

Identive GmbH

ADDENDUM TO TEST REPORT 93719-11

TouchSecure WallMount (WM) Model: Connectivity WM

Tested To The Following Standards:

FCC Part 15 Subpart C Sections 15.207, 15.225
and
RSS 210 Issue 8

Report No.: 93719-11A

Date of issue: August 28, 2013



This test report bears the accreditation symbol indicating that the testing performed herein meets the test and reporting requirements of ISO/IEC 17025 under the applicable scope of EMC testing for CKC Laboratories, Inc.

We strive to create long-term, trust based relationships by providing sound, adaptive, customer first testing services. We embrace each of our customers' unique EMC challenges, not as an interruption to set processes, but rather as the reason we are in business.

TABLE OF CONTENTS

Administrative Information	3
Test Report Information	3
Revision History	3
Report Authorization	3
Test Facility Information	4
Software Versions	4
Site Registration & Accreditation Information	4
Summary of Results	5
Conditions During Testing	5
Equipment Under Test	6
Peripheral Devices	6
FCC Part 15 Subpart C	7
15.31(e) Voltage Variations	7
15.207 AC Conducted Emissions	11
15.225(a) RF Power Output / Bandedge	29
-20dBc / 99% Occupied Bandwidth	42
15.225(d) Field Strength of Spurious Emissions	46
15.225(e) Frequency Stability	68
Supplemental Information	71
Measurement Uncertainty	71
Emissions Test Details	71

ADMINISTRATIVE INFORMATION

Test Report Information

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Project Number: 93719

DATE OF EQUIPMENT RECEIPT:

March 27, 2013

DATE(S) OF TESTING:

March 27 - May 22, 2013
August 23, 2013

Revision History

Original: Testing of TouchSecure WallMount (WM), Connectivity WM to FCC Part 15 Subpart C Sections 15.207, 15.225 and RSS 210 Issue 8.

Addendum A: To add conducted emissions fundamental data and setup photos to section 15.207. Additional 20°C at +/-15% data added to Frequency Stability table.

Report Authorization

The test data contained in this report documents the observed testing parameters pertaining to and are relevant for only the sample equipment tested in the agreed upon operational mode(s) and configuration(s) as identified herein. Compliance assessment remains the client's responsibility. This report may not be used to claim product endorsement by A2LA or any government agencies. This test report has been authorized for release under quality control from CKC Laboratories, Inc.

A handwritten signature in black ink that reads "Steve Behm".

Steve Behm
Director of Quality Assurance & Engineering Services
CKC Laboratories, Inc.

Test Facility Information



Our laboratories are configured to effectively test a wide variety of product types. CKC utilizes first class test equipment, anechoic chambers, data acquisition and information services to create accurate, repeatable and affordable test results.

TEST LOCATION(S):
CKC Laboratories, Inc.
1120 Fulton Place
Fremont, CA 94539

Software Versions

CKC Laboratories Proprietary Software	Version
EMITest Emissions	5.00.14
Immunity	5.00.07

Site Registration & Accreditation Information

Location	CB #	TAIWAN	CANADA	FCC	JAPAN
Fremont	US0082	SL2-IN-E-1148R	3082B-1	958979	A-0149

SUMMARY OF RESULTS

Standard / Specification: FCC Part 15 Subpart C

Description	Test Procedure/Method	Results
Voltage Variation	FCC Part 15 Subpart C Section 15.31(e)	Pass
Conducted Emissions	FCC Part 15 Subpart C Section 15.207 / 15.205	Pass
RF Power Output	FCC Part 15 Subpart C Section 15.225(a)	Pass
Bandedge	FCC Part 15 Subpart C 15.225	Pass
-20dBc Occupied Bandwidth	FCC Part 15 Subpart C Section 15.225 / 2.1049	Pass
Field Strength of Spurious Emissions	FCC Part 15 Subpart C Section 15.225(d) / 2.1053	Pass
Frequency Stability	FCC Part 15 Subpart C Section 15.225(e) / 2.1055(d)	Pass

Conditions During Testing

This list is a summary of the conditions noted for or modifications made to the equipment during testing.

Summary of Conditions
Note: Since the time of testing, it has come to CKC Laboratories attention the manufacturer name Indentive Group, Inc. referenced in this report should read Indentive GmbH. The data and screen captures were taken at the time of testing and cannot be changed.

EQUIPMENT UNDER TEST (EUT)

EQUIPMENT UNDER TEST

TouchSecure WallMount (WM)

Manuf: Identive GmbH
Model: Connectivity WM
Serial: None

PERIPHERAL DEVICES

The EUT was tested with the following peripheral device(s):

Laptop Power Adapter

Manuf: HP
PN: 677777-001
Serial: PPP012L-E

DC Power Supply

Manuf: Protek
Model: 3006B
Serial: AG4070

Laptop

Manuf: Dell
Model: Latitude E6320
Serial: 8BZPYN1

POE Adapter Kit

Manuf: TP-LINK
Model: TL-POE200A
Serial: 10C82100800

FCC PART 15 SUBPART C

This report contains EMC emissions test results under United States Federal Communications Commission (FCC) 47 CFR 15C requirements for Unlicensed Radio Frequency Devices, Subpart C - Intentional Radiators.

15.31(e) Voltage Variations

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Identive Group, Inc.**

Specification: **15.225 Carrier and Spurious Emissions (13.110-14.010 MHz Transmitter)**

Work Order #: **93719**

Date: 05/20/2013

Test Type: **Radiated Scan**

Time: 10:00:43

Equipment: **TouchSecure WallMount (WM)**

Sequence#: 1

Manufacturer: Identive Group, Inc.

Tested By: Hieu Song Nguyenpham

Model: Connectivity WM

S/N: None

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	AN00432	Loop Antenna	6502	3/31/2011	3/31/2013
T2	ANP00880	Cable	RG214U	7/30/2012	7/30/2014
T3	ANP05440	Cable	RG214/U	1/21/2013	1/21/2015
	AN02668	Spectrum Analyzer	E4446A	2/22/2013	2/22/2015

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
TouchSecure WallMount (WM)*	Identive Group, Inc.	Connectivity WM	None

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop Power Adapter	HP	PN: 677777-001	PPP012L-E
Laptop	Dell	Latitude E6320	8BZPYN1
DC Power Supply	Protek	3006B	AG4070

Test Conditions / Notes:

Fundamental of the EUT

Temperature: 20.5°C

Humidity: 39 %

Atmospheric Pressure: 101.3 kPa

High Clock: 48 MHz

Software Used: Hyper Terminal and Ethernet Emulator

Transmitting Operation Frequency: 13.56MHz and 125kHz

RBW=VBW=9kHz for 13.56MHz

RBW=VBW=200Hz for 125kHz

Mode: **Power by DC power supply (12VDC)**

The EUT is a fixed device. It is powered by a DC power supply at 12VDC which is outside of the chamber. The EUT is placed on 80 cm table at the center of the turn table. The EUT is connected to the Laptop by RJ45 cable in order to communicate. The EUT is set in continuously transmitting.

15.31(e) compliance: the supply voltage was varied between 85% and 115% of the nominal rated supply voltage 12VDC (10.2 VDC and 13.8VDC), no change in the fundamental signal level was observed.

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Identive Group, Inc.**

Specification: **15.225 Carrier and Spurious Emissions (13.110-14.010 MHz Transmitter)**

Work Order #: **93719**

Date: 05/20/2013

Test Type: **Radiated Scan**

Time: 10:49:53 AM

Equipment: **TouchSecure WallMount (WM)**

Sequence#: 7

Manufacturer: Identive Group, Inc.

Tested By: Hieu Song Nguyenpham

Model: Connectivity WM

S/N: None

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	AN00432	Loop Antenna	6502	3/31/2011	3/31/2013
T2	ANP00880	Cable	RG214U	7/30/2012	7/30/2014
T3	ANP05440	Cable	RG214/U	1/21/2013	1/21/2015
	AN02668	Spectrum Analyzer	E4446A	2/22/2013	2/22/2015

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
TouchSecure WallMount (WM)*	Identive Group, Inc.	Connectivity WM	None

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop Power Adapter	HP	PN: 677777-001	PPP012L-E
Laptop	Dell	Latitude E6320	8BZPYN1
POE Adapter Kit	TP-LINK	TL-POE200A	10C82100800
DC Power Supply	Sorensen	DCR55-90T1	9941B1004

Test Conditions / Notes:

Radiated Spurious Emission

Temperature: 20.8°C

Humidity: 41 %

Atmospheric Pressure: 101.1 kPa

High Clock: 48 MHz

Software Used: Hyper Terminal and Ethernet Emulator

Transmitting Operation Frequency: 13.56MHz and 125kHz

RBW=VBW=9kHz from 150kHz to 30MHz

RBW=VBW=200Hz from 9kHz to 150kHz

Mode: Power Over Ethernet at 48VDC

The EUT is a fixed device. It is powered by a POE Adapter Kit at 48V which is outside of the chamber and communicating with the laptop through a RJ 45 cable. A DC power cable is terminated at this time. The EUT is placed on 80 cm table at the center of the turn table. The EUT is set in continuously transmitting.

15.31(e) compliance: the supply voltage was varied between 85% and 115% of the nominal rated supply voltage at 48VDC which was injected over the Ethernet (40.8 VDC and 55.2 VDC), no change in the fundamental signal level was observed.

15.207 AC Conducted Emissions

Test Data Sheets

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Identive Group, Inc.**

Specification: **15.207 AC Mains - Average**

Work Order #: **93719**

Date: 5/21/2013

Test Type: **Conducted Emissions**

Time: 14:59:06

Equipment: **TouchSecure WallMount (WM)**

Sequence#: 60

Manufacturer: Identive Group, Inc.

Tested By: Hieu Song Nguyenpham

Model: Connectivity WM

120V 60Hz

S/N: None

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	ANP01211	Attenuator	PE7002-10	4/2/2013	4/2/2015
T2	ANP00880	Cable	RG214U	7/30/2012	7/30/2014
T3	ANP05440	Cable	RG214/U	1/21/2013	1/21/2015
T4	AN00493	50uH LISN-L1 (L) Loss W/O European Adapter	3816/NM	3/4/2013	3/4/2015
	AN00493	50uH LISN-L(2) N Loss W/O European Adapter	3816/NM	3/4/2013	3/4/2015
	AN02668	Spectrum Analyzer	E4446A	2/22/2013	2/22/2015
T5	ANP05258	High Pass Filter	HE9615-150K- 50-720B	12/6/2012	12/6/2014

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
TouchSecure WallMount (WM)*	Identive Group, Inc.	Connectivity WM	None

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop Power Adapter	HP	PN: 677777-001	PPP012L-E
Laptop	Dell	Latitude E6320	8BZPYN1
DC Power Supply	Protek	3006B	AG4070

Test Conditions / Notes:

Conducted Emission

Frequency Range: 150kHz to 30MHz

Temperature: 21.4°C

Humidity: 42%

Atmospheric Pressure: 101.4 kPa

High Clock: 48 MHz

Software Used: Hyper Terminal and Ethernet Emulator

Transmitting Operation Frequency: 13.56MHz and 125kHz

Mode: Power by DC power supply (12VDC)

The EUT is a fixed device. It is powered by a DC power supply at 12VDC which is outside of the chamber. The EUT is placed on 80 cm table at the center of the turn table. The EUT is set in continuously transmitting.

Note: A new HF antenna with the ground plane.

Ext Attn: 0 dB

Measurement Data:

Reading listed by margin.

Test Lead: Black

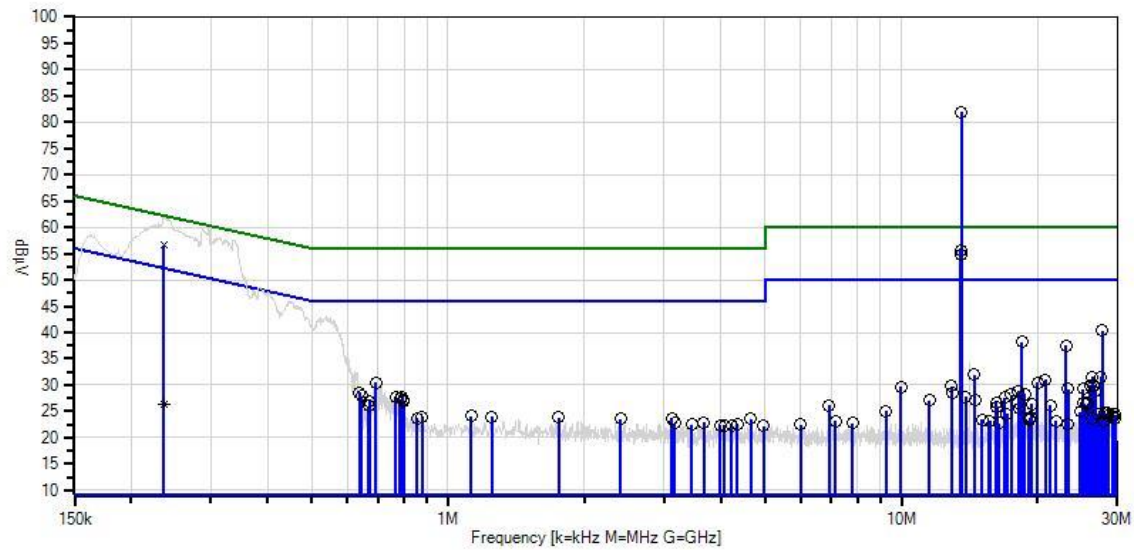
#	Freq MHz	Rdng dBμV	T1 T5 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dBμV	Spec dBμV	Margin dB	Polar Ant
1	13.562M	71.5	+9.6 +0.1	+0.3	+0.2	+0.2	+0.0	81.9	50.0 Fundamental for the EUT	+31.9	Black
2	13.535M	45.3	+9.6 +0.1	+0.3	+0.2	+0.2	+0.0	55.7	50.0 Fundamental of the EUT	+5.7	Black
3	13.589M	44.3	+9.6 +0.1	+0.3	+0.2	+0.2	+0.0	54.7	50.0 Fundamental of the EUT	+4.7	Black
4	235.810k QP	46.5	+9.6 +0.2	+0.1	+0.1	+0.1	+0.0	56.6	62.2	-5.6	Black
5	27.711M	29.2	+9.6 +0.2	+0.5	+0.2	+0.6	+0.0	40.3	50.0	-9.7	Black
6	18.481M	27.5	+9.6 +0.1	+0.4	+0.2	+0.4	+0.0	38.2	50.0	-11.8	Black
7	23.094M	26.4	+9.7 +0.2	+0.4	+0.2	+0.6	+0.0	37.5	50.0	-12.5	Black
8	692.496k	20.5	+9.7 +0.1	+0.1	+0.0	+0.1	+0.0	30.5	46.0	-15.5	Black
9	638.682k	18.5	+9.7 +0.1	+0.1	+0.0	+0.1	+0.0	28.5	46.0	-17.5	Black
10	14.472M	21.6	+9.6 +0.1	+0.3	+0.2	+0.2	+0.0	32.0	50.0	-18.0	Black
11	645.227k	17.9	+9.7 +0.1	+0.1	+0.0	+0.1	+0.0	27.9	46.0	-18.1	Black
12	767.398k	17.6	+9.6 +0.2	+0.1	+0.1	+0.1	+0.0	27.7	46.0	-18.3	Black

13	792.850k	17.7	+9.6 +0.2	+0.1	+0.0	+0.1	+0.0	27.7	46.0	-18.3	Black
14	26.410M	20.4	+9.7 +0.2	+0.5	+0.2	+0.6	+0.0	31.6	50.0	-18.4	Black
15	27.581M	20.4	+9.6 +0.2	+0.5	+0.2	+0.6	+0.0	31.5	50.0	-18.5	Black
16	783.396k	17.2	+9.6 +0.2	+0.1	+0.1	+0.1	+0.0	27.3	46.0	-18.7	Black
17	795.032k	17.2	+9.6 +0.2	+0.1	+0.0	+0.1	+0.0	27.2	46.0	-18.8	Black
18	670.679k	17.0	+9.7 +0.1	+0.1	+0.0	+0.1	+0.0	27.0	46.0	-19.0	Black
19	20.788M	19.8	+9.7 +0.2	+0.4	+0.2	+0.7	+0.0	31.0	50.0	-19.0	Black
20	798.668k	16.9	+9.6 +0.2	+0.1	+0.0	+0.1	+0.0	26.9	46.0	-19.1	Black
21	19.995M	19.4	+9.6 +0.2	+0.4	+0.3	+0.6	+0.0	30.5	50.0	-19.5	Black
22	667.771k	16.0	+9.7 +0.1	+0.1	+0.0	+0.1	+0.0	26.0	46.0	-20.0	Black
23	26.122M	18.8	+9.7 +0.2	+0.4	+0.2	+0.6	+0.0	29.9	50.0	-20.1	Black
24	26.588M	18.7	+9.7 +0.2	+0.5	+0.2	+0.6	+0.0	29.9	50.0	-20.1	Black
25	12.896M	19.5	+9.6 +0.1	+0.3	+0.1	+0.2	+0.0	29.8	50.0	-20.2	Black
26	9.995M	19.3	+9.6 +0.0	+0.3	+0.1	+0.3	+0.0	29.6	50.0	-20.4	Black
27	23.347M	18.1	+9.7 +0.2	+0.4	+0.2	+0.6	+0.0	29.2	50.0	-20.8	Black
28	25.197M	18.2	+9.6 +0.2	+0.4	+0.2	+0.6	+0.0	29.2	50.0	-20.8	Black
29	18.103M	18.3	+9.6 +0.1	+0.4	+0.2	+0.3	+0.0	28.9	50.0	-21.1	Black
30	26.786M	17.7	+9.7 +0.2	+0.5	+0.2	+0.6	+0.0	28.9	50.0	-21.1	Black
31	12.950M	18.3	+9.6 +0.1	+0.3	+0.1	+0.2	+0.0	28.6	50.0	-21.4	Black
32	18.752M	17.6	+9.6 +0.1	+0.4	+0.2	+0.4	+0.0	28.3	50.0	-21.7	Black
33	1.124M	14.1	+9.6 +0.1	+0.1	+0.1	+0.1	+0.0	24.1	46.0	-21.9	Black
34	17.499M	17.5	+9.7 +0.1	+0.4	+0.2	+0.2	+0.0	28.1	50.0	-21.9	Black
35	877.205k	13.9	+9.6 +0.2	+0.1	+0.1	+0.1	+0.0	24.0	46.0	-22.0	Black
36	1.247M	14.0	+9.6 +0.1	+0.1	+0.0	+0.1	+0.0	23.9	46.0	-22.1	Black
37	1.753M	13.8	+9.6 +0.1	+0.1	+0.1	+0.1	+0.0	23.8	46.0	-22.2	Black
38	855.390k	13.6	+9.6 +0.2	+0.1	+0.1	+0.1	+0.0	23.7	46.0	-22.3	Black

