


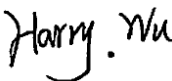
FCC PART 18  
TEST REPORT

For

**Golden Scorpion Co.,Ltd**

Changping Science Park, No.27 Chuangxin Rd, Changping, Beijing, China

**FCC ID: 2AC8ZGS-SHW1U7AX12**

<b>Report Type:</b> Original Report	<b>Product Type:</b> Electronic Ballast
<b>Test Engineer:</b> Jone Lv	
<b>Report Number:</b> RBJ141201050-00	
<b>Report Date:</b> 2015-05-27	
<b>Reviewed By:</b> Harry Wu EMC Leader	
<b>Test Laboratory:</b> Bay Area Compliance Laboratories Corp. (Dongguan) No.69 Pulongcun, Puxinhu Industrial Zone, Tangxia, Dongguan, Guangdong, China Tel: +86-769-86858888 Fax: +86-769-86858891 <a href="http://www.baclcorp.com.cn">www.baclcorp.com.cn</a>	

Note: This test report is prepared for the customer shown above and for the device described herein. It may not be duplicated or used in part without prior written consent from Bay Area Compliance Laboratories Corp. (Dongguan). This report is valid only with a valid digital signature. The digital signature may be available only under the Adobe software above version 7.0.

## **TABLE OF CONTENTS**

<b>GENERAL INFORMATION.....</b>	<b>3</b>
PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT) .....	3
OBJECTIVE .....	3
RELATED SUBMITTAL(S)/GRANT(S).....	3
TEST METHODOLOGY .....	3
TEST FACILITY .....	3
<b>OPERATING CONDITION/TEST CONFIGURATION.....</b>	<b>4</b>
JUSTIFICATION .....	4
EUT EXERCISE SOFTWARE .....	4
SPECIAL ACCESSORIES.....	4
EQUIPMENT MODIFICATIONS .....	4
SUPPORT EQUIPMENT LIST AND DETAILS .....	4
EXTERNAL CABLE.....	4
BLOCK DIAGRAM OF TEST SETUP .....	5
<b>SUMMARY OF TEST RESULT .....</b>	<b>6</b>
<b>FCC §18.307 - AC LINE CONDUCTED EMISSIONS.....</b>	<b>7</b>
MEASUREMENT UNCERTAINTY .....	7
APPLICABLE STANDARD .....	7
EUT SETUP .....	8
EMI TEST RECEIVER SETUP.....	8
TEST PROCEDURE .....	8
TEST EQUIPMENT LIST AND DETAILS.....	9
CORRECTED AMPLITUDE & MARGIN CALCULATION .....	9
TEST RESULTS SUMMARY .....	9
TEST DATA .....	9
<b>FCC §18.305 – FIELD STRENGTH.....</b>	<b>16</b>
MEASUREMENT UNCERTAINTY .....	16
APPLICABLE STANDARD .....	16
EUT SETUP .....	16
EMI TEST RECEIVER SETUP AND SPECTRUM ANALYZER SETUP.....	17
TEST PROCEDURE .....	17
CORRECTED AMPLITUDE CALCULATION.....	17
TEST EQUIPMENT LIST AND DETAILS.....	17
TEST DATA .....	18
<b>DECLARATION LETTER .....</b>	<b>26</b>

## GENERAL INFORMATION

### Product Description for Equipment under Test (EUT)

The *Golden Scorpion Co., Ltd*'s product, model number: *GS-SHW1U7AX12* (FCC ID: 2AC8ZGS-SHW1U7AX12) or the "EUT" in this report is a *Electronic Ballast*, which was measured approximately: 25.3 cm (L) x 19.8 cm (W) x 12.3 cm (H), the rated with input voltage: AC 120V/60Hz. The highest operating frequency is 0.2MHz.

*Note: The model GS-SHW1U7AX12, GS-SHW2U7AX12, GS-SHW3U7AX12, GS-SHW4U7AX12 are electrically identical, the differences between them are model name and software version, we selected GS-SHW1U7AX12 for fully testing, the details was explained in the attached declaration letter.*

*\*All measurement and test data in this report was gathered from production sample serial number: 141201050 (Assigned by BACL, Dongguan). The EUT supplied by the applicant was received on 2014-12-02.*

### Objective

This report is prepared on behalf of *Golden Scorpion Co., Ltd* in accordance with Part 2-Subpart J, and Part 18-Subparts A, B and C of the Federal Communications Commission's rules and regulations.

