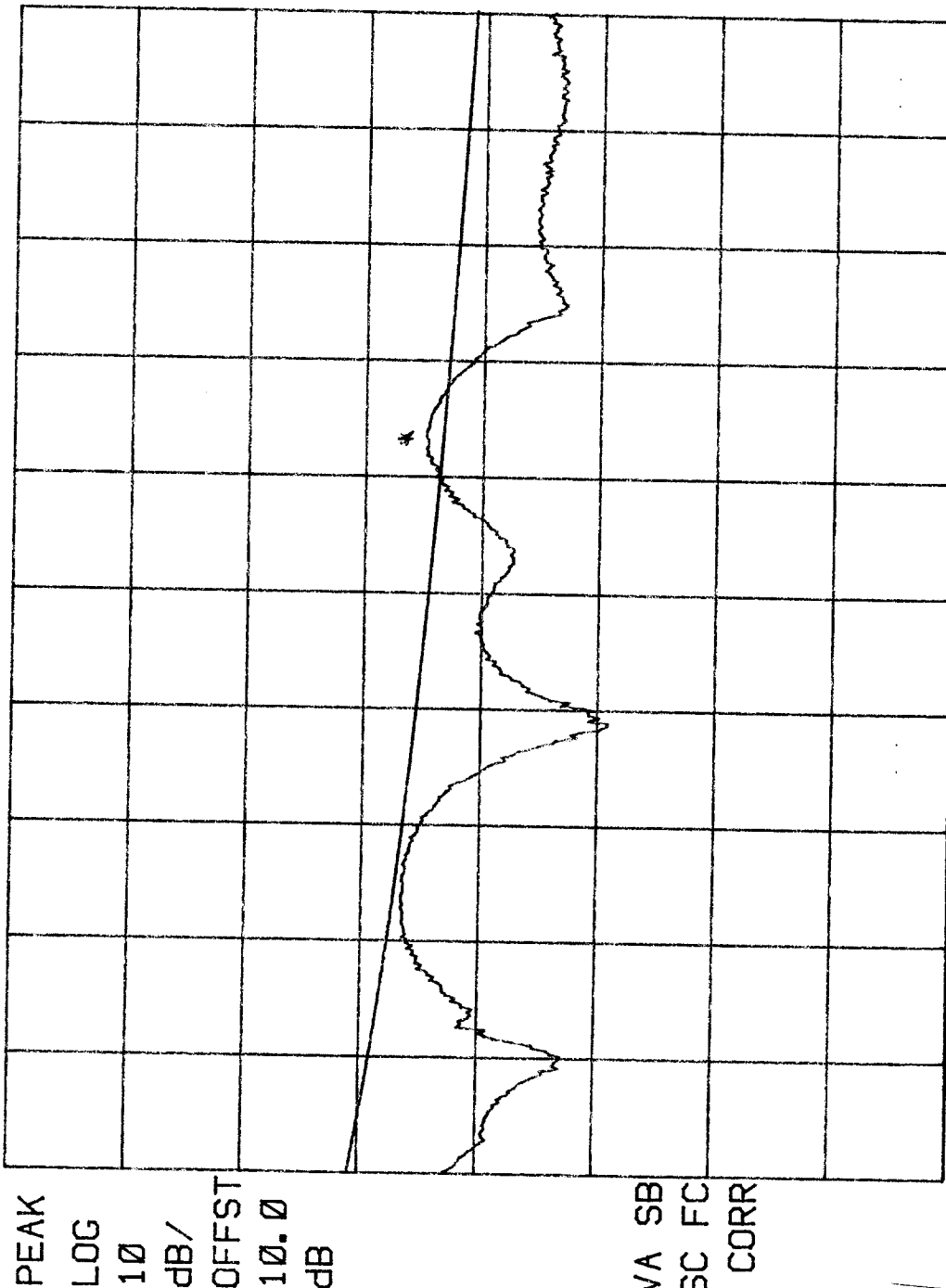


14:17:45 NOV 12, 2002
 R-9688 X-10 VR40A FCC15.209(a) CE SC Lead HOT
 REF 85.0 dBμV AT 10 dB



