

EXHIBIT H

Paragraph 2.989

Occupied Bandwidth



Retlif Testing Laboratories

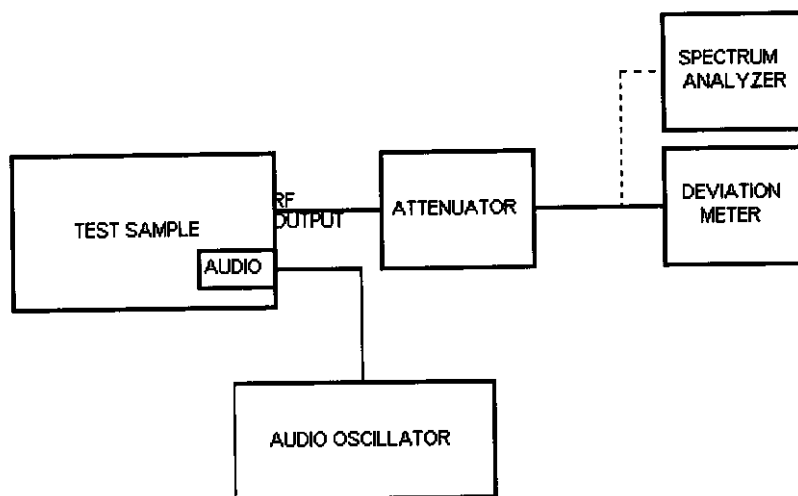
Test Report Number R-8034-1
FCC ID: CCRT32M

OCCUPIED BANDWIDTH (PARA.2.989)

A. Measurement Procedure:

An audio signal was electrically coupled to the audio input terminals of the test sample. The RF output was monitored using a deviation meter. The audio input level was increased to produce 50% modulation. The RF output was then loosely coupled through external attenuators to a spectrum analyzer and the audio level was increased by 16 dB. The occupied bandwidth of the RF carrier, modulated at 50% plus 16 dB, was then measured. The above procedure was performed with the audio input frequencies of 1000 Hz, 2500 Hz and 15 kHz applied to the unit. The modulated signal must be within the template as specified by the applicable paragraph in Part 74. The above was performed at the low and high frequencies.

Setup of the test is shown below:



B. Test Results:

The results for the above test are shown on the following six (6) data sheet.



Retlif Testing Laboratories

Test Report Number R-8034-1
FCC ID: CCRT32M

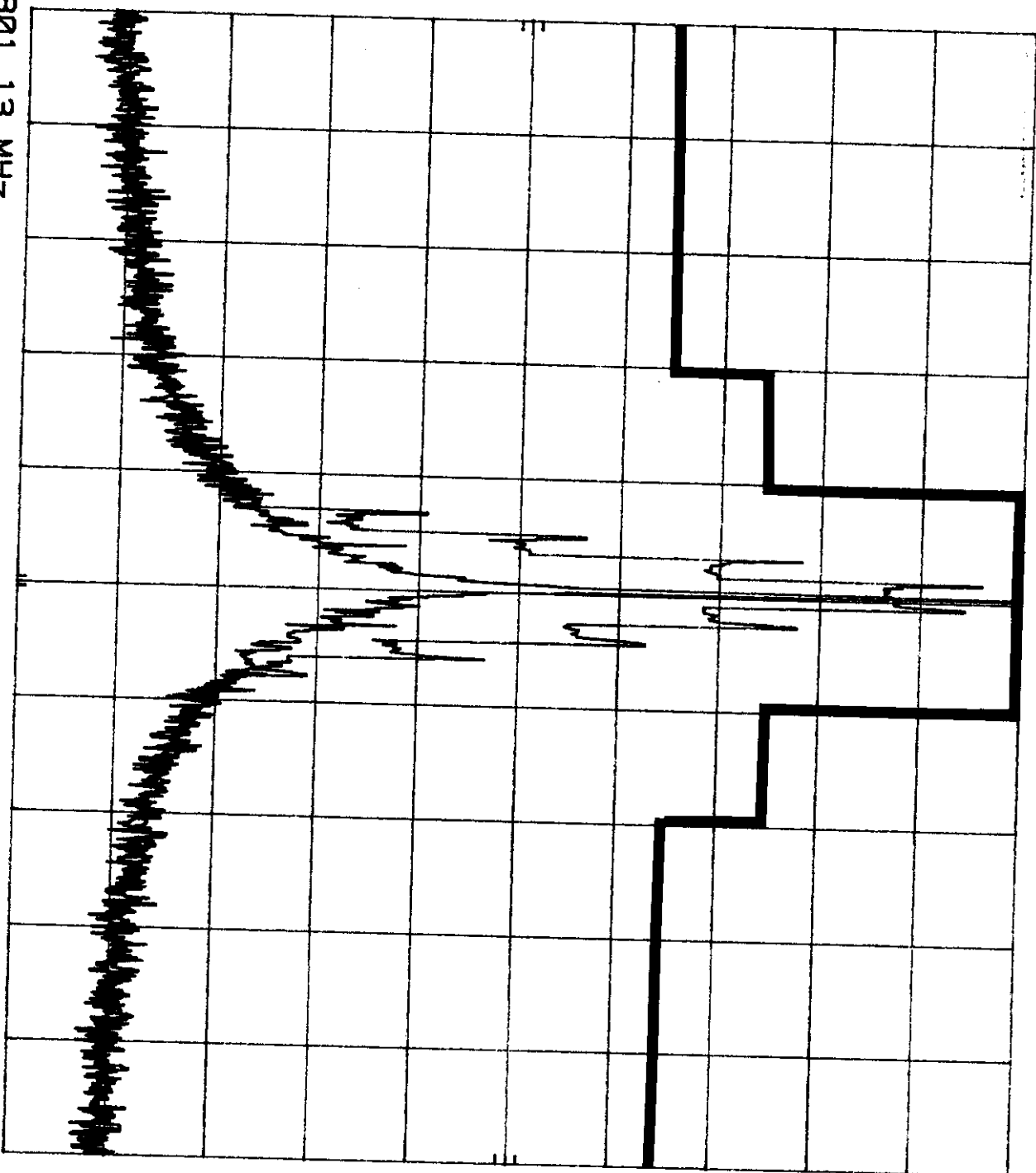
Date:	April 20, 1999
Notes:	
Test Method:	
Model No.:	T32M
Test Sample:	Wireless Beltpack Transmitter
Customer:	Samson Technologies
FCC ID: CCRT32M	
Occupied Bandwidth: FCC 74.861(5)	
Carrier Frequency: 801.125	
Audio Input: 2500Hz @ 50% Modulation, 16dBm	
Sheet	2 of 6
Tech:	Dennis Cortes



