

Results: GMSK, TX0=809 and TX1=784(Continued)

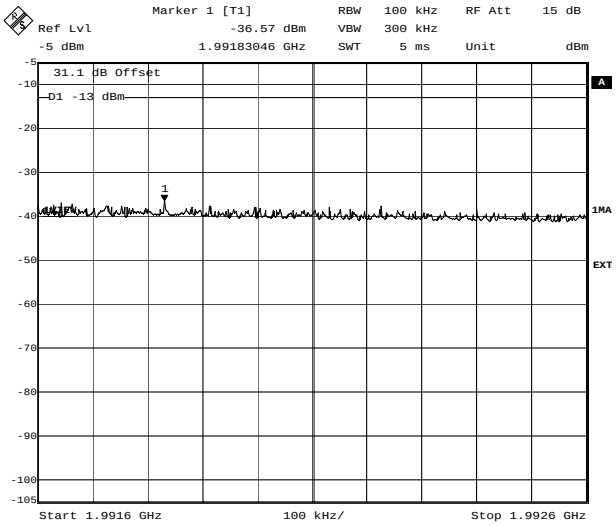
2nd 1 MHz block immediately outside adjacent frequency block.

Second Band: 1991.6 to 1992.6 MHz

100 kHz Strip Number	Peak Power (nW/100kHz)	100 kHz Strip Number	Peak Power (nW/100kHz)
1	192.686	6	153.107
2	163.787	7	160.147
3	220.300	8	119.735
4	163.710	9	118.176
5	143.996	10	109.081
Total Peak Power:		1544.725 nW/MHz	

Band (MHz)	Peak Power (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Status
1991.6 to 1992.6	-28.1	-13.0	15.1	Complied

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)



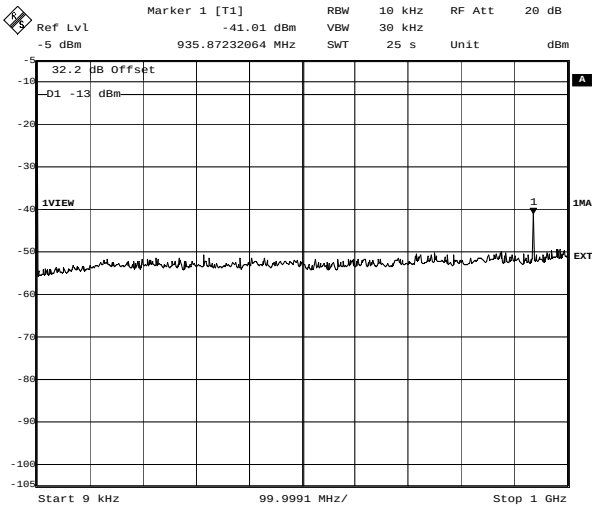
Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch809&784. Conducted Spurious Emissions. GMSK TRX0&TRX1.
+41.5dBm. FCC Part 24.238
Date: 29.NOV.2004 15:37:12

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)

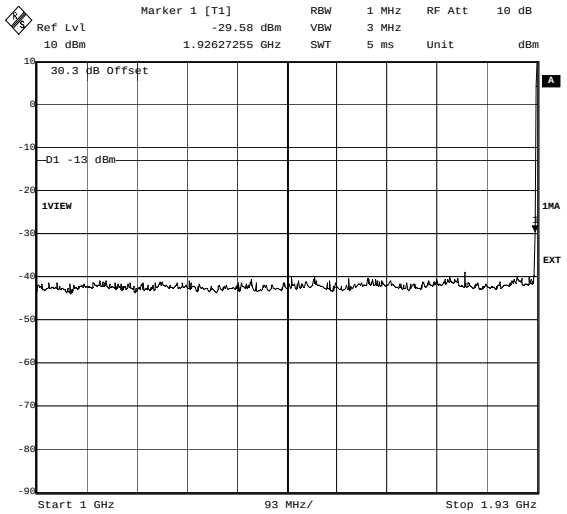
Result: GMSK, TX0=538 and TX1=513

Band	Peak Power (dBm)	Limit (dBm)	Margin (dB)	Results
0.09 MHz to 1.0 GHz	-41.0	-13.0	28.0	Complied
1.0 GHz to 1.92627 GHz	-29.5	-13.0	16.5	Complied
1.99 GHz to 2.5 GHz	-36.0	-13.0	23.0	Complied
2.5 GHz to 10.0 GHz	-32.6	-13.0	19.6	Complied
10.0 GHz to 20.0 GHz	-28.8	-13.0	15.8	Complied

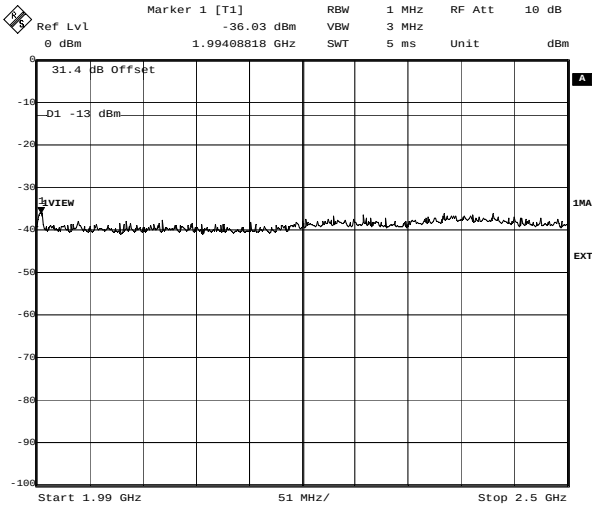
Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)



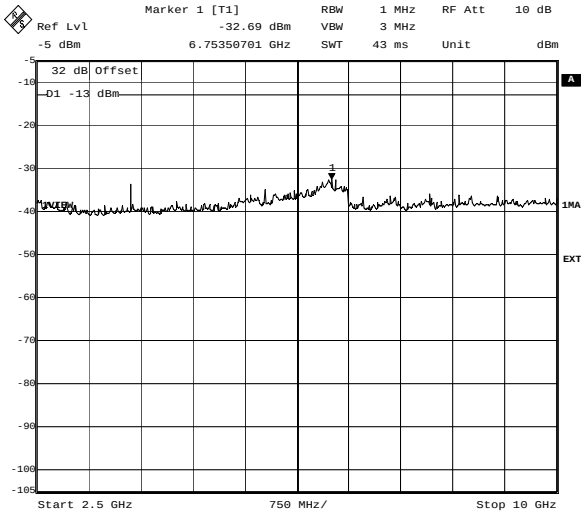
Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch538&513. Conducted Spurious Emissions. GMSK TRX0&TRX1.
+41.5dBm. FCC Part 24.238
Date: 29.NOV.2004 11:09:26



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch538&513. Conducted Spurious Emissions. GMSK TRX0&TRX1.
+41.5dBm. FCC Part 24.238
Date: 29.NOV.2004 13:16:48

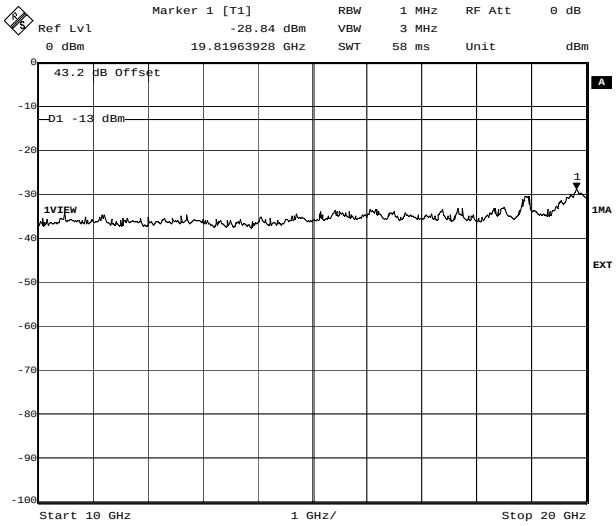


Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch538&513. Conducted Spurious Emissions. GMSK TRX0&TRX1.
+41.5dBm. FCC Part 24.238
Date: 30.NOV.2004 09:39:33



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD011.
Comment A: Ch538&513. Conducted Spurious Emissions. GMSK TRX0&TRX1.
+41.5dBm. FCC Part 24.238
Date: 29.NOV.2004 10:53:34

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch538&513. Conducted Spurious Emissions. GMSK TRX0&TRX1.
+41.5dBm. FCC Part 24.238
Date: 29.NOV.2004 11:54:17

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)

Results: GMSK, TX0=538 and TX1=513 (Continued)

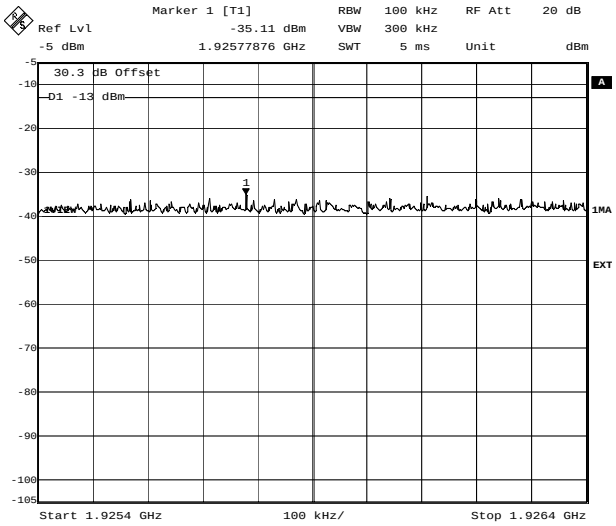
1st 1 MHz block immediately outside adjacent frequency block.

First Band: 1925.4 to 1926.4 MHz

100 kHz Strip Number	Peak Power (nW/100kHz)	100 kHz Strip Number	Peak Power (nW/100kHz)
1	183.699	6	219.477
2	231.729	7	237.886
3	214.197	8	279.729
4	308.202	9	248.708
5	236.886	10	211.506
Total Peak Power:		2372.019 nW/MHz	

Band (MHz)	Peak Power (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Status
1925.4 to 1926.4	-26.2	-13.0	13.4	Complied

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch538&513. Conducted Spurious Emissions. GMSK TRX0&TRX1.
+41.5dBm. FCC Part 24.238
Date: 29.NOV.2004 13:18:23

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)

Results: GMSK, TX0=538 and TX1=513 (Continued)

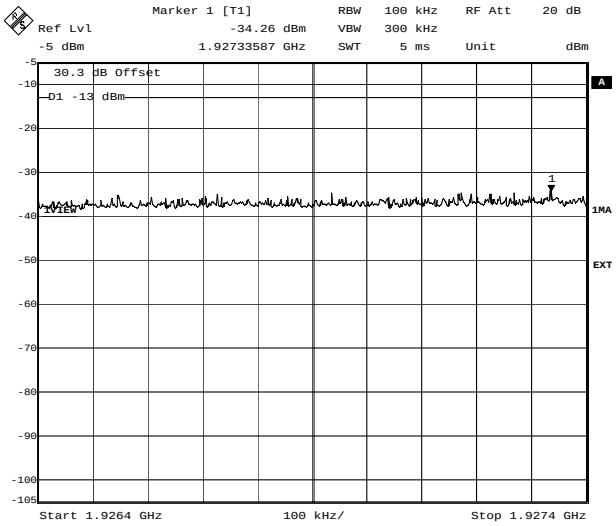
2nd 1 MHz block immediately outside adjacent frequency block.

Second Band: 1926.4 to 1927.4 MHz

100 kHz Strip Number	Peak Power (nW/100kHz)	100 kHz Strip Number	Peak Power (nW/100kHz)
1	224.151	6	330.165
2	289.728	7	257.961
3	260.388	8	320.717
4	310.957	9	326.476
5	280.253	10	374.840
Total Peak Power:		2975.636 nW/MHz	

Band (MHz)	Peak Power (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Status
1926.4 to 1927.4	-25.2	-13.0	12.2	Complied

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch538&513. Conducted Spurious Emissions. GMSK TRX0&TRX1.
+41.5dBm. FCC Part 24.238
Date: 29.NOV.2004 13:21:07

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)

Results: GMSK, TX0=538 and TX1=513 (Continued)

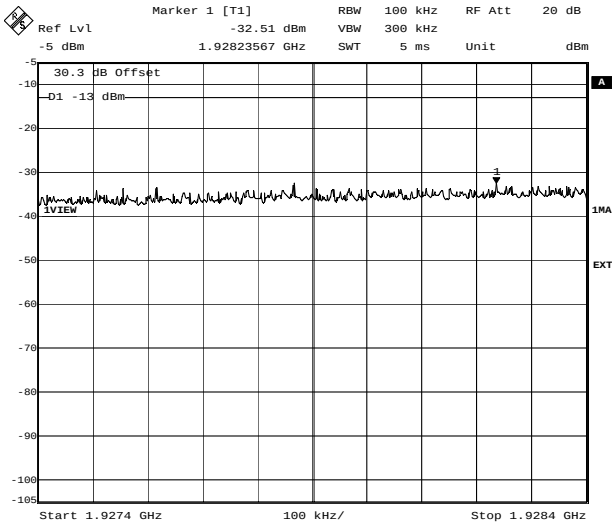
3rd 1 MHz block immediately outside adjacent frequency block.

