

#### FCC PART 15, SUBPART B and C SECTION 15.247 TEST REPORT

for

#### **RFID READER**

MODEL: STAR FCC ID: VEDSTAR1000C

Prepared for

MOJIX, INC. 11075 SANTA MONICA BLVD. SUITE 350 LOS ANGELES, CA 90025

Prepared by:_	
	REYNALD O. RAMIREZ
Approved by	:
	RUBY A. HALL

COMPATIBLE ELECTRONICS INC. 2337 TROUTDALE DRIVE AGOURA, CALIFORNIA 91301 (818) 597-0600

DATE: JULY 10, 2007

	REPORT	APPENDICES				TOTAL	
	BODY	A	В	С	D	E	
PAGES	20	2	2	2	13	46	85

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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, NIST or any other agency of the U.S. Government.

Device Tested: RFID Reader

Model: STAR

S/N: TX 906 RX 106

Product Description: This is an RFID Reader.

Modifications: The EUT was modified during the testing in order to comply with specifications. See

appendix B for list of modifications

Manufacturer: Mojix Inc

11075 Santa Monica Blvd Suite 350

Los Angeles, CA 90025

Test Dates: June 4, 6, 7 & August 29, 2007

Test Specifications: EMI requirements

CFR Title 47, Part 15, Subpart B; and Subpart C, sections 15.31, 15.205, 15.209, and 15.247

Test Procedure: ANSI C63.4: 2003

FCC Public Notice (Document Number: DA 00-705)

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



## **SUMMARY OF TEST RESULTS**

TEST	DESCRIPTION	RESULTS
1	Spurious Radiated RF Emissions, 30 MHz – 1000 MHz	Complies with the <b>Class B</b> limits of CFR Title 47, Part 15, Subpart B; and the limits of CFR Title 47, Part 15, Subpart C, section 15.209
2	Spurious Radiated RF Emissions, 9 kHz – 30 MHz and 1000 MHz – 10000 MHz	Complies with the relevant requirements of CFR Title 47, Part 15, Subpart C, section 15.247(c)
3	Fundamental and Emissions produced by the intentional radiator in non-restricted bands, 9 kHz – 10 GHz	Complies with the relevant requirements of CFR Title 47, Part 15, Subpart C, section 15.247(c)
4	Emissions produced by the intentional radiator in restricted bands, 9 kHz – 10 GHz	Complies with the relevant requirements of CFR Title 47, Part 15, Subpart C, section 15.205, 15.209(a), and section 15.247 (c)
5	20 dB Bandwidth	Complies with the relevant requirements of FCC Title 47, Part 15, Subpart C, section 15.247 (a)(1)(i)
6	Peak Power Output	Complies with the relevant requirements of FCC Title 47, Part 15, Subpart C, section 15.247 (b)(1)
7	RF Conducted Antenna Test	Complies with the relevant requirements of FCC Title 47, Part 15, Subpart C, section 15.247 (c)
8	Channel Hopping Separation	Complies with the relevant requirements of CFR Title 47, Part 15, Subpart C, section 15.247 (a)(1) and 15.247 (a)(1)(i)
9	Average Time of Occupancy	Complies with the relevant requirements of CFR Title 47, Part 15, Subpart C, section 15.247 (a)(1)(i)



Report Number: **A70607F1**FCC Part 15 Subpart B and FCC Section 15.247

\*\*RFID Reader\*\*

#### 1. PURPOSE

This document is a qualification test report based on the Electromagnetic Interference (EMI) tests performed on the RFID Reader, Model: STAR. The EMI measurements were performed according to the measurement procedure described in ANSI C63.4: 2001. 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 15.31, 15.205, 15.209, and 15.247.

Note: For the unintentional radiator portion of the test, the EUT was within the **Class B** specification limits defined by CFR Title 47, Part 15, Subpart B.



#### 2. ADMINISTRATIVE DATA

#### 2.1 Location of Testing

The EMI tests described herein were performed at the test facility of Compatible Electronics, 2337 Troutdale Drive, Agoura, California 91301.

### 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

Mojix, Inc.

Dr. John Gevargiz VP Engineering

Compatible Electronics, Inc.

Reynald O. Ramirez Sr. Test Engineer

Ruby A. Hall Lab Manager – Agoura Division

#### 2.4 Date Test Sample was Received

The test sample remains at Compatible Electronics, Inc.

#### 2.5 Disposition of the Test Sample

The sample has not been returned to Mojix, Inc. as of the date of this report.

#### 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

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
FCC Title 47, Part 15 Subpart C	FCC Rules - Radio frequency devices (including digital devices) – Intentional Radiators
ANSI C63.4 2003	Methods of measurement of radio-noise emissions from low-voltage electrical and electronic equipment in the range of 9 kHz to 40 GHz
FCC Title 47, Part 15 Subpart B	FCC Rules - Radio frequency devices (including digital devices) – Unintentional Radiators
FCC Public Notice – DA 00-705	Filing and Measurement Guidelines for Frequency Hopping Spread Spectrum Systems





#### 4. **DESCRIPTION OF TEST CONFIGURATION**

#### 4.1 **Description of Test Configuration - EMI**

The RFID Reader, Model: STAR (EUT) was set up on a tabletop configuration. In this setup, the EUT was tested in the X, Y and Z axis. During operation, the receiver and power supply which were both remotely located commands the transmitter to turn on and transmit to a RFID tag. The tag then responds and the receiver decodes the tag data. For Conducted Emissions the Receiver and power supply were on a tabletop configuration with the transmitter remotely located from the test setup.

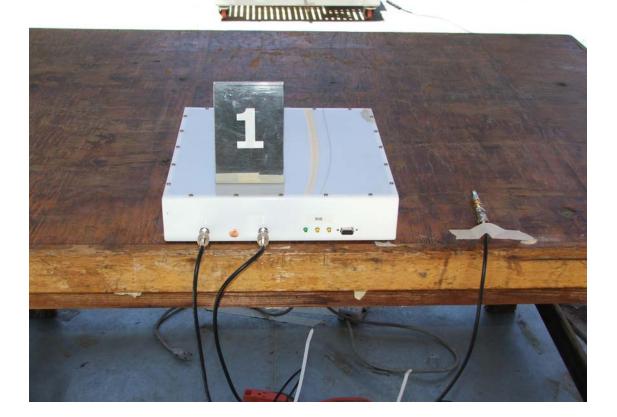
For the intentional radiator and conducted emission portion of the test – The EUT was directly connected to the spectrum analyzer and was in transmitting mode. During the AC conducted emissions test the unit was transmitting in a normal mode of operation. A Laptop with a special program was used to control the channel of the transmitter or to commit the unit to channel hopping mode, depending on the nature of the specific test.

For the unintentional radiator portion of the test – The EUT was placed on the OATS table and was operating in stand by (receive) mode.

For the restricted band emission portion of the test – The EUT was placed on the OATS table and was operating in transmitting mode.

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

#### 4.1.1 **Photograph of Test Configuration - EMI**





#### 4.1.2 Cable Construction and Termination

#### Cable 1

This is a 30 ft., shielded, round, BNC cable that connects the EUT to the receiver. There are metallic connectors at each end of the cable. The shield of the cable was grounded to the chassis via the connectors.

#### Cable 2

This is a 1 meter, shielded, round, BNC cable that connects the EUT to a 50 ohm terminator. There are metallic connectors at each end of the cable. The shield of the cable at the EUT end was grounded to the chassis via the connectors.



## 5. LISTS OF EUT, ACCESSORIES AND TEST EQUIPMENT

## 5.1 EUT and Accessory List

#	EQUIPMENT TYPE	MANUFACTURER	MODEL	SERIAL NUMBER	FCC ID
1	RFID READER. (EUT)	MOJIX, INC.	STAR	TX 906 RX 106	VEDSTAR1000C
	POWER SUPPLY	MOJIX, INC.	STAR	NONE	NONE



#### EMI TEST EQUIPMENT 5.2

EQUIPMENT TYPE	MANU- FACTURER	MODEL NUMBER	SERIAL NUMBER	CAL. DATE	CAL. DUE DATE
EMI Receiver	Rohde & Schwarz	ESIB-40	100218	Feb. 07, 2007	Feb. 07, 2008
Preamplifier	Com Power	PA-103	1619	Dec. 27, 2006	Dec. 27, 2007
Biconical Antenna	Com Power	AB-900	15283	Dec. 28, 2006	Dec. 28, 2007
Log Periodic Antenna	Com Power	AL-100	16200	Dec. 28, 2006	Dec. 28, 2007
LISN	Com Power	LI-215	12037	Oct. 13, 2006	Oct. 13, 2007
LISN (Accessory)	Com Power	LI-115	02030	Oct. 13, 2006	Oct. 13, 2007
Horn Antenna	A.R.A.	DRG-118A	1015	Jul. 26, 2006	Jul. 26, 2008
Microwave Amplifier	Com-Power	PA-122	181915	Apr. 10, 2007	Apr. 10, 2008
Antenna Mast	Com Power	AM-400	N/A	N/A	N/A
Turntable	Com Power	TTW-595	N/A	N/A	N/A
Computer	Hewlett Packard	Pavilion 4530	US91912022	N/A	N/A
Printer	Hewlett Packard	C6427B	MY066160TW	N/A	N/A
EMI Application Software	Rohde & Schwarz	ESIB-K1	1.20	N/A	N/A
Active Loop Antenna	Com-Power	AL-130	17067	Aug. 1, 2006	Aug. 1, 2007
10 dB Attenuator	Weinschel Corp.	2	Asset# 3486	Dec. 20, 2006	Dec. 20, 2007



#### 6. TEST SITE DESCRIPTION

## 6.1 Test Facility Description

Please refer to section 2.1 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 grounded through the power cord.

