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FCC PART 15.249 AND IC RSS-210 TEST REPORT
CLASS II PERMISSIVE CHANGE

Applicant	SYN-TECH SYSTEMS, INC.
Address	100 FOUR POINTS WAY PO BOX 5258 TALLAHASSEE FLORIDA 32314 USA
FCC ID	NR3AIM2MB
IC	4479A-AIM2MB
MODEL	941B0420
Product Description	AUTOMATED FUEL MANAGEMENT SYSTEM
Date Sample Received	5/18/2009
Date Tested	5/29/2009
Tested By	Richard Block
Approved By	Mario de Aranzeta
Report Number	1091AUT9TestReport.doc
Test Results	☒ PASS ☐ FAIL

**THE ATTACHED REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL OF TIMCO ENGINEERING, INC.**



Certificate # 0955-01

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GENERAL REMARKS

The attached report shall not be reproduced except in full without the written permission of Timco Engineering Inc.

The Class II Permissive change is requested to add three additional antennas to the filing.

Summary

The device under test does:

- ☒ fulfill the general approval requirements as identified in this test report
☐ not fulfill the general approval requirements as identified in this test report

Attestations

This equipment has been tested in accordance with the standards identified in this test report. To the best of my knowledge and belief, these tests were performed using the measurement procedures described in this report.

All instrumentation and accessories used to test products for compliance to the indicated standards are calibrated regularly in accordance with ISO 17025 requirements.



Certificate # 0955-01

I attest that the necessary measurements were made, under my supervision, at:

Timco Engineering Inc.
849 NW State Road 45
Newberry, Fl 32669



Authorized Signatory Name:

Mario de Aranzeta C.E.T.
Compliance Engineer/ Lab. Supervisor

Date: 6/2/2009

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GENERAL INFORMATION

DUT Specification

The test results relate only to the items tested.					
Applicable Standard	FCC Part 15.249 and IC RSS-210				
DUT Description	AUTOMATED FUEL MANAGEMENT SYSTEM				
FCC ID	NR3AIM2MB				
Operating Frequency	TX: 902.66666 – 926.66666 MHz	RX: Same			
DUT Power Source	☐ 110–120Vac/50– 60Hz				
	☒ DC Power				
	☐ Battery Operated Exclusively				
Test Item	☐ Prototype	☒ Pre-Production	☐ Production		
Type of Equipment	☐ Fixed	☒ Mobile	☐ Portable		
Antenna Connector	FCC Rules require that the antenna connector be unique.				
Test Facility	Timco Engineering Inc. located at 849 NW State Road 45 Newberry, FL 32669 USA.				
Test Conditions	Temperature: 26°C Relative humidity: 50%				
Test Exercise	The DUT was placed in continuous transmit mode of operation.				
Modifications					

Test Supporting Equipment

Supporting Device	Manufacturer	Model / FCC ID	Serial Number
N/A			

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EMC EQUIPMENT LIST

Device	Manufacturer	Model	Serial Number	Cal/Char Date	Due Date
3/10-Meter OATS	TEI	N/A	N/A	Listed 3/20/07	3/19/10
3-Meter OATS	TEI	N/A	N/A	Listed 2/5/09	2/5/12
3-Meter Semi-Anechoic Chamber	Panashield	N/A	N/A	Listed 5/11/07	5/11/10
Analyzer Tan Tower Quasi-Peak Adapter	HP	85650A	3303A01690	CAL 11/30/07	11/30/09
Analyzer Tan Tower RF Preselector	HP	85685A	3221A01400	CAL 11/30/07	11/30/09
Analyzer Tan Tower Spectrum Analyzer	HP	8566B Opt 462	3138A07786 3144A20661	CAL 11/30/07	11/30/09
Analyzer Tan Tower Preamplifier	HP	8449B-H02	3008A00372	CAL 11/30/07	11/30/09
Frequency Counter	HP	5385A	2730A03025	CAL 7/6/07	7/6/09
Hygro-Thermometer	Extech	445703	0602	CAL 11/15/07	11/15/09
Antenna: Log-Periodic	Electro-Metrics	LPA-30	409	CAL 7/18/08	7/18/09
Measuring Tape-7.5M	Kraftixx	7.5M PROFI		CHAR 11/13/07	11/13/09
System One	Audio Precision	System One	SYS1-45868	CHAR 2/27/08	2/27/10
Temperature Chamber	Tenney Engineering	TTRC	11717-7	CHAR 4/25/08	4/25/10

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TEST PROCEDURES

Radiation Interference: ANSI C63.4-2003 using a spectrum analyzer, a preselector, a quasi-peak adapter, and an appropriate antenna. The analyzer was calibrated in dB above a microvolt at the output of the antenna. The resolution bandwidth was 100 kHz with an appropriate sweep speed and the video bandwidth was 300 kHz up to 1 GHz and 1 MHz with a video BW of 3 MHz above 1 GHz. When an emission was found, the table was rotated to produce the maximum signal strength. The antenna was placed in both the horizontal and vertical planes and the worse case emissions were reported. The spectrum was searched to at least the tenth (10) harmonic of the fundamental.

Formula Of Conversion Factors: The field strength at 3m was established by adding the meter reading of the spectrum analyzer (which is set to read in units of dBuV) to the antenna correction factor supplied by the antenna manufacturer. The antenna correction factors are stated in terms of dB. The gain of the preselector was accounted for in the spectrum analyzer meter reading.

Example:

Freq (MHz)	Meter Reading	+ ACF	+ CL = FS
33	20 dBuV	+ 10.36 dB	+ 0.5 = 30.86 dBuV/m @ 3m

Power Line Conducted Interference: The procedure used was ANSI C63.4-2003 using a 50uH LISN. Both lines were observed. The bandwidth of the spectrum analyzer was 10 kHz with an appropriate sweep speed. The spectrum was scanned from 0.15 to 30 MHz.

Occupied Bandwidth: A small sample of the transmitter output was fed into the spectrum analyzer and the attached plot was printed. The vertical scale is set to -10 dBm per division.

ANSI C63.4-2003 10.1 Measurement Procedures: The DUT was placed on a table 80 cm high and with dimensions of 1m by 1.5m. The DUT was placed in the center of the table (1.5m side). The table used for radiated measurements is capable of continuous rotation.

When an emission was found, the table was rotated to produce the maximum signal strength. At this point, the antenna was raised and lowered from 1m to 4m. The antenna was placed in both the horizontal and vertical planes. Emissions attenuated more than 20 dB below the permissible value are not reported.

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RADIATION INTERFERENCE

Rules Part No.: 15.249, 15.209, RSS-210

Requirements:

Frequency	Limits
Part 15.209	
9 to 490 kHz	2400/F (kHz) μ V/m @ 300 meters
490 to 1705 kHz	24000/F (kHz) μ V/m @ 30 meters
1705 kHz to 30 MHz	29.54 dB μ V/m @ 30 meters
30 – 88	40.0 dB μ V/m @ 3 meters
80 – 216	43.5 dB μ V/m @ 3 meters
216 – 960	46.0 dB μ V/m @ 3 meters
Above 960	54.0 dB μ V/m @ 3 meters
Part 15.249	
Fundamental 902 – 928 MHz	94.0 dB μ V/m @ 3 meters
Fundamental 2.4 – 2.4835 MHz	94.0 dB μ V/m @ 3 meters
Harmonics	54.0 dB μ V/m @ 3 meters

Test Data - Maxrad MUF9000 Antenna Part 15.209, RSS-210

Emission Frequency MHz	Meter Reading dBuV	Ant. Polarity	Coax Loss dB	Correction Factor dB	Field Strength dBuV/m	Margin dB
93.87	21.7	V	0.63	10.18	32.51	10.99
104.67	20.8	V	0.65	12.35	33.80	9.70
107.62	23.1	V	0.66	13.03	36.79	6.71
110.22	23.3	H	0.66	13.07	37.03	6.47
204.53	16.6	H	0.91	12.01	29.52	13.98
214.39	24.1	H	0.93	11.72	36.75	6.75
214.91	18.9	V	0.93	11.45	31.28	12.22
215.98	23.5	H	0.93	11.66	36.09	7.41
216.70	20.5	V	0.93	11.37	32.80	13.20
226.56	17.6	V	0.95	11.20	29.75	16.25
228.99	19.7	H	0.96	11.50	32.16	13.84
236.98	15.4	H	0.97	11.85	28.22	17.78
244.42	16.9	V	0.99	12.17	30.06	15.94
253.64	20.3	V	1.01	12.65	33.96	12.04
254.91	28.6	H	1.01	12.70	42.31	3.69

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Test Data - Maxrad MUF9000 Antenna CONT'D.
Part 15.209, RSS-210

