



**FCC Part 15 Test Report
on**

**Personal Emergency Response Button
Model: REV.12**

Applicant Name: EveryFit, Inc.

Customer P.O.: 1002

Equipment Authorization: Certification

Date of Report: January 8, 2016

Test Report No: R-5996N

Test Start Date: November 23, 2015

Test Finish Date: November 24, 2015

Test Technician: M. Seamans

Laboratory Supervisor: T. Hannemann

Branch Manager: S. Wentworth

Report Prepared By: J. Ramsey

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TECHNICAL INFORMATION

MANUFACTURER		APPLICANT	
Name:	EveryFit, Inc.	Name:	EveryFit, Inc.
Address:	44 School St., Suite 350	Address:	44 School St., Suite 350
City, State, Zip:	Boston, MA 02108	City, State, Zip:	Boston, MA 02108

TEST SPECIFICATION:

FCC Rules and Regulations Part 15, Subpart C, Section 15.231

TEST PROCEDURE: ANSI C63.4: 2009

TEST SAMPLE DESCRIPTION

TEST SAMPLE: Personal Emergency Response Button

BRANDNAME(s): QMedic

PART NO. QM-12

MODEL: REV.12

FCC ID: 2AAOUQMWV4REV12

TYPE: Wearable Help Button Device

POWER REQUIREMENTS: 3.3VDC via one (1) internal CR2032 battery

FREQUENCY OF OPERATION: 315MHz

The Personal Emergency Response Button is a body worn device, worn on the wrist or neck, used for ensuring the safety of older adults in the event of a medical emergency. The device monitors safety using an accelerometer embedded in the device. The device is activated by pressing a button and transmits an emergency safety signal at 315MHz to the base station which initiates a phone call to a call center. Supervision transmissions are used to check system and data integrity.

SUPPORT EQUIPMENT:

No support equipment was utilized during the course of this testing program.

PURPOSE:

The purpose of this test program was to demonstrate compliance of the Personal Emergency Response Button to the requirements of FCC Part 15.231.

Tests Performed

The test methods performed on the Personal Emergency Response Button are shown below:

FCC Part 15, Subpart C	Test Method
15.231(b)	Field Strength of Fundamental Emissions
15.231(b)	Duty Cycle Determination
15.231(b)(3)	Field Strength of Spurious Emissions
15.231(c)	Bandwidth of Emissions

General Test Requirements

1. The measurement procedures of ANSI C63.4: 2009 were utilized.
2. All radiated emissions measurements were performed on an Open Area Test Site (OATS), listed with the FCC.
3. The level of the fundamental field strength and spurious emissions were recorded with a new battery installed in the EUT.
4. All measurements were performed at the specified 3 meter test distance as required by FCC Section 15.31(f).
5. The EUT was rotated throughout 360 degrees for all radiated emissions measurements.
6. All readily accessible EUT controls were adjusted in such a manner as to maximize the level of emissions in accordance with FCC Section 15.31(g).
7. Appropriate accessories were attached to all EUT ports during the performance of radiated emissions measurements as required by FCC Section 15.31(i).
8. All measurements were taken with a peak detector function as specified in FCC Section 15.35(a). The duty cycle, calculated in accordance with FCC Section 15.35(c), was applied to the peak readings in order to obtain the average value of emissions. The peak value of emissions was verified to meet the 20 dB requirement of FCC Section 15.35(b).
9. The EUT utilizes an internal loop trace antenna and is in compliance with 15.203.
10. The device is used in personal safety applications and uses supervision transmissions to maintain system integrity. The maximum total duration of these transmissions is 150msec per hour which meets the 2 second limit specified in 15.231 (a)(3).

Certification and Signatures

We certify that this report is a true representation of the results obtained from the tests of the equipment stated. We further certify that the measurements shown in this report were made in accordance with the procedures indicated and vouch for the qualifications of all Retlif Testing Laboratories personnel taking them.



Scott Wentworth
Branch Manager
NVLAP Approved Signatory



Todd Hannemann
Laboratory Supervisor
iNARTE Certified Technician ATL-0255-T

Non-Warranty Provision

The testing services have been performed, findings obtained and reports prepared in accordance with generally accepted laboratory principles and practices. This warranty is in lieu of all others, either expressed or implied.

Non-Endorsement

This test report contains only findings and results arrived at after employing the specific test procedures and standards listed herein. It is not intended to constitute a recommendation, endorsement or certification of the product or material tested. This test report must not be used by the client to claim product endorsement by NVLAP or any agency of the U.S. Government.

Revision History

Revisions to this document are listed below; the latest revised document supersedes all previous issues of this document.

Revision	Date	Pages Affected
-	January 8, 2016	Original Release

Requirements and Test Results

Requirement:

FCC Section 15.231(b) - Field Strength of Emissions

In addition to the provisions of Section 15.205, the field strength of emissions from intentional radiators operated under this Section shall not exceed the limits specified in Table 1.

Table 1 - Test Limits, Field Strength of Emissions

Fundamental Frequency (MHz)	Field Strength of Fundamental microvolts/meter @ 3 meters (watts, e.i.r.p.) Quasi Peak or Average	Field Strength of Spurious Emissions microvolts/meter @ 3 meters Quasi Peak or Average
40.66 to 40.70	2,250	225
70 to 130	1,250 (470 nW)	125
130 to 174	1,250 to 3,750**	125 to 375**
174 to 260	3,750 (4.2 µW)	375
260 to 470	3,750 to 12,500**	375 to 1,250**
Above 470	12,500 (47 µW)	1,250
**Linear Interpolations For 130-174 MHz: FS (microvolts/m) = (56.82 x F) - 6,136 For 260-470 MHz: FS (microvolts/m) = (41.67 x F) - 7,083 The maximum permitted unwanted emission level is 20 dB below the maximum permitted fundamental level.		

The Fundamental and Harmonic Emissions limits for a device operating at 315 MHz are listed in Table 2.

Table 2 - Fundamental and Harmonic Limits

Frequency of Operation MHz	Fundamental µV/m	Harmonics µV/m
315	6042	604

- **Results:**

The Fundamental and Harmonics field strengths did not exceed the limits specified in Table 2 at a test distance of 3 meters. See Table 3 for the worst case Fundamental and Harmonic emissions test results.