#### 7. CHARACTERISTICS OF THE TRANSMITTER

#### 7.1 Transmitter Power

Transmit power is herein defined as the power delivered to a 50 Ohm load at the RF output of the EUT. The test sample had one output power level per channel. They are the following:

CHANNEL	OUTPUT	POWER dBm	ACCURACY
Low	1	29.58	+2/-2 dB
Medium	1	29.51	+2/-2 dB
High	1	29.90	+2/-2 dB

#### 7.2 Channel Number and Frequencies

There are a total of 50 channels. The low channel is at 902.74 MHz and the high channel is at 927.23 MHz. There is a 496.99 kHz separation between channels.

#### 8. TEST PROCEDURES

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

#### **8.1 RF Emissions**

#### 8.1.1 Radiated Emissions (Spurious and Harmonics) Test

The EMI Receiver was used as a measuring meter. Amplifiers were used to increase the sensitivity of the instrument. The Com Power Preamplifier Model: PA-103 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 EMI Receiver was used in the peak detect mode with the "Max Hold" feature activated. In this mode, the spectrum analyzer records the highest measured reading over all the sweeps.

The quasi-peak adapter was used only for those readings which are marked accordingly on the data sheets.

The frequencies above 1 GHz were averaged manually by narrowing the video filter down to 10 Hz and setting the sweep time on AUTO on the EMI Receiver to keep the amplitude reading calibrated.

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 10 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: 2003. 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 by the Radiated Emission Manual Test software. 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.



### Radiated Emissions (Spurious and Harmonics) Test (con't)

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 from 9 kHz to 10 GHz to obtain final test data.

The harmonics of the transmitter frequency in the applicable restricted band were also measured utilizing the method mentioned above. See appendix E for datasheets.

#### 8.2 20 dB Bandwidth

The 20 dB Bandwidth was measured using the EMI Receiver. The bandwidth was measured using a direct connection from the RF out on the EUT. The resolution and video bandwidths were >= 1% of the 20 dB bandwidth.

#### **Test Results:**

The EUT complies with the relevant requirements of FCC Title 47, Part 15, Subpart C, section 15.247 (a)(1)(i). The bandwidth is less than 500 kHz. Please see the data sheets located in Appendix E.

#### 8.3 Peak Output Power

The Peak Output Power was taken using the EMI Receiver, a 20dB attenuator and 2 BNC cables with a 0.8 cable loss for the frequencies measured. The attenuator & cable loss factors were accounted for by the EMI receiver software. The Peak Output Power was measured using a direct connection from the RF out on the EUT. The resolution bandwidth was 500 kHz, and the video bandwidth was 500 kHz.

#### **Test Results:**

The EUT complies with the relevant requirements of FCC Title 47, Part 15, Subpart C, section 15.247 (b)(1). The maximum peak output power is less than 1 watt. Please see the data sheets located in Appendix E.

#### **8.4 RF** Antenna Conducted Test

The RF antenna conducted test was taken using the EMI Receiver. The RF antenna conducted test was measured using a direct connection from the RF out on the EUT into the input of the analyzer. The resolution bandwidth was 100 kHz, and the video bandwidth 300 kHz. The spans were wide enough to include all the harmonics and emissions that were produced by the intentional radiator.

#### **Test Results:**

The EUT complies with the relevant requirements of FCC Title 47, Part 15, Subpart C, section 15.247 (c). The RF power that is produced by the intentional radiator is at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of desired power. Please see the data sheets located in Appendix E.

#### 8.5 RF Band Edges

The RF band edges were taken at the edges of the spectrum (902 MHz when the EUT was on the low channel and 928 MHz when the EUT was on the high channel) using the EMI Receiver. The 100 kHz bandwidth outside the frequency band was at least 20 dB below from the EMI Receiver to the spec limit. The EUT was tested in the mode which is the 100 kHz bandwidth of the highest level. A data sheet is also included, which compares the reading worst case.

#### **Test Results:**

The EUT complies with the relevant requirements of FCC Title 47, Part 15, Subpart C section 15.247 (c). The RF power at the band edges at 902 MHz and 928 MHz meet the limits of section 15.209. Please see the data sheets located in Appendix E.

#### 8.6 Carrier Frequency Separation

The Channel Hopping Separation Test was measured using the EMI Receiver. The EUT was operating in its normal operating mode. The resolution bandwidth was 10 kHz, and the video bandwidth 10 kHz. The frequency span was wide enough to include the peaks of two adjacent channels.

#### Test Results:

The EUT complies with the relevant requirements of FCC Title 47, Part 15, Subpart C, section 15.247 (a)(1) and 15.247 (a)(1)(i). The Channel Hopping Separation is greater than the 20 dB bandwidth. Please see the data sheets located in Appendix D.

#### 8.7 Number of Hopping Frequencies

The Channel Hopping Separation Test was measured using the EMI Receiver. The EUT was operating in its normal operating mode. The resolution bandwidth was 30 kHz, and the video bandwidth 30 kHz. The frequency span was wide enough to include all of the peaks in the frequency band of operation.

#### **Test Results:**

The EUT complies with the relevant requirements of FCC Title 47, Part 15, Subpart C section 15.247 (a)(1) and 15.247 (a)(1)(i). The actual number of hopping frequencies is 50. Please see the data sheets located in Appendix E.

#### 8.8 Average Time of Occupancy Test

The Average Time of Occupancy Test was measured using the EMI Receiver. The EUT was operating in normal operating mode. The frequency span was taken to 0 Hz with a sweep time of 500 msec to determine the time for each transmission. The EUT was tested in channel hopping mode.

The dwell time for one frequency was 98.75 ms. In a 20 second period, the number of frequency transmissions that appear are 4. Therefore, if you multiply the dwell time for one frequency transmission with the number of transmissions in a 20 second period, you should have the time of occupancy in a 20 second period.

#### 0.09875 seconds x 4 = 0.395 seconds

#### **Test Results:**

The EUT complies with the relevant requirements of FCC Title 47, Part 15, Subpart C, section 15.247 (a)(1)(i). The EUT does not transmit for more than 400 msec during a 20 second period on any frequency. Please see the data sheets located in Appendix E.



### 9. CONCLUSIONS

The RFID Reader, Model: STAR meets all of the specification limits defined in FCC Title 47, Part 15, Subpart C, sections 15.31, 15.205, 15.209, and 15.247.

Note: For the unintentional radiator portion of the test, the EUT was within the <u>Class B specification</u> limits defined in CFR Title 47, Part 15, Subpart B.



## **APPENDIX A**

# LABORATORY ACCREDITATIONS

Report Number: **A70607F1**FCC Part 15 Subpart B and FCC Section 15.247

\*\*RFID Reader Model: STAR\*\*

## LABORATORY ACCREDITATIONS AND RECOGNITIONS



For US, Canada, Australia/New Zealand, Taiwan and the European Union, Compatible Electronics is currently accredited by NVLAP to ISO/IEC 17025 an ISO 9002 equivalent. Please follow the link to the NIST site for each of our facilities NVLAP certificate and scope of accreditation.

Silverado/Lake Forest Division: <a href="http://ts.nist.gov/ts/htdocs/210/214/scopes/2005270.htm">http://ts.nist.gov/ts/htdocs/210/214/scopes/2005270.htm</a>

Brea Division: <a href="http://ts.nist.gov/ts/htdocs/210/214/scopes/2005280.htm">http://ts.nist.gov/ts/htdocs/210/214/scopes/2005280.htm</a>
Agoura Division: <a href="http://ts.nist.gov/ts/htdocs/210/214/scopes/2000630.htm">http://ts.nist.gov/ts/htdocs/210/214/scopes/2000630.htm</a>



Compatible Electronics has been accredited by ANSI and appointed by the FCC to serve as a Telecommunications Certification Body (TCB). Compatible Electronics ANSI TCB listing can be found at: http://www.ansi.org/public/ca/ansi cp.html



Compatible Electronics has been nominated as a Conformity Assessment Body (CAB) for EMC under the US/EU Mutual Recognition Agreement (MRA). Compatible Electronics NIST US/EU CAB listing can be found at: <a href="http://ts.nist.gov/ts/htdocs/210/gsig/emc-cabs-mar02.pdf">http://ts.nist.gov/ts/htdocs/210/gsig/emc-cabs-mar02.pdf</a>



Compatible Electronics has been nominated as a Conformity Assessment Body (CAB) for Taiwan/BSMI under the US/APEC (Asia-Pacific Economic Cooperation) Mutual Recognition Agreement (MRA). Compatible Electronics NIST US/APEC CAB listing can be found at: <a href="http://ts.nist.gov/ts/htdocs/210/gsig/apec/bsmi-cabs-may02.pdf">http://ts.nist.gov/ts/htdocs/210/gsig/apec/bsmi-cabs-may02.pdf</a>



Compatible Electronics has been validated by NEMKO against ISO/IEC 17025 under the NEMKO EMC Laboratory Authorization (ELA) program to all EN standards required by the European Union (EU) EMC Directive 89/336/EEC. Please follow the link to the Compatible Electronics' web site for each of our facilities NEMKO ELA certificate and scope of accreditation. http://www.celectronics.com/certs.htm

We are also certified/listed for IT products by the following country/agency:



Compatible Electronics VCCI listing can be found at: <a href="http://www.vcci.or.jp/vcci\_e/member/tekigo/setsubi\_index\_id.html">http://www.vcci.or.jp/vcci\_e/member/tekigo/setsubi\_index\_id.html</a>

Just type "Compatible Electronics" into the Keyword search box.



Compatible Electronics FCC listing can be found at: <a href="https://gullfoss2.fcc.gov/prod/oet/index\_ie.html">https://gullfoss2.fcc.gov/prod/oet/index\_ie.html</a>

Just type "Compatible Electronics" into the Test Firms search box.



