FCC PART 15 SUBPART B and C
TEST REPORT

for

V-TAG

MODEL: VT100-1

Prepared for

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DATE: JANUARY 12, 2011

	REPORT BODY	APPENDICES					TOTAL
		A	*B*	*C*	*D*	*E*	
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1	Conducted Emissions Test Setup
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GENERAL REPORT SUMMARY

Compatible Electronics Inc. generates this electromagnetic emission test report, 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:	V-TAG Model: VT100-1 S/N: N/A
Product Description:	See Expository Statement
Modifications:	The EUT was not modified in order to meet the specifications.
Customer:	InfinID Technologies, Inc. 1 West Mountain Street, Suite 12 Pasadena, California 91103
Test Date(s):	January 3 and 4, 2011
Test Specifications:	EMI requirements CFR Title 47, Part 15, Subpart B
Test Procedure:	ANSI C63.4
Test Deviations:	The test procedure was not deviated from during the testing.

SUMMARY OF TEST RESULTS

TEST	DESCRIPTION	RESULTS
1	Conducted RF Emissions 150 kHz to 30 MHz	This test was not performed because the EUT operates on battery power only and cannot be plugged into the AC public mains.
2	Radiated RF Emissions 10 kHz to 25000 MHz (Transmitter, Receive, and Digital Portion)	Complies with the **Class B** limits of CFR Title 47, Part 15, Subpart B; and Subpart C, sections 15.205, 15.209, and 15.249. Highest reading in relation to spec limit: 42.25 dBuV @ 4810 MHz (*U = 5.34 dB)

*U = Expanded Uncertainty with a coverage factor of k=2

1. PURPOSE

This document is a qualification test report based on the Electromagnetic Interference (EMI) tests performed on the V-TAG, Model: VT100-1. The EMI measurements were performed according to the measurement procedure described in ANSI C63.4. 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 for the digital and receiver portion; and the limits defined in Subpart C, sections 15.205, 15.209, and 15.249 for the transmitter portion.

2. ADMINISTRATIVE DATA

2.1 Location of Testing

The EMI tests described herein were performed at the test facility of Compatible Electronics, 114 Olinda Drive, Brea, California.

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

InfinID Technologies, Inc.

Barry Ambrose	Systems Engineer

Compatible Electronics Inc.

Kyle Fujimoto	Test Engineer
James Ross	Test Engineer

2.4 Date Test Sample was Received

The test sample was received prior to the date of testing.

2.5 Disposition of the Test Sample

The test sample has not yet been returned as of the date of this report.

2.6 Abbreviations and Acronyms

The following abbreviations and acronyms may be used in this document.

FCC	Federal Communications Commission
RF	Radio Frequency
EMI	Electromagnetic Interference
EUT	Equipment Under Test
P/N	Part Number
S/N	Serial Number
ITE	Information Technology Equipment
LISN	Line Impedance Stabilization Network
NVLAP	National Voluntary Laboratory Accreditation Program
CFR	Code of Federal Regulations
N/A	Not Applicable
Ltd.	Limited
Inc.	Incorporated
NCR	No Calibration Required

3. APPLICABLE DOCUMENTS

The following documents are referenced or used in the preparation of this EMI Test Report.

SPEC	TITLE
CFR Title 47, Part 15	FCC Rules – Radio frequency devices (including digital devices)
ANSI C63.4: 2009	American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz

4. DESCRIPTION OF TEST CONFIGURATION

4.1 Description of Test Configuration – EMI

The V-TAG, Model: VT100-1 (EUT) tested as a stand alone unit and tested in three orthogonal axis. The EUT was continuously transmitting and receiving.

The antenna is a PCB trace.

It was determined that the emissions were at their highest level when the EUT was operating in the above configuration. The final emissions data was taken in this mode of operation and any cables were maximized. All initial investigations were performed with the measurement receiver in manual mode scanning the frequency range continuously. Photographs of the test setup are in Appendix D of this report.

4.1.1 Cable Construction and Termination

There were no external cables connected to the EUT.

5. LISTS OF EUT, ACCESSORIES AND TEST EQUIPMENT

5.1 EUT and Accessory List

EQUIPMENT	MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	FCC ID
V-TAG (EUT)	INFINID TECHNOLOGIES, INC.	VT100-1	N/A	Y8FVT1001

5.2 EMI Test Equipment

EQUIPMENT TYPE	MANU-FACTURER	MODEL NUMBER	SERIAL NUMBER	CALIBRATION DATE	CALIBRATION DUE DATE
GENERAL TEST EQUIPMENT USED FOR ALL RF EMISSIONS TESTS					
Computer	Hewlett Packard	4530	US91912319	N/A	N/A
Spectrum Analyzer – Main Section	Hewlett Packard	8566B	2637A03618	June 1, 2010	June 1, 2011
Spectrum Analyzer – Display Section	Hewlett Packard	85662A	2648A13404	June 1, 2010	June 1, 2011
Quasi-Peak Adapter	Hewlett Packard	85650A	2430A00424	September 16, 2010	September 16, 2011
EMI Receiver	Rohde & Schwarz	ESIB40	100218	April 9, 2009	April 9, 2011
Monitor	Hewlett Packard	D5258A	TW74500641	N/A	N/A
RF RADIATED EMISSIONS TEST EQUIPMENT					
Biconical Antenna	Com-Power	AB-900	15250	June 18, 2010	June 18, 2011
Log Antenna	Com-Power	AL-100	16252	June 9, 2010	June 9, 2011
Preamplifier	Com-Power	PA-102	1017	January 6, 2010	January 6, 2011
Horn Antenna	Com-Power	AH-118	071175	March 18, 2010	March 18, 2012
Loop Antenna	Com-Power	AL-130	17089	September 29, 2008	September 29, 2011
Microwave Preamplifier	Com-Power	PA-840	711013	March 11, 2010	March 11, 2011
Horn Antenna	Com-Power	AH826	71957	NCR	N/A
Microwave Preamplifier	Com-Power	PA-118	181656	December 22, 2010	December 22, 2011
Antenna Mast	Com Power	AM-100	N/A	N/A	N/A

6. TEST SITE DESCRIPTION

6.1 Test Facility Description

Please refer to section 2.1 and 7.1.2 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 not grounded.

6.3 Facility Environmental Characteristics

When applicable refer to the data sheets in Appendix E for the relative humidity, air temperature, and barometric pressure.

