

INTERTEK TESTING SERVICES

EXHIBIT 2

SYSTEM TEST CONFIGURATION

INTERTEK TESTING SERVICES

2.0 System Test Configuration

2.1 Justification

The device was configured for testing in a typical fashion (as a customer would normally use it). The device was mounted to a cardboard box, which enabled the engineer to maximize emissions through its placement in the three orthogonal axes. When the radiated emissions are measured.

The device was powered by a DC power supply adjusted to give 13.8 Vdc.

For measuring spurious and harmonic emissions of the transmitter, a 50Ω load was connected to the antenna terminal.

The frequency range from 25 MHz to 1 GHz was searched for spurious emissions from the device. Harmonic emissions of the transmitter were investigated up to 5 GHz. Only those emissions reported were detected. All other emissions were at least 20 dB below the applicable limits.

INTERTEK TESTING SERVICES

2.2 EUT Exercising Software

There was no special software to exercise the device. Once the unit is powered on, a signal is transmitted.

2.3 Special Accessories

There is no special accessory necessary for compliance of this product.

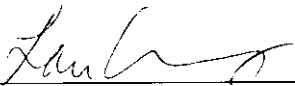
2.4 Equipment Modification

Any modification installed previous to testing by Radio Shack, A Division of Tandy Corporation will be incorporated in each production model sold/leased in the United States.

No modification were installed by Intertek Testing Services.

Confirmed by:

*C. K. Lam
Assistant Manager
Intertek Testing Services
Agent for RadioShack, A Division of Tandy Corporation*

 Signature

May 7, 1998 Date

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EXHIBIT 3

RF POWER OUTPUT

INTERTEK TESTING SERVICES

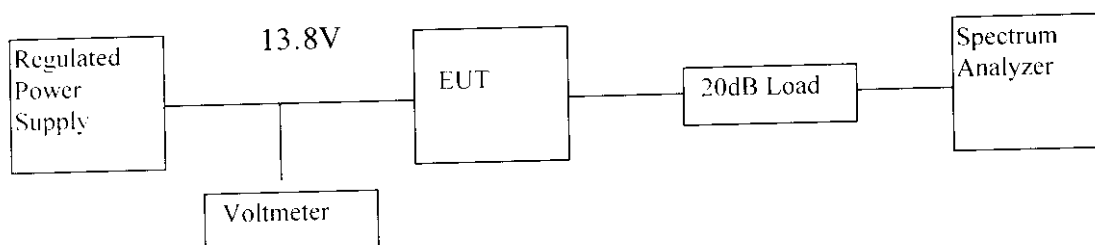
3.0 RF Power Output (Section 2.985(a))

A. Equipment Used

Equipment	Brand Name	Model No.
Regulated Power Supply	PAD	35-30L
Voltmeter	Fluke	87
Spectrum Analyzer	Hewlett Packard	8591EM
20dB RF Load	Bird	8304-200-N

B. Testing Procedure

- 1) Setup the test equipment in the following configuration:



- 2) Measure the power of all channels (40 channels) by Spectrum Analyzer in Watt.
- 3) Calculate the actual power by times the measured power with a correction factor, 104.7*
ie. Actual Power = measured Power * 104.7

* The Correction Factor is included the 20dB Load and cable loss between EUT and 20dB load.

INTERTEK TESTING SERVICES

Table 1

**RadioShack, A Division of Tandy Corporation
RadioShack 21-1702**

Transmission Power

Channel	Frequency (MHz)	Measured Power (mW)	Net Power (W)	Limit (W)	Margin (W)
1	26.965	33.43	3.50	4	-0.50
2	26.975	33.43	3.50	4	-0.50
3	26.985	33.43	3.50	4	-0.50
4	27.005	33.05	3.46	4	-0.54
5	27.015	32.95	3.45	4	-0.55
6	27.025	32.95	3.45	4	-0.55
7	27.035	32.95	3.45	4	-0.55
8	27.055	32.95	3.45	4	-0.55
9	27.065	32.57	3.41	4	-0.59
10	27.075	32.57	3.41	4	-0.59
11	27.085	32.28	3.38	4	-0.62
12	27.105	32.28	3.38	4	-0.62
13	27.115	33.24	3.48	4	-0.52
14	27.125	32.95	3.45	4	-0.55
15	27.135	32.95	3.45	4	-0.55

Notes: Negative sign in the margin column shows the value below limits.

Test Engineer: Wilson S. K. Loke

Date of Test: March 31, 1998

INTERTEK TESTING SERVICES

Table 1 (Cont'd...)

RadioShack, A Division of Tandy Corporation
RadioShack 21-1702

Transmission Power

Channel	Frequency (MHz)	Measured Power (mW)	Net Power (W)	Limit (W)	Margin (W)
16	27.155	32.95	3.45	4	-0.55
17	27.165	32.28	3.38	4	-0.62
18	27.175	32.28	3.38	4	-0.62
19	27.185	32.28	3.38	4	-0.62
20	27.205	32.28	3.38	4	-0.62
21	27.215	32.28	3.38	4	-0.62
22	27.225	32.28	3.38	4	-0.62
23	27.255	32.28	3.38	4	-0.62
24	27.235	32.28	3.38	4	-0.62
25	27.245	32.28	3.38	4	-0.62
24	27.265	32.28	3.38	4	-0.62
27	27.275	32.09	3.36	4	-0.64
28	27.285	32.09	3.36	4	-0.64
29	27.295	32.09	3.36	4	-0.64
30	27.305	31.90	3.34	4	-0.66

Notes: Negative sign in the margin column shows the value below limits.

Test Engineer: Wilson S. K. Loke

Date of Test: March 31, 1998

INTERTEK TESTING SERVICES

Table 1 (Cont'd...)

**RadioShack, A Division of Tandy Corporation
RadioShack 21-1702**

Transmission Power

Channel	Frequency (MHz)	Measured Power (mW)	Net Power (W)	Limit (W)	Margin (W)
31	27.315	31.90	3.34	4	-0.66
32	27.325	31.90	3.34	4	-0.66
33	27.335	31.71	3.32	4	-0.68
34	27.345	31.71	3.32	4	-0.68
35	27.355	31.71	3.32	4	-0.68
36	27.365	31.52	3.30	4	-0.70
37	27.375	31.52	3.30	4	-0.70
38	27.385	31.52	3.30	4	-0.70
39	27.395	31.52	3.30	4	-0.70
40	27.405	31.52	3.30	4	-0.70

Notes: Negative sign in the margin column shows the value below limits.

Test Engineer: Wilson S. K. Loke

Date of Test: March 31, 1998

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EXHIBIT 4

MODULATION CHARACTERISTICS

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4.0 Modulation Characteristics

In order to satisfy the 2.987 requirement, Modulation Frequency Response, Modulation Limit Characteristics and Over Modulation Transient Response, are attached in Exhibit 4.1, 4.2 & 4.3.

Plots for each tests are included in the following sections.

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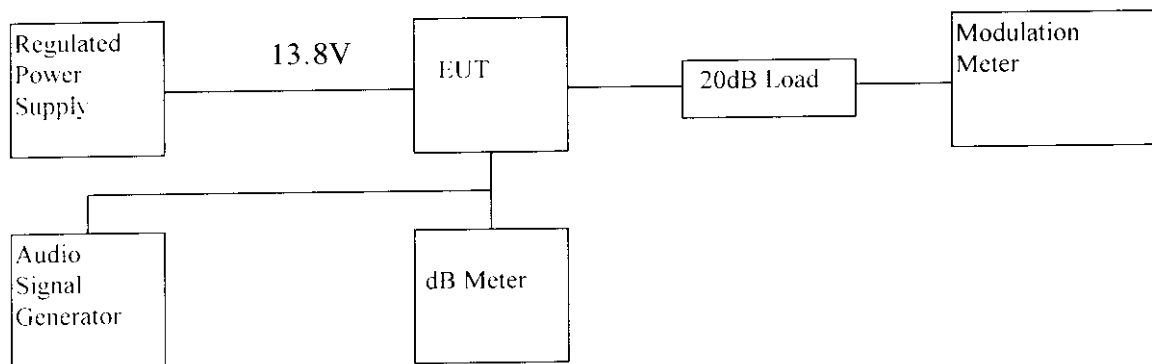
4.1 Modulation Frequency Response

A. Test Equipment

Equipment	Brand Name	Model No.
Regulated Power Supply	PAD	30-35L
Audio Signal Generator	Leader	LFG-1300S
dB meter	Leader	LMV-182A
20 dB RF Load	Bird	8304-200-N
Modulation Meter	Marconi Instrument	2945

B. Testing Procedure

- 1) Set-up the test equipment in the following configuration:



- 2) Set the audio signal generator frequency to 2kHz and adjust level to obtain 50% modulation. And then adjust the frequency to obtain the maximum audio frequency response of the EUT.
- 3) Adjust the level of audio signal generator to give 50% modulation at the maximum audio frequency response and take this level as the 0dB reference level.
- 4) The frequency of the audio signal generator is changed from 200Hz to 10kHz and adjust the level to obtain the 50% modulation at each frequency.
- 5) Record the level at each frequency reference to 0dB Level.

INTERTEK TESTING SERVICES

C. Test Result

Table 2

RadioShack, A Division of Tandy Corporation
RadioShack 21-1702

Modulation Frequency Response (Section 2.987(a))

Test Channel : 19

0 dB Level : -39.5 dBm

Modulation Output : 50%

Modulation Frequency (Hz)	Modulation input relative to max. output. (dB)
200	-11.5
300	-25.0
400	-31.5
500	-35.5
600	-38.0
700	-39.0
800	-39.0
900	-39.5
1000	-39.5
1500	-38.0
2000	-35.5
2500	-34.0
3000	-31.5
3500	-29.0
4000	-27.0
4500	-25.0
5000	-23.0
6000	-19.0
7000	-15.6
8000	-13.0
9000	-9.7
10000	-6.4

