FCC PART 15, SUBPART B and C
TEST REPORT

for

POCKET REMOTE

MODEL: 1000R-02

Prepared for

ENGINEERING INDUSTRIES
26240 N. 65TH DRIVE
GLENDALE, AZ 85310

Prepared by:_____

MICHAEL CHRISTENSEN

Approved by:_____

KYLE FUJIMOTO

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

DATE: JANUARY 3, 2003

	REPORT BODY	APPENDICES					TOTAL
		A	***B***	***C***	***D***	***E***	
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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 without the written permission of Compatible Electronics, unless done so in full.

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

Device Tested: Pocket Remote
Model: 1000R-02
S/N: N/A

Product Description: See Expository Statement.

Modifications: The EUT was not modified during the testing.

Manufacturer: Engineering Industries
26240 N. 65th Drive
Glendale, AZ 85310

Test Date: December 27, 2002

Test Specifications: EMI requirements
CFR Title 47, Part 15 Subpart B; and Subpart C, Sections 15.205, 15.209, and 15.231

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	This test was not performed because the EUT operates on battery power only and cannot be plugged into the AC public mains.
2	Radiated RF Emissions, 10 kHz – 4500 MHz	Complies with the Class B limits of CFR Title 47, Part 15, Subpart B; and Subpart C, sections 15.205, 15.209, and 15.231. Highest Reading in Relation to Spec Limit: 76.20 dBµV @ 433.95 MHz (*U_c = 2.35 dB)

1. PURPOSE

This document is a qualification test report based on the Electromagnetic Interference (EMI) tests performed on the Pocket Remote Model: 1000R-02. 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 Class B specification limits defined by CFR Title 47, Part 15, Subpart B; and Subpart C, sections 15.205, 15.209, and 15.231.

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

Engineering Industries

Brian Smyth Owner

Compatible Electronics, Inc.

Michael Christensen Test Engineer
Kyle Fujimoto Test Engineer

2.4 Date Test Sample was Received

The test sample was received on December 16, 2002.

2.5 Disposition of the Test Sample

The sample has not yet been returned to Engineering Industries as of January 3, 2003.

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, Part 15	FCC Rules – Radio frequency devices (including digital devices)
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.

Specifics of the EUT and Peripherals Tested

The Pocket Remote Model: 1000R-02 (EUT) was tested as a stand alone unit and was continuously transmitting. The EUT is a hand held device. The antenna of the EUT consists of a PCB trace and cannot be removed or replaced.

The final radiated data was taken in the mode above. Please see Appendix E for the data sheets.

4.1.1 Cable Construction and Termination

There were no external cables connected to the EUT.

5. LISTS OF EUT, ACCESSORIES AND TEST EQUIPMENT

5.1 EUT and Accessory List

EQUIPMENT	MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	FCC ID
POCKET REMOTE (EUT)	ENGINEERING INDUSTRIES	1000R-02	N/A	QRQ1000R-02

5.2 EMI Test Equipment

EQUIPMENT TYPE	MANU-FACTURER	MODEL NUMBER	SERIAL NUMBER	CAL. DATE	CAL. CYCLE
Radiate Emissions Data Capture Program	Compatible Electronics	2.0	N/A	N/A	N/A
Spectrum Analyzer – Main Section	Hewlett Packard	8566B	3638A08768	June 21, 2002	1 Year
Spectrum Analyzer – Display Section	Hewlett Packard	85662A	3701A22262	June 21, 2002	1 Year
Quasi-Peak Adapter	Hewlett Packard	85650A	2811A01363	June 21, 2002	1 Year
Preamplifier	Com Power	PA-102	1202	September 18, 2002	1 Year
Biconical Antenna	Com Power	AB-900	15011	July 15, 2002	1 Year
Log Periodic Antenna	Com Power	AL-100	01117	October 4, 2002	1 Year
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	4530	US91912319	N/A	N/A
Monitor	Hewlett Packard	D5258A	TW74500641	N/A	N/A
Horn Antenna	Com-Power	AH-118	10073	Jan. 21, 2002	1 Year
Microwave Preamplifier	Com-Power	PA-122	25196	August 2, 2002	1 Year

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 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, and the Com-Power Microwave Preamplifier Model: PA-122 was used for frequencies above 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 measurement bandwidths and transducers used for the radiated emissions test were:

FREQUENCY RANGE	EFFECTIVE MEASUREMENT BANDWIDTH	TRANSDUCER
9 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
1 GHz to 4.5 GHz	1 MHz	Horn 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 gunsight method was used when measuring with the horn antenna in order to ensure accurate results. The loop antenna was also rotated in the horizontal and vertical axis in order to ensure accurate results.

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. The final qualification data sheets are located in Appendix E.

7.2 Bandwidth of the Fundamental

The -20 dB bandwidth was checked to see that it was within 0.25% of the fundamental frequency for the EUT. Photograghs of the -20 dB bandwidth is located in Appendix E.

8. CONCLUSIONS

The Pocket Remote Model: 1000R-02 meets all of the Class B specification limits defined in CFR Title 47, Part 15, Subpart B; and Subpart C, sections 15.205, 15.209, and 15.231.

APPENDIX A

LABORATORY RECOGNITIONS

LABORATORY RECOGNITIONS

Compatible Electronics has the following agency accreditations:

National Voluntary Laboratory Accreditation Program - Lab Code: 200528-0

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

Conformity Assessment Body for the EMC Directive Under the US/EU MRA Appointed by NIST

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

Federal Communications Commission

Industry Canada

Radio-Frequency Technologies (Competent Body)

APPENDIX B

MODIFICATIONS TO THE EUT

MODIFICATIONS TO THE EUT

The modifications listed below were made to the EUT to pass FCC Class B and FCC 15.231 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.

No modifications were made to the EUT during the testing.

