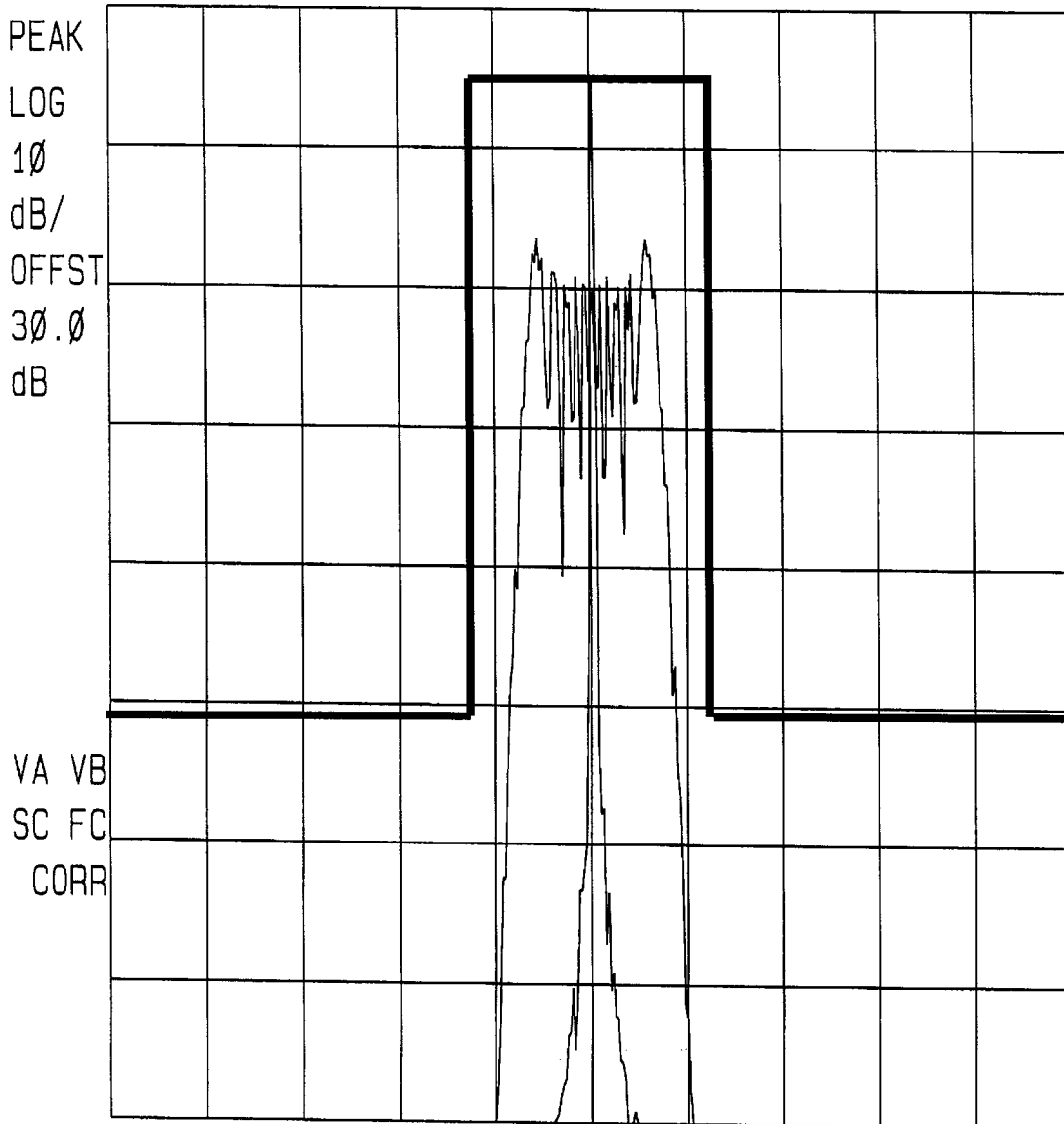


MODEL 610SMR-900 POWER PER CHANNEL

Channels	UpLink dBm	DownLink dBm
1	28.1	30.2
2	24.1	26.2
3	21.8	23.9
4	20.1	22.2
5	18.8	20.9
6	17.8	19.9
7	16.9	19.0
8	16.1	18.2
9	15.4	17.5
10	14.8	16.9
11	14.3	16.4
12	13.8	15.9
13	13.3	15.4
14	12.9	15.0
15	12.5	14.6
16	12.1	14.2

15: 54: 31 NOV 20, 2003

REF 30.0 dBm AT 10 dB



CENTER 898.5000 MHz

SPAN 250.0 kHz

#RES BW 300 Hz

VBW 1 kHz

SWP 8.33 sec

Customer: Cellular Specialties, Inc.
Test Sample: Bidirectional Amplifier
Model No: 610 SMR900
Test Method: Occupied Bandwidth, FCC Part 2, para 2.1049
Notes: Uplink Frequency 898.5 MHz
Modulation: TDMA - Output

Date: 11/21/2003 Tech: T. Firkowski Sheet 1 of 4

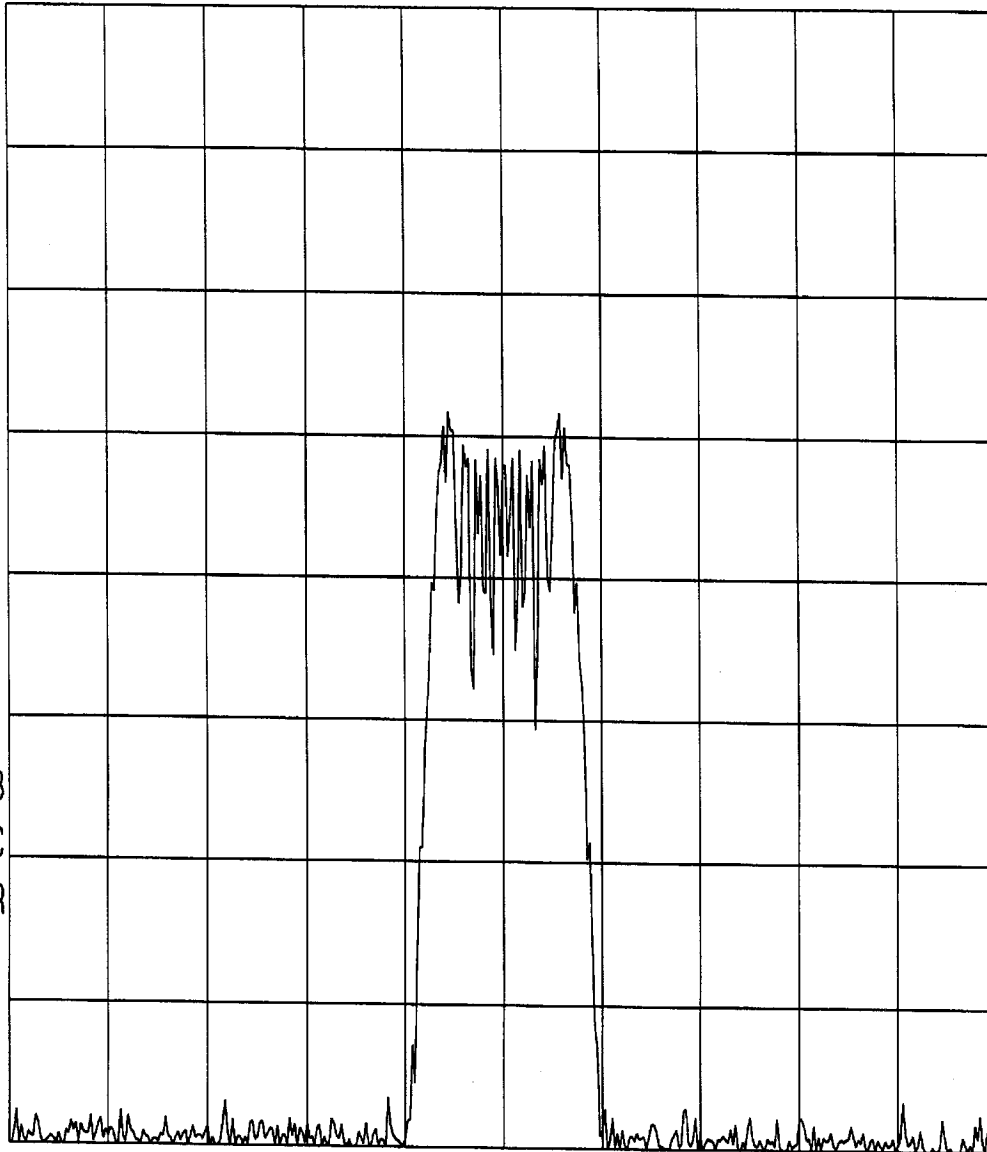
Retlif Testing Laboratories

Report No R-4193N

15:56:45 NOV 20, 2003

REF -30.0 dBm AT 10 dB

PEAK
LOG
10
dB/



CENTER 898.5000 MHz

SPAN 250.0 kHz

#RES BW 300 Hz

VBW 1 kHz

SWP 8.33 sec

Customer:	Cellular Specialties, Inc.
Test Sample:	Bidirectional Amplifier
Model No:	610 SMR900
Test Method:	Occupied Bandwidth, FCC Part 2, para 2.1049
Notes:	Uplink Frequency 898.5 MHz Modulation: TDMA - Input

