

FCC PART 15, SUBPART C
TEST METHOD: ANSI C63.4-1992
TEST REPORT

for
WIRELESS RF STEREO HEADPHONE
MODEL: CDRF

Prepared for

ACCELE ELECTRONICS
 17900 CRUSADER AVENUE
 CERRITOS, CALIFORNIA 90703

COMPATIBLE ELECTRONICS INC.
 114 OLINDA DRIVE
 BREA, CALIFORNIA 92823
 (714) 579-0500

DATE: SEPTEMBER 11, 2000

	REPORT BODY	APPENDICES					TOTAL
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GENERAL REPORT SUMMARY

This electromagnetic emission test report is generated by Compatible Electronics Inc., which is an independent testing and consulting firm. The test report is based on testing performed by Compatible Electronics personnel according to the measurement procedures described in the test specifications given below and in the "Test Procedures" section of this report.

The measurement data and conclusions appearing herein relate only to the sample tested and this report may not be reproduced in any form unless done so in full with the written permission of Compatible Electronics.

This report must not be used to claim product endorsement by NVLAP or any other agency of the U.S. Government.

Device Tested: Wireless RF Stereo Headphone
 Model: CDRF
 S/N: N/A

Product Description: See Expository Statement.

Modifications: The EUT was not modified during the testing.

Manufacturer: Accele Electronics
 17900 Crusader Avenue
 Cerritos, California 90703

Test Date: September 6, 2000

Test Specifications: EMI requirements
 CFR Title 47, Part 15 Subpart C, Sections 15.205, 15.207, 15.209, and 15.235

Test Procedure: ANSI C63.4: 1992

Test Deviations: The test procedure was not deviated from during the testing.

SUMMARY OF TEST RESULTS

TEST	DESCRIPTION	RESULTS
1	Conducted RF Emissions, 450 kHz - 30 MHz	Complies with the limits of CFR Title 47, Part 15, Subpart C, section 15.207
2	Radiated RF Emissions, 10 kHz - 1000 MHz	Complies with the limits of CFR Title 47, Part 15, Subpart C, sections 15.205, 15.209, and 15.235



1. PURPOSE

This document is a qualification test report based on the Electromagnetic Interference (EMI) tests performed on the Wireless RF Stereo Headphone Model: CDRF. The EMI measurements were performed according to the measurement procedure described in ANSI C63.4: 1992. The tests were performed in order to determine whether the electromagnetic emissions from the equipment under test, referred to as EUT hereafter, are within the specification limits defined by CFR Title 47, Part 15, Subpart C, sections 15.205, 15.207, 15.209, and 15.235.



2. ADMINISTRATIVE DATA

2.1 Location of Testing

The EMI tests described herein were performed at the test facility of Compatible Electronics, 114 Olinda Drive, Brea, California 92823.

2.2 Traceability Statement

The calibration certificates of all test equipment used during the test are on file at the location of the test. The calibration is traceable to the National Institute of Standards and Technology (NIST).

2.3 Cognizant Personnel

Accele Electronics

Emery Pudder Engineer

Compatible Electronics Inc.

Kyle Fujimoto Test Engineer
Scott McCutchan Lab Manager

2.4 Date Test Sample was Received

The test sample was received on September 6, 2000.

2.5 Disposition of the Test Sample

The test sample has not been returned to Accele Electronics as of September 11, 2000.

2.6 Abbreviations and Acronyms

The following abbreviations and acronyms may be used in this document.

RF	Radio Frequency
EMI	Electromagnetic Interference
EUT	Equipment Under Test
P/N	Part Number
S/N	Serial Number
HP	Hewlett Packard
ITE	Information Technology Equipment
CML	Corrected Meter Limit
LISN	Line Impedance Stabilization Network



3. APPLICABLE DOCUMENTS

The following documents are referenced or used in the preparation of this EMI Test Report.

SPEC	TITLE
CFR Title 47, Subpart C	FCC Rules – Radio frequency devices (including digital devices) – Intentional Radiators
ANSI C63.4 1992	Methods of measurement of radio-noise emissions from low-voltage electrical and electronic equipment in the range of 9 kHz to 40 GHz



4. DESCRIPTION OF TEST CONFIGURATION

4.1 Description of Test Configuration - EMI

Setup and operation of the equipment under test.

The Wireless RF Stereo Headphone Model: CDRF (EUT) was connected to the AC Adapter and VCR via its power and input ports, respectively. The VCR was also connected to a DC power supply via its power input. The EUT was continuously transmitting the audio signal sent by the VCR on a continuous basis

Note: If the EUT does not get a modulated input signal, the transmitter will not turn on.

Please see Appendix D for the data sheets.



4.1.1 **Cable Construction and Termination**

Cables 1-2 These are 2 foot unshielded cables connecting the DC Power Supply to cables #3 and #4. They have alligator clips at each end.

Cables 3-4 These are 2 foot unshielded cables connecting the VCR to cables #1 and #2. They are hard wired into a 4 pin terminal block at the VCR end and are hard wired at the other end.

Cable 5 This is a 6 foot unshielded cable connecting the EUT to the AC Adapter. It has a 1/8 inch power connector at the EUT end and is hard wired into the AC Adapter.

Cable 6 This is a 1 meter unshielded cable connecting the EUT to the VCR. It has a 1/8 inch stereo connector at the EUT end and two metallic RCA connectors at the VCR end.



5. LISTS OF EUT, ACCESSORIES AND TEST EQUIPMENT**5.1 EUT and Accessory List**

EQUIPMENT	MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	FCC ID
WIRELESS RF STEREO HEADPHONE (EUT)	ACCELE ELECTRONICS	CDRF	N/A	OXECDRF
VCR	ACCELE VISION	VCP-ST	61BK7000701ACC	N/A
DC POWER SUPPLY	SAMLEX	RPS1210	N/A	N/A
AC ADAPTER	EASI	41D-12-500	N/A	N/A



5.2 EMI Test Equipment

EQUIPMENT TYPE	MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	CAL. DATE	CAL. DUE DATE
Spectrum Analyzer – Main Section	Hewlett Packard	8566B	3638A08768	June 24, 2000	June 24, 2001
Spectrum Analyzer – Display Section	Hewlett Packard	85662A	3701A22262	June 24, 2000	June 24, 2001
Preamplifier	Com Power	PA-102	1017	Jan. 11, 2000	Jan. 11, 2001
Quasi-Peak Adapter	Hewlett Packard	85650A	2811A01363	June 24, 2000	June 24, 2001
Biconical Antenna	Com Power	AB-100	1548	Oct. 14, 1999	Oct. 14, 2000
Log Periodic Antenna	Com Power	AL-100	16039	Oct. 14, 1999	Oct. 14, 2000
Antenna Mast	Com Power	AM-100	N/A	N/A	N/A
Turntable	Com Power	TT-100	N/A	N/A	N/A
Computer	Hewlett Packard	HP98561A	2522A05178	N/A	N/A
Printer	Hewlett Packard	2225A	2925S33268	N/A	N/A
Plotter	Hewlett Packard	7440A	8726K38417	N/A	N/A
Loop Antenna	Com-Power	AL-130	25309	May 25, 2000	May 25, 2001



6. TEST SITE DESCRIPTION

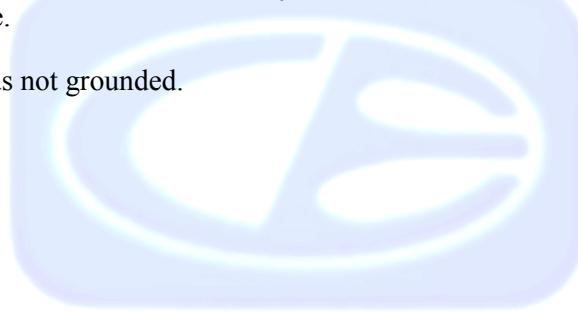
6.1 Test Facility Description

Please refer to section 2.1 and 7.1 of this report for EMI test location.

6.2 EUT Mounting, Bonding and Grounding

The EUT was mounted on a 1.0 by 1.5 meter non-conductive table 0.8 meters above the ground plane.

The EUT was not grounded.



7. TEST PROCEDURES

The following sections describe the test methods and the specifications for the tests. Test results are also included in this section.

7.1

Conducted Emissions Test

The spectrum analyzer was used as a measuring meter. The data was collected with the spectrum analyzer in the peak detect mode with the "Max Hold" feature activated. The quasi-peak was used only where indicated in the data sheets. A 10 dB attenuation pad was used for the protection of the spectrum analyzer input stage, and the offset was adjusted accordingly to read the actual data measured. The LISN output was measured using the spectrum analyzer. The output of the second LISN was terminated by a 50 ohm termination. The effective measurement bandwidth used for this test was 9 kHz.

Please see section 6.2 of this report for mounting, bonding and grounding of the EUT. The EUT was powered through the LISN, which was bonded to the ground plane. The LISN power was filtered and the filter was bonded to the ground plane. The EUT was set up with the minimum distances from any conductive surfaces as specified in ANSI C63.4: 1992. The excess power cord was wrapped in a figure eight pattern to form a bundle not exceeding 0.4 meters in length.

The conducted emissions from the EUT were maximized for operating mode as well as cable placement. The final data was collected under program control by the Compatible Electronics conducted emissions software in several overlapping sweeps by running the spectrum analyzer at a minimum scan rate of 10 seconds per octave. The final qualification data is located in Appendix E.