Requirements and Test Results (con't)

Field Strength Calculation:

The final average field strength of the emission was calculated by subtracting the duty cycle factor in dB from the maximized corrected peak reading in dBuV/m.

The maximized peak field strength of the emission was obtained as follows:

$$P_C = M_R + C_F$$

Where:

P_C = Corrected Peak Reading in dB μ V/m

M_R = Uncorrected Meter Reading in dB μ V

C_F = Correction Factor in dB (Antenna Factor + Cable Loss)

The final average field strength of the emission was obtained as follows:

$$A_F = P_C - D_F$$

Where:

A_F = Average Field Strength in dB μ V/m

P_C = Corrected Peak Reading in dB μ V/m

D_F = Duty Cycle Factor in dB

Example: For the Personal Emergency Response Button at a frequency of 315 MHz:

$$M_R = 75.10 \text{ dB}\mu\text{V}$$

$$C_F = 16.5 \text{ dB}$$

$$P_C = 75.10 \text{ dB}\mu\text{V} + 16.5 \text{ dB} = 91.6 \text{ dB}\mu\text{V/m}$$

$$D_F = 16.474 \text{ dB}$$

$$A_F = 91.6 \text{ dB}\mu\text{V/m} - 16.474 \text{ dB} = 75.126 \text{ dB}\mu\text{V/m}$$

$$75.126 \text{ dB}\mu\text{V/m} = 5705 \text{ }\mu\text{V/m}$$

Table 3 - Fundamental and Harmonics Test Results

Fundamental Frequency MHz	Maximum Fundamental μV/m	Maximum Harmonics μV/m
315	5643	365 at 2835 MHz

Requirements and Test Results (con't)

Requirement:

FCC Section 15.231(b)(2) - Duty Cycle Determination-Pulsed Operation

Intentional radiators operating under the provisions of the Section shall demonstrate compliance with the limits on the field strength emissions, as shown in Table 1, based on the average value of the measured emissions. As an alternative, compliance with the limits in the Table 1 may be based on the use of measurement instrumentation with a CISPR quasi-peak detector. The specific method of measurement employed shall be specified in the application for equipment authorization. If average emission measurements are employed, the provisions in Section 15.35 for averaging pulsed emissions and for limiting peak emissions apply. Further, compliance with the provisions of Section 15.205 shall be demonstrated using the measurement instrumentation specified in that Section.

The duty cycle of the Personal Emergency Response Button was evaluated in all possible channels and operating modes and the worst case duty cycle was determined. The following calculations were used to determine the duty cycle correction factor. As the transmitter cycle time exceeded 100msec, 100msec was used as the cycle time for the duty cycle calculation and the maximum on time within any 100msec period was recorded as the on time.

For the Personal Emergency Response Button at a frequency of 315 MHz:

$$\begin{aligned}\text{Transmitter On Time} &= \underline{10.34} \text{ milliseconds (maximum per cycle)} \\ \text{Transmitter Cycle Time} &= \underline{100} \text{ milliseconds} \\ \text{Transmitter Duty Cycle} &= \underline{10.34} \%\end{aligned}$$

CALCULATION

There was 1 pulse within the 100 msec cycle time:

$$\text{On time} = 10.34\text{msec}$$

$$\text{Duty Cycle } (10.34/100) = 10.34\%$$

$$\text{Correction Factor} = 20 \log (0.1034) = -19.71\text{dB}$$

Requirements and Test Results (con't)

Requirement:

FCC Section 15.231(b)(3) - Field Strength of Spurious Emissions

The limits on the field strength of the spurious emissions specified in Table 1 are based on the fundamental frequency of the intentional radiator. Spurious emissions shall be attenuated to the average (or, alternatively, CISPR quasi-peak) limits shown in Table 1 or to the general limits shown in Section 15.209, whichever limit permits a higher field strength.

- **Results:**

No spurious emissions exceeded the specified limit.

Requirement:

FCC Section 15.231(c) - Bandwidth of Emissions

The bandwidth of the emissions shall be no wider than 0.25% of the center frequency for devices operating above 70 MHz and below 900 MHz. For devices operating above 900 MHz, the emission shall be no wider than 0.5% of the frequency. Bandwidth is determined at the points 20 dB down from the modulated carrier.

- **Results:**

The emission bandwidth was measured and did not exceed the specified limits. See Table 3 for the worst case occupied bandwidth test results.

Table 4 – Occupied Bandwidth Test Results

Fundamental Frequency MHz	Occupied Bandwidth kHz	Occupied Bandwidth Limit kHz
315	577	787.5 kHz

Equipment Lists

FCC Section 15.231(b) - Field Strength of Fundamental & Harmonic Emissions

EN	Manufacturer	Description	Range	Model No.	Cal Date	Due Date
4029	RETLIF	OPEN AREA TEST SITE, FILING	3 / 10 Meters	RNH	5/15/2013	5/31/2016
5053	ETS / EMCO	ANTENNA, BICONILOG	26 MHz - 3 GHz	3142C	2/24/2015	8/31/2016
R462	AGILENT / HP	ANALYZER, SPECTRUM	9 kHz - 26.5 GHz	E7405A	1/8/2015	1/31/2016

FCC Section 15.231(b) - Duty Cycle Determination - Pulsed Operation

EN	Manufacturer	Description	Range	Model No.	Cal Date	Due Date
5030B	NARDA MICROWAVE	ATTENUATOR, COAXIAL	10 dB, DC - 12.4 GHz	757C-10	3/18/2015	3/31/2016
R462	AGILENT / HP	ANALYZER, SPECTRUM	9 kHz - 26.5 GHz	E7405A	1/8/2015	1/31/2016

FCC Section 15.231(b)(3) - Field Strength of Spurious Emissions

EN	Manufacturer	Description	Range	Model No.	Cal Date	Due Date
4029	RETLIF	OPEN AREA TEST SITE, FILING	3 / 10 Meters	RNH	5/15/2013	5/31/2016
5053	ETS / EMCO	ANTENNA, BICONILOG	26 MHz - 3 GHz	3142C	2/24/2015	8/31/2016
R462	AGILENT / HP	ANALYZER, SPECTRUM	9 kHz - 26.5 GHz	E7405A	1/8/2015	1/31/2016