The objective of the manufacturer is to determine compliance with FCC Part 18 limits.

### Related Submittal(s)/Grant(s)

No related submittal(s).

### Test Methodology

All measurements contained in this report were conducted with MP-5, FCC Methods of Measurements of Radio Noise Emissions from ISM Equipment, February 1986. All measurements were performed at Bay Area Compliance Laboratory Corporation. The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

### Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Dongguan) to collect test data is located on the No.69 Pulongcun, Puxinhu Industrial Zone, Tangxia, Dongguan, Guangdong, China

Test site at Bay Area Compliance Laboratories Corp. (Dongguan) has been fully described in reports submitted to the Federal Communications Commission (FCC). The details of these reports have been found to be in compliance with the requirements of Section 2.948 of the FCC Rules on February 06, 2015. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2009.

The Federal Communications Commission has the reports on file and is listed under FCC Registration No.: 273710. The test site has been approved by the FCC for public use and is listed in the FCC Public Access Link (PAL) database.

## OPERATING CONDITION/TEST CONFIGURATION

### Justification

The system was configured for testing in a typical fashion (as normally used by a typical user).

The power for EUT is 600W, 750W, 825W, 1000W, we selected 600W, 825W and 1000W for testing, please refer test results.

### EUT Exercise Software

No exercise software was used.

### Special Accessories

No special accessory was used.

### Equipment Modifications

No modification was made to the EUT tested.

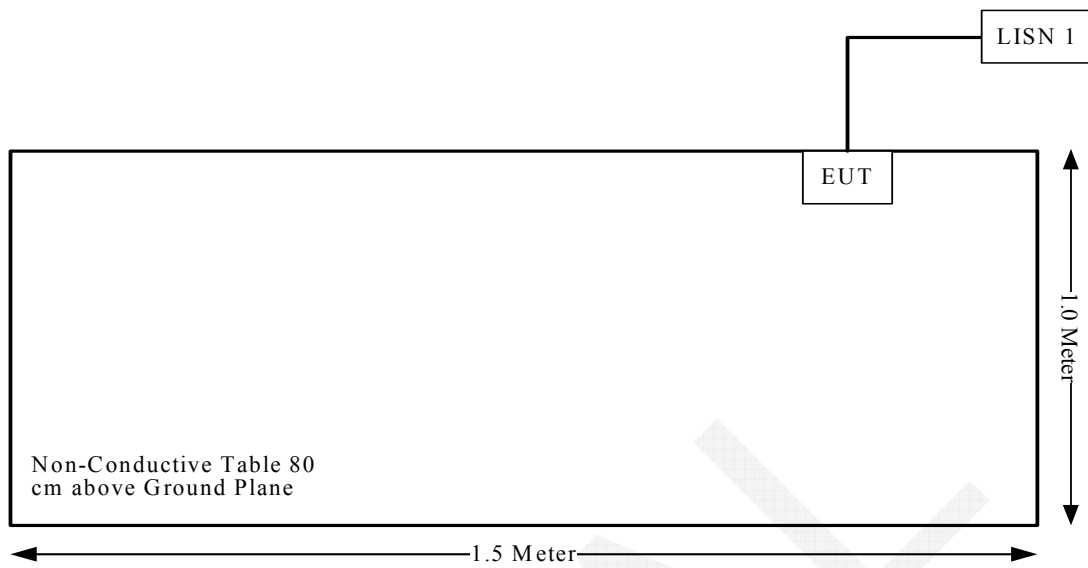
### Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
N/A	N/A	N/A	N/A

### External Cable

Cable Description	Length (m)	From Port	To
N/A	N/A	N/A	N/A

### Block Diagram of Test Setup



**SUMMARY OF TEST RESULT**

FCC Rules	Description of Test	Results
§18.307	AC Line Conducted Emissions	Compliance
§18.305	Field Strength	Compliance

## FCC §18.307 - AC LINE CONDUCTED EMISSIONS

### Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in field of EMC. The factors contributing to uncertainties are Receiver, cable loss, and LISN.

