

EMISSIONS TEST REPORT

(FULL COMPLIANCE)

Report Number: 102454853BOX-001

Project Number: G102454853

Report Issue Date: 02/05/2016

Model(s) Tested: Deno

Standards: FCC 47 CFR PT 15 SPT B: 2016

Tested by:
Intertek Testing Services NA, Inc.
70 Codman Hill Road
Boxborough, MA 01719
USA

Client:
Power Owners, LLC
857 Turnpike Street Suite 233
North Andover MA 01845
USA

Report prepared by



Emil Salman / Project Engineer

Report reviewed by



Kouma Sinn / EMC Staff Engineer

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1 Introduction and Conclusion

The tests indicated in section 2.0 were performed on the product constructed as described in section 4.0. The remaining test sections are the verbatim text from the actual data sheets used during the investigation. These test sections include the test name, the specified test Method, a list of the actual Test Equipment Used, documentation Photos, Results and raw Data. No additions, deviations, or exclusions have been made from the standard(s) unless specifically noted.

Based on the results of our investigation, we have concluded the product tested **complies** with the requirements of the standard(s) indicated. The results obtained in this test report pertain only to the item(s) tested. Intertek does not make any claims of compliance for samples or variants which were not tested.

2 Test Summary

Section	Test full name	Result
3	Client Information	--
4	Description of Equipment Under Test and Variant Models	--
5	System Setup and Method	--
6	Radiated Emissions (FCC 47 CFR PT 15 SPT B: 2016, ANSI C63.4: 2014)	Pass
7	AC Mains Conducted Emissions (FCC 47 CFR PT 15 SPT B: 2016, ANSI C63.4: 2014)	Pass
8	Revision History	--

3 Client Information

This EUT was tested at the request of:

Client: Power Owners, LLC
 857 Turnpike Street Suite 233
 North Andover MA 01845
 USA

Contact: Dan Leary
Telephone: 978-496-3460
Email: dleary@powerowners.com

4 Description of Equipment Under Test and Variant Models

Manufacturer: PowerOwners, LLC
 857 Turnpike Street Suite 233
 North Andover MA 01845
 USA

Equipment Under Test			
Description	Manufacturer	Model Number	Serial Number
Deno Smart Sensor	Power Owners, LLC	D2	150020

Receive Date:	02/04/2016
Received Condition:	Good
Type:	Production

Description of Equipment Under Test (provided by client)

The Deno Smart Sensor collects and processes irradiance and temperature data to simulate solar photovoltaic performance.

Equipment Under Test Power Configuration			
Rated Voltage	Rated Current	Rated Frequency	Number of Phases
Deno 5.5 VDC	200 mA	DC	N/A
Base Station 100-240 VAC	1 A	50-60Hz	One

Operating modes of the EUT:

No.	Descriptions of EUT Exercising
1	Continuous operation.

Software used by the EUT:

No.	Descriptions of EUT Exercising
1	Deno Operating Firmware

Variant Models:

The following variant models were not tested as part of this evaluation, but have been identified by the manufacturer as being electrically identical models, depopulated models, or with reasonable similarity to the model(s) tested. Intertek does not make any claims of compliance for samples or variants which were not tested.

None

5 System Setup and Method

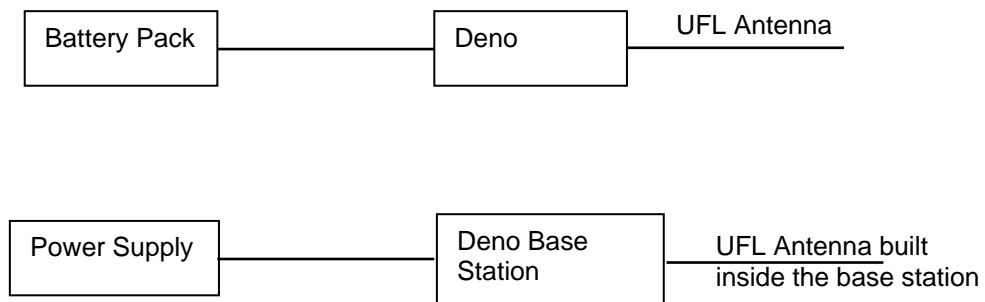
Cables					
ID	Description	Length (m)	Shielding	Ferrites	Termination
1	Power supply	1.80	None	None	AC Mains
2	Battery Pack	0.30	None	None	DC Input
3	UFL Antenna	0.12	Yes	None	Antenna

Support Equipment			
Description	Manufacturer	Model Number	Serial Number
None			

5.1 Method:

Configuration as required by FCC 47 CFR PT 15 SPT B: 2016 and ANSI C63.4: 2014.

5.2 EUT Block Diagram:



6 Radiated Emissions

6.1 Method

Tests are performed in accordance with FCC 47 CFR PT 15 SPT B: 2016 and ANSI C63.4: 2014.

TEST SITE: 10m ALSE

The 10m ALSE is 13m (Length) x 21m (Depth) x 10m (Height) with the effective size in terms of space from the tips of the absorber is 12m (Length) x 20m (Depth) x 8.5m (Height). This chamber achieves broadband performance using a unique arrangement of hybrid and ferrite tile absorber. This chamber has a built in 3m diameter turntable (Embedded type). The metal structure of the table makes electrical connection around the entire circumference of the turntable to the ground plane with a metal brush type connection. The turntable is located on one end of the chamber and the antennas are mounted 3 and 10 meters away at the other end of the chamber on the adjustable an Antenna Mast. The antenna mast is a non-conductive bore sighted type with remote control of antenna height and polarization. The Antenna Mast and the turntable can be remotely controlled through the controller located in the adjacent Control room. A Styrofoam table 80 cm high is used for table-top equipment.

Measurement Uncertainty

Measurement	Frequency Range	Expanded Uncertainty (k=2)	Ucisprr
Radiated Emissions, 10m	30-1000 MHz	4.6dB	6.3 dB
Radiated Emissions, 3m	30-1000 MHz	5.3 dB	6.3 dB
Radiated Emissions, 3m	1-6 GHz	4.5 dB	5.2 dB
Radiated Emissions, 3m	6-15 GHz	5.2 dB	5.5 dB
Radiated Emissions, 3m	15-18 GHz	5.0 dB	5.5 dB
Radiated Emissions, 3m	18-40 GHz	5.0 dB	5.5 dB

As shown in the table above our radiated emissions U_{lab} is less than the corresponding U_{CISPR} reference value in CISPR 16-4-2 Table 1, hence the compliance of the product is only based on the measured value, and no measurement uncertainty correction is required, based on CISPR 22 and CISPR 11 (for 2006 and later revisions) Clause 11.

Sample Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain (if any) from the measured reading. The basic equation with a sample calculation is as follows:

$$FS = RA + AF + CF - AG$$

Where

- FS = Field Strength in dB μ V/m
- RA = Receiver Amplitude (including preamplifier) in dB μ V
- CF = Cable Attenuation Factor in dB
- AF = Antenna Factor in dB
- AG = Amplifier Gain in dB

In the following table(s), the reading shown on the data table reflects the preamplifier gain. An example for the calculations in the following table is as follows.

Assume a receiver reading of 52.0 dB μ V is obtained. The antenna factor of 7.4 dB and cable factor of 1.6 dB is added. The amplifier gain of 29 dB is subtracted, giving a field strength of 32 dB μ V/m. This value in dB μ V/m was converted to its corresponding level in μ V/m.

RA = 52.0 dB μ V
 AF = 7.4 dB/m
 CF = 1.6 dB
 AG = 29.0 dB
 FS = 32 dB μ V/m

To convert from dB μ V to μ V or mV the following was used:

$$UF = 10^{(NF / 20)} \text{ where } UF = \text{Net Reading in } \mu\text{V}$$

$$NF = \text{Net Reading in dB}\mu\text{V}$$

Example:

$$FS = RA + AF + CF - AG = 52.0 + 7.4 + 1.6 - 29.0 = 32.0$$

$$UF = 10^{(32 \text{ dB}\mu\text{V} / 20)} = 39.8 \mu\text{V/m}$$

Alternately, when C5 Software is used, the "Level" includes all losses and gains and is compared directly in the "Margin" column to the "Limit". "AF" is the Antenna Factor; "PA+CL" are Preamp and Cable Loss. These are already accounted for in the "Level" column.