7. TEST PROCEDURES

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

7.1 RF Emissions

7.1.1 Conducted Emissions Test

The measurement receiver was used as a measuring meter. The data was collected with the measurement receiver in the peak detect mode with the "Max Hold" feature activated. The quasi-peak was used only where indicated in the data sheets. A transient limiter was used for the protection of the measurement receiver's input stage, and the offset was adjusted accordingly to read the actual data measured. The LISN output was measured using the measurement receiver. The output of the second LISN was terminated by a 50-ohm termination. The effective measurement bandwidth used for this test was 9 kHz.

Please see section 6.2 of this report for mounting, bonding and grounding of the EUT. The EUT was powered through the LISN, which was bonded to the ground plane. The LISN power was filtered and the filter was bonded to the ground plane. The EUT was set up with the minimum distances from any conductive surfaces as specified in ANSI C63.4. The excess power cord was wrapped in a figure eight pattern to form a bundle not exceeding 0.4 meters in length.

The conducted emissions from the EUT were maximized for operating mode as well as cable placement. The final data was collected under program control by the Compatible Electronics conducted emissions software in several overlapping sweeps by running the spectrum analyzer at a minimum scan rate of 10 seconds per octave. The final qualification data is located in Appendix E.

Test Results:

This test was not performed because the EUT operates on battery power only and cannot be plugged into the AC public mains.

7.1.2 Radiated Emissions (Spurious and Harmonics) Test

The spectrum analyzer and EMI Receiver were used as a measuring meter along with the quasi-peak adapter. Amplifiers were used to increase the sensitivity of the instrument. The Com-Power Preamplifier Model: PA-102 was used for frequencies from 30 MHz to 1 GHz, the Com-Power Microwave Preamplifier Model: PA-118 was used for frequencies from 1 GHz to 18 GHz, and the Com-Power Microwave Preamplifier Model: PA-840 were used for frequencies above 18 GHz. The spectrum analyzer and EMI Receiver were 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 readings were averaged by a “duty cycle correction factor,” derived from 20 log (dwell time / one pulse train with blanking interval). The measurement bandwidths and transducers used for the radiated emissions test were:

The measurement bandwidths and transducers used for the radiated emissions test were:

FREQUENCY RANGE	EFFECTIVE MEASUREMENT BANDWIDTH	TRANSDUCER
10 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 25 GHz	1 MHz	Horn Antennas

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. 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 (continued)

The presence of ambient signals was verified by turning the EUT off. In case an ambient signal was detected, the measurement bandwidth was reduced temporarily and verification was made that an additional adjacent peak did not exist. This ensures that the ambient signal does not hide any emissions from the EUT. The EUT was tested at a 3-meter test distance to obtain the final test data.

Test Results:

The EUT complies with the **Class B** limits of CFR Title 47, Part 15, Subpart B; and the limits of CFR Title 47, Part 15, Subpart C, Sections 15.209 and 15.249.

7.1.3 RF Emissions Test Results

Table 1.0 RADIATED EMISSION RESULTS
V-TAG, Model: VT100-1

Frequency MHz	**Corrected Reading* dBuV**	**Specification Limit dBuV**	**Delta (Cor. Reading – Spec. Limit) dB**
4810(**A**)	42.25	54.00	-11.75
4890(**A**)	40.21	54.00	-13.79
4960(**A**)	36.92	54.00	-17.08
2405(**A**)	76.74	94.00	-17.26
2480(**A**)	74.82	94.00	-19.18
7335(**A**)	32.89	54.00	-21.11

Notes:

* The complete emissions data is given in Appendix E of this report.

A Average Reading

8. CONCLUSIONS

The V-TAG, Model: VT100-1 (EUT), as tested, meets all of the **Class B** specification limits defined in CFR Title 47, Part 15, Subpart B for the digital and receiver portion; and the limits defined in Subpart C, sections 15.205, 15.209, and 15.249 for the transmitter portion.

APPENDIX A

LABORATORY ACCREDITATIONS AND RECOGNITIONS

LABORATORY ACCREDITATIONS AND RECOGNITIONS

NVLAP LAB CODES 200063-0, 200528-0, 200527-0

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

NVLAP listing links

Agoura Division / **Brea Division** / **Silverado/Lake Forest Division**

.Quote from ISO-ILAC-IAF Communiqué on 17025:

"A laboratory's fulfilment of the requirements of ISO/IEC 17025:2005 means the laboratory meets both the technical competence requirements and management system requirements that are necessary for it to consistently deliver technically valid test results and calibrations. The management system requirements in ISO/IEC 17025:2005 (Section 4) are written in language relevant to laboratory operations and meet the principles of ISO 9001:2008 Quality Management Systems — Requirements."

ANSI listing CETCB

Compatible Electronics has been nominated as a Conformity Assessment Body (CAB) for EMC under the US/EU Mutual Recognition Agreement (MRA).
US/EU MRA list NIST MRA site

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).
APEC MRA list NIST MRA site

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

VCCI Support member: Please visit http://www.vcci.jp/vcci_e/

FCC Listing, from FCC OET site
FCC test lab search https://fjallfoss.fcc.gov/oetcf/eas/reports/TestFirmSearch.cfm

Industry Canada Industrie Canada

Compatible Electronics IC listing can be found at:
http://www.ic.gc.ca/eic/site/ic1.nsf/eng/home

APPENDIX B

MODIFICATIONS TO THE EUT

MODIFICATIONS TO THE EUT

The modifications listed below were made to the EUT to pass FCC 15.249 and/or FCC **Class B** specifications.

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

No modification were made to the EUT during the testing.

APPENDIX C

ADDITIONAL MODELS COVERED UNDER THIS REPORT

ADDITIONAL MODELS COVERED UNDER THIS REPORT

USED FOR THE PRIMARY TEST

V-TAG
Model: VT100-1
S/N: N/A

ALSO APPROVED UNDER THIS REPORT:

There were no additional models covered under this report.