Compatible Electronics IC listing can be found at: http://spectrum.ic.gc.ca/~cert/labs/oats\_lab\_c\_e.html



### **APPENDIX B**

# **MODIFICATIONS TO THE EUT**



## MODIFICATIONS TO THE EUT

The modifications listed below were made to the EUT to pass CFR Title 47, Part 15, Subpart B; and Subpart C, sections 15.205, 15.209, and 15.247specifications.

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

- 1) Added two Ferrite Cores (Fair-Rite 0446164281) on the +5V DC line inside the STAR chassis. Ferrite core was added near the PCB and the bulkhead connector.
- 2) Added two Ferrite Cores (Fair-Rite 044616281) on the +/- 6V DC lines inside the STAR chassis. Ferrite Cores were added near the PCB and near the bulkhead connector.
- 3) A Ferrite Core (Fair-Rite 0446167251) was added to the AC cord attached to the Power Supply Box.
- 4) The DC power supply cable connecting the STAR reader with the Power Supply box was shielded.



### **APPENDIX C**

# ADDITIONAL MODELS COVERED UNDER THIS REPORT



# ADDITIONAL MODELS COVERED UNDER THIS REPORT

USED FOR THE PRIMARY TEST

RFID READER Model: STAR S/N: N/A

THERE WERE NO ADDITIONAL MODELS COVERED UNDER THIS REPORT

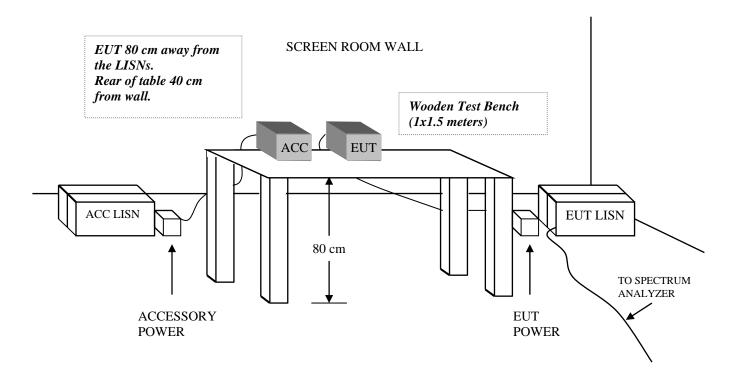


### APPENDIX D

DIAGRAMS, CHARTS, AND PHOTOS



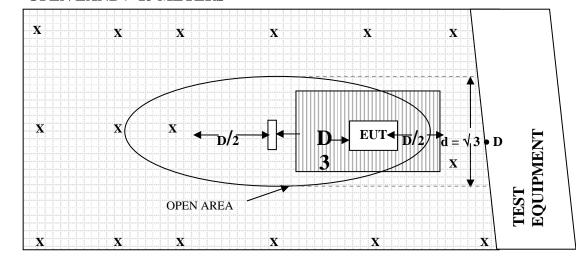
## FIGURE 1: CONDUCTED EMISSIONS TEST SETUP





## FIGURE 2: PLOT MAP AND LAYOUT OF RADIATED SITE

#### **OPEN LAND > 15 METERS**



#### **OPEN LAND > 15 METERS**

The second secon

**OPEN LAND > 15 METERS** 

## COM-POWER AL-130

# **ACTIVE LOOP ANTENNA**

S/N: 17067

CALIBRATION DATE: AUGUST 1, 2006

FREQUENCY (MHz)	FACTOR	FREQUENCY (MHz)	FACTOR
	(dB)		(dB)
0.009	11.8	1	11.0
0.01	11.2	2	11.4
0.02	10.5	3	11.2
0.03	12.2	4	11.1
0.04	11.6	5	11.7
0.05	10.3	6	11.7
0.06	10.7	7	11.3
0.07	10.5	8	11.3
0.08	10.4	9	11.6
0.09	10.7	10	11.3
0.1	10.7	15	10.2
0.2	7.9	20	10.4
0.3	10.4	25	9.8
0.4	10.4	30	10.4
0.5	10.4		
0.6	11.0		
0.7	10.8		
0.8	10.6		
0.9	10.7		



## COM-POWER AB-900

# **BICONICAL ANTENNA**

S/N: 15283

CALIBRATION DATE: DEC. 28, 2006

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
30	11.21	120	13.42
35	8.45	125	14.16
40	11.54	140	14.21
45	12.75	150	14.06
50	9.69	160	14.31
55	10.24	175	14.51
60	10.27	180	15.19
65	9.86	200	16.51
70	7.96	225	14.84
80	9.72	250	16.72
90	10.69	275	20.75
100	13.23	300	17.82



## COM-POWER AL-100

# LOG PERIODIC ANTENNA

S/N: 16200

CALIBRATION DATE: DEC. 28, 2006

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
300	12.73	650	21.56
330	12.92	700	20.03
340	13.56	725	21.93
350	13.87	750	21.80
360	14.40	800	20.08
370	13.39	850	23.25
400	14.50	900	24.72
425	16.39	925	25.23
450	18.87	950	25.13
500	21.36	975	26.01
550	22.81	1000	25.25
600	23.77		

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## DRG-118/A

## DOUBLE RIDGE HORN ANTENNA

S/N: 1015

CALIBRATION DATE: JULY 26, 2006

FREQUENCY	FACTOR	FREQUENCY	FACTOR
(MHz)	(dB)	(MHz)	(dB)
1000	24.6	10000	39.2
1500	25.4	10500	40.2
2000	27.9	11000	39.4
2500	28.6	11500	40.0
3000	30.1	12000	40.7
3500	30.7	12500	40.6
4000	30.8	13000	40.0
4500	31.6	13500	41.1
5000	33.5	14000	42.7
5500	33.6	14500	43.1
6000	34.1	15000	41.9
6500	35.1	15500	38.8
7000	37.4	16000	39.6
7500	39.5	16500	39.0
8000	38.2	17000	41.6
8500	37.5	17500	43.5
9000	38.0	18000	45.5
9500	38.6		

## COM-POWER PA-103

## **PREAMPLIFIER**

S/N: 1619

CALIBRATION DATE: DEC. 27, 2006

FREQUENCY	FACTOR	FREQUENCY	FACTOR
(MHz)	(dB)	(MHz)	(dB)
30	30.0	300	29.2
40	30.4	350	29.1
50	30.2	400	28.9
60	30.3	450	28.7
70	29.6	500	29.4
80	30.3	550	28.3
90	29.8	600	28.4
100	30.2	650	28.3
125	30.4	700	28.7
150	30.2	750	27.6
175	30.5	800	28.0
200	29.5	850	26.8
225	28.7	900	26.8
250	28.6	950	26.4
275	28.3	1000	26.8



## **COM-POWER PA-122**

## **PREAMPLIFIER**

S/N: 181915

CALIBRATION DATE: APRIL 10, 2007

FREQUENCY	FACTOR	FREQUENCY	FACTOR
(MHz)	( <b>dB</b> )	(MHz)	(dB)
1000	32.3	7000	30.1
1100	32.0	7500	30.2
1200	31.9	8000	29.9
1300	31.8	8500	29.5
1400	31.7	9000	28.1
1500	32.0	9500	27.7
1600	31.8	10000	28.8
1700	32.0	11000	23.2
1800	31.3	12000	28.0
1900	31.8	13000	29.2
2000	30.5	14000	29.3
2500	30.5	15000	29.6
3000	30.6	16000	28.7
3500	30.7	17000	28.6
4000	30.3	18000	29.3
4500	30.4	19000	29.7
5000	30.3	20000	29.2
5500	29.9	21000	30.5
6000	29.9	22000	30.6
6500	30.1		



#### **FRONT VIEW**

MOJIX INC. RFID READER MODEL: STAR

FCC SUBPART B AND C - RADIATED EMISSIONS - JUNE 4, 2007

# PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS



## **REAR VIEW**

MOJIX, INC. RFID READER MODEL: STAR

FCC SUBPART B AND C - RADIATED EMISSIONS - JUNE 4, 2007

# PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS



## **FRONT VIEW**

MOJIX, INC. RFID READER MODEL: STAR

FCC SUBPART B AND C - CONDUCTED EMISSIONS – JUNE 7, 2007

# PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS



## **REAR VIEW**

MOJIX, INC. RFID READER MODEL: STAR

FCC SUBPART B AND C - CONDUCTED EMISSIONS - JUNE 7, 2007

# PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS



## **APPENDIX E**

DATA SHEETS



Pol A

# **RADIATED EMISSIONS**

COMPANY NAME: Mojix, Inc		<b>DATE:</b> 6/7/07						
EUT: RFID Reader		EUT S/N:_ TX 906 & RX 106						
EUT MODEL: STAR	_LOCAT	ΠΟΝ: □ BREA □ SILVERA	ADO <b>X</b> AGOURA					
SPECIFICATION: FCC 15.247	CLASS: B	TEST DISTANCE: 3 meters	LAB: F					
ANTENNA: X LOOP ☐ BICONICAL	□LOG □HORN	POLARIZATION:	□ VERT □ HORIZ					
<b>X</b> QUALIFICATION □ ENGINEERIN	G □ MFG. AUDIT	ENGINEER: R. Ramirez						
NOTES:								

Pol B

Frequency	Peak	Avg. □	Antenna	Azimuth	Antenna	Cable	Amplifier	* Corrected	Delta	Spec
	Reading	Q.P. 🗆	Height		Factor	Loss	Gain	Reading	**	Limit
(MHz)	(dBuV)	(dBuV)	(meters)	(degrees)	(dB)	(dB)	(dB)	(dBuV)	(dB)	(dBuV)
9KHz- 30MHz								No frequencies found.		

Mojix Inc.

