Deadman Technologies, LLC.

ADDENDUM TO TEST REPORT 92946-5

Transceiver Module
Model: AV01RF

Tested To The Following Standards:

FCC Part 15 Subpart C Sections 15.207, 15.249
and
RSS 210 Issue 8

Report No.: 92946-5A

Date of issue: August 16, 2013

ACCREDITED
Testing Certificates:
803.01, 803.02, 803.05, 803.06

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.

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ADMINISTRATIVE INFORMATION

Test Report Information

REPORT PREPARED FOR:

Deadman Technologies, LLC.
17810 Thunder River Dr.
Reno, NV 89508

Representative: Gino DiSimone
Customer Reference Number: 11012012

REPORT PREPARED BY:

Dianne Dudley
CKC Laboratories, Inc.
5046 Sierra Pines Drive
Mariposa, CA 95338

Project Number: 92946

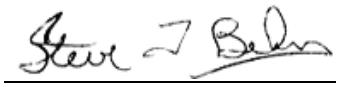
DATE OF EQUIPMENT RECEIPT: November 19, 2012
DATE(S) OF TESTING: November 19-20, 2012

Revision History

Original: Testing of the Transceiver Module, AV01RF to FCC Part 15 Subpart C Sections 15.207, 15.249 and RSS 210 Issue 8.
Addendum A: To correct test conditions in all test sections.

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.



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.
5046 Sierra Pines Drive
Mariposa, CA 95338

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
Mariposa A	US0103	SL2-IN-E-1147R	3082A-2	90477	A-0136

SUMMARY OF RESULTS

Standard / Specification: FCC Part 15 Subpart C 15.207, 15.249 and RSS 210 Issue 8

Description	Test Procedure/Method	Results
Conducted Emissions	FCC Part 15 Subpart C Section 15.207 / ANSI C63.4 (2003)	Pass
RF Power Output	FCC Part 15 Subpart C Section 15.249(a) / ANSI C63.4 (2003)	Pass
-20dBc & 99 % Occupied Bandwidth	FCC Part 15 Subpart C Section 15.249 / RSS 210 Issue 8	Pass
Field Strength of Spurious Emissions	FCC Part 15 Subpart C Section 15.249(d) / 15.209 / ANSI C63.4 (2003)	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
None

EQUIPMENT UNDER TEST (EUT)

EQUIPMENT UNDER TEST

Transceiver Module
Manuf: Deadman Technologies, LLC.
Model: AV01RF
Serial: NA

PERIPHERAL DEVICES

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

120 Volt Adapter
Manuf: Motorola
Model: NTN9393A
Serial: None

Handheld
Manuf: Deadman Technologies, LLC.
Model: AV01H
Serial: None

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.

15.207 AC Conducted Emissions

Test Data Sheets

Test Location: CKC Laboratories, Inc. • 5046 Sierra Pines Drive • Mariposa, CA 95338 • (209) 966-5240

Customer: **Deadman Technologies, LLC.**
Specification: **15.207 AC Mains - Average**
Work Order #: **92946** Date: 11/29/2012
Test Type: **Conducted Emissions** Time: 11:30:09 AM
Equipment: **Transceiver Module** Sequence#: 13
Manufacturer: Deadman Technologies, LLC. Tested By: Chuck Kendall
Model: AV01RF 120V 60Hz
S/N: NA

***Test Equipment*:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	AN00069	Quasi Peak Adapter	85650A	5/4/2011	5/4/2013
	AN01183	Spectrum Analyzer Display	85662A	5/4/2011	5/4/2013
	AN01184	Spectrum Analyzer	8568B	5/4/2011	5/4/2013
T1	ANP00082	Attenuator	PE7002-10	6/7/2011	6/7/2013
T2	AN00374	50uH LISN-Black Lead Amplitude (dB)	8028-TS-50-BNC	10/31/2011	10/31/2013
	AN00374	50uH LISN-White Lead Amplitude (dB)	8028-TS-50-BNC	10/31/2011	10/31/2013
T3	AN02608	High Pass Filter	HE9615-150K-50-720B	3/15/2012	3/15/2014
T4	ANMACOND	Cable		8/17/2012	8/17/2014

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
Transceiver Module*	Deadman Technologies, LLC.	AV01RF	NA

Support Devices:

Function	Manufacturer	Model #	S/N
120 Volt Adapter	Motorola	NTN9393A	None
Handheld	Deadman Technologies, LLC.	AV01H	None

Test Conditions / Notes:

EUT is a limited transceiver module placed in a plastic open frame in transmitter mode transmitting on two frequencies: 2405 & 2425 MHz.
For conducted emissions, the 2425 MHz and the 2405 MHz modules were tested and the results were very similar and well below the average limits; so only the 2425 MHz module results are displayed here.
Frequencies of Interest: .150 - 30 MHz
RBW = 9 kHz; VBW = 30 kHz

Position 3 in the horizontal polarity is the worst case. This is the position for the rest of the testing. Module is in the vertical position with its smaller edge with battery on the Styrofoam and the receive antennas in the horizontal polarity.

The EUT is a transceiver module that is powered by 3.3 VDC. The module would normally be supplied with 3.7 Volts and with the buck/boost IC chip is converts this to a constant 3.3 VDC.

This unit has a 120V to 4.2 VDC adapter to power it during testing-by pass added to make it work during charging mode. Conducted emissions were performed on this unit.

Environmental Conditions:
Temperature = 20.1 °C
Relative Humidity = 35%
Atmospheric Pressure = 97.6 kPa