Emission Frequency MHz	Meter Reading dBμV	Ant. Polarity	Coax Loss dB	Correction Factor dB	Field Strength dBμV/m	Margin dB
255.15	29.0	H	1.01	12.71	42.72	3.28
264.79	26.0	V	1.03	13.09	40.12	5.88
265.36	23.9	H	1.03	13.22	38.15	7.85
266.24	25.0	V	1.03	13.15	39.18	6.82
279.30	25.0	V	1.06	13.58	39.64	6.36
284.45	20.4	H	1.07	13.89	35.36	10.64
285.28	22.6	V	1.07	13.76	37.43	8.57
292.71	25.6	H	1.09	14.11	40.80	5.20
295.23	25.7	V	1.09	14.16	40.95	5.05
301.05	27.6	H	1.10	14.48	43.18	2.82
307.03	24.4	V	1.11	14.89	40.40	5.60
311.12	27.6	H	1.11	15.18	43.89	2.11
315.50	25.7	H	1.12	15.09	41.91	4.09
315.83	24.9	V	1.12	14.87	40.89	5.11
325.14	22.6	V	1.13	14.60	38.33	7.67
325.18	23.4	H	1.13	14.95	39.48	6.52
335.98	19.7	H	1.14	14.84	35.68	10.32

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Test Data - Maxrad MUF9000 Antenna
Part 15.249, RSS-210

Tuned Frequency MHz	Emission Frequency MHz	Meter Reading dBuV	Ant. Polarity	Coax Loss dB	Correction Factor dB	Field Strength dBuV/m	Margin dB
903.7	903.70	61.8	H	1.96	23.34	87.10	6.90
903.7	903.70	67.0	V	1.96	22.66	91.62	2.38
903.7	1807.40	14.2	V	2.75	29.97	46.92	7.08
903.7	1807.40	16.2	H	2.75	29.97	48.92	5.08
903.7	2711.10	6.2	H	3.40	32.54	42.14	11.86
903.7	2711.10	6.6	V	3.40	32.54	42.54	11.46
903.7	3614.80	5.8	V	4.15	32.98	42.93	11.07
903.7	3614.80	6.5	H	4.15	32.98	43.63	10.37
903.7	4518.50	5.6	H	4.76	34.10	44.46	9.54
903.7	4518.50	5.8	V	4.76	34.10	44.66	9.34
903.7	5422.20	4.2	V	5.13	34.61	43.94	10.06
903.7	5422.20	5.7	H	5.13	34.61	45.44	8.56
903.7	6325.00	4.7	V	5.40	35.66	45.76	8.24
903.7	6325.90	5.7	H	5.40	35.66	46.76	7.24
903.7	7229.60	4.5	H	5.74	36.05	46.29	7.71
903.7	7229.60	4.7	V	5.74	36.05	46.49	7.51
903.7	8133.30	5.2	V	6.25	36.00	47.45	6.55
903.7	9037.00	4.8	V	6.61	36.32	47.73	6.27
903.7	9037.00	4.8	H	6.61	36.32	47.73	6.27
915.7	915.70	54.8	H	1.97	23.34	80.11	13.89
915.7	915.70	66.2	V	1.97	22.60	90.77	3.23
915.7	1831.40	14.3	V	2.77	30.12	47.19	6.81
915.7	1831.40	14.8	H	2.77	30.12	47.69	6.31
915.7	2747.10	5.9	H	3.42	32.55	41.87	12.13
915.7	2747.10	6.2	V	3.42	32.55	42.17	11.83
915.7	3662.80	6.0	V	4.20	33.06	43.26	10.74
915.7	3662.80	6.3	H	4.20	33.06	43.56	10.44
915.7	4578.50	5.7	H	4.79	34.10	44.59	9.41
915.7	4578.50	5.8	V	4.79	34.10	44.69	9.31
915.7	5494.20	3.3	H	5.15	34.69	43.14	10.86
915.7	5494.20	4.1	V	5.15	34.69	43.94	10.06

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Test Data Cont'd. - Maxrad MUF9000 Antenna
Part 15.249, RSS-210

Tuned Frequency MHz	Emission Frequency MHz	Meter Reading dBuV	Ant. Polarity	Coax Loss dB	Correction Factor dB	Field Strength dBuV/m	Margin dB
915.7	6409.90	4.4	V	5.42	35.73	45.55	8.45
915.7	6409.90	4.8	H	5.42	35.73	45.95	8.05
915.7	7325.60	4.9	H	5.80	36.07	46.77	7.23
915.7	7325.60	5.5	V	5.80	36.07	47.37	6.63
915.7	8241.30	4.6	H	6.30	36.00	46.90	7.10
915.7	8241.30	5.0	V	6.30	36.00	47.30	6.70
915.7	9157.00	6.5	V	6.65	36.39	49.54	4.46
915.7	9157.00	6.6	H	6.65	36.39	49.64	4.36
926.7	926.70	62.8	H	1.99	23.43	88.22	5.78
926.7	926.70	68.4	V	1.99	22.67	93.06	0.94
926.7	1853.40	14.4	H	2.78	30.26	47.44	6.56
926.7	1853.40	16.3	V	2.78	30.26	49.34	4.66
926.7	2780.10	6.5	V	3.45	32.56	42.51	11.49
926.7	2780.10	7.4	H	3.45	32.56	43.41	10.59
926.7	3706.80	6.8	H	4.24	33.13	44.17	9.83
926.7	3706.80	6.9	V	4.24	33.13	44.27	9.73
926.7	4633.50	6.4	H	4.82	34.10	45.32	8.68
926.7	4633.50	7.8	V	4.82	34.10	46.72	7.28
926.7	5560.20	4.0	H	5.17	34.78	43.95	10.05
926.7	5560.20	4.2	V	5.17	34.78	44.15	9.85
926.7	6486.90	3.7	H	5.45	35.79	44.94	9.06
926.7	6486.90	4.3	V	5.45	35.79	45.54	8.46
926.7	7413.60	5.7	H	5.85	36.08	47.63	6.37
926.7	7413.60	6.3	V	5.85	36.08	48.23	5.77
926.7	8340.30	5.9	H	6.34	36.00	48.24	5.76
926.7	8340.30	6.1	V	6.34	36.00	48.44	5.56
926.7	9267.00	6.1	H	6.68	36.46	49.24	4.76
926.7	9267.00	7.2	V	6.68	36.46	50.34	3.66

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Test Data - Larson R380.900.334 Antenna
Part 15.209, RSS-210

Emission Frequency MHz	Meter Reading dBuV	Ant. Polarity	Coax Loss dB	Correction Factor dB	Field Strength dBuV/m	Margin dB
40.26	17.4	V	0.45	9.92	27.77	12.23
81.98	17.8	V	0.6	7.7	26.1	13.9
94.92	24	V	0.64	10.48	35.12	8.38
99.97	26.4	V	0.65	11.69	38.74	4.76
105.81	21	V	0.66	12.59	34.25	9.25
115.7	15.6	V	0.67	14.59	30.86	12.64
204.74	19.2	H	0.91	12.01	32.12	11.38
214.85	23.5	H	0.93	11.71	36.14	7.36
219.5	28.5	H	0.94	11.52	40.96	5.04
224.38	15.6	V	0.95	11.2	27.75	18.25
225.55	26.4	H	0.95	11.5	38.85	7.15
235.66	22.7	H	0.97	11.78	35.45	10.55
249.35	24.6	H	1	12.47	38.07	7.93
263.94	25.1	H	1.03	13.14	39.27	6.73
264.15	16.1	V	1.03	13.07	30.2	15.80
265.29	21.8	H	1.03	13.22	36.05	9.95
274.96	16.7	V	1.05	13.45	31.2	14.80
276.82	18.1	V	1.05	13.5	32.65	13.35
278.81	16	H	1.06	13.76	30.82	15.18
290.98	15.2	H	1.08	14.04	30.32	15.68
303.45	15.8	V	1.1	14.64	31.54	14.46
304.54	18.2	H	1.1	14.76	34.06	11.94
306.2	16	V	1.11	14.83	31.94	14.06
311.51	20.5	H	1.11	15.17	36.78	9.22
317.45	19.8	H	1.12	15.05	35.97	10.03
325.25	19	H	1.13	14.95	35.08	10.92

