

## MA1200 tests general information

**Product name: MA2000**

**Applicant: MobileAccess Networks Ltd.  
Ofek One Center Building B,  
Northern Industrial Zone  
Lod, Israel 71293**

Contact person: Shai Simhon  
Telephone number: 972-8-918-3867

**FCC ID: OJFMA2000**

Tested by:

**Hermon Laboratories Ltd.  
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Phone: +972 (0) 4 6288001  
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Email: [Elly@hermonlabs.com](mailto:Elly@hermonlabs.com)  
Web: [www.hermonlabs.com](http://www.hermonlabs.com)**

**Dates of testing:** 23/3/2004~25/3/2004, 16/5/2004~18/5/2004, 27/5/2004

### **Type of emissions:**

DXW (TDMA), F9W (CDMA), F8W (AMPS), F1D (Paging), GXW (iDEN),  
F3E (LMR), F3E (SMR), GXW (GSM),

### **Frequency range:**

<u>SERVICES</u>	<u>DOWNLINK</u>	<u>UPLINK</u>
AMPS/TDMA/CDMA 800	869~894MHz	824~849MHz
LMR/iDEN 800	851~869MHz	806~824MHz
Paging 900	928~941MHz	899~902MHz
TDMA/CDMA/GSM 1900	1930~1990MHz	1850-1910 MHz

### **Range of Operation Power**

Input power range (with RIU): 10~36dBm. Refer to the data sheet

For output power refer to the next table

## Maximum Power Rating

<b>Service / Modulation</b>	<b>Downlink Band [MHz]</b>	<b>Output Powers Specification (dBm) mean</b>	<b>Hermon Lab. Max. Power (dBm)</b>	<b>Hermon Lab. Max. Power (W)</b>
(F8W) AMPS 800	869-894	14	16.8	.048
(DXW) TDMA 800	869-894	14	16.7	.047
(F9W) CDMA 800	869-894	14	17.1	.051
(F3E) LMR 800	851-869	14	17.7	.059
(GXW) iDEN 800	851-869	14	17.3	.054
(F3E) SMR 900	935-941	14	19.1	.081
(F1D) Paging 900	928-941	14	19.1	.081
(DXW) TDMA 1900	1930-1990	14	16.4	.044
(GXW) GSM 1900	1930-1990	14	17.3	.054
(F9W) CDMA 1900	1930-1990	14	16.5	.045

## TEST EQUIPMENTS LIST

### From MobileAccess:

<b>MA Serial No.</b>	<b>Description</b>	<b>Manufacturer information</b>			<b>Due Calibr.</b>
		<b>Name</b>	<b>Model No.</b>	<b>Serial No.</b>	
20	Digital Signal Generator 250KHz – 3000MHz	HP	ESG–E4432B	US393406 72	02/2005
21	Digital Signal Generator 250KHz – 3000MHz	HP	ESG–E4000A	GB37040 173	02/2005
26	Digital Signal Generator 250KHz – 3000MHz	HP	ESG–D3000A	US370408 81	02/2005
29	Digital Signal Generator 250KHz – 3000MHz	HP	ESG–E4432B	GB38450 502	02/2005

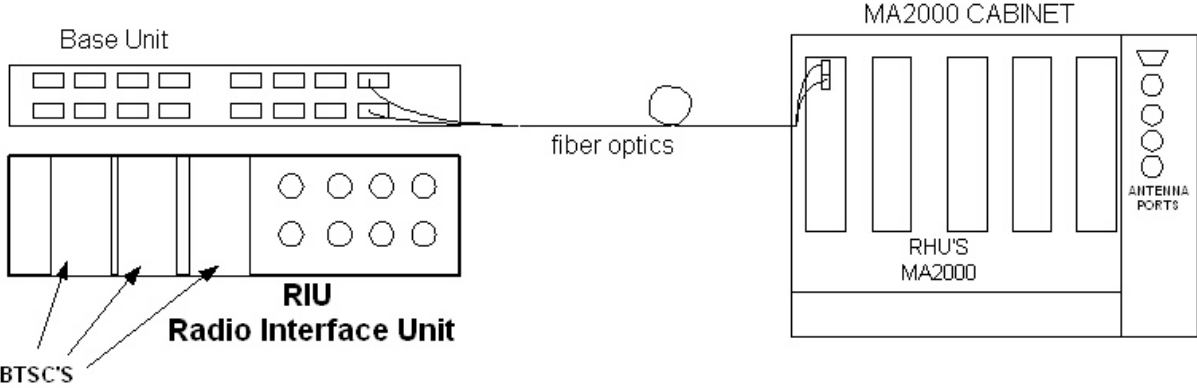
**From Hermon Laboratories:**

HLNo	Equipment Description	Manufacturer	Model	Ser. No.	Last Cal.
26	Analyzer, Spectrum, 100 Hz - 2.2 GHz	Anritsu	MS-2601A	3460	22-Sep-03
121	Filter Low Pass, 0 - 1200 MHz	Hewlett Packard	360B	121	06-Jan-03
163	LISN FCC/VDE/MIL-STD	Electro-Metrics	ANS 25/2	1314	01-Oct-03
447	LISN, 16/2, 300V RMS	HL	LISN 16 - 1	066	03-Nov-03
493	Oven temperature -45...175 deg C	Thermotron	S-1.2 Mini-Max	14016	23-Sep-03
521	EMI Receiver (Spectrum Analyzer) with RF filter section 9 k-6.5 GHz	Hewlett Packard	8546A	3617A 00319, 3448A00253	26-Sep-03
580	DC block adaptor 10 kHz - 2.2 GHz	Anritsu	MA8601 A	580	26-Dec-03
589	Cable Coaxial, GORE A2P01POL118, 2.3 m	HL	GORE-3	176	02-Dec-03
590	Attenuator 10 dB, 50 Ohm, N-type, 2 W	Elisra Electronic Systems	MW2100-N-Type	10	15-Jan-04
603	Mains Impedance Stabilization Network, 3 phase, 400 V, 40A	HL	MISN3-400-40	603	10-Feb-04
604	Antenna BiconiLog Log-Periodic/T Bow-TIE 26 - 2000 MHz	EMCO	3141	9611-1011	10-Jan-04
661	Generator Swept Signal, 10 MHz to 40 GHz, + 10 dBm	Hewlett Packard	83640B	3614A00266	14-Sep-03
787	Transient Limiter	Hewlett Packard	11947A	3107A01877	21-Nov-03
1097	Attenuator, 50 Ohm, 5 W, DC to 8 GHz, 20 dB	Midwest Microwave	0793-20-NN-07	1097	15-Jan-04
1424	Spectrum Analyzer, 30 Hz-40 GHz	Agilent Technologies (HP)	8564EC	3946A00219	30-Aug-03

HLNo	Equipment Description	Manufacturer	Model	Ser. No.	Last Cal.
1562	Oscilloscope 100 MHz, DMM	Tektronix	THS720A	B039444	20-Sep-03
1651	Attenuators Set (2, 3, 5, 20 dB), DC-18 GHz	M/A-COM	2082	1651	03-Jan-04

1947	Cable 18GHz, 6.5 m, blue	Rhophase Microwave Limited	NPS-1803A-6500-NPS	T4974	17-Oct-03
1984	Antenna, Double-Ridged Waveguide Horn, 1-18 GHz, 300 W, N-type	EMC Test Systems	3115	9911-5964	22-Mar-04
1989	Adapter, 18 - 26.5 GHz, WR- 42/SMA	Continental Microwave & Tool Co.	WR-42/SMA	1989	30-Aug-03
2014	Attenuator, Manual Step, 0-99/1 dB, 0-4 GHz, 2 W	Weinschel	AC9004-99-11	16924	08-Dec-03
2258	Amplifier Low Noise 2-20 GHz	Sophia Wireless	LNA0220-C	0222	05-Nov-03
2260	Amplifier Low Noise 14-33 GHz	Sophia Wireless	LNA28-B	0233	05-Nov-03
2387	Filter Bandpass, 8-14 GHz	HL	FBP8-14	2387	05-Jun-03
2399	Cable 40GHz, 1.5 m, blue	Rhophase Microwave Limited	KPS-1503A-1500-KPS	X2945	24-Jun-03
2400	Cable 40GHz, 1.5 m, green	Rhophase Microwave Limited	KPS-1503A-1500-KPS	X2946	24-Jun-03
2432	Antenna, Double-Ridged Waveguide Horn 1-18 GHz	EMC Test Systems	3115	000271777	02-Jul-03
2524	Attenuator, 10 dB, DC-18 GHz	Midwest Microwave	263-10	2524	01-Mar-04

**Block diagram of test setup:**



## **MA2000 Product tests results**

<b><u>Subject</u></b>	<b><u>Page</u></b>
<b>Radiated emissions part 15-receive mode.....</b>	<b>2</b>
<b>Radiated emissions part 15-transmit mode.....</b>	<b>7</b>
<b>Conducted emissions part 15.....</b>	<b>15</b>
<b>Output power tests.....</b>	<b>20</b>
<b>Occupied bandwidth tests.....</b>	<b>41</b>
<b>Conducted Emission tests part 22,24,90.....</b>	<b>72</b>
<b>Masks.....</b>	<b>212</b>

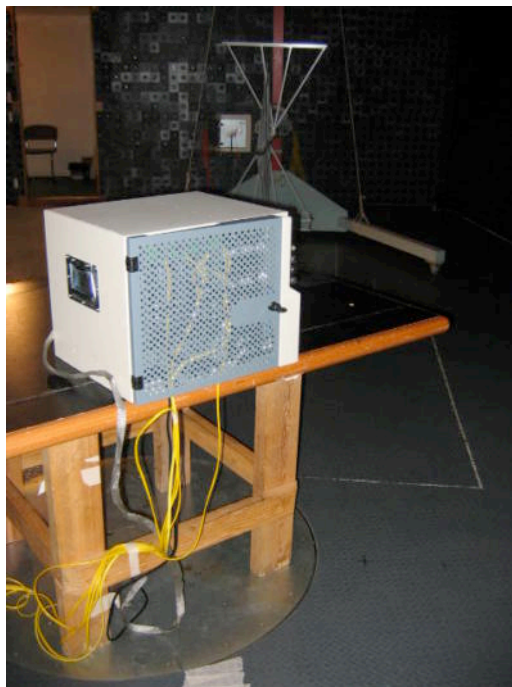
Date 28 July 2004  
Project 16021  
Test Radiated spurious emissions  
Operator Michael Lerman  
Test equipment 1984, 521, 2009, 1947, 446  
Temperature 24°C  
Humidity 37%  
Air pressure 1005 hPa  
EUT MA 2000  
Mode RECEIVE  
Polarization Vertical and horizontal  
Band 851 – 866 MHz  
CW<sub>1</sub> = 858.5 MHz

Band 869 – 894 MHz  
CW<sub>2</sub> = 881.5 MHz

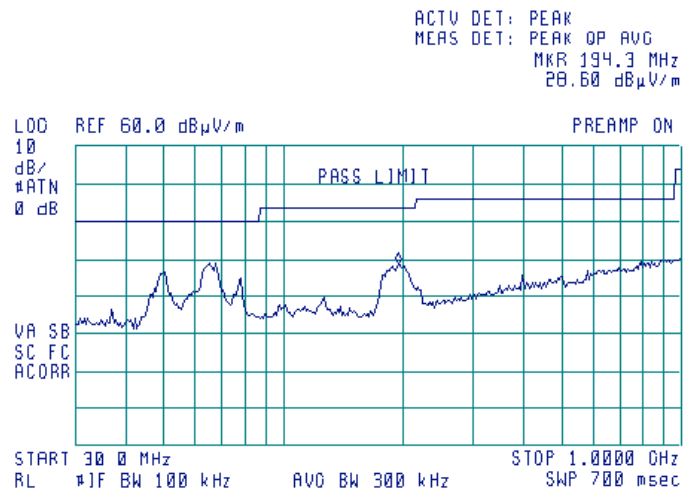
Band 928 – 941 MHz  
CW<sub>3</sub> = 934.5 MHz

Band 1930 – 1990 MHz  
CW<sub>4</sub> = 1960 MHz

#### Cabling

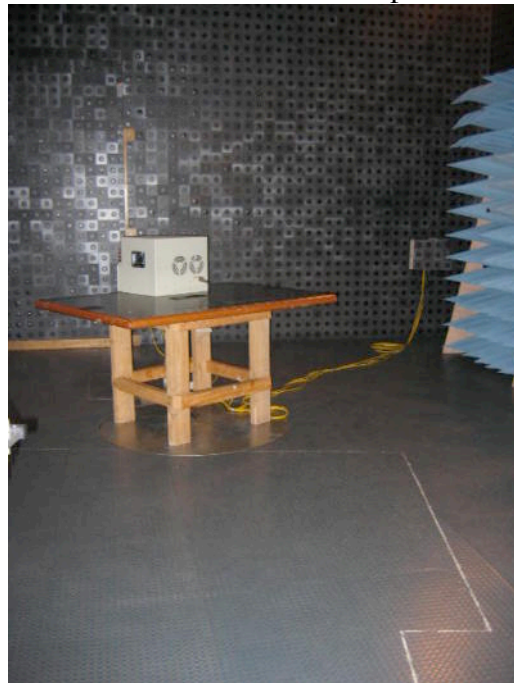


## Range 30 – 1000 MHz.



Signal	Freq (MHz)	Peak Amp (dB $\mu$ V/m)	QP Amp (dB $\mu$ V/m)	LimitLine1 (dB $\mu$ V/m)	QP - Lim1 (dB)	Corrections (dB)
1	50.455000	27.63	24.61	40.00	-15.39	9.85
2	63.725000	29.17	27.59	40.00	-12.41	11.04
3	78.200000	26.13	22.94	40.00	-17.06	12.65
4	195.800000	31.05	27.51	43.50	-15.99	13.89

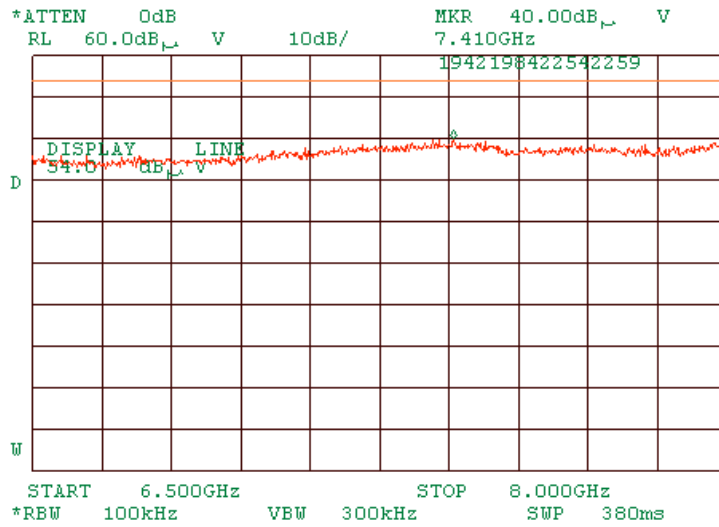
## 30 – 1000 MHz Setup



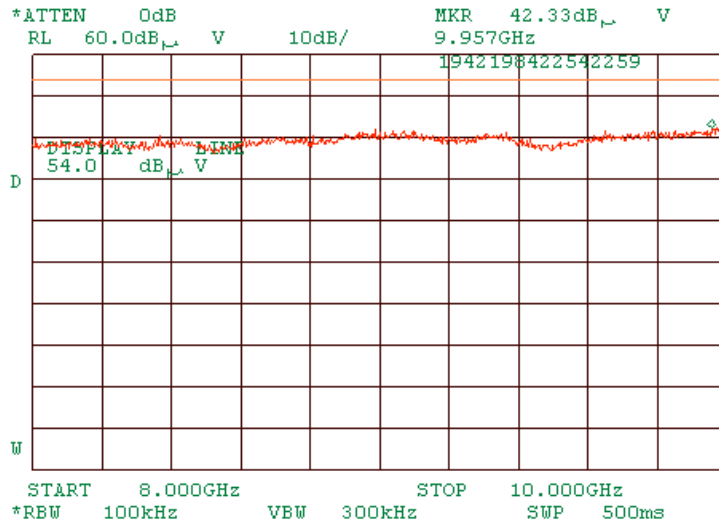




### Range 6500 – 8000 MHz.



### Range 8000 – 10000 MHz.





Date 28 July 2004  
Project 16021  
Test Radiated spurious emissions  
Operator Michael Lerman  
Test equipment 1984, 521, 2009, 1947, 446  
Temperature 24°C  
Humidity 37%  
Air pressure 1005 hPa  
EUT MA 2000  
Mode Transmit  
Polarization Vertical and horizontal

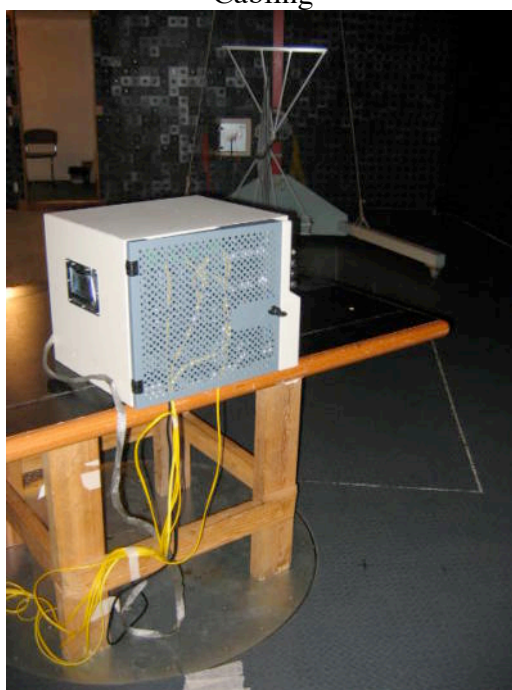
Band 851 – 866 MHz  
CW<sub>1</sub> = 858.5 MHz

Band 869 – 894 MHz  
CW<sub>2</sub> = 881.5 MHz

Band 928 – 941 MHz  
CW<sub>3</sub> = 934.5 MHz

Band 1930 – 1990 MHz  
CW<sub>4</sub> = 1960 MHz

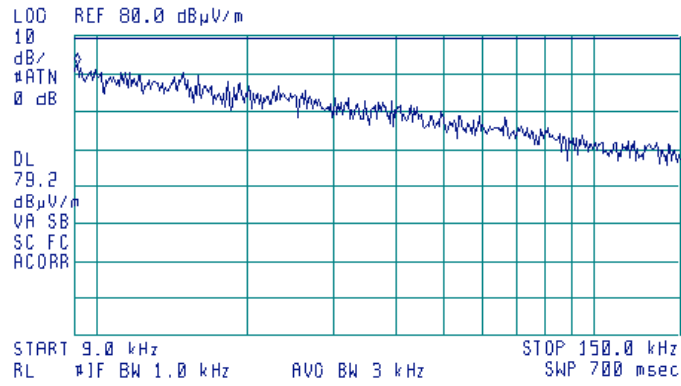
Cabling



### Range 9 – 150 kHz.



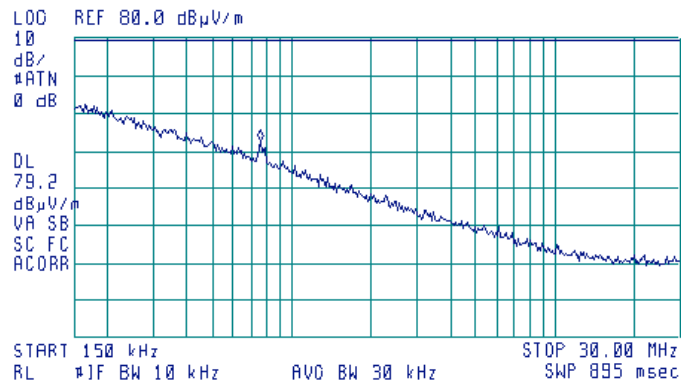
ACTV DET: PEAK  
MEAS DET: PEAK OP AVG  
MKR 9.2 kHz  
72.62 dB $\mu$ V/m



### Range 0.150 – 30 MHz.



ACTV DET: PEAK  
MEAS DET: PEAK OP AVG  
MKR 770 kHz  
52.50 dB $\mu$ V/m



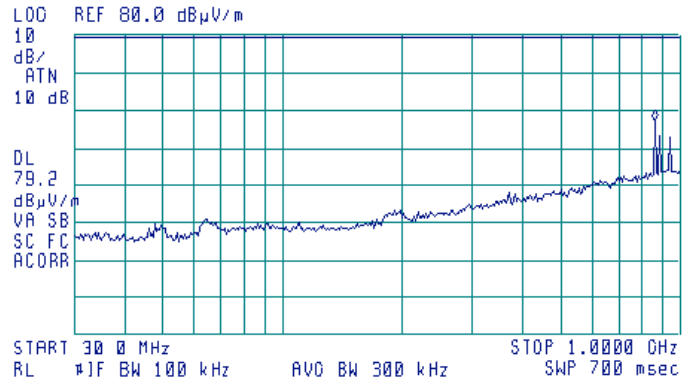
9kHz- 30MHz Setup



# Range 30 – 1000 MHz.



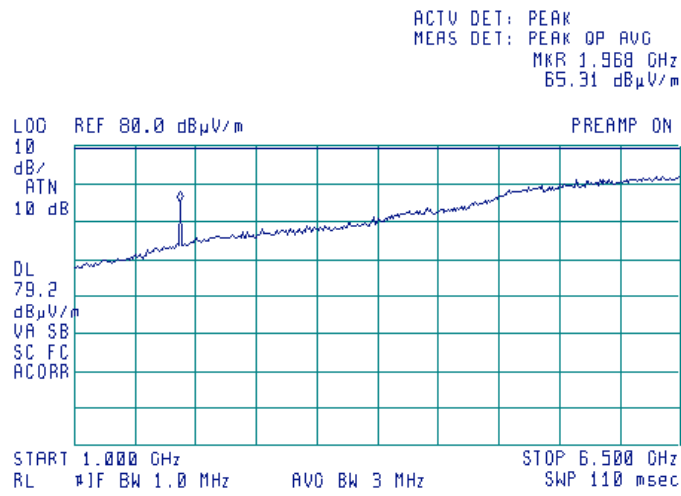
ACTV DET: PEAK  
MEAS DET: PEAK OP AVG  
MKR 857.6 MHz  
56.99 dB $\mu$ V/m



## 30 – 1000 MHz Setup



# Range 1000 – 6500 MHz.

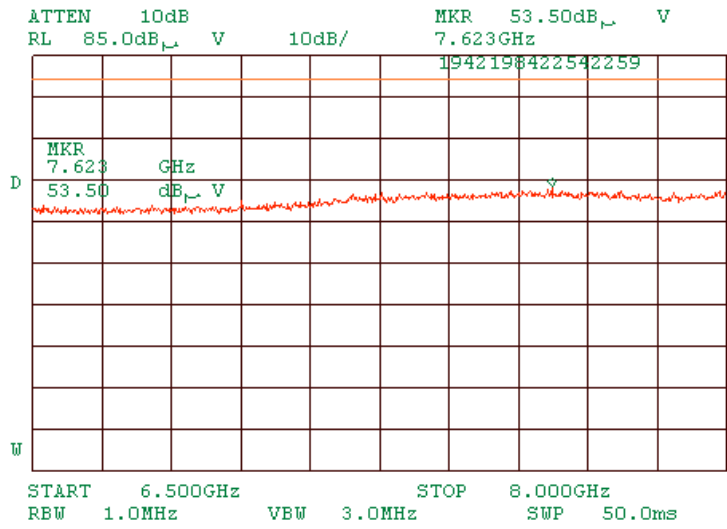


## 1000 – 6500 MHz Setup

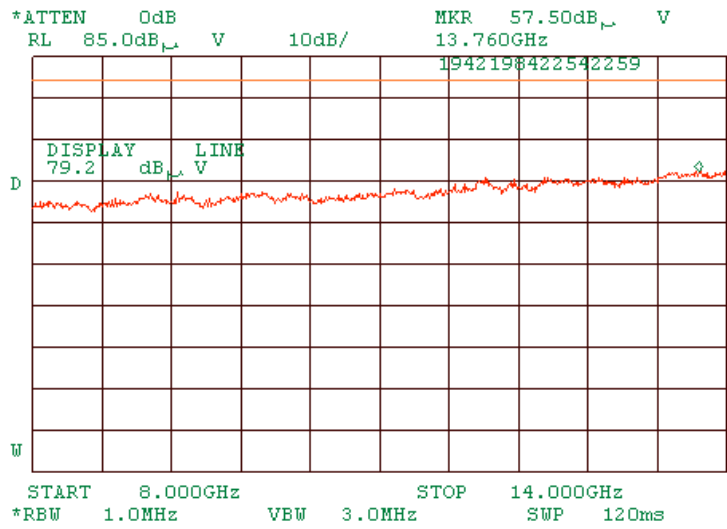




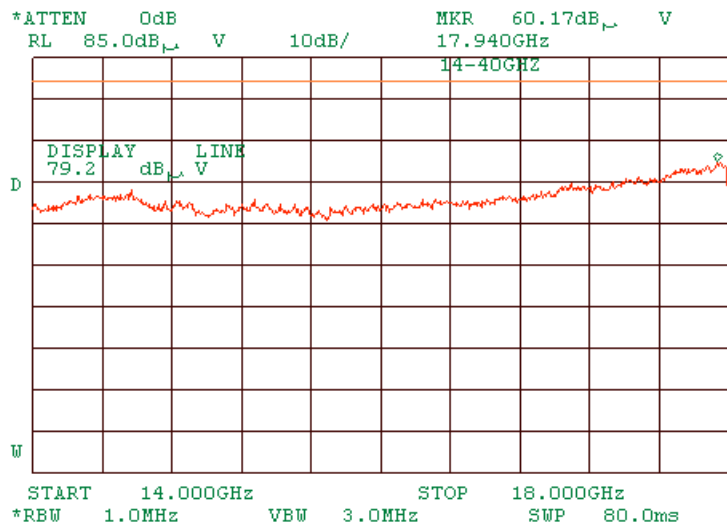
Range 6500 – 8000 MHz.



Range 8000 – 14000 MHz.



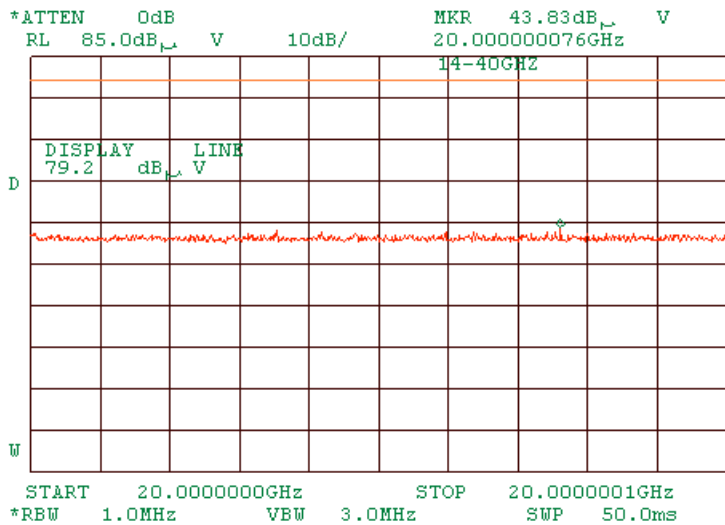
### Range 14000 – 18000 MHz.



### 6500 – 18000 MHz Setup



### Range 18000 – 20000 MHz.



### 18000 – 20000 MHz Setup



## Emissions tests according to 47CFR part 15 subpart B requirements

### Conducted emissions

#### General

This test was performed to measure common mode conducted emissions at the mains power port.

Specification test limits are given in Table 0.1. The worst test results (the lowest margins) were recorded in Table 0.2 and shown in the associated plots.

**Table 0.1 Limits for conducted emissions**

Frequency, MHz	Class B limit, dB( $\mu$ V)		Class A limit, dB( $\mu$ V)	
	QP	AVRG	QP	AVRG
0.15 - 0.5	66 - 56*	56 - 46*	79	66
0.5 - 5.0	56	46	73	60
5.0 - 30	60	50	73	60

\* The limit decreases linearly with the logarithm of frequency.

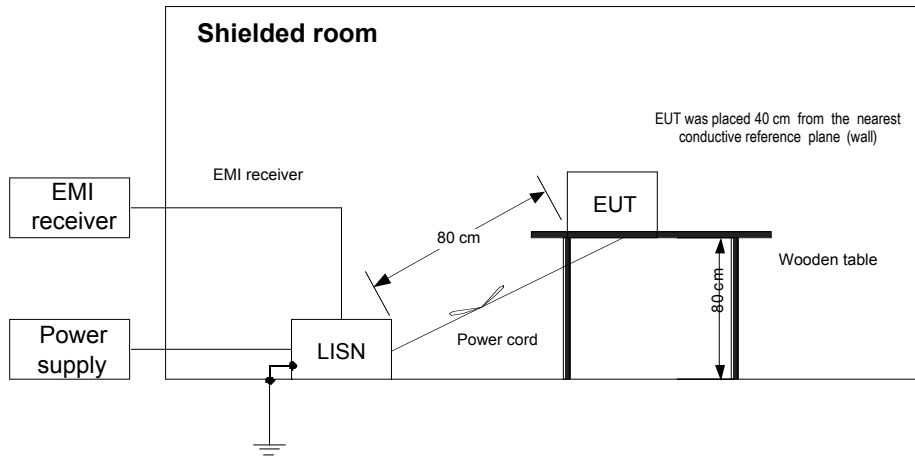
#### Test procedure

The EUT was set up as shown in Figure 0.1 and associated photographs, energized and the performance check was conducted.

The measurements were performed at power terminals with the LISN, connected to a spectrum analyzer in the frequency range referred to in Table 0.2. Unused coaxial connector of the LISN was terminated with 50 Ohm. Quasi-peak and average detectors were used throughout the testing.

The position of the device cables was varied to determine maximum emission level.

**Figure 0.1 Setup for conducted emission measurements, table-top equipment**



**Photograph 0.1 Setup for conducted emission measurements**



**Table 0.2 Conducted emission test results**

LINE: AC mains  
 LIMIT: Class B  
 EUT OPERATING MODE: Stand-by  
 EUT SET UP: TABLE-TOP  
 TEST SITE: SHIELDED ROOM  
 DETECTORS USED: PEAK / QUASI-PEAK / AVERAGE  
 FREQUENCY RANGE: 150 kHz - 30 MHz  
 RESOLUTION BANDWIDTH: 9 kHz

Frequency, MHz	Peak emission, dB(µV)	Quasi-peak			Average			Line ID	Verdict
		Measured emission, dB(µV)	Limit, dB(µV)	Margin, dB*	Measured emission, dB(µV)	Limit, dB(µV)	Margin, dB*		
0.178119	31.17	27.47	64.63	-37.16	22.42	54.63	-32.21	L1	Pass
0.185566	37.02	34.36	64.27	-29.91	29.15	54.27	-25.12		
0.184864	36.84	34.25	64.30	-30.05	28.71	54.30	-25.59	L2	Pass

\*- Margin = Measured emission - specification limit.

**Reference numbers of test equipment used**

HL 0163	HL 1430	HL 15002	HL 15010	HL			
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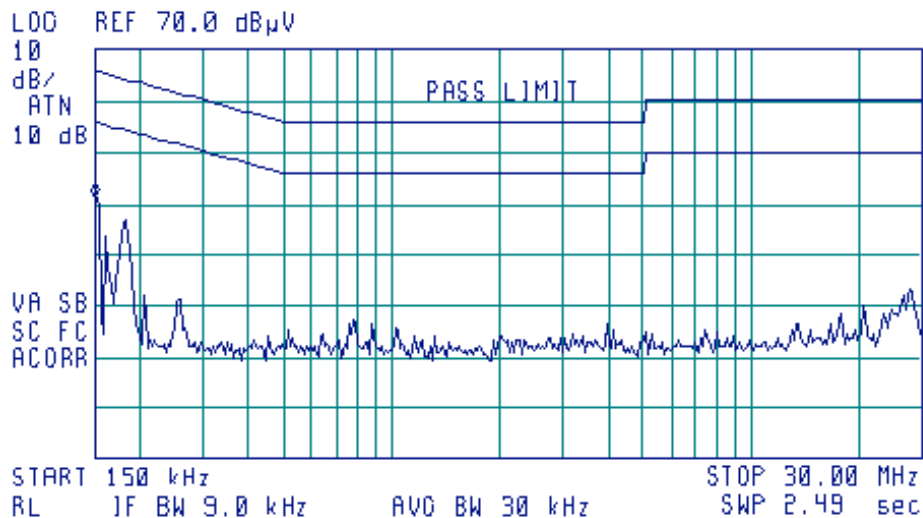
Full description is given in Appendix A.

Plot 0.1 Conducted emission measurements

LINE: L1  
LIMIT: Class B  
EUT OPERATING MODE: Stand-by  
LIMIT: QUASI-PEAK, AVERAGE  
DETECTOR: PEAK

09:47:26 AUG 09, 2004

ACTV DET: PEAK  
MEAS DET: PEAK OP AVG  
MKR 150 kHz  
41.25 dB $\mu$ V

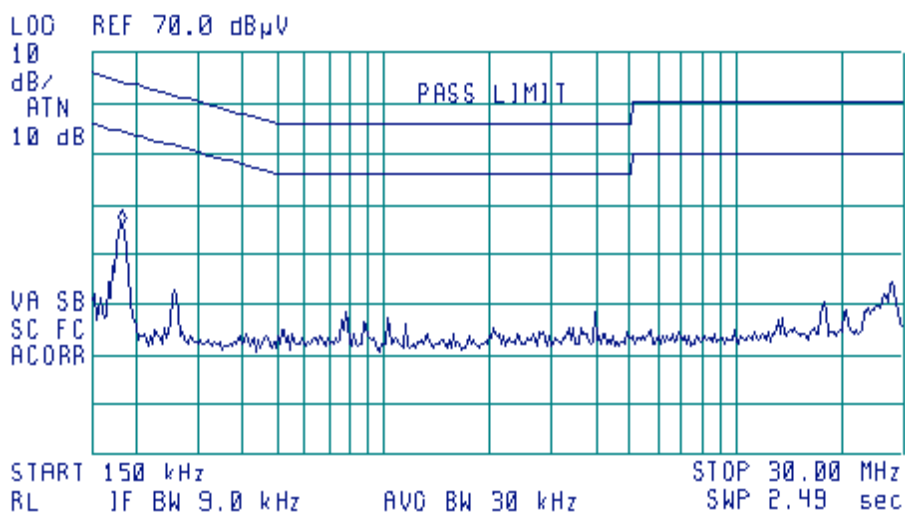


Plot 0.2 Conducted emission measurements

LINE: L2  
LIMIT: Class B  
EUT OPERATING MODE: Stand-by  
LIMIT: QUASI-PEAK, AVERAGE  
DETECTOR: PEAK

09:55:37 AUG 09, 2004

ACTV DET: PEAK  
MEAS DET: PEAK OP AVG  
MKR 100 kHz  
35.00 dBμV

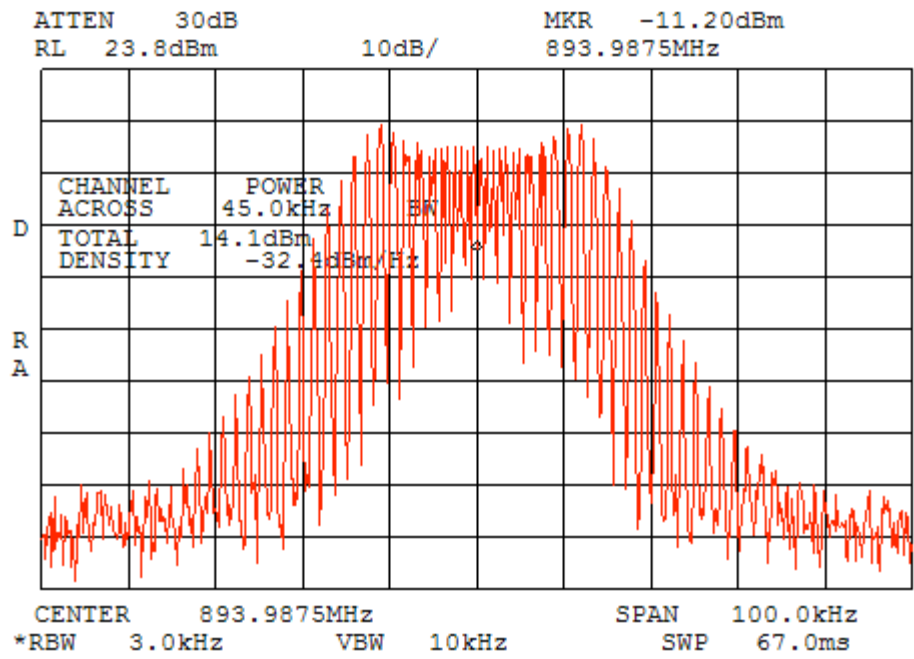




Date 04 Aug 2004  
Project 16021  
Test Output Power  
Operator Alex Kruglov  
Test equipment 1424, 2399, 1948, 789, 316, 460.  
Temperature 25°C  
Humidity 40%  
Air pressure 1004 hPa  
EUT Mobile Access 2000  
Notes: At 1.5 dBm input power (CW);  
At output connector with maximum power level.





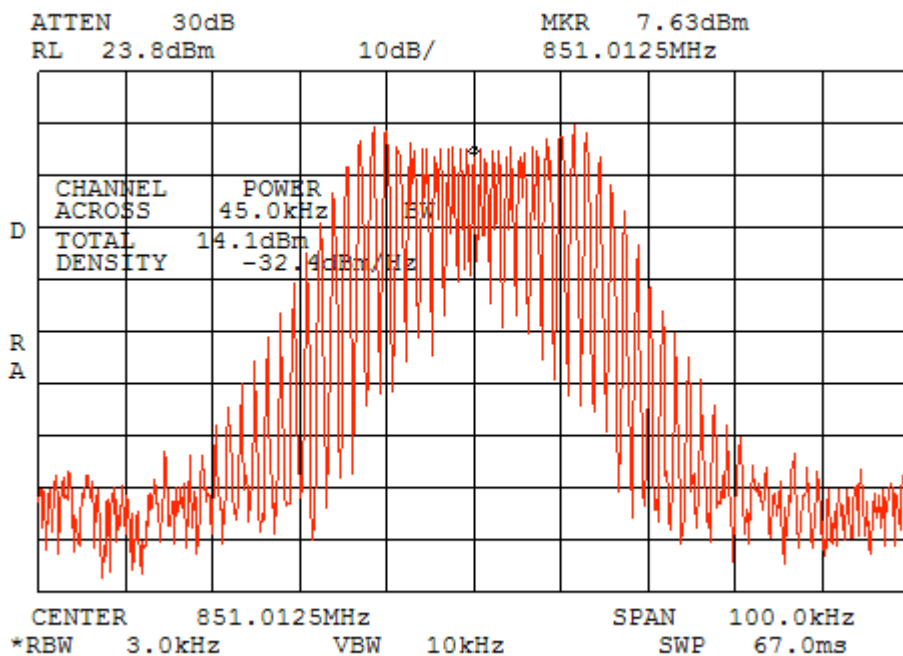




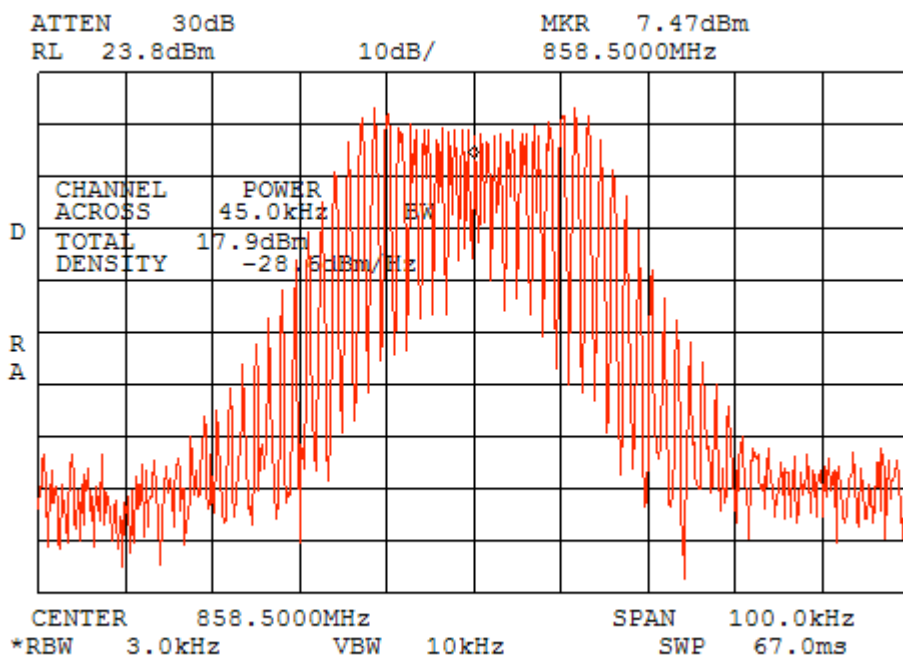




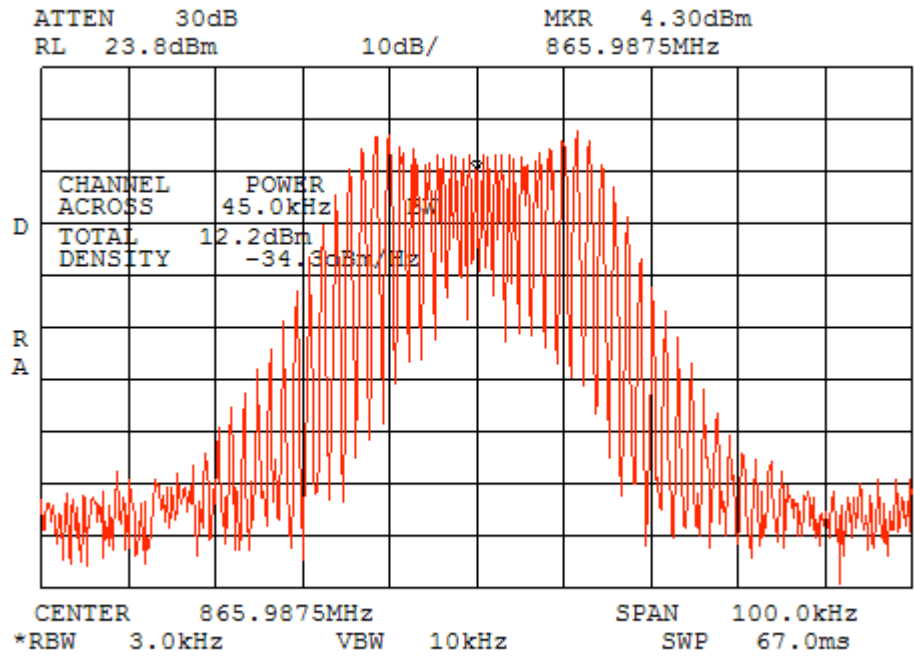




iDEN. LMR 800. 851-866 MHz. . FM 12.5KHz/1KHz. Output Power at 858.5 MHz

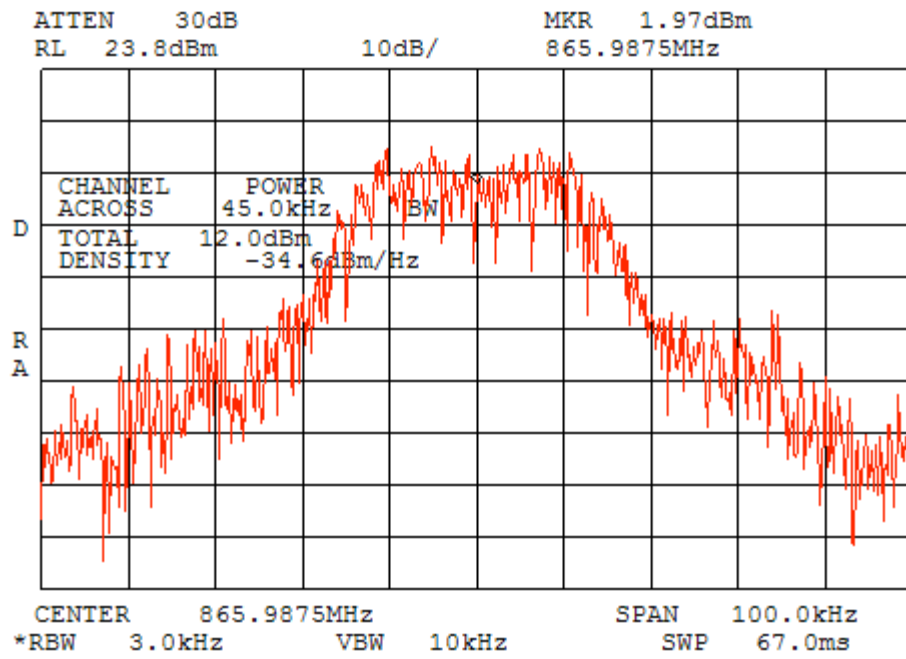


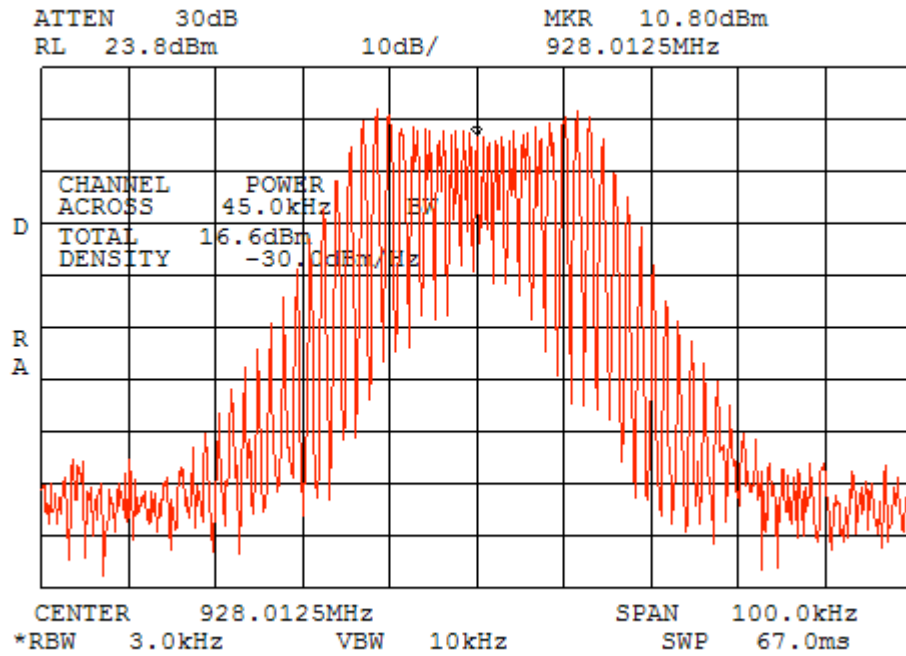




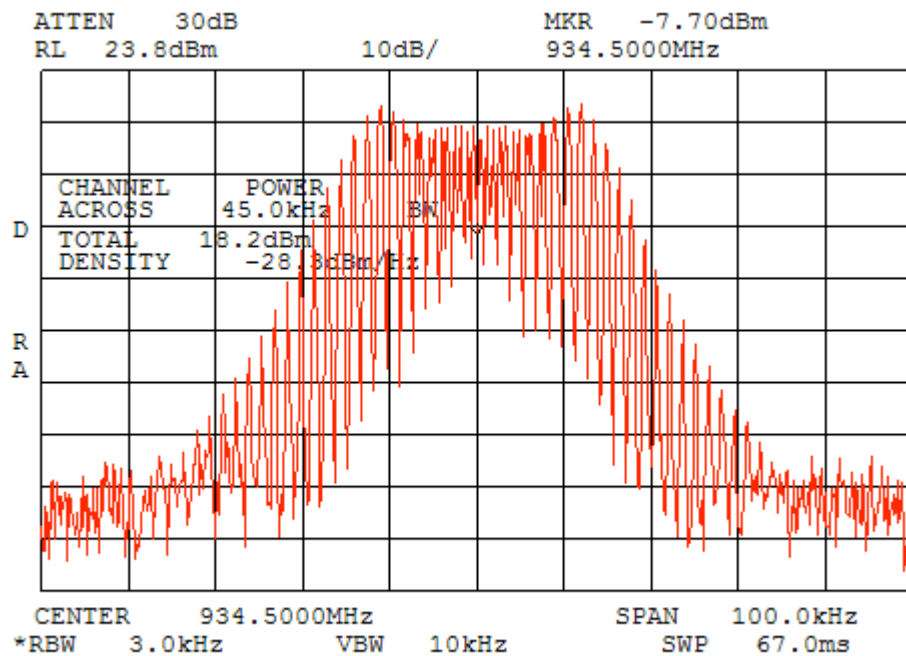


iDEN 800. 851-866. 16QAM. Output Power at 865.9875 MHz

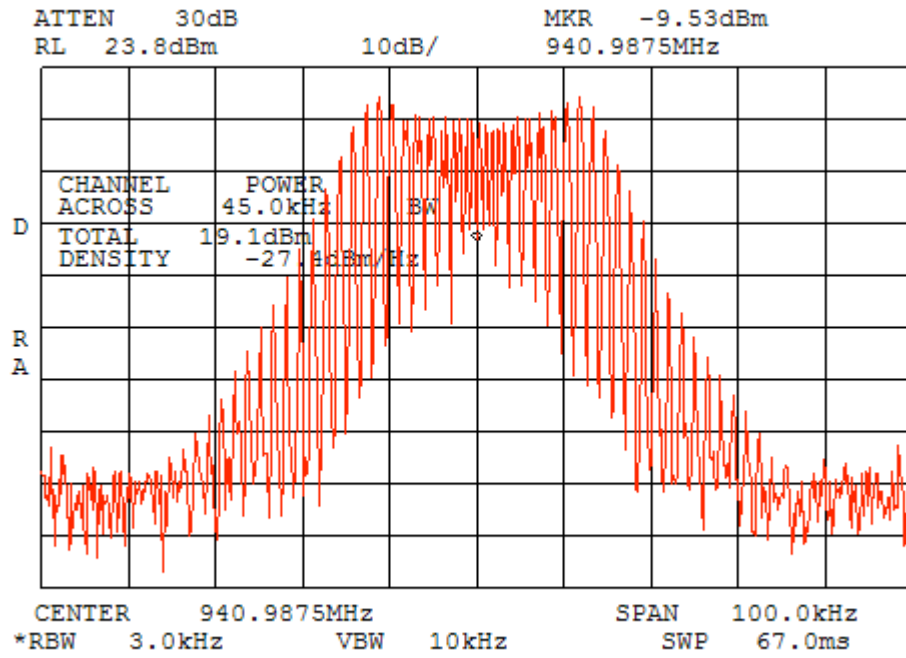


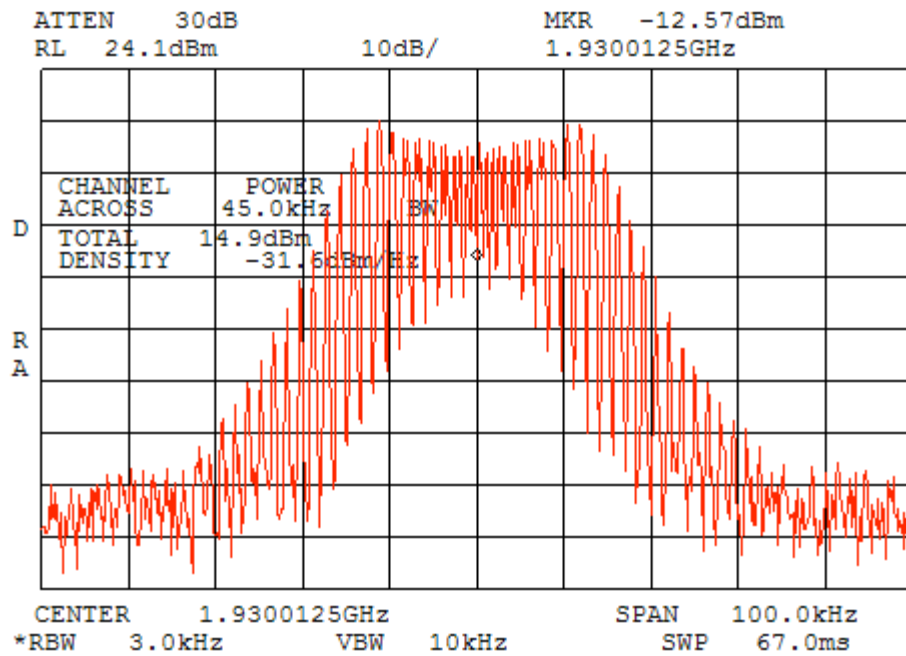


SMR/Paging 900. 928-941 MHz. FM 12.5KHz/1KHz. Output Power at 934.5 MHz

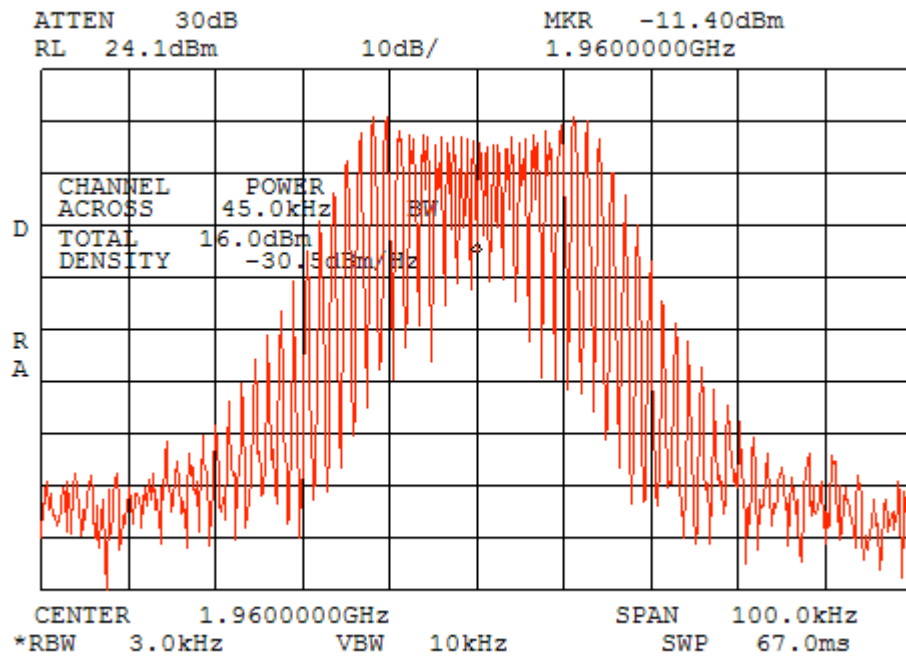


SMR900/Paging. 928-941 MHz. FM 12.5KHz/1KHz. Output Power at 940.9875 MHz





CELL-PCS. 1930-1990 MHz. FM 12.5KHz/1KHz. Output Power at 1960.0 MHz

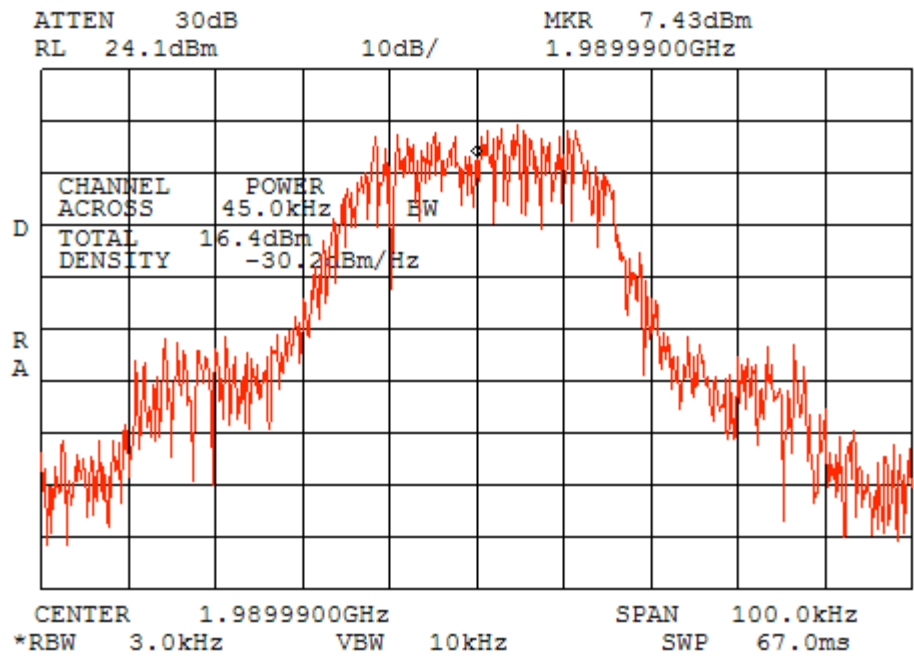




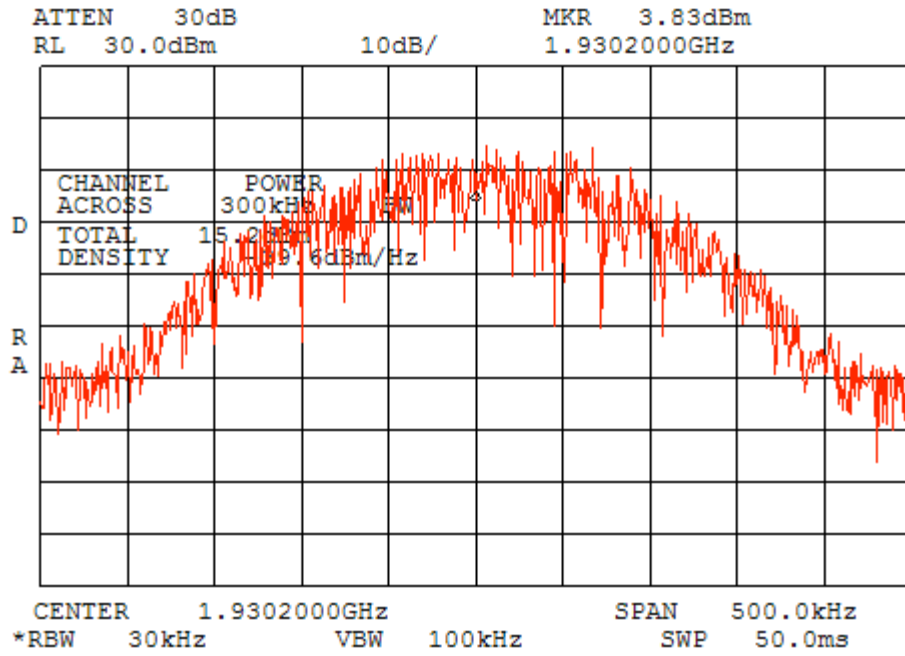




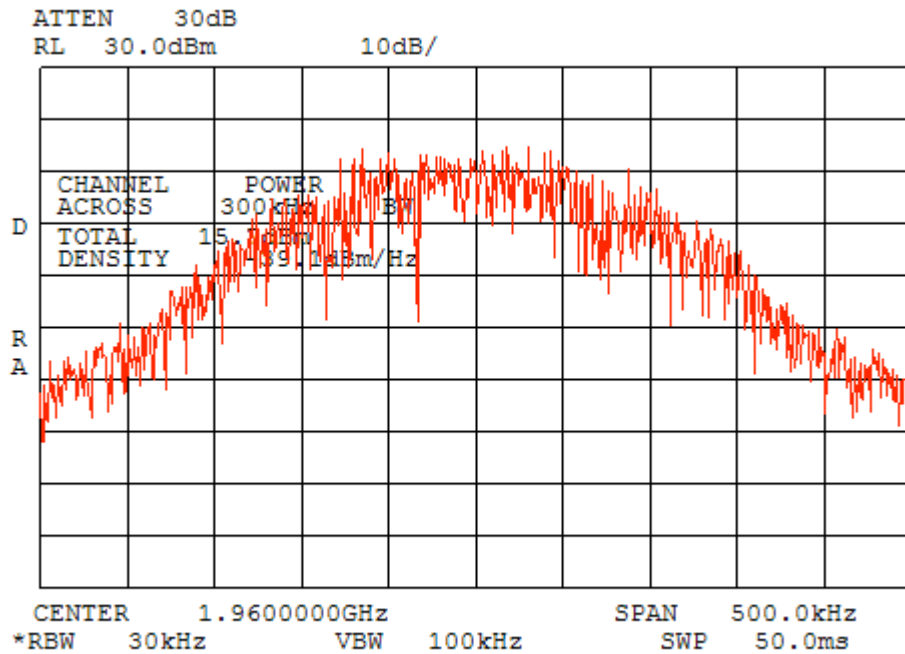
CELL-PCS. TDMA 1900. 1930-1990 MHz. Output Power at 1989.99 MHz