Retlif Testing Laboratories

Report No R-4193N

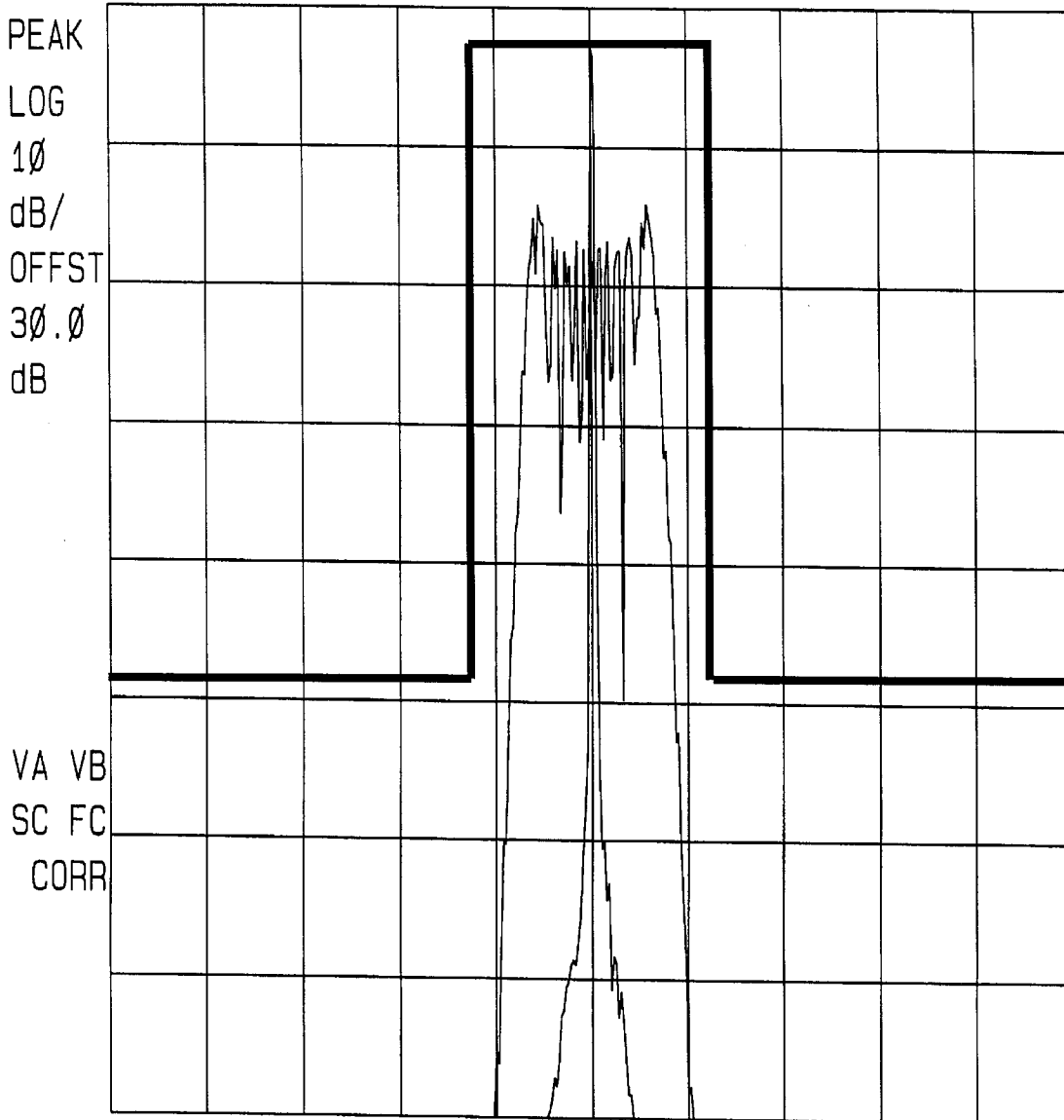
Date 11/21/2003

Tech. T. Firkowski

Sheet 2 of 4

16:00:24 NOV 20, 2003

REF 30.0 dBm AT 10 dB



CENTER 937.5000 MHz
#RES BW 300 Hz

VBW 1 kHz

SPAN 250.0 kHz
SWP 8.33 sec

Customer: Cellular Specialties, Inc.
Test Sample: Bidirectional Amplifier
Model No: 610 SMR900
Test Method: Occupied Bandwidth, FCC Part 2, para 2.1049
Notes: Downlink Frequency 937.5 MHz
Modulation: TDMA - Output

Date: 11/21/2003

Tech: T. Firkowski

Sheet 3 of 4

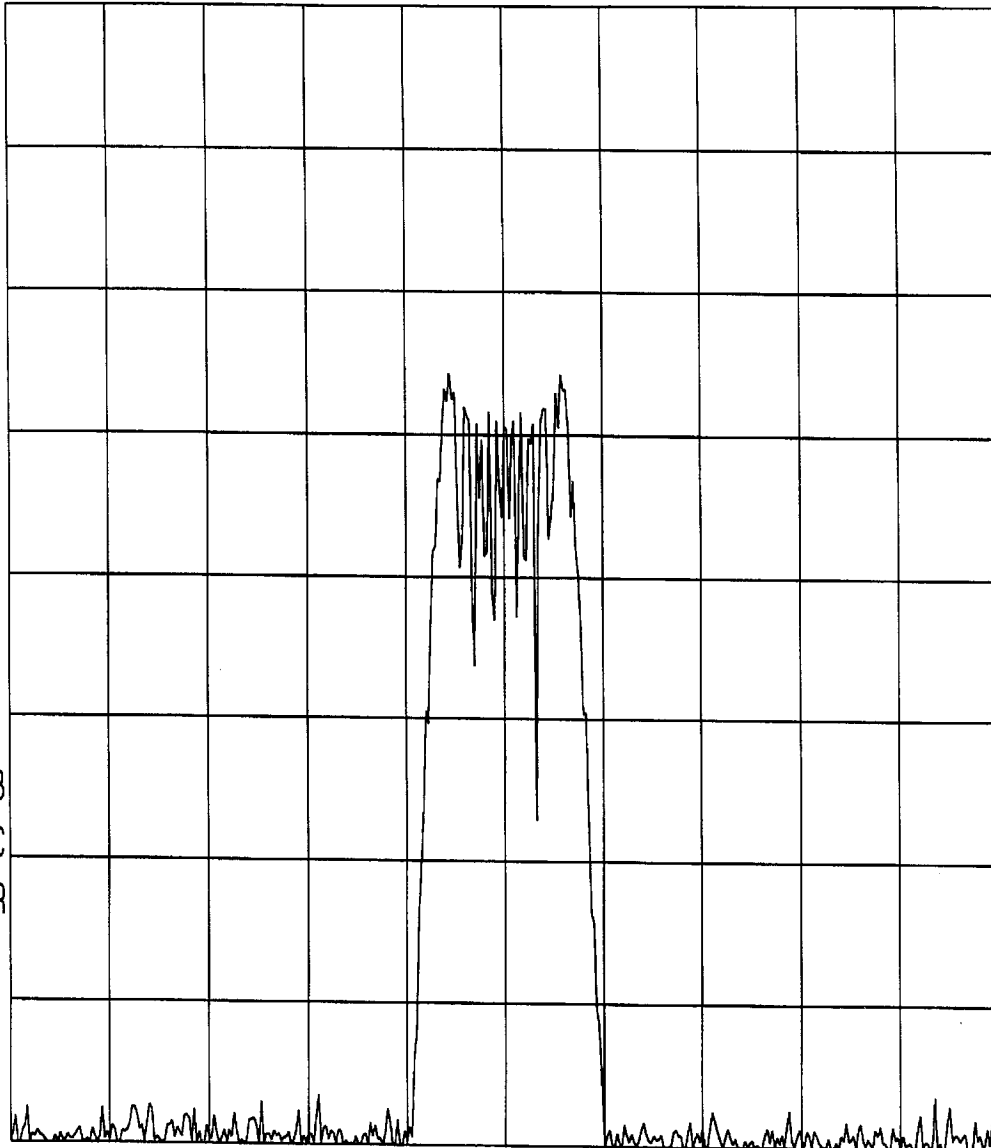
Retlif Testing Laboratories

Report No R-4193N

16:02:07 NOV 20, 2003

REF -30.0 dBm AT 10 dB

PEAK
LOG
10
dB/



CENTER 937.5000 MHz

SPAN 250.0 kHz

#RES BW 300 Hz

VBW 1 kHz

SWP 8.33 sec

Customer: Cellular Specialties, Inc.
Test Sample: Bidirectional Amplifier
Model No: 610 SMR900
Test Method: Occupied Bandwidth, FCC Part 2, para 2.1049
Notes: Downlink Frequency 937.5 MHz
Modulation: TDMA - Input

Date: 11/21/2003

Tech: T. Firkowski

Sheet 4 of 4

Retlif Testing Laboratories

Report No R-4193N

RETLIF TESTING LABORATORIES

TABULAR DATA SHEET

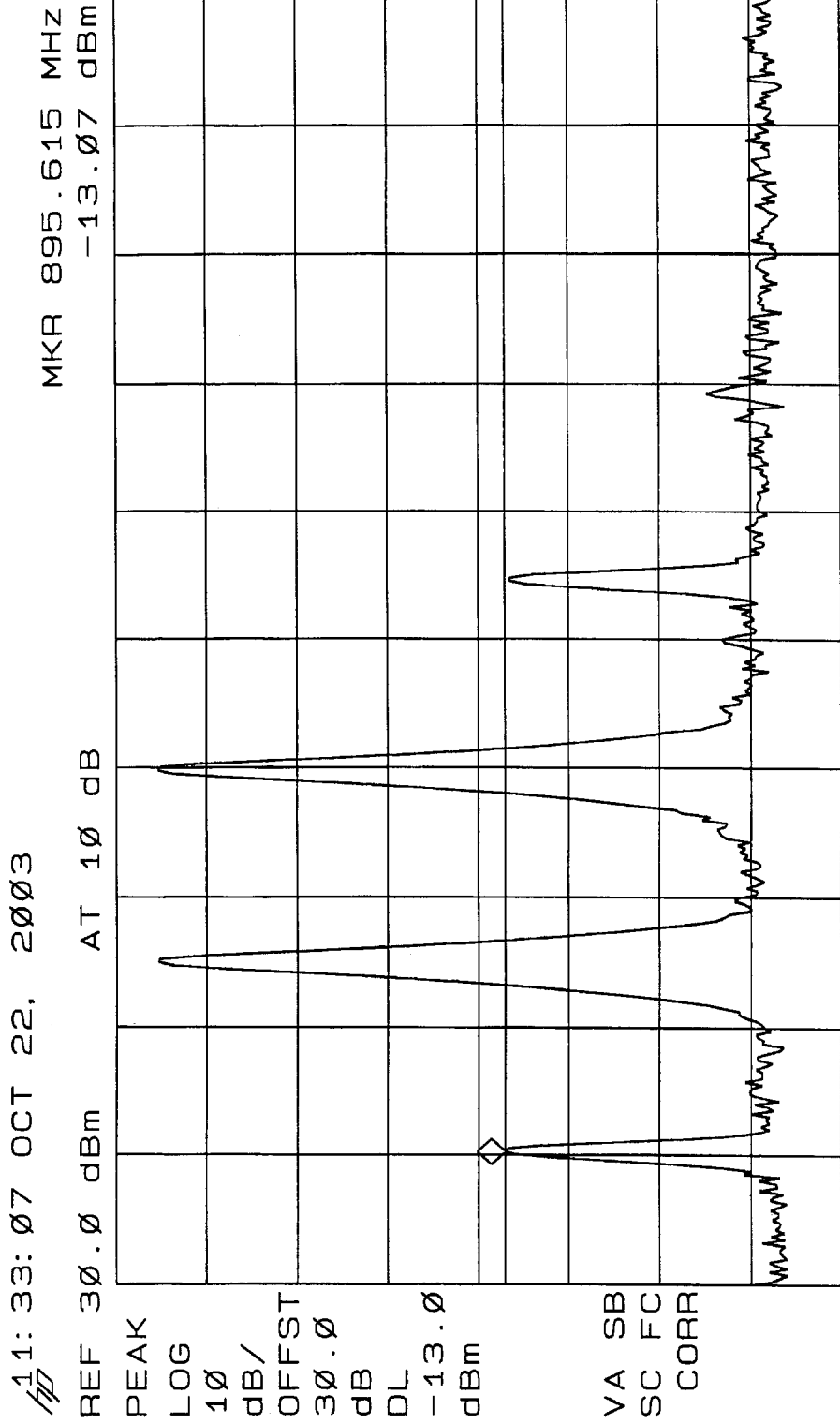
Test Method:	Two Tone		
Customer:	Cellular Specialties, Inc.	Job No:	R-4193N
Test Sample:	Bidirectional Amplifier		
Model No:	610 900 SMR	Serial No:	n/a
Test Specification:	FCC Part 2 Paragraph: 2.1047		
Operating Mode:	Amplifying input signal		
Technician:	T. Firkowski	Date:	10/22/2003
Notes:	Uplink Frequency Range: 896 - 901 MHz Downlink Frequency Range: 935 - 940 MHz		

Test Frequency	Measured Level	Power	Total Power							
MHz	dBm	mW	mW							
(Uplink) low										
895.615	-13.07									
896.500	25.30	338.8442								
897.400	25.35	342.7678	681.6119							
898.270	-13.5									
(Uplink) high										
898.445	-13.02									
899.510	25.09	322.8494								
900.560	25.11	324.3962	647.2456							
901.595	-15.84									
(Downlink) low										
934.390	-13.01									
935.485	27.37	545.7580								
936.565	27.41	550.8077	1096.5657							
937.675	-13.82									
(Downlink) high										
937.475	-13.08									
938.510	27.21	526.0173								
939.560	27.23	528.4453	1054.4625							
940.595	-15.14									

RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

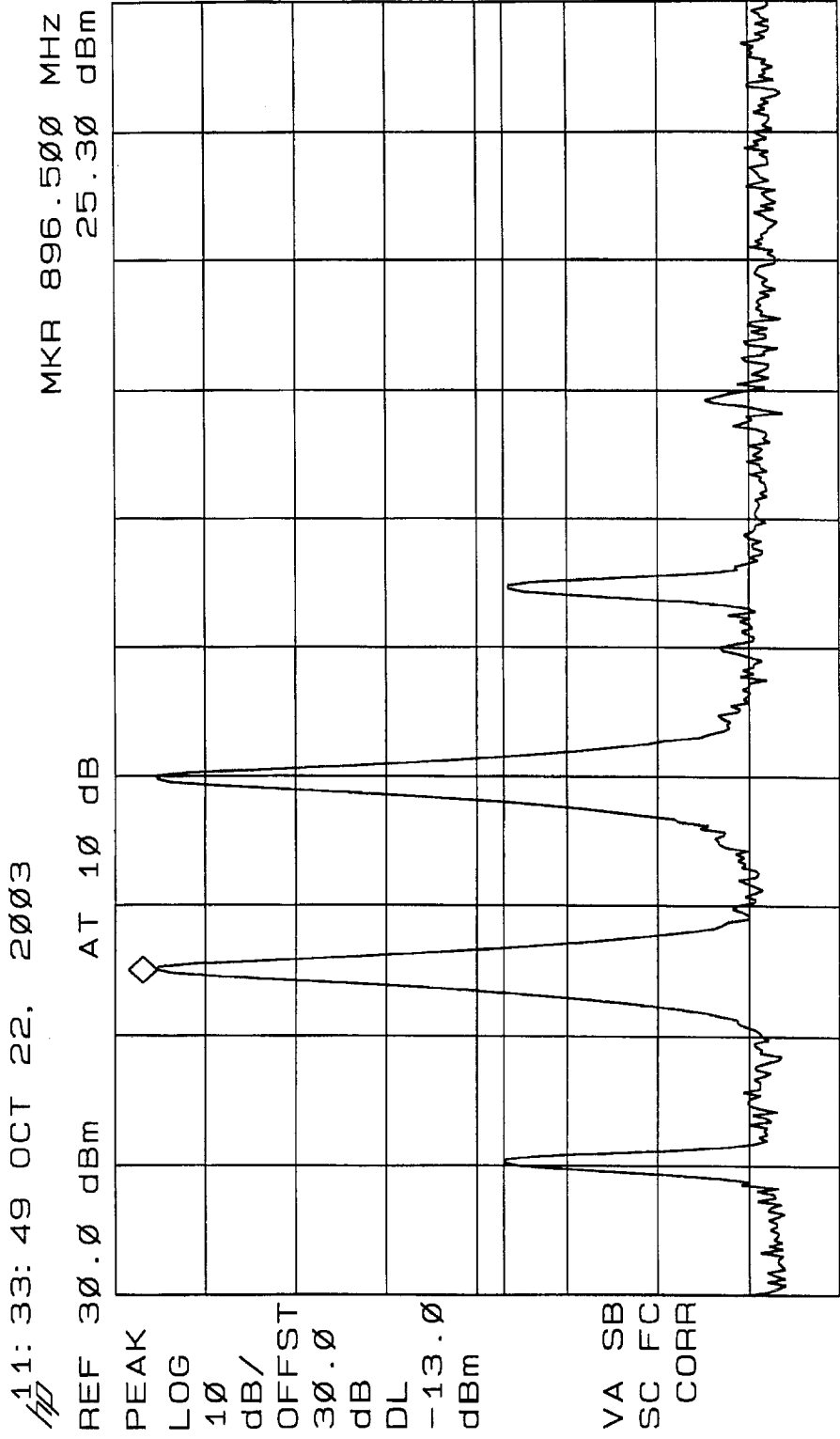
Test Method: Two Tone	Test Sample: Bidirectional Amplifier	Job No.: R-4193N	Technician: T. Firkowski
Customer: Cellular Specialties, Inc.	Serial No.: n/a	Date: 10/22/2003	
Model No.: 610 900 SMR	Paragraph: 2.1047		
Test Specification: FCC Part 2	Operating Mode: Amplifying input signal		
Notes: Uplink low end			



RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

Test Method:	Two Tone	Job No.:	R-4193N
Customer:	Cellular Specialties, Inc.	Technician:	T. Firkowski
Model No.:	610 900 SMR	Date:	10/22/2003
Test Specification:	FCC Part 2		
Operating Mode:	Amplifying input signal		
Notes:	Uplink low end		
	Paragraph: 2.1047		
	Serial No.:		
	n/a		
	Test Sample:		
	Bidirectional Amplifier		



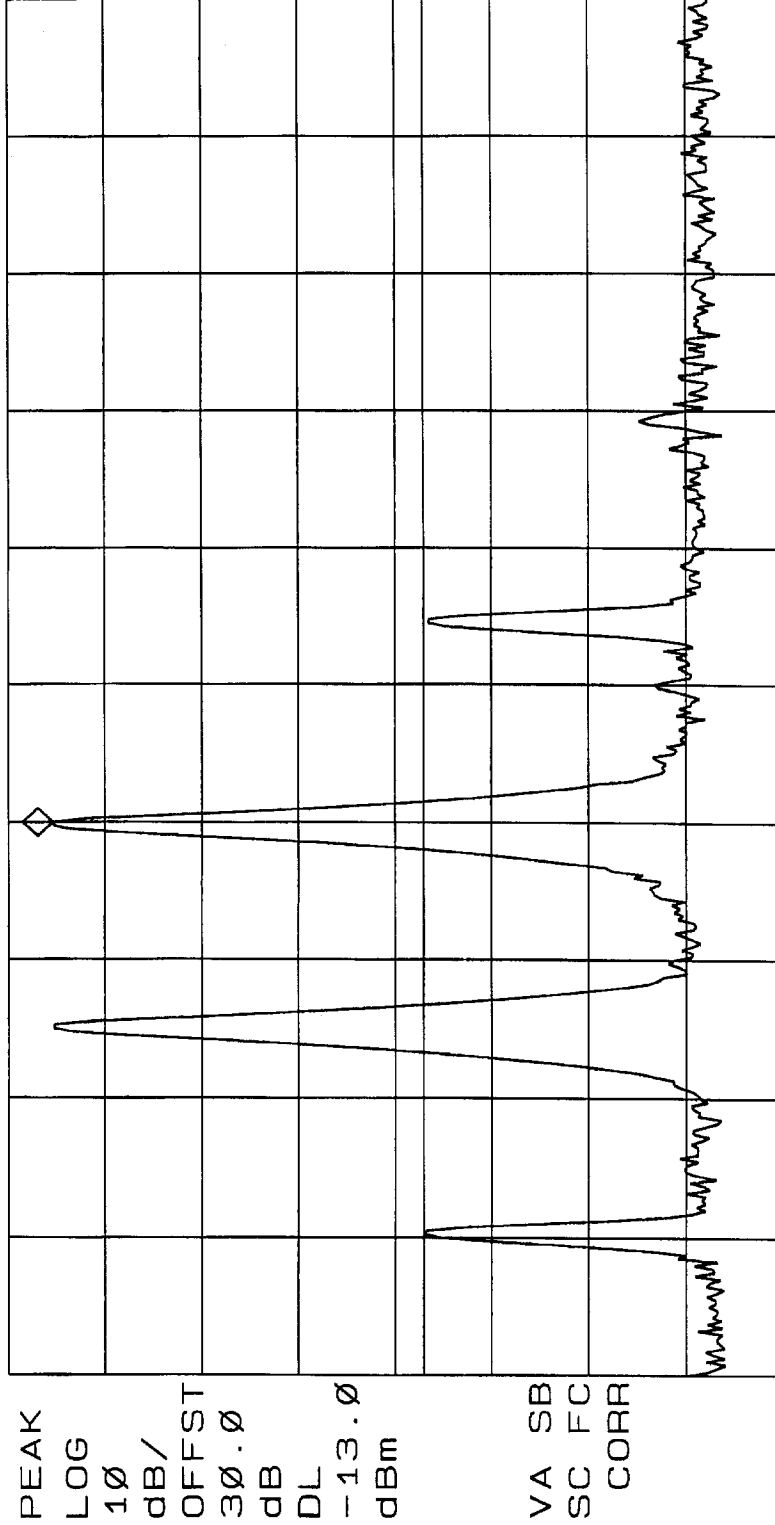
START 895.000 MHz
#RES BW 30 KHZ
VBW 100 KHZ
STOP 901.000 MHz
SWP 20.0 msec

RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

Test Method: Two Tone	Test Sample: Cellular Specialties, Inc.	Job No.: R-4193N	Technician: T. Firkowski
Customer: Cellular Specialties, Inc.	Serial No.: 610 900 SMR	Date: 10/22/2003	
Model No.:	Paragraph: 2.1047		
Test Specification: FCC Part 2			
Operating Mode: Amplifying input signal			
Notes: Uplink low end			

11:33:58 OCT 22, 2003
 MKR 897.400 MHz
 REF 30.0 dBm AT 10 dB
 25.35 dBm



START 895.000 MHz
 #RES BW 30 KHZ
 VBW 100 KHZ
 STOP 901.000 MHz
 SWP 20.0 msec

RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

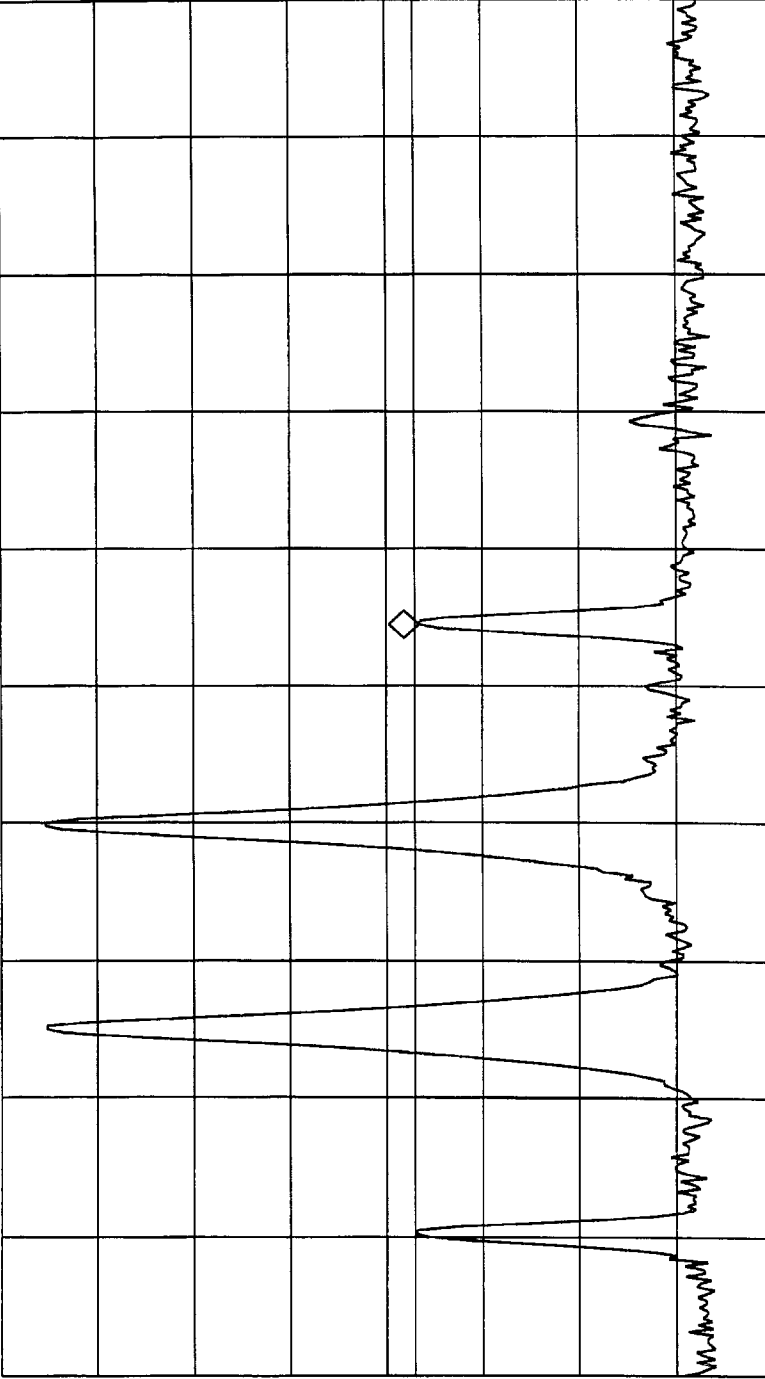
Test Method: Two Tone	Test Sample: Bidirectional Amplifier	Job No.: R-4193N	
Customer: Cellular Specialties, Inc.	Serial No.: n/a	Technician: T. Firkowski	Date: 10/22/2003
Model No.: 610 900 SMR	Paragraph: 2.1047		
Test Specification: FCC Part 2			
Operating Mode: Amplifying input signal			
Notes: Uplink low end			