APPENDIX C

ADDITIONAL MODELS COVERED UNDER THIS REPORT

ADDITIONAL MODELS COVERED UNDER THIS REPORT

USED FOR THE PRIMARY TEST

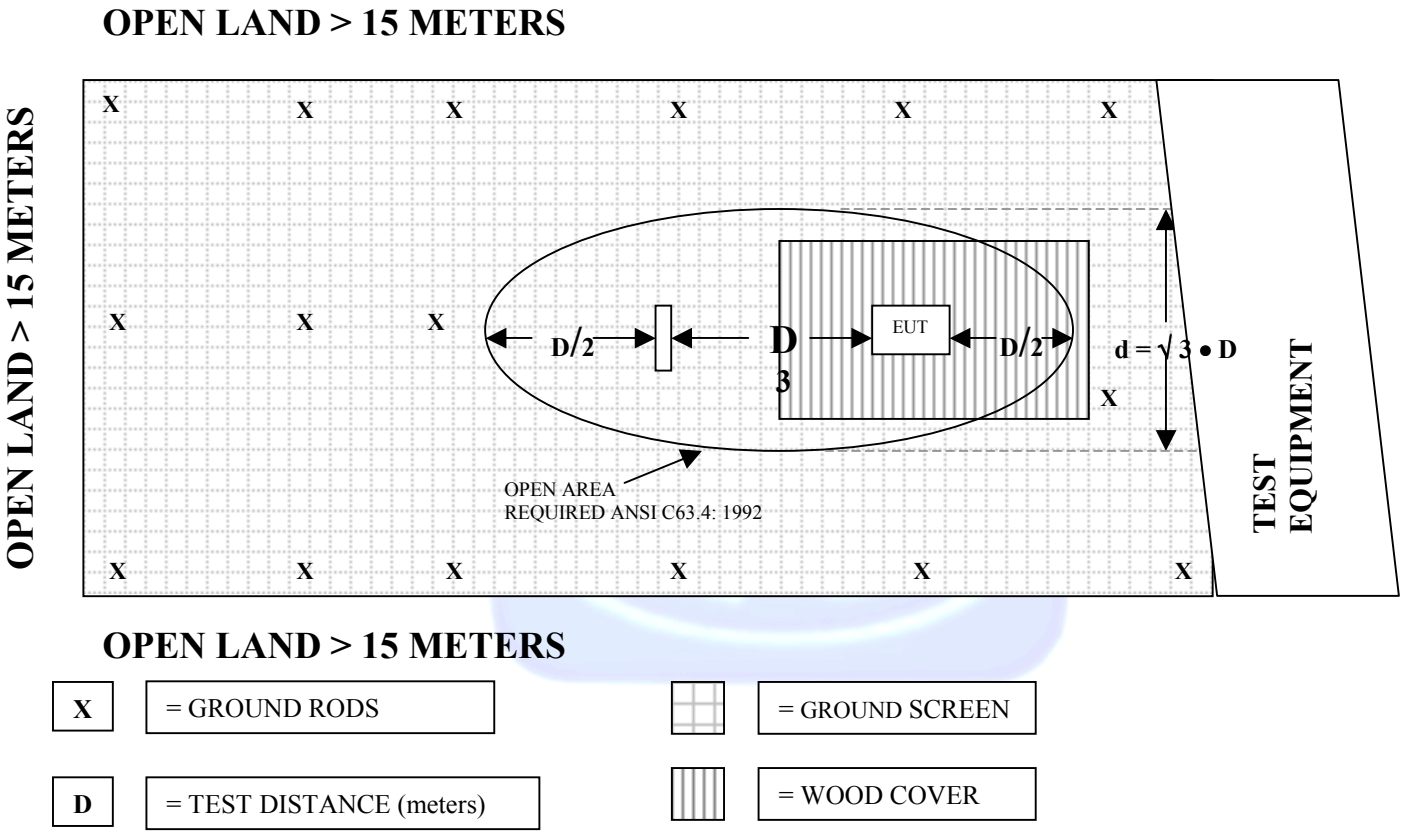
Pocket Remote
Model: 1000R-02
S/N: N/A

There were no additional models covered under this report.

APPENDIX D

DIAGRAMS, CHARTS, AND PHOTOS

FIGURE 1: PLOT MAP AND LAYOUT OF RADIATED SITE



COM-POWER AB-900

BICONICAL ANTENNA

S/N: 15011

CALIBRATION DATE: JULY 15, 2002

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
30	11.30	120	14.10
35	10.40	125	13.20
40	11.80	140	12.20
45	13.10	150	12.00
50	12.30	160	13.50
60	12.10	175	15.60
70	8.10	180	16.30
80	6.50	200	16.70
90	9.50	250	16.50
100	11.40	300	19.30

COM-POWER AL-100

LOG PERIODIC ANTENNA

S/N: 01117

CALIBRATION DATE: OCTOBER 4, 2002

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
300	13.80	700	19.50
350	15.40	750	20.70
400	15.80	800	22.00
450	16.00	850	21.90
500	17.20	900	22.50
550	17.00	950	23.40
600	18.40	1000	25.60

COM-POWER PA-102

PREAMPLIFIER

S/N: 1202

CALIBRATION DATE: SEPTEMBER 18, 2002

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
30	35.4	300	34.9
40	35.4	350	34.7
50	35.5	400	34.8
60	35.5	450	34.7
70	35.5	500	33.9
80	35.6	550	34.5
90	35.8	600	34.3
100	35.8	650	34.0
125	35.6	700	33.9
150	35.3	750	34.1
175	35.0	800	34.0
200	35.1	850	33.8
225	35.1	900	33.7
250	35.3	950	32.9
275	35.3	1000	33.8