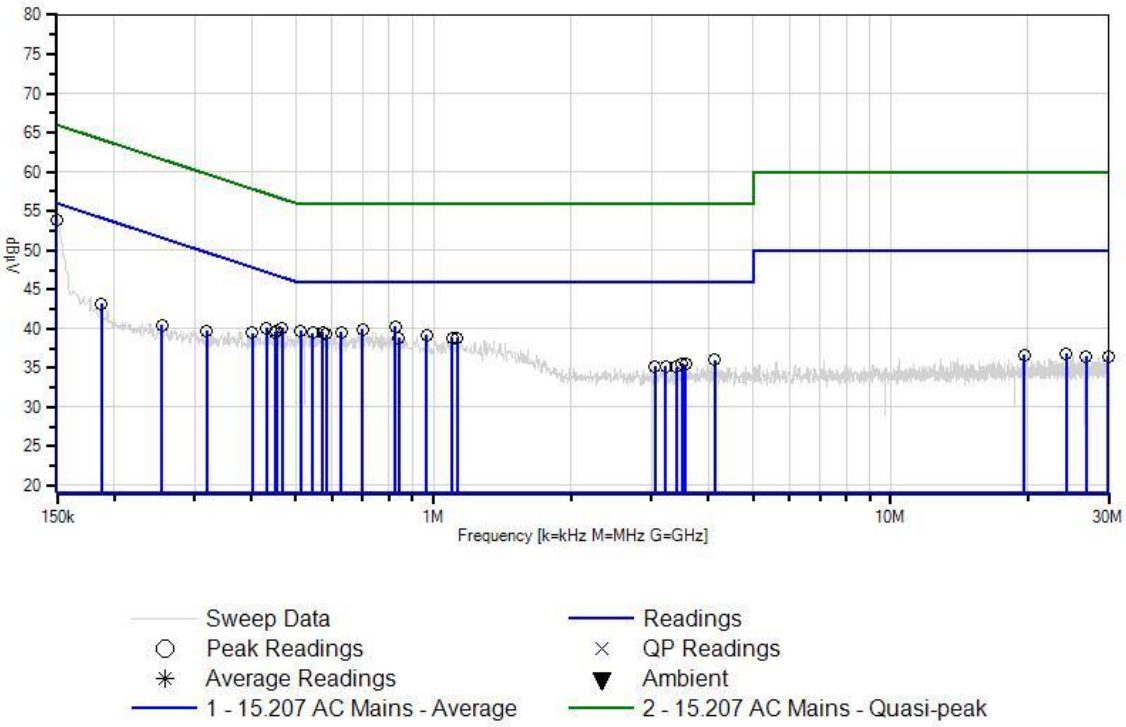
Ext Attn: 0 dB

Measurement Data: Reading listed by margin. Test Lead: Black

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	150.000k	30.4	+10.0	+4.9	+8.5	+0.1	+0.0	53.9	56.0	-2.1	Black
2	824.114k	25.7	+10.0	+4.1	+0.2	+0.3	+0.0	40.3	46.0	-5.7	Black
3	700.490k	25.2	+10.0	+4.2	+0.2	+0.3	+0.0	39.9	46.0	-6.1	Black
4	511.418k	25.0	+10.0	+4.3	+0.2	+0.2	+0.0	39.7	46.0	-6.3	Black
5	573.230k	24.9	+10.0	+4.3	+0.2	+0.2	+0.0	39.6	46.0	-6.4	Black
6	627.043k	25.0	+10.0	+4.2	+0.2	+0.2	+0.0	39.6	46.0	-6.4	Black
7	466.332k	25.3	+10.0	+4.4	+0.2	+0.2	+0.0	40.1	46.6	-6.5	Black
8	544.142k	24.8	+10.0	+4.3	+0.2	+0.2	+0.0	39.5	46.0	-6.5	Black
9	581.957k	24.6	+10.0	+4.3	+0.2	+0.2	+0.0	39.3	46.0	-6.7	Black
10	966.313k	24.7	+10.0	+4.0	+0.2	+0.3	+0.0	39.2	46.0	-6.8	Black
11	430.699k	25.4	+10.0	+4.4	+0.1	+0.2	+0.0	40.1	47.2	-7.1	Black
12	453.970k	24.9	+10.0	+4.4	+0.2	+0.2	+0.0	39.7	46.8	-7.1	Black
13	840.840k	24.2	+10.0	+4.1	+0.2	+0.3	+0.0	38.8	46.0	-7.2	Black

14	1.098M	24.3	+10.0	+4.0	+0.2	+0.3	+0.0	38.8	46.0	-7.2	Black
15	1.128M	24.3	+10.0	+4.0	+0.2	+0.3	+0.0	38.8	46.0	-7.2	Black
16	450.334k	24.8	+10.0	+4.4	+0.2	+0.2	+0.0	39.6	46.9	-7.3	Black
17	400.884k	24.8	+10.0	+4.4	+0.1	+0.2	+0.0	39.5	47.8	-8.3	Black
18	319.438k	24.9	+10.0	+4.5	+0.1	+0.2	+0.0	39.7	49.7	-10.0	Black
19	4.118M	25.2	+10.0	+0.1	+0.1	+0.6	+0.0	36.0	46.0	-10.0	Black
20	3.497M	24.8	+10.0	+0.1	+0.1	+0.6	+0.0	35.6	46.0	-10.4	Black
21	3.556M	24.7	+10.0	+0.1	+0.1	+0.6	+0.0	35.5	46.0	-10.5	Black
22	3.055M	24.5	+10.0	+0.1	+0.1	+0.5	+0.0	35.2	46.0	-10.8	Black
23	3.216M	24.5	+10.0	+0.1	+0.1	+0.5	+0.0	35.2	46.0	-10.8	Black
24	187.814k	28.0	+10.0	+4.8	+0.3	+0.1	+0.0	43.2	54.1	-10.9	Black
25	3.403M	24.3	+10.0	+0.1	+0.1	+0.6	+0.0	35.1	46.0	-10.9	Black
26	254.717k	25.5	+10.0	+4.6	+0.2	+0.2	+0.0	40.5	51.6	-11.1	Black
27	24.258M	25.0	+10.1	+0.1	+0.2	+1.4	+0.0	36.8	50.0	-13.2	Black
28	19.598M	25.0	+10.1	+0.1	+0.2	+1.3	+0.0	36.7	50.0	-13.3	Black
29	26.800M	24.6	+10.1	+0.1	+0.2	+1.5	+0.0	36.5	50.0	-13.5	Black
30	29.931M	24.5	+10.1	+0.1	+0.2	+1.6	+0.0	36.5	50.0	-13.5	Black

CKC Laboratories, Inc. Date: 11/29/2012 Time: 11:30:09 AM Deadman Technologies, LLC. WO#: 92946
15.207 AC Mains - Average Test Lead: Black 120V 60Hz Sequence#: 13 Ext ATTN: 0 dB



Test Location: CKC Laboratories, Inc. • 5046 Sierra Pines Drive • Mariposa, CA 95338 • (209) 966-5240

Customer: **Deadman Technologies, LLC.**
Specification: **15.207 AC Mains - Average**
Work Order #: **92946** Date: 11/29/2012
Test Type: **Conducted Emissions** Time: 11:29:14
Equipment: **Handheld** Sequence#: 12
Manufacturer: Deadman Technologies, LLC. Tested By: Chuck Kendall
Model: AV01H 120V 60Hz
S/N: None

***Test Equipment*:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	AN00069	Quasi Peak Adapter	85650A	5/4/2011	5/4/2013
	AN01183	Spectrum Analyzer Display	85662A	5/4/2011	5/4/2013
	AN01184	Spectrum Analyzer	8568B	5/4/2011	5/4/2013
T1	ANP00082	Attenuator	PE7002-10	6/7/2011	6/7/2013
	AN00374	50uH LISN-Black Lead Amplitude (dB)	8028-TS-50-BNC	10/31/2011	10/31/2013
T2	AN00374	50uH LISN-White Lead Amplitude (dB)	8028-TS-50-BNC	10/31/2011	10/31/2013
T3	AN02608	High Pass Filter	HE9615-150K-50-720B	3/15/2012	3/15/2014
T4	ANMACOND	Cable		8/17/2012	8/17/2014

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
Handheld*	Deadman Technologies, LLC.	AV01H	None

Support Devices:

Function	Manufacturer	Model #	S/N
120 Volt Adapter	Motorola	NTN9393A	None

Test Conditions / Notes:

EUT is a limited transceiver module placed in a plastic open frame in transmitter mode transmitting on two frequencies: 2405 & 2425 MHz. For conducted emissions, the 2425 MHz and the 2405 MHz modules were tested and the results were very similar and well below the average limits; so only the 2425 MHz module results are displayed here.
Frequencies of Interest: .150 - 30 MHz
RBW = 9 kHz; VBW = 30 kHz

Position 3 in the horizontal polarity is the worst case. This is the position for the rest of the testing. Module is in the vertical position with its smaller edge with battery on the Styrofoam and the receive antennas in the horizontal polarity.
The EUT is a transceiver module that is powered by 3.3 VDC. The module would normally be supplied with 3.7 Volts and with the buck/boost IC chip is converts this to a constant 3.3 VDC.
This unit has a 120V to 4.2 VDC adapter to power it during testing-by pass added to make it work during charging mode. Conducted emissions were performed on this unit.