START 150.0 kHz
 #RES BW 9.0 kHz
 STOP 500.0 kHz
 #SWP 20.0 sec
 VBW 30 kHz

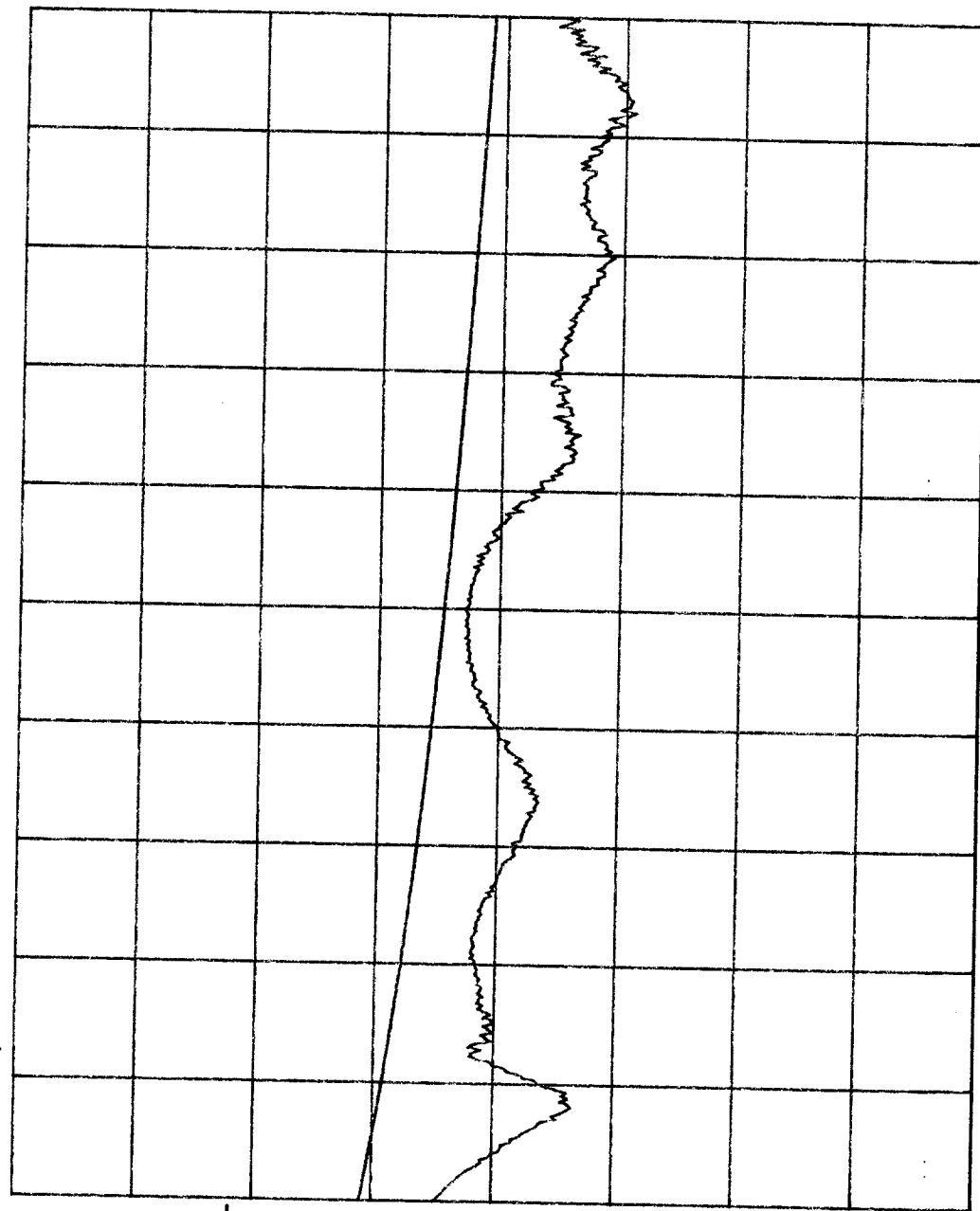
Customer:	X-10 (USA) Inc.		
Test Sample:	433 MHz Transmitter		
Model No.:	VR40A FCC ID: B4SVR40A		
Test Method:	FCC 15.209(a) AC Line Conducted Emissions, 150 kHz to 30 MHz		
Notes:	Lead Tested - HOT		
	Detector = Peak Peak passes average limit except for *, see page 7 of 7		
Date:	November 12, 2002	Technician:	S. Carley
		Sheet:	1 of 7



Retlif Testing Laboratories

Report No. R-9688-1

14:22:24 NOV 12, 2002
 R-9688 X-10 VR40A FCC15.209(a) CE SC Lead NEUTRAL
 REF 85.0 dBμV AT 10 dB



PEAK
 LOG
 10
 dB/
 OFFST
 10.0
 dB

VA SB
 SC FC
 CORR

START 150.0 kHz
 #RES BW 9.0 kHz
 STOP 500.0 kHz
 #SWP 20.0 sec
 VBW 30 kHz

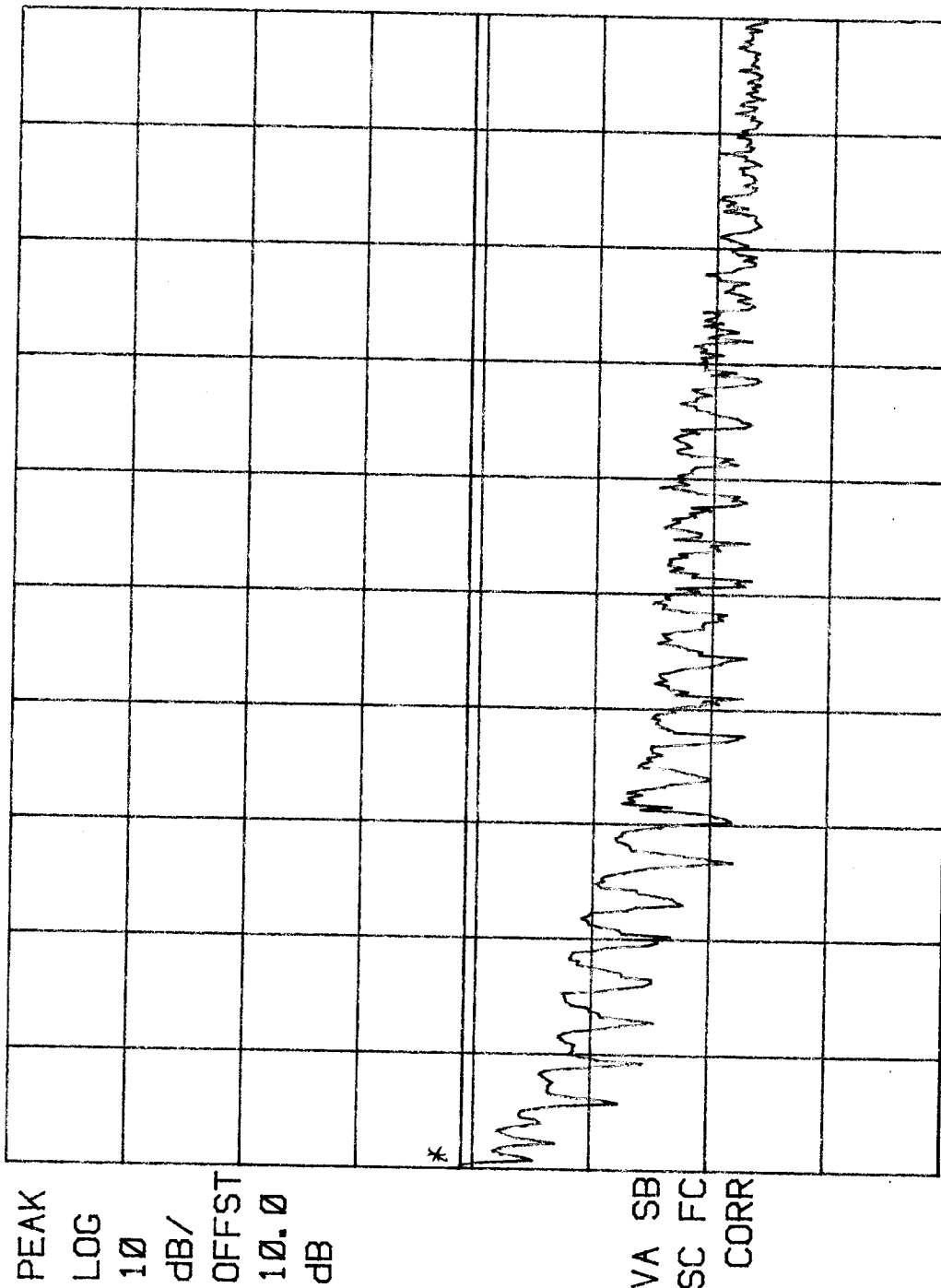
Customer:	X-10 (USA) Inc.		
Test Sample:	433 MHz Transmitter		
Model No.:	VR40A FCC ID: B4SVR40A		
Test Method:	FCC 15.209(a) AC Line Conducted Emissions, 150 kHz to 30 MHz		
Notes:	Lead Tested = NEUTRAL		
	Detector = Peak Peak passes average limit		
Date:	November 12, 2002	Tech:	S. Carley
	Street	2	of 7