Test Engineer: Wilson S. K. Loke

Date of Test: March 31, 1998

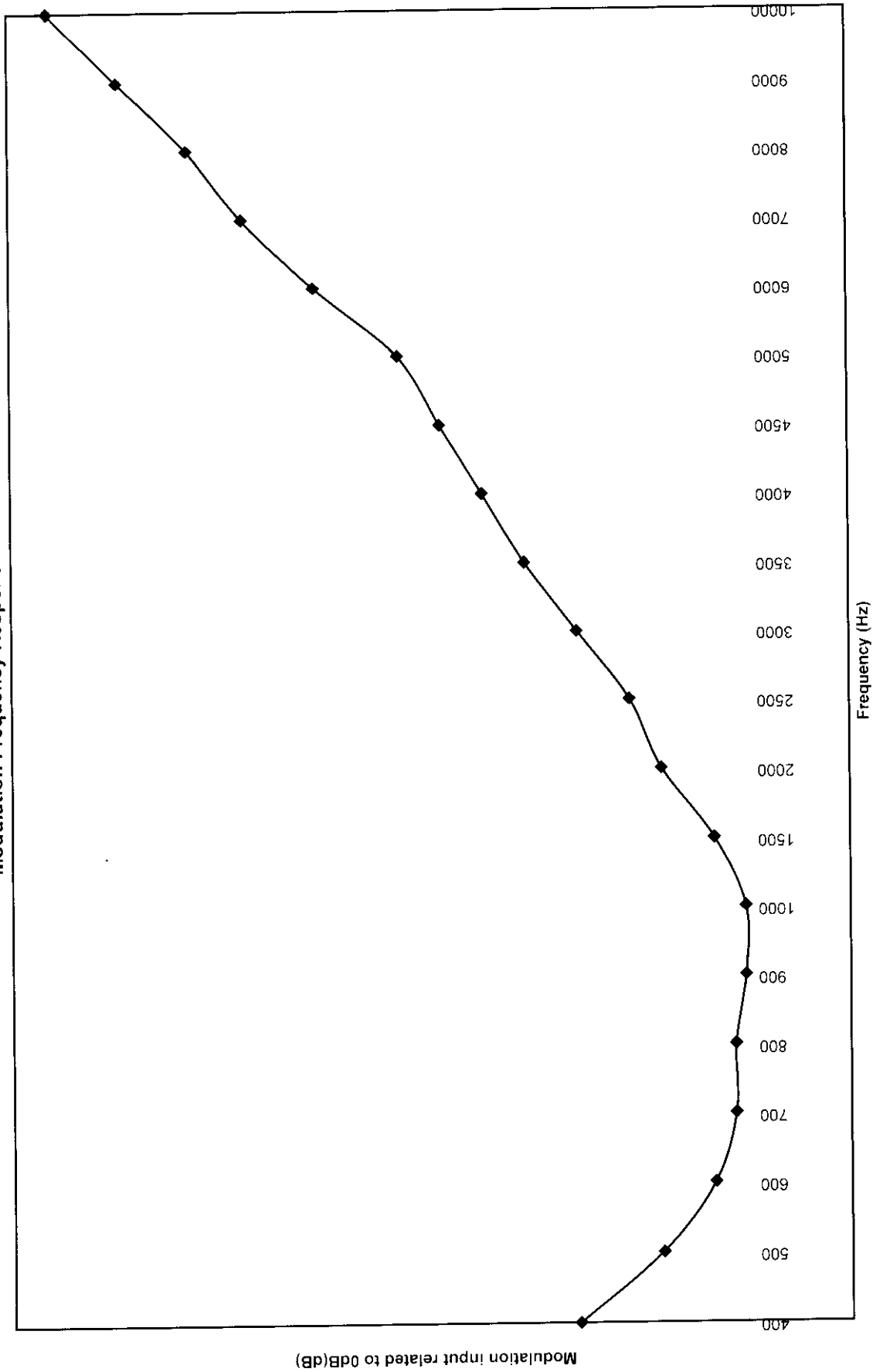


Intertek Testing Services

ETL Testing Laboratories

Report No.: 1801553

Modulation Frequency Response



Ctrl. No.: N/A

FCCID:AAO21-1702

INTERTEK TESTING SERVICES

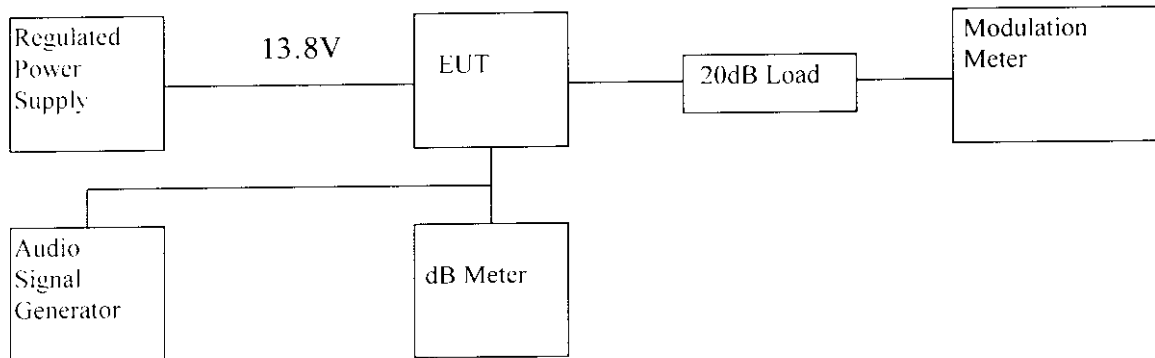
4.2 Modulation Limiting Characteristics (Section 2.987(b))

A. Test Equipment

Equipment	Brand Name	Model No.
Regulated Power Supply	PAD	30-35L
Audio Signal Generator	Leader	LFG-1300S
dB meter	Leader	LMV-182A
20 dB RF Load	Bird	8304-200-N
Modulation Meter	Marconi	2950

B. Testing Procedure

- 1) Set-up the test equipment in the following configuration:



- 2) Set the frequency of the audio signal generator to 400Hz and adjust the level from -70dBm to 0dBm. Record the output modulation index.
- 3) Repeat the above procedure with frequency 1200Hz, 1500Hz, 2500Hz & 5000Hz.

INTERTEK TESTING SERVICES

C. Test Result

Table 3

**RadioShack, A Division of Tandy Corporation
RadioShack 21-1702**

Modulation Limiting Characteristics

Test Channel : 19

Modulation Input (dBm)	Modulation Index(%) at 400Hz	Modulation Index(%) at 1200Hz	Modulation Index(%) at 1500Hz	Modulation Index(%) at 2500Hz	Modulation Index(%) at 5000Hz
-60	3	6	5	4	2
-50	5	16	14	9	4
-40	12	46	42	25	9
-30	37	86	86	76	25
-20	83	87	87	85	70
-10	84	88	88	86	82
0	85	91	90	88	86

Test Engineer: Wilson S. K. Loke

Date of Test: March 31, 1998

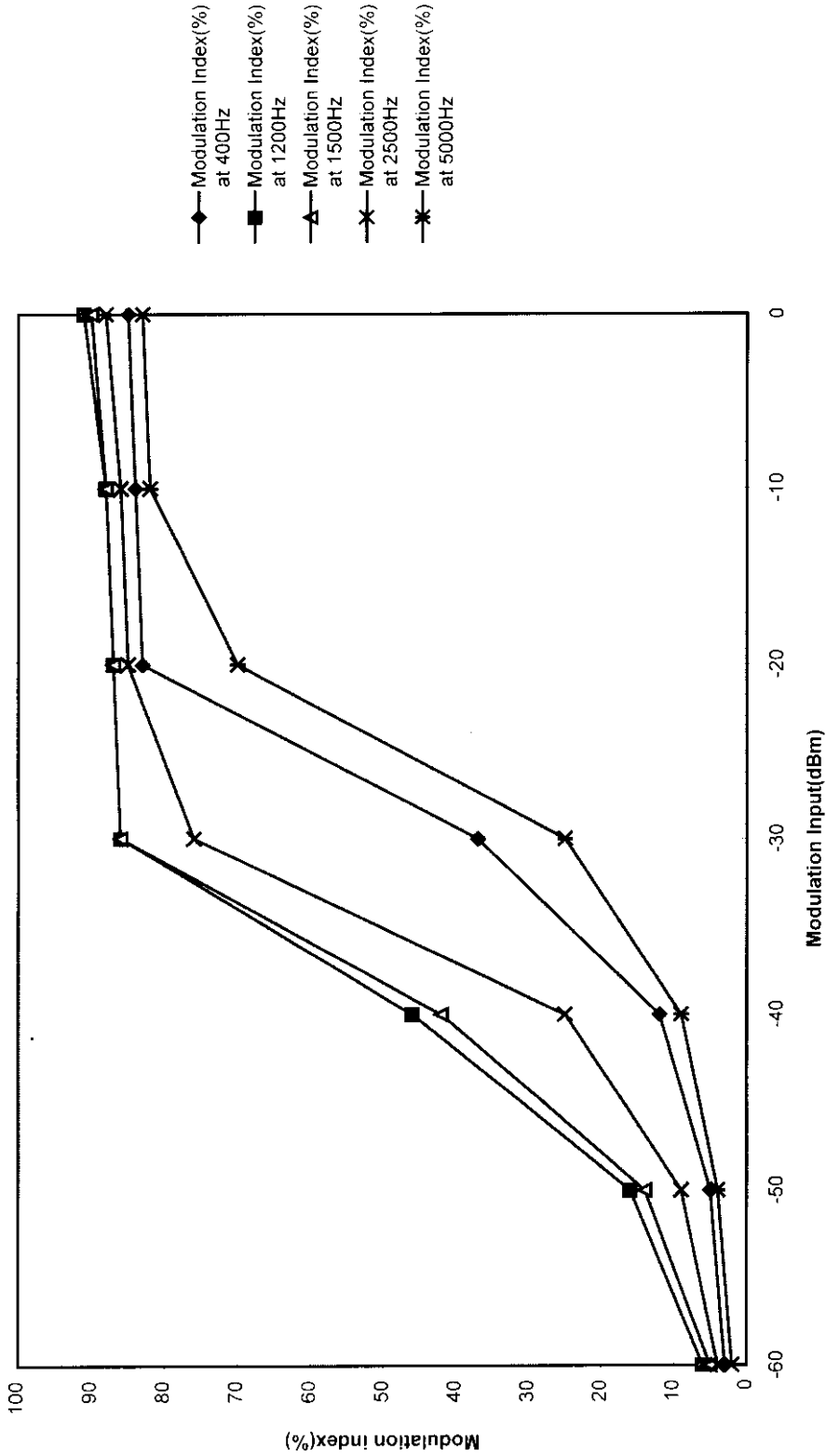


Intertek Testing Services

ETL Testing Laboratories

Report No.: 801553

Modulation Limiting Characteristic



Ctrl. No.: N/A

FCC ID: AAO21-1702

INTERTEK TESTING SERVICES

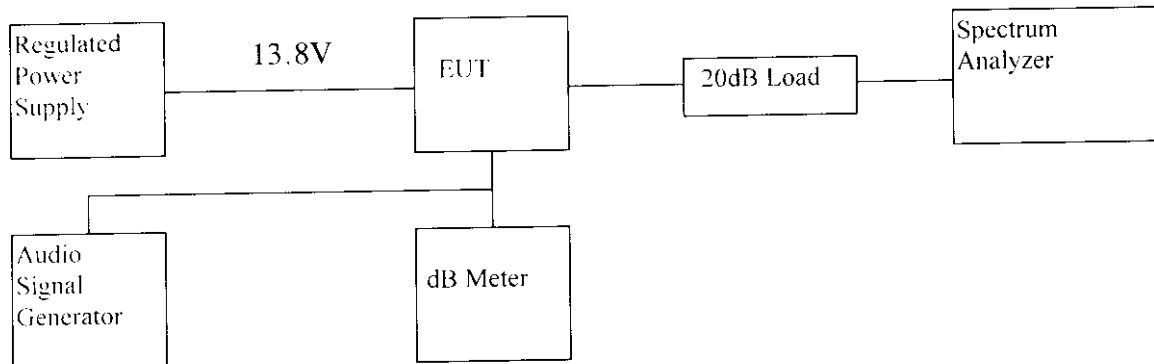
4.3 Over Modulation Transient Response (Section 2.987(b))

A. Test Equipment

Equipment	Brand Name	Model No.
Regulated Power Supply	PAD	30-35L
Audio Signal Generator	Leader	LFG-1300S
dB meter	Leader	LMV-182A
20 dB RF Load	Bird	8304-200-N
Spectrum Analyzer	Hewlett Packard	8951EM

B. Testing Procedure

- 1) Set-up the test equipment in the following configuration:



- 2) Set the frequency of the audio signal generator to 2.5kHz at level 16dB greater than required for 50% modulation.
- 3) Use the other audio signal generator pulse the previous signal at one P.P.S. with pulse width of 0.5 second.
- 4) Tune the spectrum analyzer to the channel on which the transmitter is set and adjust the setting as for the measurement of occupied bandwidth.
- 5) And then tune the spectrum analyser to adjacent channel(+/-10kHz) and use "Zero-scan" to observe the transients caused by the pulsed modulation.

INTERTEK TESTING SERVICES

C. Test Result

Table 4

**RadioShack, A Division of Tandy Corporation
RadioShack 21-1702**

Over modulation Transient Response

Channel	Adjacent Frequency (MHz)	Transient Level with respect to TP in (dB)	Transient Duration (ms)
1	26.955	42.85	20
1	26.975	41.22	20
19	27.175	44.34	30
19	27.195	44.32	20
40	27.395	59.40	20
40	27.405	43.83	40

Remark: '-' sign in the Transient Level respect to the carrier Level column mean below the carrier level.

