FCC Part 15
EMI TEST REPORT

of

E.U.T. : Cordless Telephone

MODEL : DCT4960-2 / DCX490

FCC ID. : AMW4960

for

APPLICANT : Uniden America Corporation

ADDRESS : 4700 Amon Carter Boulevard Fort Worth, Texas 76155 U.S.A.

Test Performed by

ELECTRONICS TESTING CENTER, TAIWAN
NO. 34, LIN 5, DING FU TSUN, LINKOU HSIANG,
TAIPEI HSIEN, TAIWAN, R.O.C.

Tel:(02)26023052, 26023054
Fax:(02)26010910

Report Number : ET90R-08-075-01

TEST REPORT CERTIFICATION

Applicant	: Uniden America Corporation 4700 Amon Carter Boulevard Fort Worth, Texas 76155 U.S.A.
Manufacturer	: TECOM CO., LTD. / Honor Tone Limited. No.23 R&D Road 2,Science-Based Industrial Park, Hsin-Chu Taiwan, R.O.C. / Block No.1 Tung Mun Industrial Zone, Dan Shui, Guangdong, China
Description of EUT	:
a) Type of EUT	: Cordless Telephone
b) Trade Name	: UNIDEN
c) Model No.	: DCT4960-2 / DCX490
d) Power Supply	: Adaptoer Model: AD-490; I/P: 120VAC, 60Hz, 6W; O/P: 9VDC, 300mA
Regulation Applied	: FCC Rules and Regulations Part 15 Subpart B & C (1999)

I HEREBY CERTIFY THAT: The data shown in this report were made in accordance with the procedures given in ANSI C63.4, and the energy emitted by the device was founded to be within the limits applicable. I assume full responsibility for accuracy and completeness of these data.

Note: 1. The result of the testing report relates only to the item tested.
2. The testing report shall not be reproduced expect in full, without the written approval of ETC.

Issued Date : Sep. 13, 2001

Test Engineer : Jeff Chuang
(Jeff Chuang)

Approve & Authorized Signer : Will Yauo
Will Yauo, Manager
EMC Dept. II of ELECTRONICS TESTING CENTER, TAIWAN

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1 GENERAL INFORMATION

1.1 Product Description

a) Type of EUT	: Cordless Telephone
b) Trade Name	: UNIDEN
c) Model No.	: DCT4960-2 / DCX490
d) Power Supply	: Adaptor Model : AD-490; I/P: 120VAC, 60Hz, 6W; O/P: 9VDC, 300mA

1.2 Characteristics of Device

This Cordless Telephone designed with a transmitting method of hoping spread spectrum technology. The base unit plugs into a standard analogue telephone jack and provides a digital wireless communication link with the handset using the 2400 to 2483.5 MHz ISM band.

1.3 Test Methodology

For Cordless Telephone, both conducted and radiated emissions were performed according to the procedures illustrated in ANSI C63.4 (1992) and for processing gain measurement is according to FCC Public Notice. Other required measurements were illustrated in separate sections of this test report for details.

1.4 Test Facility

The open area test site and conducted measurement facility used to collect the radiated data is located on the roof top of Building at No.34, Lin 5, Ding Fu Tsun, Linkou Hsiang, Taipei Hsien, Taiwan, R.O.C.
This site has been fully described in a report submitted to your office, and accepted in a letter dated Feb. 10, 2000.

1.5 Modist List

There are two conductive copper tapes assembly between the metal card frame and the internal shielded cam (see the assembly part picture).

2 PROVISIONS APPLICABLE

2.1 Definition

Unintentional radiator:
A device that intentionally generates and radio frequency energy for use within the device, or that sends radio frequency signals by conduction to associated equipment via connecting wiring, but which is not intended to emit RF energy by radiation or induction.

Class A Digital Device:
A digital device which is marketed for use in commercial or business environment; exclusive of a device which is market for use by the general public, or which is intended to be used in the home.

Class B Digital Device :
A digital device which is marketed for use in a residential environment notwithstanding use in a commercial, business of industrial environment. Example of such devices that are marketed for the general public.

Note : A manufacturer may also qualify a device intended to be marketed in a commercial, business, or industrial environment as a Class B digital device, and in fact is encouraged to do so, provided the device complies with the technical specifications for a Class B Digital Device. In the event that a particular type of device has been found to repeatedly cause harmful interference to radio communications, the Commission may classify such a digital device as a Class B Digital Device, Regardless of its intended use.

Intentional radiator:
A device that intentionally generates and emits radio frequency energy by radiation or induction.

2.2 Requirement for Compliance

(1) Conducted Emission Requirement

For unintentional device, according to § 15.107(a) Line Conducted Emission Limits is as following:

Frequency MHz	Emissions μV	Emissions dBμV
0.45 - 30.0	250	48.0

For intentional device, according to § 15.207(a) Line Conducted Emission Limits is same as above table.

(2) Radiated Emission Requirement

For unintentional device, according to § 15.109(a), except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Frequency MHz	Distance Meters	Radiated dBμV/m	Radiated μV/m
30 - 88	3	40.0	100
88 - 216	3	43.5	150
216 - 960	3	46.0	200
above 960	3	54.0	500

For intentional device, according to § 15.209(a), the general requirement of field strength of radiated emissions from intentional radiators at a distance of 3 meters shall not exceed the above table.

(3) Antenna Requirement

For intentional device, according to § 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

(4) Hopping Channel Separation

According to 15.247(a)(1), frequency hopping system shall have , hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater.

(5) Number of Hopping frequencies used

According to 15.247(a)(1)(ii), for frequency hopping system operating in the 2400-2483.5 MHz and 5725-5850 MHz bands shall use at least 75 hopping frequencies.

(6) Hopping Channel Bandwidth

According to 15.247(a)(1)(ii), for frequency hopping system operating in the 2400-2483.5 MHz and 5725-5850 MHz bands, the maximum 20 dB bandwidth of the hopping channel is 1MHz.

(7) Dwell Time of each frequency within a 30-second period

According to 15.247(a)(1)(ii), for frequency hopping system operating in the 2400-2483.5 MHz and 5725-5850 MHz bands, the average time of occupancy on any frequency shall not be greater than 0.4 second within a 30-second period.

(8) Output Power Requirement

For direct sequence system, according to 15.247(b), the maximum peak output power of the transmitter shall not exceed 1 Watt. If transmitting antennas of directional gain greater than 6 dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(9) 100 kHz Bandwidth of Frequency Band Edges Requirement

According to 15.247(c), if any 100 kHz bandwidth outside these frequency bands, the radio frequency power that is produced by the modulation products of the spreading sequence, the information sequence and the carrier frequency shall be either at least 20 dB below that in any 100 kHz bandwidth within the band that contains the highest level of the desired power or shall not exceed the general levels specified in § 15.209(a), whichever results in the lesser attenuation.

2.3 Restricted Bands of Operation

Only spurious emissions are permitted in any of the frequency bands listed below :

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42-16.423	399.9-410	4.5-5.25
0.495 - 0.505 **	16.69475 - 16.69525	608-614	5.35-5.46
2.1735 - 2.1905	16.80425 - 16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475 - 156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2655-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3360-4400	Above 38.6
13.36-13.41			

** : Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz

2.4 Labeling Requirement

The device shall bear the following statement in a conspicuous location on the device :

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions : (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

2.5 User Information

The users manual or instruction manual for an intentional or unintentional radiator shall caution the user that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

For a Class B digital device or peripheral, the instructions furnished the user shall include the following or similar statement, placed in a prominent location in the text of the manual.

The Federal Communications Commission Radio Frequency Interference Statement includes the following paragraph.

This equipment has been tested and found to comply with the limits for a Class B Digital Device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction may cause harmful interference to radio communication. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-- Reorient or relocate the receiving antenna.

-- Increase the separation between the equipment and receiver.

-- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-- Consult the dealer or an experienced radio / TV technician for help.

3. SYSTEM TEST CONFIGURATION

3.1 Justification

For both radiated and conducted emissions below 1 GHz, the system was configured for testing in a typical fashion as a customer would normally use it. The peripherals other than EUT were connected in normally standing by situation. Measurement was performed under the condition that a computer program was exercised to simulate data communication of EUT, and the transmission rate was set to maximum allowed by EUT. Three highest emissions were verified with varying placement of the transmitting antenna connected to EUT to maximize the emission from EUT.

For conducted emissions, only measured on TX and RX operation, for the digital circuits portion also function normally whenever TX or RX is operated. For radiated emissions, whichever RF channel is operated, the digital circuits' function identically. As the reason, measurement of radiated emissions from digital circuits is only performed with channel 11 by transmitting mode.

3.2 Devices for Tested System

Device	Manufacture	Model / FCC ID.	Cable Description
Cordless Telephone *	TECOM CO., LTD. / Honor Tone Limited.	DCT4960-2 / DCX490 AMW4960	2.0m Unshielded AC Adaptor Power Cord 2.0m Unshielded RJ-11 Cable

Remark "*" means equipment under test.

4 RADIATED EMISSION MEASUREMENT

4.1 Applicable Standard

For unintentional radiator, the radiated emission shall comply with § 15.109(a).

For intentional radiators, according to § 15.247 (a), operation under this provision is limited to frequency hopping and direct sequence spread spectrum, and the out band emission shall be comply with § 15.247 (c)

4.2 Measurement Procedure

1. Setup the configuration per figure 5 and 6 for frequencies measured below and above 1 GHz respectively.
2. For emission frequencies measured below 1 GHz, a pre-scan is performed in a shielded chamber to determine the accurate frequencies of higher emissions will be checked on a open test site. As the same purpose, for emission frequencies measured above 1 GHz, a pre-scan also be performed with a 1 meter measuring distance before final test.
3. For emission frequencies measured below and above 1 GHz, set the spectrum analyzer on a 100 kHz and 1 MHz resolution bandwidth respectively for each frequency measured in step 2.
4. The search antenna is to be raised and lowered over a range from 1 to 4 meters in horizontally polarized orientation. Position the highness when the highest value is indicated on spectrum analyzer, then change the orientation of EUT on test table over a range from 0 ° to 360 ° with a speed as slow as possible, and keep the azimuth that highest emission is indicated on the spectrum analyzer. Vary the antenna position again and record the highest value as a final reading. A RF test receiver is also used to confirm emissions measured.

   Note : A high pass filter was used to avoid pre-amplifier saturated when measure TX operation mode in frequency band above 1 GHz.
5. Repeat step 4 until all frequencies need to be measured were complete.
6. Repeat step 5 with search antenna in vertical polarized orientations.
7. Check the three frequencies of highest emission with varying the placement of cables associated with EUT to obtain the worse case and record the result.

Figure 1 : Frequencies measured below 1 GHz configuration

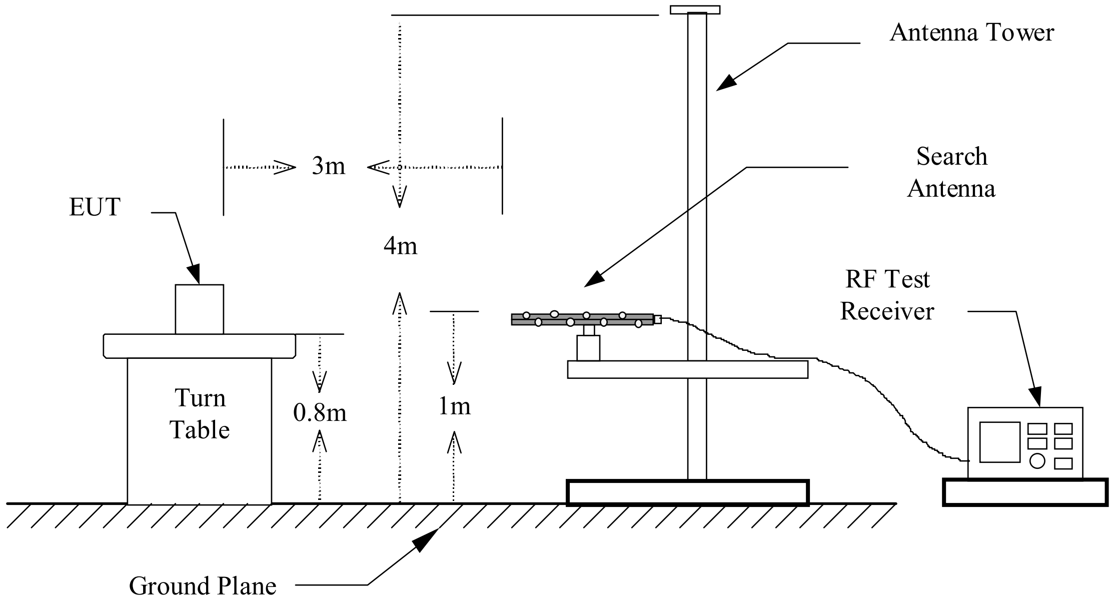
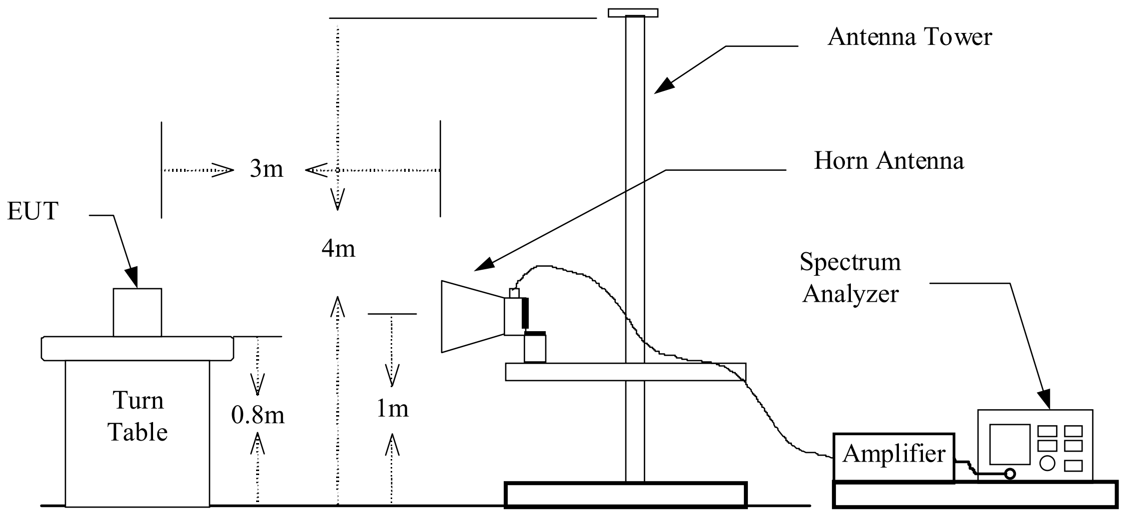


Figure 2 : Frequencies measured above 1 GHz configuration



4.3 Measuring Instrument

The following instrument are used for radiated emissions measurement:

Equipment	Manufacturer	Model No.	Next Cal. Due
Spectrum Analyzer	Hewlett-Packard	8568B	12/21/2001
Pre-selector	Hewlett-Packard	85685A	01/01/2002
Quasi Peak Detector	Hewlett-Packard	85650A	01/01/2002
RF Test Receiver	Rohde & Schwarz	ESVS 30	08/06/2002
RF Test Receiver	Rohde & Schwarz	ESBI	05/15/2002
Horn Antenna	EMCO	3115	05/15/2002
Log periodic Antenna	EMCO	3146	11/02/2001
Biconical Antenna	EMCO	3110B	11/02/2001
Preamplifier	Hewlett-Packard	8449B	05/10/2002
Preamplifier	Hewlett-Packard	8447D	12/29/2001
Spectrum Analyzer	Hewlett-Packard	8564E	04/22/2002

Measuring instrument setup in measured frequency band when specified detector function is used :

Frequency Band (MHz)	Instrument	Function	Resolution bandwidth	Video Bandwidth
30 to 1000	RF Test Receiver	Quasi-Peak	120 kHz	N/A
	Spectrum Analyzer	Peak	100 kHz	100 kHz
Above 1000	Spectrum Analyzer	Peak	1 MHz	1 MHz
	Spectrum Analyzer	Average	1 MHz	300 Hz

4.4 Radiated Emission Data

4.4.1 Handset

a) Channel 00

Operation Mode : Receiving /Transmitting

Fundamental Frequency : 2402.780 MHz (Local Frequency : 2292.230 MHz)

Test Date : Sep. 07, 2001 Temperature : 25 ℃ Humidity : 60 %

Frequency (MHz)	Reading (dBuV) H Peak	H Ave	V Peak	V Ave	Factor (dB) Corr.	Result @3m (dBuV/m) Peak	Result Ave	Limit @3m (dBuV/m) Peak	Limit Ave.	Margin (dB)	Table Deg. (Deg.)	Ant. High (m)
*2292.230	54.4	52.4	52.9	48.5	-3.5	50.9	48.9	74.0	54.0	-5.1	180	1.50
*4584.400	47.7	44.2	45.1	---	2.2	49.9	46.4	74.0	54.0	-7.6	95	1.50
*6876.690	---	---	---	---	5.2	---	---	74.0	54.0	---	---	---
*9168.920	---	---	---	---	7.1	---	---	74.0	54.0	---	---	---
*11461.150	---	---	---	---	9.1	---	---	74.0	54.0	---	---	---
4805.650	62.2	46.7	57.4	41.5	2.6	64.8	49.3	74.0	54.0	-4.7	270	1.50
7208.475	58.3	41.2	57.5	38.5	5.7	64.0	46.9	74.0	54.0	-7.1	90	1.50
9611.300	59.2	39.5	59.2	39.8	7.2	66.4	47.0	74.0	54.0	-7.0	90	1.40
12014.125	51.0	39.3	52.6	41.5	9.2	61.8	50.7	74.0	54.0	-3.3	270	1.30
14416.950	---	---	---	---	11.6	---	---	74.0	54.0	---	---	---
16819.775	---	---	---	---	11.8	---	---	74.0	54.0	---	---	---
19222.600	---	---	---	---	8.9	---	---	74.0	54.0	---	---	---
21625.425	---	---	---	---	9.8	---	---	74.0	54.0	---	---	---
24028.250	---	---	---	---	10.3	---	---	74.0	54.0	---	---	---

Note :

1. Remark "*" means that the emission frequency is produced from local oscillator.
2. Remark "---" means that the emission level is too low to be measured (a pre-amplifier of about 35 dB is used).
3. Margins are derived from Peak or Average whichever is lower. If there is only peak value in Result field, the Margin is also referred to average limits.
4. The expanded uncertainty of the radiated emission tests is 3.53 dB.

b) Channel 40

Operation Mode : Receiving /Transmitting

Fundamental Frequency : 2437.330 MHz (Local Frequency : 2326.830 MHz)

Test Date : Sep. 07, 2001 Temperature : 25 ℃ Humidity : 60 %

Frequency (MHz)	Reading (dBuV) H Peak	H Ave	V Peak	V Ave	Factor (dB) Corr.	Result @3m (dBuV/m) Peak	Ave	Limit @3m (dBuV/m) Peak	Ave.	Margin (dB)	Table Deg. (Deg.)	Ant. High (m)
*2326.830	54.3	52.0	49.8	---	-3.4	50.9	48.6	74.0	54.0	-5.4	90	1.50
*4653.600	48.5	44.0	44.7	---	2.3	50.8	46.3	74.0	54.0	-7.7	270	1.50
*6980.490	---	---	---	---	5.4	---	---	74.0	54.0	---	---	---
*9307.320	---	---	---	---	7.1	---	---	74.0	54.0	---	---	---
*11634.150	---	---	---	---	9.1	---	---	74.0	54.0	---	---	---
4874.650	61.7	44.5	59.2	39.2	2.7	64.4	47.2	74.0	54.0	-6.8	270	1.40
7311.975	59.2	42.3	56.2	37.8	5.9	65.1	48.2	74.0	54.0	-5.8	215	1.50
9749.300	58.7	38.4	56.6	37.1	7.3	66.0	45.7	74.0	54.0	-8.0	245	1.50
12186.625	50.5	36.5	50.7	35.8	9.3	60.0	45.8	74.0	54.0	-8.2	90	1.40
14623.950	---	---	---	---	11.6	---	---	74.0	54.0	---	---	---
17061.275	---	---	---	---	13.1	---	---	74.0	54.0	---	---	---
19498.600	---	---	---	---	8.5	---	---	74.0	54.0	---	---	---
21935.925	---	---	---	---	9.9	---	---	74.0	54.0	---	---	---
24373.250	---	---	---	---	10.7	---	---	74.0	54.0	---	---	---

Note :

1. Remark "*" means that the emission frequency is produced from local oscillator.
2. Remark "---" means that the emission level is too low to be measured (a pre-amplifier of about 35 dB is used).
3. Margins are derived from Peak or Average whichever is lower. If there is only peak value in Result field, the Margin is also referred to average limits.
4. The expanded uncertainty of the radiated emission tests is 3.53 dB.

c) Channel 74

Operation Mode : Receiving /Transmitting

Fundamental Frequency : 2479.680 MHz (Local Frequency : 2369.147 MHz)

Test Date : Sep. 07, 2001 Temperature : 25 ℃ Humidity : 60 %

Frequency (MHz)	Reading (dBuV) H Peak	H Ave	V Peak	V Ave	Factor (dB) Corr.	Result @3m (dBuV/m) Peak	Result Ave	Limit @3m (dBuV/m) Peak	Limit Ave.	Margin (dB)	Table Deg. (Deg.)	Ant. High (m)
*2369.147	53.1	50.3	49.0	---	-3.2	49.9	47.1	74.0	54.0	-6.9	180	1.50
*4738.294	48.1	44.0	44.5	---	2.4	50.5	46.4	74.0	54.0	-7.6	180	1.50
*7107.441	---	---	---	---	5.6	---	---	74.0	54.0	---	---	---
*9476.588	---	---	---	---	7.2	---	---	74.0	54.0	---	---	---
*11845.735	---	---	---	---	9.2	---	---	74.0	54.0	---	---	---
4959.410	61.7	44.2	58.0	41.7	2.8	64.5	47.0	74.0	54.0	-7.0	270	1.50
7439.115	58.8	41.1	60.5	38.6	6.1	66.6	47.2	74.0	54.0	-6.8	215	1.50
9918.820	59.8	39.4	59.3	39.1	7.4	67.2	46.8	74.0	54.0	-6.8	90	1.40
12398.525	50.6	35.3	49.3	33.2	9.4	60.0	44.7	74.0	54.0	-9.3	180	1.30
14878.230	---	---	---	---	11.5	---	---	74.0	54.0	---	---	---
17357.935	---	---	---	---	15.2	---	---	74.0	54.0	---	---	---
19837.640	---	---	---	---	8.6	---	---	74.0	54.0	---	---	---
22317.345	---	---	---	---	10.2	---	---	74.0	54.0	---	---	---
24797.050	---	---	---	---	11.0	---	---	74.0	54.0	---	---	---

Note :

1. Remark “*” means that the emission frequency is produced from local oscillator.
2. Remark “---” means that the emission level is too low to be measured (a pre-amplifier of about 35 dB is used).
3. Margins are derived from Peak or Average whichever is lower. If there is only peak value in Result field, the Margin is also referred to average limits.
4. The expanded uncertainty of the radiated emission tests is 3.53 dB.