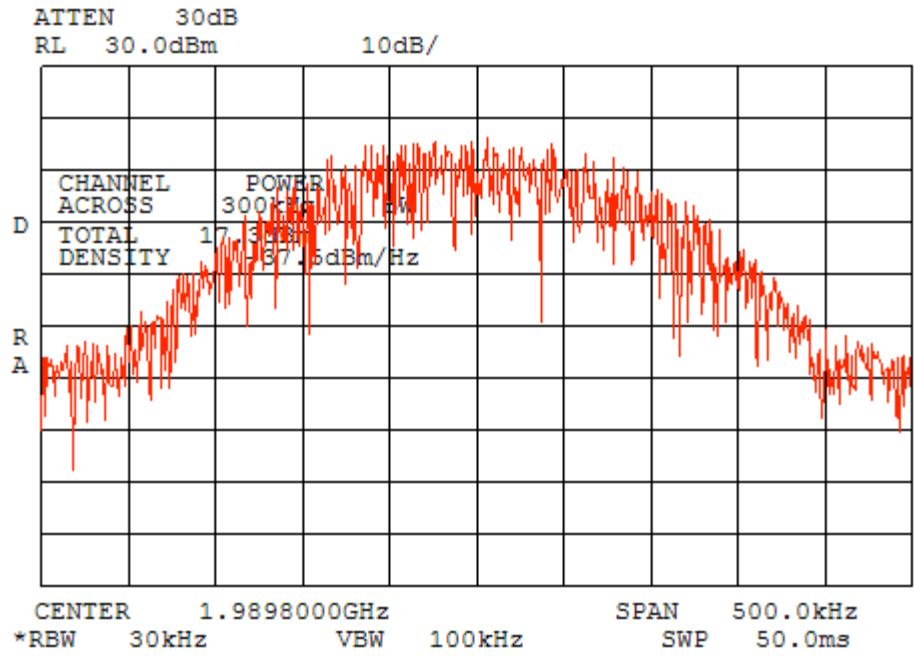
CELL-PCS. GSM 1900. 1930-1990 MHz. Output Power at 1930.2 MHz



CELL-PCS. GSM 1900. 1930-1990 MHz. Output Power at 1960.0 MHz



CELL-PCS. GSM 1900. 1930-1990 MHz. Output Power at 1989.8 MHz





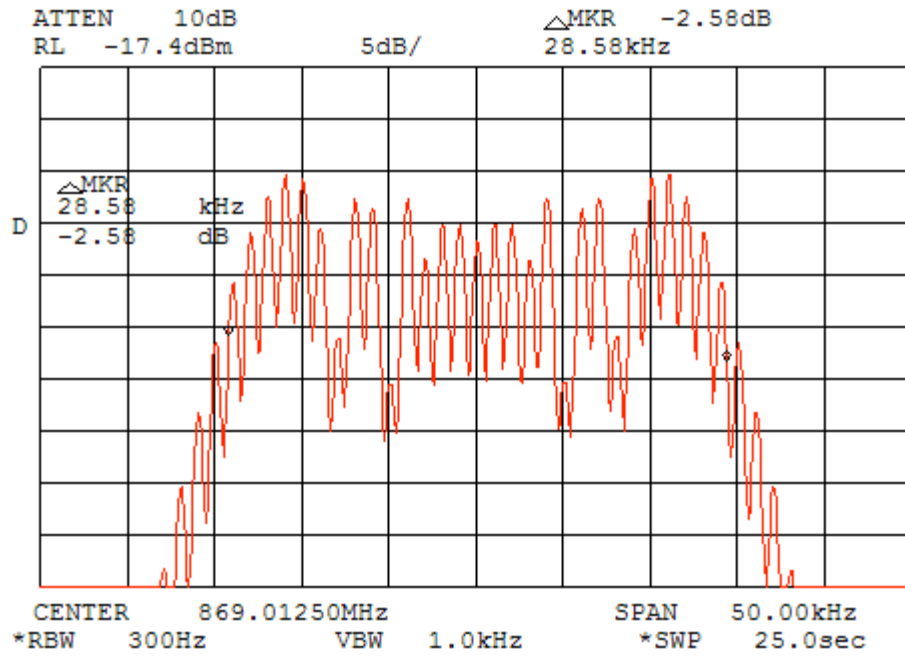


Date	03 Aug 2004
Project	16021
Test	Occupied bandwidth.
Operator	Alex Kruglov
Test equipment	1424, 2399, 2524, 1651, 789, 316, 460
Temperature	25°C
Humidity	39%
Air pressure	1003 hPa
EUT	Mobile Access 2000
Notes:	At 1.5 dBm input power (CW); At output connector with maximum power level.

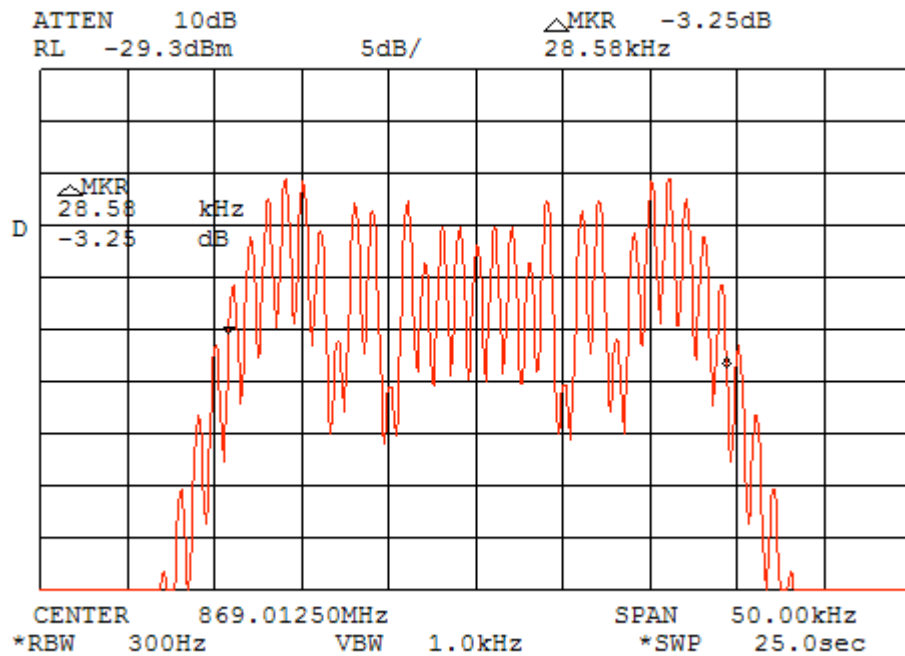


CELL-PCS. AMPS 800. 869-894 MHz. Occupied bandwidth at 869.0125 MHz

Output

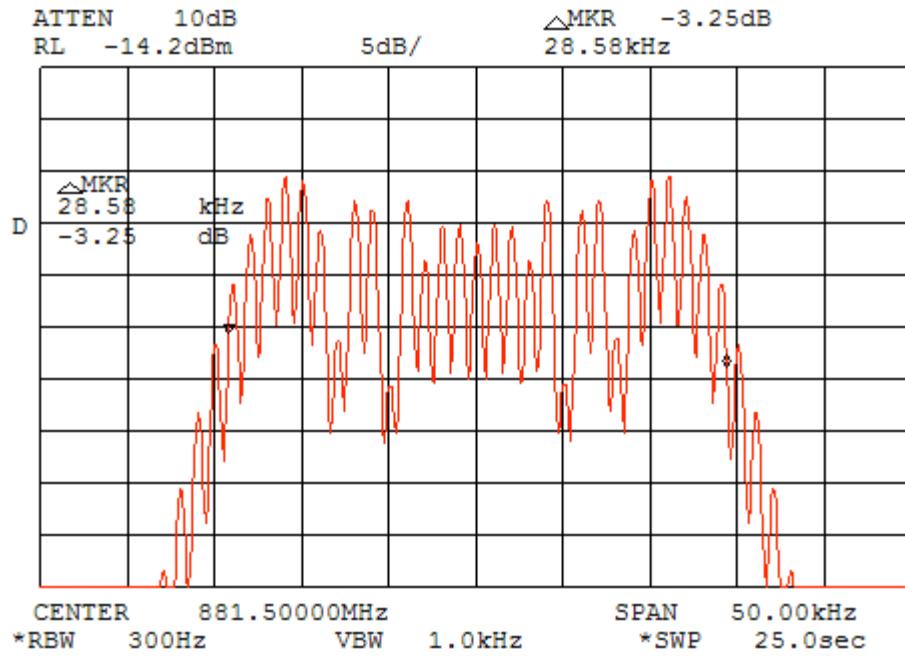


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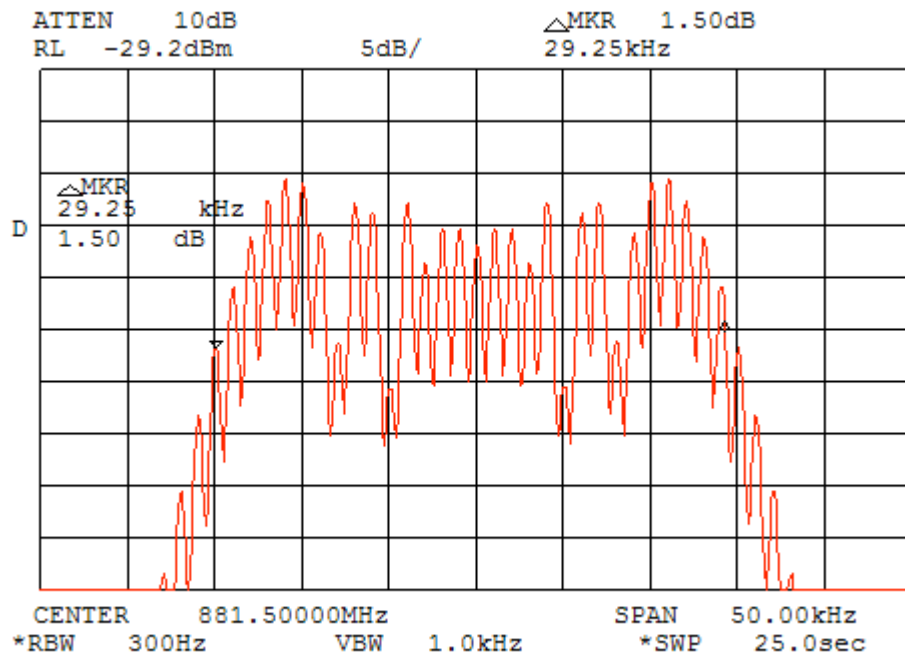


CELL-PCS. AMPS 800. 869-894 MHz. Occupied bandwidth at 881.5 MHz

Output



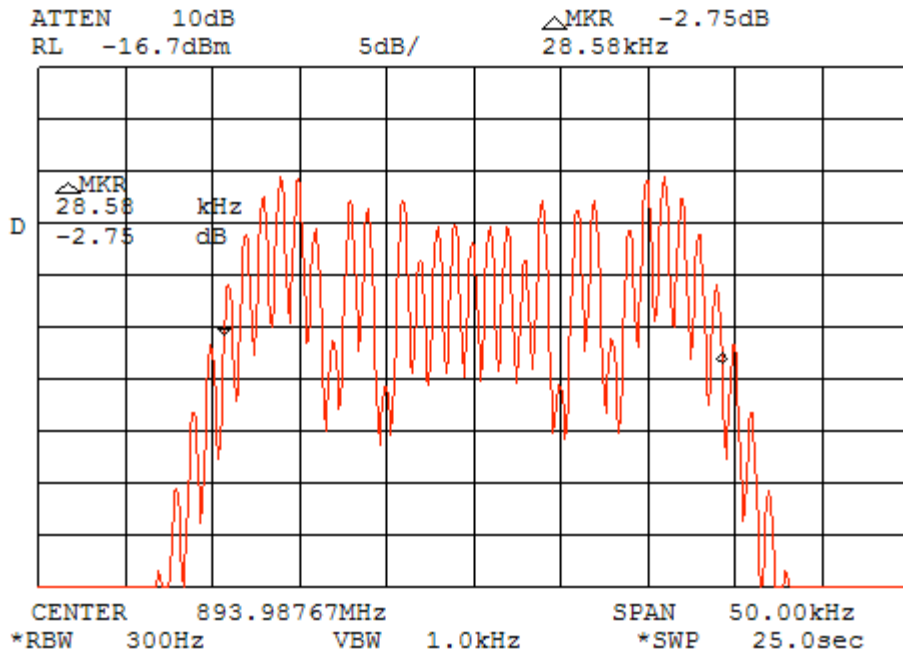
Input



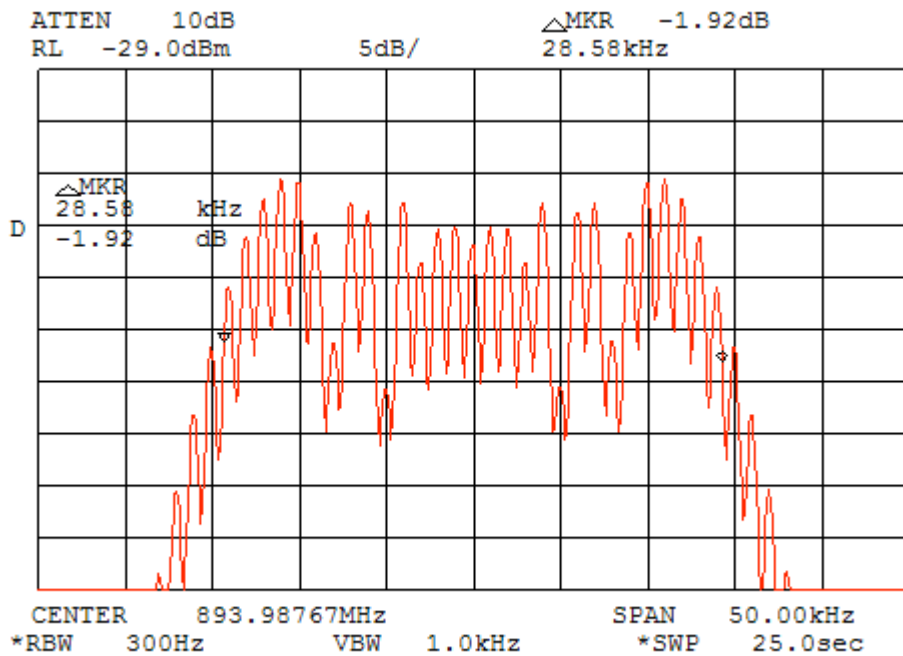


CELL-PCS. AMPS 800. 869-894 MHz. Occupied bandwidth at 893.9875 MHz

Output

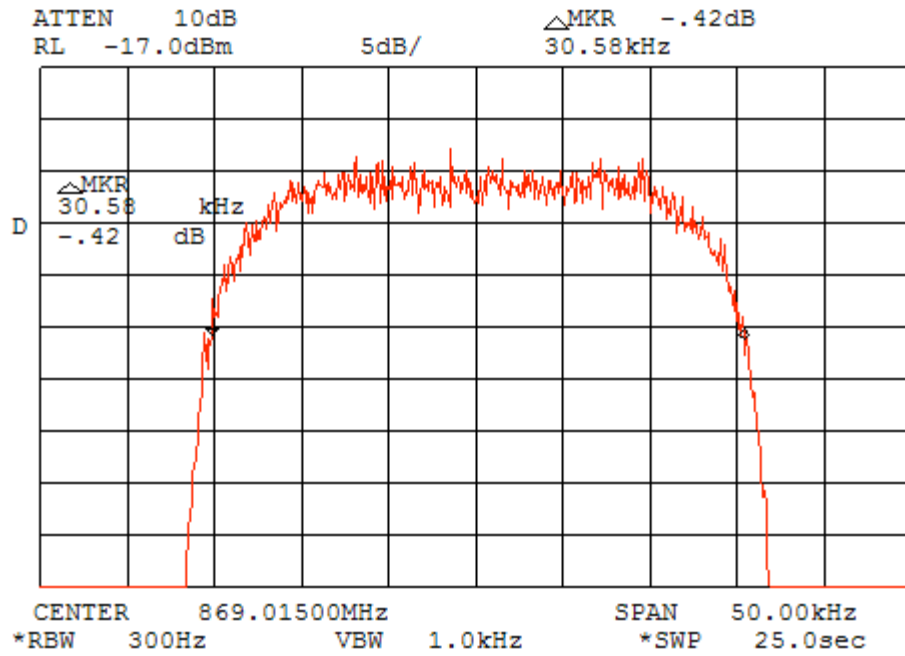


Input

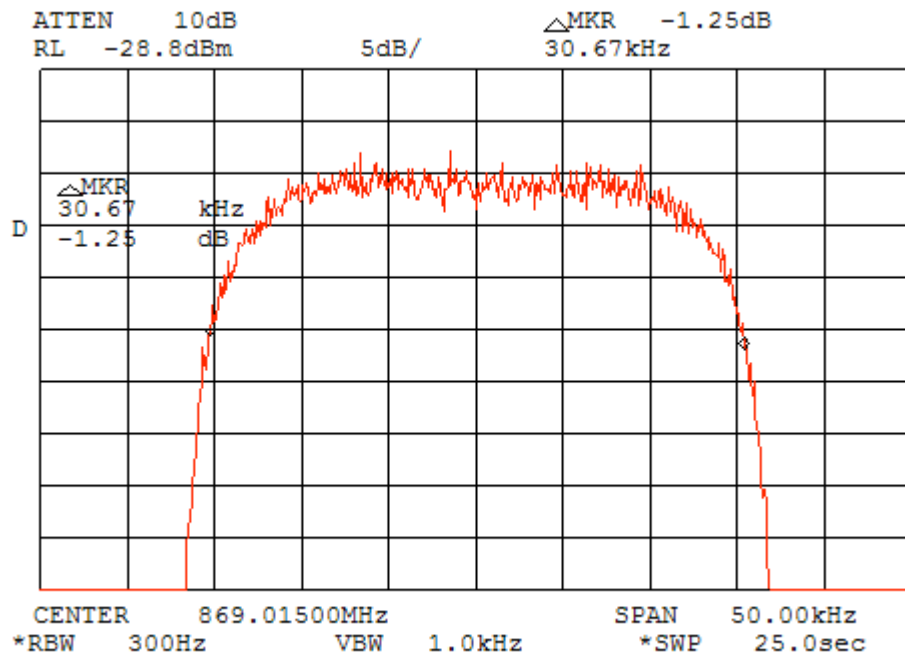


CELL-PCS. TDMA 800. 869-894 MHz. Occupied bandwidth at 869.015 MHz

Output



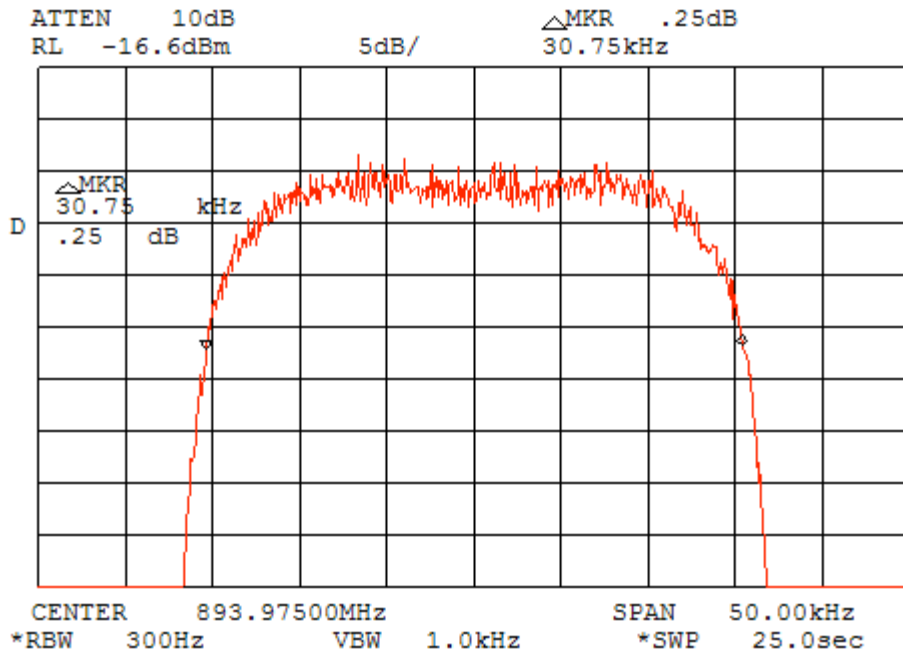
Input



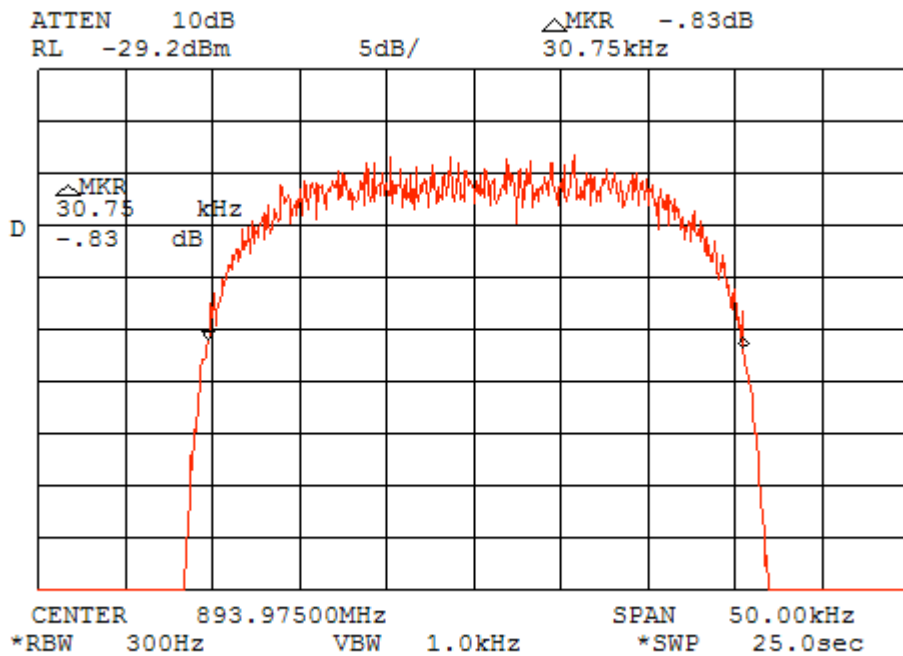


CELL-PCS. TDMA 800. 869-894 MHz. Occupied bandwidth at 893.975 MHz

Output



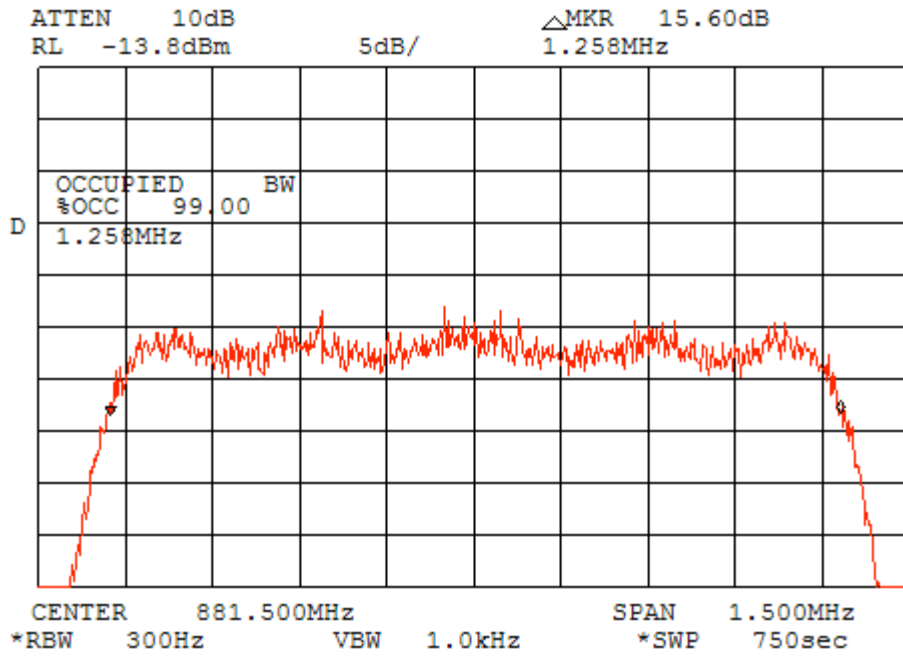
Input



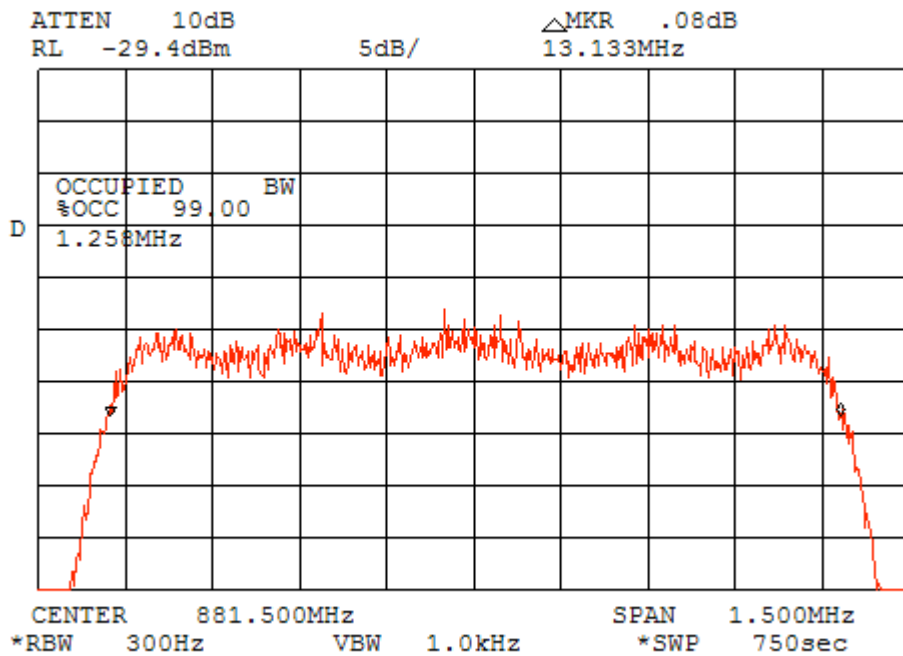


CELL-PCS. CDMA 800. 869-894 MHz. Occupied bandwidth at 881.5 MHz

Output

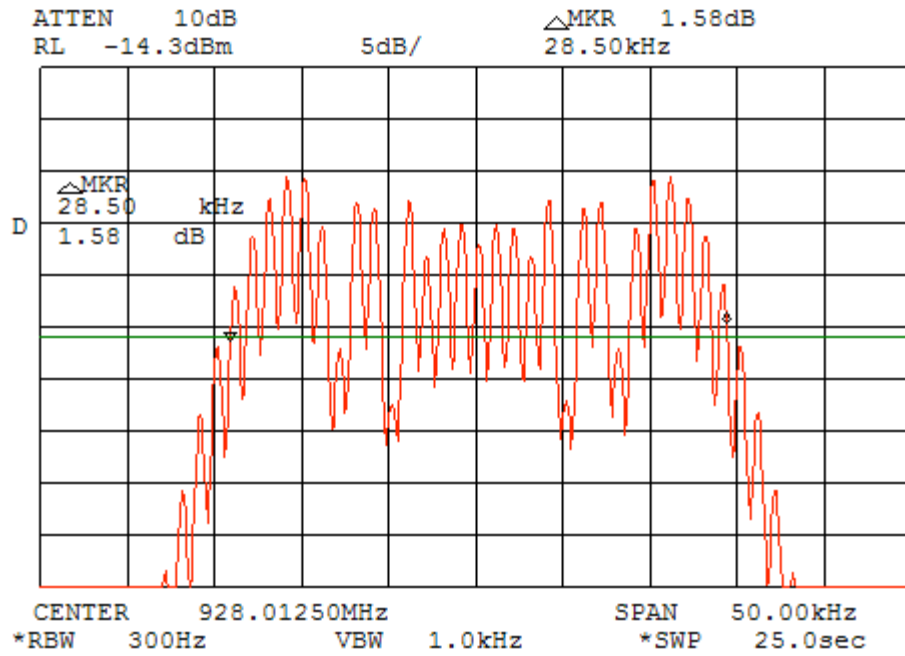


Input

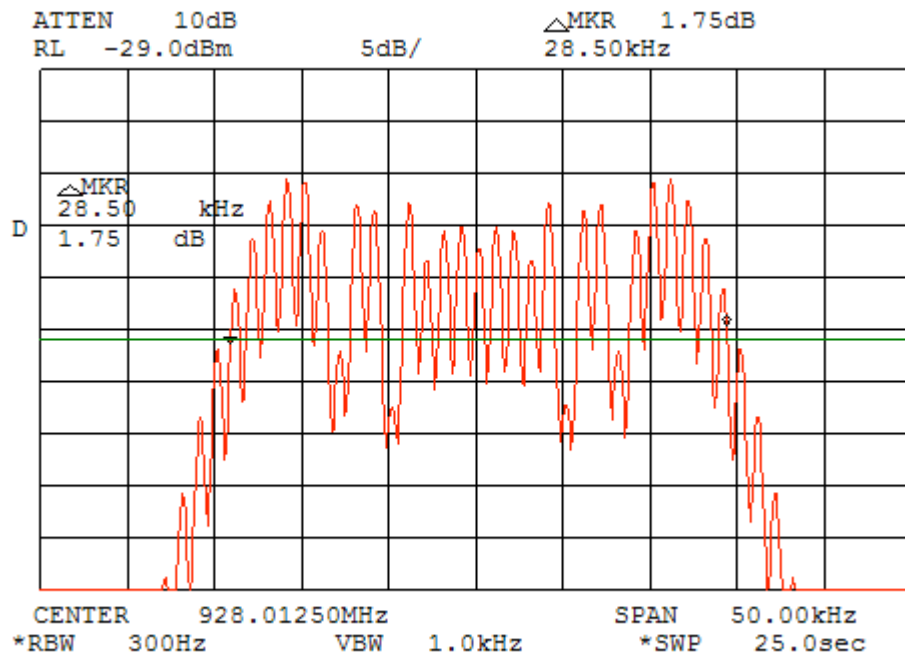




### Output



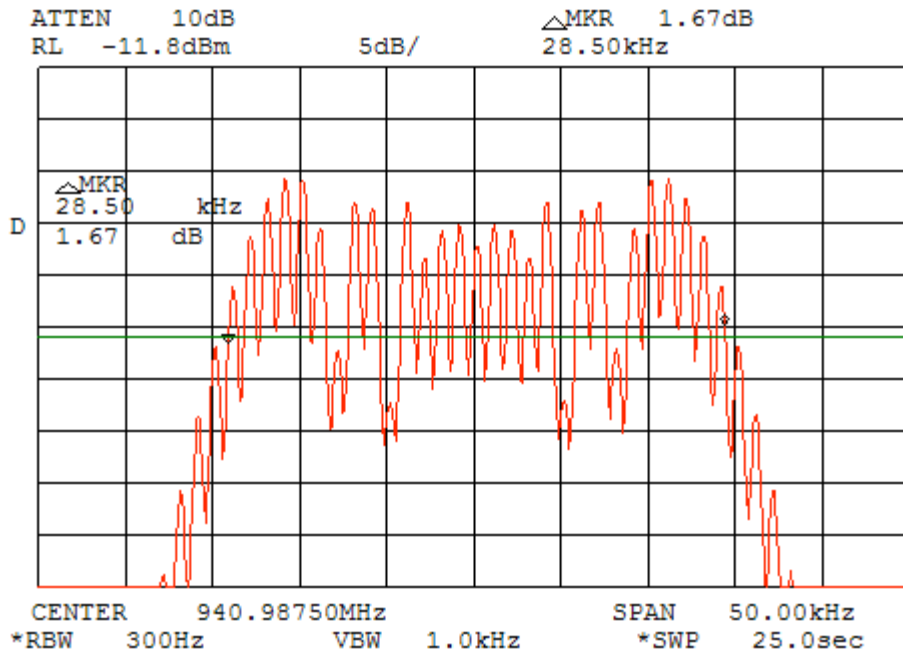
### Input



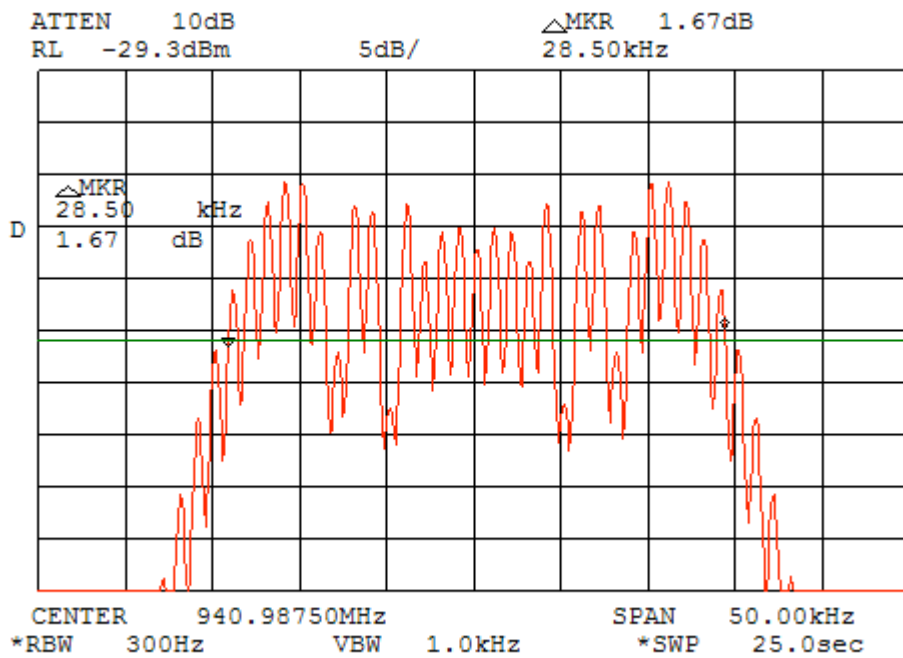




### Output

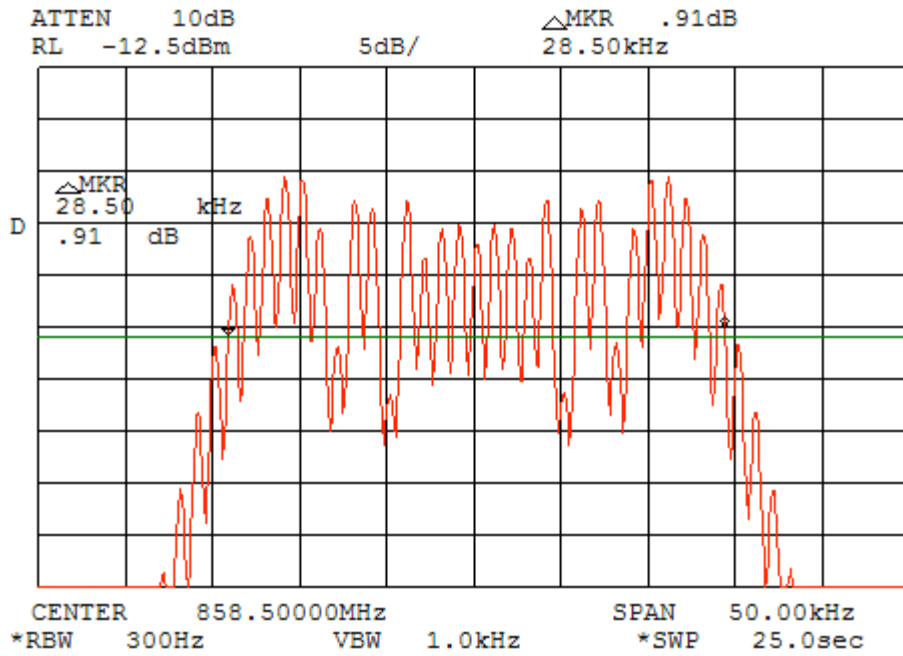


### Input

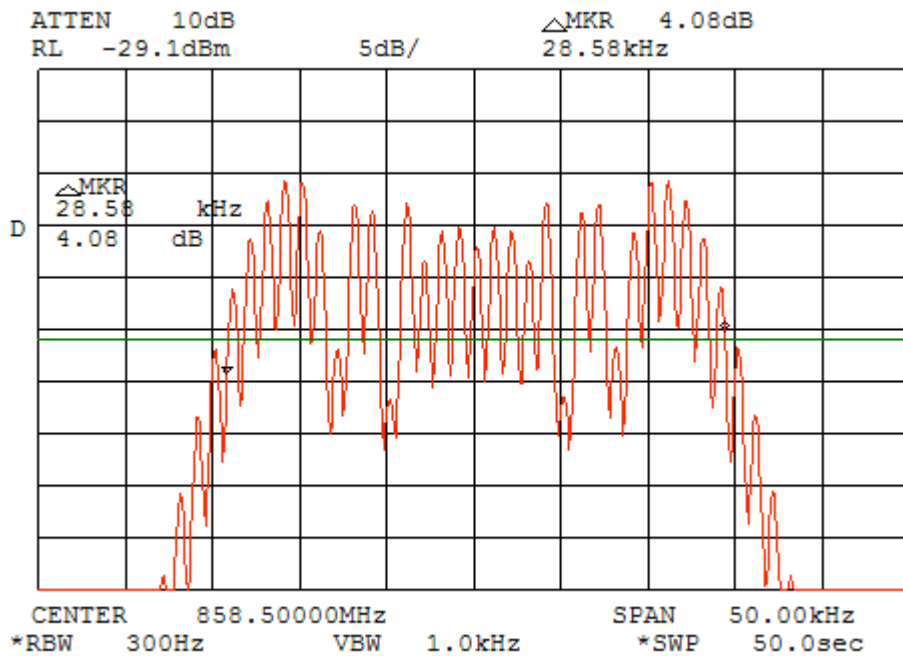




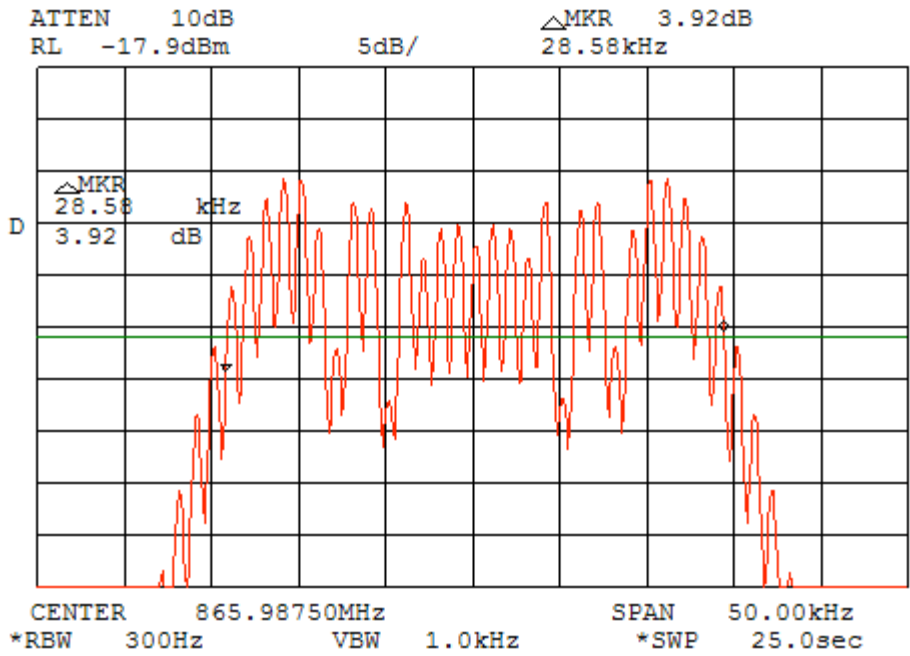
### Output



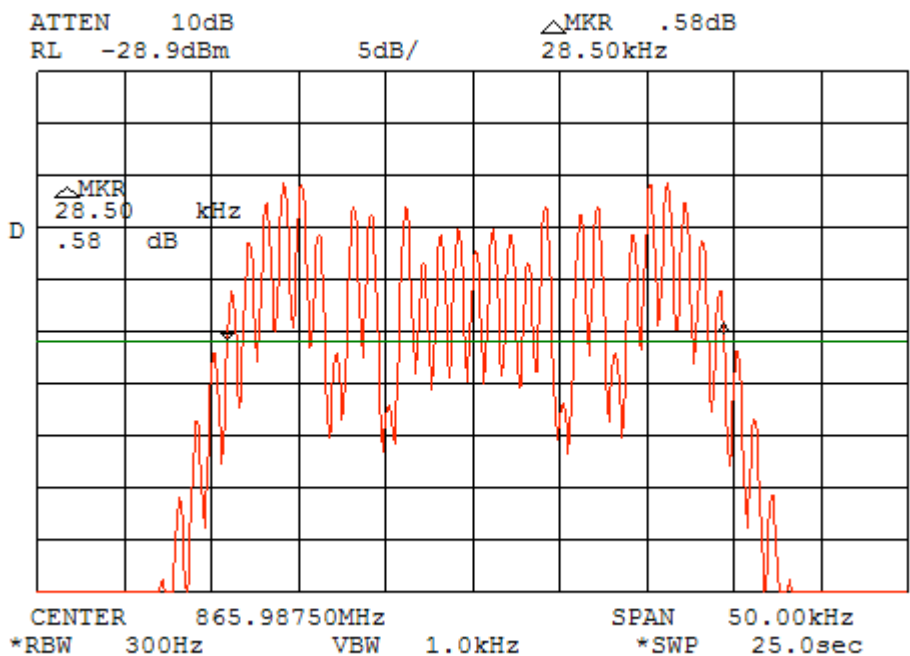
### Input



### Output

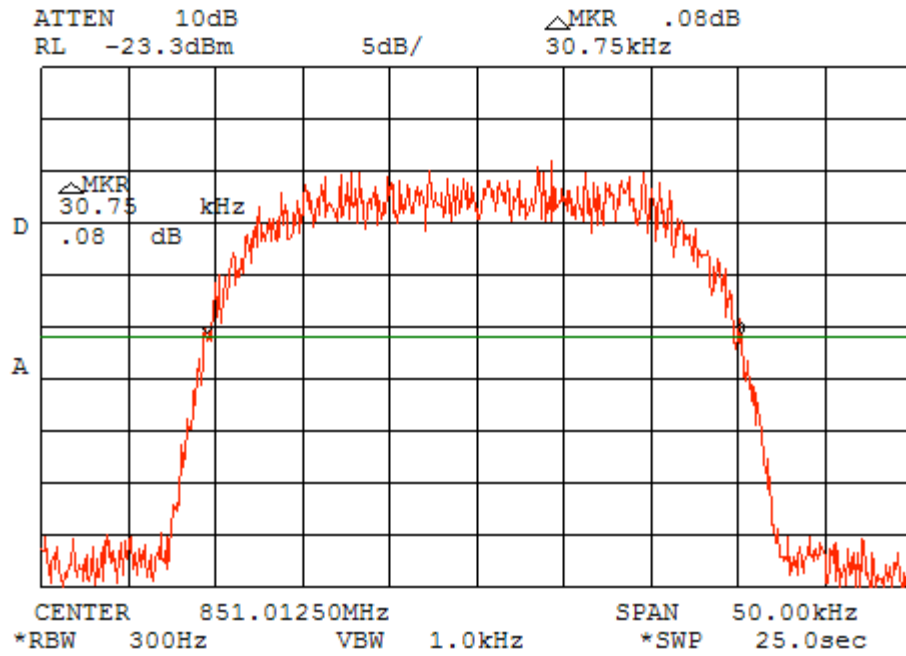


### Input

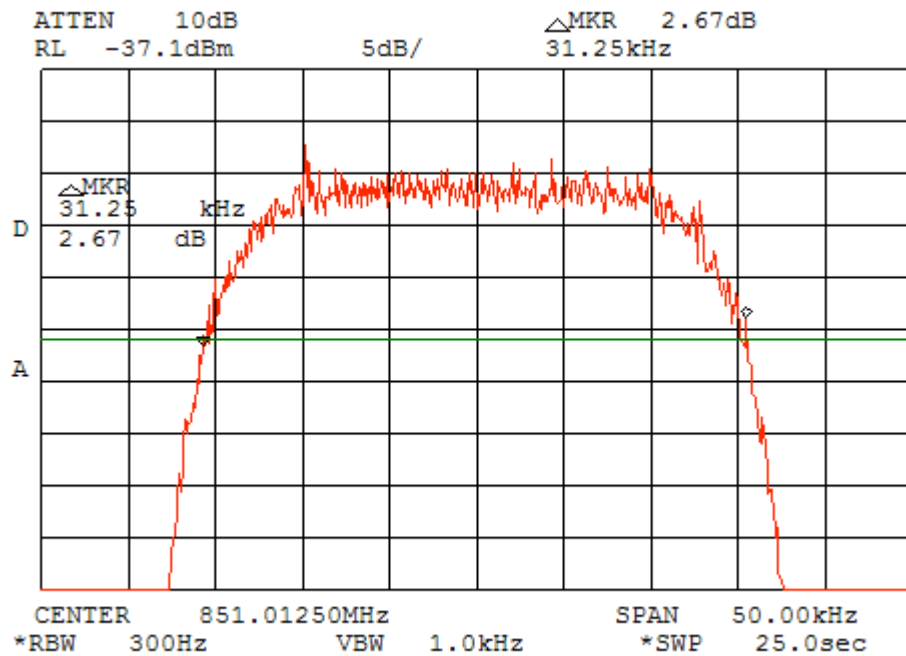


iDEN. 800. 851-866 MHz. 16QAM Occupied bandwidth at 851.0125 MHz

### Output



### Input



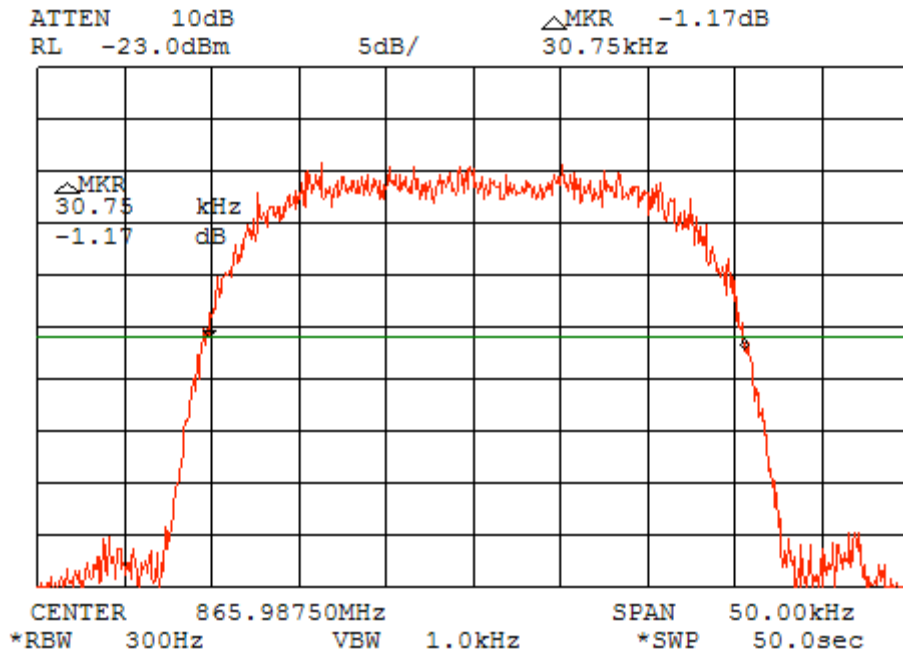
iDEN. 800. 851-866 MHz. 16QAM Occupied bandwidth at 858.5 MHz