6.2 Test Equipment Used:

Asset	Description	Manufacturer	Model	Serial	Cal Date	Cal Due
DAV004'	Weather Station	Davis Instruments	7400	PE80529A61A	10/23/2015	10/23/2017
145128'	EMI Receiver (20 Hz – 40 GHz)	Rohde & Schwarz	ESIB 40	839283/001	03/14/2015	03/14/2016
145106'	Bilog Antenna (30MHz – 5GHz)	Sunol Sciences	JB5	A111003	11/10/2015	11/10/2016
145-410'	Cables 145-400 145-403 145-405 145-406 145-407	Huber + Suhner	10m Track A Cables	multiple	09/01/2015	09/01/2016
145013'	Preamplifier (150 KHz to 1.3 GHz)	Hewlett Packard	8447D	2944A07027	10/12/2015	10/12/2016
ETS002'	1-18GHz DRG Horn Antenna	ETS Lindgren	3117	00143260	04/10/2015	04/10/2016
145014'	Preamplifier (1 GHz to 26.5 GHz)	Hewlett Packard	8449B	3008A00232	05/13/2015	05/13/2016
145-416'	Cables 145-400 145-402 145-404 145-408	Huber + Suhner	3m Track B cables	multiple	10/08/2015	10/08/2016

Software Utilized:

Name	Manufacturer	Version
Compliance 5	Teseq	5.26.46.46

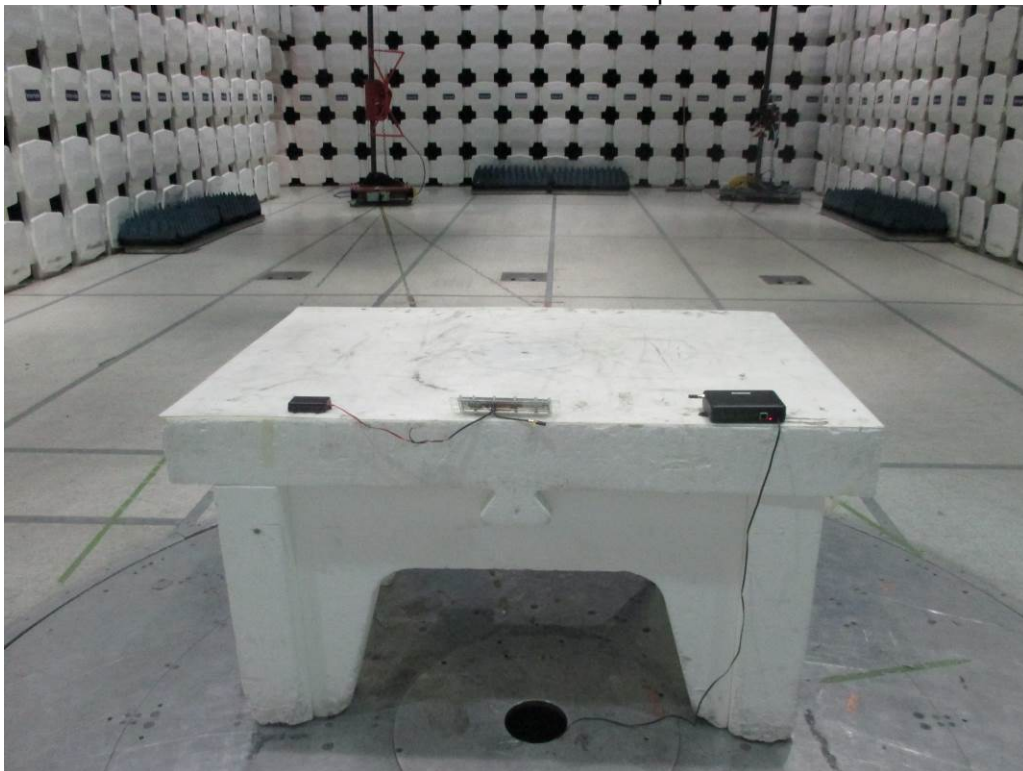
6.3 Results:

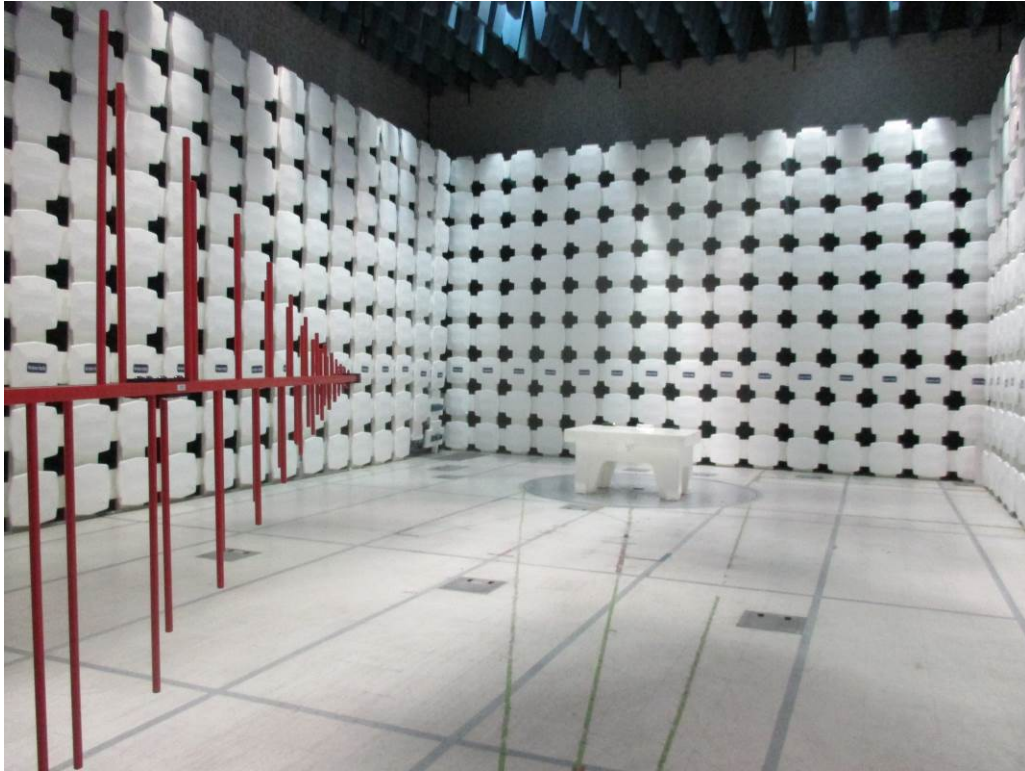
The sample tested was found to Comply.