7.2

Radiated Emissions (Spurious and Harmonics) Test

The spectrum analyzer was used as a measuring meter along with the quasi-peak adapter. Amplifiers were used to increase the sensitivity of the instrument. The Com Power Preamplifier Model: PA-102 was used for frequencies from 30 MHz to 1 GHz. The spectrum analyzer was used in the peak detect mode with the "Max Hold" feature activated. In this mode, the spectrum analyzer records the highest measured reading over all the sweeps. The quasi-peak adapter was used only for those readings which are marked accordingly on the data sheets. The measurement bandwidths and transducers used for the radiated emissions test were:

For the fundamental emission, the reading was averaged manually by narrowing the video filter down to 10 Hz and slowing the sweep time to keep the amplitude reading calibrated.

FREQUENCY RANGE	EFFECTIVE MEASUREMENT BANDWIDTH	TRANSDUCER
10 kHz to 150 kHz	200 Hz	Active Loop Antenna
150 kHz to 30 MHz	9 kHz	Active Loop Antenna
30 MHz to 300 MHz	120 kHz	Biconical Antenna
300 MHz to 1 GHz	120 kHz	Log Periodic Antenna

The open field test site of Compatible Electronics, Inc. was used for radiated emission testing. This test site is set up according to ANSI C63.4: 1992. Please see section 6.2 of this report for mounting, bonding and grounding of the EUT. The turntable supporting the EUT is remote controlled using a motor. The turntable permits EUT rotation of 360 degrees in order to maximize emissions. Also, the antenna mast allows height variation of the antenna from 1 meter to 4 meters. Data was collected in the worst case (highest emission) configuration of the EUT. At each reading, the EUT was rotated 360 degrees and the antenna height was varied from 1 to 4 meters (for E field radiated field strength).

The presence of ambient signals was verified by turning the EUT off. In case an ambient signal was detected, the measurement bandwidth was reduced temporarily and verification was made that an additional adjacent peak did not exist. This ensures that the ambient signal does not hide any emissions from the EUT. The EUT was tested at a 3 meter test distance to obtain final test data.



7.3

Occupied Bandwidth of the Fundamental

The -26 dB bandwidth was checked to see that the fundamental would be at least -26 dB from the unmodulated carrier at the band edges.

Per ANSI C63.4-1992 section I6(2), the resolution bandwidth was set at 10 kHz. The EUT was put into a special test mode so that it would output an **unmodulated carrier**. The level of the **unmodulated carrier** was taken per the procedure of ANSI C63.4-1992 section I6(3).

It was found the level of the **unmodulated carrier** was 70.1 dBuV on the spectrum analyzer. The reference display line on the spectrum analyzer was then set to 44.1 dBuV, which was 26 dB below the **unmodulated carrier**.

Modulation was then applied to the signal and it was found the occupied bandwidth at the -26 dB points (the reference display line on the spectrum analyzer) was 70.7 kHz.

The center frequency of the **unmodulated carrier** was 49.85980 MHz. This means the -26 dB point at the low end would be **49.82445 MHz** and the -26 dB point at the high end would be **49.89515 MHz**. This shows that both -26 dB points are **within** the band edges of 49.82 MHz and 49.90 MHz respectively.

Please see the Spectral Plots in Appendix D

7.4

AC Voltage Variation Tests

The AC supply voltage was varied from 85% of the nominal AC voltage input for the EUT to 115% of the nominal AC voltage input for the EUT to determine if the center frequency of the EUT remained the same.

Test Results:

The EUT does NOT change center frequency when the AC supply voltage is varied from 85% to 115% of the nominal AC voltage input for the EUT. Please see the Spectral Plots in Appendix D.



8. CONCLUSIONS

The Wireless RF Stereo Headphone Model: CDRF meets all of the specification limits defined in CFR Title 47, Part 15, Subpart C, sections 15.205, 15.207, 15.209, and 15.235.



APPENDIX A

MODIFICATIONS TO THE EUT



MODIFICATIONS TO THE EUT

The modifications listed below were made to the EUT to pass FCC 15.235 specifications.

All the rework described below was implemented during the test in a method that could be reproduced in all the units by the manufacturer.

Modifications:

No modifications were made to the EUT.



APPENDIX B

***ADDITIONAL MODELS COVERED
UNDER THIS REPORT***



ADDITIONAL MODELS COVERED UNDER THIS REPORT

USED FOR THE PRIMARY TEST

Wireless RF Stereo Headphone
Model: CDRF
S/N: N/A

There were no additional models covered under this report.



APPENDIX C

DIAGRAMS, CHARTS AND PHOTOS



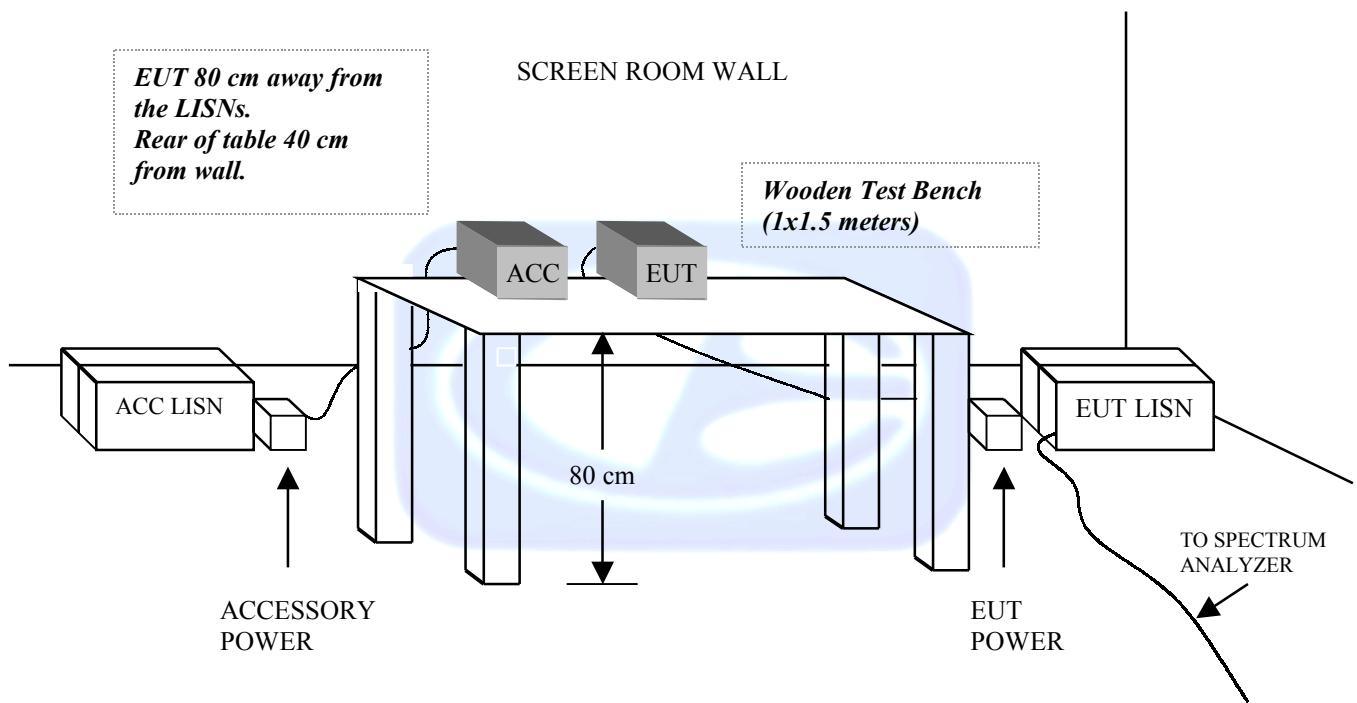
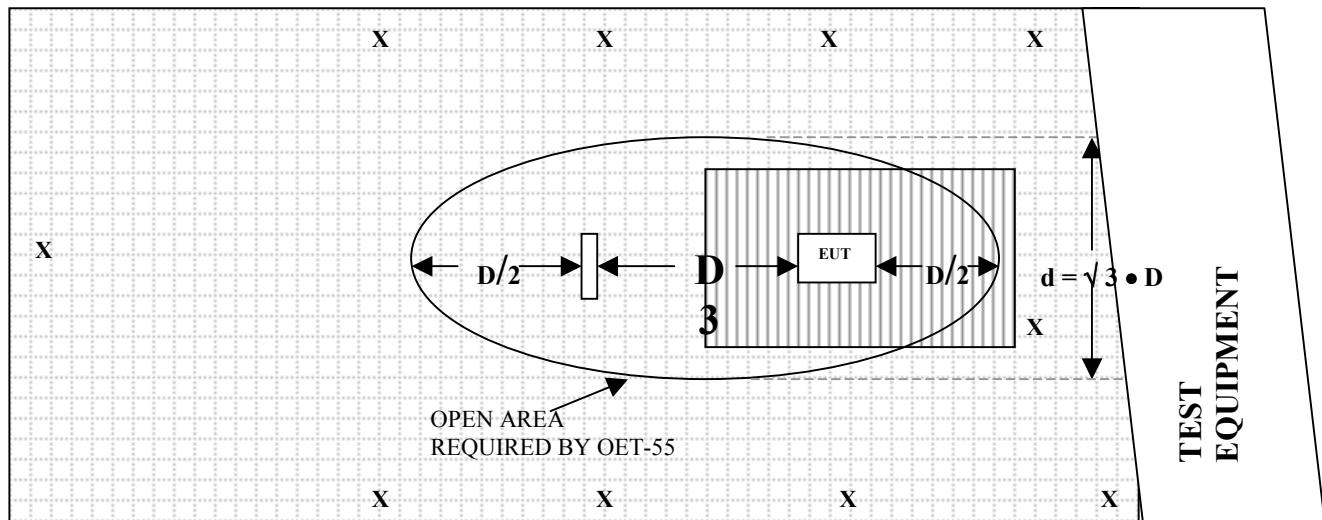
FIGURE 1: CONDUCTED EMISSIONS TEST SETUP