Test Engineer: Wilson S. K. Loke

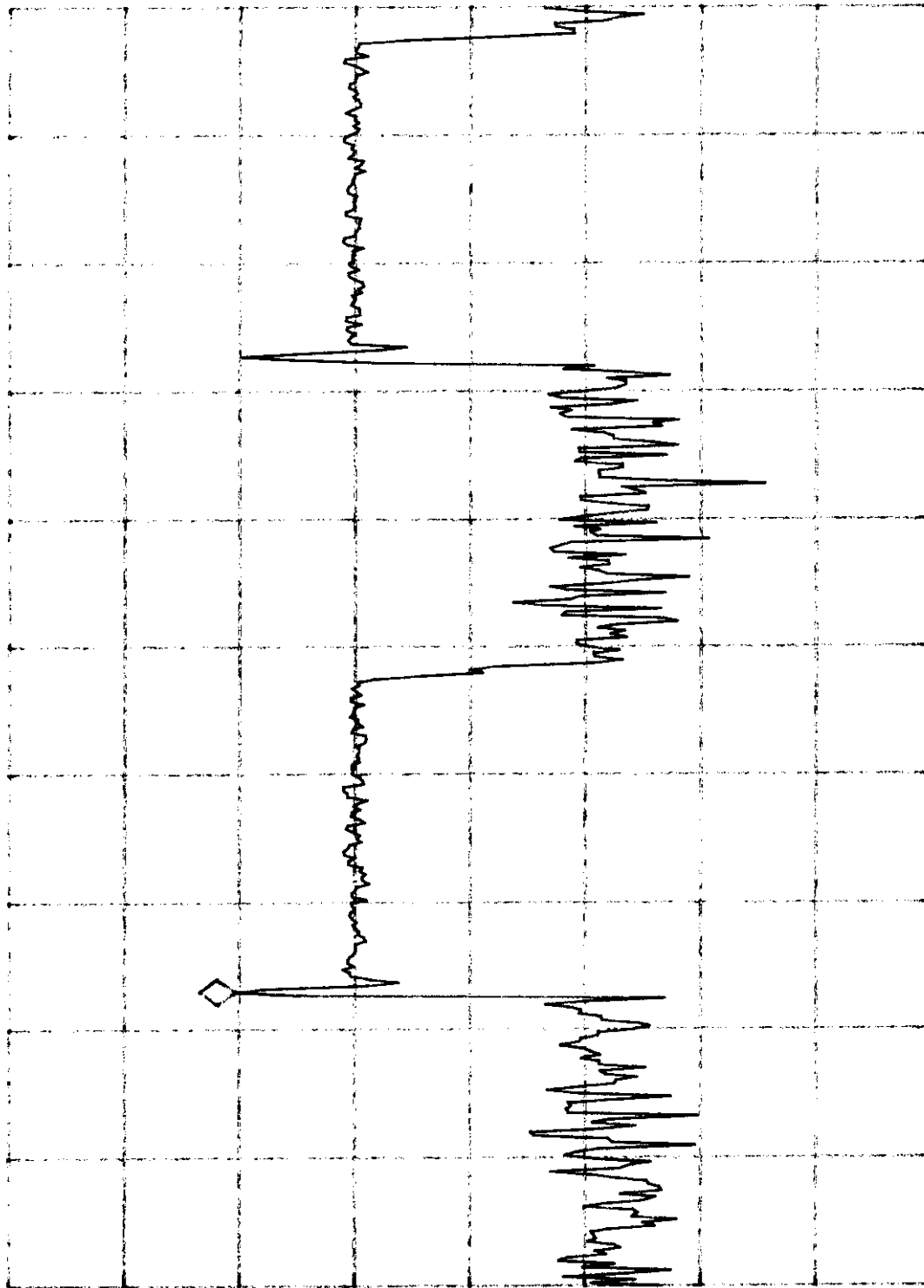
Date of Test: March 31, 1998

hp

MKR 460.00 msec
-29.70 dBm

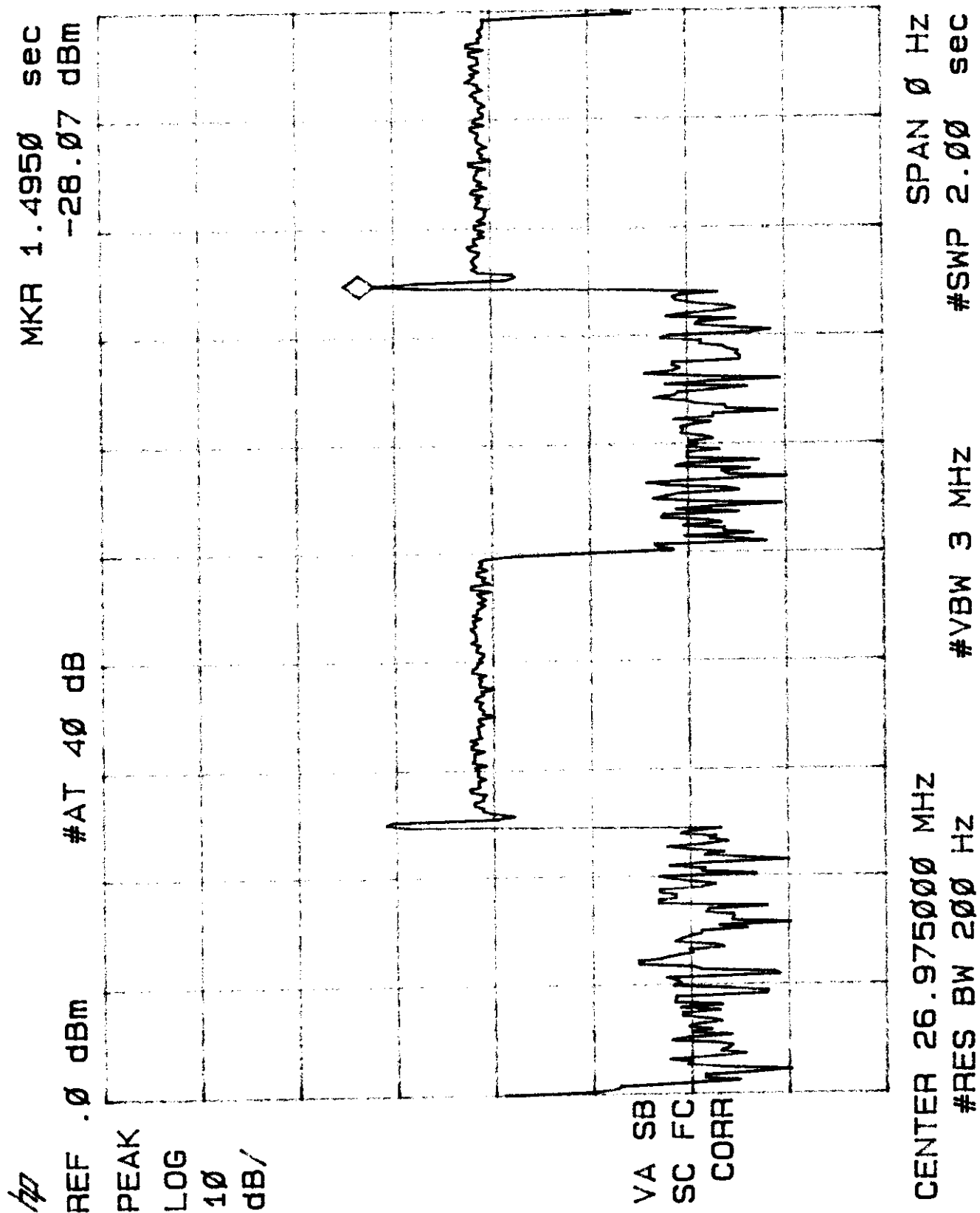
REF -10.0 dBm #AT 40 dB

PEAK
LOG
10
dB/



SA VB
SC FC
CORR

CENTER 26.955000 MHz
#RES BW 200 Hz
#VBW 3 MHz
#SWP 2.00 sec
SPAN 0 Hz



7/2

MKR 1.6200 sec
-31.19 dBm

#AT 40 dB

REF .0 dBm

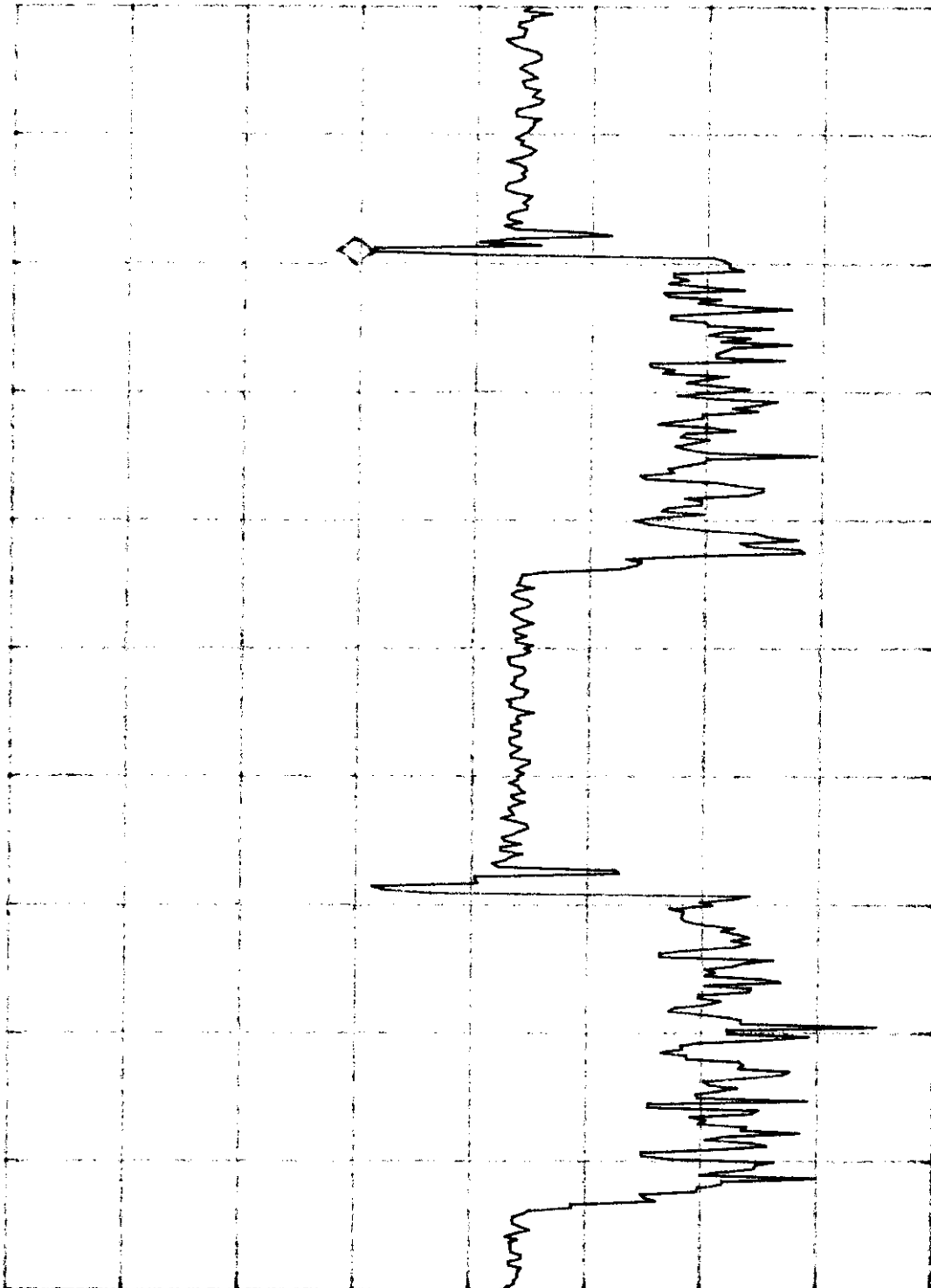
PEAK

LOG

10

dB/

SA VB
SC FC
CORR



CENTER 27.175000 MHZ

#RES BW 200 Hz

#VBW 3 MHz

#SWP 2.00 sec

SPAN 0 Hz

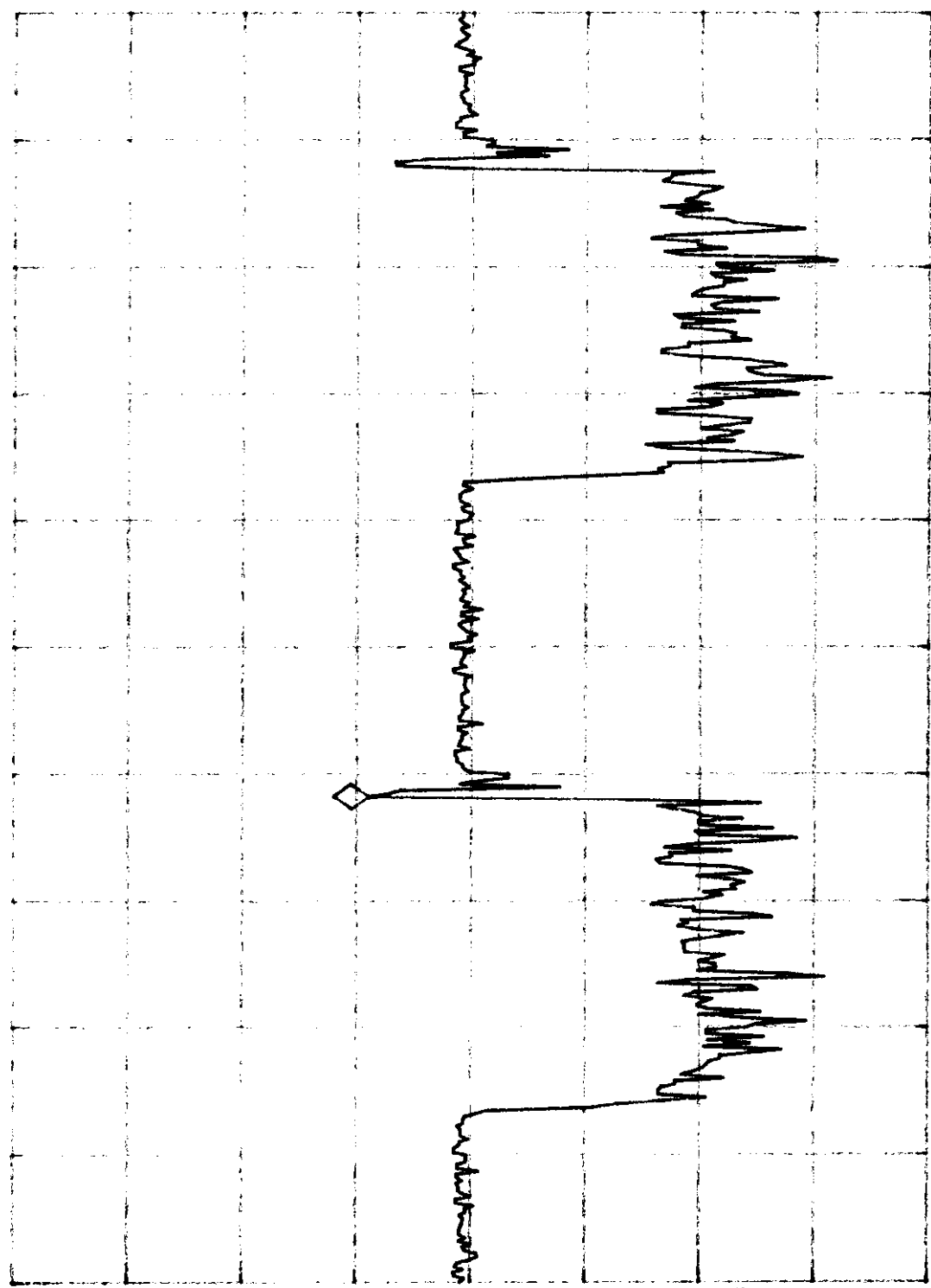
hp

MKA 765.00 msec
-31.17 dBm

#AT 40 dB

REF .0 dBm

PEAK
LOG
10
dB/



VA SB
SC FC
CORR