Retliff Testing Laboratories

Report No. R-8034-1

R-8034 SAMSON BELTPACK DCC BW 4/20/99 DC
 REF 95.6 dBμV ATTEN 10 dB
 hp
 10 dB/



CENTER 801.13 MHz

RES BW 300 Hz

VBW 1 kHz

SPAN 1.00 MHz
 SWP 30.0 sec

Date:	April 20, 1999
Notes:	
Test Method:	Samson Technologies
Model No.:	Wireless Beltpack Transmitter
Test Sample:	T32M
Occupied Bandwidth:	FCC 74.861(5)
Carrier Frequency:	801.125
Audio Input:	15000Hz @ 50% Modulation, 16dBm
Tech:	Dennis Cortes
Sheet:	3 of 6

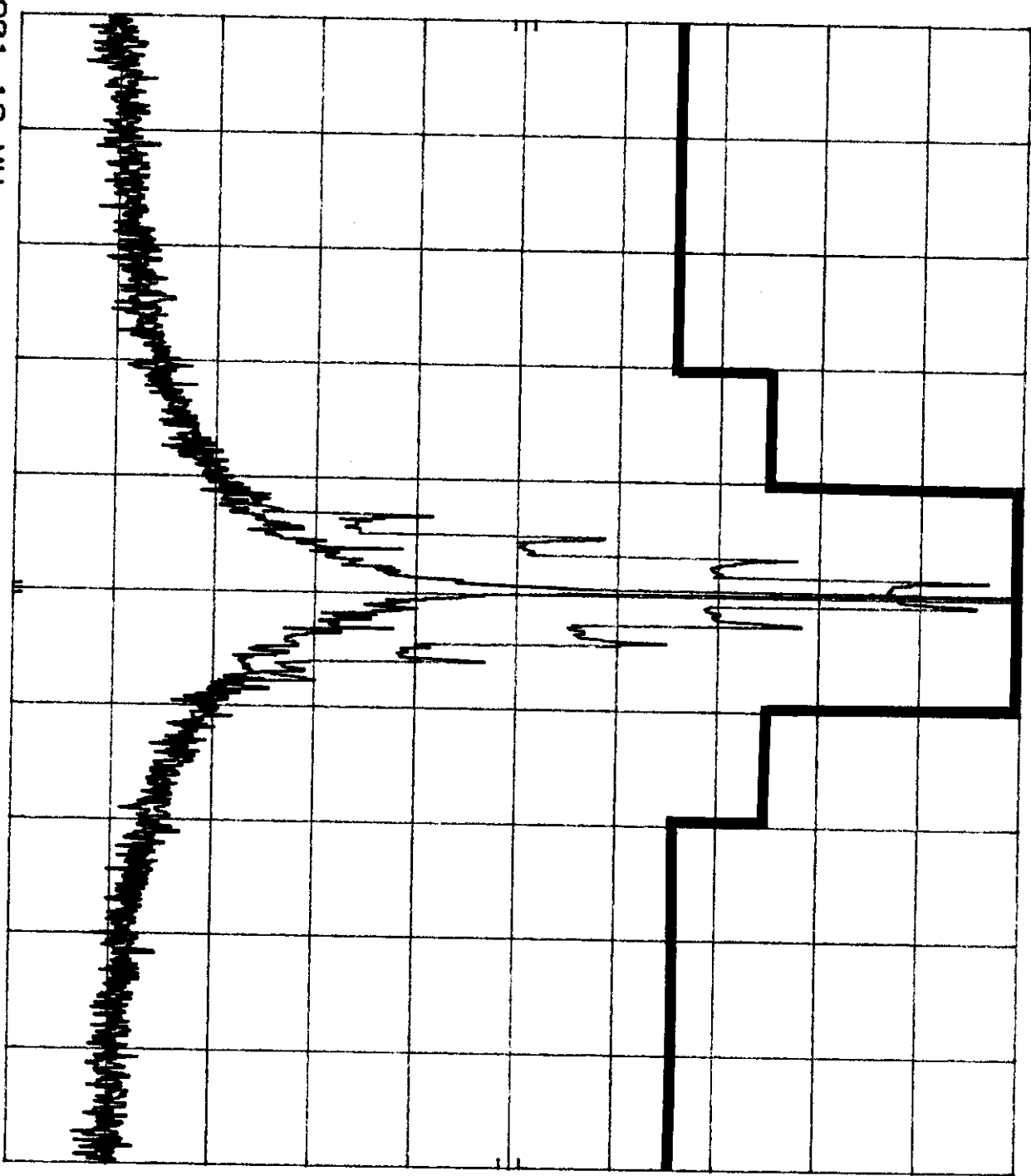


Report No. R-8034-1

Retliff Testing Laboratories

R-8034 SAMSON BELTPACK OCC BW 4/20/99 DC
 REF 95.6 dBμV ATTEN 10 dB

10 dB/



CENTER 801.13 MHz
 RES BW 300 HZ
 VBW 1 kHz
 SPAN 1.00 MHz
 SWP 30.0 sec

Date:	April 20, 1999
Tech:	Dennis Cortes
Sheet:	4 of 6
Notes:	Audio Input: 1000Hz @ 50% Modulation 6dBm Carrier Frequency: 805 Mhz Occupied Bandwidth: FCC 74.861(5) FCC ID: CCRT32M Wireless Beltpack Transmitter Model No.: T32M Test Method: T32M Test Sample: Wireless Beltpack Transmitter Customer: Samson Technologies