### Output

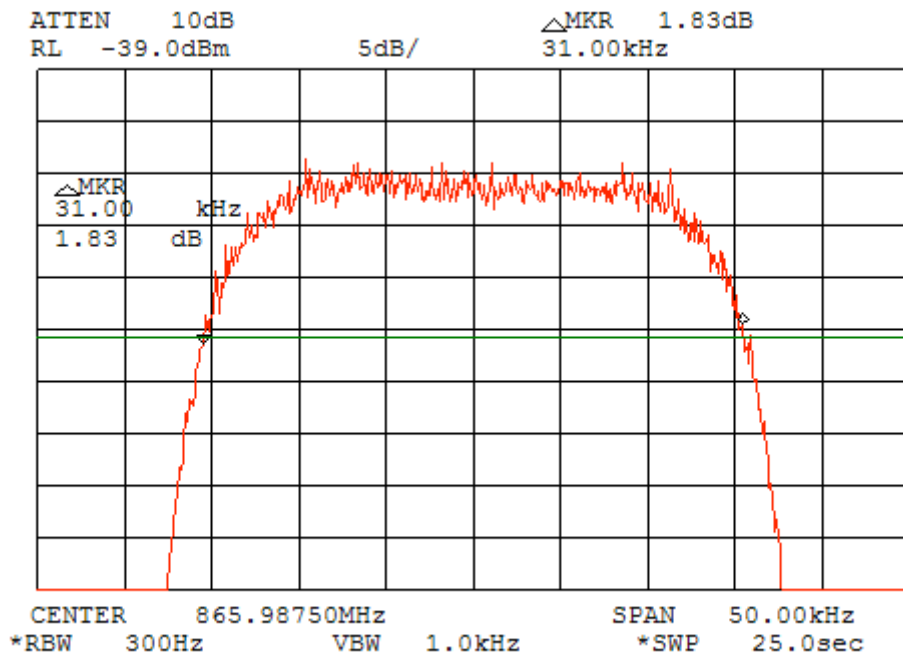


iDEN. 800. 851-866 MHz. 16QAM Occupied bandwidth at 865.9875 MHz

### Output



### Input





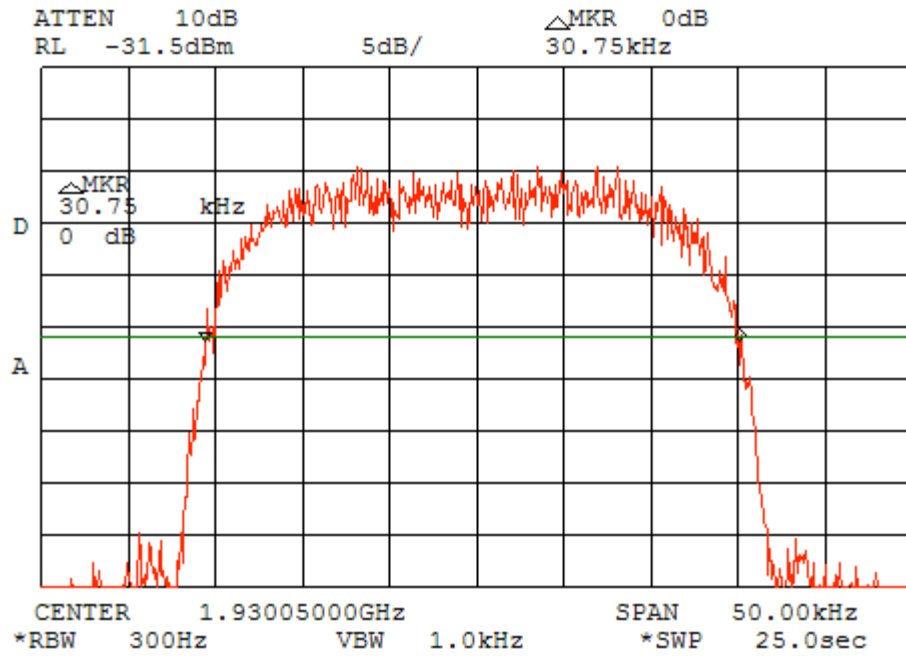




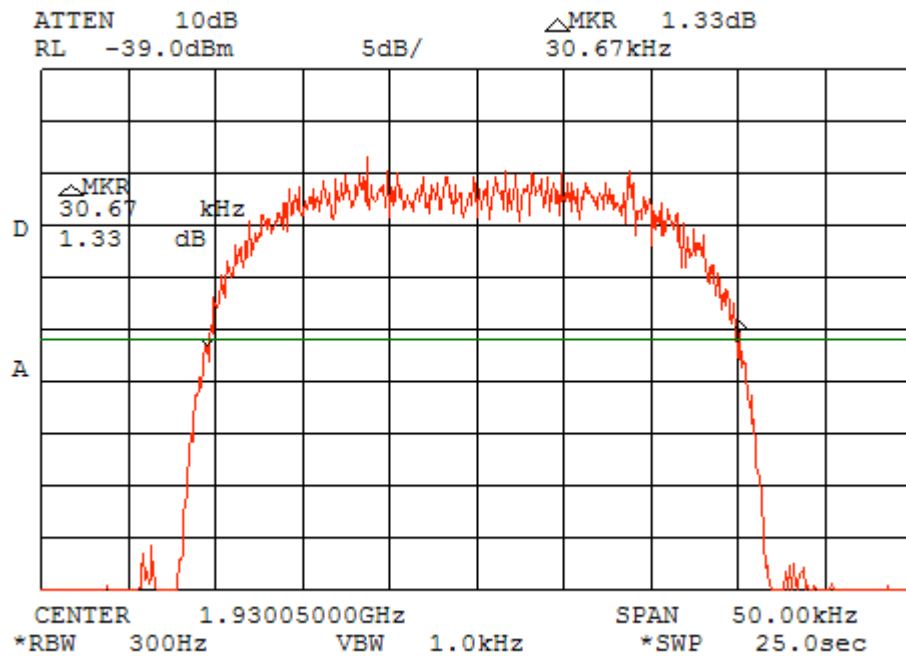


CELL-PCS. TDMA 1900. 1930-1990 MHz. Occupied bandwidth at 1930.05 MHz

Output

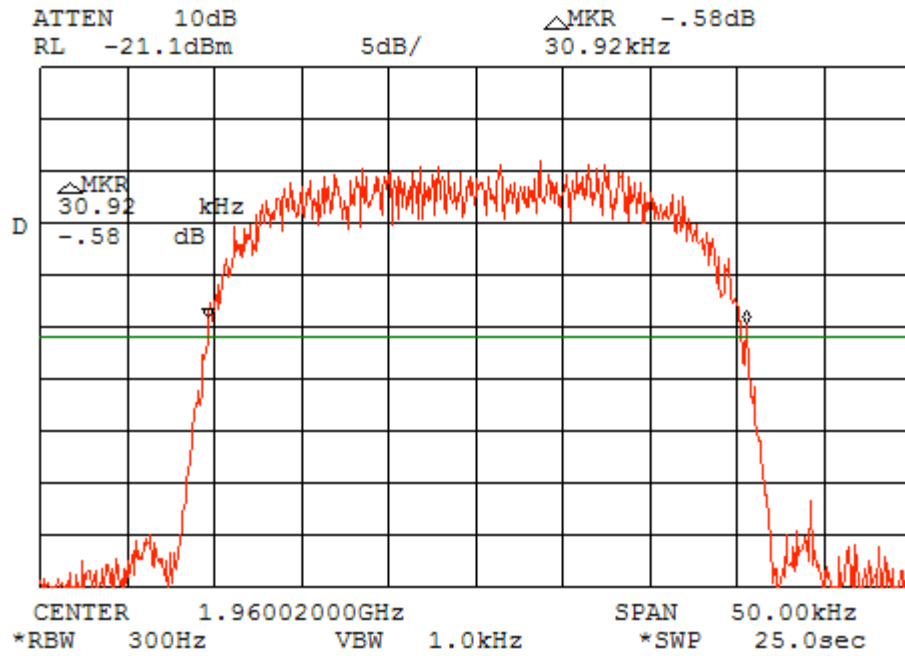


Input

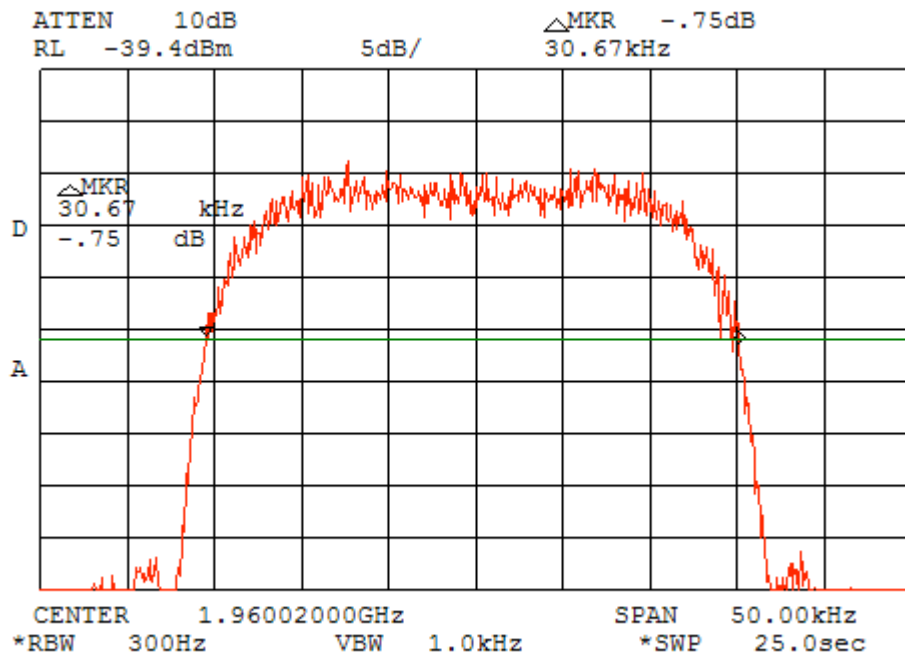


CELL-PCS. TDMA 1900. 1930-1990 MHz. Occupied bandwidth at 1960.02 MHz

Output

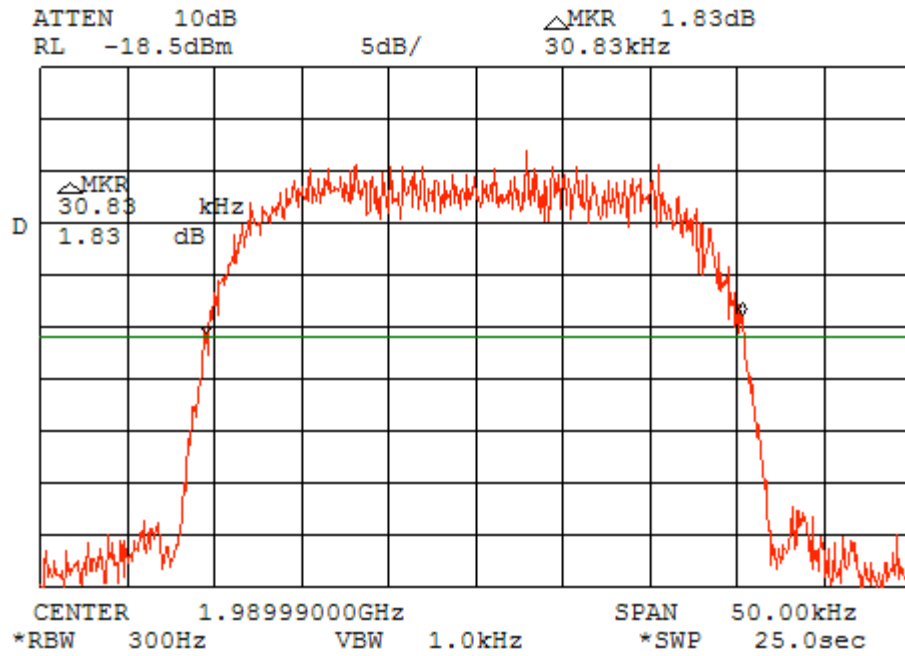


Input

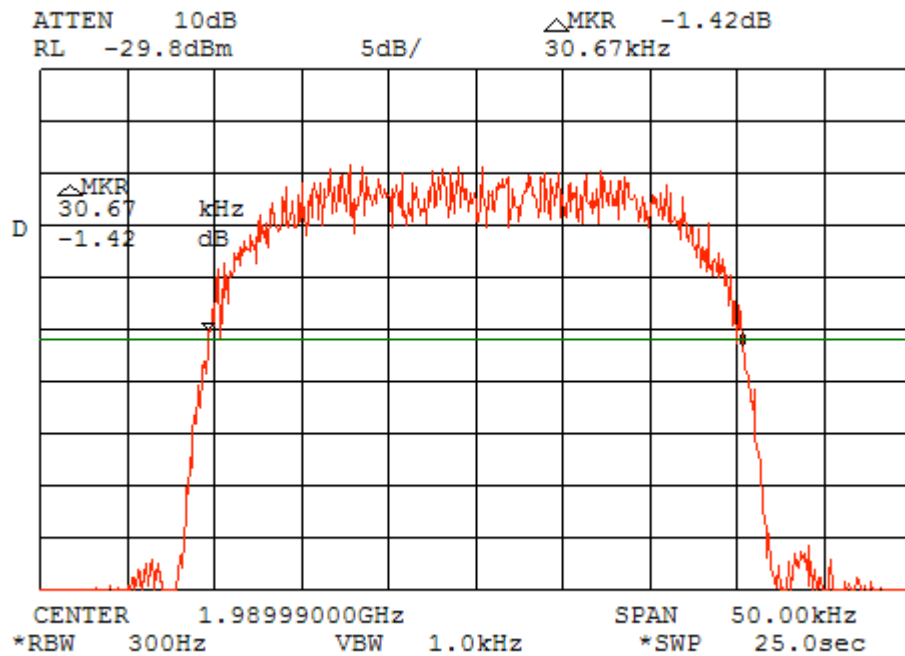


CELL-PCS. TDMA 1900. 1930-1990 MHz. Occupied bandwidth at 1989.99 MHz

Output

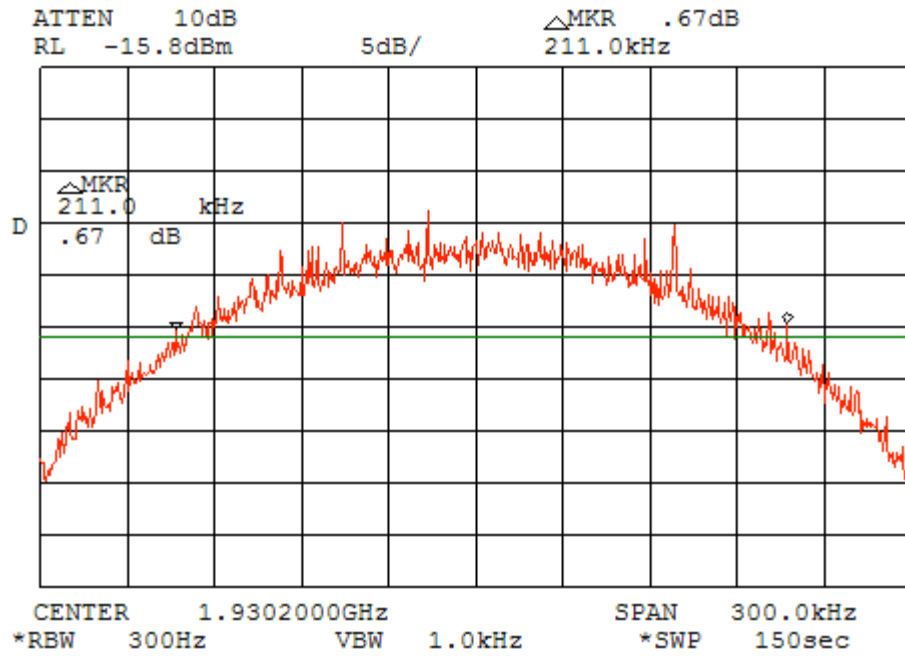


Input

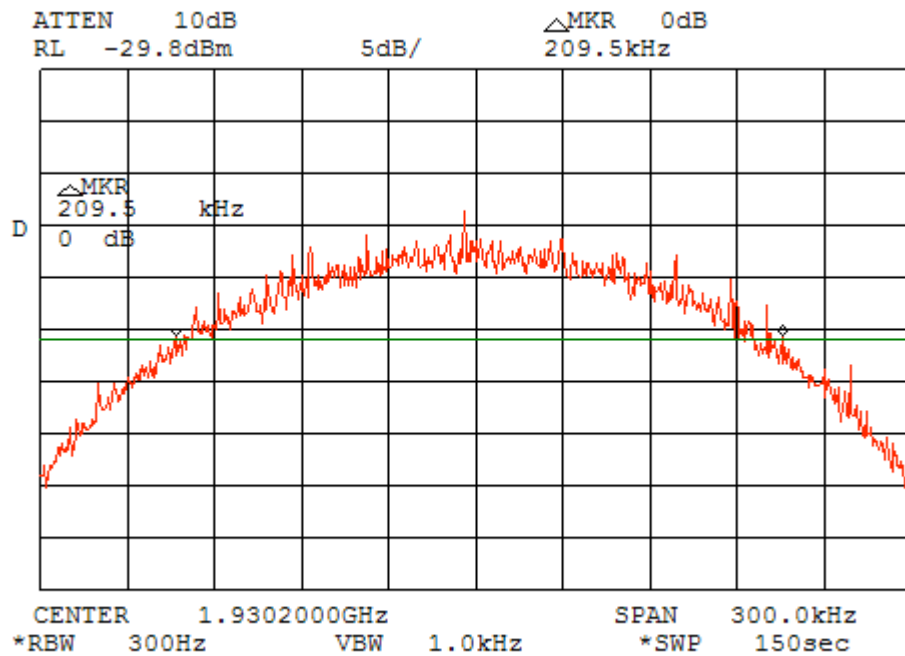


CELL-PCS. GSM 1900. 1930-1990 MHz. Occupied bandwidth at 1930.2 MHz

Output

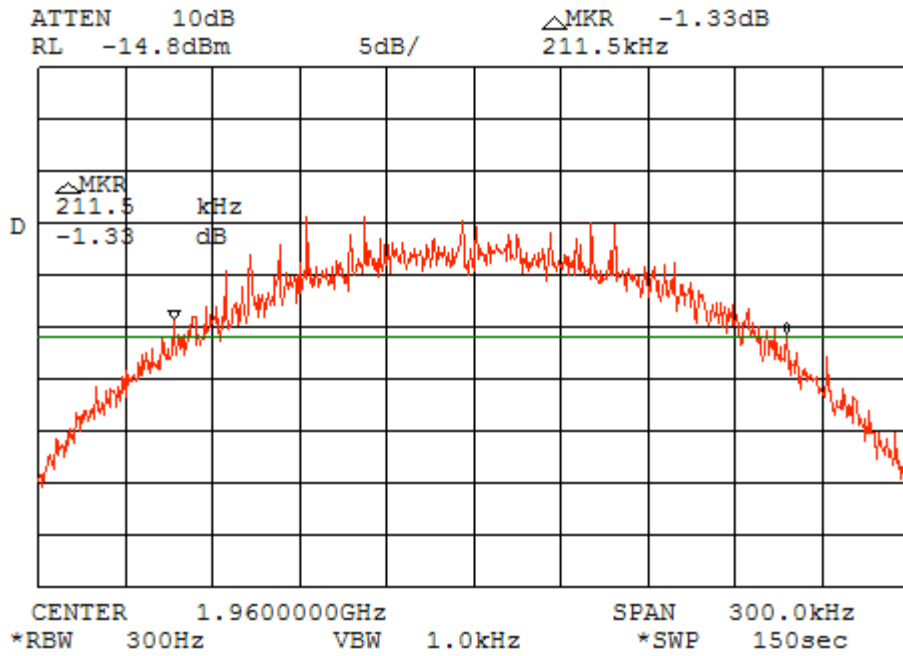


Input

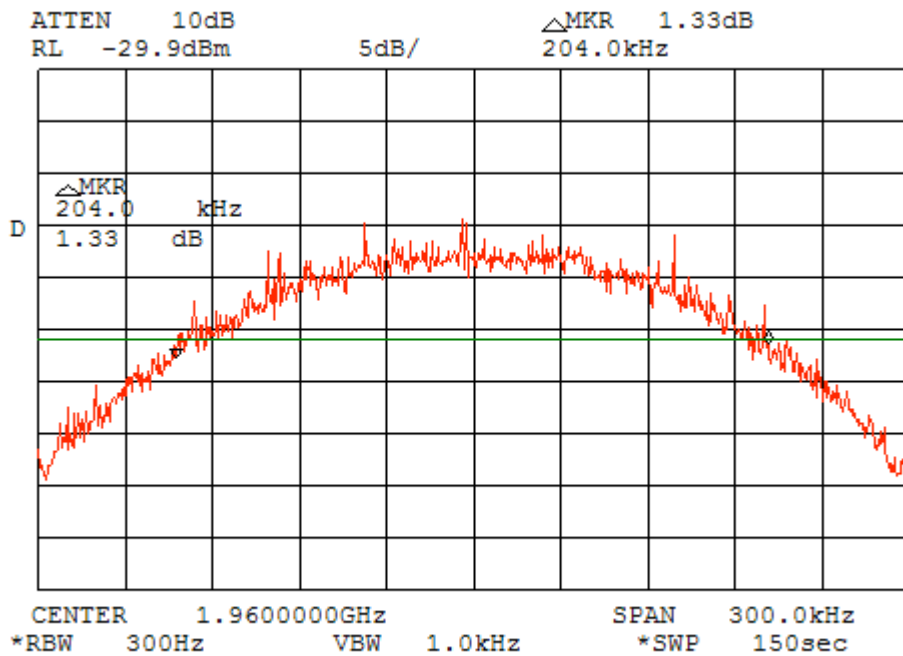


CELL-PCS. GSM 1900. 1930-1990 MHz. Occupied bandwidth at 1960.0 MHz

Output



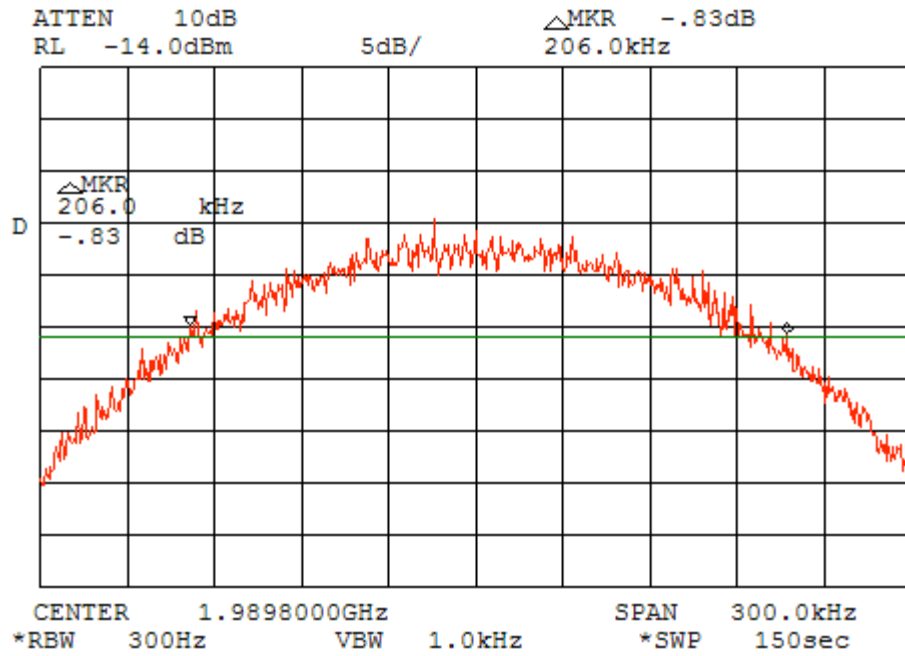
Input



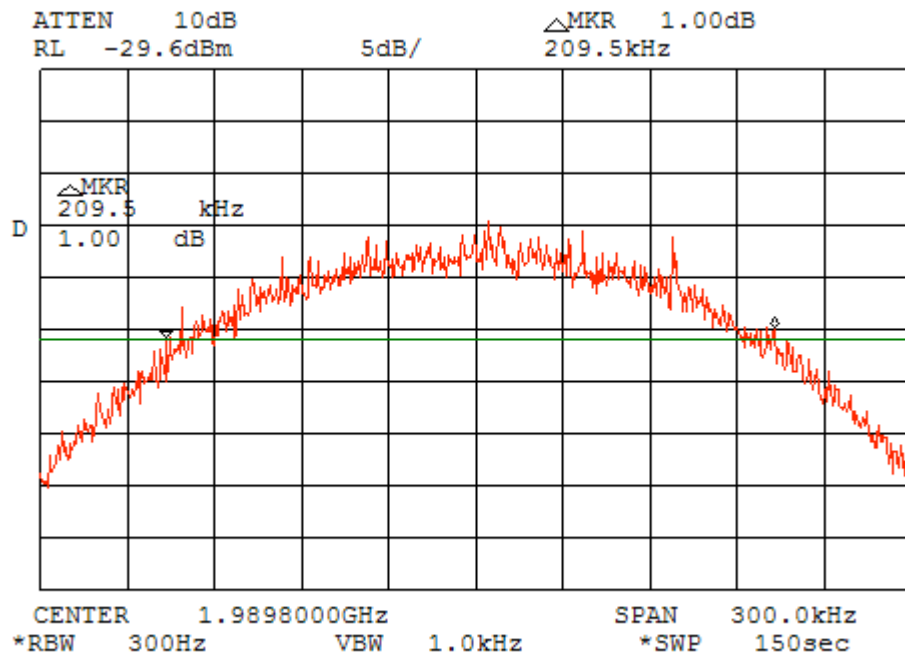


CELL-PCS. GSM 1900. 1930-1990 MHz. Occupied bandwidth at 1989.8 MHz

Output

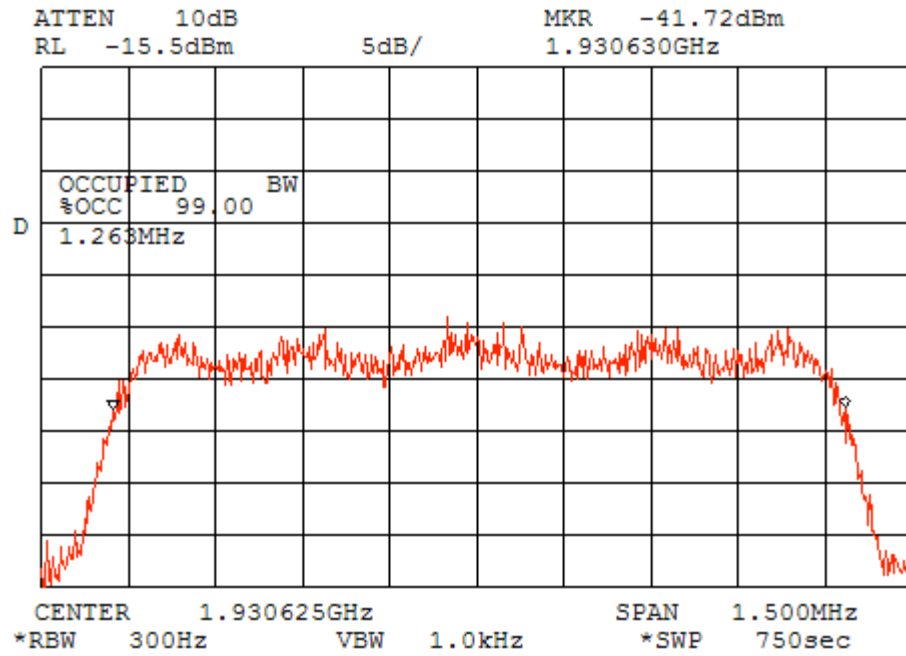


Input

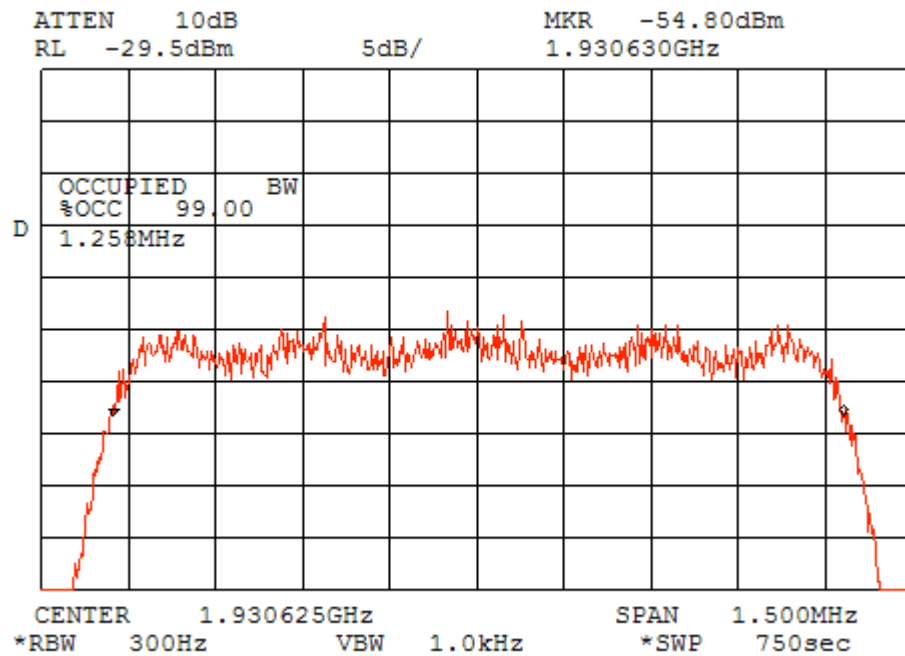


CELL-PCS. CDMA 1900. 1930-1990 MHz. Occupied bandwidth at 1930.625 MHz

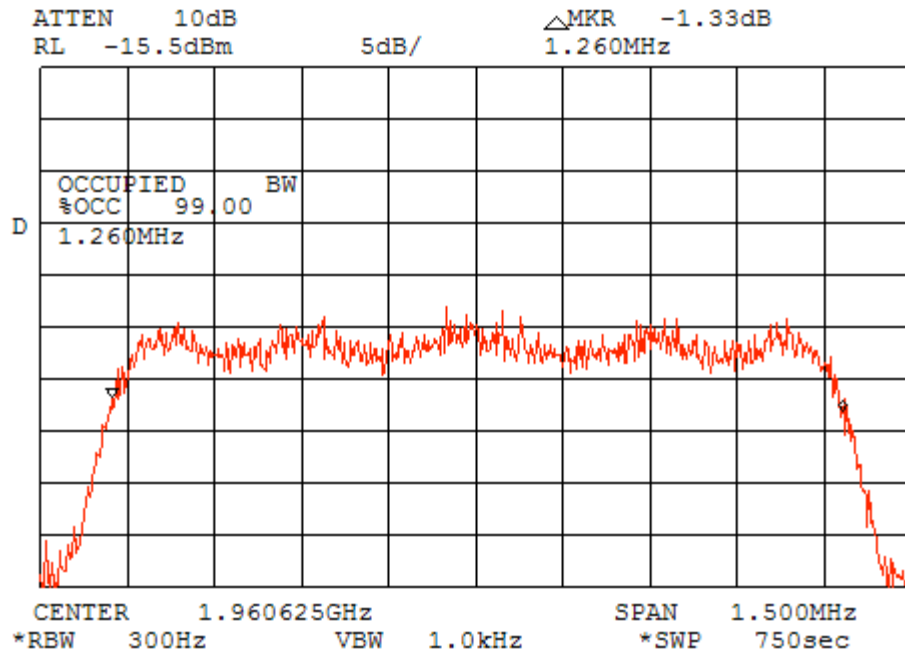
Output



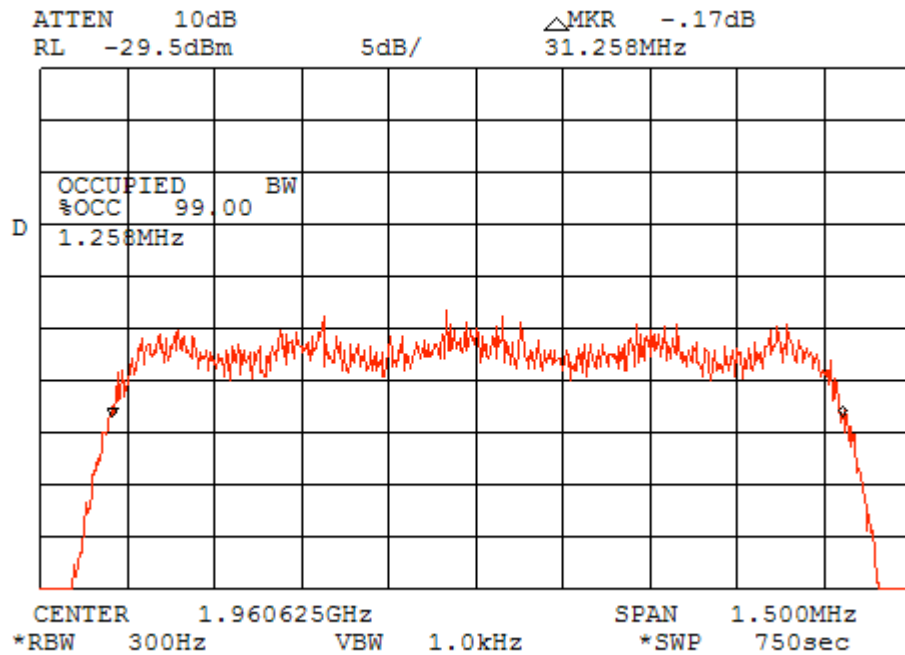
Input



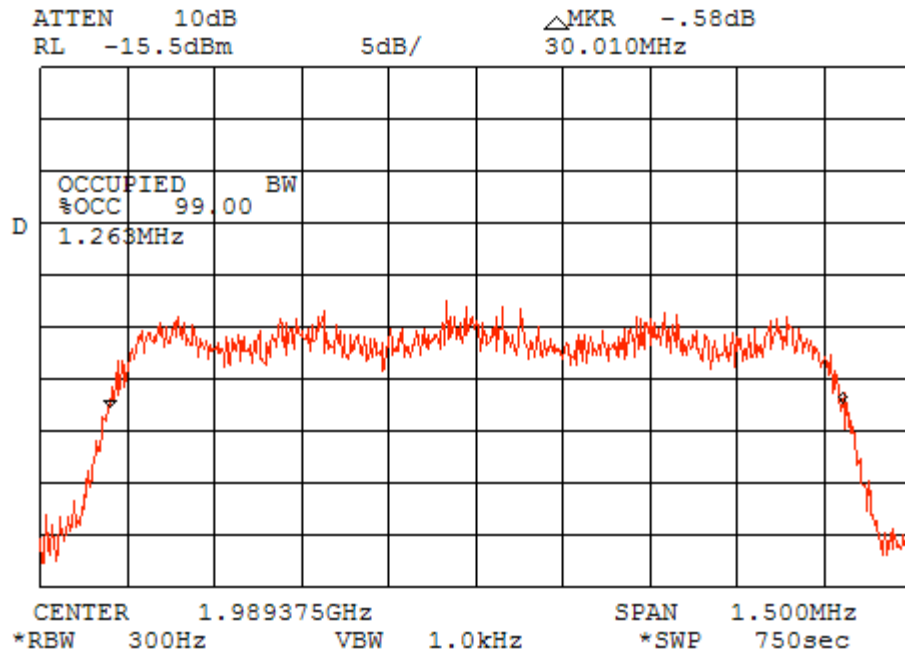
### Output



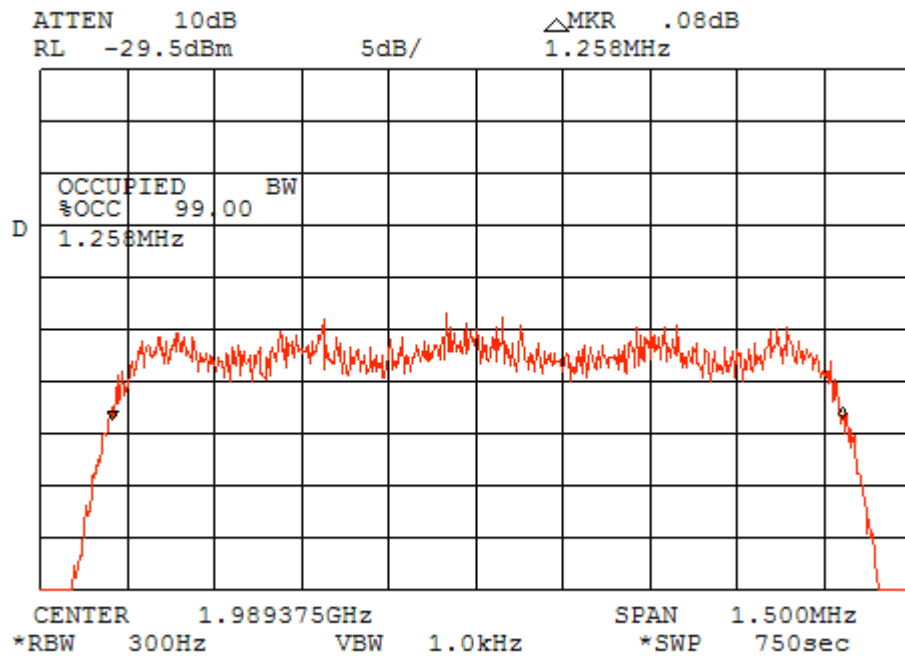
### Input



### Output



### Input



Date 28 July 2004  
Project 16021  
Test **Intermodes**  
Operator Michael Lerman  
Test equipment 2524, 1424, 2399  
Temperature 24°C  
Humidity 37%  
Air pressure 1005 hPa  
EUT SMR 1900

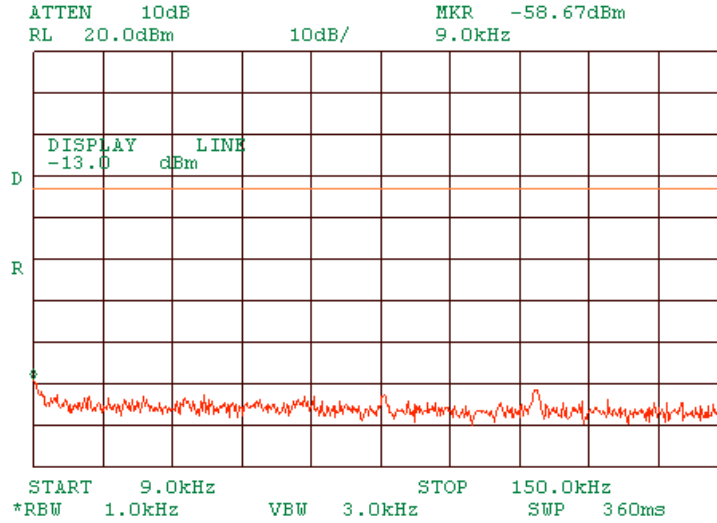
Band 928 – 941 MHz  
FM<sub>1</sub> = 928.0125 MHz  
FM<sub>2</sub> = 928.0150 MHz  
FM<sub>3</sub> = 940.9875 MHz

Band 1930 – 1990 MHz

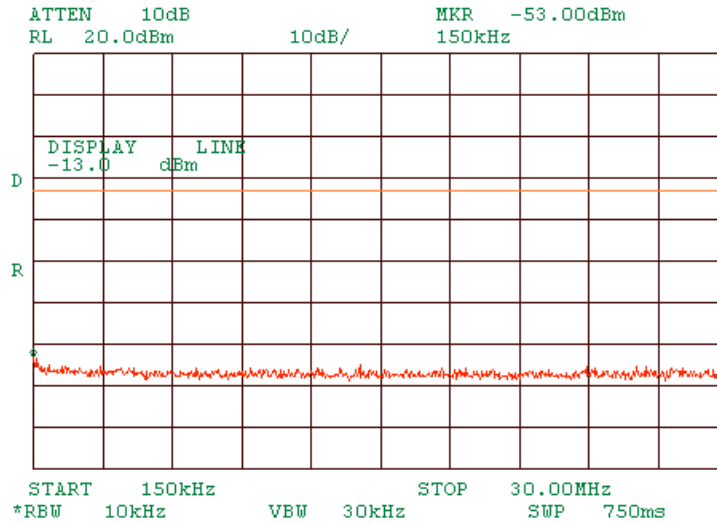
CDMA<sub>1</sub> = 1931.250 MHz  
CDMA<sub>2</sub> = 1932.500 MHz  
CDMA<sub>3</sub> = 1988.750 MHz

FM<sub>1</sub> = 1930.0125 MHz  
FM<sub>2</sub> = 1930.0150 MHz  
FM<sub>3</sub> = 1989.9875 MHz