11:34:13 OCT 22, 2003

MKR 898.270 MHz
-13.50 dBm

AT 10 dB

REF 30.0 dBm



PEAK
LOG
10
dB/
OFFST
30.0
dB
DL
-13.0
dBm

VA SB
SC FC
CORR

START 895.000 MHz
#RES BW 30 KHZ

VBW 100 KHZ

STOP 901.000 MHz
SWP 20.0 msec

RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

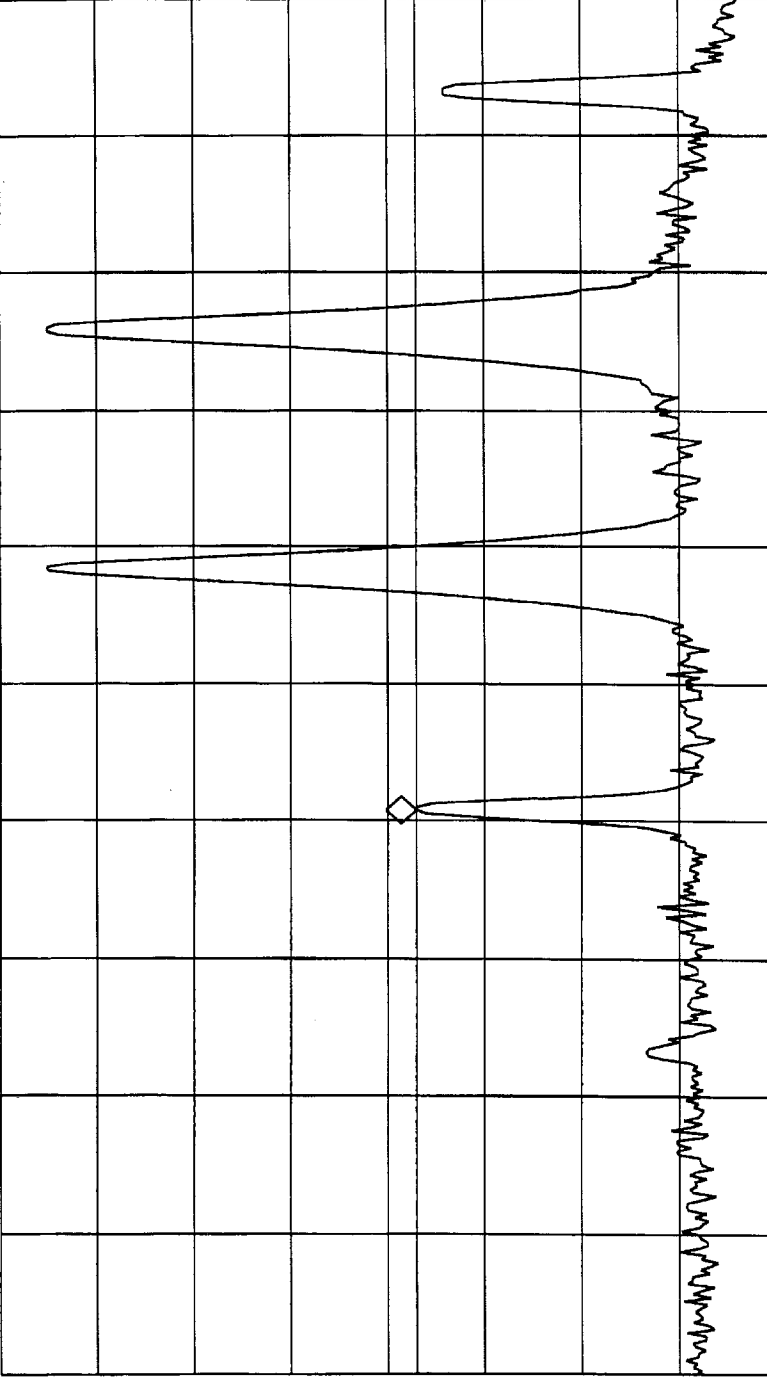
Test Method: Two Tone	Test Sample: Bidirectional Amplifier	Job No.: R-4193N	Technician: T. Firkowski
Customer: Cellular Specialties, Inc.	Serial No.: n/a	Date: 10/22/2003	
Model No.: 610 900 SMR	Paragraph: 2.1047		
Test Specification: FCC Part 2	Operating Mode: Amplifying input signal		
Notes: Uplink high end			

11:37:36 OCT 22, 2003

MKR 898.445 MHz
-13.02 dBm

AT 10 dB

REF 30.0 dBm



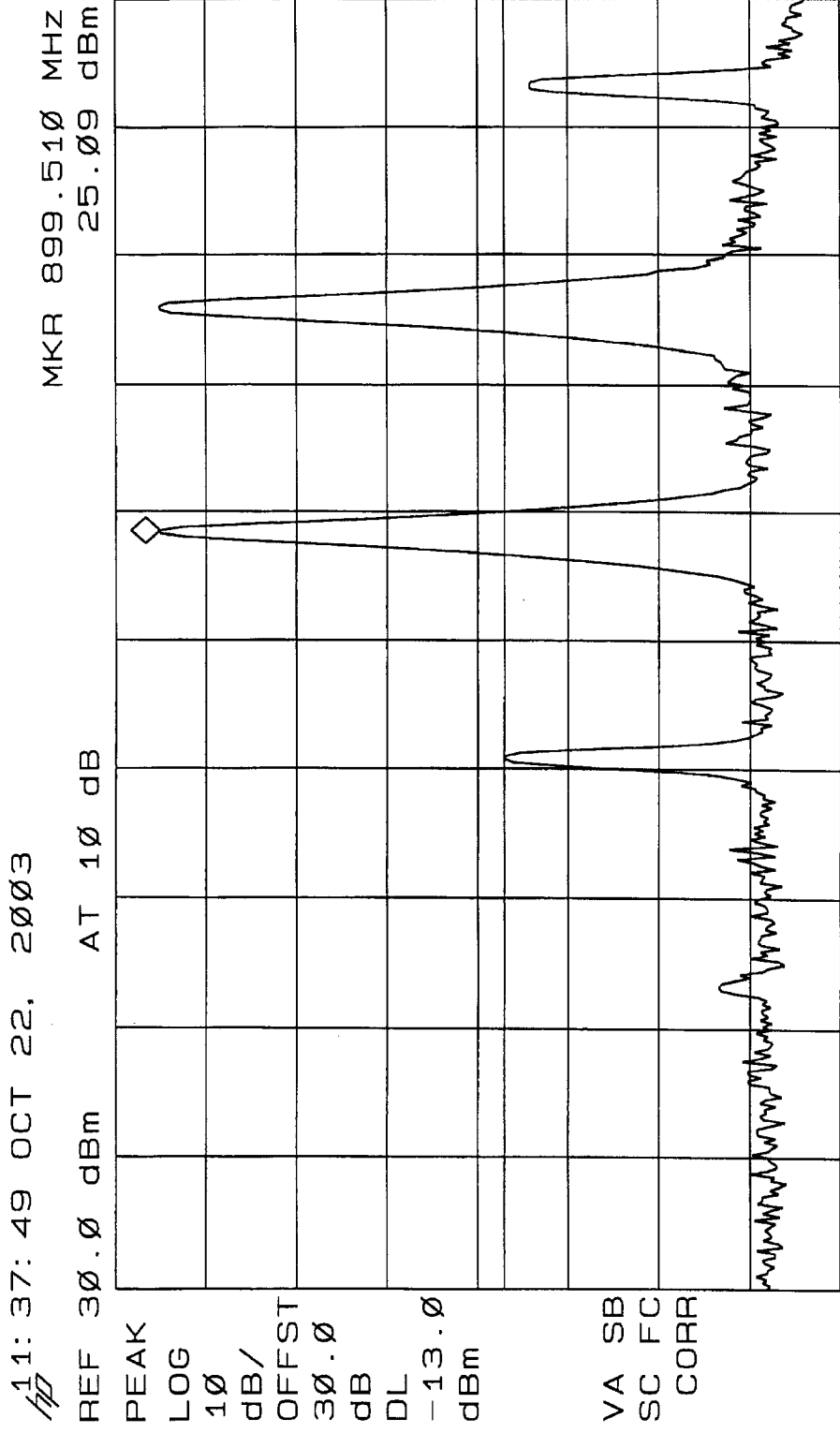
PEAK
LOG
10
dB/
OFFST
30.0
dB
DL
-13.0
dBm
VA SB
SC FC
CORR

START 896.000 MHz STOP 902.000 MHz
#RES BW 30 KHZ VBW 100 KHZ SWP 20.0 msec

RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

Test Method: Two Tone	Job No.: R-4193N	Bidirectional Amplifier	Technician: T. Firkowski
Customer: Cellular Specialties, Inc.	Test Sample:	Serial No.: n/a	Date: 10/22/2003
Model No.: 610 900 SMR	Paragraph: 2.1047		
Test Specification: FCC Part 2	Amplifying input signal		
Operating Mode: Uplink high end	Notes:		

