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**Report of Measurements
of Electromagnetic Compatibility Testing**

Test Report File No. : **NC4876** Date of issue: 10/22/02
Applicant : Ericsson Amplifier Technologies Inc.
Model : KRB 101 1108
Product Type : Amplifier
Power Supply : 27 VDC
Manufacturer : Same As Applicant
License holder : Same As Applicant
Address : 49 Wireless Blvd
: Hauppauge, NY 11788
Test Type : **Compliance Investigation**
 Manufacturer's Specification
Test Project Number : 02ME18628
References(s) : FCC ID: QANKRB1011108

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Report Directory

1.0	<i>GENERAL - Product Description</i>	3
1.1	Device Configuration During Test.....	4
1.2	Deviations from ANSI C63.4.....	5
1.3	Device Modifications Necessary for Compliance.....	5
1.4	Test Summary.....	5
2.0	<i>EMISSIONS TEST REGULATIONS</i>	6
2.1	EUT OPERATION MODE - EMISSIONS TESTS.....	6
2.1.1	RF Power Output.....	7
2.1.2	Occupied Bandwidth Test.....	10
2.1.3	Field Strength of Spurious Radiated Emissions.....	30
2.1.4	ERP Effective Radiated Power.....	55
2.1.4	Conducted Spurious Emissions:.....	63
2.1.5	Inter-modulation Distortion.....	70
3.0	<i>SUMMARY:</i>	72

File Number: NC4876
Project Number: 02ME18628
Model Number: KRB 101 1108
FCC ID: QANKRB1011108

Issued: 10/22/02

1.0 G E N E R A L - Product Description

The product is a multi – Carrier Feed Forward Power Amplifier (MCPA) designed for cellular base station application. It is entirely solid-state and is powered by an external 27 VDC power supply. The MCPA when installed in a Sub-rack becomes a Multi-Carrier power Amplifier Sub-System.

File Number: NC4876
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Issued: 10/22/02

1.1 Device Configuration During Test

Device	Manufacturer	Model Number	Serial Number	FCC ID	
RF Power Meter	Hewlett Packard	437B	3125U20495	-----	
Power Sensor	Hewlett Packard	8482A	US37292821	-----	
Spectrum Analyzer	Rhode & Schwarz	FSEB	TEL642235	-----	
RF Signal Generator	Hewlett Packard	E4433B	US40052419	-----	
RF Signal Generator	Hewlett Packard	E4433B	US40052401	-----	
RF Signal Generator	Hewlett Packard	E4433C	USA41460404	-----	
Dual Directional Coupler	NARDA	CEL30600	01691	-----	
Attenuator 40dB	Weinschel	45-40-43	KT219	Cal Verified	
Attenuator 20dB	Weinschel	1	BD6322	Cal Verified	
Attenuator 20dB	Weinschel	24-20-34	BG6768	Cal Verified	
Attenuator 10dB	Weinschel	1	BE9131	Cal Verified	
Termaline Coaxial Resistor	Bird	6251	14205	Cal Verified	
Filter Band-Pass 869-894MHz	Celwave	CV90-1430-1	2-95-A003	Cal Verified	
Power Supply	Sorensen	DC-40-75	PS502	Cal Verified	
Power Supply	GW	GPC 3030	A612152	Cal Verified	
Step Attenuator	JFD	50BR-017	174941	Cal Verified	
Isolator	Trak	I08789/A	1041	Cal Verified	
Isolator	Trak	I08789/A	1028	Cal Verified	
2 Way Combiner	Mini Circuits	ZAPD-21	-----	Cal Verified	
DVM	Fluke	37	MM385	Cal Verified	
Subrack Assembly	Ericsson	KRB 101 1108 & 1/KRB 101 1108	-----	-----	
Intermodulation Distortion Simulator	RDL Inc.	IMD 801D-03A	131	-----	
Cable	Manufacturer	Shielding	Shield Bonding	Type	Length (Feet)
High Frequency Cable	Mega Phase	D230NKNK36T2	-----	Cal Verified	-----
High Frequency Cable	Mega Phase	D230NKNK72T2	-----	Cal Verified	-----

File Number: NC4876
Project Number: 02ME18628
Model Number: KRB 101 1108
FCC ID: QANKRB1011108

Issued: 10/22/02

"The results contained in this report reflect the results for this particular model and serial number. It is the responsibility of the manufacturer to ensure that all production models meet the intent of the requirements detailed within this report"

1.1 Deviations from ANSI C63.4

Not Applicable

As described below:

1.2 Device Modifications Necessary for Compliance

N/A

As described below:

1.3 Test Summary:

Test	Basic Standard	Considered	Tested	In Compliance
RF Power Output	FCC Part 22.913	✓	✓	✓
Occupied Bandwidth Test	FCC Part 22.915	✓	✓	✓
Field Strength of Spurious Radiated Emissions	FCC Part 22.917	✓	✓	✓
Conducted Spurious Emissions	FCC Part 22.917	✓	✓	✓
Inter-modulation Distortion	FCC Part 22.917	✓	✓	✓

2.0 EMISSIONS TEST REGULATIONS

FCC Part Subpart H Paragraphs 22.913 to 22.917

2.1 EUT OPERATION MODE - EMISSIONS TESTS

- Standby
- Test program (H-Pattern)
- Test program (color bar)
- Test program (customer specific)
- Practice operation
- Normal operation Mode:
- As per manufacturer's instructions: The EUT (equipment under test) is tuned to specification at the Manufacturer Facility. The MCPA Amplifier is turned on to deliver 120watts of average power, multicarrier signal, with extremely low inter-modulation over the pass band of 869-894MHz.

File Number: NC4876
 Project Number: 02ME18628
 Model Number: KRB 101 1108
 FCC ID: QANKRB1011108

Issued: 10/22/02

2.1.1 RF POWER OUTPUT

Test Applicable **Test Not Applicable**

Temperature: 21.2 °C
 Humidity: 64 %RH
 Pressure: 1020 milbar
 Date test performed: 10/01/02

The Amplifier will operate in a typical installation. The output power measured will not exceed the rated power of the Amplifier. The output power measured will be utilized for all other tests. Connect the output of the EUT through an attenuator to an average power meter. The measurements shall be made at each modulation type and recorded. The measurements shall be made at the low, middle and high frequency band.

The output power is rated at 100watts

Modulation types:

Channel	Frequency (MHz)	Modulation type GMSK	Modulation type GSM Edge	Frequency (MHz)	Modulation type WCDMA
Low power measurement	869.6	50.03(dBm)	50.02(dBm)	874.0	50.03(dBm)
Middle power measurement	881.5	50.07(dBm)	50.06(dBm)	881.5	50.04(dBm)
High power measurement	893.6	50.05(dBm)	50.04(dBm)	889.0	50.01(dBm)

Test equipment used for RF Output Power:

HP8753C **Hewlett-Packard** **Network Analyzer** **Equipment No.: ME5-893**
 Range:300K-3G Last Calibration Date: 12 Sept 02 Calibration Due Date: 12 Sept 03

HP 85046A **Hewlett Packard** **S Parameter Test Set** **Equipment No.: ME5-894**
 Last Calibration Date: 12 Sept 02 Calibration Due Date: 12 Sept 03

R&S **Rhode & Schwarz** **Power Sensor** **Equipment No.: 5B-134**
 Last Calibration Date: 26 Aug. 02 Calibration Due Date: 26 Aug.04

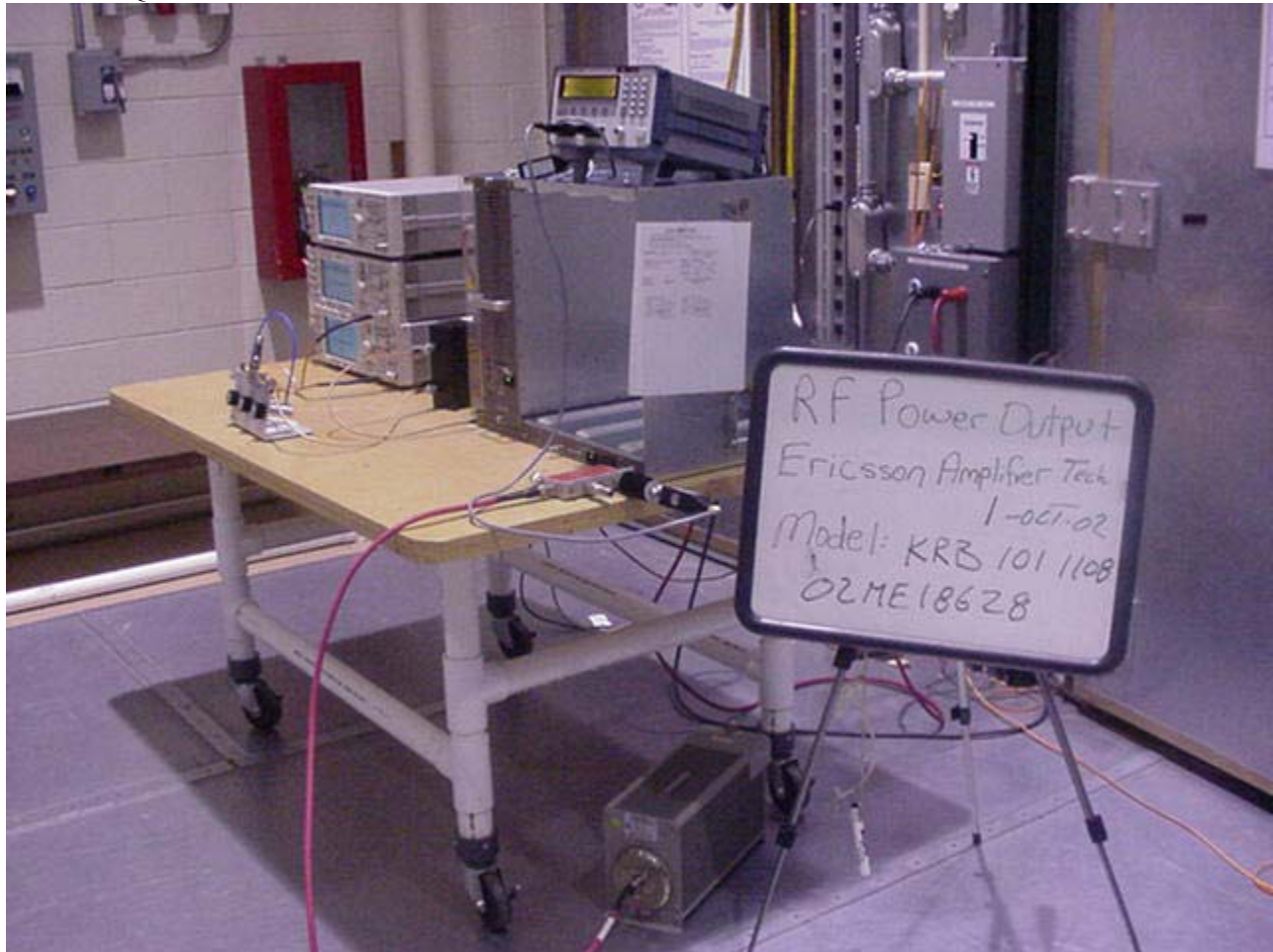
R&S **Rhode & Schwarz** **Power Meter** **Equipment No.: 5B-132**
 Last Calibration Date: 26 Aug. 02 Calibration Due Date: 26 Aug.04