39	13.860M	17.3	+9.6 +0.1	+0.3	+0.2	+0.2	+0.0	27.7	50.0	-22.3	Black
40	2.400M	13.5	+9.7 +0.1	+0.1	+0.1	+0.1	+0.0	23.6	46.0	-22.4	Black
41	4.649M	13.3	+9.7 +0.2	+0.2	+0.1	+0.1	+0.0	23.6	46.0	-22.4	Black
42	16.896M	17.1	+9.7 +0.1	+0.3	+0.2	+0.2	+0.0	27.6	50.0	-22.4	Black
43	3.114M	13.4	+9.6 +0.1	+0.2	+0.1	+0.1	+0.0	23.5	46.0	-22.5	Black
44	14.535M	16.8	+9.6 +0.1	+0.3	+0.2	+0.2	+0.0	27.2	50.0	-22.8	Black
45	11.553M	16.7	+9.6 +0.1	+0.3	+0.2	+0.2	+0.0	27.1	50.0	-22.9	Black
46	3.667M	12.8	+9.6 +0.1	+0.2	+0.1	+0.1	+0.0	22.9	46.0	-23.1	Black
47	3.161M	12.7	+9.6 +0.1	+0.2	+0.1	+0.1	+0.0	22.8	46.0	-23.2	Black
48	16.175M	16.2	+9.7 +0.1	+0.3	+0.2	+0.2	+0.0	26.7	50.0	-23.3	Black
49	4.352M	12.5	+9.6 +0.1	+0.2	+0.1	+0.1	+0.0	22.6	46.0	-23.4	Black
50	18.121M	16.0	+9.6 +0.1	+0.4	+0.2	+0.3	+0.0	26.6	50.0	-23.4	Black
51	25.245M	15.6	+9.6 +0.2	+0.4	+0.2	+0.6	+0.0	26.6	50.0	-23.4	Black
52	3.450M	12.6	+9.5 +0.1	+0.2	+0.0	+0.1	+0.0	22.5	46.0	-23.5	Black
53	25.779M	15.4	+9.7 +0.2	+0.4	+0.2	+0.6	+0.0	26.5	50.0	-23.5	Black
54	3.990M	12.3	+9.6 +0.1	+0.2	+0.1	+0.1	+0.0	22.4	46.0	-23.6	Black
55	4.228M	12.3	+9.6 +0.1	+0.2	+0.1	+0.1	+0.0	22.4	46.0	-23.6	Black
56	19.409M	15.4	+9.6 +0.2	+0.4	+0.3	+0.5	+0.0	26.4	50.0	-23.6	Black
57	4.067M	12.2	+9.6 +0.1	+0.2	+0.1	+0.1	+0.0	22.3	46.0	-23.7	Black
58	25.676M	15.2	+9.7 +0.2	+0.4	+0.2	+0.6	+0.0	26.3	50.0	-23.7	Black
59	4.968M	12.1	+9.5 +0.2	+0.2	+0.1	+0.1	+0.0	22.2	46.0	-23.8	Black
60	6.932M	16.0	+9.6 +0.1	+0.2	+0.1	+0.1	+0.0	26.1	50.0	-23.9	Black
61	21.283M	14.8	+9.7 +0.2	+0.4	+0.2	+0.8	+0.0	26.1	50.0	-23.9	Black
62	16.238M	15.3	+9.7 +0.1	+0.3	+0.2	+0.2	+0.0	25.8	50.0	-24.2	Black
63	18.229M	15.0	+9.6 +0.1	+0.4	+0.2	+0.3	+0.0	25.6	50.0	-24.4	Black
64	9.238M	14.5	+9.6 +0.1	+0.3	+0.2	+0.3	+0.0	25.0	50.0	-25.0	Black

65	24.779M	13.9	+9.6 +0.2	+0.4	+0.2	+0.6	+0.0	24.9	50.0	-25.1	Black
66	28.088M	13.6	+9.6 +0.2	+0.5	+0.2	+0.7	+0.0	24.8	50.0	-25.2	Black
67	28.588M	13.3	+9.6 +0.2	+0.5	+0.3	+0.7	+0.0	24.6	50.0	-25.4	Black
68	17.112M	13.9	+9.7 +0.1	+0.4	+0.2	+0.2	+0.0	24.5	50.0	-25.5	Black
69	27.122M	13.4	+9.6 +0.2	+0.5	+0.2	+0.6	+0.0	24.5	50.0	-25.5	Black
70	29.651M	13.0	+9.6 +0.2	+0.5	+0.3	+0.8	+0.0	24.4	50.0	-25.6	Black
71	28.465M	13.1	+9.6 +0.2	+0.5	+0.2	+0.7	+0.0	24.3	50.0	-25.7	Black
72	29.233M	12.8	+9.6 +0.2	+0.5	+0.3	+0.8	+0.0	24.2	50.0	-25.8	Black
73	235.810k Ave	16.1	+9.6 +0.2	+0.1	+0.1	+0.1	+0.0	26.2	52.2	-26.0	Black
^	235.810k	52.6	+9.6 +0.2	+0.1	+0.1	+0.1	+0.0	62.7	52.2	+10.5	Black
^	235.810k	51.9	+9.6 +0.2	+0.1	+0.1	+0.1	+0.0	62.0	52.2	+9.8	Black
76	19.292M	12.8	+9.6 +0.2	+0.4	+0.3	+0.5	+0.0	23.8	50.0	-26.2	Black
77	29.486M	12.3	+9.6 +0.2	+0.5	+0.3	+0.8	+0.0	23.7	50.0	-26.3	Black
78	19.202M	12.6	+9.6 +0.2	+0.4	+0.3	+0.5	+0.0	23.6	50.0	-26.4	Black
79	26.341M	12.4	+9.7 +0.2	+0.5	+0.2	+0.6	+0.0	23.6	50.0	-26.4	Black
80	15.049M	13.0	+9.6 +0.1	+0.3	+0.2	+0.2	+0.0	23.4	50.0	-26.6	Black
81	19.130M	12.3	+9.6 +0.2	+0.4	+0.3	+0.5	+0.0	23.3	50.0	-26.7	Black
82	7.157M	12.9	+9.6 +0.1	+0.2	+0.2	+0.2	+0.0	23.2	50.0	-26.8	Black
83	15.652M	12.7	+9.7 +0.1	+0.3	+0.2	+0.2	+0.0	23.2	50.0	-26.8	Black
84	15.688M	12.7	+9.7 +0.1	+0.3	+0.2	+0.2	+0.0	23.2	50.0	-26.8	Black
85	27.999M	12.0	+9.6 +0.2	+0.5	+0.2	+0.7	+0.0	23.2	50.0	-26.8	Black
86	21.941M	11.7	+9.7 +0.2	+0.4	+0.3	+0.8	+0.0	23.1	50.0	-26.9	Black
87	16.409M	12.3	+9.7 +0.1	+0.3	+0.2	+0.2	+0.0	22.8	50.0	-27.2	Black
88	7.797M	12.4	+9.6 +0.1	+0.3	+0.1	+0.2	+0.0	22.7	50.0	-27.3	Black
89	23.237M	11.5	+9.7 +0.2	+0.4	+0.2	+0.6	+0.0	22.6	50.0	-27.4	Black
90	5.995M	12.4	+9.6 +0.1	+0.2	+0.1	+0.1	+0.0	22.5	50.0	-27.5	Black

CKC Laboratories, Inc Date: 5/21/2013 Time: 14:59:06 Identive Group, Inc WO#: 93719
Test Lead: Black 120V 60Hz Sequence#: 60



— Sweep Data	— Readings
○ Peak Readings	× QP Readings
* Average Readings	▼ Ambient
— 1 - 15.207 AC Mains - Average	— 2 - 15.207 AC Mains - Quasi-peak

Test Location: CKC Laboratories, Inc • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Identive Group, Inc**
 Specification: **15.207 AC Mains - Average**
 Work Order #: **93719**
 Test Type: **Conducted Emissions**
 Equipment: **TouchSecure WallMount (WM)**
 Manufacturer: Identive Group, Inc.
 Model: Connectivity WM
 S/N: None

Date: 8/23/2013
 Time: 11:32:00
 Sequence#: 61
 Tested By: Hieu Song Nguyenpham
 120V 60Hz

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	ANP01211	Attenuator	PE7002-10	4/2/2013	4/2/2015
T2	ANP00880	Cable	RG214U	7/30/2012	7/30/2014
T3	AN00493	50uH LISN-L1 (L) Loss W/O European Adapter	3816/NM	3/4/2013	3/4/2015
	AN00493	50uH LISN-L(2) N Loss W/O European Adapter	3816/NM	3/4/2013	3/4/2015
	AN02668	Spectrum Analyzer	E4446A	2/22/2013	2/22/2015
T4	ANP05258	High Pass Filter	HE9615-150K- 50-720B	12/6/2012	12/6/2014
T5	ANP05300	Cable	RG214/U	3/25/2013	3/25/2015

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
TouchSecure WallMount (WM)*	Identive Group, Inc.	Connectivity WM	None

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop Power Adapter	HP	P/N: 677777-001	PPP012L-E
Laptop	Dell	Latitude E6320	8BZPYN1
DC Power Supply	Protek	3006B	AG4070

Test Conditions / Notes:

Conducted Emission
 Frequency Range: 150kHz to 30MHz
 Temperature: 23.7°C, Humidity: 42%, Atmospheric Pressure: 101.0 kPa
 High Clock: 48 MHz

Software Used: Hyper Terminal and Ethernet Emulator

Transmitting Operation Frequency: 13.56MHz and 125kHz

Mode: Power by DC power supply (12VDC)
 The EUT is a fixed device. It is powered by DC power supply at 12VDC which is next to the EUT. The EUT and The DC power supply are placed on 80 cm table. The EUT is set continuously transmitting.

Note: RF output power goes to a dummy load 51 Ohm Resistor (Digi-Key, P/N 51Q)

Ext Attn: 0 dB

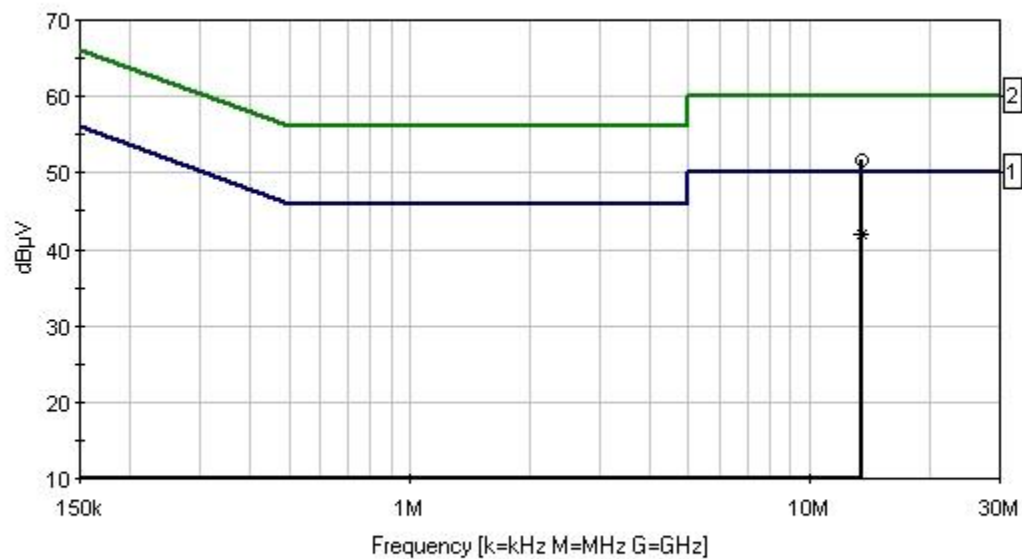
Measurement Data:

Reading listed by margin.

Test Lead: Black

#	Freq MHz	Rdng dB μ V	T1 T5 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dB μ V	Spec dB μ V	Margin dB	Polar Ant
1	13.560M	31.7	+9.6 +0.1	+0.3	+0.2	+0.1	+0.0	42.0	50.0	-8.0	Black
2	13.560M	41.3	+9.6 +0.1	+0.3	+0.2	+0.1	+0.0	51.6	60.0	-8.4	Black
^	13.560M	43.8	+9.6 +0.1	+0.3	+0.2	+0.1	+0.0	54.1	50.0	+4.1	Black

CKC Laboratories, Inc Date: 8/23/2013 Time: 11:32:00 Identive Group, Inc VVO#: 93719
Test Lead: Black 120V 60Hz Sequence#: 61



— Readings
 — 2 - 15.207 AC Mains - Quasi-peak
 * Average Readings
 — 1 - 15.207 AC Mains - Average
 ○ QP Readings

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Identive Group, Inc.**
 Specification: **15.207 AC Mains - Average**
 Work Order #: **93719**
 Test Type: **Conducted Emissions**
 Equipment: **TouchSecure WallMount (WM)**
 Manufacturer: Identive Group, Inc.
 Model: Connectivity WM
 S/N: None

Date: 5/21/2013
 Time: 15:08:33
 Sequence#: 61
 Tested By: Hieu Song Nguyenpham
 120V 60Hz

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	ANP01211	Attenuator	PE7002-10	4/2/2013	4/2/2015
T2	ANP00880	Cable	RG214U	7/30/2012	7/30/2014
T3	ANP05440	Cable	RG214/U	1/21/2013	1/21/2015
	AN00493	50uH LISN-L1 (L) Loss W/O European Adapter	3816/NM	3/4/2013	3/4/2015
T4	AN00493	50uH LISN-L(2) N Loss W/O European Adapter	3816/NM	3/4/2013	3/4/2015
	AN02668	Spectrum Analyzer	E4446A	2/22/2013	2/22/2015
T5	ANP05258	High Pass Filter	HE9615-150K- 50-720B	12/6/2012	12/6/2014

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
TouchSecure WallMount (WM)*	Identive Group, Inc.	Connectivity WM	None

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop Power Adapter	HP	PN: 677777-001	PPP012L-E
Laptop	Dell	Latitude E6320	8BZPYN1
DC Power Supply	Protek	3006B	AG4070

Test Conditions / Notes:

Conducted Emission Frequency Range: 150kHz to 30MHz Temperature: 21.4°C Humidity: 42% Atmospheric Pressure: 101.4 kPa High Clock: 48 MHz Software Used: Hyper Terminal and Ethernet Emulator Transmitting Operation Frequency: 13.56MHz and 125kHz Mode: Power by DC power supply (12VDC) The EUT is a fixed device. It is powered by DC power supply at 12VDC which is outside of the chamber. The EUT is placed on 80 cm table at the center of the turn table. The EUT is set in continuously transmitting. Note: A new HF antenna with the ground plane

Ext Attn: 0 dB

Measurement Data:

Reading listed by margin.

Test Lead: White

#	Freq MHz	Rdng dB μ V	T1 T5 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dB μ V	Spec dB μ V	Margin dB	Polar Ant
1	13.580M	48.7	+9.6 +0.1	+0.3	+0.2	+0.7	+0.0	59.6	50.0 Fundamental of the EUT	+9.6	White
2	13.643M	36.9	+9.6 +0.1	+0.3	+0.2	+0.7	+0.0	47.8	50.0 Fundamental of the EUT	-2.2	White
3	316.786k QP	44.7	+9.6 +0.2	+0.1	+0.1	+0.6	+0.0	55.3	59.8	-4.5	White
4	234.356k QP	46.4	+9.6 +0.2	+0.1	+0.1	+0.6	+0.0	57.0	62.3	-5.3	White
5	23.058M	29.8	+9.7 +0.2	+0.4	+0.2	+1.2	+0.0	41.5	50.0	-8.5	White
6	27.670M	29.5	+9.6 +0.2	+0.5	+0.2	+1.0	+0.0	41.0	50.0	-9.0	White
7	155.399k QP	45.1	+9.7 +0.6	+0.0	+0.0	+0.6	+0.0	56.0	65.7	-9.7	White
8	12.977M	28.5	+9.6 +0.1	+0.3	+0.1	+0.7	+0.0	39.3	50.0	-10.7	White
9	18.445M	27.6	+9.6 +0.1	+0.4	+0.2	+0.9	+0.0	38.8	50.0	-11.2	White
10	616.866k	23.5	+9.7 +0.1	+0.1	+0.0	+0.6	+0.0	34.0	46.0	-12.0	White
11	625.593k	22.6	+9.7 +0.1	+0.1	+0.0	+0.6	+0.0	33.1	46.0	-12.9	White
12	630.683k	22.4	+9.7 +0.1	+0.1	+0.0	+0.6	+0.0	32.9	46.0	-13.1	White
13	638.682k	20.7	+9.7 +0.1	+0.1	+0.0	+0.6	+0.0	31.2	46.0	-14.8	White
14	707.767k	20.5	+9.6 +0.1	+0.1	+0.1	+0.6	+0.0	31.0	46.0	-15.0	White
15	705.585k	20.3	+9.6 +0.1	+0.1	+0.1	+0.6	+0.0	30.8	46.0	-15.2	White
16	640.864k	20.3	+9.7 +0.1	+0.1	+0.0	+0.6	+0.0	30.8	46.0	-15.2	White
17	709.221k	19.8	+9.6 +0.1	+0.1	+0.1	+0.6	+0.0	30.3	46.0	-15.7	White
18	738.310k	19.8	+9.5 +0.1	+0.1	+0.1	+0.6	+0.0	30.2	46.0	-15.8	White
19	720.857k	19.8	+9.5 +0.1	+0.1	+0.1	+0.6	+0.0	30.2	46.0	-15.8	White
20	12.400M	23.3	+9.6 +0.1	+0.3	+0.2	+0.7	+0.0	34.2	50.0	-15.8	White
21	773.216k	19.4	+9.6 +0.2	+0.1	+0.1	+0.6	+0.0	30.0	46.0	-16.0	White
22	744.127k	19.3	+9.5 +0.1	+0.1	+0.1	+0.6	+0.0	29.7	46.0	-16.3	White