SPAN 0 Hz
#SWP 2.00 sec

#VBW 3 MHz

CENTER 27.195000 MHz
#RES BW 200 Hz

h/

MR 240.00 msec
-33.10 dBm

#AT 40 dB

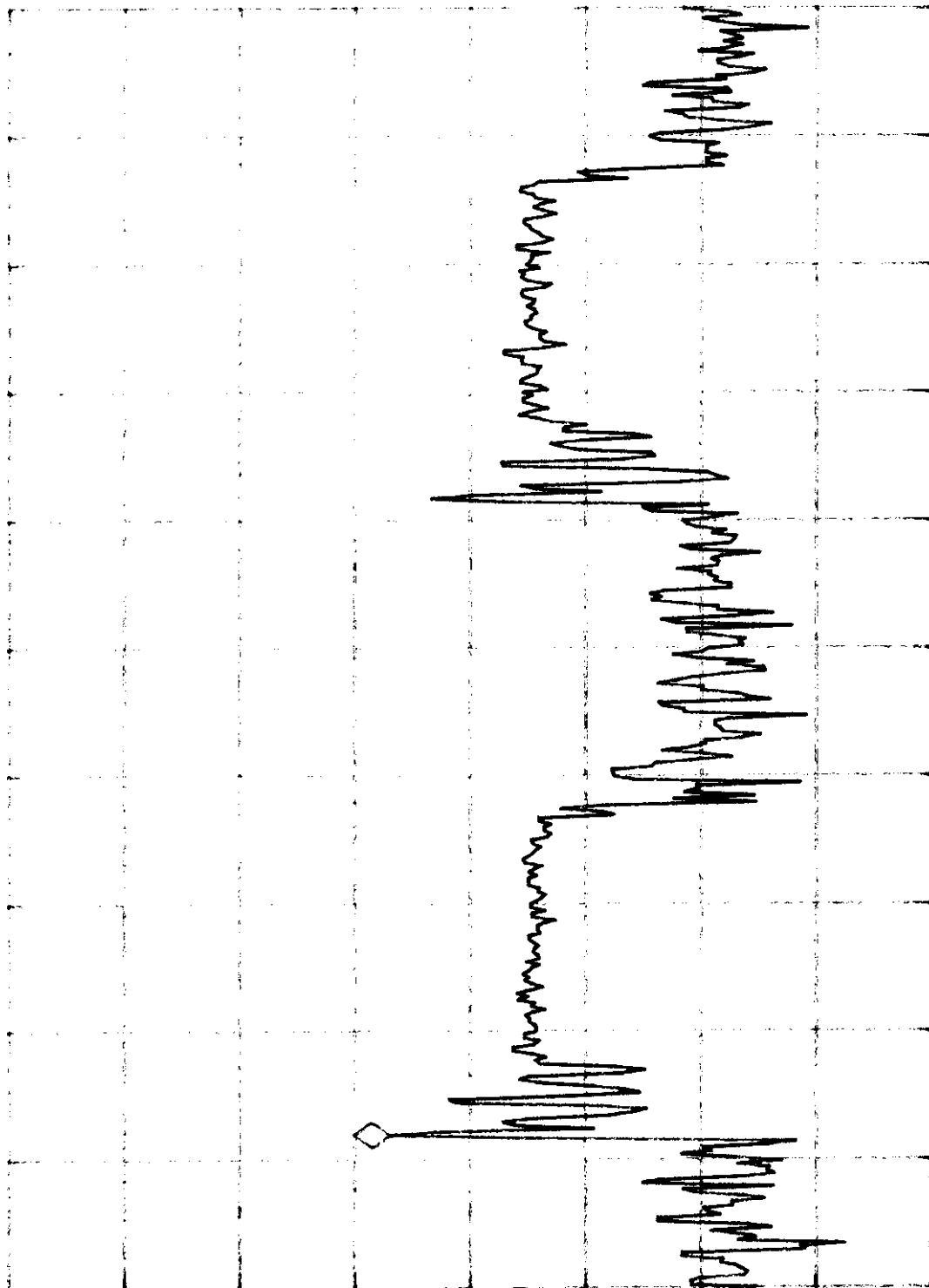
REF .0 dBm

PEAK

LOG

10

dB/



VA SB
SC FC
CORR

CENTER 27.395000 MHz

#RES BW 200 Hz

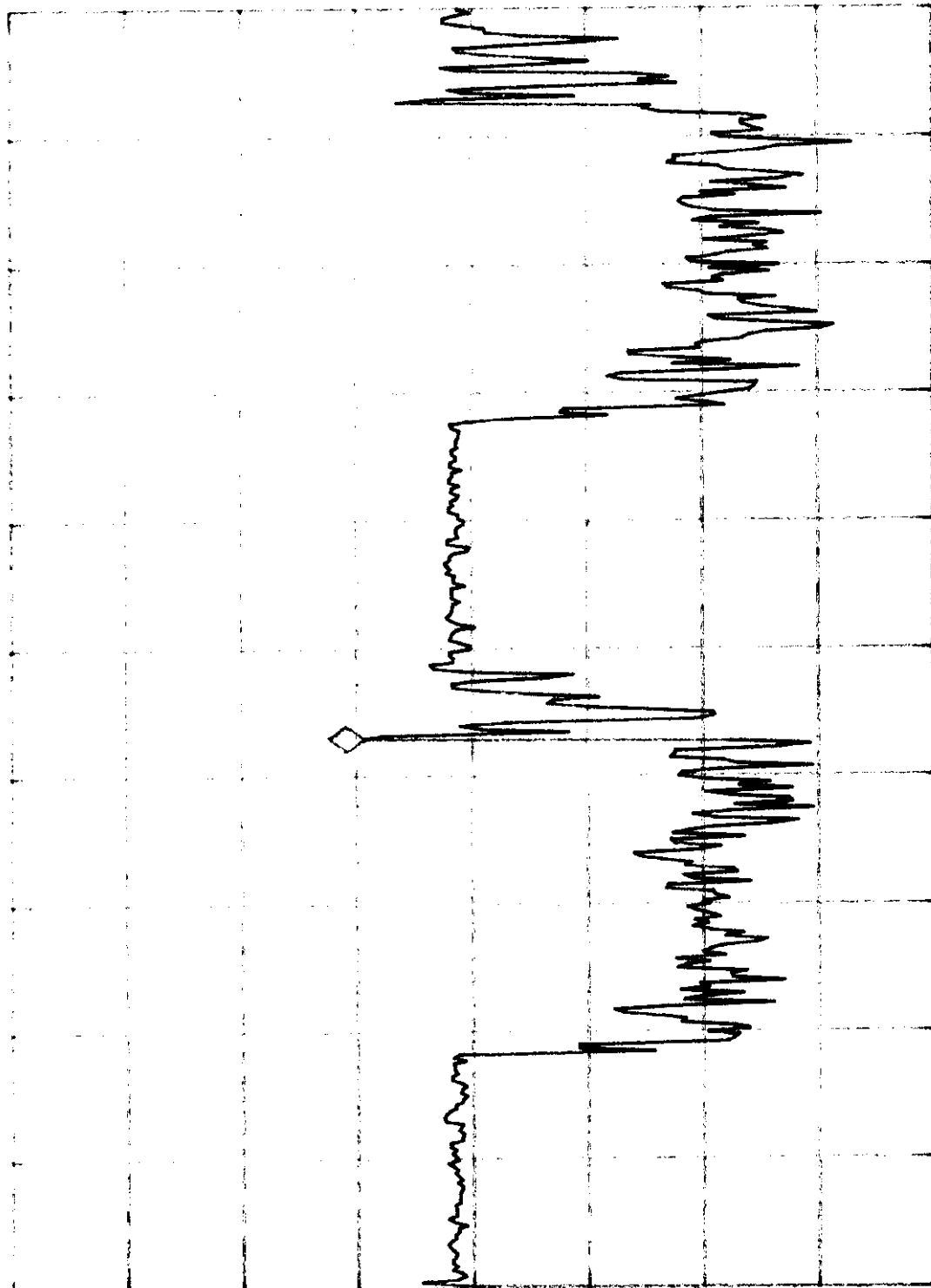
#VBW 3 MHz

#SWP 2.00 sec

SPAN 0 Hz

REF .0 dBm #AT 40 dB MKR 860.00 msec
-30.68 dBm

PEAK
LOG
10
dB/



VA SB
SC FC
CORR

CENTER 27.415000 MHz SPAN 0 Hz
#RES BW 200 Hz #SWP 2.00 sec
#VBW 3 MHz

INTERTEK TESTING SERVICES

EXHIBIT 5

OCCUPIED BANDWIDTH

INTERTEK TESTING SERVICES

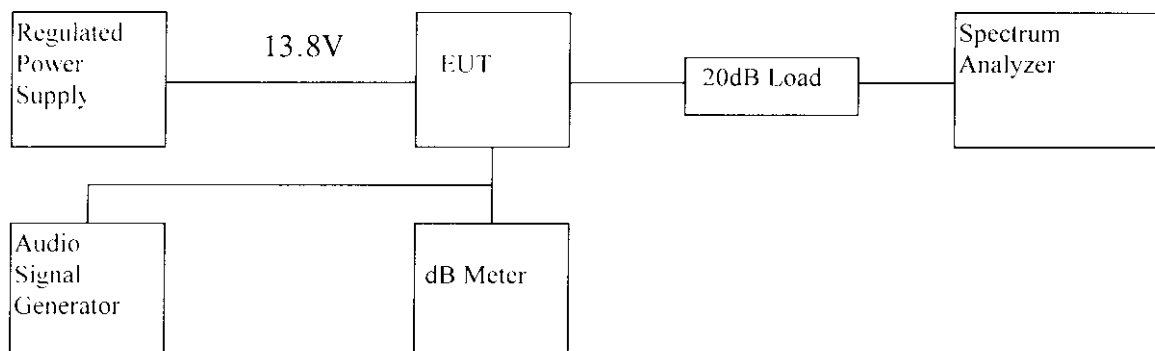
5.0 Occupied Bandwidth (Section 2.989 & Section 95.633)