FIGURE 2: PLOT MAP AND LAYOUT OF RADIATED SITE**OPEN LAND > 15 METERS****OPEN LAND > 15 METERS****OPEN LAND > 15 METERS**

	= GROUND RODS		= GROUND SCREEN
	= TEST DISTANCE (meters)		= WOOD COVER



**FRONT VIEW**

ACCELE ELECTRONICS
WIRELESS RF STEREO HEADPHONE
MODEL: CDRF
FCC SUBPART C - RADIATED EMISSIONS – 9-6-00

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**



**REAR VIEW**

ACCELE ELECTRONICS
WIRELESS RF STEREO HEADPHONE
MODEL: CDRF
FCC SUBPART C - RADIATED EMISSIONS – 9-6-00

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**



**FRONT VIEW**

ACCELE ELECTRONICS
WIRELESS RF STEREO HEADPHONE
MODEL: CDRF
FCC SUBPART C - CONDUCTED EMISSIONS – 9-6-00

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**

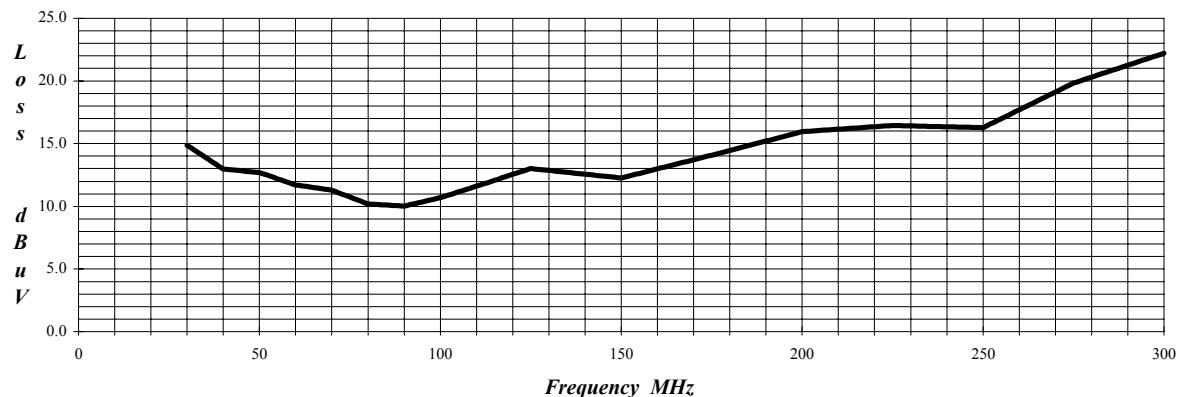
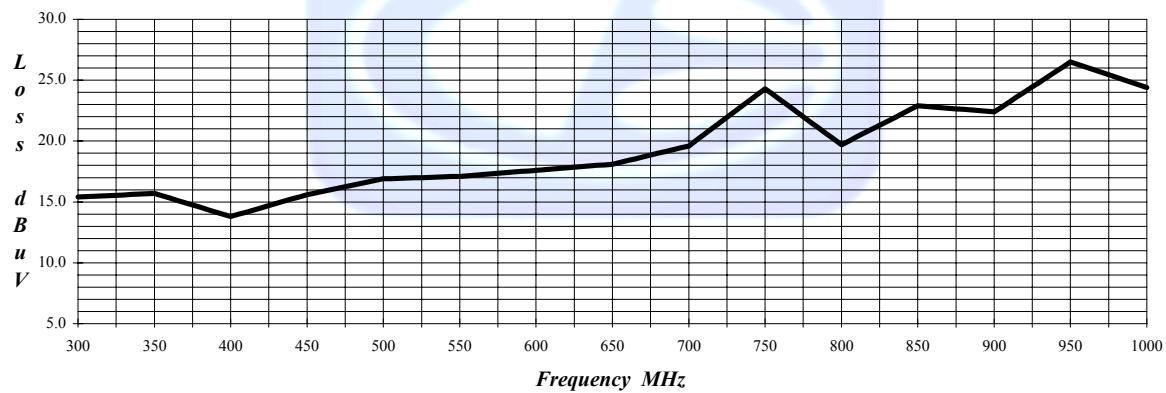
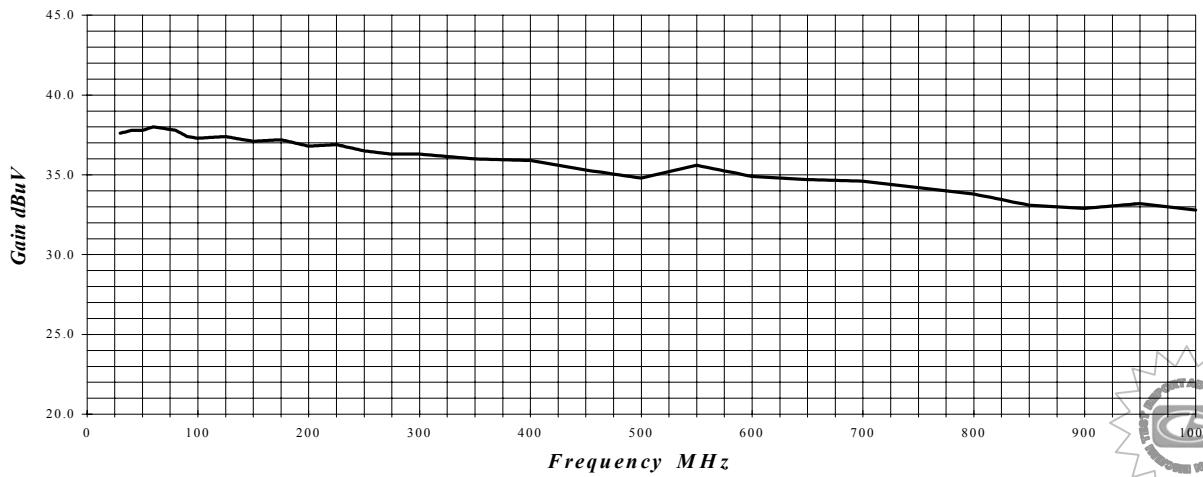


**REAR VIEW**

ACCELE ELECTRONICS
WIRELESS RF STEREO HEADPHONE
MODEL: CDRF
FCC SUBPART C - CONDUCTED EMISSIONS – 9-6-00

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**



LAB "D" BICONICAL ANTENNA AB-100 S/N 01548 Cal: 10-14-99**LAB "D" LOG PERIODIC ANTENNA AL-100 S/N 16039 Cal: 10-14-99****PREAMPLIFIER EFFECTIVE GAIN AT 3 METERS PA-102 S/N: 1017 Effective 1-13-00**

COM-POWER PA-122
MICROWAVE PREAMPLIFIER
S/N: 25195

CALIBRATION DATE: JANUARY 13, 2000

FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
1.0	34.4	9.0	30.7
1.1	34.1	9.5	31.5
1.2	34.2	10.0	31.0
1.3	34.1	10.5	31.4
1.4	33.9	11.0	30.7
1.5	33.8	11.5	29.5
1.6	33.0	12.0	27.8
1.7	33.3	12.5	31.4
1.8	33.3	13.0	31.0
1.9	31.9	13.5	31.0
2.0	32.7	14.0	31.5
2.5	31.8	14.5	30.2
3.0	31.7	15.0	29.2
3.5	31.9	15.5	30.1
4.0	31.0	16.0	29.0
4.5	31.4	16.5	27.8
5.0	31.1	17.0	30.8
5.5	31.0	17.5	31.5
6.0	32.0	18.0	30.8
6.5	31.6		
7.0	32.3		
7.5	32.9		
8.0	32.1		
8.5	31.6		



E-FIELD ANTENNA FACTOR CALIBRATION

$$E(\text{dB V/m}) = V_o(\text{dB V}) + AFE(\text{dB/m})$$

Model number : DRG-118/A

Frequency GHz	AFE dB/m	Gain dBi
1	22.3	8.0
2	26.7	9.5
3	29.7	10.1
4	29.5	12.8
5	32.3	12.0
6	32.4	13.4
7	36.1	11.0
8	37.4	10.9
9	36.8	12.5
10	39.5	10.7
11	39.6	11.5
12	39.8	12.0
13	39.7	12.8
14	41.8	11.3
15	41.9	11.9
16	38.1	16.3
17	41.0	13.9
18	46.5	8.9

Serial number : 1053
Job number : 96-092
Remarks : 3 meter calibration
Standards : LPD-118/A, TE-1000

Temperature : 72° F
Humidity : 56 %
Traceability : A01887
Date : December 08, 1995