FCC Section 15.231(c) - Bandwidth of Emission

EN	Manufacturer	Description	Range	Model No.	Cal Date	Due Date
5030B	NARDA MICROWAVE	ATTENUATOR, COAXIAL	10 dB, DC - 12.4 GHz	757C-10	3/18/2015	3/31/2016
R462	AGILENT / HP	ANALYZER, SPECTRUM	9 kHz - 26.5 GHz	E7405A	1/8/2015	1/31/2016

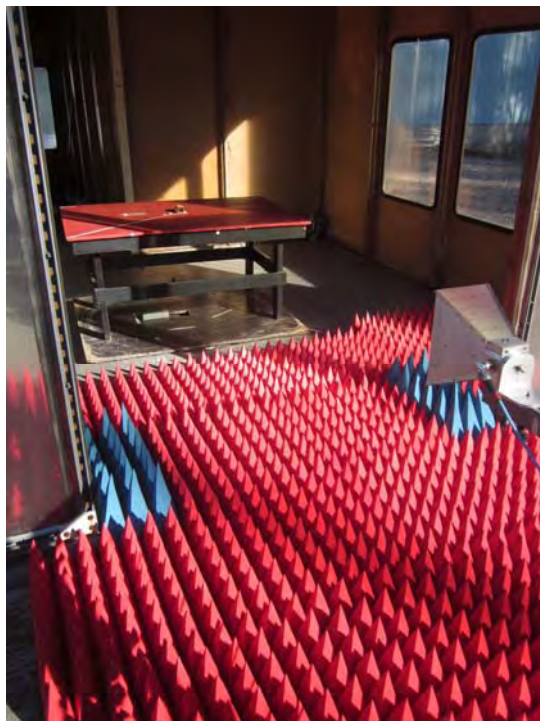
FCC Section 15.231(b) - Field Strength of Spurious Emissions
Photographs



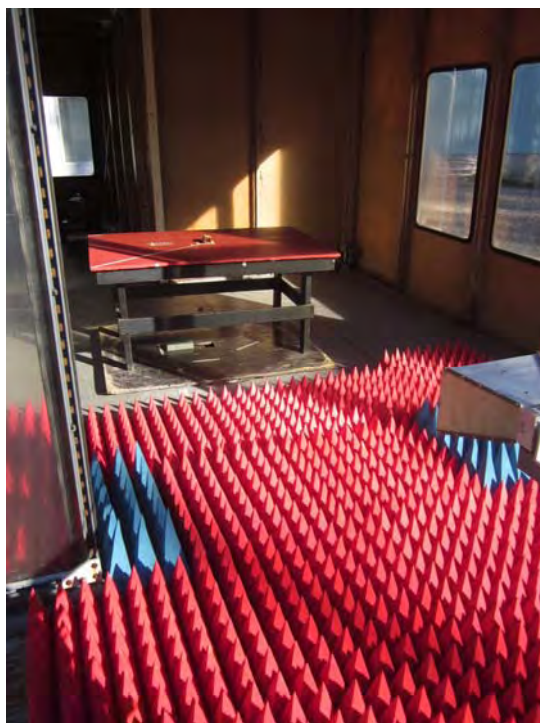
Horizontal Antenna Polarization, 30 to 1000 MHz



Vertical Antenna Polarization, 30 to 1000 MHz



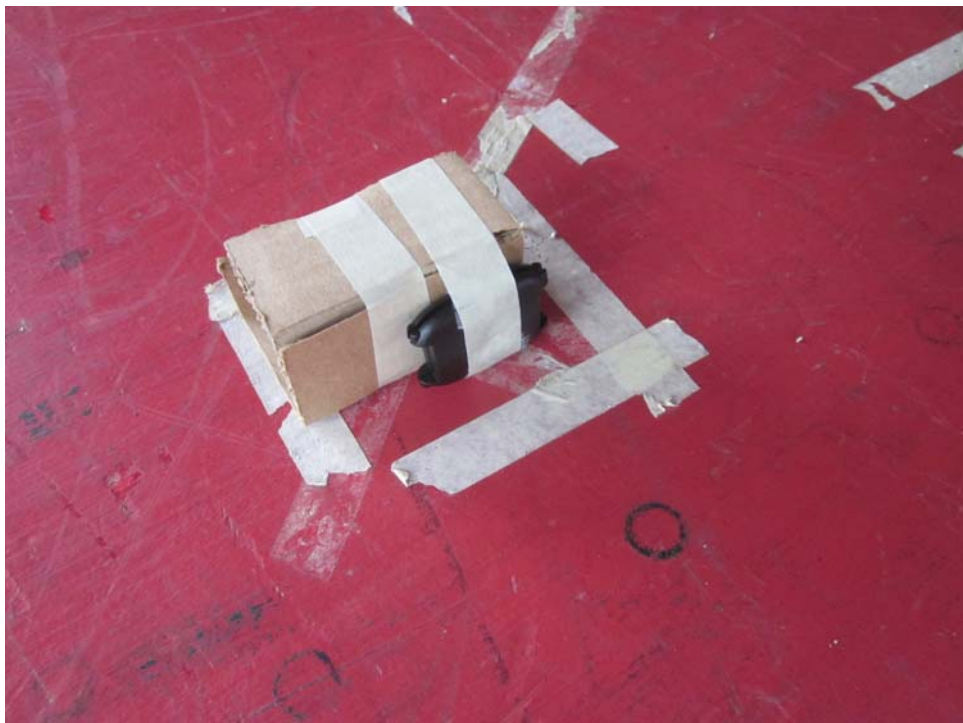
Horizontal Antenna Polarization, 1 to 3.2 GHz