Date: 10/11/2007

RFID Reader

Lab: F

RFID Reader Lab: STAR Tested By:

Tested By: R. Ramirez
Test Distance 3 meters

Configuration: Low Channel spurious emissions

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit (dBuV/m)	Margin (dB)	Peak / QP / Avg	Comments
74.00	27.58	V	40.00	-12.42	Peak	
116.25	26.76	V	43.52	-16.76	Peak	
125.00	27.26	V	43.52	-16.26	Peak	
150.00	26.34	V	43.52	-17.18	Peak	
170.00	24.63	V	43.52	-18.89	Peak	
74.00	29.38	Н	40.00	-10.62	Peak	
116.25	26.53	Н	43.52	-16.99	Peak	
125.00	31.30	Н	43.52	-12.22	Peak	
150.00	29.44	Н	43.52	-14.08	Peak	
155.00	26.79	Н	43.52	-16.73	Peak	
170.00	22.02	Н	43.52	-21.50	Peak	
375.00	26.81	V	46.02	-19.21	Peak	
400.00	27.47	V	46.02	-18.55	Peak	
375.00	28.31	Н	46.02	-17.71	Peak	
400.00	29.18	Н	46.02	-16.84	Peak	

Mojix Inc Date: 10/11/2007 RFID Reader Lab: F

RFID Reader Lab: STAR Tested By:

Tested By: R. Ramirez
Test Distance 3 meters

Configuration: Low channel harmonics

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit (dBuV/m)	Margin (dB)	Peak / QP / Avg	Comments
2708.00	48.01	V	53.98	-5.97	Peak	X axis
3611.00	48.53	V	53.98	-5.45	Peak	
4513.00	48.83	V	53.98	-5.15	Peak	
2708.00	45.19	Н	53.98	-8.79	Peak	
3611.00	47.78	Н	53.98	-6.20	Peak	
4513.00	48.54	Н	53.98	-5.44	Peak	
2708.00	47.52	V	53.98	-6.46	Peak	Y axis
3611.00	47.24	V	53.98	-6.74	Peak	
4513.00	49.44	V	53.98	-4.54	Peak	
2708.00	45.21	Н	53.98	-8.77	Peak	
3611.00	46.97	Н	53.98	-7.01	Peak	
4513.00	48.79	Н	53.98	-5.19	Peak	
2708.00	47.94	V	53.98	-6.04	Peak	Z axis
3611.00	48.05	V	53.98	-5.93	Peak	
4513.00	47.69	V	53.98	-6.29	Peak	
2708.00	46.93	Н	53.98	-7.05	Peak	
3611.00	46.82	Н	53.98	-7.16	Peak	
4513.00	47.94	Н	53.98	-6.04	Peak	

Mojix Inc. Date: 10/11/2007 F

RFID Reader Lab:

Tested By: STAR R. Ramirez Test Distance 3 meters

Configuration: Mid Channel spurious emissions

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit (dBuV/m)	Margin (dB)	Peak / QP / Avg	Comments
74.00	29.10	V	40.00	-10.90	Peak	
116.25	25.56	V	43.52	-17.96	Peak	
125.00	27.38	V	43.52	-16.14	Peak	
150.00	24.09	V	43.52	-19.43	Peak	
155.00	24.09	V	43.52	-19.43	Peak	
170.00	24.97	V	43.52	-18.55	Peak	
74.00	27.85	Н	40.00	-12.15	Peak	
116.25	27.63	Н	43.52	-15.89	Peak	
125.00	32.84	Н	43.52	-10.68	Peak	
150.00	28.98	Н	43.52	-14.54	Peak	
155.00	25.70	Н	43.52	-17.82	Peak	
170.00	22.73	Н	43.52	-20.79	Peak	
375.00	38.15	V	46.02	-7.87	Peak	
400.00	42.08	V	46.02	-3.94	Peak	
375.00	38.74	Н	46.02	-7.28	Peak	
400.00	40.53	Н	46.02	-5.49	Peak	

Mojix Inc RFID Reader Date: 10/10/2007 F

Lab: STAR

Tested By: R. Ramirez Test Distance 3 meters

Configuration: Mid channel harmonics

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit (dBuV/m)	Margin (dB)	Peak / QP / Avg	Comments
					_	
2745.00	45.44	V	53.98	-8.54	Peak	X axis
3661.00	49.07	V	53.98	-4.91	Peak	
4576.00	47.61	V	53.98	-6.37	Peak	
5491.00	50.09	V	53.98	-3.89	Peak	
2745.00	45.42	Н	53.98	-8.56	Peak	
3661.00	48.21	Н	53.98	-5.77	Peak	
4576.00	47.72	Н	53.98	-6.26	Peak	
5491.00	50.59	Н	53.98	-3.39	Peak	
07.47.00	10.05					
2745.00	48.35	V	53.98	-5.63	Peak	Y axis
3661.00	48.68	V	53.98	-5.30	Peak	
4576.00	47.77	V	53.98	-6.21	Peak	
5491.00	49.61	V	53.98	-4.37	Peak	
2745.00	46.23	Н	53.98	-7.75	Peak	
3661.00	46.89	Н	53.98	-7.09	Peak	
4576.00	47.72	Н	53.98	-6.26	Peak	
5491.00	49.23	Н	53.98	-4.75	Peak	
07.47.60						
2745.00	47.75	V	53.98	-6.23	Peak	Z axis
3661.00	48.24	V	53.98	-5.74	Peak	
4576.00	47.83	V	53.98	-6.15	Peak	
5491.00	48.93	V	53.98	-5.05	Peak	
2745.00	50.80	Н	53.98	-3.18	Peak	
3661.00	48.74	Н	53.98	-5.24	Peak	
4576.00	49.85	Н	53.98	-4.13	Peak	
5491.00	48.95	Н	53.98	-5.03	Peak	

Mojix Inc. Date: 10/11/2007

RFID Reader Lab: STAR Tested By:

Tested By: R. Ramirez
Test Distance 3 meters

Configuration: High Channel spurious emissions

Freq. (MHz)	,	Pol (v/h)	Limit (dBuV/m)	Margin (dB)	Peak / QP / Avg	Comments
74.00	29.79	V	40.00	-10.21	Peak	
116.25	24.76	V	43.52	-18.76	Peak	
125.00	28.92	V	43.52	-14.60	Peak	
150.00	25.71	V	43.52	-17.81	Peak	
170.00	21.80	V	43.52	-21.72	Peak	
74.00	33.47	Н	40.00	-6.53	Peak	
116.25	28.59	Н	43.52	-14.93	Peak	
125.00	31.28	Н	43.52	-12.24	Peak	
150.00	31.39	Η	43.52	-12.13	Peak	
155.00	26.33	Н	43.52	-17.19	Peak	
170.00	21.86	Н	43.52	-21.66	Peak	
375.00	27.27	V	46.02	-18.75	Peak	
400.00	28.48	V	46.02	-17.54	Peak	
375.00	29.05	Н	46.02	-16.97	Peak	
400.00	28.44	Н	46.02	-17.58	Peak	

Mojix Inc RFID Reader Date: 10/10/2007 F

Lab: STAR

Tested By: R. Ramirez Test Distance 3 meters

Configuration: High channel harmonics

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit (dBuV/m)	Margin (dB)	Peak / QP / Avg	Comments
2781.00	47.46	V	53.98	-6.52	Peak	X axis
3709.00	48.45	V	53.98	-5.53	Peak	
4636.00	47.94	V	53.98	-6.04	Peak	
2781.00	45.68	Н	53.98	-8.30	Peak	
3709.00	48.69	Н	53.98	-5.29	Peak	
4636.00	49.05	Н	53.98	-4.93		
2781.00	50.98	V	53.98	-3.00	Peak	Y axis
3709.00	48.60	V	53.98	-5.38	Peak	
4636.00	48.85	V	53.98	-5.13	Peak	
2781.00	50.48	Н	53.98	-3.50	Peak	
3709.00	47.88	Н	53.98	-6.10	Peak	
4636.00	49.79	Н	53.98	-4.19	Peak	
2781.00	47.92	V	53.98	-6.06	Peak	Z axis
3709.00	45.88	V	53.98	-8.10	Peak	
4636.00	49.59	V	53.98	-4.39	Peak	
2781.00	48.78	Н	53.98	-5.20	Peak	
3709.00	45.55	Н	53.98	-8.43	Peak	
4636.00	47.92	Н	53.98	-6.06	Peak	

#### Line

EUT: RFID Reader(RX)

Manufacturer: Mojix Inc.

Operating Condition: 120V
Test Site: Lab F
Operator: R. Ramirez
Test Specification: EN55022B
Comment: STAR

Start of Test: 6/7/07 / 11:16:55AM

#### SCAN TABLE: "EN 55022 VoltageFin"

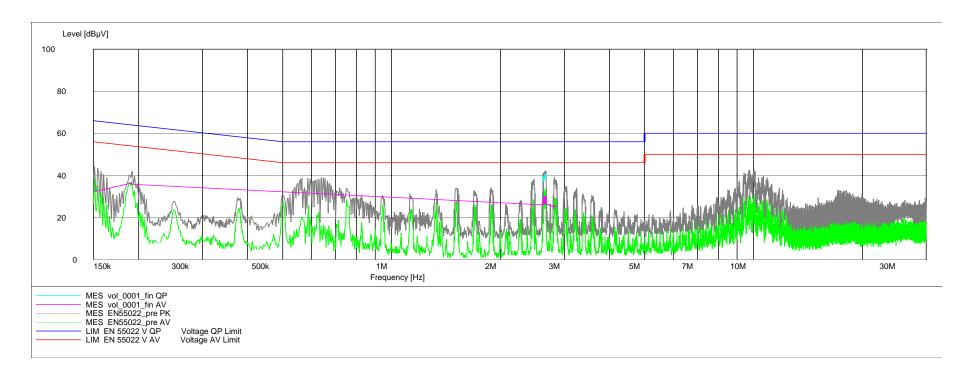
Short Description: EN 55022 Voltage

Start Stop Step Detector Meas. IF Transducer

Frequency Frequency Width Time Bandw.