Power Ten, Inc **DC Power Supply** **Equipment No.: 7A-714**

Fluke 87 **Fluke** **Digital Volt Meter** **Equipment No.: 5B-218**
 Last Calibration Date:26 Aug.02 Calibration Due Date: 26 Aug.03

Temp/Pressure **Oakton** **Barometer** **Equipment No.: ME4-263**
 Range: Auto Last Calibration Date: 2 April 02 Calibration Due Date: 2 April 03

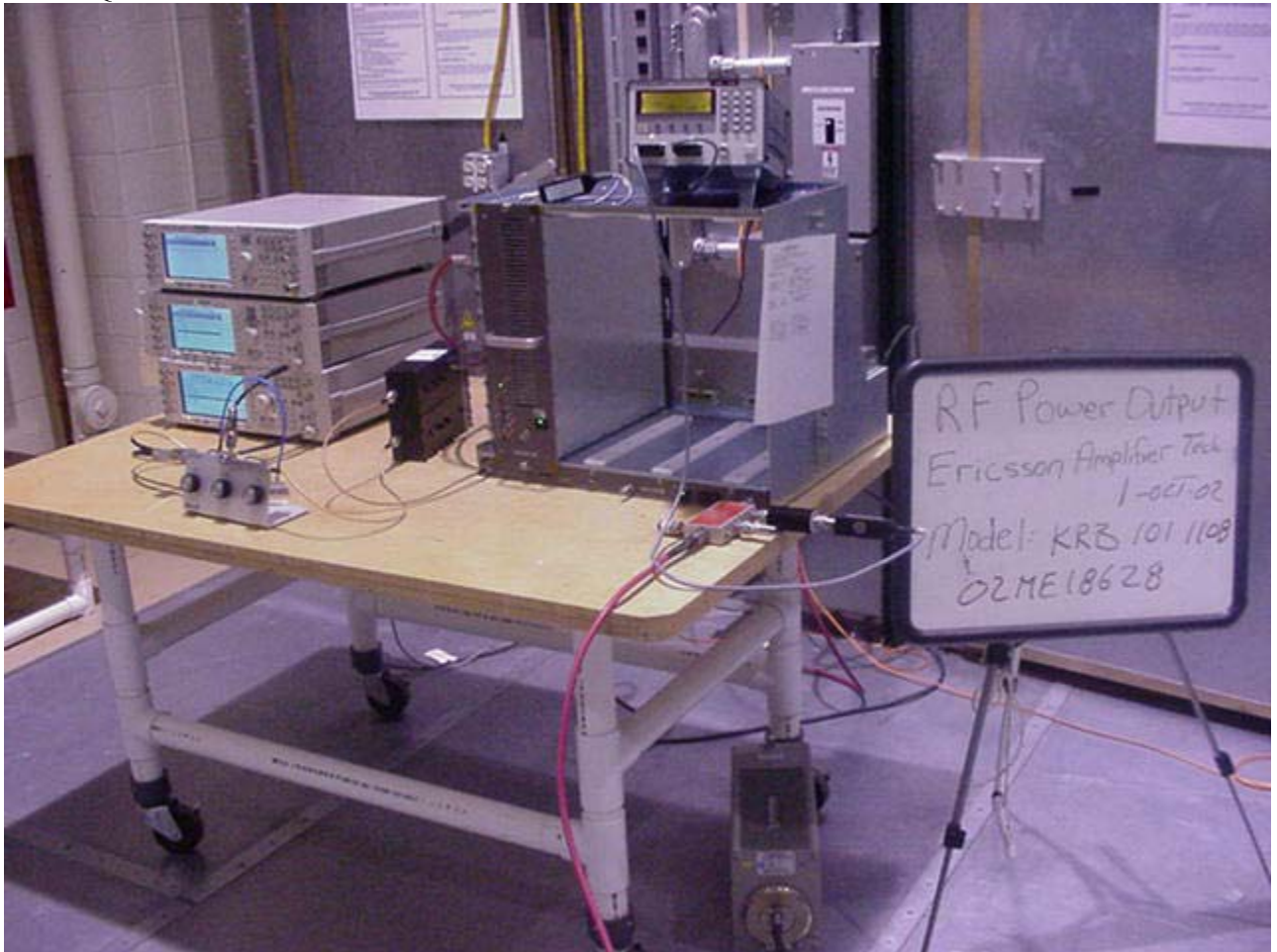
453320 **Ex-Tech** **Hydro-Thermometer** **Equipment No.: ME4-264**
 Range:Auto Last Calibration Date: 2 April 02 Calibration Due Date: 2 April 03



RF Power Output Test Set-Up

File Number: NC4876
Project Number: 02ME18628
Model Number: KRB 101 1108
FCC ID: QANKRB1011108

Issued: 10/22/02



RF Power Output Test Set-Up

2.1.2 Occupied Bandwidth Test

Test Applicable Test Not Applicable

Temperature: 21 °C
 Humidity: 64 %RH
 Pressure: 1020 milbar
 Date test performed: 4 OCT.02

The Amplifier will operate in a typical installation. Connect the output of the EUT through an attenuator to a Spectrum Analyzer. The measurements shall be made at the input and then the output at each modulation type. The measurements shall be made at the low, middle and high frequency band. The output bandwidth shall not exceed the input bandwidth at each modulation.

Tested at the low, middle, and high channel frequency:

Modulation types:

Modulation type	GMSK		GSM Edge		WCDMA	
	Input	Output	Input	Output	Input	Output
Low bandwidth measurement	260 KHz	260 KHz	257KHz	257KHz	4.1MHz	4.1MHz
Middle bandwidth measurement	260 KHz	260 KHz	258KHz	257KHz	4.1MHz	4.1MHz
High bandwidth measurement	260 KHz	260 KHz	258KHz	257KHz	4.1MHz	4.1MHz

Test equipment used for Occupied Bandwidth.

ESI **Rohde & Schwarz** **EMI Test Reciever,** **Equipment No.: 5B-081**
 Range: 20Hz- 26.5GHz Last Calibration Date: 20 Aug.02 Calibration Due Date: 20 Aug. 03

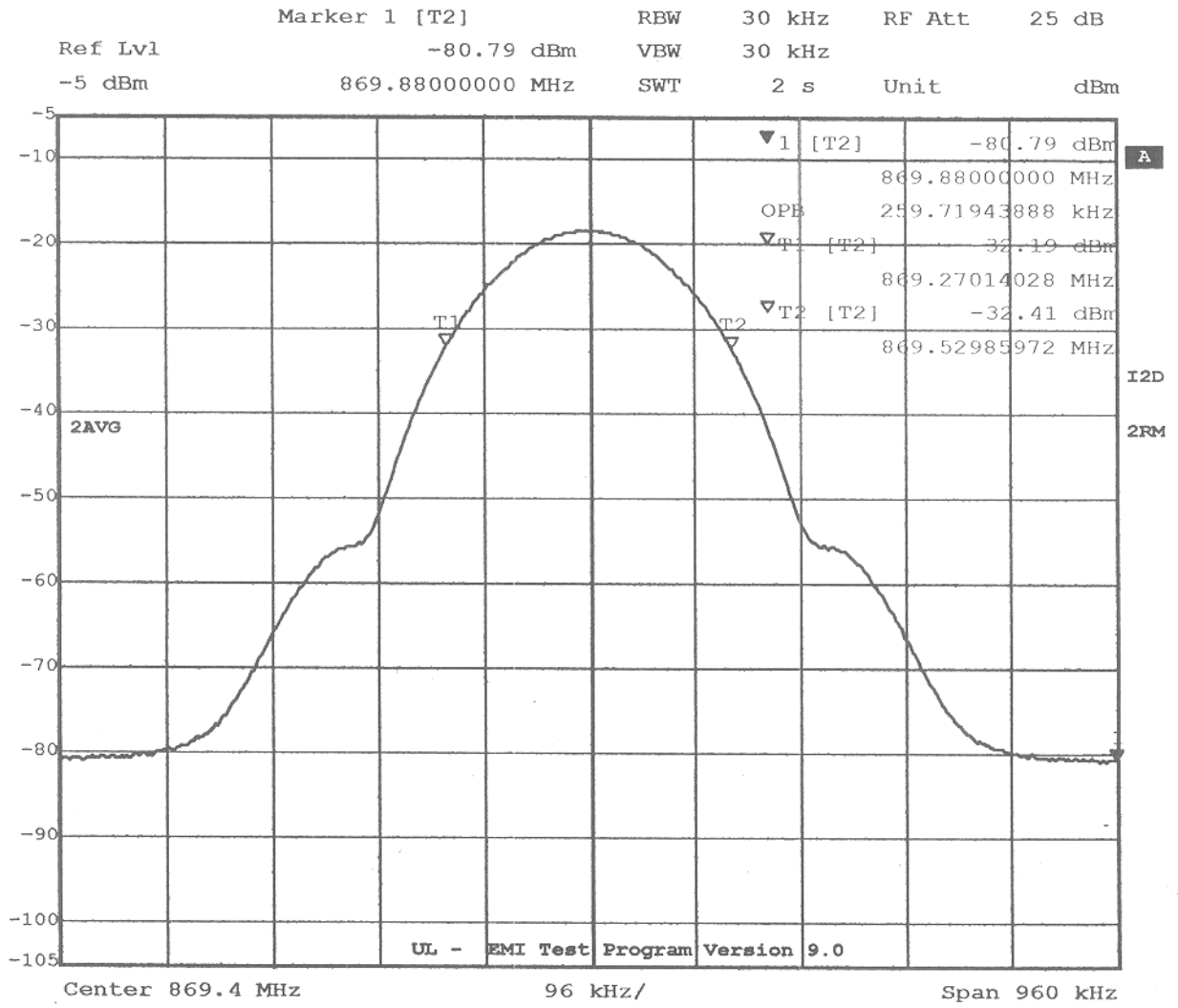
10 dB Attenuator **Weinschel**

Temp/Pressure **Oakton** **Barometer** **Equipment No.: ME4-263**
 Range: Auto Last Calibration Date: 2 April 02 Calibration Due Date: 2 April 03