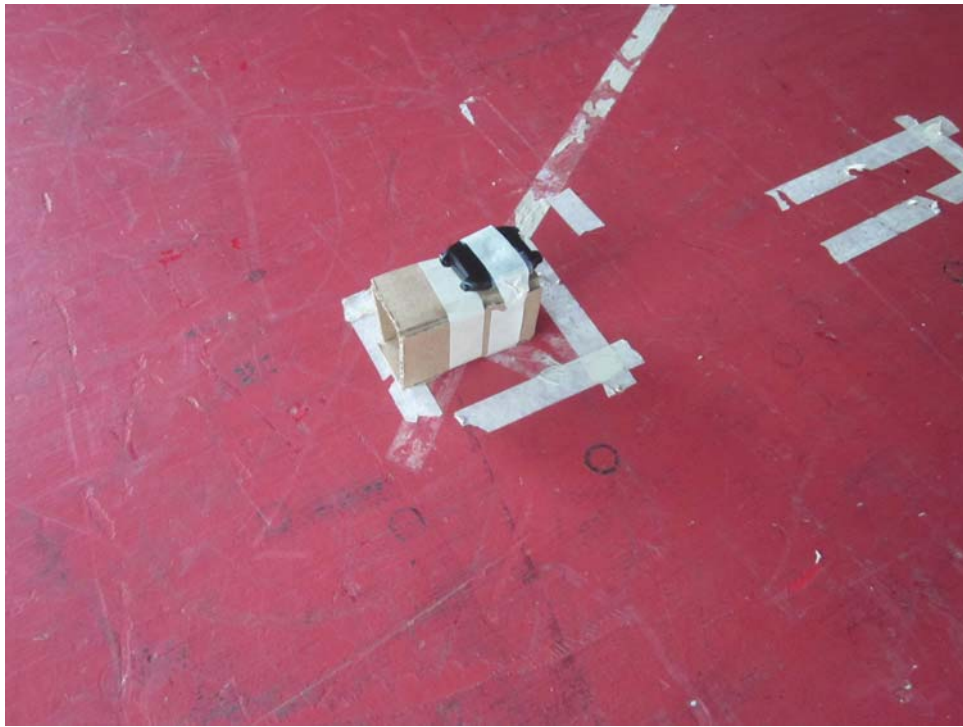
Vertical Antenna Polarization, 1 to 3.2 GHz



X Axis



Y Axis



Z Axis

**FCC Section 15.231(b) - Field Strength of Spurious Emissions
Test Data**

RETLIF TESTING LABORATORIES

EMISSIONS TEST DATA SHEET

Test Method	Field Strength of Spurious Emissions 30 MHz to 1 GHz	
Customer	EveryFit, Inc.	
Job Number	R-5996N	
Test Sample	Personal Emergency Response Button	
Part Number	QM-12	
Serial Number	001	
Test Specification	FCC Part 15, Subpart C	Paragraph: 15.231(b), 15.205, 15.209
Operating Mode	Transmitting modulated signal at 315 MHz	
Technician	M. Seamans	
Date	November 24, 2015	

Notes: Test Distance: 3 meters Detector: Quasi-Peak from 30 MHz to 1 GHz, Average above 1 GHz

TEST PARAMETERS

Test Frequency	Antenna	Meter Reading	Correction Factor	Corrected Reading			Converted Reading	Limit at 3M
MHz	V/H	dBuV	dB	dBuV/m			uV/m	uV/m
30.00	-	-	-	-			-	100.00
	-	-	-	-			-	
35.00*	V	10.77	15.72	26.49			21.11	
	-	-	-	-			-	
88.00	-	-	-	-			-	100.00
88.00	-	-	-	-			-	150.00
	-	-	-	-			-	
110.00*	H	13.24	10.12	23.36			14.72	
195.00*	V	15.27	13.19	28.46			26.49	
205.00*	H	10.26	13.64	23.90			15.67	
	-	-	-	-			-	
216.00	-	-	-	-			-	150.00
216.00	-	-	-	-			-	200.00
	-	-	-	-			-	
600.00*	V	6.54	27.29	33.83			49.15	
600.00*	H	7.62	27.29	34.91			55.65	
	-	-	-	-			-	
960.00	-	-	-	-			-	200.00
960.00	-	-	-	-			-	500.00
	-	-	-	-			-	
1000.00	-	-	-	-			-	500.00

All EUT emissions observed and recorded were more than 10 db below the specified limit throughout the given frequency spectrum. * This emission is not from the EUT. It is a measurement of minimum measurement system sensitivity (Noise Floor).

Data Sheet 1 of 2

RETLIF TESTING LABORATORIES

EMISSIONS TEST DATA SHEET

Test Method	Field Strength of Spurious Emissions 1 GHz to 3.2 GHz	
Customer	EveryFit, Inc.	
Job Number	R-5996N	
Test Sample	Personal Emergency Response Button	
Part Number	QM-12	
Serial Number	001	
Test Specification	FCC Part 15, Subpart C	Paragraph: 15.231(b), 15.205, 15.209
Operating Mode	Transmitting modulated signal at 315 MHz	
Technician	M. Seamans	
Date	November 24, 2015	

Notes: Test Distance: 3 meters Detector: Quasi-Peak from 30 MHz to 1 GHz, Average above 1 GHz

TEST PARAMETERS

[illegible]

All EUT emissions observed and recorded were more than 10 db below the specified limit throughout the given frequency spectrum. * This emission is not from the EUT. It is a measurement of minimum measurement system sensitivity (Noise Floor).

RETLIF TESTING LABORATORIES

EMISSIONS TEST DATA SHEET

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Customer	EveryFit, Inc.	
Job Number	R-5996N	
Test Sample	Personal Emergency Response Button	
Part Number	QM-12	
Serial Number	001	
Test Specification	FCC Part 15, Subpart C	Paragraph: 15.231(b), 15.205, 15.209
Operating Mode	Transmitting modulated signal at 315 MHz	
Technician	M. Seamans	
Date	November 24, 2015	

Notes: Test Distance: 3 meters Detector: Peak
Average values calculated from Peak readings Duty Cycle: 10.34ms Correction: -19.71 dB

TEST PARAMETERS

Test Frequency	Antenna Position	EUT Orientation	Peak Reading	Duty Cycle Correction	Corrected Reading		Converted Reading	Limit at 3M
MHz		X/Y/Z	dBuV/m	dB	dBuV/m		uV/m	uV/m
630	V	X	44.93	-19.71	25.22		18.24	604.2
630	V	Y	45.41	-19.71	25.70		19.28	
630	V	Z	45.61	-19.71	25.90		19.72	
630	H	X	45.70	-19.71	25.99		19.93	
630	H	Y	46.91	-19.71	27.20		22.91	
630	H	Z	47.63	-19.71	27.92		24.89	604.2
945	V	X	55.35	-19.71	35.64		60.53	604.2
945	V	Y	52.13	-19.71	32.42		41.78	
945	V	Z	52.25	-19.71	32.54		42.36	
945	H	X	53.77	-19.71	34.06		50.47	
945	H	Y	55.90	-19.71	36.19		64.49	
945	H	Z	55.80	-19.71	36.09		63.75	604.2
1260	V	X	42.84	-19.71	23.13		14.34	604.2
1260	V	Y	50.67	-19.71	30.96		35.32	
1260	V	Z	48.23	-19.71	28.52		26.67	
1260	H	X	51.39	-19.71	31.68		38.37	
1260	H	Y	46.41	-19.71	26.70		21.63	
1260	H	Z	45.99	-19.71	26.28		20.61	604.2