Third Band: 1927.4 to 1928.4 MHz

100 kHz Strip Number	Peak Power (nW/100kHz)	100 kHz Strip Number	Peak Power (nW/100kHz)
1	287.700	6	403.626
2	415.517	7	421.001
3	431.378	8	408.954
4	369.438	9	560.460
5	546.466	10	473.068
Total Peak Power:		4317.608 nW/MHz	

Band (MHz)	Peak Power (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Status
1927.4 to 1928.4	-23.6	-13.0	10.6	Complied

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch538&513. Conducted Spurious Emissions. GMSK TRX0&TRX1.
+41.5dBm. FCC Part 24.238
Date: 29.NOV.2004 13:23:45

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)

Results: GMSK, TX0=538 and TX1=513 (Continued)

4th 1 MHz block immediately outside adjacent frequency block.

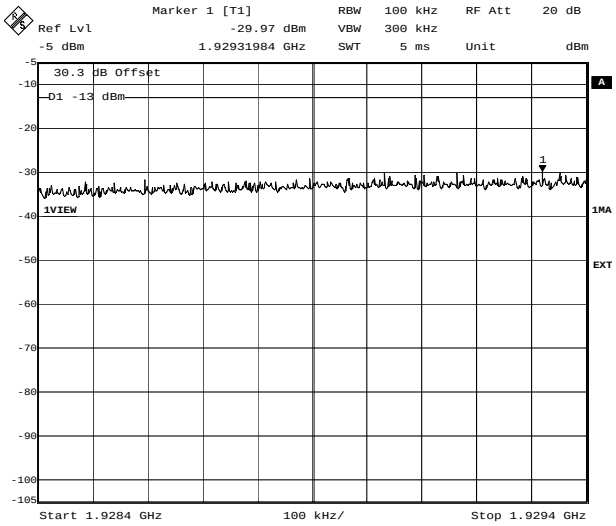
Fourth Band: 1928.4 to 1929.4 MHz

100 kHz Strip Number	Peak Power (nW/100kHz)	100 kHz Strip Number	Peak Power (nW/100kHz)
1	577.242	6	703.696
2	638.685	7	930.243
3	556.277	8	936.362
4	626.833	9	761.650
5	681.640	10	1006.000
Total Peak Power:		7445.628 nW/MHz	

Band (MHz)	Peak Power (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Status
1928.4 to 1929.4	-21.2	-13.0	8.2	Complied

Test Of: **Ericsson AB**
RBS 2109 1900 MHz
To: **FCC Part 24: 2003**

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch538&513. Conducted Spurious Emissions. GMSK TRX0&TRX1.
+41.5dBm. FCC Part 24.238
Date: 29.NOV.2004 13:26:42

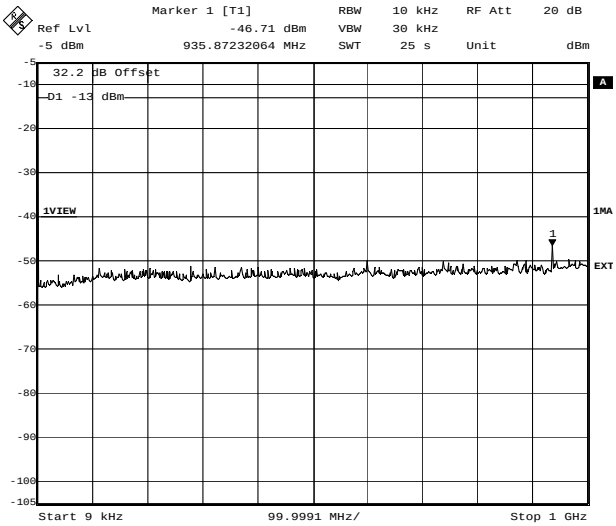
Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)

Result: GMSK, TX0=784 and TX1=809

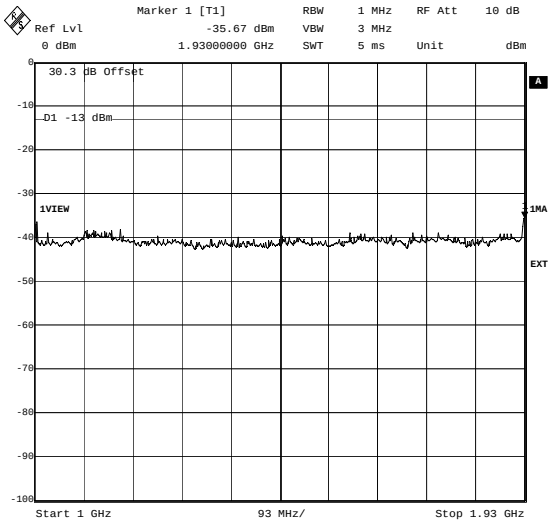
Band	Peak Power (dBm)	Limit (dBm)	Margin (dB)	Results
0.09 MHz to 1.0 GHz	-46.7	-13.0	33.7	Complied
1.0 GHz to 1.93 GHz	-35.6	-13.0	22.6	Complied
1.99204 GHz to 2.5 GHz	-23.5	-13.0	10.5	Complied
2.5 GHz to 10.0 GHz	-32.2	-13.0	19.2	Complied
10.0 GHz to 20.0 GHz	-28.6	-13.0	15.6	Complied

Test Of: **Ericsson AB**
RBS 2109 1900 MHz
To: **FCC Part 24: 2003**

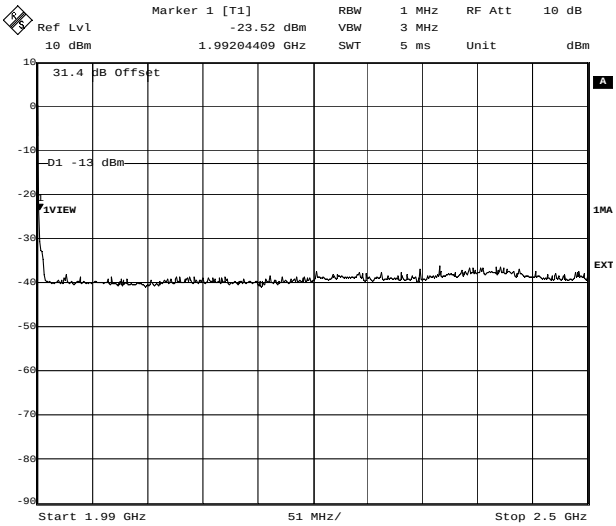
Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)



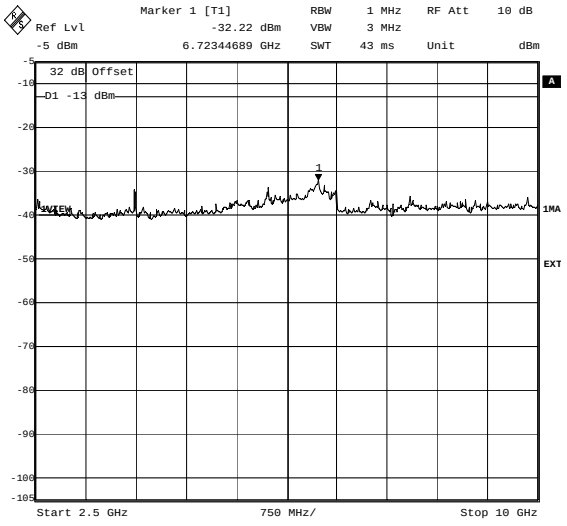
Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch784&809. Conducted Spurious Emissions. GMSK TRX0&TRX1.
+41.5dBm. FCC Part 24.238
Date: 29.NOV.2004 11:10:47



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch784&809. Conducted Spurious Emissions. GMSK TRX0&TRX1.
+41.5dBm. FCC Part 24.238
Date: 29.NOV.2004 13:30:18

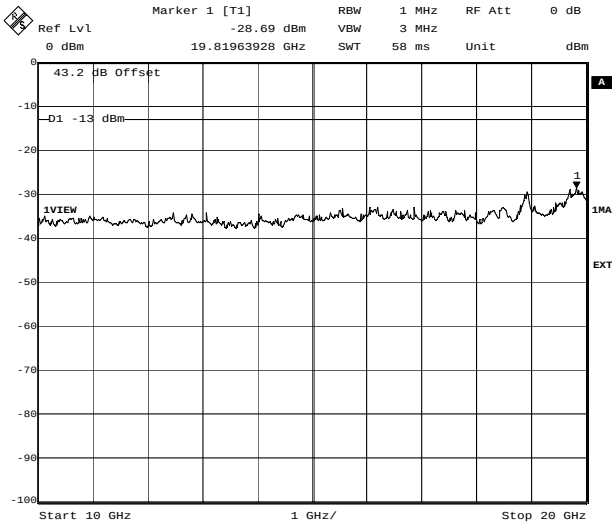


Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch784&809. Conducted Spurious Emissions. GMSK TRX0&TRX1.
+41.5dBm. FCC Part 24.238
Date: 30.NOV.2004 09:32:02



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD011.
Comment A: Ch784&809. Conducted Spurious Emissions. GMSK TRX0&TRX1.
+41.5dBm. FCC Part 24.238
Date: 29.NOV.2004 10:54:41

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch784&809. Conducted Spurious Emissions. GMSK TRX0&TRX1.
+41.5dBm. FCC Part 24.238
Date: 2.DEC.2004 08:50:53

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)

Results: GMSK, TX0=784 and TX1=809 (Continued)

1st 1 MHz block immediately outside adjacent frequency block.

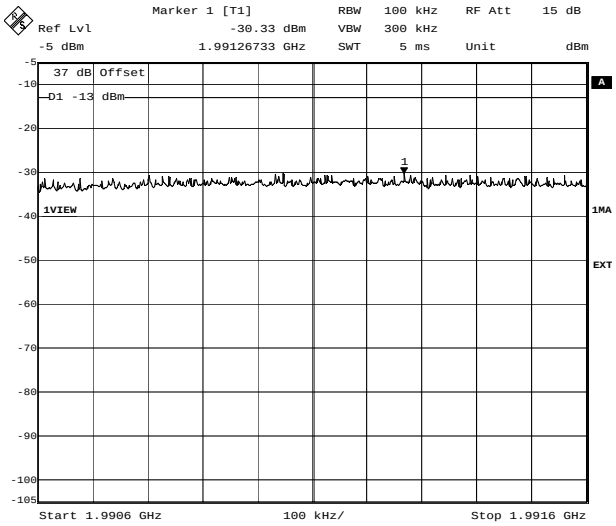
First Band: 1990.6 to 1991.6 MHz

100 kHz Strip Number	Peak Power (nW/100kHz)	100 kHz Strip Number	Peak Power (nW/100kHz)
1	706.338	6	833.694
2	686.446	7	925.897
3	820.526	8	832.134
4	749.620	9	786.663
5	915.978	10	800.036
Total Peak Power:		8057.332 nW/MHz	

Band (MHz)	Peak Power (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Status
1990.6 to 1991.6	-20.9	-13.0	7.9	Complied

Test Of: **Ericsson AB**
RBS 2109 1900 MHz
To: **FCC Part 24: 2003**

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch784&809. Conducted Spurious Emissions. GMSK TRX0&TRX1.
+41.5dBm. FCC Part 24.238
Date: 30.NOV.2004 09:33:17

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)

Results: GMSK, TX0=784 and TX1=809 (Continued)

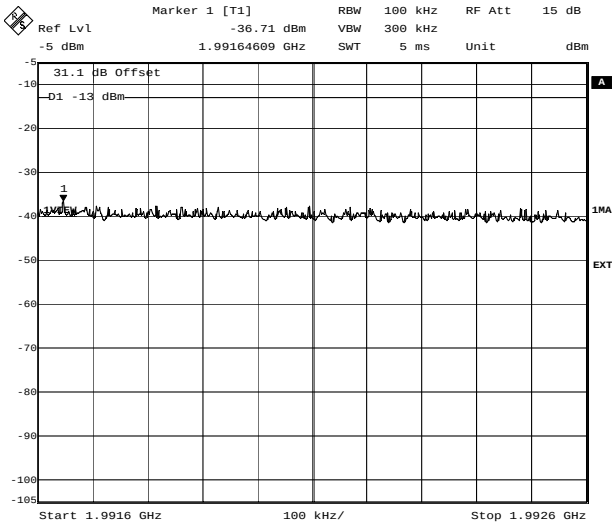
2nd 1 MHz block immediately outside adjacent frequency block.

Second Band: 1991.6 to 1992.6 MHz

100 kHz Strip Number	Peak Power (nW/100kHz)	100 kHz Strip Number	Peak Power (nW/100kHz)
1	213.396	6	154.620
2	162.793	7	142.320
3	164.479	8	137.216
4	154.910	9	148.795
5	166.338	10	130.510
Total Peak Power:		1575.378 nW/MHz	

Band (MHz)	Peak Power (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Status
1991.6 to 1992.6	-28.0	-13.0	15.0	Complied

Transmitter Conducted Out of Band Emissions: Section 2.1051/24.238(a) (Continued)



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch784&809. Conducted Spurious Emissions. GMSK TRX0&TRX1.
+41.5dBm. FCC Part 24.238
Date: 30.NOV.2004 09:36:17

7.8. Transmitter Conducted Intermodulation Responses: Section 2.1051/24.238 (a)

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

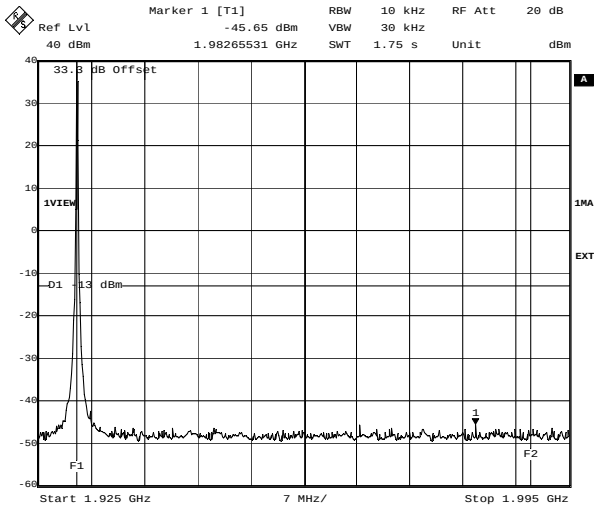
7.8.2. Tests were performed to identify the level of any Intermodulation responses present.