Environmental Conditions:
Temperature = 20.1 °C
Relative Humidity = 35%
Atmospheric Pressure = 97.6 kPa

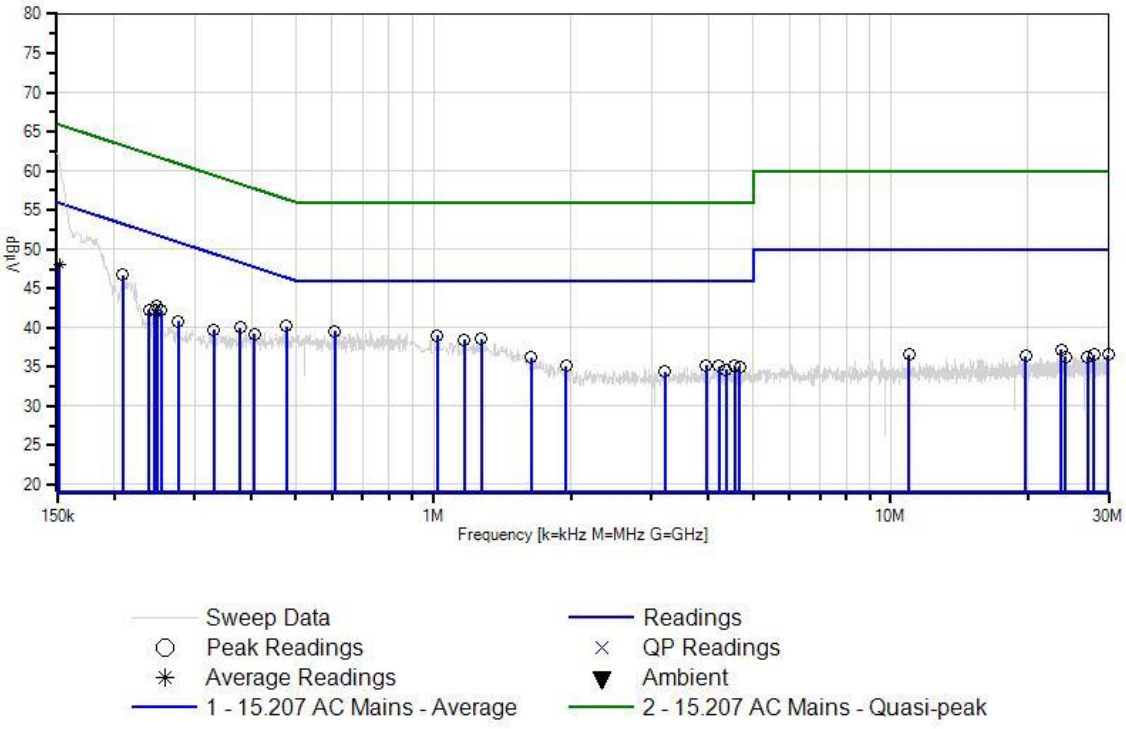
Ext Attn: 0 dB

Measurement Data: Reading listed by margin. Test Lead: White

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	477.240k	25.4	+10.0	+4.4	+0.2	+0.2	+0.0	40.2	46.4	-6.2	White
2	607.409k	24.9	+10.0	+4.3	+0.2	+0.2	+0.0	39.6	46.0	-6.4	White
3	208.903k	31.6	+10.0	+4.7	+0.2	+0.2	+0.0	46.7	53.2	-6.5	White
4	1.017M	24.4	+10.0	+4.1	+0.2	+0.3	+0.0	39.0	46.0	-7.0	White
5	1.273M	24.3	+10.0	+3.8	+0.2	+0.3	+0.0	38.6	46.0	-7.4	White
6	1.166M	24.0	+10.0	+4.0	+0.2	+0.3	+0.0	38.5	46.0	-7.5	White
7	152.000k Ave	26.2	+10.0	+4.8	+6.9	+0.1	+0.0	48.0	55.9	-7.9	White
^	150.000k	38.8	+10.0	+4.8	+8.5	+0.1	+0.0	62.2	56.0	+6.2	White
9	376.886k	25.2	+10.0	+4.5	+0.1	+0.2	+0.0	40.0	48.3	-8.3	White
10	405.974k	24.5	+10.0	+4.4	+0.1	+0.2	+0.0	39.2	47.7	-8.5	White
11	248.172k	27.7	+10.0	+4.6	+0.2	+0.2	+0.0	42.7	51.8	-9.1	White
12	253.990k	27.2	+10.0	+4.6	+0.2	+0.2	+0.0	42.2	51.6	-9.4	White
13	245.263k	27.2	+10.0	+4.6	+0.2	+0.2	+0.0	42.2	51.9	-9.7	White
14	331.073k	24.9	+10.0	+4.5	+0.1	+0.2	+0.0	39.7	49.4	-9.7	White
15	1.634M	23.5	+10.0	+2.2	+0.1	+0.4	+0.0	36.2	46.0	-9.8	White
16	238.718k	27.3	+10.0	+4.6	+0.2	+0.2	+0.0	42.3	52.1	-9.8	White
17	276.533k	25.8	+10.0	+4.6	+0.2	+0.2	+0.0	40.8	50.9	-10.1	White
18	3.956M	24.4	+10.0	+0.1	+0.1	+0.6	+0.0	35.2	46.0	-10.8	White
19	1.953M	24.3	+10.0	+0.3	+0.1	+0.4	+0.0	35.1	46.0	-10.9	White
20	4.564M	24.3	+10.0	+0.1	+0.1	+0.6	+0.0	35.1	46.0	-10.9	White
21	4.220M	24.3	+10.0	+0.1	+0.1	+0.6	+0.0	35.1	46.0	-10.9	White
22	4.679M	24.2	+10.0	+0.1	+0.1	+0.6	+0.0	35.0	46.0	-11.0	White
23	4.373M	23.9	+10.0	+0.1	+0.1	+0.6	+0.0	34.7	46.0	-11.3	White

24	3.208M	23.7	+10.0	+0.1	+0.1	+0.5	+0.0	34.4	46.0	-11.6	White
25	23.648M	25.4	+10.1	+0.1	+0.2	+1.4	+0.0	37.2	50.0	-12.8	White
26	29.986M	24.6	+10.1	+0.1	+0.2	+1.6	+0.0	36.6	50.0	-13.4	White
27	10.977M	25.4	+10.1	+0.1	+0.1	+0.9	+0.0	36.6	50.0	-13.4	White
28	27.883M	24.7	+10.1	+0.1	+0.2	+1.5	+0.0	36.6	50.0	-13.4	White
29	19.734M	24.7	+10.1	+0.1	+0.2	+1.3	+0.0	36.4	50.0	-13.6	White
30	26.978M	24.4	+10.1	+0.1	+0.2	+1.5	+0.0	36.3	50.0	-13.7	White
31	24.190M	24.5	+10.1	+0.1	+0.2	+1.4	+0.0	36.3	50.0	-13.7	White