453320 **Ex-Tech** **Hydro-Thermometer** **Equipment No.: ME4-264**
 Range:Auto Last Calibration Date: 2 April 02 Calibration Due Date: 2 April 03

File Number: NC4876
 Project Number: 02ME18628
 Model Number: KRB 101 1108
 FCC ID: QANKRB1011108

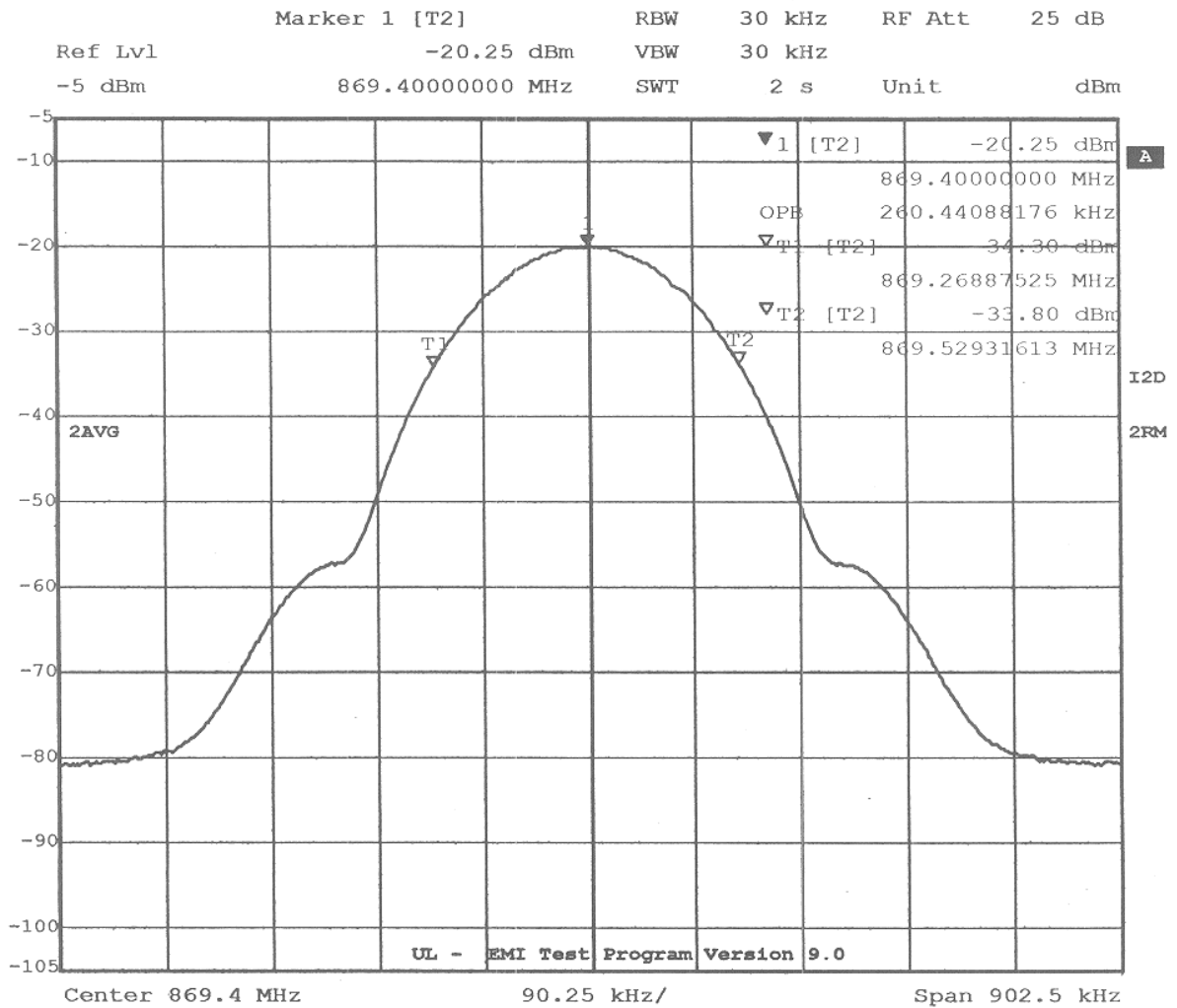
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Title: Ericsson Occupied Bandwidth GMSK 869.4Mhz Input Low
 Date: 4.OCT.2002 13:34:03

File Number: NC4876
 Project Number: 02ME18628
 Model Number: KRB 101 1108
 FCC ID: QANKRB1011108

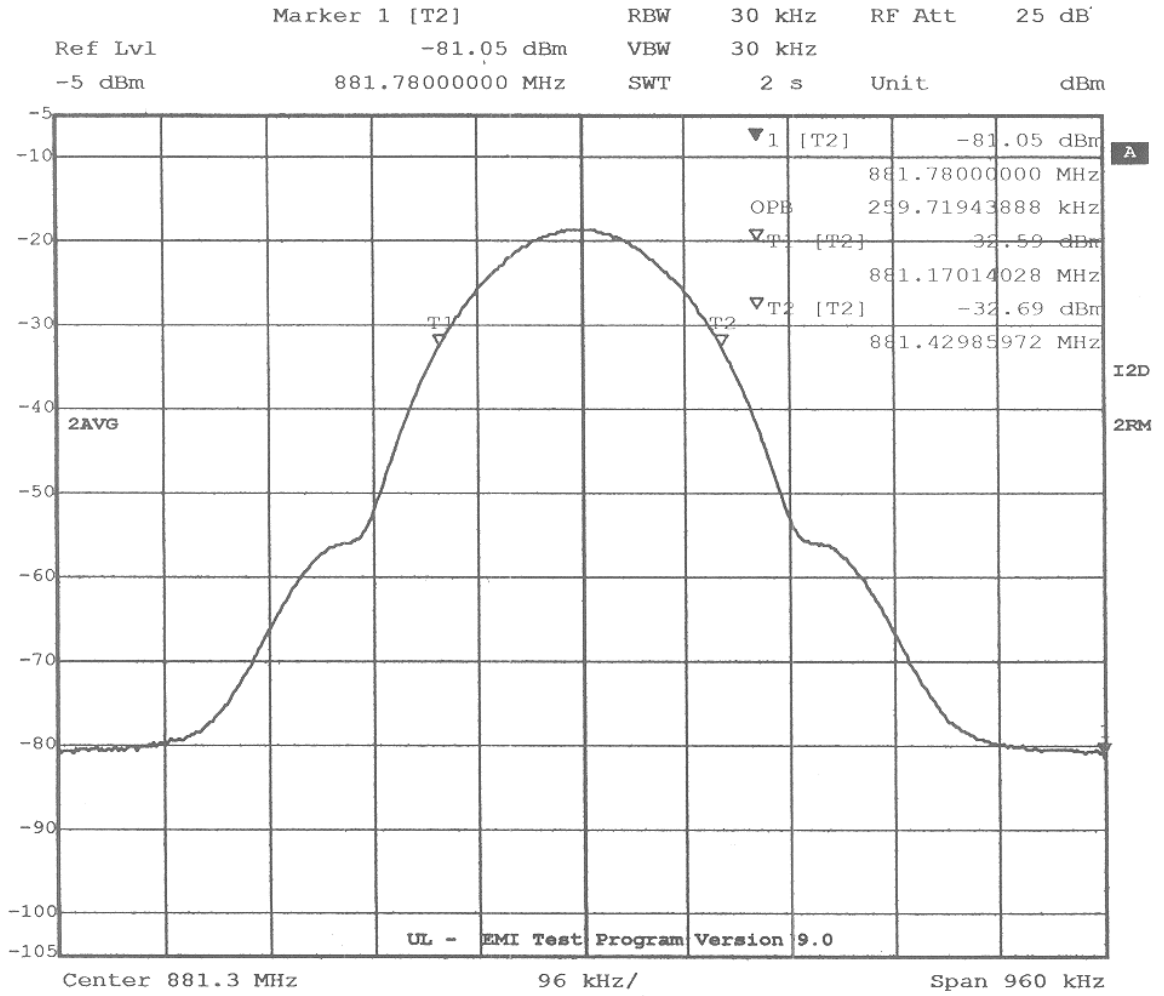
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Title: Ericsson Occupied BW GMSK Low 869.43Mhz Output
 Date: 4.OCT.2002 14:41:39

File Number: NC4876
 Project Number: 02ME18628
 Model Number: KRB 101 1108
 FCC ID: QANKRB1011108