Results: 8PSK, TX0 and TX1

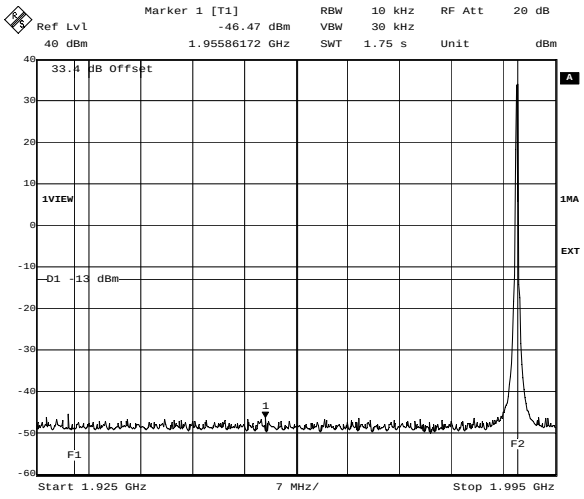
TX	Channel pair	Peak Power Emission (dBm)	Frequency (MHz)	Limit (dBm)	Margin (dB)	Result
TX0/TX1	512&537	-45.6	1982.65531	-13.0	32.6	Complied
TX0/TX1	810&785	-46.4	1955.86172	-13.0	33.4	Complied
TX1/TX0	512&537	-45.9	1964.69940	-13.0	32.9	Complied
TX1/TX0	810&785	-44.8	1984.89980	-13.0	31.8	Complied

Test Of: **Ericsson AB**
RBS 2109 1900 MHz
To: **FCC Part 24: 2003**

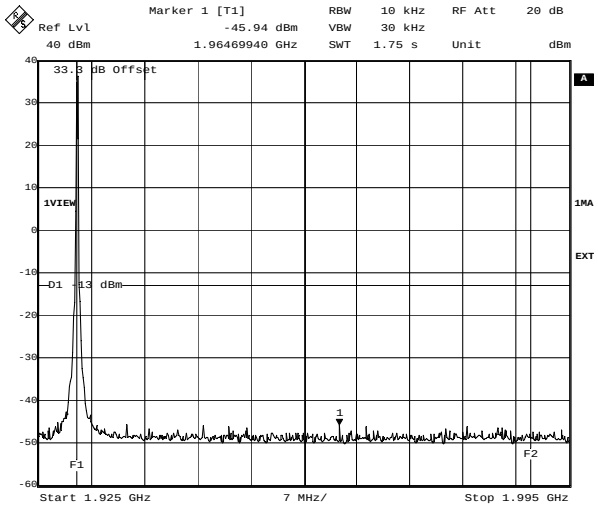
Transmitter Conducted Intermodulation Responses: Section 2.1051/24.238 (a) (Continued)



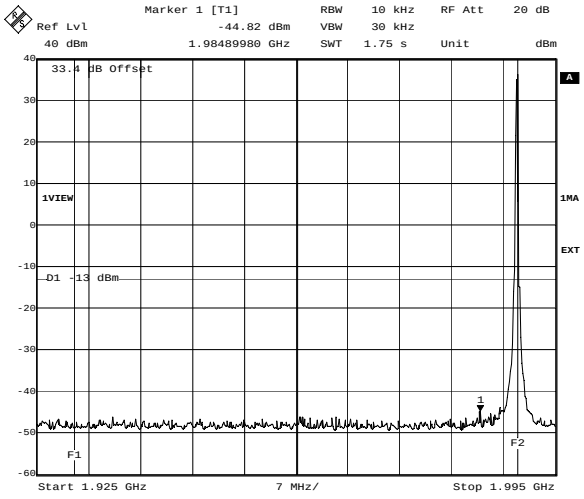
Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch512&537. TX Inband Intermodulation. 8PSK TRX0&TRX1.
+38.2dBm. FCC Part 24.238
Date: 29.NOV.2004 10:18:56



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch810&785. TX Inband Intermodulation. 8PSK TRX0&TRX1.
+38.2dBm. FCC Part 24.238
Date: 29.NOV.2004 10:20:39



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch537&512. TX Inband Intermodulation. 8PSK TRX0&TRX1.
+38.2dBm. FCC Part 24.238
Date: 29.NOV.2004 09:46:48



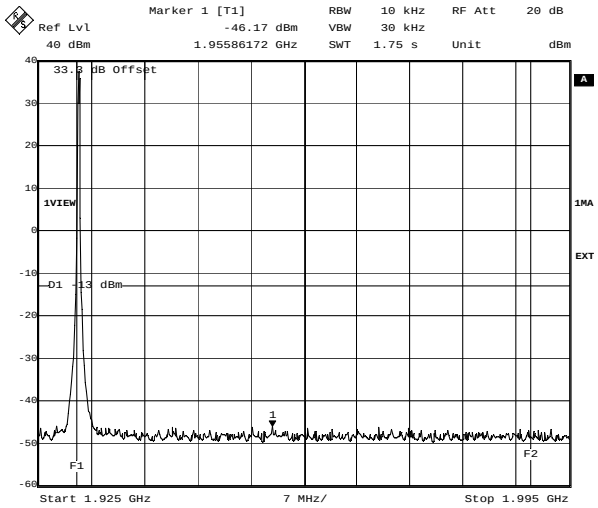
Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch785&810. TX Inband Intermodulation. 8PSK TRX0&TRX1.
+38.2dBm. FCC Part 24.238
Date: 29.NOV.2004 09:48:30

Transmitter Conducted Intermodulation Responses: Section 2.1051/24.238 (a) (Continued)

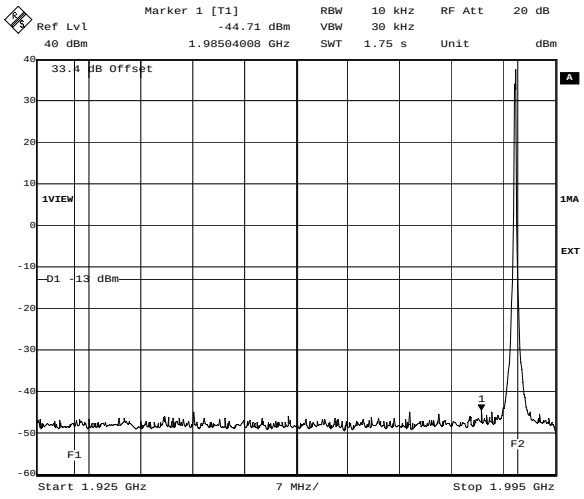
Results: GMSK, TX0 and TX1

TX	Channel pair	Peak Power Emission (dBm)	Frequency (MHz)	Limit (dBm)	Margin (dB)	Result
TX0/TX1	513&538	-46.1	1955.86172	-13.0	33.1	Complied
TX0/TX1	809&784	-44.7	1985.04008	-13.0	31.7	Complied
TX1/TX0	513&538	-44.5	1933.27655	-13.0	31.5	Complied
TX1/TX0	809&784	-43.0	1984.61924	-13.0	30.0	Complied

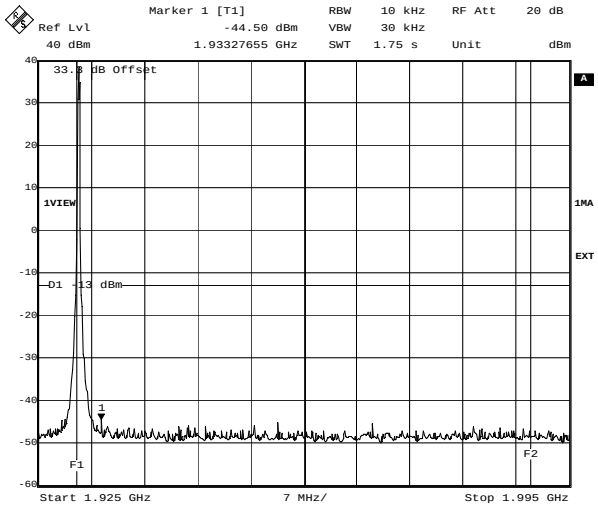
Transmitter Conducted Intermodulation Responses: Section 2.1051/24.238 (a) (Continued)



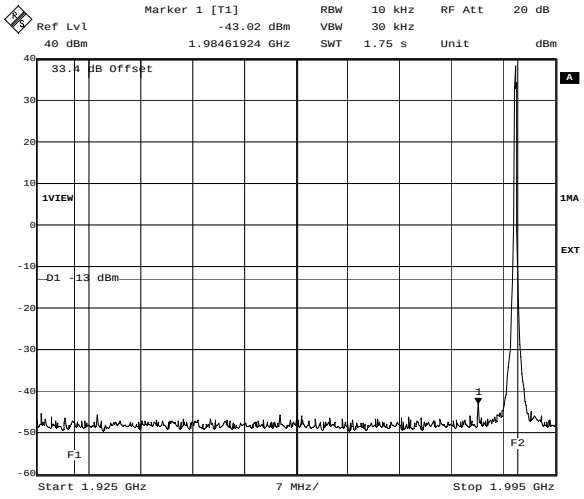
Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch513&538. TX Inband Intermodulation. GMSK TRX0&TRX1.
+41.5dBm. FCC Part 24.238
Date: 29.NOV.2004 10:22:12



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch809&784. TX Inband Intermodulation. GMSK TRX0&TRX1.
+41.5dBm. FCC Part 24.238
Date: 29.NOV.2004 10:23:54



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch538&513. TX Inband Intermodulation. GMSK TRX0&TRX1.
+41.5dBm. FCC Part 24.238
Date: 29.NOV.2004 09:50:46



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch784&809. TX Inband Intermodulation. GMSK TRX0&TRX1.
+41.5dBm. FCC Part 24.238
Date: 29.NOV.2004 09:52:32

7.9.Transmitter Conducted Emissions at Band Edges: Section 2.1051/24.238

7.9.1. The EUT was configured as 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

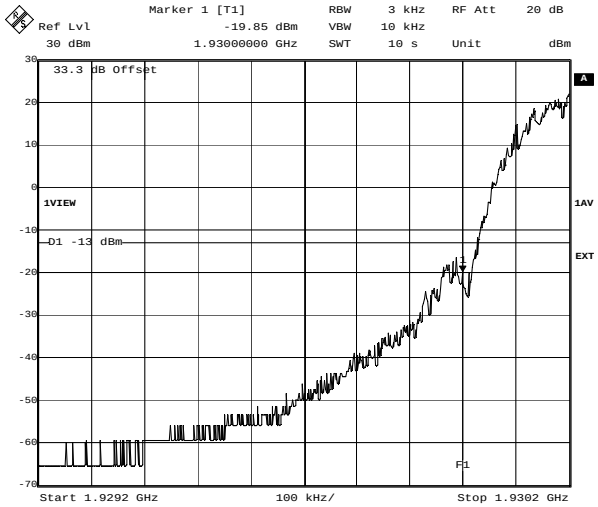
Lower Band Edge

Frequency (MHz)	Output Power (dBm)	ARFCN	Peak Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
1930.0	38.2	512	-19.8	-13.0	6.8	Complied

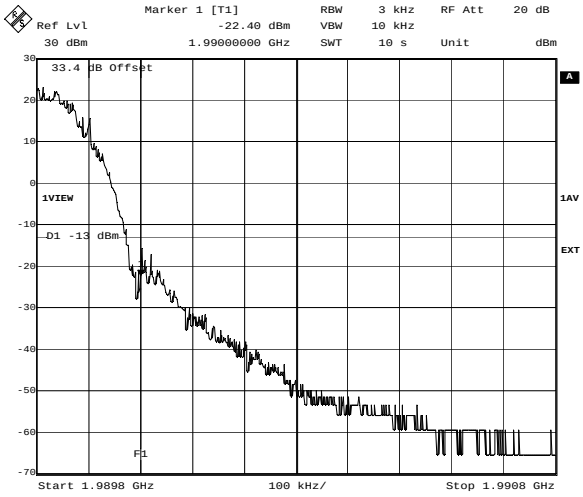
Upper Band Edge

Frequency (MHz)	Output Power (dBm)	ARFCN	Peak Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
1990.0	38.2	810	-22.4	-13.0	9.4	Complied

Transmitter Conducted Emissions at Band Edges: Section 2.1051/24.238 (Continued)



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch512. Band Edges. 8PSK TRX0. +38.2dBm. FCC Part 24.238
Date: 26.NOV.2004 13:28:30



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch810. Band Edges. 8PSK TRX0. +38.2dBm. FCC Part 24.238
Date: 30.NOV.2004 09:23:33

