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FCC Part 15, Subpart C
Test Report

On

RFID Reader
FCC ID: 2ABSR-5396-9920

Customer Name:	Monarch Instrument
Customer P.O:	21080
Date of Report:	March 19, 2014
Test Report No:	R-5812N
Test Start Date:	February 12, 2014
Test Finish Date:	February 13, 2014
Test Technician:	M. Seamans
Approved By:	S. Wentworth
Report Prepared By:	J. Ramsey

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Scott Wentworth
Branch Manager
NVLAP Approved Signatory

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

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Technical Information

Report Number:	R-5812N
Applicant:	Monarch International, Inc. dba Monarch Instrument
	15 Columbia Drive
	Amherst, NH 03031
Manufacturer:	Monarch Instrument
Test Sample:	RFID Reader
Part Number:	N/A
Model Number:	RFID-RDR
Serial Numbers:	Beta-002, Beta-001 (Frequency Tolerance only)
Brand Name:	Monarch Instrument
Power Requirements:	5 VDC
Frequency of Operation:	13.56 MHz
Equipment Use:	RFID Tag Reader

Test Specification:
FCC Rules and Regulations Part 15, Subpart C, Section 15.225 and 15.209

Test Procedure:
ANSI C63.4:2003

EUT Description/Installation:

The RFID Reader is used to read and write information from passive Near Field Communication (NFC) tags (RFID Track – Its). The reader is a peripheral accessory that plugs into the USB port on a PC or laptop to enable the tags to be read by the user. The tags can also be read using the NFC capability of certain mobile smart phones.

EUT Description/Installation (continued)

The RFID Reader is built around the ST micro CR95HF which is an integrated transceiver IC for contactless applications. The CD95HF manages frame coding and decoding in Reader Mode for standard applications such as NFC, proximity and vicinity standards. The CR95HF embeds an Analog Front End to provide the 13.56 MHz Air Interface.

Tests Performed

The test methods performed on the RFID Reader are shown below:

FCC Part 15, Subpart C	Test Method
15.255(a)	Field Strength of Fundamental
15.225(b)(c)(d) and 15.209	Field Strength of Spurious, Out of Band/Band Edge Emissions
15.225(e)	Frequency Tolerance
15.207(a)	Conducted Emissions, 150 kHz to 30 MHz

Support Equipment

The EUT was tested while connected to the USB port of a Laptop Computer System. The following support equipment was used during testing:

Description	Manufacturer	Model Number	Serial Number
Laptop Computer	Samsung	Series 9	N/A
Laptop Computer	Dell	PP05L	CN-0X2034-48643-41E-0420
Mouse	Dell	N/A	N/A
Monitor	Dell	E197FPF	CN-OWM319-72872-698-281L
Ethernet Switch	Linksys	EZXS55W	R9150H443962

General Test Requirements

1. The measurement procedures of ANSI C63.4:2003 were utilized as specified in FCC Part 15, Subpart C, Section 15.31(a)(3).
2. All measurements were performed at a 3 meter test distance.
3. The EUT was rotated throughout 360 degrees for all radiated emissions measurements as specified in FCC Section 15.31(f)(5).
4. 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).
5. Appropriate accessories were attached to all EUT ports during the performance of radiated emissions measurements as required by FCC Section 15.31(i).

Requirements and Test Results

Requirement:

FCC Section 15.225 (a)

Field Strength of Fundamental

FCC Section 15.225(a) – The field strength of any emission within the band 13.553 MHz – 13.567 MHz shall not exceed 15,848 microvolts/meter at 30 meters.

Field Strength Measurement & Calculation:

The following spectrum analyzer settings were used:

RBW = 1 MHz for f ≥ 1 GHz, 100 kHz for f ≤ 1 GHz

VBW ≥ RBW

Detector Function = Peak or Average as applicable

Trace = Max Hold

Sweep = Auto

The maximized field strength of the emission was calculated as follows:

$F_C = M_R + C_F$

Where:
F_C = Corrected Field Strength Reading in dBµV/m
M_R = Uncorrected Meter Reading in dBµV
C_F = Correction Factor in dB (Pre-Amp + Antenna Factor + Cable Loss + Distance Factor)

For frequencies below 30 MHz a distance factor of -40dB/decade was utilized

Requirements and Test Results (con't)

15.225 (a) Field Strength of Fundamental

Radiated Emissions Measurement Procedure:

The field strength of the fundamental emission was measured with a spectrum analyzer or EMI Receiver. The EUT was placed on an 80cm high wooden test stand located 3 meters from the test antenna on a FCC listed open area test site. Emissions from the EUT were maximized by re-orientating the test sample, rotating the test sample 360 degrees, changing the orientation of the receive antenna and raising and lowering the test antenna from 1 – 4 meters. The maximized field strength of each observed emission was measured, recorded and compared to the specified limits of 15.225(a) as appropriate.

- **Results**: The maximized measured field strength of the fundamental emission was below the specified test limit of 15.225(a). See test data.

Requirement:

FCC Section 15.225 (b) - The field strength of any emission within the 13.410 – 13.553 MHz and 13.567 MHz – 13.710 MHz bands shall not exceed 334 uV/M at 30 meters.