4.4.2 Base Unit

a) Channel 00

Operation Mode : Receiving /Transmitting

Fundamental Frequency : 2402.880 MHz (Local Frequency : 1146.100 MHz)

Test Date : Sep. 07, 2001 Temperature : 25 ℃ Humidity : 60 %

Frequency (MHz)	Reading (dBuV) H Peak	H Ave	V Peak	V Ave	Factor (dB) Corr.	Result @3m (dBuV/m) Peak	Result Ave	Limit @3m (dBuV/m) Peak	Limit Ave.	Margin (dB)	Table Deg. (Deg.)	Ant. High (m)
*1146.100	49.8	---	48.0	---	-9.1	40.7	---	74.0	54.0	-13.3	215	1.40
*2292.200	46.2	---	50.0	38.5	-3.5	46.5	35.0	74.0	54.0	-19.0	270	1.50
*3438.300	---	---	---	---	-0.1	---	---	74.0	54.0	---	---	---
*4584.400	---	---	---	---	2.2	---	---	74.0	54.0	---	---	---
*5730.500	---	---	---	---	4.4	---	---	74.0	54.0	---	---	---
4805.440	61.2	46.5	67.8	49.7	2.5	70.3	52.2	74.0	54.0	-1.8	180	1.50
7208.160	62.3	43.2	66.3	46.6	5.7	72.0	52.3	74.0	54.0	-1.7	180	1.40
9610.880	54.8	40.5	55.2	41.1	7.2	62.4	48.3	74.0	54.0	-5.7	90	1.50
12013.600	54.3	40.3	50.2	39.4	9.2	63.5	49.5	74.0	54.0	-4.5	180	1.60
14416.320	---	---	---	---	11.5	---	---	74.0	54.0	---	---	---
16819.040	---	---	---	---	11.8	---	---	74.0	54.0	---	---	---
19221.760	---	---	---	---	8.9	---	---	74.0	54.0	---	---	---
21624.480	---	---	---	---	9.7	---	---	74.0	54.0	---	---	---
24027.200	---	---	---	---	10.3	---	---	74.0	54.0	---	---	---

Note :

1. Remark “*” means that the emission frequency is produced from local oscillator.
2. Remark “---” means that the emission level is too low to be measured (a pre-amplifier of about 35 dB is used).
3. Margins are derived from Peak or Average whichever is lower. If there is only peak value in Result field, the Margin is also referred to average limits.
4. The expanded uncertainty of the radiated emission tests is 3.53 dB.

b) Channel 40

Operation Mode : Receiving /Transmitting

Fundamental Frequency : 2437.340 MHz (Local Frequency : 1163.375 MHz)

Test Date : Sep. 07, 2001 Temperature : 25 ℃ Humidity : 60 %

Frequency	Reading (dBuV)				Factor	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Deg. (Deg.)	Ant. High
	H		V		(dB)							
(MHz)	Peak	Ave	Peak	Ave	Corr.	Peak	Ave	Peak	Ave.			(m)
*1163.375	44.1	---	47.4	---	-9.0	38.4	---	74.0	54.0	-15.6	215	1.50
*2326.750	45.6	40.1	48.6	43.4	-3.4	45.2	40.0	74.0	54.0	-14.0	270	1.50
*3490.125	---	---	---	---	0.0	---	---	74.0	54.0	---	---	---
*4653.500	---	---	44.4	36.5	2.3	46.7	38.8	74.0	54.0	-15.2	280	1.40
*5816.875	---	---	---	---	4.5	---	---	74.0	54.0	---	---	---
4874.620	59.9	46.0	67.2	49.5	2.7	69.9	52.2	74.0	54.0	-1.8	360	1.50
7311.930	65.5	45.8	66.5	47.0	5.9	72.4	52.9	74.0	54.0	-1.1	90	1.40
9749.240	49.2	39.3	55.3	41.2	7.3	62.6	48.5	74.0	54.0	-5.5	180	1.50
12186.550	49.6	35.4	49.6	35.0	9.3	58.9	44.7	74.0	54.0	-9.3	270	1.20
14623.860	---	---	---	---	11.6	---	---	74.0	54.0	---	---	---
17061.170	---	---	---	---	13.1	---	---	74.0	54.0	---	---	---
19498.480	---	---	---	---	8.5	---	---	74.0	54.0	---	---	---
21935.790	---	---	---	---	9.9	---	---	74.0	54.0	---	---	---
24373.100	---	---	---	---	10.7	---	---	74.0	54.0	---	---	---

Note :

1. Remark "*" means that the emission frequency is produced from local oscillator.
2. Remark "---" means that the emission level is too low to be measured (a pre-amplifier of about 35 dB is used).
3. Margins are derived from Peak or Average whichever is lower. If there is only peak value in Result field, the Margin is also referred to average limits.
4. The expanded uncertainty of the radiated emission tests is 3.53 dB.

c) Channel 74

Operation Mode : Receiving /Transmitting

Fundamental Frequency : 2479.750 MHz (Local Frequency : 1184.508 MHz)

Test Date : Sep. 07, 2001 Temperature : 25 ℃ Humidity : 60 %

Frequency (MHz)	Reading (dBuV) H Peak	H Ave	V Peak	V Ave	Factor (dB) Corr.	Result @3m (dBuV/m) Peak	Result Ave	Limit @3m (dBuV/m) Peak	Limit Ave.	Margin (dB)	Table Deg. (Deg.)	Ant. High (m)
*1184.508	44.0	---	47.2	---	-8.9	38.3	---	74.0	54.0	-15.7	90	1.50
*2369.016	45.5	40.0	48.5	43.3	-3.2	45.3	40.1	74.0	54.0	-13.9	180	1.40
*3553.524	---	---	---	---	0.2	---	---	74.0	54.0	---	---	---
*4738.032	---	---	44.0	36.3	2.4	46.4	38.7	74.0	54.0	-15.3	145	1.50
*5922.540	---	---	---	---	4.5	---	---	74.0	54.0	---	---	---
4959.320	60.1	45.5	67.1	49.2	2.8	69.9	52.0	74.0	54.0	-2.0	180	1.00
7438.980	63.3	46.1	66.0	46.7	6.1	72.1	52.8	74.0	54.0	-1.2	175	1.20
9918.640	49.5	39.5	55.1	40.9	7.4	62.5	48.3	74.0	54.0	-5.7	180	1.50
12398.300	49.7	35.5	49.5	35.1	9.4	59.1	44.9	74.0	54.0	-9.1	215	1.40
14877.960	---	---	---	---	11.5	---	---	74.0	54.0	---	---	---
17357.620	---	---	---	---	15.2	---	---	74.0	54.0	---	---	---
19837.280	---	---	---	---	8.6	---	---	74.0	54.0	---	---	---
22316.940	---	---	---	---	10.2	---	---	74.0	54.0	---	---	---
24796.600	---	---	---	---	11.0	---	---	74.0	54.0	---	---	---

Note :

1. Remark “*” means that the emission frequency is produced from local oscillator.
2. Remark “---” means that the emission level is too low to be measured (a pre-amplifier of about 35 dB is used).
3. Margins are derived from Peak or Average whichever is lower. If there is only peak value in Result field, the Margin is also referred to average limits.
4. The expanded uncertainty of the radiated emission tests is 3.53 dB.

4.4.3 Other Emssion

a) Handset

Operation Mode : Receiving /Transmitting

Test Date : Sep. 11, 2001 Temperature : 25 ℃ Humidity : 60 %

Frequency (MHz)	Ant-Pol H/V	Meter Reading (dBuV)	Corrected Factor (dB)	Result @3m (dBuV/m)	Limit @3m (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (m)
131.207	V	34.6	-11.4	23.2	43.5	-20.3	90	1.10
499.512	V	38.0	-4.4	33.6	46.0	-12.4	180	1.20
521.188	V	38.3	-4.9	33.4	46.0	-12.6	215	1.10
540.792	V	39.1	-5.1	34.0	46.0	-12.0	270	1.50
664.685	V	37.4	-1.8	35.6	46.0	-10.4	180	1.00
726.957	V	36.0	-0.8	35.2	46.0	-10.8	245	1.50

b) Base Unit

Operation Mode : Receiving /Transmitting

Test Date : Sep. 11, 2001 Temperature : 25 ℃ Humidity : 60 %

Frequency (MHz)	Ant-Pol H/V	Meter Reading (dBuV)	Corrected Factor (dB)	Result @3m (dBuV/m)	Limit @3m (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (m)
41.490	V	50.7	-12.1	38.6	40.0	-1.4	145	1.00
124.391	V	43.1	-11.1	32.0	43.5	-11.5	180	1.50
165.883	V	42.4	-9.2	33.2	43.5	-10.3	177	1.40
176.220	V	43.1	-9.1	34.0	43.5	-9.5	218	1.50
207.337	H	39.4	-6.7	32.7	43.5	-10.8	90	1.80
269.521	H	35.8	-3.6	32.2	46.0	-13.8	180	1.70
331.760	H	36.5	-7.7	28.8	46.0	-17.2	45	1.50
456.167	H	35.9	-5.3	30.6	46.0	-15.4	90	1.50

Note :

1. Remark "---" means that the emissions level is too low to be measured.

2. The expanded uncertainty of the radiated emission tests is 3.53 dB.

c) Emission frequencies above 1 GHz

Radiated emission frequencies above 1 GHz to 5 GHz were too low to be measured with a pre-amplifier of 35 dB.

4.5 Field Strength Calculation

The field strength is calculated by adding the Antenna Factor, High Pass Filter Loss (if used) and Cable Loss, and subtracting the Amplifier Gain (if any) from the measured reading. The basic equation calculation is as follows:

Result = Reading + Corrected Factor

where

Corrected Factor = Antenna FACTOR + Cable Loss + High Pass Filter Loss - Amplifier Gain

4.6 Photos of Radiation Measuring Setup

4.6.1 Handset

Please see Setup Photos in Exhibit F.

4.6.2 Base Unit

Please see Setup Photos in Exhibit F.

5 CONDUCTED EMISSION MEASUREMENT

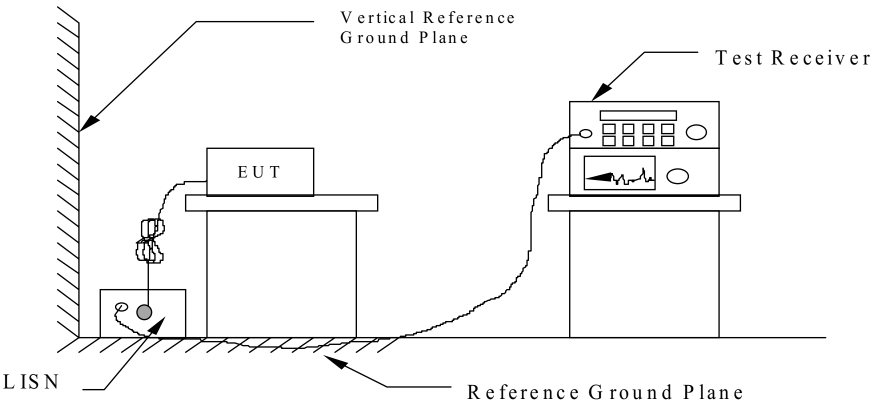
5.1 Standard Applicable

For unintentional and intentional device, Line Conducted Emission Limits are in accordance to § 15.107(a) and § 15.207(a) respectively. Both Limits are identical specification.

5.2 Measurement Procedure

1. Setup the configuration per figure 3.
2. A preliminary scan with a spectrum monitor is performed to identify the frequency of emission that has the highest amplitude relative to the limit by operating the EUT in selected modes of operation, typical cable positions, and with a typical system configuration.
3. Record the 6 or 8 highest emissions relative to the limit.
4. Measure each frequency obtained from step 3 by a test receiver set on quasi peak detector function, and then record the accuracy frequency and emission level. If all emissions measured in the specified band are attenuated more than 20 dB from the limit, this step would be ignored, and the peak detector function would be used.
5. Confirm the highest three emissions with variation of the EUT cable configuration and record the final data.
6. Repeat all above procedures on measuring each operation mode of EUT.

Figure 3 : Conducted emissions measurement configuration



5.3 Conducted Emission Data

Operation Mode : Charging
Test Date : Sep. 11, 2001   Temperature : 25 ℃   Humidity: 60 %

Frequency (MHz)	Reading (dBuV)		Factor (dB)	Result (dBuV)		Limit (dBuV)	Margin (dB)
	N	L1		N	L1		
0.4826	40.0	37.2	0.2	40.2	37.5	48.0	-7.8
0.5789	40.0	41.0	0.2	40.2	41.2	48.0	-6.8
0.9763	36.8	42.2	0.3	37.1	42.5	48.0	-5.5
1.0673	33.8	41.6	0.3	34.1	41.9	48.0	-6.1
1.3100	39.6	40.6	0.3	39.9	40.9	48.0	-7.1
1.9570	26.8	35.2	0.3	27.1	35.5	48.0	-12.5

Note : 1. Please see appendix 3 for Plotted Data
2. The expanded uncertainty of the conducted emission tests is 2.45 dB.

5.4 Result Data Calculation

The result data is calculated by adding the Factor (including LISN insertion loss and cable loss) to the measured reading. The basic equation with a sample calculation is as follows:

RESULT = READING + FACTOR

5.5 Conducted Measurement Equipment

The following test equipment are used during the conducted test.

Equipment	Manufacturer	Model No.	Next Cal. Due
RF Test Receiver	Rohde and Schwarz	ESH3	12/29/2001
Spectrum Monitor	Rohde and Schwarz	EZM	N.C.R.
Line Impedance Stabilization network	Kyoritsu	KNW-407	11/24/2001
Plotter	Hewlett-Packard	7440A	N/A
Shielded Room	Riken		N.C.R.

5.6 Photos of Conduction Measuring Setup

Please see Setup Photos in Exhibit F.

6 ANTENNA REQUIREMENT

6.1 Standard Applicable

For intentional device, according to § 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.
And according to § 15.247 (b), if transmitting antennas of directional gain greater than 6 dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

6.2 Antenna Connected Construction

The antenna terminal of this unit is designed to be mounted permanently on the device. Please see construction Photos Of Exhibit B for details.

7 HOPPING CHANNEL SEPARATION

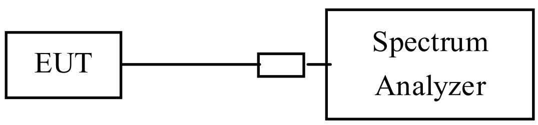
7.1 Standard Applicable

According to 15.247(a)(1), frequency hopping system shall have, hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater.

7.2 Measurement Procedure

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT as shown in figure 4 without connection to measurement instrument. Turn on the EUT and connect it to measurement instrument. Then set it to any one convenient frequency within its operating range.
3. By using the MaxHold function record the separation of two adjacent channels.
4. Measure the frequency difference of these two adjacent channels by SA MARK function. And then plot the result on SA screen.
5. Repeat above procedures until all frequencies measured were complete.

Figure 4 : Emission bandwidth measurement configuration.



7.3 Measurement Equipment

Equipment	Manufacturer	Model No.	Next Cal. Due
Spectrum Analyzer	Hewlett-Packard	8564E	04/22/2002
Plotter	Hewlett-Packard	7440A	N/A

7.4 Measurement Data

Test Date : Sep. 07, 2001 Temperature : 25 ℃ Humidity: 60 %

A. Handset
1) Channel 00 : Adjacent Hopping Channel Separation is 870kHz
2) Channel 40 : Adjacent Hopping Channel Separation is 863kHz
3) Channel 74 : Adjacent Hopping Channel Separation is 863kHz

B. Base Unit
1) Channel 00 : Adjacent Hopping Channel Separation is 867kHz
2) Channel 40 : Adjacent Hopping Channel Separation is 867kHz
3) Channel 74 : Adjacent Hopping Channel Separation is 867kHz

Note : 1. Please see appendix 2 for Plotted Data
2. The expanded uncertainty of the hopping channel separation tests is 2dB.

8 NUMBER OF HOPPING FREQUENCY USED

8.1 Standard Applicable

According to 15.247(a)(1)(ii), for frequency hopping system operating in the 2400-2483.5 MHz and 5725-5850 MHz bands shall use at least 75 hopping frequencies.

8.2 Measurement Procedure

1. Check the calibration of the measuring instrument (SA) using either an internal calibrator or a known signal from an external generator.
2. Position the EUT as shown in figure 4 without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range and make sure the instrument is operated in its linear range.
3. Set the SA on MaxHold Mode, and then keep the EUT in hoppping mode. Record all the siganls from each channel until each one has been recorded.
4. Set the SA on View mode and then plot the result on SA screen.
5. Repeat above procedures until all frequencies measured were complete.

8.3 Measurement Equipment

Equipment	Manufacturer	Model No.	Next Cal. Due
Spectrum Analyzer	Hewlett-Packard	8564E	04/22/2002
Attenuator	Weinschel Engineering	1	N/A

8.4 Measurement Data

Test Date : Sep. 07, 2001 Temperature : 25 ℃ Humidity: 60 %

There are 75 hopping frequencies in a hopping sequence.

Note : 1. Please see appendix 3 for Plotted Data

2. The expanded uncertainty of umber of hopping frequency used tests is 2dB.

9 CHANNEL BANDWIDTH

9.1 Standard Applicable

According to 15.247(a)(1)(ii), for frequency hopping system operating in the 2400-2483.5 MHz and 5725-5850 MHz bands, the maximum 20dB bandwidth of the hopping channel is 1MHz.

9.2 Measurement Procedure

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT as shown in figure 4 without connection to measurement instrument. Turn on the EUT and connect it to measurement instrument. Then set it to any one convenient frequency within its operating range. Set a reference level on the measuring instrument equal to the highest peak value.
3. Measure the frequency difference of two frequencies that were attenuated 20 dB from the reference level. Record the frequency difference as the emission bandwidth.
4. Repeat above procedures until all frequencies measured were complete.

9.3 Measurement Equipment

Equipment	Manufacturer	Model No.	Next Cal. Due
Spectrum Analyzer	Hewlett-Packard	8564E	04/22/2002
Attenuator	Weinschel Engineering	1	N/A

9.4 Measurement Data

Test Date : Sep. 07, 2001 Temperature : 25 ℃ Humidity: 60 %

A. Handset
1) Channel 00 : Channel Bandwidth is 673 kHz
2) Channel 40 : Channel Bandwidth is 670 kHz
3) Channel 74 : Channel Bandwidth is 683 kHz

B. Base Unit
1) Channel 00 : Channel Bandwidth is 663 kHz
2) Channel 40 : Channel Bandwidth is 663 kHz
3) Channel 74 : Channel Bandwidth is 663 kHz

Note : 1. Please see appendix 4 for Plotted Data
2. The expanded uncertainty ofchannel bandwidth tests is 2dB.

10 DWELL TIME ON EACH CHANNEL

10.1 Standard Applicable

According to 15.247(a)(1)(ii), for frequency hopping system operating in the 2400-2483.5 MHz and 5725-5850 MHz bands, the average time of occupancy on any frequency shall not be greater than 0.4 second within a 30-second period.

10.2 Measurement Procedure

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT as shown in figure 4 without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range and make sure the instrument is operated in its linear range.
3. Adjust the center frequency of SA on any frequency be measured and set SA to zero span mode. And then, set RBW and VBW of spectrum analyzer to proper value.
4. Measure the time duration of one transmission on the measured frequency. And then plot the result with time difference of this time duration.
5. Repeat above procedures until all frequencies measured were complete.

10.3 Measurement Equipment

Equipment	Manufacturer	Model No.	Next Cal. Due
Spectrum Analyzer	Hewlett-Packard	8564E	04/22/2002
Attenuator	Weinschel Engineering	1	N/A

10.4 Measurement Data

Test Date : Sep. 07, 2001 Temperature : 25 ℃ Humidity: 60 %

A. Handset

1) Channel 00 : the dwell time is 1.0ms× 40＝40 ms
2) Channel 40 : the dwell time is 1.0ms× 40＝40 ms
3) Channel 74 : the dwell time is 1.0ms× 40＝40 ms

The maximum time of occupancy for a particular channel is 40.0 msec in any 30 second period, which is less than the 400 msec allowed by the rules; therefore, it meets the requirements of this section.

B. Base Unit

1) Channel 00 : the dwell time is 4.92× 40＝196.8 ms
2) Channel 40 : the dwell time is 5.00× 40＝200.0 ms
3) Channel 74 : the dwell time is 4.83× 40＝193.2 ms

The maximum time of occupancy for a particular channel is 200 msec in any 30 second period, which is less than the 400 msec allowed by the rules; therefore, it meets the requirements of this section.

Note : 1. Please see appendix 5 for Plotted Data
2. The expanded uncertainty of dwell time on each channel tests is 2dB.

11 OUTPUT POWER MEASUREMENT

11.1 Standard Applicable

For direct sequence system, according to 15.247(b), the maximum peak output power of the transmitter shall not exceed 1 Watt. If transmitting antennas of directional gain greater than 6 dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

11.2 Measurement Procedure

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT as shown in figure 4 without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range and make sure the instrument is operated in its linear range.
3. Set RBW of spectrum analyzer to 1 MHz and VBW to 1 MHz.
4. Measure the highest amplitude appearing on spectral display and record the level to calculate result data.
5. Repeat above procedures until all frequencies measured were complete.

11.3 Measurement Equipment

Equipment	Manufacturer	Model No.	Next Cal. Due
Spectrum Analyzer	Hewlett-Packard	8564E	04/22/2002
Attenuator	Weinschel Engineering	1	N/A

11.4 Measurement Data

Test Date : Sep. 07, 2001   Temperature : 25 ℃   Humidity: 60 %

A. Handset
1) Channel 02 : Output Peak Power is 17.17 dBm = **52.12**mW
2) Channel 40 : Output Peak Power is 17.50 dBm = **56.23** mW
3) Channel 74 : Output Peak Power is 18.50 dBm = **70.79** mW

B. Base Unit
1) Channel 02 : Output Peak Power is 14.50 dBm = **28.18** mW
2) Channel 40 : Output Peak Power is 14.33 dBm = **27.10** mW
3) Channel 74 : Output Peak Power is 13.33 dBm = **21.53** mW

Note : 1. Please see appendix 6 for Plotted Data
2. The expanded uncertainty of output power measurement tests is 2dB.

12 100 kHz BANDWIDTH OF BAND EDGES MEASUREMENT

12.1 Standard Applicable

According to 15.247(c), if any 100 kHz bandwidth outside these frequency bands, the radio frequency power that is produced by the modulation products of the spreading sequence, the information sequence and the carrier frequency shall be either at least 20 dB below that in any 100 kHz bandwidth within the band that contains the highest level of the desired power or shall not exceed the general levels specified in § 15.209(a), whichever results in the lesser attenuation.

12.2 Measurement Procedure

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT as shown in figure 4 without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range and make sure the instrument is operated in its linear range.
3. Set both RBW and VBW of spectrum analyzer to 300 kHz with a convenient frequency span including 100kHz bandwidth from band edge.
4. Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
5. Repeat above procedures until all measured frequencies were complete.

12.3 Measurement Equipment

Equipment	Manufacturer	Model No.	Next Cal. Due
Spectrum Analyzer	Hewlett-Packard	8564E	04/22/2002
Plotter	Hewlett-Packard	7440A	N/A

12.4 Measurement Data

Test Date : Sep. 07, 2001 Temperature : 25 ℃ Humidity: 60 %

A. Handset

a) Lower Band Edge : All emissions in this 100kHz bandwidth are attenuated more than 50dB from the carrier.

b) Upper Band Edge : All emissions in this 100kHz bandwidth are attenuated more than 50dB from the carrier.

B. Base Unit

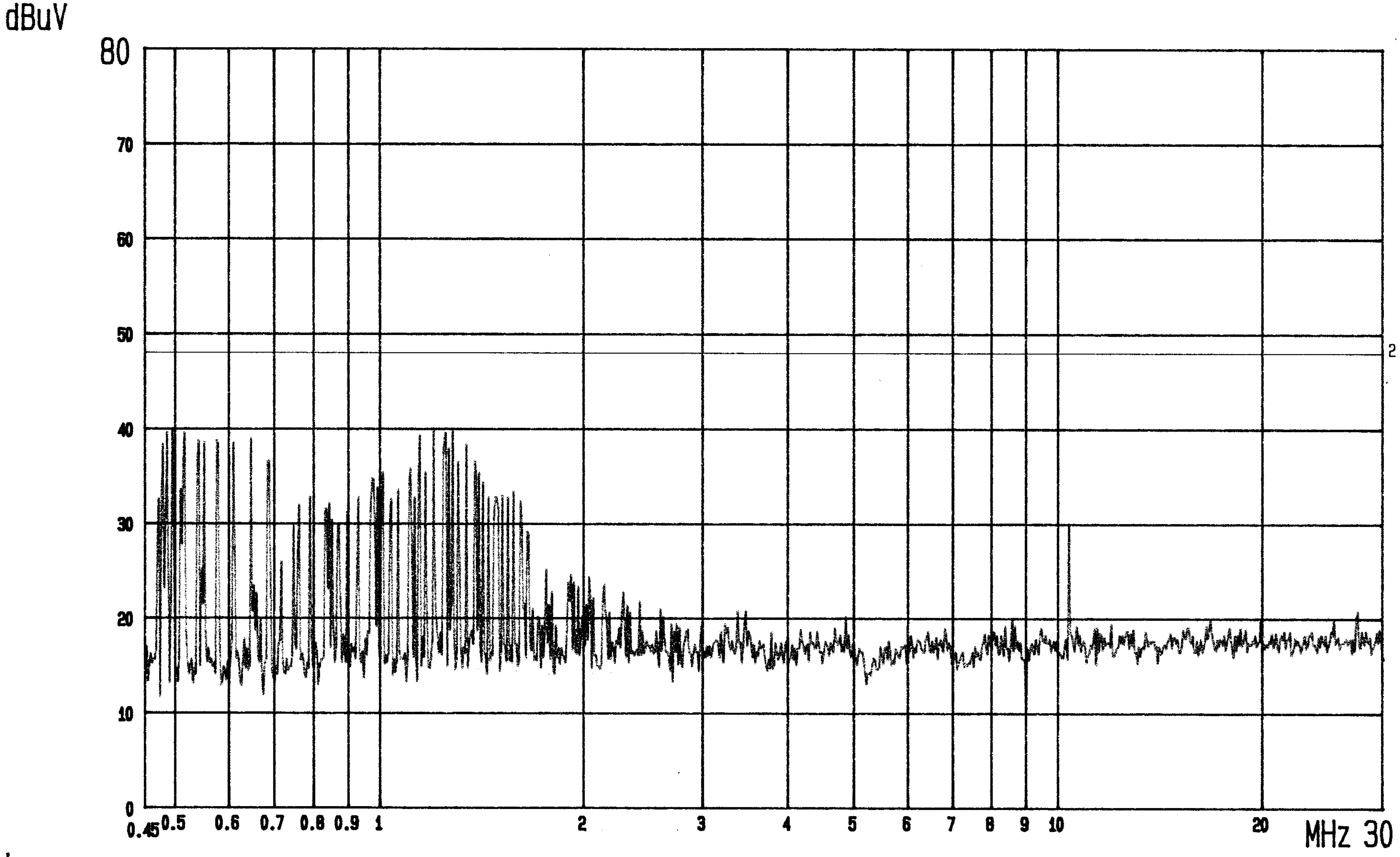
a) Lower Band Edge : All emissions in this 100kHz bandwidth are attenuated more than 50dB from the carrier.

b) Upper Band Edge : All emissions in this 100kHz bandwidth are attenuated more than 50dB from the carrier.