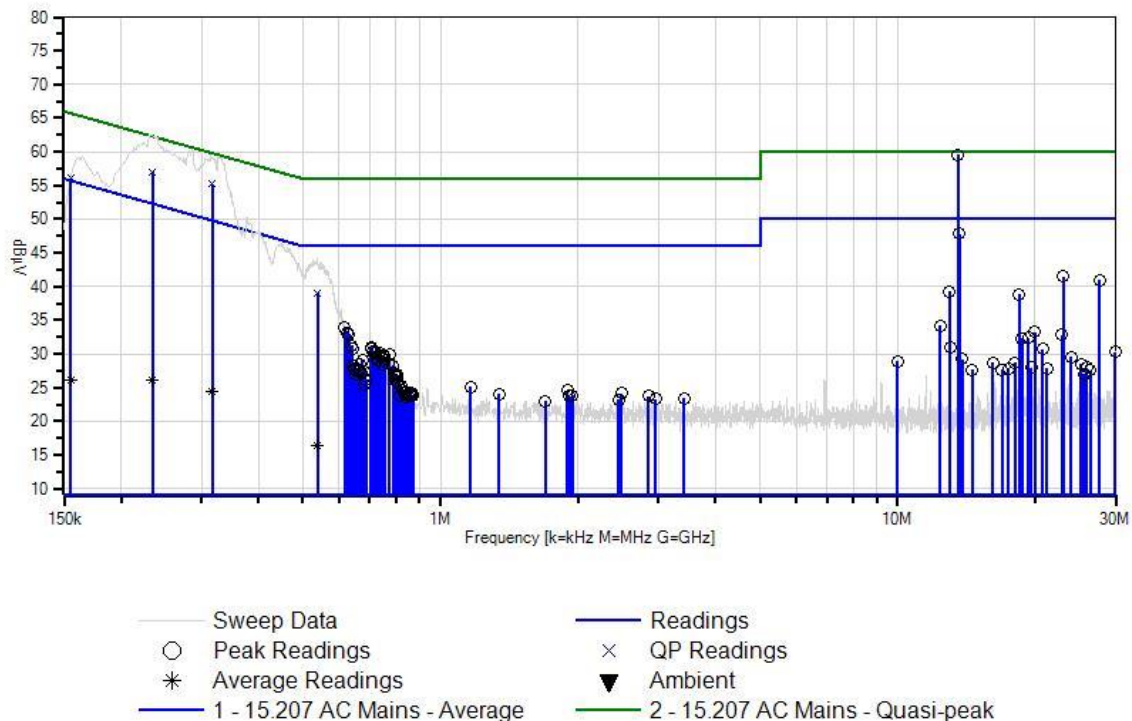
23	751.399k	19.1	+9.6 +0.2	+0.1	+0.1	+0.6	+0.0	29.7	46.0	-16.3	White
24	740.491k	19.2	+9.5 +0.1	+0.1	+0.1	+0.6	+0.0	29.6	46.0	-16.4	White
25	752.854k	18.7	+9.6 +0.2	+0.1	+0.1	+0.6	+0.0	29.3	46.0	-16.7	White
26	19.995M	21.6	+9.6 +0.2	+0.4	+0.3	+1.1	+0.0	33.2	50.0	-16.8	White
27	733.946k	18.7	+9.5 +0.1	+0.1	+0.1	+0.6	+0.0	29.1	46.0	-16.9	White
28	675.770k	18.6	+9.7 +0.1	+0.1	+0.0	+0.6	+0.0	29.1	46.0	-16.9	White
29	537.601k QP	28.8	+9.5 +0.1	+0.1	+0.0	+0.6	+0.0	39.1	56.0	-16.9	White
30	723.766k	18.6	+9.5 +0.1	+0.1	+0.1	+0.6	+0.0	29.0	46.0	-17.0	White
31	22.923M	21.1	+9.7 +0.2	+0.4	+0.2	+1.2	+0.0	32.8	50.0	-17.2	White
32	769.580k	18.1	+9.6 +0.2	+0.1	+0.1	+0.6	+0.0	28.7	46.0	-17.3	White
33	745.582k	18.0	+9.6 +0.1	+0.1	+0.1	+0.6	+0.0	28.5	46.0	-17.5	White
34	664.135k	17.9	+9.7 +0.1	+0.1	+0.0	+0.6	+0.0	28.4	46.0	-17.6	White
35	19.310M	20.8	+9.6 +0.2	+0.4	+0.3	+1.1	+0.0	32.4	50.0	-17.6	White
36	788.487k	17.7	+9.6 +0.2	+0.1	+0.1	+0.6	+0.0	28.3	46.0	-17.7	White
37	18.697M	21.0	+9.6 +0.1	+0.4	+0.2	+1.0	+0.0	32.3	50.0	-17.7	White
38	643.773k	17.7	+9.7 +0.1	+0.1	+0.0	+0.6	+0.0	28.2	46.0	-17.8	White
39	649.591k	17.4	+9.7 +0.1	+0.1	+0.0	+0.6	+0.0	27.9	46.0	-18.1	White
40	646.682k	17.1	+9.7 +0.1	+0.1	+0.0	+0.6	+0.0	27.6	46.0	-18.4	White
41	665.589k	17.1	+9.7 +0.1	+0.1	+0.0	+0.6	+0.0	27.6	46.0	-18.4	White
42	661.226k	17.0	+9.7 +0.1	+0.1	+0.0	+0.6	+0.0	27.5	46.0	-18.5	White
43	668.498k	17.0	+9.7 +0.1	+0.1	+0.0	+0.6	+0.0	27.5	46.0	-18.5	White
44	683.042k	16.9	+9.7 +0.1	+0.1	+0.0	+0.6	+0.0	27.4	46.0	-18.6	White
45	669.952k	16.7	+9.7 +0.1	+0.1	+0.0	+0.6	+0.0	27.2	46.0	-18.8	White
46	791.396k	16.7	+9.6 +0.2	+0.1	+0.0	+0.6	+0.0	27.2	46.0	-18.8	White
47	797.213k	16.5	+9.6 +0.2	+0.1	+0.0	+0.6	+0.0	27.0	46.0	-19.0	White
48	13.040M	20.2	+9.6 +0.1	+0.3	+0.1	+0.7	+0.0	31.0	50.0	-19.0	White

49	653.227k	16.4	+9.7 +0.1	+0.1	+0.0	+0.6	+0.0	26.9	46.0	-19.1	White
50	800.122k	16.4	+9.6 +0.2	+0.1	+0.0	+0.6	+0.0	26.9	46.0	-19.1	White
51	20.752M	19.1	+9.7 +0.2	+0.4	+0.2	+1.1	+0.0	30.7	50.0	-19.3	White
52	803.031k	16.1	+9.6 +0.2	+0.1	+0.0	+0.6	+0.0	26.6	46.0	-19.4	White
53	29.973M	18.5	+9.6 +0.2	+0.5	+0.3	+1.2	+0.0	30.3	50.0	-19.7	White
54	685.951k	15.7	+9.7 +0.1	+0.1	+0.0	+0.6	+0.0	26.2	46.0	-19.8	White
55	798.668k	15.6	+9.6 +0.2	+0.1	+0.0	+0.6	+0.0	26.1	46.0	-19.9	White
56	805.213k	15.5	+9.6 +0.2	+0.1	+0.0	+0.6	+0.0	26.0	46.0	-20.0	White
57	24.004M	18.1	+9.6 +0.2	+0.4	+0.2	+1.1	+0.0	29.6	50.0	-20.4	White
58	810.303k	15.0	+9.6 +0.2	+0.1	+0.0	+0.6	+0.0	25.5	46.0	-20.5	White
59	680.133k	14.9	+9.7 +0.1	+0.1	+0.0	+0.6	+0.0	25.4	46.0	-20.6	White
60	819.757k	14.7	+9.6 +0.2	+0.1	+0.0	+0.6	+0.0	25.2	46.0	-20.8	White
61	13.833M	18.3	+9.6 +0.1	+0.3	+0.2	+0.7	+0.0	29.2	50.0	-20.8	White
62	1.162M	14.6	+9.6 +0.1	+0.1	+0.1	+0.6	+0.0	25.1	46.0	-20.9	White
63	9.986M	18.1	+9.6 +0.0	+0.3	+0.1	+0.8	+0.0	28.9	50.0	-21.1	White
64	824.120k	14.2	+9.6 +0.2	+0.1	+0.0	+0.6	+0.0	24.7	46.0	-21.3	White
65	16.139M	17.7	+9.7 +0.1	+0.3	+0.2	+0.7	+0.0	28.7	50.0	-21.3	White
66	18.085M	17.5	+9.6 +0.1	+0.4	+0.2	+0.9	+0.0	28.7	50.0	-21.3	White
67	827.756k	14.1	+9.6 +0.2	+0.1	+0.0	+0.6	+0.0	24.6	46.0	-21.4	White
68	1.898M	14.1	+9.6 +0.1	+0.1	+0.1	+0.6	+0.0	24.6	46.0	-21.4	White
69	25.210M	17.1	+9.6 +0.2	+0.4	+0.2	+1.0	+0.0	28.5	50.0	-21.5	White
70	836.482k	13.8	+9.6 +0.2	+0.1	+0.1	+0.6	+0.0	24.4	46.0	-21.6	White
71	831.392k	13.8	+9.6 +0.2	+0.1	+0.0	+0.6	+0.0	24.3	46.0	-21.7	White
72	860.480k	13.7	+9.6 +0.2	+0.1	+0.1	+0.6	+0.0	24.3	46.0	-21.7	White
73	853.935k	13.6	+9.6 +0.2	+0.1	+0.1	+0.6	+0.0	24.2	46.0	-21.8	White
74	2.485M	13.6	+9.7 +0.1	+0.1	+0.1	+0.6	+0.0	24.2	46.0	-21.8	White

75	1.341M	13.7	+9.6 +0.1	+0.1	+0.0	+0.6	+0.0	24.1	46.0	-21.9	White
76	866.298k	13.4	+9.6 +0.2	+0.1	+0.1	+0.6	+0.0	24.0	46.0	-22.0	White
77	19.643M	16.4	+9.6 +0.2	+0.4	+0.3	+1.1	+0.0	28.0	50.0	-22.0	White
78	25.985M	16.5	+9.7 +0.2	+0.4	+0.2	+1.0	+0.0	28.0	50.0	-22.0	White
79	871.388k	13.3	+9.6 +0.2	+0.1	+0.1	+0.6	+0.0	23.9	46.0	-22.1	White
80	17.508M	16.7	+9.7 +0.1	+0.4	+0.2	+0.8	+0.0	27.9	50.0	-22.1	White
81	21.202M	16.3	+9.7 +0.2	+0.4	+0.2	+1.1	+0.0	27.9	50.0	-22.1	White
82	848.845k	13.2	+9.6 +0.2	+0.1	+0.1	+0.6	+0.0	23.8	46.0	-22.2	White
83	813.939k	13.3	+9.6 +0.2	+0.1	+0.0	+0.6	+0.0	23.8	46.0	-22.2	White
84	864.843k	13.2	+9.6 +0.2	+0.1	+0.1	+0.6	+0.0	23.8	46.0	-22.2	White
85	1.945M	13.3	+9.6 +0.1	+0.1	+0.1	+0.6	+0.0	23.8	46.0	-22.2	White
86	867.752k	13.2	+9.6 +0.2	+0.1	+0.1	+0.6	+0.0	23.8	46.0	-22.2	White
87	1.915M	13.2	+9.6 +0.1	+0.1	+0.1	+0.6	+0.0	23.7	46.0	-22.3	White
88	2.846M	13.1	+9.6 +0.1	+0.2	+0.1	+0.6	+0.0	23.7	46.0	-22.3	White
89	14.580M	16.8	+9.6 +0.1	+0.3	+0.2	+0.7	+0.0	27.7	50.0	-22.3	White
90	837.937k	13.0	+9.6 +0.2	+0.1	+0.1	+0.6	+0.0	23.6	46.0	-22.4	White
91	16.914M	16.5	+9.7 +0.1	+0.3	+0.2	+0.8	+0.0	27.6	50.0	-22.4	White
92	26.403M	15.9	+9.7 +0.2	+0.5	+0.2	+1.0	+0.0	27.5	50.0	-22.5	White
93	3.416M	13.0	+9.5 +0.1	+0.2	+0.0	+0.6	+0.0	23.4	46.0	-22.6	White
94	2.953M	12.7	+9.6 +0.1	+0.2	+0.1	+0.6	+0.0	23.3	46.0	-22.7	White
95	2.451M	12.6	+9.7 +0.1	+0.1	+0.1	+0.6	+0.0	23.2	46.0	-22.8	White
96	1.698M	12.5	+9.6 +0.1	+0.1	+0.1	+0.6	+0.0	23.0	46.0	-23.0	White
97	25.615M	15.5	+9.7 +0.2	+0.4	+0.2	+1.0	+0.0	27.0	50.0	-23.0	White
98	316.786k Ave	13.8	+9.6 +0.2	+0.1	+0.1	+0.6	+0.0	24.4	49.8	-25.4	White
^	316.786k	50.3	+9.6 +0.2	+0.1	+0.1	+0.6	+0.0	60.9	49.8	+11.1	White
^	316.783k	48.9	+9.6 +0.2	+0.1	+0.1	+0.6	+0.0	59.5	49.8	+9.7	White

101	234.356k	15.5	+9.6	+0.1	+0.1	+0.6	+0.0	26.1	52.3	-26.2	White
	Ave		+0.2								
^	234.356k	52.0	+9.6	+0.1	+0.1	+0.6	+0.0	62.6	52.3	+10.3	White
			+0.2								
^	234.356k	51.0	+9.6	+0.1	+0.1	+0.6	+0.0	61.6	52.3	+9.3	White
			+0.2								
104	537.601k	6.2	+9.5	+0.1	+0.0	+0.6	+0.0	16.5	46.0	-29.5	White
	Ave		+0.1								
^	537.601k	33.9	+9.5	+0.1	+0.0	+0.6	+0.0	44.2	46.0	-1.8	White
			+0.1								
^	537.601k	33.7	+9.5	+0.1	+0.0	+0.6	+0.0	44.0	46.0	-2.0	White
			+0.1								
107	155.399k	15.3	+9.7	+0.0	+0.0	+0.6	+0.0	26.2	55.7	-29.5	White
	Ave		+0.6								
^	155.399k	50.8	+9.7	+0.0	+0.0	+0.6	+0.0	61.7	55.7	+6.0	White
			+0.6								
^	155.399k	48.5	+9.7	+0.0	+0.0	+0.6	+0.0	59.4	55.7	+3.7	White
			+0.6								

CKC Laboratories, Inc Date: 5/21/2013 Time: 15:08:33 Identive Group, Inc WO#: 93719
Test Lead: White 120V 60Hz Sequence#: 61



Test Location: CKC Laboratories, Inc • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Identive Group, Inc**
Specification: **15.207 AC Mains - Average**
Work Order #: **93719**
Test Type: **Conducted Emissions**
Equipment: **TouchSecure WallMount (WM)**
Manufacturer: Identive Group, Inc.
Model: Connectivity WM
S/N: None

Date: 8/23/2013
Time: 11:34:27
Sequence#: 62
Tested By: Hieu Song Nguyenpham
120V 60Hz

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	ANP01211	Attenuator	PE7002-10	4/2/2013	4/2/2015
T2	ANP00880	Cable	RG214U	7/30/2012	7/30/2014
	AN00493	50uH LISN-L1 (L) Loss W/O European Adapter	3816/NM	3/4/2013	3/4/2015
T3	AN00493	50uH LISN-L(2) N Loss W/O European Adapter	3816/NM	3/4/2013	3/4/2015
	AN02668	Spectrum Analyzer	E4446A	2/22/2013	2/22/2015
T4	ANP05258	High Pass Filter	HE9615-150K- 50-720B	12/6/2012	12/6/2014
T5	ANP05300	Cable	RG214/U	3/25/2013	3/25/2015

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
TouchSecure WallMount (WM)*	Identive Group, Inc.	Connectivity WM	None

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop Power Adapter	HP	P/N: 677777-001	PPP012L-E
Laptop	Dell	Latitude E6320	8BZPYN1
DC Power Supply	Protek	3006B	AG4070

Test Conditions / Notes:

Conducted Emission
Frequency Range: 150kHz to 30MHz
Temperature: 23.7°C, Humidity: 42%, Atmospheric Pressure: 101.0 kPa

High Clock: 48 MHz

Software Used: Hyper Terminal and Ethernet Emulator

Transmitting Operation Frequency: 13.56MHz and 125kHz
Mode: Power by DC power supply (12VDC)

The EUT is a fix device. It is powered by DC power supply at 12VDC which is next to the EUT. The EUT and The DC power supply are placed on 80 cm table
The EUT is set continuously transmitting.
Note: RF output power goes to a dummy load 51 Ohm resistor (Digi-Key, P/N 51Q)

Ext Attn: 0 dB

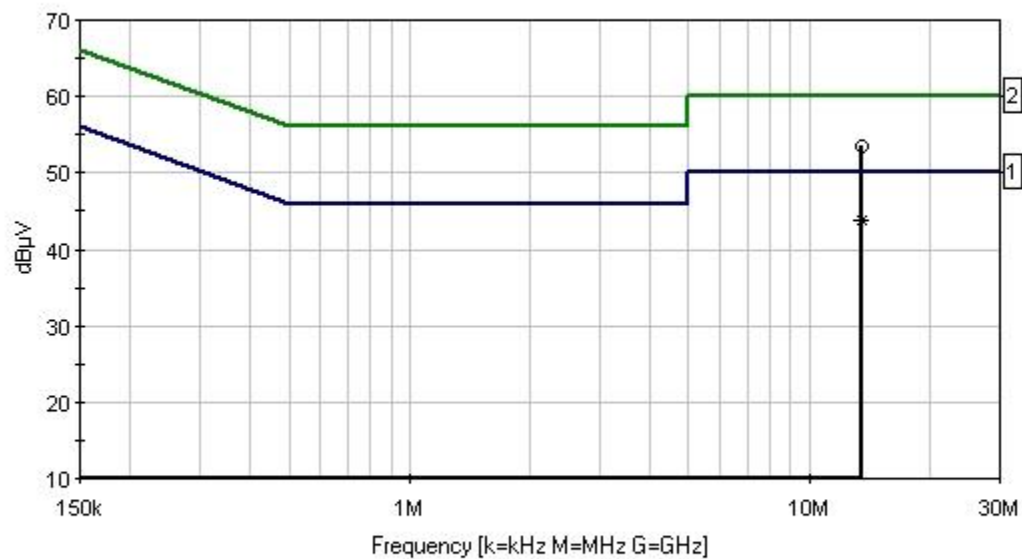
Measurement Data:

Reading listed by margin.

Test Lead: White

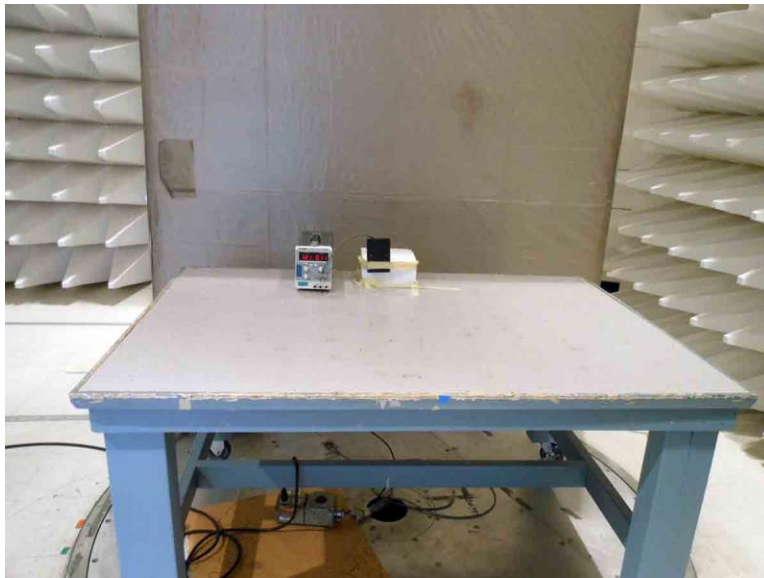
#	Freq MHz	Rdng dB μ V	T1 T5 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dB μ V	Spec dB μ V	Margin dB	Polar Ant
1	13.560M	32.9	+9.6 +0.1	+0.3	+0.7	+0.1	+0.0	43.7	50.0	-6.3	White
2	13.560M	42.7	+9.6 +0.1	+0.3	+0.7	+0.1	+0.0	53.5	60.0	-6.5	White
^	13.560M	45.0	+9.6 +0.1	+0.3	+0.7	+0.1	+0.0	55.8	50.0	+5.8	White

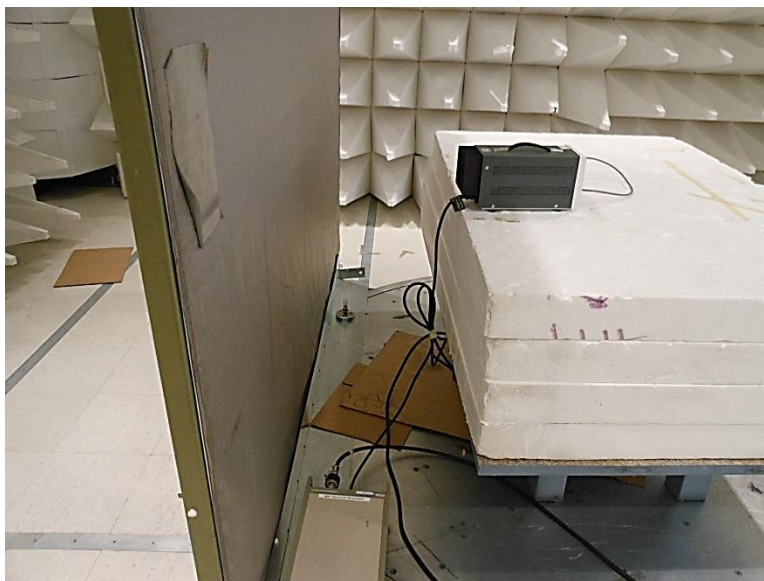
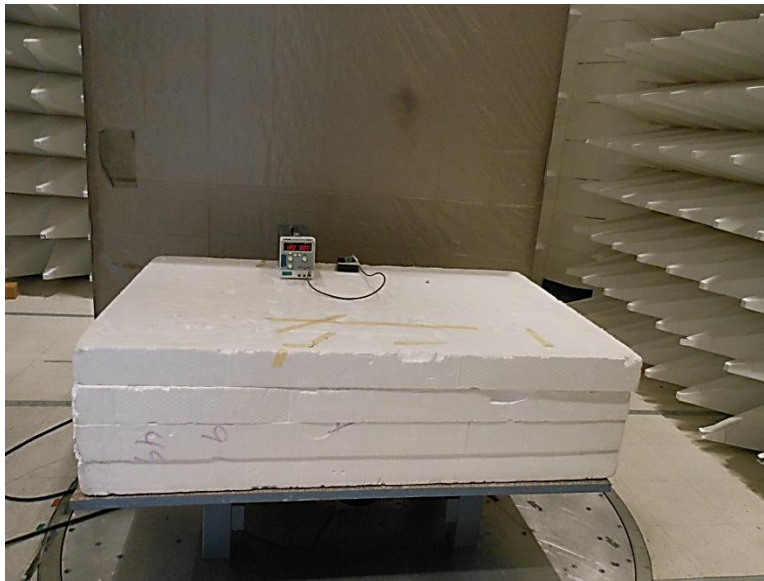
CKC Laboratories, Inc Date: 8/23/2013 Time: 11:34:27 Identive Group, Inc VVO#: 93719
Test Lead: White 120V 60Hz Sequence#: 62