FCC Section 15.225 (c) - The field strength of any emission within the 13.110 – 13.410 MHz and 13.710 – 14.010 MHz band shall not exceed 106 uV/M at 30 meters.

FCC Section 15.225 (d) - The field strength of any emission outside the 13.553 MHz – 13.567 MHz band shall not exceed the general radiated limits of 15.209 as shown below.

Test Limits, Field Strength of Out of Band Emissions

Fundamental Frequency (MHz)	Field Strength of Fundamental microvolts/meter	Measurement Distance
0.009 to 0.490	2400/F(kHz)	300
0.490 to 1.705	24000/F(kHz)	30
1.705 to 30.0	30	30
30.0 to 88.0	100	3
88.0 to 216.0	150	3
216.0 to 960.0	200	3
Above 960.0	500	3

Requirements and Test Results (con't)

FCC Section 15.225 (b)(c)(d)

Radiated Emissions Measurement Procedure:

The field strength of radiated emissions were measured with a spectrum analyzer or EMI Receiver. The EUT was placed on an 80cm high wooden test stand located 3 meters from the test antenna on a FCC listed open area test site. Emissions from the EUT were maximized by re-orientating the test sample, rotating the test sample 360 degrees, changing the polarization/orientation of the test antenna and raising and lowering the test antenna from 1 – 4 meters. The maximized field strength of each observed emission was measured, recorded and compared to the specified limits of 15.225(b)(c)(d)/15.209. When necessary, the marker/delta method was used to verify bandedge compliance.

- **Results**: The maximized measured field strength of the radiated emissions were below the specified test limits of 15.225(b)(c)(d)/15.209. See test data.

Requirement:

FCC Section 15.225 (e) Frequency Tolerance

The frequency tolerance of the carrier signal must be maintained within ±0.01% of the operating frequency over a temperature variation of -20 degrees to +50 degrees C at normal supply voltage.

Frequency Tolerance Measurement Procedure

The EUT was placed in a temperature chamber and a frequency counter was connected to the EUT's RF output. The EUT's RF output frequency was measured and recorded over the temperature range of -20 degrees to +50 degrees C at 10 degree increments.

- **Results:** The frequency tolerance of the EUT was in compliance with the specified requirements of 15.225(e). See test data.

Requirements and Test Results (con't)

Requirement:

FCC Section 15.207(a)

Conducted Emissions

For an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits shown below as measured using a 50 µH/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of the paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges.

Conducted Emission Limits

Frequency of Emission (MHz)	**Conducted Limit (dBµV)**	
	Quasi-Peak	Average
0.15 to 0.5	66 to 56*	56 to 46*
0.5 to 5	56	46
5 to 30	60	50
*Decreases due to logarithm of the frequency		

Conducted Emissions Measurement Procedure

The EUT and associated cabling was placed on a 0.8 m high non-conductive test stand above the horizontal ground plane. The horizontal ground plane extended at least 0.5 m beyond the boundary of the equipment under test, and had a minimum size of 2.0 m x 2.0 m. The 0.8 m test stand was positioned such that the distance between the EUT and the vertical reference plane was 0.4 m. The LISN was located so that its closest surface was no less than 0.8 m from the nearest boundary of the equipment under test.

Each current carrying conductor of the EUT's power cord was then connected to a 50 ohm/50 µH LISN. The LISN was mounted to the ground plane in a position that produced a minimum distance of 0.8 m between the EUT and the LISN.

The RF port of the LISN was connected to the test receiver by means of 50 Ohm coaxial cable.

- **Results**:
  The conducted emissions observed from the EUT did not exceed the limits specified in 15.207(a).

Equipment Lists

FCC Section 15.225(a) – Field Strength of Fundamental

EN	Manufacturer	Description	Range	Model No.	Cal Date	Due Date
3207	EMCO	ACTIVE LOOP	10 KHZ - 30 MHZ	6502	1/22/2014	1/31/2015
4029	RETLIF	OPEN AREA TEST SITE	3 / 10 Meters	RNH	7/24/2012	7/24/2015
5070	ROHDE & SCHWARZ	EMI TEST RECEIVER	20 Hz - 40 GHz	ESIB40	11/6/2012	11/30/2014
5188	Cybertron	Control Computer	N/A	TSVQJA2221	No Calibration Required	

FCC Section 15.225(d) & 15.209 – Field Strength of Spurious and Out of Band Emissions

EN	Manufacturer	Description	Range	Model No.	Cal Date	Due Date
5030B	NARDA	10DB ATTENUATOR	DC - 12.4 GHz	757C-10	1/14/2014	12/31/2014
5070	ROHDE & SCHWARZ	EMI TEST RECEIVER	20 Hz - 40 GHz	ESIB40	11/6/2012	11/30/2014
3207	EMCO	ACTIVE LOOP	10 KHZ - 30 MHZ	6502	1/22/2014	1/31/2015
4029	RETLIF	OPEN AREA TEST SITE	3 / 10 Meters	RNH	7/24/2012	7/24/2015
5053	EMCO	BICONILOG ANTENNA	26 MHz - 3 GHz	3142C	7/2/2013	1/31/2015
5188	Cybertron	Control Computer	N/A	TSVQJA2221	No Calibration Required	