A. Test Equipment

Equipment	Brand Name	Model No.
Regulated Power Supply	PAD	30-35L
Audio Signal Generator	Leader	LFG-1300S
dB meter	Leader	LMV-182A
20 dB RF Load	Bird	8304-200-N
Spectrum Analyzer	Hewlett Packard	8951EM

B. Testing Procedure

- 1) Set-up the test equipment in the following configuration:



- 2) Set the level of audio signal generator to obtain 16 dB greater than required for 50% modulation.
- 3) The occupied bandwidth is measured with the spectrum analyzer set at 5kHz/div scan and 10dB/div.

C. Test Result

The occupied Bandwidth is measured to be 5.5 kHz.

Test Engineer: Wilson S. K. Loke

Date of Test: March 31, 1998

Channel 1

hp

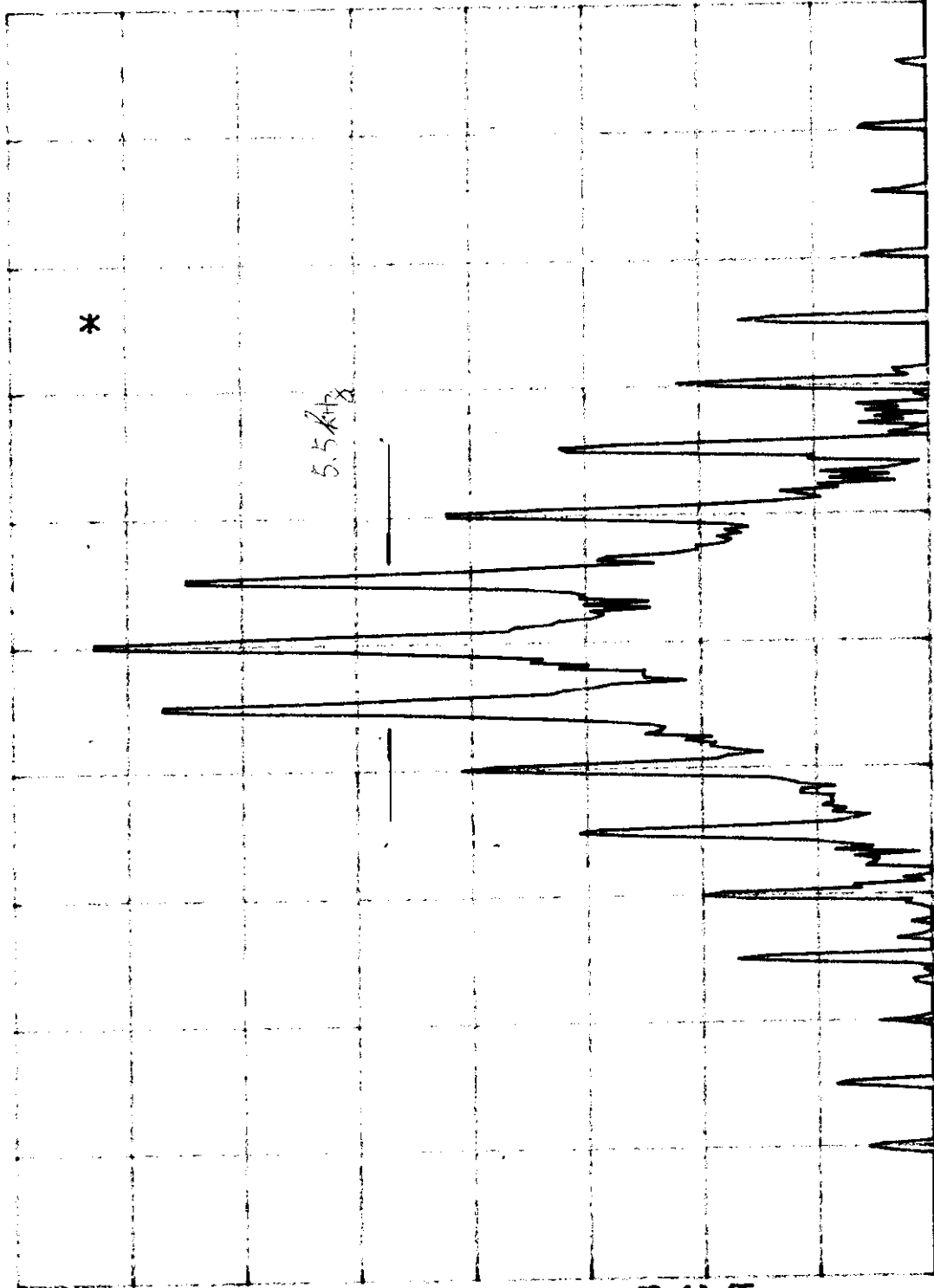
REF 20.0 dBm #AT 40 dB

PEAK

LOG

10

dB/



VA SB

SC FC

CORR

CENTER 26.96500 MHz

#RES BW 200 Hz

#VBW 3 MHz

SPAN 50.00 KHz

#SWP 7.50 sec

Channel 19

hp

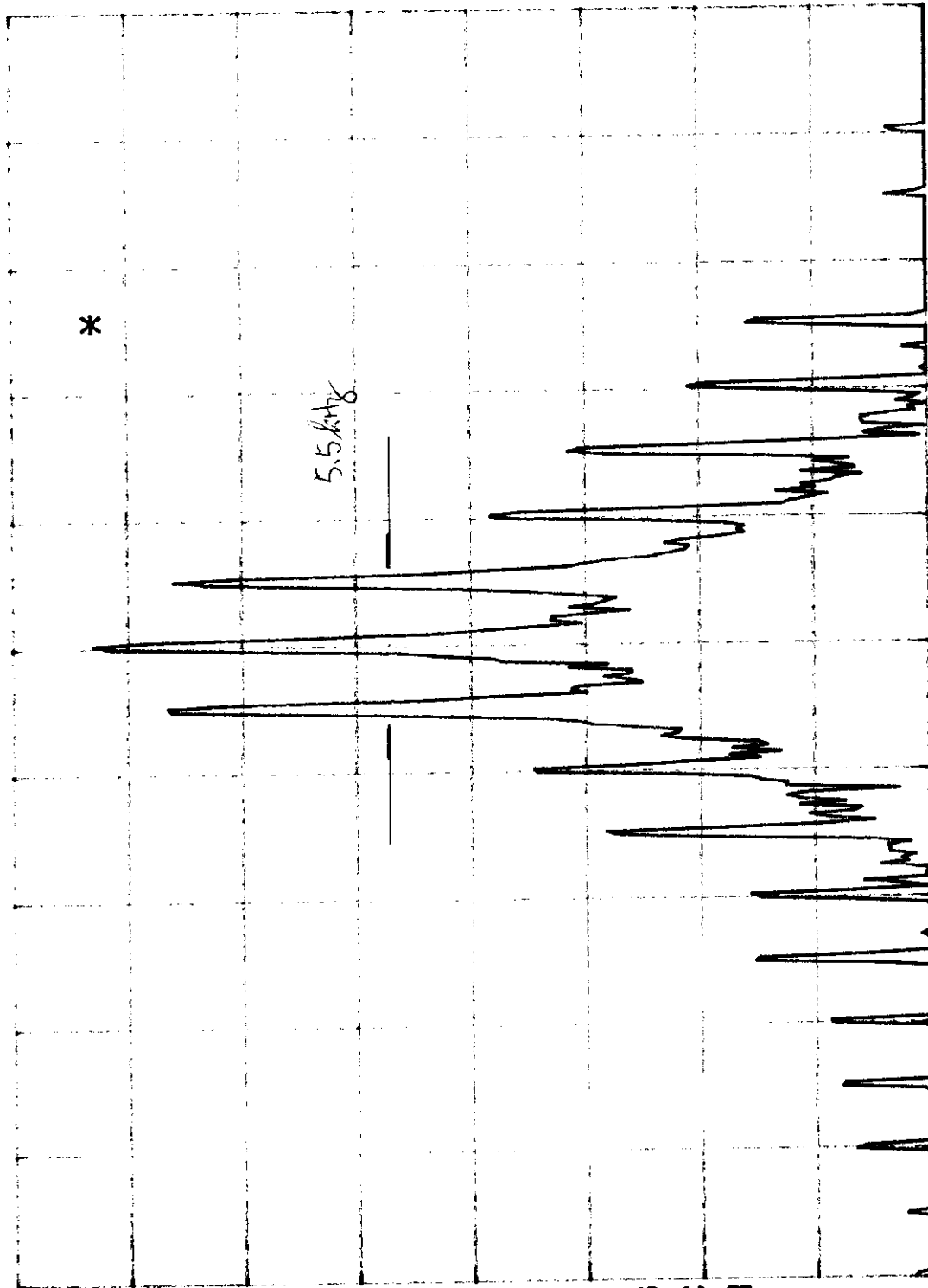
REF 20.0 dBm #AT 40 dB

PEAK

LOG

10

dB/



VA SB
SC FC
CORR

CENTER 27.185000 MHz
#RES BW 200 Hz
SPAN 0 Hz
#SWP 7.50 sec
#VBW 3 MHz

Channel 40

hp

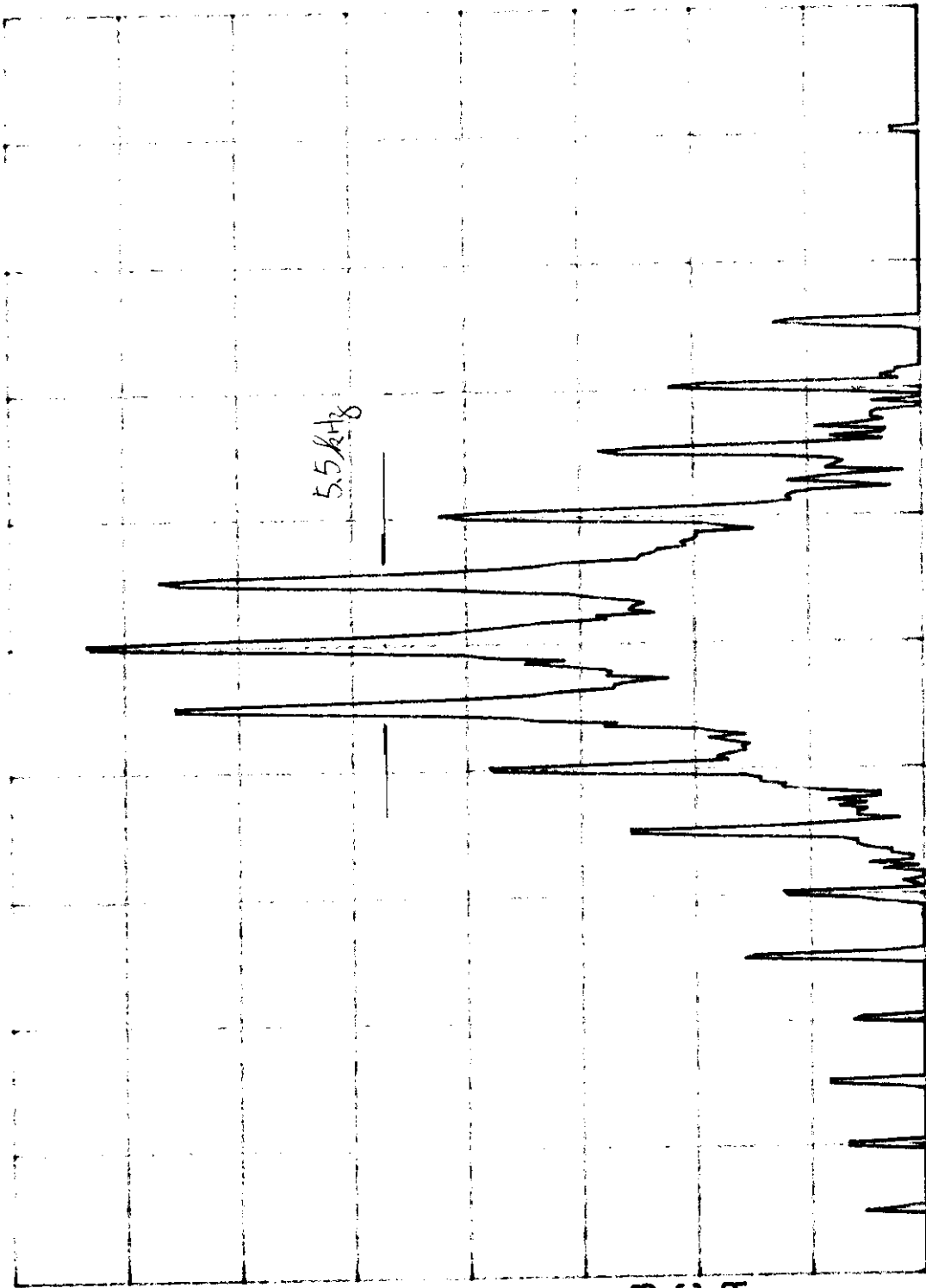
REF 20.0 dBm #AT 40 dB

PEAK

LOG

10

dB/



SPAN 50.00 kHz

#SWP 7.50 sec

#VBW 3 MHz

CENTER 27.40500 MHz

#RES BW 200 Hz

INTERTEK TESTING SERVICES

EXHIBIT 6

SPURIOUS EMISSION

INTERTEK TESTING SERVICES

6.0 Spurious Emission

In order to satisfy the 2.991 & 2.993 requirement, the spurious emission from the antenna terminal and from the EUT are measured and shown in the Exhibit 6.1 & 6.2

INTERTEK TESTING SERVICES

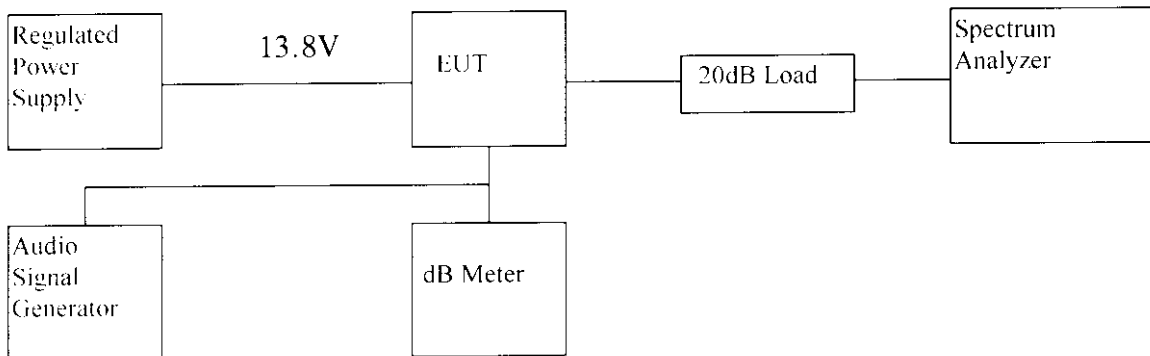
6.1 Spurious emission at the antenna terminal (Section 2.991 & Section 95.631)

A. Test Equipment

Equipment	Brand Name	Model No.
Regulated Power Supply	PAD	30-35L
Audio Signal Generator	Leader	LFG-1300S
dB meter	Leader	LMV-182A
20 dB RF Load	Bird	8304-200-N
RF Filter	Tailithic	3VF
Spectrum Analyzer	Hewlett Packard	8951EM

B. Testing Procedure

- 1) Set-up the test equipment in the following configuration:



- 2) Set the level of audio signal generator to obtain 16 dB greater than required for 50% modulation.
- 3) Plot the graph of emissions with 50kHz span.
- 4) Measure the emissions relative to TP in region CARRIER $\pm$ 4kHz to CARRIER $\pm$ 20kHz from the plot.