Note : 1. Please see appendix 7 for Plotted Data

2. The expanded uncertainty of the 100 khz bandwidth of band edges tests is 1000Hz.

Appendix 1 : Plotted Data of Power Line Conducted Emissions



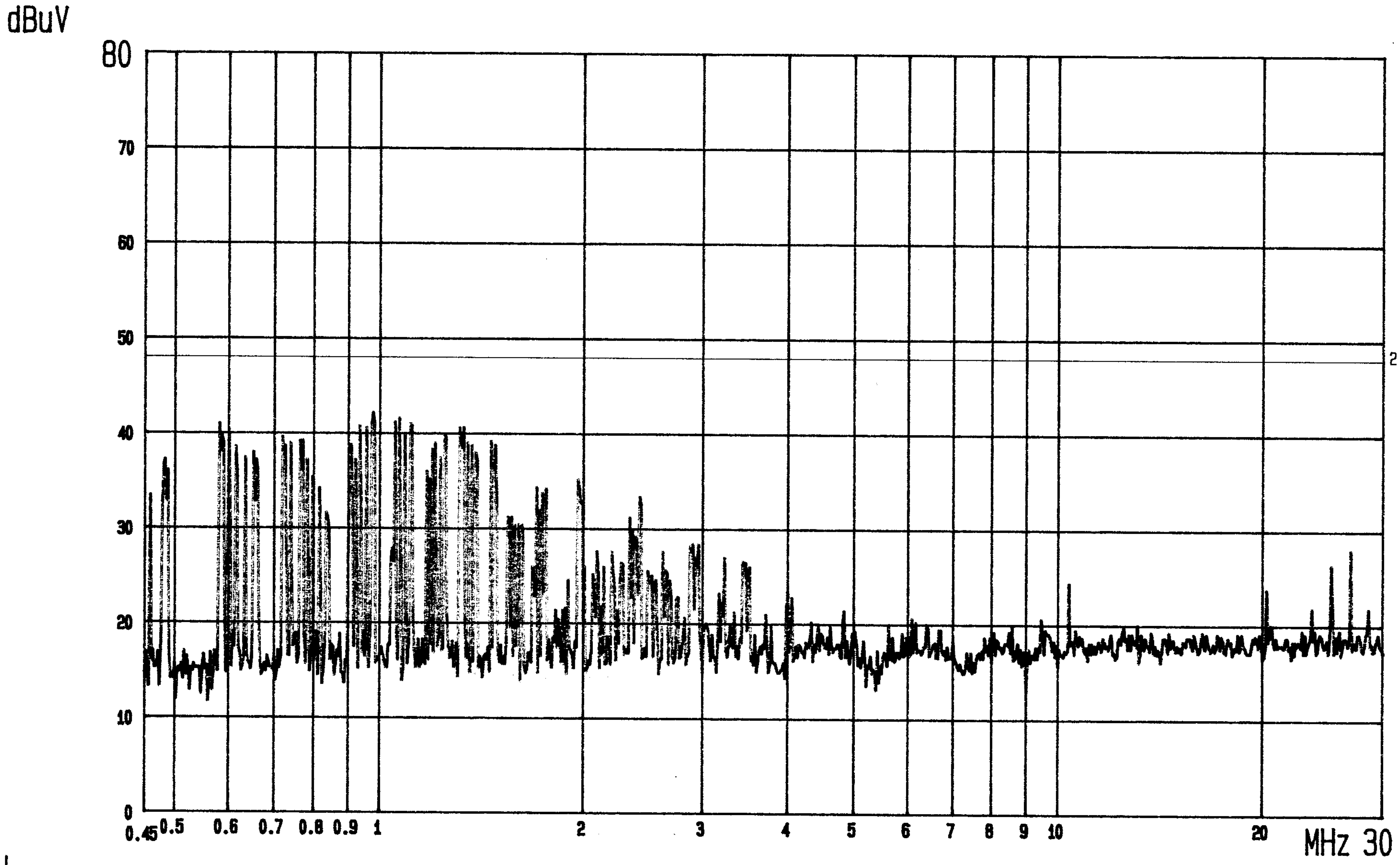
|---

FCC CONDUCTED TEST
MODEL: UNIDEN 4960

POWER: 120V/60HZ
MODE: CHARGE

2: QP.;
LISN: N

CLASS B LIMIT
ETC EMI LAB.



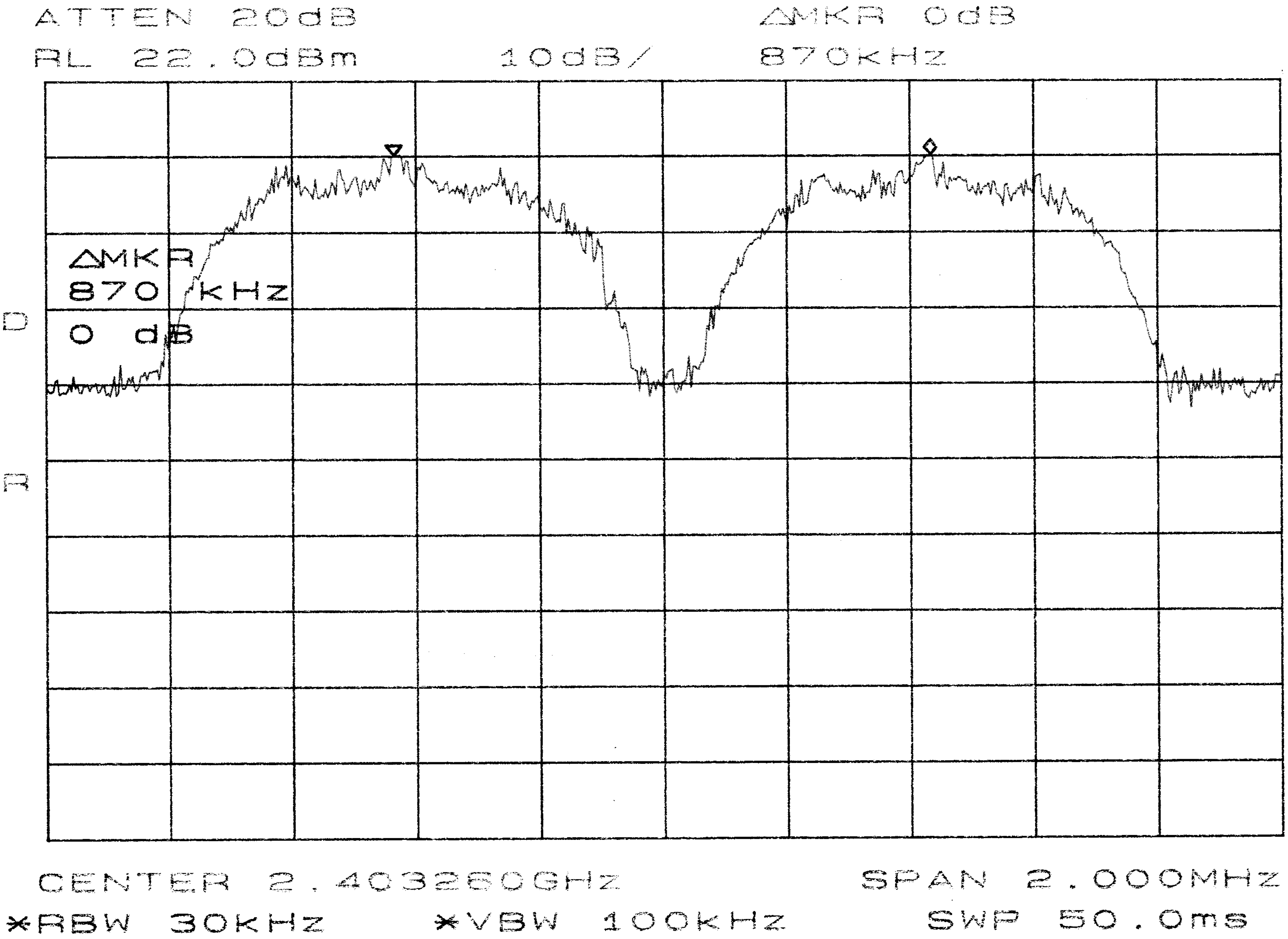
FCC CONDUCTED TEST
MODEL: UNIDEN 4960

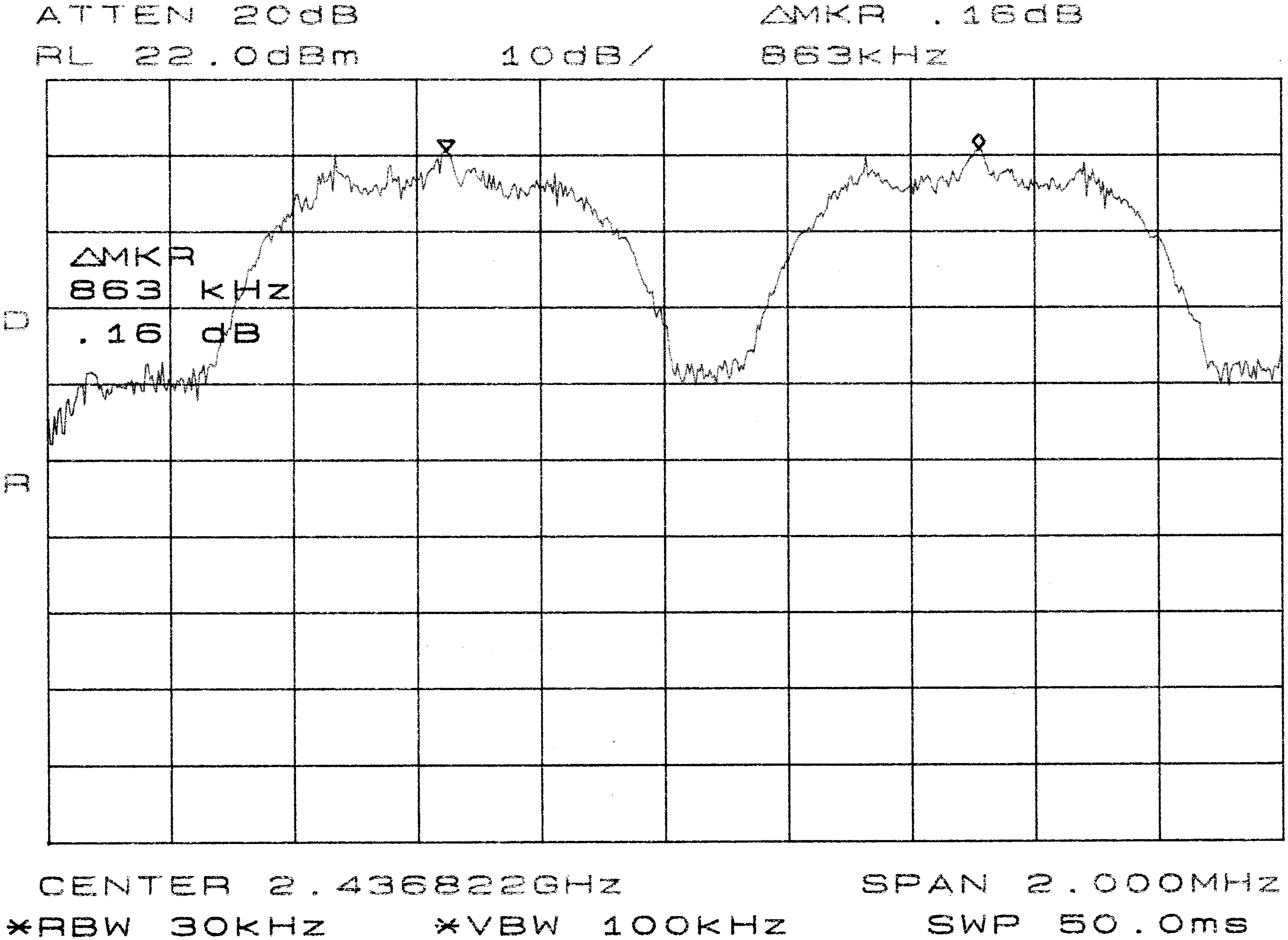
POWER: 120V/60HZ
MODE: CHARGE

2: QP.;
LISN: L1

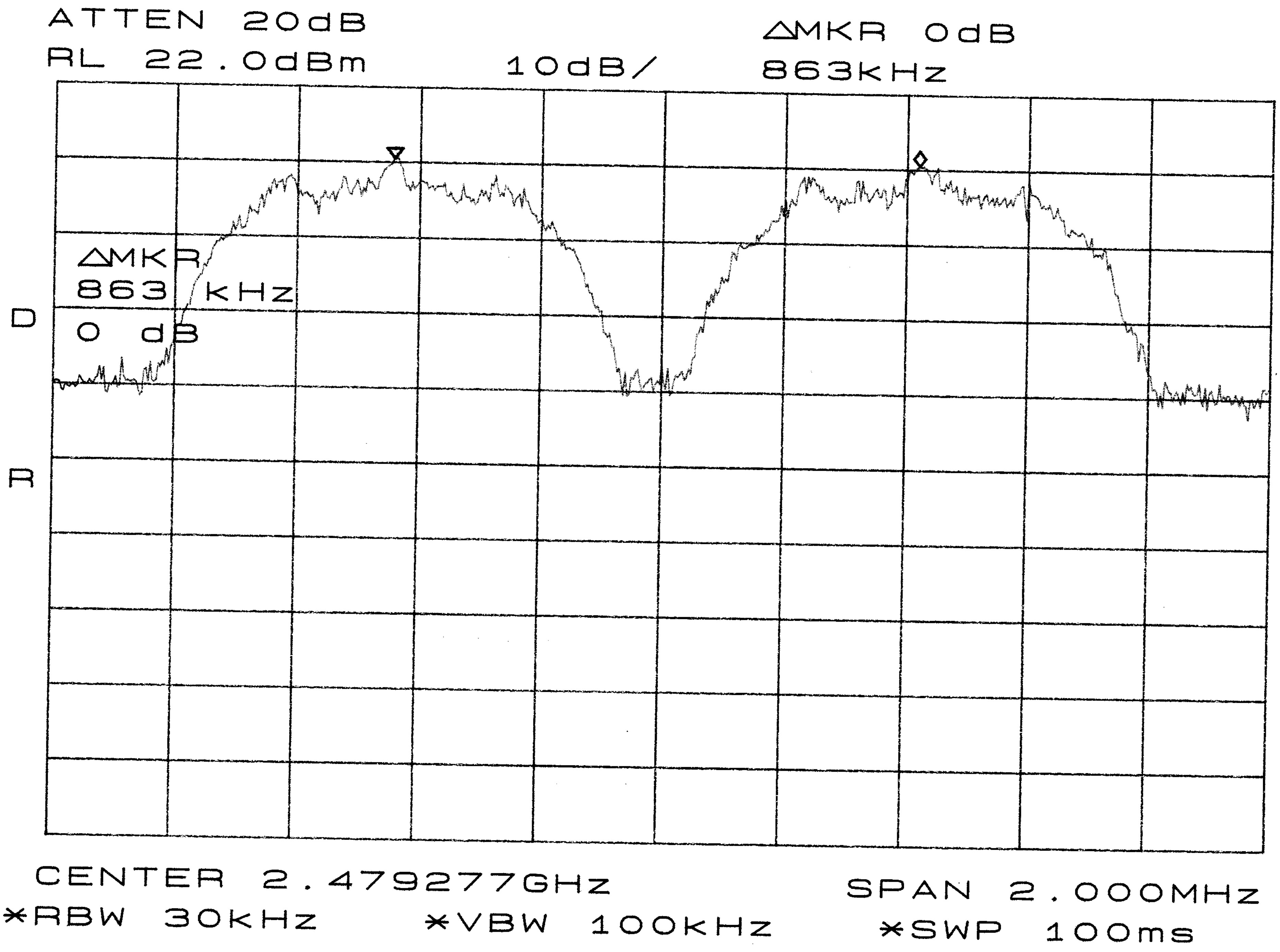
CLASS B LIMIT
ETC EMI LAB.

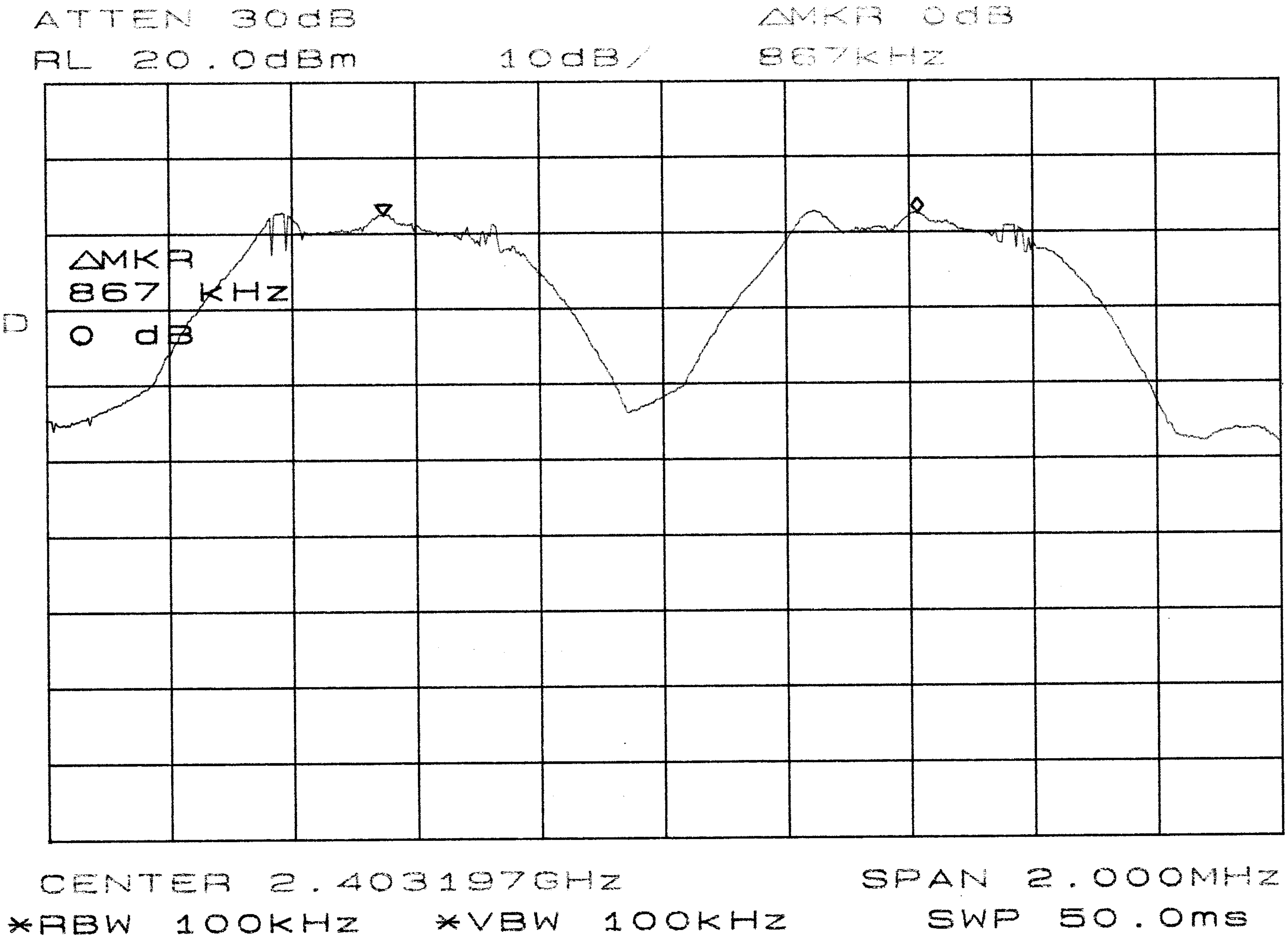
Appendix 2 : Plotted Data for Separation of Adjacent Channel


ATTEN 20dB
RL 22.0dBm
10dB/
ΔMKR 0dB
870KHz
ΔMKR
870 kHz
0 dB
D
R
CENTER 2.403260GHz
SPAN 2.000MHz
*RBW 30KHz
*VBW 100KHz
SWP 50.0ms

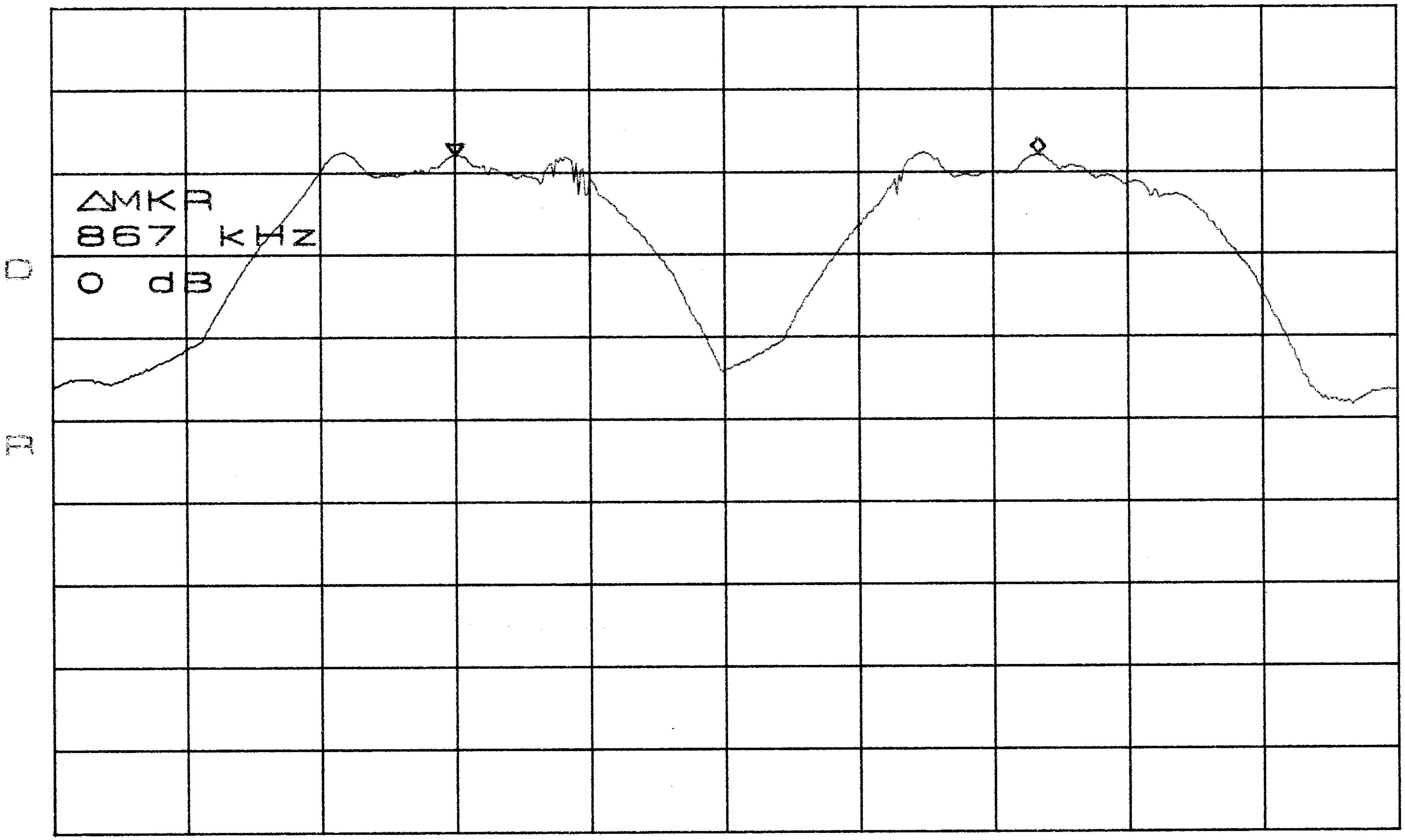


ATTEN 20dB
RL 22.0dBm
10dB/
ΔMKR .16dB
863kHz
ΔMKR
863 kHz
.16 dB
D
R
CENTER 2.436822GHz
SPAN 2.000MHz
*RBW 30kHz
*VBW 100kHz
SWP 50.0ms