Data Sheet 1 of 6

RETLIF TESTING LABORATORIES

EMISSIONS TEST DATA SHEET

EMISSIONS TEST DATA SHEET		
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Test Specification	FCC Part 15, Subpart C	Paragraph: 15.231(b), 15.205, 15.209
Operating Mode	Transmitting modulated signal at 315 MHz	
Technician	M. Seamans	
Date	November 24, 2015	
Notes:	Test Distance: 3 meters Detector: Peak Average values calculated from Peak readings Duty Cycle: 10.34ms Correction: -19.71 dB	

TEST PARAMETERS

Test Frequency	Antenna Position	EUT Orientation	Peak Reading	Duty Cycle Correction	Corrected Reading		Converted Reading	Limit at 3M
MHz		X/Y/Z	dBuV/m	dB	dBuV/m		uV/m	uV/m
1575	V	X	51.94	-19.71	32.23		40.88	604.2
1575	V	Y	50.01	-19.71	30.30		32.73	
1575	V	Z	56.31	-19.71	36.60		67.61	
1575	H	X	57.16	-19.71	37.45		74.56	
1575	H	Y	50.56	-19.71	30.85		34.87	
1575	H	Z	53.74	-19.71	34.03		50.29	604.2
1890	V	X	54.13	-19.71	34.42		52.60	604.2
1890	V	Y	53.41	-19.71	33.70		48.42	
1890	V	Z	60.61	-19.71	40.90		110.92	
1890	H	X	58.41	-19.71	38.70		86.10	
1890	H	Y	55.45	-19.71	35.74		61.24	
1890	H	Z	55.15	-19.71	35.44		59.16	604.2
2205	V	X	61.53	-19.71	41.82		123.31	500
2205	V	Y	53.86	-19.71	34.15		50.99	
2205	V	Z	57.30	-19.71	37.59		75.77	
2205	H	X	54.14	-19.71	34.43		52.66	
2205	H	Y	49.97	-19.71	30.26		32.58	
2205	H	Z	56.64	-19.71	36.93		70.23	500

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RETLIF TESTING LABORATORIES

EMISSIONS TEST DATA SHEET

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Technician	M. Seamans	
Date	November 24, 2015	
Notes: Test Distance: 3 meters Detector: Peak Average values calculated from Peak readings Duty Cycle: 10.34ms Correction: -19.71 dB		

TEST PARAMETERS

Test Frequency	Antenna Position	EUT Orientation	Peak Reading	Duty Cycle Correction	Corrected Reading		Converted Reading	Limit at 3M
MHz		X/Y/Z	dBuV/m	dB	dBuV/m		uV/m	uV/m
2502	V	X	64.12	-19.71	44.41		166.15	604.2
2502	V	Y	65.19	-19.71	45.48		187.93	
2502	V	Z	66.51	-19.71	46.80		218.78	
2502	H	X	64.37	-19.71	44.66		171.00	
2502	H	Y	63.48	-19.71	43.77		154.35	
2502	H	Z	65.24	-19.71	45.53		189.02	604.2
2835	V	X	70.95	-19.71	51.24		364.75	604.2
2835	V	Y	68.33	-19.71	48.62		269.77	
2835	V	Z	68.61	-19.71	48.90		278.61	
2835	H	X	67.76	-19.71	48.05		252.64	
2835	H	Y	68.46	-19.71	48.75		273.84	
2835	H	Z	71.08	-19.71	51.37		370.25	604.2
3150	V	X	67.09	-19.71	47.38		233.88	500
3150	V	Y	62.70	-19.71	42.99		141.09	
3150	V	Z	66.23	-19.71	46.52		211.84	
3150	H	X	66.79	-19.71	47.08		225.94	
3150	H	Y	66.94	-19.71	47.23		229.88	
3150	H	Z	62.79	-19.71	43.08		142.56	500

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RETLIF TESTING LABORATORIES

EMISSIONS TEST DATA SHEET

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Serial Number	001	
Test Specification	FCC Part 15, Subpart C	Paragraph: 15.231(b), 15.205, 15.209
Operating Mode	Transmitting modulated signal at 315 MHz	
Technician	M. Seamans	
Date	November 24, 2015	

Notes: Test Distance: 3 meters Detector: Peak

TEST PARAMETERS

Test Frequency	Antenna Position	EUT Orientation	Meter Reading	Correction Factor	Corrected Reading		Converted Reading	Limit at 3M
MHz		X/Y/Z	dBuV/m	dB	dBuV/m		uV/m	uV/m
630	V	X	15.79	29.14	44.93		176.40	6042
630	V	Y	16.27	29.14	45.41		186.42	
630	V	Z	16.47	29.14	45.61		190.77	
630	H	X	16.56	29.14	45.70		192.75	
630	H	Y	17.77	29.14	46.91		221.56	
630	H	Z	18.49	29.14	47.63		240.71	6042
945	V	X	21.19	34.16	55.35		585.46	6042
945	V	Y	17.97	34.16	52.13		404.11	
945	V	Z	18.09	34.16	52.25		409.73	
945	H	X	19.61	34.16	53.77		488.09	
945	H	Y	21.74	34.16	55.90		623.73	
945	H	Z	21.64	34.16	55.80		616.60	6042
1260	V	X	51.08	-8.24	42.84		138.68	6042
1260	V	Y	58.91	-8.24	50.67		341.59	
1260	V	Z	56.47	-8.24	48.23		257.93	
1260	H	X	59.63	-8.24	51.39		371.11	
1260	H	Y	54.65	-8.24	46.41		209.17	
1260	H	Z	54.23	-8.24	45.99		199.30	6042

Data Sheet 4 of 6

RETLIF TESTING LABORATORIES

EMISSIONS TEST DATA SHEET

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Test Specification	FCC Part 15, Subpart C	Paragraph: 15.231(b), 15.205, 15.209
Operating Mode	Transmitting modulated signal at 315 MHz	
Technician	M. Seamans	
Date	November 24, 2015	