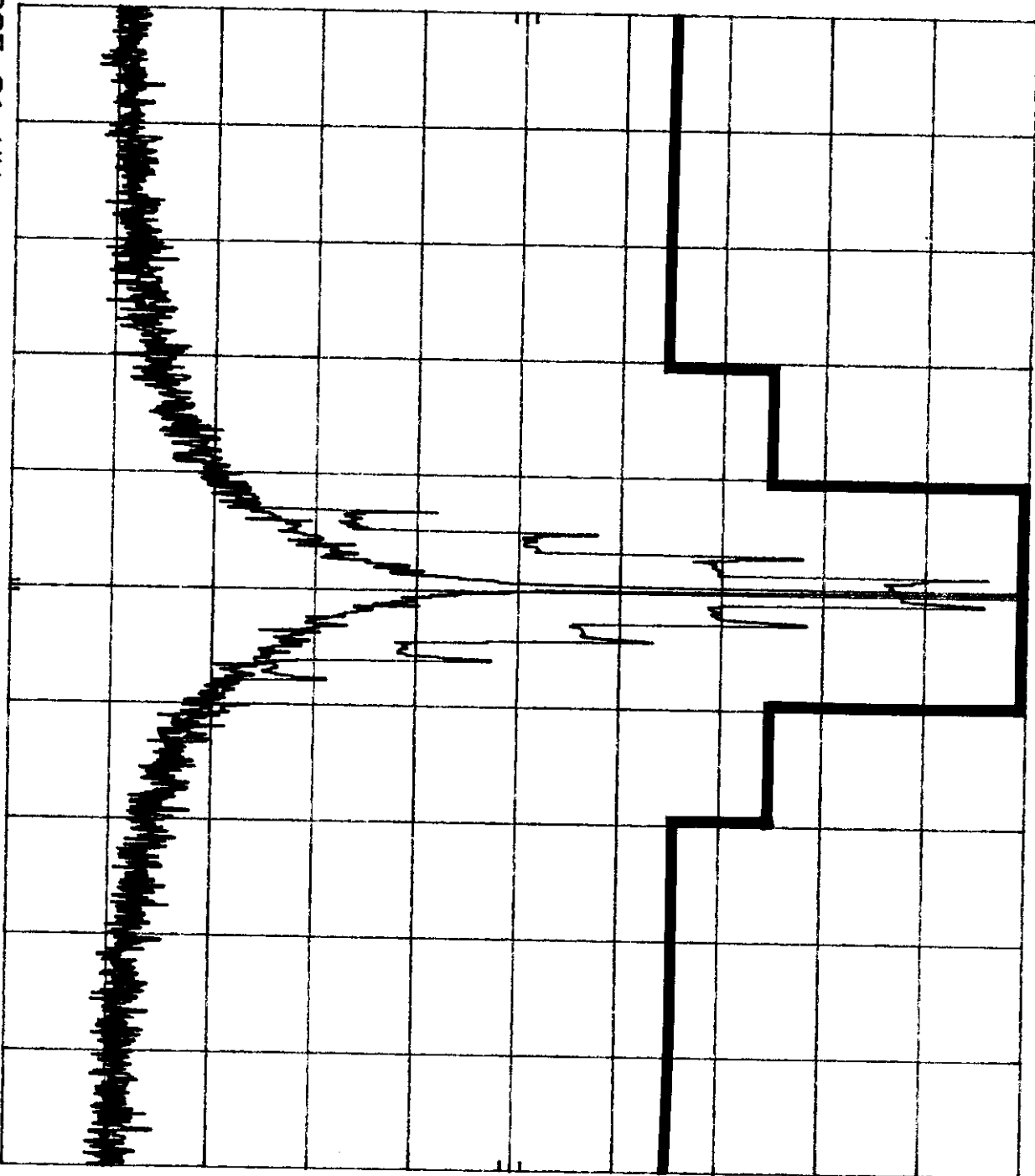
Report No. R-8034-1

Retliff Testing Laboratories

R-8034 SAMSON BELTPACK OCC BW 4/20/99 DC

hp REF 94.0 dBμV ATTEN 10 dB

10 dB/



CENTER 805.01 MHz

RES BW 300 HZ

VBW 1 kHz

SPAN 1.00 MHz

SWP 30.0 sec

Date:	April 20, 1999
Tech:	Dennis Cortes
Sheet:	5 of 6
Notes:	Audio Input: 2500Hz @ 50% Modulation -16dBm Carrier Frequency: 805 MHz Occupied Bandwidth FCC 74.861(5) T32M FCC ID: CCRT32M Wireless Beltpack Transmitter Samson Technologies
Customer:	
Test Sample:	
Model No:	
Test Method:	