Calibrated By

Com-Power Corporation

(949) 587-9800

Antenna Calibration

Antenna Type:			Loop Antenna
Model:			AL-130
Serial Number:			25309
Calibration Date:			05/25/00
Frequency MHz	Magnetic (dB/m)	Electric dB/m	
0.009	-41.0	10.5	
0.01	-41.0	10.5	
0.02	-41.9	9.6	
0.05	-41.9	9.6	
0.075	-41.8	9.7	
0.1	-42.2	9.3	
0.15	-42.2	9.3	
0.25	-40.7	10.8	
0.5	-42.1	9.4	
0.75	-40.9	10.6	
1	-41.3	10.2	
2	-40.8	10.7	
3	-41.1	10.4	
4	-41.2	10.3	
5	-40.7	10.8	
10	-40.6	10.9	
15	-42.0	9.5	
20	-42.0	9.5	
25	-42.9	8.6	
30	-42.3	9.2	
Trans. Antenna Height	2 meter		
Receiving Antenna Height	2 meter		

APPENDIX D

DATA SHEETS



RADIATED EMISSIONS

DATA SHEETS



Test location: Compatible Electronics
 Customer : ACCELE ELECTRONICS Date : 9 / 6/2000
 Manufacturer : ACCELE ELECTRONICS Time : 13.39
 EUT name : WIRELESS RF STEREO HEADPHONE Model: CDRF
 Specification: Fcc_B Test distance: 3.0 mtrs Lab: D
 Distance correction factor($20 \log(\text{test}/\text{spec})$) : 0.00
 Test Mode : TRANSMIT MODE - FUNDAMENTAL AND HARMONICS
 VERTICAL POLARIZATION
 TEMPERATURE 85 DEGREES F.
 RELATIVE HUMIDITY 43%
 TESTED BY: KYLE FUJIMOTO

Pol	Freq	Rdng	Cable loss	Ant factor	Amp gain	Cor'd rdg = R	limit = L	Delta R-L
		MHz	dBuV	dB	dB	dBuV	dBuV/m	dB
1V	49.86	65.90	0.90	12.68	00.00	79.48	80.00	-0.52
2V	49.86	64.39	0.90	12.68	00.0	78.97Avg*	80.00	-1.03
3V	99.77	64.30	1.30	10.72	38.60	37.72	43.50	-5.78
4V	149.60	56.80	1.60	12.26	38.70	31.96	43.50	-11.54
5V	199.44	57.90	1.80	15.91	38.60	37.00	43.50	-6.50
6V	249.29	58.10	2.09	16.27	38.61	37.86	46.00	-8.14
7V	299.10	51.10	2.30	22.12	38.60	36.92	46.00	-9.08
8V	348.97	52.90	2.59	15.67	38.60	32.57	46.00	-13.43
9V	398.82	52.70	2.70	13.81	38.60	30.60	46.00	-15.40
10V	448.61	52.60	2.80	15.55	38.11	32.83	46.00	-13.17
11V	498.49	54.70	3.09	16.84	37.91	36.73	46.00	-9.27
12V	548.31	52.90	3.58	17.08	39.16	34.41	46.00	-11.59
13V	598.16	46.50	3.41	17.60	38.33	29.17	46.00	-16.83
14V	648.05	51.80	3.69	18.12	38.40	35.21	46.00	-10.79
15V	697.78	45.00	3.70	19.57	38.30	29.97	46.00	-16.03
16V	747.74	50.80	3.99	20.45	38.20	37.03	46.00	-8.97
17V	797.47	44.30	3.91	19.71	37.73	30.19	46.00	-15.81
18V	847.34	44.40	4.37	22.71	37.51	33.97	46.00	-12.03
19V	897.24	42.50	4.59	22.45	37.50	32.04	46.00	-13.96
20V	947.08	43.90	4.51	26.23	37.69	36.95	46.00	-9.05
21V	997.04	39.80	4.50	24.51	37.32	31.49	54.00	-22.51

*Average Reading

Test location: Compatible Electronics
 Customer : ACCELE ELECTRONICS Date : 9 / 6/2000
 Manufacturer : ACCELE ELECTRONICS Time : 14.14
 EUT name : WIRELESS RF STEREO HEADPHONE Model: CDRF
 Specification: Fcc_B Test distance: 3.0 mtrs Lab: D
 Distance correction factor($20 * \log(\text{test/spec})$) : 0.00
 Test Mode : TRANSMIT MODE - FUNDAMENTAL AND HARMONICS
 HORIZONTAL POLARIZATION
 TEMPERATURE 85 DEGREES F.
 RELATIVE HUMIDITY 43%
 TESTED BY: KYLE FUJIMOTO

Pol	Freq	Rdng	Cable loss	Ant factor	Amp gain	Cor'd rdg = R	limit = L	Delta R-L
	MHz	dBuV	dB	dB	dB	dBuV	dBuV/m	dB
1H	49.94	55.50	0.90	12.68	38.70	30.38	40.00	-9.62
2H	99.77	60.30	1.30	10.72	38.60	33.72	43.50	-9.78
3H	149.59	61.20	1.60	12.26	38.70	36.36	43.50	-7.14
4H	199.46	59.90	1.80	15.91	38.60	39.00	43.50	-4.50
5H	249.31	63.90	2.09	16.27	38.61	43.66	46.00	-2.34
6H	249.31	63.10	2.09	16.27	38.61	42.86Qp	46.00	-3.14
7H	299.16	51.40	2.30	22.13	38.60	37.23	46.00	-8.77
8H	348.93	54.30	2.59	15.67	38.60	33.97	46.00	-12.03
9H	398.81	49.70	2.70	13.81	38.60	27.60	46.00	-18.40
10H	448.61	46.30	2.80	15.55	38.11	26.53	46.00	-19.47
11H	498.46	53.70	3.09	16.84	37.91	35.73	46.00	-10.27
12H	548.39	54.90	3.58	17.08	39.16	36.41	46.00	-9.59
13H	598.27	43.90	3.41	17.60	38.33	26.58	46.00	-19.42
14H	648.23	42.20	3.69	18.12	38.40	25.61	46.00	-20.39
15H	697.91	42.80	3.70	19.58	38.30	27.77	46.00	-18.23
16H	747.63	49.10	3.99	20.45	38.20	35.33	46.00	-10.67
17H	797.54	44.90	3.90	19.71	37.72	30.79	46.00	-15.21
18H	847.56	43.60	4.38	22.72	37.51	33.19	46.00	-12.81
19H	897.30	41.80	4.59	22.45	37.50	31.34	46.00	-14.66
20H	947.26	34.20	4.51	26.25	37.69	27.27	46.00	-18.73

Test location: Compatible Electronics
 Customer : ACCELE ELECTRONICS Date : 9 / 6/2000
 Manufacturer : ACCELE ELECTRONICS Time : 14.53
 EUT name : WIRELESS RF STEREO HEADPHONE Model: CDRF
 Specification: Fcc_B Test distance: 3.0 mtrs Lab: D
 Distance correction factor($20 \cdot \log(\text{test}/\text{spec})$) : 0.00
 Test Mode : TRANSMIT MODE - SPURIOUS EMISSIONS
 VERTICAL AND HORIZONTAL POLARIZATION
 30 MHz TO 1000 MHz
 TEMPERATURE 85 DEGREES F.
 RELATIVE HUMIDITY 43%
 TESTED BY: KYLE FUJIMOTO

Pol	Freq MHz	Rdng dBuV	Cable loss dB	Ant factor dB	Amp gain dB	Cor'd rdg = R dBuV	limit = L dBuV/m	Delta R-L dB
1V	51.29	48.60	0.89	12.56	38.71	23.33	40.00	-16.67
2V	122.94	46.70	1.39	12.82	38.78	22.13	43.50	-21.37
3V	114.60	53.20	1.36	12.07	38.72	27.91	43.50	-15.59
4V	143.26	45.50	1.55	12.45	38.73	20.77	43.50	-22.73
5H	266.49	37.50	2.17	18.62	38.53	19.75	46.00	-26.25
6H	276.73	37.10	2.21	19.99	38.51	20.79	46.00	-25.21

Test location: Compatible Electronics
Customer : ACCELE ELECTRONICS Date : 9/ 6/2000
Manufacturer : ACCELE ELECTRONICS Time : 16.10
EUT name : WIRELESS RF STEREO HEADPHONE Model: CDRF
Specification: Fcc_B Test distance: 3.0 mtrs Lab: D
Distance correction factor(20*log(test/spec)) : 0.00
Test Mode : TRANSMIT MODE - SPURIOUS EMISSIONS
VERTICAL AND HORIZONTAL POLARIZATION
10 kHz TO 30 MHz
TEMPERATURE 85 DEGREES F.
RELATIVE HUMIDITY 43%
TESTED BY: KYLE FUJIMOTO