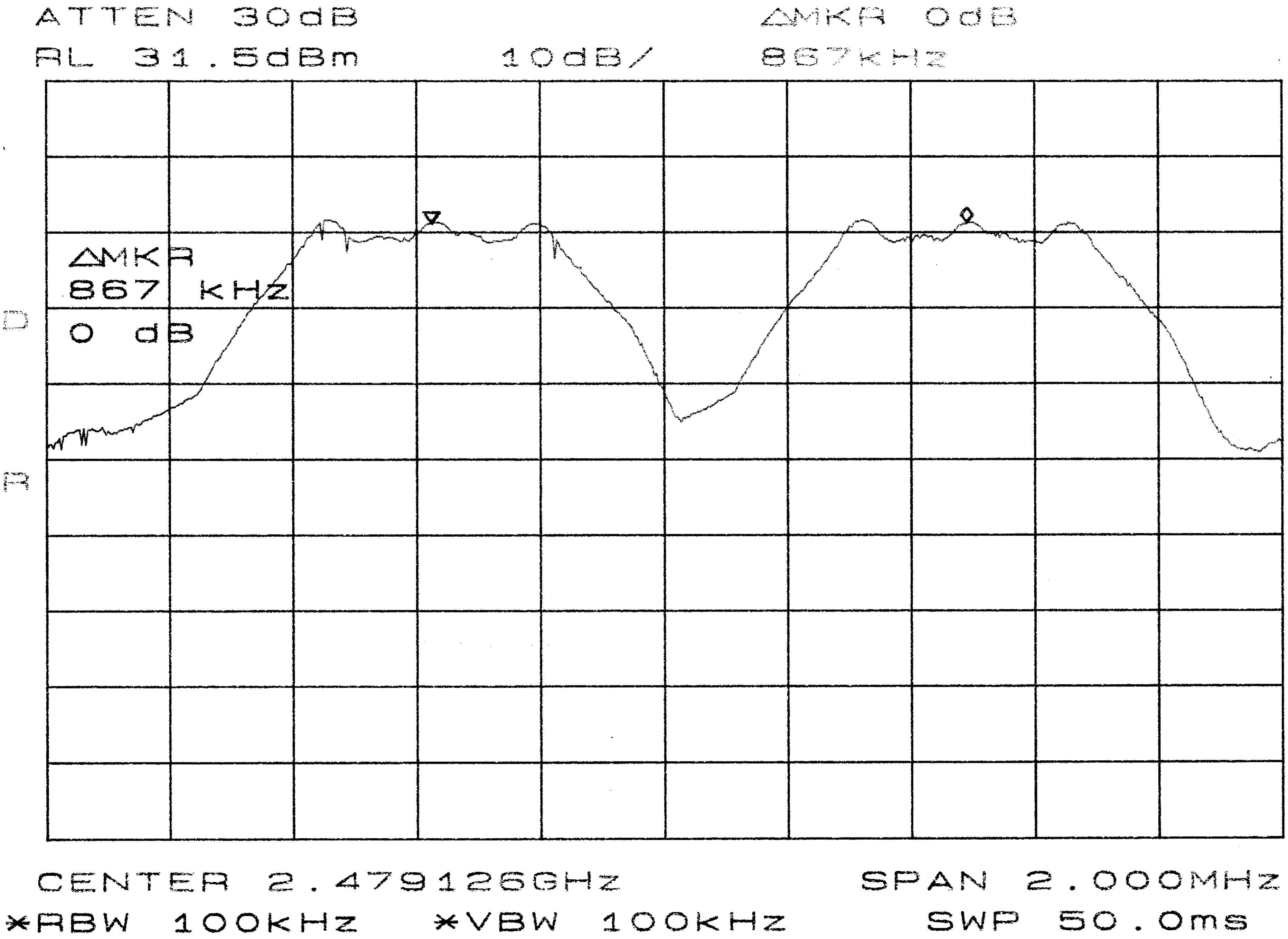

ATTEN 20dB
RL 22.0dBm
10dB/
ΔMKR 0dB
863kHz
ΔMKR
863 kHz
0 dB
D
R
CENTER 2.479277GHz
SPAN 2.000MHz
*RBW 30kHz
*VBW 100kHz
*SWP 100ms


ATTEN 30dB
RL 20.0dBm
10dB/
ΔMKR 0dB
867kHz
ΔMKR
867 kHz
0 dB
D
CENTER 2.403197GHz
SPAN 2.000MHz
*RBW 100kHz
*VBW 100kHz
SWP 50.0ms

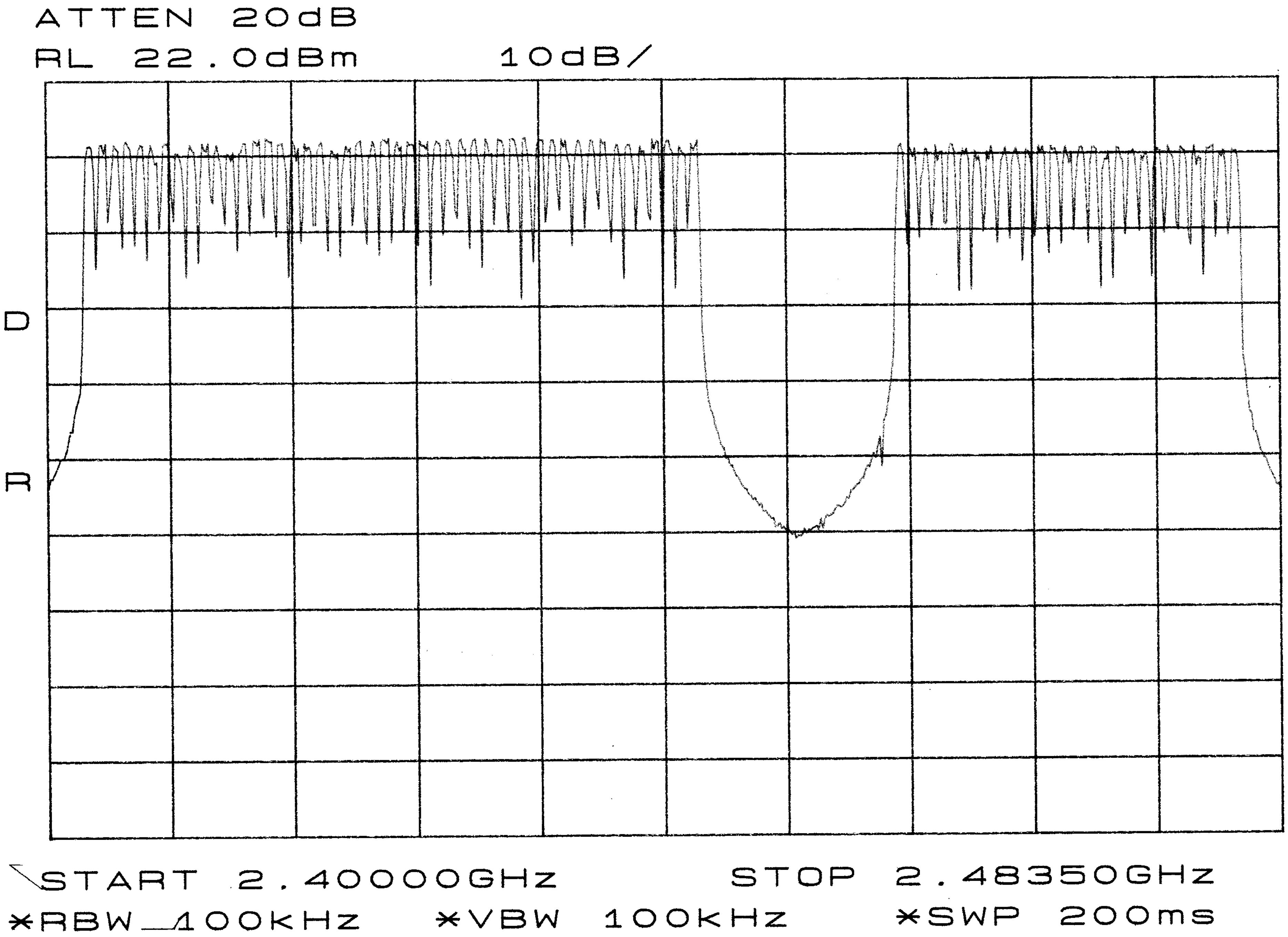
ATTEN 30dB   ΔMKR 0dB
RL 31.5dBm   10dB/   867kHz

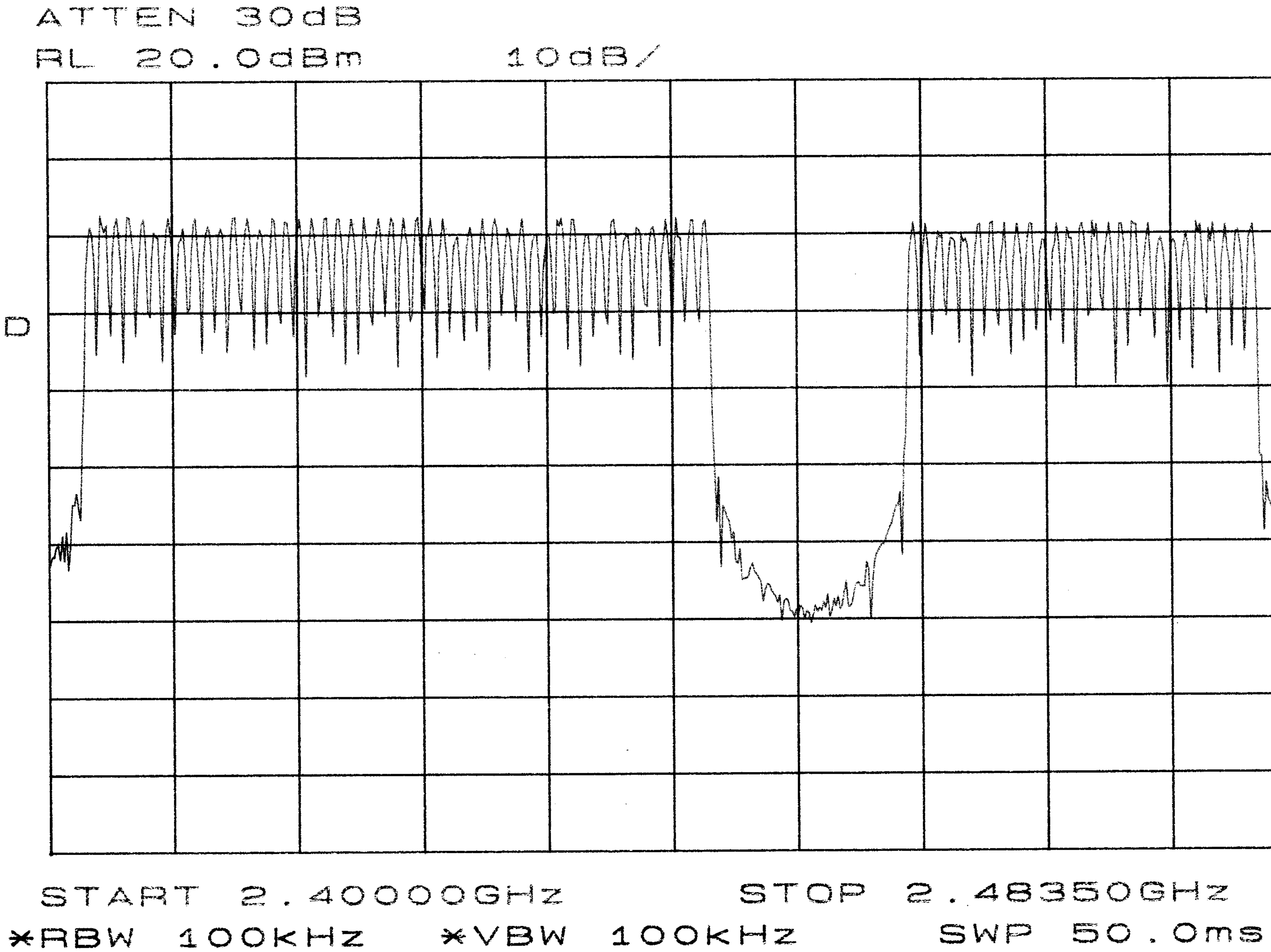


CENTER 2.437700GHz   SPAN 2.000MHz
*RBW 100kHz   *VBW 100kHz   SWP 50.0ms


ATTEN 30dB
RL 31.5dBm
10dB/
ΔMKR 0dB
867kHz
ΔMKR
867 kHz
0 dB
D
R
CENTER 2.479126GHz
SPAN 2.000MHz
*RBW 100kHz
*VBW 100kHz
SWP 50.0ms

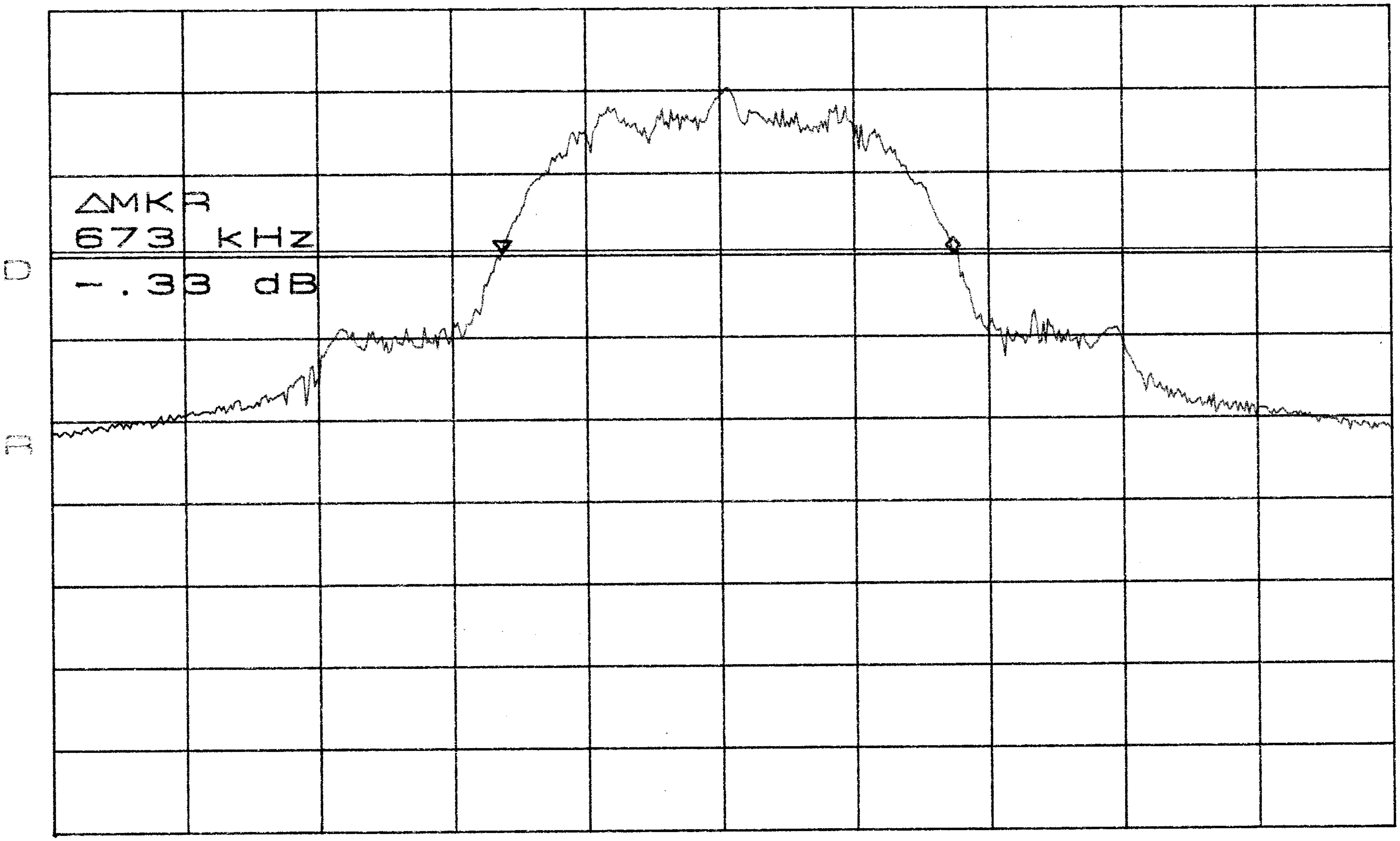
Appendix 3 : Plotted Data for Total Used Hopping Frequencies


ATTEN 20dB
RL 22.0dBm 10dB/
D
R
START 2.40000GHz STOP 2.48350GHz
*RBW 100kHz *VBW 100kHz *SWP 200ms

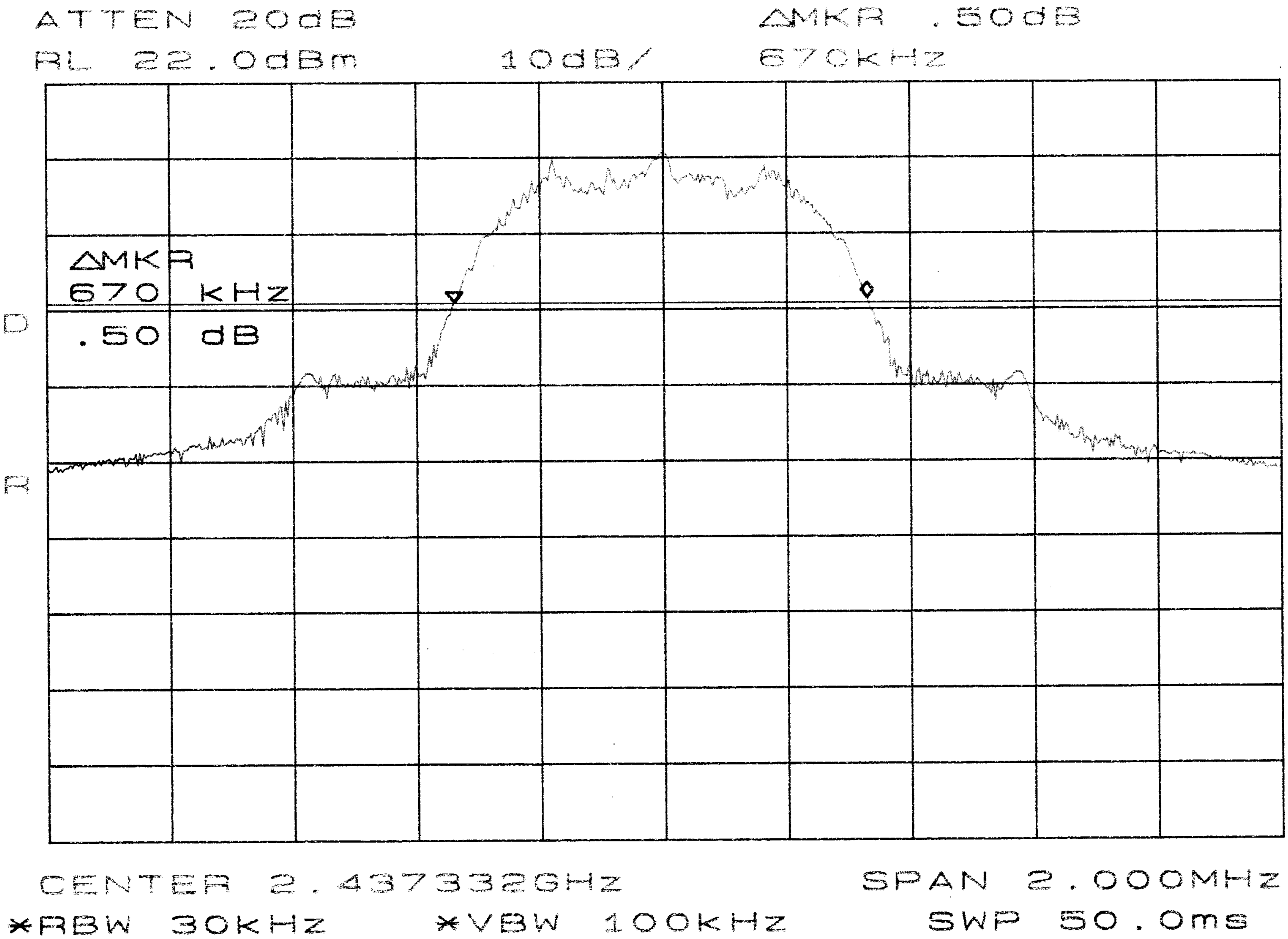

ATTEN 30dB
RL 20.0dBm 10dB/
D
START 2.40000GHz STOP 2.48350GHz
*RBW 100kHz *VBW 100kHz SWP 50.0ms

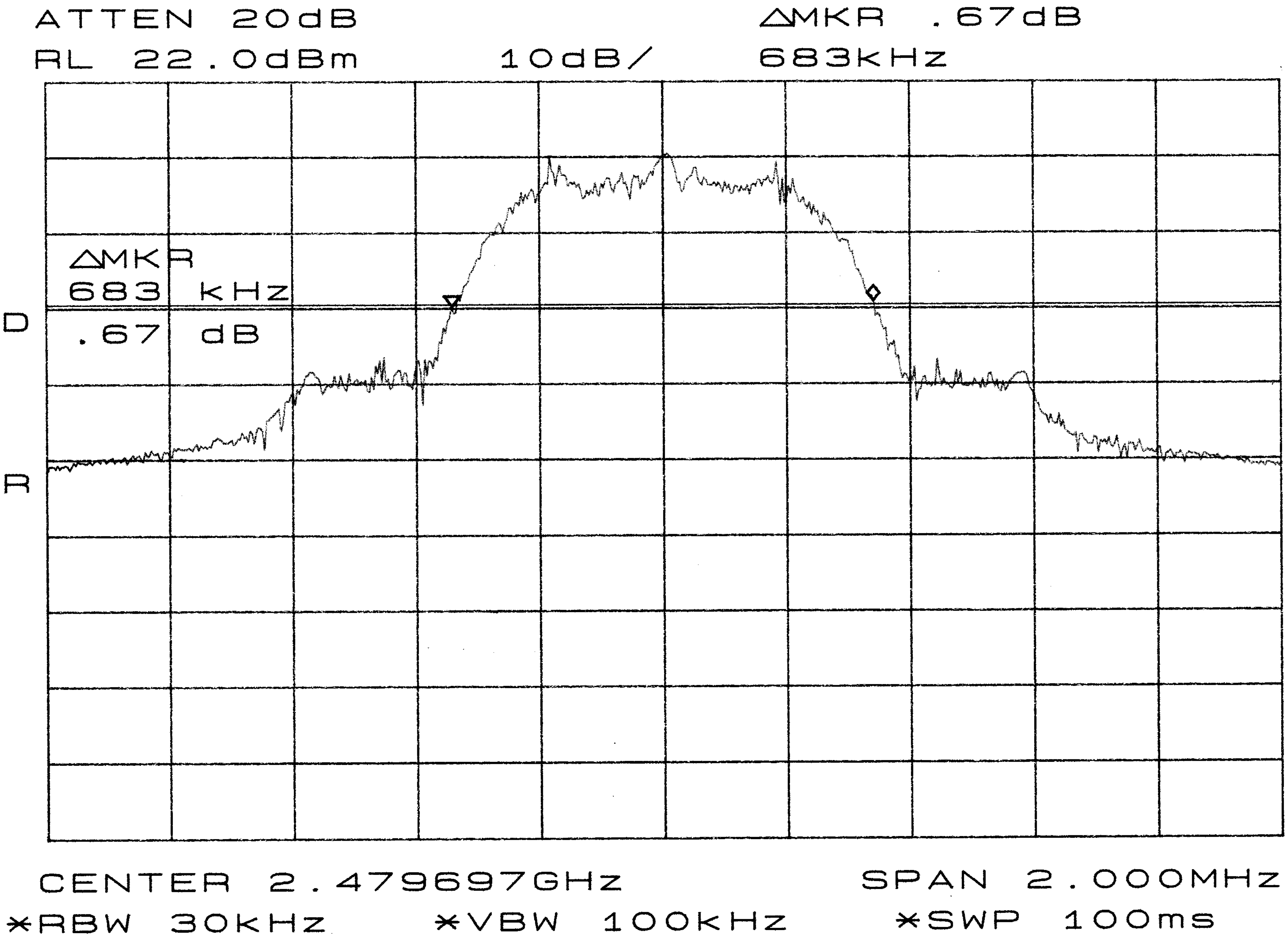
Appendix 4 : Plotted Data for Channel Bandwidth