6.4 Setup Photographs:

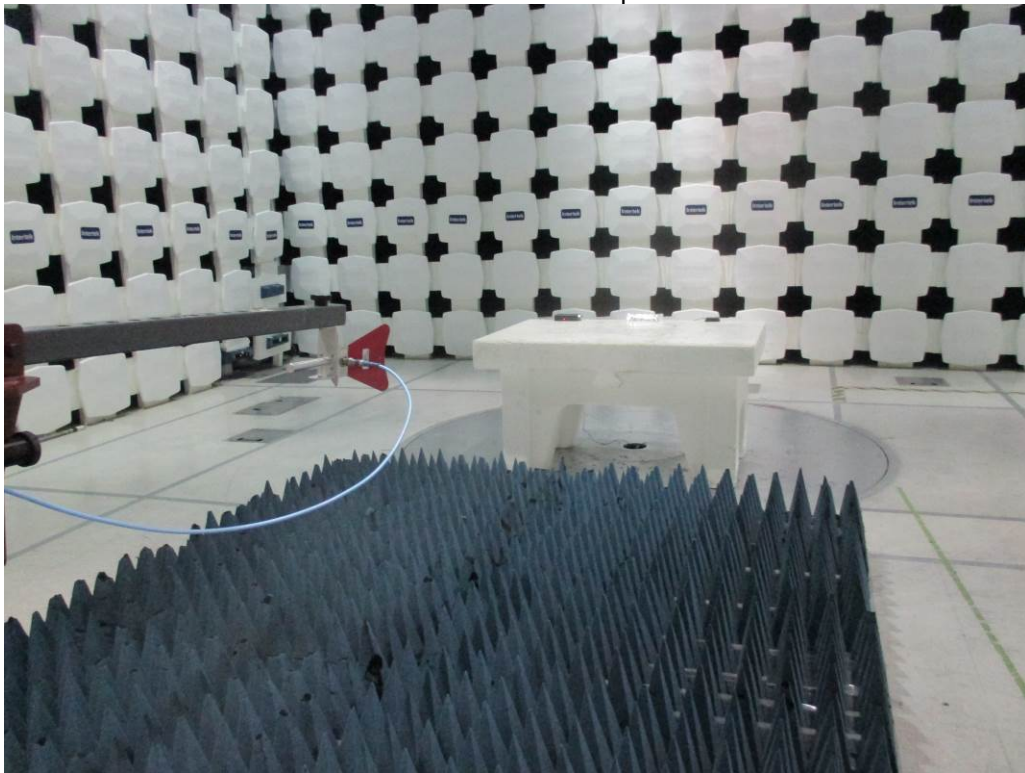


30 – 1000 MHz Test setup





1 -5 GHz Test setup



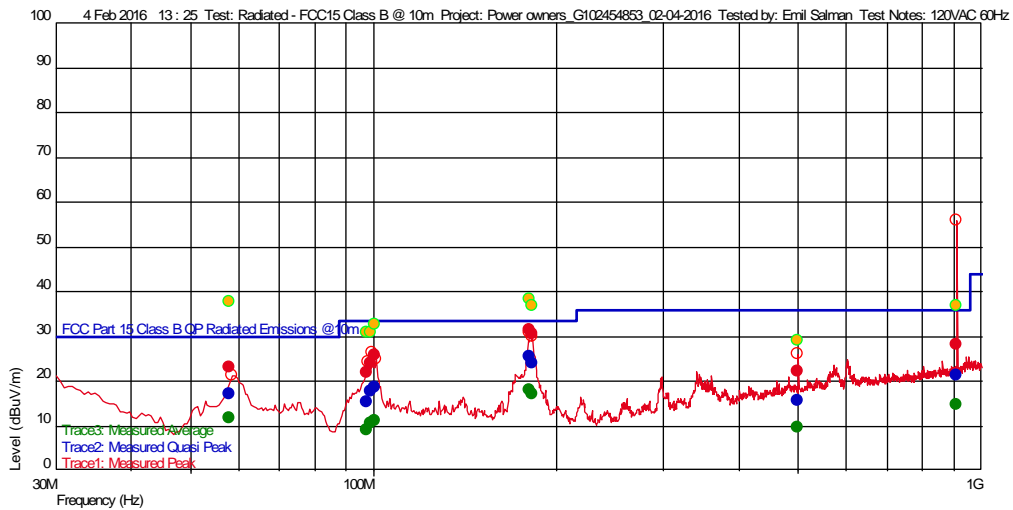
6.5 Plots/Data:

30 – 1000 MHz

Test Information

Test Details	User Entry
Test:	Radiated - FCC15 Class B @ 10m
Project:	Power owners_G102454853_02-04-2016
Test Notes:	120VAC 60Hz
Temperature:	20C
Humidity:	42%,1000mbar
Tested by:	Emil Salman
Test Started:	4 Feb 2016 13 : 25

Prescan Emission Graph



- Measured Peak Value
- Measured Quasi Peak Value
- Measured Average Value
- Maximum Value of Mast and Turntable
- Swept Peak Data
- Swept Quasi Peak Data
- Swept Average Data

Emissions Test Data

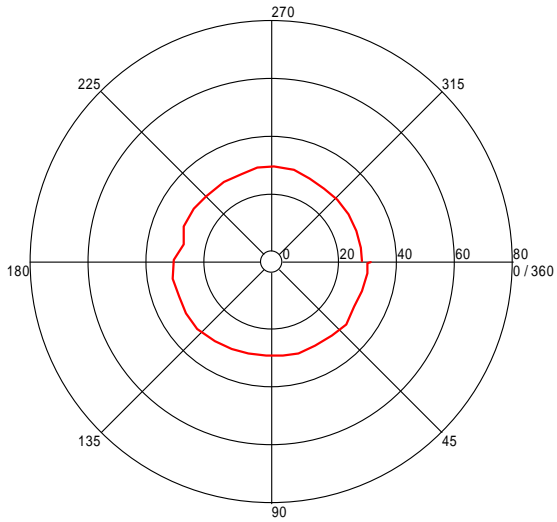
Trace2: Measured Quasi Peak

Frequency(Hz)	Level (dBuV/m)	AF	PA+CL	Limit(dBuV/m)	Margin(dBuV/m)	Hor (--), Ver ()	Azimuth (deg)(Deg)	Mast Height(m)	RBW(Hz)
500.157916148 M	15.57	17.800	-24.285	36.020	-20.45	--	47	2.07	120 k
97.754709275 M	15.44	9.926	-26.456	33.520	-18.08		287	1.66	120 k
99.005010044 M	17.70	10.202	-26.425	33.520	-15.82		360	2.74	120 k
100.434068329 M	18.63	10.630	-26.397	33.520	-14.89		298	1.05	120 k
911.691182208 M	21.26	22.100	-22.887	36.020	-14.76		288	2.92	120 k
58.108817946 M	17.05	7.311	-27.447	30.000	-12.95		182	1.36	120 k
182.248897415 M	24.04	11.300	-25.824	33.520	-9.48		61	1.36	120 k
181.146693782 M	25.47	11.300	-25.832	33.520	-8.05		83	1.45	120 k

Azimuth Plots

Turntable Plot (58.108817946 MHz)

Level (dBuV/m)

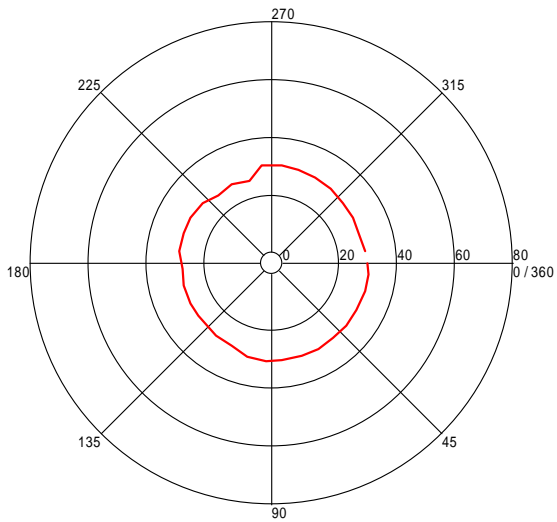


All Polarities

Azimuth (Degrees)

Turntable Plot (97.754709275 MHz)

Level (dBuV/m)

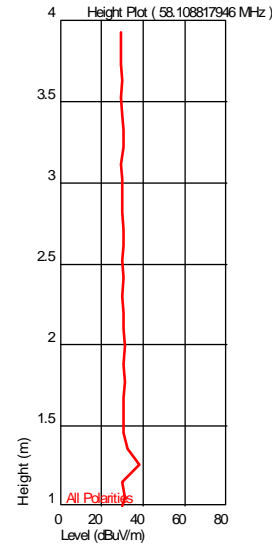


All Polarities

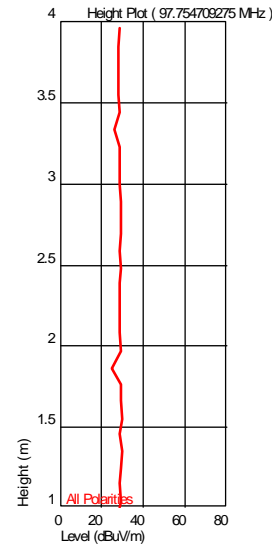
Azimuth (Degrees)

Turntable Plots

Height Plot (58.108817946 MHz)

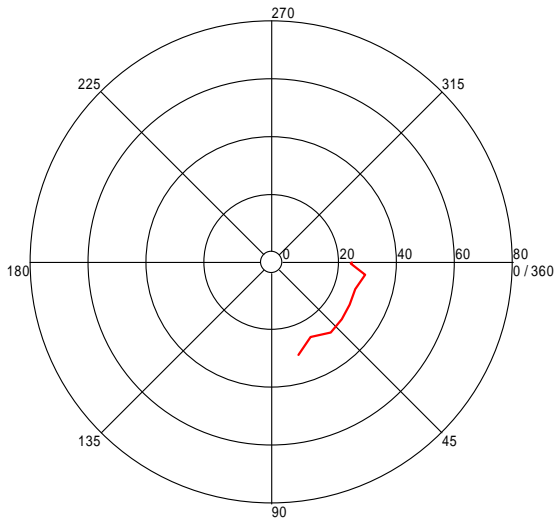


Height Plot (97.754709275 MHz)



Turntable Plot (99.005010044 MHz)