Retlif Testing Laboratories

Report No. R-9688-1

14:30:16 NOV 12, 2002
 R-9688 X-10 VR40A FCC15.209(a) CE SC Lead Hot
 REF 85.0 dBμV AT 10 dB



START 500 kHz STOP 5.000 MHz
 #RES BW 9.0 kHz #SWP 20.0 sec
 VBW 30 kHz

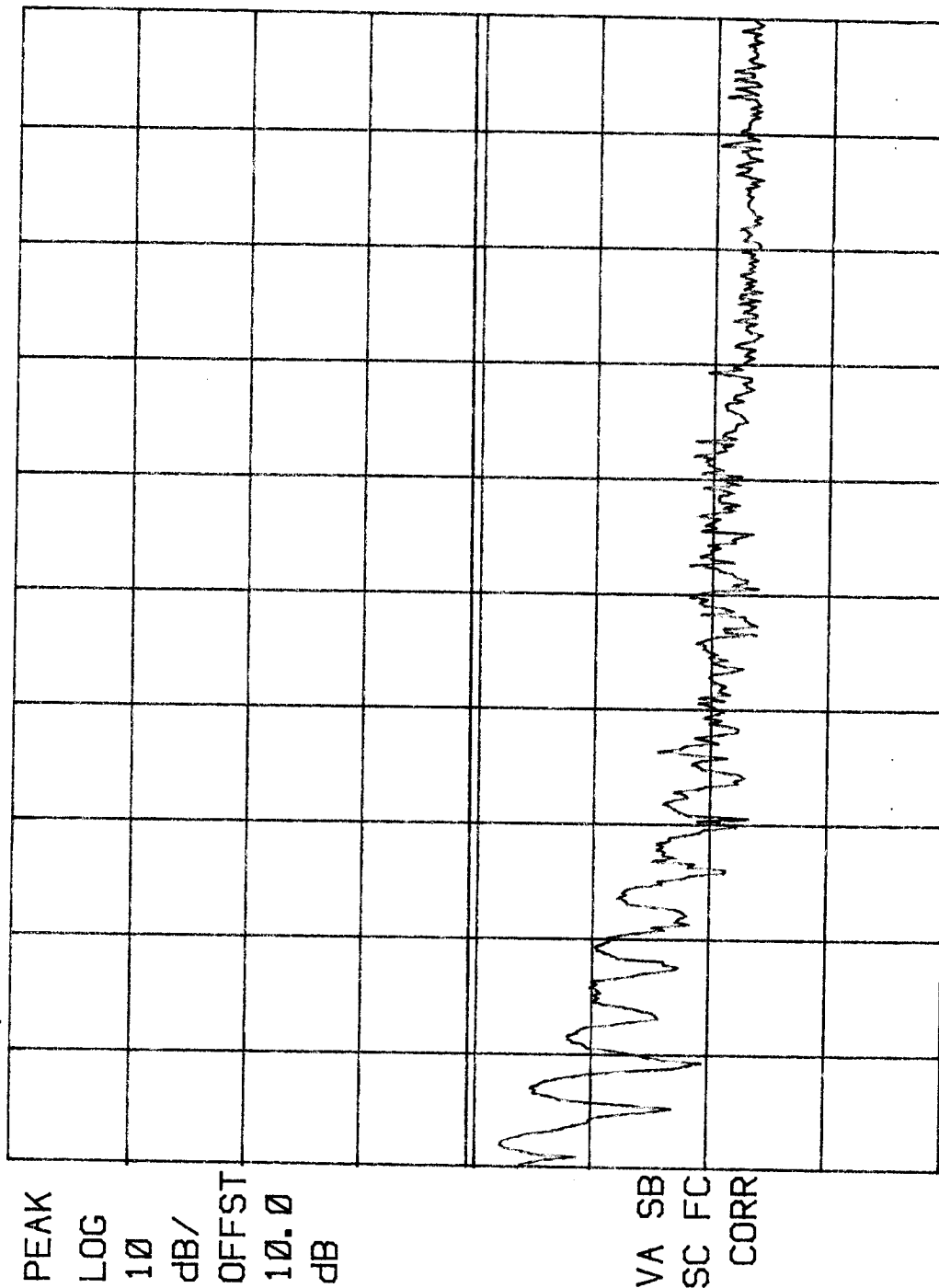
Customer:	X-10 (USA) Inc.
Test Sample:	433 MHz Transmitter
Model No.:	VR40A FCC ID: B4SVR40A
Test Method:	FCC 15.209(a) AC Line Conducted Emissions, 150 kHz to 30 MHz
Notes:	Lead Tested = HOT
	Detector = Peak Peak passes average limit except for *, see page 7 of 7
Date:	November 12, 2002
Tech:	S. Carley
Sheet	3 of 7