CKC Laboratories, Inc. Date: 11/29/2012 Time: 11:29:14 Deadman Technologies, LLC. WO#: 92946
15.207 AC Mains - Average Test Lead: White 120V 60Hz Sequence#: 12 Ext ATTN: 0 dB



Test Setup Photos

15.249(a) RF Power Output

Test Location: CKC Laboratories, Inc. • 5046 Sierra Pines Drive • Mariposa, CA 95338 • (209) 966-5240

Customer: **Deadman Technologies, LLC.**
Specification: **15.249 (a) Carrier Output**
Work Order #: **92946** Date: 11/16/2012
Test Type: **Maximized Emissions** Time: 13:50:47
Equipment: **Transceiver Module** Sequence#: 1
Manufacturer: Deadman Technologies, LLC. Tested By: Chuck & Eddie
Model: AV01RF
S/N: NA

***Test Equipment*:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	AN00327	Horn Antenna	3115	4/13/2012	4/13/2014
T2	AN03012	Cable	32022-2-29094K-36TC	2/28/2012	2/28/2014
T3	AN03155	Preamp	83017A	8/3/2011	8/3/2013
T4	ANP01403	Cable	58758-23	6/22/2011	6/22/2013
T5	ANP05904	Cable	32022-2-29094K-144TC	6/22/2011	6/22/2013
	AN02660	Spectrum Analyzer	E4446A	8/23/2012	8/23/2014

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
Transceiver Module*	Deadman Technologies, LLC.	AV01RF	NA

Support Devices:

Function	Manufacturer	Model #	S/N
120 Volt Adapter	Radio Shack	273-1776	None
Handheld	Deadman Technologies, LLC.	AV01H	None

Test Conditions / Notes:

The EUT is a limited transceiver module placed in transceiver mode.
Module was tested in a plastic open frame which supported the modular transceiver during the radiated emissions testing. The manufacturer declares that the test data is representative of the module without an enclosure. It was just used to support the module and its power supply so that they could be placed in the three orthogonal planes to determine the worst case scenario for emissions. Position 3 in the horizontal polarity is the worst case. This is the position used for the rest of the testing. The module is in the vertical position with its smaller edge with battery on the Styrofoam and the receive antennas in the horizontal polarity.
The EUT is a transceiver module that is powered by 3.3 VDC.

Two modules were tested each with a different constant transmit frequency: one module was fixed at 2405 MHz and the other module was fixed at 2425 MHz. Transmitter characteristics will be done using these two frequencies.

15.31(e) Voltage was varied from 85% to 115% and no change in frequency or output power was observed.

From 2400 MHz-24835 MHz: RBW=1MHz; VBW=3MHz
Antenna gain =2.6 dBi integral.
Atmospheric Conditions:
Ambient Temperature = 20.1°C, Humidity = 35%, Ambient Pressure = 97.6 kPa

Ext Attn: 0 dB

Measurement Data: Reading listed by order taken. Test Distance: 3 Meters

#	Freq	Rdng	T1 T5	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dBµV	dB	dB	dB	dB	Table	dBµV/m	dBµV/m	dB	Ant
1	2405.090M	84.3	+28.4 +2.5	+0.7	-30.7	+2.6	+0.0	87.8	94.0 Fundamental-2405MHz	-6.2	Horiz
2	2405.090M	84.2	+28.4 +2.5	+0.7	-30.7	+2.6	+0.0	87.7	94.0 Average reading	-6.3	Horiz
3	2404.710M	84.1	+28.4 +2.5	+0.7	-30.7	+2.6	+0.0	87.6	94.0 85% AC power to adapter-102VAC.	-6.4	Horiz
4	2404.970M	84.1	+28.4 +2.5	+0.7	-30.7	+2.6	+0.0	87.6	94.0 115% or 138VAC applied.	-6.4	Horiz
5	2425.020M	84.9	+28.5 +2.3	+0.7	-30.7	+2.6	+0.0	88.3	94.0 fundamental-2425MHz	-5.7	Horiz
6	2424.950M	84.8	+28.5 +2.3	+0.7	-30.7	+2.6	+0.0	88.2	94.0 Average detector on.	-5.8	Horiz
7	2425.020M Ave	84.9	+28.5 +2.3	+0.7	-30.7	+2.6	+0.0	88.3	94.0 115% or 138 VAC applied	-5.7	Horiz
8	2425.020M	84.9	+28.5 +2.3	+0.7	-30.7	+2.6	+0.0	88.3	94.0 85% or 102 VAC Applied	-5.7	Horiz

Test Setup Photos

-20dBc & 99 % Bandwidth

Test Location: CKC Laboratories, Inc. • 5046 Sierra Pines Drive • Mariposa, CA 95338 • (209) 966-5240

Customer: **Deadman Technologies, LLC.**
Specification: **15.249 Occupied & RSS-210 Effective 99% Bandwidth**
Work Order #: **92946** Date: 11/16/2012
Test Type: **Effective Bandwidth** Time: 08:43:41
Equipment: **Transceiver Module** Sequence#: 1
Manufacturer: Deadman Technologies, LLC. Tested By: Chuck & Eddie
Model: AV01RF
S/N: NA

***Test Equipment*:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	AN00327	Horn Antenna	3115	4/13/2012	4/13/2014
	AN03012	Cable	32022-2-29094K-36TC	2/28/2012	2/28/2014
	AN03155	Preamp	83017A	8/3/2011	8/3/2013
T1	ANP01403	Cable	58758-23	6/22/2011	6/22/2013
T2	ANP05904	Cable	32022-2-29094K-144TC	6/22/2011	6/22/2013
T3	AN02660	Spectrum Analyzer	E4446A	8/23/2012	8/23/2014

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
Transceiver Module*	Deadman Technologies, LLC.	AV01RF	N/A

Support Devices:

Function	Manufacturer	Model #	S/N
120 Volt Adapter	Motorola	NTN9393A	None
Handheld	Deadman Technologies, LLC.	AV01H	None

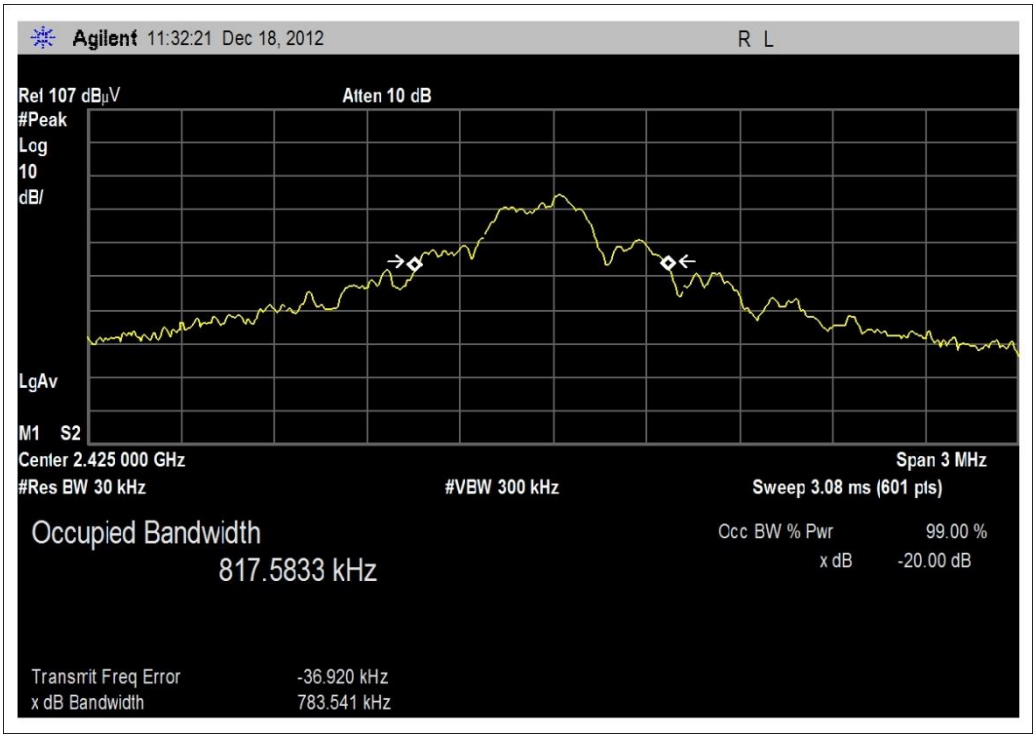
Test Conditions / Notes:

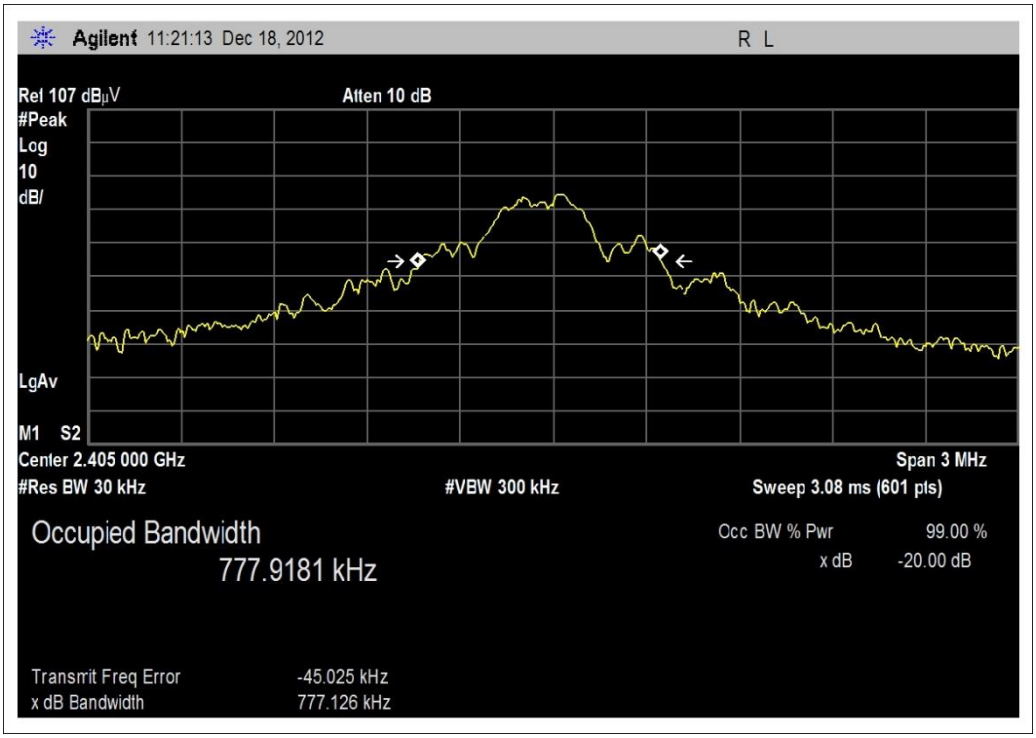
The EUT is a limited transceiver module placed in transceiver mode.
Module was tested in a plastic open frame which supported the modular transceiver during the radiated emissions testing. The manufacturer declares that the test data is representative of the module without an enclosure. It was just used to support the module and its power supply so that they could be placed in the three orthogonal planes to determine the worst case scenario for emissions. Position 3 in the horizontal polarity is the worst case. This is the position used for the rest of the testing. The module is in the vertical position with its smaller edge with battery on the Styrofoam and the receive antennas in the horizontal polarity.
The EUT is a transceiver module that is powered by 3.3 VDC.

Two modules were tested each with a different constant transmit frequency: one module was fixed at 2405 MHz and the other module was fixed at 2425 MHz. Transmitter characteristics will be done using these two frequencies.

From 2400 MHz-24835 MHz: RBW=30kHz; VBW=300kHz
Antenna gain =2.6 dBi integral.
Atmospheric Conditions:
Ambient Temperature = 20.1°C, Humidity = 35%, Ambient Pressure = 97.6 kPa

Test Data


Agilent 11:32:21 Dec 18, 2012
R L
Ref 107 dBµV
Atten 10 dB
#Peak
Log
10
dB/
LgAv
M1 S2
Center 2.425 000 GHz
Span 3 MHz
#Res BW 30 kHz
#VBW 300 kHz
Sweep 3.08 ms (601 pts)
Occupied Bandwidth
817.5833 kHz
Occ BW % Pwr 99.00 %
x dB -20.00 dB
Transmit Freq Error -36.920 kHz
x dB Bandwidth 783.541 kHz



Test Setup Photos

15.249(d) Field Strength of Spurious Emissions

Test Data Sheets

Test Location: CKC Laboratories, Inc. • 5046 Sierra Pines Drive • Mariposa, CA 95338 • (209) 966-5240

Customer: **Deadman Technologies, LLC.**
Specification: **15.209 Radiated Emissions**
Work Order #: **92946** Date: 11/16/2012
Test Type: **Maximized Emissions** Time: 15:52:45
Equipment: **Transceiver Module** Sequence#: 2
Manufacturer: Deadman Technologies, LLC. Tested By: Chuck & Eddie
Model: AV01RF
S/N: NA

***Test Equipment*:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	AN02660	Spectrum Analyzer	E4446A	8/23/2012	8/23/2014
T1	AN00226	Loop Antenna	6502	3/28/2012	3/28/2014
T2	ANP05686	Cable	RG214/U	1/24/2012	1/24/2014

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
Transceiver Module*	Deadman Technologies, LLC.	AV01RF	NA

Support Devices:

Function	Manufacturer	Model #	S/N
120 Volt Adapter	Motorola	NTN9393A	None
Handheld	Deadman Technologies, LLC.	AV01H	None

Test Conditions / Notes:

The EUT is a limited transceiver module placed in transceiver mode. Module was tested in a plastic open frame which supported the modular transceiver during the radiated emissions testing. The manufacturer declares that the test data is representative of the module without an enclosure. It was just used to support the module and its power supply so that they could be placed in the three orthogonal planes to determine the worst case scenario for emissions. Position 3 in the horizontal polarity is the worst case. This is the position used for the rest of the testing. The module is in the vertical position with its smaller edge with battery on the Styrofoam and the receive antennas in the horizontal polarity.

The EUT is a transceiver module that is powered by 3.3 VDC.
Two modules were tested each with a different constant transmit frequency: one module was fixed at 2405 MHz and the other module was fixed at 2425 MHz. Transmitter characteristics will be done using these two frequencies.