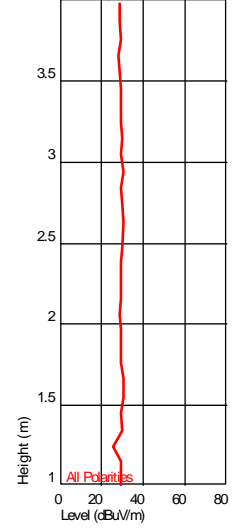
Level (dBuV/m)



All Polarities

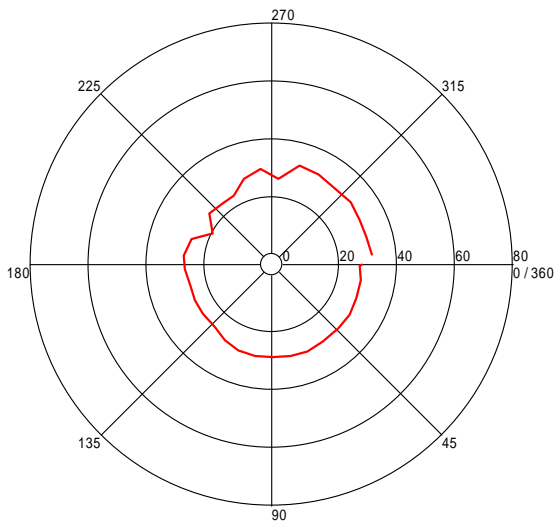
Azimuth (Degrees)

Height Plot (99.005010044 MHz)



Turntable Plot (100.434068329 MHz)

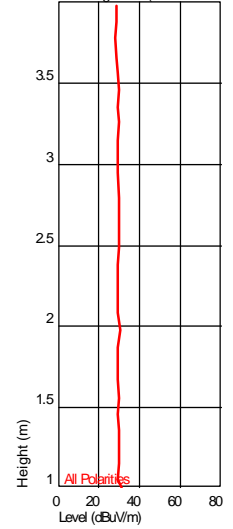
Level (dBuV/m)



All Polarities

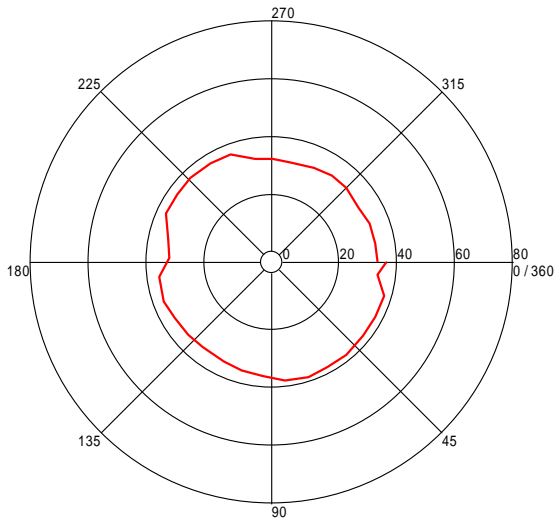
Azimuth (Degrees)

Height Plot (100.434068329 MHz)



Turntable Plot (181.146693782 MHz)

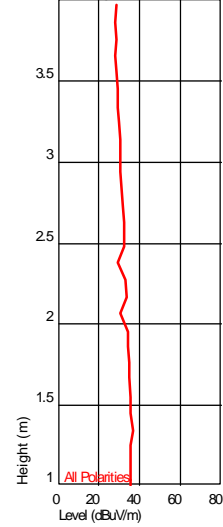
Level (dBuV/m)



All Polarities

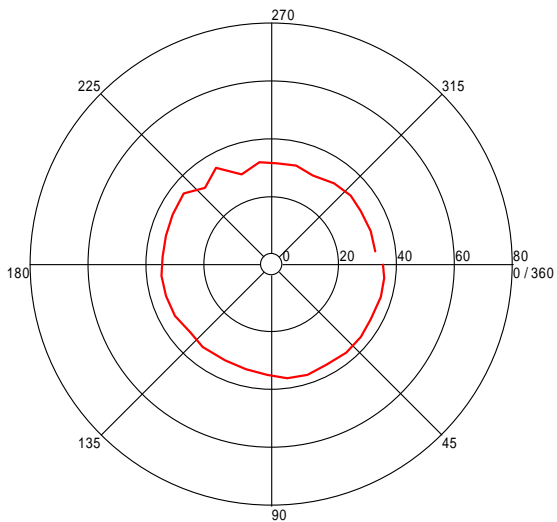
Azimuth (Degrees)

Height Plot (181.146693782 MHz)



Turntable Plot (182.248897415 MHz)

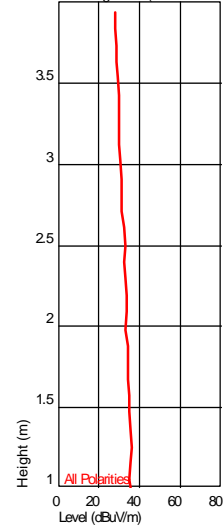
Level (dBuV/m)



All Polarities

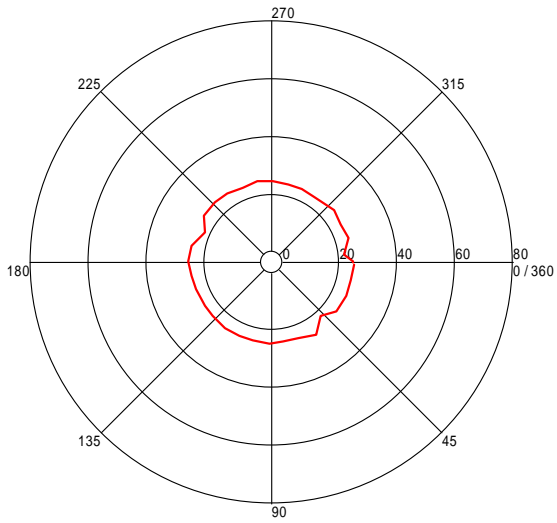
Azimuth (Degrees)

Height Plot (182.248897415 MHz)



Turntable Plot (500.157916148 MHz)

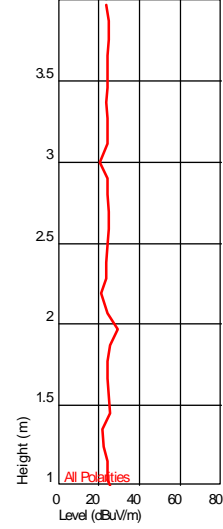
Level (dBuV/m)



All Polarities

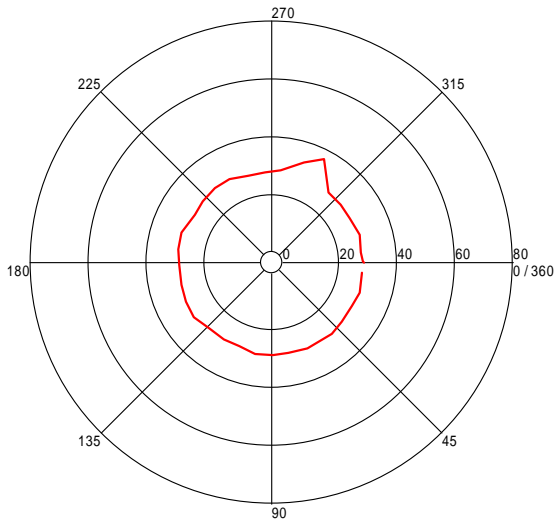
Azimuth (Degrees)

Height Plot (500.157916148 MHz)



Turntable Plot (911.691182208 MHz)

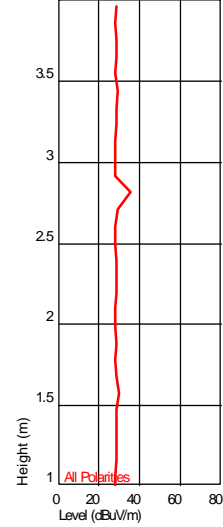
Level (dBuV/m)



All Polarities

Azimuth (Degrees)