Retlif Testing Laboratories

Report No. R-9688-1

14:25:54 NOV 12, 2002
 R-9688 X-10 VR40A FCC15.209(a) CE SC Lead NEUTRAL
 REF 85.0 dBμV AT 10 dB



START 500 kHz STOP 5.000 MHz
 #RES BW 9.0 kHz #SWP 20.0 sec
 VBW 30 kHz

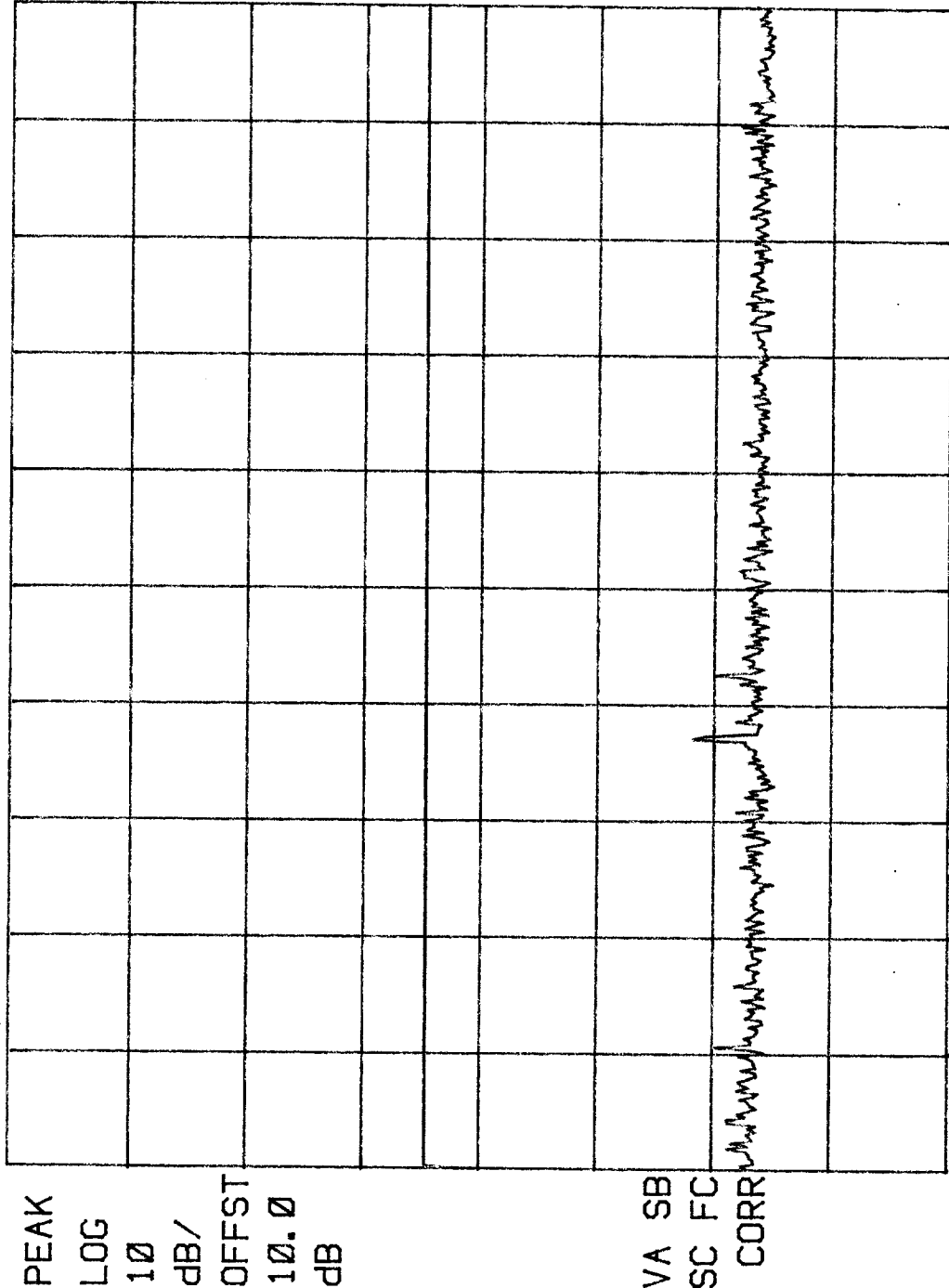
Customer:	X-10 (USA) Inc.
Test Sample:	433 MHz Transmitter
Model No:	VR40A FCC ID: B4SVR40A
Test Method:	FCC 15.209(a) AC Line Conducted Emissions, 150 kHz to 30 MHz
Notes:	Lead Tested = NEUTRAL
	Detector = Peak Peak passes average limit
Date:	November 12, 2002
Tech:	S. Carley
Sheet	4 of 7



Retlif Testing Laboratories

Report No. R-9688-1

14:34:38 NOV 12, 2002
 R-9688 X-10 VR40A FCC15.209(a) CE SC Lead *Hot*
 REF 85.0 dBμV AT 10 dB