Antenna gain =2.6 dBi integral.
Atmospheric Conditions:
Ambient Temperature = 20.1°C, Humidity = 35%, Ambient Pressure = 97.6 kPa

Frequencies of Interest: 9kHz to 30 MHz
RBW = 9 kHz; VBW = 30 kHz

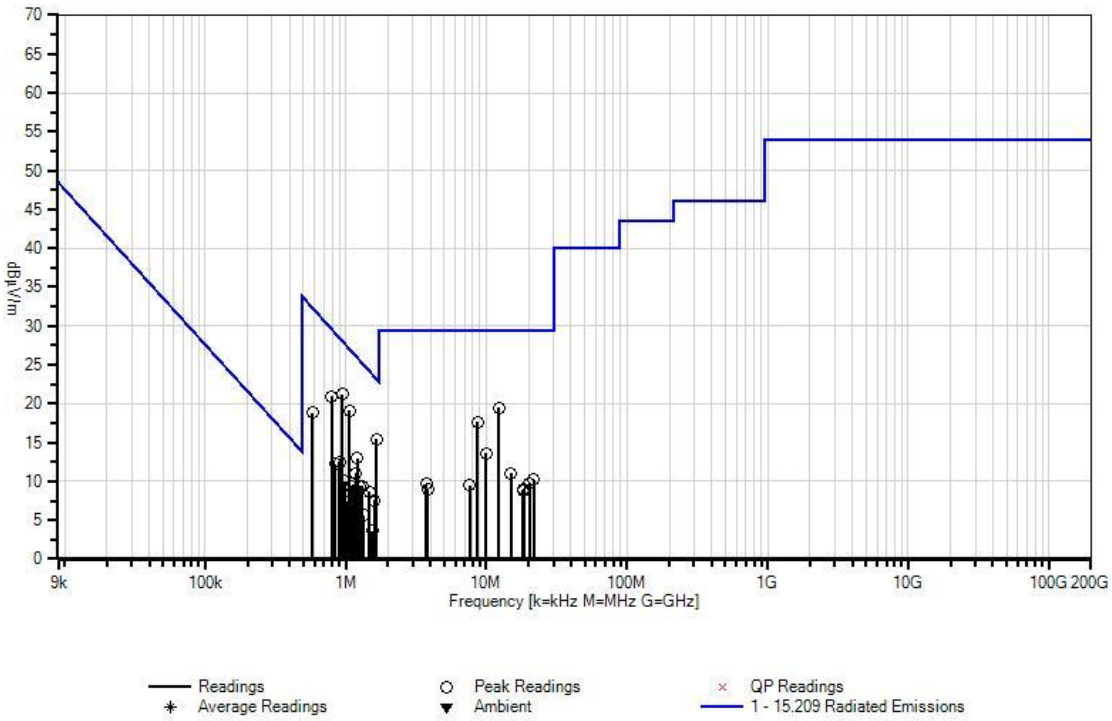
Ext Attn: 0 dB

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	dB	dB	Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
1	941.350k	50.9	+10.3	+0.0			-40.0	21.2	28.1	-6.9	Vert
2	1.658M	45.4	+10.0	+0.0			-40.0	15.4	23.1	-7.7	Vert
3	1.063M	48.9	+10.2	+0.0			-40.0	19.1	27.0	-7.9	Vert
4	790.050k	50.5	+10.4	+0.0			-40.0	20.9	29.6	-8.7	Vert
5	12.270M	49.8	+9.7	+0.0			-40.0	19.5	29.5	-10.0	Vert
6	8.694M	47.7	+9.9	+0.0			-40.0	17.6	29.5	-11.9	Vert
7	1.207M	42.9	+10.1	+0.0			-40.0	13.0	25.9	-12.9	Vert
8	578.400k	48.9	+9.9	+0.0			-40.0	18.8	32.4	-13.6	Vert
9	1.180M	40.9	+10.1	+0.0			-40.0	11.0	26.1	-15.1	Vert
10	1.477M	38.6	+10.1	+0.0			-40.0	8.7	24.2	-15.5	Vert
11	1.306M	39.3	+10.1	+0.0			-40.0	9.4	25.2	-15.8	Vert
12	1.604M	37.6	+10.0	+0.0			-40.0	7.6	23.4	-15.8	Vert
13	9.991M	43.7	+9.9	+0.0			-40.0	13.6	29.5	-15.9	Vert
14	899.700k	42.1	+10.4	+0.0			-40.0	12.5	28.5	-16.0	Vert
15	1.252M	39.3	+10.1	+0.0			-40.0	9.4	25.6	-16.2	Vert
16	1.126M	39.5	+10.2	+0.0			-40.0	9.7	26.5	-16.8	Vert
17	839.350k	41.8	+10.4	+0.0			-40.0	12.2	29.1	-16.9	Vert
18	1.090M	39.2	+10.2	+0.0			-40.0	9.4	26.8	-17.4	Vert
19	981.300k	39.8	+10.2	+0.0			-40.0	10.0	27.7	-17.7	Vert
20	15.000M	41.5	+9.5	+0.0			-40.0	11.0	29.5	-18.5	Vert
21	21.739M	42.2	+7.9	+0.1			-40.0	10.2	29.5	-19.3	Vert
22	1.333M	35.5	+10.1	+0.0			-40.0	5.6	25.0	-19.4	Vert
23	20.315M	41.6	+8.1	+0.1			-40.0	9.8	29.5	-19.7	Vert

24	3.730M	39.9	+9.8	+0.0	-40.0	9.7	29.5	-19.8	Vert
25	7.595M	39.6	+9.9	+0.0	-40.0	9.5	29.5	-20.0	Vert
26	1.009M	37.2	+10.2	+0.0	-40.0	7.4	27.5	-20.1	Vert
27	1.550M	33.6	+10.0	+0.0	-40.0	3.6	23.7	-20.1	Vert
28	3.838M	39.2	+9.8	+0.0	-40.0	9.0	29.5	-20.5	Vert
29	18.532M	40.4	+8.5	+0.1	-40.0	9.0	29.5	-20.5	Vert
30	18.243M	40.2	+8.5	+0.1	-40.0	8.8	29.5	-20.7	Vert

Date: 11/16/2012 Time: 15:52:45 Deadman Technologies, LLC. WO#: 92946
15.209 Radiated Emissions Test Distance: 3 Meters Sequence#: 2 Ext ATTN: 0 dB



Test Location: CKC Laboratories, Inc. • 5046 Sierra Pines Drive • Mariposa, CA 95338 • (209) 966-5240

Customer: **Deadman Technologies, LLC.**
Specification: **15.209 Radiated Emissions**
Work Order #: **92946** Date: 11/19/2012
Test Type: **Maximized Emissions** Time: 09:15:14
Equipment: **Transceiver Module** Sequence#: 4
Manufacturer: Deadman Technologies, LLC. Tested By: Chuck & Eddie
Model: AV01RF
S/N: NA

***Test Equipment*:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	AN00327	Horn Antenna	3115	4/13/2012	4/13/2014
T2	AN03012	Cable	32022-2-29094K-36TC	2/28/2012	2/28/2014
T3	AN03155	Preamp	83017A	8/3/2011	8/3/2013
T4	ANP01403	Cable	58758-23	6/22/2011	6/22/2013
T5	ANP05904	Cable	32022-2-29094K-144TC	6/22/2011	6/22/2013
T6	AN02660	Spectrum Analyzer	E4446A	8/23/2012	8/23/2014
T7	AN01994	Biconilog Antenna	CBL6111C	5/16/2012	5/16/2014
T8	AN00062	Preamp	8447D	6/6/2012	6/6/2014
	AN01413	Horn Antenna-ANSI C63.5 Antenna Factors (dB)	84125-80008	12/2/2010	12/2/2012