Compliance or non-compliance with a disturbance limit shall be determined in the following manner:

If  $U_{lab}$  is less than or equal to  $U_{cisp}$  of Table 1, then:

- compliance is deemed to occur if no measured disturbance level exceeds the disturbance limit;
- non-compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit.

If  $U_{lab}$  is greater than  $U_{cisp}$  of Table 1, then:

- compliance is deemed to occur if no measured disturbance level, increased by  $(U_{lab} - U_{cisp})$ , exceeds the disturbance limit;
- non-compliance is deemed to occur if any measured disturbance level, increased by  $(U_{lab} - U_{cisp})$ , exceeds the disturbance limit.

Based on CISPR 16-4-2: 2011, measurement uncertainty of conducted disturbance at mains port using AMN at Bay Area Compliance Laboratories Corp. (Dongguan) is 3.46 dB (150 kHz to 30 MHz).

Table 1 – Values of  $U_{cisp}$

Measurement	$U_{cisp}$
Conducted disturbance at mains port using AMN (150 kHz to 30 MHz)	3.4 dB

### Applicable Standard

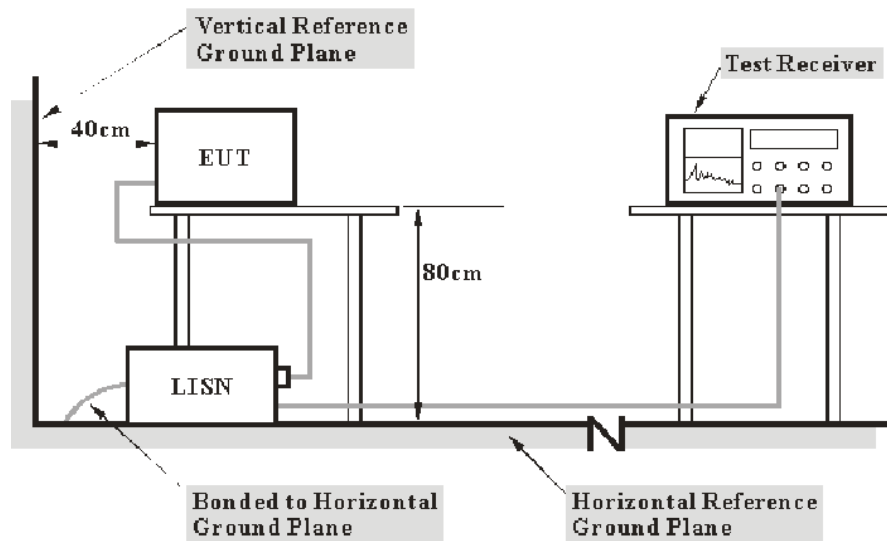
Conduction limits. For the following equipment, when designed to be connected to the public utility (AC) power line the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies shall not exceed the limits in the following tables. Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal using a 50  $\mu$ H/50 ohms line impedance stabilization network (LISN).

All Induction cooking ranges and ultrasonic equipment

Frequency of emission (MHz)	Conducted limit (dB $\mu$ V)	
	Quasi-peak	Average
0.009–0.05	110	-
0.05–0.15	90–80	-
0.15–0.5	66 to 56*	56 to 46*
0.5–5	56	46
5–30	60	50

\* Decreases with the logarithm of the frequency \*The tighter limits shall apply at the boundary between two frequency ranges

## EUT Setup



- Note: 1. Support units were connected to second LISN.  
 2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

The setup of EUT is according with MP-5: 1986 measurement procedure. Specification used was with the FCC Part 18 limits.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

The EUT was connected to a 120 VAC/60 Hz power source.

## EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 9 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

Frequency Range	IF B/W
9 kHz – 150 kHz	200 Hz
150 kHz – 30 MHz	9 kHz

## Test Procedure

During the conducted emission test, the EUT was connected to the outlet of the LISN.

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

All final data was recorded in the Quasi-Peak detection and Average detection mode.



### Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	EMI Test Receiver	ESCS 30	830245/006	2014-10-20	2015-10-20
R&S	L.I.S.N	ESH2-Z5	892107/021	2014-06-09	2015-06-09
R&S	Two-line V-network	ENV 216	3560.6550.12	2014-12-11	2015-12-11
R&S	Test Software	EMC32	Version8.53.0	N/A	N/A

\* Statement of Traceability: Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

### Corrected Amplitude & Margin Calculation

The basic equation is as follows:

$$V_C = V_R + A_C + VDF$$

Herein,

$V_C$ : corrected voltage amplitude

$V_R$ : reading voltage amplitude

$A_C$ : attenuation caused by cable loss

VDF: voltage division factor of AMN or ISN

The “**Margin**” column of the following data tables indicates the degree of compliance within the applicable limit. For example, a margin of 7dB means the emission is 7dB below the maximum limit. The equation for margin calculation is as follows:

$$\text{Margin} = \text{Limit} - \text{Corrected Amplitude}$$

### Test Results Summary

According to the recorded data in following table, the EUT complied with the FCC Part 18.307(a), the worst margin reading as below:

**4.60 dB at 0.921850 MHz** in the **Line** conducted mode for 825W

### Test Data

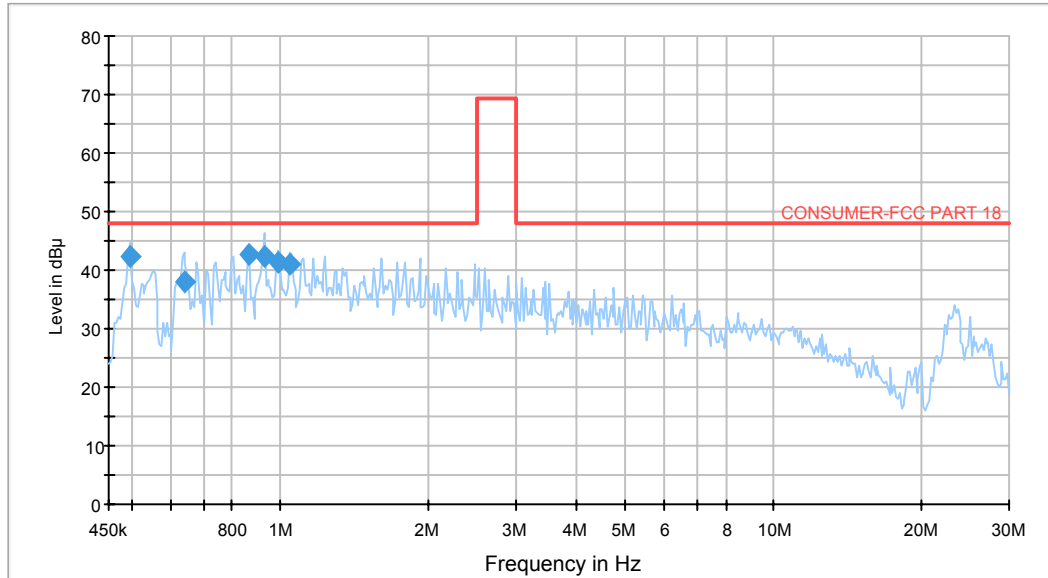
#### Environmental Conditions

Temperature:	26.6°C
Relative Humidity:	50 %
ATM Pressure:	100.6 kPa

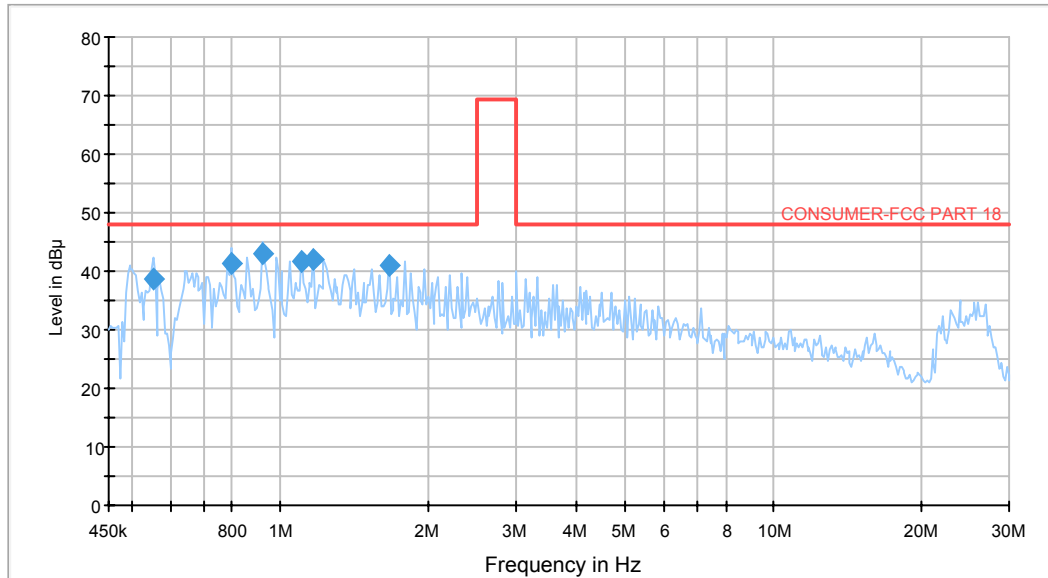
Testing was performed by Jone Lv on 2015-05-27.