FCC Section 15.225(e) – Frequency Tolerance

EN	Manufacturer	Description	Range	Model No.	Cal Date	Due Date
4911	ELENCO	FREQUENCY COUNTER	DC - 1.3 GHz	F-1300	10/21/2013	10/31/2014
4997	OMEGA	DIGITAL THERMOMETER	-200 DEG C - +1372 DEG C	HH22	9/4/2013	9/30/2014
5077	ASSOCIATED ENVIRONME	TEMPERATURE CHAMBER	-50 to 150 C	ZFD-531	8/15/2012	2/28/2014
530A	MARCONI	SIGNAL GENERATOR	10 kHz - 1.2 GHz	2023	10/23/2013	10/31/2014

FCC Section 15.207– Conducted Emissions, 150 kHz to 30 MHz

EN	Manufacturer	Description	Range	Model No.	Cal Date	Due Date
4027	SOLAR ELECTRONICS	LINE IMPEDANCE STABILIZATION NETWORK	10KHZ-50MHZ	9252-50-R-24BNC	1/13/2014	1/31/2015
4028	ACME	ISOLATION TRANSFORMER		120X240	No Calibration Required	
5030B	NARDA	10DB ATTENUATOR	DC - 12.4 GHz	757C-10	1/14/2014	12/31/2014
5070	ROHDE & SCHWARZ	EMI TEST RECEIVER	20 Hz - 40 GHz	ESIB40	11/6/2012	11/30/2014
5188	Cybertron	Control Computer	N/A	TSVQJA2221	No Calibration Required	

Test Photograph(s)
Field Strength of Fundamental
FCC Part 15, Subpart C, Section 15.225(a)

Test Photograph(s)
Field Strength of Fundamental

Test Setup, OATS, 9 kHz to 30 MHz

Test Configuration

FCC Section 15.225(a) – Field Strength of Fundamental
Test Data

RETLIF TESTING LABORATORIES

EMISSIONS TEST DATA SHEET

Test Method	**Field Strength of Fundamental**	
Customer	Monarch Instruments	
Job Number	R-5812N	
Test Sample	RFID Reader	
Model Number	RFID-RDR	
Serial Number	Beta-002	
Test Specification	FCC Part 15, Subpart C	Paragraph: 15.225(a)
Operating Mode	Continuously transmitting at 13.56 MHz	
Technician	M. Seamans	
Date	Feb. 13th, 2014	

Notes: Test Distance: 3 meters Detector: Peak

TEST PARAMETERS

Transmit Frequency	Loop Orientation	Meter Reading	Correction Factor	Corrected Reading	Distance Factor	Corrected Reading	Converted Reading	Limit at 30M
MHz	**Planar/ Coplanar**	**dBuV**	**dB**	**dBuV/m**	**dB**	**dBuV/m**	**uV/m**	**uV/m**
13.56	Planar	38.94	10.30	49.24	-40.00	9.24	2.90	15848.00

Data Sheet 1 of 1

Test Photograph(s)
Field Strength of Spurious and Out of Band Emissions
FCC Part 15, Subpart C, Section 15.225 (b)(c)(d) and FCC 15.209

Test Photograph(s)
Field Strength of Spurious and Out of Band Emissions

Test Setup

Test Photograph(s)
Field Strength of Spurious and Out of Band Emissions

Test Setup, OATS, 9 kHz to 30 MHz

Test Photograph(s)
Field Strength of Spurious and Out of Band Emissions

Test Setup, OATS, 30 MHz to 1 GHz, Horizontal Antenna Polarization

Test Setup, OATS, 30 MHz to 1 GHz, Vertical Antenna Polarization

FCC Part 15, Subpart C, Section 15.225 (b)(c)(d) and FCC 15.209 –
Field Strength of Spurious and Out of Band Emissions

Test Data

RETLIF TESTING LABORATORIES

EMISSIONS TEST DATA SHEET

Test Method	**Field Strength of Out of Band Emissions**	
Customer	Monarch Instrument	
Job Number	R-5812N	
Test Sample	RFID Reader	
Model Number	RFID-RDR	
Serial Number	Beta-002	
Test Specification	FCC Part 15, Subpart C	Paragraph: 15.209
Operating Mode	Continuously transmitting at 13.56 MHz	
Technician	M. Seamans	
Date	Feb. 13th, 2014	

Notes: Antenna Test Distance: 3 meters

TEST PARAMETERS

Frequency	Antenna Position	EUT Orientation	Meter Reading	Correction Factor	Corrected Reading	Converted to 300M	Converted Reading	Limit at 300M
MHz	**(H/V) / Height**	**Degrees**	**dBuV**	**dB**	**dBuV/m**	**dBuV/m**	**uV/m**	**uV/m**
0.009	-	-	-	-	-	-	-	266.67
|	-	-	-	-	-	-	-	|
|	-	-	-	-	-	-	-	|
|	-	-	-	-	-	-	-	|
0.490	-	-	-	-	-	-	-	4.89

No EUT emissions were observed at the stated test distance throughout the given frequency spectrum.