150.0 kHz 30.0 MHz 4.0 kHz QuasiPeak 1.0 s 9 kHz LabF LI-215

CISPR AV



#### Line

EUT: RFID Reader(RX)
Manufacturer: Mojix Inc.

Operating Condition: 120V

### MEASUREMENT RESULT: "vol\_0001\_fin QP"

#### 6/7/07 11:20AM

, . ,						
Frequency	Level	Transd	Limit	Margin	Line	PE
MHz	dΒμV	dB	dΒμV	dB		
2.617000	37.30	9.7	56	18.7	1	
2.623000	39.10	9.7	56	16.9	1	
2.626000	38.70	9.7	56	17.3	1	
2.632000	37.80	9.7	56	18.2	1	
2.635000	37.90	9.7	56	18.1	1	
2.641000	38.70	9.7	56	17.3	1	
2.644000	39.40	9.7	56	16.6	1	
2.647000	39.90	9.7	56	16.1	1	
2.650000	39.90	9.7	56	16.1	1	
2.653000	39.90	9.7	56	16.1	1	
2.656000	39.90	9.7	56	16.1	1	
2.659000	40.20	9.7	56	15.8	1	
2.662000	40.30	9.7	56	15.7	1	
2.665000	40.30	9.7	56	15.7	1	
2.668000	40.00	9.7	56	16.0	1	

#### MEASUREMENT RESULT: "vol\_0001\_fin AV"

#### 6/7/07 11:20AM

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Line	PE
MIIZ	ασμν	αь	ασμν	αь		
0.151000	32.30	9.7	56	23.6	1	
0.188000	36.10	9.7	54	18.0	1	
0.189000	36.50	9.7	54	17.6	1	
0.191000	35.80	9.7	54	18.2	1	
2.626000	26.00	9.7	46	20.0	1	
2.632000	27.50	9.7	46	18.5	1	
2.635000	27.90	9.7	46	18.1	1	
2.644000	29.40	9.7	46	16.6	1	
2.647000	29.80	9.7	46	16.2	1	
2.653000	30.00	9.7	46	16.0	1	
2.656000	29.70	9.7	46	16.3	1	
2.665000	26.60	9.7	46	19.4	1	
2.815000	25.00	9.7	46	21.0	1	
2.824000	25.60	9.7	46	20.4	1	
2.845000	25.50	9.7	46	20.5	1	

#### Neutral

EUT: RFID Reader(RX)

Manufacturer: Mojix Inc.

Operating Condition: 120V
Test Site: Lab F
Operator: R. Ramirez
Test Specification: EN55022B
Comment: STAR

Start of Test: 6/7/07 / 11:27:13AM

#### SCAN TABLE: "EN 55022 VoltageFin"

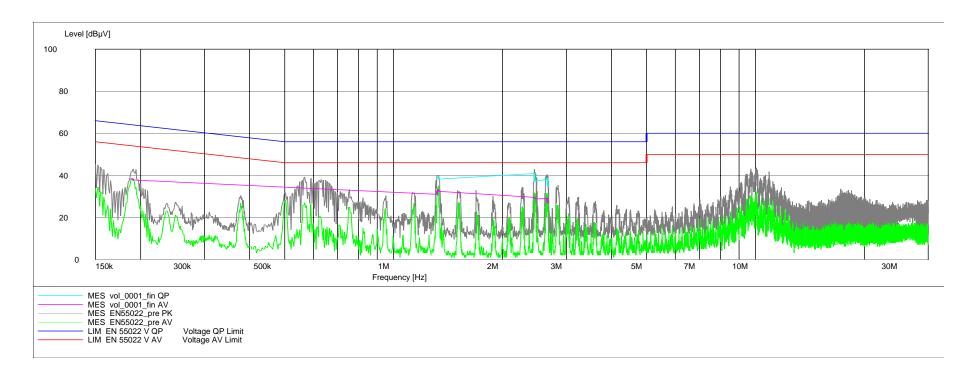
Short Description: EN 55022 Voltage

Start Stop Step Detector Meas. IF Transducer

Frequency Frequency Width Time Bandw.

150.0 kHz 30.0 MHz 4.0 kHz QuasiPeak 1.0 s 9 kHz LabF LI-215

CISPR AV



#### Neutral

EUT: RFID Reader(RX)
Manufacturer: Mojix Inc.

Operating Condition: 120V

### MEASUREMENT RESULT: "vol\_0001\_fin QP"

# 6/7/07 11:30AM

Frequency	Level	Transd	Limit	Margin	Line	PE
MHz	dBuV	dВ	dBuV	dВ		
			•			
1.315000	39.30	9.6	56	16.7	1	
1.318000	39.30	9.6	56	16.7	1	
1.321000	39.20	9.6	56	16.8	1	
1.324000	39.30	9.6	56	16.7	1	
1.327000	39.20	9.6	56	16.8	1	
1.330000	39.00	9.6	56	17.0	1	
1.333000	38.20	9.6	56	17.8	1	
2.446000	40.90	9.7	56	15.1	1	
2.452000	38.90	9.7	56	17.1	1	
2.455000	37.50	9.7	56	18.5	1	
2.461000	37.70	9.7	56	18.3	1	
2.467000	37.30	9.7	56	18.7	1	
2.644000	38.10	9.7	56	17.9	1	
2.653000	38.70	9.7	56	17.3	1	
2.674000	34.50	9.7	56	21.5	1	

#### MEASUREMENT RESULT: "vol\_0001\_fin AV"

#### 6/7/07 11:30AM

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Line	PE
MHZ	αвμν	αь	ασμν	αь		
0.188000	38.10	9.7	54	16.0	1	
0.189000	38.50	9.7	54	15.6	1	
0.191000	37.80	9.7	54	16.2	1	
1.315000	31.00	9.6	46	15.0	1	
1.318000	32.30	9.6	46	13.7	1	
1.324000	33.30	9.6	46	12.7	1	
1.327000	33.10	9.6	46	12.9	1	
1.330000	32.40	9.6	46	13.6	1	
2.452000	29.60	9.7	46	16.4	1	
2.455000	29.30	9.7	46	16.7	1	
2.464000	28.80	9.7	46	17.2	1	
2.644000	29.00	9.7	46	17.0	1	
2.653000	29.20	9.7	46	16.8	1	
2.656000	29.00	9.7	46	17.0	1	
2.665000	26.80	9.7	46	19.2	1	

of

### RADIATED EMISSIONS

COMPANY NAME: Mojix, Inc DATE: 6/7/07

EUT: Receiver EUT S/N:\_ none

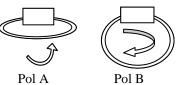
EUT MODEL: STAR LOCATION: □ BREA □ SILVERADO X AGOURA

SPECIFICATION: FCC 15.247 CLASS: B TEST DISTANCE: 3 meters LAB: F

ANTENNA: X LOOP ☐ BICONICAL ☐ LOG ☐ HORN POLARIZATION: ☐ VERT ☐ HORIZ

**X** QUALIFICATION ☐ ENGINEERING ☐ MFG. AUDIT **ENGINEER**: R. Ramirez

NOTES:



Frequency	Peak	Avg. □	Antenna	Azimuth	Antenna	Cable	Amplifier	* Corrected	Delta	Spec
	Reading	Q.P. □	Height		Factor	Loss	Gain	Reading	**	Limit
(MHz)	(dBuV)	(dBuV)	(meters)	(degrees)	(dB)	(dB)	(dB)	(dBuV)	(dB)	(dBuV)
9KHz- 30MHz								No frequencies found.		

BREA (714) 579-0500 SILVERADO (714) 589-0700 AGOURA (818) 597-0600

Doc. No.: EMI\_MHz CABLE-B-0-53 Rev. A 05/05/00

Mojix, Inc. Date: 8/29/2007 Receiver Lab: F

STAR Tested By: R. Ramirez

Test Distance 3 meters

# Configuration:

l _			,		5	
Freq.	Level	Del (v/b)	Limit	Margin	Peak / QP /	Comments
(MHz)		, ,	(dBuV/m)	, ,	Avg	Comments
30.63	23.97	V	40.00	-16.03	Peak	
64.69	25.52	V	40.00	-14.48	Peak	
83.09	23.42	V	40.00	-16.58	Peak	
137.79	22.35	V	43.52	-21.17	Peak	
150.00	21.83	V	43.52	-21.69	Peak	
156.24	38.67	V	43.52	-4.85	Peak	
234.37	39.41	V	46.02	-6.61	Peak	
250.00	28.83	V	46.02	-17.20	Peak	
30.63	22.81	Н	40.00	-17.19	Peak	
64.69	25.08	Н	40.00	-14.92	Peak	
83.09	25.31	Η	40.00	-14.69	Peak	
137.78	22.11	Н	43.52	-21.41	Peak	
150.00	26.14	Н	43.52	-17.38	Peak	
156.24	44.36	Н	43.52	0.84	Peak	
156.24	42.18	Н	43.52	-1.34	QP	
234.37	39.36	Н	46.02	-6.66	Peak	
250.00	31.86	Н	46.02	-14.16	Peak	

Mojix, Inc.