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
Transceiver Module*	Deadman Technologies, LLC.	AV01RF	NA

Support Devices:

Function	Manufacturer	Model #	S/N
120 Volt Adapter	Motorola	NTN9393A	None
Handheld	Deadman Technologies, LLC.	AV01H	None

Test Conditions / Notes:

The EUT is a limited transceiver module placed in transceiver mode.
Module was tested in a plastic open frame which supported the modular transceiver during the radiated emissions testing. The manufacturer declares that the test data is representative of the module without an enclosure. It was just used to support the module and its power supply so that they could be placed in the three orthogonal planes to determine the worst case scenario for emissions.
Position 3 in the horizontal polarity is the worst case. This is the position used for the rest of the testing. The module is in the vertical position with its smaller edge with battery on the Styrofoam and the receive antennas in the horizontal polarity.

The EUT is a transceiver module that is powered by 3.3 VDC.

Two modules were tested each with a different constant transmit frequency: one module was fixed at 2405 MHz and the other module was fixed at 2425 MHz. Transmitter characteristics will be done using these two frequencies.
From 30 MHz to 1000 MHz; RBW = 120kHz; VBW = 300kHz
From 1GHz-24.835 GHz: RBW=1MHz; VBW=3MHz
Antenna gain =2.6 dBi integral.
Atmospheric Conditions: Ambient Temperature = 20.1°C, Humidity = 35%, Ambient Pressure = 97.6 kPa

Ext Attn: 0 dB

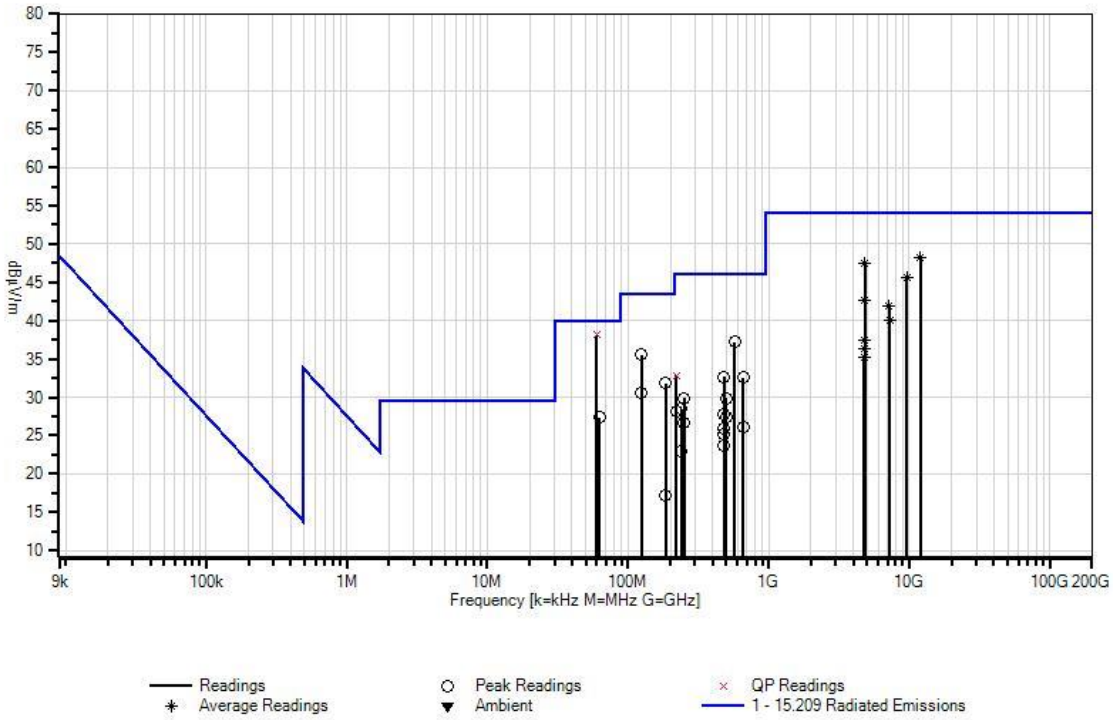
Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
			T5	T6	T7	T8					
	MHz	dBµV	dB	dB	dB	dB	Table	dBµV/m	dBµV/m	dB	Ant
1	60.058M	62.0	+0.0	+0.0	+0.0	+0.3	+0.0	38.1	40.0	-1.9	Vert
	QP		+0.4	+0.0	+5.8	-30.4					
^	60.050M	65.9	+0.0	+0.0	+0.0	+0.3	+0.0	42.0	40.0	+2.0	Vert
			+0.4	+0.0	+5.8	-30.4					
3	12000.174 M	26.2	+39.0	+1.9	-30.3	+6.6	+0.0	48.3	54.0	-5.7	Horiz
	Ave		+4.9	+0.0	+0.0	+0.0					
^	12000.170 M	41.5	+39.0	+1.9	-30.3	+6.6	+0.0	63.6	54.0	+9.6	Horiz
			+4.9	+0.0	+0.0	+0.0					
5	12027.002 M	26.2	+39.0	+1.9	-30.3	+6.6	+0.0	48.3	54.0	-5.7	Vert
	Ave		+4.9	+0.0	+0.0	+0.0					
^	12027.000 M	38.2	+39.0	+1.9	-30.3	+6.6	+0.0	60.3	54.0	+6.3	Vert
			+4.9	+0.0	+0.0	+0.0					
7	12025.002 M	26.2	+39.0	+1.9	-30.3	+6.6	+0.0	48.3	54.0	-5.7	Horiz
	Ave		+4.9	+0.0	+0.0	+0.0					
^	12025.000 M	37.5	+39.0	+1.9	-30.3	+6.6	+0.0	59.6	54.0	+5.6	Horiz
			+4.9	+0.0	+0.0	+0.0					
9	4848.997M	37.7	+31.6	+1.1	-30.4	+4.0	+0.0	47.5	54.0	-6.5	Vert
	Ave		+3.5	+0.0	+0.0	+0.0					
^	4849.000M	48.4	+31.6	+1.1	-30.4	+4.0	+0.0	58.2	54.0	+4.2	Vert
			+3.5	+0.0	+0.0	+0.0					
11	4809.450M	37.6	+31.6	+1.1	-30.4	+4.0	+0.0	47.4	54.0	-6.6	Vert
	Ave		+3.5	+0.0	+0.0	+0.0					
^	4809.460M	56.4	+31.6	+1.1	-30.4	+4.0	+0.0	66.2	54.0	+12.2	Vert
			+3.5	+0.0	+0.0	+0.0					
13	125.000M	53.0	+0.0	+0.0	+0.0	+0.5	+0.0	35.5	43.5	-8.0	Vert
			+0.6	+0.0	+11.5	-30.1					
14	9619.999M	26.2	+36.7	+1.5	-30.4	+7.5	+0.0	45.5	54.0	-8.5	Horiz
	Ave		+4.0	+0.0	+0.0	+0.0					
^	9620.000M	38.1	+36.7	+1.5	-30.4	+7.5	+0.0	57.4	54.0	+3.4	Horiz
			+4.0	+0.0	+0.0	+0.0					
16	9622.010M	26.2	+36.7	+1.5	-30.4	+7.5	+0.0	45.5	54.0	-8.5	Vert
	Ave		+4.0	+0.0	+0.0	+0.0					
^	9622.000M	38.8	+36.7	+1.5	-30.4	+7.5	+0.0	58.1	54.0	+4.1	Vert
			+4.0	+0.0	+0.0	+0.0					
18	571.020M	45.7	+0.0	+0.0	+0.0	+1.0	+0.0	37.2	46.0	-8.8	Vert
			+1.1	+0.0	+19.5	-30.1					
19	4809.990M	32.9	+31.6	+1.1	-30.4	+4.0	+0.0	42.7	54.0	-11.3	Vert
	Ave		+3.5	+0.0	+0.0	+0.0					
20	184.525M	51.0	+0.0	+0.0	+0.0	+0.6	+0.0	31.8	43.5	-11.7	Vert
			+0.7	+0.0	+9.0	-29.5					