Data Sheet 1 of 4

RETLIF TESTING LABORATORIES

EMISSIONS TEST DATA SHEET

Test Method	**Field Strength of Out of Band Emissions**	
Customer	Monarch Instrument	
Job Number	R-5812N	
Test Sample	RFID Reader	
Model Number	RFID-RDR	
Serial Number	Beta-002	
Test Specification	FCC Part 15, Subpart C	Paragraphs: 15.209, 15.225(b/c/d)
Operating Mode	Continuously transmitting at 13.56 MHz	
Technician	M. Seamans	
Date	Feb. 13th, 2014	

Notes: Antenna Test Distance: 3 meters

TEST PARAMETERS

Frequency	Antenna Position	EUT Orientation	Meter Reading	Correction Factor	Corrected Reading	Converted to 30M	Converted Reading	Limit at 30M
MHz	**(H/V) / Height**	**Degrees**	**dBuV**	**dB**	**dBuV/m**	**dBuV/m**	**uV/m**	**uV/m**
0.490	-	-	-	-	-	-	-	48.98
|	-	-	-	-	-	-	-	|
1.705	-	-	-	-	-	-	-	14.08
1.705	-	-	-	-	-	-	-	30.00
|	-	-	-	-	-	-	-	|
13.110	-	-	-	-	-	-	-	30.00
13.110	-	-	-	-	-	-	-	106.00
|	-	-	-	-	-	-	-	|
13.410	-	-	-	-	-	-	-	106.00
13.410	-	-	-	-	-	-	-	334.00
|	-	-	-	-	-	-	-	|
13.553	-	-	-	-	-	-	-	334.00
13.553	-	-	-	-	-	-	-	15848.00
|	-	-	-	-	-	-	-	|
13.567	-	-	-	-	-	-	-	15848.00
13.567	-	-	-	-	-	-	-	334.00
|	-	-	-	-	-	-	-	|
13.710	-	-	-	-	-	-	-	334.00
13.710	-	-	-	-	-	-	-	106.00
|	-	-	-	-	-	-	-	|
14.010	-	-	-	-	-	-	-	106.00

No EUT emissions were observed at the stated test distance throughout the given frequency spectrum.

Data Sheet 2 of 4

RETLIF TESTING LABORATORIES

EMISSIONS TEST DATA SHEET		
Test Method	**Field Strength of Out of Band Emissions**	
Customer	Monarch Instrument	
Job Number	R-5812N	
Test Sample	RFID Reader	
Model Number	RFID-RDR	
Serial Number	Beta-002	
Test Specification	FCC Part 15, Subpart C	Paragraphs: 15.209, 15.225(b/c/d)
Operating Mode	Continuously transmitting at 13.56 MHz	
Technician	M. Seamans	
Date	Feb. 13th, 2014	
Notes: Antenna Test Distance: 3 meters		

TEST PARAMETERS

Frequency	Antenna Position	EUT Orientation	Meter Reading	Correction Factor	Corrected Reading	Converted to 30M	Converted Reading	Limit at 30M
MHz	**(H/V) / Height**	**Degrees**	**dBuV**	**dB**	**dBuV/m**	**dBuV/m**	**uV/m**	**uV/m**
14.010	-	-	-	-	-	-	-	30.00
|	-	-	-	-	-	-	-	|
|	-	-	-	-	-	-	-	|
|	-	-	-	-	-	-	-	|
|	-	-	-	-	-	-	-	|
|	-	-	-	-	-	-	-	|
30.00	-	-	-	-	-	-	-	30.00

No EUT emissions were observed at the stated test distance throughout the given frequency spectrum.

Data Sheet 3 of 4

RETLIF TESTING LABORATORIES

EMISSIONS TEST DATA SHEET		
Test Method	**Field Strength of Out of Band Emissions**	
Customer	Monarch Instrument	
Job Number	R-5812N	
Test Sample	RFID Reader	
Model Number	RFID-RDR	
Serial Number	Beta-002	
Test Specification	FCC Part 15, Subpart C	Paragraph: 15.209
Operating Mode	Continuously transmitting at 13.56 MHz	
Technician	M. Seamans	
Date	Feb. 13th, 2014	

Notes: Antenna Test Distance: 3 meters

TEST PARAMETERS

Frequency	Antenna Position	EUT Orientation	Meter Reading	Correction Factor	Corrected Reading		Converted Reading	Limit at 3M
MHz	**(H/V) / Height**	**Degrees**	**dBuV**	**dB**	**dBuV/m**		**uV/m**	**uV/m**
30.00	-	-	-	-	-		-	100.00
|	-	-	-	-	-		-	|
|	-	-	-	-	-		-	|
|	-	-	-	-	-		-	|
88.00	-	-	-	-	-		-	100.00
88.00	-	-	-	-	-		-	150.00
|	-	-	-	-	-		-	|
135.56	V-1m	45.0	17.11	9.29	26.40		20.89	|
|	-	-	-	-	-		-	|
216.00	-	-	-	-	-		-	150.00
216.00	-	-	-	-	-		-	200.00
|	-	-	-	-	-		-	|
338.99	V-1m	45.0	17.87	18.13	36.00		63.10	|
338.99	H-1m	90.0	25.07	18.13	43.20		144.54	|
366.11	V-1m	45.0	16.04	19.06	39.40		93.33	|
366.11	H-1m	90.0	20.34	19.06	35.10		56.89	|
|	-	-	-	-	-		-	|
960.00	-	-	-	-	-		-	200.00
960.00	-	-	-	-	-		-	500.00
|	-	-	-	-	-		-	|
1000.00	-	-	-	-	-		-	500.00

EUT emissions observed throughout the given frequency spectrum were recorded and evaluated. Emission levels closest to the limit are listed on this data sheet.