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Tuned Frequency MHz	Emission Frequency MHz	Meter Reading dBuV	Ant. Polarity	Coax Loss dB	Correction Factor dB	Field Strength dBuV/m	Margin dB
903.7	903.7	58.1	H	1.96	23.34	83.4	10.6
903.7	903.7	65.4	V	1.96	22.66	90.02	3.98
903.7	1,807.40	13	H	2.75	29.97	45.72	8.28
903.7	1,807.40	14.9	V	2.75	29.97	47.62	6.38
903.7	2,711.10	6	V	3.4	32.54	41.94	12.06
903.7	2,711.10	6.2	H	3.4	32.54	42.14	11.86
903.7	3,614.80	6.7	H	4.15	32.98	43.83	10.17
903.7	3,614.80	6.7	V	4.15	32.98	43.83	10.17
903.7	4,518.50	5.7	V	4.76	34.1	44.56	9.44
903.7	4,518.50	6.3	H	4.76	34.1	45.16	8.84
903.7	5,422.20	3.8	H	5.13	34.61	43.54	10.46
903.7	5,422.20	3.8	V	5.13	34.61	43.54	10.46
903.7	6,325.90	4.6	H	5.4	35.66	45.66	8.34
903.7	6,325.90	5.8	V	5.4	35.66	46.86	7.14
903.7	7,229.60	5.1	H	5.74	36.05	46.89	7.11
903.7	7,229.60	5.4	V	5.74	36.05	47.19	6.81
903.7	8,133.30	5.8	H	6.25	36	48.05	5.95
903.7	8,133.30	6.1	V	6.25	36	48.35	5.65
903.7	9,037.00	4.7	H	6.61	36.32	47.63	6.37
903.7	9,037.00	5.6	V	6.61	36.32	48.53	5.47
915.7	915.7	57.9	H	1.97	23.34	83.21	10.79
915.7	915.7	60.7	V	1.97	22.6	85.27	8.73
915.7	1,831.40	13.3	H	2.77	30.12	46.19	7.81
915.7	1,831.40	14.9	V	2.77	30.12	47.79	6.21
915.7	2,747.10	5.7	H	3.42	32.55	41.67	12.33
915.7	2,747.10	6.9	V	3.42	32.55	42.87	11.13
915.7	3,662.80	5.8	H	4.2	33.06	43.06	10.94
915.7	3,662.80	5.9	V	4.2	33.06	43.16	10.84
915.7	4,578.50	5.9	H	4.79	34.1	44.79	9.21
915.7	4,578.50	6.5	V	4.79	34.1	45.39	8.61
915.7	5,494.20	2.8	V	5.15	34.69	42.64	11.36

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**Test Data Contd. - Larson R380.900.334 Antenna
Part 15.249, RSS-210**

Tuned Frequency MHz	Emission Frequency MHz	Meter Reading dBuV	Ant. Polarity	Coax Loss dB	Correction Factor dB	Field Strength dBuV/m	Margin dB
915.7	5,494.20	2.9	H	5.15	34.69	42.74	11.26
915.7	6,409.90	4.3	H	5.42	35.73	45.45	8.55
915.7	6,409.90	4.3	V	5.42	35.73	45.45	8.55
915.7	7,325.60	5.2	H	5.8	36.07	47.07	6.93
915.7	7,325.60	6.1	V	5.8	36.07	47.97	6.03
915.7	8,241.30	4.3	V	6.3	36	46.6	7.4
915.7	8,241.30	4.6	H	6.3	36	46.9	7.1
915.7	9,157.00	5.5	H	6.65	36.39	48.54	5.46
915.7	9,157.00	5.6	V	6.65	36.39	48.64	5.36
926.7	926.7	58.5	H	1.99	23.43	83.92	10.08
926.7	926.7	62.5	V	1.99	22.67	87.16	6.84
926.7	1,853.40	15.1	V	2.78	30.26	48.14	5.86
926.7	1,853.40	15.7	H	2.78	30.26	48.74	5.26
926.7	2,780.10	6.9	H	3.45	32.56	42.91	11.09
926.7	2,780.10	7.6	V	3.45	32.56	43.61	10.39
926.7	3,706.80	5.8	V	4.24	33.13	43.17	10.83
926.7	3,706.80	6.7	H	4.24	33.13	44.07	9.93
926.7	4,633.50	6	V	4.82	34.1	44.92	9.08
926.7	4,633.50	6.5	H	4.82	34.1	45.42	8.58
926.7	5,560.20	4.3	H	5.17	34.78	44.25	9.75
926.7	5,560.20	4.6	V	5.17	34.78	44.55	9.45
926.7	6,486.90	4.3	H	5.45	35.79	45.54	8.46
926.7	6,486.90	5.5	V	5.45	35.79	46.74	7.26
926.7	7,413.60	6	V	5.85	36.08	47.93	6.07
926.7	7,413.60	7.6	H	5.85	36.08	49.53	4.47
926.7	8,340.30	5.2	H	6.34	36	47.54	6.46
926.7	8,340.30	5.6	V	6.34	36	47.94	6.06
926.7	9,267.00	5	H	6.68	36.46	48.14	5.86
926.7	9,267.00	6	V	6.68	36.46	49.14	4.86

APPLICANT: SYN-TECH SYSTEMS, INC.
FCC ID: NR3AIM2MB
IC: 4479A-AIM2MB
REPORT: Y:\S\SYN_NR3\1091AUT9\1091AUT9TestReport.doc

Test Data - Mobile Mark CVT925S Antenna
Part 15.209, RSS-210

Emission Frequency MHz	Meter Reading dBuV	Ant. Polarity	Coax Loss dB	Correction Factor dB	Field Strength dBuV/m	Margin dB
68.48	17.2	V	0.56	8.23	25.99	14.01
91.74	23.3	V	0.63	9.59	33.52	9.98
104.02	27.6	V	0.65	12.26	40.51	2.99
105.65	26	H	0.66	11.78	38.44	5.06
105.92	27.5	V	0.66	12.62	40.78	2.72
214.15	23.2	H	0.93	11.73	35.86	7.64
221.31	26.4	H	0.94	11.5	38.84	7.16
224.09	25.2	V	0.95	11.2	37.35	8.65
227.23	24.8	V	0.95	11.2	36.95	9.05
232.1	23.3	H	0.96	11.61	35.87	10.13
235.06	22.6	V	0.97	11.55	35.12	10.88
235.1	22.5	H	0.97	11.76	35.23	10.77
248.5	24.9	H	1	12.43	38.33	7.67
252.08	23.7	V	1	12.58	37.28	8.72
255.23	22.8	V	1.01	12.71	36.52	9.48
264.29	24.7	H	1.03	13.16	38.89	7.11
265.95	16	V	1.03	13.14	30.17	15.83
266.67	20.6	H	1.03	13.3	34.93	11.07
284.48	15.8	V	1.07	13.73	30.6	15.40
284.75	17.3	H	1.07	13.9	32.27	13.73
287.92	16.6	V	1.08	13.84	31.52	14.48
294.58	20.1	H	1.09	14.18	35.37	10.63
300.23	25.5	H	1.1	14.42	41.02	4.98
303.59	19.3	V	1.1	14.65	35.05	10.95
313.37	19.8	H	1.11	15.13	36.04	9.96
314.76	21.5	V	1.11	14.91	37.52	8.48
316.38	26	H	1.12	15.07	42.19	3.81
316.75	22.4	V	1.12	14.83	38.35	7.65
325.11	20.8	V	1.13	14.6	36.53	9.47
335.3	15.1	V	1.14	14.55	30.79	15.21

APPLICANT: SYN-TECH SYSTEMS, INC.
FCC ID: NR3AIM2MB
IC: 4479A-AIM2MB
REPORT: Y:\S\SYN_NR3\1091AUT9\1091AUT9TestReport.doc

Test Data - Mobile Mark CVT925S Antenna
Part 15.249, RSS-210

Tuned Frequency MHz	Emission Frequency MHz	Meter Reading dBuV	Ant. Polarity	Coax Loss dB	Correction Factor dB	Field Strength dBuV/m	Margin dB
903.7	903.7	61.8	H	1.96	23.34	87.1	6.9
903.7	903.7	68.8	V	1.96	22.66	93.42	0.58
903.7	1,807.40	14.5	V	2.75	29.97	47.22	6.78
903.7	1,807.40	14.8	H	2.75	29.97	47.52	6.48
903.7	2,711.10	6.4	H	3.4	32.54	42.34	11.66
903.7	2,711.10	6.5	V	3.4	32.54	42.44	11.56
903.7	3,614.80	6	V	4.15	32.98	43.13	10.87
903.7	3,614.80	6.4	H	4.15	32.98	43.53	10.47
903.7	4,518.50	4.8	V	4.76	34.1	43.66	10.34
903.7	4,518.50	5.4	H	4.76	34.1	44.26	9.74
903.7	5,422.20	3.3	V	5.13	34.61	43.04	10.96
903.7	5,422.20	3.9	H	5.13	34.61	43.64	10.36
903.7	6,325.90	4.9	V	5.4	35.66	45.96	8.04
903.7	6,325.90	5.1	H	5.4	35.66	46.16	7.84
903.7	7,229.60	5.3	V	5.74	36.05	47.09	6.91
903.7	7,229.60	5.7	H	5.74	36.05	47.49	6.51
903.7	8,133.30	3.9	H	6.25	36	46.15	7.85
903.7	8,133.30	5.5	V	6.25	36	47.75	6.25
903.7	9,037.00	5.4	V	6.61	36.32	48.33	5.67
903.7	9,037.00	5.8	H	6.61	36.32	48.73	5.27
915.7	915.7	58.6	H	1.97	23.34	83.91	10.09
915.7	915.7	65	V	1.97	22.6	89.57	4.43
915.7	1,831.40	13.9	H	2.77	30.12	46.79	7.21
915.7	1,831.40	14.5	V	2.77	30.12	47.39	6.61
915.7	2,747.10	7	V	3.42	32.55	42.97	11.03
915.7	2,747.10	7.1	H	3.42	32.55	43.07	10.93
915.7	3,662.80	6.3	V	4.2	33.06	43.56	10.44
915.7	3,662.80	7.3	H	4.2	33.06	44.56	9.44
915.7	4,578.50	5.2	V	4.79	34.1	44.09	9.91
915.7	4,578.50	5.4	H	4.79	34.1	44.29	9.71