APPENDIX D

DIAGRAMS, CHARTS, AND PHOTOS

FIGURE 1: CONDUCTED EMISSIONS TEST SETUP

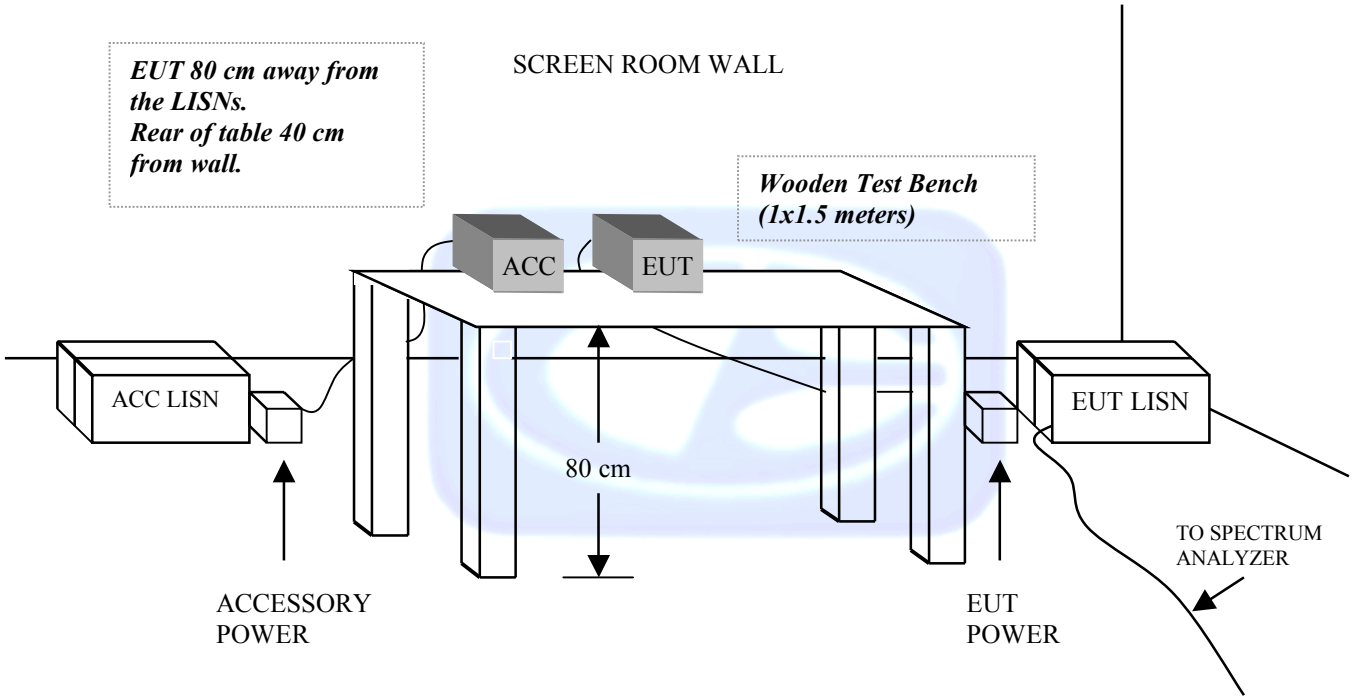
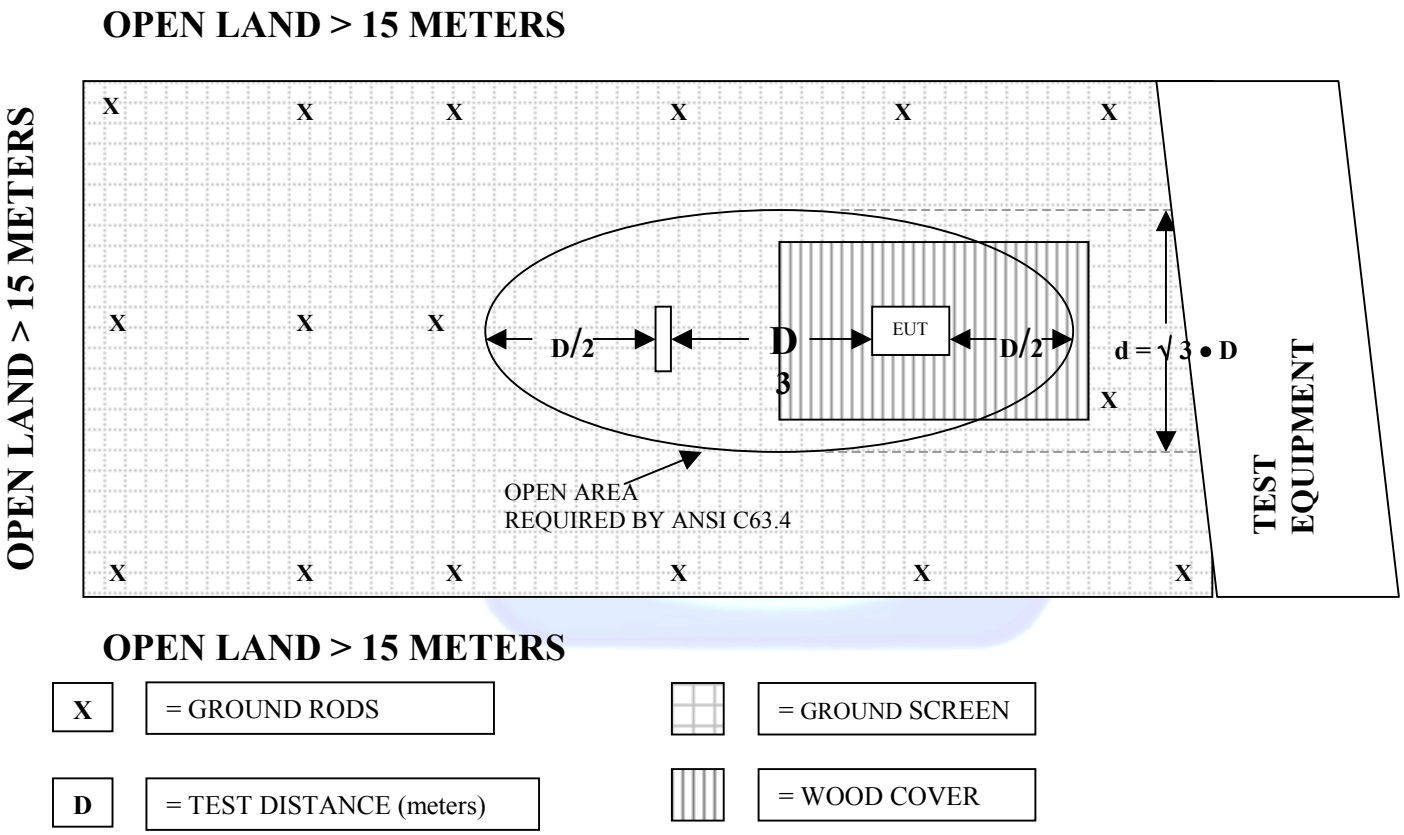