COM-POWER PA-122

MICROWAVE PREAMPLIFIER

S/N: 25196

CALIBRATION DATE: AUGUST 2, 2002

FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
1.0	33.2	9.5	26.1
1.1	33.1	10.0	25.9
1.2	33.0	11.0	23.5
1.3	32.8	12.0	22.7
1.4	32.6	13.0	21.8
1.5	32.3	14.0	20.9
1.6	31.3	15.0	34.2
1.7	30.8	16.0	35.3
1.8	26.4	17.0	29.6
1.9	28.7	18.0	28.4
2.0	28.5		
2.5	31.5		
3.0	29.2		
3.5	30.3		
4.0	30.9		
4.5	30.3		
5.0	28.3		
5.5	27.5		
6.0	27.3		
6.5	28.0		
7.0	28.2		
7.5	28.0		
8.0	29.2		
8.5	28.3		
9.0	28.9		

COM-POWER AH-118

HORN ANTENNA

S/N: 10073

CALIBRATION DATE: JANUARY 21, 2002

FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
1.0	26.6	9.5	41.4
1.5	29.2	10.0	41.8
2.0	32.4	10.5	40.4
2.5	32.3	11.0	37.5
3.0	31.4	11.5	42.2
3.5	31.8	12.0	40.4
4.0	31.1	12.5	43.6
4.5	32.0	13.0	44.2
5.0	33.9	13.5	41.8
5.5	32.0	14.0	43.3
6.0	37.8	14.5	47.0
6.5	36.8	15.0	49.4
7.0	42.4	15.5	49.9
7.5	39.5	16.0	49.9
8.0	41.3	16.5	48.2
8.5	40.3	17.0	44.0
9.0	39.5	17.5	44.8
		18.0	44.7

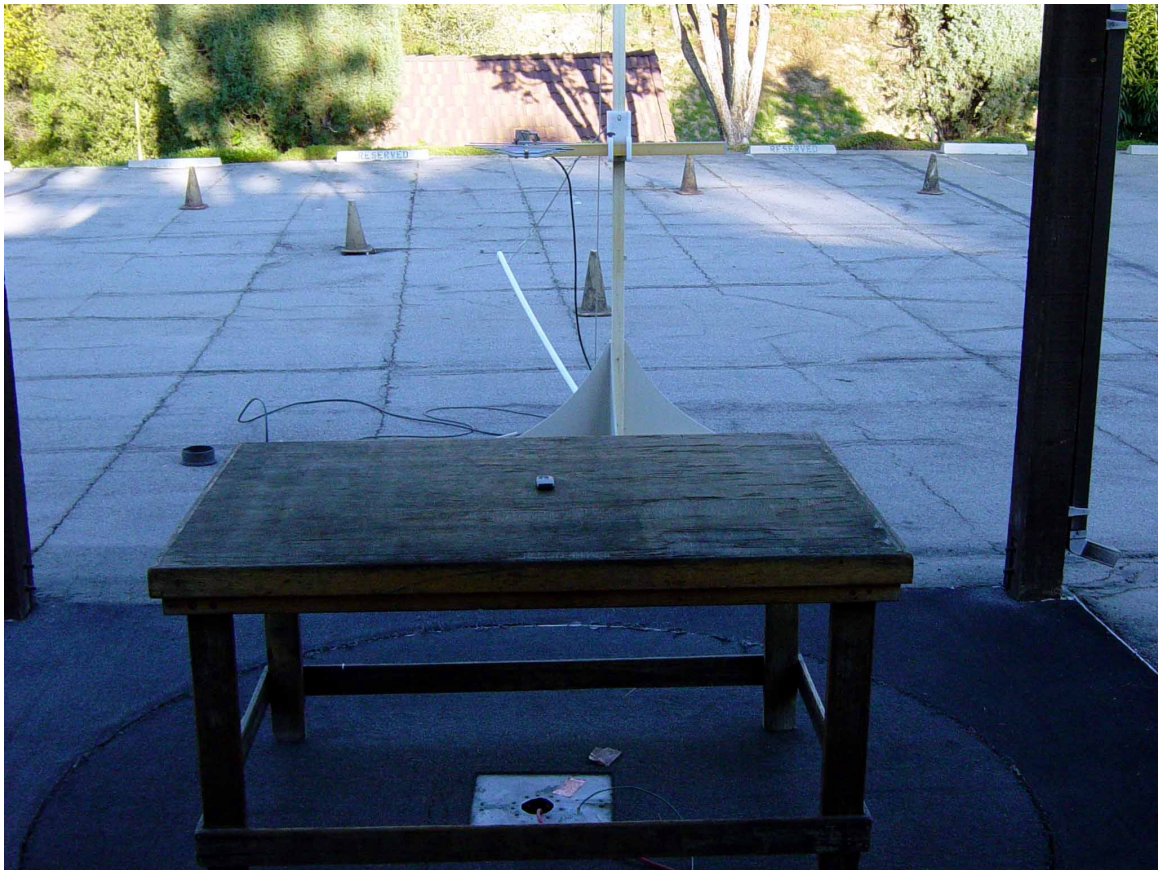
COM-POWER AL-130

LOOP ANTENNA

S/N: 17070

CALIBRATION DATE: JUNE 19, 2002

FREQUENCY (MHz)	MAGNETIC (dB/m)	ELECTRIC (dB/m)
0.009	-40.4	11.1
0.01	-40.3	11.2
0.02	-41.2	10.3
0.05	-41.6	9.9
0.07	-41.4	10.1
0.1	-41.7	9.8
0.2	-44.0	7.5
0.3	-41.6	9.9
0.5	-41.3	10.2
0.7	-41.4	10.1
1	-40.9	10.6
2	-40.6	10.9
3	-40.5	11.0
4	-40.8	10.7
5	-40.2	11.3
10	-40.7	10.8
15	-41.4	10.1
20	-41.6	9.9
25	-41.7	9.8
30	-42.9	8.6