- 5) Record the emissions relative to TP from region CARRIER $\pm$ 20kHz to 1000MHz.

INTERTEK TESTING SERVICES

C. Test Result

RadioShack, A Division of Tandy Corporation
RadioShack 21-1702
Table 5(a)

- 1) Unwanted emission from CARRIER $\pm$ 4kHz to Carrier $\pm$ 20kHz (Refer to the plots)

Region	Unwanted emission		
	Channel 1	Channel 19	Channel 40
CARRIER $\pm$ 4kHz to $\pm$ 8kHz	< 25dB	< 25dB	< 25dB
CARRIER $\pm$ 8kHz to $\pm$ 20kHz	< 35dB	< 35dB	< 35dB

- 2) Unwanted emission from CARRIER $\pm$ 20kHz to 1000MHz

Table 5(b): Channel 1

Frequency (MHz)	Emission relative to TP (dB)	Limit (dB)	Margin (dB)
53.930	-66.9	-60	-6.9
80.895	-84.0	-60	-24.0
107.860	-86.2	-60	-26.2
134.825	-83.2	-60	-23.2
161.790	-86.3	-60	-26.3
188.755	-85.7	-60	-25.7
215.720	-84.4	-60	-24.4
242.685	-83.4	-60	-23.4
269.650	-80.3	-60	-20.3

Remark: 1. '-' sign in margin column shows the value below the limits.

2. Any emissions and other harmonics which are attenuated more than 20dB below the permissible value need not be recorded.

Test Engineer: Wilson S. K. Loke

Date of Test: March 31, 1998

INTERTEK TESTING SERVICES

RadioShack, A Division of Tandy Corporation
RadioShack 21-1702

Table 5(c): Channel 19

Frequency (MHz)	Emission relative to TP (dB)	Limit (dB)	Margin (dB)
54.370	-66.1	-60	-6.1
81.555	-82.9	-60	-22.9
108.740	-88.8	-60	-28.8
135.925	-81.6	-60	-21.6
163.110	-84.2	-60	-24.2
190.295	-89.8	-60	-29.8
217.480	-81.3	-60	-21.3
244.665	-80.4	-60	-20.4
271.850	-83.3	-60	-23.3

- Remark:
1. '-' sign in margin column shows the value below the limits.
 2. Any emissions and any other harmonics which are attenuated more than 20dB below the permissible value need not be recorded.

Test Engineer: Wilson S. K. Loke

Date of Test: March 31, 1998

INTERTEK TESTING SERVICES

Table 5(d): Channel 40

Frequency (MHz)	Emission relative to TP (dB)	Limit (dB)	Margin (dB)
54.810	-62.8	-60	-2.8
82.215	-83.5	-60	-23.5
109.620	-89.4	-60	-29.4
137.025	-82.6	-60	-22.6
164.430	-87.1	-60	-27.1
191.835	-89.1	-60	-29.1
219.420	-82.1	-60	-22.1
246.645	-78.8	-60	-18.8
274.050	-80.2	-60	-20.2

- Remark:
1. '-' sign in margin column shows the value below the limits.
 2. Any emissions and any other harmonics which are attenuated more than 20dB below the permissible value need not be recorded.