FIGURE 2: PLOT MAP AND LAYOUT OF RADIATED SITE – 3 METERS



COM-POWER AB-900

BICONICAL ANTENNA

S/N: 15250

CALIBRATION DATE: JUNE 18, 2010

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
30	12.8	100	11.5
35	11.3	120	13.6
40	10.8	140	12.5
45	10.1	160	13.2
50	11.0	180	15.5
60	11.1	200	16.9
70	7.3	250	16.4
80	7.5	275	18.7
90	8.3	300	19.5

COM-POWER AL-100

LOG PERIODIC ANTENNA

S/N: 16252

CALIBRATION DATE: JUNE 9, 2010

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
300	12.7	700	19.5
400	16.1	800	20.9
500	16.9	900	20.8
600	20.1	1000	21.5

COM-POWER PA-102

PREAMPLIFIER

S/N: 1017

CALIBRATION DATE: JANUARY 6, 2010

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
30	38.3	300	38.2
40	38.4	350	38.1
50	38.2	400	38.5
60	38.2	450	38.0
70	38.3	500	37.9
80	38.1	550	38.2
90	38.2	600	38.2
100	38.3	650	37.7
125	38.2	700	38.3
150	38.3	750	38.3
175	38.3	800	37.4
200	38.1	850	37.5
225	38.2	900	37.6
250	38.3	950	37.4
275	38.2	1000	37.3

COM POWER AH-118

HORN ANTENNA

S/N: 071175

CALIBRATION DATE: MARCH 18, 2010

FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
1.0	22.2	10.0	39.8
1.5	24.2	10.5	40.2
2.0	27.2	11.0	39.7
2.5	27.8	11.5	39.9
3.0	30.5	12.0	41.7
3.5	30.9	12.5	42.7
4.0	31.9	13.0	42.3
4.5	33.2	13.5	40.3
5.0	33.6	14.0	42.6
5.5	36.2	14.5	43.4
6.0	35.8	15.0	41.9
6.5	36.1	15.5	40.8
7.0	37.9	16.0	41.0
7.5	37.4	16.5	41.5
8.0	38.0	17.0	44.5
8.5	38.8	17.5	47.6
9.0	38.0	18.0	50.8
9.5	39.2		

COM-POWER PA-118

PREAMPLIFIER

S/N: 181656

CALIBRATION DATE: DECEMBER 22, 2010

FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
1.0	24.90	10.0	26.07
1.5	26.50	10.5	24.97
2.0	26.79	11.0	24.79
2.5	26.90	11.5	24.33
3.0	27.03	12.0	24.24
3.5	26.94	12.5	24.92
4.0	27.18	13.0	24.52
4.5	26.79	13.5	24.33
5.0	26.25	14.0	24.56
5.5	26.16	14.5	24.99
6.0	25.52	15.0	26.06
6.5	25.29	15.5	26.87
7.0	24.45	16.0	25.95
7.5	24.18	16.5	24.69
8.0	24.02	17.0	24.20
8.5	24.54	17.5	25.12
9.0	24.91	18.0	26.03
9.5	25.42		

COM-POWER AL-130

LOOP ANTENNA

S/N: 17089

CALIBRATION DATE: SEPTEMBER 29, 2008

FREQUENCY (MHz)	MAGNETIC (dB/m)	ELECTRIC (dB/m)
0.009	-41.57	9.93
0.01	-42.06	9.44
0.02	-42.43	9.07
0.05	-42.50	9.00
0.07	-42.10	9.40
0.1	-42.03	9.47
0.2	-44.50	7.00
0.3	-41.93	9.57
0.5	-41.90	9.60
0.7	-41.73	9.77
1	-41.23	10.27
2	-40.90	10.60
3	-41.20	10.30
4	-41.30	10.20
5	-40.70	10.80
10	-41.10	10.40
15	-42.17	9.33
20	-42.00	9.50
25	-42.20	9.30
30	-43.10	8.40

COM-POWER AH826

HORN ANTENNA

S/N: 71957

FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
18.0	33.5	22.5	35.5
18.5	33.5	23.0	35.9
19.0	34.0	23.5	35.7
19.5	34.0	24.0	35.6
20.0	34.3	24.5	36.0
20.5	34.9	25.0	36.2
21.0	34.7	25.5	36.1
21.5	35.0	26.0	36.2
22.0	35.0	26.5	35.7

COM-POWER PA-840

MICROWAVE PREAMPLIFIER

S/N: 711013

CALIBRATION DATE: MARCH 11, 2010

FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
18.0	24.36	29.5	23.52
18.5	24.54	30.0	21.73
19.0	24.06	30.5	22.34
19.5	23.71	31.0	20.06
20.0	23.42	31.5	20.02
20.5	22.87	32.0	18.11
21.0	22.60	32.5	19.35
21.5	21.08	33.0	17.50
22.0	22.13	33.5	17.49
22.5	22.42	34.0	17.48
23.0	22.85	34.5	18.57
23.5	22.85	35.0	18.64
24.0	23.82	35.5	18.82
24.5	22.33	36.0	19.14
25.0	24.09	36.5	18.58
25.5	23.20	37.0	15.07
26.0	23.18	37.5	17.29
26.5	23.50	38.0	20.82
27.0	24.25	38.5	19.96
27.5	23.58	39.0	20.66
28.0	23.81	39.5	21.41
28.5	23.76	40.0	18.89
29.0	24.83		

FRONT VIEW

INFINID TECHNOLOGIES, INC.
V-TAG
MODEL: VT100-1
FCC SUBPART B AND C – RADIATED EMISSIONS

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

REAR VIEW

INFINID TECHNOLOGIES, INC.
V-TAG
MODEL: VT100-1
FCC SUBPART B AND C – RADIATED EMISSIONS

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

APPENDIX E

DATA SHEETS

RADIATED EMISSIONS

DATA SHEETS

FCC 15.249

InfinID Technologies, Inc.
V-TAG
Model: VT100-1

Date: 01/04/2011
Lab: B
Tested By: Kyle Fujimoto

Transmit Mode
X-Axis - Low Channel

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2405	87.15	V	94	-6.85	Peak	1	0	
2405	67.15	V	94	-26.85	Avg	1	0	
4810	39.27	V	74	-34.73	Peak	1.25	135	
4810	26.88	V	54	-27.12	Avg	1.25	135	
7215								**No Emission**
7215								**Detected**
9620								**No Emission**
9620								**Detected**
12025								**No Emission**
12025								**Detected**
14430								**No Emission**
14430								**Detected**
16835								**No Emission**
16835								**Detected**
19240								**No Emission**
19240								**Detected**
21645								**No Emission**
21645								**Detected**
24050								**No Emission**
24050								**Detected**