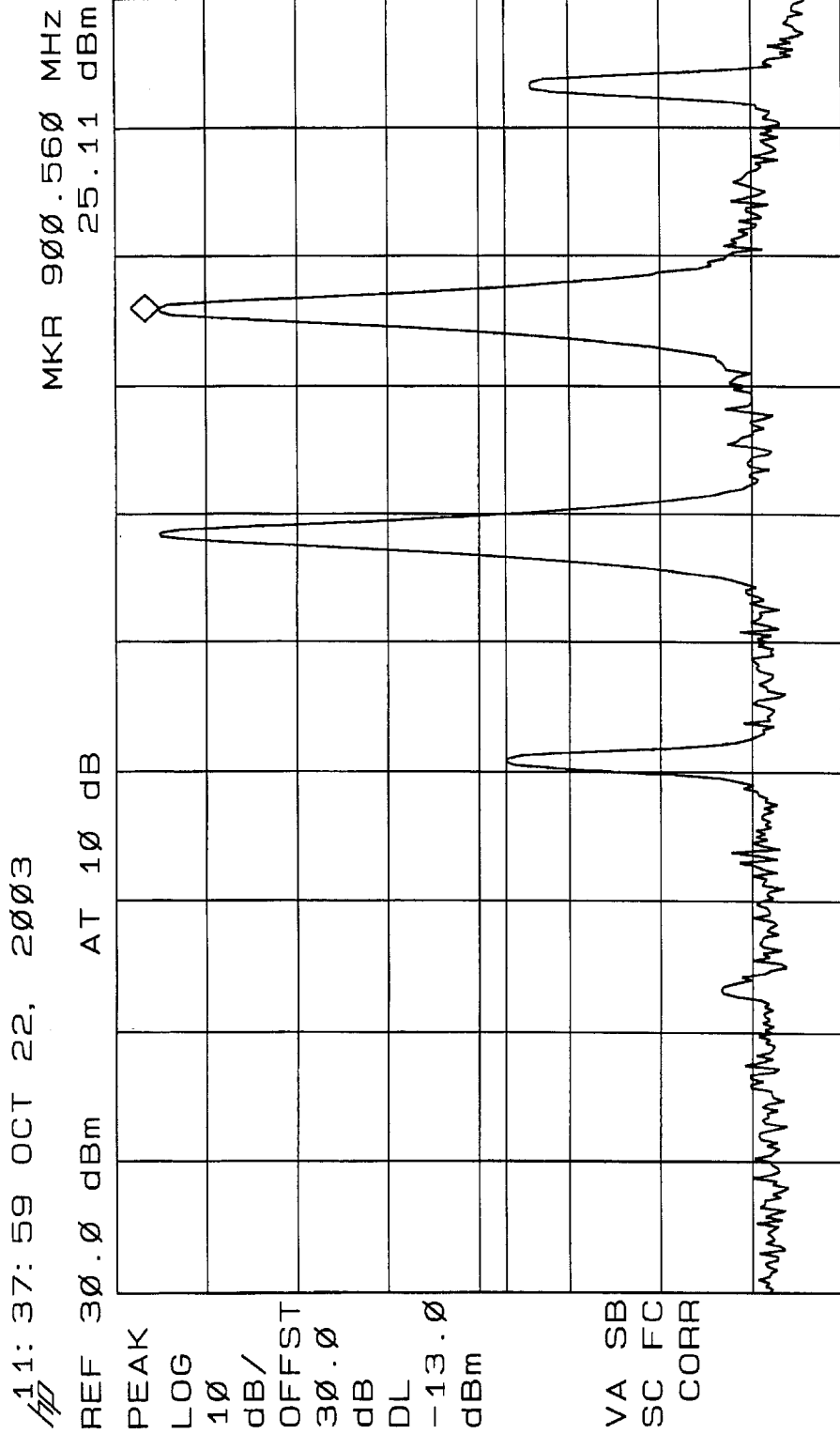


START 896.000 MHz STOP 902.000 MHz
#RES BW 30 KHZ VBW 100 KHZ SWP 20.0 msec

RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

Test Method:	Two Tone		
Customer:	Cellular Specialties, Inc.	Test Sample:	Bidirectional Amplifier
Model No.:	610 900 SMR	Serial No.:	n/a
Test Specification:	FCC Part 2	Paragraph:	2.1047
Operating Mode:	Amplifying input signal		
Notes:	Uplink high end		
Job No.:	R-4193N		
Technician:	T. Firkowski		
Date:	10/22/2003		

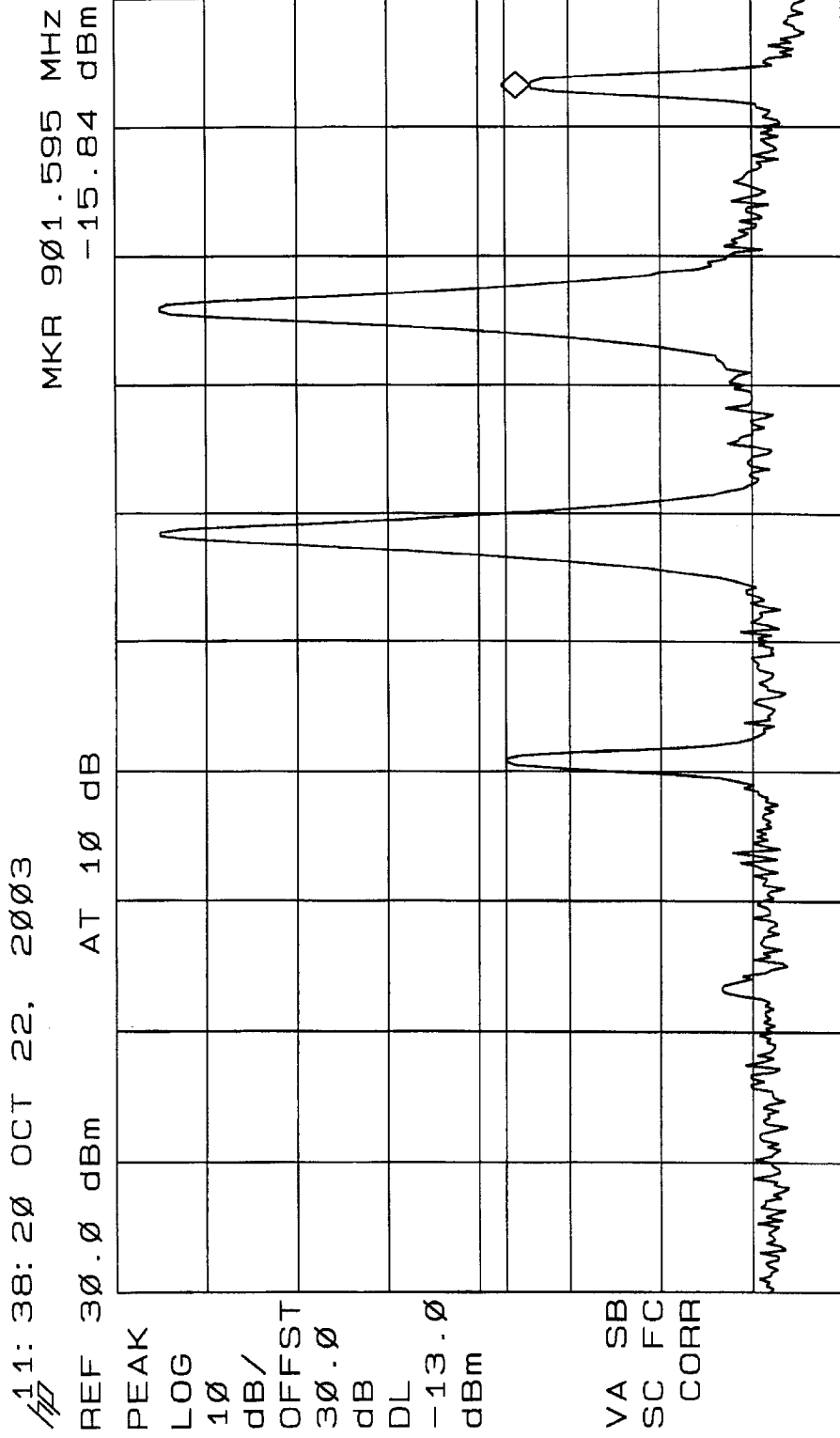


START 896.000 MHz STOP 902.000 MHz
 #RES BW 30 KHZ VBW 100 KHZ SWP 20.0 msec

RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

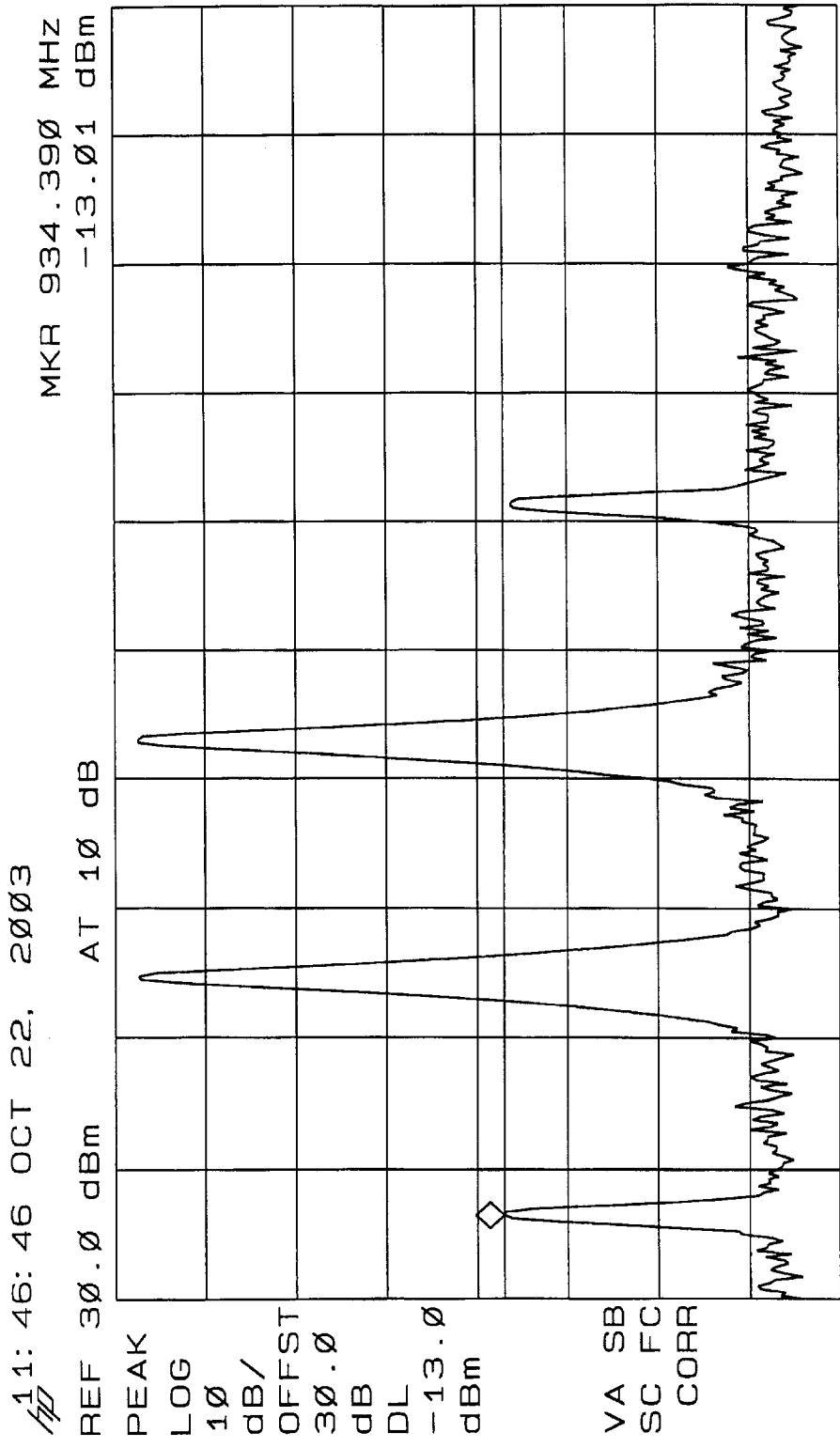
Test Method:	Two Tone		
Customer:	Cellular Specialties, Inc.	Test Sample:	Bidirectional Amplifier
Model No.:	610 900 SMR	Serial No.:	n/a
Test Specification:	FCC Part 2	Paragraph:	2.1047
Operating Mode:	Amplifying input signal		
Notes:	Uplink high end		
Job No.:	R-4193N		
Technician:	T. Firkowski		
Date:	10/22/2003		



RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

Test Method:	Two Tone	Job No:	R-4193N
Customer:	Cellular Specialties, Inc.	Technician:	T. Firkowski
Model No.:	610 900 SMR	Date:	10/22/2003
Test Specification:	FCC Part 2		
Operating Mode:	Amplifying input signal		
Notes:	Downlink low end		
	Serial No.:		
	n/a		
	Paragraph: 2.1047		
	Bidirectional Amplifier		



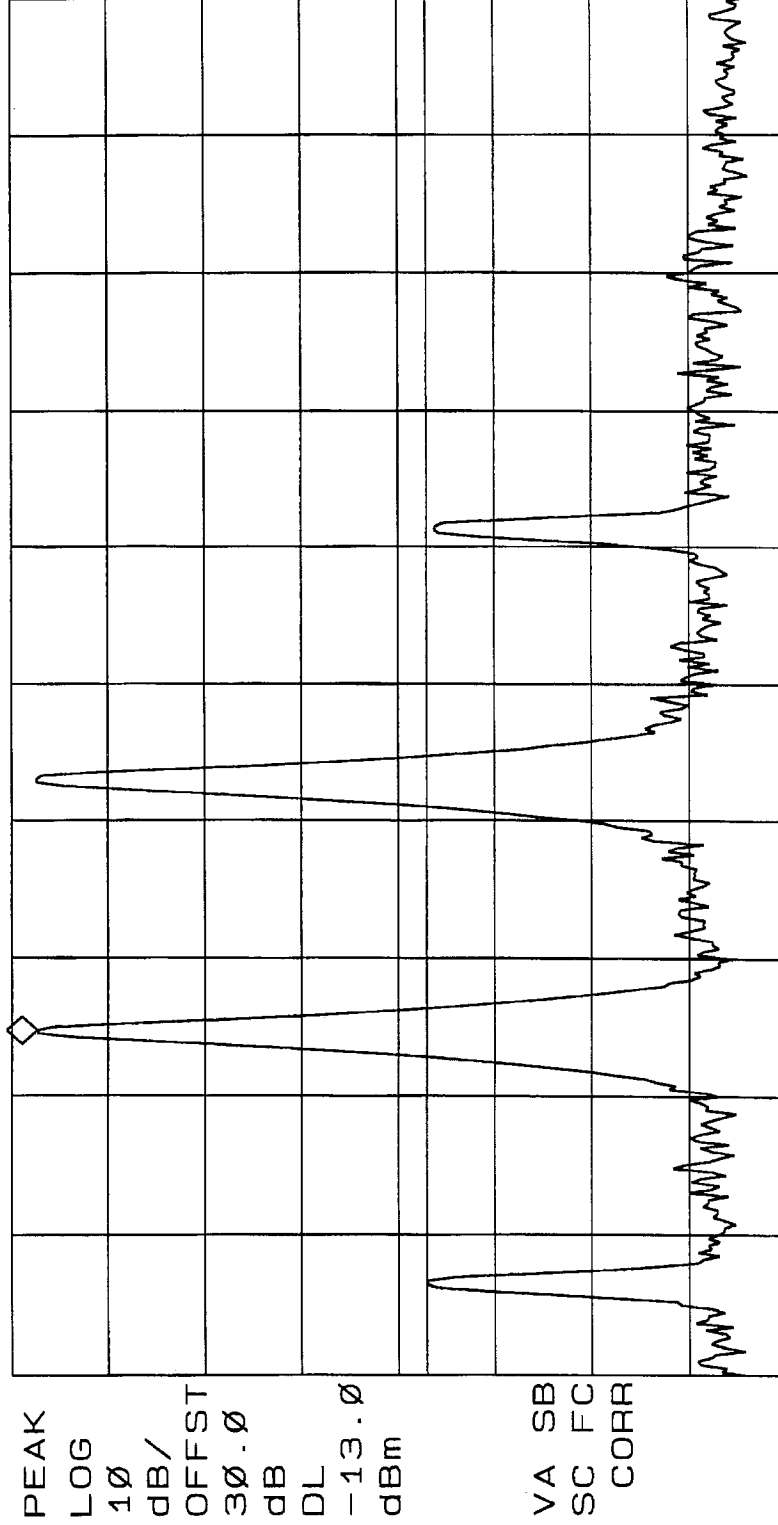
START 934.000 MHz STOP 940.000 MHz
#RES BW 30 KHZ SWP 20.0 msec
VBW 100 KHZ

RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

Test Method: Two Tone	Cellular Specialties, Inc.	Bidirectional Amplifier	Job No: R-4193N
Customer:	610 900 SMR	Serial No: n/a	Technician: T. Firkowski
Model No:	FCC Part 2	Date: 10/22/2003	
Test Specification:	Paragraph: 2.1047		
Operating Mode:	Amplifying input signal		
Notes:	Downlink low end		

11: 46:55 OCT 22, 2003
 MKR 935.485 MHz
 REF 30.0 dBm AT 10 dB 27.37 dBm

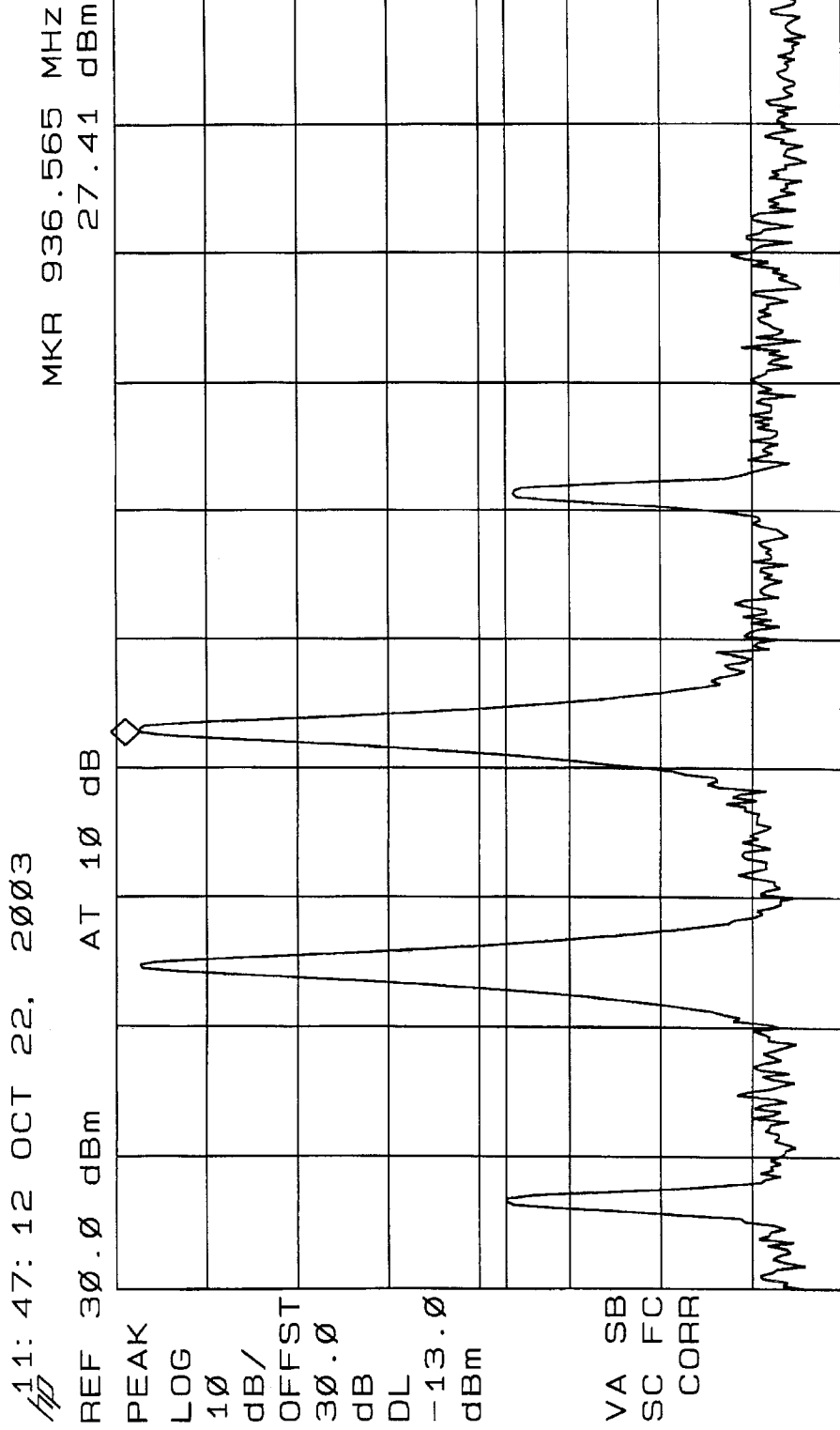


START 934.000 MHz STOP 940.000 MHz
 #RES BW 30 KHZ VBW 100 KHZ SWP 20.0 msec

RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

Test Method: Two Tone	Test Sample: Bidirectional Amplifier	Job No.: R-4193N	Technician: T. Firkowski
Customer: Cellular Specialties, Inc.	Serial No.: n/a	Date: 10/22/2003	
Model No.: 610 900 SMR	Paragraph: 2.1047		
Test Specification: FCC Part 2			
Operating Mode: Amplifying input signal			
Notes: Downlink low end			