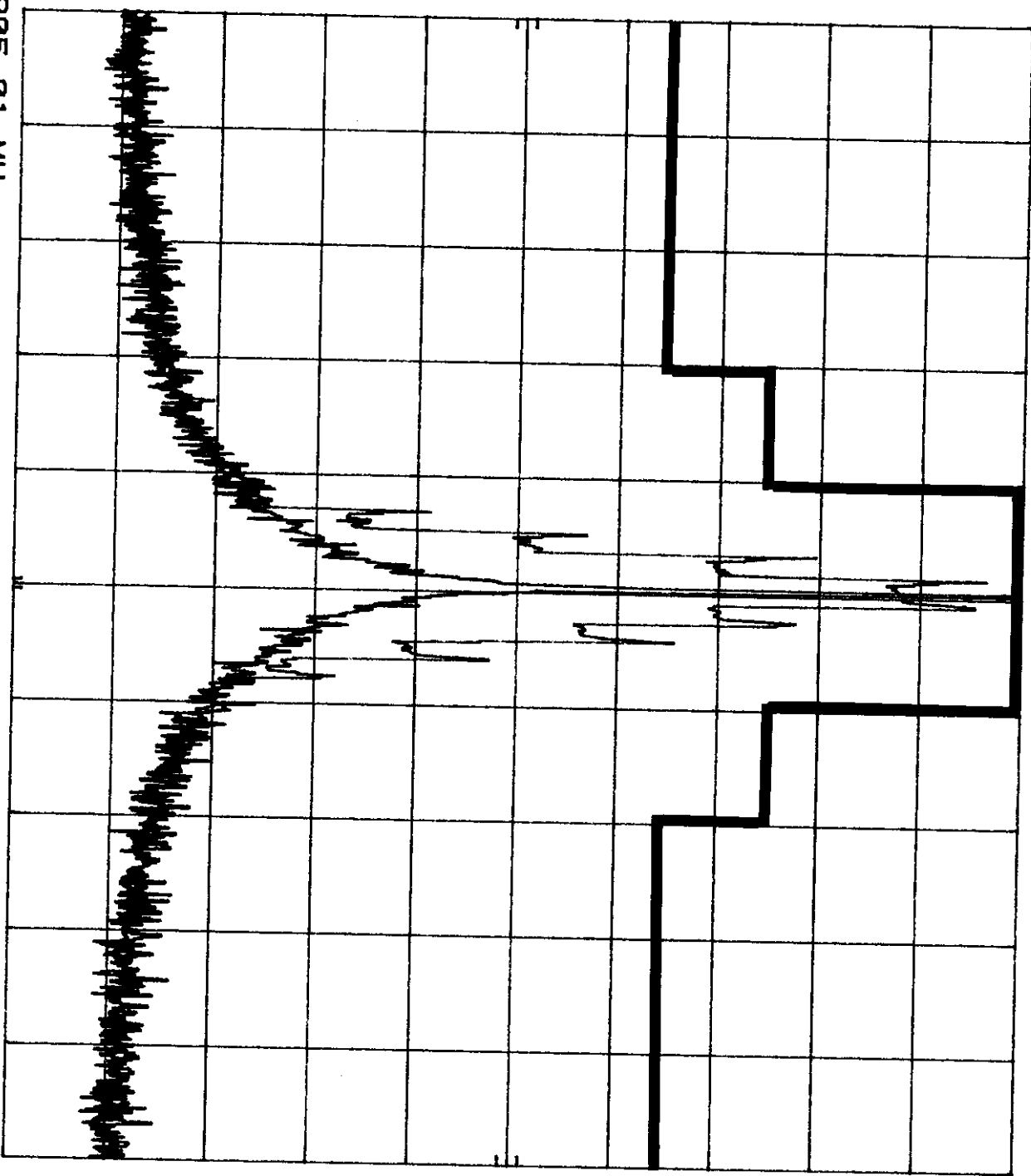


Report No. R-8034-1

Retlif Testing Laboratories

R-8034 SAMSON BELTPACK OCC BW 4/20/99 DC
 REF 94.0 dBμV ATTEN 10 dB

hp
 10 dB/



CENTER 805.01 MHz
 RES BW 300 HZ
 VBW 1 kHz
 SPAN 1.00 MHz
 SWP 30.0 sec

Date	April 20, 1999
Notes:	
Test Method	Notes:
Model No.	132M
Test Sample	Wireless Beltpack Transmitter
Customer	Samson Technologies
Tech	Dennis Cortes
Sheet	6 of 6
Audio Input	15000Hz @ 50% Modulation 16dBm
Carrier Frequency	805 Mhz