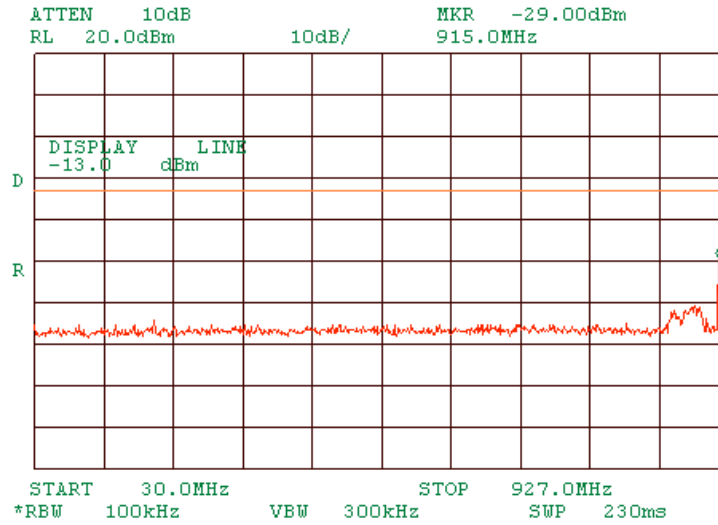
### Range 9 – 150 kHz. FM 900



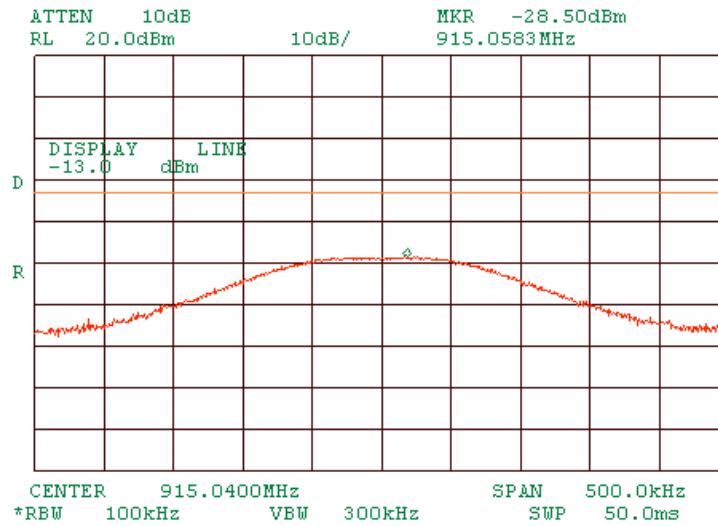
### Range 0.150 – 30 MHz. FM 900



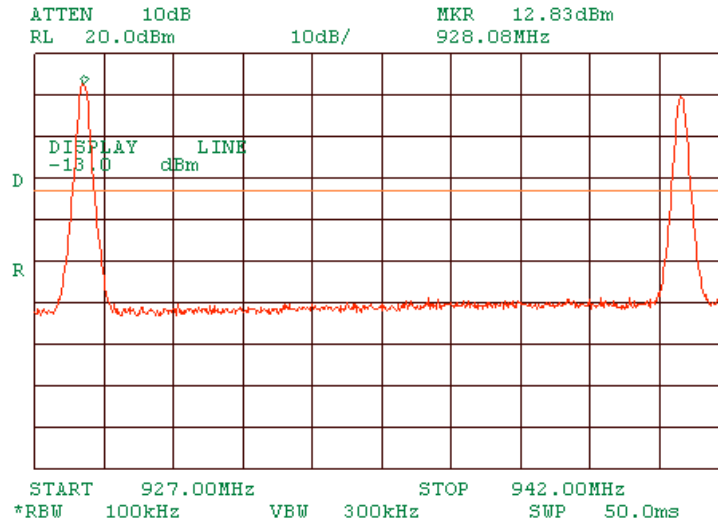
### Range 30 – 927 MHz. FM



### Spurious. FM

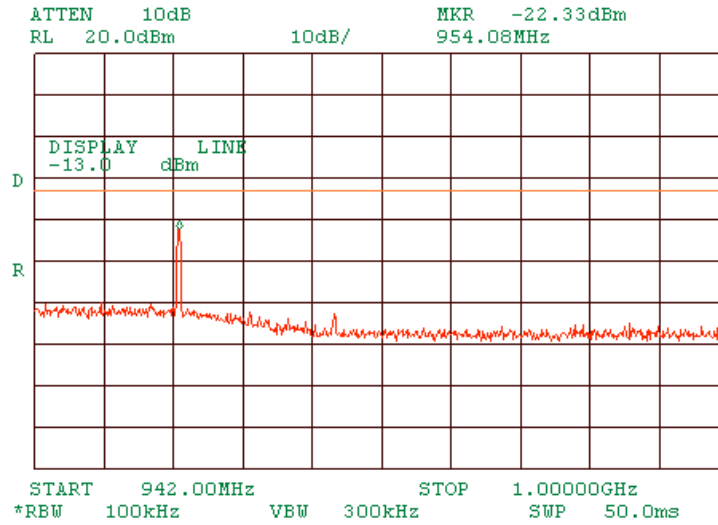


### Range 927 – 942 MHz. FM 900

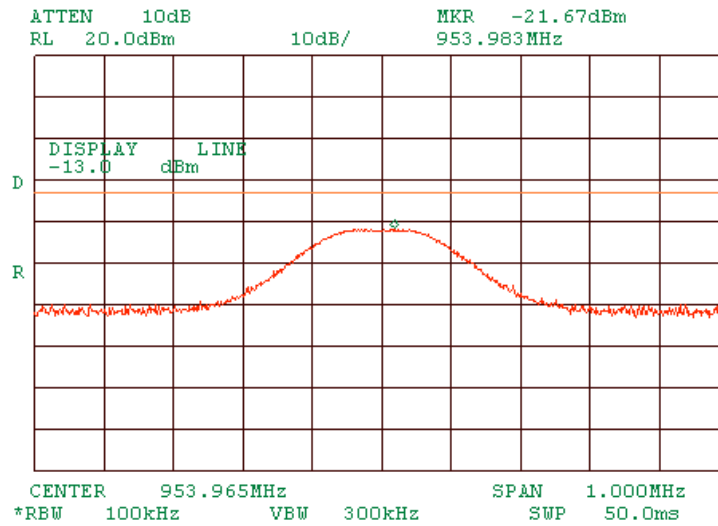




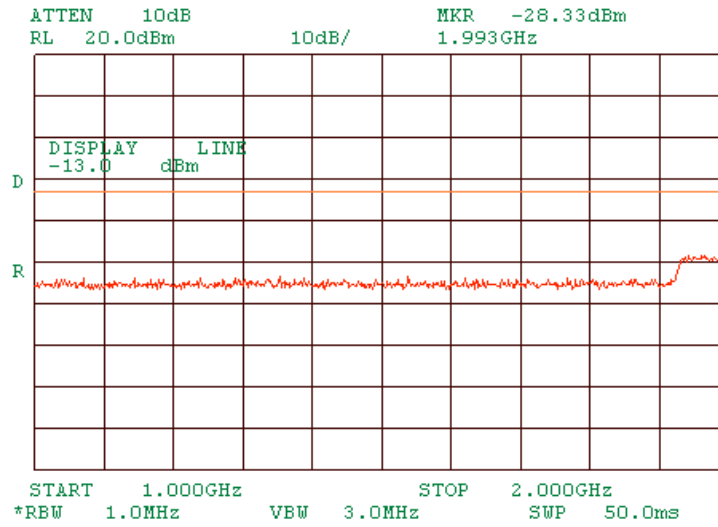
### Range 942 – 1000 MHz. FM 900



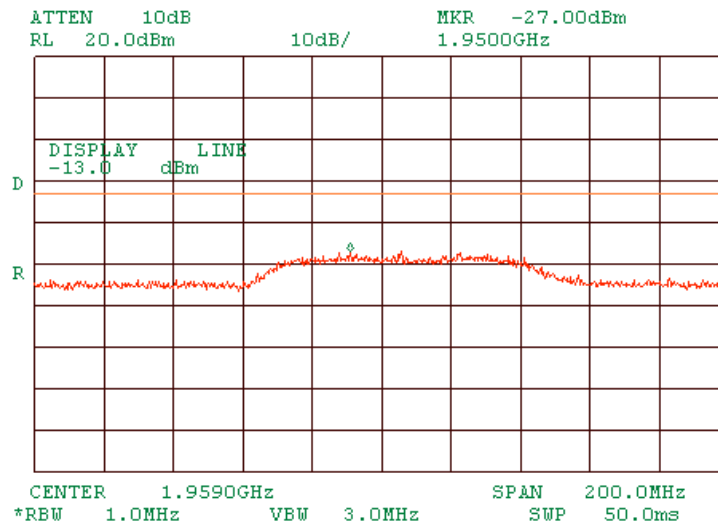
### Spurious. FM 900



### Range 1000 – 2000 MHz. FM 900

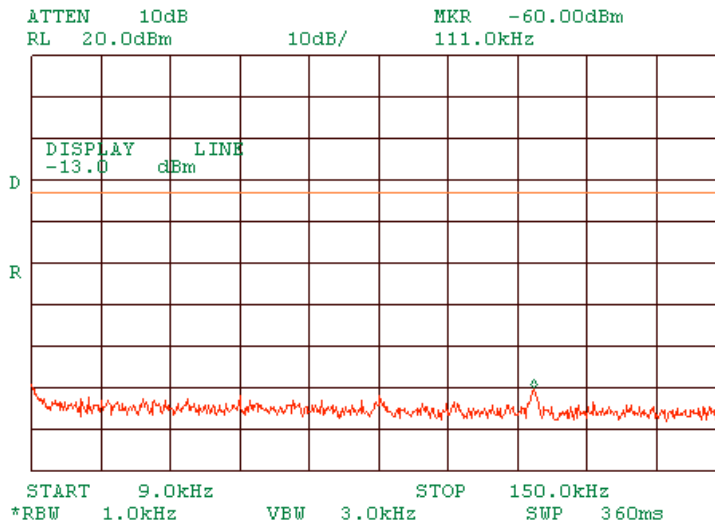


### Spurious. FM 900

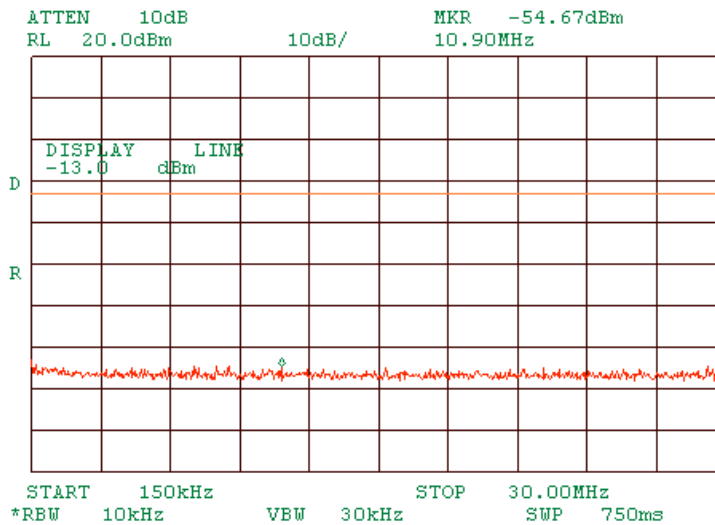




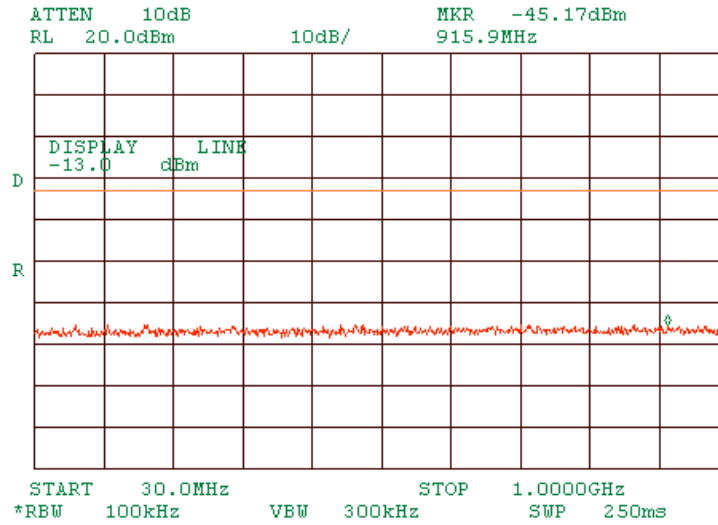
Range 9 – 150 kHz. CDMA 1900



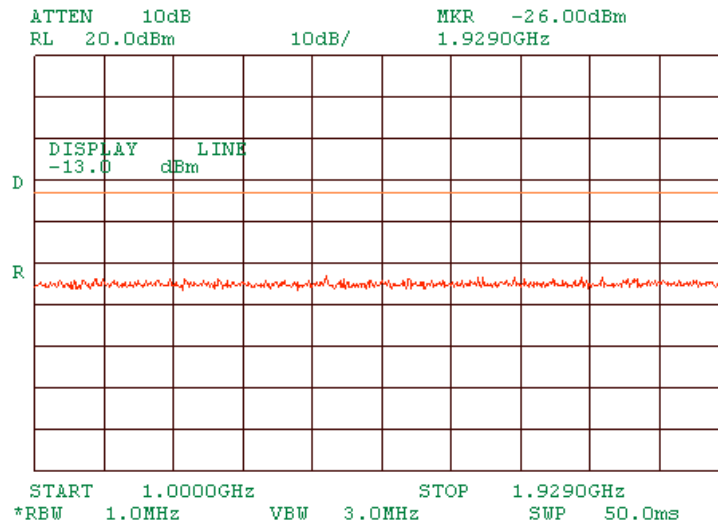
Range 0.150 – 30 MHz. CDMA 1900



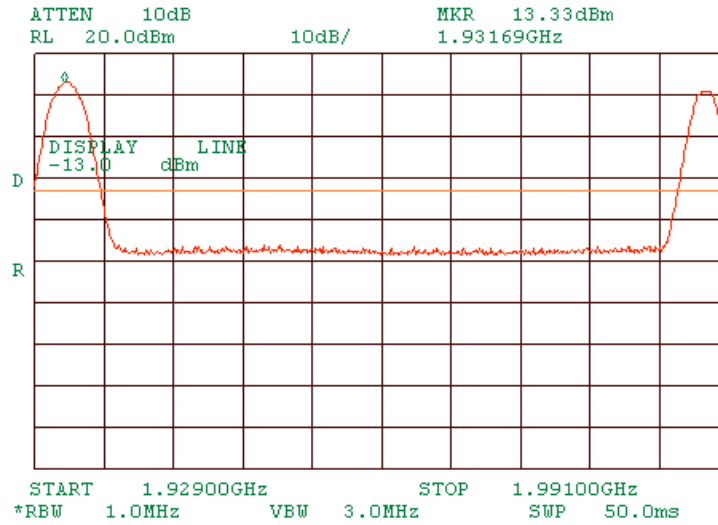
### Range 30 – 1000 MHz. CDMA 1900



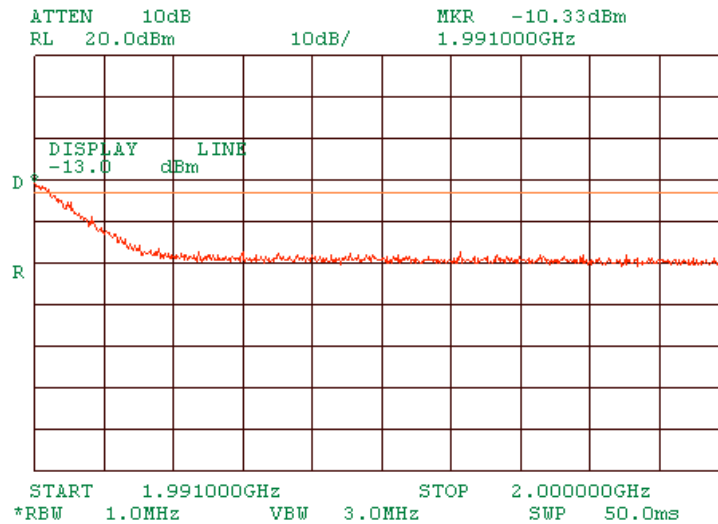
### Range 1000 – 1929 MHz. CDMA 1900



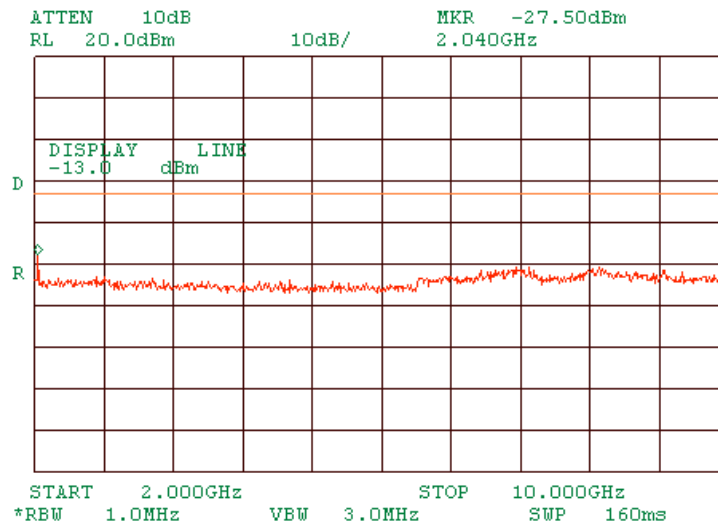
### Range 1929 – 1991 MHz. CDMA 1900



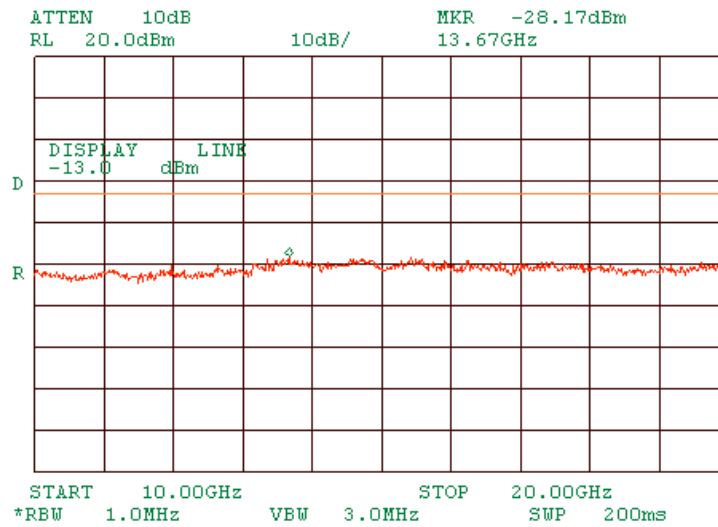
### Range 1991 – 2000 MHz. CDMA 1900



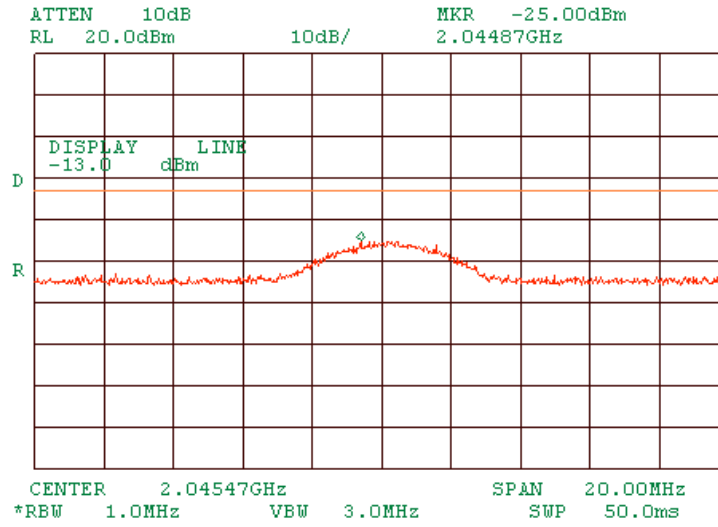
### Range 2000 – 10000 MHz. CDMA 1900



### Range 10000 – 20000 MHz. CDMA 1900

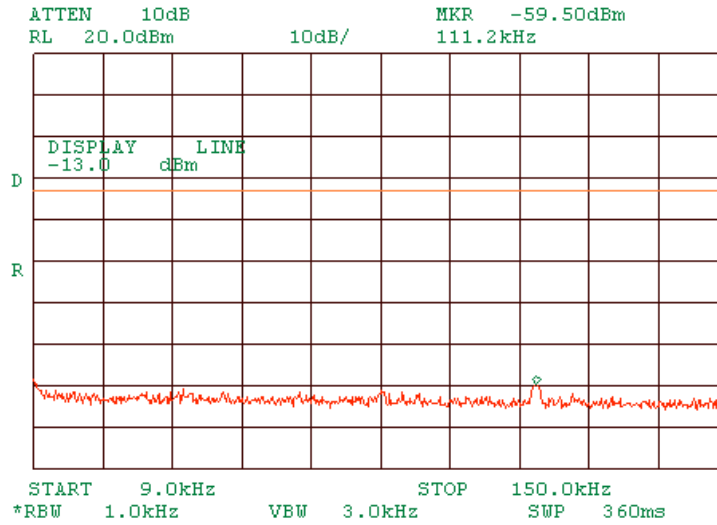


# Spurious at 2040 MHz. CDMA 1900

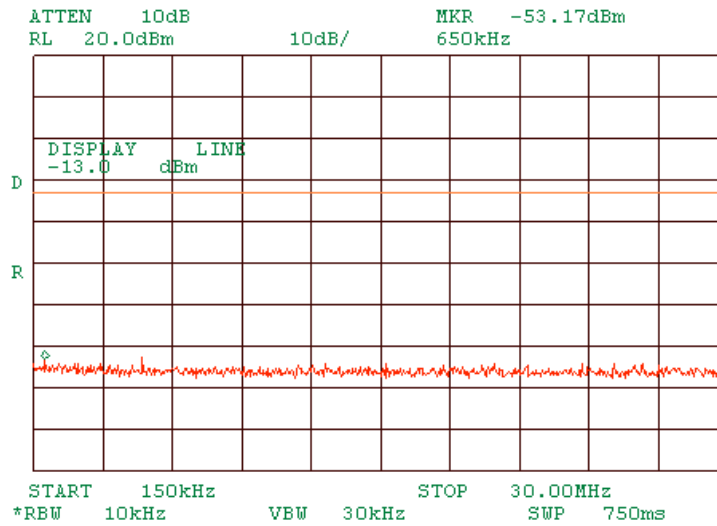




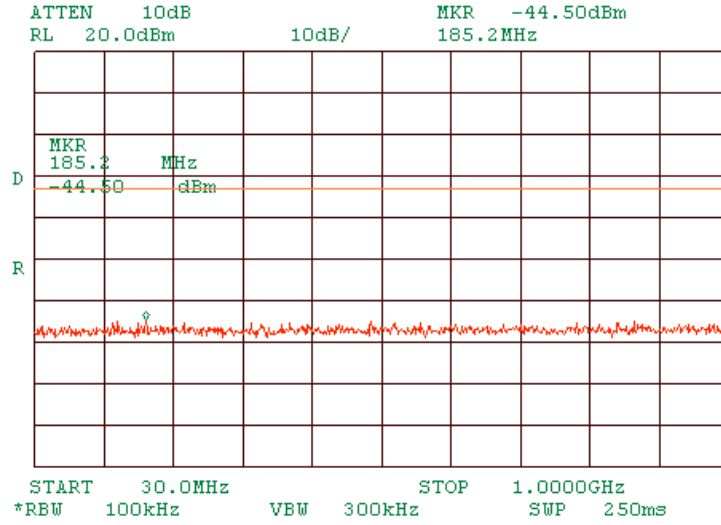
### Range 9 – 150 kHz. FM 1900



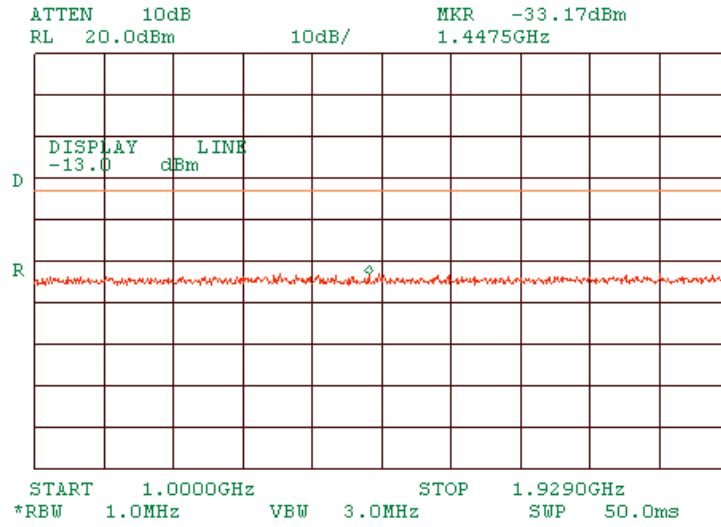
### Range 0.150 – 30 MHz. FM 1900



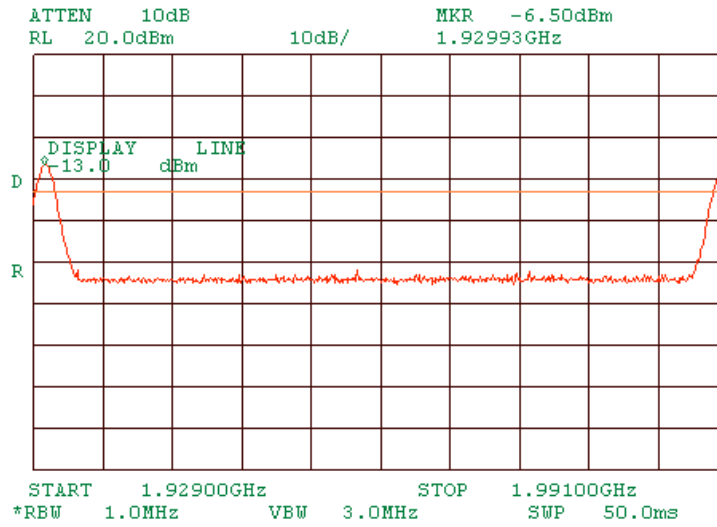
### Range 30 – 1000 MHz. FM 1900



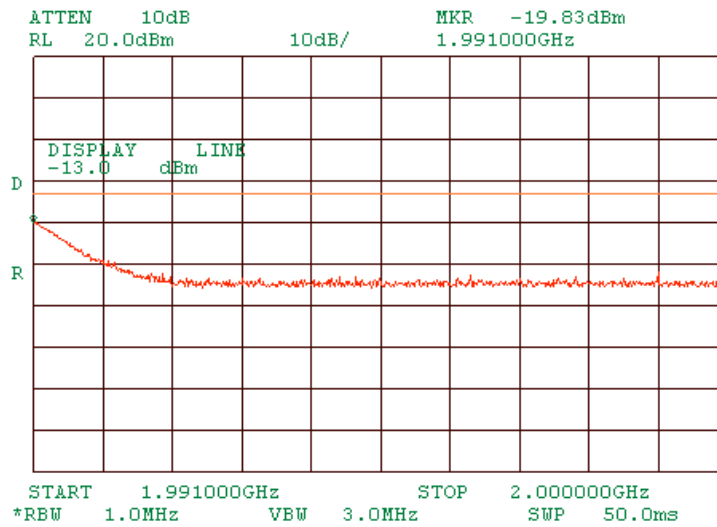
### Range 1000 – 1929 MHz. FM 1900



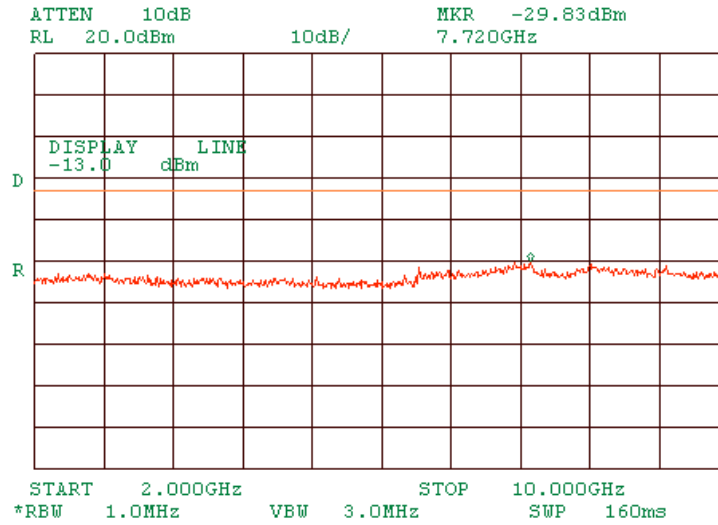
### Range 1929 – 1991 MHz. FM 1900



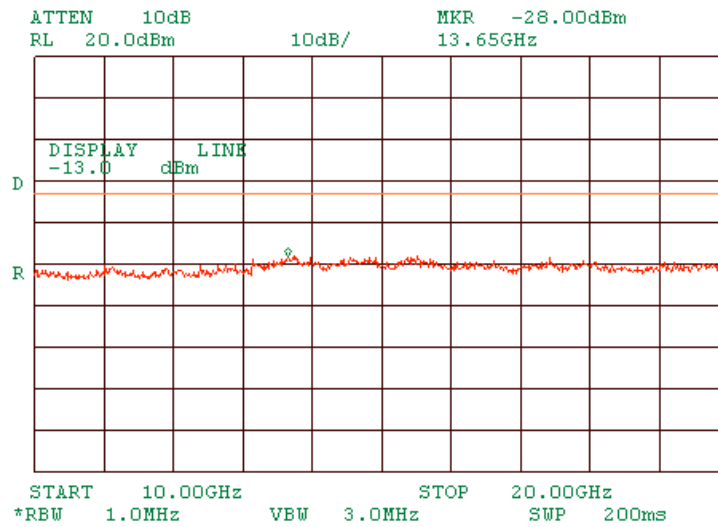
### Range 1991 – 2000 MHz. FM 1900



### Range 2000 – 10000 MHz. FM 1900



### Range 10000 – 20000 MHz. FM 1900

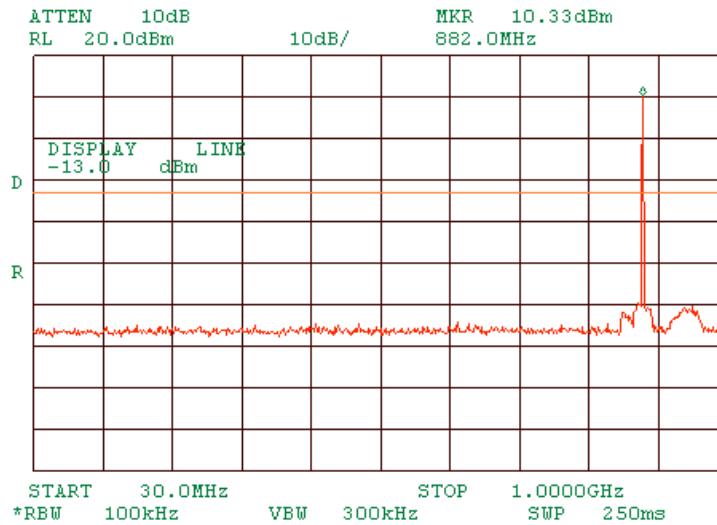


Date 28 July 2004  
Project 16021  
Test Intermod  
Operator Michael Lerman  
Test equipment 2524, 1424, 2399  
Temperature 24°C  
Humidity 37%  
Air pressure 1005 hPa  
EUT CELL 800 1900

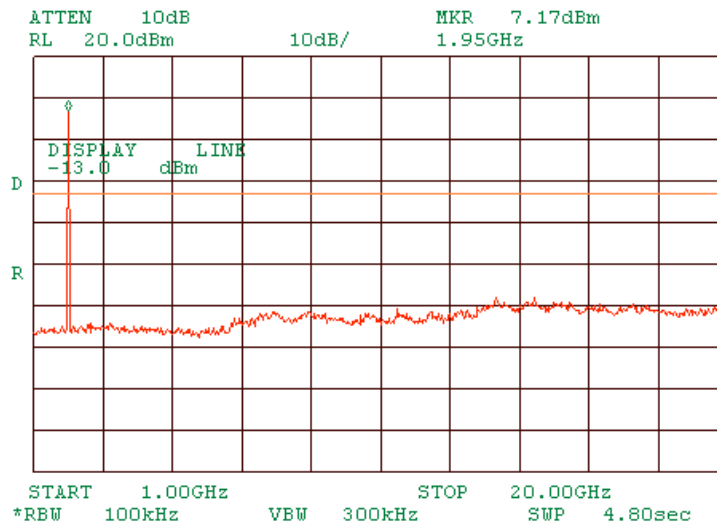
Band 869 - 894 MHz  
CW<sub>1</sub> = 881.5 MHz

Band 1930 - 1990 MHz  
CW<sub>2</sub> = 1960 MHz

### Range 30 – 1000 MHz.



### Range 1000 – 20000 MHz.



Test	Intermodes
Operator	Michael Lerman
Test equipment	2524, 1424, 2399
Temperature	24°C
Humidity	37%
Air pressure	1005 hPa
EUT	iDEN 1900

Band 851 – 866 MHz

FM<sub>1</sub> = 851.0125 MHz

FM<sub>2</sub> = 851.0150 MHz

FM<sub>3</sub> = 865.9875 MHz

Band 1930 – 1990 MHz

FM<sub>1</sub> = 1930.0125 MHz

FM<sub>2</sub> = 1930.0150 MHz

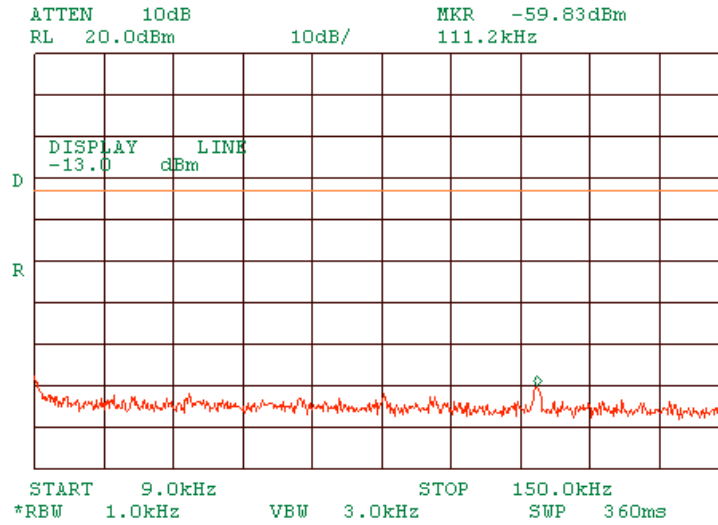
FM<sub>3</sub> = 1989.9875 MHz

CDMA<sub>1</sub> = 1931.250 MHz

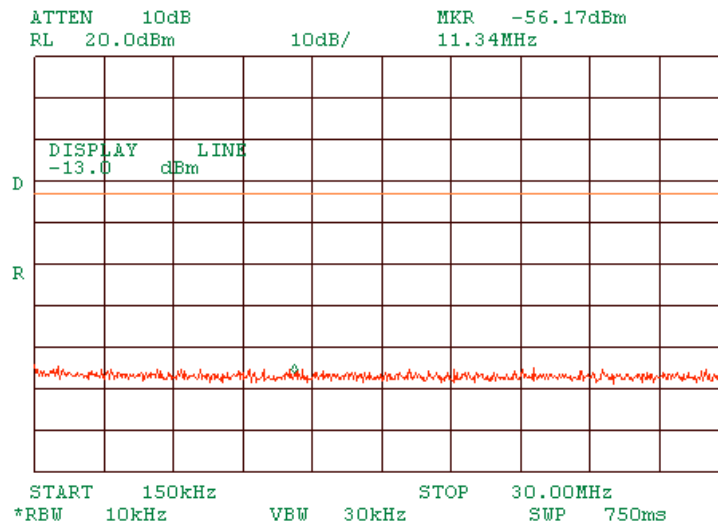
CDMA<sub>2</sub> = 1932.500 MHz

CDMA<sub>3</sub> = 1988.750 MHz

### Range 9 – 150 kHz. FM 800

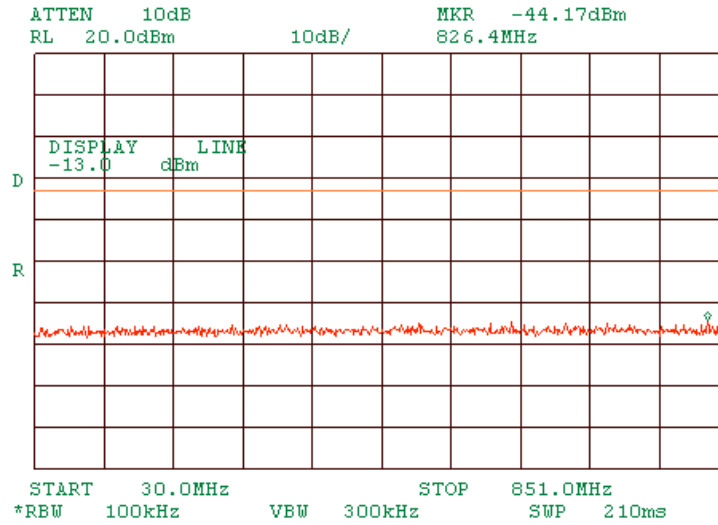


### Range 0.150 – 30 MHz. FM 800

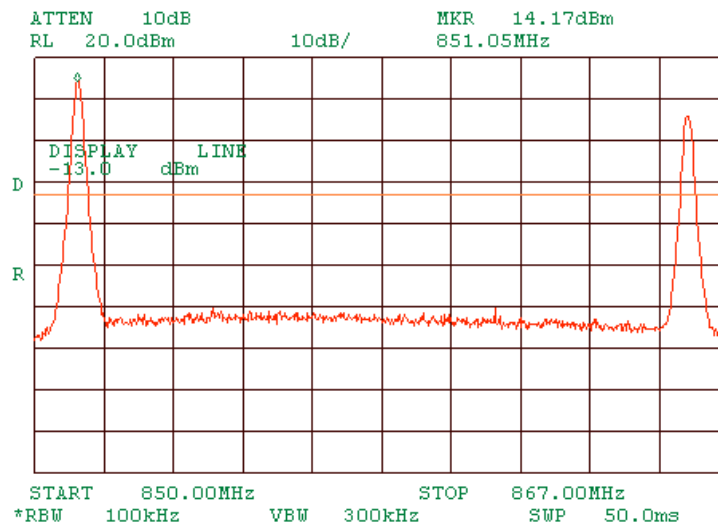




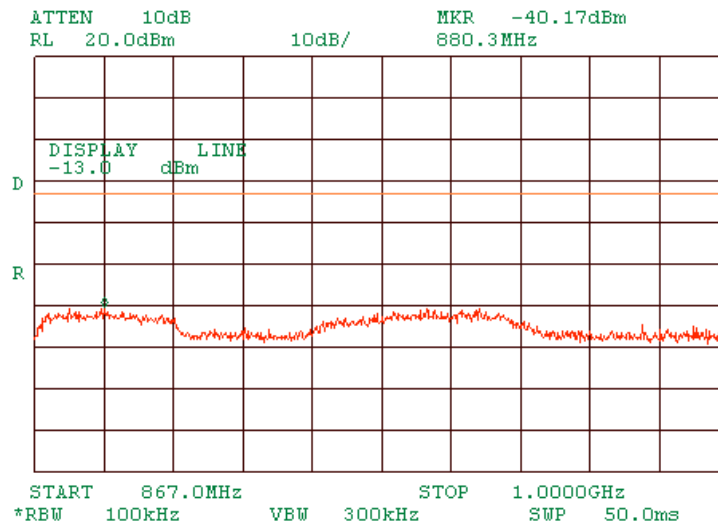
### Range 30 – 850 MHz. FM



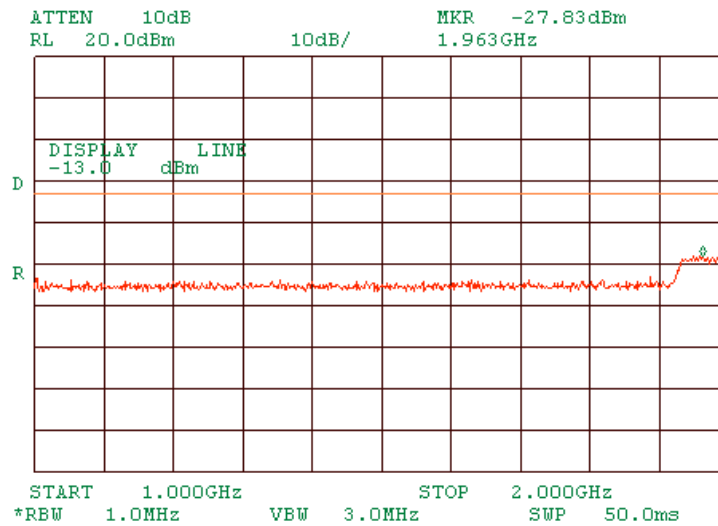
### Range 850 – 867 MHz. FM 800



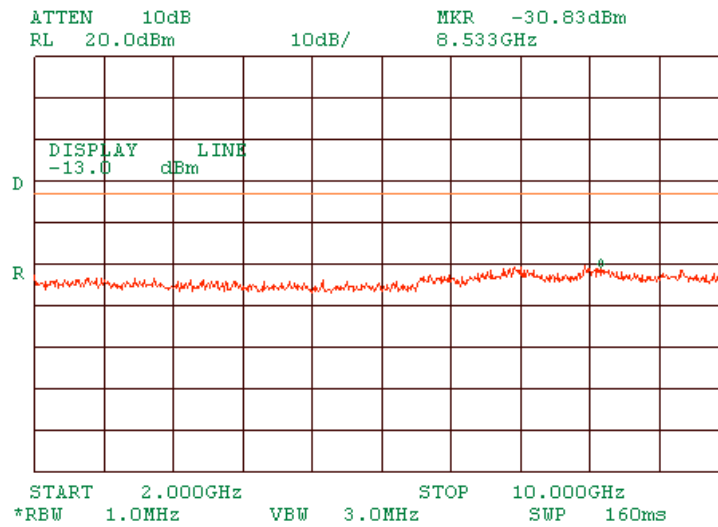
### Range 867 – 1000 MHz. FM 800



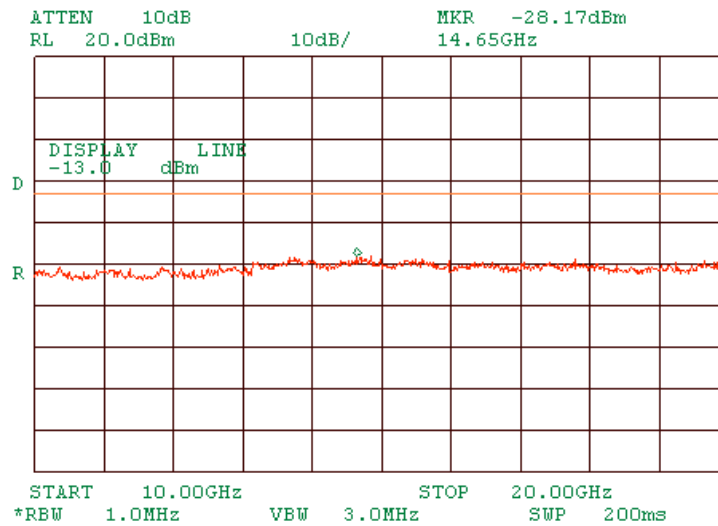
### Range 1000 – 2000 MHz. FM 800



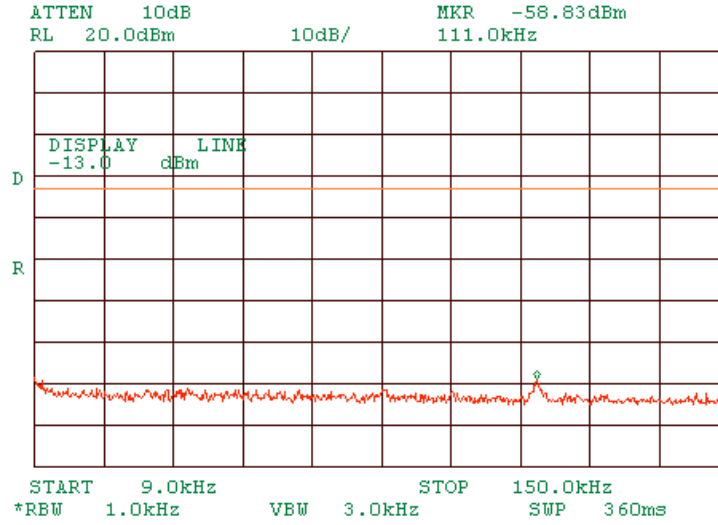
### Range 2000 – 10000 MHz. FM 800



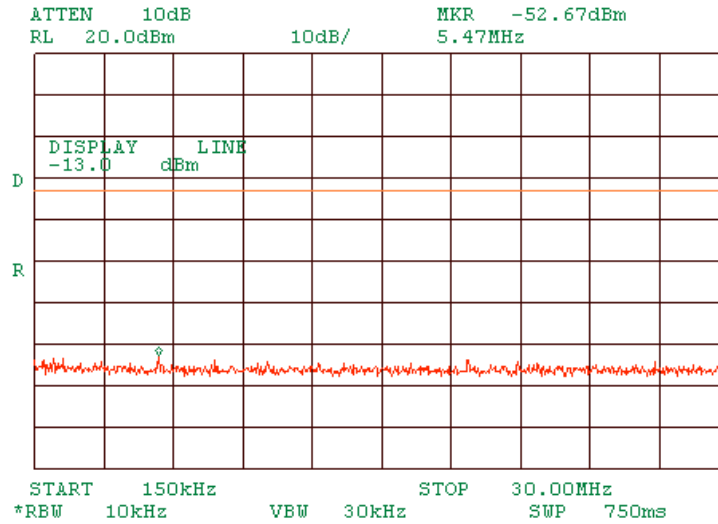
### Range 10000 – 20000 MHz. FM 800



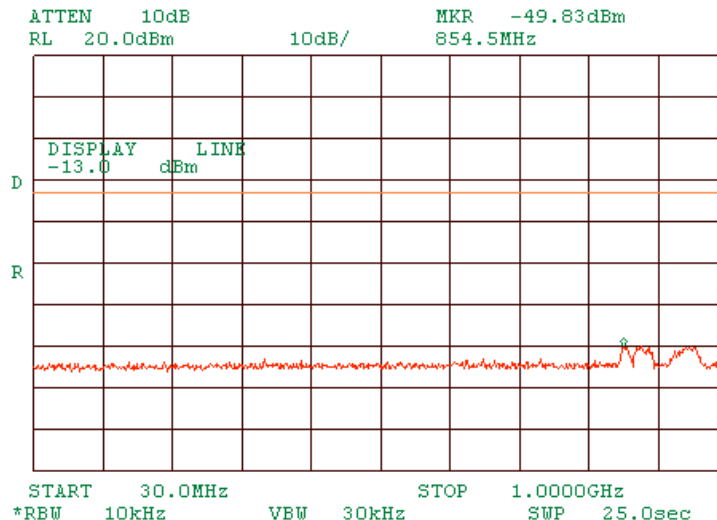
### Range 9 – 150 kHz. CDMA 1900



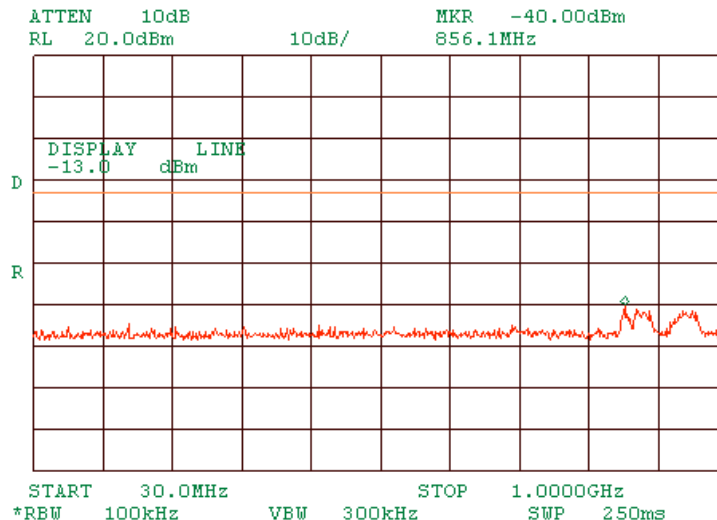
### Range 0.150 – 30 MHz. CDMA 1900



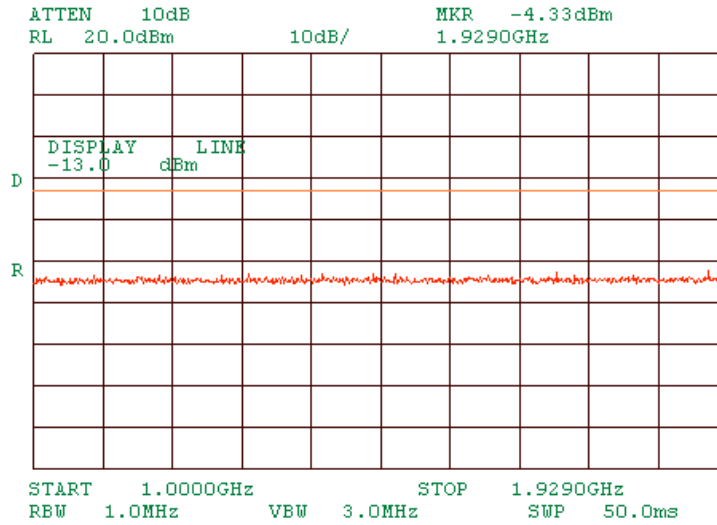
### Range 30 – 1000 MHz. CDMA 1900



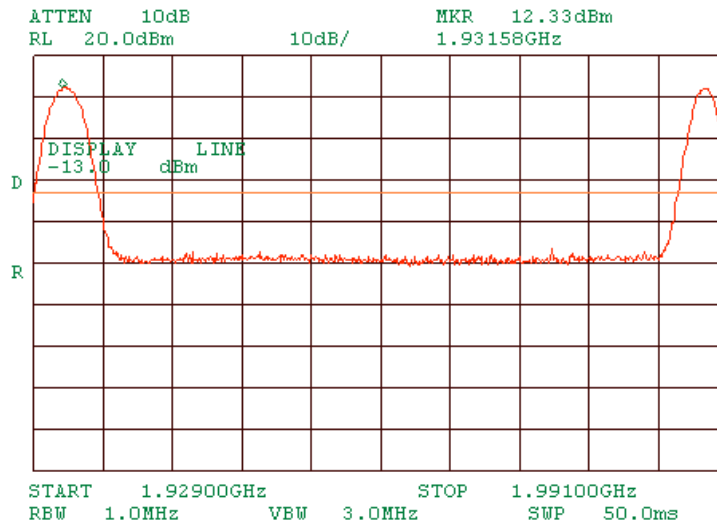
### Range 1000 – 1930 MHz. CDMA 1900



### Range 1000 – 1929 MHz. CDMA 1900

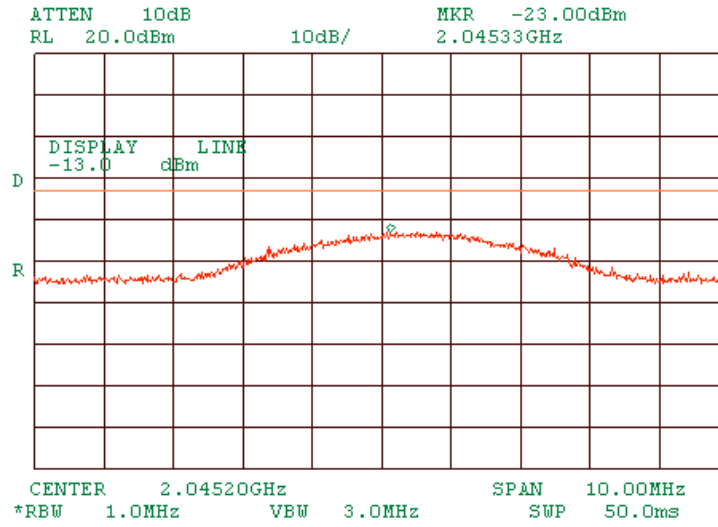


### Range 1929 – 1991 MHz. CDMA 1900



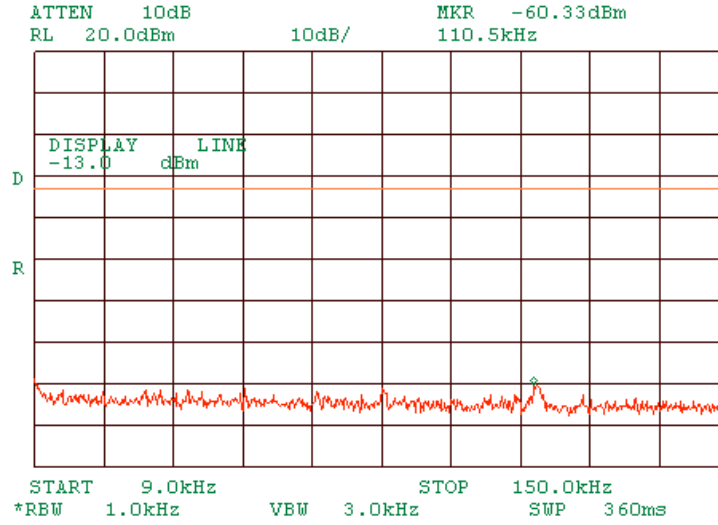


### Spurious at 2040 MHz. CDMA 1900

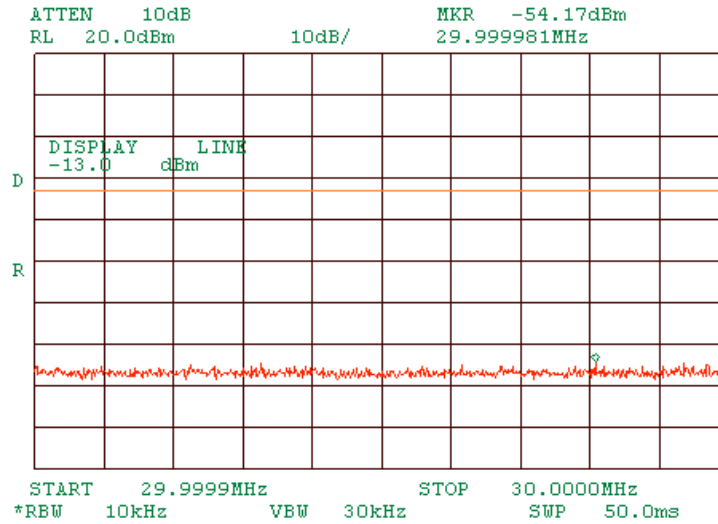




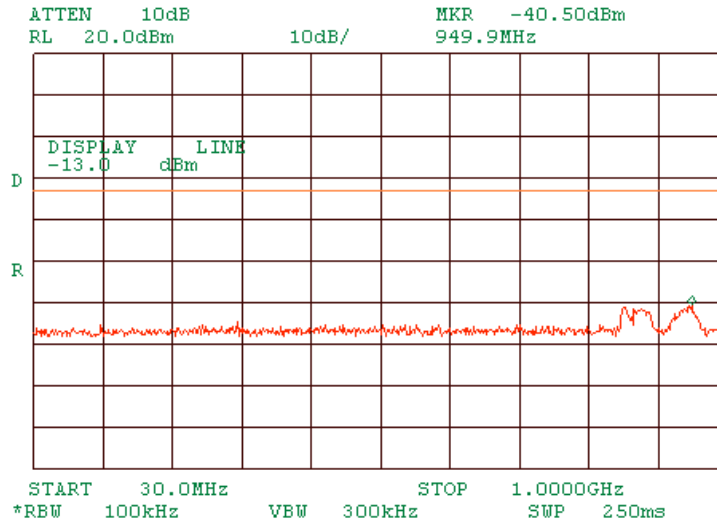
### Range 9 – 150 kHz. FM 1900



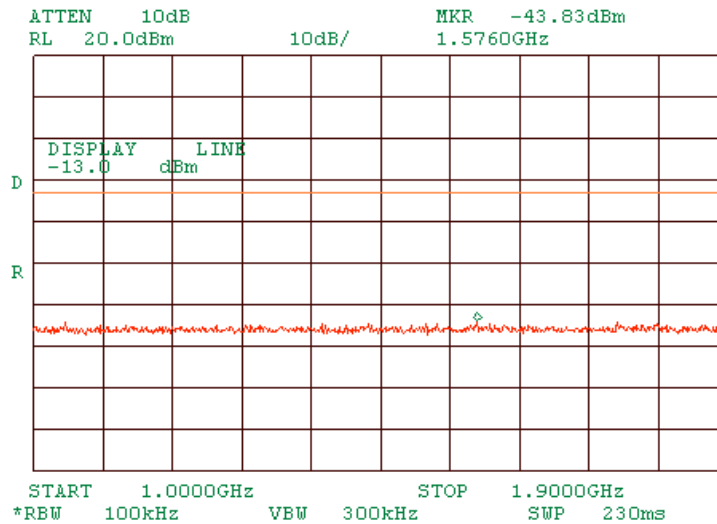
### Range 0.150 – 30 MHz. FM 1900



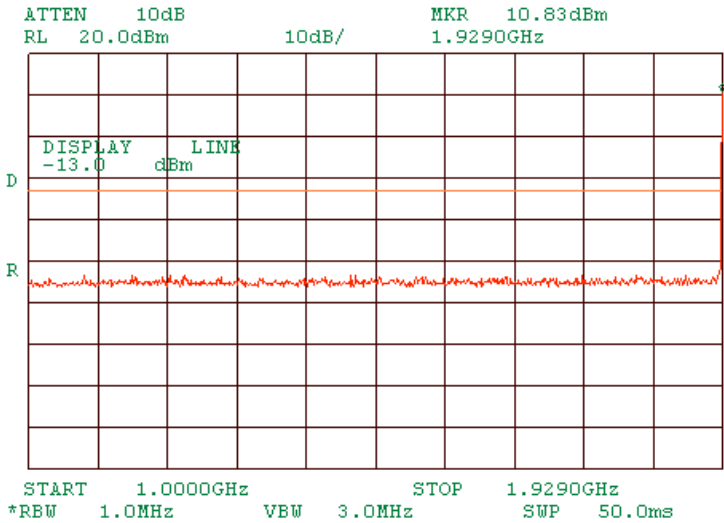
### Range 30 – 1000 MHz. FM 1900



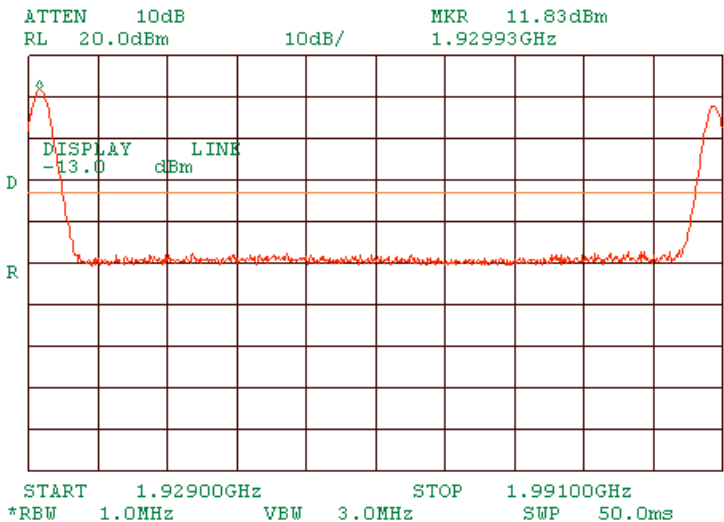
### Range 1000 – 1930 MHz. FM 1900



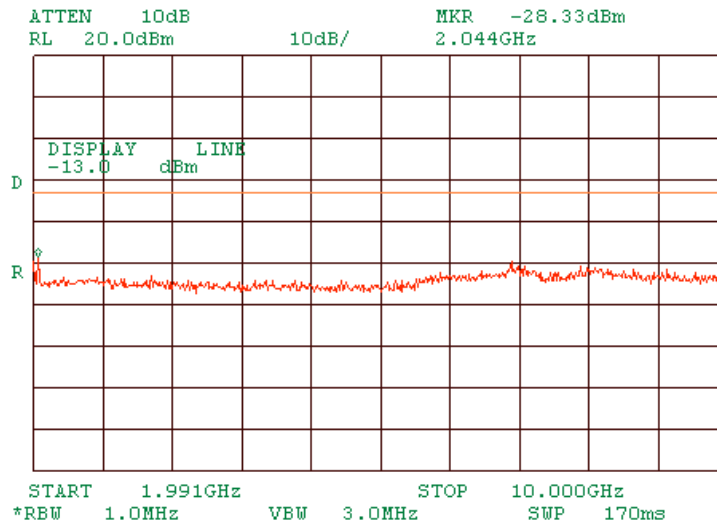
### Range 1000 – 1929 MHz. FM 1900



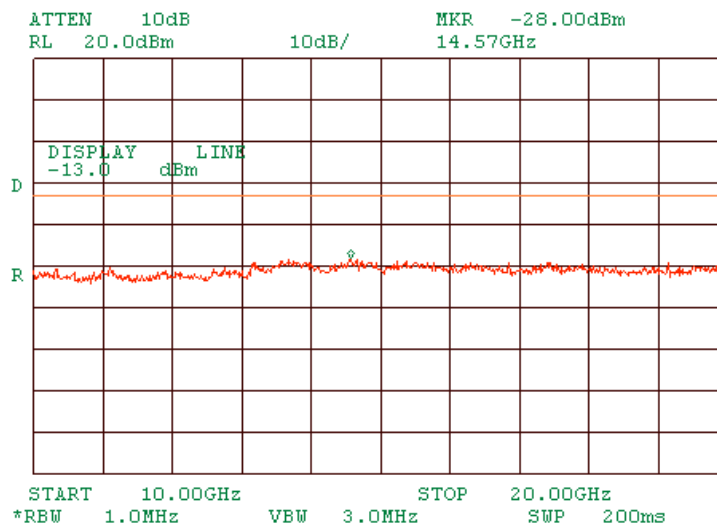
### Range 1929 – 1991 MHz. FM 1900



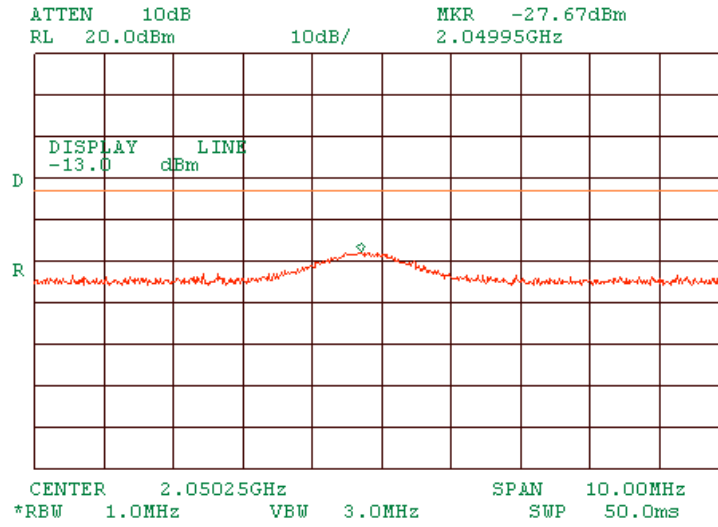
### Range 1991 – 10000 MHz. FM 1900



### Range 10000 – 20000 MHz. FM 1900

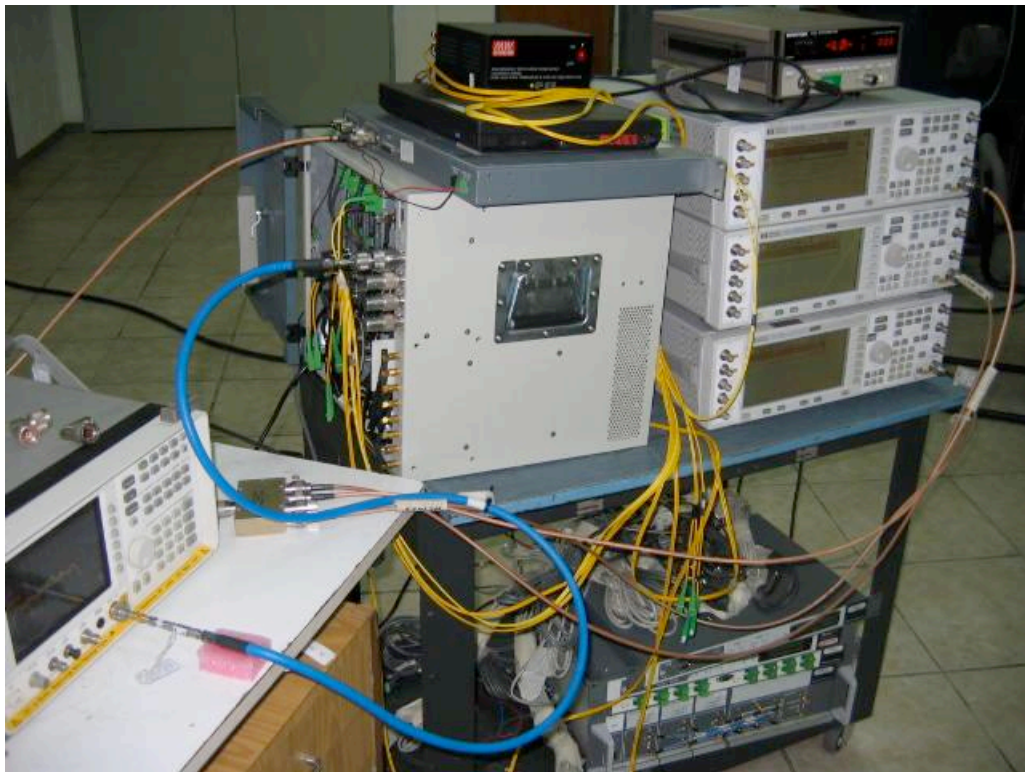


### Spurious at 2040 MHz. FM 1900

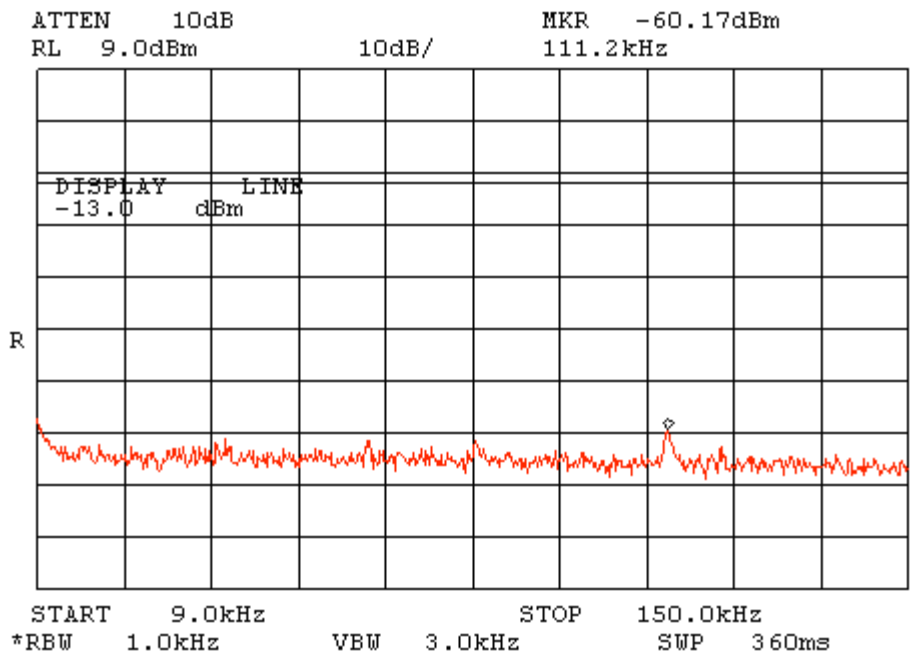


Date	02 Aug 2004
Project	16021
Test	Intermodes
Operator	Alex Kruglov
Test equipment	1424, 2399, 2524, 1651, 789, 316, 460
Temperature	25°C
Humidity	39%
Air pressure	1006 hPa
EUT	iDEN 1900