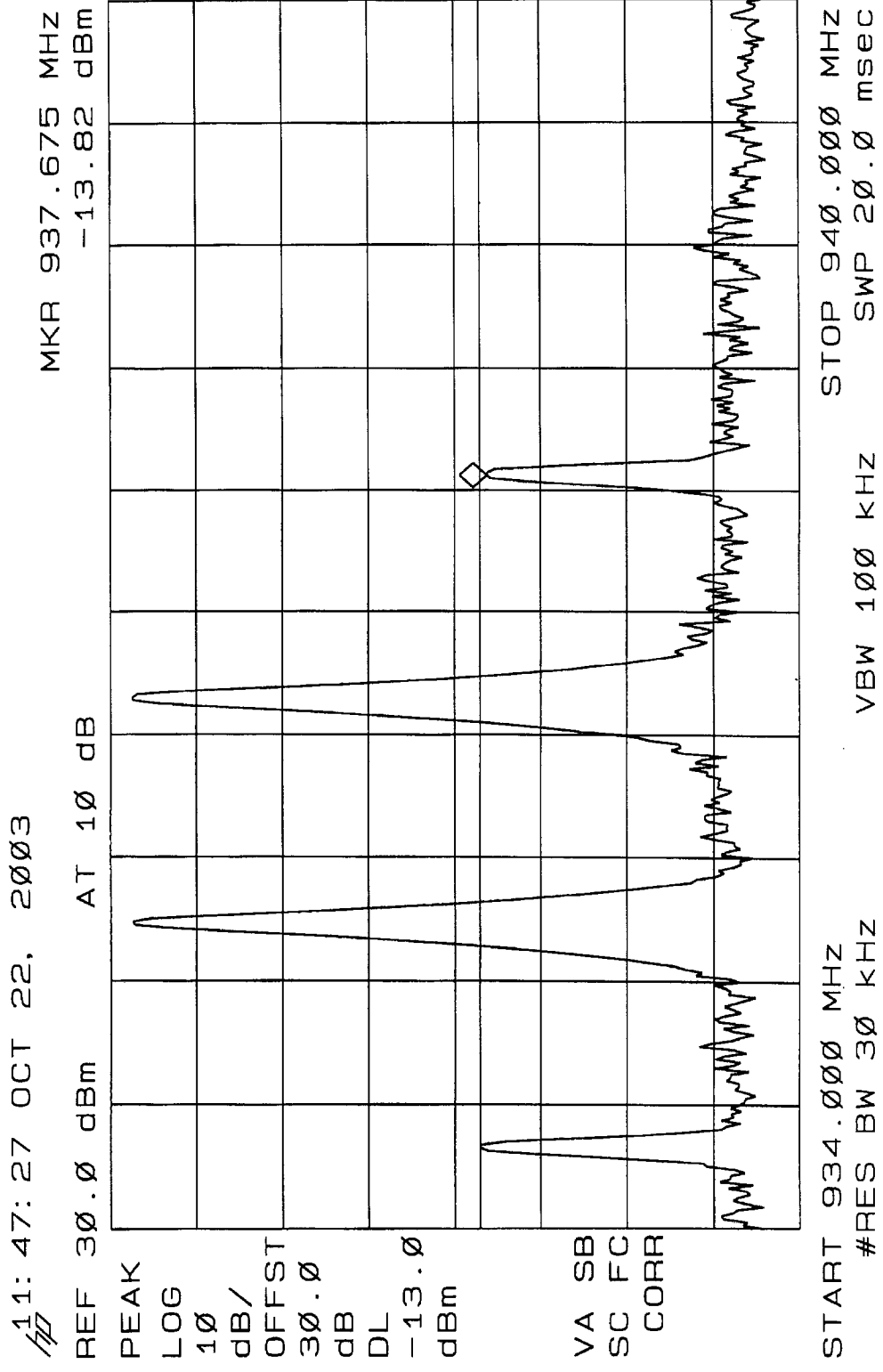


START 934.000 MHz STOP 940.000 MHz
#RES BW 30 KHZ VBW 100 KHZ SWP 20.0 msec

RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

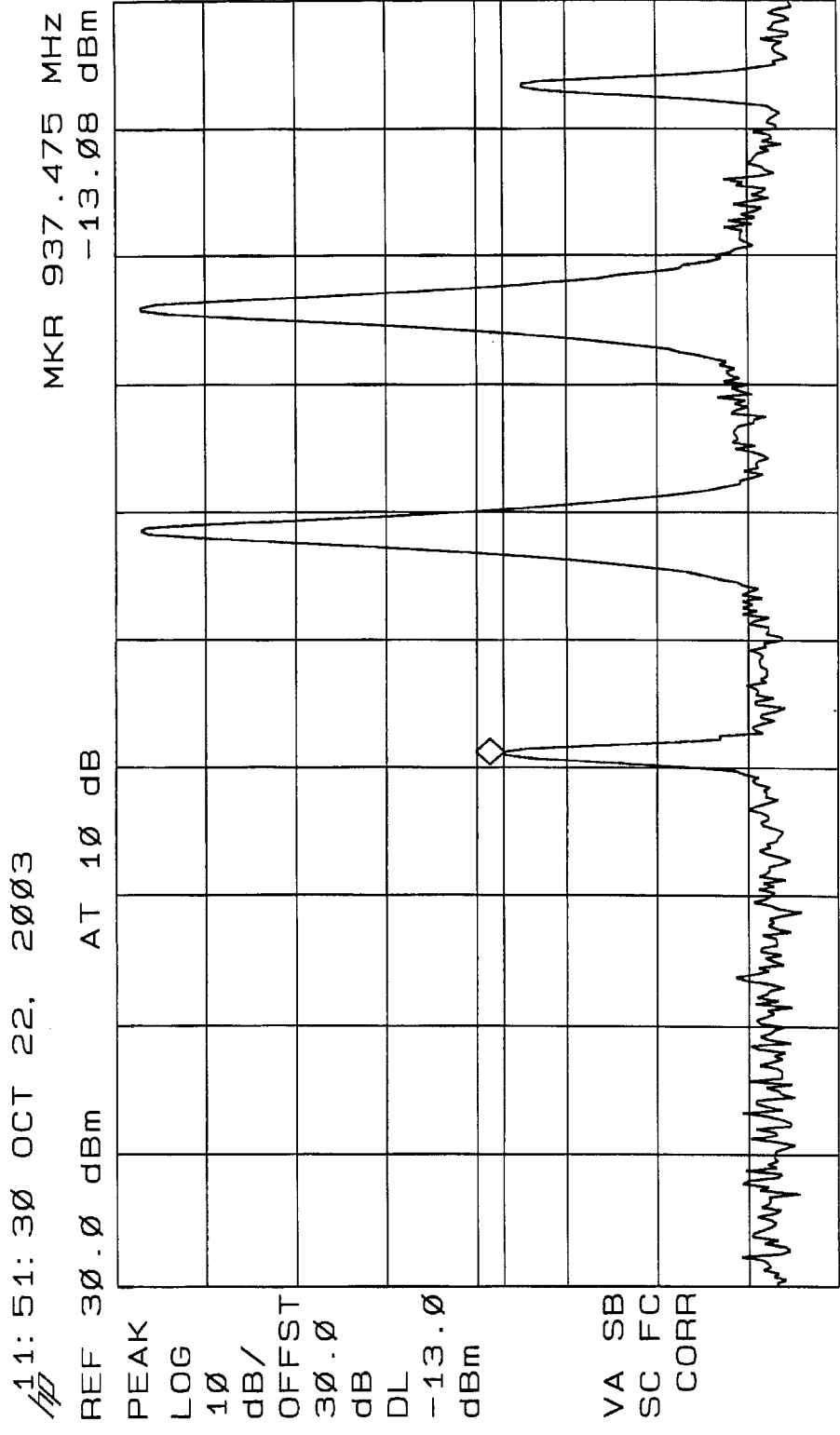
Test Method:	Two Tone		
Customer:	Cellular Specialties, Inc.	Test Sample:	Bidirectional Amplifier
Model No.:	610 900 SMR	Serial No.:	n/a
Test Specification:	FCC Part 2	Paragraph:	2.1047
Operating Mode:	Amplifying input signal	Job No.:	R-4193N
Notes:	Downlink low end	Technician:	T. Firkowski
		Date:	10/22/2003



RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

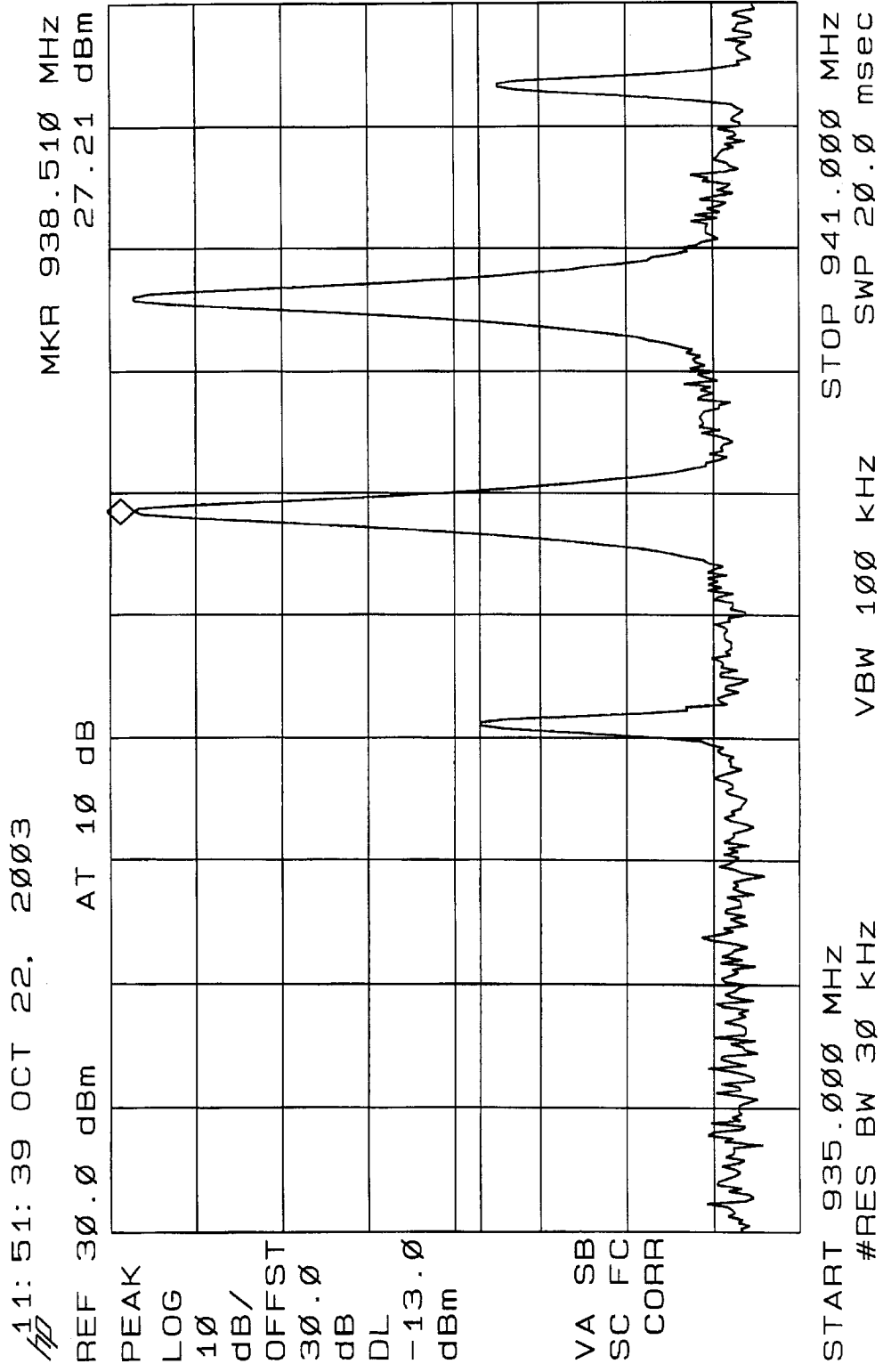
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Customer:	Cellular Specialties, Inc.	Test Sample:	Bidirectional Amplifier
Model No.:	610 900 SMR	Serial No.:	n/a
Test Specification:	FCC Part 2	Paragraph:	2.1047
Operating Mode:	Amplifying input signal		
Notes:	Downlink high end		
Job No.:	R-4193N		
Technician:	T. Firkowski		
Date:	10/22/2003		



RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

Test Method:	Two Tone		
Customer:	Cellular Specialties, Inc.	Test Sample:	Bidirectional Amplifier
Model No.:	610 900 SMR	Serial No.:	n/a
Test Specification:	FCC Part 2	Paragraph:	2.1047
Operating Mode:	Amplifying input signal		
Notes:	Downlink high end		
Job No.:	R-4193N		
Technician:	T. Firkowski		
Date:	10/22/2003		



RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

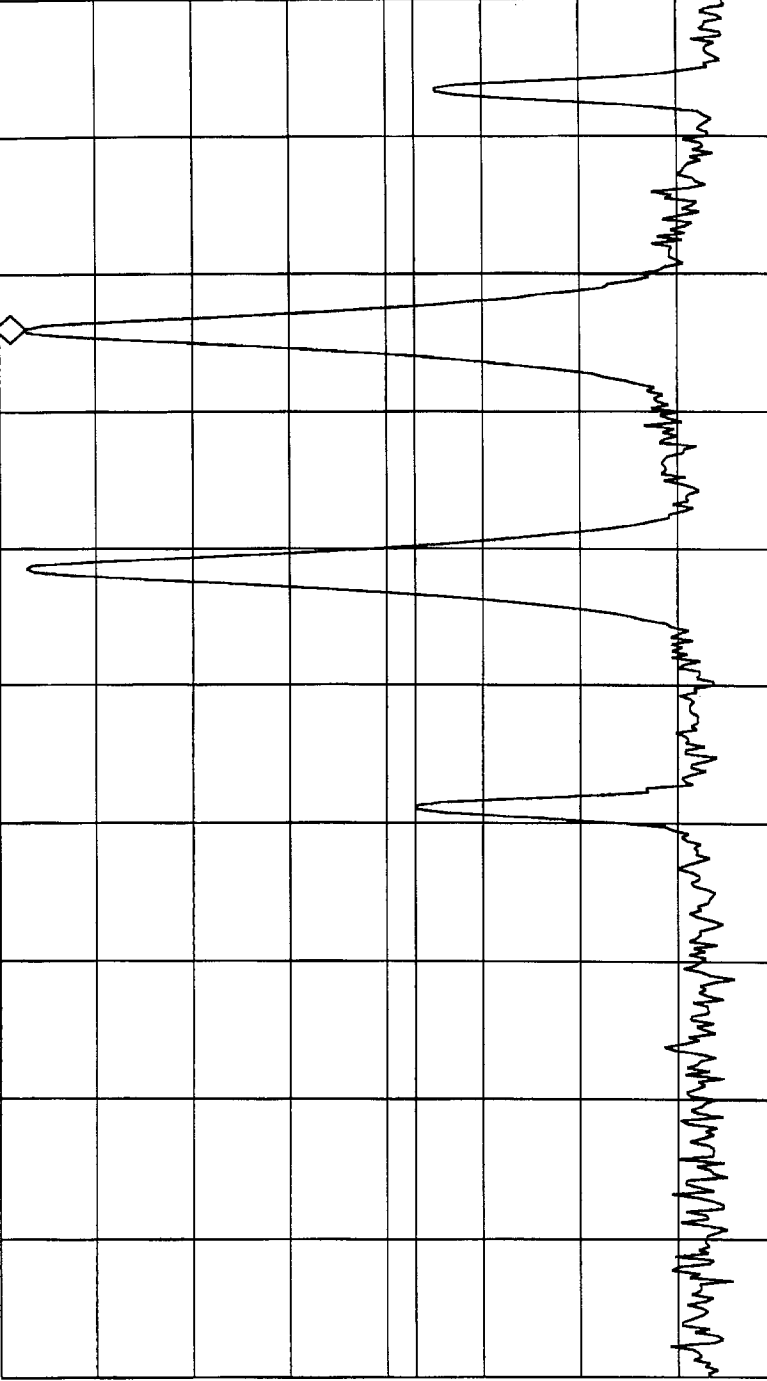
Test Method: Two Tone	Job No: R-4193N	Test Sample: Bidirectional Amplifier	Technician: T. Firkowski
Customer: Cellular Specialties, Inc.	Serial No.:	Paragraph: 2.1047	Date: 10/22/2003
Model No.:	610 900 SMR	FCC Part 2	
Test Specification:	Amplifying input signal		
Operating Mode:	Downlink high end		
Notes:			

11:51:52 OCT 22, 2003

MKR 939.560 MHz
27.23 dBm

AT 10 dB

REF 30.0 dBm



LOG
10
dB/
OFFST
30.0
dB
DL
-13.0
dBm

VA SB
SC FC
CORR

START 935.000 MHz
#RES BW 30 KHZ

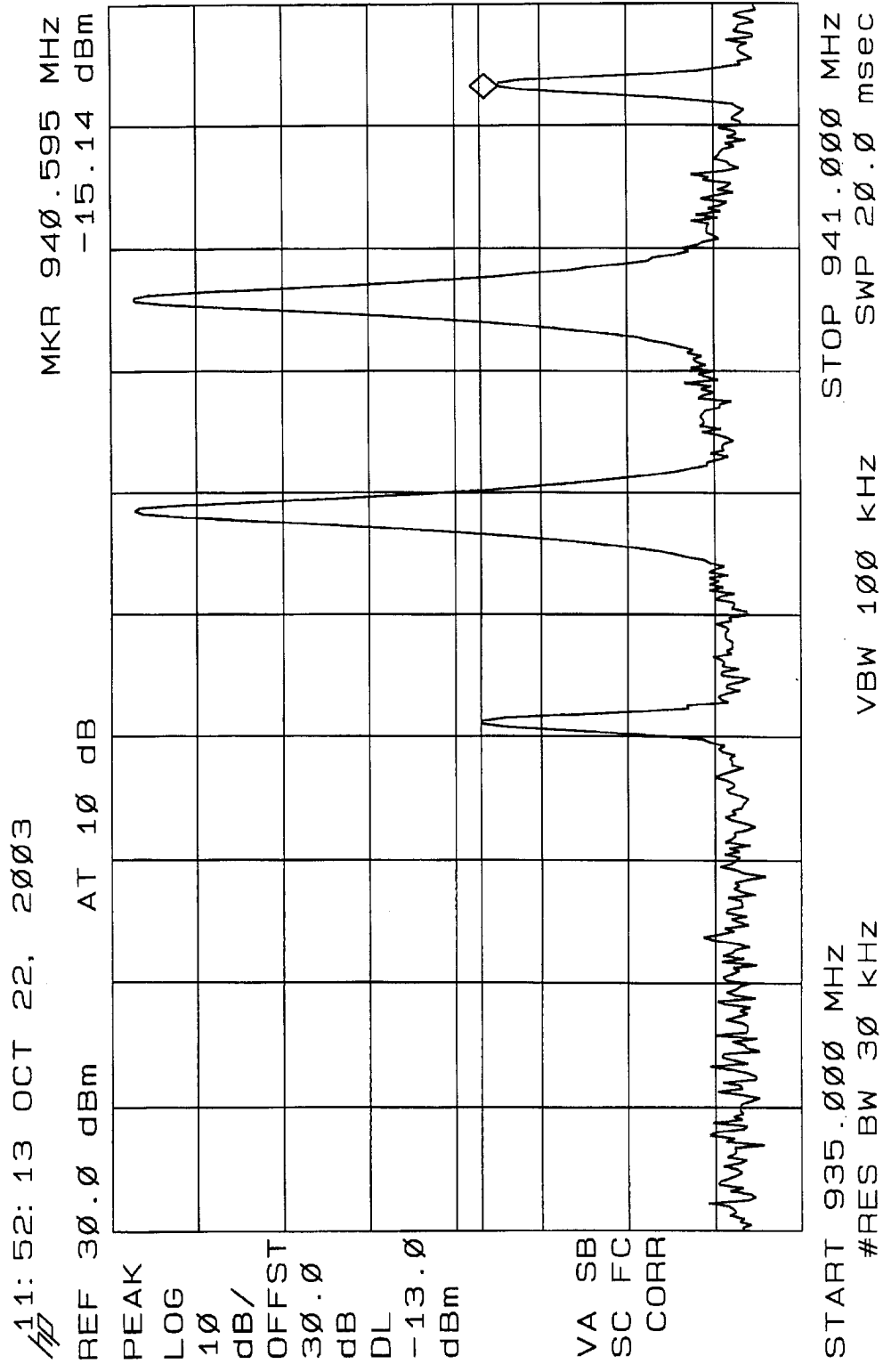
STOP 941.000 MHz
SWP 20.0 msec

VBW 100 KHZ

RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

Test Method:	Two Tone		
Customer:	Cellular Specialties, Inc.	Test Sample:	Bidirectional Amplifier
Model No.:	610 900 SMR	Serial No.:	n/a
Test Specification:	FCC Part 2	Paragraph:	2.1047
Operating Mode:	Amplifying input signal		
Notes:	Downlink high end		
Job No.:	R-4193N		
Technician:	T. Firkowski		
Date:	10/22/2003		



RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

Test Method:	Spurious Emissions at the Antenna Terminals 30 MHz to 9.5 GHz	
Customer:	Cellular Specialties, Inc.	Job No: R-4193N
Test Sample:	Bidirectional Amplifier	
Model No:	610 SMR900	Serial No: n/a
Test Specification:	FCC Part 2 Paragraph: 2.1051	
Operating Mode:	Amplifying input signal	
Technician:	T. Firkowski	Date: 10/23/2003
Notes:	Uplink Frequency 898.5 MHz Downlink Frequency 937.5 MHz	

Uplink Input Signal	Test Frequency	Harmonic Frequencies	Reading	Limit	Downlink Input Signal	Test Frequency	Harmonic Frequencies	Reading	Limit
dBm	MHz	MHz	dBm	dBm	dBm	MHz	MHz	dBm	dBm
-46.43	898.50	898.50	25.09		-44.14	937.50	937.50	27.21	
		1797.00	-36.93	-13.0			1875.00	-30.00	-13.0
		2695.50	-45.24				2812.50	-37.75	
		3594.00	<-60				3750.00	<-60	
		4492.50	<-60				4687.50	<-60	
		5391.00	<-60				5625.00	-55.8	
		6289.50	<-60				6562.50	<-54	
		7188.00	<-54				7500.00	<-50	
		8086.50	<-50				8437.50	<-52	
-46.43	898.50	8985.00	<-54	-13.0	-44.14	937.50	9375.00	<-54	-13.0

RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

Test Method: Spurious Radiated Emissions (ERP) 30 MHz to 9.5 GHz

Customer: Cellular Specialties, Inc. Job No: R-4193N

Test Sample: Bidirectional Amplifier

Model No: 610 SMR900 Serial No: n/a

Test Specification: FCC Part 2.1053/90.209
Paragraph: n/a

Operating Mode: Amplifying input signal

Technician: T. Firkowski Date: 10/24/2003

Notes: Downlink Frequency Range: 935 - 940 MHz Tested at 937.5 MHz
Detector: Peak Test Distance: 3 meters

Test Frequency	Antenna Position	Turntable Position	Reference Reading	Signal Gen Level	Reference Ant Gain				Corrected Reading	Spurious Limit
MHz	(H/V) - Height	Degrees	dBuV	dBm	dBd				dBm	dBm
30.00	-	-	-	-	-				-	-13.00
	-	-	-	-	-				-	
	-	-	-	-	-				-	
	-	-	-	-	-				-	
	-	-	-	-	-				-	
	-	-	-	-	-				-	
	-	-	-	-	-				-	
	-	-	-	-	-				-	
	-	-	-	-	-				-	
	-	-	-	-	-				-	
9500.00	-	-	-	-	-				-	-13.00
No EUT emissions were observed at the specified test distance										

RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

Test Method: Frequency Stability

Customer: Cellular Specialties, Inc. **Job No.:** R-4193N

Test Sample: Bidirectional Amplifier

Model No.: 610 SMR900 **Serial No.:** n/a

Test Specification: FCC Part 2
Paragraph: 2.1055

Operating Mode: Amplifying input signal

Technician: T. Firkowski **Date:** 10/24/2003

Notes: Uplink Frequency 898.5 MHz Nominal Voltage = 115 VAC
Downlink Frequency 937.5 MHz

Test Frequency	Input Power	Output Power		Frequency @ 97.75 VAC	Frequency @ 103.50 VAC	Frequency @ 109.25 VAC	Frequency @ 115 VAC	Frequency @ 120.75 VAC	Frequency @ 126.50 VAC	Frequency @ 132.25 VAC
MHz	dBm	dBm		MHz	MHz	MHz	MHz	MHz	MHz	MHz
(Uplink)										
898.50	-46.43	25.09		898.50	898.50	898.50	898.50	898.50	898.50	898.50
(Downlink)										
937.50	-44.14	27.21		937.50	937.50	937.50	937.50	937.50	937.50	937.50