NO EMISSIONS FOUND BETWEEN 10 kHz AND 30 MHz
FOR THE EUT IN EITHER POLARIZATION

CONDUCTED EMISSIONS

DATA SHEETS





**COMPATIBLE
ELECTRONICS**

ACCELE ELECTRONICS
WIRELESS RF STEREO HEADPHONE
MODEL: CDRF
FCC C - BLACK LEAD
TEST ENGINEER : KYLE FUJIMOTO

9/06/2000 14:48:14

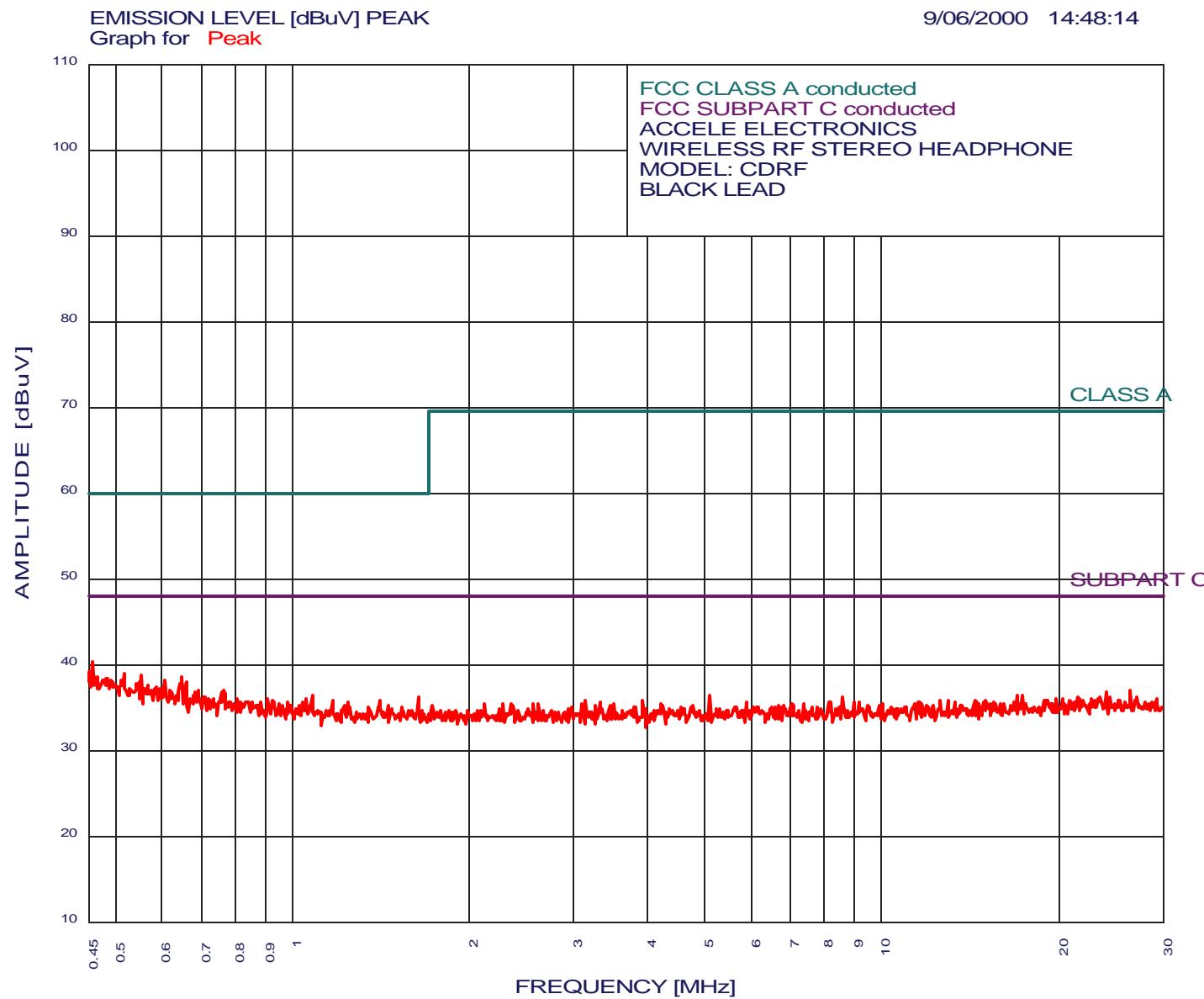
25 highest peaks above -50.00 dB of CLASS B limit line

Peak criteria : 1.00 dB, Curve : Peak

Peak#	Freq(MHz)	Amp(dBuV)	Limit(dB)	Delta(dB)
1	0.458	40.20	48.00	-7.80
2	0.452	39.10	48.00	-8.90
3	0.517	39.00	48.00	-9.00
4	0.553	38.80	48.00	-9.20
5	0.649	38.50	48.00	-9.50
6	0.484	38.40	48.00	-9.60
7	0.607	38.20	48.00	-9.80
8	0.660	38.00	48.00	-10.00
9	0.549	37.90	48.00	-10.10
10	0.567	37.50	48.00	-10.50
11	0.602	37.40	48.00	-10.60
12	0.589	37.30	48.00	-10.70
13	0.594	37.20	48.00	-10.80
14	26.472	37.05	48.00	-10.95
15	0.620	36.90	48.00	-11.10
16	0.691	36.90	48.00	-11.10
17	0.764	36.90	48.00	-11.10
18	0.685	36.70	48.00	-11.30
19	0.758	36.70	48.00	-11.30
20	24.033	36.69	48.00	-11.31
21	5.100	36.46	48.00	-11.54
22	17.321	36.46	48.00	-11.54
23	1.079	36.40	48.00	-11.60
24	16.956	36.34	48.00	-11.66
25	8.585	36.26	48.00	-11.74



COMPATIBLE
ELECTRONICS





**COMPATIBLE
ELECTRONICS**

ACCELE ELECTRONICS
WIRELESS RF STEREO HEADPHONE
MODEL: CDRF
FCC C - WHITE LEAD
TEST ENGINEER : KYLE FUJIMOTO

9/06/2000 14:55:34

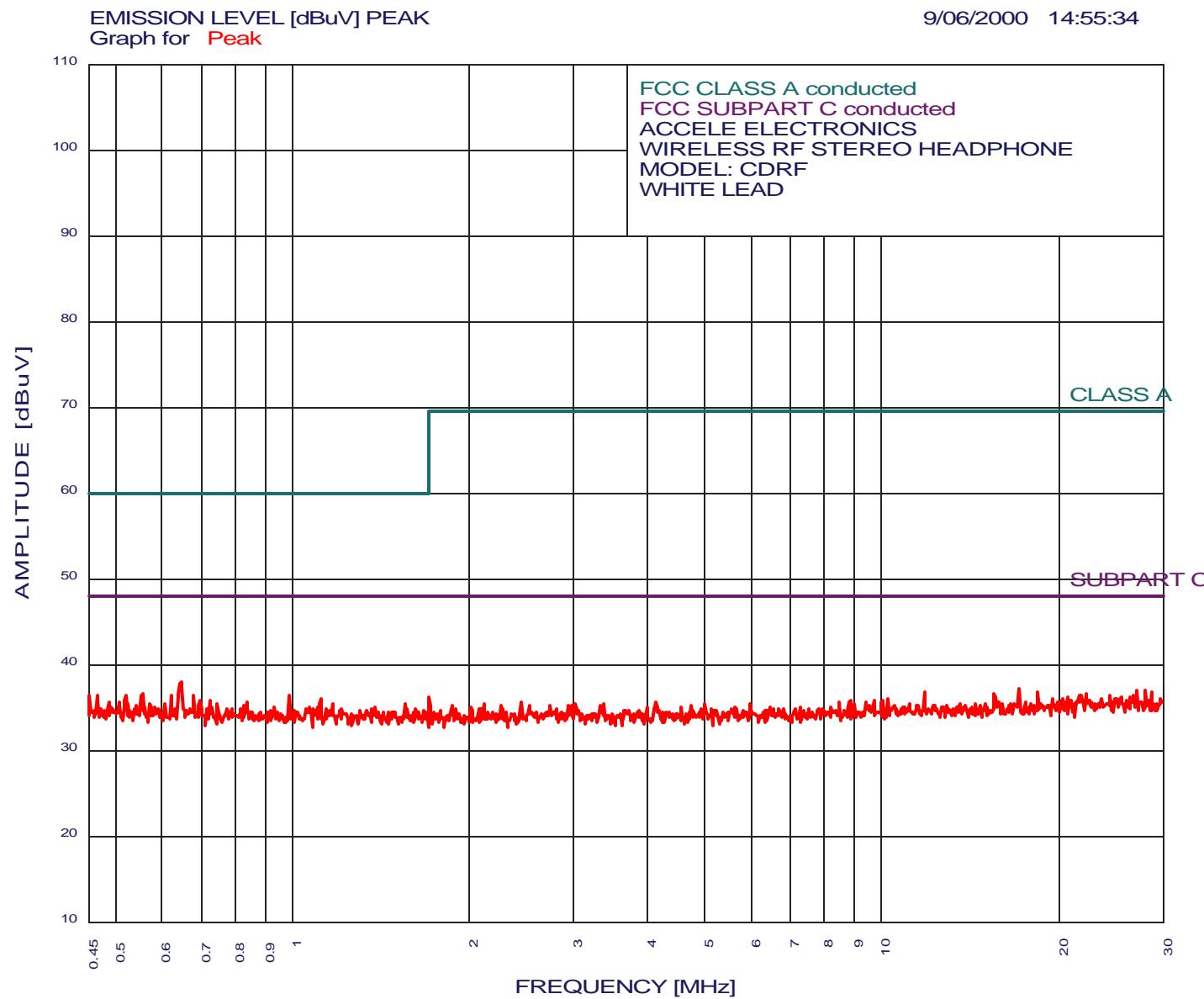
25 highest peaks above -50.00 dB of CLASS B limit line