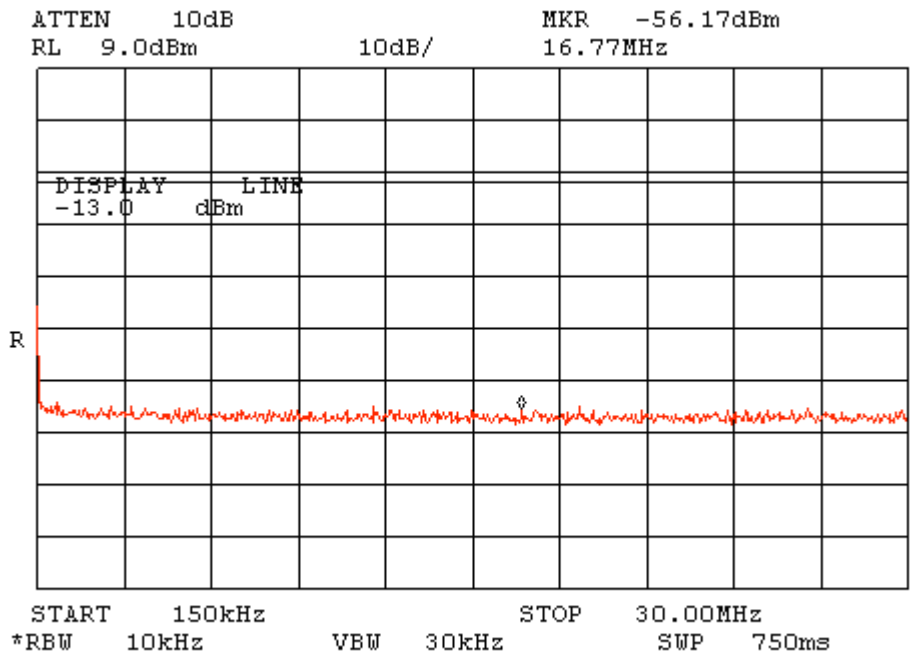
$F_1=851.025$  MHz 16QAM  
 $F_2=851.050$  MHz 16QAM  
 $F_3=851.050$  MHz CW



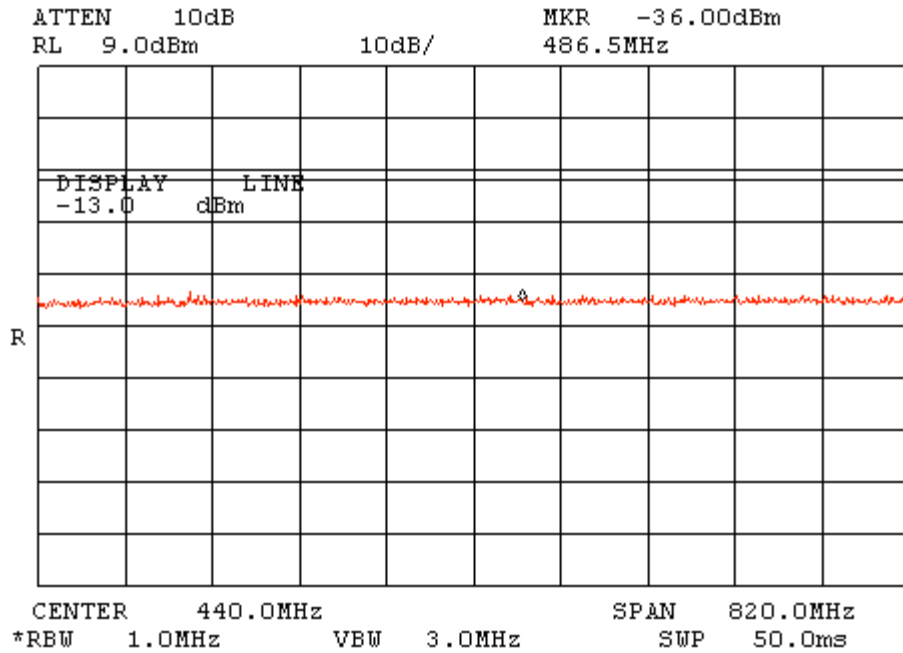
### Range 9 – 150 kHz. 16QAM



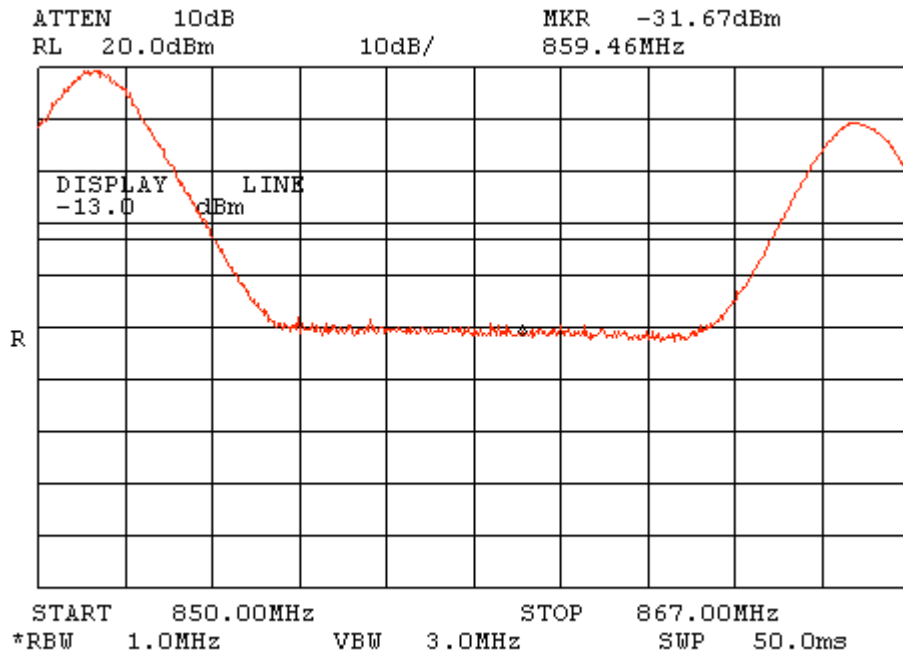
### Range 0.150 – 30 MHz. 16QAM



### Range 30 – 850MHz. 16QAM

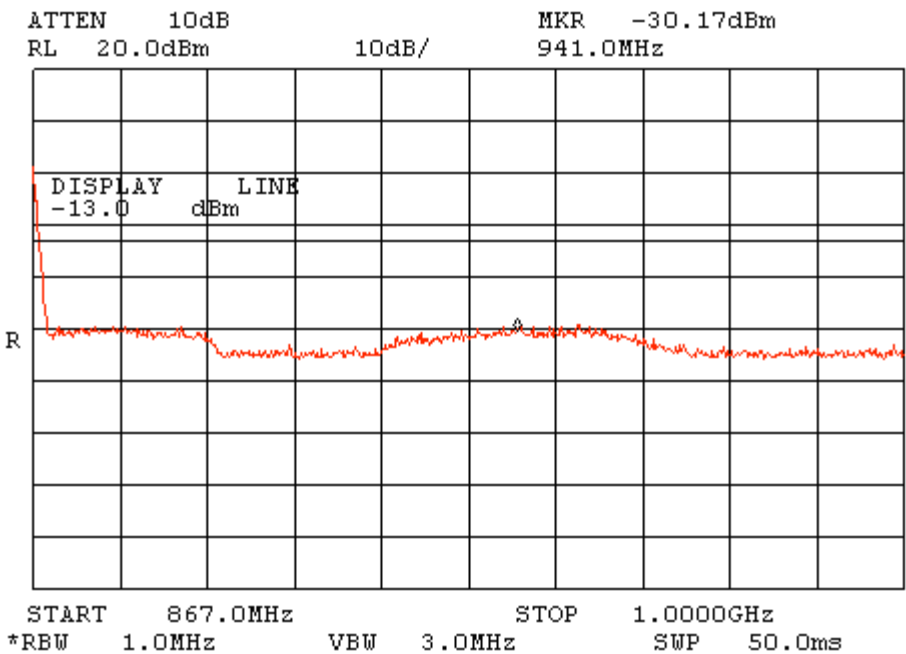


### Range 850 – 867 MHz. 16QAM

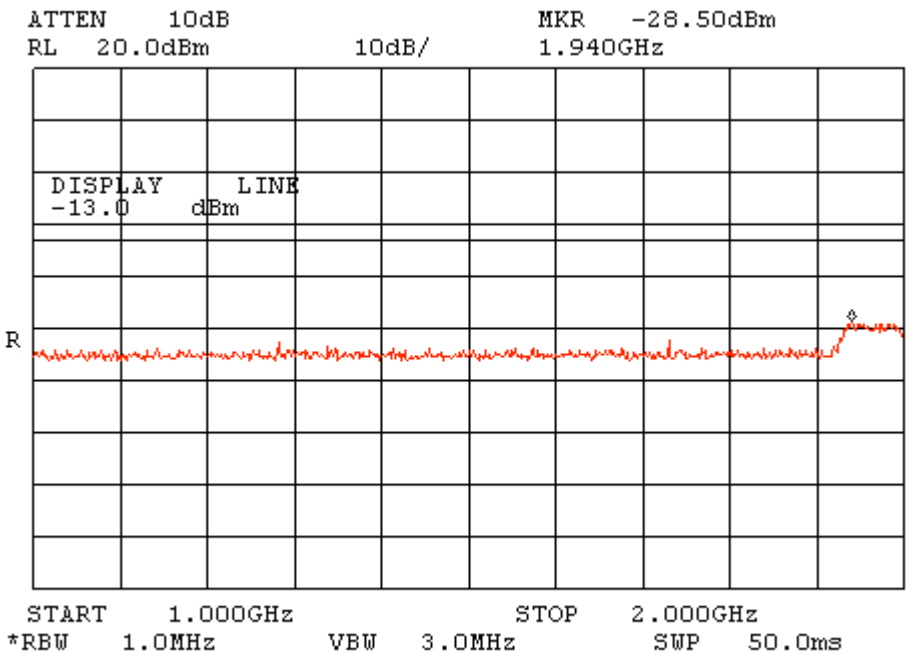




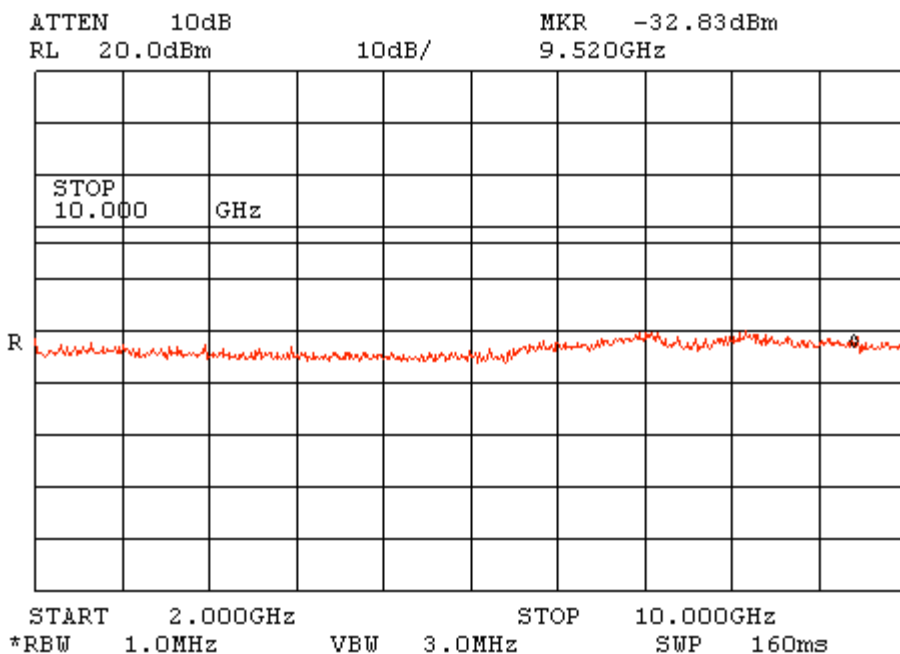
### Range 867 – 1000 MHz 16QAM



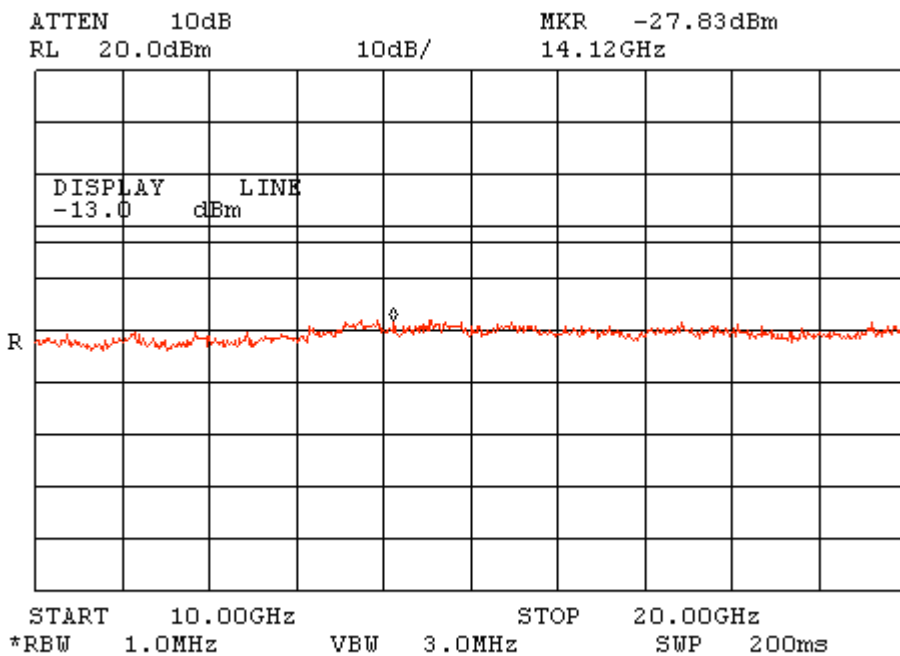
### Range 1000 – 2000 MHz 16QAM



### Range 2000 – 10000 MHz 16QAM



### Range 10000 – 20000 MHz 16QAM



Date 02 Aug 2004  
Project 16021  
Test Intermodos.  
Operator Alex Kruglov  
Test equipment 1424, 2399, 2524, 1651, 789, 316, 460  
Temperature 25°C  
Humidity 39%  
Air pressure 1006 hPa  
EUT Mobile Access CELL-PCS  
Notes: At 1.5 dBm input power (CW);  
At output connector with maximum power level.

Band 869 - 894 MHz:

$FM_1 = 869.015 \text{ MHz (12.5 kHz/1kHz)}$   
 $FM_2 = 869.0375 \text{ MHz (12.5 kHz/1kHz)}$   
 $FM_3 = 893.985 \text{ MHz (12.5 kHz/1kHz)}$

$TDMA_1 = 869.015 \text{ MHz}$   
 $TDMA_2 = 870.045 \text{ MHz}$   
 $CW_3 = 893.985 \text{ MHz}$

$CDMA_1 = 869.625 \text{ MHz}$   
 $CDMA_2 = 870.875 \text{ MHz}$   
 $CDMA_3 = 893.375 \text{ MHz}$

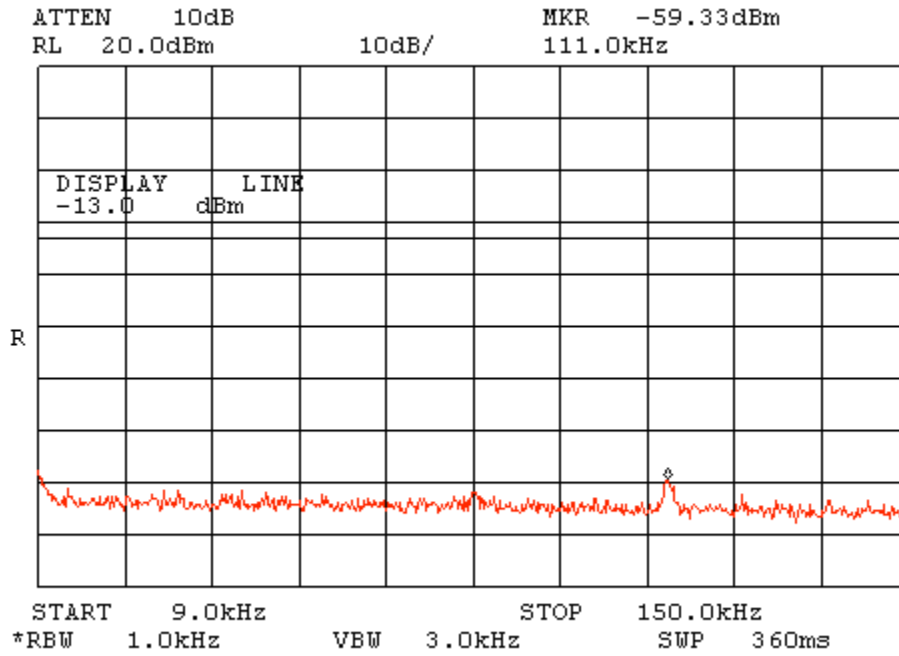
Band 1930 – 1990 MHz:

$TDMA_1 = 1930.015 \text{ MHz}$   
 $TDMA_2 = 1930.045 \text{ MHz}$   
 $CW_3 = 1989.975 \text{ MHz}$

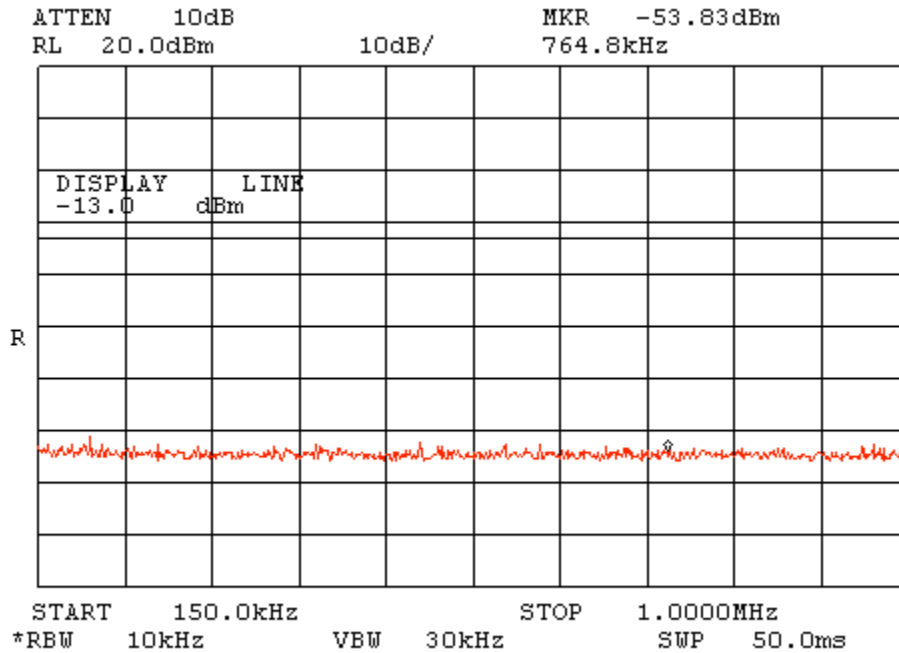
$GSM_1 = 1930.2 \text{ MHz}$   
 $GSM_2 = 1930.4 \text{ MHz}$   
 $CW_3 = 1989.8 \text{ MHz}$