FCC 15.249

InfinID Technologies, Inc.
V-TAG
Model: VT100-1

Date: 01/04/2011
Lab: B
Tested By: Kyle Fujimoto

Transmit Mode
X-Axis - Low Channel

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2405	75.09	H	94	-18.91	Peak	1.25	135	
2405	55.09	H	94	-38.91	Avg	1.25	135	
4810	46.87	H	74	-27.13	Peak	1.35	155	
4810	26.87	H	54	-27.13	Avg	1.35	155	
7215								**No Emission**
7215								**Detected**
9620								**No Emission**
9620								**Detected**
12025								**No Emission**
12025								**Detected**
14430								**No Emission**
14430								**Detected**
16835								**No Emission**
16835								**Detected**
19240								**No Emission**
19240								**Detected**
21645								**No Emission**
21645								**Detected**
24050								**No Emission**
24050								**Detected**

FCC 15.249

InfinID Technologies, Inc.
V-TAG
Model: VT100-1

Date: 01/04/2011
Lab: B
Tested By: Kyle Fujimoto

Transmit Mode
Y-Axis - Low Channel

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2405	96.74	V	94	2.74	Peak	1	180	
2405	76.74	V	94	-17.26	Avg	1	180	
4810	56.86	V	74	-17.14	Peak	1.25	135	
4810	36.86	V	54	-17.14	Avg	1.25	135	
7215								**No Emission**
7215								**Detected**
9620								**No Emission**
9620								**Detected**
12025								**No Emission**
12025								**Detected**
14430								**No Emission**
14430								**Detected**
16835								**No Emission**
16835								**Detected**
19240								**No Emission**
19240								**Detected**
21645								**No Emission**
21645								**Detected**
24050								**No Emission**
24050								**Detected**

FCC 15.249

InfinID Technologies, Inc.
V-TAG
Model: VT100-1

Date: 01/04/2011
Lab: B
Tested By: Kyle Fujimoto

Transmit Mode
Y-Axis - Low Channel

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2405	76.92	H	94	-17.08	Peak	1.25	135	
2405	56.92	H	94	-37.08	Avg	1.25	135	
4810	49.62	H	74	-24.38	Peak	1.25	155	
4810	29.62	H	54	-24.38	Avg	1.25	155	
7215								**No Emission**
7215								**Detected**
9620								**No Emission**
9620								**Detected**
12025								**No Emission**
12025								**Detected**
14430								**No Emission**
14430								**Detected**
16835								**No Emission**
16835								**Detected**
19240								**No Emission**
19240								**Detected**
21645								**No Emission**
21645								**Detected**
24050								**No Emission**
24050								**Detected**

FCC 15.249

InfinID Technologies, Inc.
V-TAG
Model: VT100-1

Date: 01/04/2011
Lab: B
Tested By: Kyle Fujimoto

Transmit Mode
Z-Axis - Low Channel

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2405	91.52	V	94	-2.48	Peak	1	270	
2405	71.52	V	94	-22.48	Avg	1	270	
4810	62.25	V	74	-11.75	Peak	1	225	
4810	42.25	V	54	-11.75	Avg	1	225	
7215	57.44	V	74	-16.56	Peak	1	180	
7215	37.44	V	54	-16.56	Avg	1	180	
9620								**No Emission**
9620								**Detected**
12025								**No Emission**
12025								**Detected**
14430								**No Emission**
14430								**Detected**
16835								**No Emission**
16835								**Detected**
19240								**No Emission**
19240								**Detected**
21645								**No Emission**
21645								**Detected**
24050								**No Emission**
24050								**Detected**

FCC 15.249

InfinID Technologies, Inc.
V-TAG
Model: VT100-1

Date: 01/04/2011
Lab: B
Tested By: Kyle Fujimoto

Transmit Mode
Z-Axis - Low Channel

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2405	88.35	H	94	-5.65	Peak	1.25	135	
2405	68.35	H	94	-25.65	Avg	1.25	135	
4810	60.08	H	74	-13.92	Peak	1.35	145	
4810	40.08	H	54	-13.92	Avg	1.35	145	
7215	57.54	H	74	-16.46	Peak	1.25	165	
7215	37.54	H	54	-16.46	Avg	1.25	165	
9620								**No Emission**
9620								**Detected**
12025								**No Emission**
12025								**Detected**
14430								**No Emission**
14430								**Detected**
16835								**No Emission**
16835								**Detected**
19240								**No Emission**
19240								**Detected**
21645								**No Emission**
21645								**Detected**
24050								**No Emission**
24050								**Detected**

FCC 15.249

InfinID Technologies, Inc.
V-TAG
Model: VT100-1

Date: 01/04/2011
Lab: B
Tested By: Kyle Fujimoto

Middle Channel - X-Axis
Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2445	80.57	V	94	-13.43	Peak	1.25	155	
2445	60.57	V	94	-33.43	Avg	1.25	155	
4890	49.26	V	74	-24.74	Peak	1.25	155	
4890	29.26	V	54	-24.74	Avg	1.25	155	
7335								**No Emission**
7335								**Detected**
9780								**No Emission**
9780								**Detected**
12225								**No Emission**
12225								**Detected**
14670								**No Emission**
14670								**Detected**
17115								**No Emission**
17115								**Detected**
19560								**No Emission**
19560								**Detected**
22005								**No Emission**
22005								**Detected**
24450								**No Emission**
24450								**Detected**

FCC 15.249

InfinID Technologies, Inc.
V-TAG
Model: VT100-1

Date: 01/04/2011
Lab: B
Tested By: Kyle Fujimoto

Middle Channel - X-Axis
Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2445	72.43	H	94	-21.57	Peak	1.25	155	
2445	52.43	H	94	-41.57	Avg	1.25	155	
4890	50.61	H	74	-23.39	Peak	1.35	165	
4890	30.61	H	54	-23.39	Avg	1.35	165	
7335	48.65	H	74	-25.35	Peak	1.25	175	
7335	28.65	H	54	-25.35	Avg	1.25	175	
9780								**No Emission**
9780								**Detected**
12225								**No Emission**
12225								**Detected**
14670								**No Emission**
14670								**Detected**
17115								**No Emission**
17115								**Detected**
19560								**No Emission**
19560								**Detected**
22005								**No Emission**
22005								**Detected**
24450								**No Emission**
24450								**Detected**