Notes: Test Distance: 3 meters Detector: Peak

TEST PARAMETERS

Test Frequency	Antenna Position	EUT Orientation	Meter Reading	Correction Factor	Corrected Reading		Converted Reading	Limit at 3M
MHz		X/Y/Z	dBuV/m	dB	dBuV/m		uV/m	uV/m
1575	V	X	59.49	-7.55	51.94		395.37	5000
1575	V	Y	57.56	-7.55	50.01		316.59	
1575	V	Z	63.86	-7.55	56.31		653.88	
1575	H	X	64.71	-7.55	57.16		721.11	
1575	H	Y	58.11	-7.55	50.56		337.29	
1575	H	Z	61.29	-7.55	53.74		486.41	5000
1890	V	X	59.19	-5.06	54.13		508.74	6042
1890	V	Y	58.47	-5.06	53.41		468.27	
1890	V	Z	65.67	-5.06	60.61		1072.75	
1890	H	X	63.47	-5.06	58.41		832.72	
1890	H	Y	60.51	-5.06	55.45		592.24	
1890	H	Z	60.21	-5.06	55.15		572.14	6042
2205	V	X	66.48	-4.95	61.53		1192.61	5000
2205	V	Y	58.81	-4.95	53.86		493.17	
2205	V	Z	62.25	-4.95	57.30		732.82	
2205	H	X	59.09	-4.95	54.14		509.33	
2205	H	Y	54.92	-4.95	49.97		315.14	
2205	H	Z	61.59	-4.95	56.64		679.20	5000

Data Sheet 5 of 6

RETLIF TESTING LABORATORIES

EMISSIONS TEST DATA SHEET

Test Method	Field Strength of Spurious Emissions	
Customer	EveryFit, Inc.	
Job Number	R-5996N	
Test Sample	Personal Emergency Response Button	
Part Number	QM-12	
Serial Number	001	
Test Specification	FCC Part 15, Subpart C	Paragraph: 15.231(b), 15.205, 15.209
Operating Mode	Transmitting modulated signal at 315 MHz	
Technician	M. Seamans	
Date	November 24, 2015	

Notes: Test Distance: 3 meters Detector: Peak

TEST PARAMETERS

Test Frequency	Antenna Position	EUT Orientation	Meter Reading	Correction Factor	Corrected Reading		Converted Reading	Limit at 3M
MHz		X/Y/Z	dBuV/m	dB	dBuV/m		uV/m	uV/m
2502	V	X	68.07	-3.95	64.12		1606.94	6042
2502	V	Y	69.14	-3.95	65.19		1817.61	
2502	V	Z	70.46	-3.95	66.51		2115.92	
2502	H	X	68.32	-3.95	64.37		1653.86	
2502	H	Y	67.43	-3.95	63.48		1492.79	
2502	H	Z	69.19	-3.95	65.24		1828.10	6042
2835	V	X	74.53	-3.58	70.95		3527.77	5000
2835	V	Y	71.91	-3.58	68.33		2609.16	
2835	V	Z	72.19	-3.58	68.61		2694.64	
2835	H	X	71.34	-3.58	67.76		2443.43	
2835	H	Y	72.04	-3.58	68.46		2648.50	
2835	H	Z	74.66	-3.58	71.08		3580.96	5000
3150	V	X	69.05	-1.96	67.09		2262.04	6042
3150	V	Y	64.66	-1.96	62.70		1364.58	
3150	V	Z	68.19	-1.96	66.23		2048.80	
3150	H	X	68.75	-1.96	66.79		2185.24	
3150	H	Y	68.90	-1.96	66.94		2223.31	
3150	H	Z	64.75	-1.96	62.79		1378.80	6042

Data Sheet 6 of 6

FCC Section 15.231(b) - Duty Cycle Determination - Pulsed Operation

Test Photograph



Test Setup

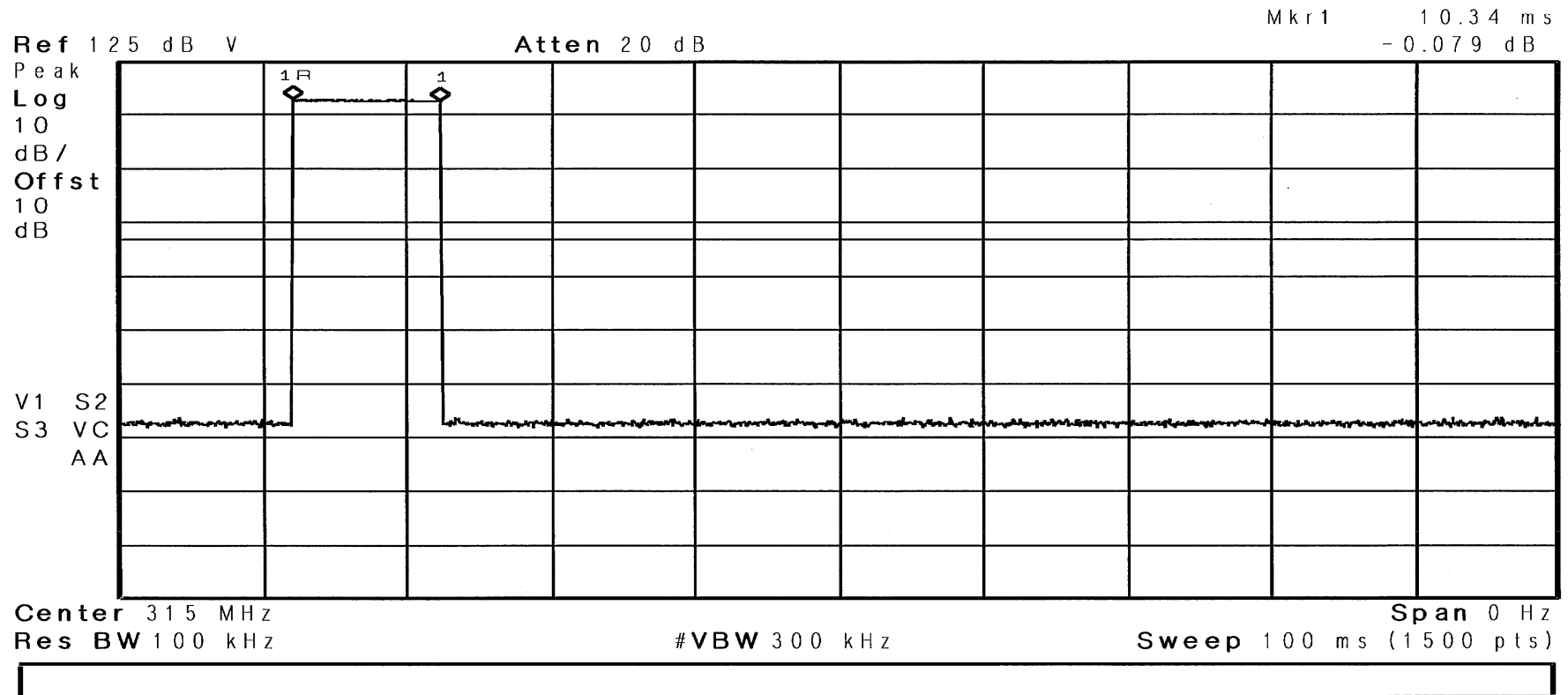
FCC Section 15.231(b) - Duty Cycle Determination - Pulsed Operation