Transmitter Conducted Emissions at Band Edges: Section 2.1051/24.238 (Continued)

Results: 8PSK – TX1

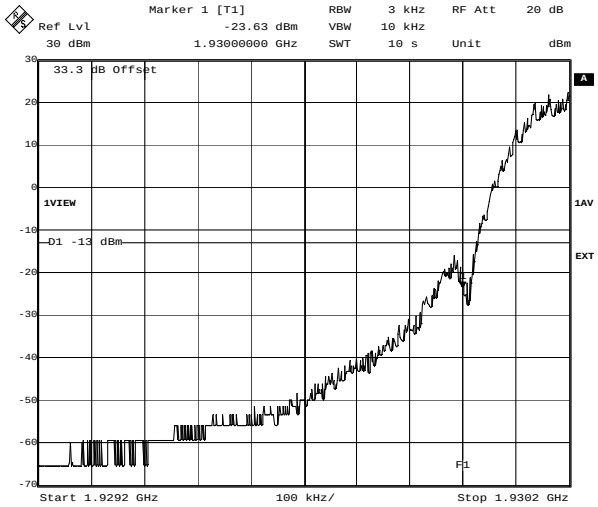
Lower Band Edge

Frequency (MHz)	Output Power (dBm)	ARFCN	Peak Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
1930.0	38.2	512	-23.6	-13.0	10.6	Complied

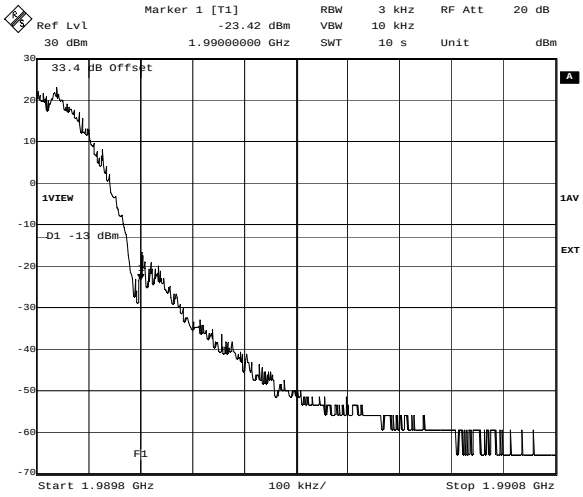
Upper Band Edge

Frequency (MHz)	Output Power (dBm)	ARFCN	Peak Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
1990.0	38.2	810	-23.4	-13.0	10.4	Complied

Transmitter Conducted Emissions at Band Edges: Section 2.1051/24.238 (Continued)



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch512. Band Edges. 8PSK TRX1. +38.2dBm. FCC Part 24.238
Date: 26.NOV.2004 15:01:24



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch810. Band Edges. 8PSK TRX1. +38.2dBm. FCC Part 24.238
Date: 26.NOV.2004 15:04:34

Transmitter Conducted Emissions at Band Edges: Section 2.1051/24.238 (Continued)

Results: GMSK – TX0

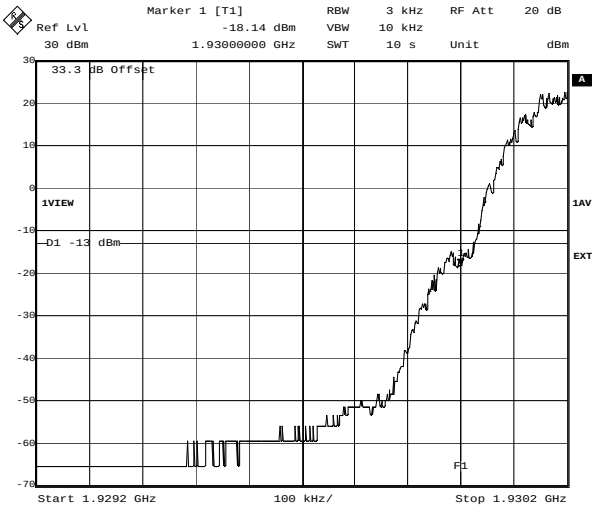
Lower Band Edge

Frequency (MHz)	Output Power (dBm)	ARFCN	Peak Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
1930.0	39.5	512	-18.1	-13.0	5.1	Complied
1930.0	41.5	513	-50.0	-13.0	47.0	Complied

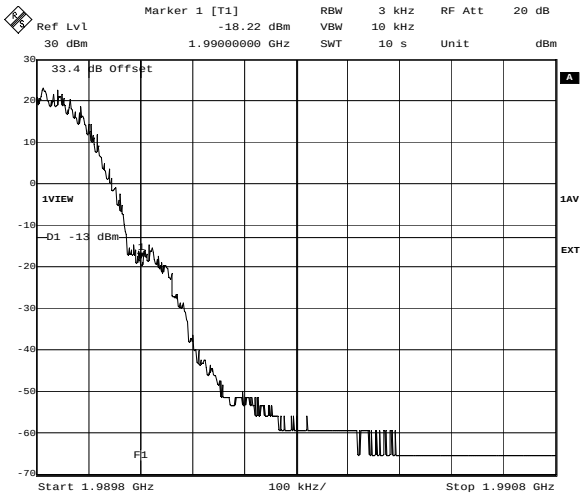
Upper Band Edge

Frequency (MHz)	Output Power (dBm)	ARFCN	Peak Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
1990.0	39.5	810	-18.2	-13.0	5.2	Complied
1990.0	41.5	809	-48.6	-13.0	35.6	Complied

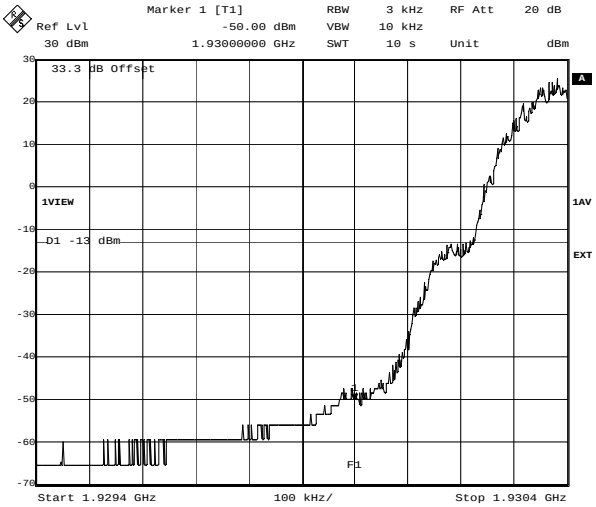
Transmitter Conducted Emissions at Band Edges: Section 2.1051/24.238 (Continued)



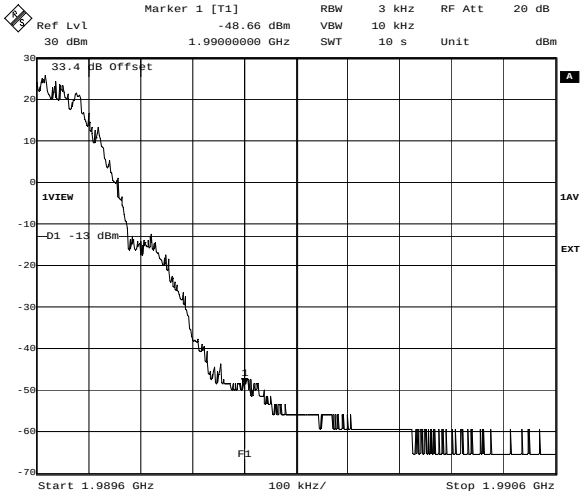
Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch512. Band Edges. GMSK TRX0. +39.5dBm. FCC Part 24.238
Date: 26.NOV.2004 11:19:49



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch810. Band Edges. GMSK TRX0. +39.5dBm. FCC Part 24.238
Date: 26.NOV.2004 12:43:32



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch513. Band Edges. GMSK TRX0. +41.5dBm. FCC Part 24.238
Date: 26.NOV.2004 11:28:05



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch809. Band Edges. GMSK TRX0. +41.5dBm. FCC Part 24.238
Date: 26.NOV.2004 12:53:02

Transmitter Conducted Emissions at Band Edges: Section 2.1051/24.238 (Continued)

Results: GMSK – TX1

Lower Band Edge

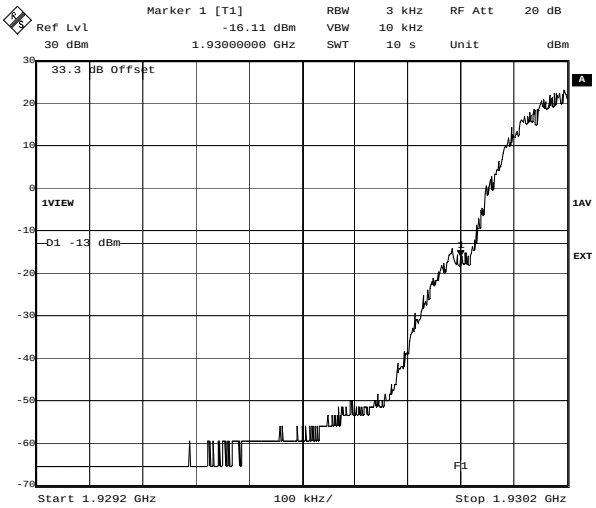
Frequency (MHz)	Output Power (dBm)	ARFCN	Peak Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
1930.0	39.5	512	-16.1	-13.0	3.1	Complied
1930.0	41.5	513	-50.0	-13.0	47.0	Complied

Upper Band Edge

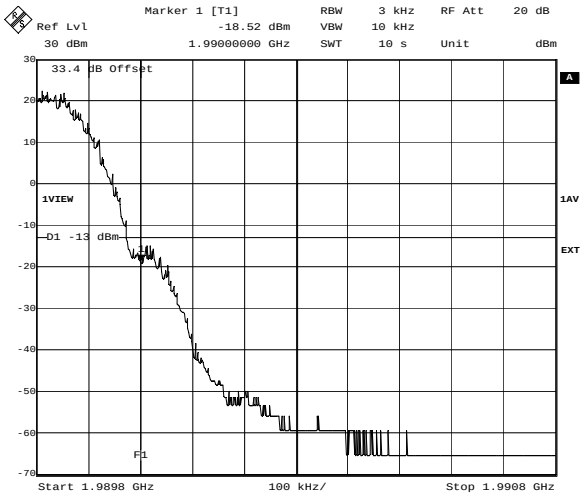
Frequency (MHz)	Output Power (dBm)	ARFCN	Peak Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
1990.0	39.5	810	-18.5	-13.0	5.5	Complied
1990.0	41.5	809	-50.0	-13.0	47.0	Complied

Test Of: **Ericsson AB**
RBS 2109 1900 MHz
To: **FCC Part 24: 2003**

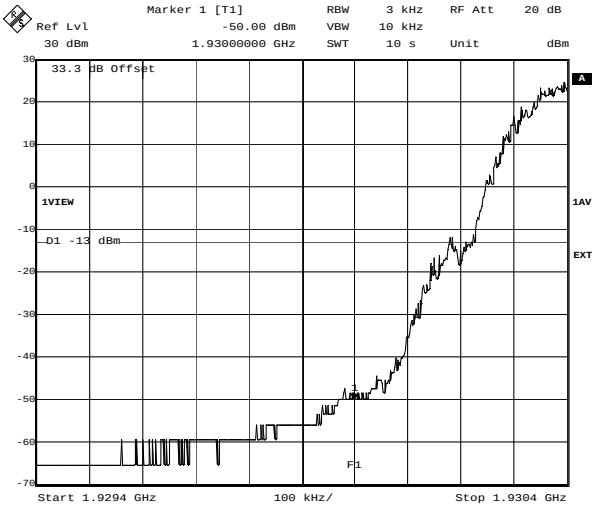
Transmitter Conducted Emissions at Band Edges: Section 2.1051/24.238 (Continued)



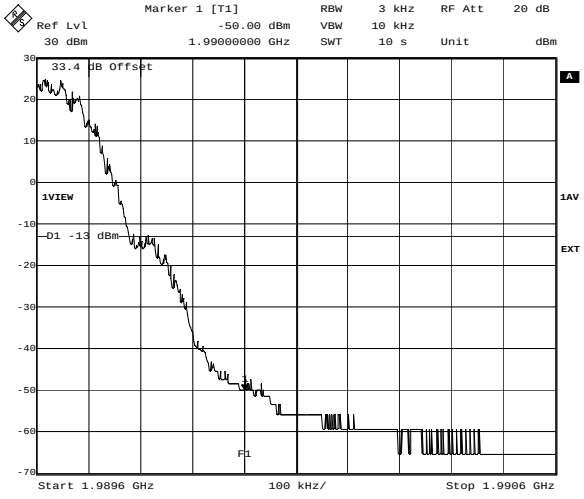
Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch512. Band Edges. GMSK TRX1. +39.5dBm. FCC Part 24.238
Date: 26.NOV.2004 13:55:31



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch810. Band Edges. GMSK TRX1. +39.5dBm. FCC Part 24.238
Date: 26.NOV.2004 14:10:54



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch513. Band Edges. GMSK TRX1. +41.5dBm. FCC Part 24.238
Date: 26.NOV.2004 14:00:35



Title: Testing for Ericsson AB. RBS2109 1900MHz. 46314JD11.
Comment A: Ch809. Band Edges. GMSK TRX1. +41.5dBm. FCC Part 24.238
Date: 26.NOV.2004 14:15:48