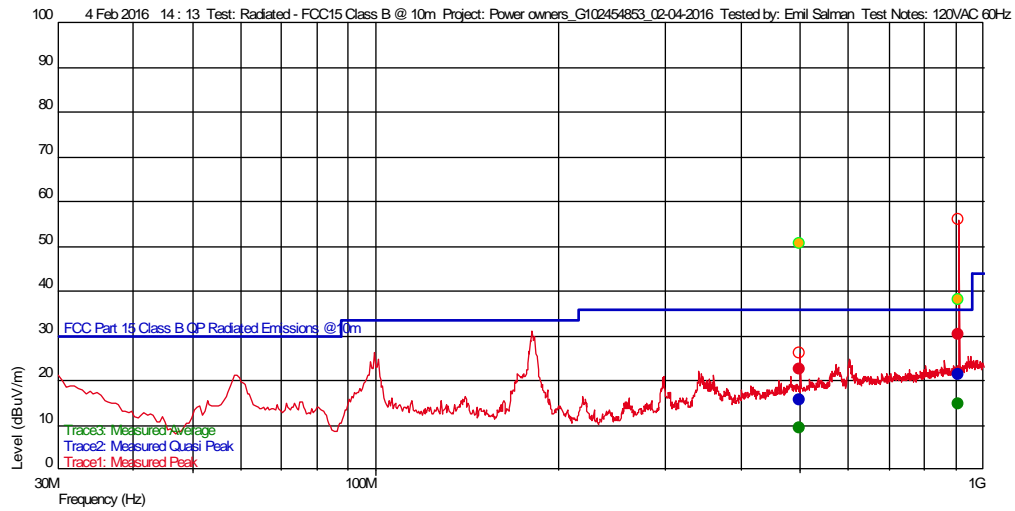
Height Plot (911.691182208 MHz)



Test Information

Test Details	User Entry
Test:	Radiated - FCC15 Class B @ 10m
Project:	Power owners_G102454853_02-04-2016
Test Notes:	120VAC 60Hz
Temperature:	20C
Humidity:	42%,1000mbar
Tested by:	Emil Salman
Test Started:	4 Feb 2016 14 : 13

Prescan Emission Graph



- | | |
|---------------------------------------|-------------------------|
| ● Measured Peak Value | — Swept Peak Data |
| ● Measured Quasi Peak Value | — Swept Quasi Peak Data |
| ● Measured Average Value | — Swept Average Data |
| ● Maximum Value of Mast and Turntable | |

Emissions Test Data

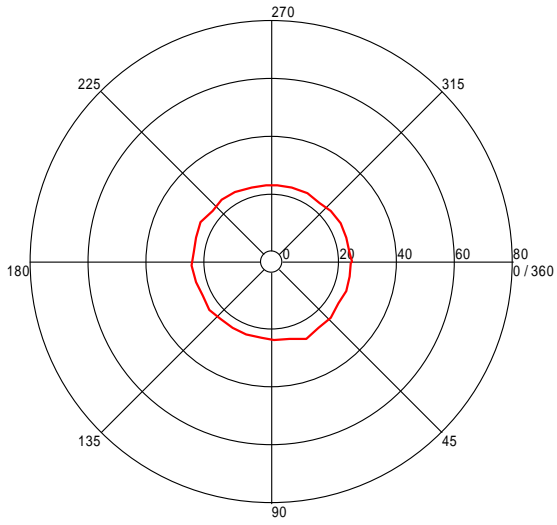
Trace2: Measured Quasi Peak

Frequency(Hz)	Level (dBuV/m)	AF	PA+CL	Limit(dBuV/m)	Margin(dBuV/m)	Hor (--), Ver ()	Azimuth (deg)(Deg)	Mast Height(m)	RBW(Hz)
500.08577186 M	15.68	17.800	-24.286	36.020	-20.34	--	54	1.98	120 k
911.388176196 M	21.26	22.100	-22.890	36.020	-14.76		260	3.07	120 k

Azimuth Plots

Turntable Plot (500.08577186 MHz)

Level (dBuV/m)

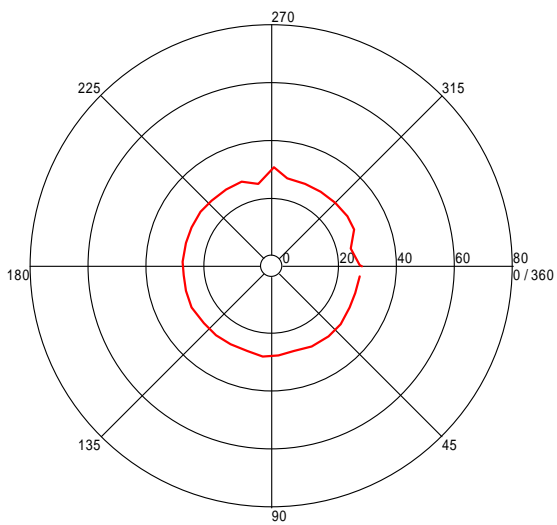


All Polarities

Azimuth (Degrees)

Turntable Plot (911.388176196 MHz)

Level (dBuV/m)

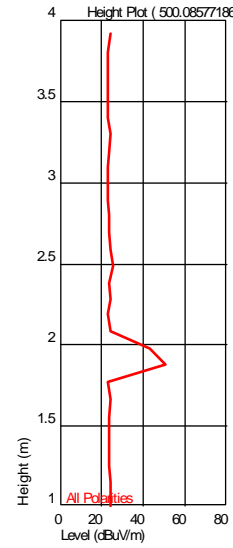


All Polarities

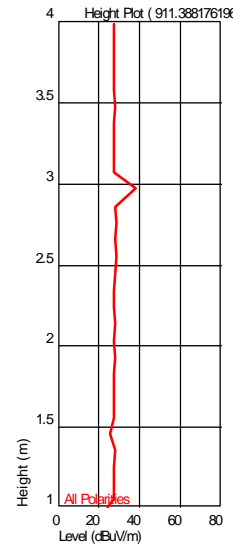
Azimuth (Degrees)

Turntable Plots

Height Plot (500.08577186 MHz)



Height Plot (911.388176196 MHz)

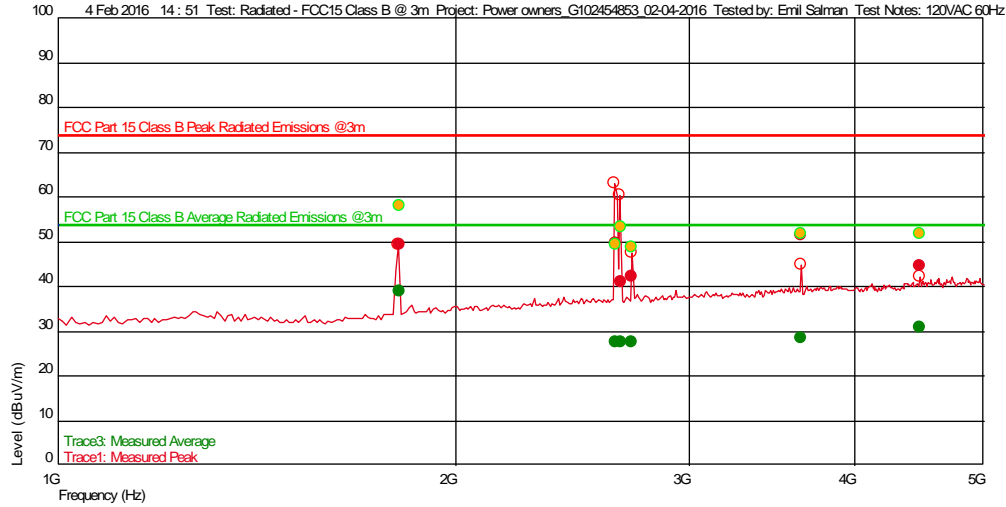


1-5 GHz

Test Information

Test Details	User Entry
Test:	Radiated - FCC15 Class B @ 3m
Project:	Power owners_G102454853_02-04-2016
Test Notes:	120VAC 60Hz
Temperature:	20C
Humidity:	42%, 1000mbar
Tested by:	Emil Salman
Test Started:	4 Feb 2016 14 : 51

Prescan Emission Graph



- | | |
|---|---|
| ● Measured Peak Value | — Swept Peak Data |
| ● Measured Quasi Peak Value | — Swept Quasi Peak Data |
| ● Measured Average Value | — Swept Average Data |
| ● Maximum Value of Mast and Turntable | |

Emissions Test Data

Trace1: Measured Peak

Frequency(Hz)	Level (dBuV/m)	AF	PA+CL	Limit(dBuV/m)	Margin(dBuV/m)	Hor (--), Ver ()	Azimuth (deg)(Deg)	Mast Height(m)	RBW(Hz)
2.661102204 G	41.19	32.378	-33.717	74.000	-32.81		298	1.14	1 M
2.711843688 G	42.26	32.448	-33.623	74.000	-31.74		145	1.80	1 M
4.479632599 G	44.48	33.823	-30.384	74.000	-29.52	--	254	1.46	1 M
1.810948563 G	49.46	30.184	-34.993	74.000	-24.54	--	254	1.45	1 M
2.638069472 G	49.75	32.348	-33.760	74.000	-24.25		352	1.91	1 M
3.643820975 G	51.63	33.096	-31.789	74.000	-22.37	--	0	2.55	1 M