FRONT VIEW

ENGINEERING INDUSTRIES
POCKET REMOTE
MODEL: 1000R-02
FCC SUBPART B AND C - RADIATED EMISSIONS – 12-27-02

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

REAR VIEW

ENGINEERING INDUSTRIES
POCKET REMOTE
MODEL: 1000R-02
FCC SUBPART B AND C - RADIATED EMISSIONS – 12-27-02

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

APPENDIX E

DATA SHEETS

RADIATED EMISSIONS

DATA SHEETS

Test location: Compatible Electronics
Customer : ENGINEERING INDUSTRIES Date : 12/27/2002
Manufacturer : ENGINEERING INDUSTRIES Time : 15.45
EUT name : POCKET REMOTE Model: 1000R-02
Specification: Fcc_B Test distance: 3.0 mtrs Lab: A
Distance correction factor(20*log(test/spec)) : 0.00
Test Mode : RADIATED SPURIOUS EMISSIONS 10 kHz TO 4500 MHz
TESTED BY: MICHAEL CHRISTENSEN

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

NO SPURIOUS EMISSIONS FOUND

RADIATED EMISSIONS (FCC SECTION 15.205 AND 15.231)

COMPANY	**ENGINEERING INDUSTRIES**	**DATE**	**12/27/02**
EUT	**POCKET REMOTE**	**DUTY CYCLE**	**30 %**
MODEL	**1000R-02**	**PEAK TO AVG**	**-10.4575749 dB**
S/N	**N/A**	**TEST DIST.**	**3 Meters**
TEST ENGINEER	**MICHAEL CHRISTENSEN**	**LAB**	**A**

Frequency MHz	Peak Reading (dBuV)	Average (A) or Quasi-Peak (QP)	Antenna Polar. (V or H)	Antenna Height (meters)	EUT Azimuth (degrees)	EUT Axis (X,Y,Z)	EUT Tx Channel	Antenna Factor (dB)	Cable Loss (dB)	Amplifier Gain (dB)	Distance Factor (dB)	Mixer Factor (dB)	*Corrected Reading (dBuV/m)	Delta ** (dB)	Spec Limit (dBuV/m)	Comments
433.9500	102.8	92.4 A	H	1.0	90	X	LOW	15.9	2.6	34.7	0.0	0.0	**76.2**	**-4.7**	**80.8**	
433.9500	85.4	A	H	1.0	180	Y	LOW	15.9	2.6	34.7	0.0	0.0	**69.2**	**-11.6**	**80.8**	
433.9500	101.8	91.4 A	H	1.0	0	Z	LOW	15.9	2.6	34.7	0.0	0.0	**75.2**	**-5.7**	**80.8**	
433.9500	83.4	A	V	1.0	90	X	LOW	15.9	2.6	34.7	0.0	0.0	**67.2**	**-13.6**	**80.8**	
433.9500	89.7	A	V	1.0	270	Y	LOW	15.9	2.6	34.7	0.0	0.0	**73.5**	**-7.3**	**80.8**	
433.9500	85.5	A	V	1.0	180	Z	LOW	15.9	2.6	34.7	0.0	0.0	**69.3**	**-11.5**	**80.8**	
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* CORRECTED READING = METER READING + ANTENNA FACTOR + CABLE LOSS - AMPLIFIER GAIN
** DELTA = SPEC LIMIT - CORRECTED READING

RADIATED EMISSIONS (FCC SECTION 15.205 AND 15.231)

COMPANY	**ENGINEERING INDUSTRIES**	**DATE**	**12/27/02**
EUT	**POCKET REMOTE**	**DUTY CYCLE**	**30 %**
MODEL	**1000R-02**	**PEAK TO AVG**	**-10.4575749 dB**
S/N	**N/A**	**TEST DIST.**	**3 Meters**
TEST ENGINEER	**MICHAEL CHRISTENSEN**	**LAB**	**A**

Frequency MHz	Peak Reading (dBuV)	Average (A) or Quasi-Peak (QP)	Antenna Polar. (V or H)	Antenna Height (meters)	EUT Azimuth (degrees)	EUT Axis (X,Y,Z)	EUT Tx Channel	Antenna Factor (dB)	Cable Loss (dB)	Amplifier Gain (dB)	Distance Factor (dB)	Mixer Factor (dB)	*Corrected Reading (dBuV/m)	Delta ** (dB)	Spec Limit (dBuV/m)	Comments
867.9000	57.6	A	H	1.0	90	X	LOW	22.1	4.5	33.8	0.0	0.0	**50.5**	**-10.4**	**60.8**	
867.9000	46.9	A	H	2.5	0	Y	LOW	22.1	4.5	33.8	0.0	0.0	**39.8**	**-21.1**	**60.8**	
867.9000	56.8	A	H	1.0	0	Z	LOW	22.1	4.5	33.8	0.0	0.0	**49.7**	**-11.2**	**60.8**	
867.9000	48.5	A	V	1.0	270	X	LOW	22.1	4.5	33.8	0.0	0.0	**41.4**	**-19.5**	**60.8**	
867.9000	50.9	A	V	1.0	0	Y	LOW	22.1	4.5	33.8	0.0	0.0	**43.8**	**-17.1**	**60.8**	
867.9000	49.8	A	V	1.0	180	Z	LOW	22.1	4.5	33.8	0.0	0.0	**42.7**	**-18.2**	**60.8**	
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* CORRECTED READING = METER READING + ANTENNA FACTOR + CABLE LOSS - AMPLIFIER GAIN

** DELTA = SPEC LIMIT - CORRECTED READING

RADIATED EMISSIONS (FCC SECTION 15.205 AND 15.231)

COMPANY	**ENGINEERING INDUSTRIES**	**DATE**	**12/27/02**
EUT	**POCKET REMOTE**	**DUTY CYCLE**	**30 %**
MODEL	**1000R-02**	**PEAK TO AVG**	**-10.4575749 dB**
S/N	**N/A**	**TEST DIST.**	**3 Meters**
TEST ENGINEER	**MICHAEL CHRISTENSEN**	**LAB**	**A**