— Readings
 — 2 - 15.207 AC Mains - Quasi-peak
 * Average Readings
 — 1 - 15.207 AC Mains - Average
 ○ QP Readings

Test Setup Photos





15.225(a) RF Power Output / Bandedge

RF Power Output - Test Conditions / Setup

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Identive Group, Inc.**

Specification: **15.225 Carrier and Spurious Emissions (13.110-14.010 MHz Transmitter)**

Work Order #: **93719** Date: 5/21/2013

Test Type: **Radiated Scan** Time: 14:13:11

Equipment: **TouchSecure WallMount (WM)** Sequence#: 59

Manufacturer: Identive Group, Inc. Tested By: Hieu Song Nguyenpham

Model: Connectivity WM

S/N: None

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	ANP00880	Cable	RG214U	7/30/2012	7/30/2014
T2	ANP05440	Cable	RG214/U	1/21/2013	1/21/2015
	AN02668	Spectrum Analyzer	E4446A	2/22/2013	2/22/2015
T3	AN00432	Loop Antenna	6502	4/2/2013	4/2/2015

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
TouchSecure WallMount (WM)*	Identive Group, Inc.	Connectivity WM	None

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop Power Adapter	HP	PN: 677777-001	PPP012L-E
Laptop	Dell	Latitude E6320	8BZPYN1
DC Power Supply	Protek	3006B	AG4070

Test Conditions / Notes:

Fundamental of the EUT
 Temperature: 21.4°C
 Humidity: 42%
 Atmospheric Pressure: 101.4 kPa

High Clock: 48 MHz
 Software Used: Hyper Terminal and Ethernet Emulator

Transmitting Operation Frequency: 13.56MHz and 125kHz

RBW=VBW=200Hz from 9kHz to 150kHz
 RBW=VBW=9kHz from 150kHz to 30MHz

Mode: Power by DC power supply (12VDC)

The EUT is a fixed device. It is powered by a DC power supply at 12VDC which is outside of the chamber. The EUT is placed on 80 cm table at the center of the turn table. The EUT is set in continuously transmitting.

Note: A new HF antenna with the ground plane. Pigtail connector.

Ext Attn: 0 dB

Measurement Data:		Reading listed by margin.				Test Distance: 3 Meters					
#	Freq MHz	Rdng dBμV	T1 dB	T2 dB	T3 dB		Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	125.000k	72.5	+0.1	+0.1	+9.8		-80.0	2.5	25.7	-23.2	Paral
2	125.000k	69.0	+0.1	+0.1	+9.8		-80.0	-1.0	25.7	-26.7	Paral
3	13.560M	65.6	+0.3	+0.2	+9.1		-40.0	35.2	84.0	-48.8	Perpe
4	13.560M	65.4	+0.3	+0.2	+9.1		-40.0	35.0	84.0	-49.0	Paral

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Identive Group, Inc.**
 Specification: **15.225 Carrier and Spurious Emissions (13.110-14.010 MHz Transmitter)**
 Work Order #: **93719** Date: 5/20/2013
 Test Type: **Radiated Scan** Time: 13:24:38
 Equipment: **TouchSecure WallMount (WM)** Sequence#: 34
 Manufacturer: Identive Group, Inc. Tested By: Hieu Song Nguyenpham
 Model: Connectivity WM
 S/N: None

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	ANP00880	Cable	RG214U	7/30/2012	7/30/2014
T2	ANP05440	Cable	RG214/U	1/21/2013	1/21/2015
	AN02668	Spectrum Analyzer	E4446A	2/22/2013	2/22/2015
T3	AN00432	Loop Antenna	6502	4/2/2013	4/2/2015

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
TouchSecure WallMount (WM)*	Identive Group, Inc.	Connectivity WM	None

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop Power Adapter	HP	PN: 677777-001	PPP012L-E
Laptop	Dell	Latitude E6320	8BZPYN1
DC Power Supply	Protek	3006B	AG4070

Test Conditions / Notes:

Fundamental transmitting operating frequency

Temperature: 21.4°C
 Humidity: 42%
 Atmospheric Pressure: 101.4 kPa

High Clock: 48 MHz
 Software Used: Hyper Terminal and Ethernet Emulator

Transmitting Operation Frequency: 13.56MHz and 125kHz

RBW=VBW=9kHz for 13.56MHz

RBW=VBW=200Hz for 125kHz

Mode: Power by DC power supply (12VDC)

The EUT is a fixed device. It is powered by a DC power supply at 12VDC which is outside of the chamber. The EUT is placed on 80 cm table at the center of the turn table. The EUT is set in continuously transmitting.

Note: A new HF antenna with the ground plane

Ext Attn: 0 dB

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dB μ V	T1 dB	T2 dB	T3 dB		Dist Table	Corr dB μ V/m	Spec dB μ V/m	Margin dB	Polar Ant
1	125.000k	72.3	+0.1	+0.1	+9.8		-80.0	2.3	25.7	-23.4	Parra
2	125.000k	67.8	+0.1	+0.1	+9.8		-80.0	-2.2	25.7	-27.9	Perpe
3	13.560M	63.2	+0.3	+0.2	+9.1		-40.0	32.8	84.0	-51.2	Parra
4	13.560M	62.5	+0.3	+0.2	+9.1		-40.0	32.1	84.0	-51.9	Perpe

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Identive Group, Inc.**
 Specification: **15.225 Carrier and Spurious Emissions (13.110-14.010 MHz Transmitter)**
 Work Order #: **93719** Date: 5/20/2013
 Test Type: **Radiated Scan** Time: 11:09:54
 Equipment: **TouchSecure WallMount (WM)** Sequence#: 27
 Manufacturer: Identive Group, Inc. Tested By: Hieu Song Nguyenpham
 Model: Connectivity WM
 S/N: None

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	ANP00880	Cable	RG214U	7/30/2012	7/30/2014
T2	ANP05440	Cable	RG214/U	1/21/2013	1/21/2015
	AN02668	Spectrum Analyzer	E4446A	2/22/2013	2/22/2015
T3	AN00432	Loop Antenna	6502	4/2/2013	4/2/2015

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
TouchSecure WallMount (WM)*	Identive Group, Inc.	Connectivity WM	None

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop Power Adapter	HP	P/N: 677777-001	PPP012L-E
Laptop	Dell	Latitude E6320	8BZPYN1
DC Power Supply	Protek	3006B	AG4070
POE Adapter Kit	TP-LINK	TL-POE200A	10C82100800

Test Conditions / Notes:

Fundamental Transmitting Operating Frequency Temperature: 21.4°C Humidity: 42% Atmospheric Pressure: 101.4 kPa High Clock: 48 MHz Software Used: Hyper Terminal and Ethernet Emulator Transmitting Operation Frequency: 13.56MHz and 125kHz RBW=VBW=9kHz for 13.56MHz RBW=VBW=200Hz for 125kHz Mode: Power by POE at 48VDC The EUT is a fixed device. It is powered by a POE Adapter Kit at 48V which is outside of the chamber and communication with laptop through a RJ 45 cable. A DC power cable is terminated at this time. The EUT is placed on 80 cm table at the center of the turn table. The EUT is set in continuously transmitting. Note: A new HF antenna with the ground plane
--

Ext Attn: 0 dB

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dB μ V	T1 dB	T2 dB	T3 dB		Dist Table	Corr dB μ V/m	Spec dB μ V/m	Margin dB	Polar Ant
1	125.000k	71.9	+0.1	+0.1	+9.8		-80.0	1.9	25.7	-23.8	Parra
2	125.000k	68.8	+0.1	+0.1	+9.8		-80.0	-1.2	25.7	-26.9	Perpe
3	13.560M	64.1	+0.3	+0.2	+9.1		-40.0	33.7	84.0	-50.3	Perpe
4	13.560M	63.6	+0.3	+0.2	+9.1		-40.0	33.2	84.0	-50.8	Parra

Bandedge Test Conditions / Setup

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Identive Group, Inc.**

Specification: **15.225 Carrier and Spurious Emissions (13.110-14.010 MHz Transmitter)**

Work Order #: **93719**

Date: 05/20/2013

Test Type: **Radiated Scan**

Time: 10:00:43

Equipment: **TouchSecure WallMount (WM)**

Sequence#: 1

Manufacturer: Identive Group, Inc.

Tested By: Hieu Song Nguyenpham

Model: Connectivity WM

S/N: None

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	AN00432	Loop Antenna	6502	04/02/2013	04/02/2015
T2	ANP00880	Cable	RG214U	7/30/2012	7/30/2014
T3	ANP05440	Cable	RG214/U	1/21/2013	1/21/2015
	AN02668	Spectrum Analyzer	E4446A	2/22/2013	2/22/2015

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
TouchSecure WallMount (WM)*	Identive Group, Inc.	Connectivity WM	None

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop Power Adapter	HP	PN: 677777-001	PPP012L-E
Laptop	Dell	Latitude E6320	8BZPYN1
DC Power Supply	Protek	3006B	AG4070

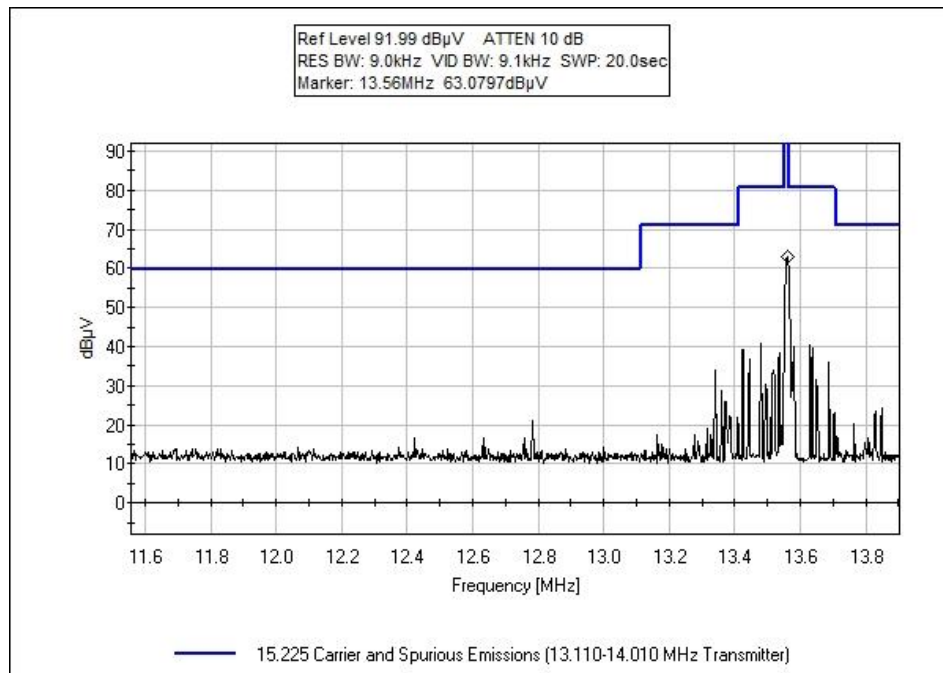
Test Conditions / Notes:

Fundamental of the EUT
 Temperature: 20.5°C
 Humidity: 39 %
 Atmospheric Pressure: 101.3 kPa

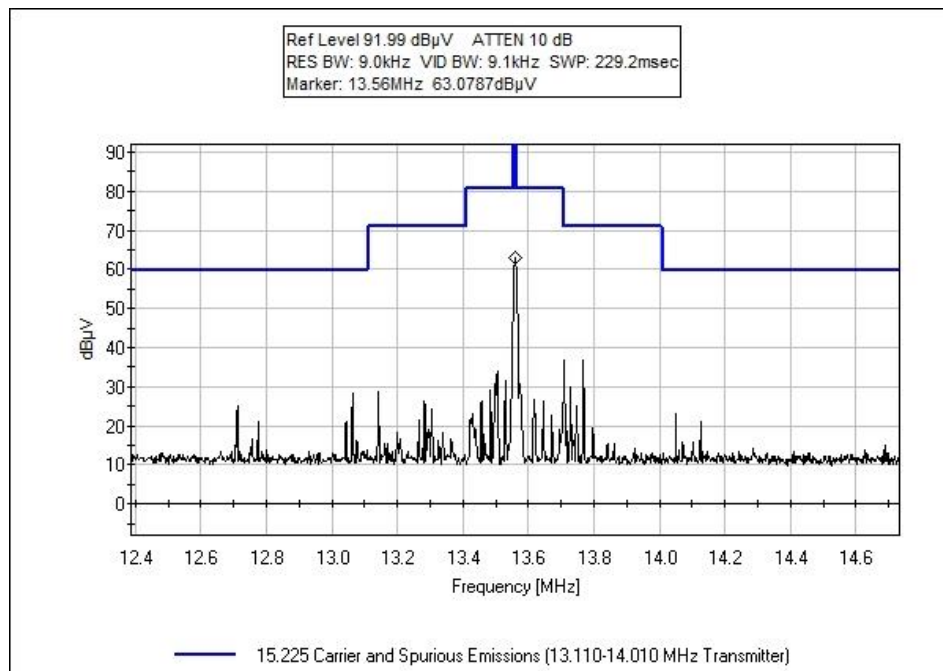
High Clock: 48 MHz
 Software Used: Hyper Terminal and Ethernet Emulator
 Transmitting Operation Frequency: 13.56MHz and 125kHz
 RBW=VBW=9kHz for 13.56MHz
 RBW=VBW=200Hz for 125kHz
 Mode: Power by DC power supply (12VDC)

The EUT is a fixed device. It is powered by a DC power supply at 12VDC which is outside of the chamber. The EUT is placed on 80 cm table at the center of turn table. The EUT is connected to the Laptop by RJ45 cable in order to communicate. The EUT is set in continuously transmitting.

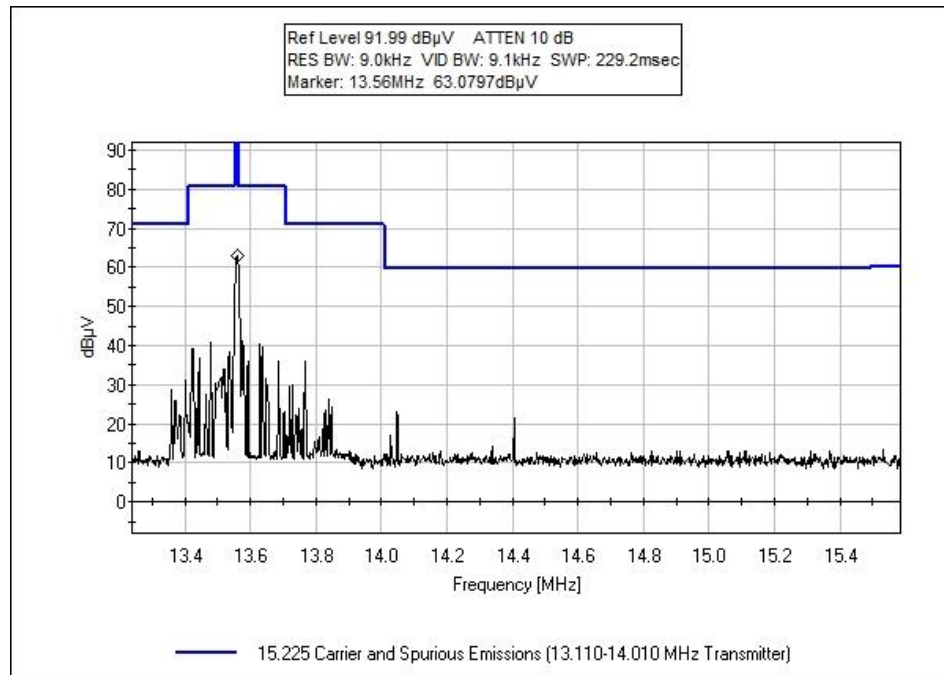
Note: A new HF antenna with the ground plane