Data Sheet 4 of 4

Test Photograph(s)
Frequency Tolerance
FCC Part 15, Subpart C, Section 15.255(e)

Test Photograph(s)
Frequency Tolerance

Test Setup

FCC Section 15.255(e) – Frequency Tolerance
Test Data

RETLIF TESTING LABORATORIES

EMISSIONS TEST DATA SHEET

Test Method	**Frequency Tolerance**
Customer	Monarch Instruments
Job Number	R-5812N
Test Sample	RFID Reader
Model Number	RFID-RDR
Serial Number	Beta-002
Test Specification	FCC Part 15.225(e)
Operating Mode	Continuously transmitting signal at 13.56MHz
Technician	M. Seamans
Date	Feb. 12th, 2014

Notes: Frequency Counter

TEST PARAMETERS

Temp.	Transmit Frequency	Recorded Frequency		Lower Limit	Upper Limit	Frequency Error
Degrees	**MHz**	**MHz**		**MHz**	**MHz**	**kHz**
-30.00	13.56	13.56030		13.55898	13.56169	0.04
-20.00	13.56	13.56030		|	|	0.04
0.00	13.56	13.56035		|	|	0.05
20.00	13.56	13.56034		|	|	0.00
55.00	13.56	13.56033		13.55898	13.56169	0.03

Data Sheet 1 of 1

Test Photograph(s)
Conducted Emissions, 150 kHz to 30 MHz
FCC Section 15.207(a)