Frequency MHz	Peak Reading (dBuV)	Average (A) or Quasi-Peak (QP)	Antenna Polar. (V or H)	Antenna Height (meters)	EUT Azimuth (degrees)	EUT Axis (X,Y,Z)	EUT Tx Channel	Antenna Factor (dB)	Cable Loss (dB)	Amplifier Gain (dB)	Distance Factor (dB)	Mixer Factor (dB)	*Corrected Reading (dBuV/m)	Delta ** (dB)	Spec Limit (dBuV/m)	Comments
1301.8500	51.6	A	H	3.0	270	X	LOW	28.2	3.0	32.8	0.0	0.0	**50.0**	**-4.0**	**54.0**	
1301.8500	47.8	A	H	3.0	180	Y	LOW	28.2	3.0	32.8	0.0	0.0	**46.2**	**-7.8**	**54.0**	
1301.8500	50.6	A	H	3.0	0	Z	LOW	28.2	3.0	32.8	0.0	0.0	**49.0**	**-5.0**	**54.0**	
1301.8500	50.1	A	V	2.0	90	X	LOW	28.2	3.0	32.8	0.0	0.0	**48.5**	**-5.5**	**54.0**	
1301.8500	53.3	42.9 A	V	2.0	90	Y	LOW	28.2	3.0	32.8	0.0	0.0	**41.2**	**-12.8**	**54.0**	
1301.8500	50.2	A	V	3.0	270	Z	LOW	28.2	3.0	32.8	0.0	0.0	**48.6**	**-5.4**	**54.0**	
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RADIATED EMISSIONS (FCC SECTION 15.205 AND 15.231)

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MODEL	**1000R-02**	**PEAK TO AVG**	**-10.4575749 dB**
S/N	**N/A**	**TEST DIST.**	**3 Meters**
TEST ENGINEER	**MICHAEL CHRISTENSEN**	**LAB**	**A**

Frequency MHz	Peak Reading (dBuV)	Average (A) or Quasi-Peak (QP)	Antenna Polar. (V or H)	Antenna Height (meters)	EUT Azimuth (degrees)	EUT Axis (X,Y,Z)	EUT Tx Channel	Antenna Factor (dB)	Cable Loss (dB)	Amplifier Gain (dB)	Distance Factor (dB)	Mixer Factor (dB)	*Corrected Reading (dBuV/m)	Delta ** (dB)	Spec Limit (dBuV/m)	Comments
1735.8000	46.7	A	H	1.0	270	X	LOW	30.7	3.7	29.2	0.0	0.0	**51.9**	**-9.0**	**60.8**	
1735.8000	48.0	A	H	3.0	0	Y	LOW	30.7	3.7	29.2	0.0	0.0	**53.2**	**-7.7**	**60.8**	
1735.8000	45.8	A	H	1.0	180	Z	LOW	30.7	3.7	29.2	0.0	0.0	**51.0**	**-9.9**	**60.8**	
1735.8000	45.7	A	V	3.0	90	X	LOW	30.7	3.7	29.2	0.0	0.0	**50.9**	**-10.0**	**60.8**	
1735.8000	45.9	A	V	1.0	0	Y	LOW	30.7	3.7	29.2	0.0	0.0	**51.1**	**-9.8**	**60.8**	
1735.8000	49.5	A	V	1.0	0	Z	LOW	30.7	3.7	29.2	0.0	0.0	**54.7**	**-6.2**	**60.8**	
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* CORRECTED READING = METER READING + ANTENNA FACTOR + CABLE LOSS - AMPLIFIER GAIN
** DELTA = SPEC LIMIT - CORRECTED READING

RADIATED EMISSIONS (FCC SECTION 15.205 AND 15.231)

COMPANY	**ENGINEERING INDUSTRIES**	**DATE**	**12/27/02**
EUT	**POCKET REMOTE**	**DUTY CYCLE**	**30 %**
MODEL	**1000R-02**	**PEAK TO AVG**	**-10.4575749 dB**
S/N	**N/A**	**TEST DIST.**	**3 Meters**
TEST ENGINEER	**MICHAEL CHRISTENSEN**	**LAB**	**A**

Frequency MHz	Peak Reading (dBuV)	Average (A) or Quasi-Peak (QP)	Antenna Polar. (V or H)	Antenna Height (meters)	EUT Azimuth (degrees)	EUT Axis (X,Y,Z)	EUT Tx Channel	Antenna Factor (dB)	Cable Loss (dB)	Amplifier Gain (dB)	Distance Factor (dB)	Mixer Factor (dB)	*Corrected Reading (dBuV/m)	Delta ** (dB)	Spec Limit (dBuV/m)	Comments
2169.7500	49.8	A	H	3.0	180	X	LOW	32.4	4.1	29.5	0.0	0.0	**56.8**	**-4.1**	**60.8**	
2169.7500	52.8	42.4 A	H	3.5	0	Y	LOW	32.4	4.1	29.5	0.0	0.0	**49.3**	**-11.5**	**60.8**	
2169.7500	49.8	A	H	3.5	270	Z	LOW	32.4	4.1	29.5	0.0	0.0	**56.8**	**-4.1**	**60.8**	
2169.7500	48.2	A	V	3.0	0	X	LOW	32.4	4.1	29.5	0.0	0.0	**55.2**	**-5.7**	**60.8**	
2169.7500	50.6	A	V	3.0	270	Y	LOW	32.4	4.1	29.5	0.0	0.0	**57.6**	**-3.3**	**60.8**	
2169.7500	52.0	41.6 A	V	3.0	0	Z	LOW	32.4	4.1	29.5	0.0	0.0	**48.5**	**-12.3**	**60.8**	
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** DELTA = SPEC LIMIT - CORRECTED READING