Date: 8/29/2007

Receiver

Lab: F

STAR Lab:
Tested By:

Tested By: R. Ramirez
Test Distance 3 meters

Configuration:

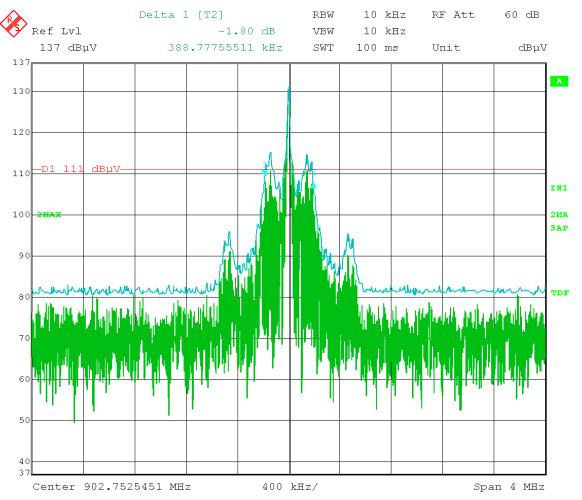
(MHz)         (dBuV/m)         Pol (v/h)         (dBuV/m)         (dB)         Avg         Comments           312.48         34.66         V         46.02         -11.36         Peak           500.00         30.59         V         46.02         -15.43         Peak           625.00         35.59         V         46.02         -10.43         Peak           750.01         31.78         V         46.02         -14.24         Peak           875.00         31.80         V         46.02         -14.22         Peak           999.99         37.23         V         53.98         -16.75         Peak           312.47         32.88         H         46.02         -13.14         Peak           500.00         38.43         H         46.02         -7.59         Peak	
500.00       30.59       V       46.02       -15.43       Peak         625.00       35.59       V       46.02       -10.43       Peak         750.01       31.78       V       46.02       -14.24       Peak         875.00       31.80       V       46.02       -14.22       Peak         999.99       37.23       V       53.98       -16.75       Peak         312.47       32.88       H       46.02       -13.14       Peak	
750.01       31.78       V       46.02       -14.24       Peak         875.00       31.80       V       46.02       -14.22       Peak         999.99       37.23       V       53.98       -16.75       Peak         312.47       32.88       H       46.02       -13.14       Peak	
875.00 31.80 V 46.02 -14.22 Peak 53.98 -16.75 Peak 312.47 32.88 H 46.02 -13.14 Peak	
999.99 37.23 V 53.98 -16.75 Peak 312.47 32.88 H 46.02 -13.14 Peak	
312.47 32.88 H 46.02 -13.14 Peak	
500.00 00.40 II 40.00 7.50 Deal.	
625.00 37.86 H 46.02 -8.16 Peak	
750.00 35.23 H 46.02 -10.79 Peak	
875.00 33.32 H 46.02 -12.70 Peak	
999.99 32.49 H 53.98 -21.49 Peak	