APPLICANT: SYN-TECH SYSTEMS, INC.
FCC ID: NR3AIM2MB
IC: 4479A-AIM2MB
REPORT: Y:\S\SYN_NR3\1091AUT9\1091AUT9TestReport.doc

Test Data Contd. - Mobile Mark CVT925S Antenna
Part 15.249, RSS-210

Tuned Frequency MHz	Emission Frequency MHz	Meter Reading dBuV	Ant. Polarity	Coax Loss dB	Correction Factor dB	Field Strength dBuV/m	Margin dB
915.7	5,494.20	3.5	H	5.15	34.69	43.34	10.66
915.7	5,494.20	3.9	V	5.15	34.69	43.74	10.26
915.7	6,409.90	4.1	H	5.42	35.73	45.25	8.75
915.7	6,409.90	5	V	5.42	35.73	46.15	7.85
915.7	7,325.60	4.4	H	5.8	36.07	46.27	7.73
915.7	7,325.60	5.3	V	5.8	36.07	47.17	6.83
915.7	8,241.30	4.5	V	6.3	36	46.8	7.2
915.7	8,241.30	4.7	H	6.3	36	47	7
915.7	9,157.00	6.3	H	6.65	36.39	49.34	4.66
915.7	9,157.00	6.8	V	6.65	36.39	49.84	4.16
926.7	926.7	59.2	H	1.99	23.43	84.62	9.38
926.7	926.7	64.8	V	1.99	22.67	89.46	4.54
926.7	1,853.40	13.7	H	2.78	30.26	46.74	7.26
926.7	1,853.40	14.5	V	2.78	30.26	47.54	6.46
926.7	2,780.10	5.5	H	3.45	32.56	41.51	12.49
926.7	2,780.10	6.3	V	3.45	32.56	42.31	11.69
926.7	3,706.80	6.1	V	4.24	33.13	43.47	10.53
926.7	3,706.80	6.3	H	4.24	33.13	43.67	10.33
926.7	4,633.50	5.5	V	4.82	34.1	44.42	9.58
926.7	4,633.50	6	H	4.82	34.1	44.92	9.08
926.7	5,560.20	4.2	H	5.17	34.78	44.15	9.85
926.7	5,560.20	4.7	V	5.17	34.78	44.65	9.35
926.7	6,486.90	4.4	V	5.45	35.79	45.64	8.36
926.7	6,486.90	4.9	H	5.45	35.79	46.14	7.86
926.7	7,413.60	5.5	H	5.85	36.08	47.43	6.57
926.7	7,413.60	6.5	V	5.85	36.08	48.43	5.57
926.7	8,340.30	5.4	V	6.34	36	47.74	6.26
926.7	8,340.30	5.7	H	6.34	36	48.04	5.96
926.7	9,267.00	4.8	V	6.68	36.46	47.94	6.06
926.7	9,267.00	5.3	H	6.68	36.46	48.44	5.56

APPLICANT: SYN-TECH SYSTEMS, INC.
FCC ID: NR3AIM2MB
IC: 4479A-AIM2MB
REPORT: Y:\S\SYN_NR3\1091AUT9\1091AUT9TestReport.doc

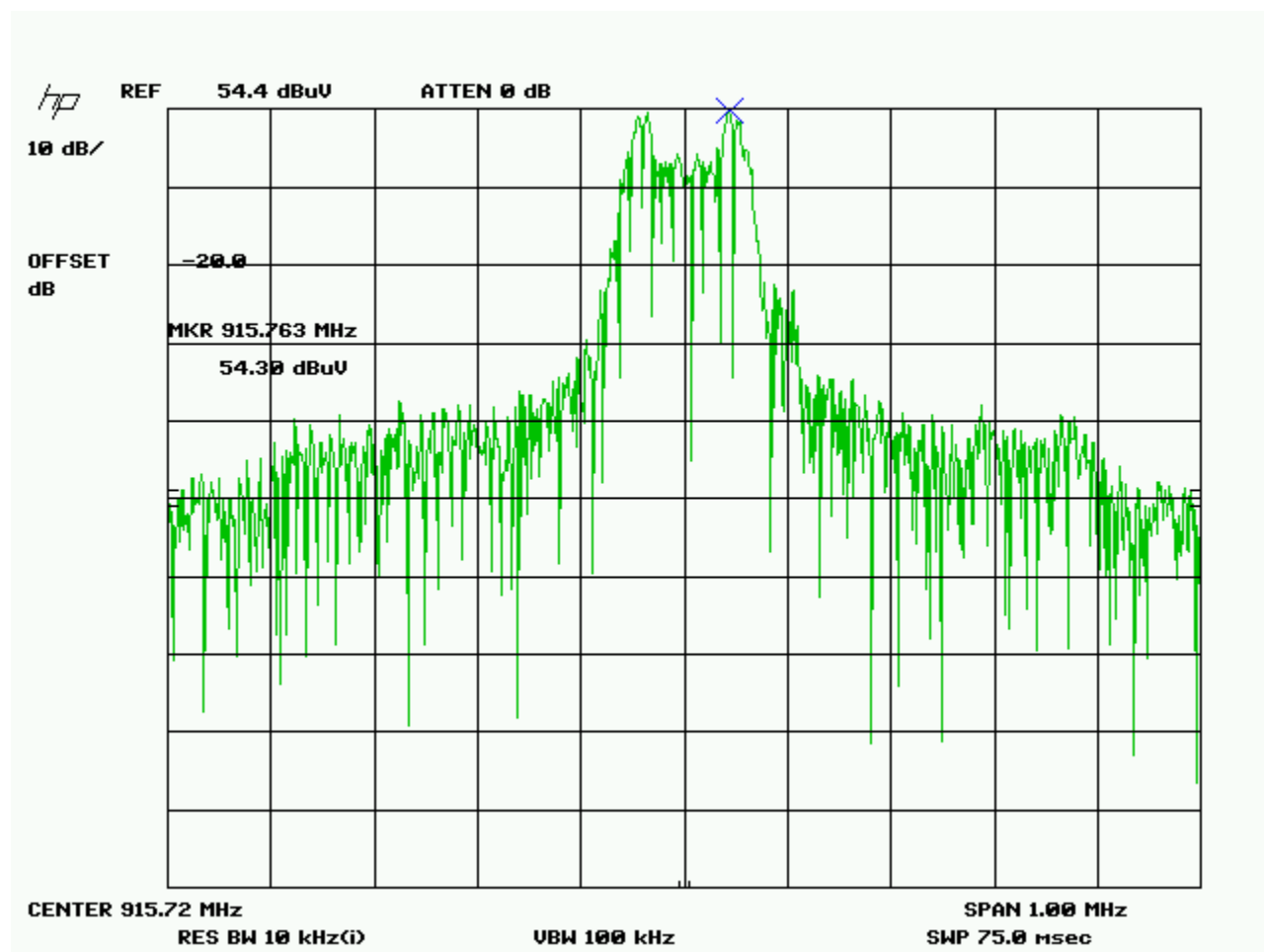
OCCUPIED BANDWIDTH

Rules Part No.: 15.249 (d), RSS-210, RSS-GEN

Requirements: The field strength of any emissions appearing outside the band edges and up to 10 kHz above and below the band edges shall be attenuated at least 50 dB below the level of the carrier or to the general limits of 15.249.