START 5.00 MHz STOP 30.00 MHz
 #RES BW 9.0 kHz VBW 30 kHz #SWP 20.0 sec

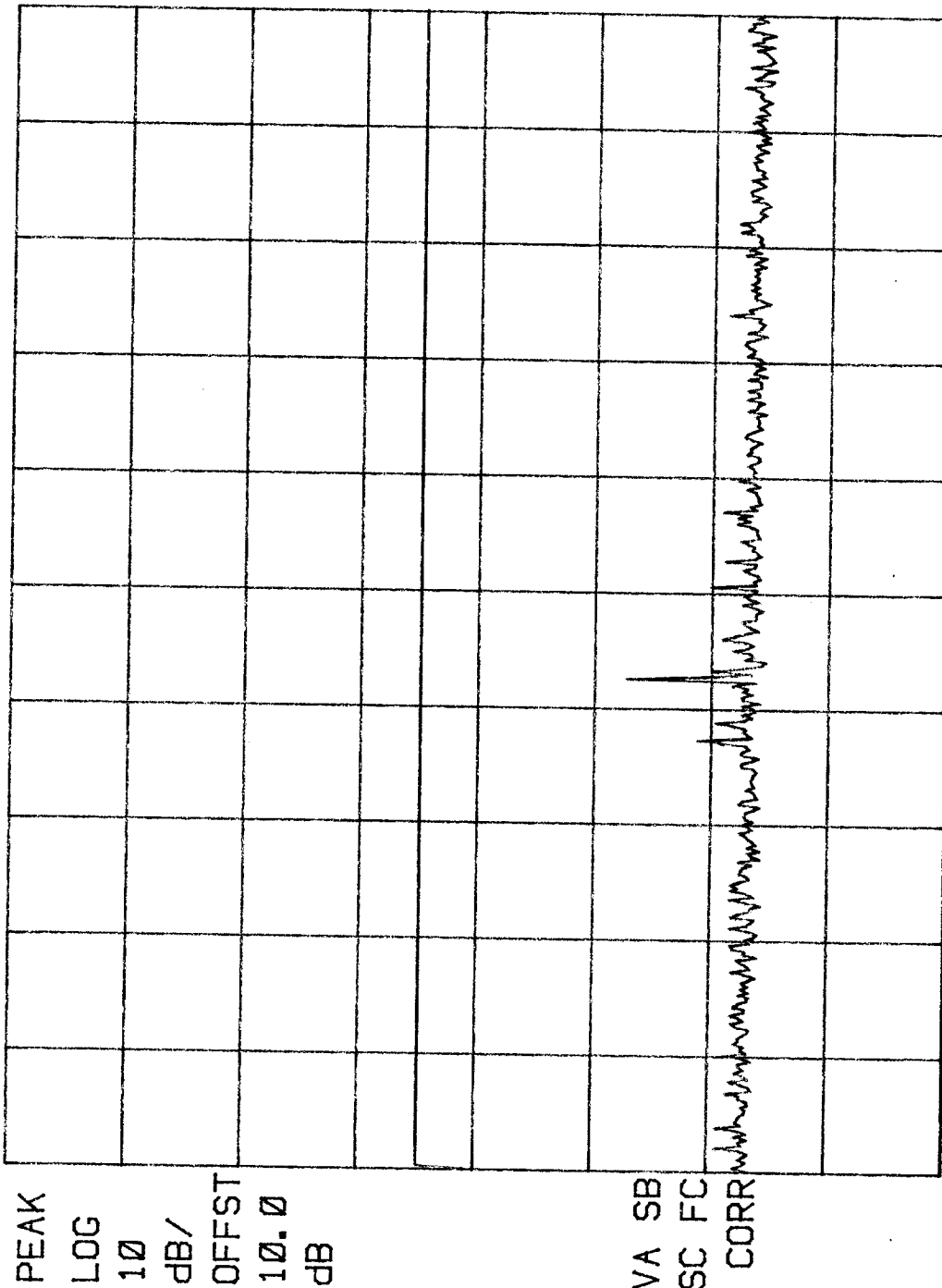
Customer:	X-10 (USA) Inc.
Test Sample:	433 Mhz Transmitter
Model No.:	VR40A FCC ID: B4SVR40A
Test Method:	FCC 15.209(a) AC Line Conducted Emissions, 150 kHz to 30 MHz
Notes:	Lead Tested = HOT
	Detector = Peak Peak passes average limit
Date:	November 12, 2002
Tech:	S. Carley
Sheet	5 of 7



Retlif Testing Laboratories

Report No. R-9688-1.

14:38:12 NOV 12, 2002
 R-9688 X-10 VR40A FCC15.209(a) CE SC Lead NEUTRAL
 REF 85.0 dBµV AT 10 dB



START 5.00 MHz STOP 30.00 MHz
 #RES BW 9.0 kHz VBW 30 kHz #SWP 20.0 sec

Customer:	X-10 (USA) Inc.
Test Sample:	433 MHz Transmitter
Model No.:	VR40A FCC ID: B4SVR40A
Test Method:	FCC 15.209(a) AC Line Conducted Emissions, 150 kHz to 30 MHz
Notes:	Lead Tested = NEUTRAL Detector = Peak Peak passes average limit
Date:	November 12, 2002
Tech:	S. Carley
Sheet	6 of 7



Retlif Testing Laboratories

Report No. R-9688-1

RETLIF TESTING LABORATORIES

TABULAR DATA SHEET

TEST METHOD: FCC Part 15, Conducted Emissions, Class B (150 KHz to 30 MHz)

CUSTOMER:	X-10 (USA) Inc.	JOB No.:	R9688-1
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TEST 433 MHz Pulsed Transmitter

SAMPLE:

MODEL No.: VR40A FCC ID: B4SVR40A SERIAL No.: n/a

TEST	FCC Part 15, Subpart B, Class B
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PARAGRAPH: 15.209(a)

OPERATING MODE:	Powered by 115 Vac 60 Hz, transmitting a continuous 433 MHz signal
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TECHNICIAN: S. Carley DATE: November 12, 2002