DC POWER, LEFT



DC POWER, CENTER

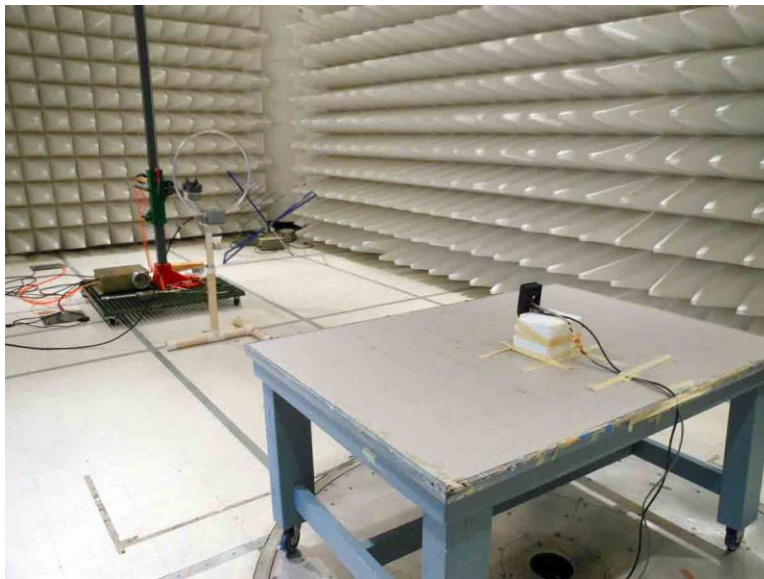


DC POWER, RIGHT

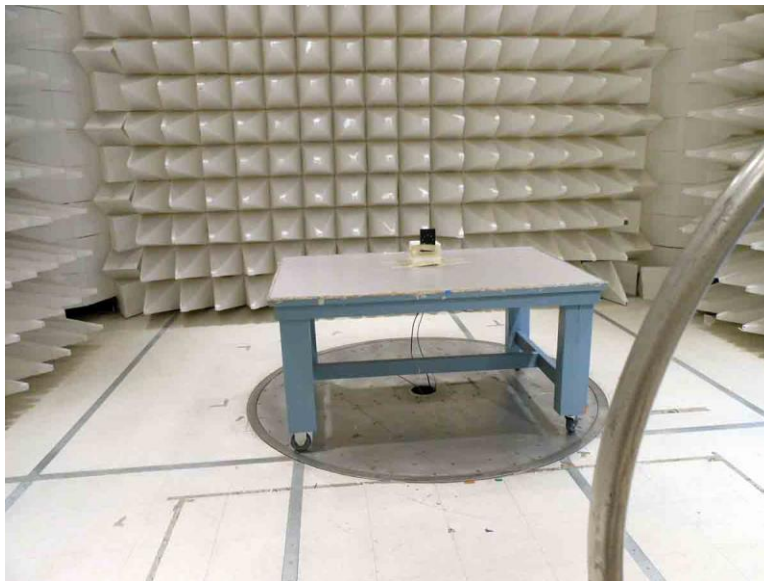
Test Setup Photos



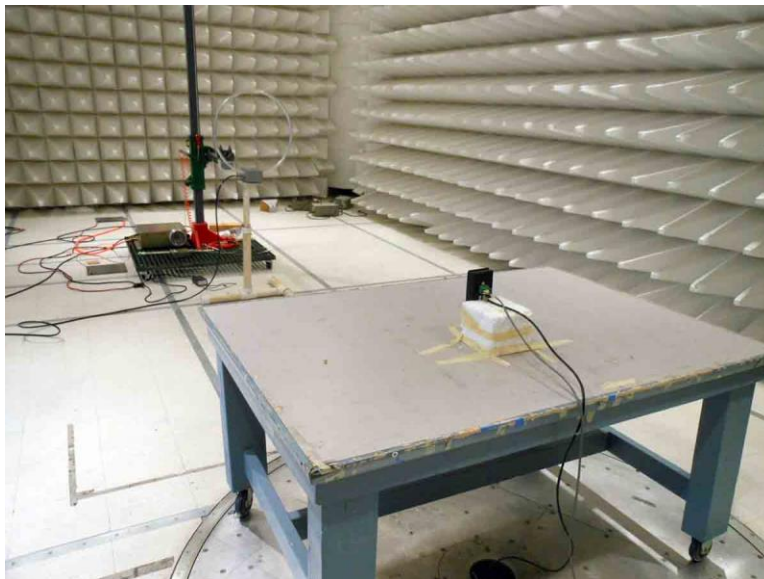
DC POWER W/ PIGTAIL, FRONT VIEW



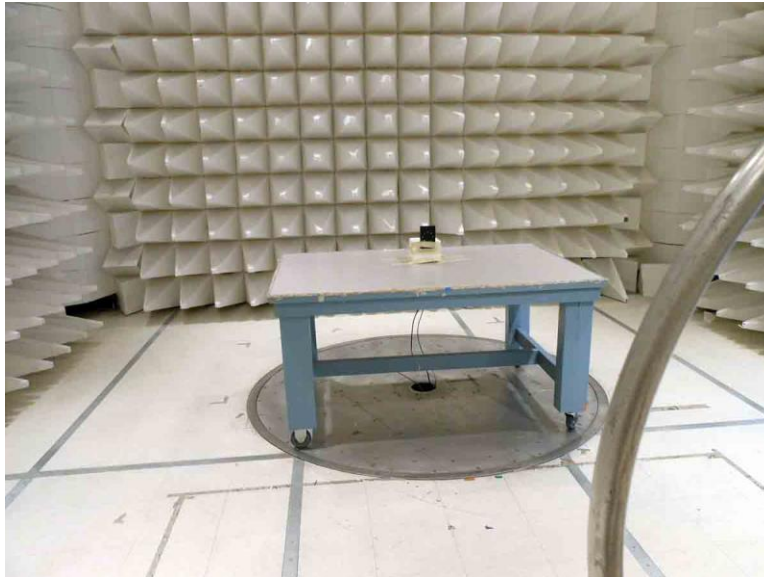
DC POWER W/ PIGTAIL, BACK VIEW



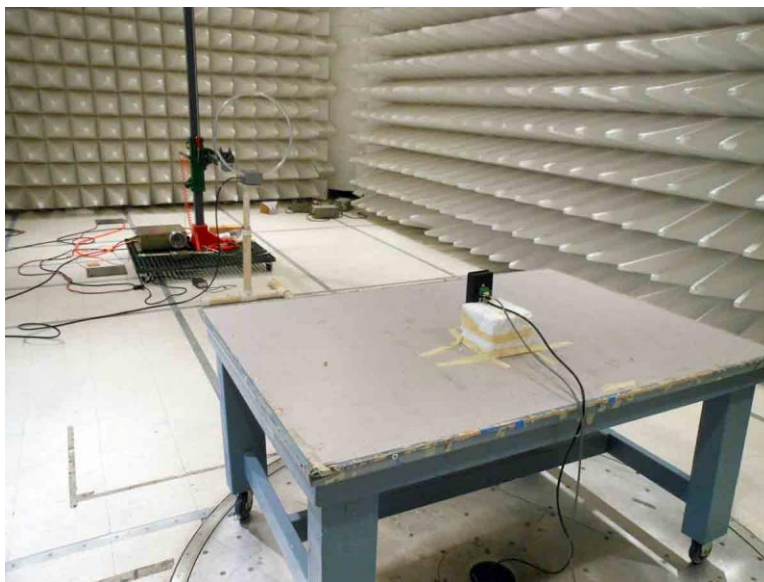
DC POWER W/ PHOENIX CONNECTOR, FRONT VIEW



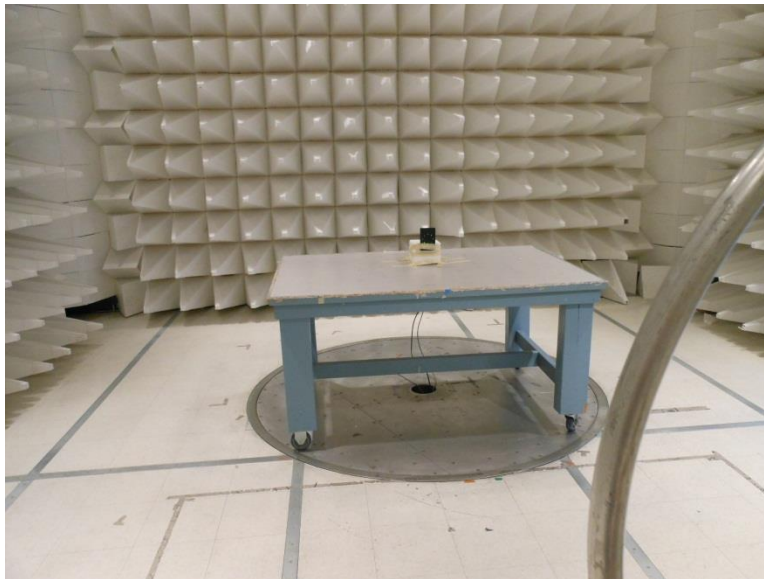
DC POWER W/ PHOENIX CONNECTOR, BACK VIEW



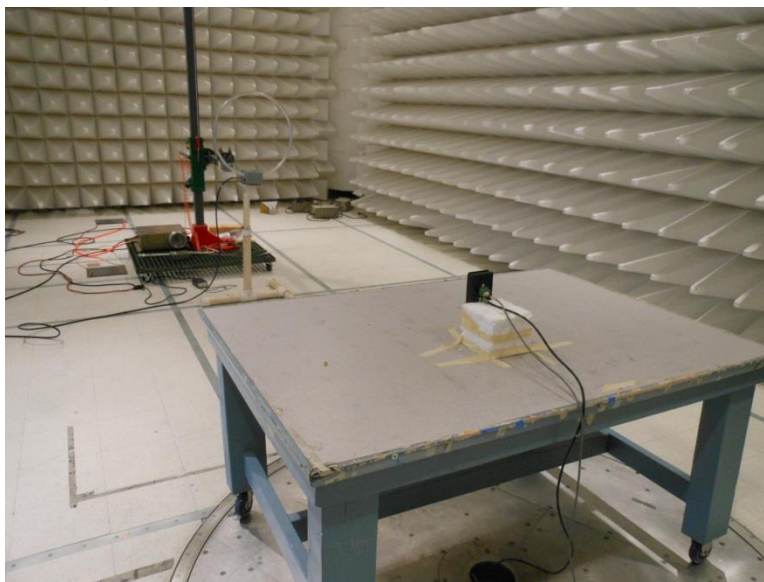
POE, FRONT VIEW



POE, BACK VIEW



BANDEDGE TEST SET UP, FRONT VIEW



BANDEDGE TEST SET UP, BACK VIEW

-20dBc / 99% Occupied Bandwidth

Test Conditions / Setup

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Identive Group, Inc.**

Specification: **OBW Set up**

Work Order #: **93719**

Date: 05/20/2013

Test Type: **Radiated Scan**

Time: 10:00:43

Equipment: **TouchSecure WallMount (WM)**

Sequence#: 1

Manufacturer: Identive Group, Inc.

Tested By: Hieu Song Nguyenpham

Model: Connectivity WM

S/N: None

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	AN00432	Loop Antenna	6502	04/02/2013	04/02/2015
T2	ANP00880	Cable	RG214U	7/30/2012	7/30/2014
T3	ANP05440	Cable	RG214/U	1/21/2013	1/21/2015
	AN02668	Spectrum Analyzer	E4446A	2/22/2013	2/22/2015

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
TouchSecure WallMount (WM)*	Identive Group, Inc.	Connectivity WM	None

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop Power Adapter	HP	PN: 677777-001	PPP012L-E
Laptop	Dell	Latitude E6320	8BZPYN1
DC Power Supply	Protek	3006B	AG4070

Test Conditions / Notes:

Fundamental of the EUT

Temperature: 21.4°C

Humidity: 42%

Atmospheric Pressure: 101.4 kPa

High Clock: 48 MHz

Software Used: Hyper Terminal and Ethernet Emulator

Transmitting Operation Frequency: 13.56MHz and 125kHz

RBW=VBW=9kHz for 13.56MHz

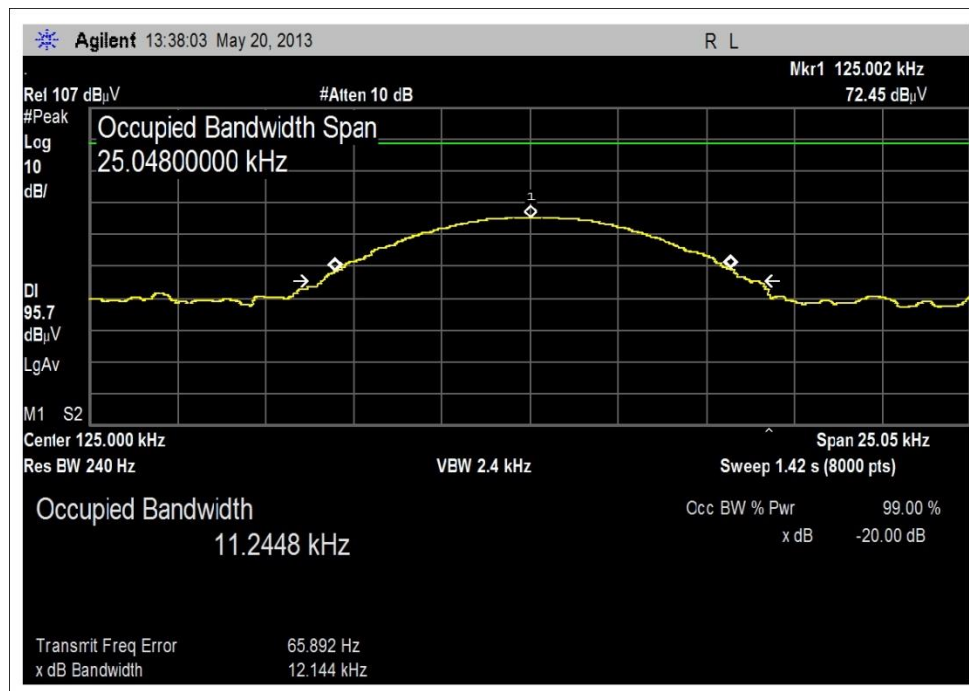
RBW=VBW=200Hz for 125kHz

Mode: Power by DC power supply (12VDC)

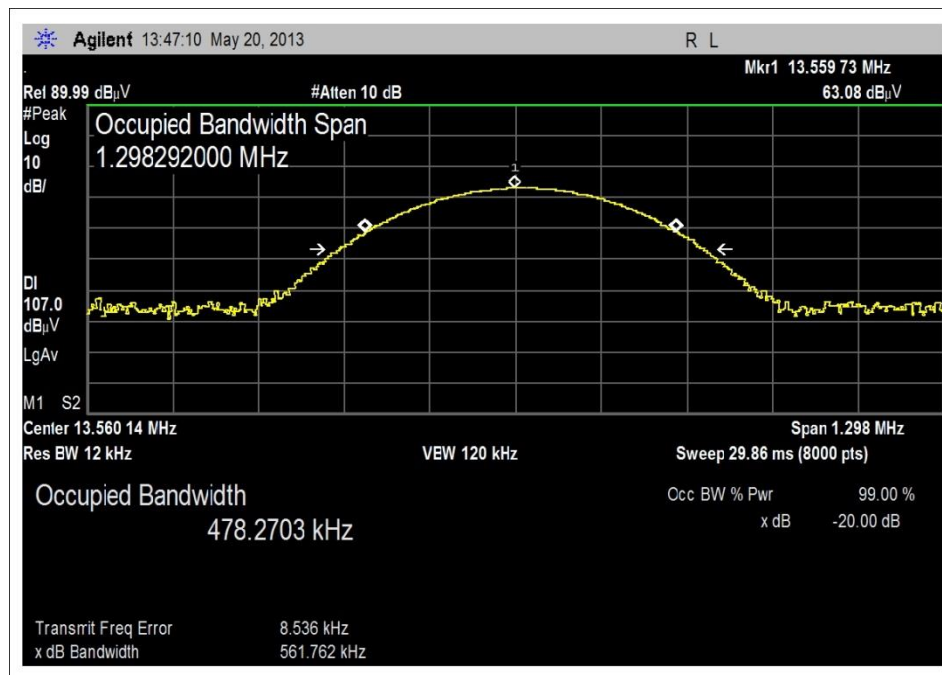
The EUT is a fixed device. It is powered by a DC power supply at 12VDC which is outside of the chamber. The EUT is placed on 80 cm table at the center of the turn table. The EUT is connected to the Laptop by RJ45 cable in order to communicate. The EUT is set in continuously transmitting.

Note: A new HF antenna with the ground plane.

Test Plots

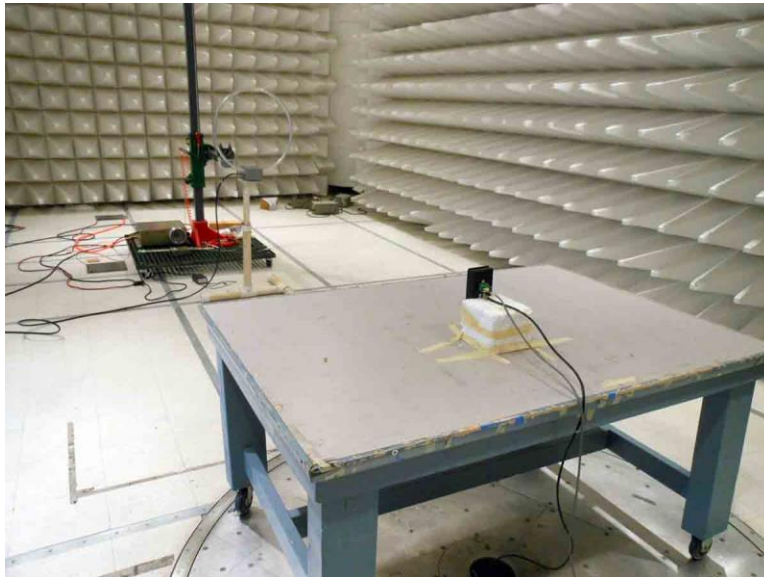
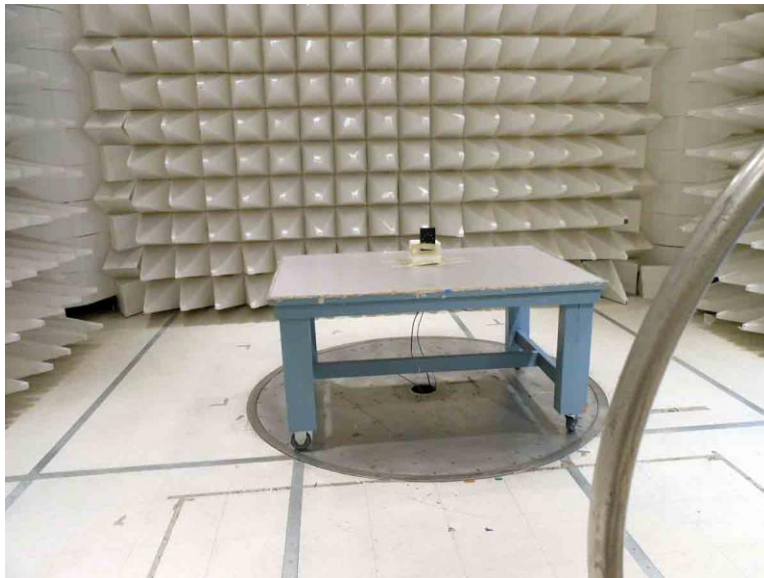


DC POWER, 125kHz



DC POWER, 13.56MHz

Test Setup Photos



15.225(d) Field Strength of Spurious Emissions

Test Data Sheets

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Identive Group, Inc.**

Specification: **15.225 Carrier and Spurious Emissions (13.110-14.010 MHz Transmitter)**

Work Order #: **93719**

Date: 5/20/2013

Test Type: **Radiated Scan**

Time: 11:53:44

Equipment: **TouchSecure WallMount (WM)**

Sequence#: 33

Manufacturer: Identive Group, Inc.

Tested By: Hieu Song Nguyenpham

Model: Connectivity WM

S/N: None

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	ANP00880	Cable	RG214U	7/30/2012	7/30/2014
T2	ANP05440	Cable	RG214/U	1/21/2013	1/21/2015
	AN02668	Spectrum Analyzer	E4446A	2/22/2013	2/22/2015
T3	AN00432	Loop Antenna	6502	4/2/2013	4/2/2015

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
TouchSecure WallMount (WM)*	Identive Group, Inc.	Connectivity WM	None

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop Power Adapter	HP	P/N: 677777-001	PPP012L-E
Laptop	Dell	Latitude E6320	8BZPYN1
DC Power Supply	Protek	3006B	AG4070

Test Conditions / Notes:

Radiated Spurious Emission
Frequency Range: 9kHz to 30 MHz

Temperature: 21.4°C
Humidity: 42%
Atmospheric Pressure: 101.4 kPa

High Clock: 48 MHz
Software Used: Hyper Terminal and Ethernet Emulator

Transmitting Operation Frequency: 13.56MHz and 125kHz

RBW=VBW=200Hz from 9kHz to 150kHz
RBW=VBW= 9kHz from 150kHz to 30MHz

Mode: Power by DC power supply (12VDC)

The EUT is a fixed device. It is powered by a DC power supply at 12VDC which is outside of the chamber. The EUT is placed on 80 cm table at the center of the turn table. The EUT is set in continuously transmitting.

Note: A new HF antenna with the ground plane.