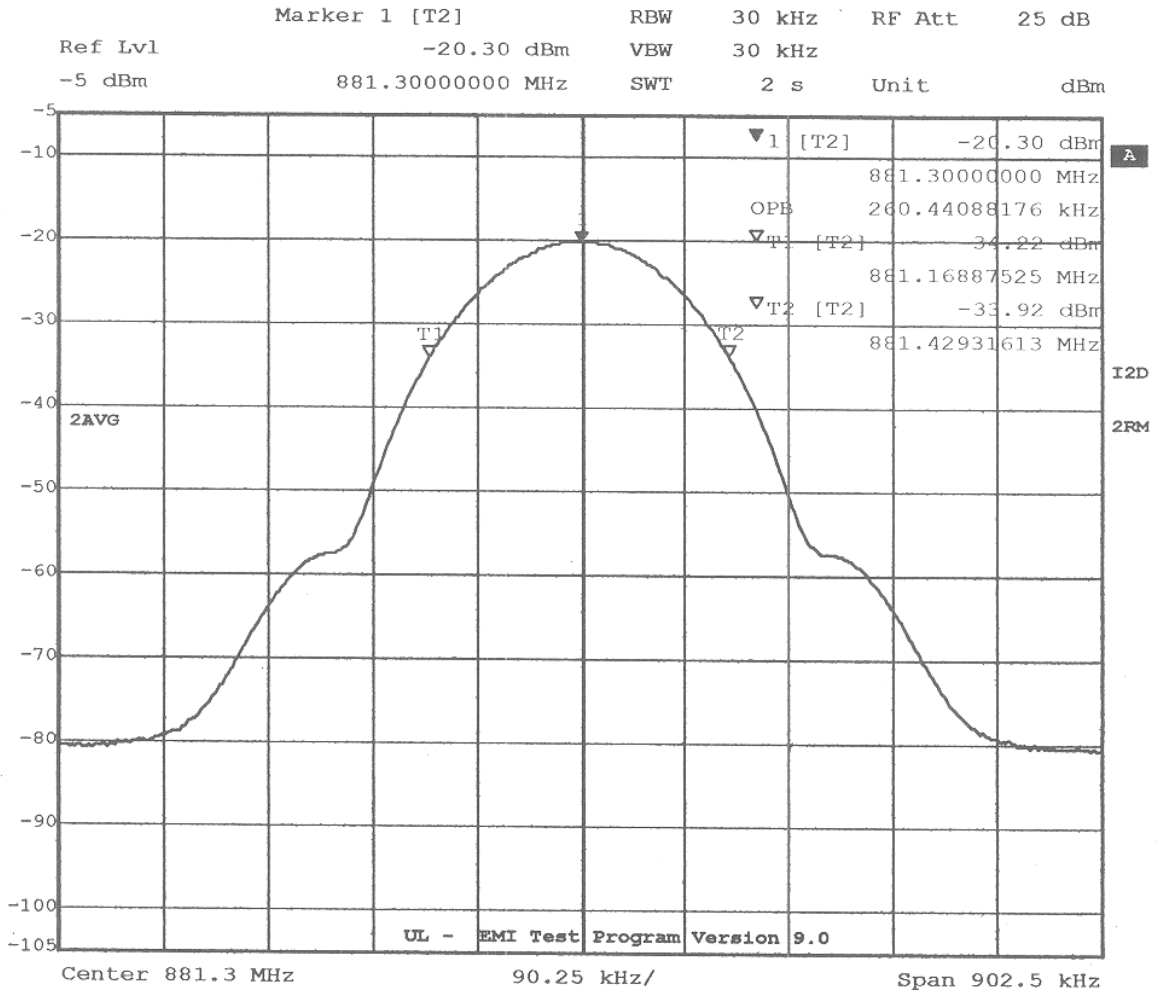
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Title: Ericsson Occupied Bandwidth GMSK 881.3Mhz Input Mid
 Date: 4.OCT.2002 13:31:24

File Number: NC4876
 Project Number: 02ME18628
 Model Number: KRB 101 1108
 FCC ID: QANKRB1011108

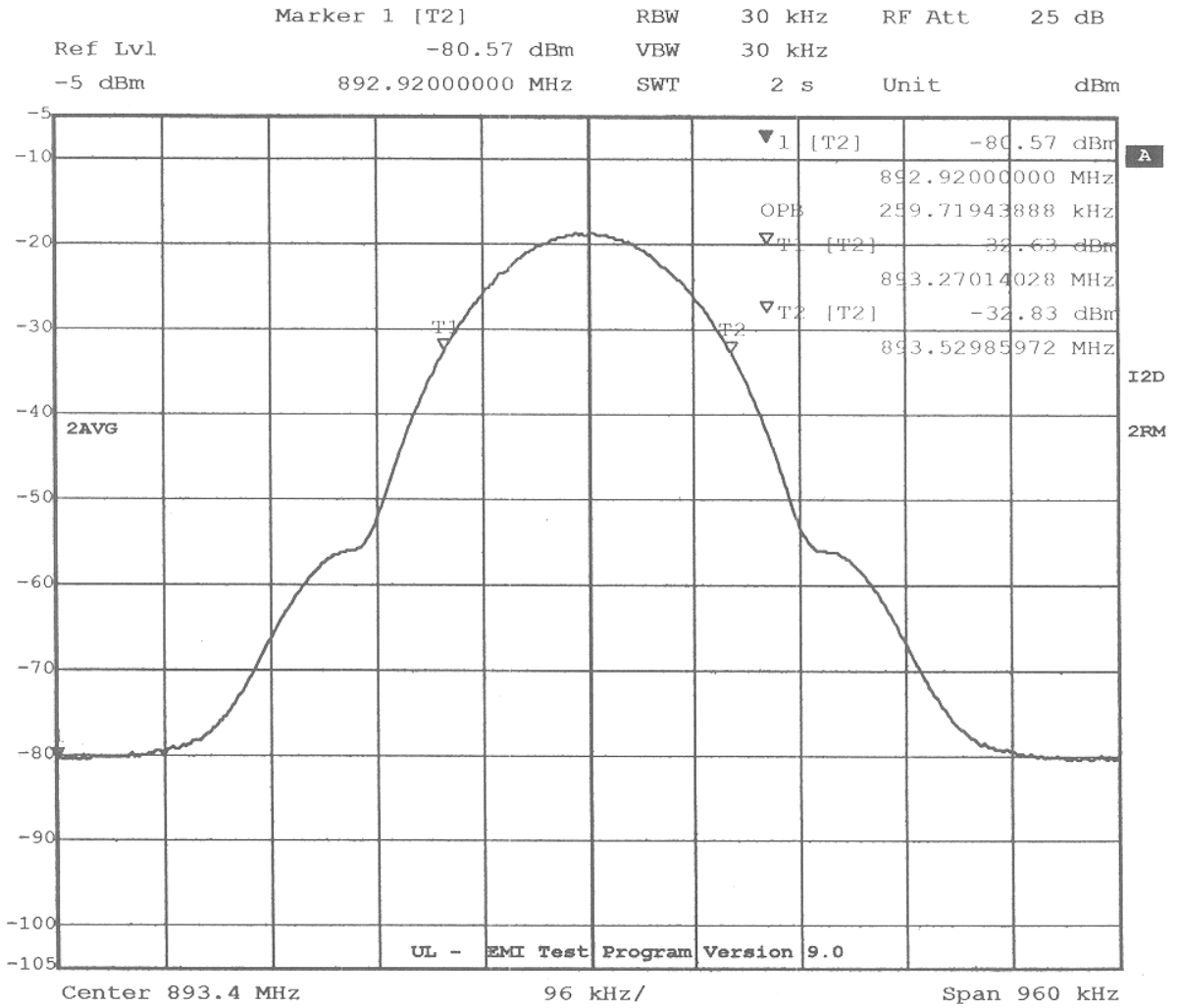
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Title: Ericsson Occupied BW GMSK Mid 881.3Mhz Output
 Date: 4.OCT.2002 14:37:25

File Number: NC4876
 Project Number: 02ME18628
 Model Number: KRB 101 1108
 FCC ID: QANKRB1011108

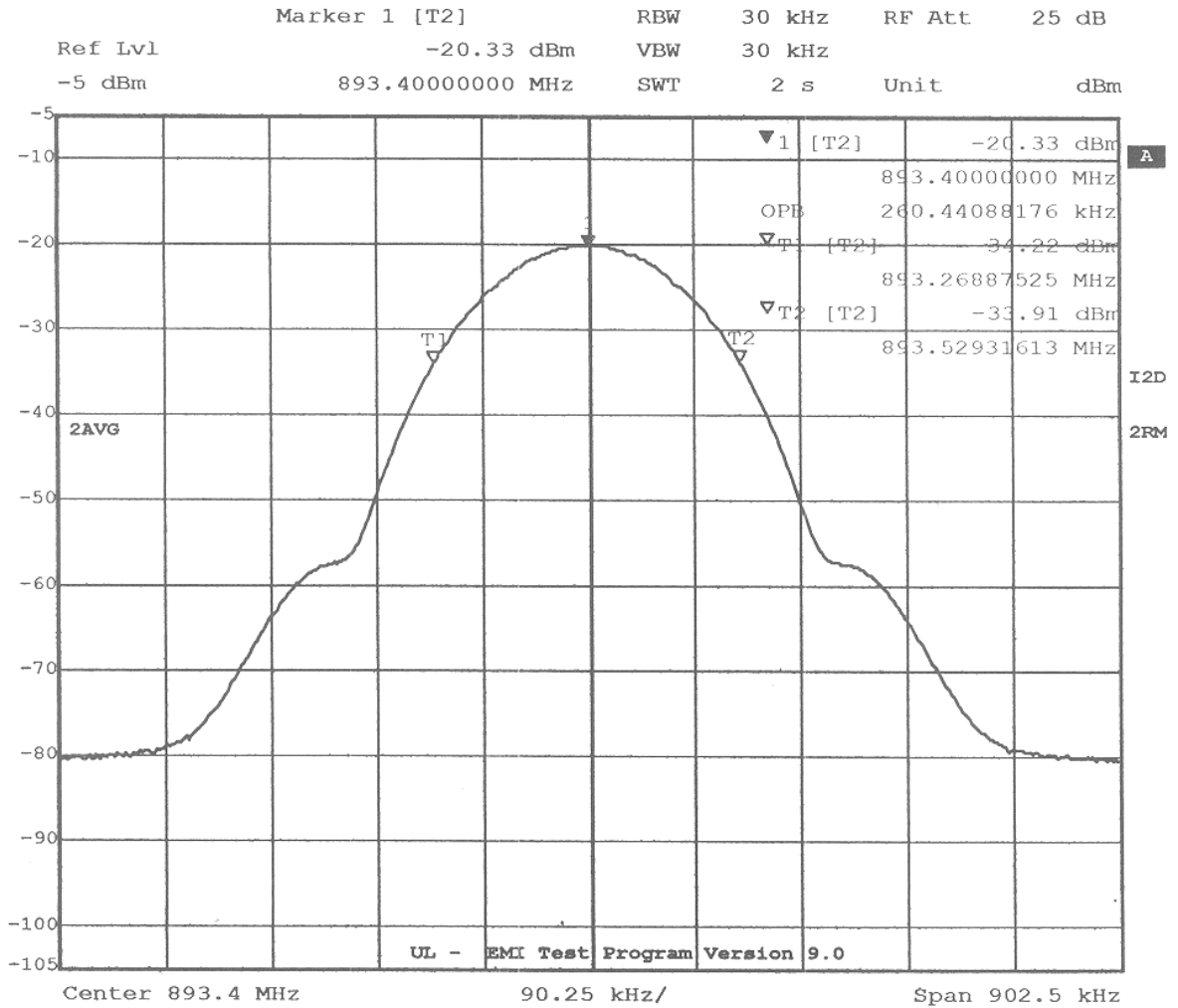
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Title: Ericsson Occupied Bandwidth GMSK 893.4Mhz Input High
 Date: 4.OCT.2002 13:25:35