Model: STAR

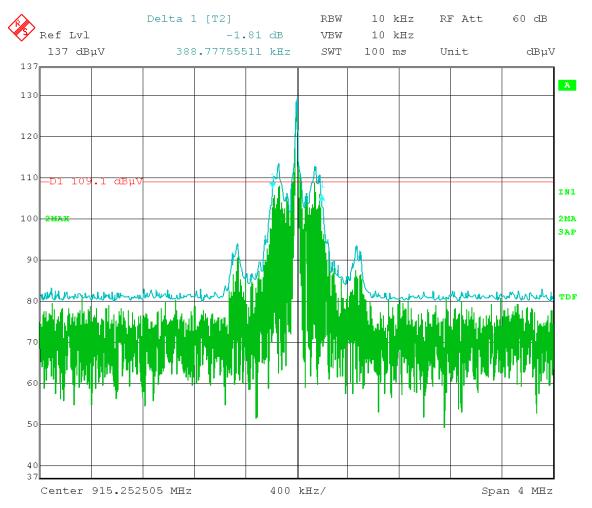


-20 dB BANDWIDTH

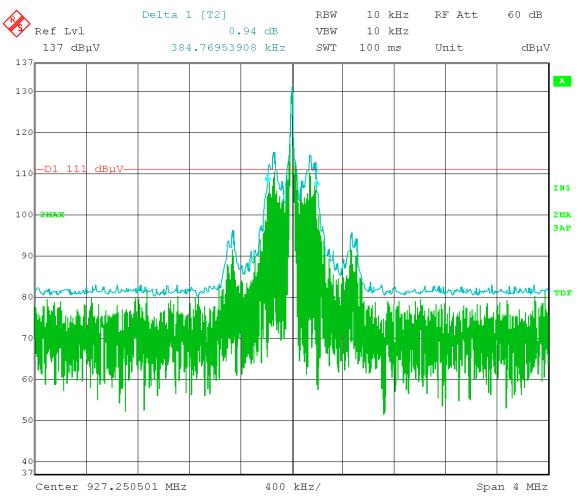
**DATA SHEETS** 



Date: 21.SEP.2007 11:45:06



Date: 21.SEP.2007 11:47:53

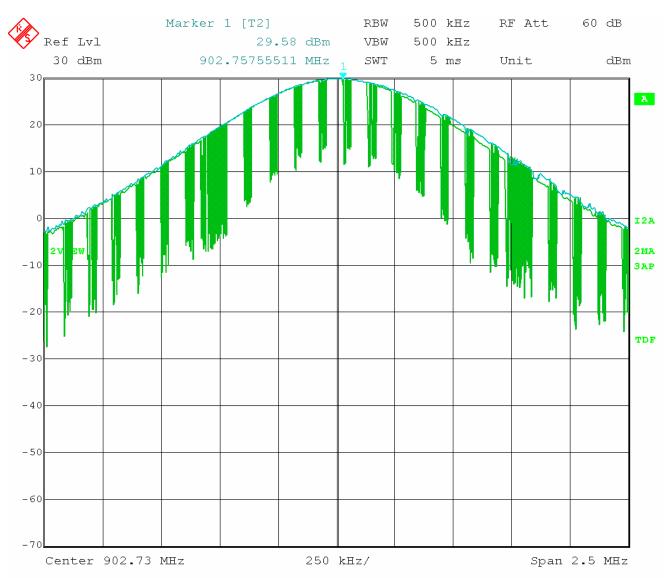


Date: 21.SEP.2007 11:51:58

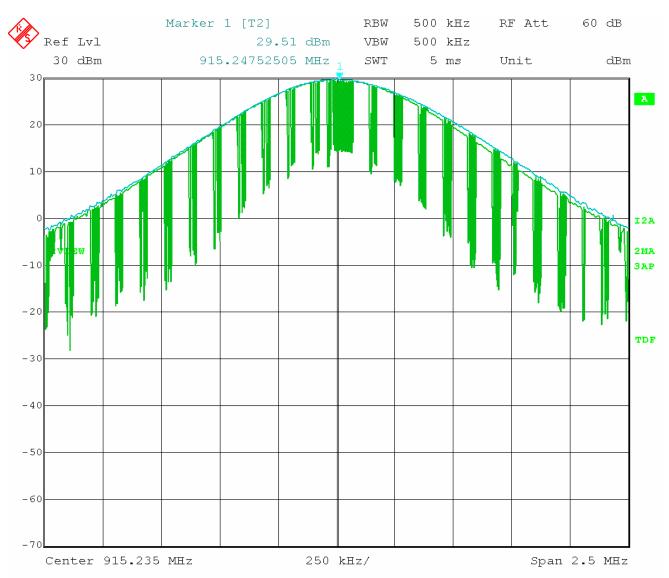


# PEAK POWER OUTPUT

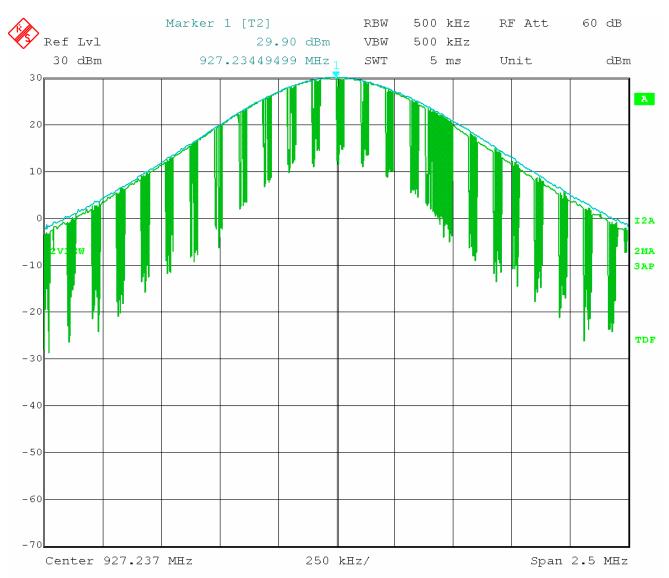
DATA SHEETS



Date: 11.OCT.2007 13:28:44



Date: 11.0CT.2007 13:23:07



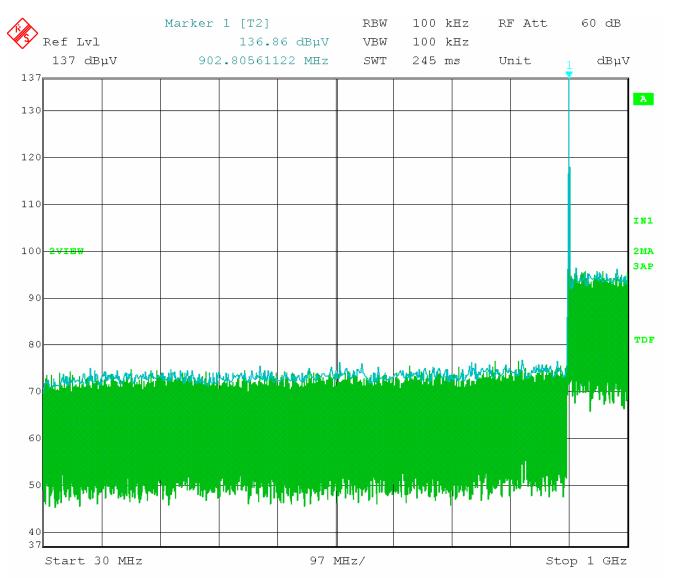
Date: 11.0CT.2007 13:20:02



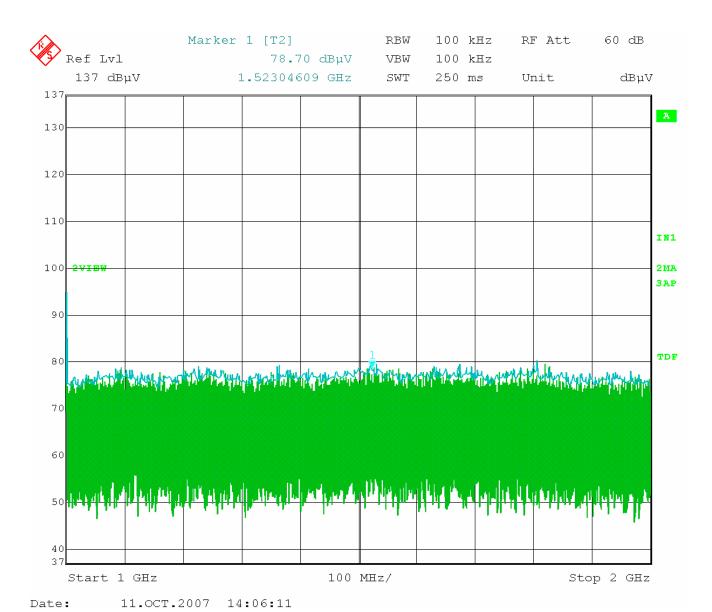
Model: STAR

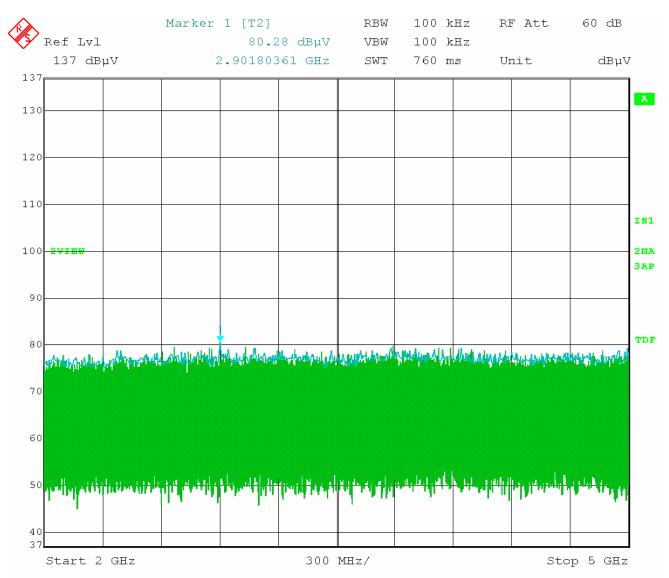
# RF CONDUCTED ANTENNA TEST

DATA SHEETS

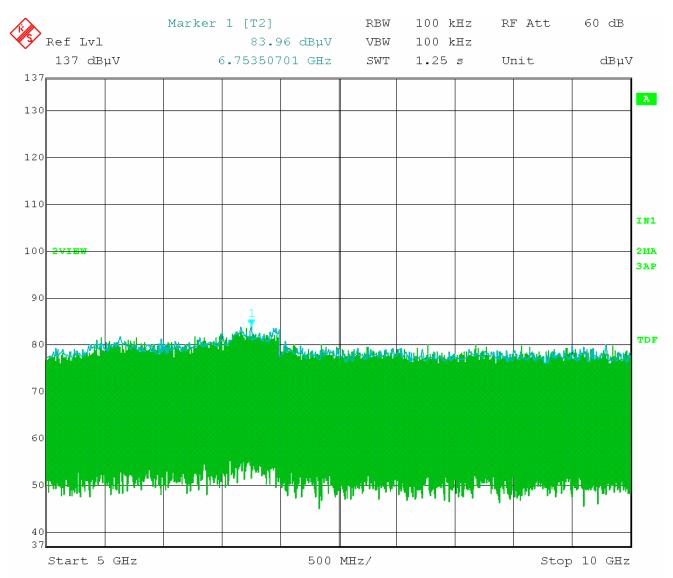


Date: 11.OCT.2007 14:05:19

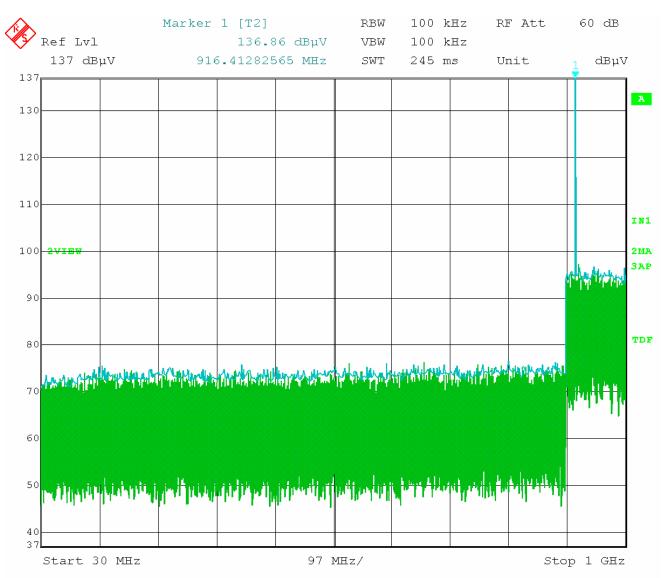




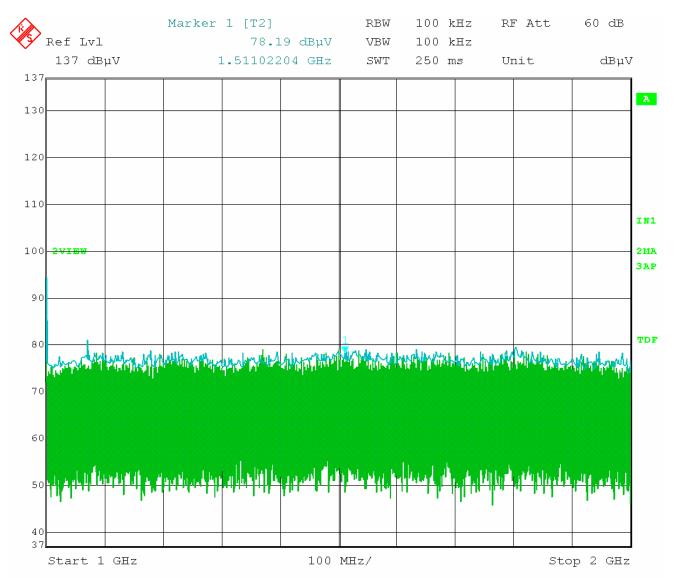
Date: 11.0CT.2007 14:07:49



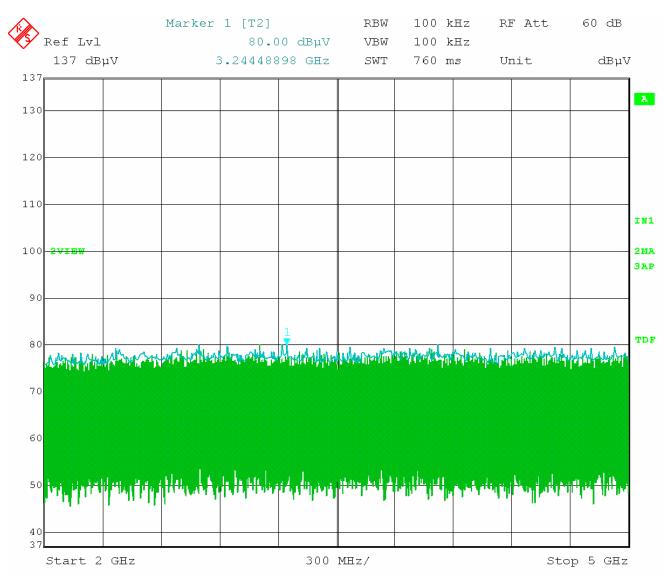
Date: 11.OCT.2007 14:08:44