Test Photograph(s)
Conducted Emissions, 150 kHz to 30 MHz

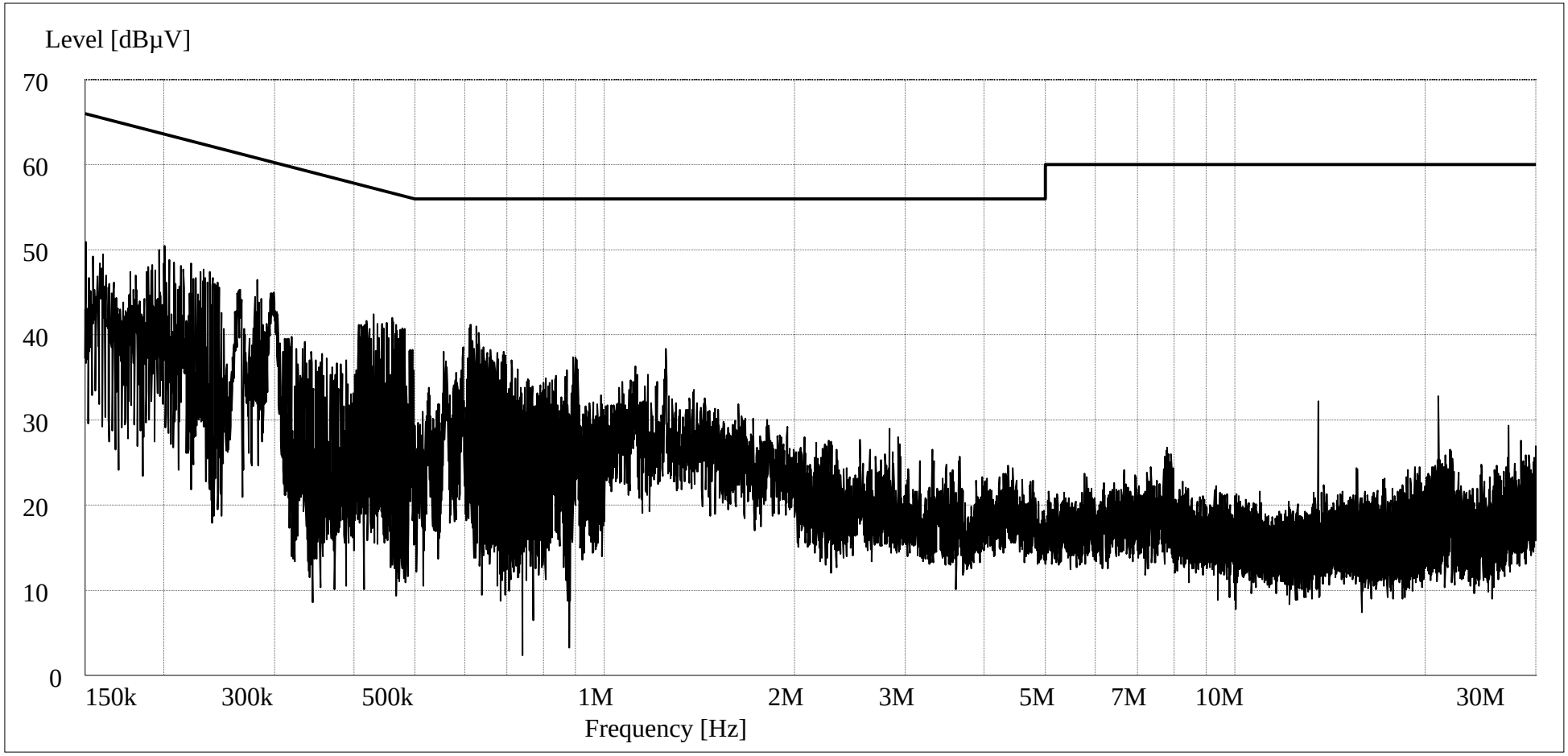
Test Configuration

Test Setup

FCC Section 15.207(a) – Conducted Emissions, 150 kHz to 30 MHz
Test Data

RETLIF TESTING LABORATORIES

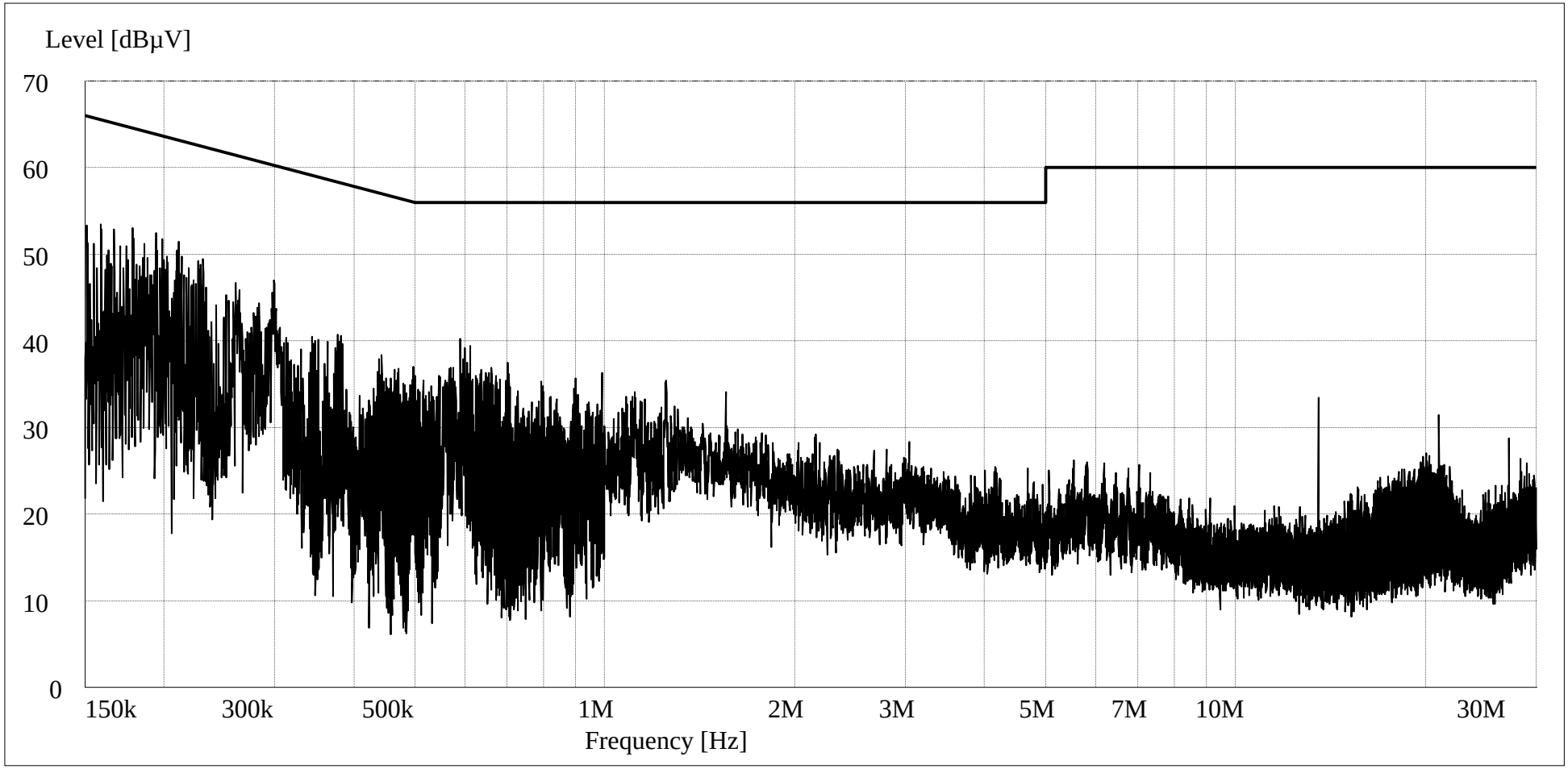
Test Method	Conducted Emissions 150 kHz to 30 MHz		
Customer	Monarch Instrument	**Job No.**	R-5812N
Test Sample	RFID Reader		
Model No.	RFID-RDR	**Serial No.**	Beta 002
Operating Mode	Continuously transmitting at 13.56MHz		
Test Specification	FCC Part 15. 207(a)		
Technician	M. Seamans	**Date**	Feb. 12th, 2014
Climatic Conditions	Temp: 22.0 °C Relative Humidity: 23.0 %		
Lead Tested	120 VAC 60 Hz Hot Peak Readings to Quasi-Peak Limits.		