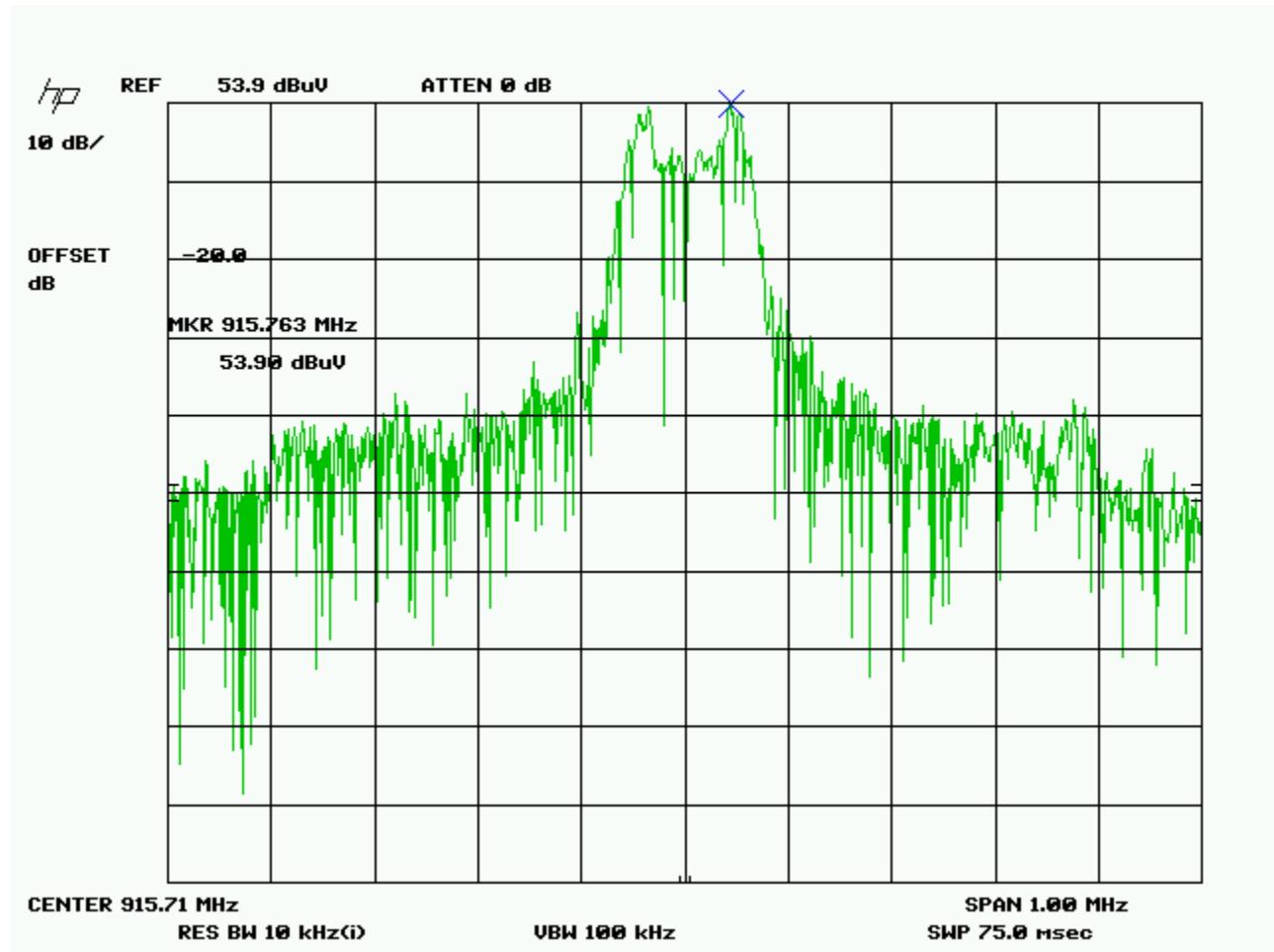
Test Data:

Maxrad MUF9000 Antenna



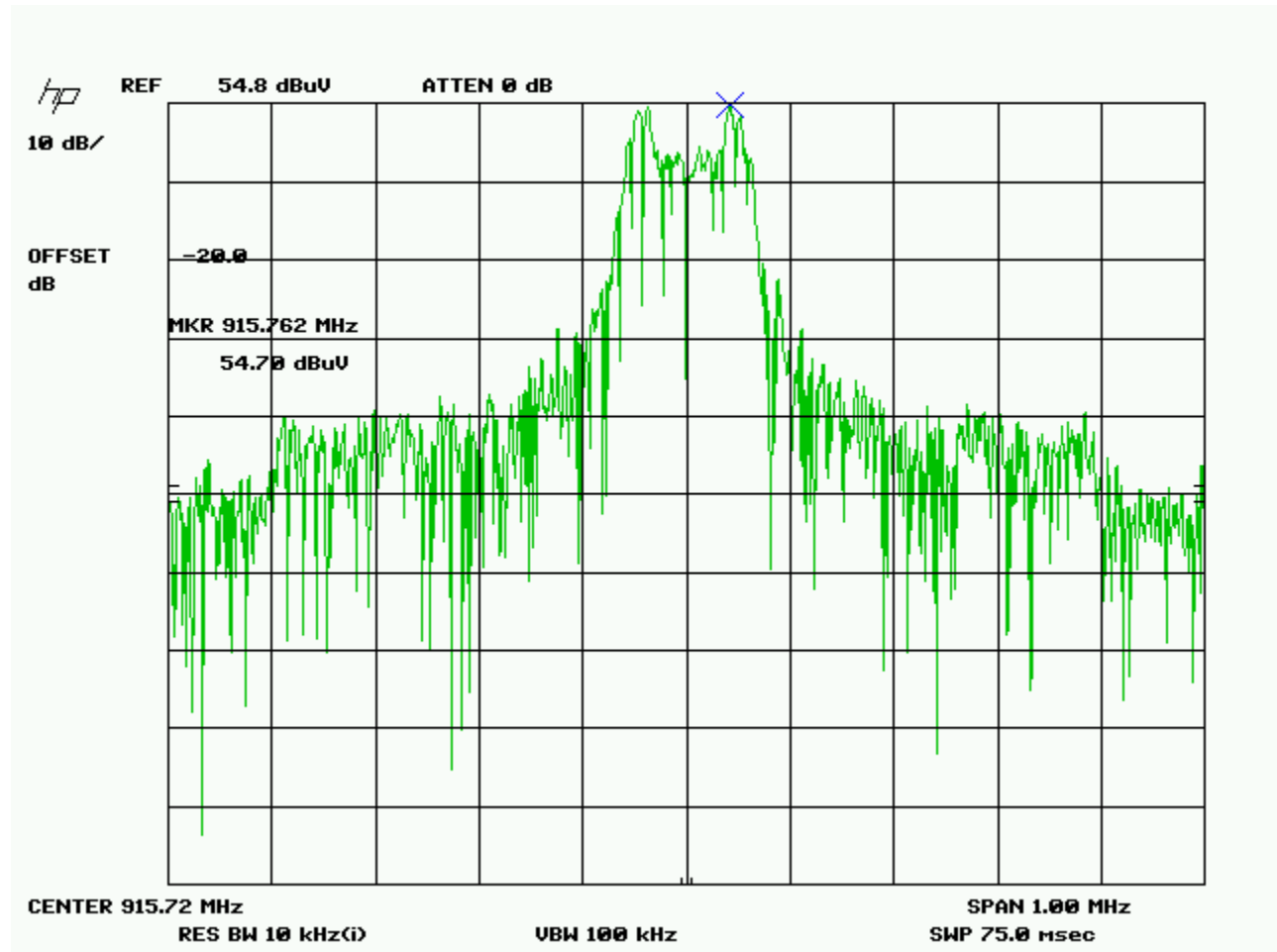
APPLICANT: SYN-TECH SYSTEMS, INC.
FCC ID: NR3AIM2MB
IC: 4479A-AIM2MB
REPORT: Y:\S\SYN_NR3\1091AUT9\1091AUT9TestReport.doc

Larson R380.900.334 Antenna



APPLICANT: SYN-TECH SYSTEMS, INC.
 FCC ID: NR3AIM2MB
 IC: 4479A-AIM2MB
 REPORT: Y:\S\SYN_NR3\1091AUT9\1091AUT9TestReport.doc

Mobile Mark CVT925S Antenna



APPLICANT: SYN-TECH SYSTEMS, INC.
FCC ID: NR3AIM2MB
IC: 4479A-AIM2MB
REPORT: Y:\S\SYN_NR3\1091AUT9\1091AUT9TestReport.doc