File Number: NC4876
 Project Number: 02ME18628
 Model Number: KRB 101 1108
 FCC ID: QANKRB1011108

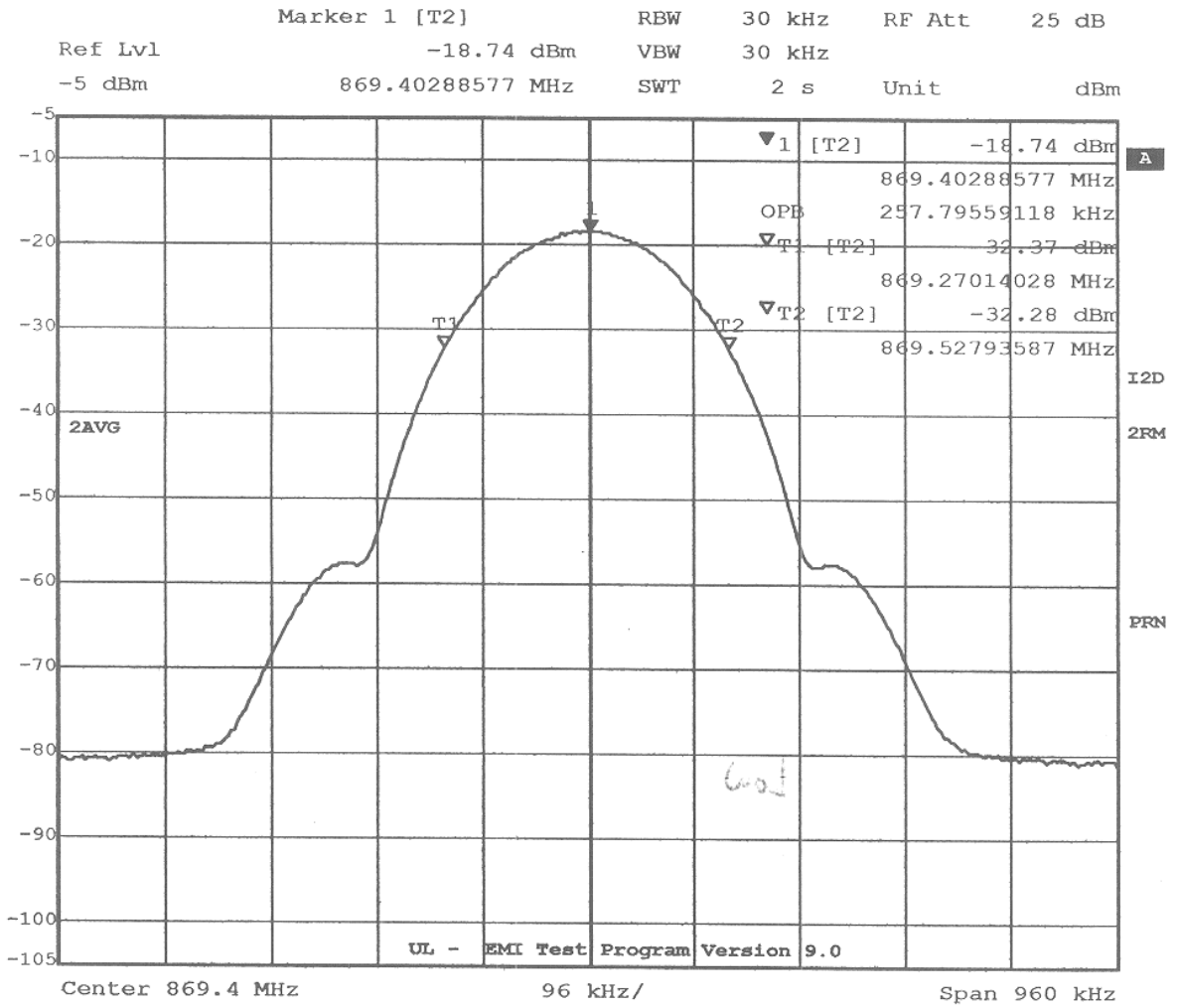
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Title: Ericsson Occupied BW GMSK High 893.4Mhz Output
 Date: 4.OCT.2002 14:34:02

File Number: NC4876
 Project Number: 02ME18628
 Model Number: KRB 101 1108
 FCC ID: QANKRB1011108

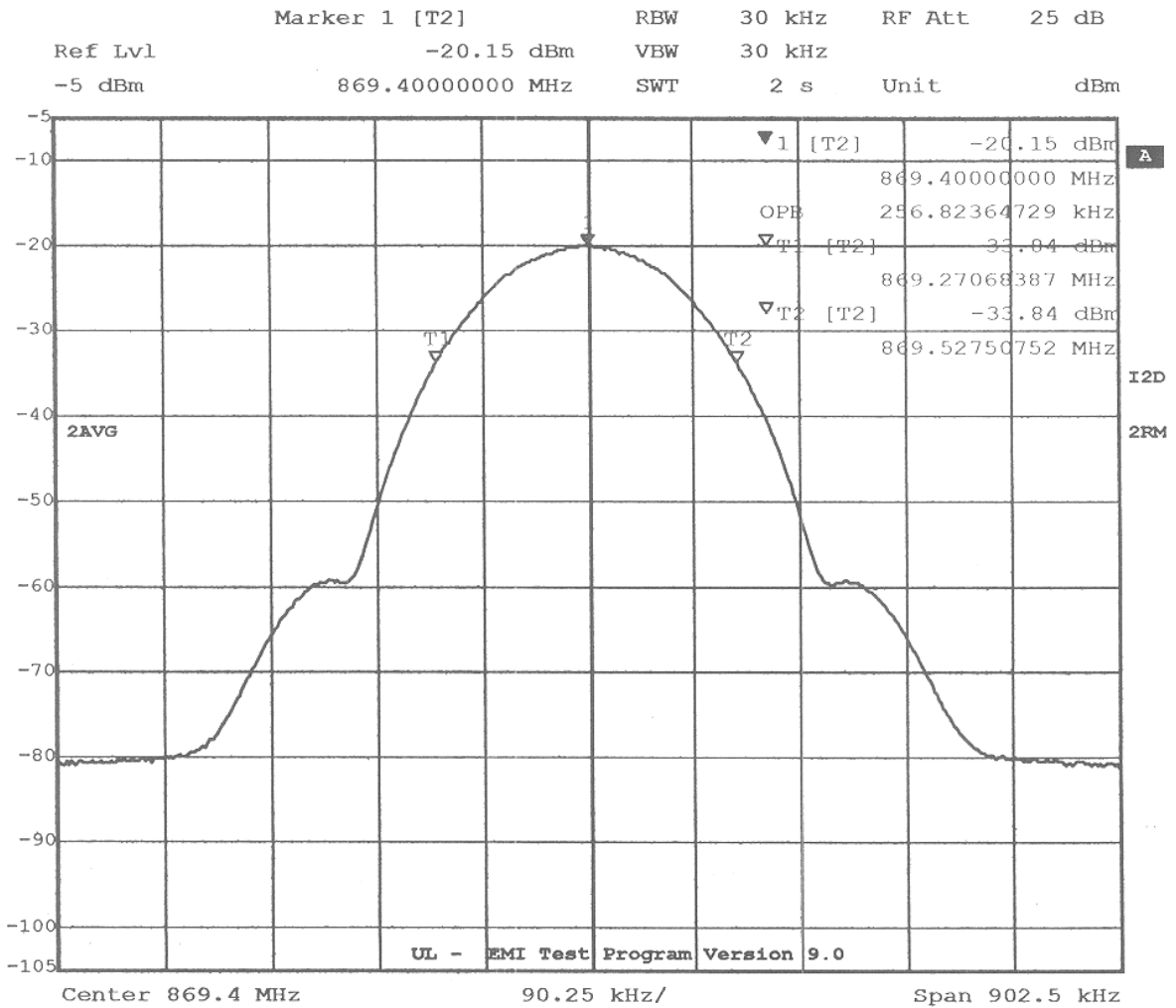
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Title: Ericsson Occupied Bandwidth Edge 869.4 Mhz Input
 Date: 4.OCT.2002 13:11:52

File Number: NC4876
 Project Number: 02ME18628
 Model Number: KRB 101 1108
 FCC ID: QANKRB1011108