ATTEN 20dB　　　　　　　　ΔMKR -.33dB
RL 22.0dBm　　10dB/　　673kHz

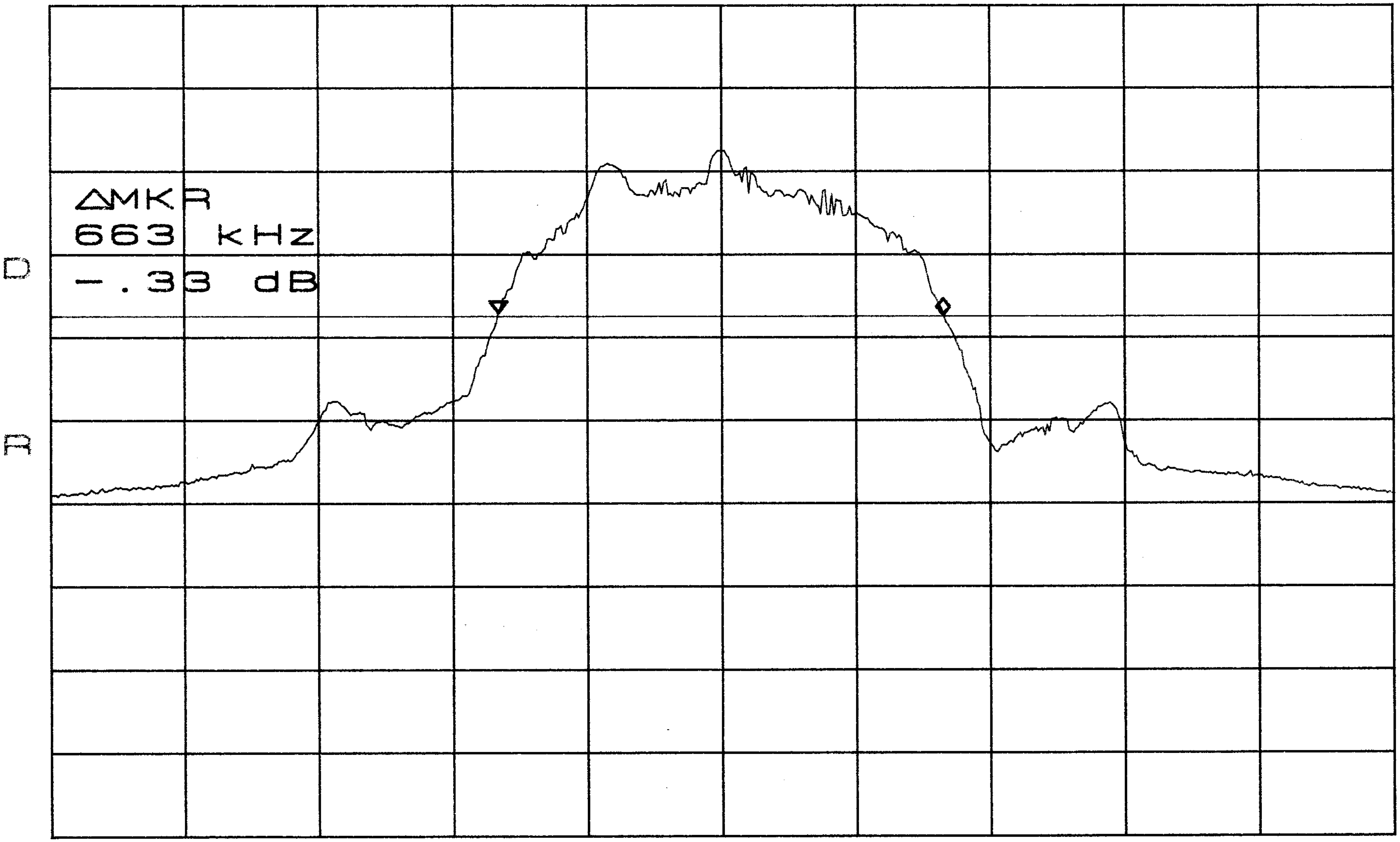


CENTER 2.402820GHz　　　　SPAN 2.000MHz
*RBW 30kHz　　*VBW 100kHz　　SWP 50.0ms

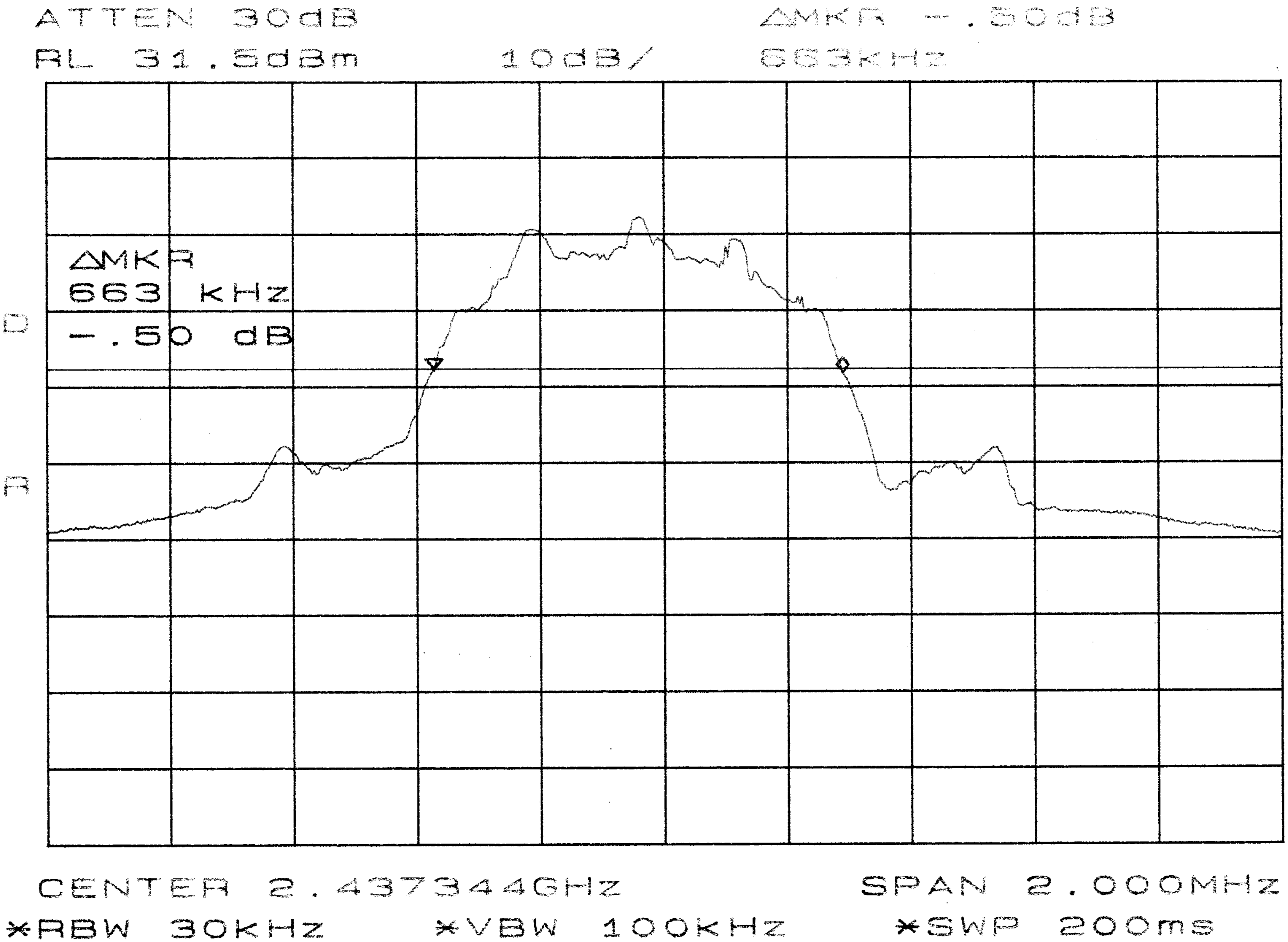

ATTEN 20dB
ΔMKR .50dB
RL 22.0dBm
10dB/
670kHz
ΔMKR
670 kHz
.50 dB
D
R
CENTER 2.437332GHz
SPAN 2.000MHz
*RBW 30kHz
*VBW 100kHz
SWP 50.0ms


ATTEN 20dB
RL 22.0dBm
10dB/
ΔMKR .67dB
683kHz
ΔMKR
683 kHz
.67 dB
D
R
CENTER 2.479697GHz
SPAN 2.000MHz
*RBW 30kHz
*VBW 100kHz
*SWP 100ms

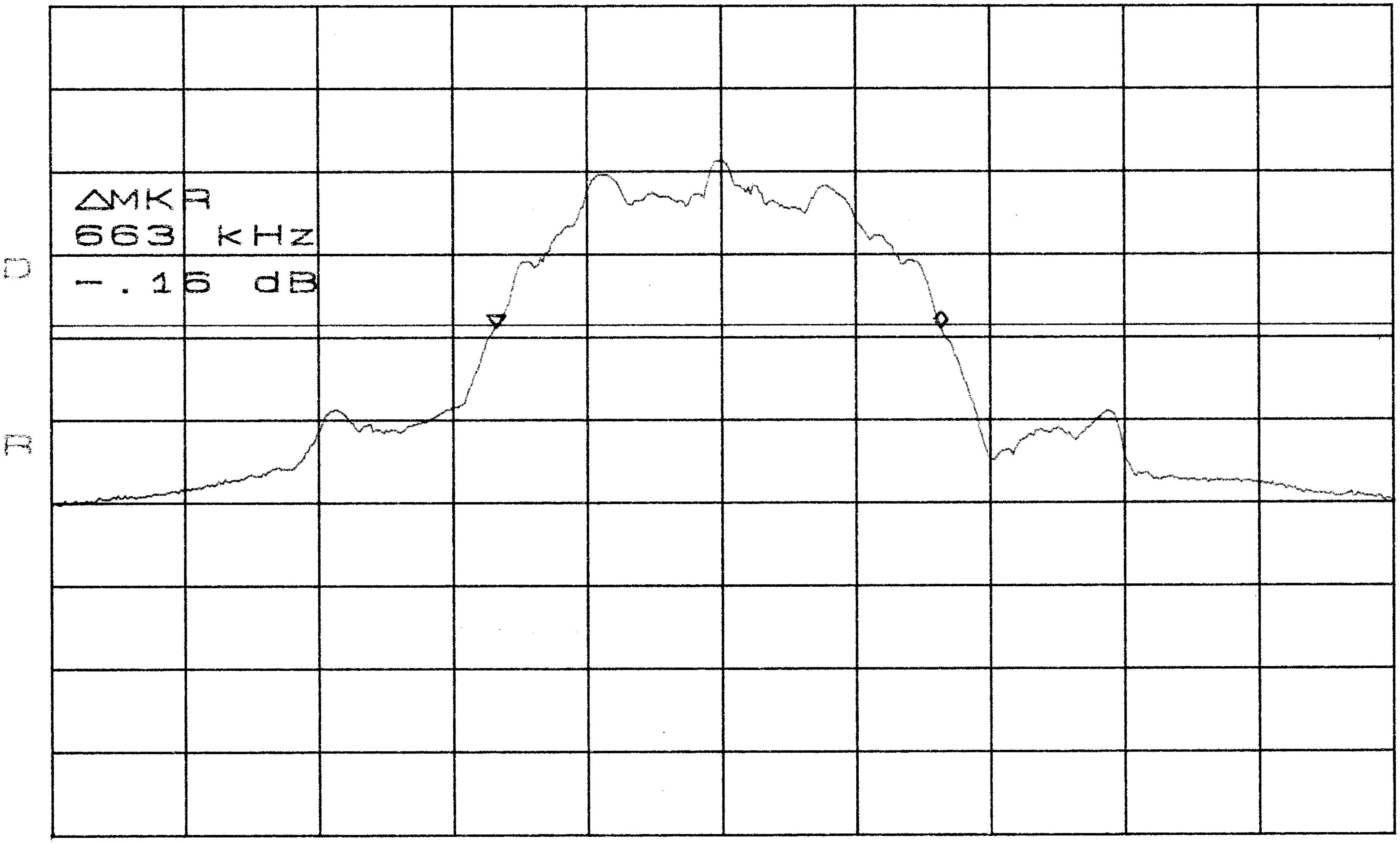
ATTEN 30dB ΔMKR -.33dB
RL 31.5dBm 10dB/ 663kHz



CENTER 2.402747GHz SPAN 2.000MHz
*RBW 30kHz *VBW 100kHz *SWP 200ms


ATTEN 30dB
ΔMKR -.50dB
RL 31.5dBm
10dB/
663kHz
ΔMKR
663 kHz
-.50 dB
D
R
CENTER 2.437344GHz
SPAN 2.000MHz
*RBW 30kHz
*VBW 100kHz
*SWP 200ms

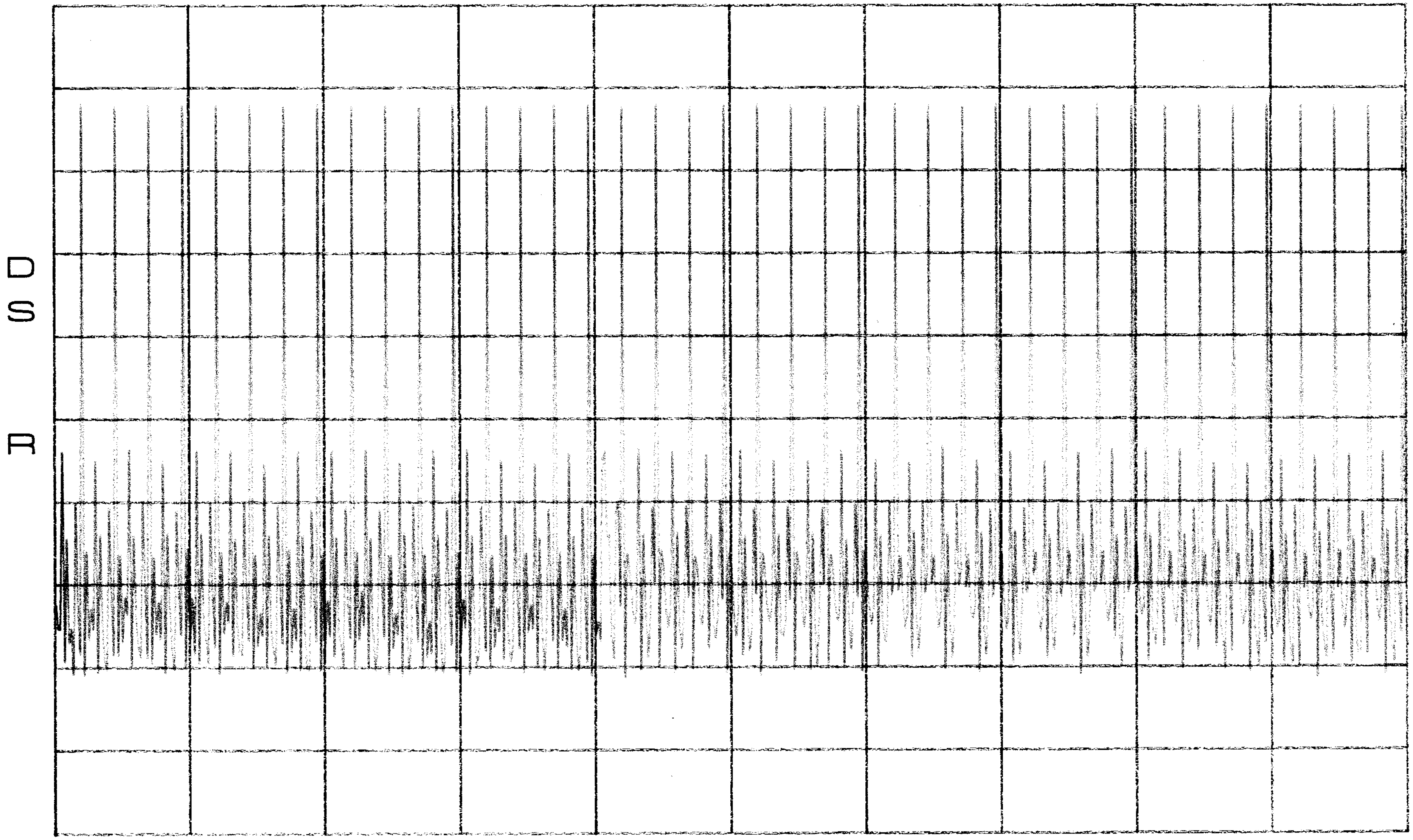
ATTEN 30dB   ΔMKR -.16dB
RL 31.5dBm   10dB/   663kHz



CENTER 2.479623GHz   SPAN 2.000MHz
*RBW 30kHz   *VBW 100kHz   *SWP 200ms

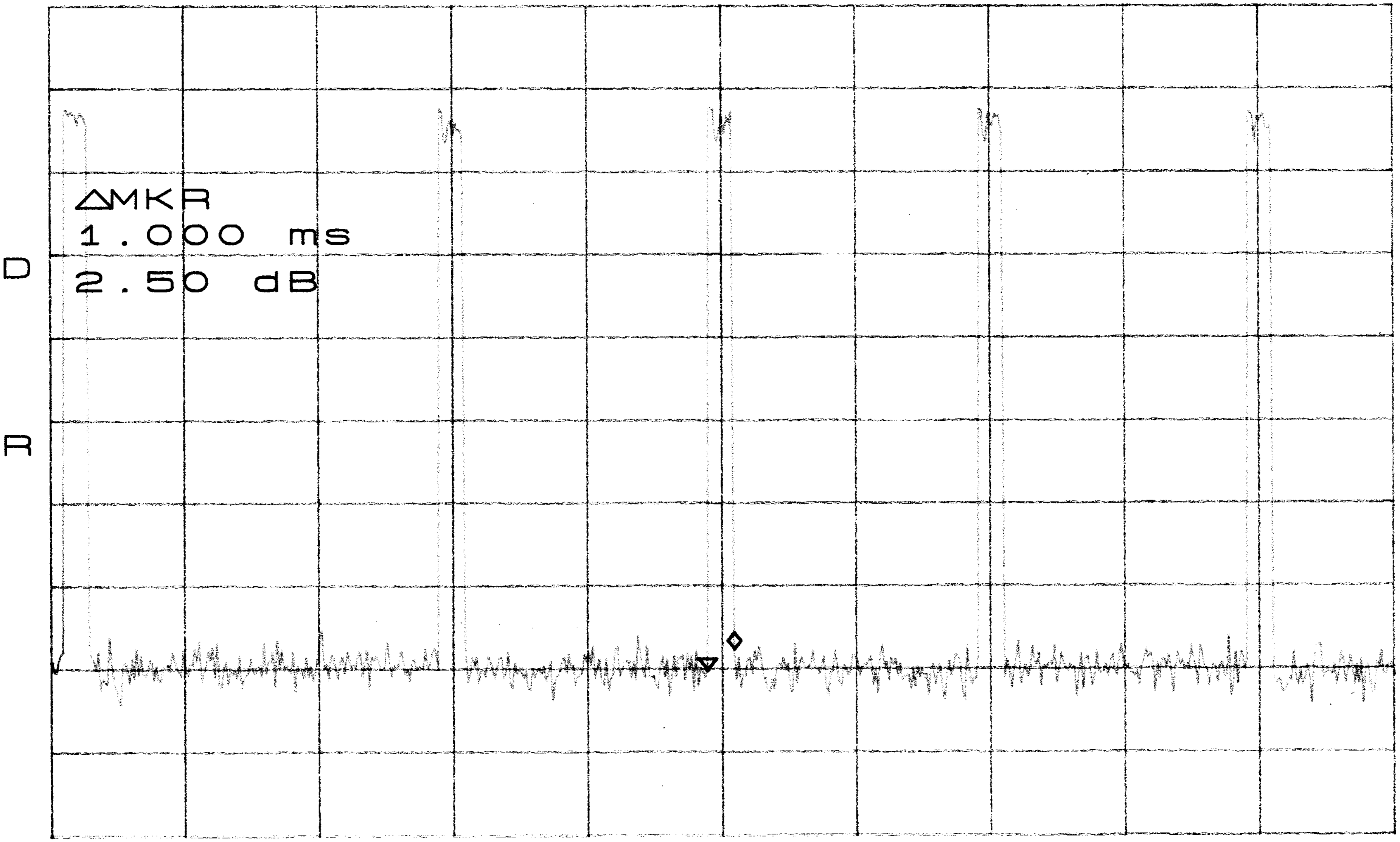
Appendix 5 : Plotted Data for Channel Dwell Time

ATTEN 30dB
RL 31.5dBm 10dB/



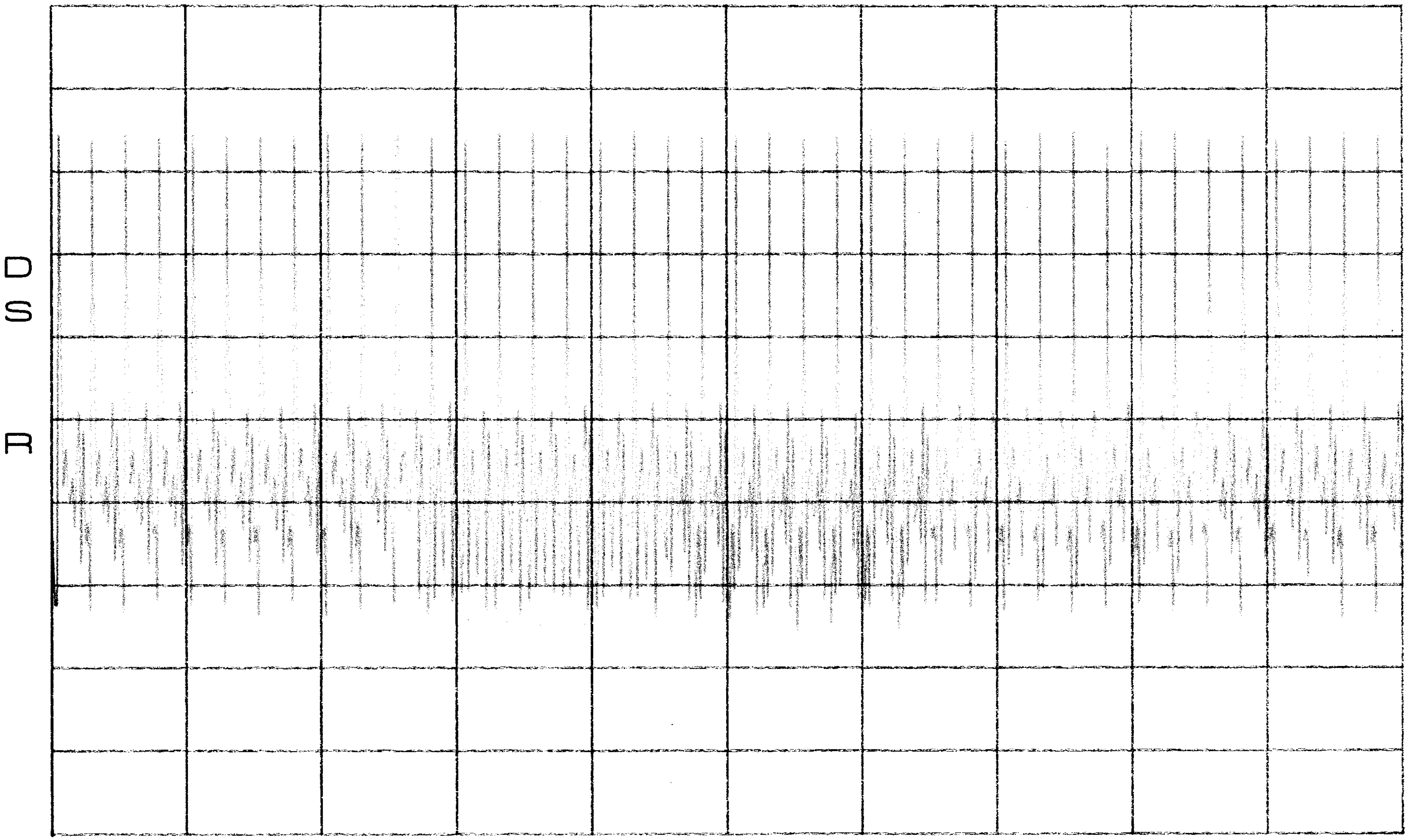
CENTER 2.402784000GHz SPAN 0Hz
*RBW 30kHz *VBW 30kHz *SWP 30.0sec