Test Mode: Running (600W)

Line:



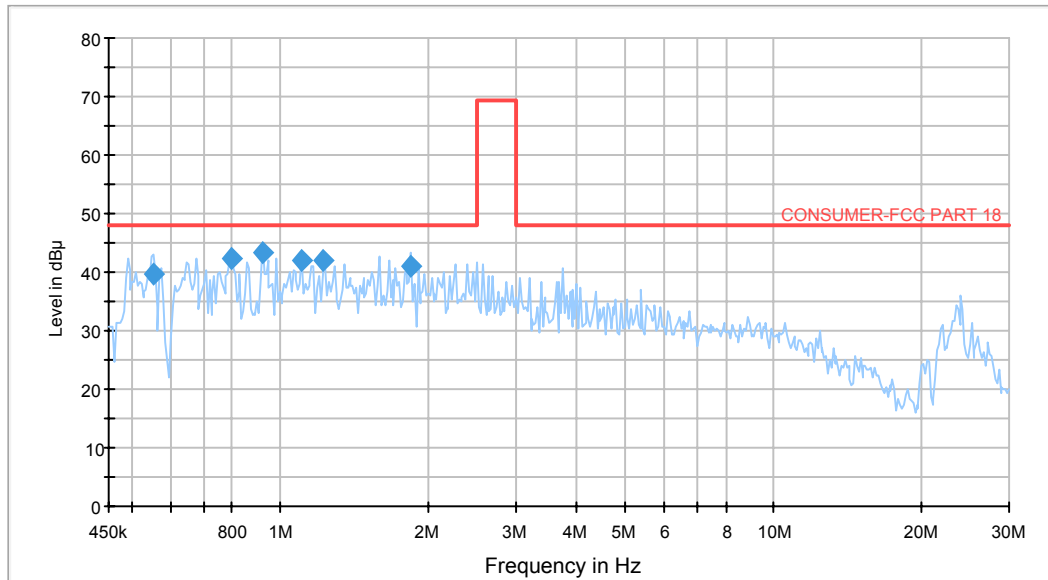
Frequency (MHz)	QuasiPeak (dBμV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)	Comment
0.495152	42.4	9.000	L1	10.1	5.6	48.0	Compliance
0.638963	37.9	9.000	L1	10.4	10.1	48.0	Compliance
0.864920	42.6	9.000	L1	10.4	5.4	48.0	Compliance
0.929225	42.3	9.000	L1	10.4	5.7	48.0	Compliance
0.990388	41.3	9.000	L1	10.4	6.7	48.0	Compliance
1.047198	40.9	9.000	L1	10.4	7.1	48.0	Compliance