Peak criteria : 1.00 dB, Curve : Peak

Peak#	Freq(MHz)	Amp(dBuV)	Limit(dB)	Delta(dB)
1	0.646	37.87	48.00	-10.13
2	17.102	37.11	48.00	-10.89
3	27.139	36.98	48.00	-11.02
4	28.066	36.97	48.00	-11.03
5	11.813	36.82	48.00	-11.18
6	28.671	36.76	48.00	-11.24
7	18.442	36.71	48.00	-11.29
8	22.191	36.59	48.00	-11.41
9	15.523	36.59	48.00	-11.41
10	0.558	36.58	48.00	-11.42
11	0.679	36.47	48.00	-11.53
12	0.466	36.39	48.00	-11.61
13	0.622	36.37	48.00	-11.63
14	21.627	36.37	48.00	-11.63
15	24.441	36.31	48.00	-11.69
16	0.452	36.29	48.00	-11.71
17	26.805	36.29	48.00	-11.71
18	0.522	36.28	48.00	-11.72
19	0.553	36.28	48.00	-11.72
20	0.988	36.28	48.00	-11.72
21	1.704	36.11	48.00	-11.89
22	25.472	36.10	48.00	-11.90
23	20.662	36.08	48.00	-11.92
24	19.474	36.05	48.00	-11.95
25	20.230	35.97	48.00	-12.03