Occupied Bandwidth	FCC 74.861(5)

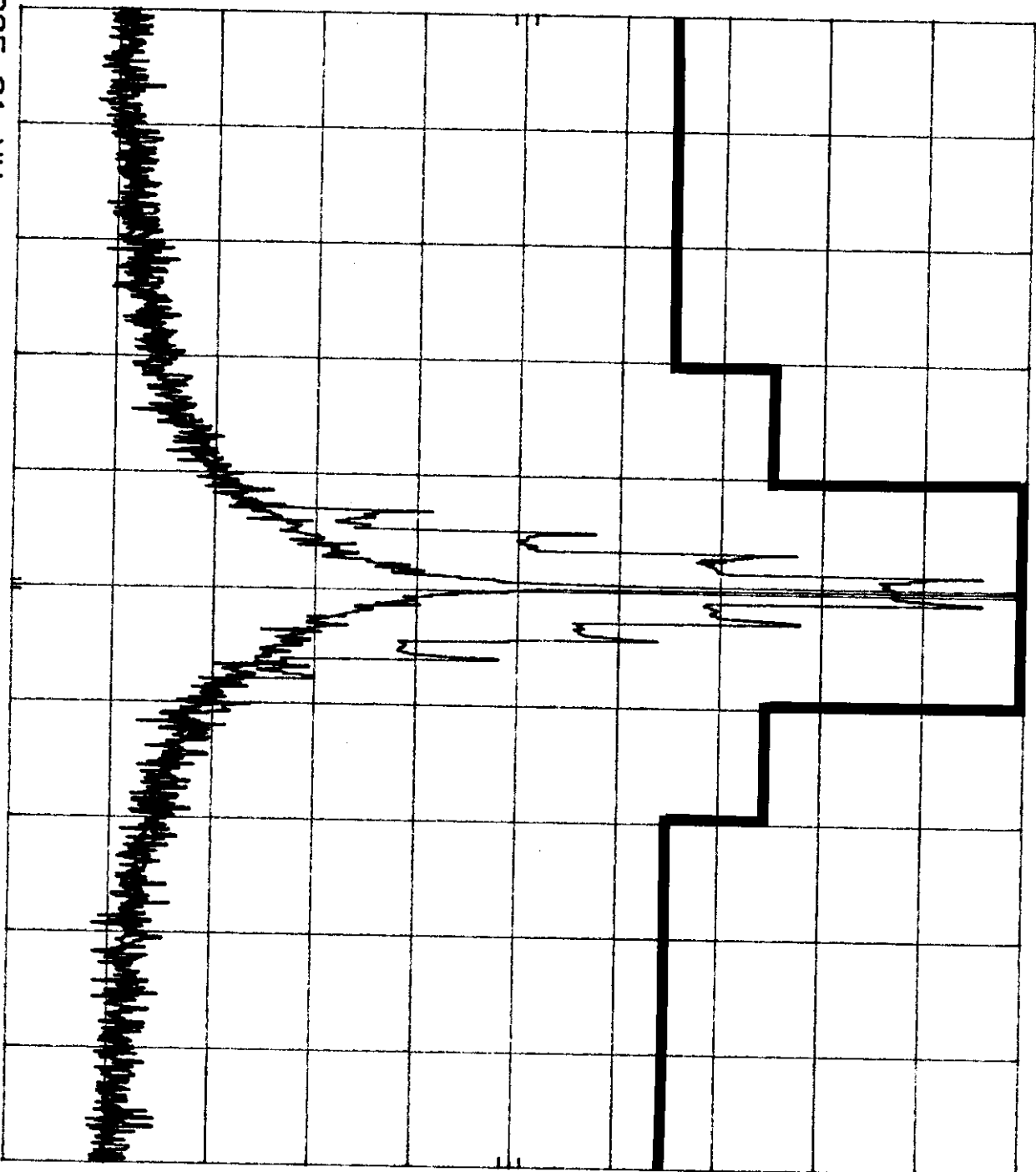


Report No. R-8034-1

Retliff Testing Laboratories

hpd
 R-8034 SAMSON BELTPACK OCC BW 4/20/99 DC
 REF 94.0 DBμV ATTEN 10 DB

10 dB/



CENTER 805.01 MHZ
 RES BW 300 Hz
 VBW 1 kHz
 SPAN 1.00 MHZ
 SWP 30.0 sec



Retlif Testing Laboratories

Test Report Number R-8034-1
FCC ID: CCRT32M

EXHIBIT H

Para. 2.993

Field Strength of Spurious Radiation

FIELD STRENGTH OF SPURIOUS RADIATION (PARA 2.993)

A.