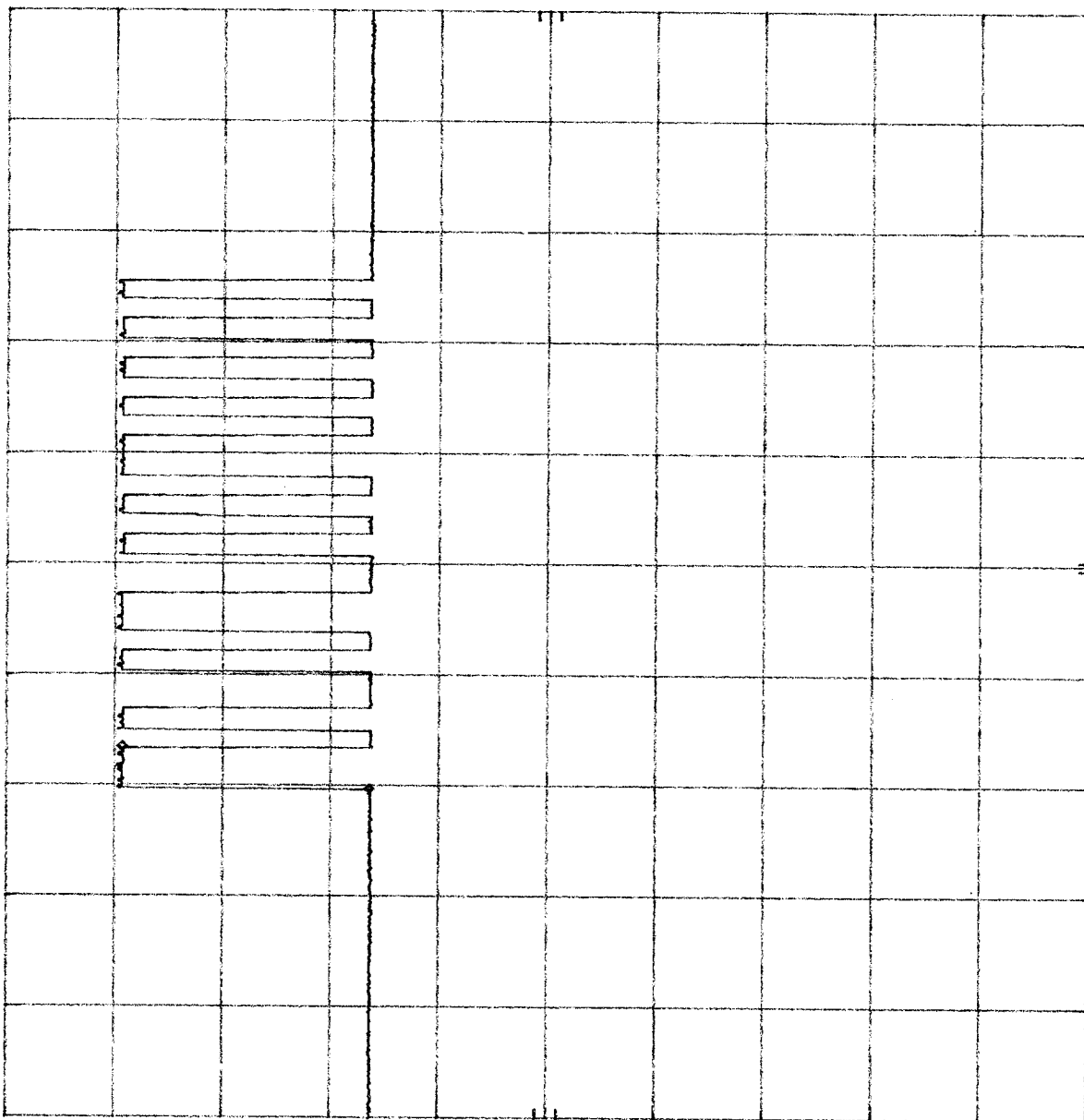
NOTES: Temperature: 23 ° C Humidity: 42 %

[illegible]

R-9688 X-10 VR40A DCD 11/11/02 PL
 REF 97.0 dBμV ATTEN 10 dB
 MKR Δ 1.900 msec
 22.90 dB

hp

10 dB/



CENTER 433.934 120 MHz
 RES BW 1 MHz
 VBW 3 MHz
 SPAN 0 Hz
 SWP 50.0 msec

Customer:	X-10 (USA), Inc.
Test Sample:	433MHz Pulsed Transmitter
Model No.:	VR40A FCC ID.: B4SVR40A
Test Method:	FCC 15.35 Duty Cycle Determination
Notes:	Large Pulse = 1.9milliseconds Large Pulses = 3 * 1.9ms = 5.7ms
Date	November 13, 2002
Tech	Peter Lananna
Sheet	1 of 3