Test Engineer: Wilson S. K. Loke

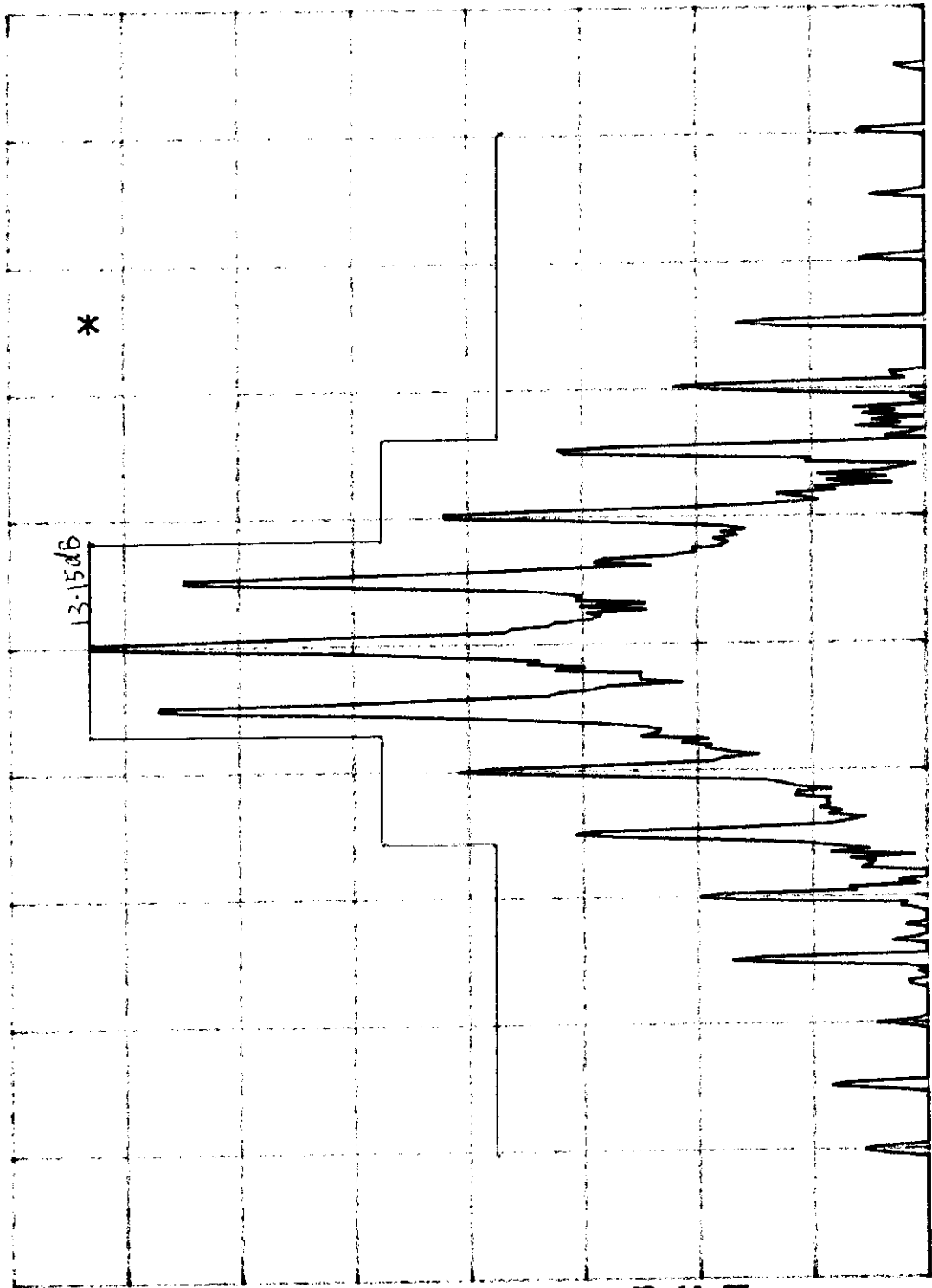
Date of Test: March 31, 1998

Channel 1

70

REF 20.0 dBm #AT 40 dB

PEAK
LOG
10
dB/



VA SB
SC FC
CORR

CENTER 26.96500 MHz
#RES BW 200 Hz
SPAN 50.00 KHz
#SWP 7.50 sec
#VBW 3 MHz

Channel 19

77

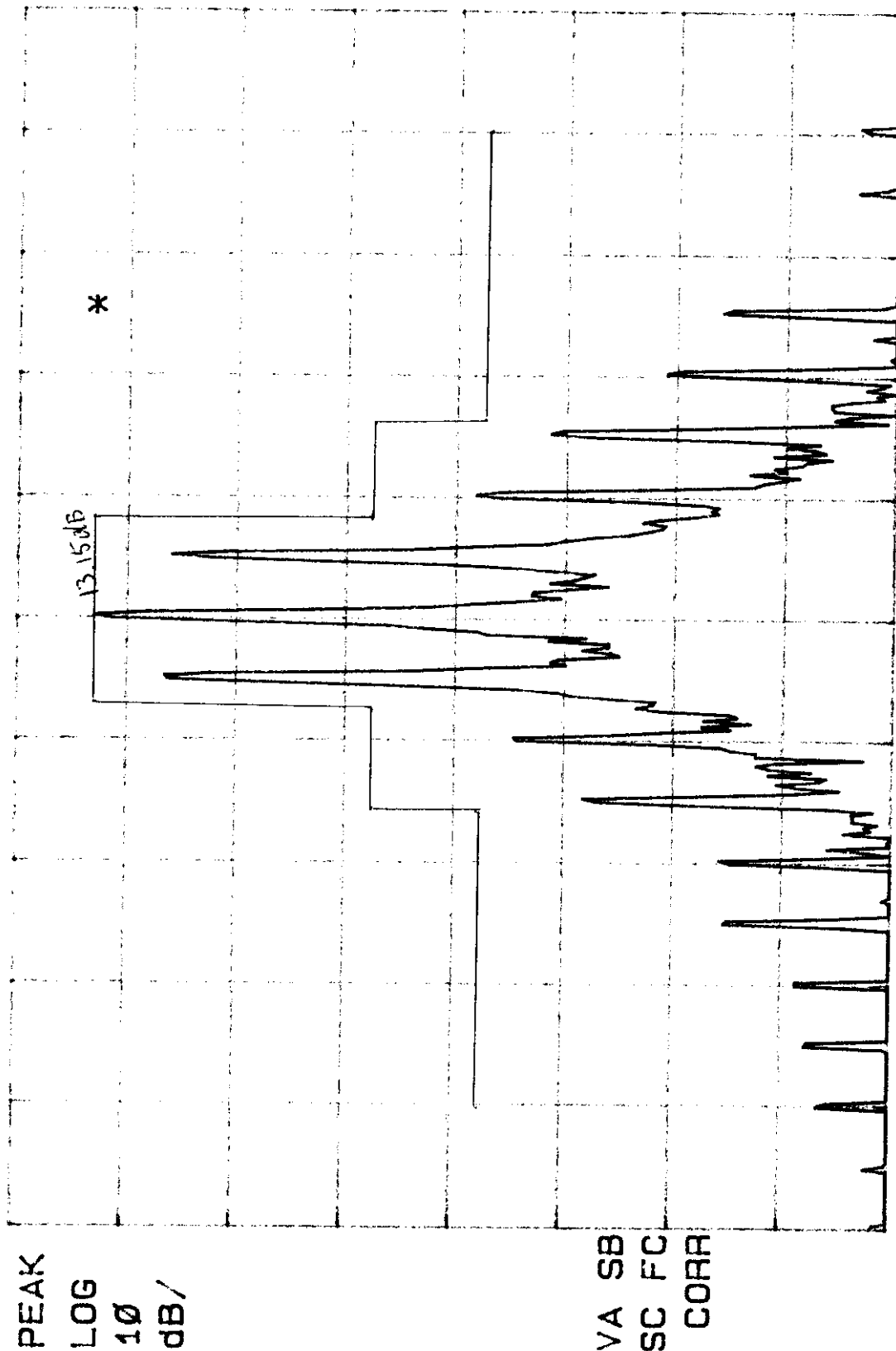
REF 20.0 dBm #AT 40 dB

PEAK

LOG

10

dB/



VA SB
SC FC
CORR

CENTER 27.185000 MHz

#RES BW 200 Hz

#VBW 3 MHz

#SWP 7.50 sec

SPAN 0 Hz

Channel 40

hp

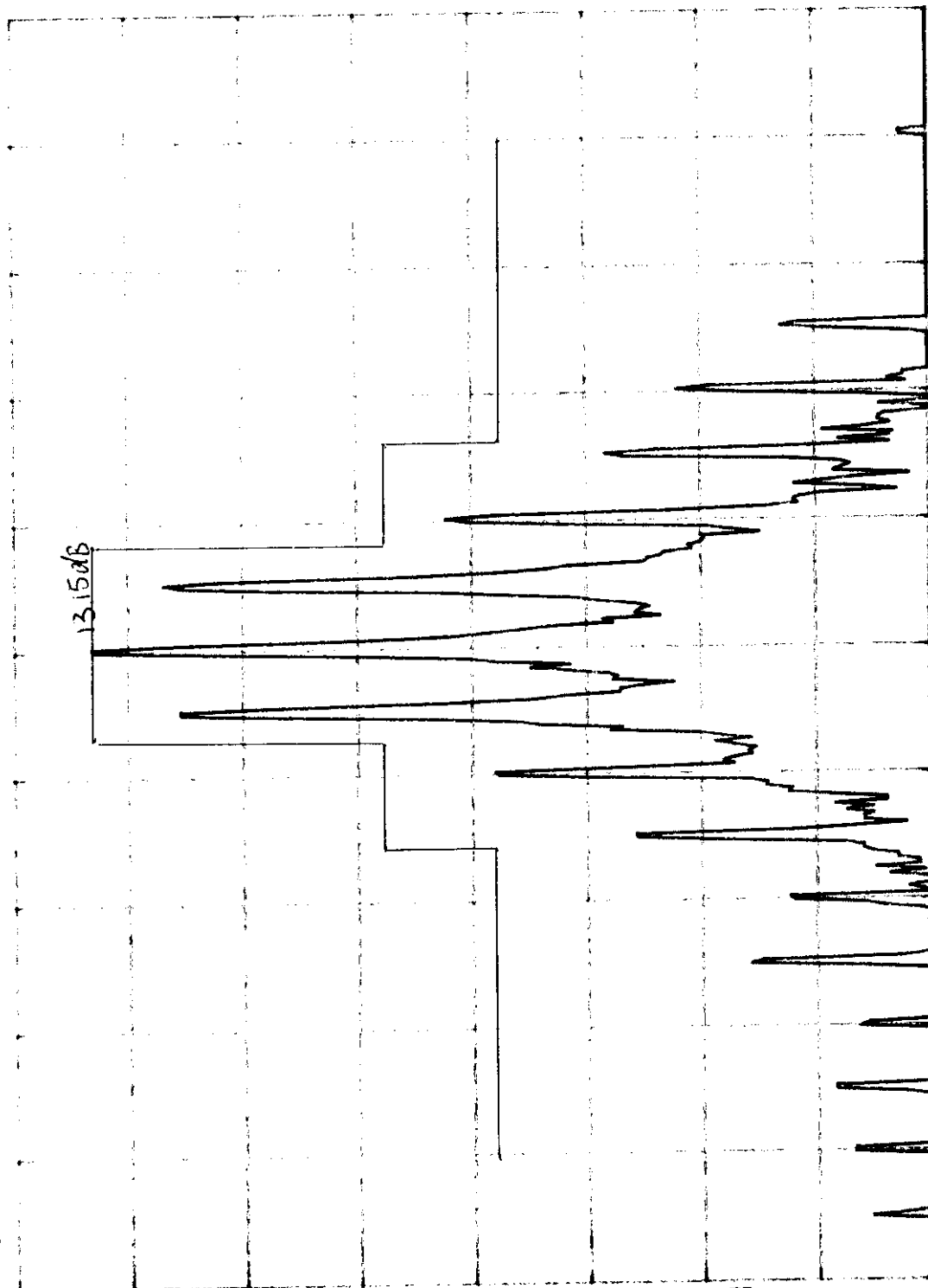
REF 20.0 dBm #AT 40 dB

PEAK

LOG

10

dB/



SPAN 50.00 KHZ
#SWP 7.50 sec

#VBW 3 MHZ

CENTER 27.40500 MHZ
#RES BW 200 HZ

INTERTEK TESTING SERVICES

6.2 Field Strength of Spurious Radiation (Section 2.993)

A. Test Equipment

Equipment	Brand Name	Model No.
Regulated Power Supply	PAD	30-35L
Antenna	CDI	B100,B200,B300
Test receiver	Rohde & Schwarz	ESVS30
RF Filter	Tailithic	3VF

B. Testing Procedure

Radiated emission measurements were performed according to the procedures in ANSI C63.4(1992). All measurements were performed in Open Area Test Sites located at Roof Top of Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong.

INTERTEK TESTING SERVICES

D. Test Result

Table 6

**RadioShack, A Division of Tandy Corporation
RadioShack 21-1702
Radiated Spurious Emissions**

Channel : 1

The output power of transmitter is 35.4 dBm

Antenna Polarity	Frequency (MHz)	Reading (dB μ V)	Antenna Factor (dB)	Net at 3m (dB μ V/m)	ERP (dBm)	ERP to related TOP*
V	53.929	58.2	11	69.2	-26.0	-61.4
V	80.895	44.2	6	50.2	-45.0	-80.4
H	107.860	47.3	13	60.3	-34.9	-70.3
H	134.824	54.4	13	67.4	-27.8	-63.2
V	161.789	48.3	16	64.3	-30.9	-66.3
H	188.754	49.4	16	65.4	-29.8	-65.2
H	215.719	50.3	17	67.3	-27.9	-63.3
H	242.683	35.8	19	54.8	-40.4	-75.8
H	269.648	21.2	22	43.2	-52.0	-87.4
H	296.663	35.1	22	57.1	-38.1	-73.5
H	323.578	29.6	24	53.6	-41.6	-77.0
H	350.543	21.9	24	45.9	-49.3	-84.7
H	377.508	28.7	24	52.7	-42.5	-77.9
H	404.472	27.4	24	51.4	-43.8	-79.2
H	431.438	28.6	25	53.6	-41.6	-77.0
H	458.402	27.4	26	53.4	-41.8	-77.2
H	566.262	32.2	28	60.2	-35.0	-70.4
H	593.227	25.1	29	54.1	-41.1	-76.5

* "TOP" is Transmitter Output Power

Test Engineer: Wilson S. K. Loke

Date of Test: March 31, 1998

INTERTEK TESTING SERVICES

D. Test Result

Table 7

RadioShack, A Division of Tandy Corporation
RadioShack 21-1702
Radiated Spurious Emissions

Channel : 19

The output power of transmitter is 35.2 dBm

Antenna Polarity	Frequency (MHz)	Reading (dB μ V)	Antenna Factor (dB)	Net at 3m (dB μ V/m)	ERP (dBm)	ERP to related TOP*
V	54.369	58.8	11	69.8	-25.4	-60.6
V	81.554	45.1	7	52.1	-43.1	-78.3
H	108.739	49.8	13	62.8	-32.4	-67.6
H	135.924	55.7	13	68.7	-26.5	-61.7
V	163.109	46.5	17	63.5	-31.7	-66.9
H	190.294	49.3	16	65.3	-29.9	-65.1
H	217.479	49.7	17	66.7	-28.5	-63.7
H	244.664	41.2	20	61.2	-34.0	-69.2
H	271.849	34.6	22	56.6	-38.6	-73.8
H	299.034	22.1	22	44.1	-51.1	-86.3
H	326.218	31.4	24	55.4	-39.8	-75.0
H	353.404	32.0	24	56.0	-39.2	-74.4
H	380.586	28.9	24	52.9	-42.3	-77.5
H	407.774	22.5	24	46.5	-48.7	-83.9
H	434.958	28.0	25	53	-42.2	-77.4
H	462.143	26.3	26	52.3	-42.9	-78.1
H	570.885	33.1	28	61.1	-34.1	-69.3
H	598.071	26.4	29	55.4	-39.8	-75.0