**Neutral:**

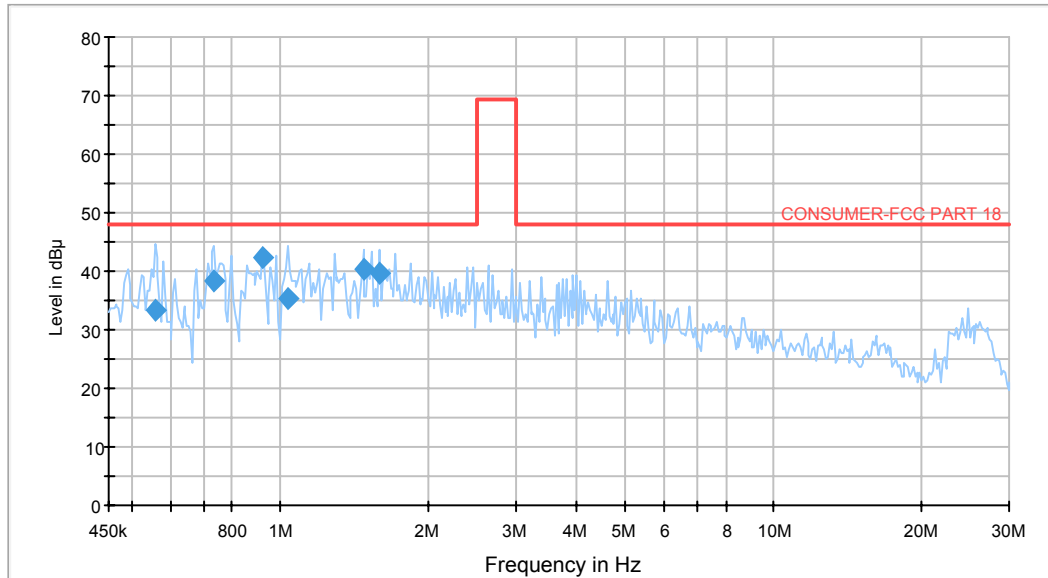
Frequency (MHz)	QuasiPeak (dBμV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)	Comment
0.553588	38.6	9.000	N	10.1	9.4	48.0	Compliance
0.798676	41.4	9.000	N	10.4	6.6	48.0	Compliance
0.921850	42.9	9.000	N	10.4	5.1	48.0	Compliance
1.107268	41.6	9.000	N	10.4	6.4	48.0	Compliance
1.170783	42.0	9.000	N	10.4	6.0	48.0	Compliance
1.662416	41.1	9.000	N	10.4	6.9	48.0	Compliance

Test Mode: Running (825W)

Line:



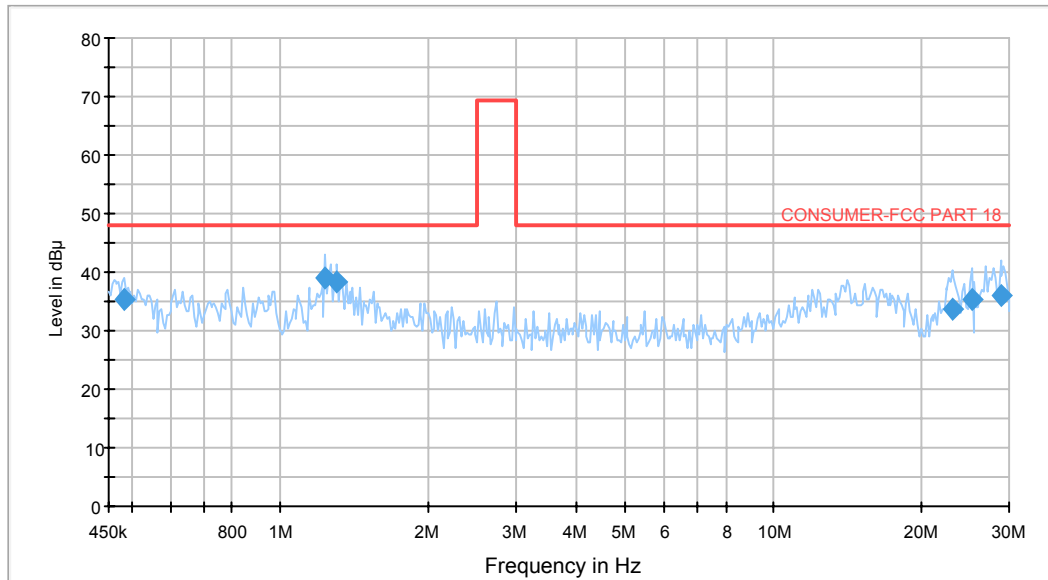
Frequency (MHz)	QuasiPeak (dBμV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)	Comment
0.553588	39.6	9.000	L1	10.1	8.4	48.0	Compliance
0.798676	42.5	9.000	L1	10.4	5.5	48.0	Compliance
0.921850	43.4	9.000	L1	10.4	4.6	48.0	Compliance
1.107268	42.0	9.000	L1	10.4	6.0	48.0	Compliance
1.228116	41.9	9.000	L1	10.4	6.1	48.0	Compliance
1.843855	41.1	9.000	L1	10.4	6.9	48.0	Compliance