RADIATED EMISSIONS (FCC SECTION 15.205 AND 15.231)

COMPANY	**ENGINEERING INDUSTRIES**	**DATE**	**12/27/02**
EUT	**POCKET REMOTE**	**DUTY CYCLE**	**30 %**
MODEL	**1000R-02**	**PEAK TO AVG**	**-10.4575749 dB**
S/N	**N/A**	**TEST DIST.**	**3 Meters**
TEST ENGINEER	**MICHAEL CHRISTENSEN**	**LAB**	**A**

Frequency MHz	Peak Reading (dBuV)	Average (A) or Quasi-Peak (QP)	Antenna Polar. (V or H)	Antenna Height (meters)	EUT Azimuth (degrees)	EUT Axis (X,Y,Z)	EUT Tx Channel	Antenna Factor (dB)	Cable Loss (dB)	Amplifier Gain (dB)	Distance Factor (dB)	Mixer Factor (dB)	*Corrected Reading (dBuV/m)	Delta ** (dB)	Spec Limit (dBuV/m)	Comments
2603.7000	42.4	A	H	3.0	180	X	LOW	32.1	4.6	31.0	0.0	0.0	**48.0**	**-12.8**	**60.8**	
2603.7000	43.3	A	H	3.5	0	Y	LOW	32.1	4.6	31.0	0.0	0.0	**48.9**	**-11.9**	**60.8**	
2603.7000	42.3	A	H	3.5	0	Z	LOW	32.1	4.6	31.0	0.0	0.0	**47.9**	**-12.9**	**60.8**	
2603.7000	41.7	A	V	3.0	0	X	LOW	32.1	4.6	31.0	0.0	0.0	**47.3**	**-13.5**	**60.8**	
2603.7000	41.6	A	V	3.0	0	Y	LOW	32.1	4.6	31.0	0.0	0.0	**47.2**	**-13.6**	**60.8**	
2603.7000	42.3	A	V	3.0	90	Z	LOW	32.1	4.6	31.0	0.0	0.0	**47.9**	**-12.9**	**60.8**	
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** DELTA = SPEC LIMIT - CORRECTED READING

RADIATED EMISSIONS (FCC SECTION 15.205 AND 15.231)

COMPANY	**ENGINEERING INDUSTRIES**	**DATE**	**12/27/02**
EUT	**POCKET REMOTE**	**DUTY CYCLE**	**30 %**
MODEL	**1000R-02**	**PEAK TO AVG**	**-10.4575749 dB**
S/N	**N/A**	**TEST DIST.**	**3 Meters**
TEST ENGINEER	**MICHAEL CHRISTENSEN**	**LAB**	**A**

Frequency MHz	Peak Reading (dBuV)	Average (A) or Quasi-Peak (QP)	Antenna Polar. (V or H)	Antenna Height (meters)	EUT Azimuth (degrees)	EUT Axis (X,Y,Z)	EUT Tx Channel	Antenna Factor (dB)	Cable Loss (dB)	Amplifier Gain (dB)	Distance Factor (dB)	Mixer Factor (dB)	*Corrected Reading (dBuV/m)	Delta ** (dB)	Spec Limit (dBuV/m)	Comments
3037.6500		A	H			X	LOW	31.4	6.1	29.3	0.0				**60.8**	**NO EMISSION FOUND**
3037.6500		A	H			Y	LOW	31.4	6.1	29.3	0.0				**60.8**	**NO EMISSION FOUND**
3037.6500		A	H			Z	LOW	31.4	6.1	29.3	0.0				**60.8**	**NO EMISSION FOUND**
3037.6500		A	V			X	LOW	31.4	6.1	29.3	0.0				**60.8**	**NO EMISSION FOUND**
3037.6500		A	V			Y	LOW	31.4	6.1	29.3	0.0				**60.8**	**NO EMISSION FOUND**
3037.6500		A	V			Z	LOW	31.4	6.1	29.3	0.0				**60.8**	**NO EMISSION FOUND**
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** DELTA = SPEC LIMIT - CORRECTED READING

RADIATED EMISSIONS (FCC SECTION 15.205 AND 15.231)

COMPANY	**ENGINEERING INDUSTRIES**	**DATE**	**12/27/02**
EUT	**POCKET REMOTE**	**DUTY CYCLE**	**30 %**
MODEL	**1000R-02**	**PEAK TO AVG**	**-10.4575749 dB**
S/N	**N/A**	**TEST DIST.**	**3 Meters**
TEST ENGINEER	**MICHAEL CHRISTENSEN**	**LAB**	**A**

Frequency MHz	Peak Reading (dBuV)	Average (A) or Quasi-Peak (QP)	Antenna Polar. (V or H)	Antenna Height (meters)	EUT Azimuth (degrees)	EUT Axis (X,Y,Z)	EUT Tx Channel	Antenna Factor (dB)	Cable Loss (dB)	Amplifier Gain (dB)	Distance Factor (dB)	Mixer Factor (dB)	*Corrected Reading (dBuV/m)	Delta ** (dB)	Spec Limit (dBuV/m)	Comments
3471.6000	42.7	A	H	3.0	270	X	LOW	31.8	7.8	30.2	0.0	0.0	**52.0**	**-8.8**	**60.8**	
3471.6000	43.6	A	H	3.0	0	Y	LOW	31.8	7.8	30.2	0.0	0.0	**52.9**	**-7.9**	**60.8**	
3471.6000	43.8	A	H	3.5	0	Z	LOW	31.8	7.8	30.2	0.0	0.0	**53.1**	**-7.7**	**60.8**	
3471.6000	42.6	A	V	3.0	0	X	LOW	31.8	7.8	30.2	0.0	0.0	**51.9**	**-8.9**	**60.8**	
3471.6000	43.2	A	V	3.0	180	Y	LOW	31.8	7.8	30.2	0.0	0.0	**52.5**	**-8.3**	**60.8**	
3471.6000	43.4	A	V	3.0	90	Z	LOW	31.8	7.8	30.2	0.0	0.0	**52.7**	**-8.1**	**60.8**	
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** DELTA = SPEC LIMIT - CORRECTED READING