Test Data

RETLIF TESTING LABORATORIES

Test Method:	Duty Cycle Determination		
Customer	EveryFit, Inc.	Job No.	R-5996N
Test Sample	Personal Emergency Response Button		
Part Number	QM-12	Serial No.	001
Operating Mode	Transmitting modulated signal at 315 MHz		
Test Specification	FCC part 15.35		
Technician	M. Seamans	Date	November 24, 2015
Climatic Conditions	Temp: 21.3 °C Relative Humidity: 32.0 %		
Notes	Measured maximum transmit time: 10.34ms		

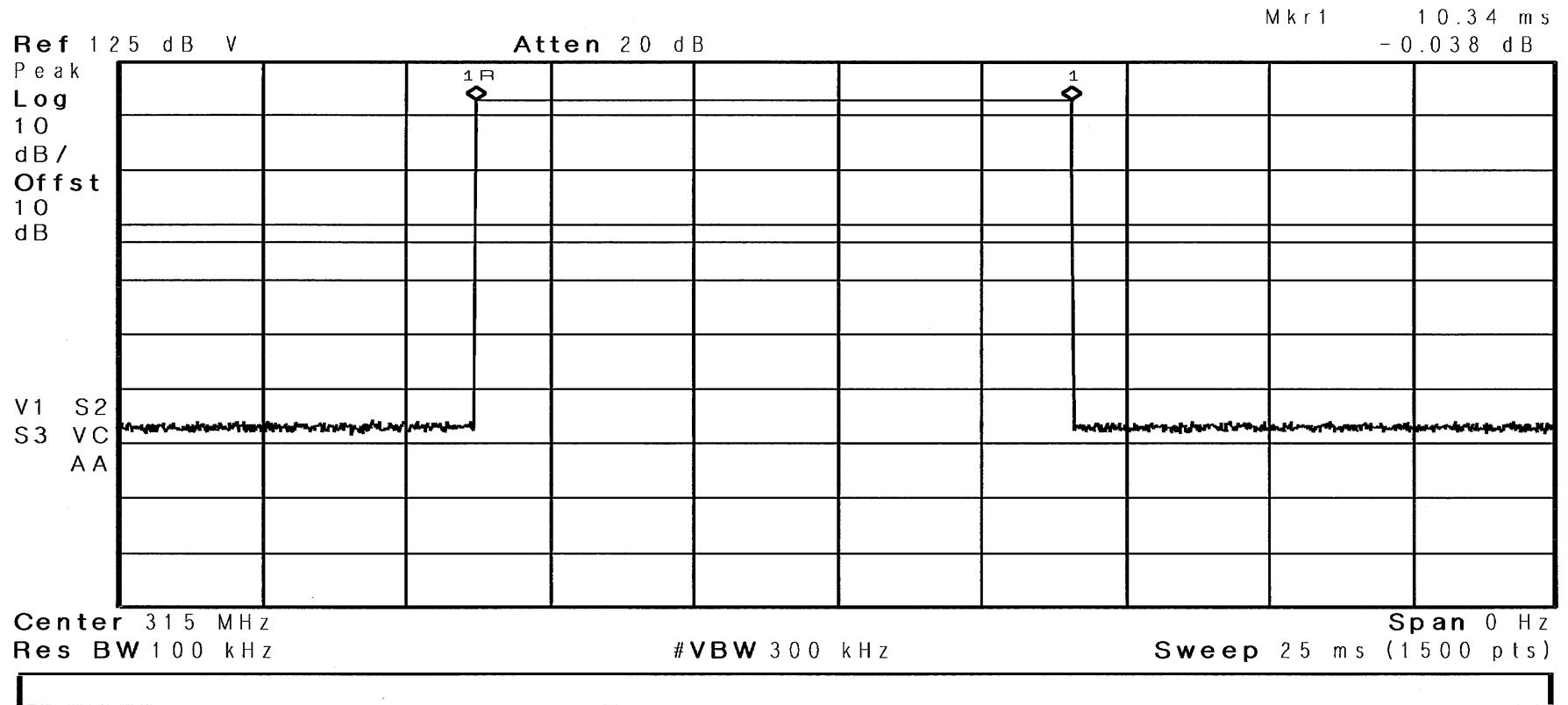
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RETLIF TESTING LABORATORIES

Test Method:	Duty Cycle Determination		
Customer	EveryFit, Inc.	Job No.	R-5996N
Test Sample	Personal Emergency Response Button		
Part Number	QM-12	Serial No.	001
Operating Mode	Transmitting modulated signal at 315 MHz		
Test Specification	FCC part 15.35		
Technician	M. Seamans	Date	November 24, 2015
Climatic Conditions	Temp: 21.3 °C Relative Humidity: 32.0 %		
Notes	Measured maximum transmit time: 10.34ms		

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RETLIF TESTING LABORATORIES

EMISSIONS TEST DATA SHEET

Test Method	Duty Cycle Determination
Customer	EveryFit, Inc.
Job Number	R-5996N
Test Sample	Personal Emergency Response Button
Part Number	QM-12
Serial Number	001
Test Specification	FCC part 15.35
Operating Mode	Transmitting modulated signal at 315 MHz
Technician	M. Seamans
Date	November 24, 2015