ATTEN 30dB　　　　　　　　ΔMKR 2.50dB
RL 31.5dBm　　10dB/　　1.000ms



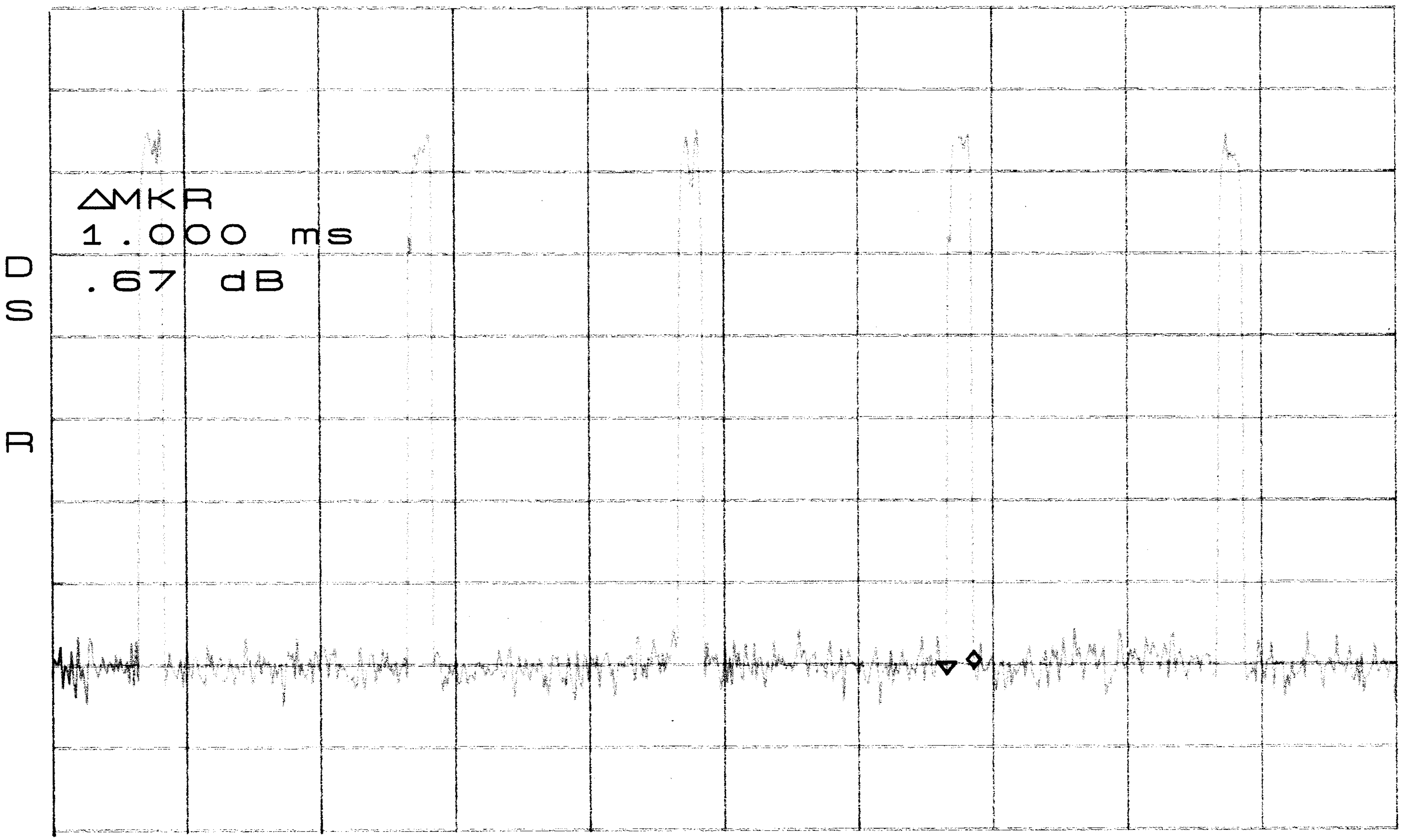
CENTER 2.402784000GHz　　　SPAN 0Hz
*RBW 100kHz　　*VBW 100kHz　　*SWP 50.0ms

ATTEN 30dB
RL 31.5dBm 10dB/



CENTER 2.43734000GHz SPAN 0Hz
*RBW 100kHz *VBW 100kHz *SWP 30.0sec

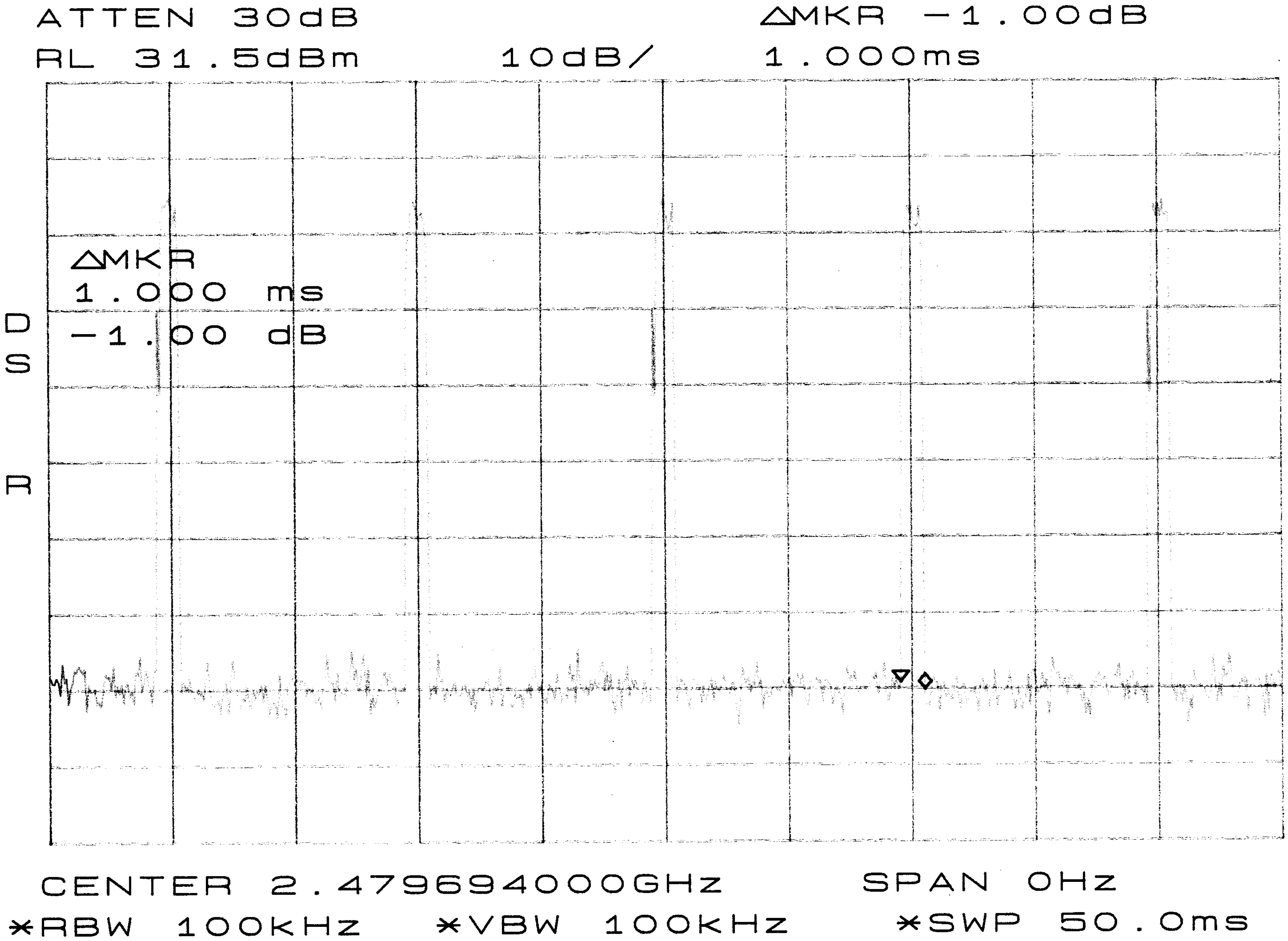
ATTEN 30dB   ΔMKR .67dB
RL 31.5dBm   10dB/   1.000ms

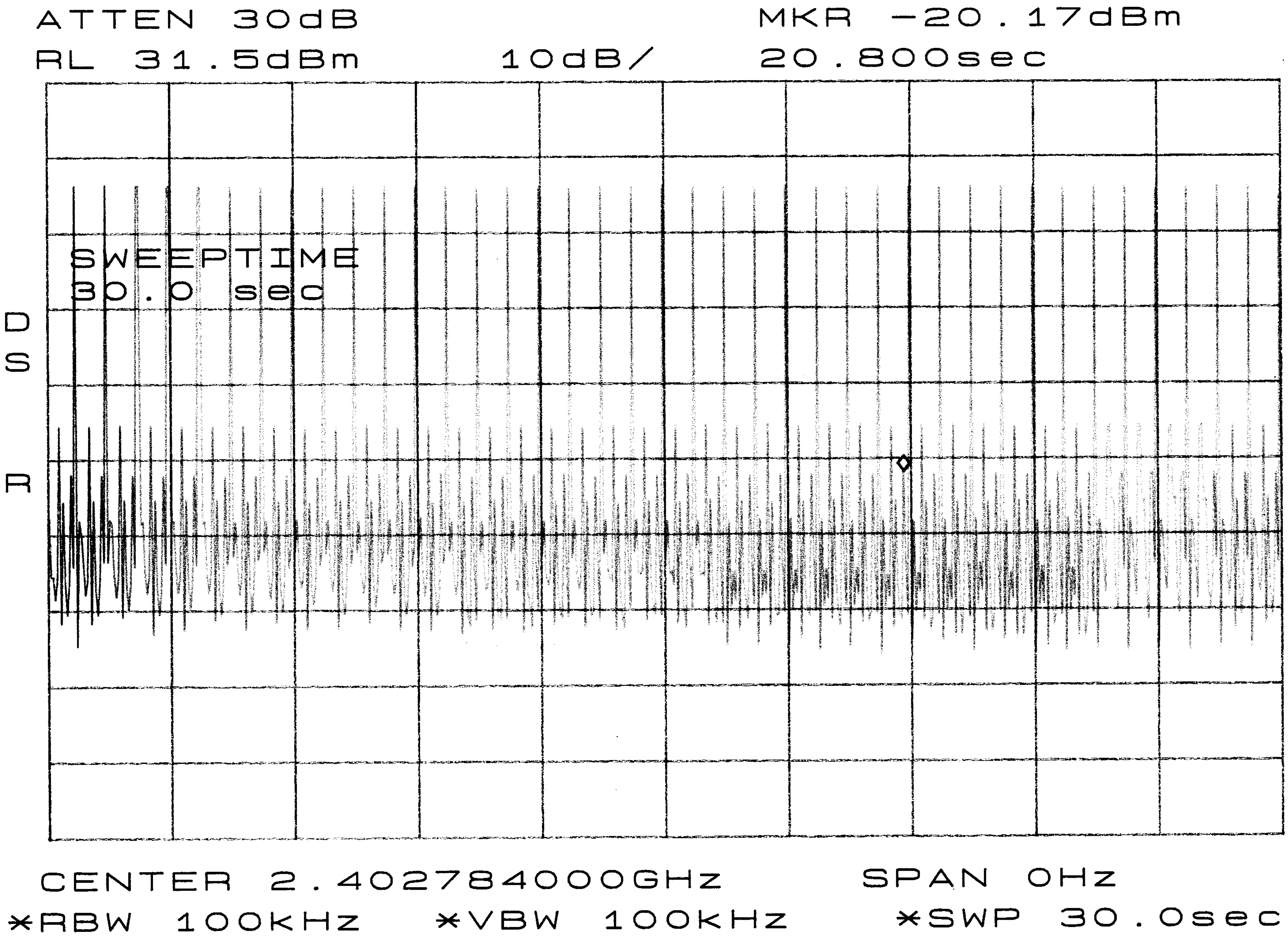


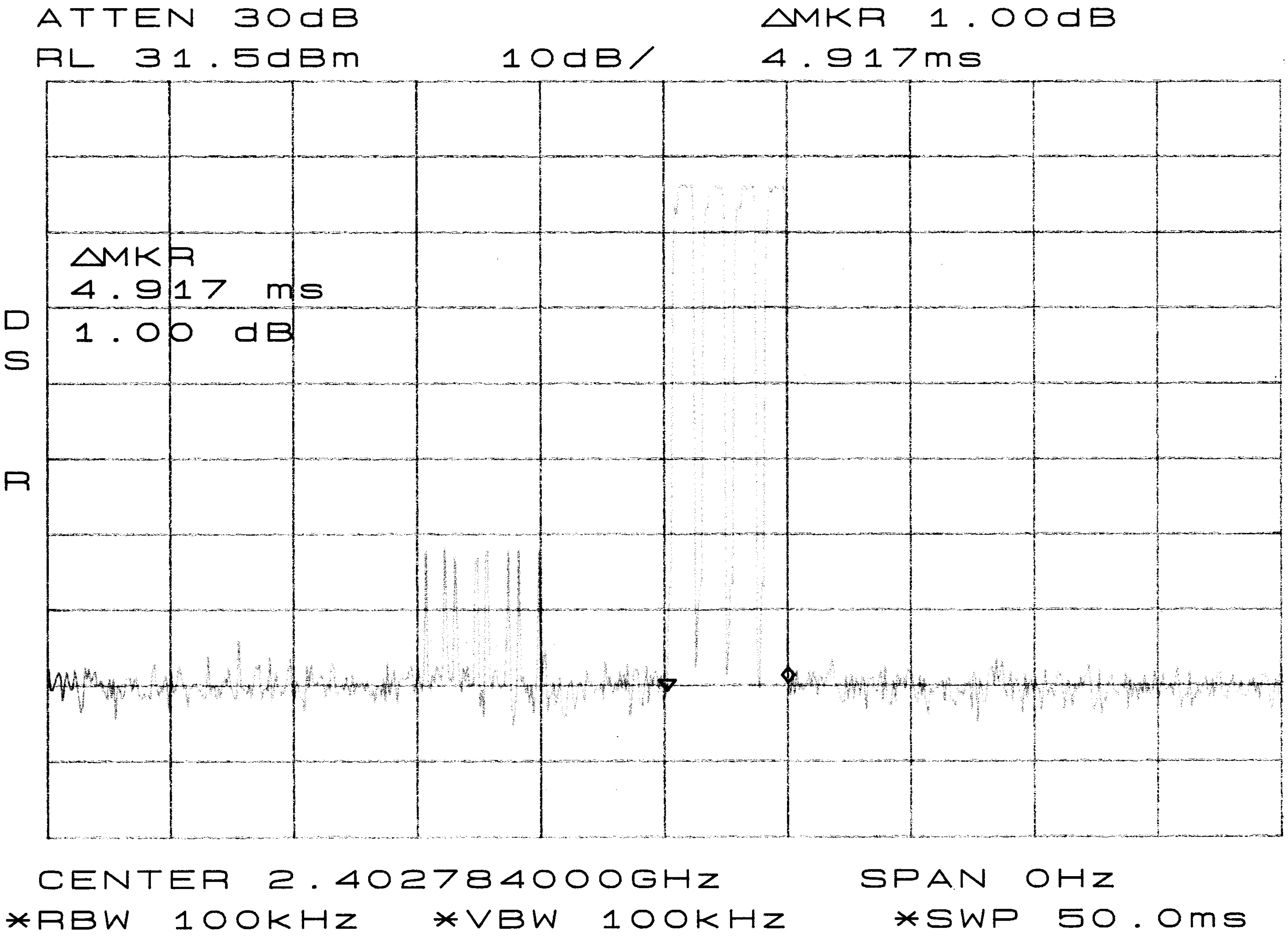
CENTER 2.43734000GHz   SPAN 0Hz
*RBW 100kHz   *VBW 100kHz   *SWP 50.0ms

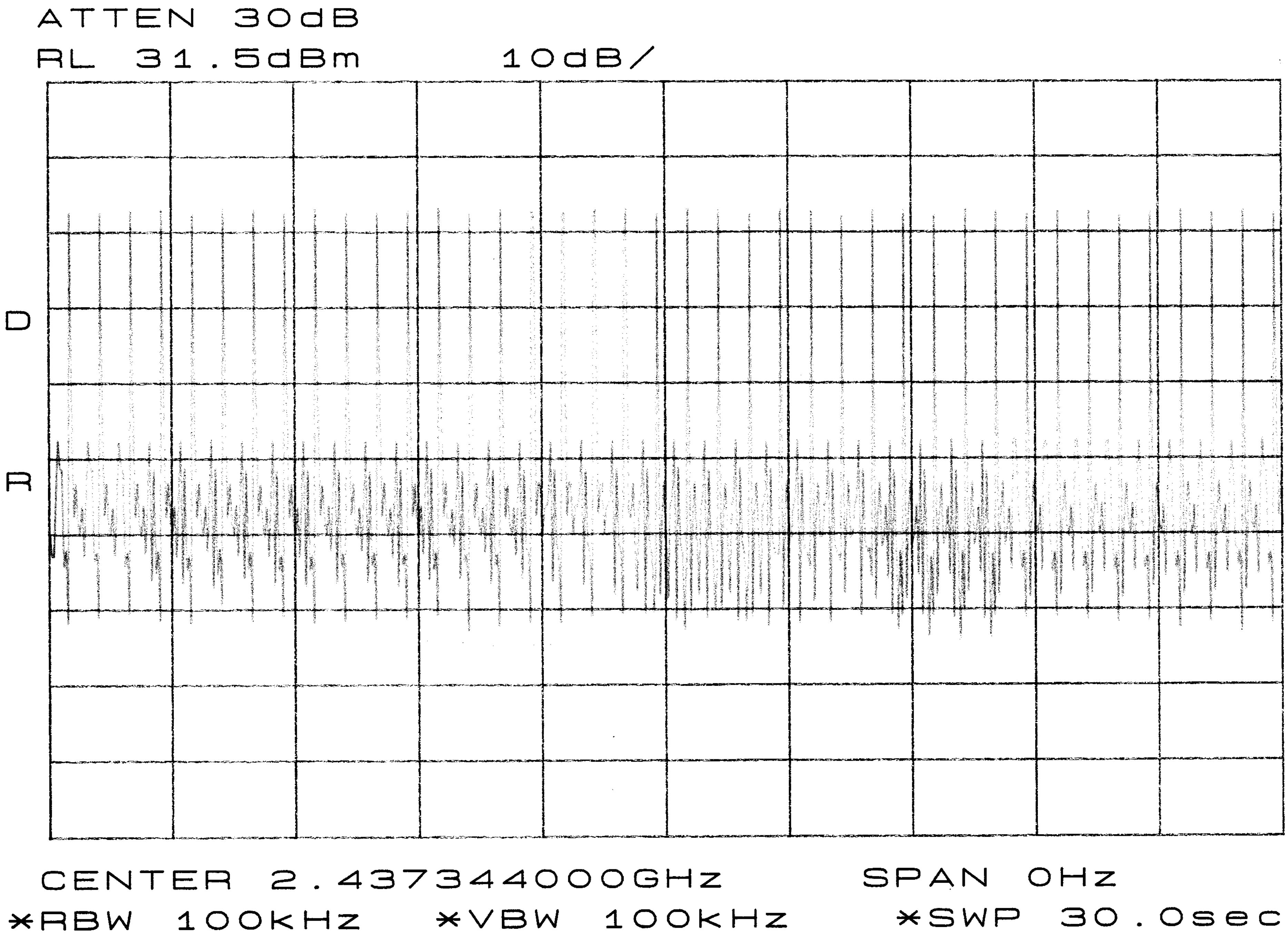
ATTEN 30dB
RL 31.5dBm 10dB/

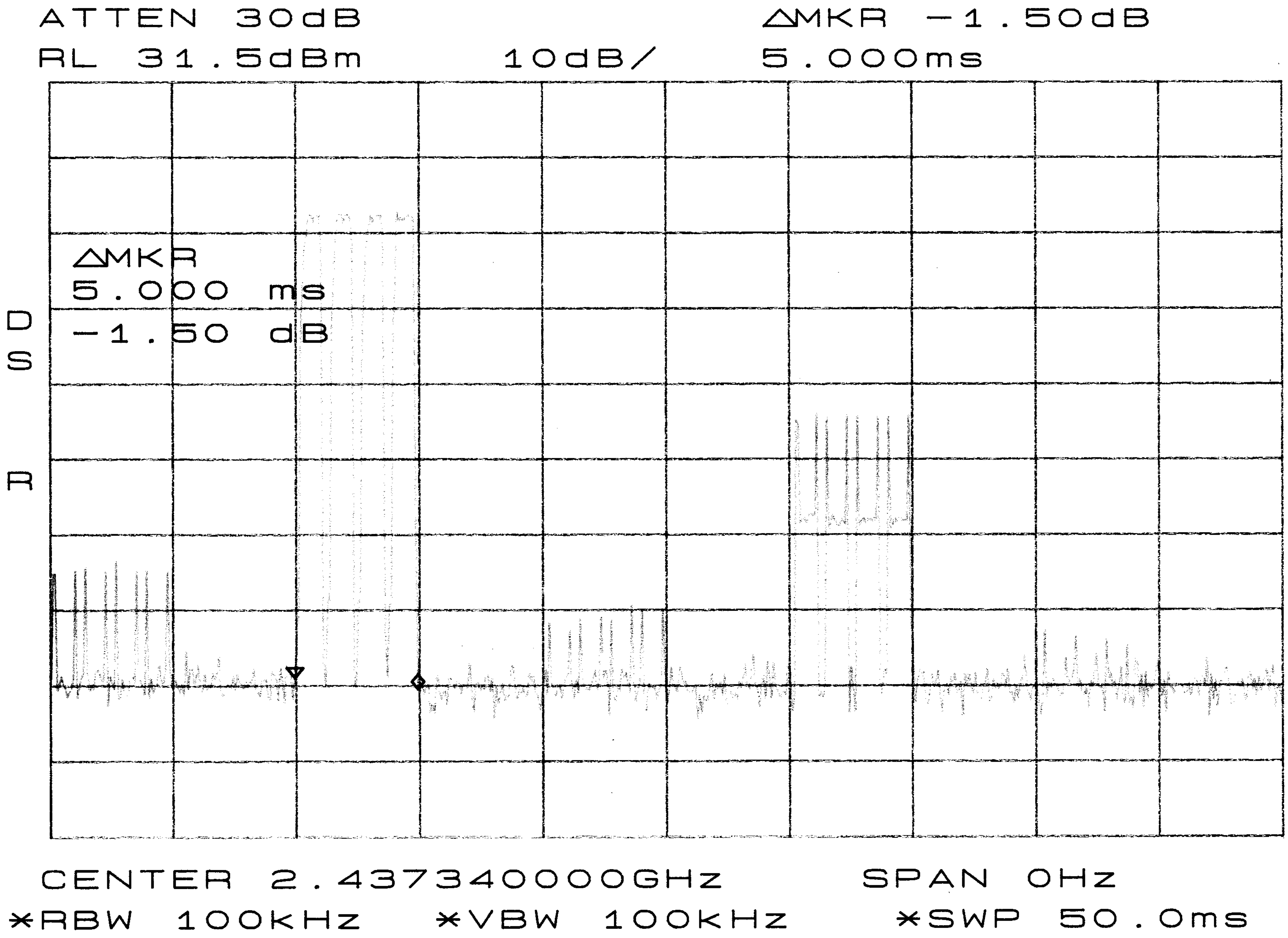
CENTER 2.479694000GHz SPAN 0Hz
*RBW 100kHz *VBW 100kHz *SWP 30.0sec


ATTEN 30dB
RL 31.5dBm
10dB/
ΔMKR −1.00dB
1.000ms
ΔMKR
1.000 ms
−1.00 dB
D
S
R
CENTER 2.479694000GHz
SPAN 0Hz
*RBW 100kHz
*VBW 100kHz
*SWP 50.0ms