7.10. Transmitter Radiated Emissions: Section 2.1053/24.238 (a)

Electric Field Strength Measurements of Spurious Emissions and Intermodulation Products: 30 MHz to 20 GHz

7.10.1. The EUT was configured as 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.

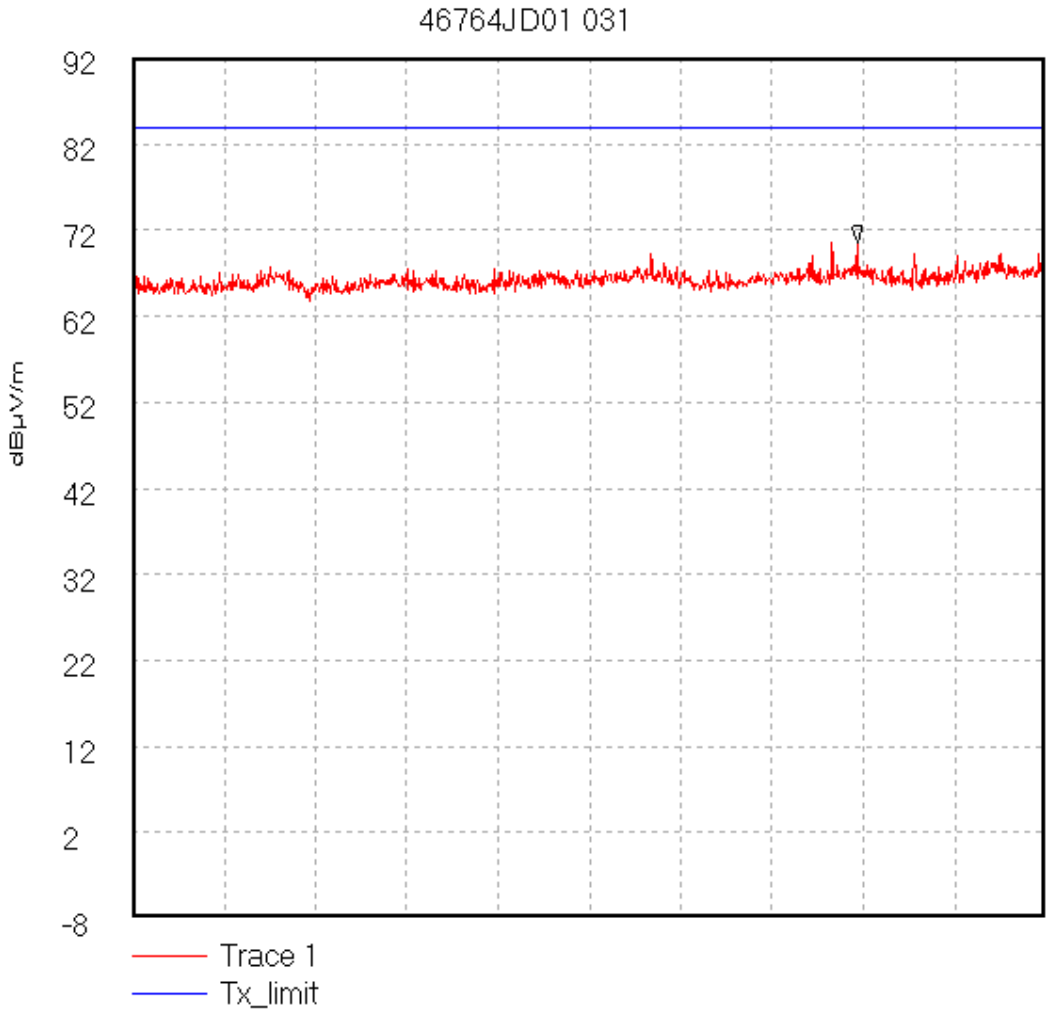
7.10.3. Tests were also performed to identify the field strength of any Intermodulation responses present.

Results:

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

Transmitter Radiated Emissions: Section 2.1053/24.238 (a) (Continued)

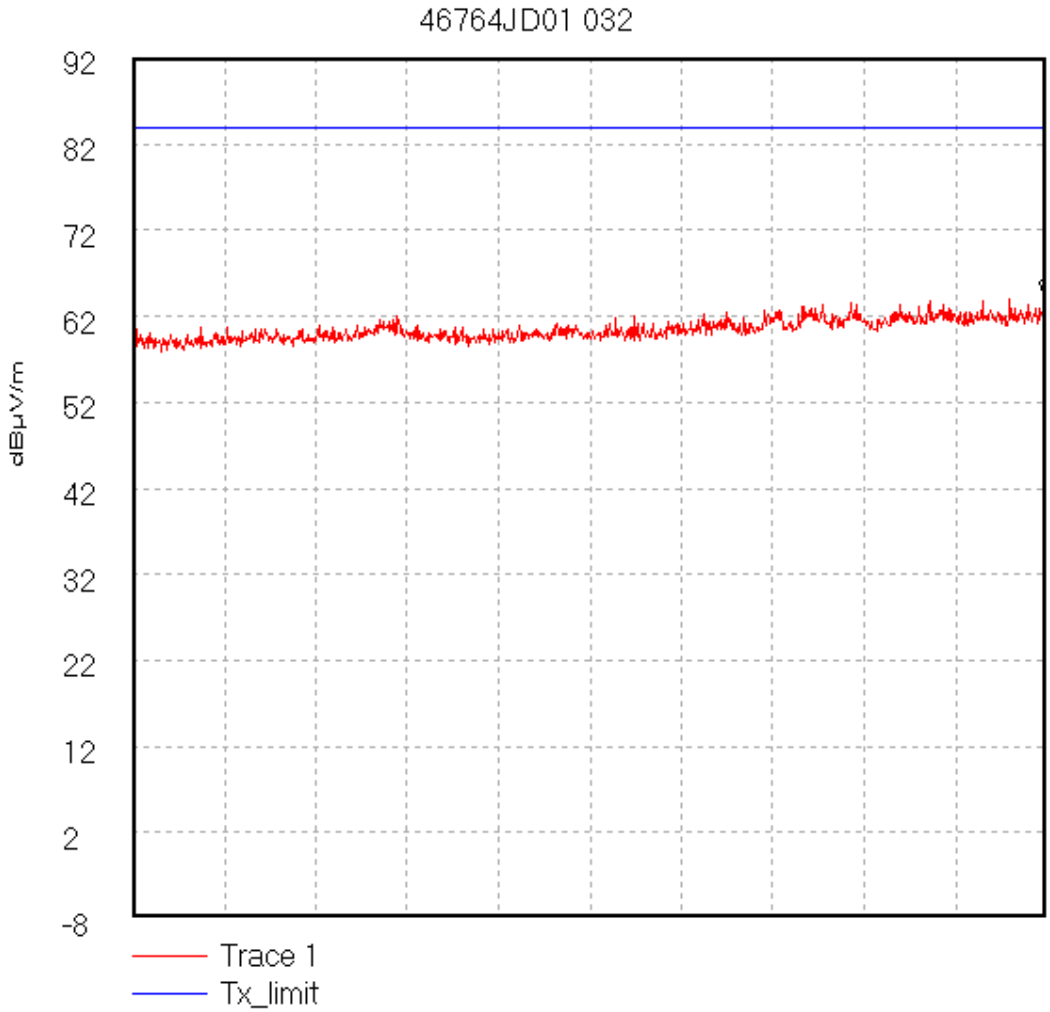
EUT: RBS 2109. Power: -48 V, DC Supply. Radiated Emissions. FCC Part 2.1053 Prescan @ 1 m (using 3m limit line as worst case) Full Power Transmit Mode: TRx0, ARFCN 661 = GMSK (41.5dBm) TRx1, ARFCN 661 = 8-PSK (EDGE) (38.2dBm)



Test Of: **Ericsson AB**
RBS 2109 1900 MHz
To: **FCC Part 24: 2003**

Transmitter Radiated Emissions: Section 2.1053/24.238 (a) (Continued)

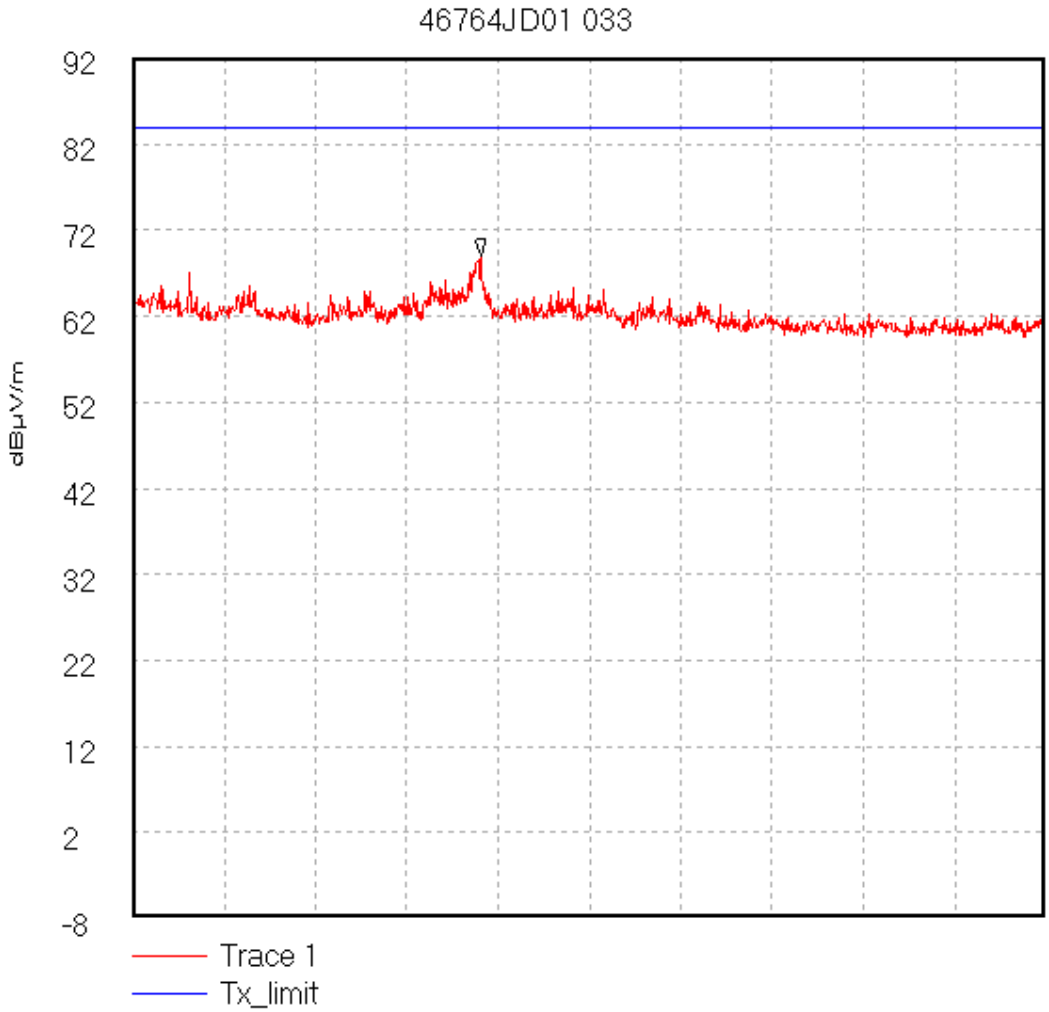
EUT: RBS 2109. Power: -48 V, DC Supply. Radiated Emissions. FCC Part 2.1053 Prescan @ 1 m (using 3m limit line as worst case) Full Power Transmit Mode: TRx0, ARFCN 661 = GMSK (41.5dBm) TRx1, ARFCN 661 = 8-PSK (EDGE) (38.2dBm)



Start 12.5 GHz; Stop 18.0 GHz
Ref 92 dBµV/m; Ref Offset 0.0 dB; 10 dB/div
RBW 1000.0 kHz; VBW 3.0 MHz; Att 5 dB; Swp 40.0 mS
Peak 17.987778 GHz, 64.12 dBµV/m
Limit/Mask: Tx_limit; ; Limit Test Passed
10/26/2004 9:45:47 PM

Transmitter Radiated Emissions: Section 2.1053/24.238 (a) (Continued)