FCC 15.249

InfinID Technologies, Inc.
V-TAG
Model: VT100-1

Date: 01/04/2011
Lab: B
Tested By: Kyle Fujimoto

Middle Channel - Y-Axis
Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2445	95.77	V	94	1.77	Peak	1.25	135	
2445	75.77	V	94	-18.23	Avg	1.25	135	
4890	52.73	V	74	-21.27	Peak	1.25	145	
4890	32.73	V	54	-21.27	Avg	1.25	145	
7335								**No Emission**
7335								**Detected**
9780								**No Emission**
9780								**Detected**
12225								**No Emission**
12225								**Detected**
14670								**No Emission**
14670								**Detected**
17115								**No Emission**
17115								**Detected**
19560								**No Emission**
19560								**Detected**
22005								**No Emission**
22005								**Detected**
24450								**No Emission**
24450								**Detected**

FCC 15.249

InfinID Technologies, Inc.
V-TAG
Model: VT100-1

Date: 01/04/2011
Lab: B
Tested By: Kyle Fujimoto

Middle Channel - Y-Axis
Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2445	79.97	H	94	-14.03	Peak	1.25	155	
2445	59.97	H	94	-34.03	Avg	1.25	155	
4890	53.96	H	74	-20.04	Peak	1.35	165	
4890	33.96	H	54	-20.04	Avg	1.35	165	
7335								**No Emission**
7335								**Detected**
9780								**No Emission**
9780								**Detected**
12225								**No Emission**
12225								**Detected**
14670								**No Emission**
14670								**Detected**
17115								**No Emission**
17115								**Detected**
19560								**No Emission**
19560								**Detected**
22005								**No Emission**
22005								**Detected**
24450								**No Emission**
24450								**Detected**

FCC 15.249

InfinID Technologies, Inc.
V-TAG
Model: VT100-1

Date: 01/04/2011
Lab: B
Tested By: Kyle Fujimoto

Middle Channel - Z-Axis
Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2445	89.98	V	94	-4.02	Peak	1.5	225	
2445	68.98	V	94	-25.02	Avg	1.5	225	
4890	56.96	V	74	-17.04	Peak	1.25	135	
4890	36.96	V	54	-17.04	Avg	1.25	135	
7335								**No Emission**
7335								**Detected**
9780								**No Emission**
9780								**Detected**
12225								**No Emission**
12225								**Detected**
14670								**No Emission**
14670								**Detected**
17115								**No Emission**
17115								**Detected**
19560								**No Emission**
19560								**Detected**
22005								**No Emission**
22005								**Detected**
24450								**No Emission**
24450								**Detected**

FCC 15.249

InfinID Technologies, Inc.
V-TAG
Model: VT100-1

Date: 01/04/2011
Lab: B
Tested By: Kyle Fujimoto

Middle Channel - Z-Axis
Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2445	84.99	H	94	-9.01	Peak	1.25	155	
2445	64.99	H	94	-29.01	Avg	1.25	155	
4890	60.21	H	74	-13.79	Peak	1.55	165	
4890	40.21	H	54	-13.79	Avg	1.55	165	
7335	52.89	H	74	-21.11	Peak	1.65	185	
7335	32.89	H	54	-21.11	Avg	1.65	185	
9780								**No Emission**
9780								**Detected**
12225								**No Emission**
12225								**Detected**
14670								**No Emission**
14670								**Detected**
17115								**No Emission**
17115								**Detected**
19560								**No Emission**
19560								**Detected**
22005								**No Emission**
22005								**Detected**
24450								**No Emission**
24450								**Detected**

FCC 15.249

InfinID Technologies, Inc.
V-TAG
Model: VT100-1

Date: 01/04/2011
Lab: B
Tested By: Kyle Fujimoto

High Channel - X-Axis
Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2480	82.46	V	94	-11.54	Peak	1.25	135	
2480	62.46	V	94	-31.54	Avg	1.25	135	
4960	52.39	V	74	-21.61	Peak	1.35	145	
4960	32.39	V	54	-21.61	Avg	1.35	145	
7440								**No Emission**
7440								**Detected**
9920								**No Emission**
9920								**Detected**
12400								**No Emission**
12400								**Detected**
14880								**No Emission**
14880								**Detected**
17360								**No Emission**
17360								**Detected**
19840								**No Emission**
19840								**Detected**
22320								**No Emission**
22320								**Detected**
24800								**No Emission**
24800								**Detected**

FCC 15.249

InfinID Technologies, Inc.
V-TAG
Model: VT100-1

Date: 01/04/2011
Lab: B
Tested By: Kyle Fujimoto

High Channel - X-Axis
Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2480	70.79	H	94	-23.21	Peak	1.25	155	
2480	50.79	H	94	-43.21	Avg	1.25	155	
4960	45.25	H	74	-28.75	Peak	1.25	135	
4960	25.25	H	54	-28.75	Avg	1.25	135	
7440								**No Emission**
7440								**Detected**
9920								**No Emission**
9920								**Detected**
12400								**No Emission**
12400								**Detected**
14880								**No Emission**
14880								**Detected**
17360								**No Emission**
17360								**Detected**
19840								**No Emission**
19840								**Detected**
22320								**No Emission**
22320								**Detected**
24800								**No Emission**
24800								**Detected**

FCC 15.249

InfinID Technologies, Inc.
V-TAG
Model: VT100-1

Date: 01/04/2011
Lab: B
Tested By: Kyle Fujimoto

High Channel - Y-Axis
Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2480	94.82	V	94	0.82	Peak	1	180	
2480	74.82	V	94	-19.18	Avg	1	180	
4960	52.39	V	74	-21.61	Peak	1.25	135	
4960	32.39	V	54	-21.61	Avg	1.25	135	
7440								**No Emission**
7440								**Detected**
9920								**No Emission**
9920								**Detected**
12400								**No Emission**
12400								**Detected**
14880								**No Emission**
14880								**Detected**
17360								**No Emission**
17360								**Detected**
19840								**No Emission**
19840								**Detected**
22320								**No Emission**
22320								**Detected**
24800								**No Emission**
24800								**Detected**