RADIATED EMISSIONS (FCC SECTION 15.205 AND 15.231)

COMPANY	**ENGINEERING INDUSTRIES**	**DATE**	**12/27/02**
EUT	**POCKET REMOTE**	**DUTY CYCLE**	**30 %**
MODEL	**1000R-02**	**PEAK TO AVG**	**-10.4575749 dB**
S/N	**N/A**	**TEST DIST.**	**3 Meters**
TEST ENGINEER	**MICHAEL CHRISTENSEN**	**LAB**	**A**

Frequency MHz	Peak Reading (dBuV)	Average (A) or Quasi-Peak (QP)	Antenna Polar. (V or H)	Antenna Height (meters)	EUT Azimuth (degrees)	EUT Axis (X,Y,Z)	EUT Tx Channel	Antenna Factor (dB)	Cable Loss (dB)	Amplifier Gain (dB)	Distance Factor (dB)	Mixer Factor (dB)	*Corrected Reading (dBuV/m)	Delta ** (dB)	Spec Limit (dBuV/m)	Comments
3905.5500	50.4	40.0 A	H	3.0	180	X	LOW	31.2	6.5	30.8	0.0	0.0	**46.9**	**-7.1**	**54.0**	
3905.5500	51.1	40.7 A	H	2.5	0	Y	LOW	31.2	6.5	30.8	0.0	0.0	**47.6**	**-6.4**	**54.0**	
3905.5500	50.5	40.1 A	H	3.0	180	Z	LOW	31.2	6.5	30.8	0.0	0.0	**47.0**	**-7.0**	**54.0**	
3905.5500	50.9	40.5 A	V	3.0	180	X	LOW	31.2	6.5	30.8	0.0	0.0	**47.4**	**-6.6**	**54.0**	
3905.5500	51.9	41.5 A	V	3.0	180	Y	LOW	31.2	6.5	30.8	0.0	0.0	**48.4**	**-5.6**	**54.0**	
3905.5500	51.2	40.8 A	V	3.0	270	Z	LOW	31.2	6.5	30.8	0.0	0.0	**47.7**	**-6.3**	**54.0**	
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RADIATED EMISSIONS (FCC SECTION 15.205 AND 15.231)

COMPANY	**ENGINEERING INDUSTRIES**	**DATE**	**12/27/02**
EUT	**POCKET REMOTE**	**DUTY CYCLE**	**30 %**
MODEL	**1000R-02**	**PEAK TO AVG**	**-10.4575749 dB**
S/N	**N/A**	**TEST DIST.**	**3 Meters**
TEST ENGINEER	**MICHAEL CHRISTENSEN**	**LAB**	**A**

Frequency MHz	Peak Reading (dBuV)	Average (A) or Quasi-Peak (QP)	Antenna Polar. (V or H)	Antenna Height (meters)	EUT Azimuth (degrees)	EUT Axis (X,Y,Z)	EUT Tx Channel	Antenna Factor (dB)	Cable Loss (dB)	Amplifier Gain (dB)	Distance Factor (dB)	Mixer Factor (dB)	*Corrected Reading (dBuV/m)	Delta ** (dB)	Spec Limit (dBuV/m)	Comments
4339.5000		A	H			X	LOW	31.7	7.3	30.5	0.0				**54.0**	**NO EMISSION FOUND**
4339.5000	43.7	33.2 A	H	2.0	0	Y	LOW	31.7	7.3	30.5	0.0	0.0	**41.8**	**-12.2**	**54.0**	
4339.5000		A	H			Z	LOW	31.7	7.3	30.5	0.0				**54.0**	**NO EMISSION FOUND**
4339.5000		A	V			X	LOW	31.7	7.3	30.5	0.0				**54.0**	**NO EMISSION FOUND**
4339.5000		A	V			Y	LOW	31.7	7.3	30.5	0.0				**54.0**	**NO EMISSION FOUND**
4339.5000		A	V			Z	LOW	31.7	7.3	30.5	0.0				**54.0**	**NO EMISSION FOUND**
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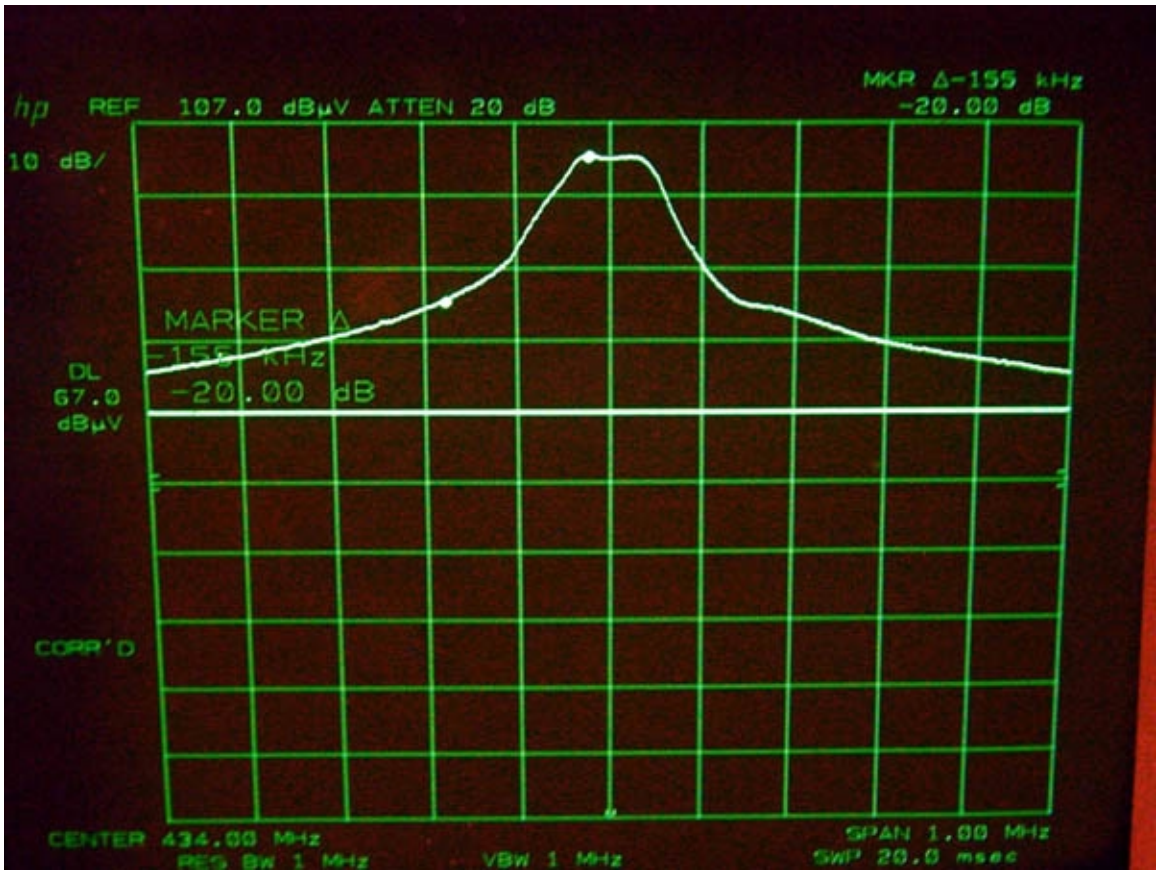
-20 dB BANDWIDTH