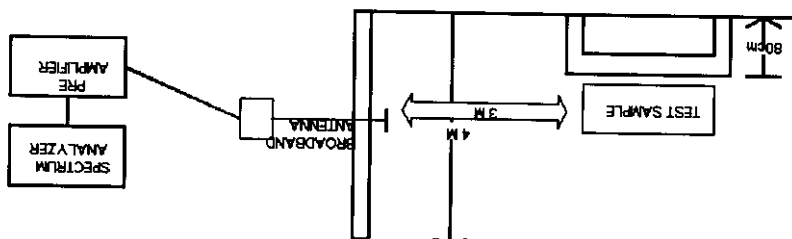
Measurement Procedure:

The test sample was then placed on an 80cm high wooden test stand which was located three meters from the test antenna on an FCC listed test site. The frequency range scanned was from the lowest frequency generated by the test sample to its tenth harmonic. In order to maximize the level of each emission observed from the test sample, the broadband antenna was tuned to the frequency of each emission and the test sample was rotated 360 degrees. To further maximize the each emission observed, the test antenna was both horizontally and vertically polarized, and then was raised and lowered from one to four meters from the ground plane. The limits for all of the spurious emissions was calculated utilizing the measured output power and the following equation:

$$\text{Limit (dB}\mu\text{V/M)} = 20 \log [\{ (49.2 \times P_T)^{1/3} \times 10^6 \} - (43 + 10 \log P_T)]$$

The above procedure was performed at the lower and upper frequencies of the device's operating frequency range.

Setup of the test is shown below:



B.

Test Results:

The results for the above test are shown on the following two (2) data sheets.



Retlif Testing Laboratories

Test Report Number R-8034-1
FCC ID: CCRT32M



Retlif Testing Laboratories

Retlif Job Number R-8034-1

Test Method:		Spurious Emissions, Paragraph 2.993				
Customer:		Samson Technologies				
Test Sample:		Wireless Backpack Transmitter				
Model No.:		T32M				
Operating Mode		EUT continuously transmitting 801.125 Mhz signal				
Test Specification		FCC Part 74 Experimental Radio, Auxiliary, Special Broadcast and other Program				
Technician:		Dennis Cortes				
Notes:		Test Distance: 3 Meters Detector: Peak Limit = $49.2 \times \text{Output Power}^{\frac{1}{2}}$ - (43+10 log Output Power)				
Date:		April 27, 1999				
Test Freq.	Antenna Pol./Height	EUT Orientation	Meter Reading	Correction Factor	Corrected Reading	Converted Reading
Mhz	(V/H) / Degrees	Degrees	dBuv	dB	dBuv/m	uv/m
30.0						16596
V						
1602.25	V-1.0	180	57.2	-4.1	53.1	451.9
2403.37	V-1.1	293	55.9	-0.3	55.6	602.6
3204.50	V-1.4	135	50.1	3.8	53.9	495.5
4005.60	V-1.7	113	48.8	8.9	57.7	767.4
V						
9000.0						16596
The EUT was scanned from 30 Mhz to 9 Ghz						
The emissions observed from the EUT do not exceed the specified limits.						
All emissions not observed were more than 20dB below the specified limit						

[illegible]



Retlif Testing Laboratories

Test Report Number R-8034-1
FCC ID: CCRT32M

EXHIBIT H

Para. 2.995

Frequency Stability

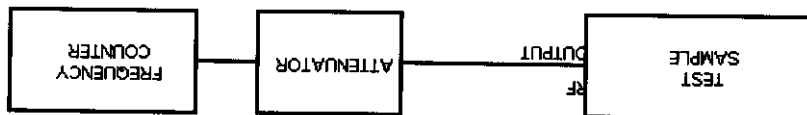
FREQUENCY STABILITY MEASUREMENTS (PARA 2.995)

A.

Measurement Procedure (Frequency vs. Voltage):

The RF output of the test sample was coupled to a frequency counter through external attenuation. Using a Variable power supply and voltmeter, the input voltage was varied. Measurements were taken with the device being supplied with 85, 100, 115 percent and at the battery endpoint of its rated input voltage and set to transmit the unmodulated carrier frequency.

Setup of the test is shown below:



B.

Test Results:

The results for the above test are shown of the following single data sheet.