Trace3: Measured Average

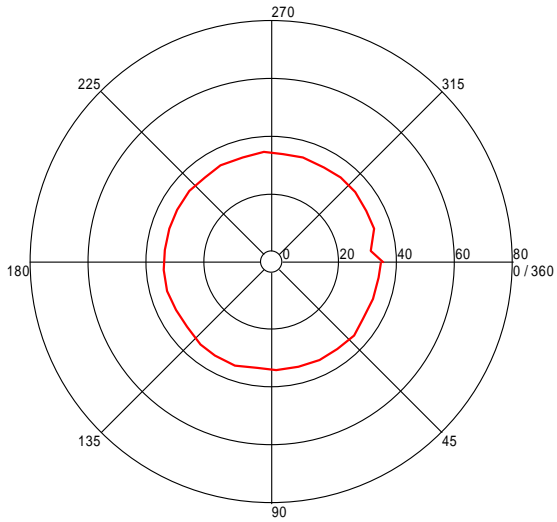
Frequency(Hz)	Level (dBuV/m)	AF	PA+CL	Limit(dBuV/m)	Margin(dBuV/m)	Hor (--), Ver ()	Azimuth (deg)(Deg)	Mast Height(m)	RBW(Hz)
2.638069472 G	27.51	32.348	-33.760	54.000	-26.49		352	1.91	1 M
2.661102204 G	27.58	32.378	-33.717	54.000	-26.42		298	1.14	1 M
2.711843688 G	27.75	32.448	-33.623	54.000	-26.25		145	1.80	1 M
3.643820975 G	28.61	33.096	-31.789	54.000	-25.39	--	0	2.55	1 M
4.479632599 G	30.94	33.823	-30.384	54.000	-23.06	--	254	1.46	1 M
1.810948563 G	38.96	30.184	-34.993	54.000	-15.04	--	254	1.45	1 M

Azimuth Plots

Turntable Plots

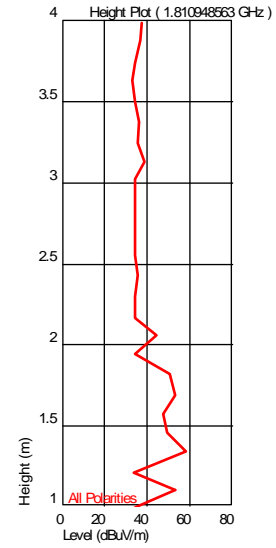
Turntable Plot (1.810948563 GHz)

Level (dBuV/m)



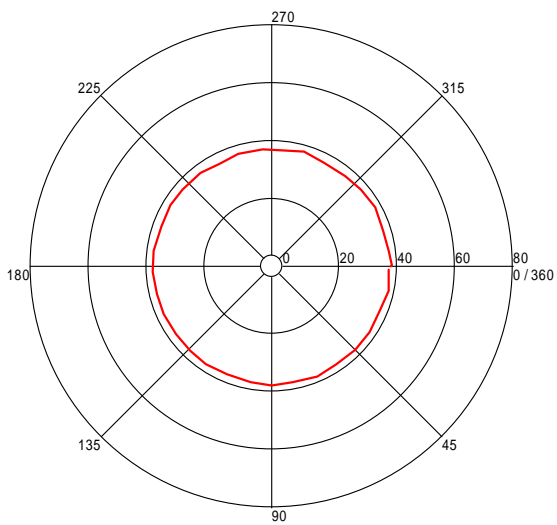
All Polarities

Azimuth (Degrees)



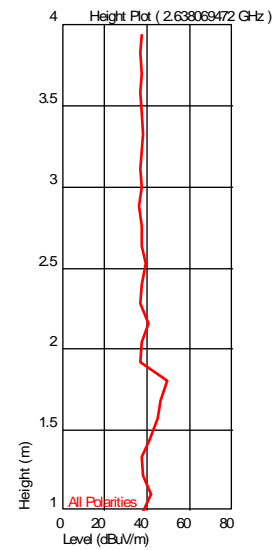
Turntable Plot (2.638069472 GHz)

Level (dBuV/m)



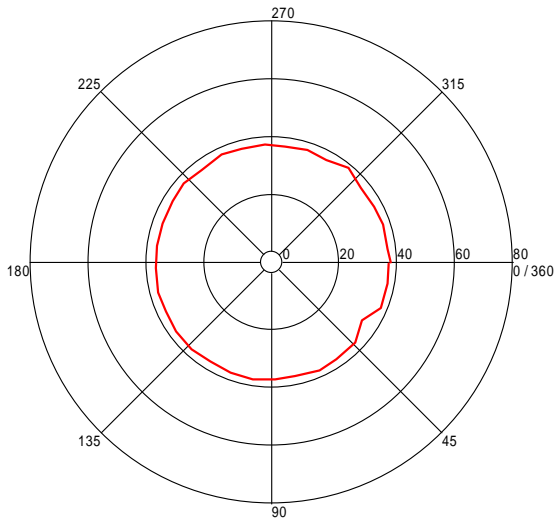
All Polarities

Azimuth (Degrees)



Turntable Plot (2.661102204 GHz)

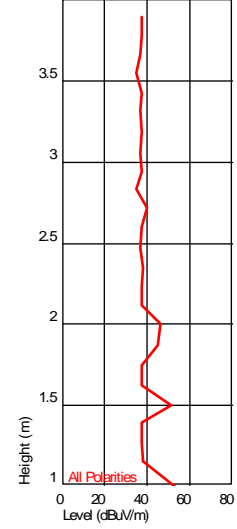
Level (dBuV/m)



All Polarities

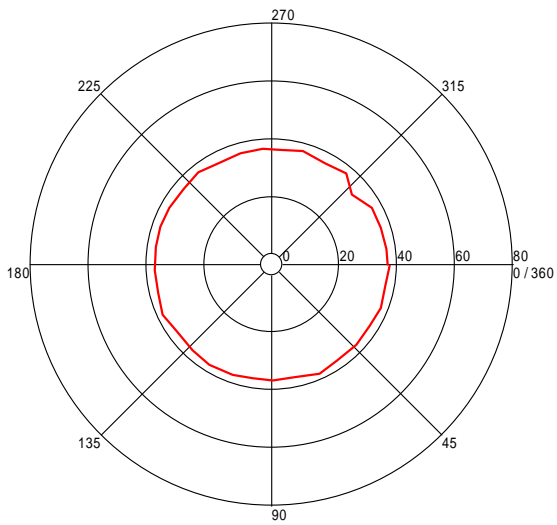
Azimuth (Degrees)

Height Plot (2.661102204 GHz)



Turntable Plot (2.711843688 GHz)

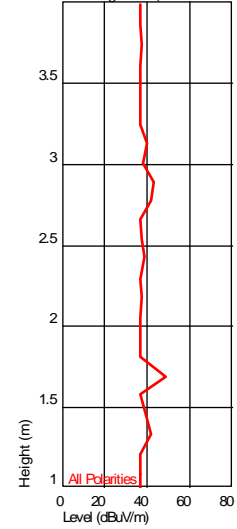
Level (dBuV/m)



All Polarities

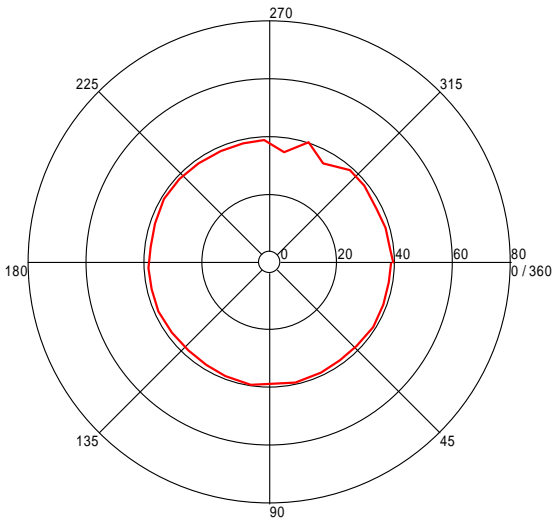
Azimuth (Degrees)

Height Plot (2.711843688 GHz)



Turntable Plot (3.643820975 GHz)