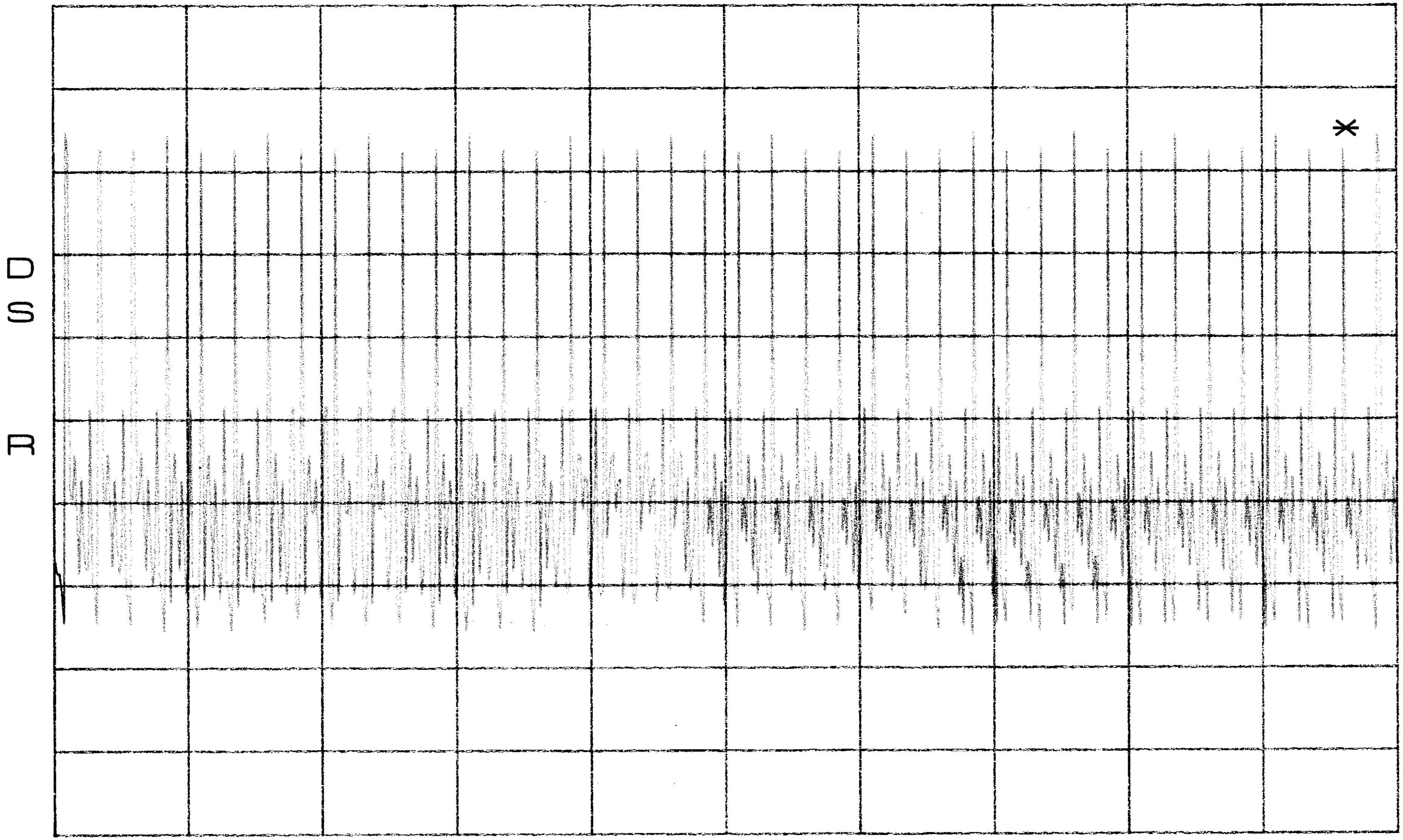

ATTEN 30dB
MKR -20.17dBm
RL 31.5dBm
10dB/
20.800sec
SWEEPTIME
30.0 sec
D
S
R
CENTER 2.402784000GHz
SPAN 0Hz
*RBW 100kHz
*VBW 100kHz
*SWP 30.0sec


ATTEN 30dB
RL 31.5dBm
10dB/
ΔMKR 1.00dB
4.917ms
ΔMKR
4.917 ms
1.00 dB
D
S
R
CENTER 2.402784000GHz
SPAN 0Hz
*RBW 100kHz
*VBW 100kHz
*SWP 50.0ms

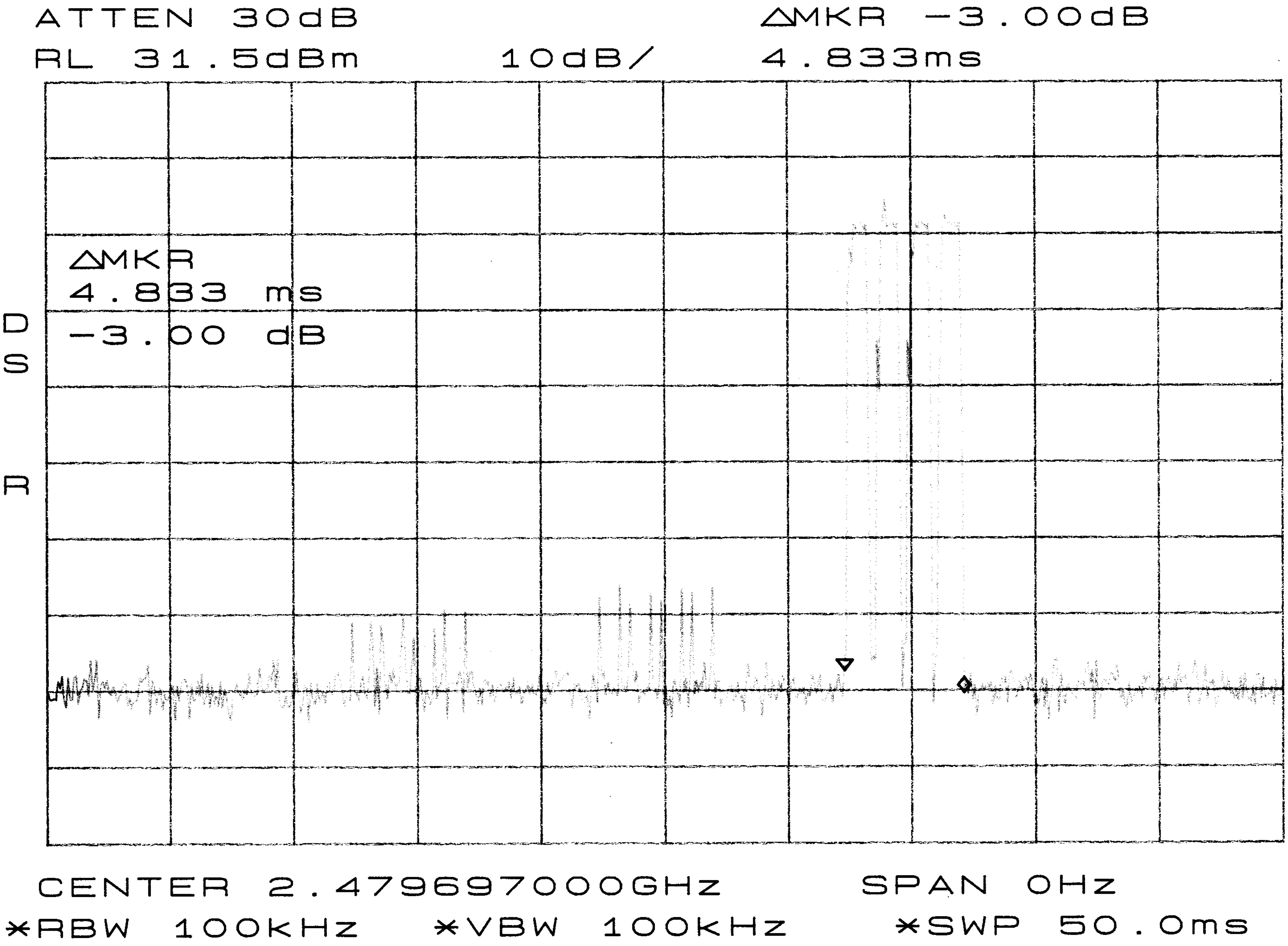

ATTEN 30dB
RL 31.5dBm 10dB/
D
R
CENTER 2.437344000GHz SPAN 0Hz
*RBW 100kHz *VBW 100kHz *SWP 30.0sec


ATTEN 30dB
ΔMKR -1.50dB
RL 31.5dBm
10dB/
5.000ms
ΔMKR
5.000 ms
-1.50 dB
D
S
R
CENTER 2.43734000GHz
SPAN 0Hz
*RBW 100kHz
*VBW 100kHz
*SWP 50.0ms

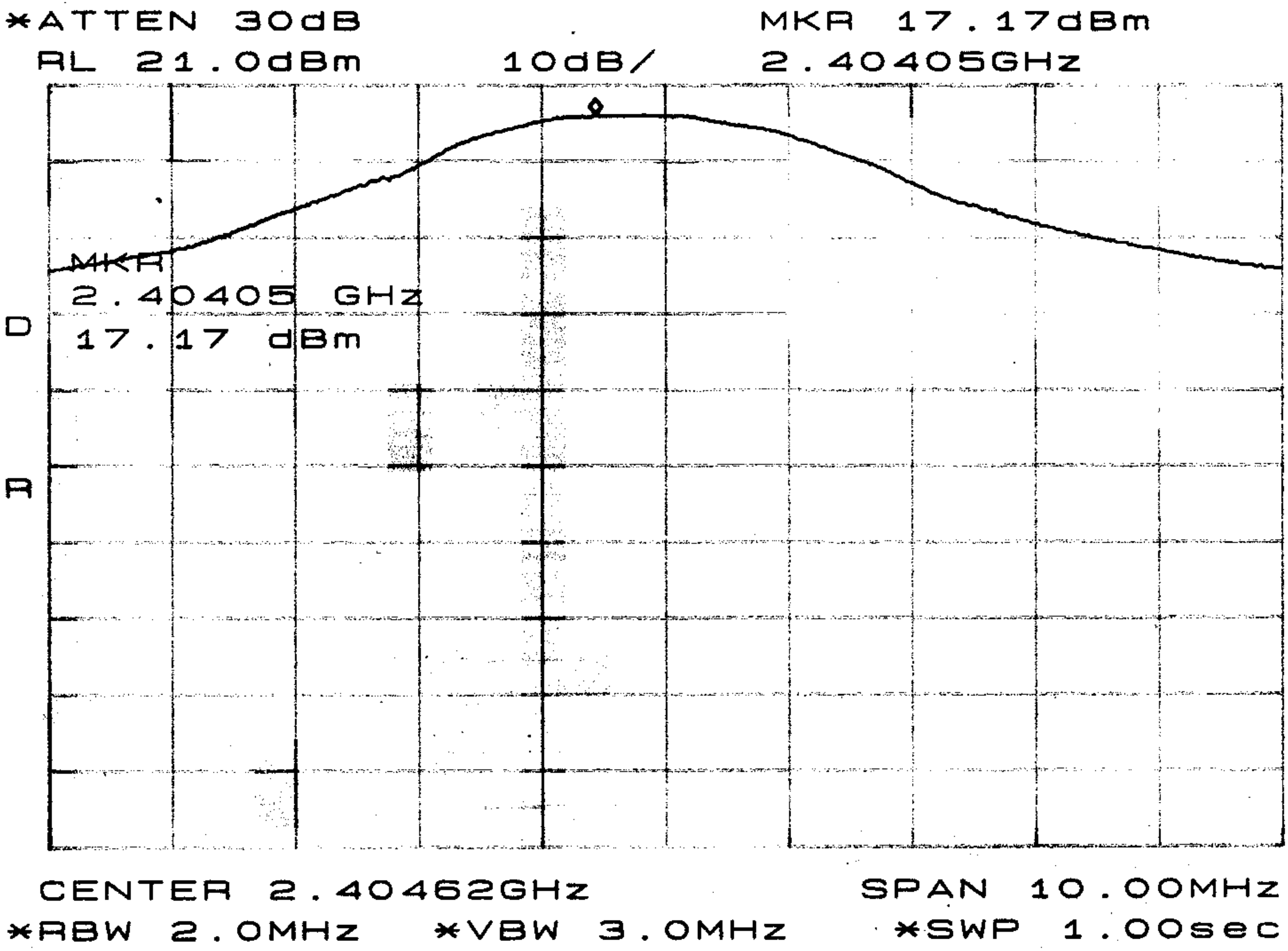
ATTEN 30dB
RL 31.5dBm 10dB/

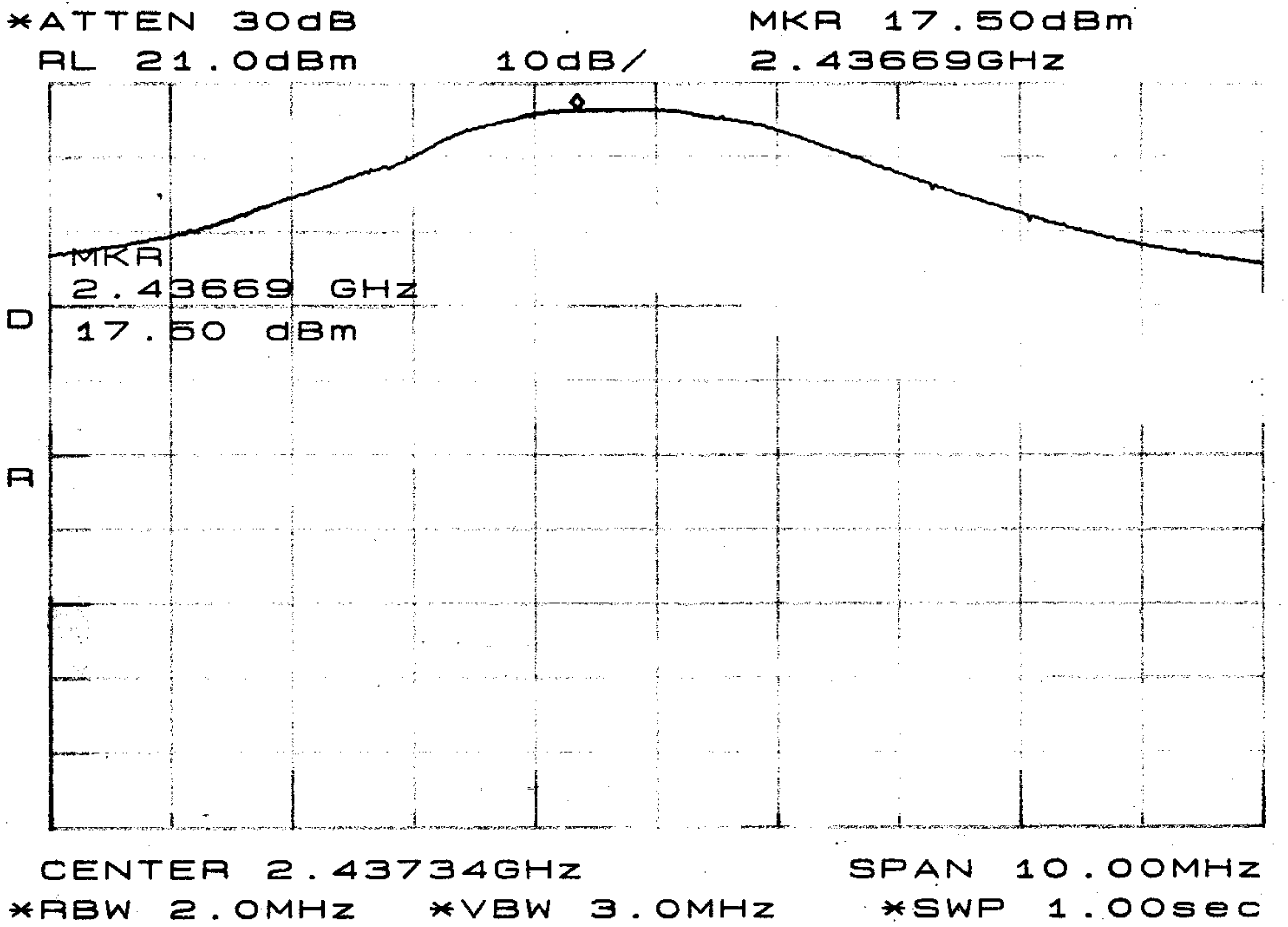


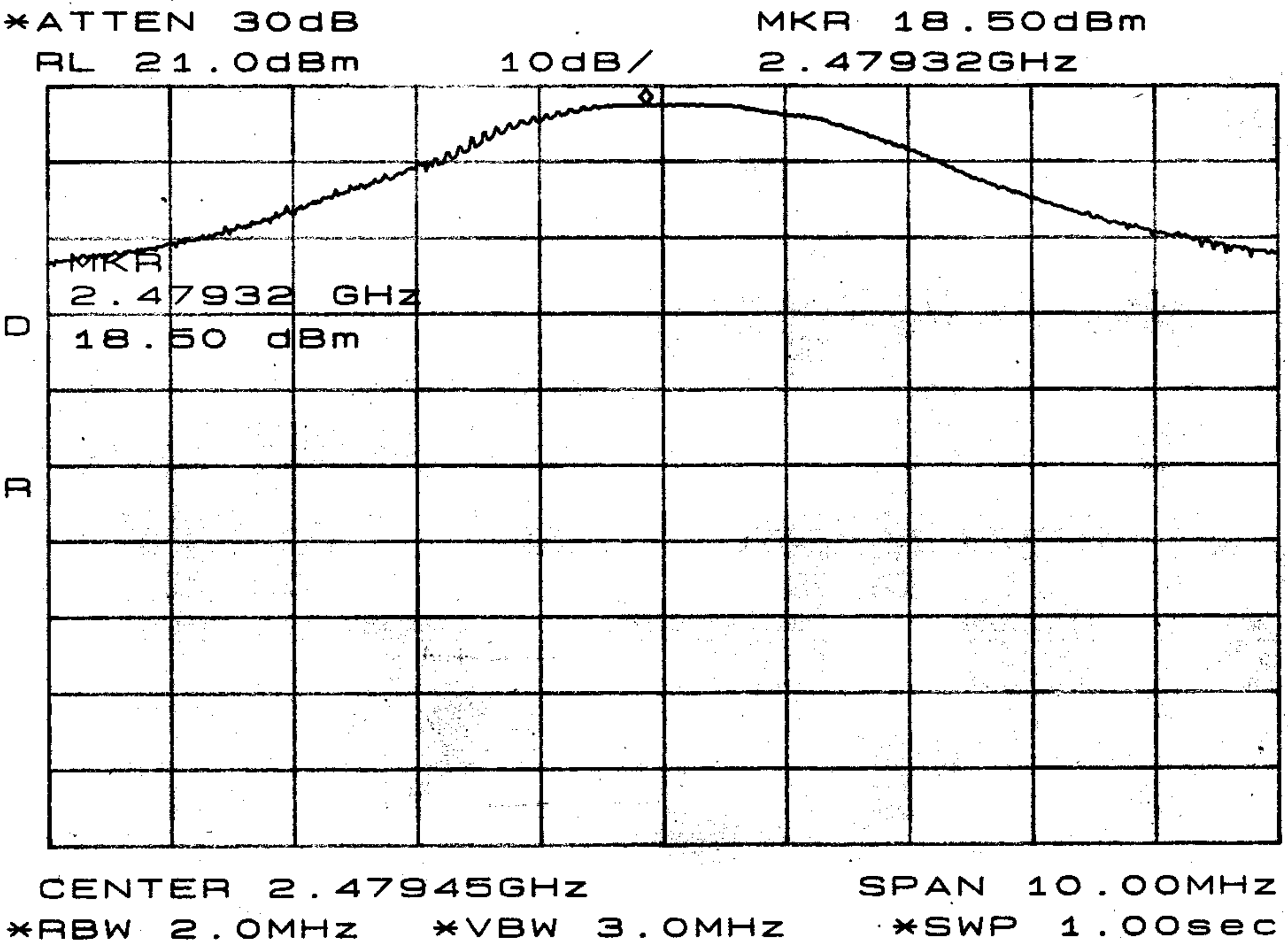
CENTER 2.47969700GHz SPAN 0Hz
*RBW 100kHz *VBW 100kHz *SWP 30.0sec


ATTEN 30dB
ΔMKR -3.00dB
RL 31.5dBm
10dB/
4.833ms
ΔMKR
4.833 ms
-3.00 dB
D
S
R
CENTER 2.47969700GHz
SPAN 0Hz
*RBW 100kHz
*VBW 100kHz
*SWP 50.0ms

Appendix 6 : Plotted Data for Output Peak Power

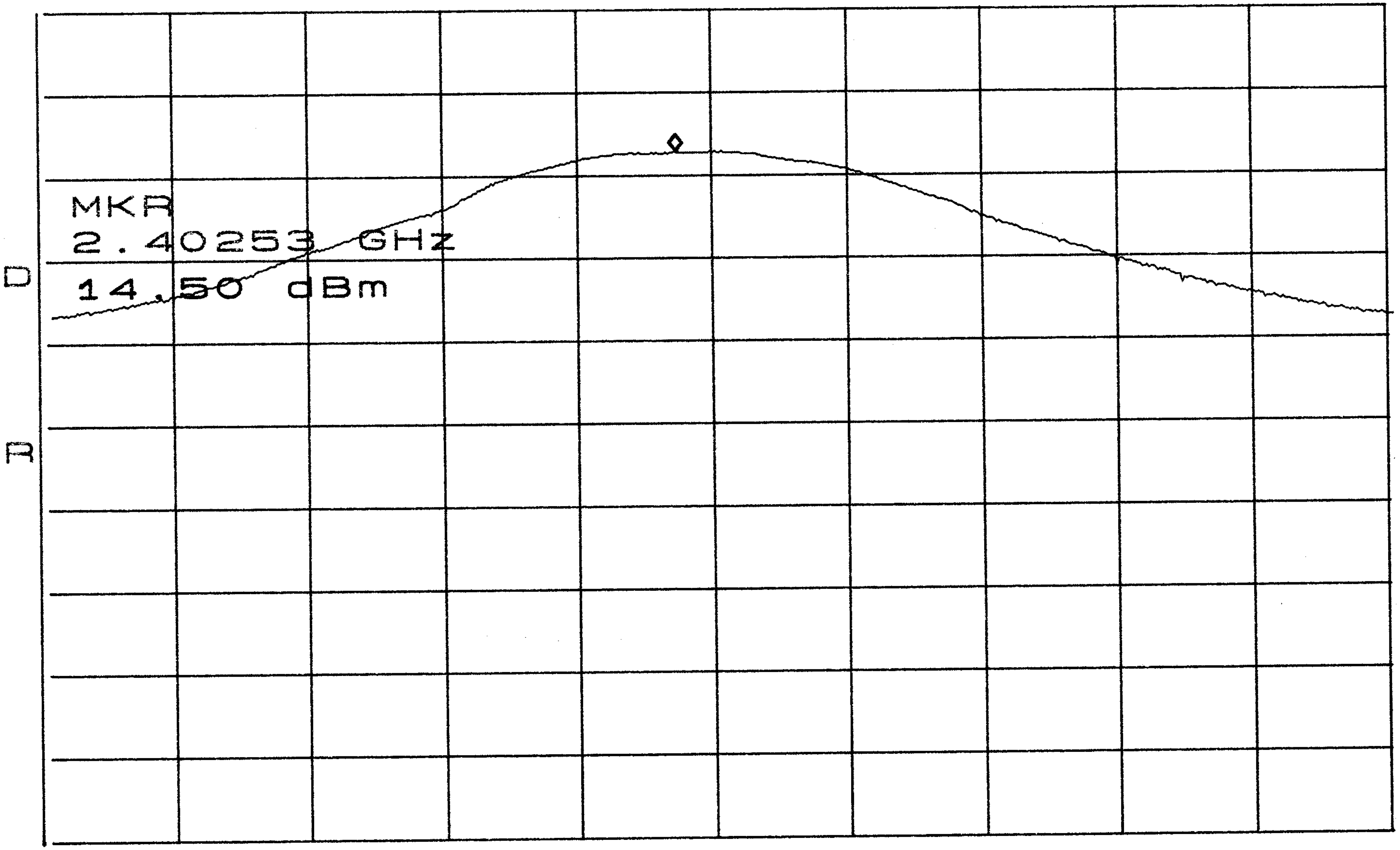

*ATTEN 30dB
MKR 17.17dBm
RL 21.0dBm
10dB/
2.40405GHz
MKR
2.40405 GHz
17.17 dBm
D
R
CENTER 2.40462GHz
SPAN 10.00MHz
*RBW 2.0MHz
*VBW 3.0MHz
*SWP 1.00sec


*ATTEN 30dB
MKR 17.50dBm
RL 21.0dBm
10dB/
2.43669GHz
MKR
2.43669 GHz
17.50 dBm
D
R
CENTER 2.43734GHz
SPAN 10.00MHz
*RBW 2.0MHz
*VBW 3.0MHz
*SWP 1.00sec


*ATTEN 30dB
RL 21.0dBm
10dB/
MKR 18.50dBm
2.47932GHz
MKR
2.47932 GHz
18.50 dBm
D
R
CENTER 2.47945GHz
SPAN 10.00MHz
*RBW 2.0MHz
*VBW 3.0MHz
*SWP 1.00sec