BAND EDGE COMPLIANCE

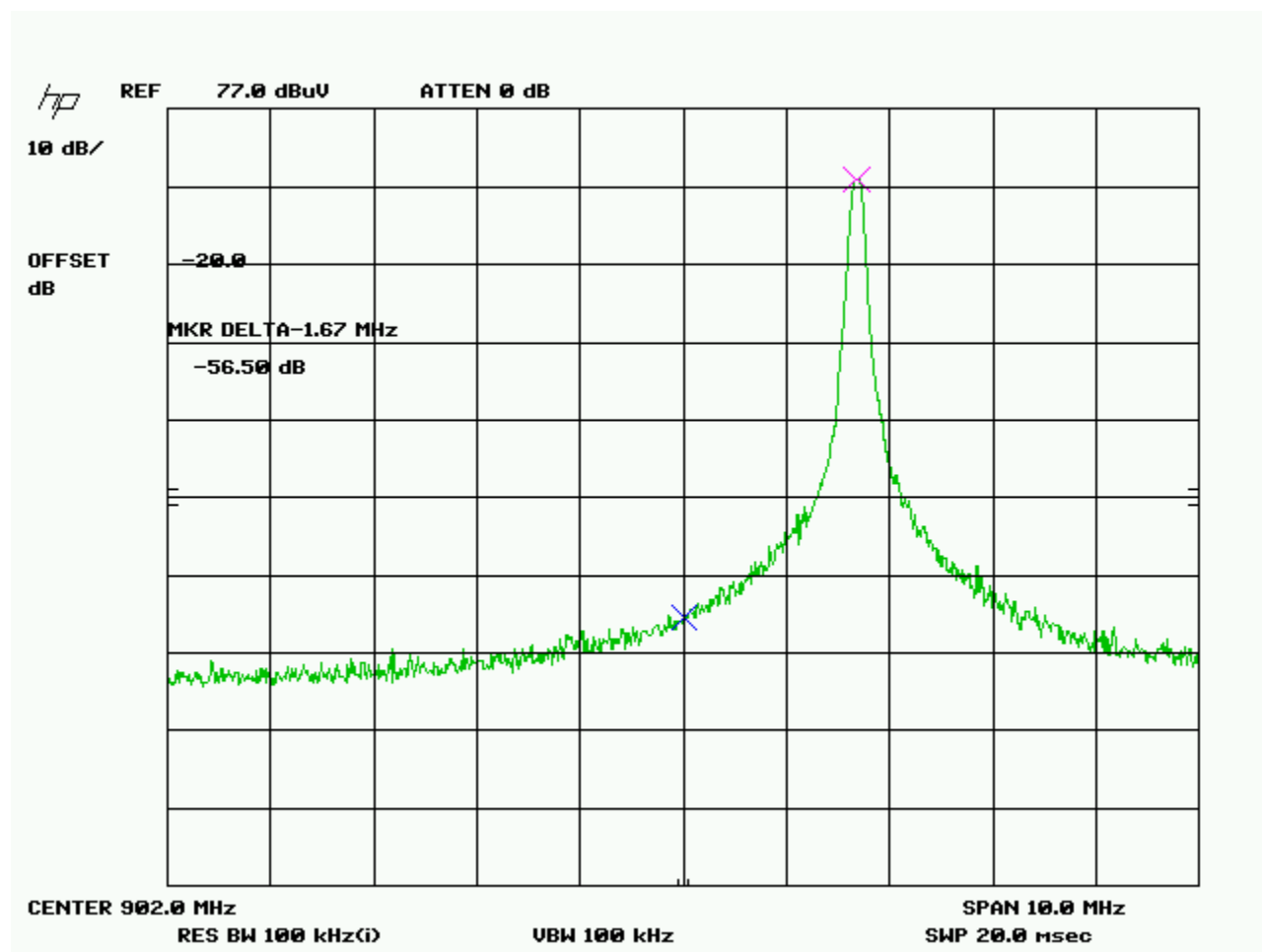
Rules Part No.: 15.249 (d), RSS-210, RSS-GEN

Requirements: 40 dBc or in the case of restricted bands 54 dBuV/m.

Test Data:

Lower band edge

Maxrad MUF9000 Antenna



Tuned Frequency MHz	Emission Frequency MHz	Meter Reading dBμV	Ant. Polarity	Coax Loss dB	Correction Factor dB	Field Strength dBμV/m
903.7	903.7	65.4	V	1.96	22.66	90.02

90.02 dBμV/m- 56.5 dB = 33.52 dBμV/m

APPLICANT: SYN-TECH SYSTEMS, INC.