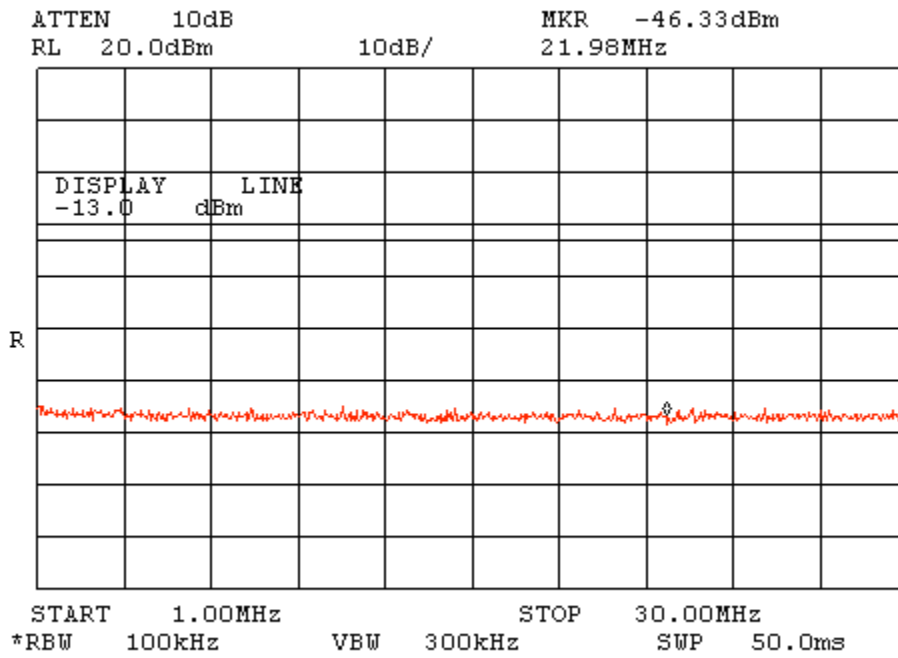
Range 9 – 150 kHz. AMPS 869-894



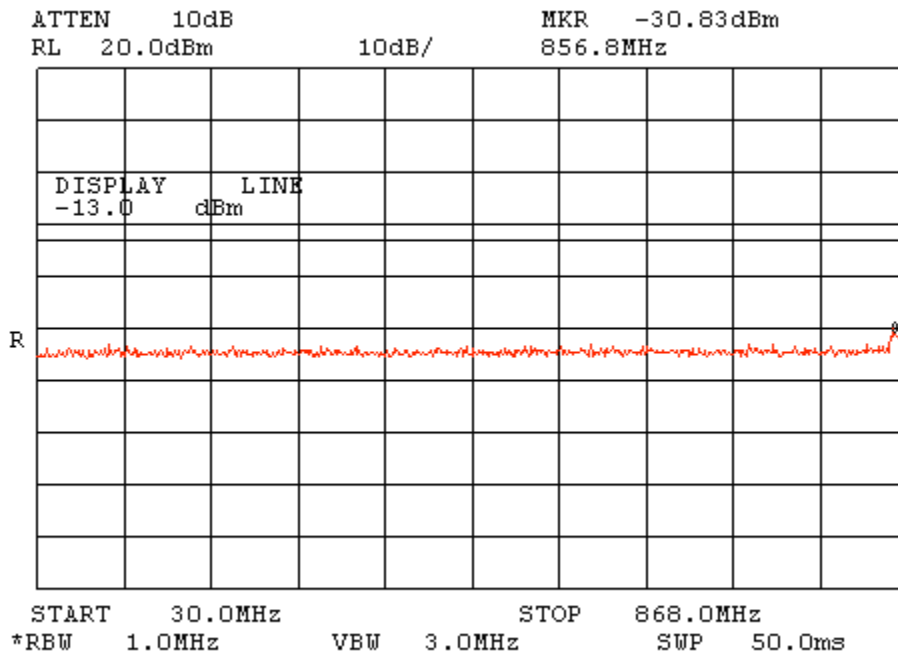
Range 0.150 – 1 MHz. AMPS 869-894



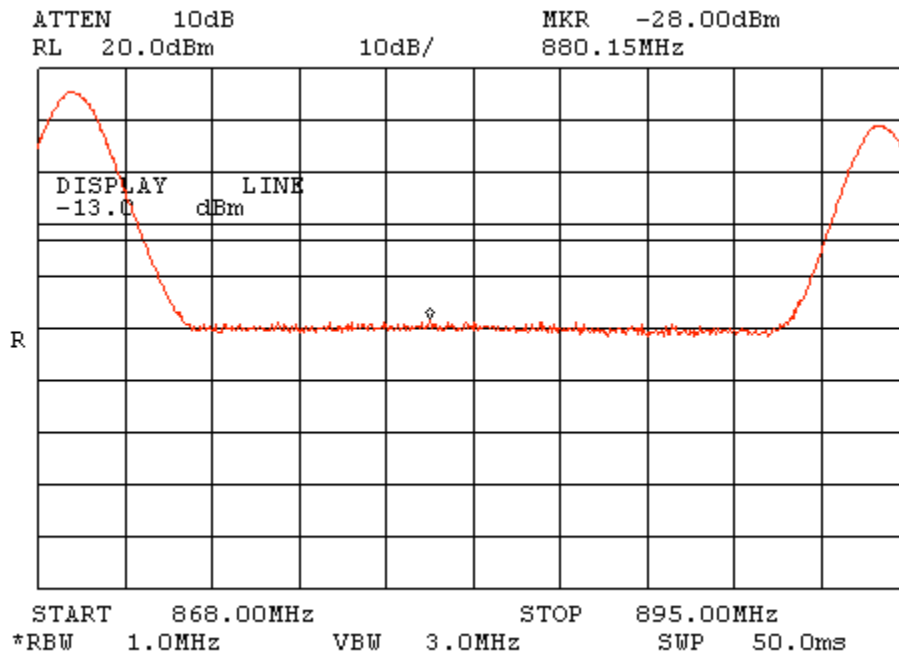
### Range 1 – 30 MHz. AMPS 869-894



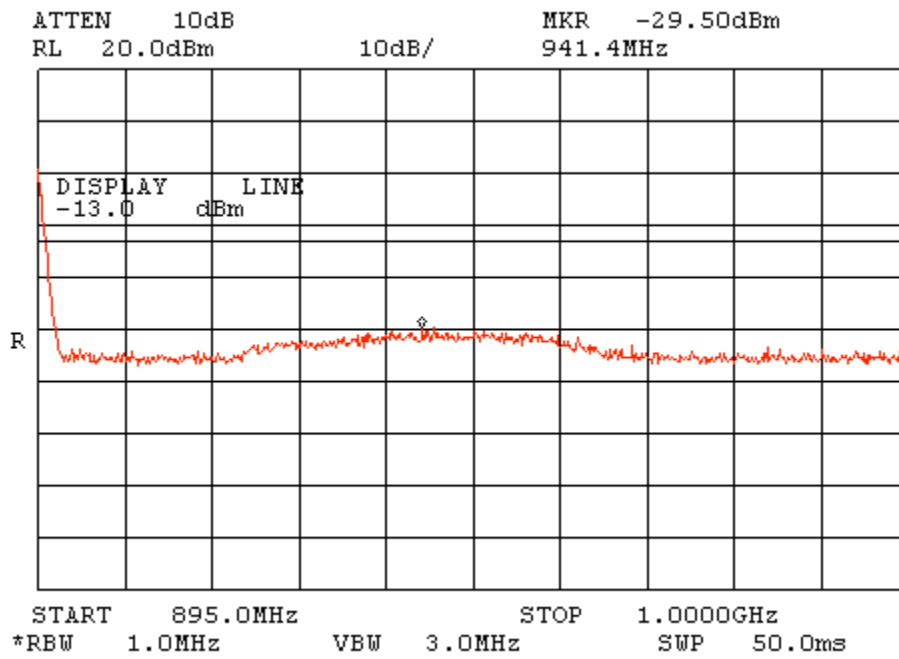
### Range 30 – 868 MHz. AMPS 869-894



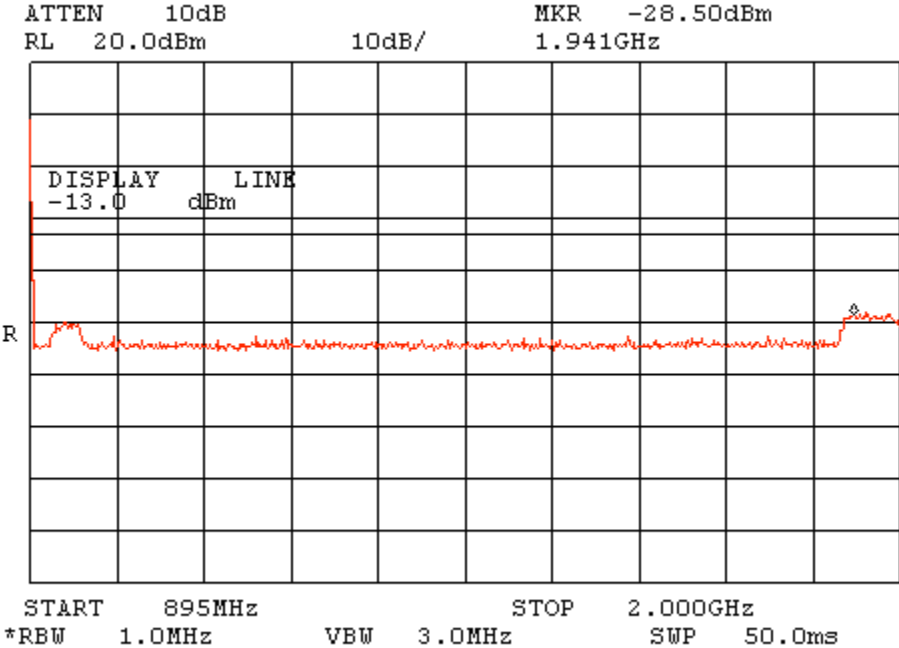
### Range 868 – 895 MHz. AMPS 869-894



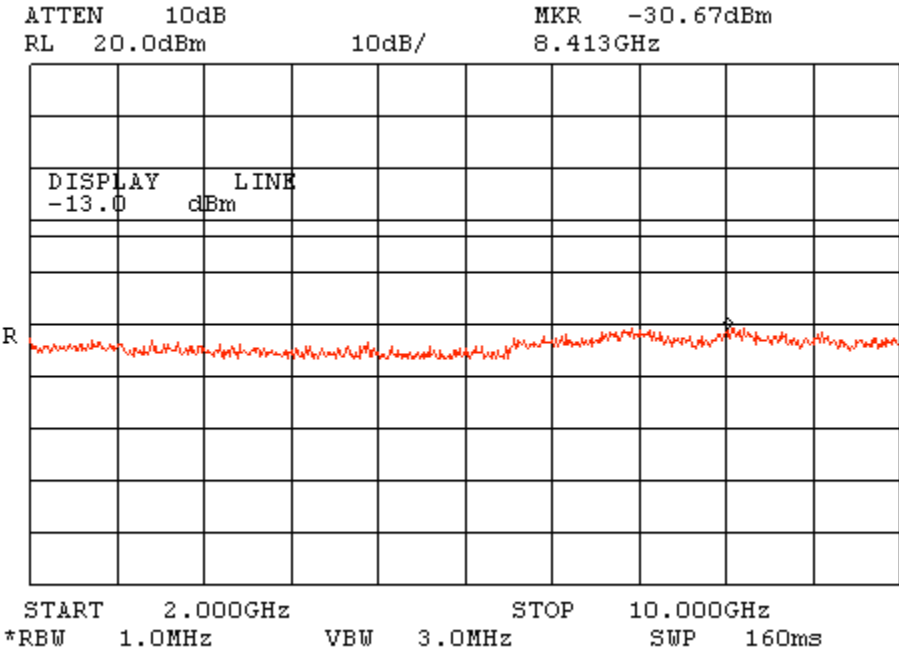
### Range 895 – 1000 MHz. AMPS 869-894



### Range 1000 – 2000 MHz. AMPS 869-894

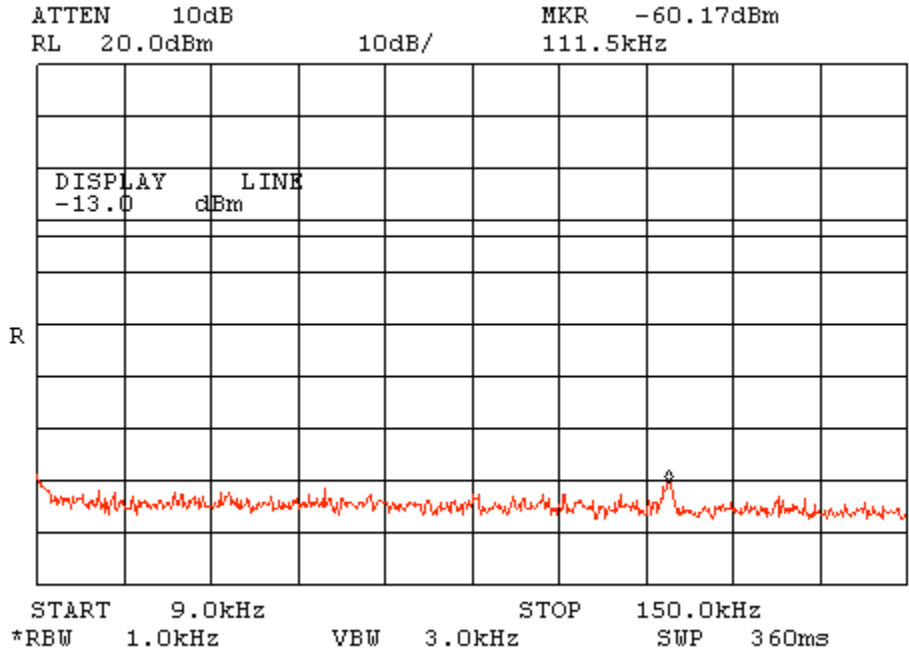


### Range 2000 – 10000 MHz. AMPS 869-894

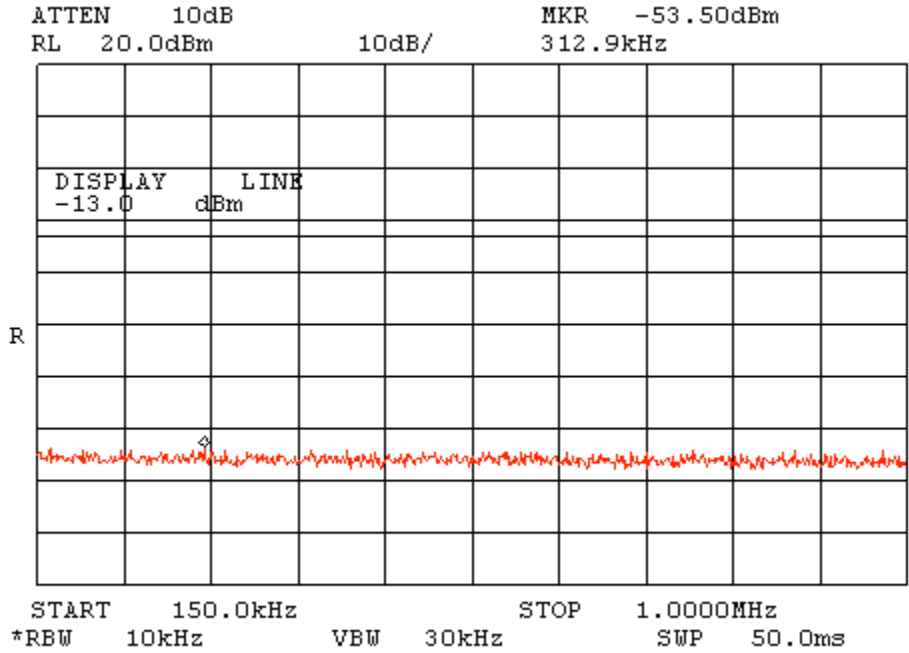




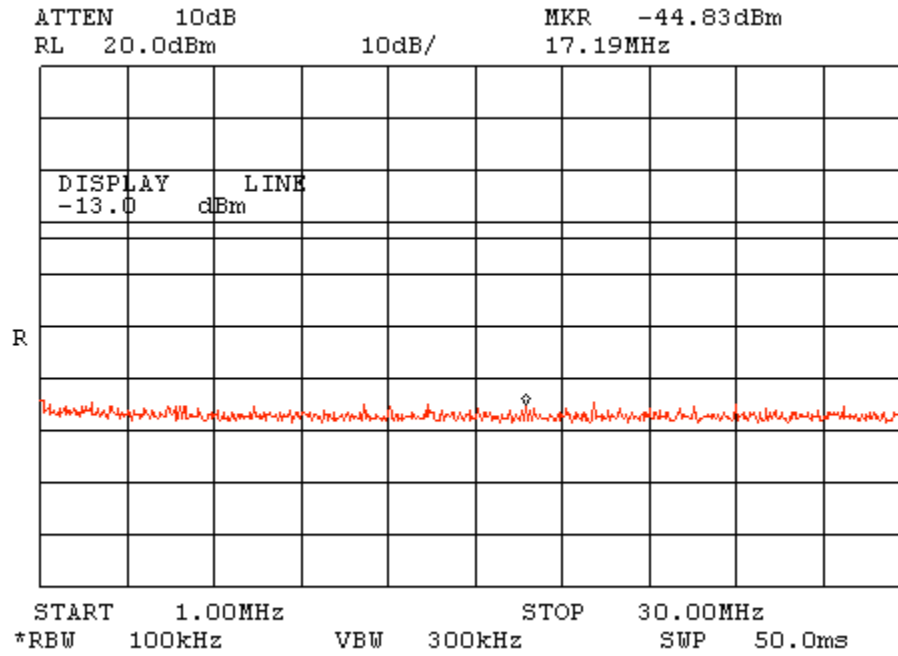
Range 9 – 150 kHz. TDMA 869-894



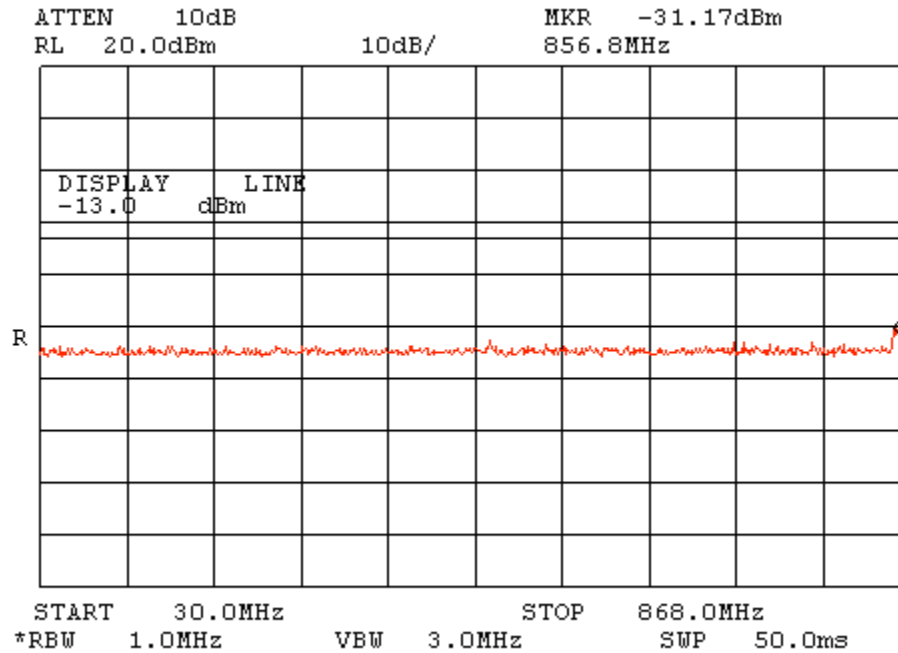
Range 0.150 – 1 MHz. TDMA 869-894



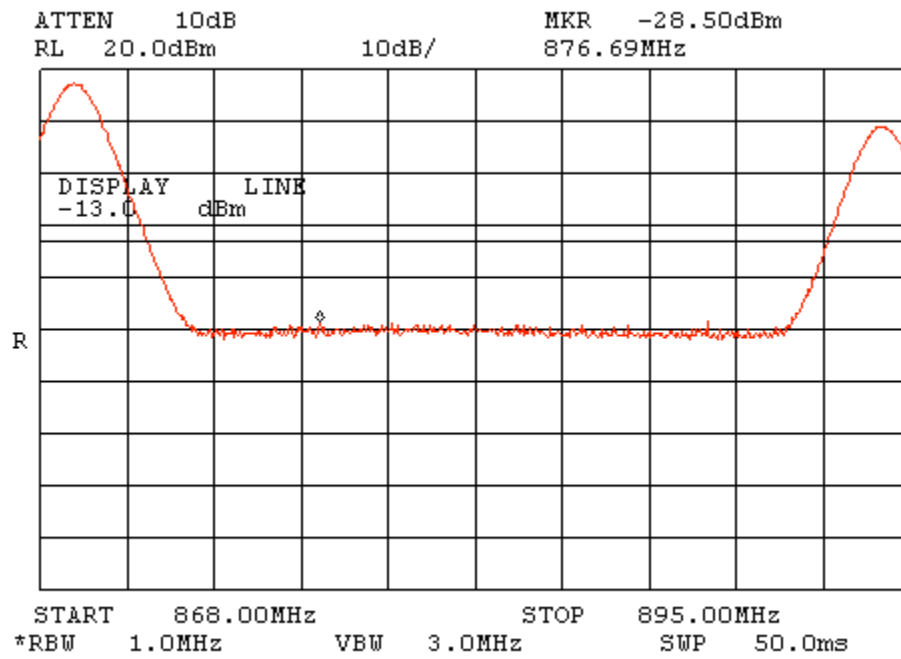
### Range 1 – 30 MHz. TDMA 869-894



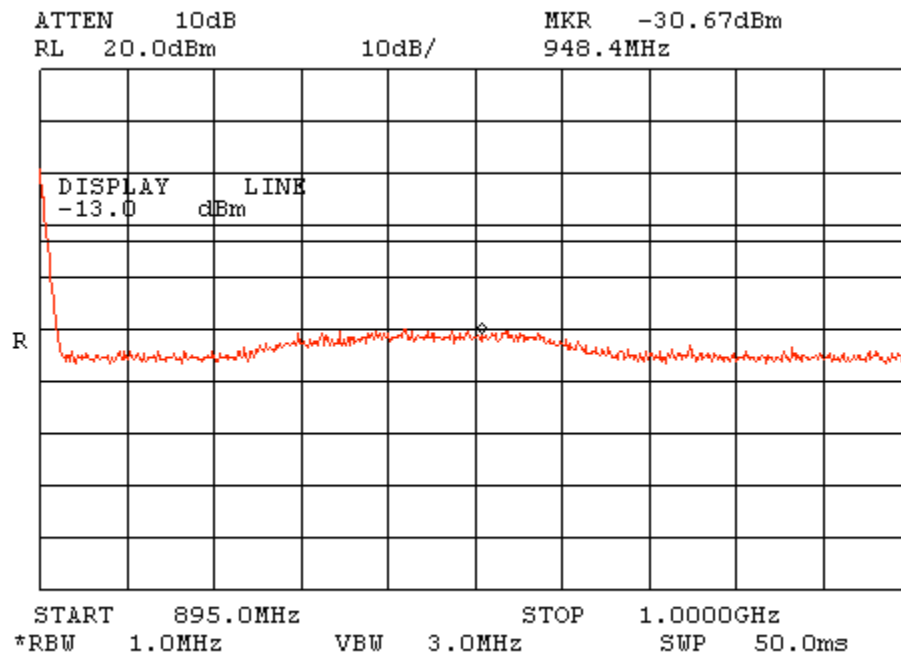
### Range 30 – 868 MHz. TDMA 869-894



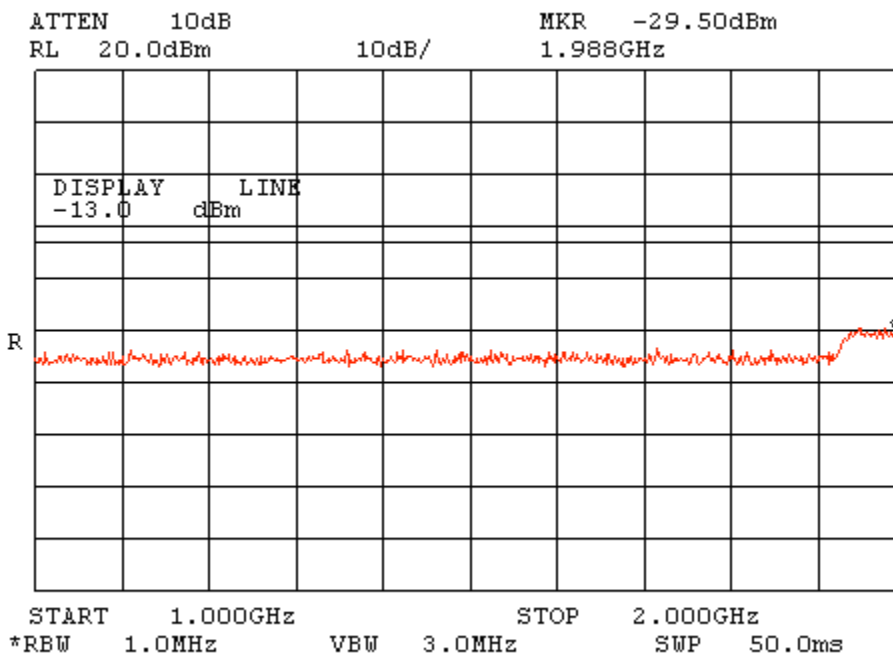
Range 868 – 895 MHz. TDMA 869-894



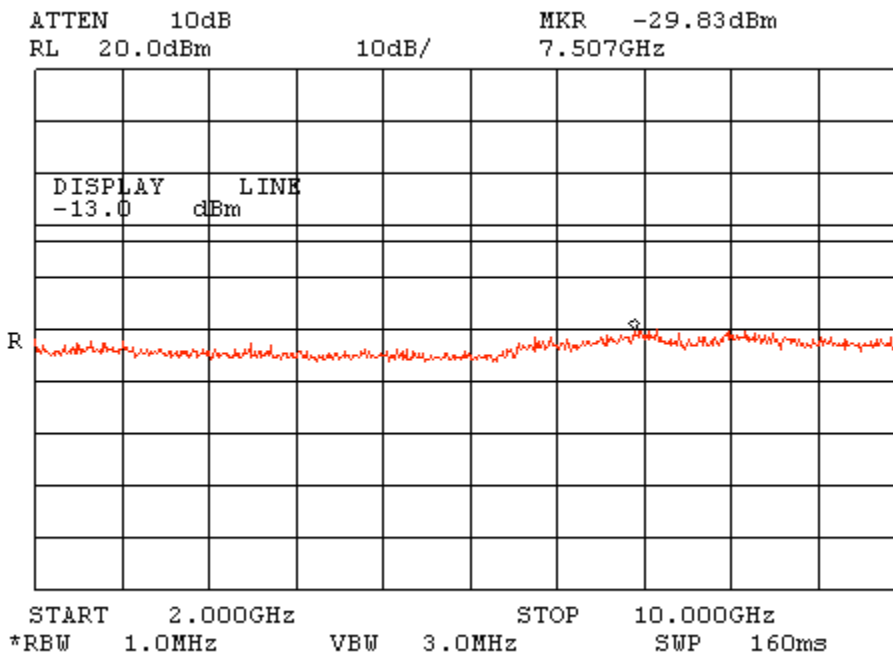
Range 895 – 1000 MHz. TDMA 869-894



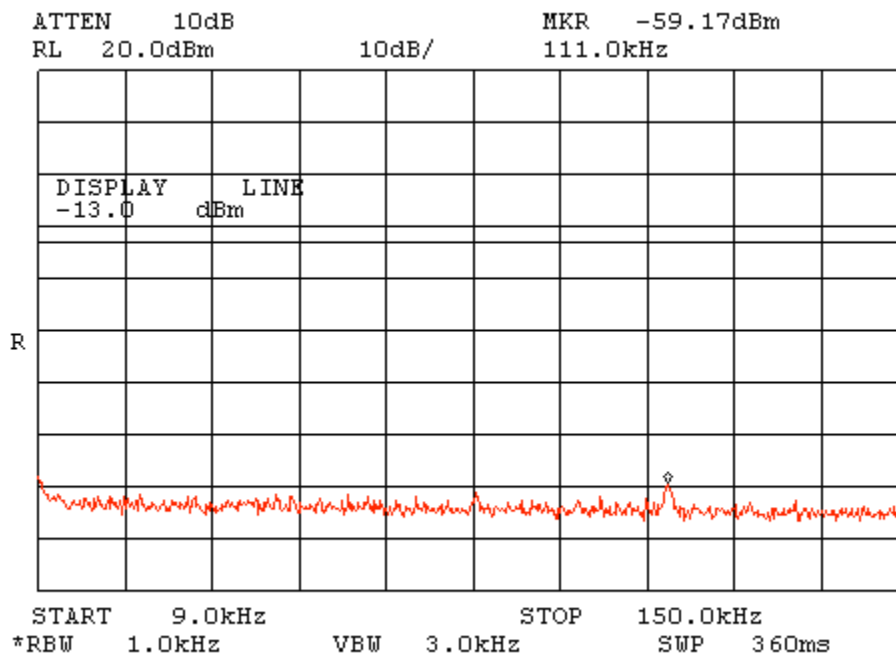
Range 1000 – 2000 MHz. TDMA 869-894



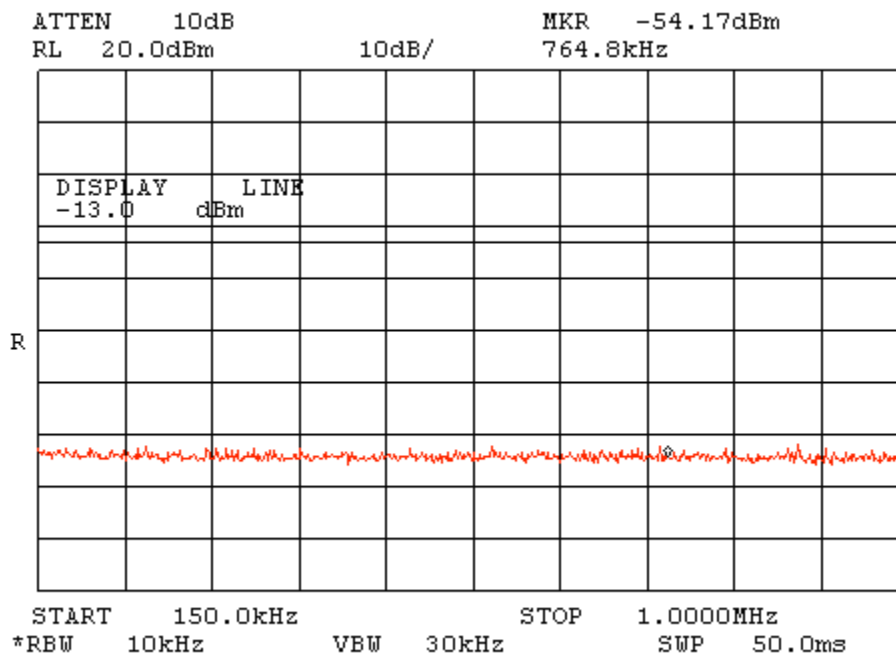
Range 2000 – 10000 MHz. TDMA 869-894



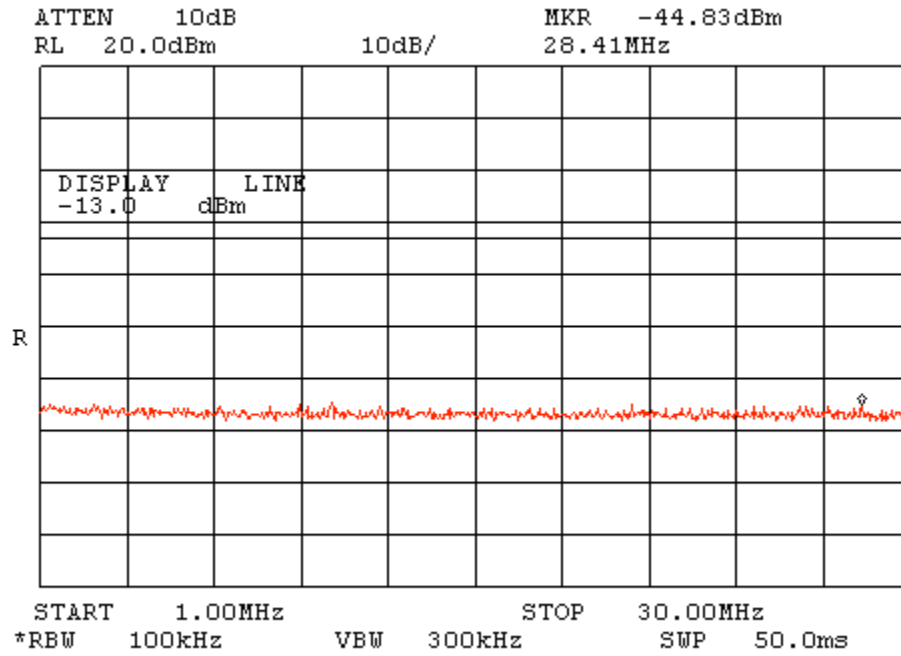
### Range 9 – 150 kHz. CDMA 869-894



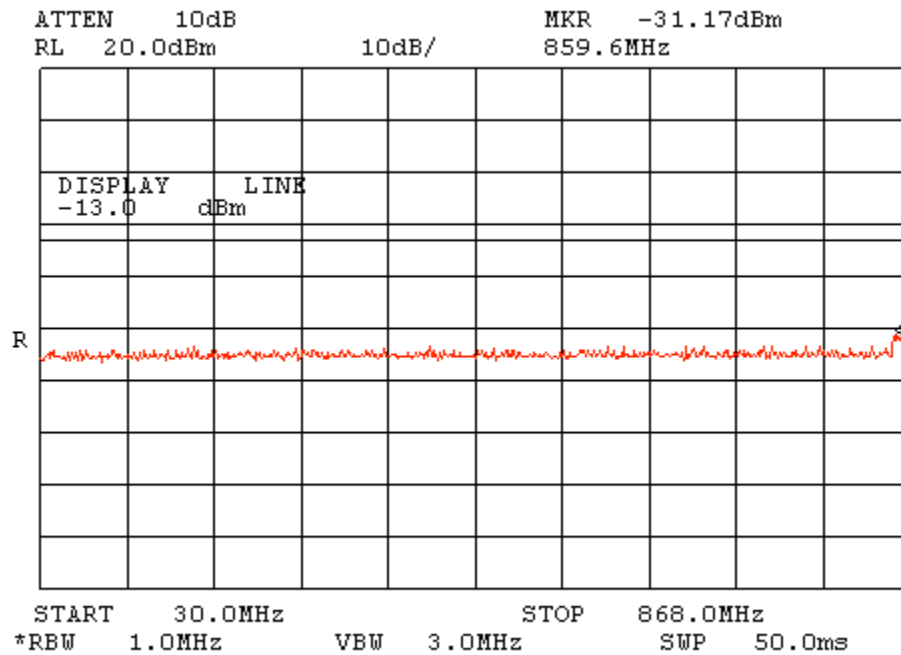
### Range 0.150 – 1 MHz. CDMA 869-894



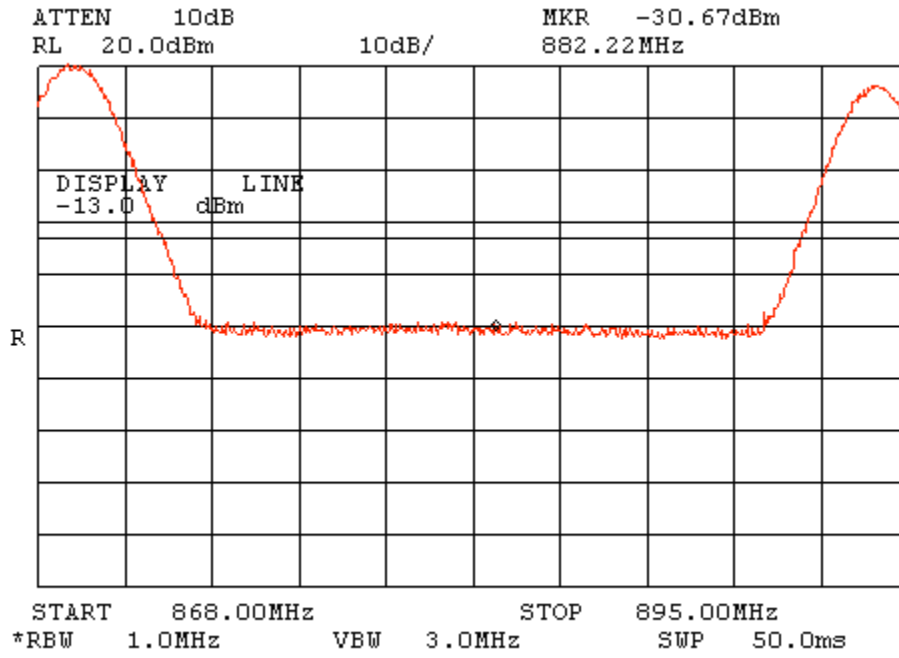
### Range 1 – 30 MHz. CDMA 869-894



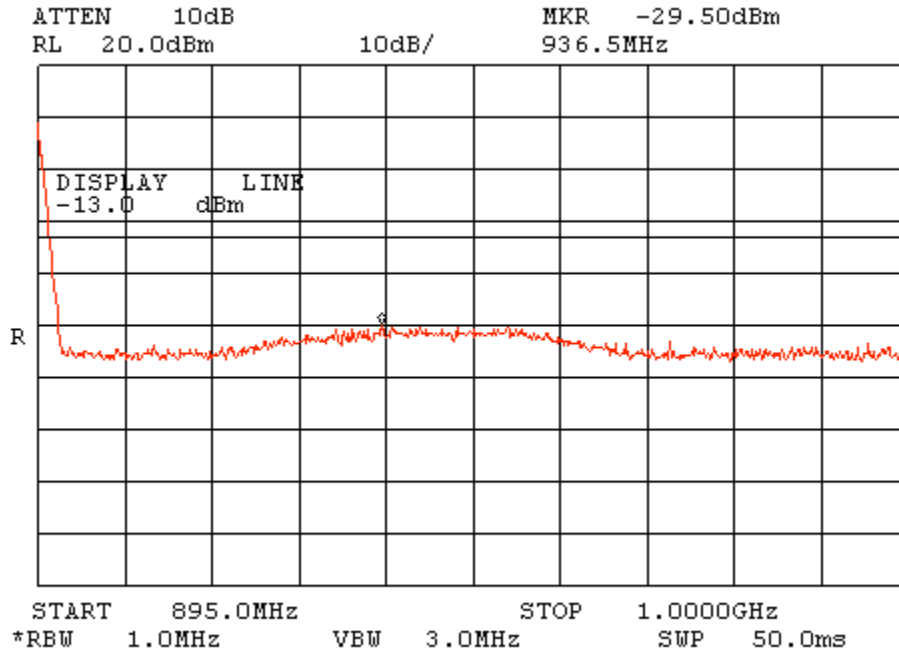
### Range 30 – 868 MHz. CDMA 869-894



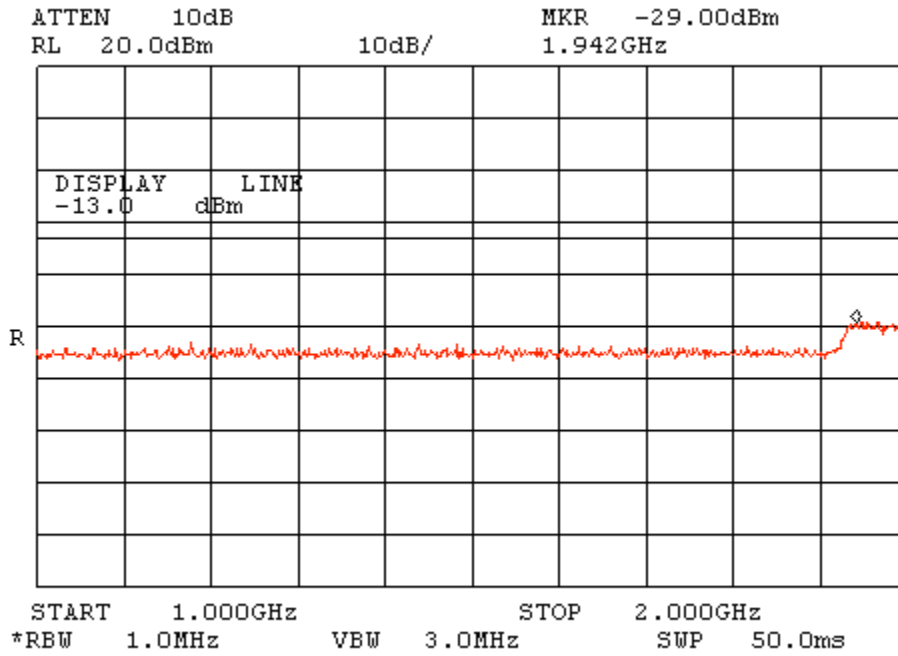
Range 868 – 895 MHz. CDMA 869-894



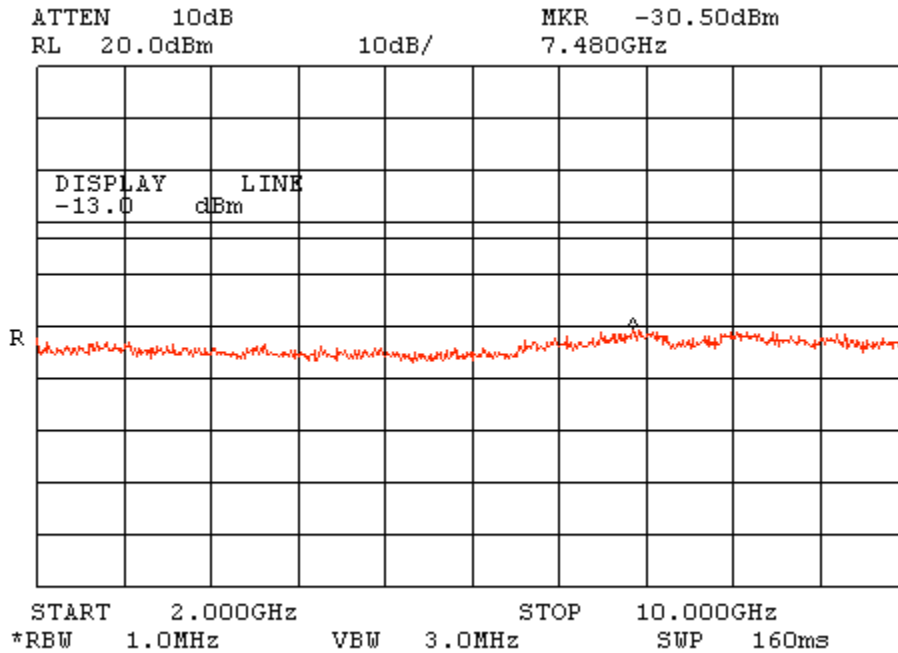
Range 895 – 1000 MHz. CDMA 869-894



### Range 1000 – 2000 MHz. CDMA 869-894

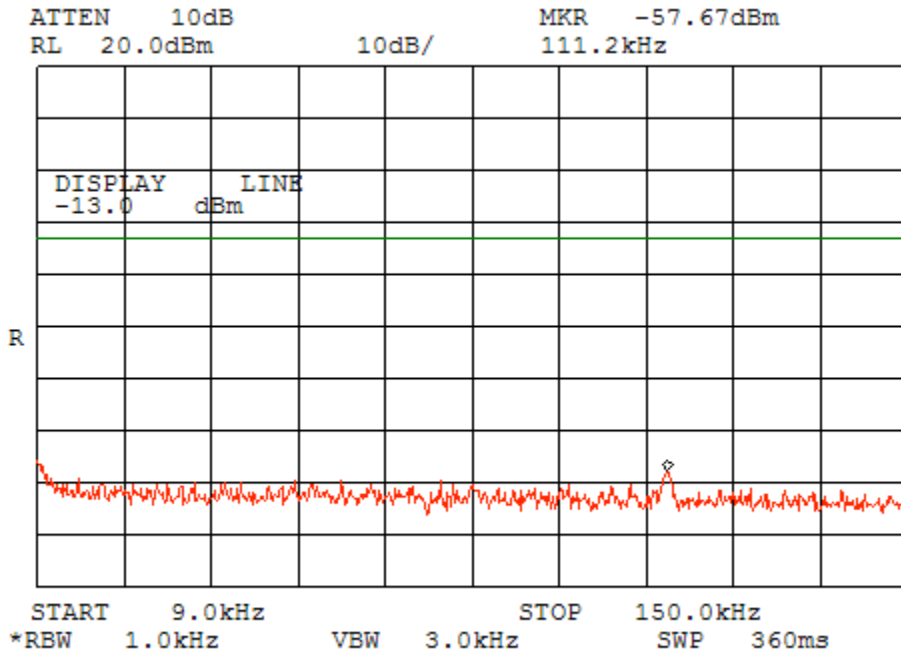


### Range 2000 – 10000 MHz. CDMA 869-894

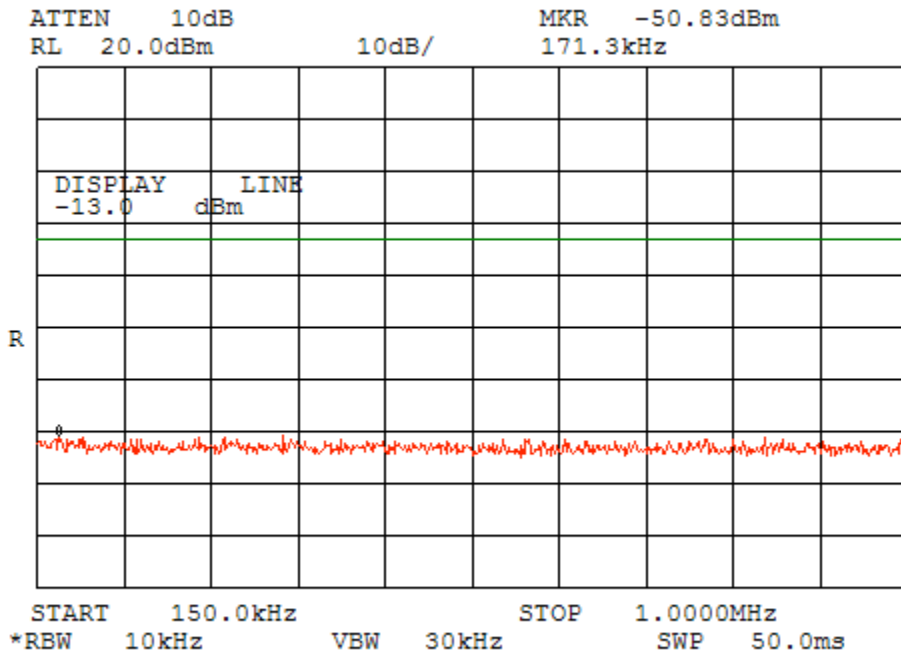




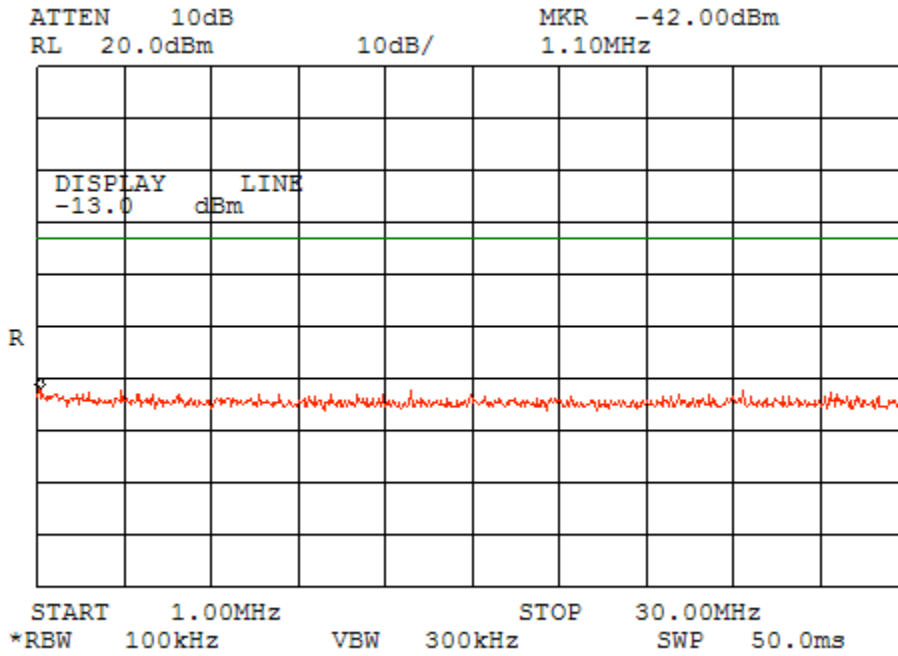
### Range 9 – 150 kHz. TDMA 1930-1990



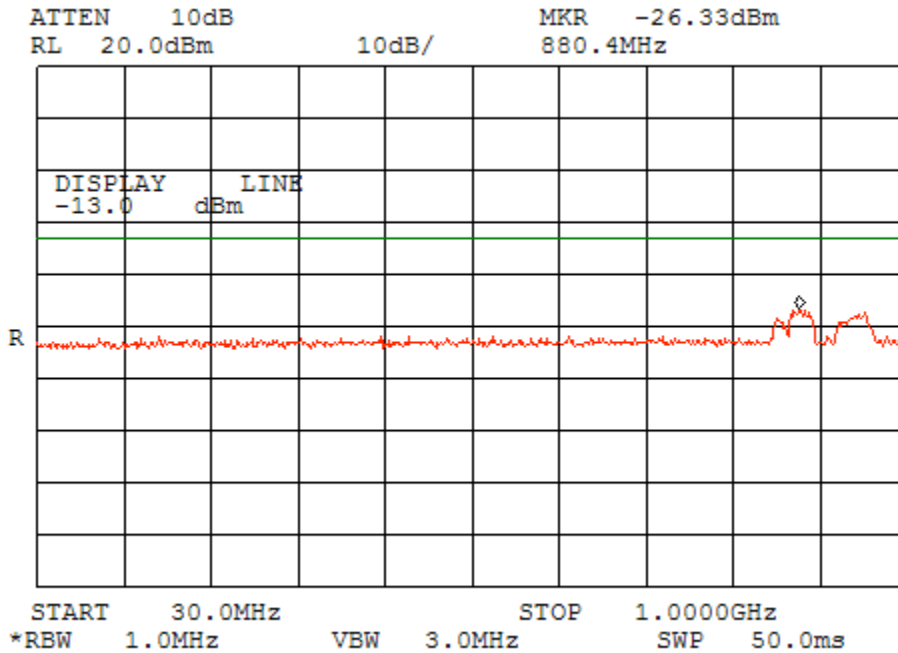
### Range 0.150 – 1 MHz. TDMA 1930-1990



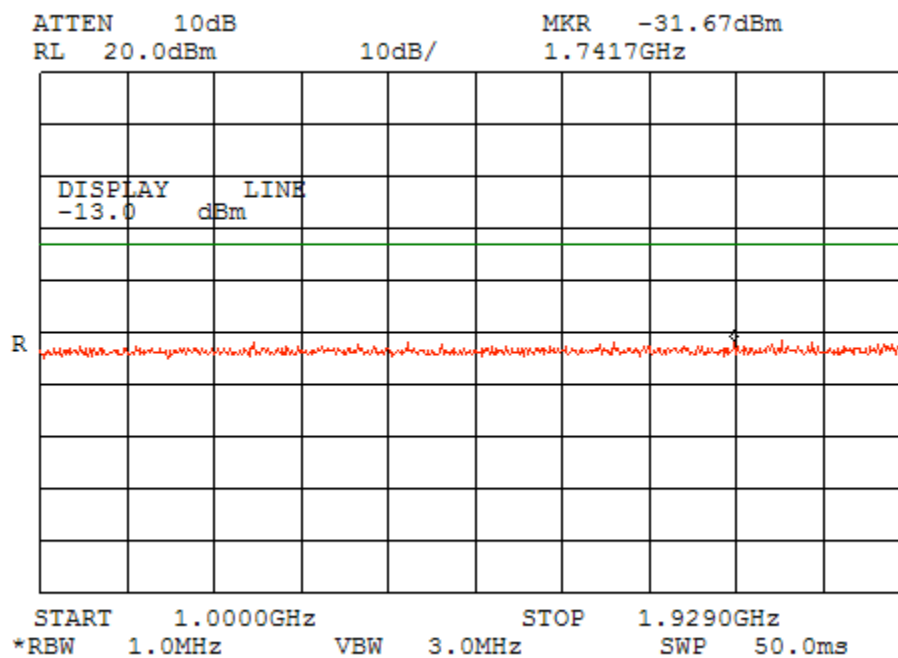
### Range 1 – 30 MHz. TDMA 1930-1990



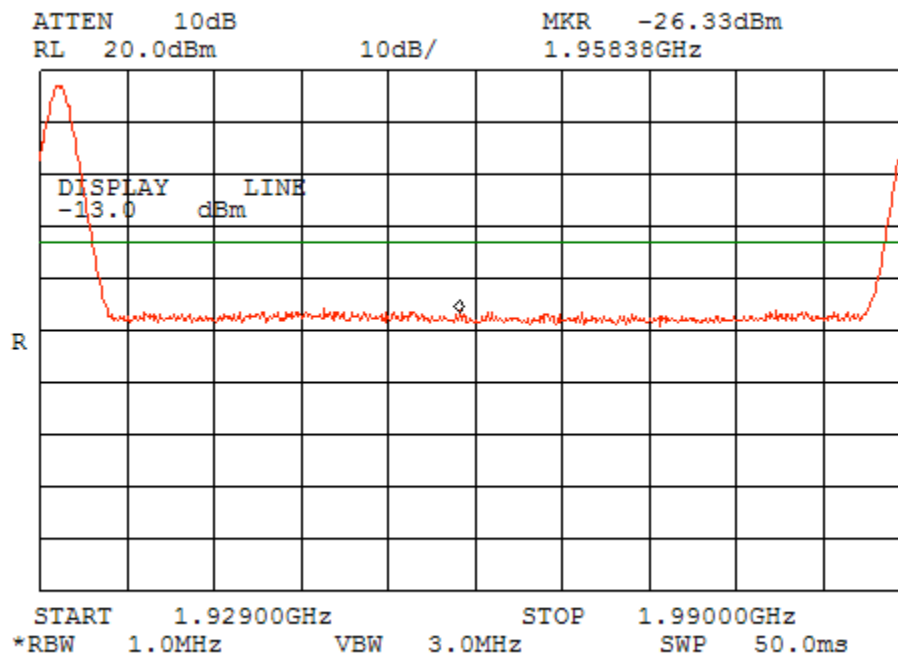
### Range 30 – 1000 MHz. TDMA 1930-1990



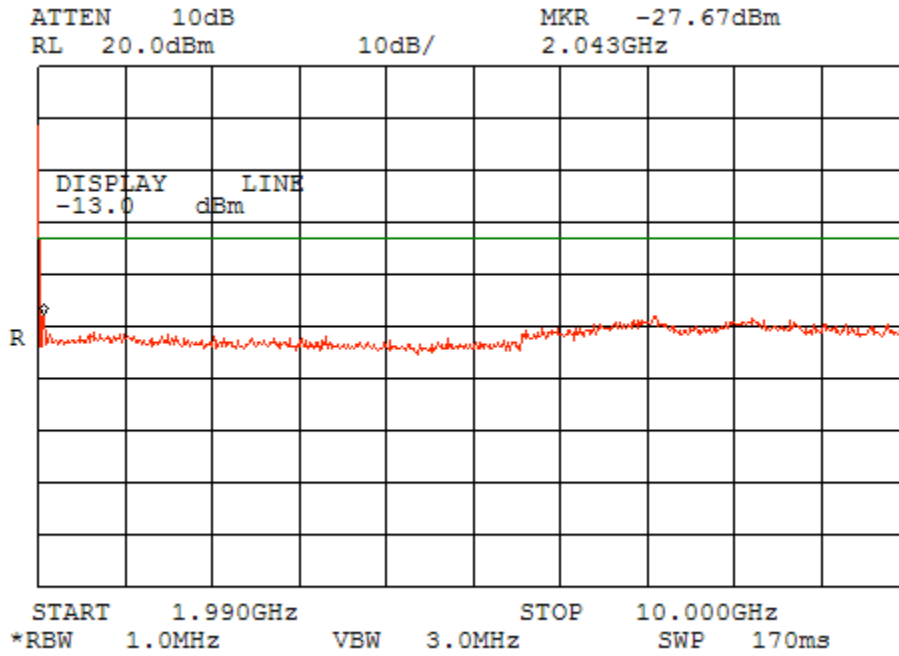
Range 1000 – 1929 MHz. TDMA 1930-1990



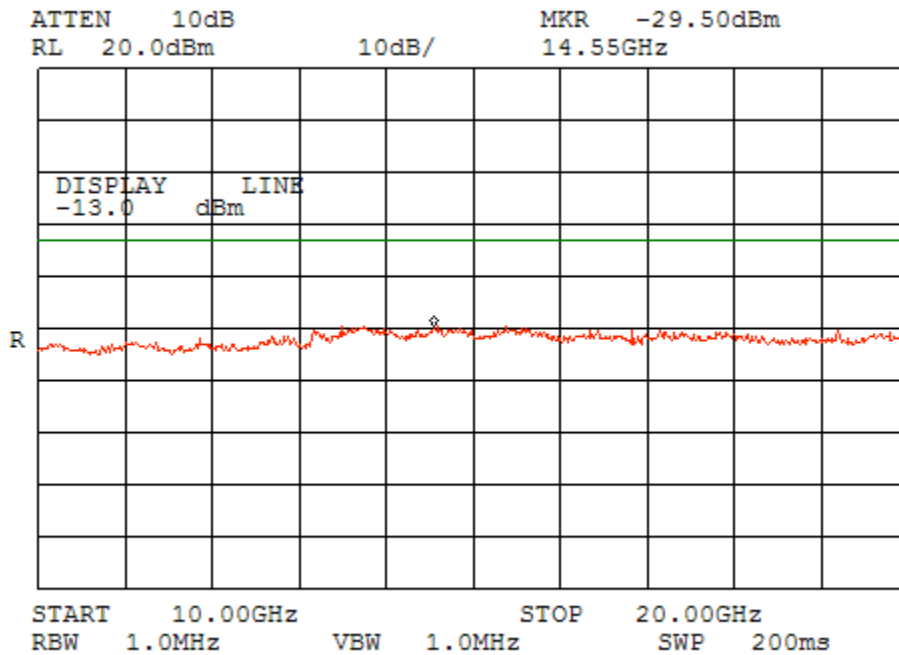
Range 1929 – 1990 MHz. TDMA 1930-1990



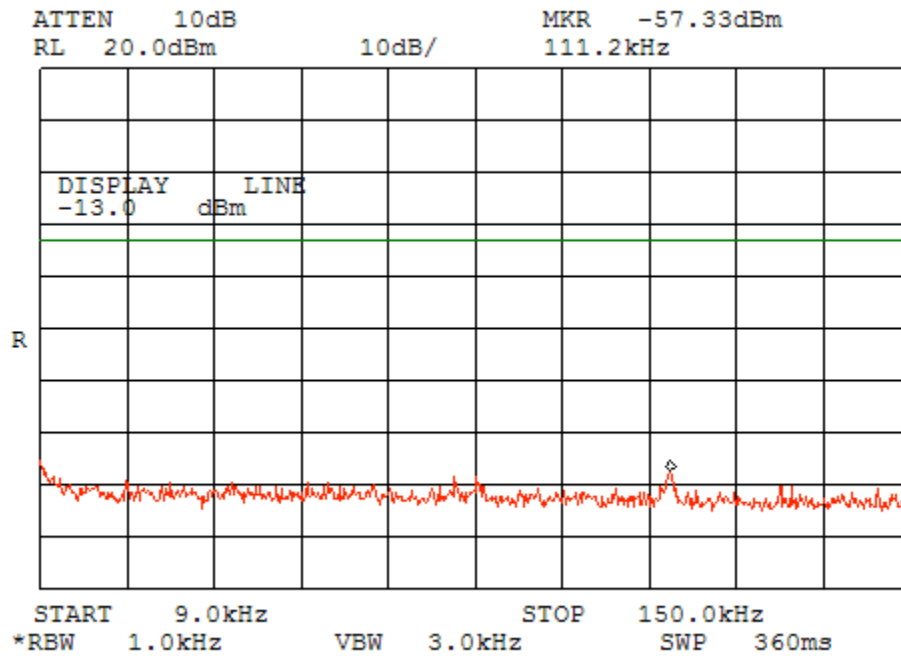
Range 1990 – 10000 MHz. TDMA 1930-1990



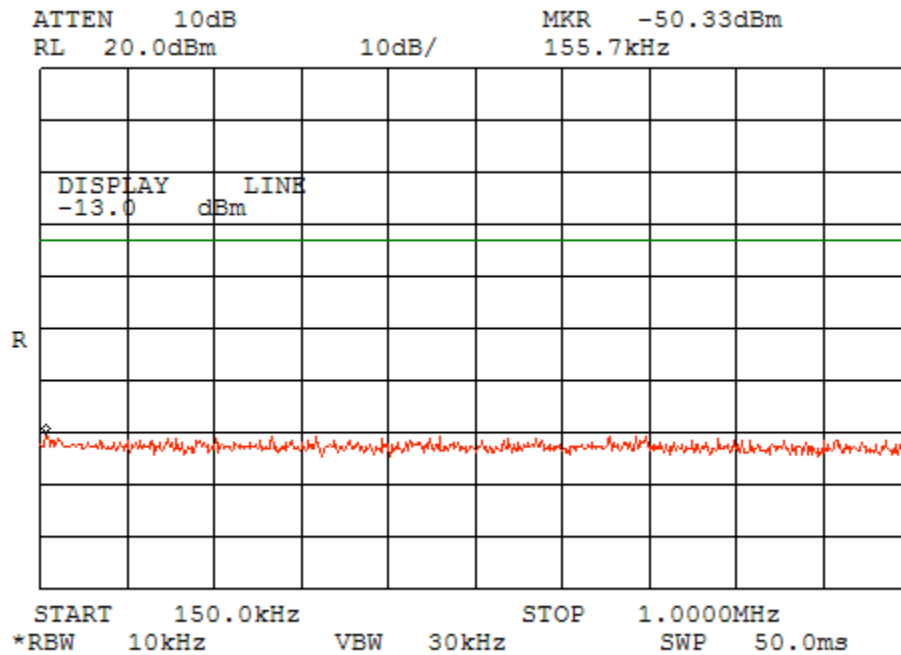
Range 10000 – 20000 MHz. TDMA 1930-1990



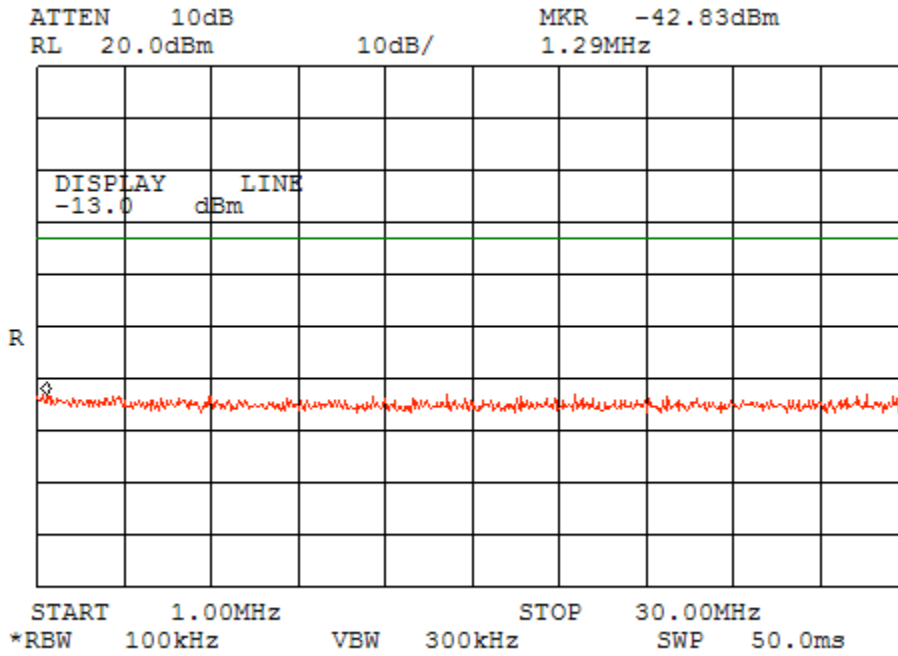
### Range 9 – 150 kHz. GSM 1930-1990



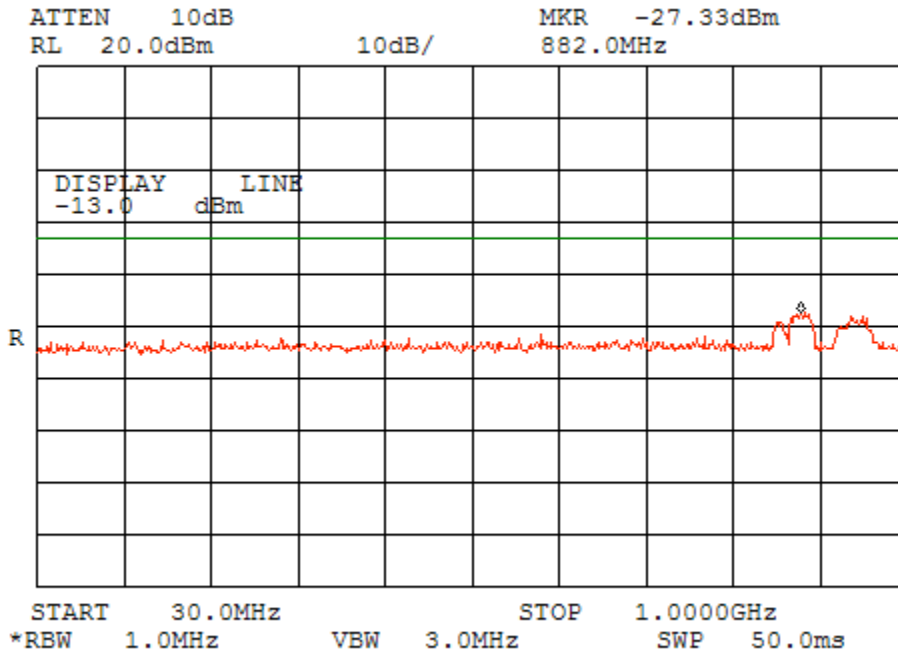
### Range 0.150 – 1 MHz. GSM 1930-1990



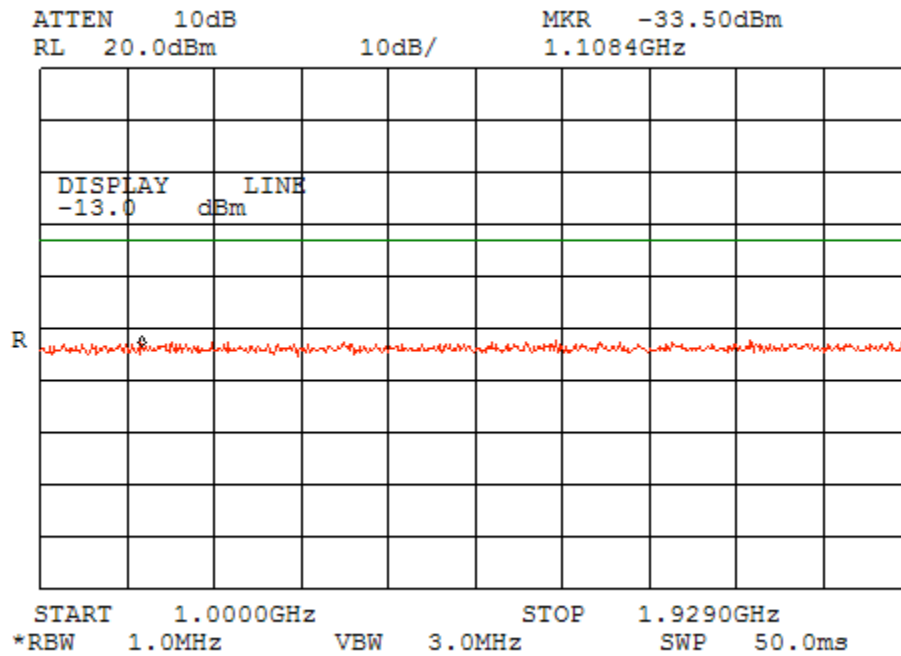
Range 1 – 30 MHz. GSM 1930-1990



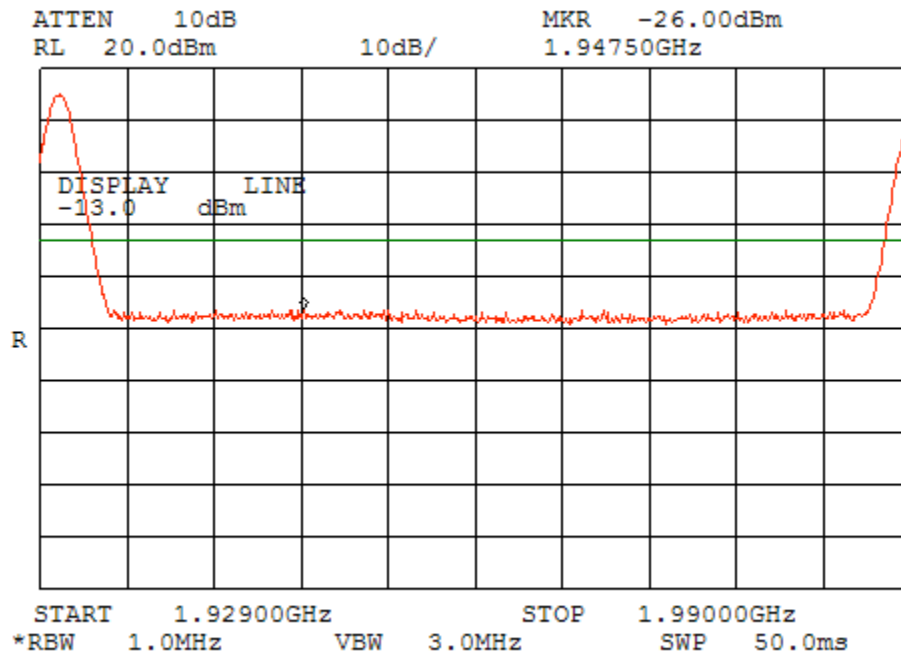
Range 30 – 1000 MHz. GSM 1930-1990



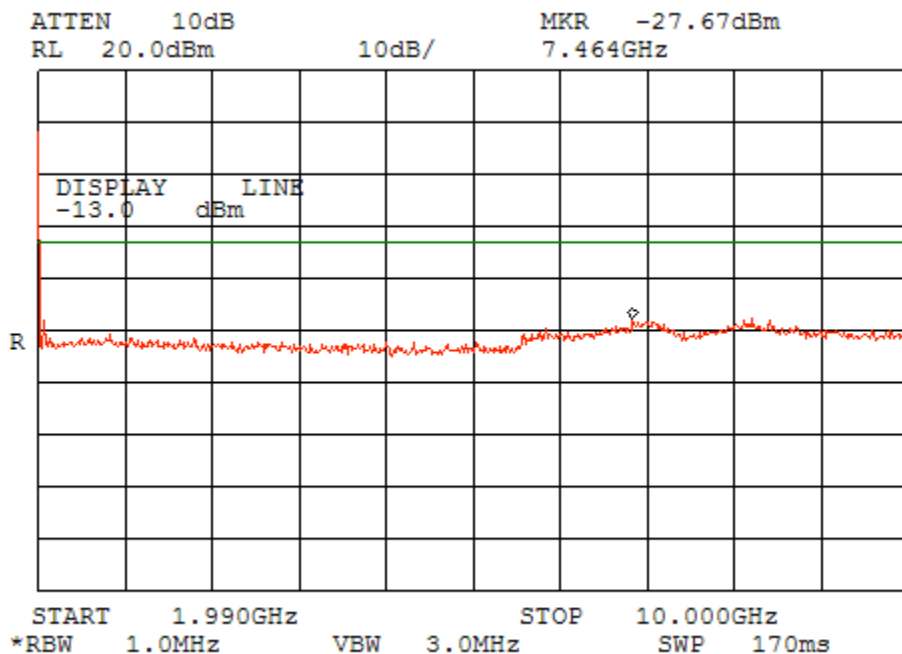
Range 1000 – 1929 MHz. GSM 1930-1990



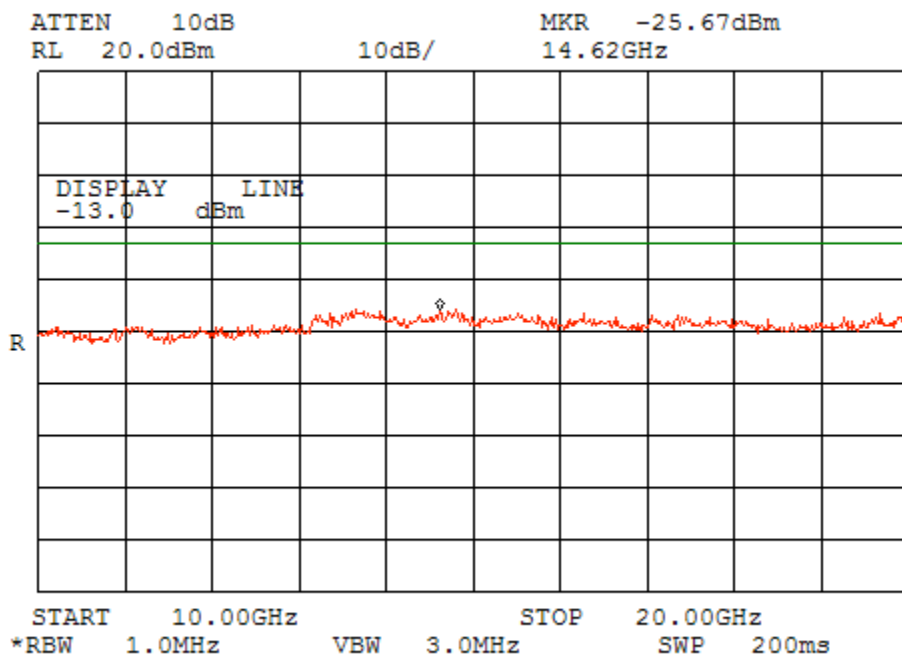
Range 1929 – 1990 MHz. GSM 1930-1990



### Range 1990 – 10000 MHz. GSM 1930-1990



### Range 10000 – 20000 MHz. GSM 1930-1990

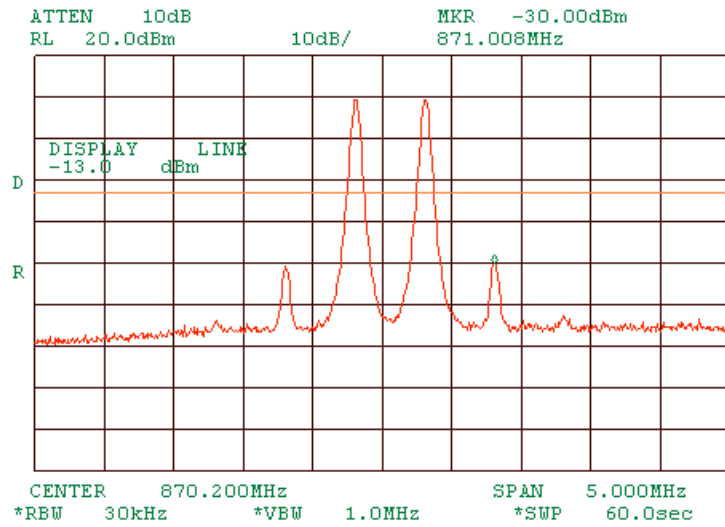




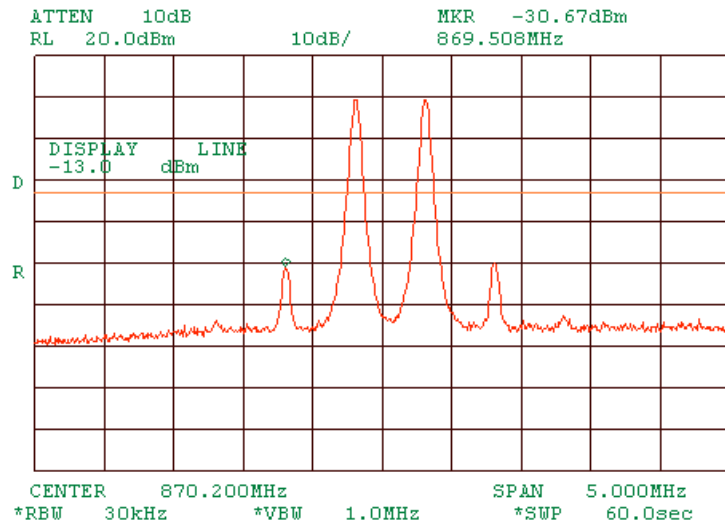
**FOR TEST REPORT –spurious emission CELL band**

Date/Time: 28 July 2004  
Ambient Temperature: 27C  
Relative Humidity: 41%  
Test Name: Spurious emissions (conducted)  
Customer: Mobile Access  
Test Specification: FCC 22,24,90  
EUT: Mobile Access 2000  
Test Equipment: HL#1424, 2254, 911, 1650,  
Operator Name: Michael Lerman  
Notes: AMPS, FM, 851.0125, 851.0150, 865.9875 MHz

Date/Time: August 4 2003 1:43:21 PM  
Ambient Temperature: 27C  
Relative Humidity: 41%  
Test Name: Spurious emissions (conducted)  
Customer: Mobile Access  
Test Specification: FCC 22,24,90  
EUT: Mobile Access 1000  
Test Equipment: HL#1424, 2254, 911, 1650,  
Operator Name: Michael Lerman  
Notes: AMPS, FM, 870, 870.5, 893 MHz

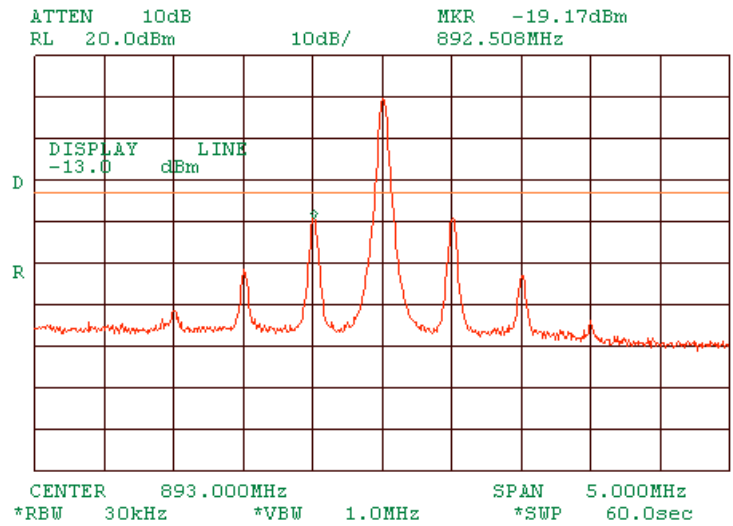


Date/Time: August 4 2003 1:45:14 PM  
Ambient Temperature: 27C  
Relative Humidity: 41%  
Test Name: Spurious emissions (conducted)  
Customer: Mobile Access  
Test Specification: FCC 22,24,90  
EUT: Mobile Access 1000  
Test Equipment: HL#1424, 2254, 911, 1650,  
Operator Name: Michael Lerman  
Notes: AMPS, FM, 870, 870.5, 893 MHz



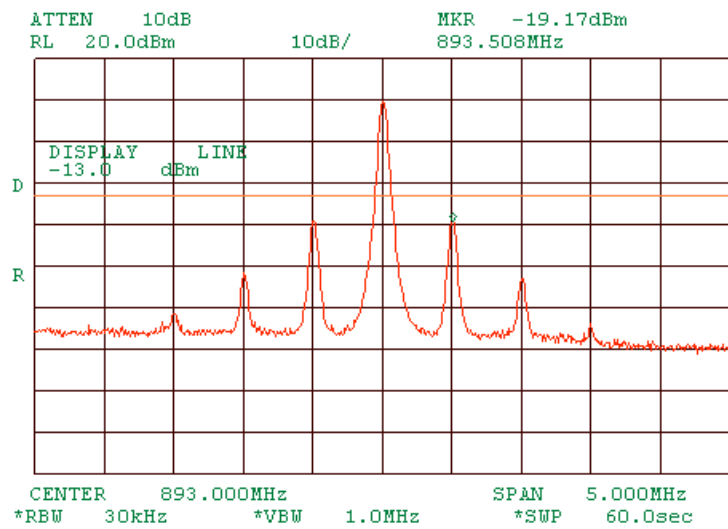
**Plot 3**

Date/Time: August 4 2003 1:48:54 PM  
Ambient Temperature: 27C  
Relative Humidity: 41%  
Test Name: Spurious emissions (conducted)  
Customer: Mobile Access  
Test Specification: FCC 22,24,90  
EUT: Mobile Access 1000  
Test Equipment: HL#1424, 2254, 911, 1650,  
Operator Name: Michael Lerman  
Notes: AMPS, FM, 870, 870.5, 893 MHz



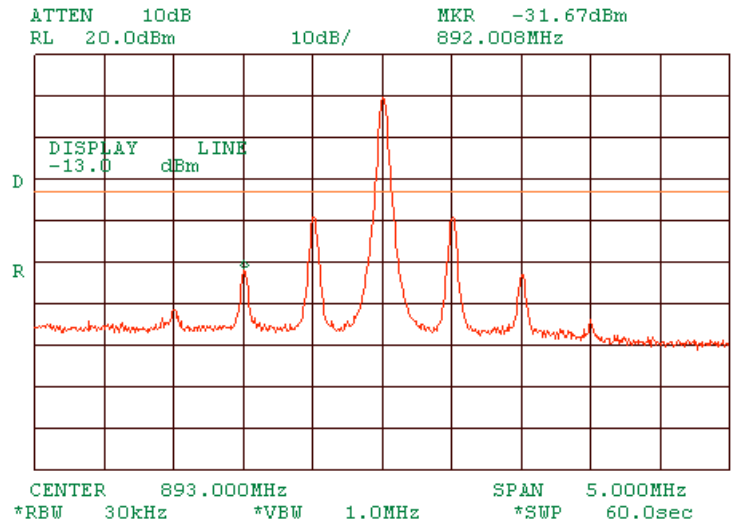
**Plot 4**

Date/Time: August 4 2003 1:49:36 PM  
Ambient Temperature: 27C  
Relative Humidity: 41%  
Test Name: Spurious emissions (conducted)  
Customer: Mobile Access  
Test Specification: FCC 22,24,90  
EUT: Mobile Access 1000  
Test Equipment: HL#1424, 2254, 911, 1650,  
Operator Name: Michael Lerman  
Notes: AMPS, FM, 870, 870.5, 893 MHz