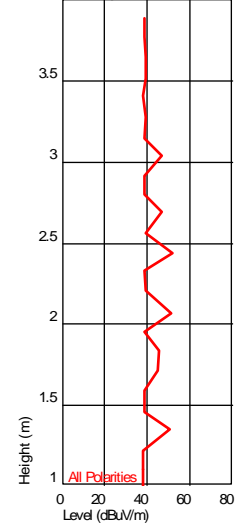
Level (dBuV/m)



All Polarities

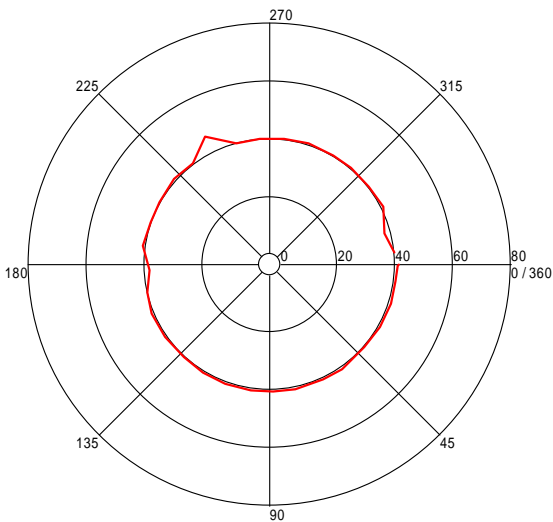
Azimuth (Degrees)

Height Plot (3.643820975 GHz)



Turntable Plot (4.479632599 GHz)

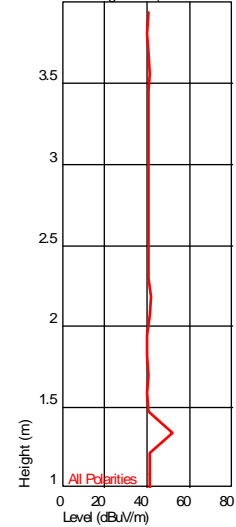
Level (dBuV/m)



All Polarities

Azimuth (Degrees)

Height Plot (4.479632599 GHz)



Test Personnel: Emil Salman *ES*
 Supervising/Reviewing Engineer: _____
 (Where Applicable) N/A
 Product Standard: FCC Part 15
 Input Voltage: 120VAC 60Hz and 5.5 VDC
 Pretest Verification w/ Ambient Signals or BB Source: Yes

Test Date: 02/04/2016

Limit Applied: Class B
 Ambient Temperature: 20 °C
 Relative Humidity: 41 %
 Atmospheric Pressure: 1000 mbars

Deviations, Additions, or Exclusions: None

7 AC Mains Conducted Emissions

7.1 Method

Tests are performed in accordance with FCC 47 CFR PT 15 SPT B: 2016 and ANSI C63.4: 2014.

TEST SITE: 10m ALSE

The EMC Lab has one Semi-anechoic Chamber and one Shielded Chamber. AC Mains Power is available at 120, 230, and 277 Single Phase; 208, 400, and 480 3-Phase. Large reference ground-planes are installed in the general lab area to facilitate EMC work not requiring a shielded environment.

The 10m ALSE is 13m (Length) x 21m (Depth) x 10m (Height) with the effective size in terms of space from the tips of the absorber is 12m (Length) x 20m (Depth) x 8.5m (Height). This chamber achieves broadband performance using a unique arrangement of hybrid and ferrite tile absorber. This chamber has a built in 3m diameter turntable (Embedded type). The metal structure of the table makes electrical connection around the entire circumference of the turntable to the ground plane with a metal brush type connection. A Styrofoam table 80 cm high is used for table-top equipment.

Measurement Uncertainty

Measurement	Frequency Range	Expanded Uncertainty (k=2)	Ucispr
AC Line Conducted Emissions	150 kHz - 30 MHz	2.8dB	3.4dB
Telco Port Emissions	150 kHz - 30 MHz	3.2dB	5.0dB

As shown in the table above our conducted emissions U_{lab} is less than the corresponding U_{CISPR} reference value in CISPR 16-4-2 Table 1, hence the compliance of the product is only based on the measured value, and no measurement uncertainty correction is required, based on CISPR 22 and CISPR 11 (for 2006 and later revisions) Clause 11.

Sample Calculations

The following is how net line-conducted readings were determined:

$$NF = RF + LF + CF + AF$$

Where NF = Net Reading in dB μ V

RF = Reading from receiver in dB μ V

LF = LISN or ISN Correction Factor in dB

CF = Cable Correction Factor in dB

AF = Attenuator Loss Factor in dB

To convert from dB μ V to μ V or mV the following was used:

$$UF = 10^{(NF / 20)} \text{ where } UF = \text{Net Reading in } \mu\text{V}$$

NF = Net Reading in dB μ V

Example:

$$NF = RF + LF + CF + AF = 28.5 + 0.2 + 0.4 + 20.0 = 49.1 \text{ dB}\mu\text{V}$$

$$UF = 10^{(49.1 \text{ dB}\mu\text{V} / 20)} = 285.1 \mu\text{V/m}$$

Alternately, when C5 Software is used, the "Level" includes all losses and gains and is compared directly in the "Margin" column to the "Limit". "TF" is the Transducer Factor; in this case LISN or ISN loss.

7.2 Test Equipment Used:

Asset	Description	Manufacturer	Model	Serial	Cal Date	Cal Due
DAV004'	Weather Station	Davis Instruments	7400	PE80529A61A	10/23/2015	10/23/2017
145128'	EMI Receiver (20 Hz - 40 Ghz)	Rohde & Schwarz	ESIB 40	839283/001	03/14/2015	03/14/2016
DS25'	Attenuator, 20dB	Mini Circuits	20dB, 50 ohm	DS25	10/12/2015	10/12/2016
CBL2014-2'	30' RG58C/U, BNC (M)	Pomona	2249-C-360	CBL2014-2	10/27/2015	10/27/2016
LISN32'	LISN - CISPR16 Compliant 9kHz-30MHz	Com-Power	LI-215A	191955	03/18/2015	03/18/2016
145-416'	Cables 145-400 145-402 145-404 145-408	Huber + Suhner	3m Track B cables	multiple	10/08/2015	10/08/2016