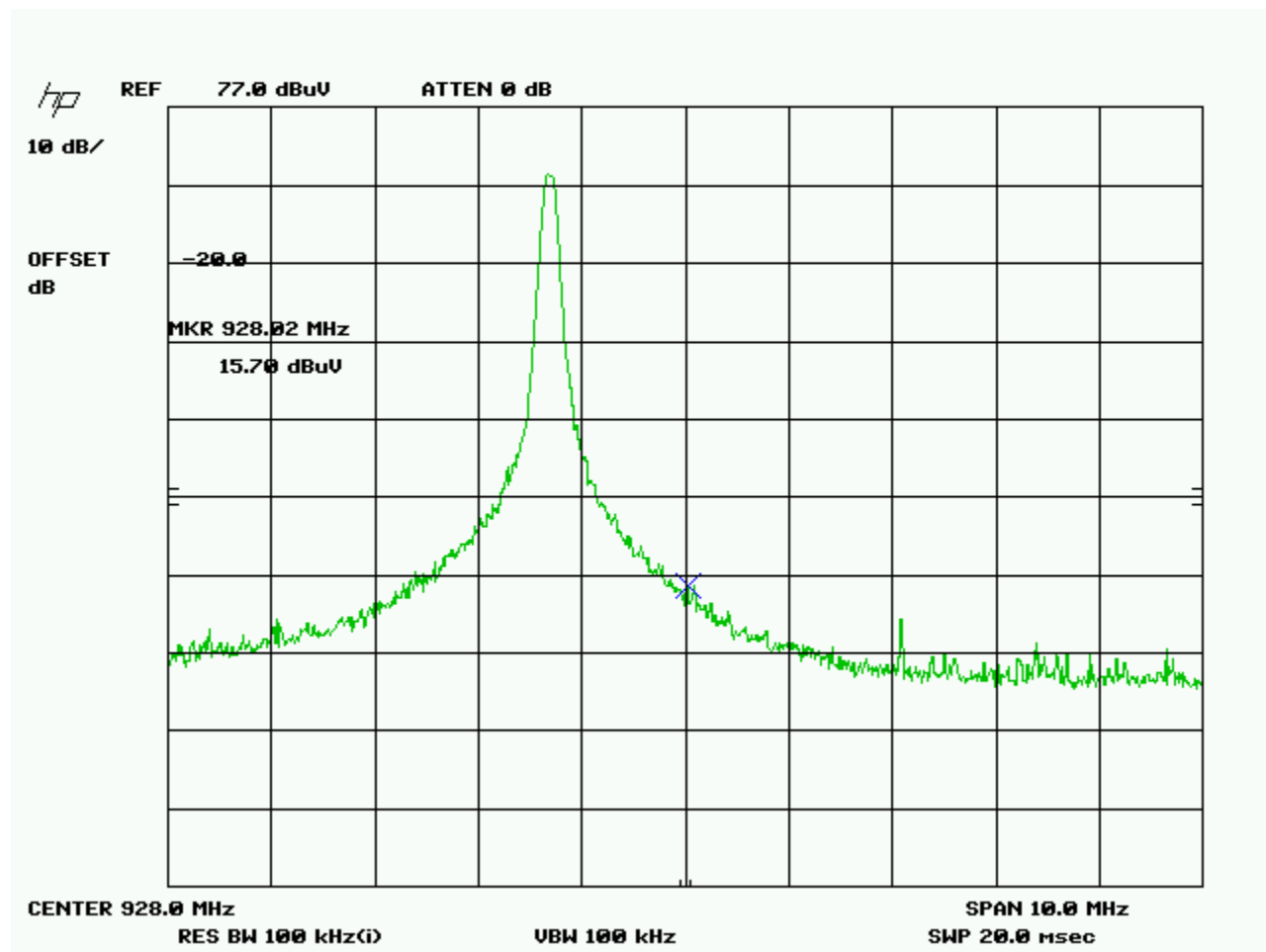
FCC ID: NR3AIM2MB

IC: 4479A-AIM2MB

REPORT: Y:\S\SYN_NR3\1091AUT9\1091AUT9TestReport.doc

Upper band edge

Maxrad MUF9000 Antenna

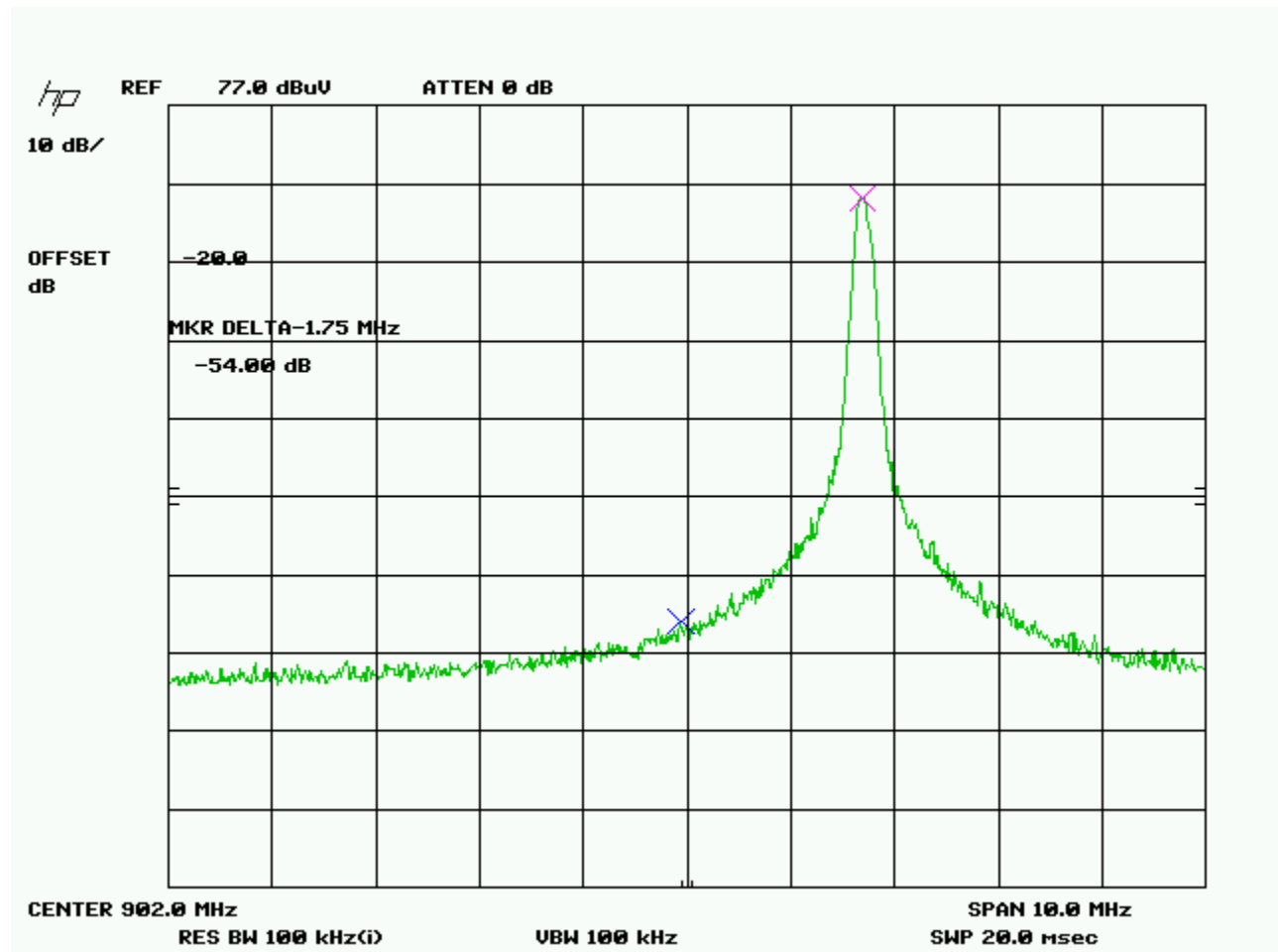


Tuned Frequency MHz	Emission Frequency MHz	Meter Reading dBuV	Ant. Polarity V/H	Coax Loss dB	Correction Factor dB/m	Field Strength dBuV/m	Margin dB
928.0	928.02	15.7	V	1.99	22.68	40.37	5.63

APPLICANT: SYN-TECH SYSTEMS, INC.
FCC ID: NR3AIM2MB
IC: 4479A-AIM2MB
REPORT: Y:\S\SYN_NR3\1091AUT9\1091AUT9TestReport.doc

Lower band edge

Larson R380.900.334 Antenna



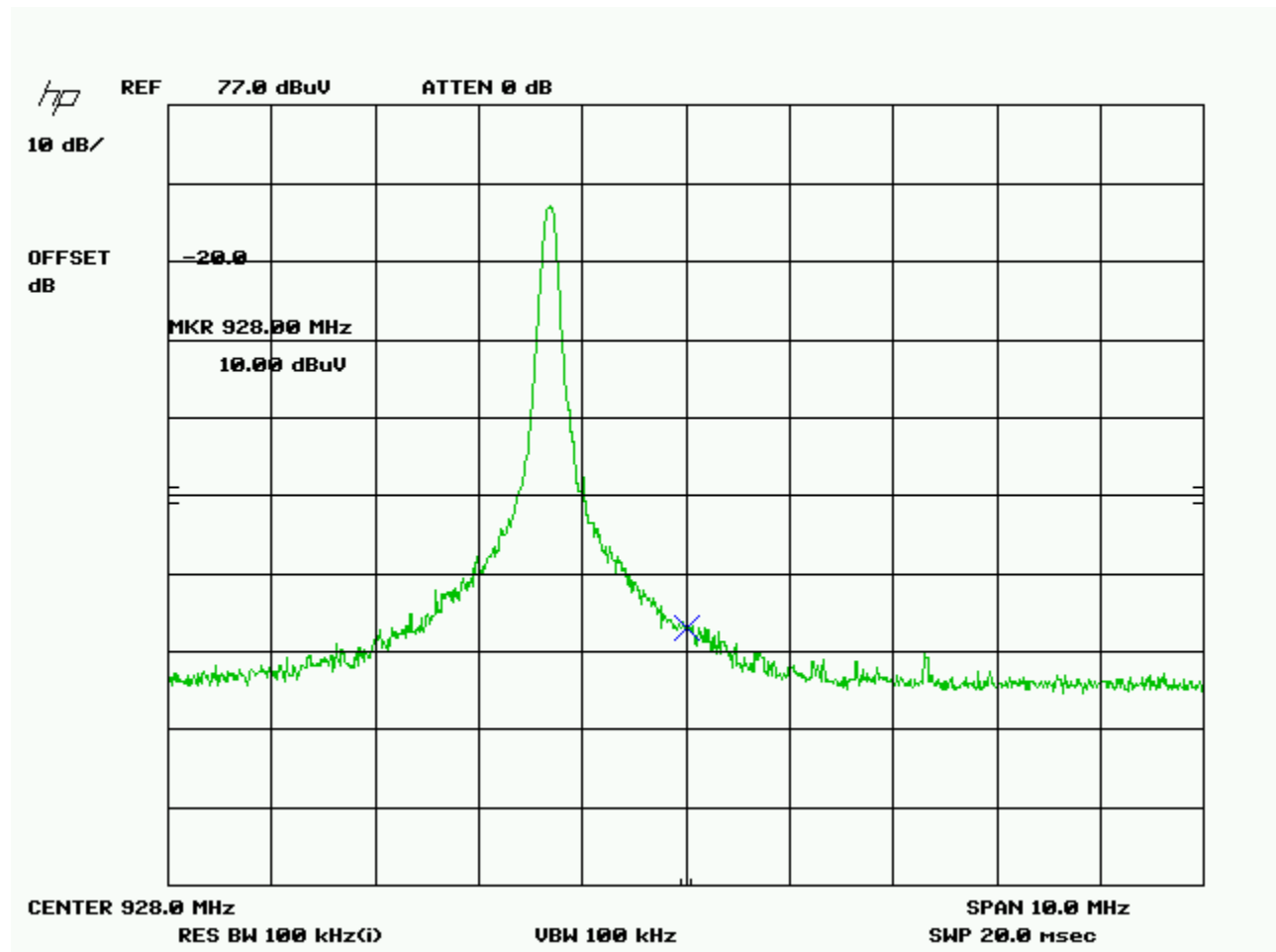
Tuned Frequency MHz	Emission Frequency MHz	Meter Reading dBμV	Ant. Polarity	Coax Loss dB	Correction Factor dB	Field Strength dBμV/m
903.7	903.7	65.4	V	1.96	22.66	90.02

$$90.02 \text{ dB}\mu\text{V/m} - 54 \text{ dB} = 36.02 \text{ dB}\mu\text{V/m}$$

APPLICANT: SYN-TECH SYSTEMS, INC.
FCC ID: NR3AIM2MB
IC: 4479A-AIM2MB
REPORT: Y:\S\SYN_NR3\1091AUT9\1091AUT9TestReport.doc