Retliff Testing Laboratories

Test Report Number R-8034-1
FCC ID: CCRT32M

Retliff Testing Laboratories

Retliff Job Number R-8034-1



Test Method:	Customer:	Test Sample:	Model No.:	Operating Mode:	Test Specification:	Technician:	Notes:
FREQUENCY STABILITY (INPUT POWER 85% TO 115%) Para 2.995	Samson Technologies	Wireless Backpack Transmitter	T32M	EUT continuously transmitting 803 Mhz signal	FCC part 74: Experimental Radio, Auxiliary, Special broadcast and other program distributional services paragraph: 74.861(e)	Dennis Cortes	Level adjustment set at maximum. * = At this point, the low battery voltage LED came on.
Job No. R-8034-1	FCC ID CCRT32M	Serial No. N/A	Date: April 18, 1999				
Transmit Frequency	Input Voltage	Input Voltage	VDC	Lower Limit	Meter Reading	Upper Limit	
Mhz	%			Mhz	Mhz	Mhz	
803.0	85	7.65	802.95985	803.0085	803.04015		
803.0	100	9.0	802.95985	803.0083	803.04015		
803.0	115	10.35	802.95985	803.0084	803.04015		
803.0	*Low Batt	6.4	802.95985	803.0088	803.04015		

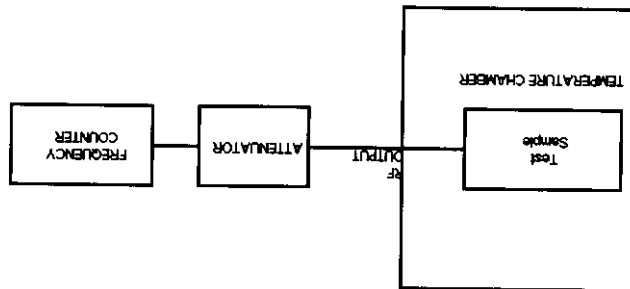
FREQUENCY STABILITY MEASUREMENTS (PARA 2.995)

A.

Measurement Procedure (Frequency vs. Temperature)

The RF output of the test sample was coupled to a frequency counter through external attenuators. With the counter connected, the test sample was activated and placed into a temperature chamber. The temperature was then programmed to start at -30 degrees Celsius and reach +50 degrees Celsius in 10 degrees increments. Each increment was held for 30 minutes in order to let the test sample stabilize at that temperature.

Setup of the test is shown below:



B.

Test Results:

The results for the above test are shown of the following single data sheet.



Reli Testing Laboratories

Test Report Number R-8034-1
FCC ID: CCR732M



Retlif Testing Laboratories

Retlif Job Number R-8034-1

Test Method:		FREQUENCY STABILITY (-30 degrees C to +50 degrees C) Para 2.985			
Customer:	Samson Technologies	Job No.:	R-8034-1	FCC ID:	CCRTT32M
Test Sample:	Wireless Backpack Transmitter	Serial No.:	N/A	Operating Mode:	EUT continuously transmitting a 803 Mhz signal
Model No.:	T32M	Test Specification:	FCC Part 74; Experimental radio, auxiliary, special broadcast and other program distributional services		
Technician:	Mark Stasiewicz	Date:	May 3, 1999	Notes:	
Level adjustment set at maximum.					
Transmit Frequency	Mhz	Temp. Degrees C	Lower Limit Mhz	Meter Reading Mhz	Upper Limit Mhz
803.0	-30			802.95985	803.04015
803.0	-20			802.95985	803.04015
803.0	-10			802.95985	803.04015
803.0	0			802.95985	803.04015
803.0	10			802.95985	803.04015
803.0	20			802.95985	803.04015
803.0	Room temp			802.95985	803.04015
803.0	30			802.95985	803.04015
803.0	40			802.95985	803.04015
803.0	50			802.95985	803.04015



Retlif Testing Laboratories

Test Report Number R-8034-1
FCC ID: CCRT32M

TEST EQUIPMENT LIST

EQUIPMENT LIST

FCC Part 74

EN	Type	Manufacturer	Frequency Range	Model No.	Cal Date	Due Date
067	Open Area Test Site	Relif	3 Meter	RNY	8/30/97	8/30/99
128C	Double Ridge Guide	Eaton Corporation	1 GHz - 18 GHz	96001	10/6/98	10/6/99
133	Broadband Pre-Amplifier	Electro-Metics	10 kHz - 1 GHz, 26dB	BPA-1000	6/22/98	6/22/99
141	Spectrum Analyzer	Hewlett Packard	100 Hz - 40 GHz	8566B	3/16/99	9/16/99
141A	Graphics Plotter	Hewlett Packard	N/A	7470A	3/5/99	3/5/00
141B	Quasi-Peak Adaptor	Hewlett Packard	100 Hz - 1 GHz	85650A	3/16/99	9/16/99
159	Frequency Counter	Leader	10 Hz - 1 GHz	LDC-825	9/18/98	9/18/99
206B	6.0 dB Attenuator	Texscan	0 - 1.0 GHz	FP-50 - 6 dB	6/22/98	6/22/99
302	Temperature Chamber	Tenney Engineering	N/A	TJR	11/23/98	11/23/99
379D	H.P. Filter	Microfab/FXR	N/A	2GHz H.P Filter	6/17/98	6/17/99
413	Temp/Altitude Chamber	Thermotron	0 - 100,000 ft	F-4-CHA-1-1	1/18/99	1/18/00
419	Modulation Meter	Boonton Electronics	.01 - 1.2 GHz	82AD	4/30/99	4/30/00
451C	Tuned Dipole Antenna	Empire Devices	400 - 1000 MHz	DM-105-T3	8/1/97	8/1/00
488	HP Test Oscillator	Hewlett Packard	10 Hz - 10 MHz	654A	4/30/99	4/30/00
523	Biconilog	Electro-Mechanics	26 - 2000 MHz	3142B	10/22/98	4/22/00
534	DC Power Supply	Lambda	N/A	DV-1827-2	5/11/98	5/11/99
543	Preamplifier	Hewlett Packard	1.0 GHz - 26.5 GHz	8449B	9/3/98	9/3/99
544	EMC Analyzer	Hewlett Packard	9.0 kHz - 1.8 GHz	8591EM	8/6/98	8/6/99