Ext Attn: 0 dB

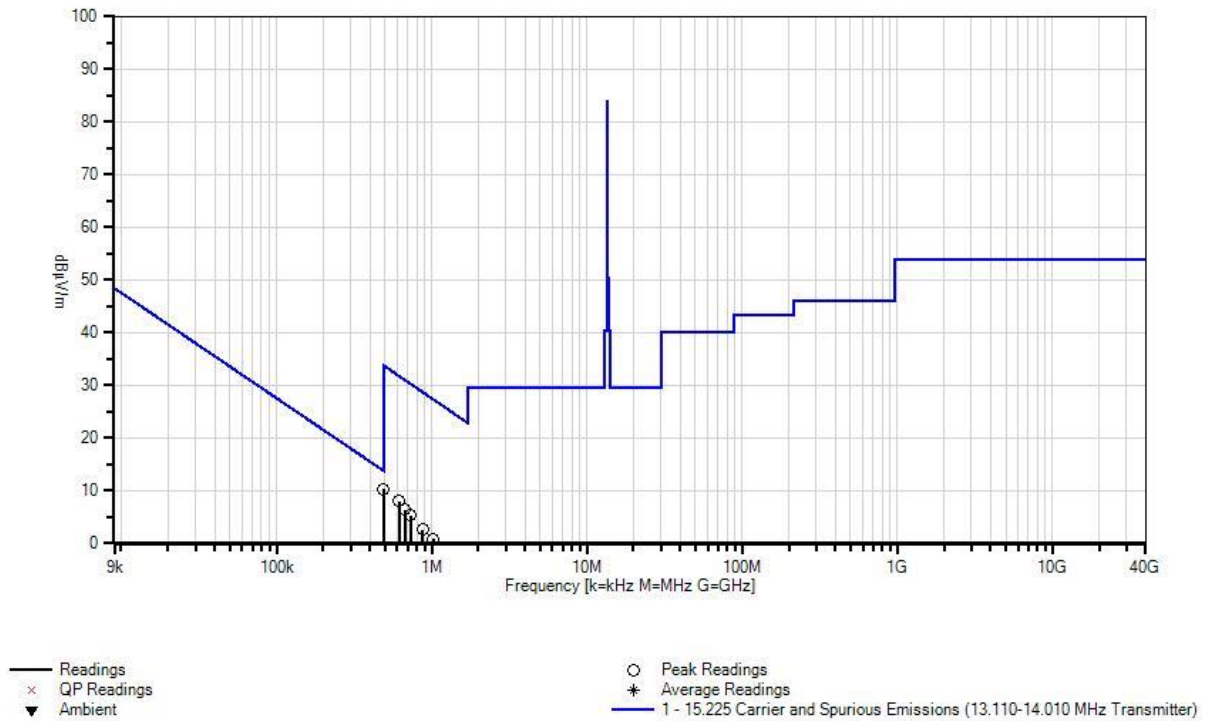
Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB	T3 dB	dB	Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	490.784k	40.5	+0.1	+0.0	+9.8		-40.0	10.4	33.8	-23.4	Parra
2	614.136k	38.1	+0.1	+0.0	+9.8		-40.0	8.0	31.8	-23.8	Perpe
3	668.494k	36.4	+0.1	+0.0	+9.9		-40.0	6.4	31.1	-24.7	Parra
4	733.306k	35.5	+0.1	+0.1	+9.7		-40.0	5.4	30.3	-24.9	Perpe
5	875.474k	33.0	+0.1	+0.1	+9.5		-40.0	2.7	28.7	-26.0	Parra
6	1.026M	31.0	+0.1	+0.1	+9.7		-40.0	0.9	27.3	-26.4	Perpe

CKC Laboratories, Inc. Date: 5/20/2013 Time: 11:53:44 Identive Group, Inc WO#: 93719
 Test Distance: 3 Meters Sequence#: 33



Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Identive Group, Inc.**
 Specification: **15.225 Carrier and Spurious Emissions (13.110-14.010 MHz Transmitter)**
 Work Order #: **93719** Date: 5/20/2013
 Test Type: **Radiated Scan** Time: 09:28:02
 Equipment: **TouchSecure WallMount (WM)** Sequence#: 21
 Manufacturer: Identive Group, Inc. Tested By: Hieu Song Nguyenpham
 Model: Connectivity WM
 S/N: None

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	AN00730	Preamplifier	8447D	1/17/2013	1/17/2015
T2	AN00852	Biconilog Antenna	CBL 6111C	11/28/2012	11/28/2014
T3	ANP00880	Cable	RG214U	7/30/2012	7/30/2014
T4	ANP01183	Cable	CNT-195	10/24/2011	10/24/2013
T5	ANP05440	Cable	RG214/U	1/21/2013	1/21/2015
	AN02668	Spectrum Analyzer	E4446A	2/22/2013	2/22/2015

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
TouchSecure WallMount (WM)*	Identive Group, Inc.	Connectivity WM	None

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop Power Adapter	HP	PN: 677777-001	PPP012L-E
Laptop	Dell	Latitude E6320	8BZPYN1
DC Power Supply	Protek	3006B	AG4070

Test Conditions / Notes:

Radiated Spurious Emission
 Frequency Range: 30MHz to 1000MHz

Temperature: 21.4°C
 Humidity: 42%
 Atmospheric Pressure: 101.4 kPa

High Clock: 48 MHz
 Software Used: Hyper Terminal and Ethernet Emulator

Transmitting Operation Frequency: 13.56MHz and 125kHz

RBW=VBW=120kHz from 30MHz to 1000MHz

Mode: Power by DC power supply (12VDC)

The EUT is a fixed device. It is powered by a DC power supply at 12VDC which is outside of the chamber. The EUT is placed on 80 cm table at the center of the turn table. The EUT is set in continuously transmitting.

Note: A new HF antenna with the ground plane.

Ext Attn: 0 dB

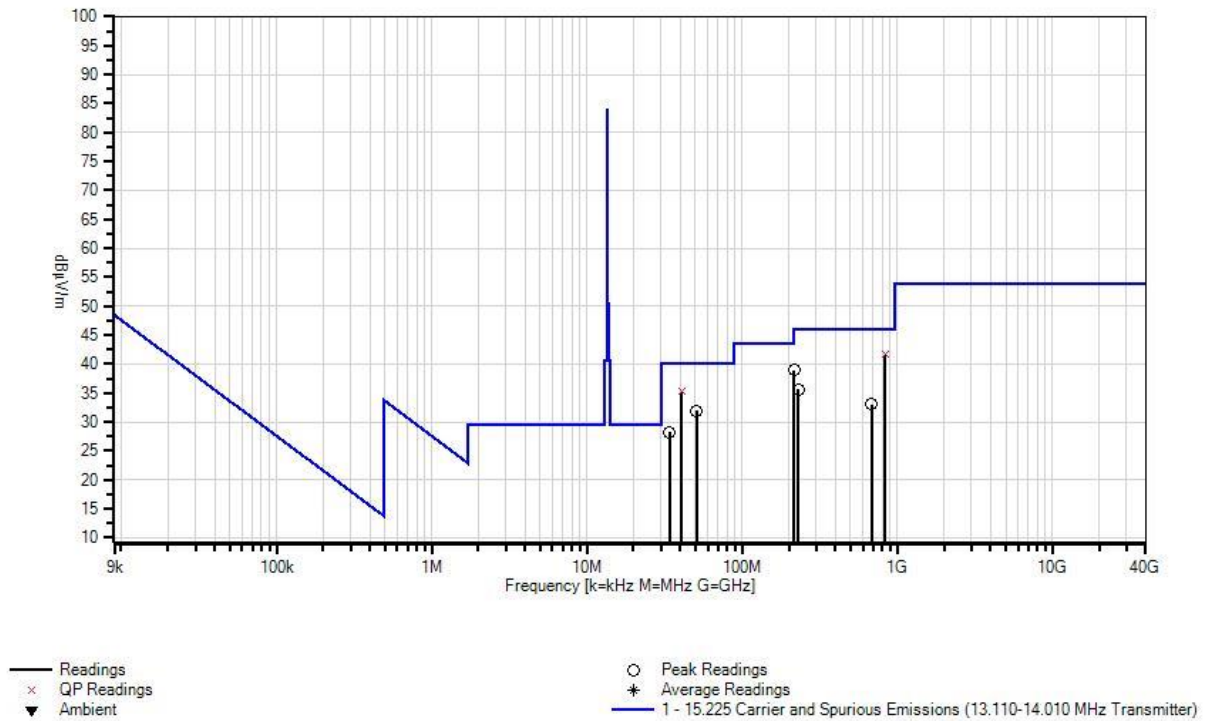
Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq	Rdng	T1 T5	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dB μ V	dB	dB	dB	dB	Table	dB μ V/m	dB μ V/m	dB	Ant
1	831.924M	40.3	-26.9 +2.0	+22.1	+3.3	+0.9	+0.0	41.7	46.0	-4.3	Horiz
QP											
^	831.924M	44.8	-26.9 +2.0	+22.1	+3.3	+0.9	+0.0	46.2	46.0	+0.2	Horiz
^	831.924M	41.7	-26.9 +2.0	+22.1	+3.3	+0.9	+0.0	43.1	46.0	-2.9	Horiz
4	40.683M	48.2	-27.0 +0.3	+13.0	+0.6	+0.1	+0.0	35.2	40.0	-4.8	Vert
QP											
^	40.683M	50.2	-27.0 +0.3	+13.0	+0.6	+0.1	+0.0	37.2	40.0	-2.8	Vert
^	40.683M	49.5	-27.0 +0.3	+13.0	+0.6	+0.1	+0.0	36.5	40.0	-3.5	Vert
7	216.909M	54.6	-27.0 +0.8	+8.8	+1.5	+0.3	+0.0	39.0	46.0	-7.0	Horiz
8	50.896M	49.2	-27.0 +0.3	+8.6	+0.7	+0.1	+0.0	31.9	40.0	-8.1	Vert
9	230.002M	49.9	-27.0 +0.9	+10.0	+1.5	+0.3	+0.0	35.6	46.0	-10.4	Horiz
10	33.993M	37.9	-27.0 +0.4	+16.3	+0.5	+0.1	+0.0	28.2	40.0	-11.8	Vert
11	679.972M	34.4	-26.8 +1.8	+20.0	+2.9	+0.8	+0.0	33.1	46.0	-12.9	Horiz

CKC Laboratories, Inc Date: 5/20/2013 Time: 09:28:02 Identive Group, Inc WO#: 93719
 Test Distance: 3 Meters Sequence#: 21



Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Identive Group, Inc.**
 Specification: **15.225 Carrier and Spurious Emissions (13.110-14.010 MHz Transmitter)**
 Work Order #: **93719** Date: 5/21/2013
 Test Type: **Radiated Scan** Time: 13:56:44
 Equipment: **TouchSecure WallMount (WM)** Sequence#: 58
 Manufacturer: Identive Group, Inc. Tested By: Hieu Song Nguyenpham
 Model: Connectivity WM
 S/N: None

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	ANP00880	Cable	RG214U	7/30/2012	7/30/2014
T2	ANP05440	Cable	RG214/U	1/21/2013	1/21/2015
	AN02668	Spectrum Analyzer	E4446A	2/22/2013	2/22/2015
T3	AN00432	Loop Antenna	6502	4/2/2013	4/2/2015

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
TouchSecure WallMount (WM)*	Identive Group, Inc.	Connectivity WM	None

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop Power Adapter	HP	PN: 677777-001	PPP012L-E
Laptop	Dell	Latitude E6320	8BZPYN1
DC Power Supply	Protek	3006B	AG4070

Test Conditions / Notes:

Radiated Spurious Emission
 Frequency Range: 9kHz to 30MHz

Temperature: 21.4°C
 Humidity: 42%
 Atmospheric Pressure: 101.4 kPa

High Clock: 48 MHz
 Software Used: Hyper Terminal and Ethernet Emulator

Transmitting Operation Frequency: 13.56MHz and 125kHz

RBW=VBW= 200Hz from 9kHz to 150kHz
 RBW=VBW= 9kHz from 150kHz to 30MHz

Mode: Power by DC power supply (12VDC)

The EUT is a fixed device. It is powered by a DC power supply at 12VDC which is outside of the chamber. The EUT is placed on 80 cm table at the center of the turn table. The EUT is set in continuously transmitting.

Note: A new HF antenna with the ground plane. Pigtail connector

Ext Attn: 0 dB

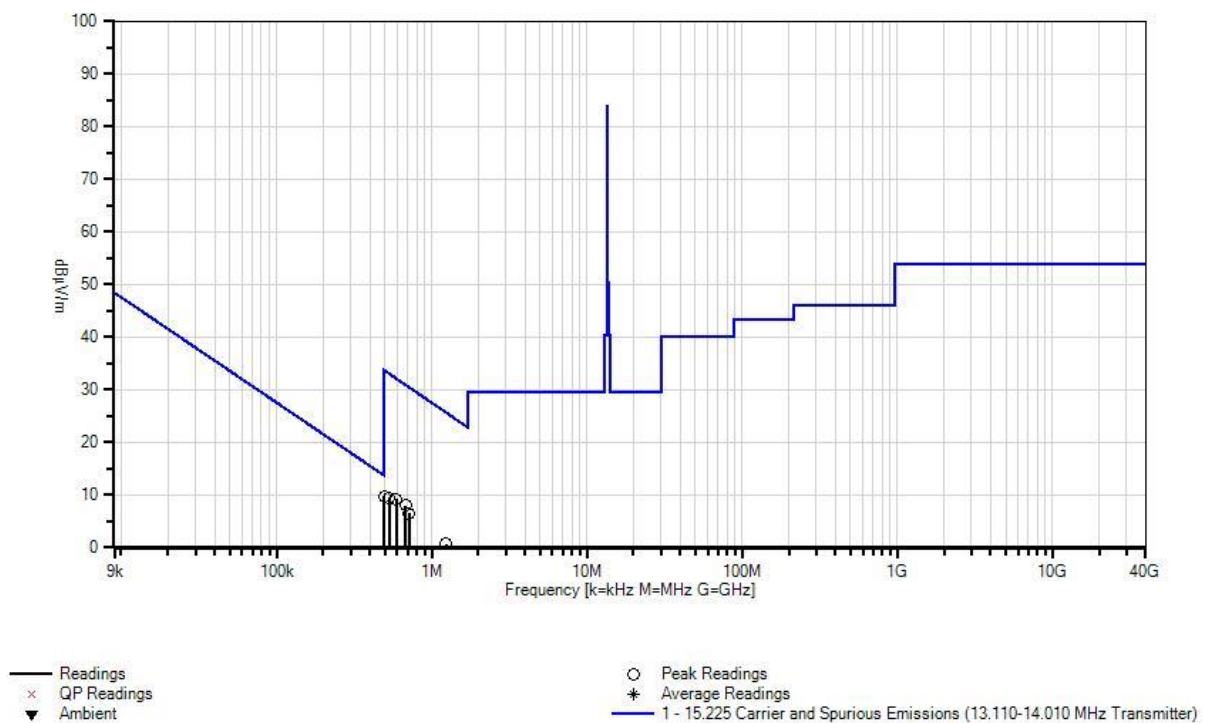
Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dB μ V	T1 dB	T2 dB	T3 dB		Dist Table	Corr dB μ V/m	Spec dB μ V/m	Margin dB	Polar Ant
1	591.138k	39.4	+0.1	+0.0	+9.8		-40.0	9.3	32.2	-22.9	Perpe
2	676.857k	38.0	+0.1	+0.0	+9.9		-40.0	8.0	31.0	-23.0	Perpe
3	532.598k	39.6	+0.1	+0.0	+9.8		-40.0	9.5	33.1	-23.6	Perpe
4	492.875k	39.9	+0.1	+0.0	+9.8		-40.0	9.8	33.7	-23.9	Paral
5	718.671k	36.5	+0.1	+0.1	+9.8		-40.0	6.5	30.5	-24.0	Paral
6	1.233M	30.8	+0.1	+0.0	+9.8		-40.0	0.7	25.7	-25.0	Paral

CKC Laboratories, Inc Date: 5/21/2013 Time: 13:56:44 Identive Group, Inc WO#: 93719
Test Distance: 3 Meters Sequence#: 58



Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Identive Group, Inc.**
 Specification: **15.225 Carrier and Spurious Emissions (13.110-14.010 MHz Transmitter)**
 Work Order #: **93719** Date: 5/21/2013
 Test Type: **Radiated Scan** Time: 11:55:40
 Equipment: **TouchSecure WallMount (WM)** Sequence#: 54
 Manufacturer: Identive Group, Inc. Tested By: Hieu Song Nguyenpham
 Model: Connectivity WM
 S/N: None

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	AN00730	Preamplifier	8447D	1/17/2013	1/17/2015
T2	AN00852	Biconilog Antenna	CBL 6111C	11/28/2012	11/28/2014
T3	ANP00880	Cable	RG214U	7/30/2012	7/30/2014
T4	ANP01183	Cable	CNT-195	10/24/2011	10/24/2013
T5	ANP05440	Cable	RG214/U	1/21/2013	1/21/2015
	AN02668	Spectrum Analyzer	E4446A	2/22/2013	2/22/2015

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
TouchSecure WallMount (WM)*	Identive Group, Inc.	Connectivity WM	None

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop Power Adapter	HP	PN: 677777-001	PPP012L-E
Laptop	Dell	Latitude E6320	8BZPYN1
DC Power Supply	Protek	3006B	AG4070

Test Conditions / Notes:

Radiated Spurious Emission
 Frequency Range: 30MHz to 1000MHz

Temperature: 21.4°C
 Humidity: 42%
 Atmospheric Pressure: 101.4 kPa

High Clock: 48 MHz
 Software Used: Hyper Terminal and Ethernet Emulator

Transmitting Operation Frequency: 13.56MHz and 125kHz

RBW=VBW=120kHz from 30MHz to 1000MHz

Mode: Power by DC power supply (12VDC)

The EUT is a fixed device. It is powered by a DC power supply at 12VDC which is outside of the chamber. The EUT is placed on 80 cm table at the center of the turn table. The EUT is set in continuously transmitting.