Upper band edge

Larson R380.900.334 Antenna

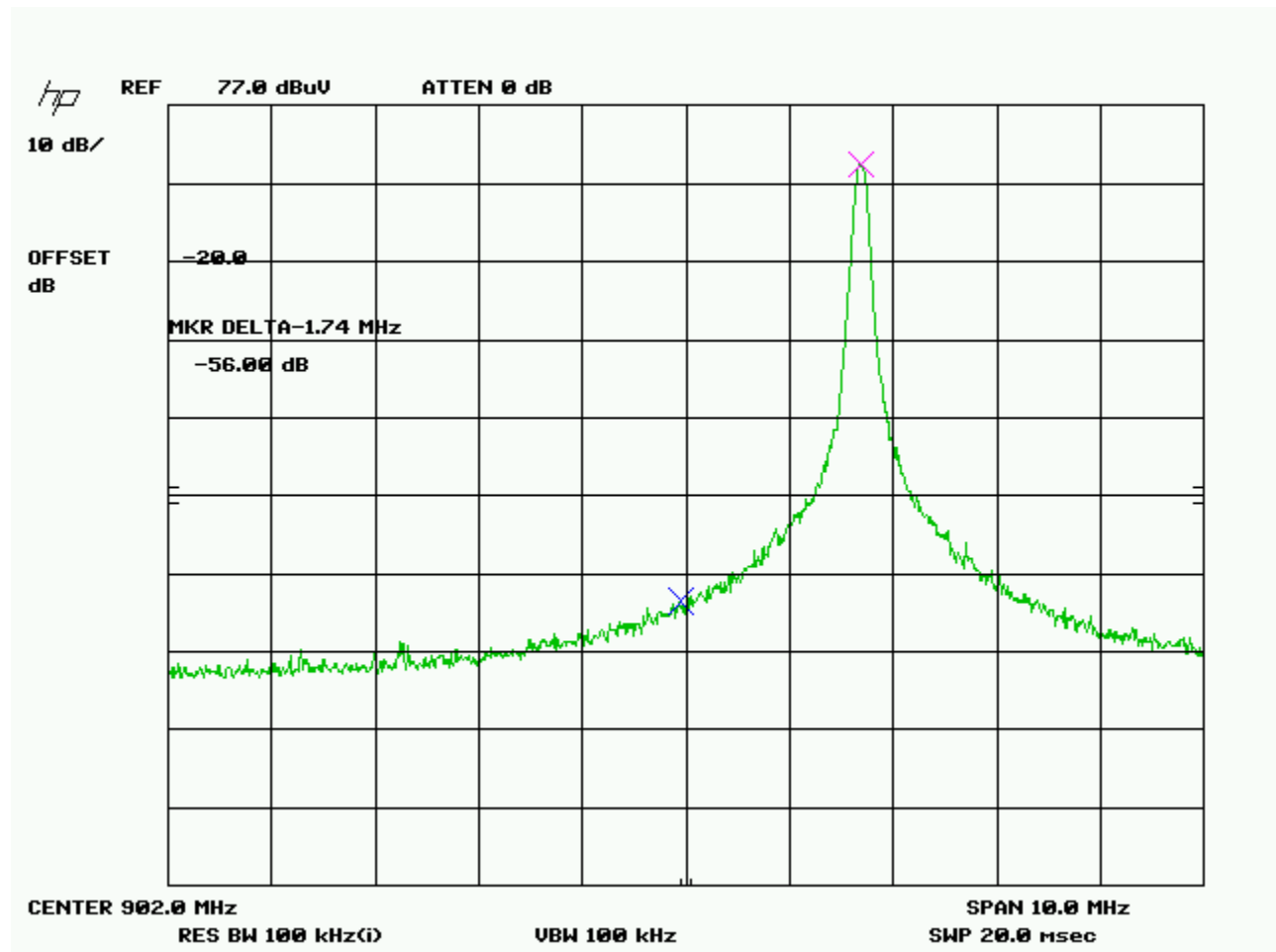


Tuned Frequency MHz	Emission Frequency MHz	Meter Reading dBuV	Ant. Polarity V/H	Coax Loss dB	Correction Factor dB/m	Field Strength dBuV/m	Margin dB
928.00	928.00	10	V	1.99	22.68	34.67	11.33

APPLICANT: SYN-TECH SYSTEMS, INC.
FCC ID: NR3AIM2MB
IC: 4479A-AIM2MB
REPORT: Y:\S\SYN_NR3\1091AUT9\1091AUT9TestReport.doc

Lower band edge

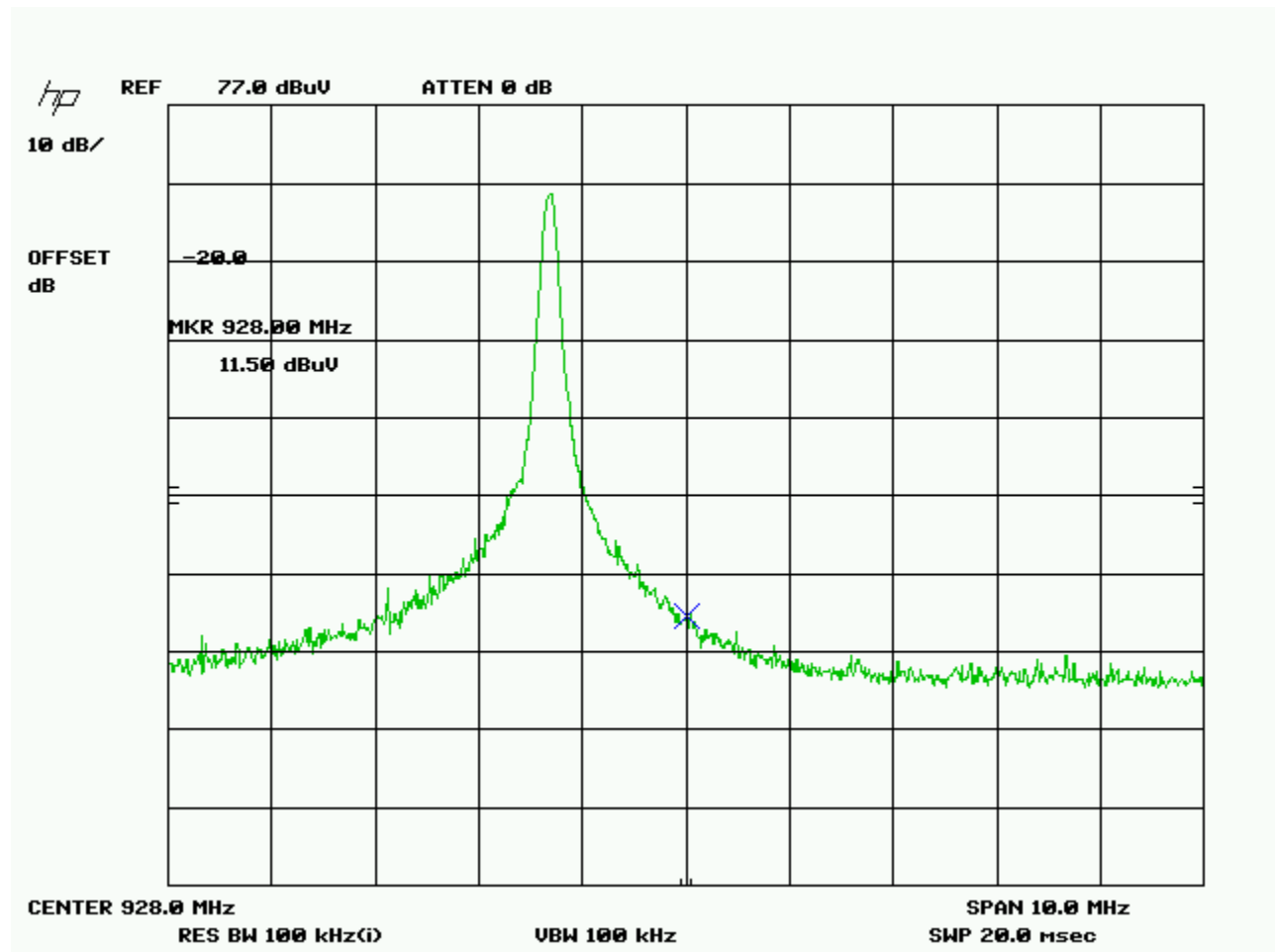
Mobile Mark CVT925S Antenna



APPLICANT: SYN-TECH SYSTEMS, INC.
FCC ID: NR3AIM2MB
IC: 4479A-AIM2MB
REPORT: Y:\S\SYN_NR3\1091AUT9\1091AUT9TestReport.doc

Upper band edge

Mobile Mark CVT925S Antenna



Tuned Frequency MHz	Emission Frequency MHz	Meter Reading dBuV	Ant. Polarity V/H	Coax Loss dB	Correction Factor dB/m	Field Strength dBuV/m	Margin dB
928.00	928.00	11.5	V	1.99	22.68	36.17	9.83

APPLICANT: SYN-TECH SYSTEMS, INC.
FCC ID: NR3AIM2MB
IC: 4479A-AIM2MB
REPORT: Y:\S\SYN_NR3\1091AUT9\1091AUT9TestReport.doc

POWER LINE CONDUCTED INTERFERENCE

Rules Part No.: 15.207 RSS-210, RSS-GEN

Requirements:

Frequency (MHz)	Quasi Peak Limits (dBμV)	Average Limits (dBuV)
0.15 – 0.5	66 – 56	56 – 46
0.5 – 5.0	56	46
5.0 – 30	60	50

Test Data: The attached graphs represent the emissions read for power line conducted for this device. Both lines were observed.

N/A
Battery or vehicle powered DUT.

APPLICANT: SYN-TECH SYSTEMS, INC.
FCC ID: NR3AIM2MB
IC: 4479A-AIM2MB
REPORT: Y:\S\SYN_NR3\1091AUT9\1091AUT9TestReport.doc

RADIATED EMISSIONS TEST SET UP PHOTO

Maxrad MUF9000 Antenna



APPLICANT: SYN-TECH SYSTEMS, INC.
FCC ID: NR3AIM2MB
IC: 4479A-AIM2MB
REPORT: Y:\S\SYN_NR3\1091AUT9\1091AUT9TestReport.doc

RADIATED EMISSIONS TEST SET UP PHOTO

Larson R380.900.334 Antenna



APPLICANT: SYN-TECH SYSTEMS, INC.
FCC ID: NR3AIM2MB
IC: 4479A-AIM2MB
REPORT: Y:\S\SYN_NR3\1091AUT9\1091AUT9TestReport.doc

RADIATED EMISSIONS TEST SET UP PHOTO

Mobile Mark CVT925S Antenna



APPLICANT: SYN-TECH SYSTEMS, INC.
FCC ID: NR3AIM2MB
IC: 4479A-AIM2MB
REPORT: Y:\S\SYN_NR3\1091AUT9\1091AUT9TestReport.doc