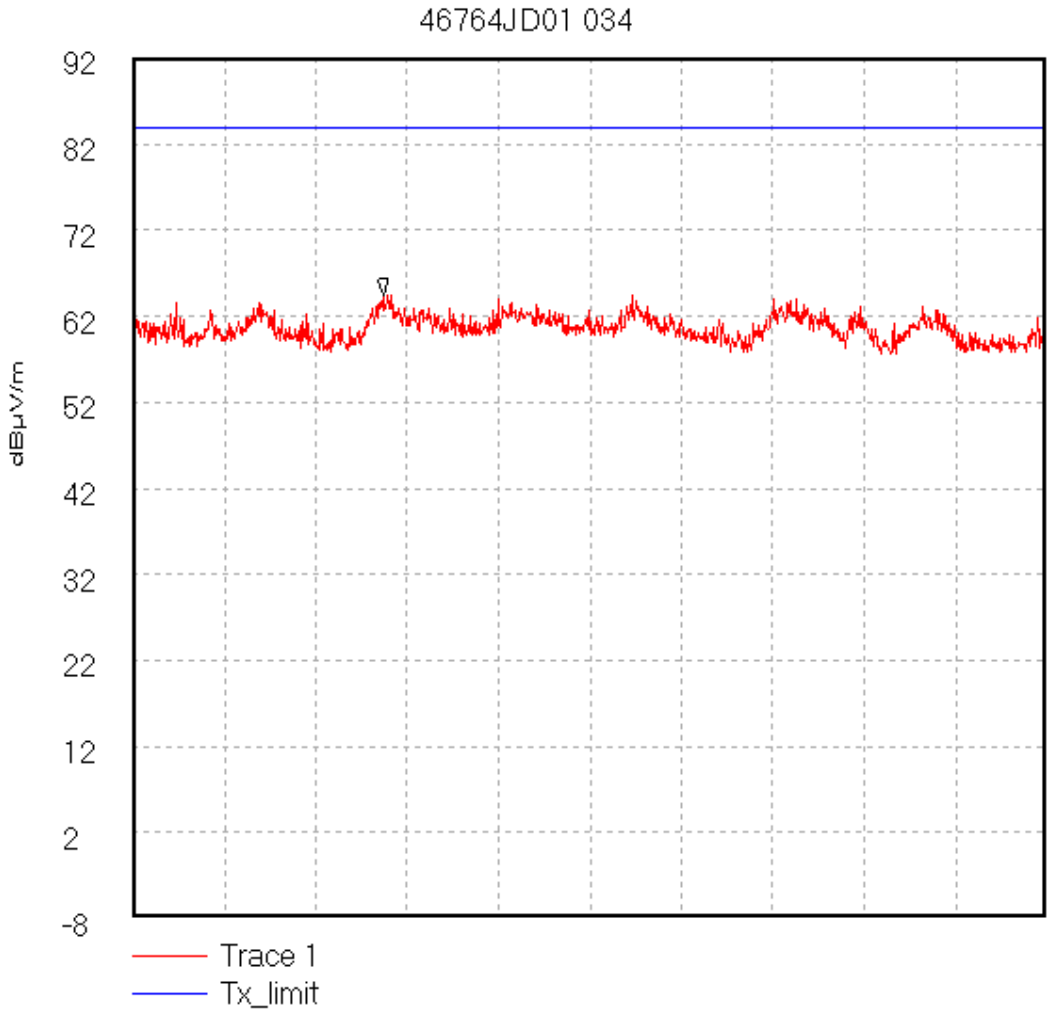
EUT: RBS 2109. Power: -48 V, DC Supply. Radiated Emissions. FCC Part 2.1053 Prescan @ 1 m (using 3m limit line as worst case) Full Power Transmit Mode: TRx0, ARFCN 661 = GMSK (41.5dBm) TRx1, ARFCN 661 = 8-PSK (EDGE) (38.2dBm)



Test Of: **Ericsson AB**
RBS 2109 1900 MHz
To: **FCC Part 24: 2003**

Transmitter Radiated Emissions: Section 2.1053/24.238 (a) (Continued)

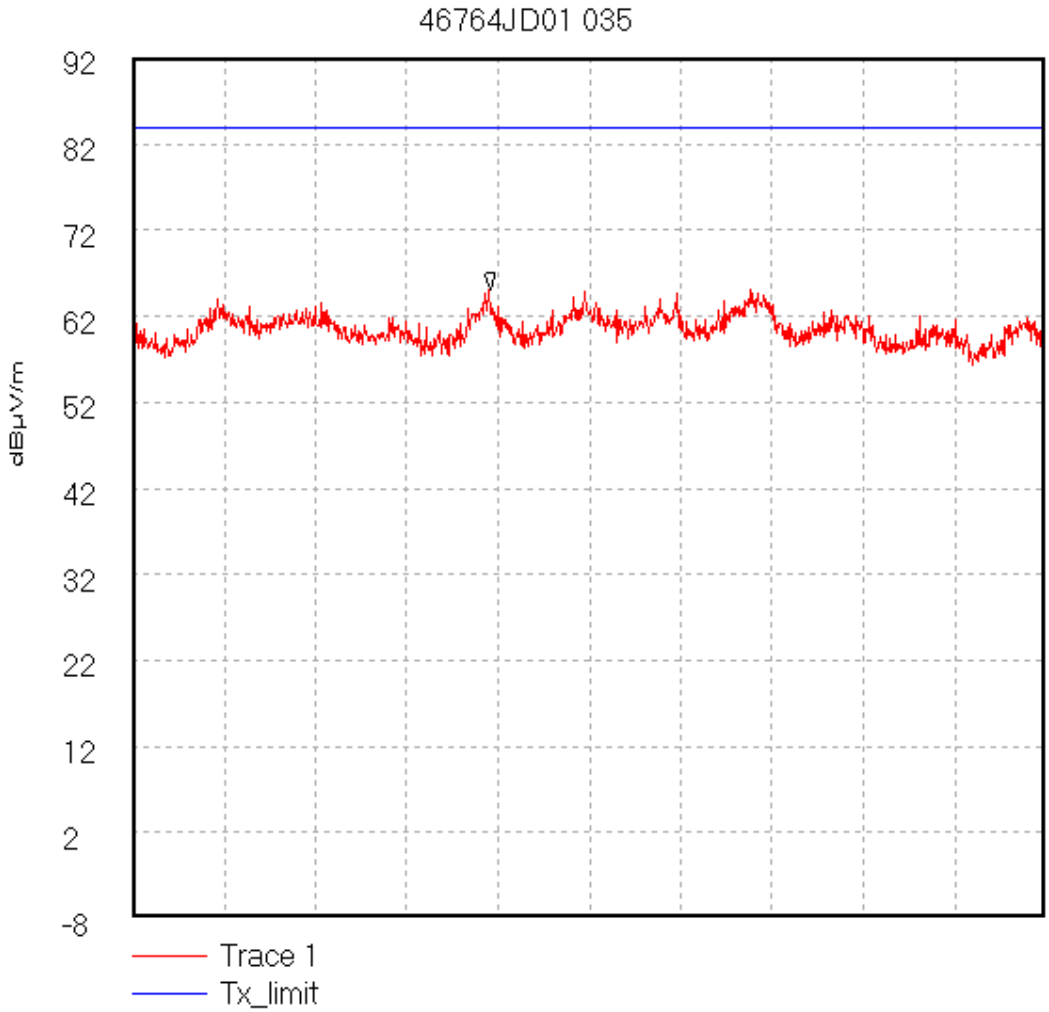
EUT: RBS 2109. Power: -48 V, DC Supply. Radiated Emissions. FCC Part 2.1053 Prescan @ 1 m (using 3m limit line as worst case) Full Power Transmit Mode: TRx0, ARFCN 661 = GMSK (41.5dBm) TRx1, ARFCN 661 = 8-PSK (EDGE) (38.2dBm)



Start 6.0 GHz; Stop 8.0 GHz
Ref 92 dBµV/m; Ref Offset 0.0 dB; 10 dB/div
RBW 1000.0 kHz; VBW 3.0 MHz; Att 10 dB; Swp 20.0 mS
Peak 6.548889 GHz, 64.5 dBµV/m
Limit/Mask: Tx_limit; ; Limit Test Passed
10/26/2004 10:12:10 PM

Transmitter Radiated Emissions: Section 2.1053/24.238 (a) (Continued)

EUT: RBS 2109. Power: -48 V, DC Supply. Radiated Emissions. FCC Part 2.1053 Prescan @ 1 m (using 3m limit line as worst case) Full Power Transmit Mode: TRx0, ARFCN 661 = GMSK (41.5dBm) TRx1, ARFCN 661 = 8-PSK (EDGE) (38.2dBm)

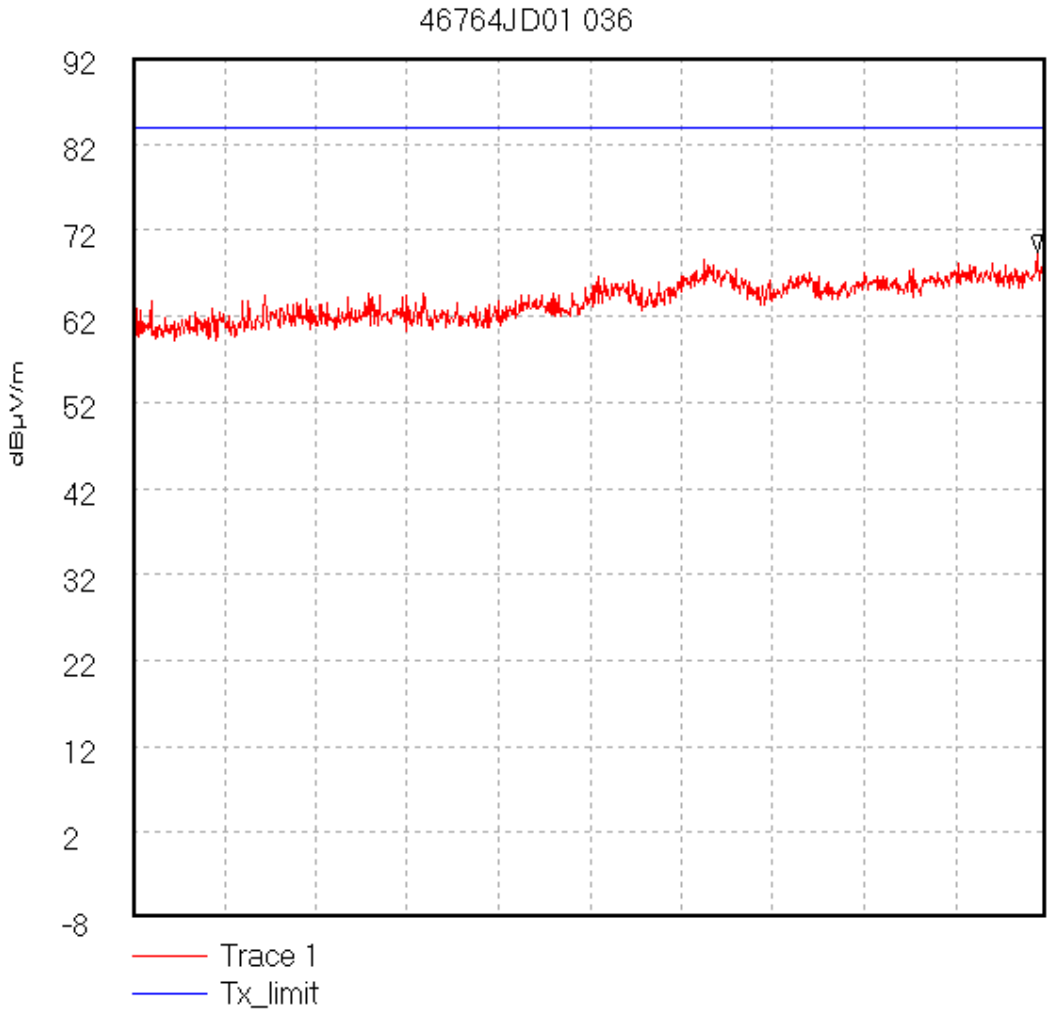


Start 5.0 GHz; Stop 6.0 GHz
Ref 92 dBµV/m; Ref Offset 0.0 dB; 10 dB/div
RBW 1000.0 kHz; VBW 3.0 MHz; Att 10 dB; Swp 20.0 mS
Peak 5.391111 GHz, 65.16 dBµV/m
Limit/Mask: Tx_limit; ; Limit Test Passed
10/26/2004 10:26:02 PM

Test Of: **Ericsson AB**
RBS 2109 1900 MHz
To: **FCC Part 24: 2003**

Transmitter Radiated Emissions: Section 2.1053/24.238 (a) (Continued)