Notes: Measured maximum transmit time: 10.34ms

TEST PARAMETERS

Measured on time	Measured time interval	Duty Cycle Factor Calculation	Result	Duty Cycle Factor Allowed
msec	msec		dB	dB
10.34	100	$= 20 \cdot \log_{10} (10.34 \text{ ms} / 100 \text{ ms})$	-19.7095	-19.71

Data Sheet 3 of 3

**FCC Section 15.231(b)(3) - Field Strength of Fundamental Emissions
Test Photographs**



Horizontal Antenna Polarization, 30 to 1000 MHz



Vertical Antenna Polarization, 30 to 1000 MHz

**FCC Section 15.231(b)(3) - Field Strength of Fundamental Emissions
Test Data**

RETLIF TESTING LABORATORIES

EMISSIONS TEST DATA SHEET

Test Method	Field Strength of Emissions - Fundamental Field Strength	
Customer	EveryFit, Inc.	
Job Number	R-5996N	
Test Sample	Personal Emergency Response Button	
Part Number	QM-12	
Serial Number	001	
Test Specification	FCC Part 15, Subpart C	Paragraph: 15.231(b)
Operating Mode	Transmitting modulated signal at 315 MHz	
Technician	M. Seamans	
Date	November 23 rd , 2015	
Notes: Test Distance: 3 meters Detector: Peak Resolution BW: 100 kHz		

TEST PARAMETERS

Frequency	Antenna Position	Measured level	Correction Factor	Corrected Peak Reading	Duty Cycle Factor	Corrected Average Reading	Converted Average Reading	Average Limit at 3m
MHz	(H/V)	dBuV	dB	dBuV/m	dB	dBuV/m	uV/m	uV/m
315	H	75.90	18.82	94.72	-19.71	75.03	5642.87	6042

TEST PARAMETERS

Frequency	Antenna Position	Measured level	Correction Factor	Corrected Peak Reading			Converted Peak Reading	Peak Limit at 3m
MHz	(H/V)	dBuV	dB	dBuV/m			uV/m	uV/m
315	H	75.90	18.82	94.72			54575.79	60420

Peak Limit is 20dB higher than the Average limit.

Data Sheet 1 of 1

**FCC Section 15.231(c) - Bandwidth of Emission
Test Photograph**




Test Setup

**FCC Section 15.231(c) - Bandwidth of Emission
Test Data**

RETLIF TESTING LABORATORIES

Test Method:	Bandwidth of Emission – 20dB Bandwidth		
Customer	EveryFit, Inc.	Job No.	R-5996N
Test Sample	Personal Emergency Response Button		
Part Number	QM-12	Serial No.	001
Operating Mode	Transmitting modulated signal at 315 MHz		
Test Specification	FCC Part 15, Subpart C Paragraph: 15.231 (c)		
Technician	M. Seamans	Date	November 23 rd , 2015
Climatic Conditions	Temp: 21.3 °C Relative Humidity: 32.0 %		
Notes	20dB Bandwidth: 577 kHz Limit: 787.5 kHz		

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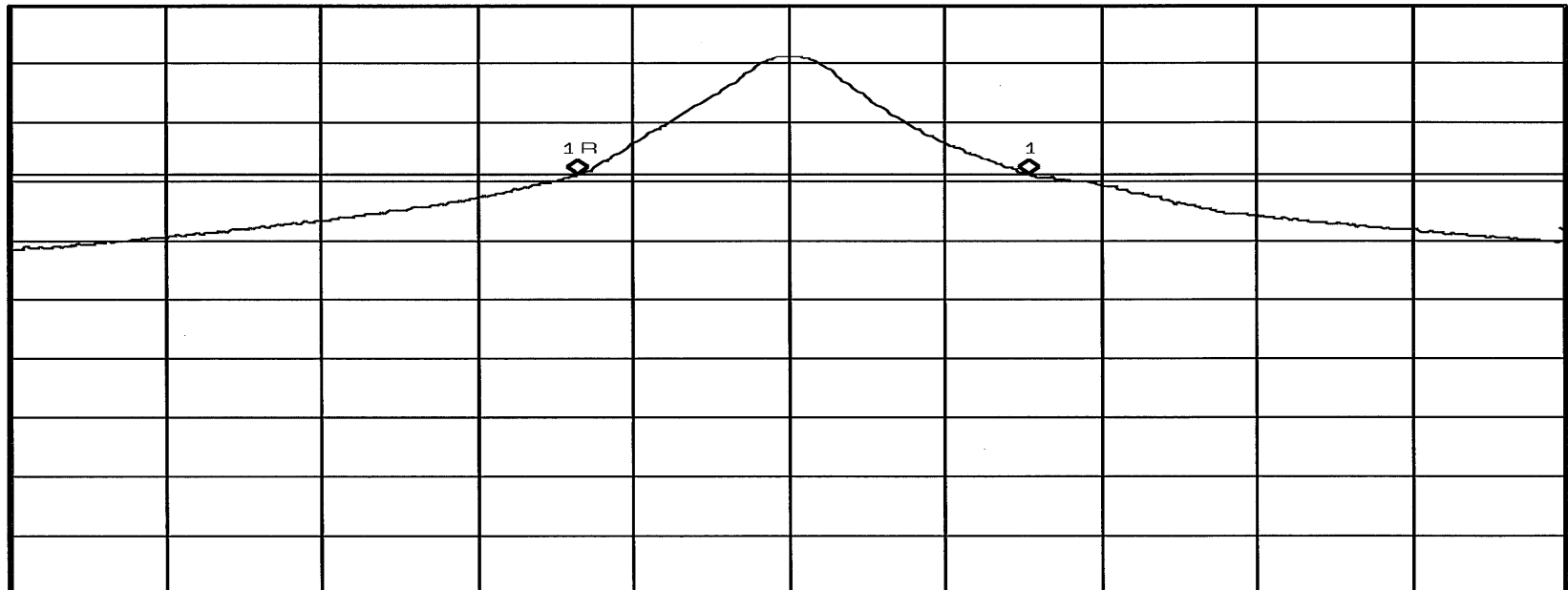
Mkr1 577 kHz
0.017 dB

Ref 125 dB V

Atten 20 dB

Peak
Log
10
dB /
Offset
10
dB
DI
96.1
dB V

V1 S2
S3 FC
AA



Center 315 MHz

#Res BW 100 kHz

#VBW 300 kHz

Span 2 MHz
#Sweep 200 s (500 pts)