21	7215.005M	28.3	+34.4	+1.3	-30.4	+4.9	+0.0	41.9	54.0	-12.1	Horiz
	Ave		+3.4	+0.0	+0.0	+0.0					
^	7215.000M	40.5	+34.4	+1.3	-30.4	+4.9	+0.0	54.1	54.0	+0.1	Horiz
			+3.4	+0.0	+0.0	+0.0					
23	7217.008M	28.3	+34.4	+1.3	-30.4	+4.9	+0.0	41.9	54.0	-12.1	Vert
	Ave		+3.4	+0.0	+0.0	+0.0					
^	7217.000M	42.5	+34.4	+1.3	-30.4	+4.9	+0.0	56.1	54.0	+2.1	Vert
			+3.4	+0.0	+0.0	+0.0					
25	62.510M	51.2	+0.0	+0.0	+0.0	+0.3	+0.0	27.4	40.0	-12.6	Horiz
			+0.4	+0.0	+5.9	-30.4					
26	125.000M	48.1	+0.0	+0.0	+0.0	+0.5	+0.0	30.6	43.5	-12.9	Horiz
			+0.6	+0.0	+11.5	-30.1					
27	220.426M	50.3	+0.0	+0.0	+0.0	+0.6	+0.0	32.8	46.0	-13.2	Vert
	QP		+0.7	+0.0	+10.4	-29.2					
^	220.420M	57.8	+0.0	+0.0	+0.0	+0.6	+0.0	40.3	46.0	-5.7	Vert
			+0.7	+0.0	+10.4	-29.2					
29	483.229M	43.5	+0.0	+0.0	+0.0	+0.9	+0.0	32.6	46.0	-13.4	Horiz
			+1.0	+0.0	+17.2	-30.0					
30	659.990M	39.8	+0.0	+0.0	+0.0	+1.1	+0.0	32.5	46.0	-13.5	Horiz
			+1.2	+0.0	+20.4	-30.0					
31	7254.000M	26.4	+34.5	+1.3	-30.6	+4.9	+0.0	40.0	54.0	-14.0	Vert
	Ave		+3.5	+0.0	+0.0	+0.0					
^	7254.000M	40.7	+34.5	+1.3	-30.6	+4.9	+0.0	54.3	54.0	+0.3	Vert
			+3.5	+0.0	+0.0	+0.0					
33	500.000M	40.5	+0.0	+0.0	+0.0	+1.0	+0.0	29.9	46.0	-16.1	Vert
			+1.0	+0.0	+17.4	-30.0					
34	250.000M	44.9	+0.0	+0.0	+0.0	+0.7	+0.0	29.8	46.0	-16.2	Vert
			+0.8	+0.0	+12.4	-29.0					
35	4810.010M	27.5	+31.6	+1.1	-30.4	+4.0	+0.0	37.3	54.0	-16.7	Horiz
	Ave		+3.5	+0.0	+0.0	+0.0					
^	4810.000M	48.3	+31.6	+1.1	-30.4	+4.0	+0.0	58.1	54.0	+4.1	Horiz
			+3.5	+0.0	+0.0	+0.0					
37	240.005M	44.4	+0.0	+0.0	+0.0	+0.6	+0.0	28.5	46.0	-17.5	Horiz
			+0.8	+0.0	+11.8	-29.1					
38	4850.040M	26.2	+31.6	+1.1	-30.3	+4.0	+0.0	36.2	54.0	-17.8	Horiz
	Ave		+3.6	+0.0	+0.0	+0.0					
^	4850.030M	48.5	+31.6	+1.1	-30.3	+4.0	+0.0	58.5	54.0	+4.5	Horiz
			+3.6	+0.0	+0.0	+0.0					
40	220.421M	45.6	+0.0	+0.0	+0.0	+0.6	+0.0	28.1	46.0	-17.9	Horiz
			+0.7	+0.0	+10.4	-29.2					
41	483.220M	38.6	+0.0	+0.0	+0.0	+0.9	+0.0	27.7	46.0	-18.3	Vert
			+1.0	+0.0	+17.2	-30.0					
42	499.986M	38.1	+0.0	+0.0	+0.0	+1.0	+0.0	27.5	46.0	-18.5	Horiz
			+1.0	+0.0	+17.4	-30.0					
43	4799.866M	25.4	+31.6	+1.1	-30.4	+4.0	+0.0	35.2	54.0	-18.8	Horiz
	Ave		+3.5	+0.0	+0.0	+0.0					
^	4799.860M	42.1	+31.6	+1.1	-30.4	+4.0	+0.0	51.9	54.0	-2.1	Horiz
			+3.5	+0.0	+0.0	+0.0					
45	250.020M	41.8	+0.0	+0.0	+0.0	+0.7	+0.0	26.7	46.0	-19.3	Horiz
			+0.8	+0.0	+12.4	-29.0					
46	660.020M	33.4	+0.0	+0.0	+0.0	+1.1	+0.0	26.1	46.0	-19.9	Vert
			+1.2	+0.0	+20.4	-30.0					

47	480.020M	37.0	+0.0 +1.0	+0.0 +0.0	+0.0 +17.1	+0.9 -30.0	+0.0	26.0	46.0	-20.0	Vert
48	479.999M	36.2	+0.0 +1.0	+0.0 +0.0	+0.0 +17.1	+0.9 -30.0	+0.0	25.2	46.0	-20.8	Vert
49	480.013M	34.6	+0.0 +1.0	+0.0 +0.0	+0.0 +17.1	+0.9 -30.0	+0.0	23.6	46.0	-22.4	Horiz
50	239.999M	38.8	+0.0 +0.8	+0.0 +0.0	+0.0 +11.8	+0.6 -29.1	+0.0	22.9	46.0	-23.1	Vert
51	184.425M	36.4	+0.0 +0.7	+0.0 +0.0	+0.0 +9.0	+0.6 -29.5	+0.0	17.2	43.5	-26.3	Horiz

Date: 11/19/2012 Time: 09:15:14 Deadman Technologies, LLC. WO#: 92946
15.209 Radiated Emissions Test Distance: 3 Meters Sequence#: 4 Ext ATTN: 0 dB



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 dBµV/m, the spectrum analyzer reading in dBµV 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.