FCC 15.249

InfinID Technologies, Inc.
V-TAG
Model: VT100-1

Date: 01/04/2011
Lab: B
Tested By: Kyle Fujimoto

High Channel - Y-Axis
Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2480	79.43	H	94	-14.57	Peak	1.25	135	
2480	59.43	H	94	-34.57	Avg	1.25	135	
4960	50.73	H	74	-23.27	Peak	1.35	155	
4960	30.73	H	54	-23.27	Avg	1.35	155	
7440								**No Emission**
7440								**Detected**
9920								**No Emission**
9920								**Detected**
12400								**No Emission**
12400								**Detected**
14880								**No Emission**
14880								**Detected**
17360								**No Emission**
17360								**Detected**
19840								**No Emission**
19840								**Detected**
22320								**No Emission**
22320								**Detected**
24800								**No Emission**
24800								**Detected**

FCC 15.249

InfinID Technologies, Inc.
V-TAG
Model: VT100-1

Date: 01/04/2011
Lab: B
Tested By: Kyle Fujimoto

High Channel - Z-Axis
Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2480	87.61	V	94	-6.39	Peak	1.25	135	
2480	67.61	V	94	-26.39	Avg	1.25	135	
4960	47.66	V	74	-26.34	Peak	1.35	145	
4960	27.66	V	54	-26.34	Avg	1.35	145	
7440								**No Emission**
7440								**Detected**
9920								**No Emission**
9920								**Detected**
12400								**No Emission**
12400								**Detected**
14880								**No Emission**
14880								**Detected**
17360								**No Emission**
17360								**Detected**
19840								**No Emission**
19840								**Detected**
22320								**No Emission**
22320								**Detected**
24800								**No Emission**
24800								**Detected**

FCC 15.249

InfinID Technologies, Inc.
V-TAG
Model: VT100-1

Date: 01/04/2011
Lab: B
Tested By: Kyle Fujimoto

High Channel - Z-Axis
Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2480	82.03	H	94	-11.97	Peak	1.25	135	
2480	62.03	H	94	-31.97	Avg	1.25	135	
4960	48.89	H	74	-25.11	Peak	1.35	145	
4960	36.92	H	54	-17.08	Avg	1.35	145	
7440								**No Emission**
7440								**Detected**
9920								**No Emission**
9920								**Detected**
12400								**No Emission**
12400								**Detected**
14880								**No Emission**
14880								**Detected**
17360								**No Emission**
17360								**Detected**
19840								**No Emission**
19840								**Detected**
22320								**No Emission**
22320								**Detected**
24800								**No Emission**
24800								**Detected**

FCC Class B and RSS-210

InfinID Technologies, Inc.
V-TAG
Model: VT100-1

Date: 01/03/2011
Labs: B and D
Tested By: Kyle Fujimoto

Receive Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
								No Emissions Found for the
								Receive Mode
								from 10 kHz to 25000 MHz
								for both Vertical and Horizontal
								Polarizations
								Investigated in the
								X, Y, and Z Axis
								Investigated in the
								at the Low, Middle, and High
								Channels

FCC 15.249 and FCC Class B

InfinID Technologies, Inc.
V-TAG
Model: VT100-1

Date: 01/03/2011
Labs: B and D
Tested By: Kyle Fujimoto

Non Harmonic Emissions from the Tx and Digital Portion 10 kHz to 25 GHz
Vertical and Horizontal Polarization

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
								No Emissions Found for the
								Digital Portion
								from 10 kHz to 25 GHz
								for both Vertical and Horizontal
								Polarizations
								No Non Harmonic
								Emissions Found
								for the Tx Mode
								from 10 kHz to 25 GHz
								for both Vertical and Horizontal
								Polarizations
								Investigated in the
								X, Y, and Z Axis