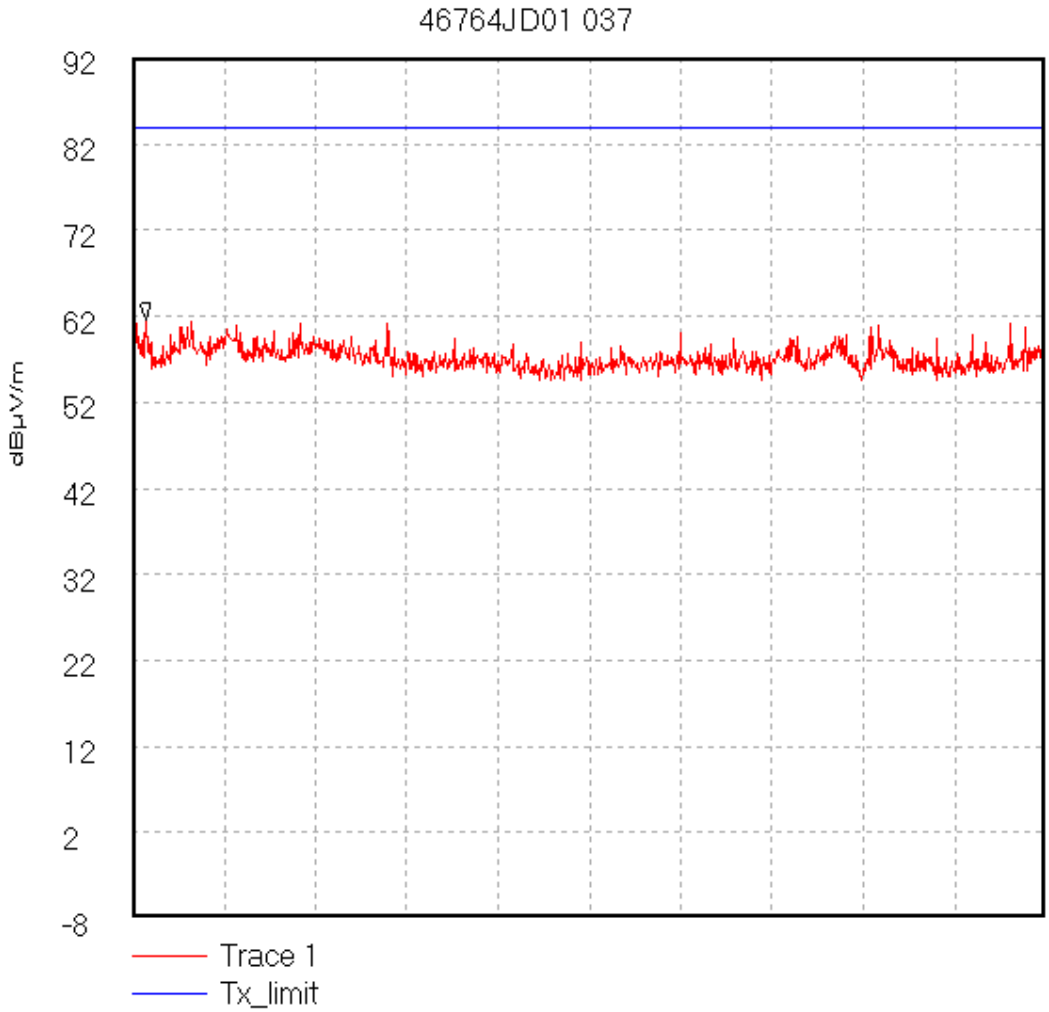
EUT: RBS 2109. Power: -48 V, DC Supply. Radiated Emissions. FCC Part 2.1053 Prescan @ 1 m (using 3m limit line as worst case) Full Power Transmit Mode: TRx0, ARFCN 661 = GMSK (41.5dBm) TRx1, ARFCN 661 = 8-PSK (EDGE) (38.2dBm)



Start 4.0 GHz; Stop 5.0 GHz
Ref 92 dBµV/m; Ref Offset 0.0 dB; 10 dB/div
RBW 1000.0 kHz; VBW 3.0 MHz; Att 10 dB; Swp 20.0 mS
Peak 4.99 GHz, 69.46 dBµV/m
Limit/Mask: Tx_limit; ; Limit Test Passed
10/26/2004 10:42:31 PM

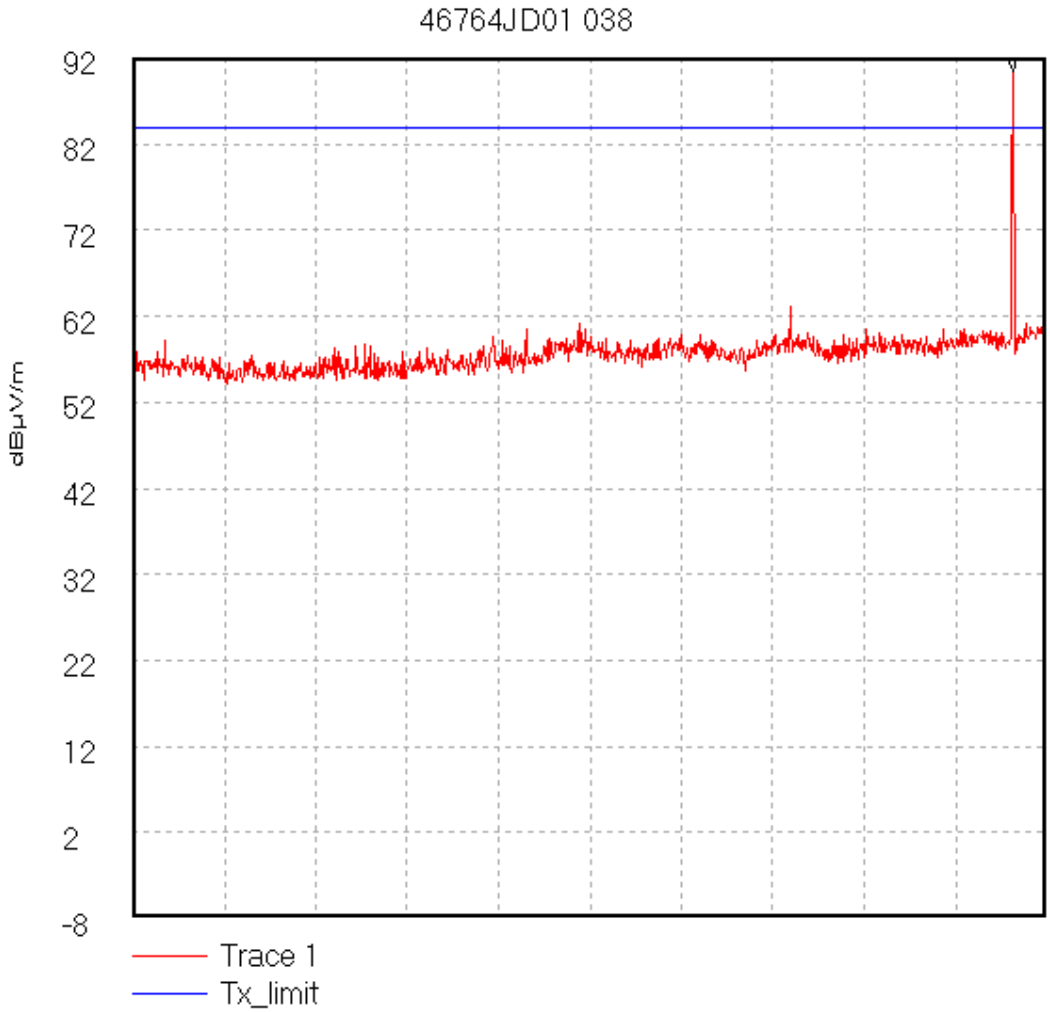
Transmitter Radiated Emissions: Section 2.1053/24.238 (a) (Continued)

EUT: RBS 2109. Power: -48 V, DC Supply. Radiated Emissions. FCC Part 2.1053 Prescan @ 3 m Full Power Transmit Mode: TRx0, ARFCN 661 = GMSK (41.5dBm) TRx1, ARFCN 661 = 8-PSK (EDGE) (38.2dBm)



Transmitter Radiated Emissions: Section 2.1053/24.238 (a) (Continued)

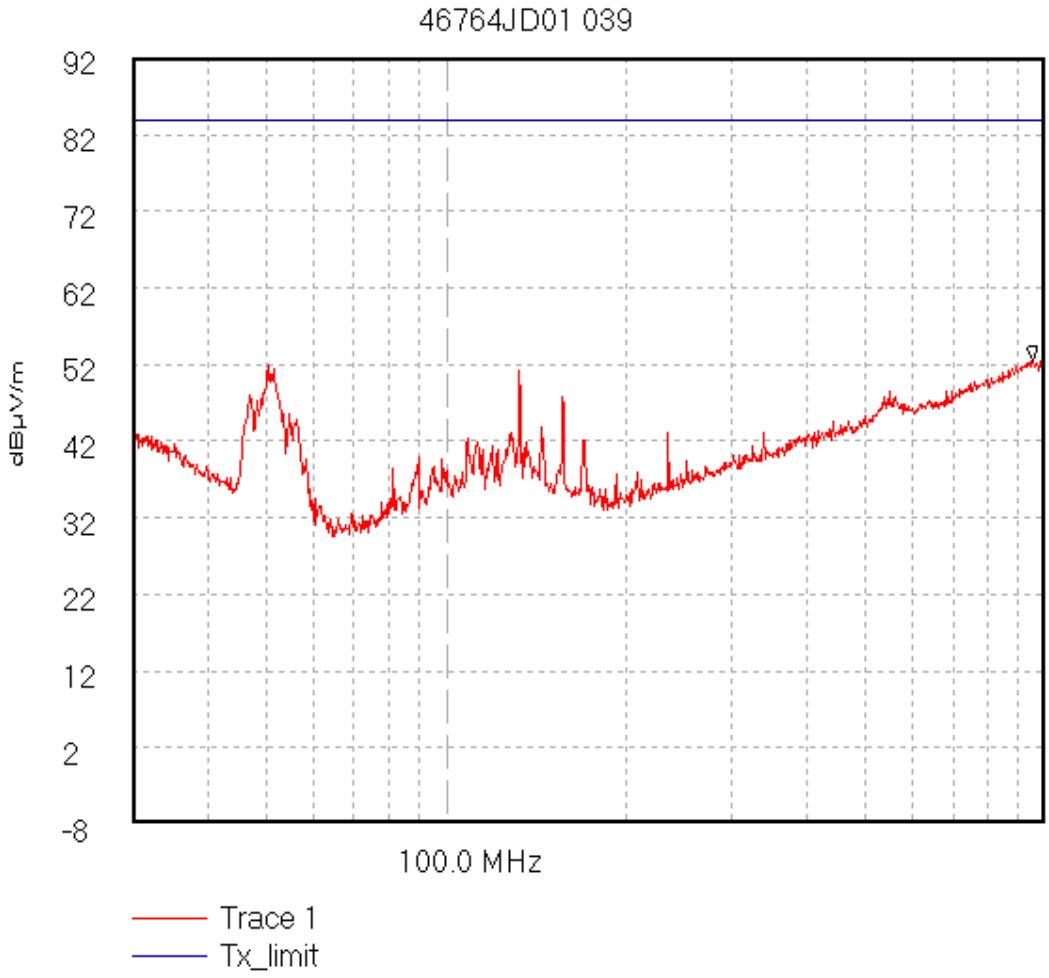
EUT: RBS 2109. Power: -48 V, DC Supply. Radiated Emissions. FCC Part 2.1053 Prescan @ 3 m Full Power Transmit Mode: TRx0, ARFCN 661 = GMSK (41.5dBm) TRx1, ARFCN 661 = 8-PSK (EDGE) (38.2dBm)



Test Of: **Ericsson AB**
RBS 2109 1900 MHz
To: **FCC Part 24: 2003**

Transmitter Radiated Emissions: Section 2.1053/24.238 (a) (Continued)

EUT: RBS 2109. Power: -48 V, DC Supply. Radiated Emissions. FCC Part 2.1053 Prescan @ 3 m Full Power Transmit Mode: TRx0, ARFCN 661 = GMSK (41.5dBm) TRx1, ARFCN 661 = 8-PSK (EDGE) (38.2dBm)



Start 30.0 MHz; Stop 1.0 GHz - Log Scale
Ref 92 dBµV/m; Ref Offset 0.0 dB; 10 dB/div
RBW 120.0 kHz; VBW 1.0 MHz; Att 10 dB; Swp 380.0 mS
Peak 950.611 MHz, 52.52 dBµV/m
Limit/Mask: Tx_limit; ; Limit Test Passed
Transducer Factors: A490
10/27/2004 12:05:57 AM

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	1930 to 1990 MHz	95%	+/- 0.6 dB
Frequency Stability	1930 to 1990 MHz	95%	+/- 5.0 Hz
Occupied Bandwidth	1930 to 1990 MHz	95%	+/- 5.0 Hz
Modulation Characteristics	1930 to 1990 MHz	95%	Phase error +/- 2.1° EVM (rms) <0.5% Origin Offset +/- 0.54 dB
Conducted Out of Band Emissions	9 kHz to 20 GHz	95%	+/- 3.5 dB
Conducted Emissions Inband Intermodulation	1930 to 1990 MHz	95%	+/- 0.7 dB
Radiated Spurious Emissions	30 MHz to 1000 MHz	95%	+/- 5.26 dB
Radiated Spurious Emissions	1 GHz to 26 GHz	95%	+/- 4.18 dB
Emissions at Band Edges	1930 to 1990 MHz	95%	+/- 0.7 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_603B.

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 and TX1.

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 TX1 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 measured frequency (MHz) was compared to upper/lower band edge to provide a margin.

Margin (MHz) = $UBEF_{MHz}$ - MCF_{MHz} (for top channel),
Margin (MHz) = MCF_{MHz} - $LBEF_{MHz}$ (for bottom channel),

where,

MCF_{MHz} is the measured carrier frequency in MHz
$LBEF_{MHz}$ is the lower band edge carrier frequency in MHz
$UBEF_{MHz}$ is the upper band edge carrier frequency in MHz.

The client has stated that the authorised frequency band is:-

Lower Band Edge	1930 MHz
Upper Band Edge	1990 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.

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+1 and T-1 channels for GMSK and B and T for 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.

It should be noted that FCC Part 24.238 states the 1st MHz band immediately adjacent to the applicants declared frequency block may be measured using a resolution bandwidth of at least 1% of the emission bandwidth. This bandwidth was found to be 3 kHz.

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. However, as the band edge ARFCNs need to be reduced by 2dB, the adjacent channels were measured at full output power instead. These being bottom ARFCN +1 and bottom ARFCN +26, top ARFCN -1 and top ARFCN –26 for GMSK. For 8PSK the band edge ARFCNs do not need to be reduced in order to fulfil the band edge requirements thus bottom channel and top channel were measured at full output power instead. Bottom ARFCN and bottom ARFCN +25, top ARFCN and top ARFCN –25.

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 40.8 dBm, using an average detector.

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 40.8 dBm, using an average detector.

This unit must use a reduced transmit power by 2 dB to 39.5 dBm for GMSK modulation for the channels adjacent to each frequency band edge in order to show compliance.