* "TOP" is Transmitter Output Power

Test Engineer: Wilson S. K. Loke

Date of Test: March 31, 1998

INTERTEK TESTING SERVICES

D. Test Result

Table 8

**RadioShack, A Division of Tandy Corporation
RadioShack 21-1702
Radiated Spurious Emissions**

Channel : 40

The output power of transmitter is 35.2 dBm

Antenna Polarity	Frequency (MHz)	Reading (dB μ V)	Antenna Factor (dB)	Net at 3m (dB μ V/m)	ERP (dBm)	ERP to related TOP*
V	54.809	57.4	11	68.4	-26.8	-62.0
H	82.215	44.1	7	51.1	-44.1	-79.3
H	109.62	49.7	13	62.7	-32.5	-67.7
V	135.024	55.3	13	68.3	-26.9	-62.1
H	164.429	46.7	17	63.7	-31.5	-66.7
H	191.834	50.3	16	66.3	-28.9	-64.1
H	219.239	50.2	17	67.2	-28.0	-63.2
H	426.644	36.4	25	61.4	-33.8	-69.0
H	274.049	35.1	22	57.1	-38.1	-73.3
H	301.454	23.3	22	45.3	-49.9	-85.1
H	328.858	30.8	24	54.8	-40.4	-75.6
H	356.263	32.7	24	56.7	-38.5	-73.7
H	383.668	29.4	24	53.4	-41.8	-77.0
H	411.073	20.1	25	45.1	-50.1	-85.3
H	438.478	24.2	26	50.2	-45.0	-80.2
H	465.883	28.7	26	54.7	-40.5	-75.7
H	575.502	34.3	28	62.3	-32.9	-68.1
H	602.907	22.3	29	51.3	-43.9	-79.1

* "TOP" is Transmitter Output Power

Test Engineer: Wilson S. K. Loke

Date of Test: March 31, 1998

INTERTEK TESTING SERVICES

EXHIBIT 7

FREQUENCY STABILITY

INTERTEK TESTING SERVICES

7.0 Frequency Stability

The frequency tolerance was tested in normal condition & over extreme ambient conditions with respect to voltage and temperature variation.

INTERTEK TESTING SERVICES

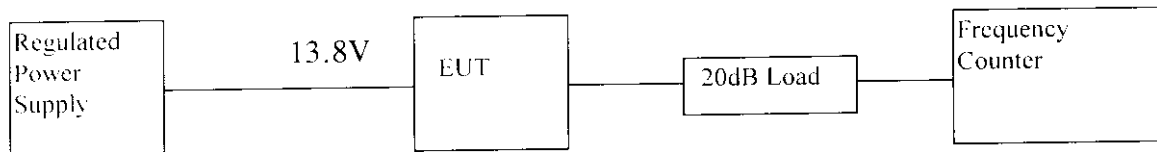
7.1 Frequency Tolerance (Section 95.625)

A. Test Equipment

Equipment	Brand Name	Model No.
Regulated Power Supply	PAD	30-35L
20 dB RF Load	Bird	8304-200-N
Frequency Counter	Phillips	PM6668

B. Testing Procedure

- 1) Set-up the test equipment in the following configuration:



- 2) Measure all transmit channel frequencies in MHz.

INTERTEK TESTING SERVICES

C. Test Result

Table 9

RadioShack, A Division of Tandy Corporation
RadioShack 21-1702
Frequency Tolerance

Channel	Frequency (MHz)	Measured Frequency (MHz)	Tolerance (%)
1	26.96500	26.96508	0.00029
2	26.97500	26.97508	0.00029
3	26.98500	26.98508	0.00029
4	27.00500	27.00507	0.00025
5	27.01500	27.01506	0.00022
6	27.02500	27.02507	0.00025
7	27.03500	27.03507	0.00025
8	27.05500	27.05507	0.00025
9	27.06500	27.06507	0.00025
10	27.07500	27.07505	0.00018
11	27.08500	27.08504	0.00014
12	27.10500	27.10503	0.00011
13	27.11500	27.11511	0.00040
14	27.12500	27.12511	0.00040
15	27.13500	27.1351	0.00036
16	27.15500	27.15509	0.00331
17	27.16500	27.16507	0.00025
18	27.17500	27.17506	0.00022
19	27.18500	27.18506	0.00022
20	27.20500	27.20505	0.00018
21	27.21500	27.21505	0.00018
22	27.22500	27.22505	0.00018
23	27.25500	27.25505	0.00018
24	27.23500	27.23505	0.00018
25	27.24500	27.24504	0.00014
26	27.26500	27.26504	0.00014

INTERTEK TESTING SERVICES

C. Test Result

Table 9 (Cont'd...)

**RadioShack, A Division of Tandy Corporation
RadioShack 21-1702
Frequency Tolerance**

Channel	Frequency (MHz)	Measured Frequency (MHz)	Tolerance (%)
27	27.27500	27.27504	0.00014
28	27.28500	27.28504	0.00014
29	27.29500	27.29504	0.00014
30	27.30500	27.30503	0.00010
31	27.31500	27.31503	0.00010
32	27.32500	27.32503	0.00010
33	27.33500	27.33502	0.00007
34	27.34500	27.34501	0.00004
35	27.35500	27.35501	0.00004
36	27.36500	27.36501	0.00004
37	27.37500	27.37501	0.00004
38	27.38500	27.38501	0.00004
39	27.39500	27.39501	0.00004
40	27.40500	27.40501	0.00004

Test Engineer: Wilson S. K. Loke

Date of Test: March 31, 1998

INTERTEK TESTING SERVICES

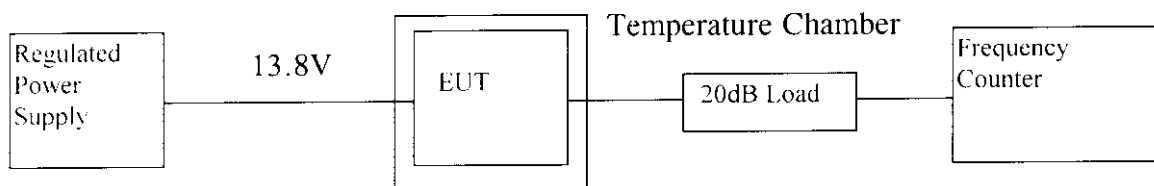
7.2 Frequency Stability - Temperature (Section 2.995)

A. Test Equipment

Equipment	Brand Name	Model No.
Regulated Power Supply	PAD	30-35L
20 dB RF Load	Bird	8304-200-N
Frequency Counter	Phillips	PM6668

B. Testing Procedure

- 1) Set-up the test equipment in the following configuration:



- 2) Set the Temperature Chamber to -30°C and stabilize the EUT temperature for one hour. Apply standard input voltage of 13.8 volts with transmitter ON for two minutes.
- 3) Measure the channel frequency of channel 1, 19, 40 in MHz.
- 4) Turn the EUT OFF
- 5) Repeat the above procedure with 10°C intervals from -30°C to 50°C

INTERTEK TESTING SERVICES

C. Test Result

Table 10

**RadioShack, A Division of Tandy Corporation
RadioShack 21-1702**

Frequency Deviation with Temperature Variation

Channel : 1

Temperature (°C)	Assigned Frequency (MHz)	Measured Frequency (MHz)	% Deviation
-30	26.96500	26.96526	0.00096
-20	26.96500	26.96521	0.00078
-10	26.96500	26.96526	0.00096
0	26.96500	26.96524	0.00089
10	26.96500	26.96517	0.00063
20	26.96500	26.96508	0.00030
30	26.96500	26.96496	-0.00015
40	26.96500	26.96489	-0.00041
50	26.96500	26.96482	-0.00067

Test Engineer: Wilson S. K. Loke

Date of Test: March 31, 1998

INTERTEK TESTING SERVICES

C. Test Result

Table 11

**RadioShack, A Division of Tandy Corporation
RadioShack 21-1702**

Frequency Deviation with Temperature Variation

Channel : 19

Temperature (°C)	Assigned Frequency (MHz)	Measured Frequency (MHz)	% Deviation
-30	27.18500	27.18526	0.00096
-20	27.18500	27.18521	0.00077
-10	27.18500	27.18525	0.00092
0	27.18500	27.18524	0.00088
10	27.18500	27.18516	0.00059
20	27.18500	27.18508	0.00029
30	27.18500	27.18497	-0.00041
40	27.18500	27.18489	-0.00040
50	27.18500	27.18482	-0.00066

Test Engineer: Wilson S. K. Loke

Date of Test: March 31, 1998

INTERTEK TESTING SERVICES

C. Test Result

Table 12

**RadioShack, A Division of Tandy Corporation
RadioShack 21-1702**

Frequency Deviation with Temperature Variation

Channel : 40

Temperature (°C)	Assigned Frequency (MHz)	Measured Frequency (MHz)	% Deviation
-30	27.40500	27.40526	0.00095
-20	27.40500	27.40520	0.00073
-10	27.40500	27.40526	0.00095
0	27.40500	27.40524	0.00088
10	27.40500	27.40517	0.00062
20	27.40500	27.40508	0.00029
30	27.40500	27.40497	0.00011
40	27.40500	27.40489	-0.00040
50	27.40500	27.40482	-0.00066

Test Engineer: Wilson S. K. Loke

Date of Test: March 31, 1998

INTERTEK TESTING SERVICES

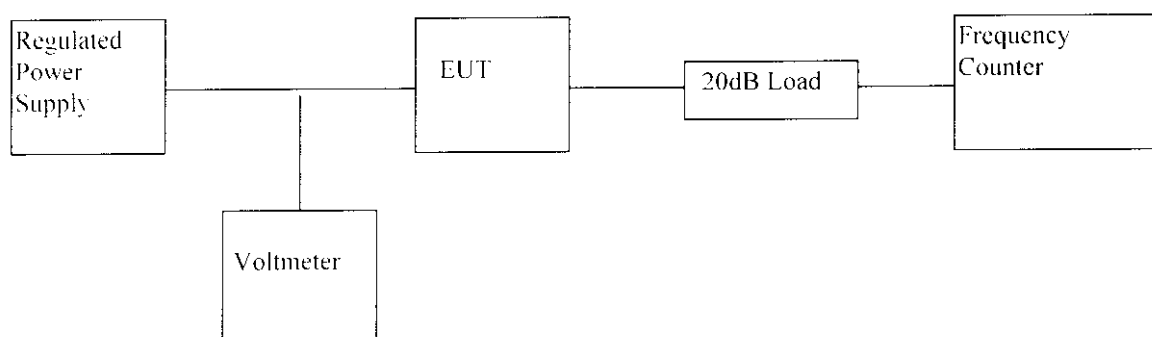
7.3 Frequency Stability - Voltage (Section 2.995)

A. Test Equipment

Equipment	Brand Name	Model No.
Regulated Power Supply	PAD	30-35L
20 dB RF Load	Bird	8304-200-N
Voltage meter	Fluke	87
Frequency Counter	Phillips	PM6668

B. Testing Procedure

- 1) Set-up the test equipment in the following configuration:



- 2) Vary the level of regulated power supply from 85% to 115% of the rated voltage and the manufacturer specified battery end point of the EUT.
- 3) Measure the channel frequency of channel 1, 19, 40 in MHz at each input power level.

INTERTEK TESTING SERVICES

C. Test Result

Table 13

**RadioShack, A Division of Tandy Corporation
RadioShack 21-1702**

Frequency Deviation with Voltage Variation

Channel : 1

Voltage (Vdc)	Assigned Frequency (MHz)	Measured Frequency (MHz)	% Deviation
15.9	26.96500	26.965090	0.00033
13.8	26.96500	26.965080	0.00030
11.7	26.96500	26.965070	0.00026

Channel : 19

Voltage (Vdc)	Assigned Frequency (MHz)	Measured Frequency (MHz)	% Deviation
15.9	27.18500	27.185090	0.00033
13.8	27.18500	27.185060	0.00022
11.7	27.18500	27.185070	0.00026

Channel : 40

Voltage (Vdc)	Assigned Frequency (MHz)	Measured Frequency (MHz)	% Deviation
15.9	27.40500	27.405090	0.00328
13.8	27.40500	27.405010	0.00004
11.7	27.40500	27.405070	0.00026