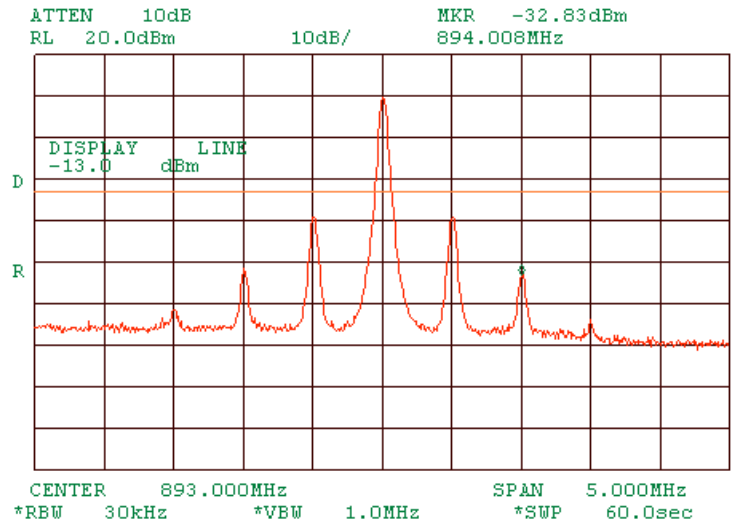
**Plot 5**

Date/Time: August 4 2003 1:50:21 PM  
Ambient Temperature: 27C  
Relative Humidity: 41%  
Test Name: Spurious emissions (conducted)  
Customer: Mobile Access  
Test Specification: FCC 22,24,90  
EUT: Mobile Access 1000  
Test Equipment: HL#1424, 2254, 911, 1650,  
Operator Name: Michael Lerman  
Notes: AMPS, FM, 870, 870.5, 893 MHz



**Plot 6**

Date/Time: August 4 2003 1:52:01 PM  
Ambient Temperature: 27C  
Relative Humidity: 41%  
Test Name: Spurious emissions (conducted)  
Customer: Mobile Access  
Test Specification: FCC 22,24,90  
EUT: Mobile Access 1000  
Test Equipment: HL#1424, 2254, 911, 1650,  
Operator Name: Michael Lerman  
Notes: AMPS, FM, 870, 870.5, 893 MHz

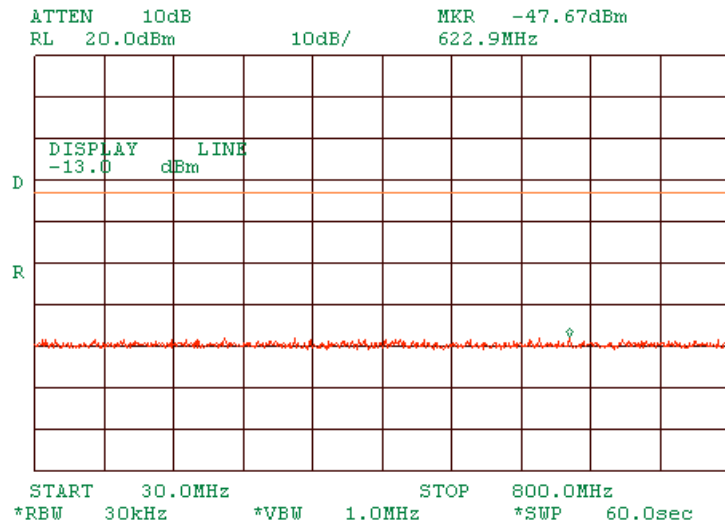






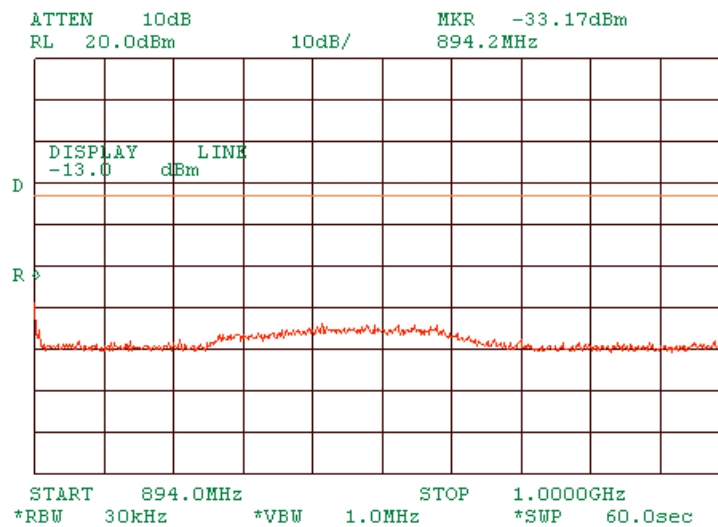
**Plot 8**

Date/Time: August 4 2003 1:57:49 PM  
Ambient Temperature: 27C  
Relative Humidity: 41%  
Test Name: Spurious emissions (conducted)  
Customer: Mobile Access  
Test Specification: FCC 22,24,90  
EUT: Mobile Access 1000  
Test Equipment: HL#1424, 2254, 911, 1650,  
Operator Name: Michael Lerman  
Notes: AMPS, FM, 870, 870.5, 893 MHz

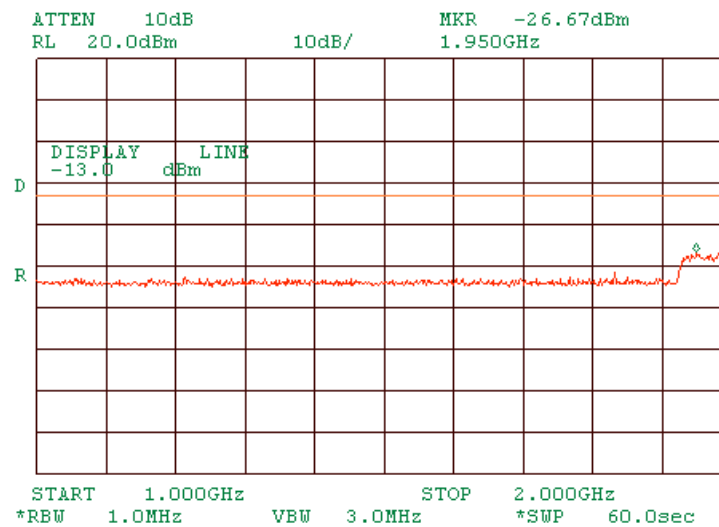


### Plot 9

Date/Time: August 4 2003 1:59:31 PM  
Ambient Temperature: 27C  
Relative Humidity: 41%  
Test Name: Spurious emissions (conducted)  
Customer: Mobile Access  
Test Specification: FCC 22,24,90  
EUT: Mobile Access 1000  
Test Equipment: HL#1424, 2254, 911, 1650,  
Operator Name: Michael Lerman  
Notes: AMPS, FM, 870, 870.5, 893 MHz

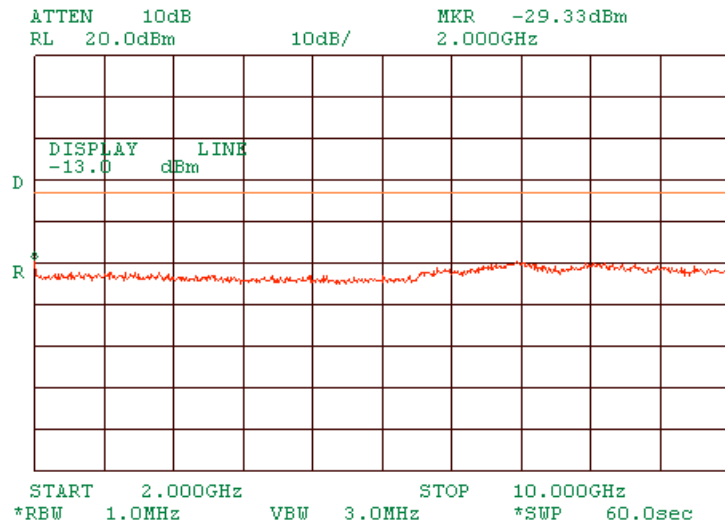


Date/Time: August 4 2003 2:03:06 PM  
Ambient Temperature: 27C  
Relative Humidity: 41%  
Test Name: Spurious emissions (conducted)  
Customer: Mobile Access  
Test Specification: FCC 22,24,90  
EUT: Mobile Access 1000  
Test Equipment: HL#1424, 2254, 911, 1650,  
Operator Name: Michael Lerman  
Notes: AMPS, FM, 870, 870.5, 893 MHz



**Plot 10**

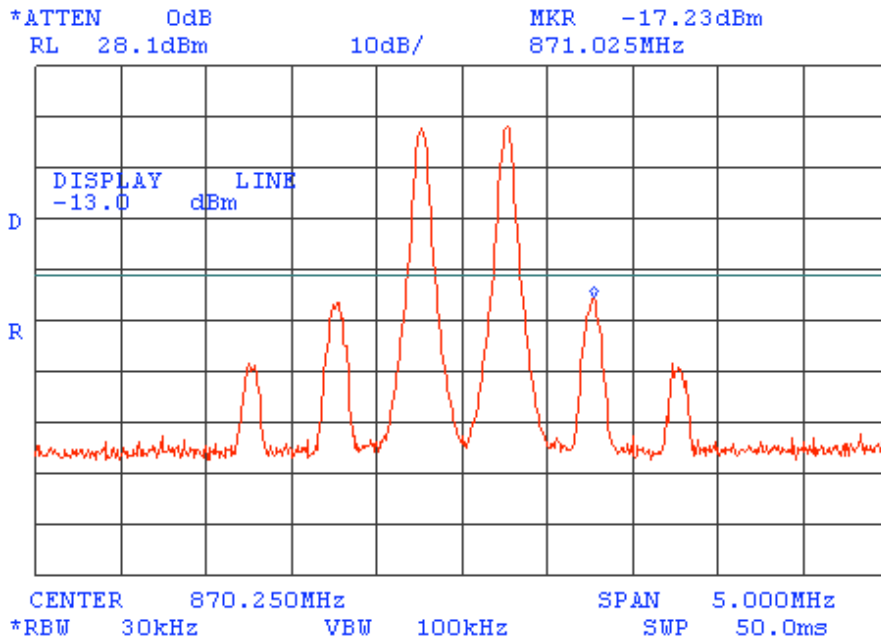
Date/Time: August 4 2003 2:08:04 PM  
Ambient Temperature: 27C  
Relative Humidity: 41%  
Test Name: Spurious emissions (conducted)  
Customer: Mobile Access  
Test Specification: FCC 22,24,90  
EUT: Mobile Access 1000  
Test Equipment: HL#1424, 2254, 911, 1650,  
Operator Name: Michael Lerman  
Notes: AMPS, FM, 870, 870.5, 893 MHz





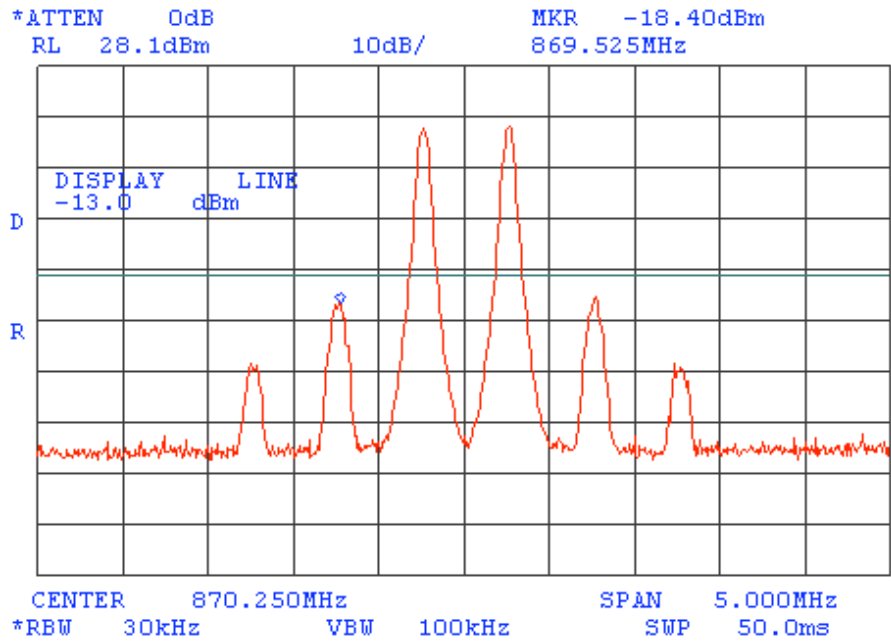
**Plot 12**

Date/Time: August 4 2003 2:16:57 PM  
Ambient Temperature: 27C  
Relative Humidity: 41%  
Test Name: Spurious emissions (conducted)  
Customer: Mobile Access  
Test Specification: FCC 22,24,90  
EUT: Mobile Access 1000  
Test Equipment: HL#1424, 2254, 911, 1650,  
Operator Name: Michael Lerman  
Notes: TDMA, 870, 870.5, 893 MHz



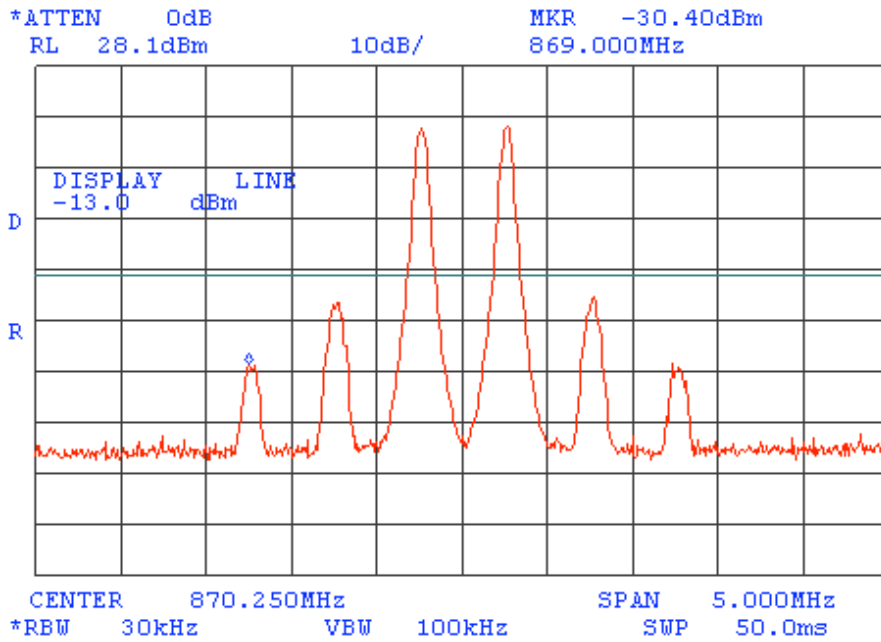
**Plot 13**

Date/Time: August 4 2003 2:17:35 PM  
Ambient Temperature: 27C  
Relative Humidity: 41%  
Test Name: Spurious emissions (conducted)  
Customer: Mobile Access  
Test Specification: FCC 22,24,90  
EUT: Mobile Access 1000  
Test Equipment: HL#1424, 2254, 911, 1650,  
Operator Name: Michael Lerman  
Notes: TDMA, 870, 870.5, 893 MHz



**Plot 14**

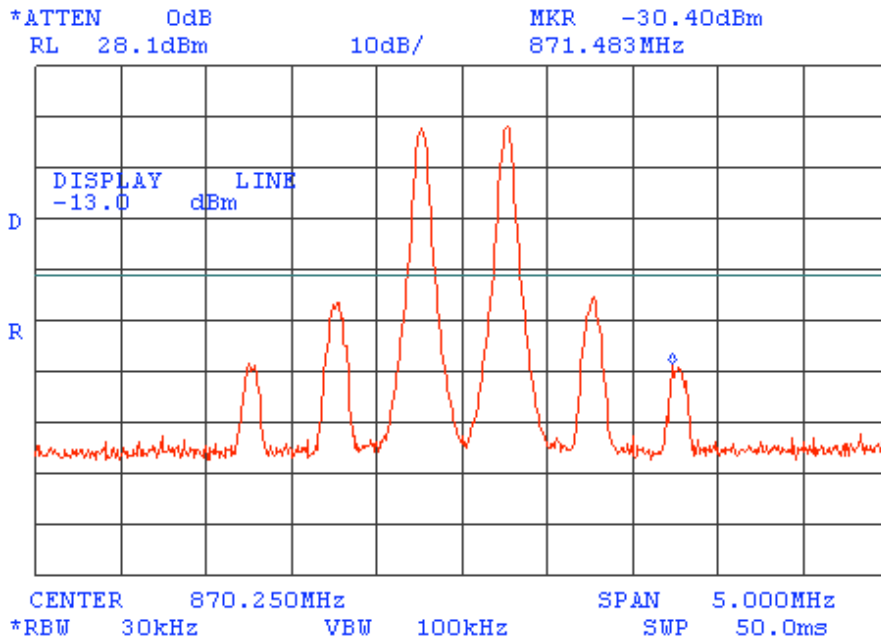
Date/Time: August 4 2003 2:19:35 PM  
Ambient Temperature: 27C  
Relative Humidity: 41%  
Test Name: Spurious emissions (conducted)  
Customer: Mobile Access  
Test Specification: FCC 22,24,90  
EUT: Mobile Access 1000  
Test Equipment: HL#1424, 2254, 911, 1650,  
Operator Name: Michael Lerman  
Notes: TDMA, 870, 870.5, 893 MHz





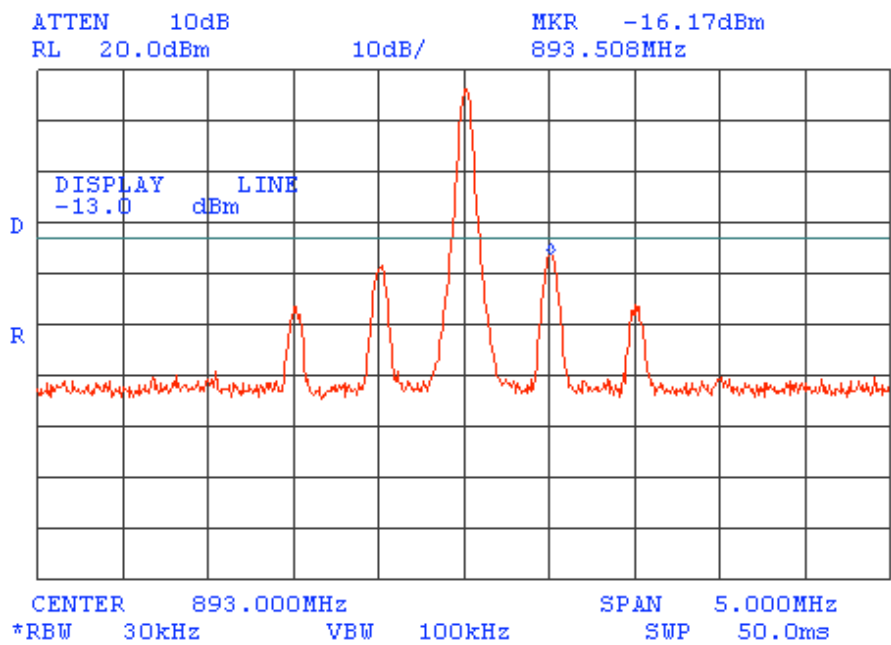
**Plot 15**

Date/Time: August 4 2003 2:20:15 PM  
Ambient Temperature: 27C  
Relative Humidity: 41%  
Test Name: Spurious emissions (conducted)  
Customer: Mobile Access  
Test Specification: FCC 22,24,90  
EUT: Mobile Access 1000  
Test Equipment: HL#1424, 2254, 911, 1650,  
Operator Name: Michael Lerman  
Notes: TDMA, 870, 870.5, 893 MHz



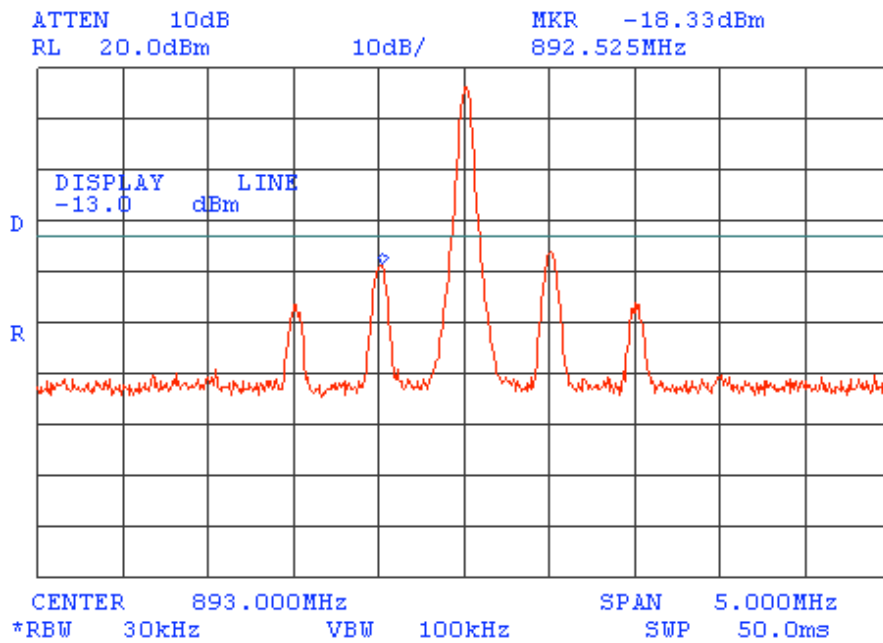
**Plot 16**

Date/Time: August 4 2003 2:21:17 PM  
Ambient Temperature: 27C  
Relative Humidity: 41%  
Test Name: Spurious emissions (conducted)  
Customer: Mobile Access  
Test Specification: FCC 22,24,90  
EUT: Mobile Access 1000  
Test Equipment: HL#1424, 2254, 911, 1650,  
Operator Name: Michael Lerman  
Notes: TDMA, 870, 870.5, 893 MHz



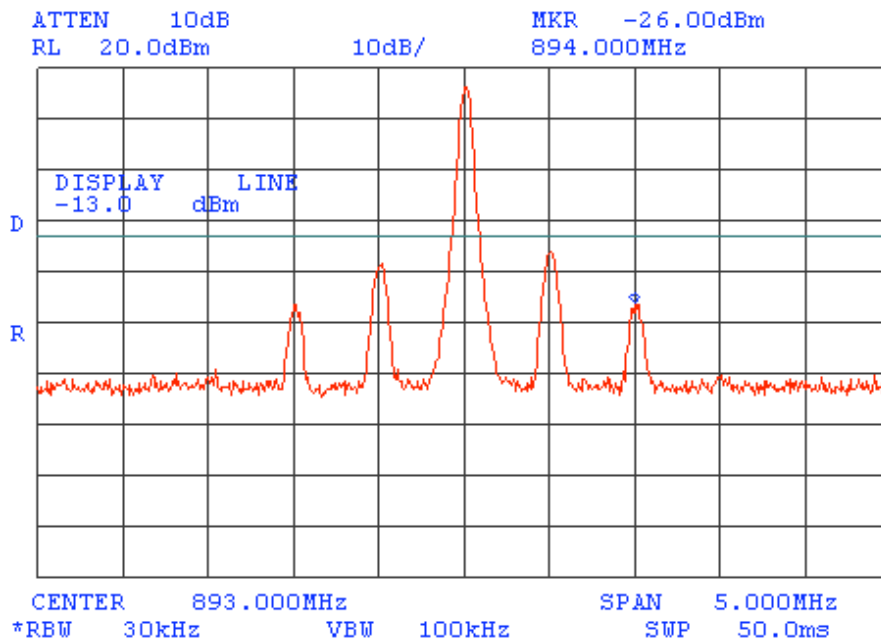
**Plot 17**

Date/Time: August 4 2003 2:21:53 PM  
Ambient Temperature: 27C  
Relative Humidity: 41%  
Test Name: Spurious emissions (conducted)  
Customer: Mobile Access  
Test Specification: FCC 22,24,90  
EUT: Mobile Access 1000  
Test Equipment: HL#1424, 2254, 911, 1650,  
Operator Name: Michael Lerman  
Notes: TDMA, 870, 870.5, 893 MHz



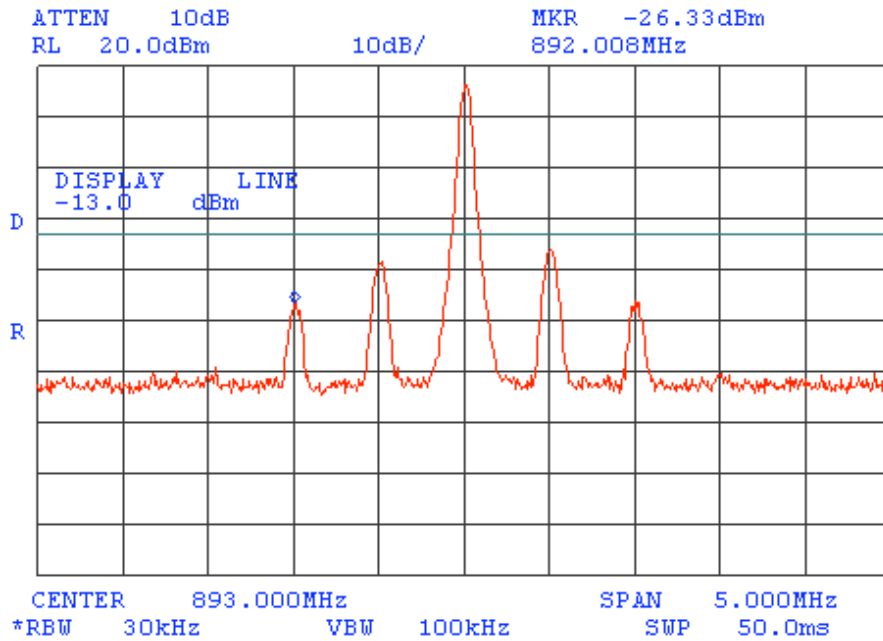
**Plot 18**

Date/Time: August 4 2003 2:22:29 PM  
Ambient Temperature: 27C  
Relative Humidity: 41%  
Test Name: Spurious emissions (conducted)  
Customer: Mobile Access  
Test Specification: FCC 22,24,90  
EUT: Mobile Access 1000  
Test Equipment: HL#1424, 2254, 911, 1650,  
Operator Name: Michael Lerman  
Notes: TDMA, 870, 870.5, 893 MHz



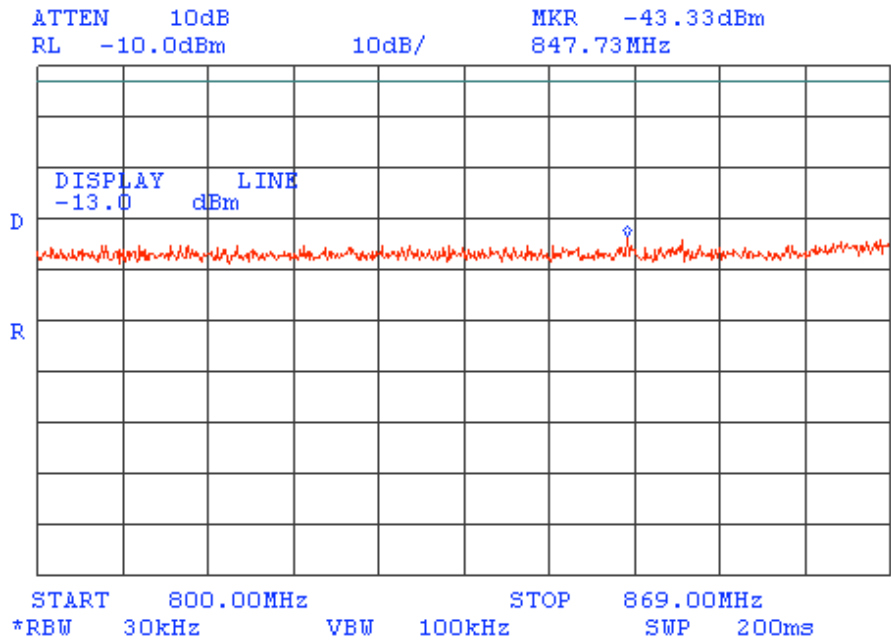
**Plot 19**

Date/Time: August 4 2003 2:23:28 PM  
Ambient Temperature: 27C  
Relative Humidity: 41%  
Test Name: Spurious emissions (conducted)  
Customer: Mobile Access  
Test Specification: FCC 22,24,90  
EUT: Mobile Access 1000  
Test Equipment: HL#1424, 2254, 911, 1650,  
Operator Name: Michael Lerman  
Notes: TDMA, 870, 870.5, 893 MHz



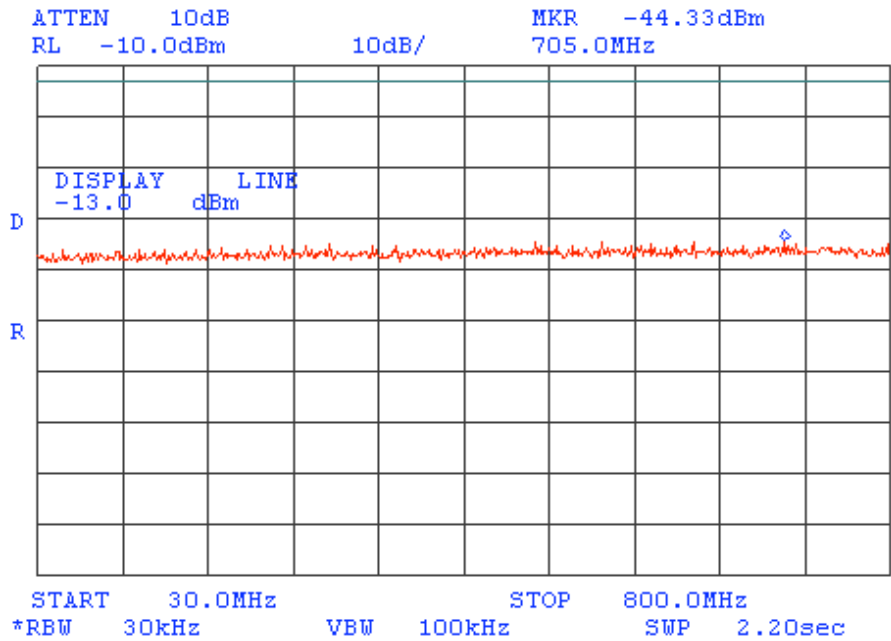
**Plot 20**

Date/Time: August 4 2003 2:25:13 PM  
Ambient Temperature: 27C  
Relative Humidity: 41%  
Test Name: Spurious emissions (conducted)  
Customer: Mobile Access  
Test Specification: FCC 22,24,90  
EUT: Mobile Access 1000  
Test Equipment: HL#1424, 2254, 911, 1650,  
Operator Name: Michael Lerman  
Notes: TDMA, 870, 870.5, 893 MHz



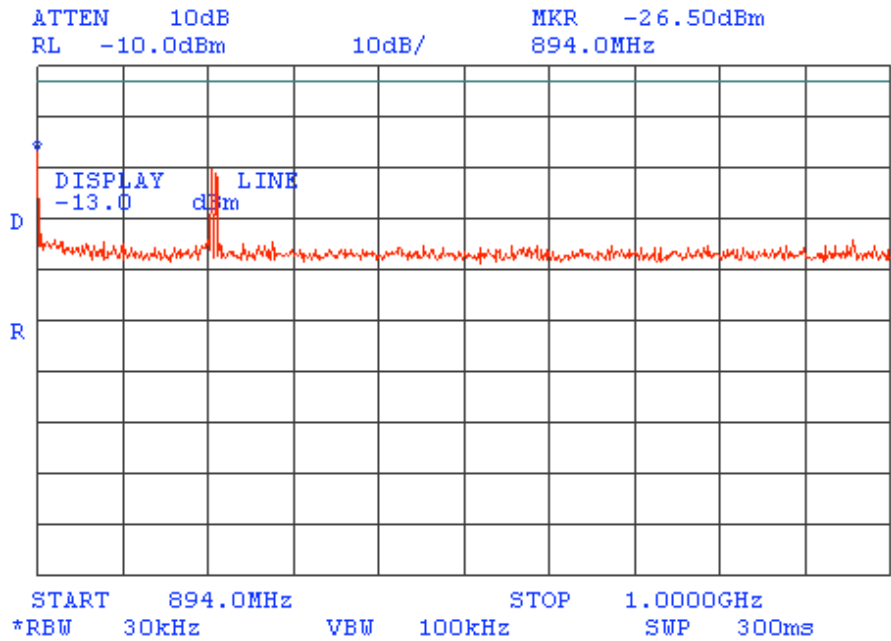
**Plot 21**

Date/Time: August 4 2003 2:26:41 PM  
Ambient Temperature: 27C  
Relative Humidity: 41%  
Test Name: Spurious emissions (conducted)  
Customer: Mobile Access  
Test Specification: FCC 22,24,90  
EUT: Mobile Access 1000  
Test Equipment: HL#1424, 2254, 911, 1650,  
Operator Name: Michael Lerman  
Notes: TDMA, 870, 870.5, 893 MHz



**Plot 22**

Date/Time: August 4 2003 2:28:25 PM  
Ambient Temperature: 27C  
Relative Humidity: 41%  
Test Name: Spurious emissions (conducted)  
Customer: Mobile Access  
Test Specification: FCC 22,24,90  
EUT: Mobile Access 1000  
Test Equipment: HL#1424, 2254, 911, 1650,  
Operator Name: Michael Lerman  
Notes: TDMA, 870, 870.5, 893 MHz

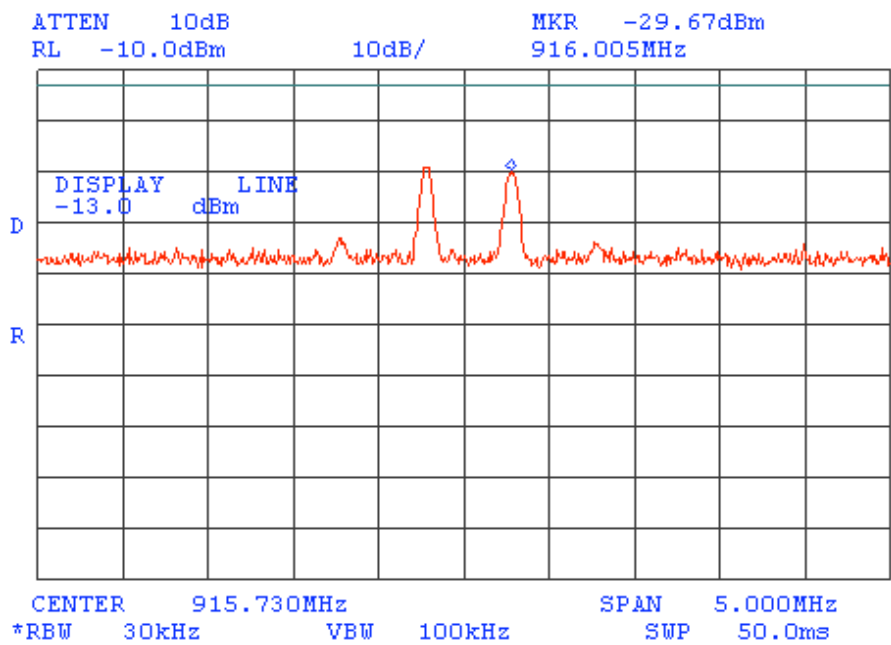






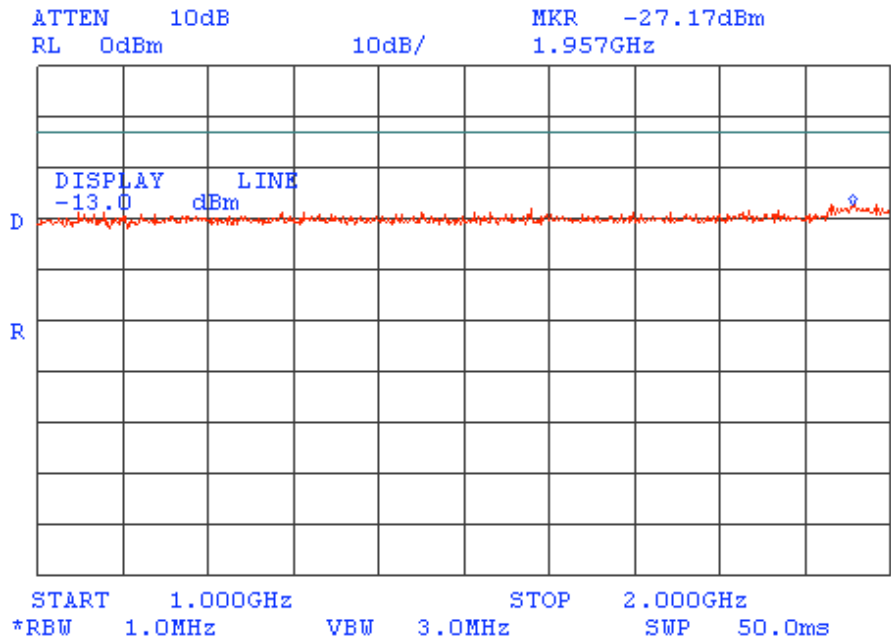
**Plot 24**

Date/Time: August 4 2003 2:30:26 PM  
Ambient Temperature: 27C  
Relative Humidity: 41%  
Test Name: Spurious emissions (conducted)  
Customer: Mobile Access  
Test Specification: FCC 22,24,90  
EUT: Mobile Access 1000  
Test Equipment: HL#1424, 2254, 911, 1650,  
Operator Name: Michael Lerman  
Notes: TDMA, 870, 870.5, 893 MHz



**Plot 25**

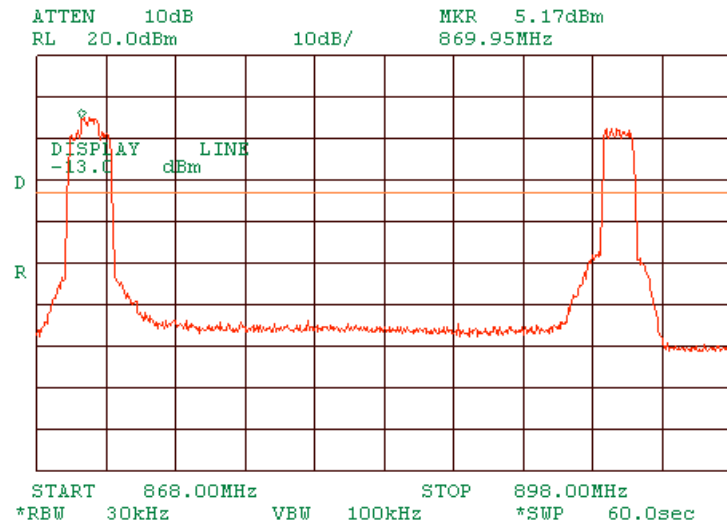
Date/Time: August 4 2003 2:32:28 PM  
Ambient Temperature: 27C  
Relative Humidity: 41%  
Test Name: Spurious emissions (conducted)  
Customer: Mobile Access  
Test Specification: FCC 22,24,90  
EUT: Mobile Access 1000  
Test Equipment: HL#1424, 2254, 911, 1650,  
Operator Name: Michael Lerman  
Notes: TDMA, 870, 870.5, 893 MHz





**Plot 27**

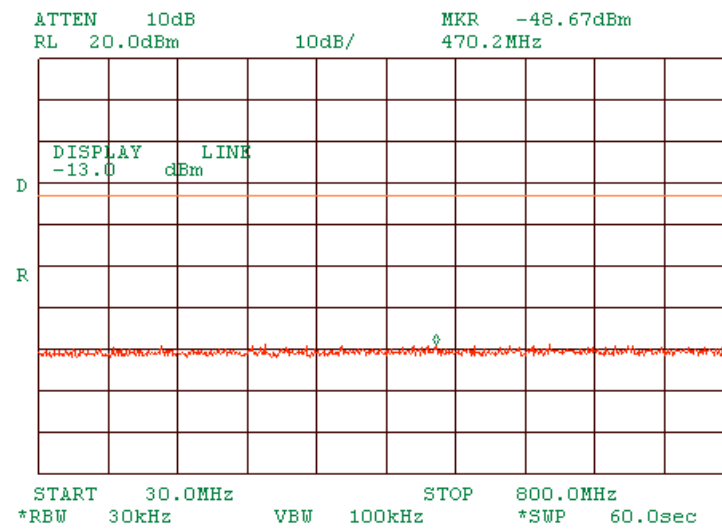
Date/Time: August 4 2003 3:04:34 PM  
Ambient Temperature: 27C  
Relative Humidity: 41%  
Test Name: Spurious emissions (conducted)  
Customer: Mobile Access  
Test Specification: FCC 22,24,90  
EUT: Mobile Access 1000  
Test Equipment: HL#1424, 2254, 911, 1650,  
Operator Name: Michael Lerman  
Notes: CDMA 870, 870.5, 893 MHz





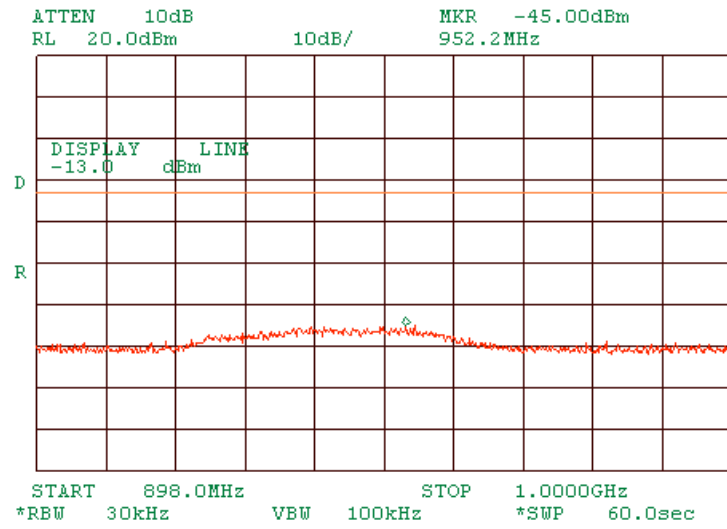
**Plot 29**

Date/Time: August 4 2003 3:07:16 PM  
Ambient Temperature: 27C  
Relative Humidity: 41%  
Test Name: Spurious emissions (conducted)  
Customer: Mobile Access  
Test Specification: FCC 22,24,90  
EUT: Mobile Access 1000  
Test Equipment: HL#1424, 2254, 911, 1650,  
Operator Name: Michael Lerman  
Notes: CDMA 870, 870.5, 893 MHz



**Plot 30**

Date/Time: August 4 2003 3:08:34 PM  
Ambient Temperature: 27C  
Relative Humidity: 41%  
Test Name: Spurious emissions (conducted)  
Customer: Mobile Access  
Test Specification: FCC 22,24,90  
EUT: Mobile Access 1000  
Test Equipment: HL#1424, 2254, 911, 1650,  
Operator Name: Michael Lerman  
Notes: CDMA 870, 870.5, 893 MHz





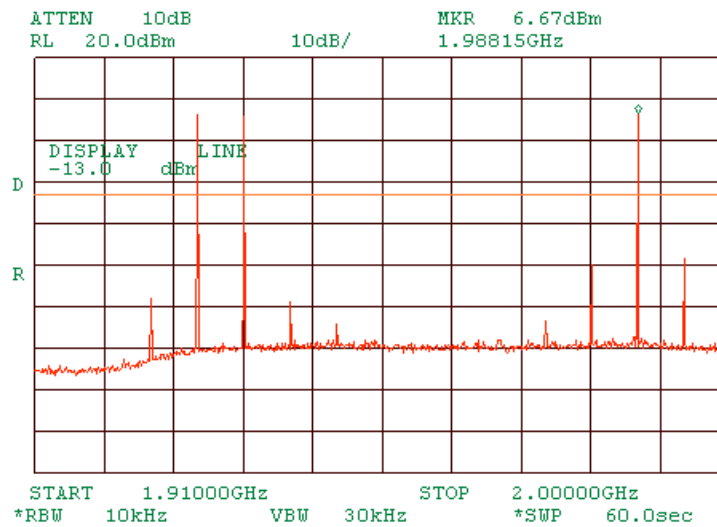




**spurious emissions PCS band**

**Plot 33**

Date/Time: August 4 2003 4:58:00 PM  
Ambient Temperature: 27C  
Relative Humidity: 41%  
Test Name: Spurious emissions (conducted)  
Customer: Mobile Access  
Test Specification: FCC 22,24,90  
EUT: Mobile Access 1000  
Test Equipment: HL#1424, 2254, 911, 1650,  
Operator Name: Michael Lerman  
Notes: FM: 1931, 1937, 1988 MHz



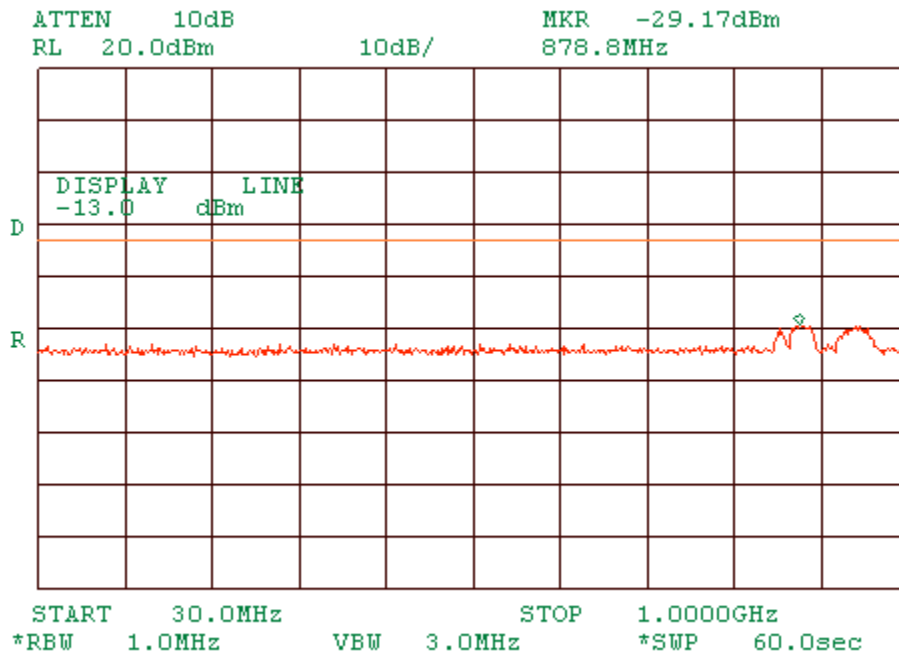






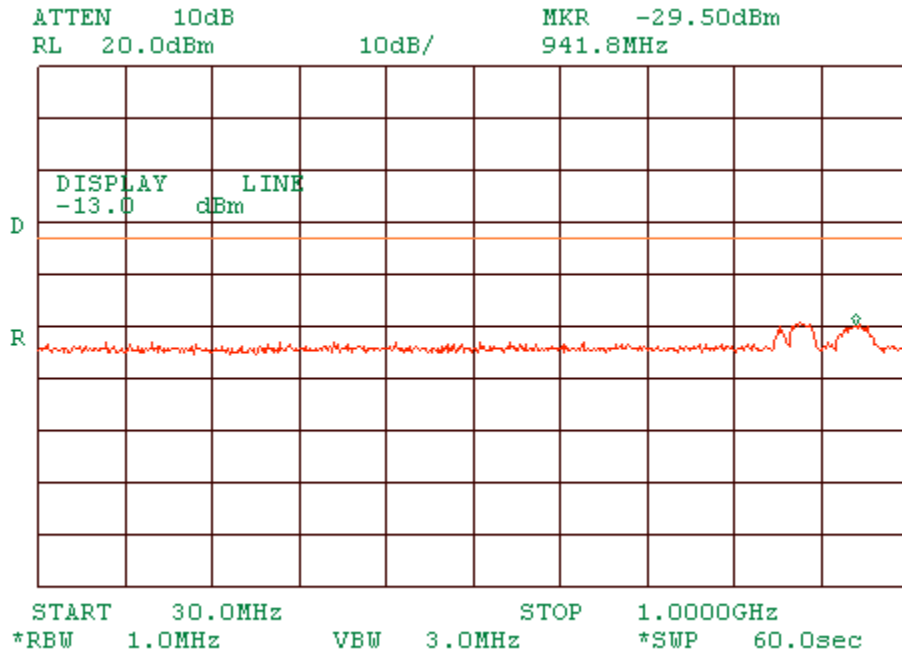


Date/Time: August 4 2003 5:13:21 PM  
Ambient Temperature: 27C  
Relative Humidity: 41%  
Test Name: Spurious emissions (conducted)  
Customer: Mobile Access  
Test Specification: FCC 22,24,90  
EUT: Mobile Access 1000  
Test Equipment: HL#1424, 2254, 911, 1650,  
Operator Name: Michael Lerman  
Notes: FM: 1931, 1937, 1988 MHz





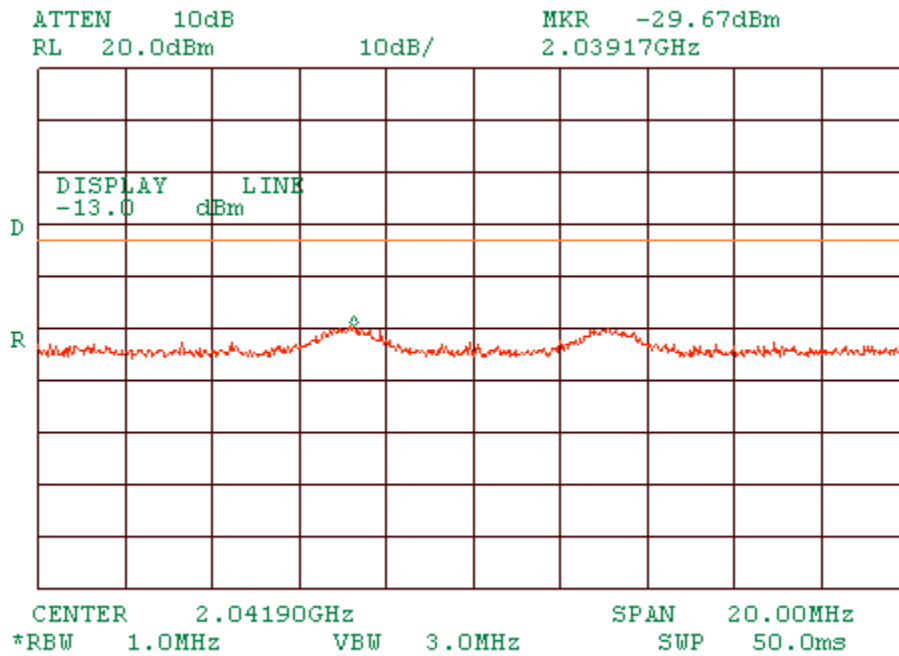
Date/Time: August 4 2003 5:13:21 PM  
Ambient Temperature: 27C  
Relative Humidity: 41%  
Test Name: Spurious emissions (conducted)  
Customer: Mobile Access  
Test Specification: FCC 22,24,90  
EUT: Mobile Access 1000  
Test Equipment: HL#1424, 2254, 911, 1650,  
Operator Name: Michael Lerman  
Notes: FM: 1931, 1937, 1988 MHz





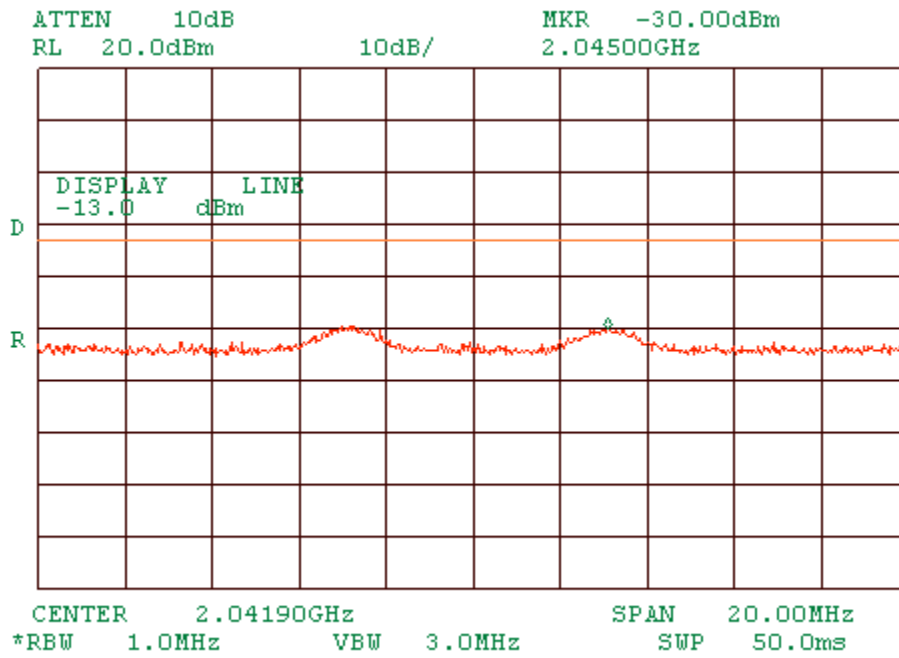
**Plot 36**

Date/Time: August 4 2003 5:22:28 PM  
Ambient Temperature: 27C  
Relative Humidity: 41%  
Test Name: Spurious emissions (conducted)  
Customer: Mobile Access  
Test Specification: FCC 22,24,90  
EUT: Mobile Access 1000  
Test Equipment: HL#1424, 2254, 2403, 1650  
Operator Name: Michael Lerman  
Notes: FM: 1931, 1937, 1988 MHz