Retlif Testing Laboratories

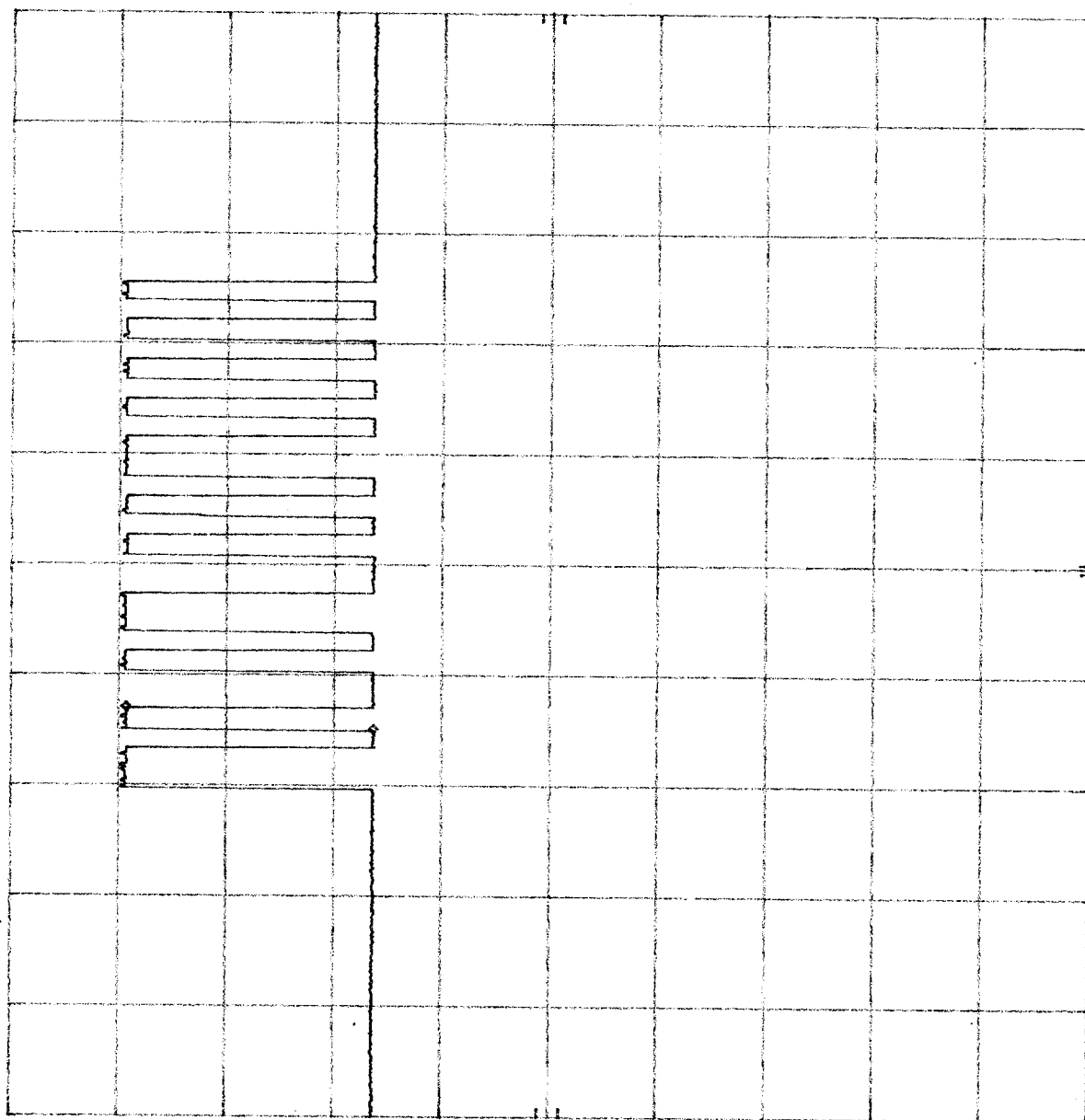
Report No. R-9688-1

R-9688 X-10 VR40A DCD 11/11/02 PL
 REF 97.0 dBμV ATTEN 10 dB

MKR Δ 1.000 msec
 23.00 dB

hp

10 dB/



CENTER 433.934 120 MHz
 RES BW 1 MHz
 VBW 3 MHz
 SWP 50.0 msec
 SPAN 0 Hz

Customer:	X-10 (USA), Inc.
Test Sample:	433MHz Pulsed Transmitter
Model No:	VR40A FCC ID.: B4SVR40A
Test Method:	FCC 15.35 Duty Cycle Determination
Notes:	Small Pulse = 1milliseconds Small Pulses = 8 * 1ms = 8ms
Date	November 13, 2002
Tech:	Peter Lananna
Sheet	2 of 3

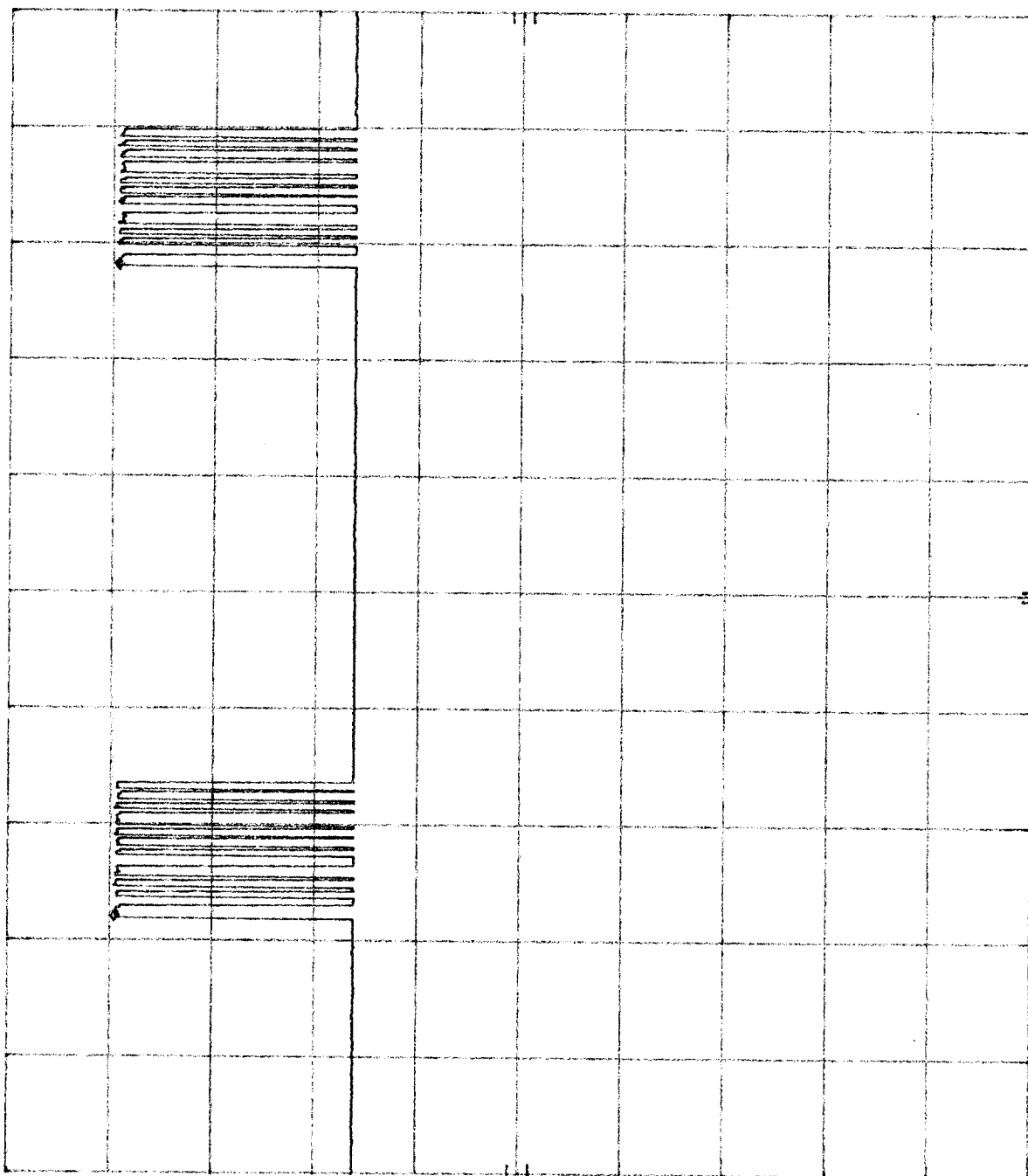


Retlif Testing Laboratories

Report No. R-9688-1

R-9688 X-10 VR40A DCD 11/11/02 PL
 REF 97.0 dBμV ATTEN 10 dB
 MKR Δ 112.2 msec
 -0.10 dB

hp
 10 dB/



CENTER 433.934 120 MHz
 RES BW 100 kHz
 VBW 300 kHz
 SWP 200 msec
 SPAN 0 Hz

Customer:	X-10 (USA), Inc.
Test Sample:	433MHz Pulsed Transmitter
Model No.:	VR40A FCC ID.: B4SVR40A
Test Method:	FCC 15.35 Duty Cycle Determination
Notes:	5.7ms + 8ms = 13.7ms worst case Cycle time = 112.2ms 13.7ms / 100ms = 13.7% Duty Cycle 20log(0.137) = -17.3dB
Date:	November 13, 2002
Tech:	Peter Lananna
Sheet:	3 of 3