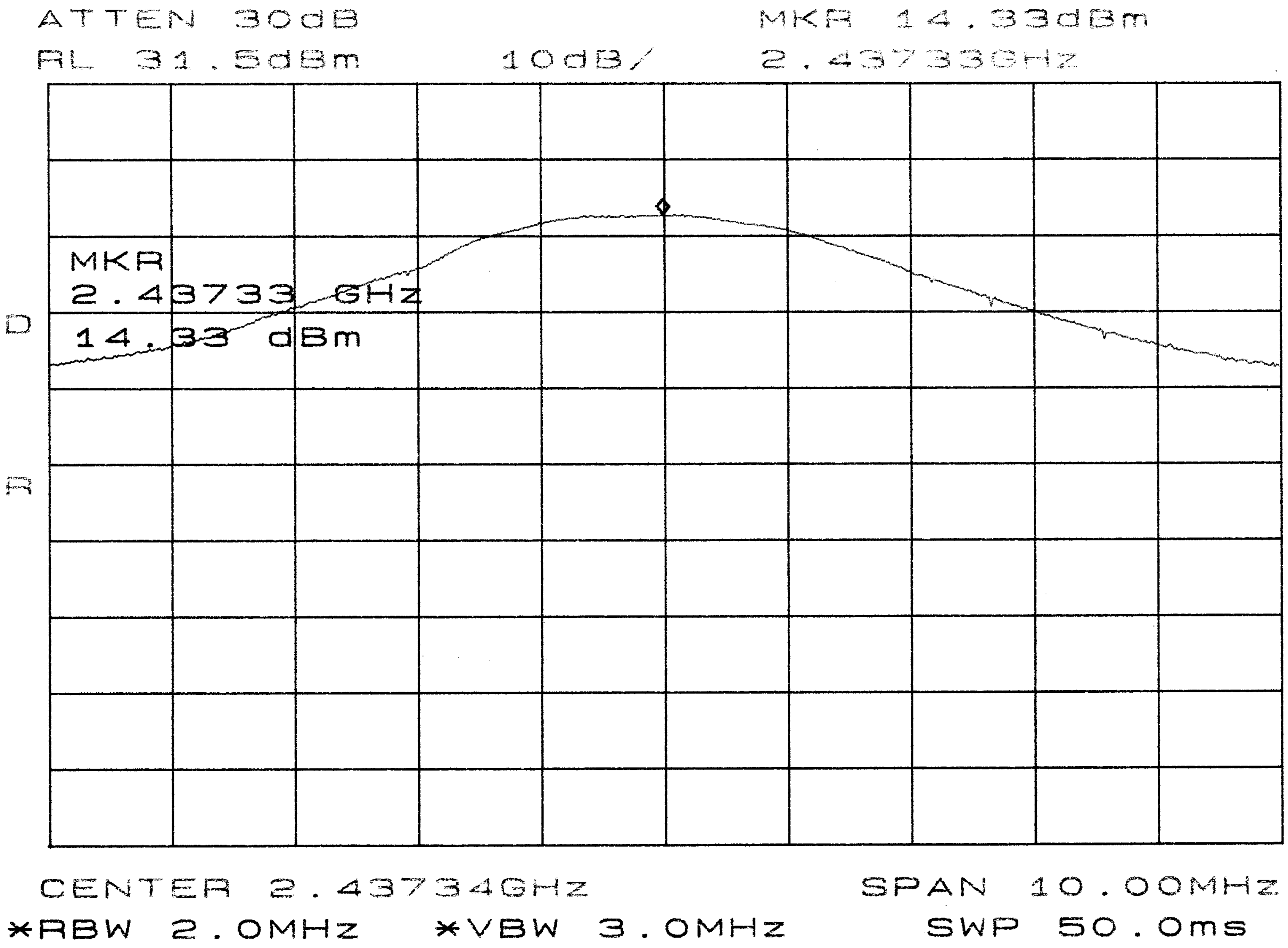
Base Unit

ATTEN 30dB MKR 14.50dBm
RL 31.5dBm 10dB/ 2.40253GHz

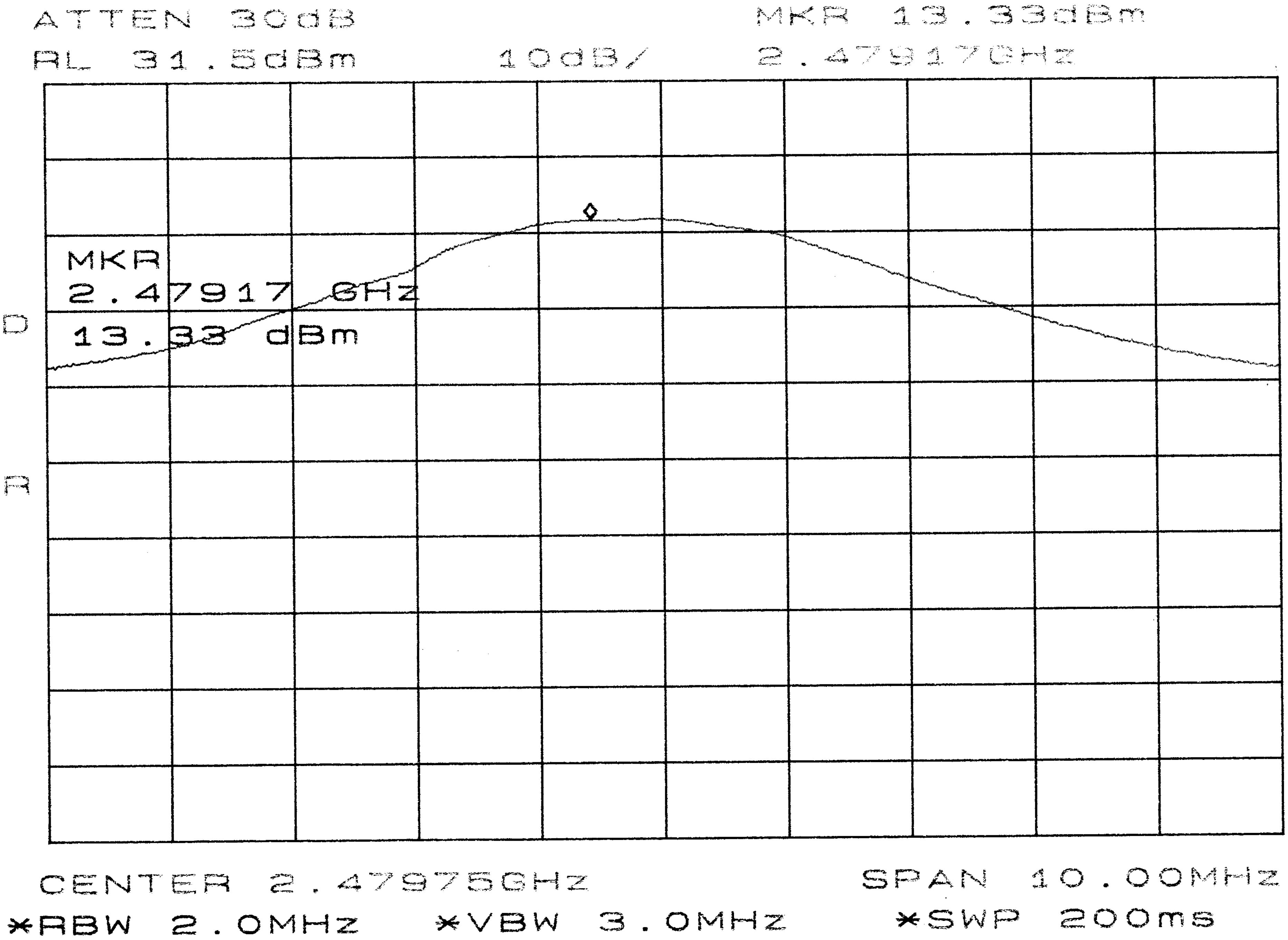


CENTER 2.40288GHz SPAN 10.00MHz
*RBW 2.0MHz *VBW 3.0MHz SWP 50.0ms

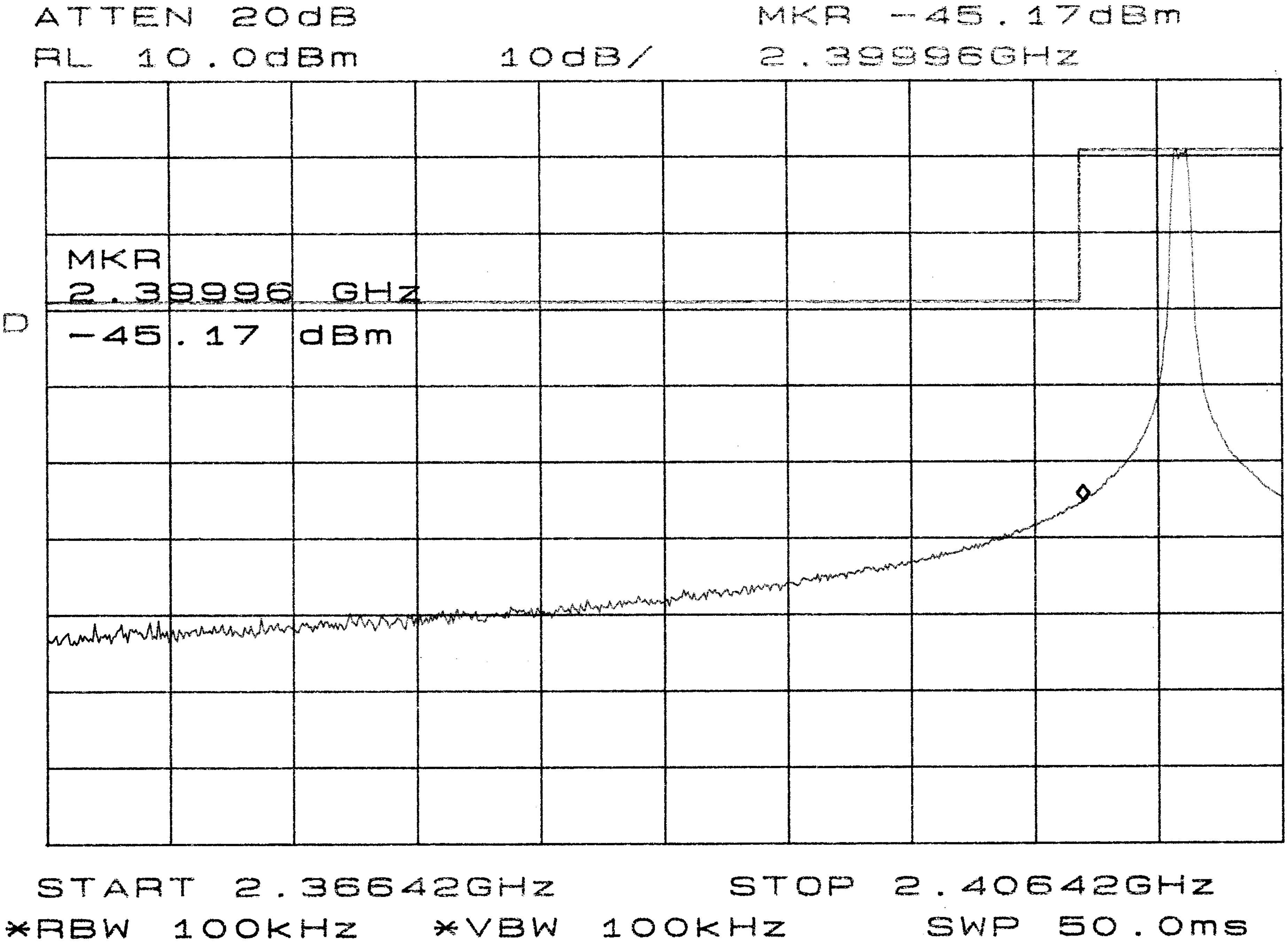
Base Unit


ATTEN 30dB
RL 31.5dBm
10dB/
MKR 14.33dBm
2.43733GHz
MKR
2.43733 GHz
14.33 dBm
D
R
CENTER 2.43734GHz
SPAN 10.00MHz
*RBW 2.0MHz
*VBW 3.0MHz
SWP 50.0ms

Base Unit


ATTEN 30dB
RL 31.5dBm
10dB/
MKR 13.33dBm
2.47917GHz
MKR
2.47917 GHz
13.33 dBm
D
R
CENTER 2.47975GHz
SPAN 10.00MHz
*RBW 2.0MHz
*VBW 3.0MHz
*SWP 200ms

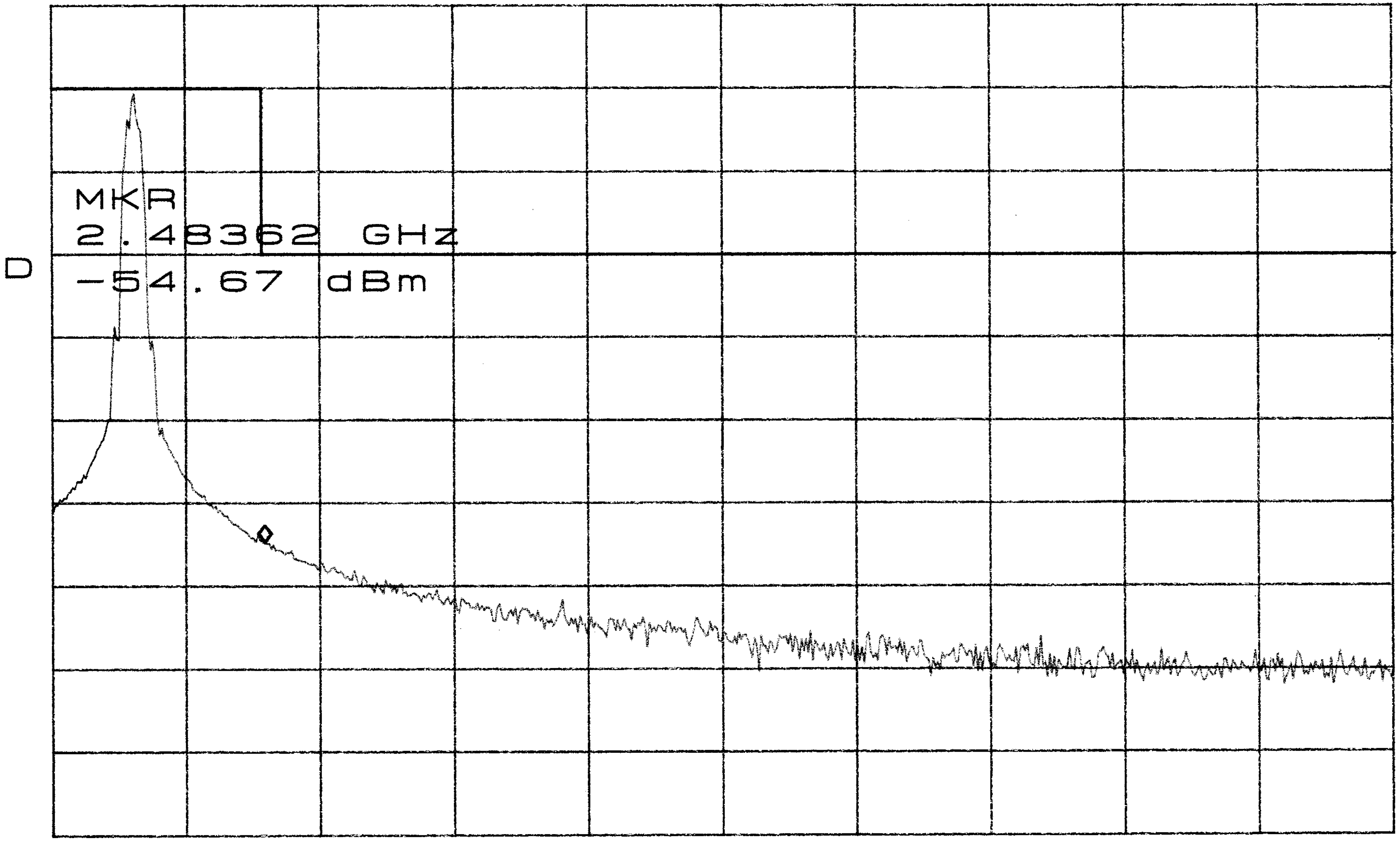
Appendix 7 : Plotted Data for 100 kHz Bandwidth from Band Edge


ATTEN 20dB
RL 10.0dBm
10dB/
MKR -45.17dBm
2.39996GHz
MKR
2.39996 GHz
-45.17 dBm
D
START 2.36642GHz
STOP 2.40642GHz
*RBW 100kHz
*VBW 100kHz
SWP 50.0ms

Handset

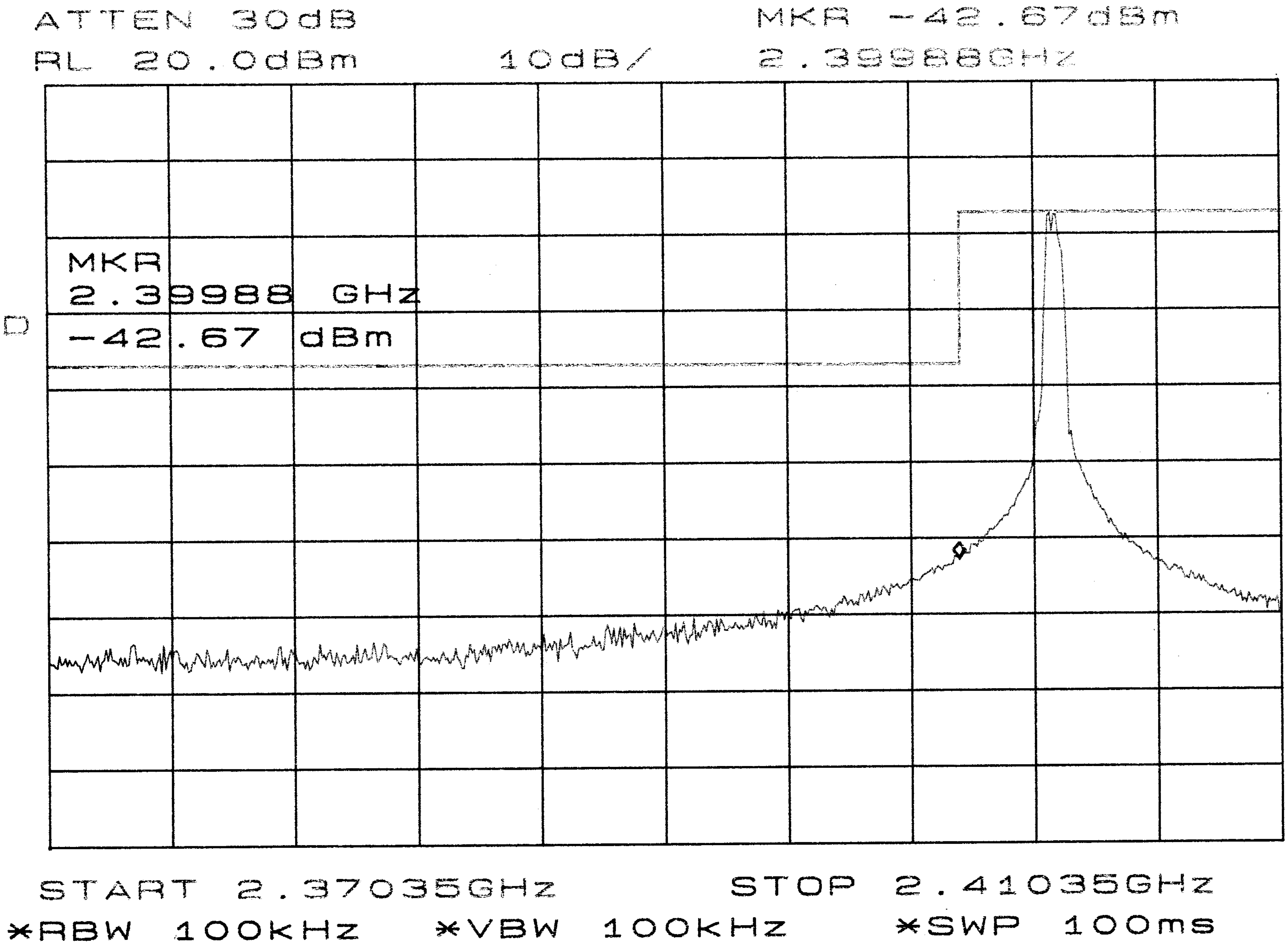
Handset

ATTEN 20dB MKR −54.67dBm
RL 10.0dBm 10dB/ 2.48362GHz

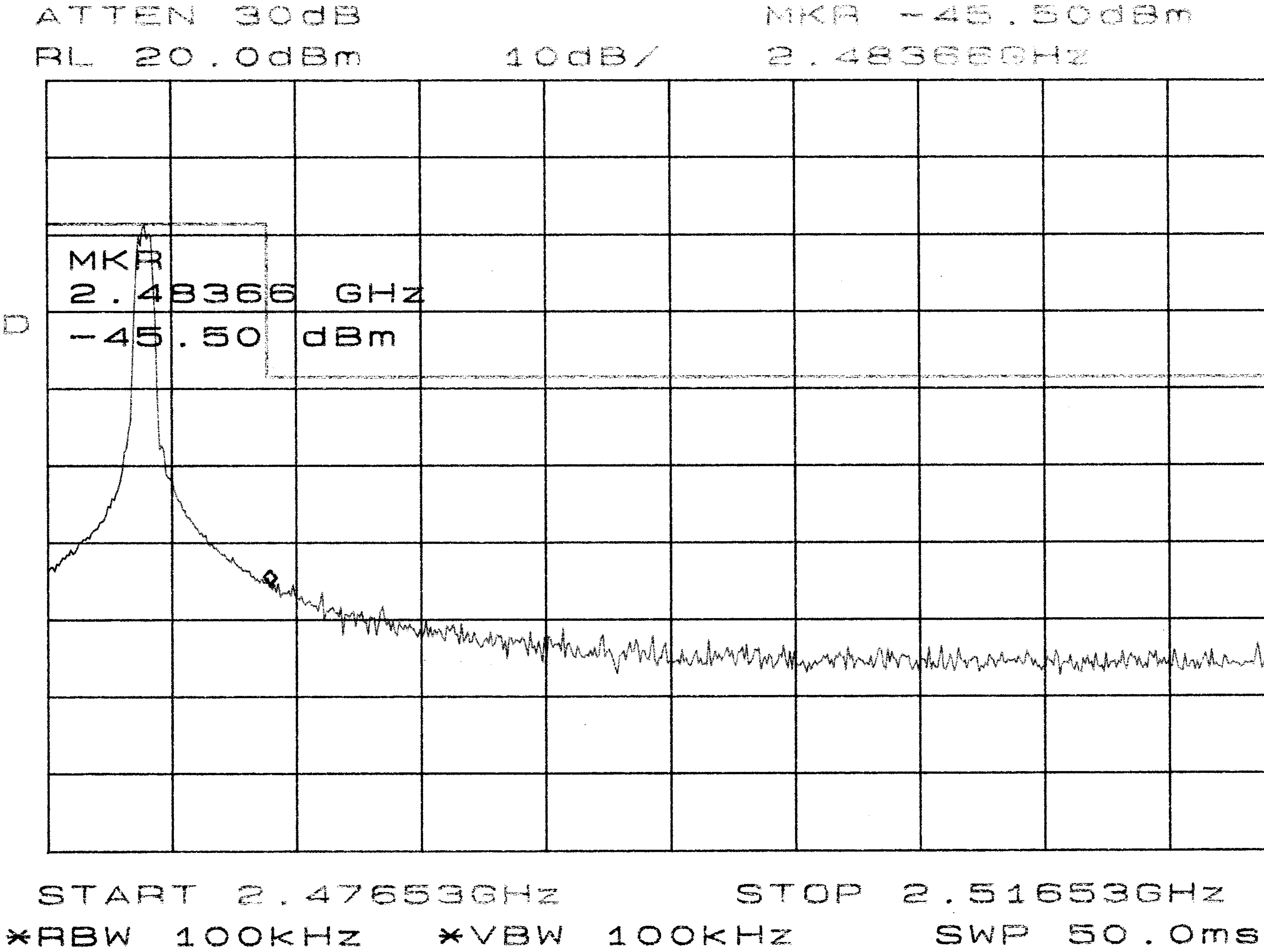


START 2.47729GHz STOP 2.51729GHz
*RBW 30kHz *VBW 30kHz SWP 120ms

Base Unit


ATTEN 30dB
RL 20.0dBm
10dB/
MKR -42.67dBm
2.39988GHz
MKR
2.39988 GHz
-42.67 dBm
D
START 2.37035GHz
STOP 2.41035GHz
*RBW 100kHz
*VBW 100kHz
*SWP 100ms

Base Unit


ATTEN 30dB
RL 20.0dBm
10dB/
MKR -45.50dBm
2.48366GHz
MKR
2.48366 GHz
-45.50 dBm
D
START 2.47653GHz
STOP 2.51653GHz
*RBW 100kHz
*VBW 100kHz
SWP 50.0ms