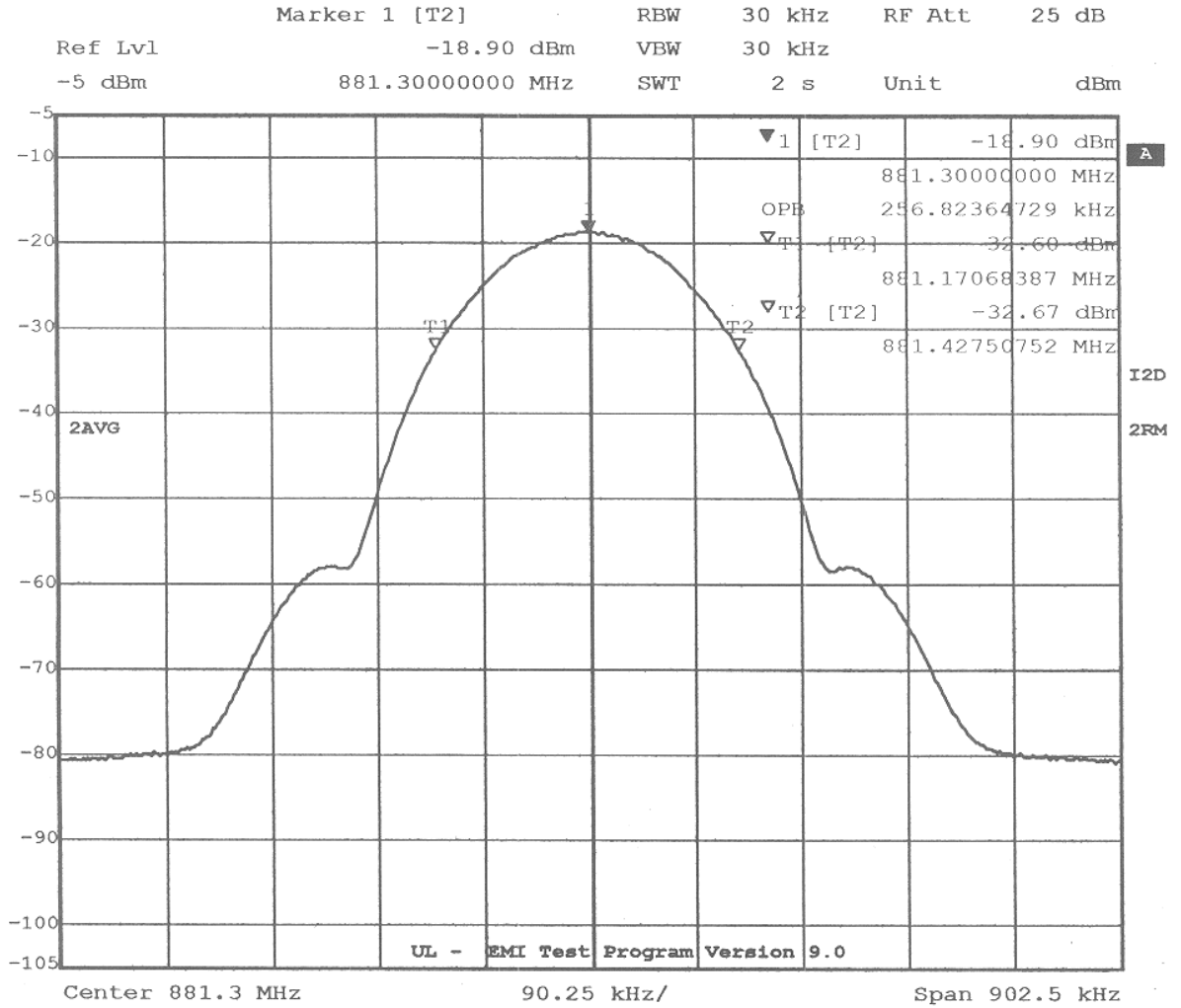
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Title: Ericsson Occupied BW EDGE Low 869.5Mhz Output
 Date: 4.OCT.2002 14:24:37

File Number: NC4876
 Project Number: 02ME18628
 Model Number: KRB 101 1108
 FCC ID: QANKRB1011108

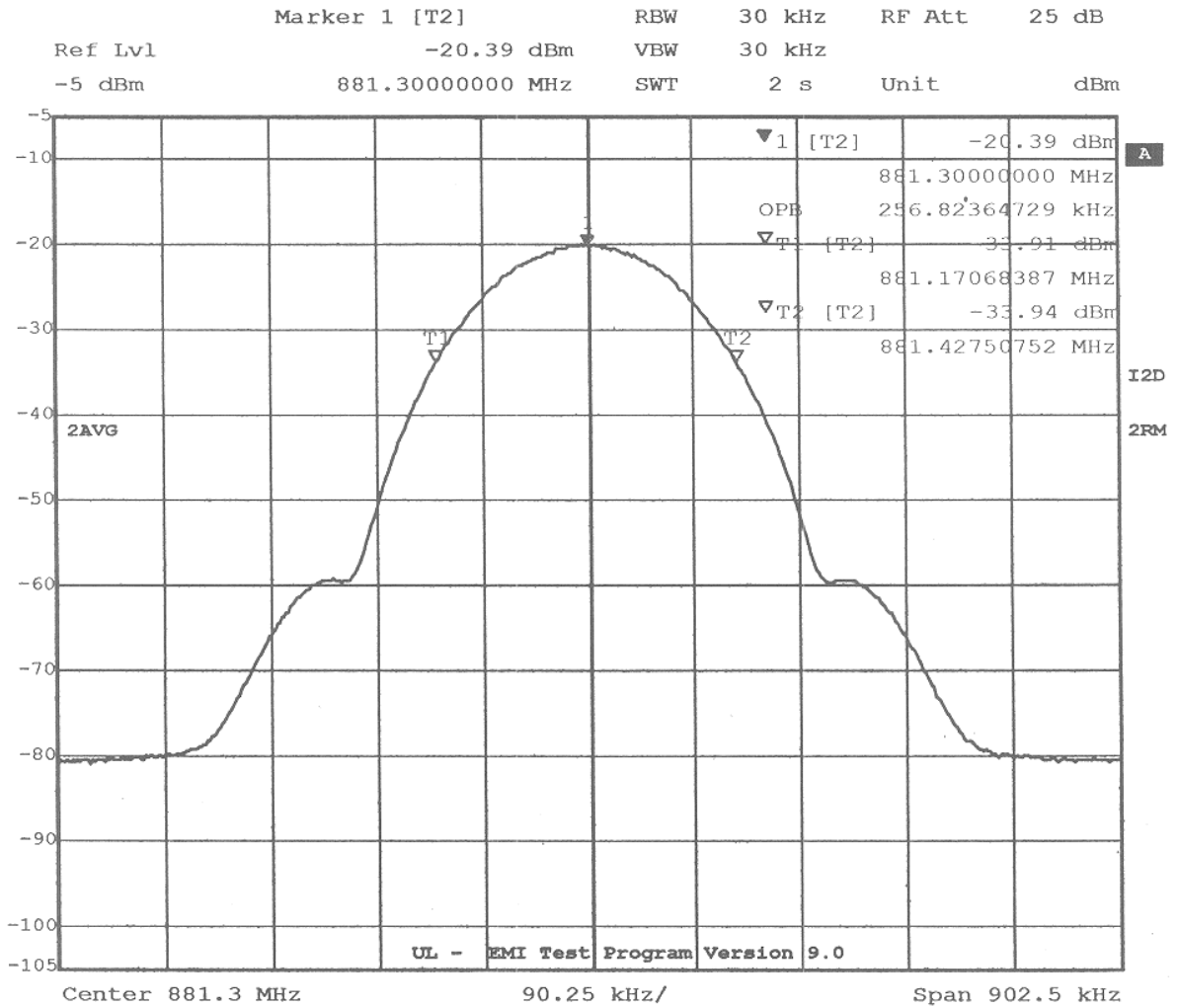
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Title: Ericsson Occupied BW EDGE Mid 881.3Mhz Input
 Date: 4.OCT.2002 14:00:25

File Number: NC4876
 Project Number: 02ME18628
 Model Number: KRB 101 1108
 FCC ID: QANKRB1011108

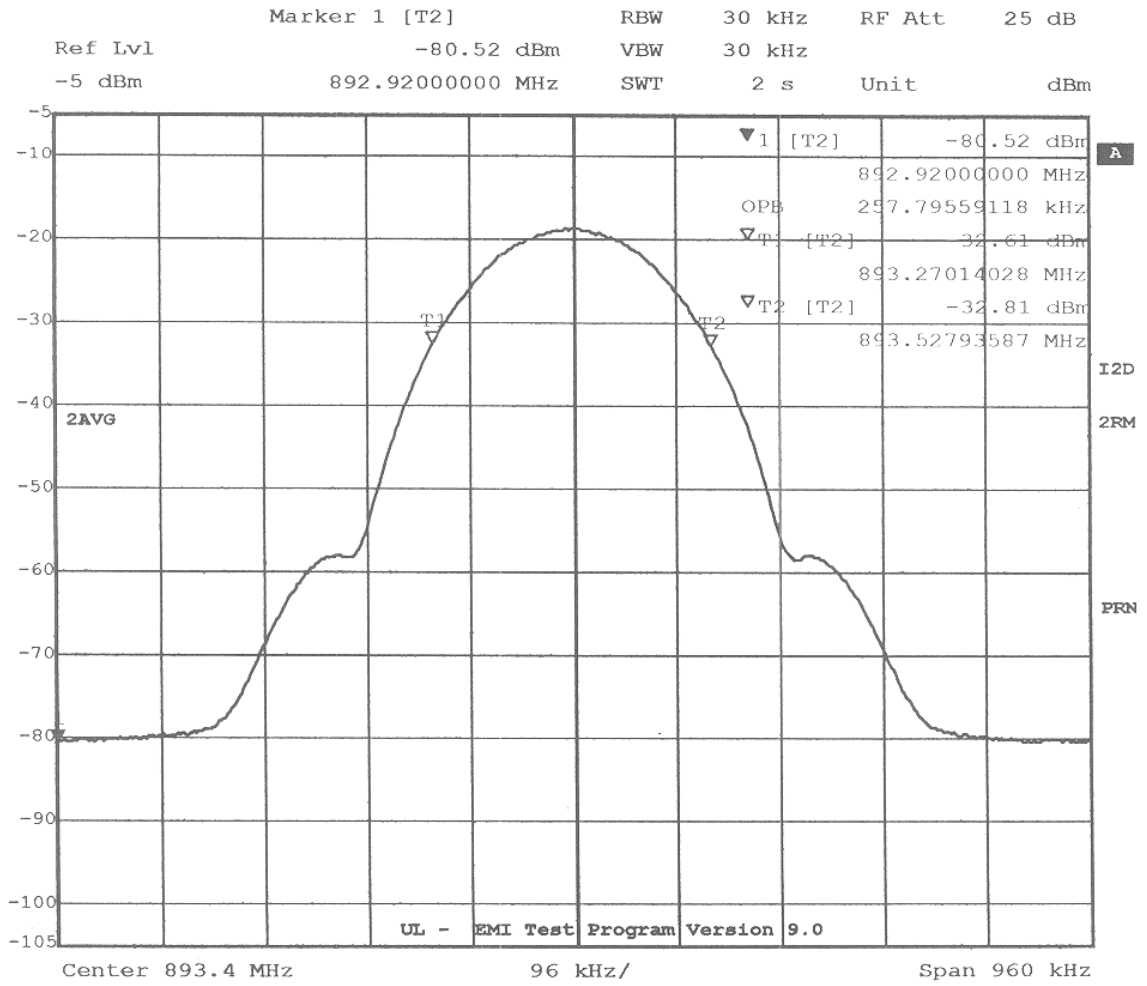
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Title: Ericsson Occupied BW EDGE Mid 881.3Mhz Output
 Date: 4.OCT.2002 14:21:14