Retlif Testing Laboratories

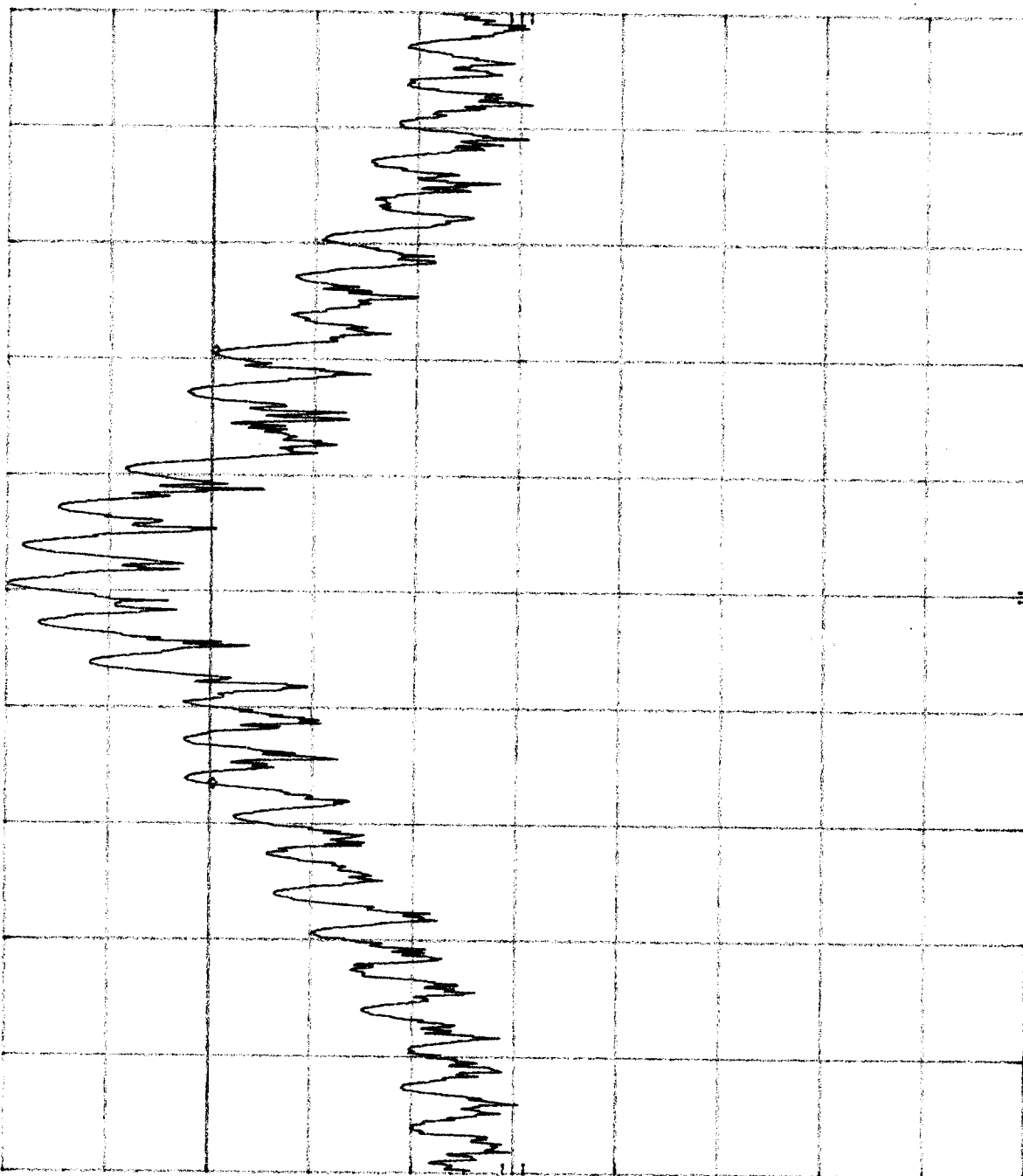
Report No. R-9688-1

R-9688 X-10 VR40A Occ. Bw. 11/11/02 PL
 REF 75.6 dBμV ATTN 10 dB MKR Δ 402 kHz
 0.00 dB

h7

10 dB/

DL
 55.6
 dBμV



CENTER 433.93 MHz
 RES BW 10 kHz
 VBW 30 kHz
 SPAN 1.08 MHz
 SWP 32.4 msec

Customer:	X-10 (USA), Inc.
Test Sample:	433MHz Pulsed Transmitter
Model No.:	VR40A FCC ID.: B4SVR40A
Test Method:	FCC 15.231 (c) Occupied Bandwidth
Notes:	Emission is less than 0.25% of center frequency measured 20dB(c). 433MHz * 0.0025 = 1.08MHz
Date:	November 13, 2002
Tech:	Peter Lananna
Sheet:	1 of 1



Retlif Testing Laboratories

Report No. R-9688-1

Test Method:	FCC Part 15 Subpart C, Spurious Case Radiated Emissions, Paragraph 15.209(a)						
Customer:	X-10 (USA), Inc.				Job No.	R-9688-1	
Test Sample:	433MHz Pulsed Transmitter						
Model No.:	VR40A				FCC ID.:	B4SVR40A	
Operating Mode:	Continuously transmitting a 433MHz pulsed signal.						
Technician:	Peter Lananna				Date:	November 12, 2002	
Notes:	Test Distance: 3 Meters Temp: 14C Humidity: 99% Detector: Quasi-Peak Below 30 MHz to 1 GHz, Peak above 1 GHz						
Test Freq.	Antenna Position	EUT Orientation	Meter Readings	Correction Factor	Corrected Reading	Converted Reading	LIMIT
MHz	(V/H) / Meters	Degrees	dBuV	dB	dBuV/m	uV/m	uV/m
30.00							100
85.9	V/1.0	157	37.5	-11.0	26.5	21.1	
88.00							100
88.00							150
114.7	V/1.0	202	36.6	-10.9	25.9	19.3	
216.00							150
216.00							200
960.00							200
960.00							500
4400.0							500
The EUT was scanned from 30 MHz to 4.4 GHz							
The emissions observed from the EUT do not exceed the specified limits. Emissions not recorded were more than 10dB under the specified limit							



Retlif Testing Laboratories

Retlif Job Number R-9688-1