Note: A new HF antenna with the ground plane. Pigtail connector

Ext Attn: 0 dB

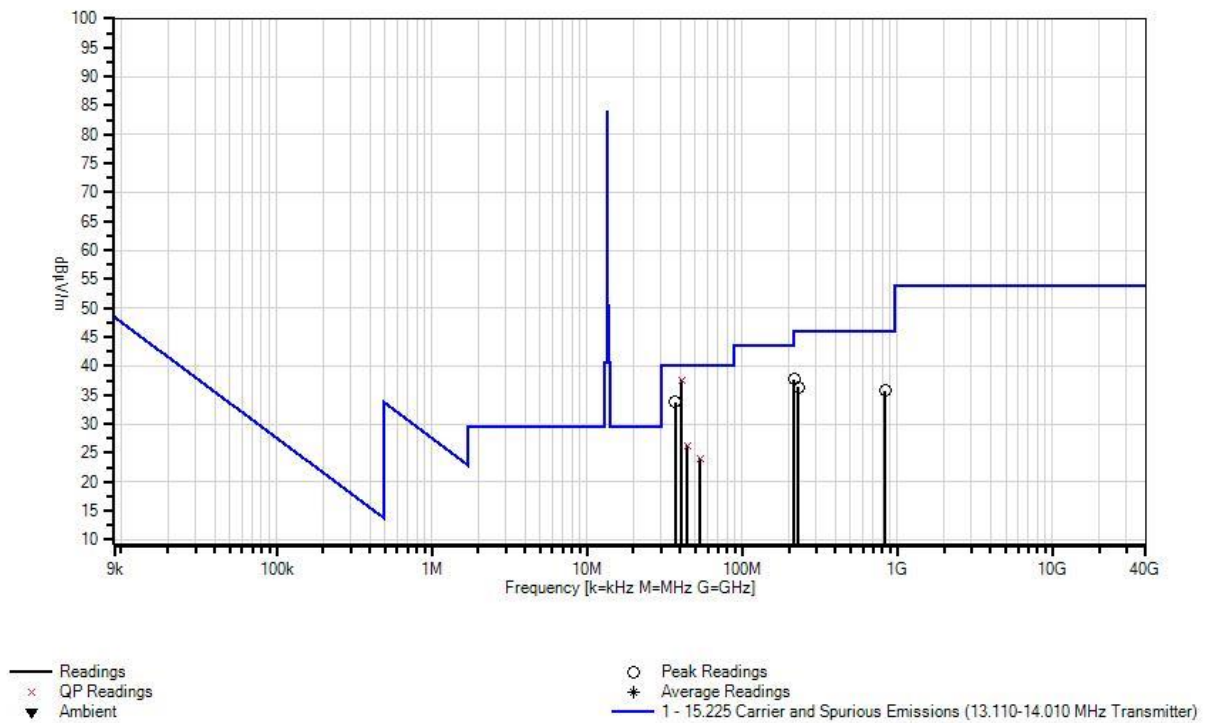
Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dB μ V	T1 T5 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dB μ V/m	Spec dB μ V/m	Margin dB	Polar Ant
1	40.684M	50.6	-27.0 +0.3	+13.0	+0.6	+0.1	+0.0	37.6	40.0	-2.4	Vert
QP											
^	40.684M	52.9	-27.0 +0.3	+13.0	+0.6	+0.1	+0.0	39.9	40.0	-0.1	Vert
^	40.684M	52.4	-27.0 +0.3	+13.0	+0.6	+0.1	+0.0	39.4	40.0	-0.6	Vert
4	36.988M	45.0	-27.1 +0.3	+14.8	+0.6	+0.2	+0.0	33.8	40.0	-6.2	Vert
5	216.909M	53.3	-27.0 +0.8	+8.8	+1.5	+0.3	+0.0	37.7	46.0	-8.3	Horiz
6	230.483M	50.5	-27.0 +0.9	+10.1	+1.5	+0.3	+0.0	36.3	46.0	-9.7	Horiz
7	831.083M	34.3	-26.9 +2.0	+22.1	+3.3	+0.9	+0.0	35.7	46.0	-10.3	Horiz
8	44.235M	41.1	-27.1 +0.3	+11.2	+0.6	+0.2	+0.0	26.3	40.0	-13.7	Vert
QP											
^	44.235M	53.4	-27.1 +0.3	+11.2	+0.6	+0.2	+0.0	38.6	40.0	-1.4	Vert
^	44.235M	52.3	-27.1 +0.3	+11.2	+0.6	+0.2	+0.0	37.5	40.0	-2.5	Vert
11	53.863M	42.2	-27.0 +0.4	+7.6	+0.7	+0.2	+0.0	24.1	40.0	-15.9	Vert
QP											
^	53.863M	62.2	-27.0 +0.4	+7.6	+0.7	+0.2	+0.0	44.1	40.0	+4.1	Vert
^	53.863M	52.6	-27.0 +0.4	+7.6	+0.7	+0.2	+0.0	34.5	40.0	-5.5	Vert

CKC Laboratories, Inc. Date: 5/21/2013 Time: 11:55:40 Identive Group, Inc WO#: 93719
 Test Distance: 3 Meters Sequence#: 54



Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Identive Group, Inc.**
 Specification: **15.225 Carrier and Spurious Emissions (13.110-14.010 MHz Transmitter)**
 Work Order #: **93719** Date: 5/20/2013
 Test Type: **Radiated Scan** Time: 11:31:12
 Equipment: **TouchSecure WallMount (WM)** Sequence#: 30
 Manufacturer: Identive Group, Inc. Tested By: Hieu Song Nguyenpham
 Model: Connectivity WM
 S/N: None

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	ANP00880	Cable	RG214U	7/30/2012	7/30/2014
T2	ANP05440	Cable	RG214/U	1/21/2013	1/21/2015
	AN02668	Spectrum Analyzer	E4446A	2/22/2013	2/22/2015
T3	AN00432	Loop Antenna	6502	4/2/2013	4/2/2015

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
TouchSecure WallMount (WM)*	Identive Group, Inc.	Connectivity WM	None

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop Power Adapter	HP	PN: 677777-001	PPP012L-E
Laptop	Dell	Latitude E6320	8BZPYN1
DC Power Supply	Protek	3006B	AG4070
POE Adapter Kit	TP-LINK	TL-POE200A	10C82100800

Test Conditions / Notes:

Radiated Spurious Emission
 Frequency Range: 9kHz to 30MHz

Temperature: 21.4°C
 Humidity: 42%
 Atmospheric Pressure: 101.4 kPa

High Clock: 48 MHz
 Software Used: Hyper Terminal and Ethernet Emulator

Transmitting Operation Frequency: 13.56MHz and 125kHz

RBW=VBW=200Hz from 9kHz to 150kHz
 RBW=VBW= 9kHz from 150kHz to 30MHz

Mode: Power by POE at 48VDC

The EUT is a fixed device. It is powered by a POE Adapter Kit which is outside of the chamber and communicating with the laptop through a RJ 45 cable. A DC power cable is terminated at this time. The EUT is placed on 80 cm table at the center of the turn table. The EUT is set in continuously transmitting.

Note: A new HF antenna with the ground plane.

Ext Attn: 0 dB

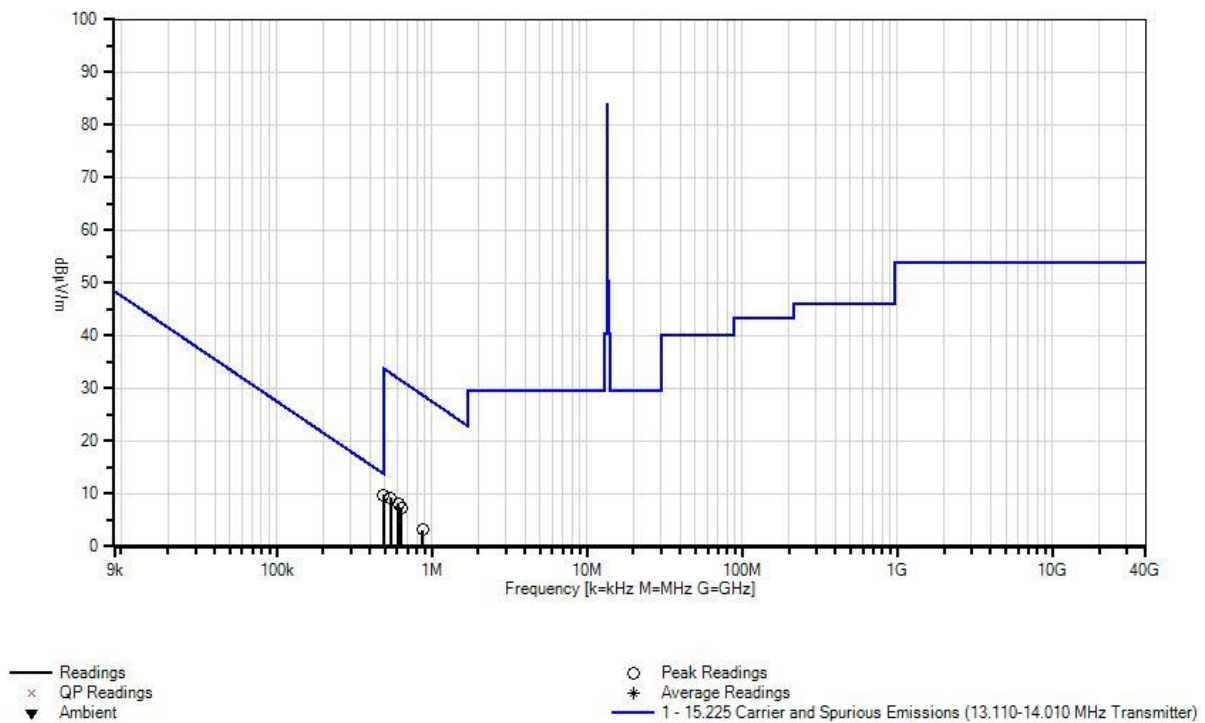
Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dB μ V	T1 dB	T2 dB	T3 dB	dB	Dist Table	Corr dB μ V/m	Spec dB μ V/m	Margin dB	Polar Ant
1	545.143k	39.4	+0.1	+0.0	+9.8		-40.0	9.3	32.9	-23.6	Perpe
2	607.864k	38.2	+0.1	+0.0	+9.8		-40.0	8.1	31.9	-23.8	Perpe
3	490.784k	39.9	+0.1	+0.0	+9.8		-40.0	9.8	33.8	-24.0	Parra
4	637.134k	37.4	+0.1	+0.0	+9.8		-40.0	7.3	31.5	-24.2	Parra
5	877.564k	33.5	+0.1	+0.1	+9.5		-40.0	3.2	28.7	-25.5	Perpe
6	1.285M	28.9	+0.1	+0.1	+9.8		-40.0	-1.1	25.4	-26.5	Parra

CKC Laboratories, Inc Date: 5/20/2013 Time: 11:31:12 Identive Group, Inc WO#: 93719
Test Distance: 3 Meters Sequence#: 30



Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Identive Group, Inc.**
 Specification: **15.225 Carrier and Spurious Emissions (13.110-14.010 MHz Transmitter)**
 Work Order #: **93719** Date: 5/20/2013
 Test Type: **Radiated Scan** Time: 10:08:44
 Equipment: **TouchSecure WallMount (WM)** Sequence#: 25
 Manufacturer: Identive Group, Inc. Tested By: Hieu Song Nguyenpham
 Model: Connectivity WM
 S/N: None

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	AN00730	Preamp	8447D	1/17/2013	1/17/2015
T2	AN00852	Biconilog Antenna	CBL 6111C	11/28/2012	11/28/2014
T3	ANP00880	Cable	RG214U	7/30/2012	7/30/2014
T4	ANP01183	Cable	CNT-195	10/24/2011	10/24/2013
T5	ANP05440	Cable	RG214/U	1/21/2013	1/21/2015
	AN02668	Spectrum Analyzer	E4446A	2/22/2013	2/22/2015

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
TouchSecure WallMount (WM)*	Identive Group, Inc.	Connectivity WM	None

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop Power Adapter	HP	PN: 677777-001	PPP012L-E
Laptop	Dell	Latitude E6320	8BZPYN1
DC Power Supply	Protek	3006B	AG4070
POE Adapter Kit	TP-LINK	TL-POE200A	10C82100800

Test Conditions / Notes:

Radiated Spurious Emission
 Frequency Range: 30MHz to 1000MHz

Temperature: 21.4°C
 Humidity: 42%
 Atmospheric Pressure: 101.4 kPa

High Clock: 48 MHz
 Software Used: Hyper Terminal and Ethernet Emulator

Transmitting Operation Frequency: 13.56MHz and 125kHz

RBW=VBW=120kHz from 30MHz to 1000MHz

Mode: Power by POE at 48VDC

The EUT is a fix device. It is powered by POE Adapter Kit which is outside of the chamber and communication with laptop through a RJ 45 cable. A DC power cable is terminated at this time. The EUT is placed on 80 cm table at the center of turning table. The EUT is set continuously transmitting.

Note: A new HF antenna with the ground plan

Ext Attn: 0 dB

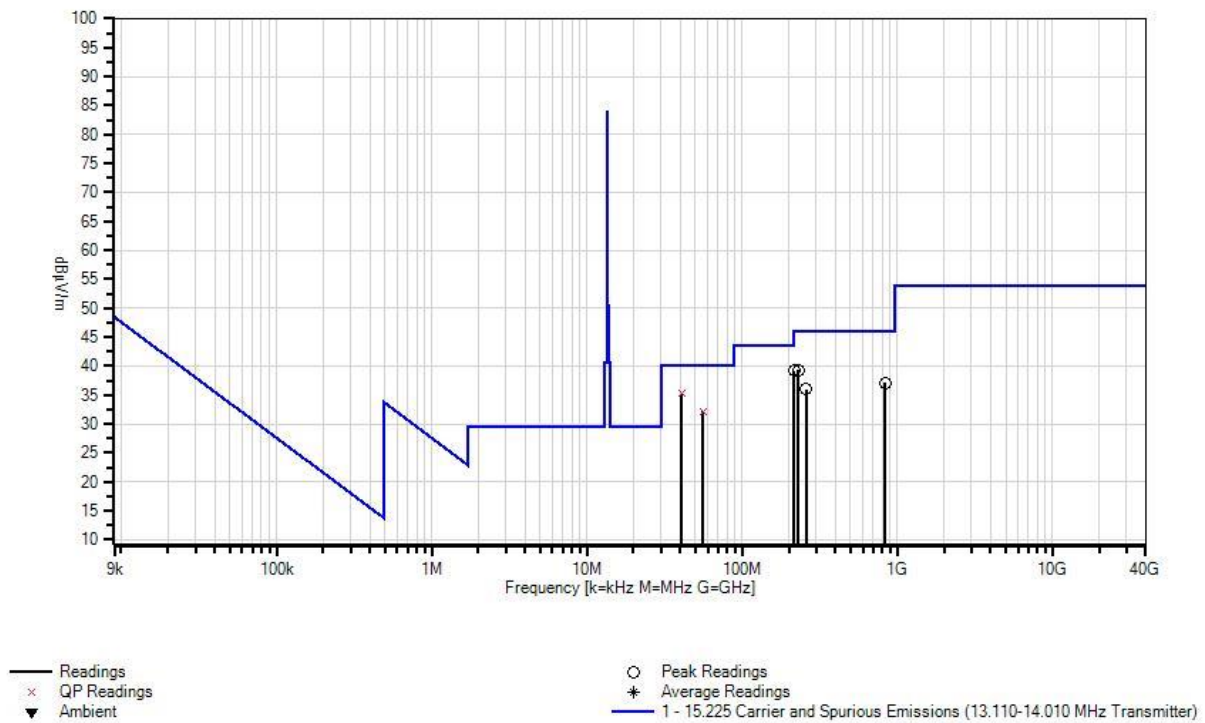
Measurement Data:

Reading listed by margin.

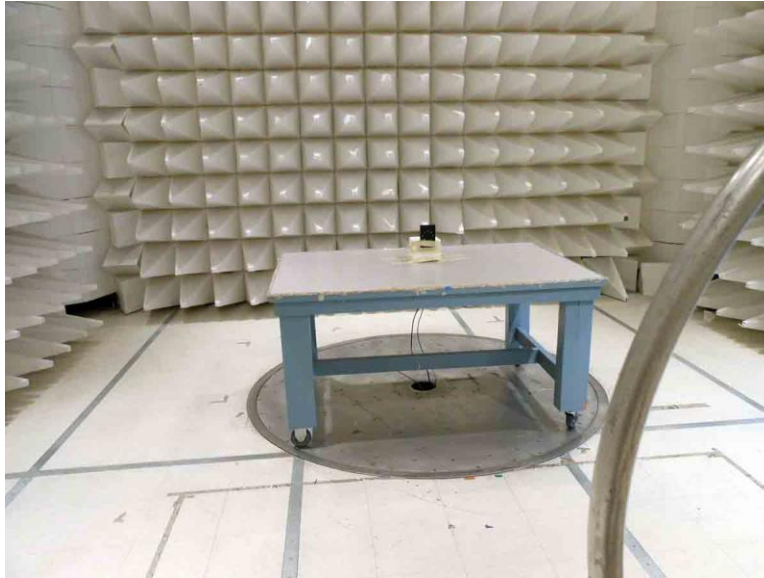
Test Distance: 3 Meters

#	Freq MHz	Rdng dB μ V	T1 T5 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dB μ V/m	Spec dB μ V/m	Margin dB	Polar Ant
1	40.682M QP	48.3	-27.0 +0.3	+13.0	+0.6	+0.1	+0.0	35.3	40.0	-4.7	Vert
^	40.682M	50.6	-27.0 +0.3	+13.0	+0.6	+0.1	+0.0	37.6	40.0	-2.4	Vert
^	40.682M	50.6	-27.0 +0.3	+13.0	+0.6	+0.1	+0.0	37.6	40.0	-2.4	Vert
4	230.483M	53.5	-27.0 +0.9	+10.1	+1.5	+0.3	+0.0	39.3	46.0	-6.7	Horiz
5	216.909M	54.8	-27.0 +0.8	+8.8	+1.5	+0.3	+0.0	39.2	46.0	-6.8	Horiz
6	56.220M QP	51.1	-27.0 +0.4	+6.8	+0.7	+0.2	+0.0	32.2	40.0	-7.8	Vert
^	56.220M	60.0	-27.0 +0.4	+6.8	+0.7	+0.2	+0.0	41.1	40.0	+1.1	Vert
^	56.220M	59.1	-27.0 +0.4	+6.8	+0.7	+0.2	+0.0	40.2	40.0	+0.2	Vert
9	833.365M	35.7	-26.9 +2.0	+22.1	+3.3	+0.9	+0.0	37.1	46.0	-8.9	Vert
10	259.191M	46.2	-27.0 +1.0	+13.9	+1.6	+0.3	+0.0	36.0	46.0	-10.0	Horiz

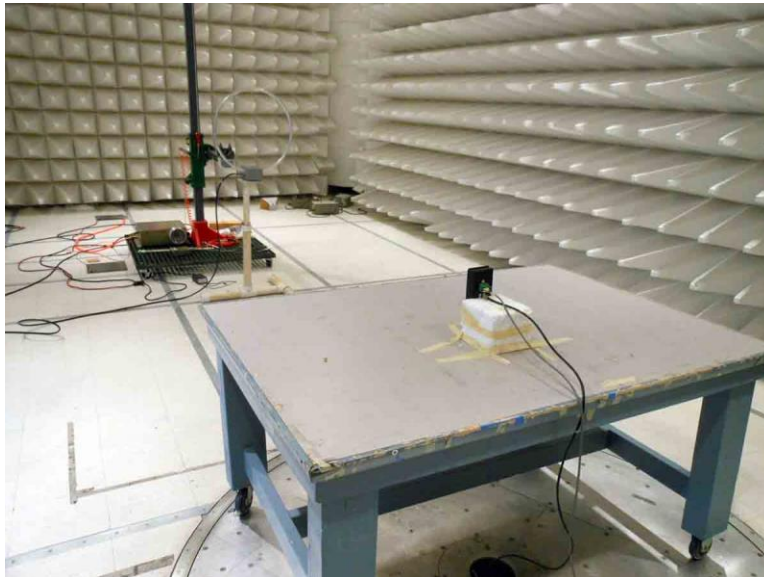
CKC Laboratories, Inc. Date: 5/20/2013 Time: 10:08:44 Identive Group, Inc WO#: 93719
 Test Distance: 3 Meters Sequence#: 25



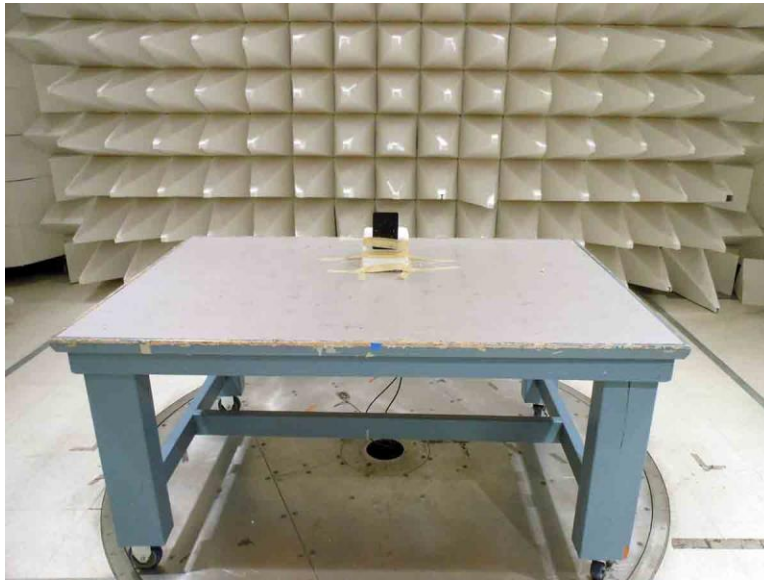
Test Setup Photos



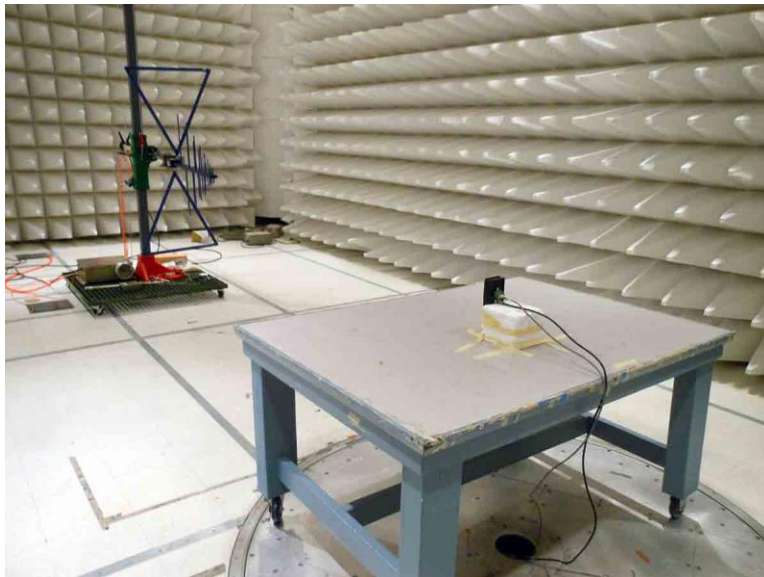
DC POWER W/ PHOENIX CONNECTOR, 9kHz-30MHz