File Number: NC4876
 Project Number: 02ME18628
 Model Number: KRB 101 1108
 FCC ID: QANKRB1011108

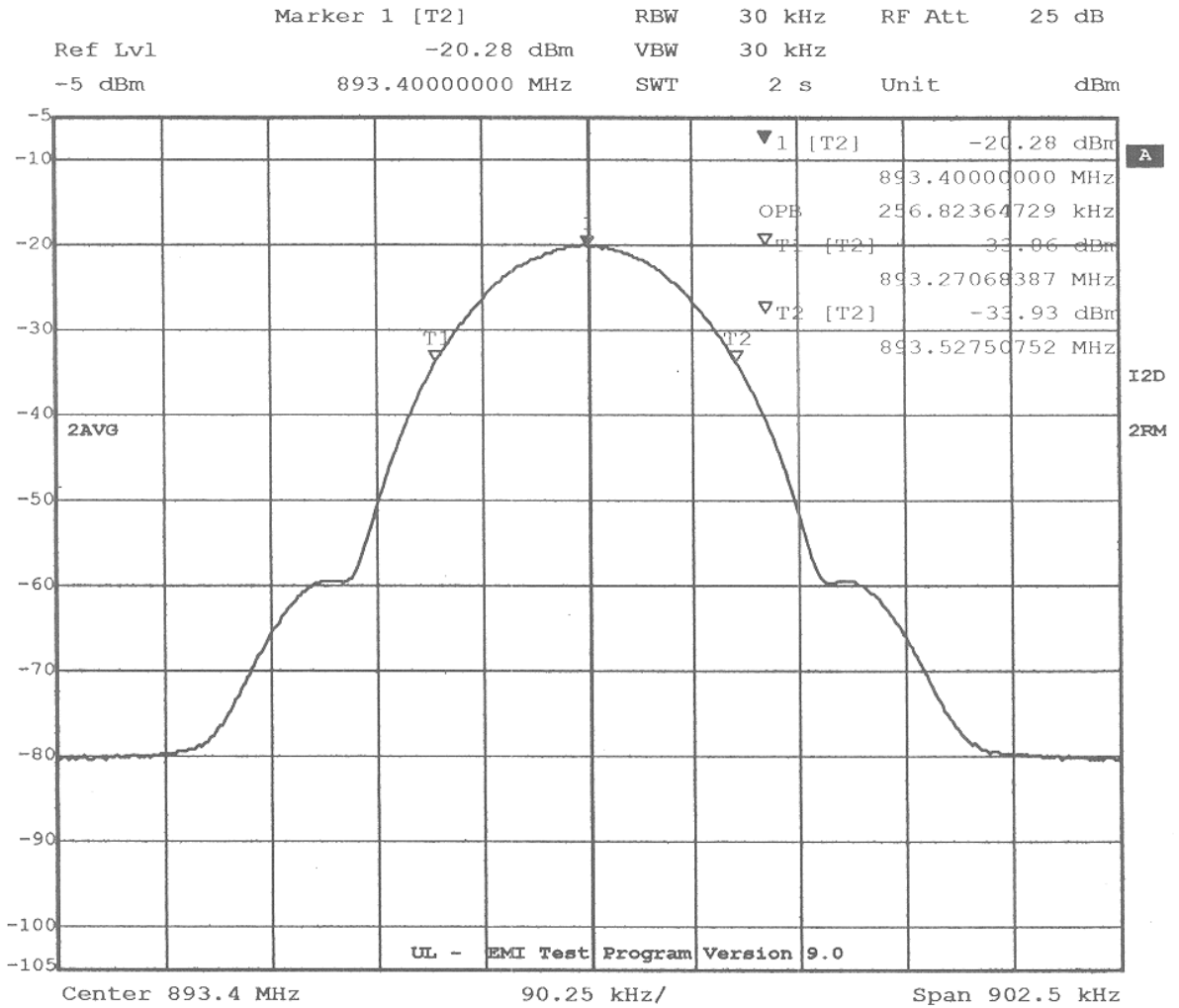
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Title: Ericsson Occupied Bandwidth Edge 893.4Mhz Input High
 Date: 4.OCT.2002 13:22:15

File Number: NC4876
 Project Number: 02ME18628
 Model Number: KRB 101 1108
 FCC ID: QANKRB1011108

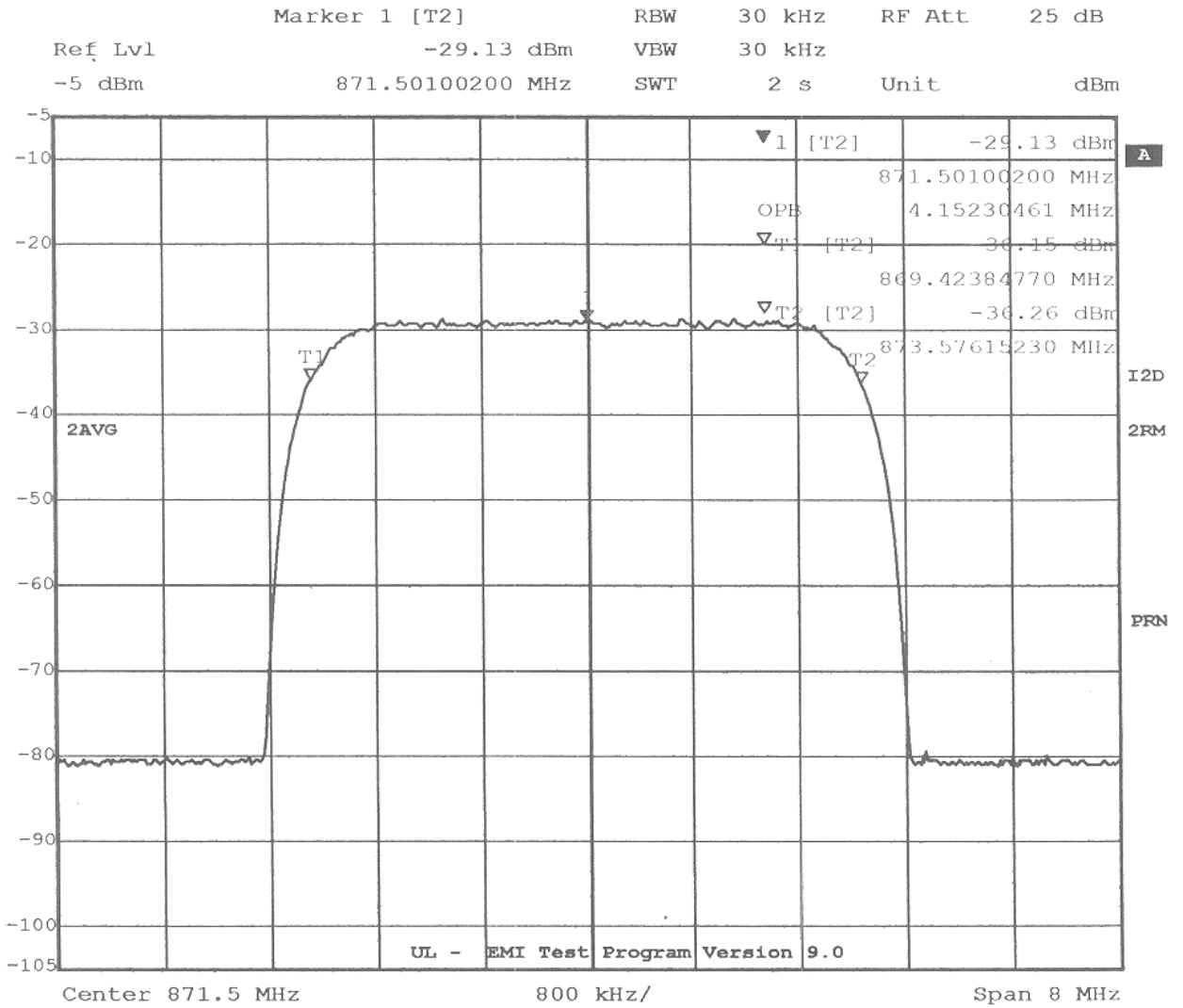
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Title: Ericsson Occupied BW EDGE High 893.4Mhz Output
 Date: 4.OCT.2002 14:27:40

File Number: NC4876
 Project Number: 02ME18628
 Model Number: KRB 101 1108
 FCC ID: QANKRB1011108

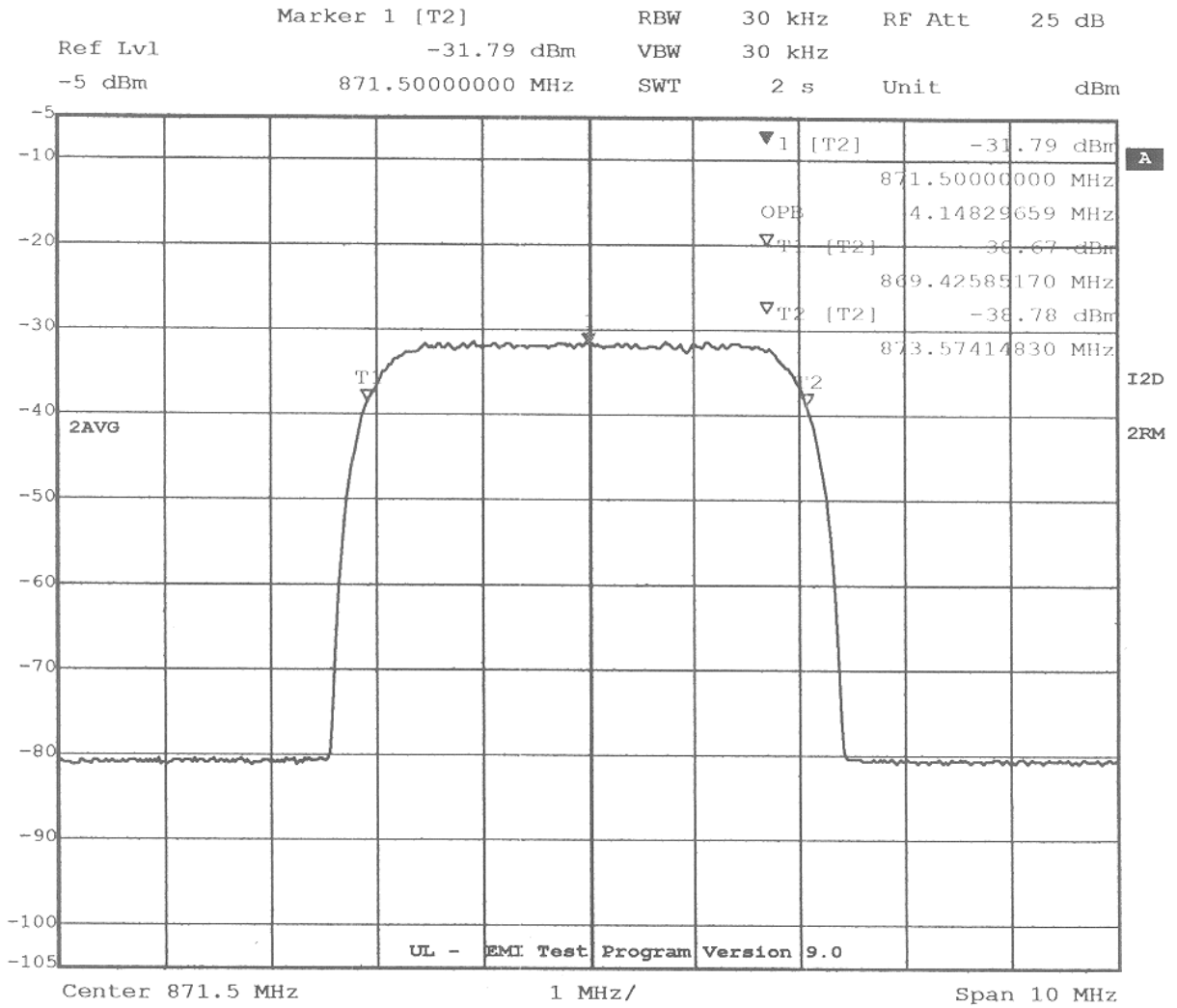
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Title: Ericsson Occupied Bandwidth WCDMA Low 871.5Mhz Input Low
 Date: 4.OCT.2002 13:45:15