Page 1 of 4

RETLIF TESTING LABORATORIES

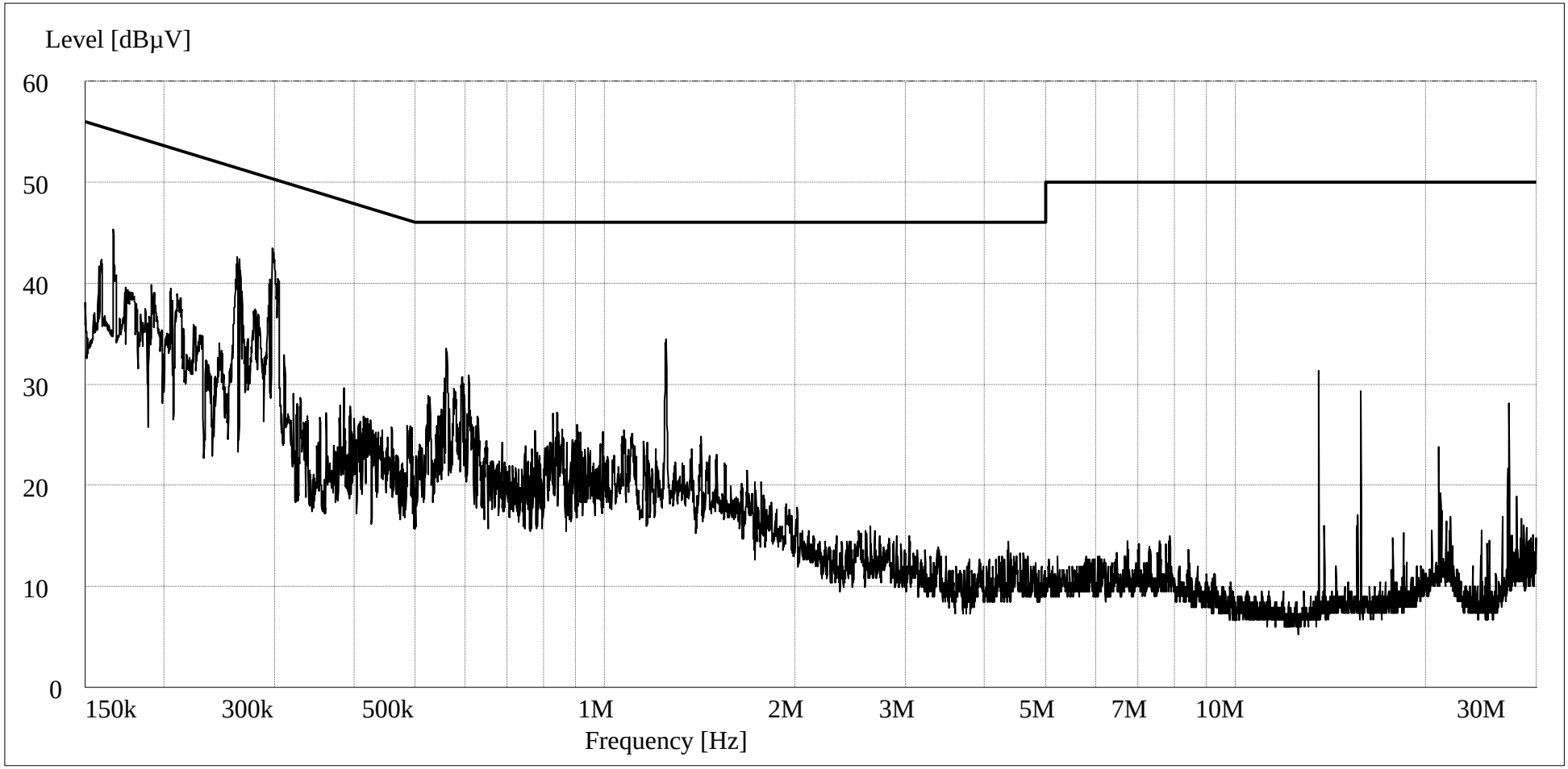
Test Method	Conducted Emissions 150 kHz to 30 MHz		
Customer	Monarch Instrument	**Job No.**	R-5812N
Test Sample	RFID Reader		
Model No.	RFID-RDR	**Serial No.**	Beta 002
Operating Mode	Continuously transmitting at 13.56MHz		
Test Specification	FCC Part 15. 207(a)		
Technician	M. Seamans	**Date**	Feb. 12th, 2014
Climatic Conditions	Temp: 22.0 °C Relative Humidity: 23.0 %		
Lead Tested	120 VAC 60 Hz Neutral Peak Readings to Quasi-Peak Limits.		