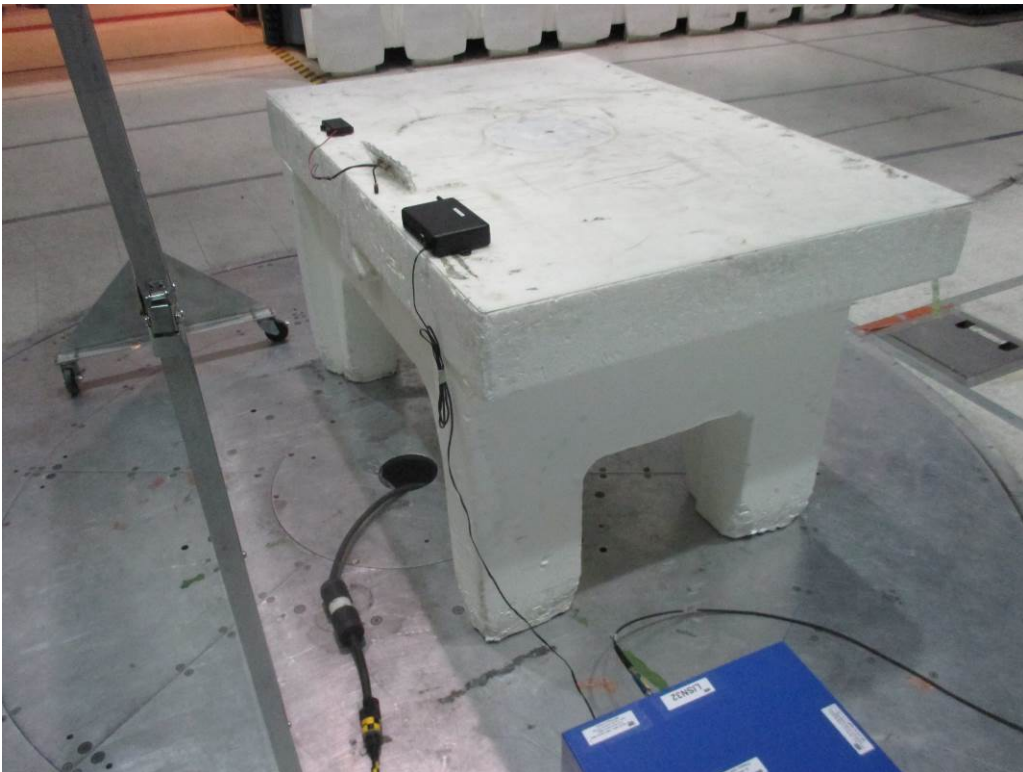
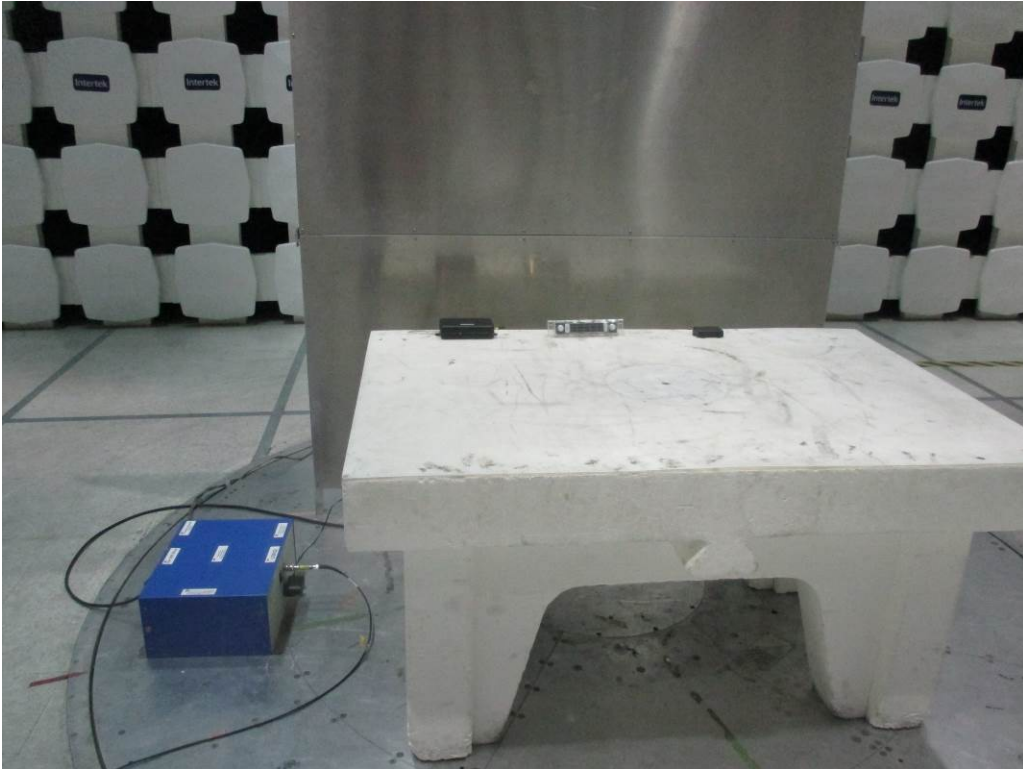
Software Utilized:

Name	Manufacturer	Version
Compliance 5	Teseq	5.26.46.46

7.3 Results:

The sample tested was found to Comply.

7.4 Setup Photographs:

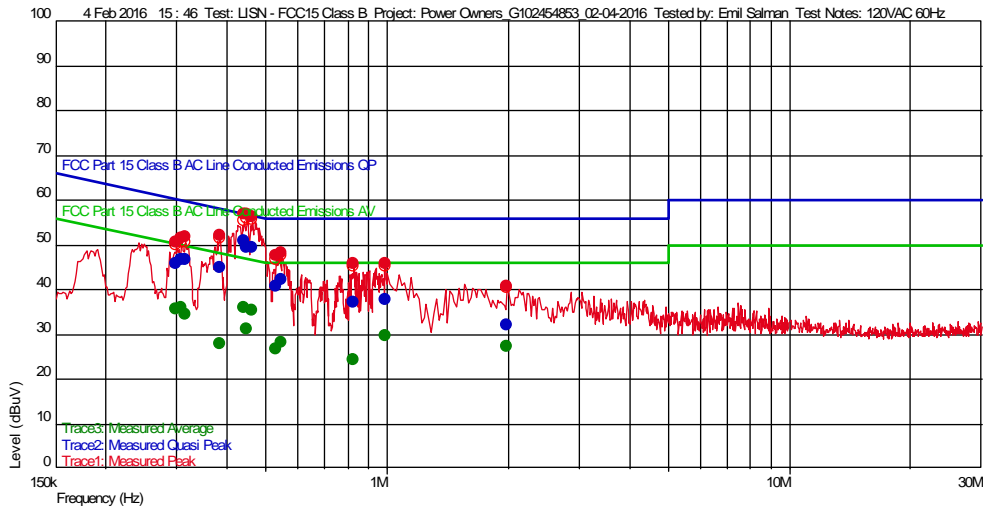


7.5 Plots/Data:

Test Information

Test Details User Entry
 Test: LISN - FCC15 Class B
 Project: Power Owners_G102454853_02-04-2016
 Test Notes: 120VAC 60Hz
 Temperature: 20C
 Humidity: 42%,1000mbar
 Tested by: Emil Salman
 Test Started: 4 Feb 2016 15 : 46

Prescan Emission Graph



- Measured Peak Value
- Measured Quasi Peak Value
- Measured Average Value
- Maximum Value of Mast and Turntable
- Swept Peak Data
- Swept Quasi Peak Data
- Swept Average Data

Emissions Test Data

Trace2: Measured Quasi Peak

Frequency(Hz)	Level(dBuV)	TF	PA+CL	Limit(dBuV)	Margin(dBuV)	RBW(Hz)	LINE
1.991983968 M	32.18	0.030	20.335	56.000	-23.82	9 k	N
827.955911824 k	37.26	0.030	20.252	56.000	-18.74	9 k	N
989.779559118 k	37.89	0.030	20.260	56.000	-18.11	9 k	N
529.859719439 k	40.71	0.030	20.223	56.000	-15.29	9 k	N
299.899799599 k	45.86	0.040	20.210	60.246	-14.39	9 k	N
546.893787575 k	42.33	0.030	20.224	56.000	-13.67	9 k	N
308.416833667 k	46.66	0.038	20.210	60.013	-13.35	9 k	N
315.230460922 k	46.57	0.037	20.211	59.832	-13.26	9 k	N
385.070140281 k	45.05	0.030	20.214	58.169	-13.12	9 k	N
449.799599198 k	49.27	0.030	20.217	56.879	-7.61	9 k	N
463.426853707 k	49.52	0.030	20.218	56.631	-7.11	9 k	N
441.28256513 k	50.99	0.030	20.217	57.038	-6.04	9 k	N

Trace3: Measured Average

Frequency(Hz)	Level(dBuV)	TF	PA+CL	Limit(dBuV)	Margin(dBuV)	RBW(Hz)	LINE
827.955911824 k	24.26	0.030	20.252	46.000	-21.74	9 k	N
385.070140281 k	27.93	0.030	20.214	48.169	-20.24	9 k	N
529.859719439 k	26.73	0.030	20.223	46.000	-19.27	9 k	N
1.991983968 M	27.26	0.030	20.335	46.000	-18.74	9 k	N
546.893787575 k	28.31	0.030	20.224	46.000	-17.69	9 k	N
989.779559118 k	29.69	0.030	20.260	46.000	-16.31	9 k	N
449.799599198 k	31.33	0.030	20.217	46.879	-15.55	9 k	N
315.230460922 k	34.51	0.037	20.211	49.832	-15.32	9 k	N
299.899799599 k	35.67	0.040	20.210	50.246	-14.58	9 k	N
308.416833667 k	35.90	0.038	20.210	50.013	-14.12	9 k	N
463.426853707 k	35.51	0.030	20.218	46.631	-11.12	9 k	N
441.28256513 k	36.12	0.030	20.217	47.038	-10.92	9 k	N

Test Personnel: Emil Salman *ES*
Supervising/Reviewing
Engineer: _____
(Where Applicable) N/A
Product Standard: FCC Part 15
Input Voltage: 120VAC 60Hz
Pretest Verification w/
Ambient Signals or
BB Source: Yes

Test Date: 02/04/2016
Limit Applied: Class B
Ambient Temperature: 20 °C
Relative Humidity: 42 %
Atmospheric Pressure: 1000 mbars

Deviations, Additions, or Exclusions: None

8 Revision History

Revision Level	Date	Report Number	Prepared By	Reviewed By	Notes
0	02/05/2016	102454853BOX-001	<i>ES</i>	KPS <i>KPS</i>	Original Issue