File Number: NC4876
 Project Number: 02ME18628
 Model Number: KRB 101 1108
 FCC ID: QANKRB1011108

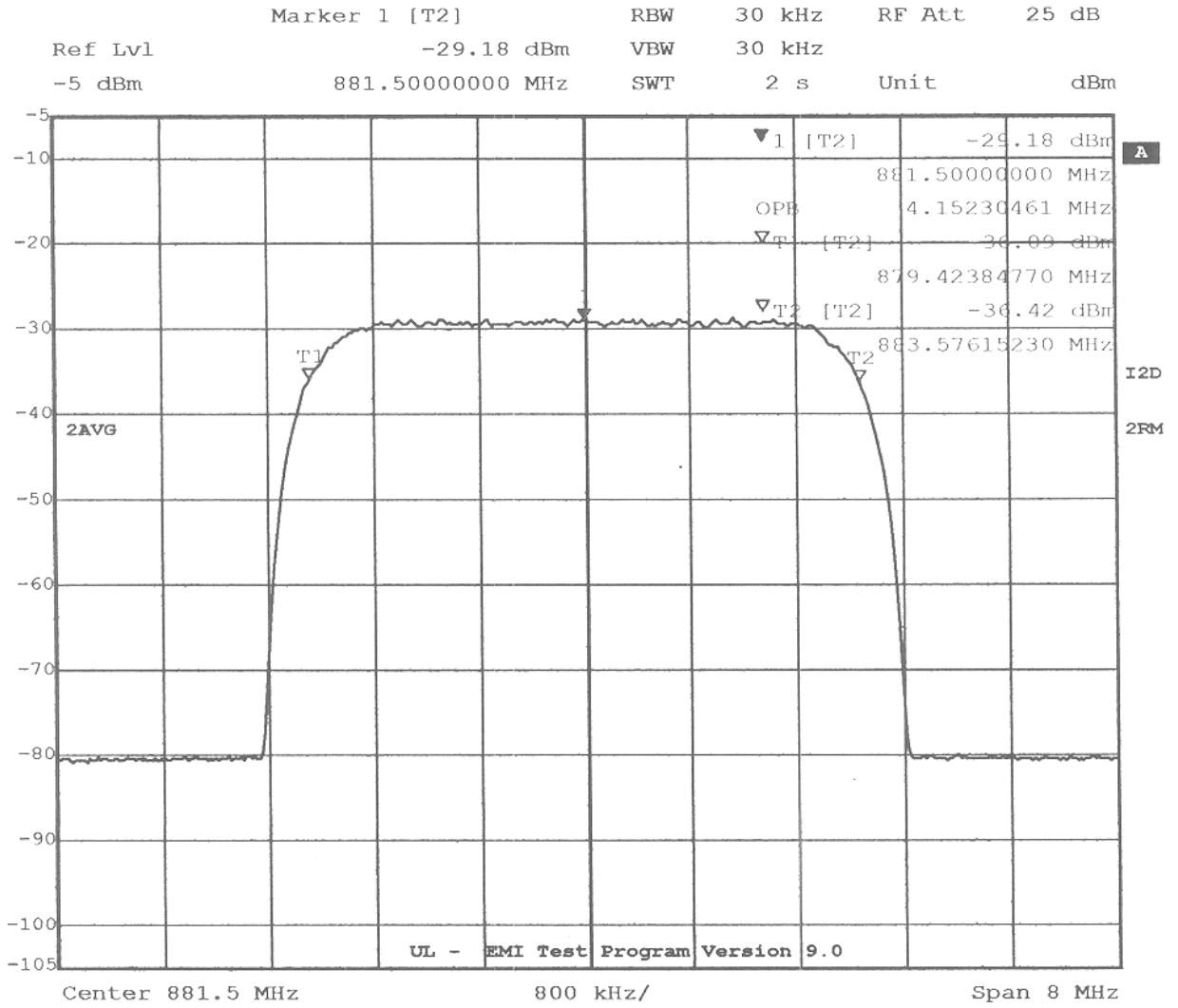
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Title: Ericsson Occupied BW WCDMA Low 871.5Mhz Output
 Date: 4.OCT.2002 14:51:26

File Number: NC4876
 Project Number: 02ME18628
 Model Number: KRB 101 1108
 FCC ID: QANKRB1011108

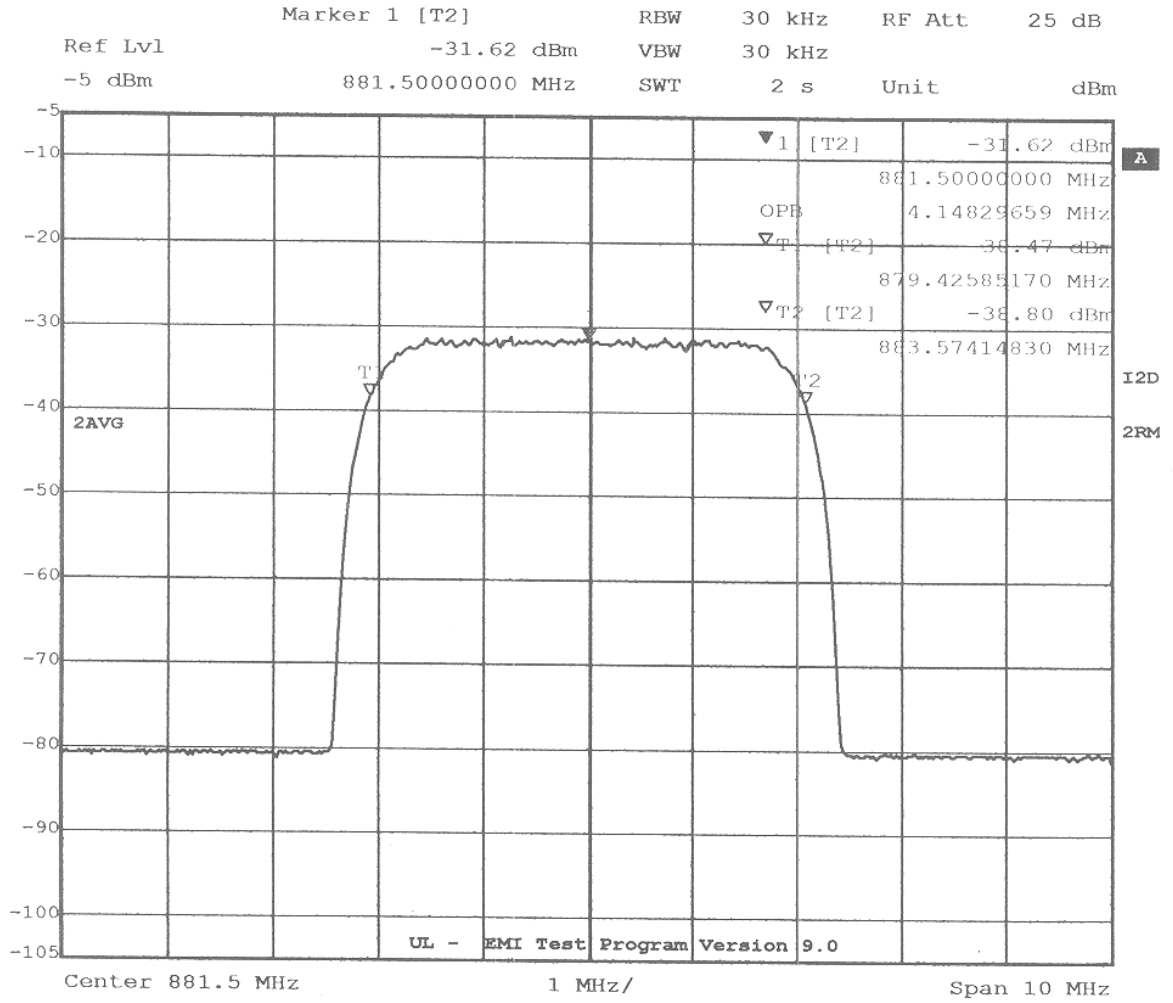
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Title: Ericsson Occupied Bandwidth WCDMA Low 881.5Mhz Input Mid
 Date: 4.OCT.2002 13:50:29

File Number: NC4876
 Project Number: 02ME18628
 Model Number: KRB 101 1108
 FCC ID: QANKRB1011108

Issued: 10/22/02



Title: Ericsson Occupied BW WCDMA Mid 881.5Mhz Output
 Date: 4.OCT.2002 14:53:46