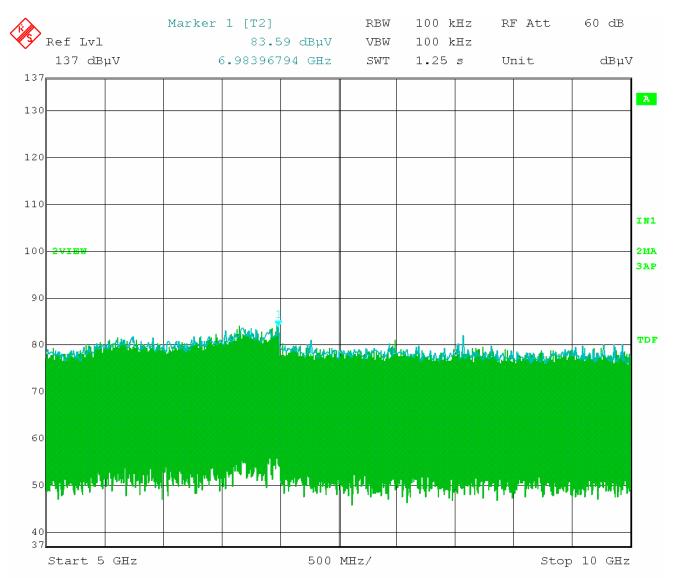
Date: 11.OCT.2007 13:59:41



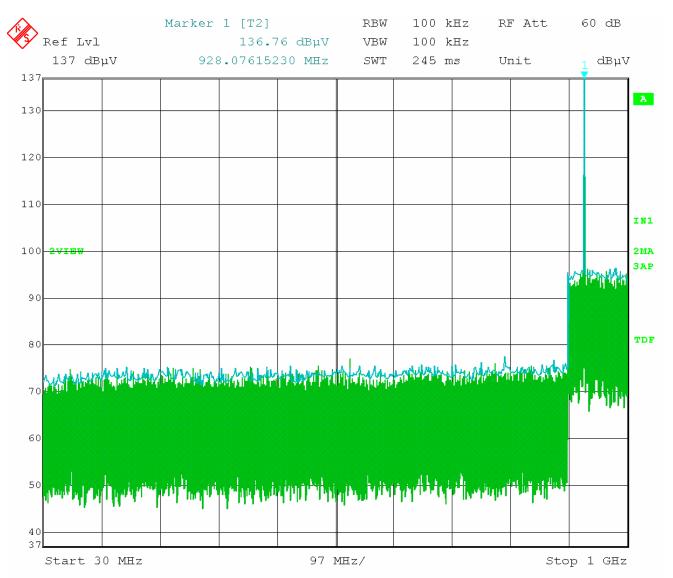
Date: 11.OCT.2007 14:00:28



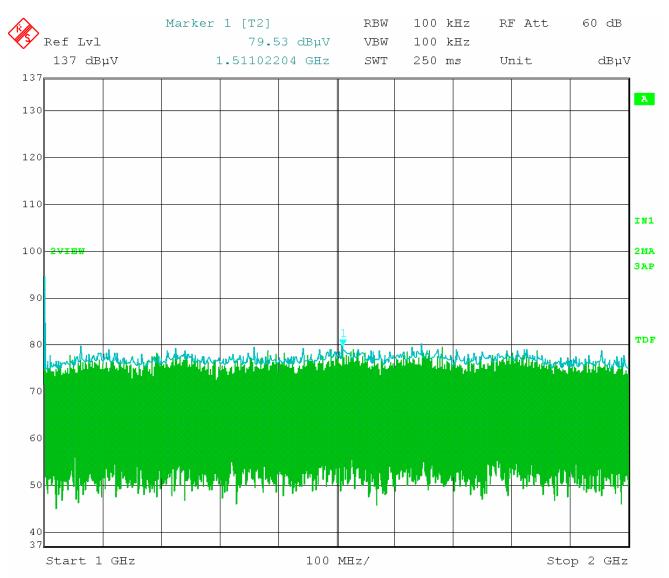
Date: 11.OCT.2007 14:02:04



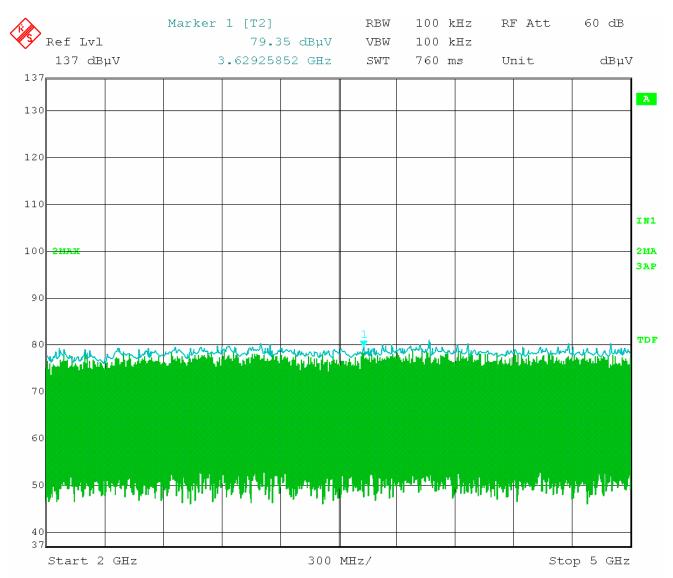
Date: 11.OCT.2007 14:02:40



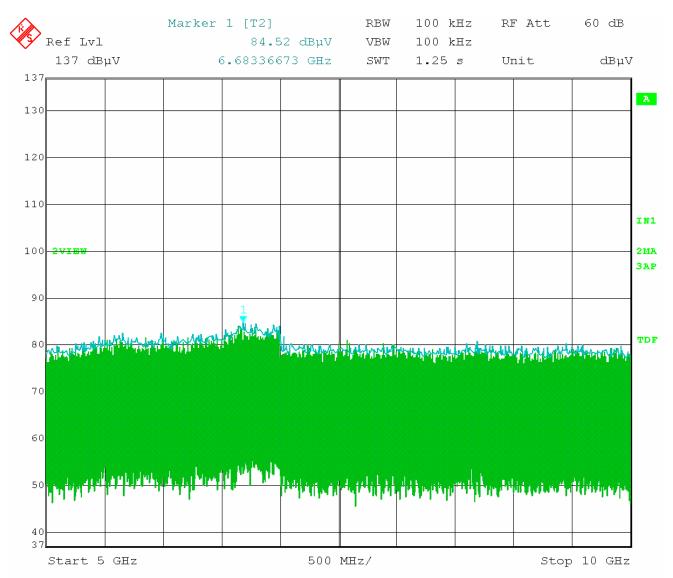
Date: 11.OCT.2007 13:56:55



Date: 11.0CT.2007 13:57:33



Date: 11.OCT.2007 13:54:28

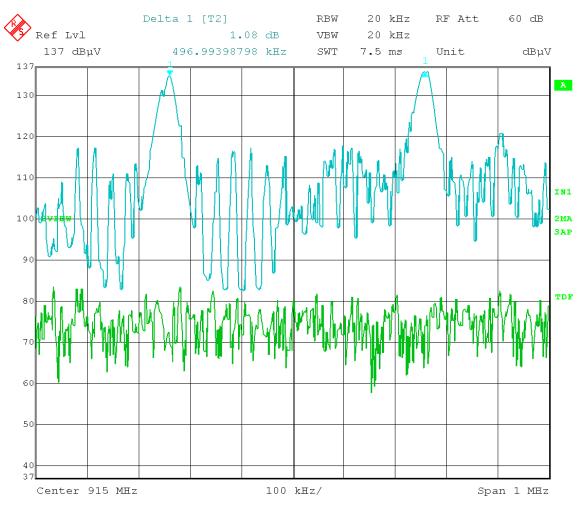


Date: 11.0CT.2007 13:55:22

RFID Reader Model: STAR

## **CHANNEL HOPPING SEPARATION**

DATA SHEET



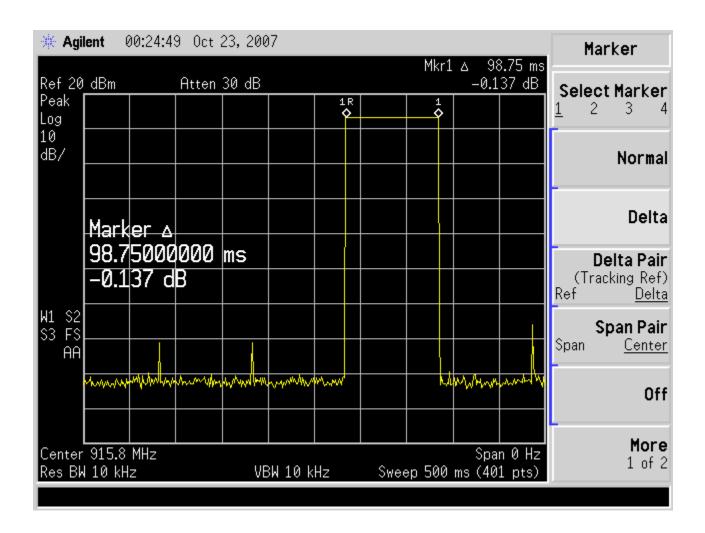
Date: 21.SEP.2007 12:43:48

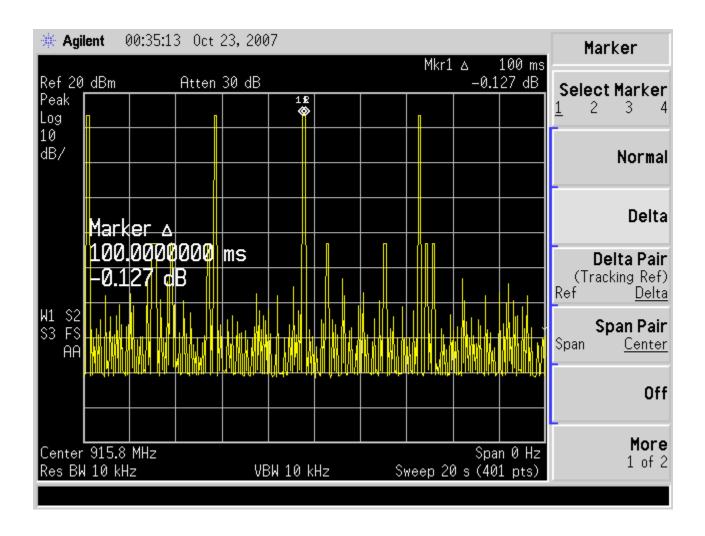
Model: STAR



AVERAGE TIME OF OCCUPANCY

DATA SHEETS

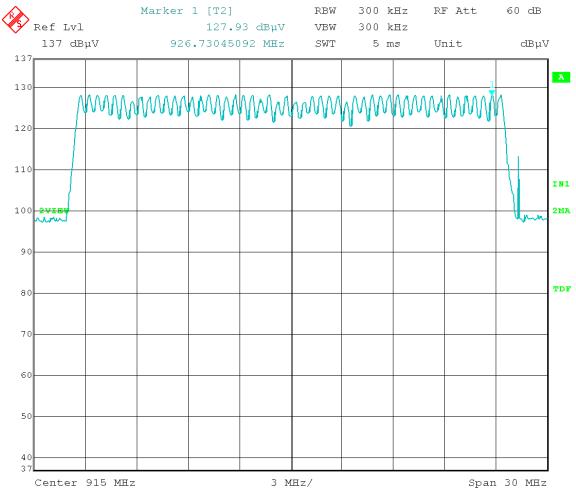




Model: STAR

# NUMBER OF HOPPING FREQUENCIES

DATA SHEET



Date: 21.SEP.2007 13:59:09



RFID Reader Model: STAR

## RF BAND EDGES

### INFORMATION AND DATA SHEET