DC POWER W/ PHOENIX CONNECTOR, 9kHz-30MHz



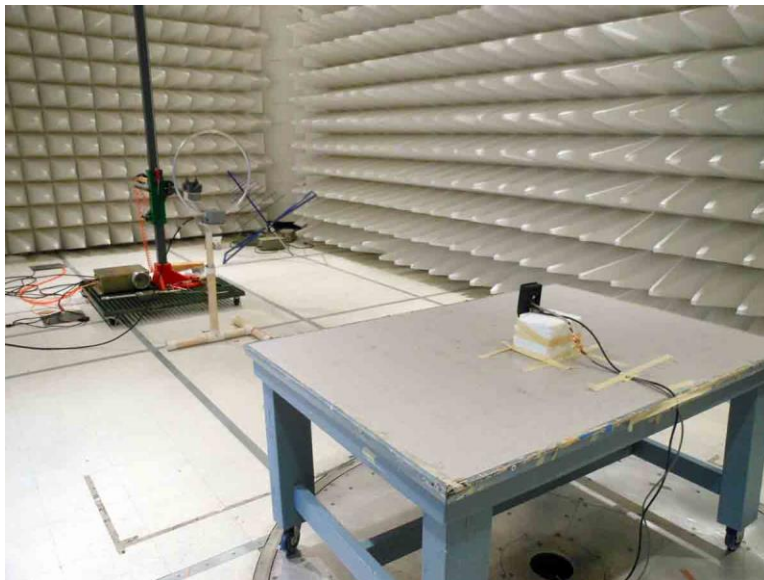
DC POWER W/ PHOENIX CONNECTOR, 30MHz-1GHz



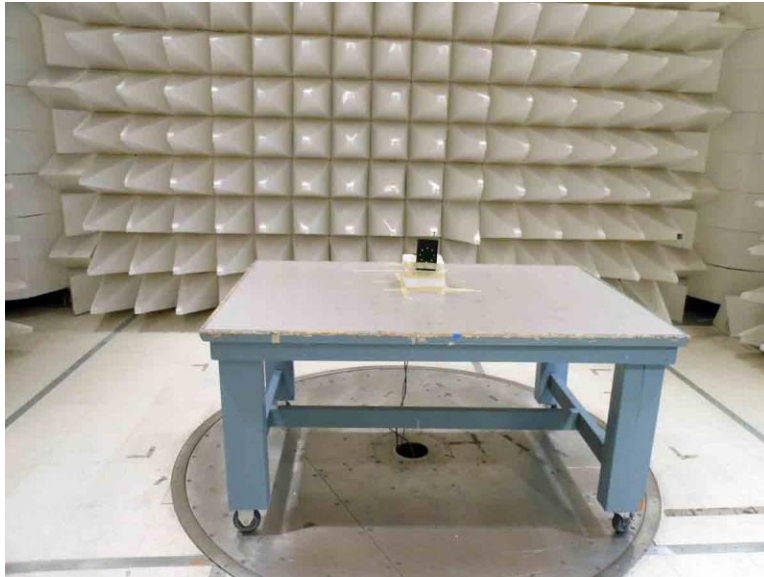
DC POWER W/ PHOENIX CONNECTOR, 30MHz-1GHz



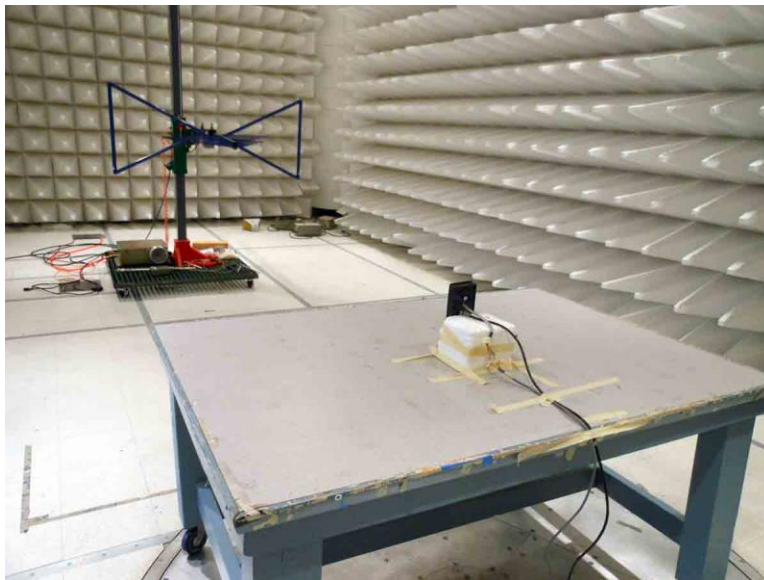
DC POWER W/ PIGTAIL, 9kHz-30MHz



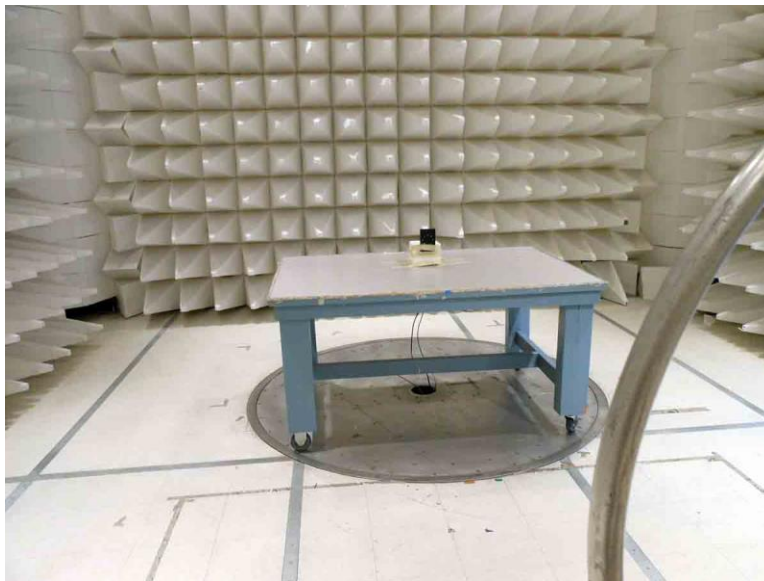
DC POWER W/ PIGTAIL, 9kHz-30MHz



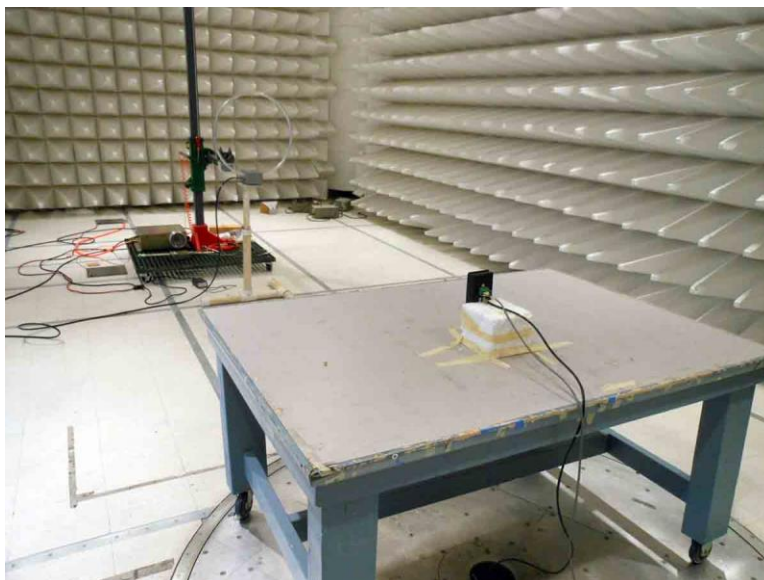
DC POWER W/ PIGTAIL, 30MHz-1GHz



DC POWER W/ PIGTAIL, 30MHz-1GHz



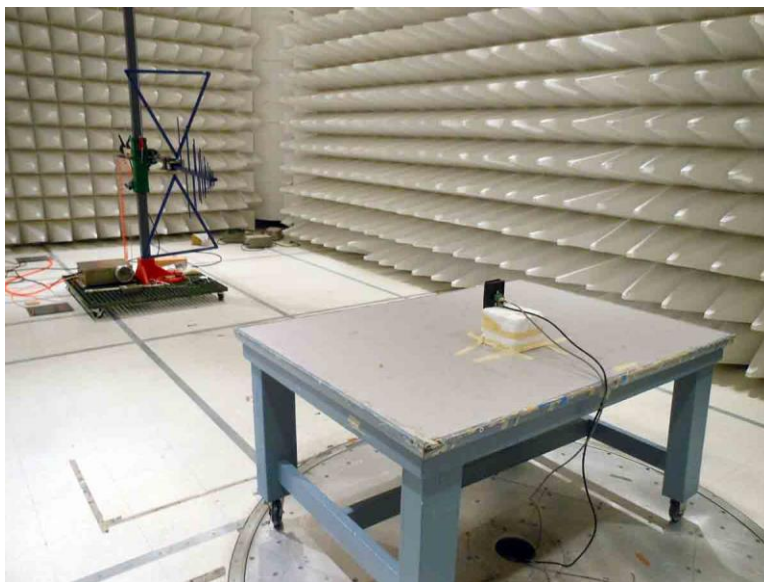
POE, 9kHz-30MHz



POE, 9kHz-30MHz



POE, 30MHz-1GHz



POE, 30MHz-1GHz

15.225(e) Frequency Stability

Test Conditions / Setup

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170

Customer: **Identive Group, Inc.**

Specification: **15.225 Carrier and Spurious Emissions (13.110-14.010 MHz Transmitter)**

Work Order #: **93719** Date: 05/20/2013

Test Type: **Radiated Scan** Time: 10:00:43

Equipment: **TouchSecure WallMount (WM)** Sequence#: 1

Manufacturer: Identive Group, Inc. Tested By: Hieu Song Nguyenpham/Eddie Mariscal

Model: Connectivity WM

S/N: None

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
TouchSecure WallMount (WM)*	Identive Group, Inc.	Connectivity WM	None

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop Power Adapter	HP	PN: 677777-001	PPP012L-E
Laptop	Dell	Latitude E6320	8BZPYN1
DC Power Supply	Protek	3006B	AG4070

Test Equipment

Asset #	Name	Manufacturer	Model	Cal_Date	Cal Due
01879	Temperature Chamber	Thermotron	S-1.2 Min.	1/15/2012	1/15/2014
00170	Loop Antenna	Solar	7334-1	3/15/2012	3/15/2014
02660	Spectrum Analyzer	Agilent	E4446A	8/23/2012	8/23/2014
03338	Multimeter	Extech	MM570A	10/8/2012	10/8/2014
02242	Thermometer	Omega	HH-26K	4/10/2012	4/10/2014
00765	DC Power Supply	Sorenson	DCR-60-30B	10/8/2012	10/8/2014
00432	Loop Antenna	EMCO	6502	4/2/2013	4/2/2015
P00880	Cable	Pasternack	RG214U	7/30/2012	7/30/2014
P05440	Cable	Pasternack	RG214/U	1/21/2013	1/21/2015
02668	Spectrum Analyzer	Agilent	E4446A	2/22/2013	2/22/2015

Test Conditions

Transmitting Frequency: 125kHz & 13.56MHz

125kHz: RBW = 200Hz; VBW = 2kHz;

13.56MHz: RBW=9kHz; VBW = 30kHz

EUT is powered with 12VDC by DC power supply located outside of the temperature chamber. The EUT is placed atop a nonconductive, Styrofoam insulation inside the temperature chamber. EUT is set to continuously transmit.

Temperature: 21°C

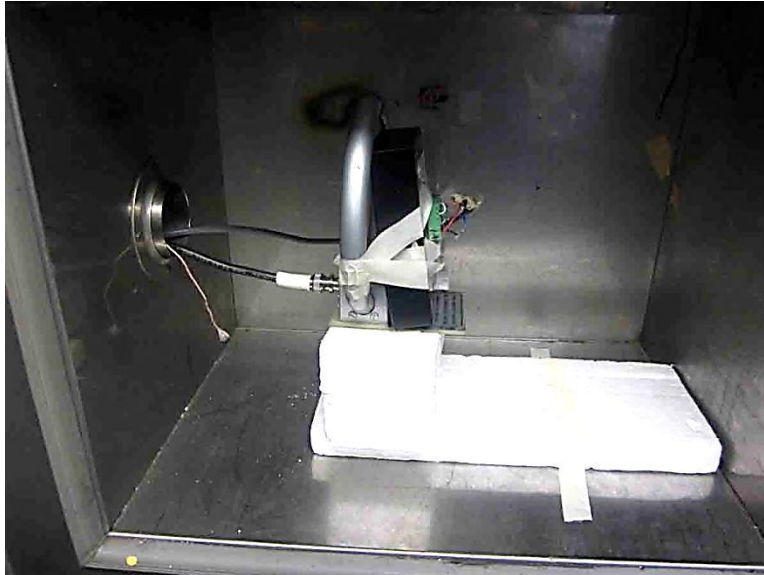
Relative Humidity: 38 %

Atmospheric Pressure: 97.8 kPa

Test Data

Temperature °C	Voltage (V DC)	Fundamental Frequency Reading (MHz)	+/-0.01% Range (MHz)	Results
-20	12	13.55956	0.00324	Pass
-10	12	13.55960	0.00295	Pass
0	12	13.55967	0.00243	Pass
10	12	13.55974	0.00192	Pass
20	10.2	13.55995	0.00037	Pass
20	12	13.55982	0.00133	Pass
20	13.8	13.55977	0.00170	Pass
30	12	13.55979	0.00155	Pass
40	12	13.55976	0.00177	Pass
50	12	13.55974	0.00192	Pass
-20	12	13.55956	0.00324	Pass

Test Setup Photos



SUPPLEMENTAL INFORMATION

Measurement Uncertainty

Uncertainty Value	Parameter
4.73 dB	Radiated Emissions
3.34 dB	Mains Conducted Emissions
3.30 dB	Disturbance Power

The reported measurement uncertainties are calculated based on the worst case of all laboratory environments from CKC Laboratories, Inc. test sites. Only those parameters which require estimation of measurement uncertainty are reported. The reported worst case measurement uncertainty is less than the maximum values derived in CISPR 16-4-2. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of $k=2$. Compliance is deemed to occur provided measurements are below the specified limits.

Emissions Test Details

TESTING PARAMETERS

Unless otherwise indicated, the following configuration parameters are used for equipment setup: The cables were routed consistent with the typical application by varying the configuration of the test sample. Interface cables were connected to the available ports of the test unit. The effect of varying the position of the cables was investigated to find the configuration that produced maximum emissions. Cables were of the type and length specified in the individual requirements. The length of cable that produced maximum emissions was selected.

The equipment under test (EUT) was set up in a manner that represented its normal use, as shown in the setup photographs. Any special conditions required for the EUT to operate normally are identified in the comments that accompany the emissions tables.

The emissions data was taken with a spectrum analyzer or receiver. Incorporating the applicable correction factors for distance, antenna, cable loss and amplifier gain, the data was reduced as shown in the table below. The corrected data was then compared to the applicable emission limits. Preliminary and final measurements were taken in order to ensure that all emissions from the EUT were found and maximized.

CORRECTION FACTORS

The basic spectrum analyzer reading was converted using correction factors as shown in the highest emissions readings in the tables. For radiated emissions in dB μ V/m, the spectrum analyzer reading in dB μ V was corrected by using the following formula. This reading was then compared to the applicable specification limit.

SAMPLE CALCULATIONS		
	Meter reading	(dBμV)
+	Antenna Factor	(dB)
+	Cable Loss	(dB)
-	Distance Correction	(dB)
-	Preamplifier Gain	(dB)
=	Corrected Reading	(dBμV/m)

TEST INSTRUMENTATION AND ANALYZER SETTINGS

The test instrumentation and equipment listed were used to collect the emissions data. A spectrum analyzer or receiver was used for all measurements. Unless otherwise specified, the following table shows the measuring equipment bandwidth settings that were used in designated frequency bands. For testing emissions, an appropriate reference level and a vertical scale size of 10 dB per division were used.

MEASURING EQUIPMENT BANDWIDTH SETTINGS PER FREQUENCY RANGE			
TEST	BEGINNING FREQUENCY	ENDING FREQUENCY	BANDWIDTH SETTING
CONDUCTED EMISSIONS	150 kHz	30 MHz	9 kHz
RADIATED EMISSIONS	9 kHz	150 kHz	200 Hz
RADIATED EMISSIONS	150 kHz	30 MHz	9 kHz
RADIATED EMISSIONS	30 MHz	1000 MHz	120 kHz
RADIATED EMISSIONS	1000 MHz	>1 GHz	1 MHz

SPECTRUM ANALYZER/RECEIVER DETECTOR FUNCTIONS

The notes that accompany the measurements contained in the emissions tables indicate the type of detector function used to obtain the given readings. Unless otherwise noted, all readings were made in the "positive peak" detector mode. Whenever a "quasi-peak" or "average" reading was recorded, the measurement was annotated with a "QP" or an "Ave" on the appropriate rows of the data sheets. In cases where quasi-peak or average limits were employed and data exists for multiple measurement types for the same frequency then the peak measurement was retained in the report for reference, however the numbering for the affected row was removed and an arrow or carrot ("^") was placed in the far left-hand column indicating that the row above takes precedence for comparison to the limit. The following paragraphs describe in more detail the detector functions and when they were used to obtain the emissions data.

Peak

In this mode, the spectrum analyzer or receiver recorded all emissions at their peak value as the frequency band selected was scanned. By combining this function with another feature called "peak hold," the measurement device had the ability to measure intermittent or low duty cycle transient emission peak levels. In this mode the measuring device made a slow scan across the frequency band selected and measured the peak emission value found at each frequency across the band.

Quasi-Peak

Quasi-peak measurements were taken using the quasi-peak detector when the true peak values exceeded or were within 2 dB of a quasi-peak specification limit. Additional QP measurements may have been taken at the discretion of the operator.

Average

Average measurements were taken using the average detector when the true peak values exceeded or were within 2 dB of an average specification limit. Additional average measurements may have been taken at the discretion of the operator. If the specification or test procedure requires trace averaging, then the averaging was performed using 100 samples or as required by the specification. All other average measurements are performed using video bandwidth averaging. To make these measurements, the test engineer reduces the video bandwidth on the measuring device until the modulation of the signal is filtered out. At this point the measuring device is set into the linear mode and the scan time is reduced.