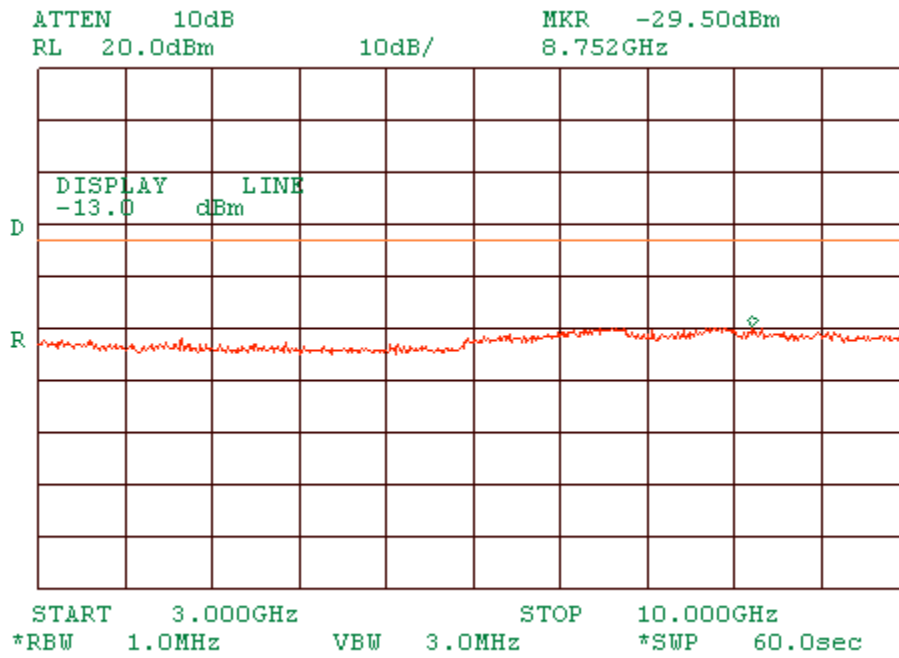


**Plot 37**

Date/Time: August 4 2003 5:23:09 PM  
Ambient Temperature: 27C  
Relative Humidity: 41%  
Test Name: Spurious emissions (conducted)  
Customer: Mobile Access  
Test Specification: FCC 22,24,90  
EUT: Mobile Access 1000  
Test Equipment: HL#1424, 2254, 2403, 1650  
Operator Name: Michael Lerman  
Notes: FM: 1931, 1937, 1988 MHz

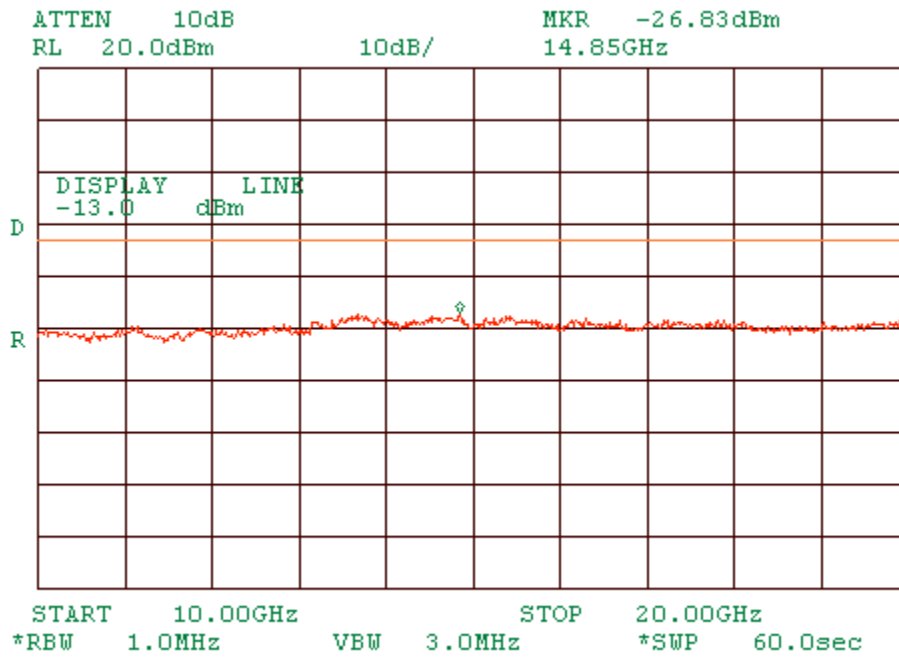


Date/Time: August 4 2003 5:25:03 PM  
Ambient Temperature: 27C  
Relative Humidity: 41%  
Test Name: Spurious emissions (conducted)  
Customer: Mobile Access  
Test Specification: FCC 22,24,90  
EUT: Mobile Access 1000  
Test Equipment: HL#1424, 2254, 2403, 1650  
Operator Name: Michael Lerman  
Notes: FM: 1931, 1937, 1988 MHz



**Plot 38**

Date/Time: August 4 2003 5:26:34 PM  
Ambient Temperature: 27C  
Relative Humidity: 41%  
Test Name: Spurious emissions (conducted)  
Customer: Mobile Access  
Test Specification: FCC 22,24,90  
EUT: Mobile Access 1000  
Test Equipment: HL#1424, 2254, 2403, 1650  
Operator Name: Michael Lerman  
Notes: FM: 1931, 1937, 1988 MHz





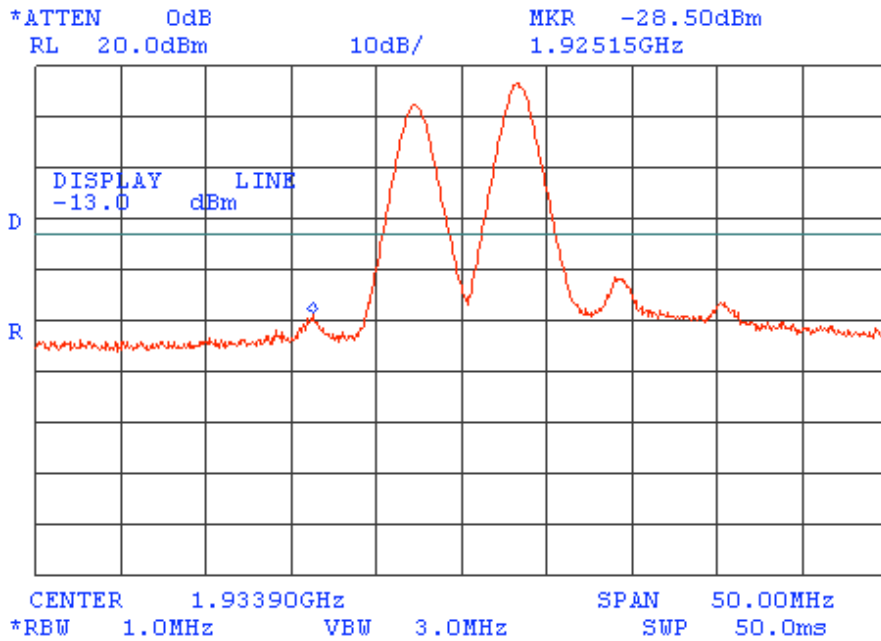






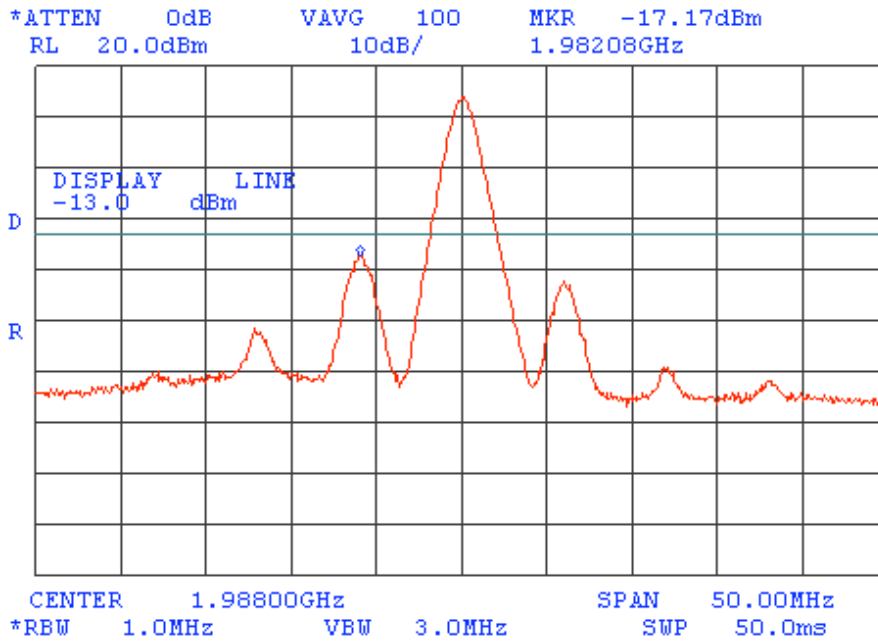
**Plot 42**

Date/Time: August 4 2003 5:40:06 PM  
Ambient Temperature: 27C  
Relative Humidity: 41%  
Test Name: Spurious emissions (conducted)  
Customer: Mobile Access  
Test Specification: FCC 22,24,90  
EUT: Mobile Access 1000  
Test Equipment: HL#1424, 2254, 2403, 1650  
Operator Name: Michael Lerman  
Notes: TDMA: 1931, 1937, 1988 MHz



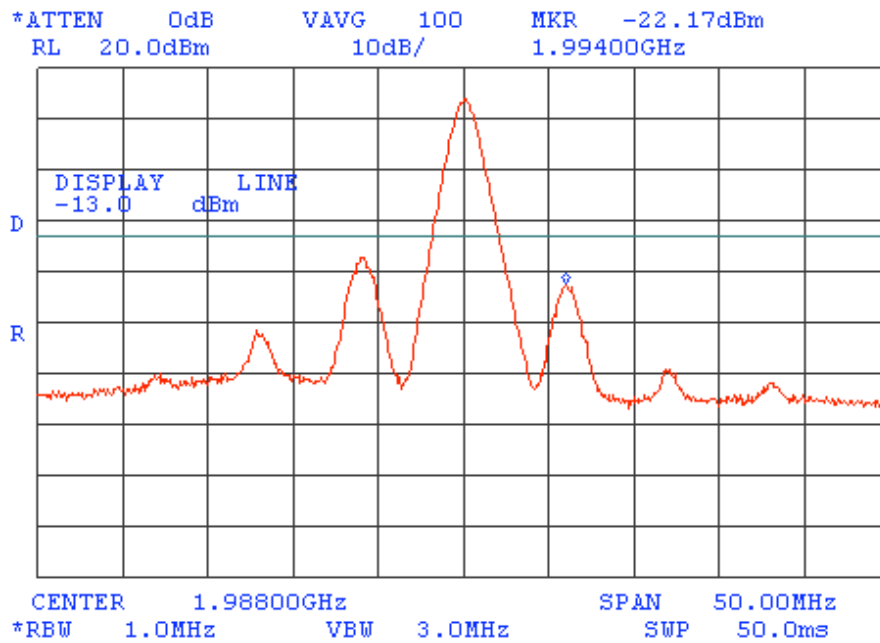
**Plot 43**

Date/Time: August 4 2003 5:47:45 PM  
Ambient Temperature: 27C  
Relative Humidity: 41%  
Test Name: Spurious emissions (conducted)  
Customer: Mobile Access  
Test Specification: FCC 22,24,90  
EUT: Mobile Access 1000  
Test Equipment: HL#1424, 2254, 2403, 1650  
Operator Name: Michael Lerman  
Notes: TDMA: 1931, 1937, 1988 MHz



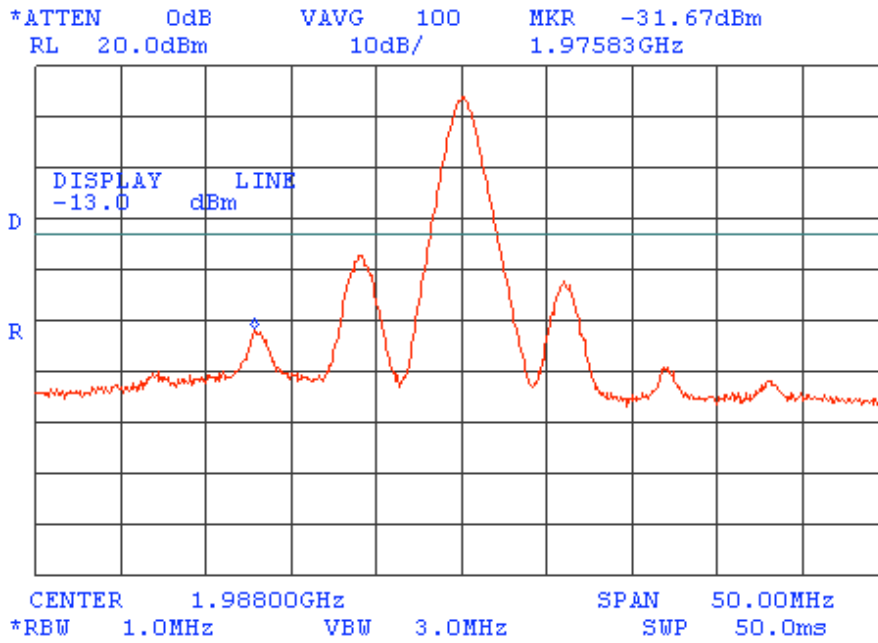
**Plot 44**

Date/Time: August 4 2003 5:48:22 PM  
Ambient Temperature: 27C  
Relative Humidity: 41%  
Test Name: Spurious emissions (conducted)  
Customer: Mobile Access  
Test Specification: FCC 22,24,90  
EUT: Mobile Access 1000  
Test Equipment: HL#1424, 2254, 2403, 1650  
Operator Name: Michael Lerman  
Notes: TDMA: 1931, 1937, 1988 MHz



**Plot 45**

Date/Time: August 4 2003 5:49:00 PM  
Ambient Temperature: 27C  
Relative Humidity: 41%  
Test Name: Spurious emissions (conducted)  
Customer: Mobile Access  
Test Specification: FCC 22,24,90  
EUT: Mobile Access 1000  
Test Equipment: HL#1424, 2254, 2403, 1650  
Operator Name: Michael Lerman  
Notes: TDMA: 1931, 1937, 1988 MHz

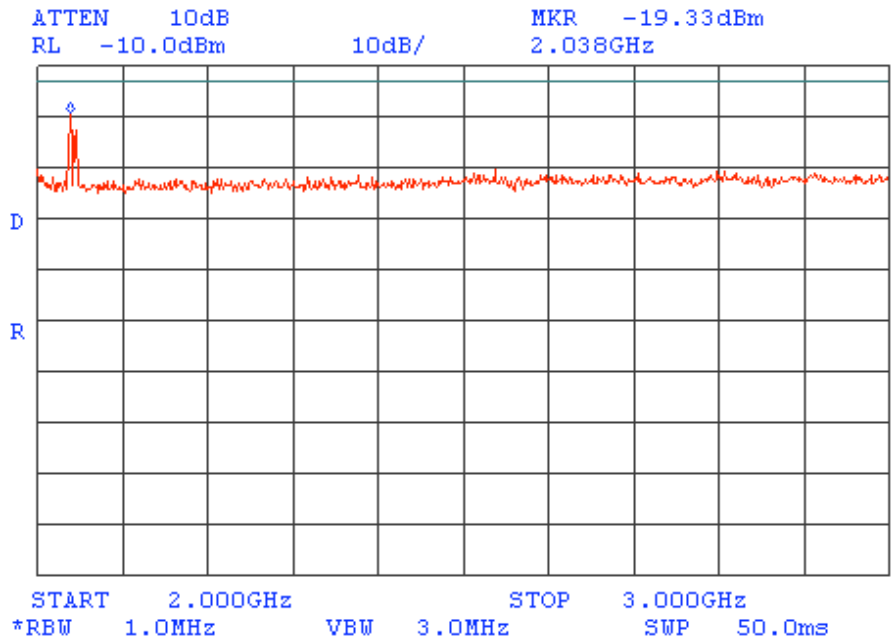






**Plot 48**

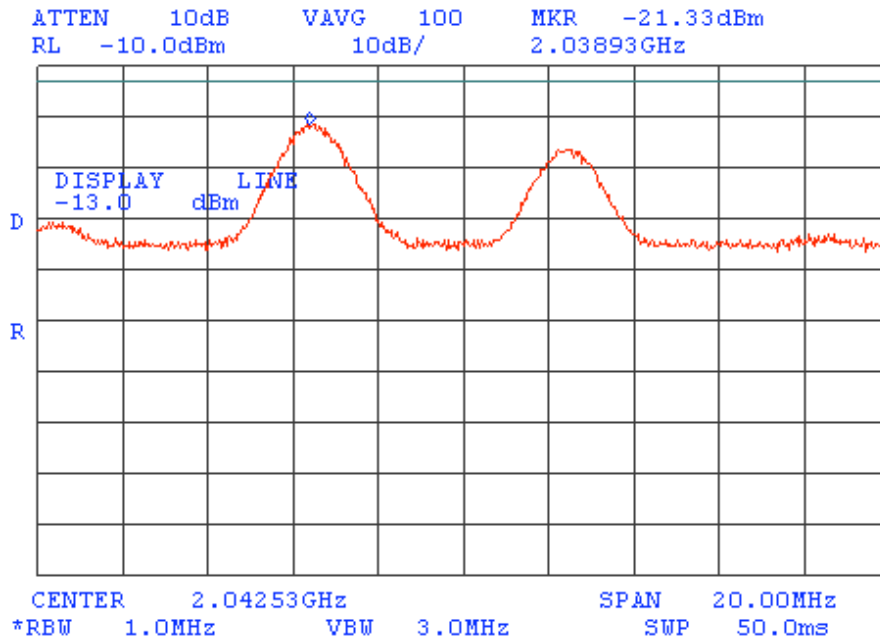
Date/Time: August 4 2003 5:55:00 PM  
Ambient Temperature: 27C  
Relative Humidity: 41%  
Test Name: Spurious emissions (conducted)  
Customer: Mobile Access  
Test Specification: FCC 22,24,90  
EUT: Mobile Access 1000  
Test Equipment: HL#1424, 2254, 2403, 1650  
Operator Name: Michael Lerman  
Notes: TDMA: 1931, 1937, 1988 MHz





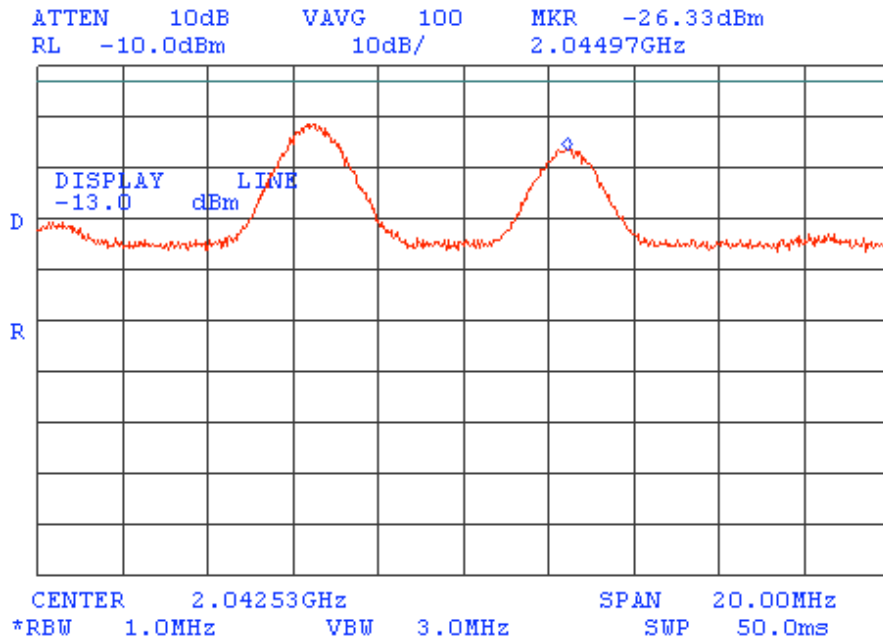
**Plot 49**

Date/Time: August 4 2003 5:56:48 PM  
Ambient Temperature: 27C  
Relative Humidity: 41%  
Test Name: Spurious emissions (conducted)  
Customer: Mobile Access  
Test Specification: FCC 22,24,90  
EUT: Mobile Access 1000  
Test Equipment: HL#1424, 2254, 2403, 1650  
Operator Name: Michael Lerman  
Notes: TDMA: 1931, 1937, 1988 MHz



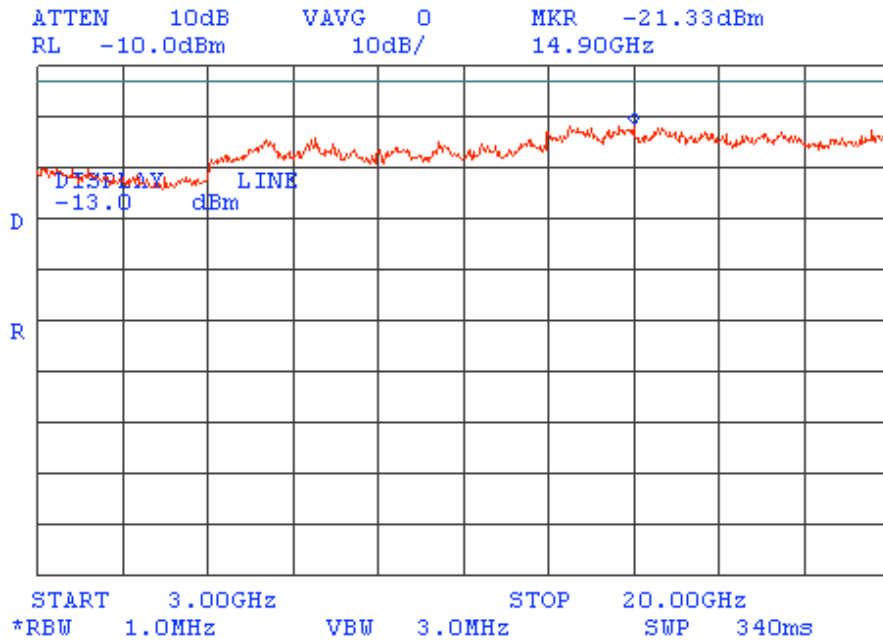
**Plot 50**

Date/Time: August 4 2003 5:57:20 PM  
Ambient Temperature: 27C  
Relative Humidity: 41%  
Test Name: Spurious emissions (conducted)  
Customer: Mobile Access  
Test Specification: FCC 22,24,90  
EUT: Mobile Access 1000  
Test Equipment: HL#1424, 2254, 2403, 1650  
Operator Name: Michael Lerman  
Notes: TDMA: 1931, 1937, 1988 MHz



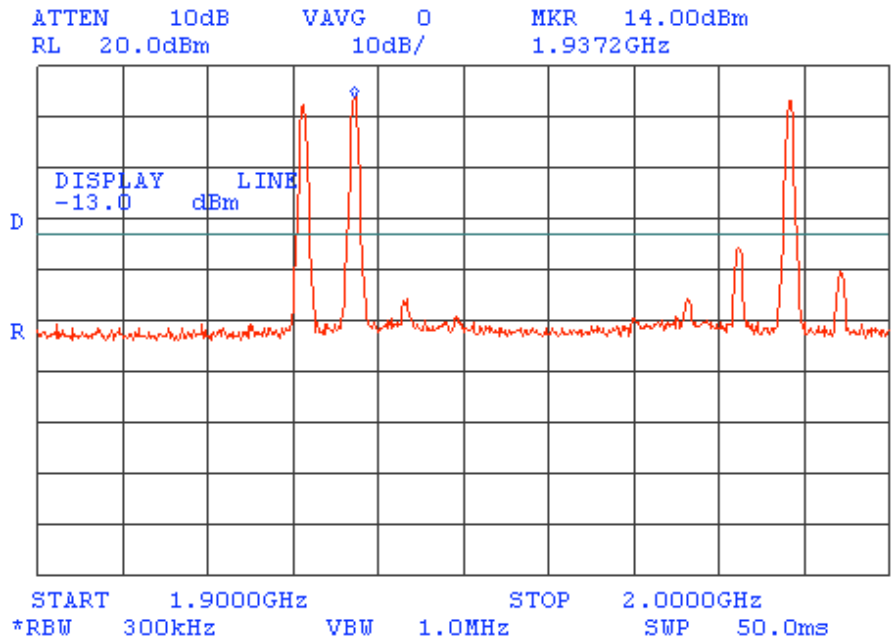
**Plot 51**

Date/Time: August 4 2003 5:59:40 PM  
Ambient Temperature: 27C  
Relative Humidity: 41%  
Test Name: Spurious emissions (conducted)  
Customer: Mobile Access  
Test Specification: FCC 22,24,90  
EUT: Mobile Access 1000  
Test Equipment: HL#1424, 2254, 2403, 1650  
Operator Name: Michael Lerman  
Notes: TDMA: 1931, 1937, 1988 MHz



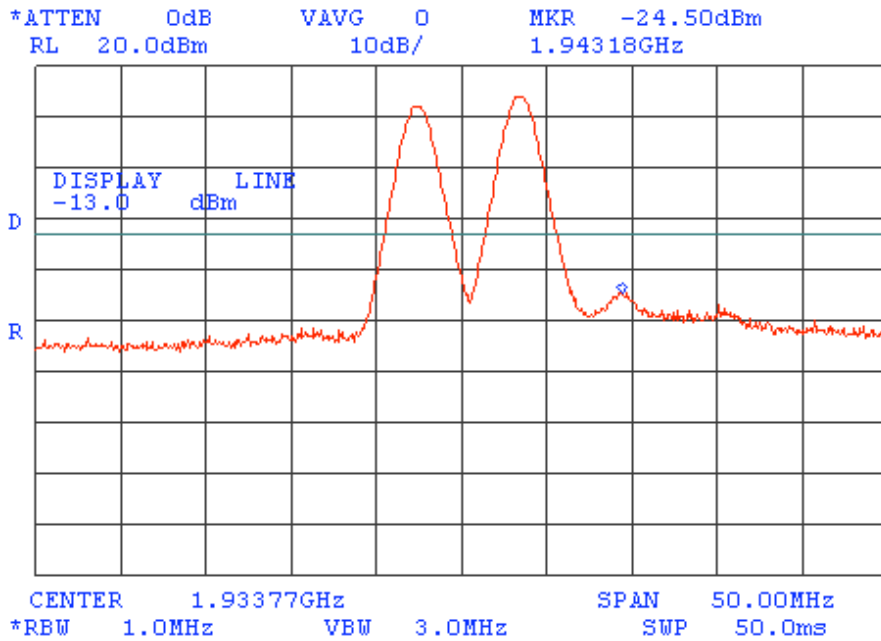
**Plot 52**

Date/Time: August 4 2003 6:06:33 PM  
Ambient Temperature: 27C  
Relative Humidity: 41%  
Test Name: Spurious emissions (conducted)  
Customer: Mobile Access  
Test Specification: FCC 22,24,90  
EUT: Mobile Access 1000  
Test Equipment: HL#1424, 2254, 2403, 1650  
Operator Name: Michael Lerman  
Notes: GSM: 1931, 1937, 1988 MHz



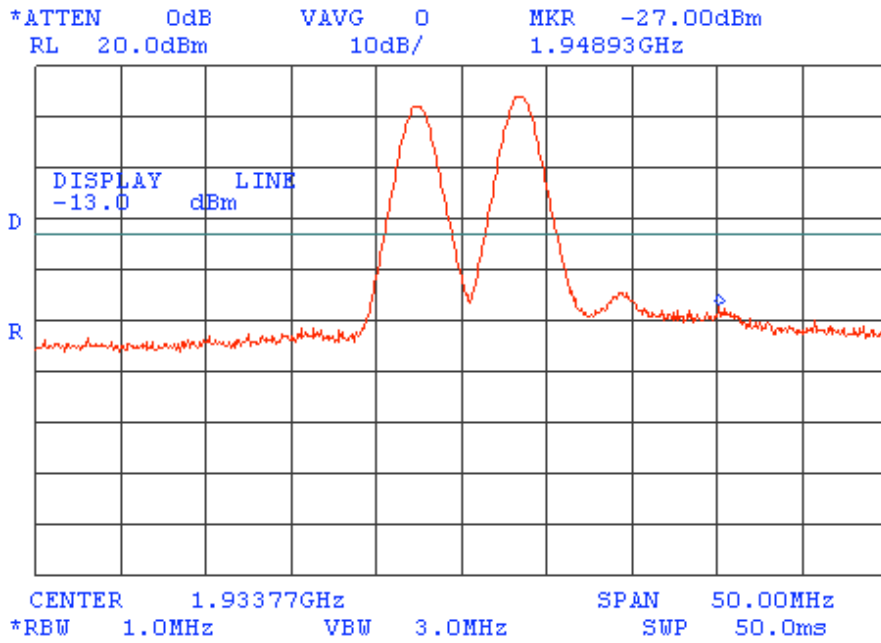
**Plot 53**

Date/Time: August 4 2003 6:09:31 PM  
Ambient Temperature: 27C  
Relative Humidity: 41%  
Test Name: Spurious emissions (conducted)  
Customer: Mobile Access  
Test Specification: FCC 22,24,90  
EUT: Mobile Access 1000  
Test Equipment: HL#1424, 2254, 2403, 1650  
Operator Name: Michael Lerman  
Notes: GSM: 1931, 1937, 1988 MHz



**Plot 54**

Date/Time: August 4 2003 6:10:49 PM  
Ambient Temperature: 27C  
Relative Humidity: 41%  
Test Name: Spurious emissions (conducted)  
Customer: Mobile Access  
Test Specification: FCC 22,24,90  
EUT: Mobile Access 1000  
Test Equipment: HL#1424, 2254, 2403, 1650  
Operator Name: Michael Lerman  
Notes: GSM: 1931, 1937, 1988 MHz





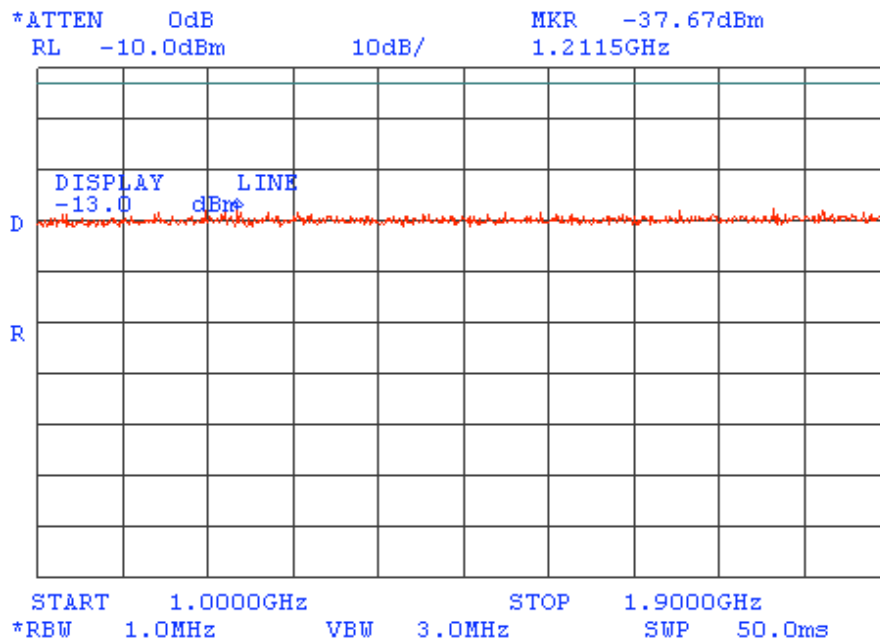






**Plot 58**

Date/Time: August 4 2003 6:14:33 PM  
Ambient Temperature: 27C  
Relative Humidity: 41%  
Test Name: Spurious emissions (conducted)  
Customer: Mobile Access  
Test Specification: FCC 22,24,90  
EUT: Mobile Access 1000  
Test Equipment: HL#1424, 2254, 2403, 1650  
Operator Name: Michael Lerman  
Notes: GSM: 1931, 1937, 1988 MHz





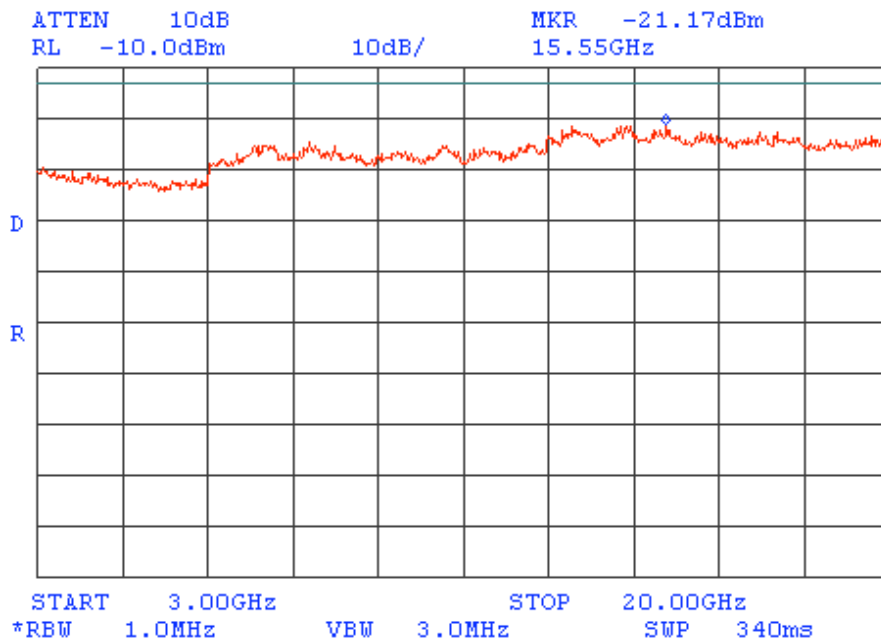






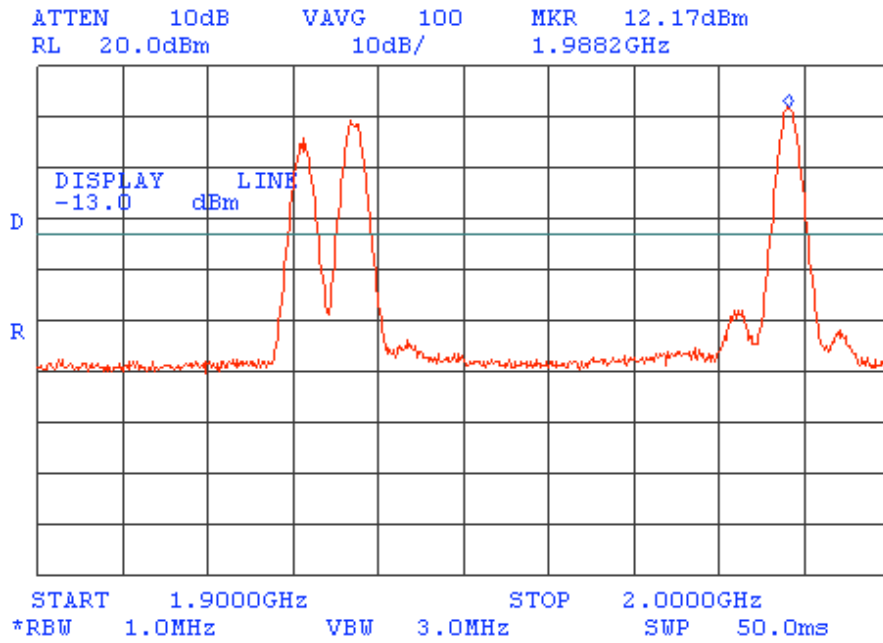
**Plot 63**

Date/Time: August 4 2003 6:24:38 PM  
Ambient Temperature: 27C  
Relative Humidity: 41%  
Test Name: Spurious emissions (conducted)  
Customer: Mobile Access  
Test Specification: FCC 22,24,90  
EUT: Mobile Access 1000  
Test Equipment: HL#1424, 2254, 2403, 1650  
Operator Name: Michael Lerman  
Notes: GSM: 1931, 1937, 1988 MHz



**Plot 64**

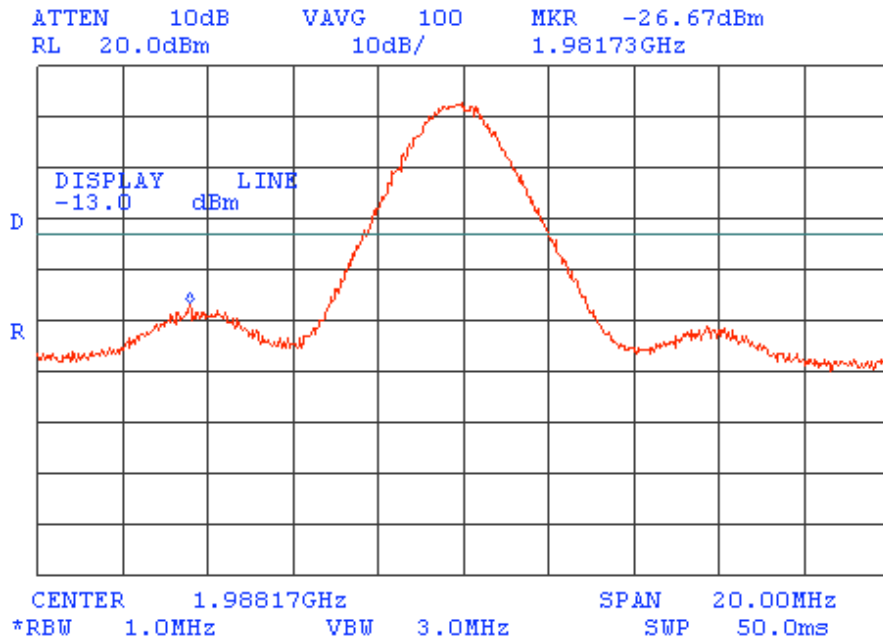
Date/Time: August 4 2003 6:34:02 PM  
Ambient Temperature: 27C  
Relative Humidity: 41%  
Test Name: Spurious emissions (conducted)  
Customer: Mobile Access  
Test Specification: FCC 22,24,90  
EUT: Mobile Access 1000  
Test Equipment: HL#1424, 2254, 2403, 1650  
Operator Name: Michael Lerman  
Notes: CDMA: 1931, 1937, 1988 MHz





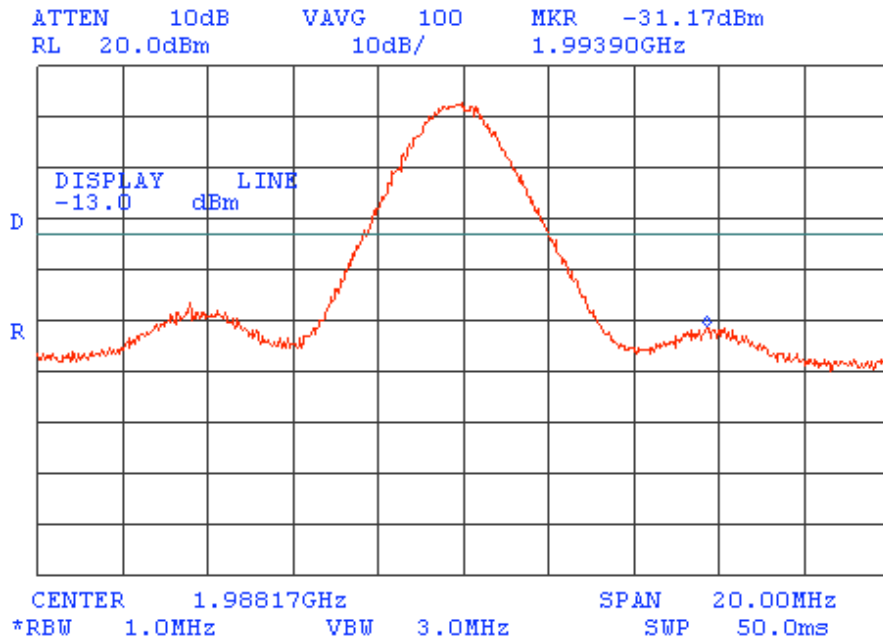
**Plot 65**

Date/Time: August 4 2003 6:36:13 PM  
Ambient Temperature: 27C  
Relative Humidity: 41%  
Test Name: Spurious emissions (conducted)  
Customer: Mobile Access  
Test Specification: FCC 22,24,90  
EUT: Mobile Access 1000  
Test Equipment: HL#1424, 2254, 2403, 1650  
Operator Name: Michael Lerman  
Notes: CDMA: 1931, 1937, 1988 MHz



**Plot 66**

Date/Time: August 4 2003 6:37:06 PM  
Ambient Temperature: 27C  
Relative Humidity: 41%  
Test Name: Spurious emissions (conducted)  
Customer: Mobile Access  
Test Specification: FCC 22,24,90  
EUT: Mobile Access 1000  
Test Equipment: HL#1424, 2254, 2403, 1650  
Operator Name: Michael Lerman  
Notes: CDMA: 1931, 1937, 1988 MHz

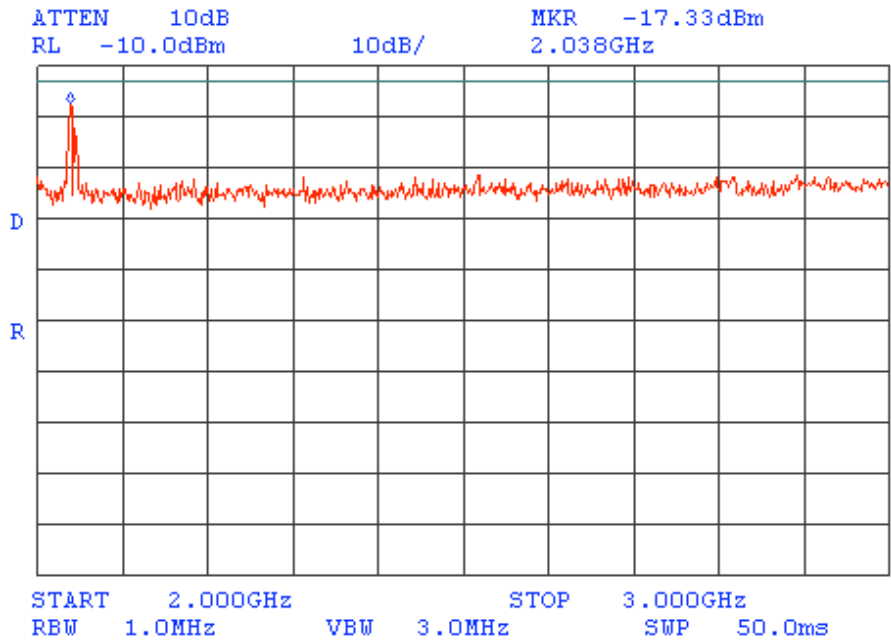






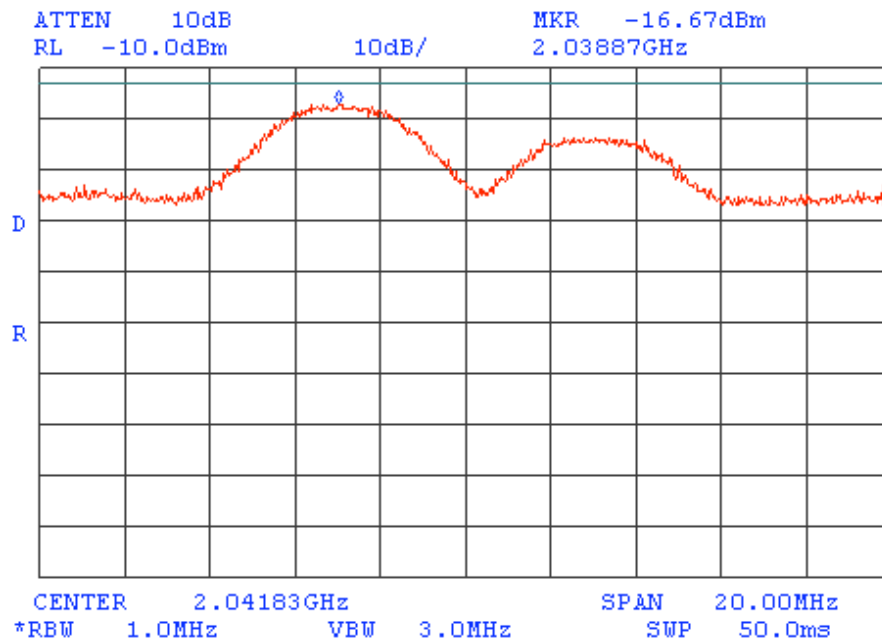
**Plot 69**

Date/Time: August 4 2003 6:50:23 PM  
Ambient Temperature: 27C  
Relative Humidity: 41%  
Test Name: Spurious emissions (conducted)  
Customer: Mobile Access  
Test Specification: FCC 22,24,90  
EUT: Mobile Access 1000  
Test Equipment: HL#1424, 2254, 2403, 1650, 1097  
Operator Name: Michael Lerman  
Notes: CDMA: 1931, 1937, 1988 MHz



**Plot 70**

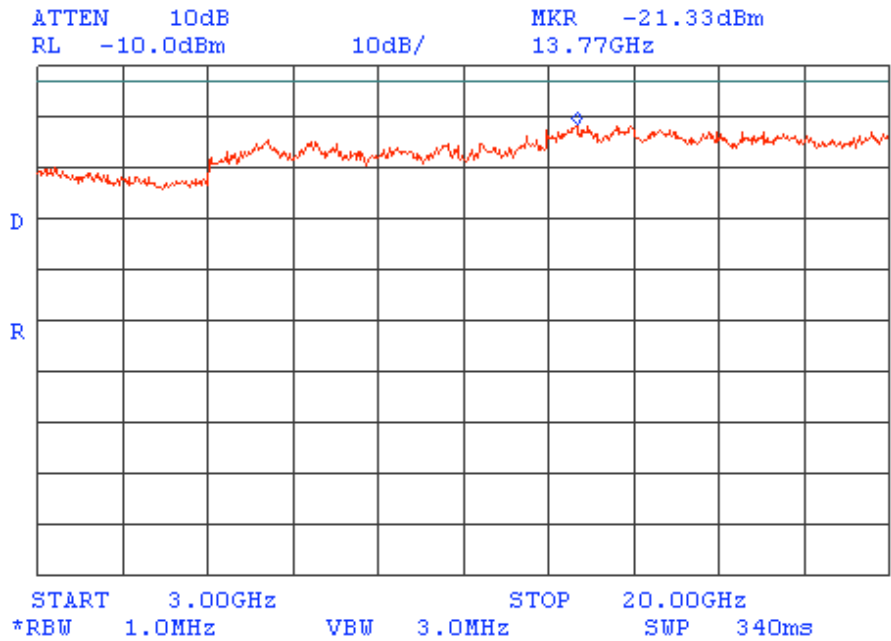
Date/Time: August 4 2003 6:55:08 PM  
Ambient Temperature: 27C  
Relative Humidity: 41%  
Test Name: Spurious emissions (conducted)  
Customer: Mobile Access  
Test Specification: FCC 22,24,90  
EUT: Mobile Access 1000  
Test Equipment: HL#1424, 2254, 2403, 1650, 1097  
Operator Name: Michael Lerman  
Notes: CDMA: 1931, 1937, 1988 MHz





**Plot 72**

Date/Time: August 4 2003 6:57:05 PM  
Ambient Temperature: 27C  
Relative Humidity: 41%  
Test Name: Spurious emissions (conducted)  
Customer: Mobile Access  
Test Specification: FCC 22,24,90  
EUT: Mobile Access 1000  
Test Equipment: HL#1424, 2254, 2403, 1650, 1097  
Operator Name: Michael Lerman  
Notes: CDMA: 1931, 1937, 1988 MHz





Date 01 Aug 2004  
Project 16021  
**Test Emission mask**  
Operator Alex Kruglov  
Test equipment 1424, 2399, 2524, 1651, 789, 316, 460  
Temperature 26°C  
Humidity 47%  
Air pressure 1005 hPa  
EUT Mobile Access 2000  
Notes: At 1.5 dBm input power (CW);  
At output connector with maximum power level.  
High signal (red) – at EUT output, low signal (blue) – at EUT  
input.





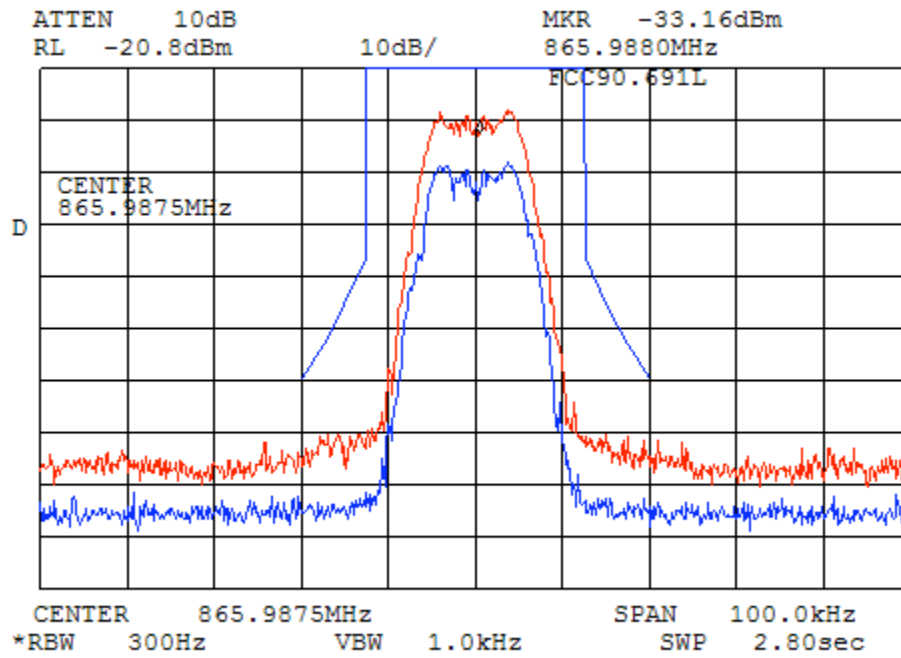








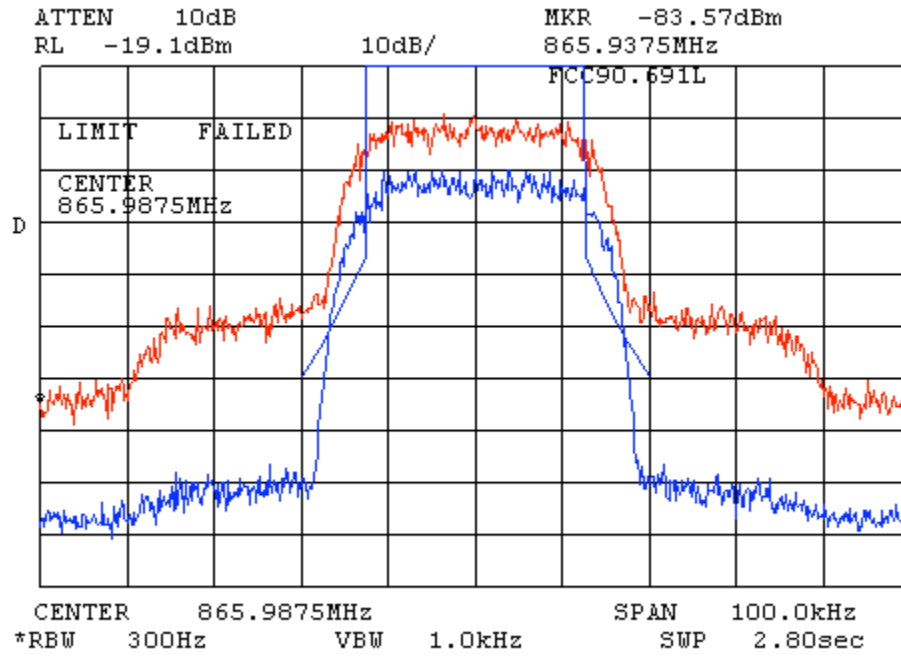
**Emission mask at 865.9875 MHz. FFC 90.691**







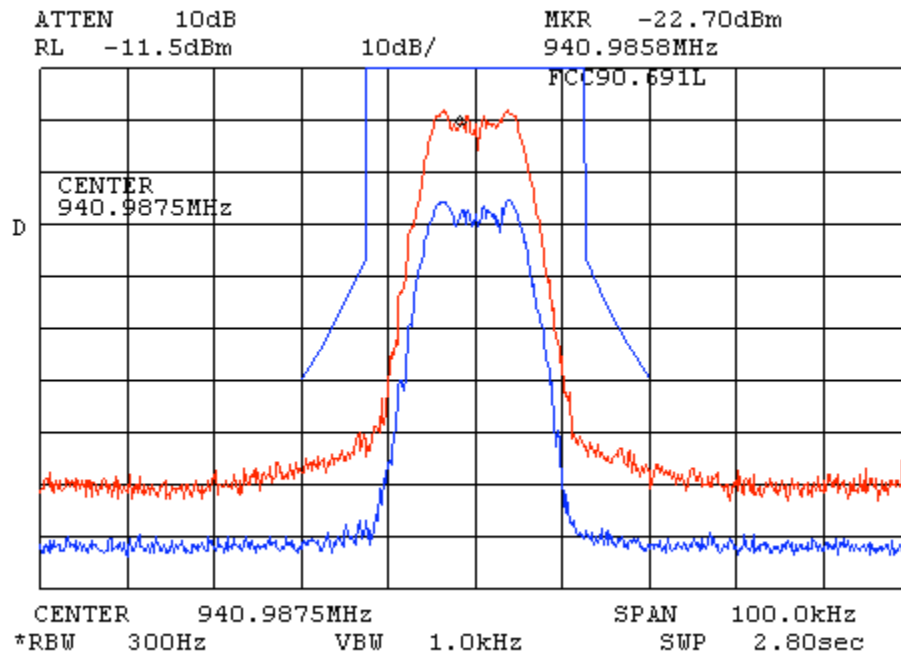
### Emission mask at 865.9875 MHz. FCC 90.691







**Emission mask at 940.9875 MHz. FCC 90.691**





### Emission mask at 940.9875 MHz. FFC 90.210G