Page 2 of 4

RETLIF TESTING LABORATORIES

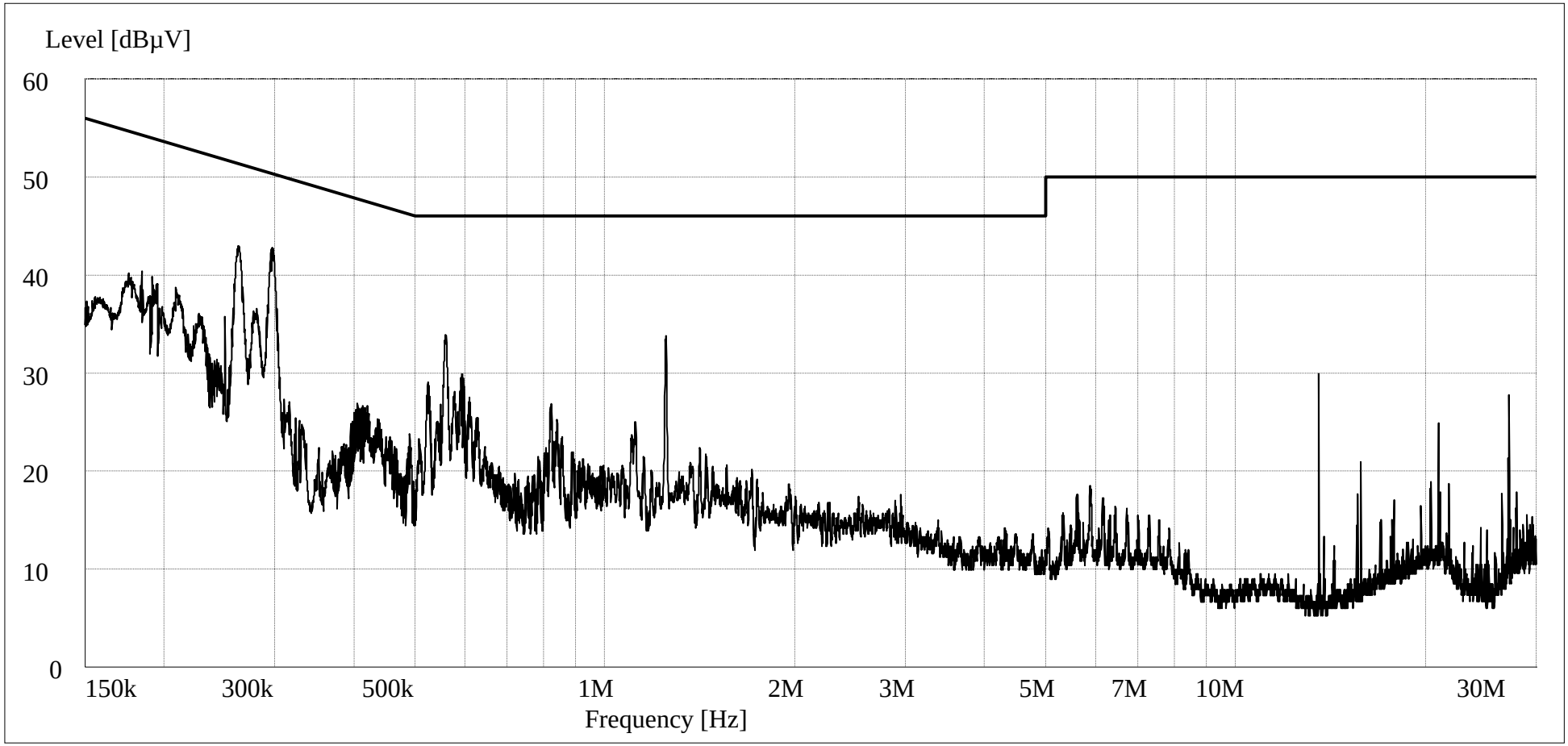
Test Method	Conducted Emissions 150 kHz to 30 MHz		
Customer	Monarch Instrument	**Job No.**	R-5812N
Test Sample	RFID Reader		
Model No.	RFID-RDR	**Serial No.**	Beta 002
Operating Mode	Continuously transmitting at 13.56MHz		
Test Specification	FCC Part 15. 207(a)		
Technician	M. Seamans	**Date**	Feb. 12th, 2014
Climatic Conditions	Temp: 22.0 °C Relative Humidity: 23.0 %		
Lead Tested	120 VAC 60 Hz Hot Average Readings to Average Limits.		



Page 3 of 4

RETLIF TESTING LABORATORIES

Test Method	Conducted Emissions 150 kHz to 30 MHz		
Customer	Monarch Instrument	**Job No.**	R-5812N
Test Sample	RFID Reader		
Model No.	RFID-RDR	**Serial No.**	Beta 002
Operating Mode	Continuously transmitting at 13.56MHz		
Test Specification	FCC Part 15. 207(a)		
Technician	M. Seamans	**Date**	Feb. 12th, 2014
Climatic Conditions	Temp: 22.0 °C Relative Humidity: 23.0 %		
Lead Tested	120 VAC 60 Hz Neutral Average Readings to Average Limits.		



Page 4 of 4