DATA SHEETS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-20.00 dB
10 dB/
MARKER Δ
-155 kHz
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67.0
dBµV
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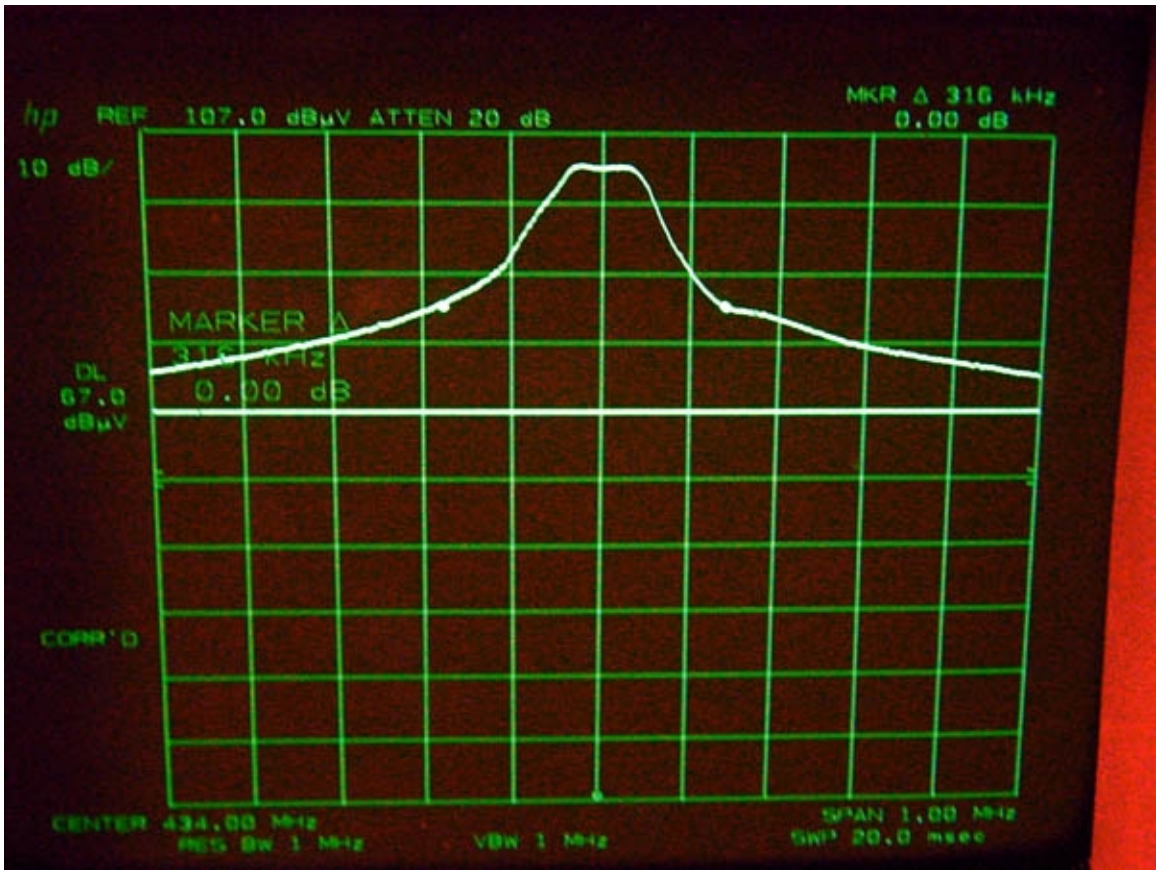
CENTER 434.00 MHz
RES BW 1 MHz
VBW 1 MHz
SPAN 1.00 MHz
SWP 20.0 msec


hp
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MARKER Δ
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CORR'D
CENTER 434.00 MHz
RES BW 1 MHz
VBW 1 MHz
SPAN 1.00 MHz
SWP 20.0 msec