COMPATIBLE
ELECTRONICS



OCCUPIED BANDWIDTH
DATA SHEETS



LEVEL OF UNMODULATED CARRIER
REF 100.0 dB μ V ATTEN 10 dB

MKR 49.859 8 MHz
70.10 dB μ V

HP

10 dB/

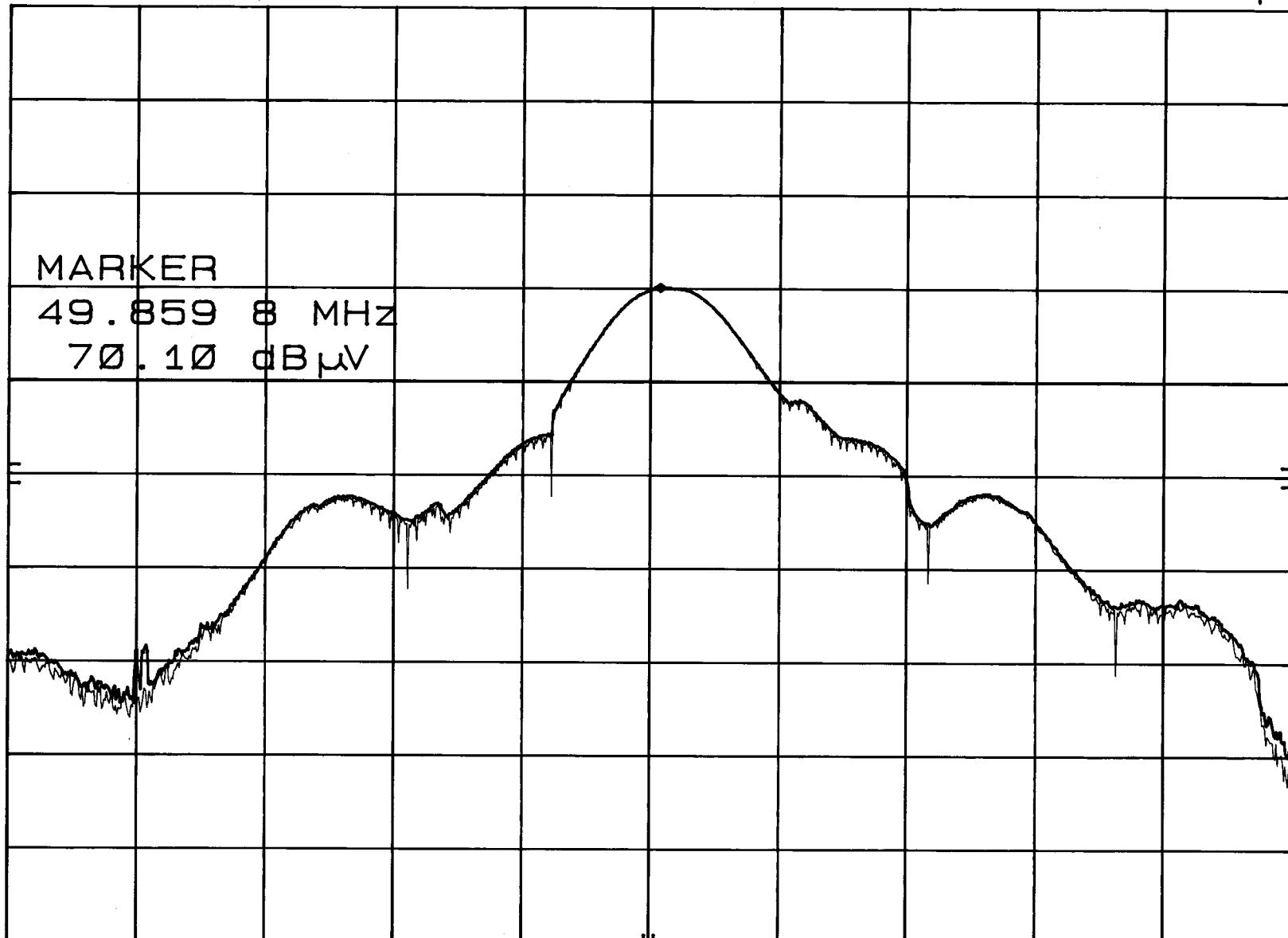
DL
60.0
dB μ V

CORR'D

START 49.784 MHz
RES BW 10 kHz

VBW 10 kHz

STOP 49.933 MHz
SWP 30.0 msec



BAND EDGE AT 49.82 MHZ - WITH MODULATION
REF 100.0 dB μ V ATTEN 10 dB

MKR 49.820 0 MHz
41.30 dB μ V

hp

10 dB/

26dB BELOW
UNMODULATED CARRIER

↳ DL
44.1
dB μ V

CORR'D

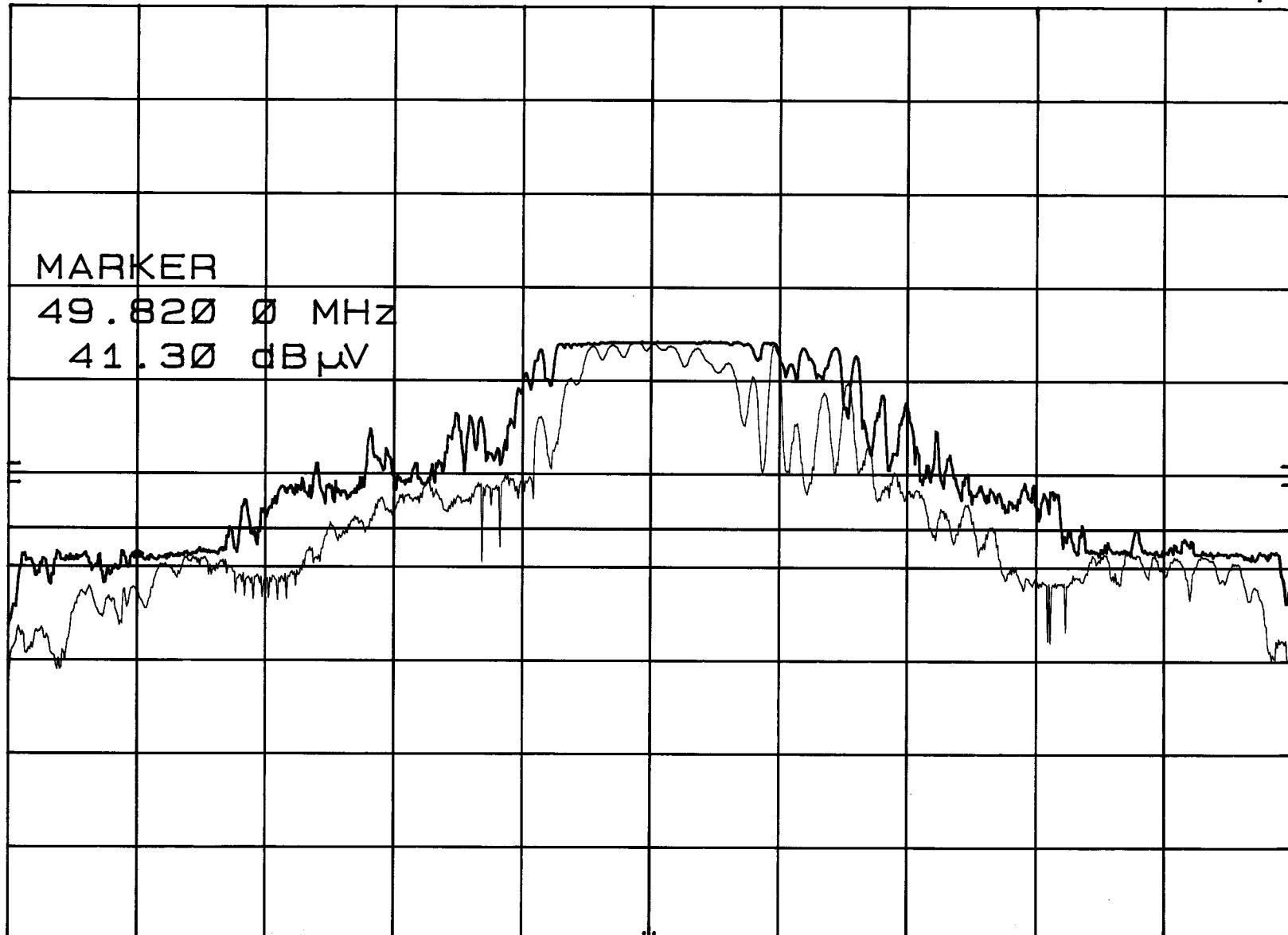
CENTER 49.860 MHz

RES BW 10 kHz

VBW 10 kHz

SPAN 100 kHz

SWP 30.0 msec



BAND EDGE AT 49.90 MHZ - WITH MODULATION
REF 100.0 dB μ V ATTEN 10 dB

MKR 49.900 0 MHz
41.70 dB μ V

HP

10 dB/

26 dB BELOW
UNMODULATED CARRIER

DL
44.1
dB μ V

CORR'D

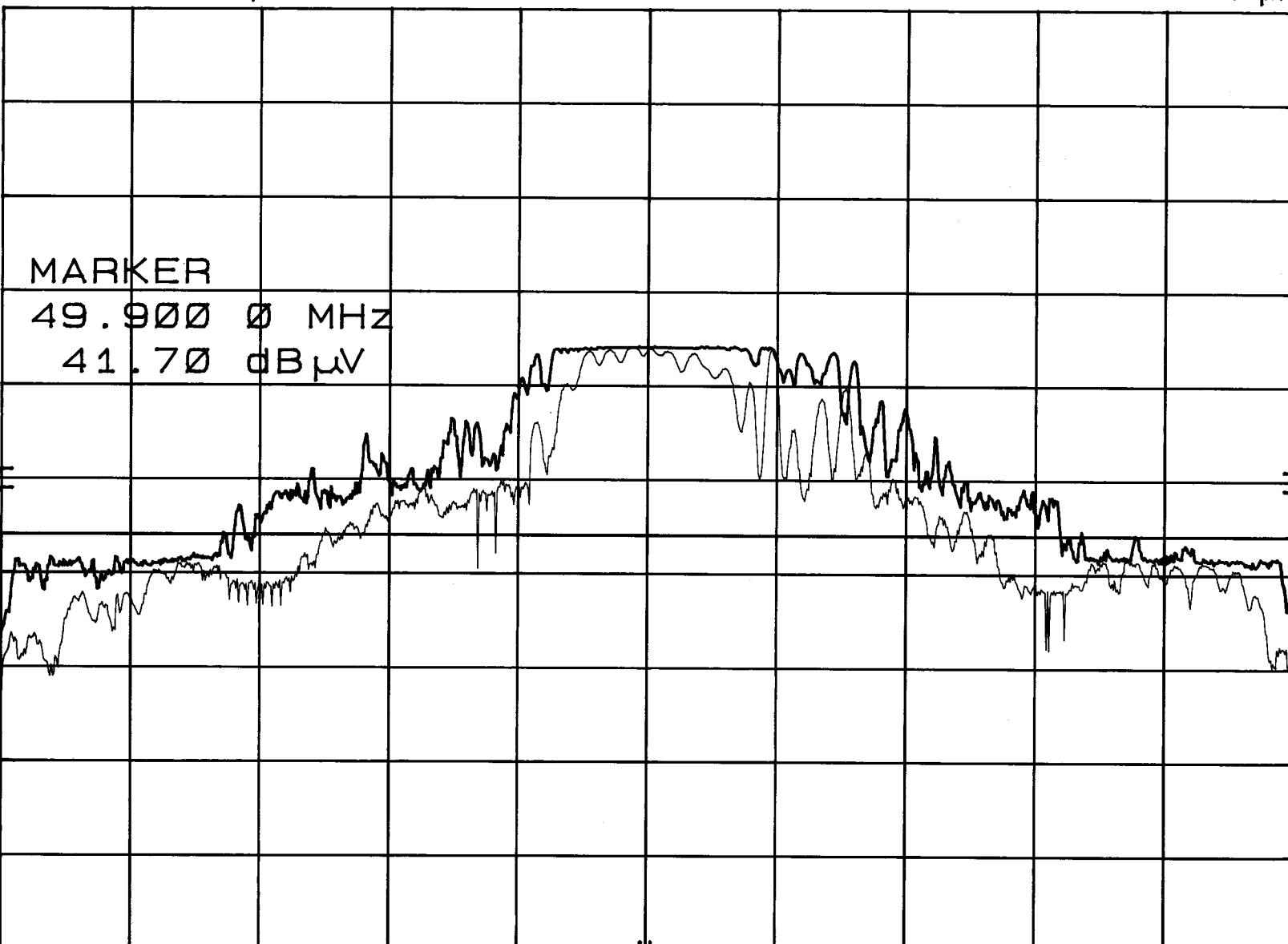
CENTER 49.860 MHz

RES BW 10 kHz

VBW 10 kHz

SPAN 100 kHz

SWP 30.0 msec





OCCUPIED BANDWIDTH OF FUNDAMENTAL - WITH MODULATION MKR Δ 70.7 kHz
REF 100.0 dB μ V ATTEN 10 dB -0.50 dB

hp

10 dB/

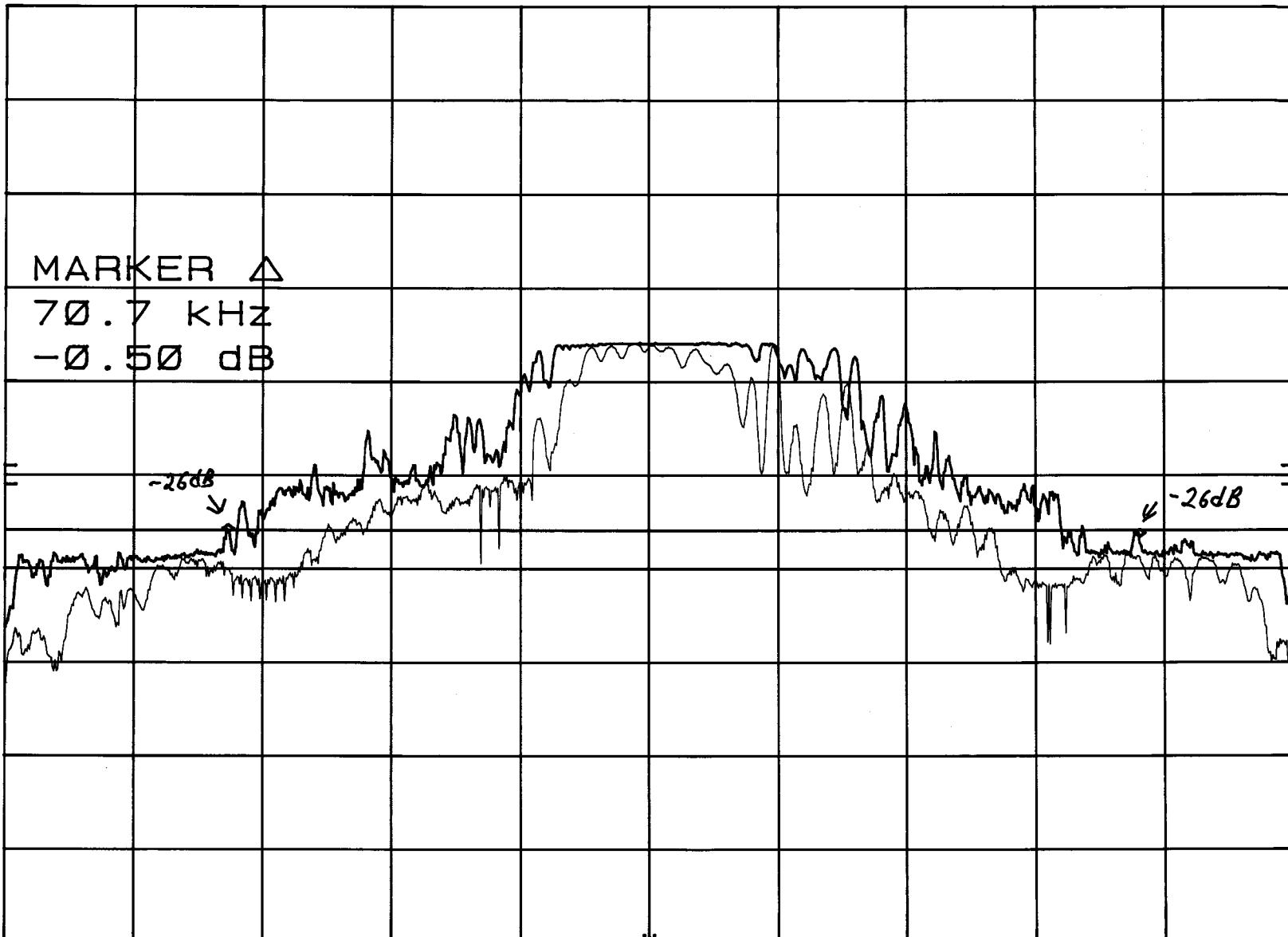
DL
44.1
dB μ V

CORR'D

CENTER 49.860 MHz
RES BW 10 kHz

VBW 10 kHz

SPAN 100 kHz
SWP 30.0 msec