Receiver Function:	**Settings**
Detector Type:	Average
Mode:	Max Hold
Resolution Bandwidth:	3 kHz
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 an anechoic lined screened room in the frequency range of 30.0 MHz to 4.0 GHz. Between 4.0 GHz and 20.0 GHz a 1 m test distance was used. The EUT was rotated through 360 degrees when in the anechoic room to find any directional emissions that might be absorbed in the anechoic. A limit line was set to the specification limit for 3 m measurements. This limit was used across the whole test frequency range and therefore was tighter than necessary in the range 4 GHz to 20 GHz. Any levels within 10 dB of this limit were measured where possible, except on occasions when the receiver noise floor came within the 10 dB boundary

In the range 30 MHz to 1.0 GHz a narrower bandwidth was used than required by the specification. Consequently in this range the threshold for performing final measurements was increased from 10 dB to 20 dB.

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. A limit line was set to the specification limit by characterising the screen room using a known signal source set at exactly the same location as the EUT. The signal source was derived from either a horn antenna or a dipole dependant on the frequency band under investigation.

Appendix 1. Test Equipment Used

Test Equipment Used for Testing at Ericsson AB

ID Number	Description	Manufacturer	Model Number	Serial Number
429678	Tunable Notch Filter	K&L	3TNF-00008	11
80025915	PC	Compaq	EVO	CZC3230BP2
970319	RF Modulation Box 1900	Ericsson	LPY 107 616	4
A10474	Spectrum Analyzer	Rohde & Schwarz	FSIQ 26	838600/010
A19068	Vötsch	VCS 7250/S	Temperature chamber	58566031900010
A19314	Hewlett Packard	NTC195	Network Analyser Cables	50R49
A19315	Hewlett Packard	NTC195	Network Analyser Cables	50R50
EK8500	VXI Switch	Hewlett-Packard	HP 75000	3227A03959
K00659	Vaisala	HMI 31	Temperature and Humidity meter	P3840027
GS4336	Hewlett Packard	6812A	AC Voltage Supply	3523A00635
N1	Notch Filter 1800-1900 MHz	Ericsson	LPY 108 16/2	2
Y02435	Signal Generator	Rohde & Schwarz	SME 03	843098/030
A001	Attenuator, 10dB, 100W	Weinschel Corp.	48-10-34	BC2558
A002	Attenuator, 20dB, 100W	Weinschel Corp.	48-20-34	BC2572
A003	Attenuator, 20dB, 100W	Weinschel Corp.	48-20-34	BB8312
C001	Cable, 1.0m SMA-N-type	Suhner	Sucoflex 104	99134/4
C002	Cable, 1.0m SMA-N-type	Suhner	Sucoflex 104	99140/4
C003	Cable, 1.0m N-N-type	Suhner	Sucoflex 104PE	30662/4PE
C004	Cable, 1.5m N-N-type	Suhner	Sucoflex 104E	2635/4E
C005	Cable, 3.0m N-N-type	Suhner	Sucoflex 104E	1394/4E
C006	Cable, 1.0m N-N-type	Suhner	Sucoflex 104E	7501/4E
C007	Cable, 1.0m N-N-type	Suhner	Sucoflex 104E	7502/4E
T001	Terminator, 50 ohm, 50W	Weinschel Corp.	M1426	BL3560
T002	Terminator, 50 ohm, 50W	Weinschel Corp.	M1426	BL3588
YI2033	Hewlett Packard	8720D	Network Analyser	US36140166
YI2044	Hewlett Packard	11793A	Microwave Converter	3336A01928

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RFI Test Equipment Used for Testing at Ericsson AB

RFI No	Instrument	Manufacturer	Model Number	Serial Number
M1181	Temperature and Humidity Meter	Rohde & Schwarz	Thermo-Hygro	N/A
M517	Fluke	77 Series 11	Multimeter	63150434R

Test Equipment Used for Testing at Basingstoke

RFI No.	Instrument	Manufacturer	Type No.	Serial No.
A027	Horn Antenna	Eaton	9188-2	301
A031	2 to 4 GHz Eaton Horn Antenna	Eaton	91889-2	557
A1306	N-Type Connector	Narda	370 BNM	0210
A427	WG 14 horn	Flann	14240-20	150
A428	WG 12 horn	Flann	12240-20	134
A429	WG 16 horn	Flann	16240-20	561
A430	WG 18 horn	Flann	18240-20	425
A436	WG 20 horn	Flann	20240-20	330
A553	Bi-log Antenna	Chase	CBL6111A	1593
A649	LISN	Rohde & Schwarz	ESH3-Z5	825562/008
C160	Cables	Rosenberger	UFA210A-1-1181-70x70	None
C172	Cable	Rosenberger	UFA210A-1-1181-70x70	None
C320	Cable	Rosenberger	UFA 210A-1-0788-50x50	96A0123
C459	Cable	Rosenberger	UFA210A-1-1182-704704	98H0303
M069	ESMI Spectrum Analyser / Receiver	Rohde & Schwarz	ESMI	829 808/007 (DU) / 827 063/008 (RU)
S212	Site 12	RFI	12	

NB In accordance with UKAS requirements, all RFI measurement equipment is on a calibration schedule.

Appendix 2. Test Configuration Drawings

This appendix contains the following drawings:

Drawing Reference Number	Title
DRG\46314JD11\001	Schematic diagram of the EUT, support equipment and interconnecting cables used for the conducted measurements in Lindholmen.
DRG\46314JD11\002	Schematic diagram of the EUT, support equipment and interconnecting cables used for testing in Basingstoke.

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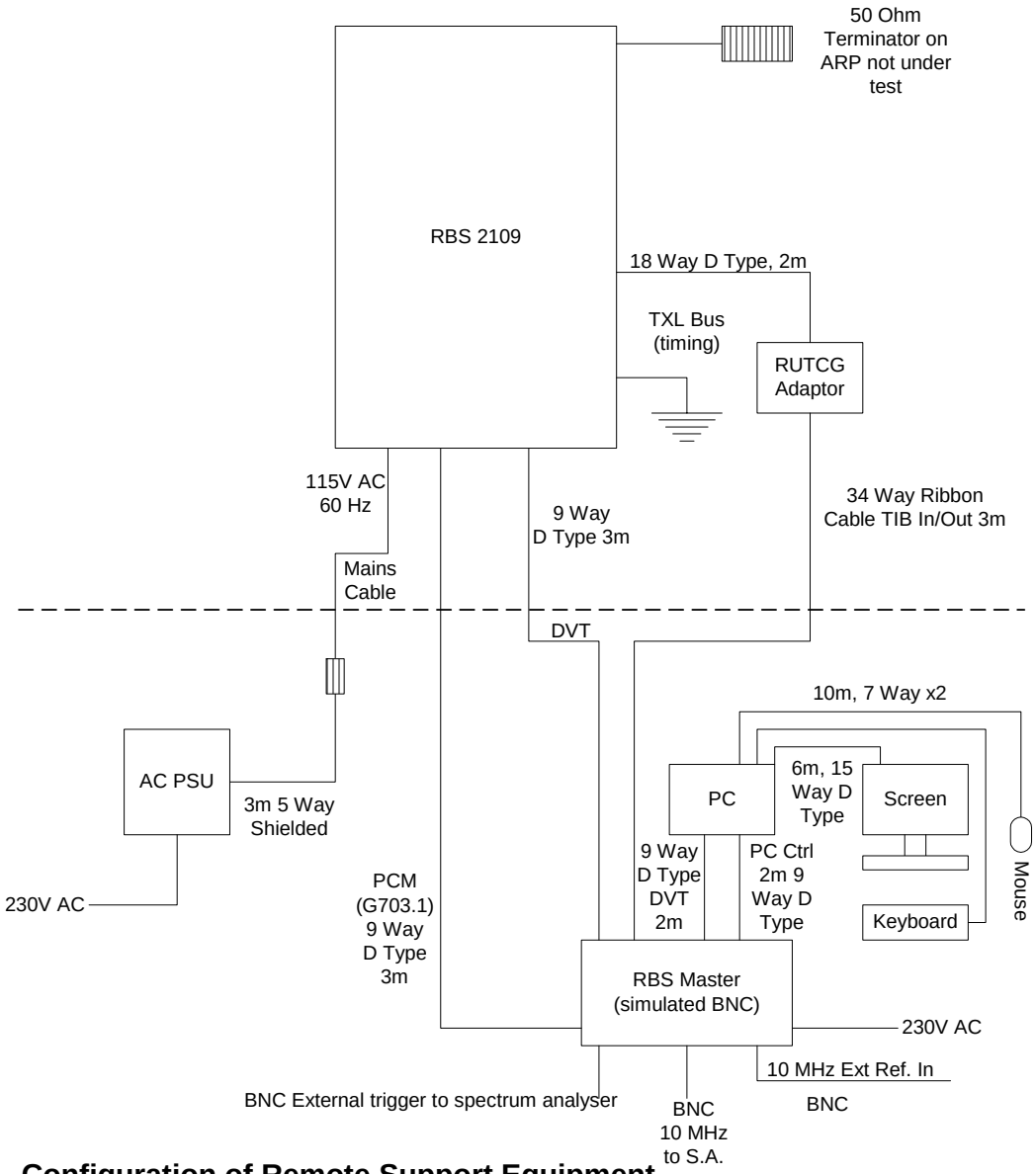
DRG\46314JD11\001

Configuration of EUT and Local Support Equipment
Conducted Measurements



Configuration of Remote Support Equipment

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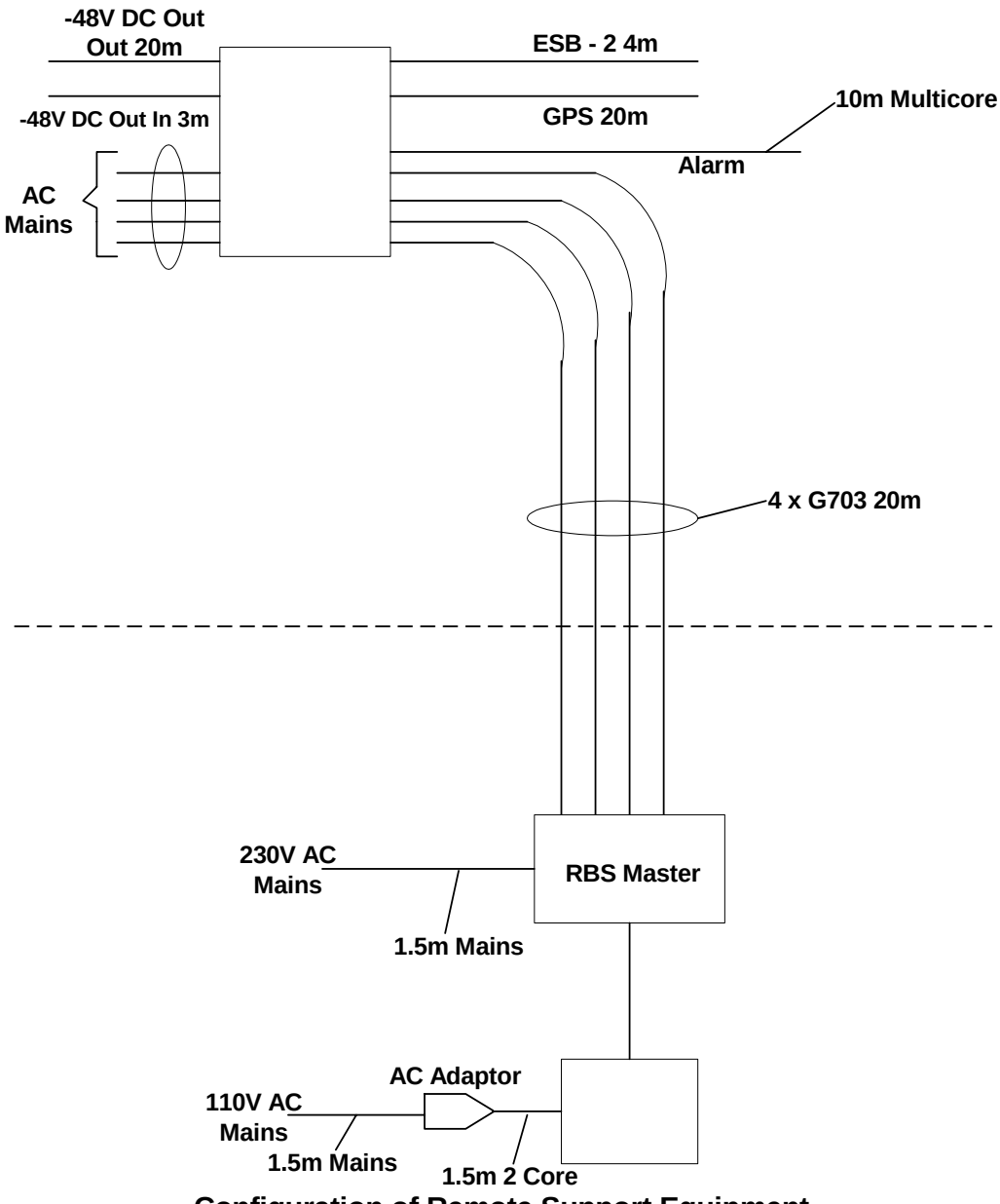
DRG\46314JD11\002

Configuration of EUT and Local Support Equipment



Configuration of Remote Support Equipment