BAND EDGES

DATA SHEETS

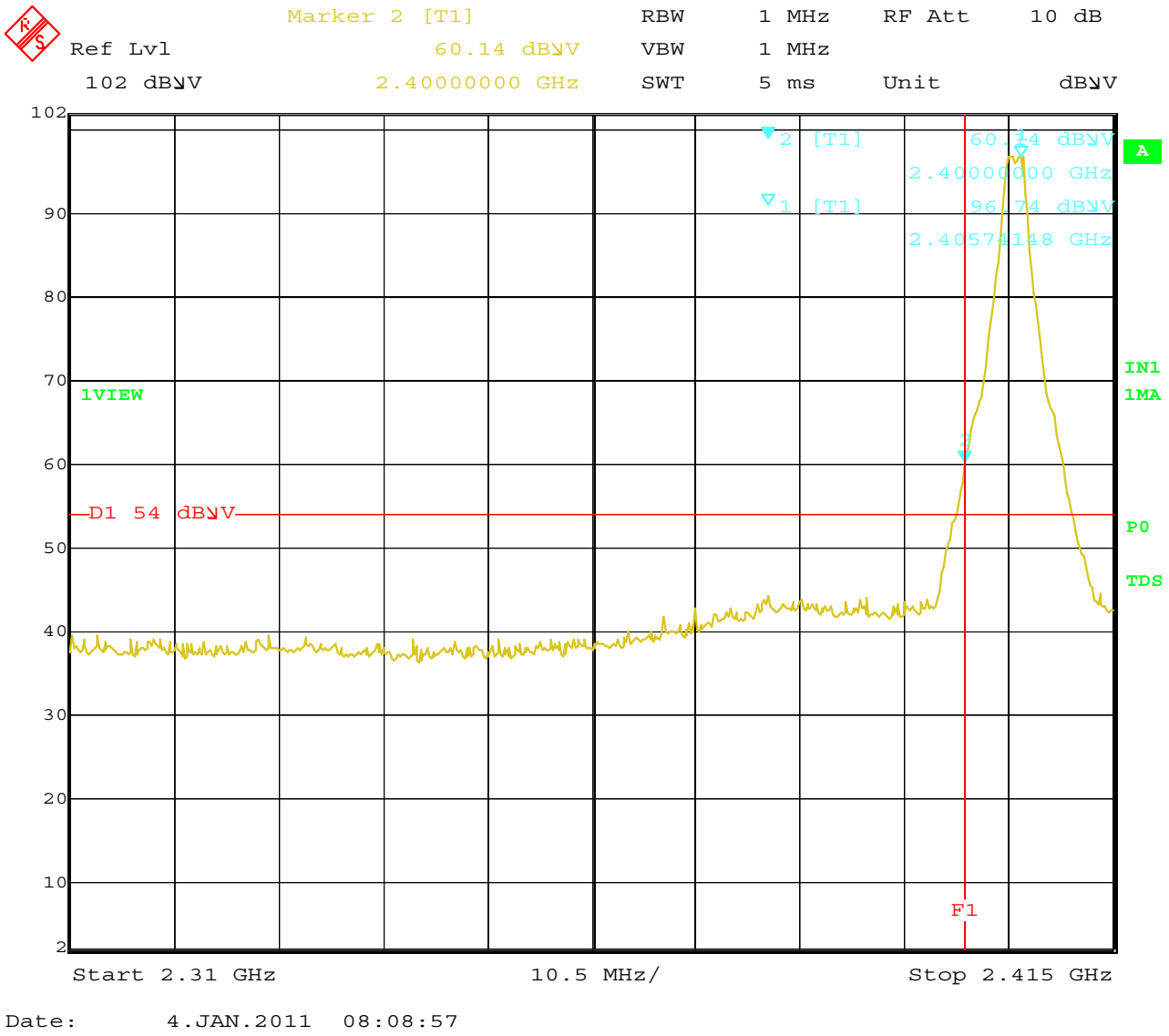
FCC 15.249

InfinID Technologies, Inc.
V-TAG
Model: VT100-1

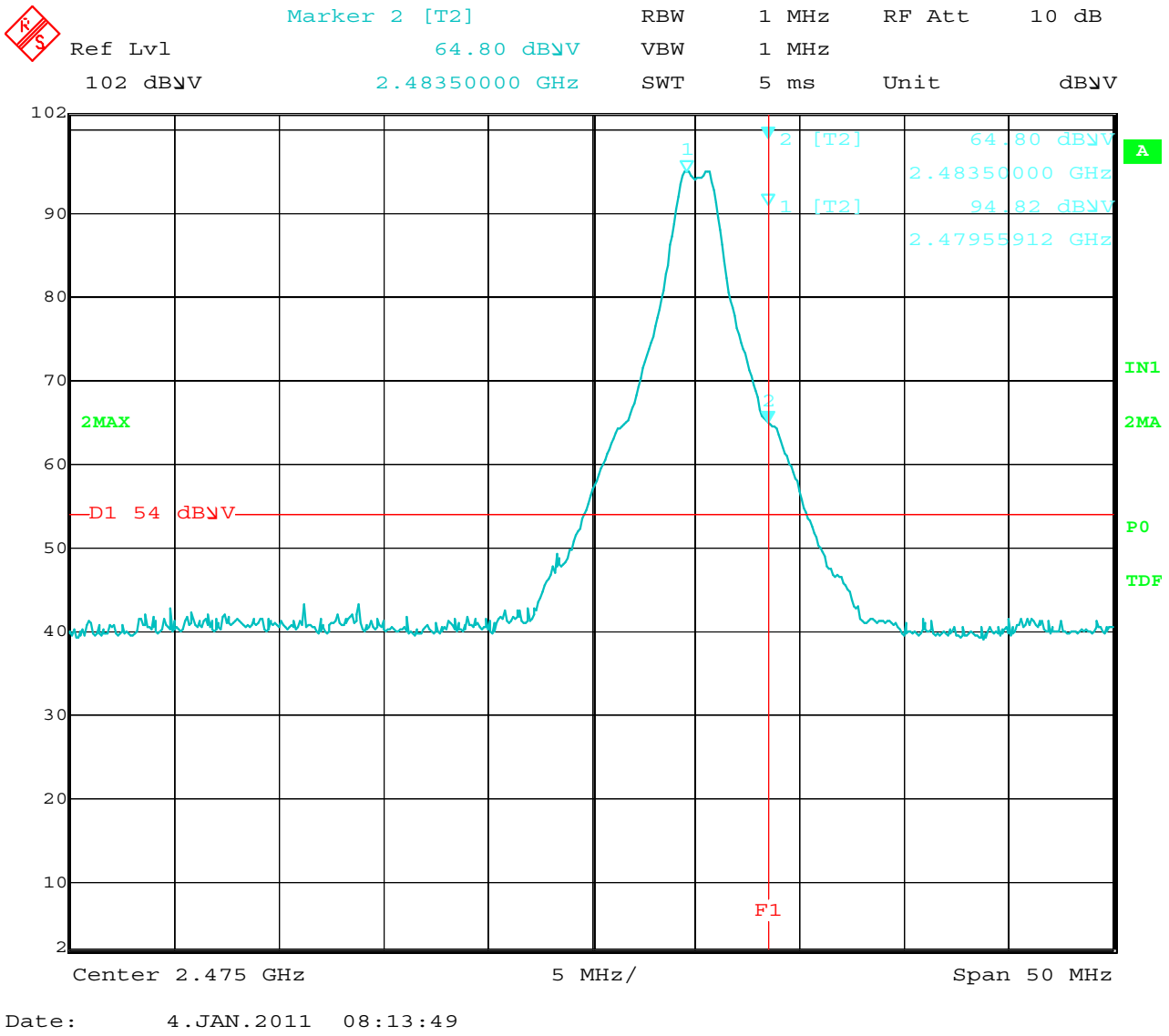
Date: 01/04/2011
Lab: B
Tested By: Kyle Fujimoto

Band Edges - Vertical Polarization - Y-Axis - Worst Case

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2405	96.74	V	94	2.74	Peak	1	180	Fundamental of Low Channel
2405	76.74	V	94	-17.26	Avg	1	180	@ 3 meters
2400	60.14	V	74	-13.86	Peak	1	180	Band Edge of
2400	40.14	V	54	-13.86	Avg	1	180	Low Channel
2480	94.82	V	94	0.82	Peak	1	180	Fundamental of High Channel
2480	74.82	V	94	-19.18	Avg	1	180	@ 3 meters
2483.5	64.8	V	74	-9.2	Peak	1	180	Band Edge of
2483.5	48.8	V	54	-5.2	Avg	1	180	High Channel



Band Edge – Low Channel – Vertical Polarization – Y-Axis (Worst Case)



Date: 4.JAN.2011 08:13:49

Band Edge – High Channel – Vertical Polarization – Y-Axis (Worst Case)