AC VOLTAGE VARIATION
DATA SHEETS



CENTER FREQUENCY AT 85 PERCENT VOLTAGE
REF 100.0 dB μ V ATTEN 10 dB

MKR 49.858 8 MHz
62.10 dB μ V

HP

10 dB/

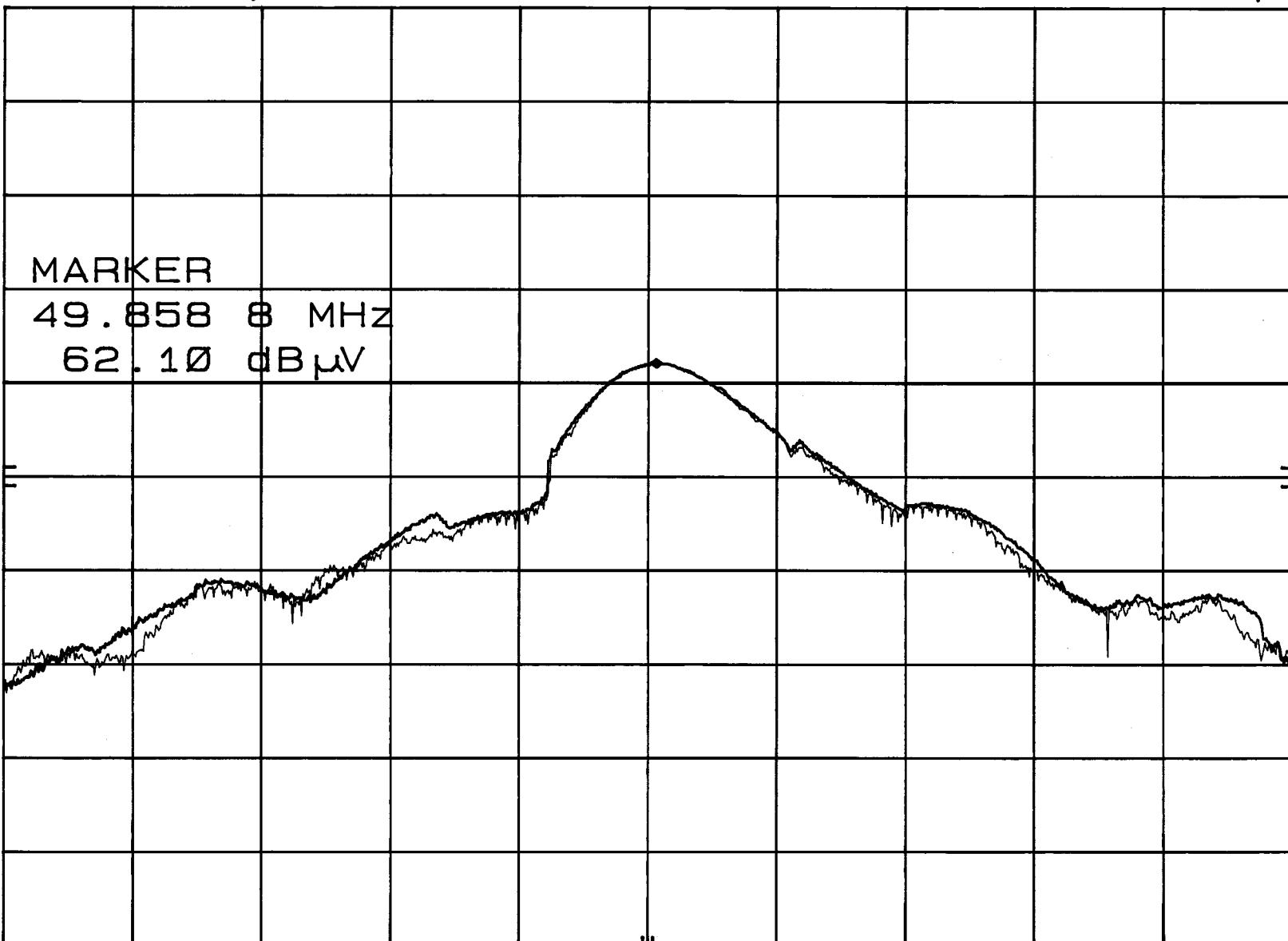
DL
60.0
dB μ V

CORR'D

CENTER 49.858 MHz
RES BW 10 kHz

VBW 10 kHz

SPAN 100 kHz
SWP 30.0 msec



CENTER FREQUENCY AT 115 PERCENT VOLTAGE
REF 100.0 dB μ V ATTEN 10 dB

MKR 49.858 8 MHz
59.10 dB μ V

hp

10 dB/

DL
60.0
dB μ V

CORR'D

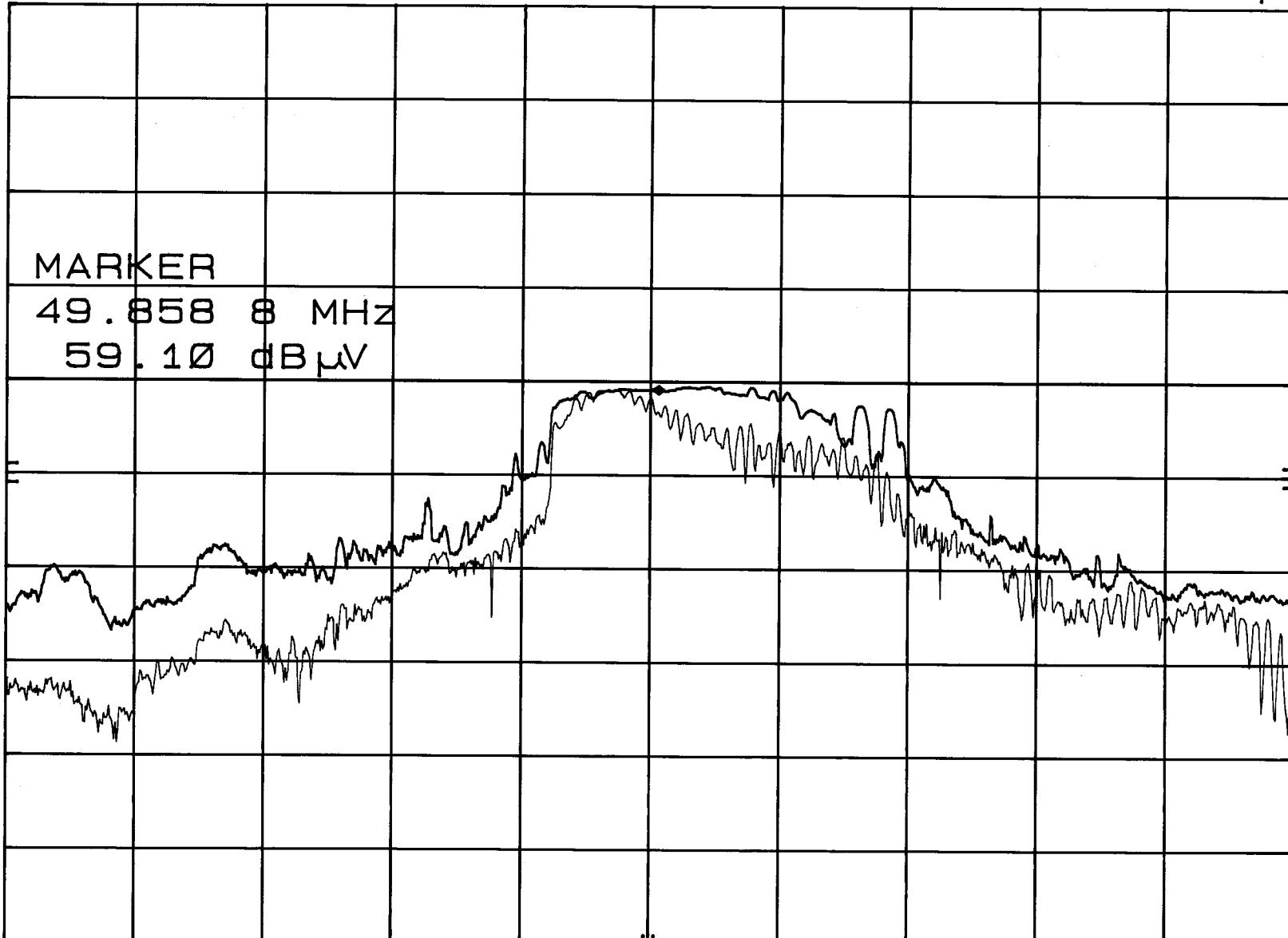
CENTER 49.858 MHz

RES BW 10 kHz

VBW 10 kHz

SPAN 100 kHz

SWP 30.0 msec



APPENDIX E

LABORATORY RECOGNITIONS



LABORATORY RECOGNITIONS

Compatible Electronics has the following agency accreditations:

National Voluntary Laboratory Accreditation Program - Lab Code: 200063-0

Voluntary Control Council for Interference - Registration Numbers: R-983, C-1026, R-984 and C-1027

Bureau of Standards and Metrology Inspection - Reference Number: SL2-IN-E-1031

Compatible Electronics is recognized or on file with the following agencies:

Federal Communications Commission

Industry Canada

Radio-Frequency Technologies (Competent Body)

Technology International (Europe) Ltd.