Relif Testing Laboratories

Test Report Number R-8034-1
FCC ID: CCR32M

Date:	April 20, 1999
Notes:	
Test Method:	Samson Technologies
Model No.:	T32M
Test Sample:	Wireless Beltpack Transmitter
Occupied Bandwidth:	FCC ID: CCRT32M
Carrier Frequency:	801.125
Audio Input:	1000Hz @ 50% Modulation 16dBm
Sheet:	1 of 6
Tech:	Dennis Cortes

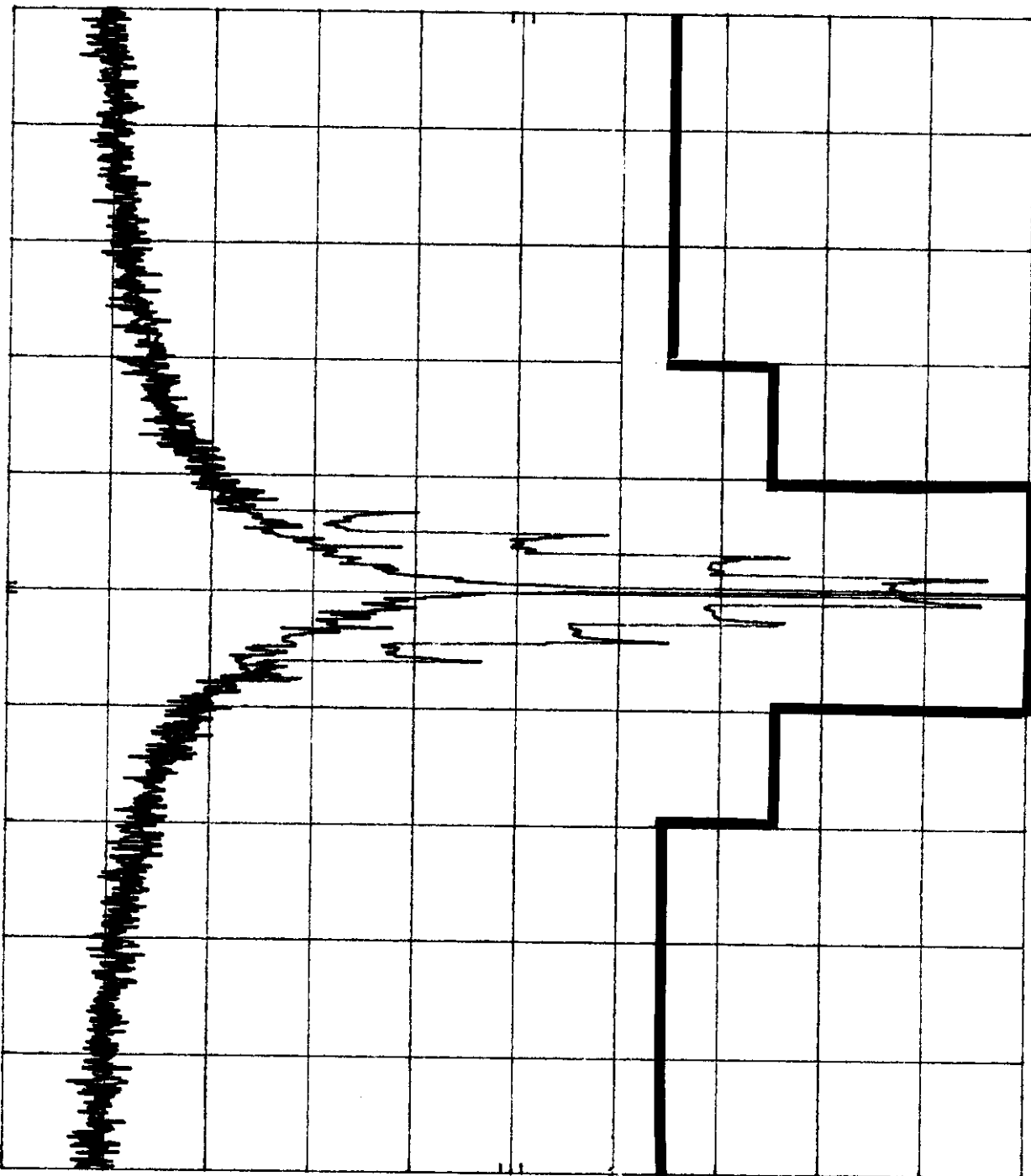


Report No. R-8034-1

Retlif Testing Laboratories

R-8034 SAMSON BELTPACK OCC BW 4/20/99 DC
 REF 95.6 dBμV ATTEN 10 dB

10 dB/



CENTER 801.13 MHz

RES BW 300 Hz VBW 1 kHz

SPAN 1.00 MHz
 SWP 30.0 sec