**Neutral:**

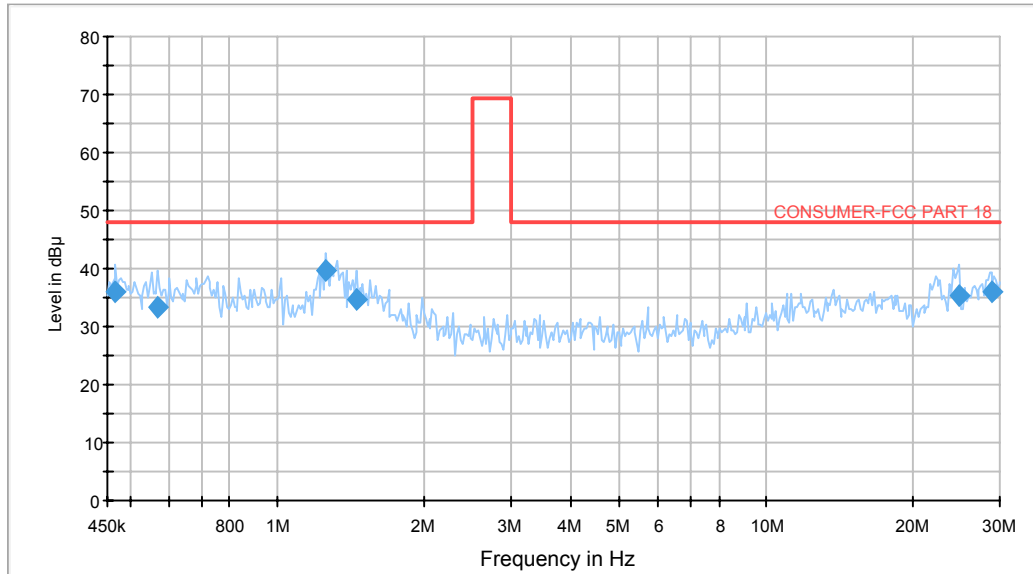
Frequency (MHz)	QuasiPeak (dBμV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)	Comment
0.558016	33.3	9.000	N	10.1	14.7	48.0	Compliance
0.737506	38.3	9.000	N	10.4	9.7	48.0	Compliance
0.921850	42.2	9.000	N	10.4	5.8	48.0	Compliance
1.038887	35.2	9.000	N	10.4	12.8	48.0	Compliance
1.475135	40.2	9.000	N	10.4	7.8	48.0	Compliance
1.597486	39.7	9.000	N	10.4	8.3	48.0	Compliance

Test Mode: Running (1000W)

Line:



Frequency (MHz)	QuasiPeak (dBμV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)	Comment
0.483456	35.5	9.000	L1	10.1	12.5	48.0	Compliance
1.237941	38.9	9.000	L1	10.4	9.1	48.0	Compliance
1.308952	38.5	9.000	L1	10.4	9.5	48.0	Compliance
23.052359	33.6	9.000	L1	10.8	14.4	48.0	Compliance
25.164090	35.3	9.000	L1	10.8	12.7	48.0	Compliance
28.814446	36.0	9.000	L1	11.0	12.0	48.0	Compliance

**Neutral:**

Frequency (MHz)	QuasiPeak (dBμV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)	Comment
0.468290	35.8	9.000	N	10.1	12.2	48.0	Compliance
0.571516	33.5	9.000	N	10.2	14.5	48.0	Compliance
1.257828	39.7	9.000	N	10.4	8.3	48.0	Compliance
1.451813	34.5	9.000	N	10.4	13.5	48.0	Compliance
24.766245	35.4	9.000	N	10.9	12.6	48.0	Compliance
28.814446	36.0	9.000	N	11.1	12.0	48.0	Compliance

## FCC §18.305 – FIELD STRENGTH

### Measurement Uncertainty

Compliance or non-compliance with a disturbance limit shall be determined in the following manner:

If  $U_{lab}$  is less than or equal to  $U_{cisp}$  of Table 1, then:

- compliance is deemed to occur if no measured disturbance level exceeds the disturbance limit;
- non-compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit.

If  $U_{lab}$  is greater than  $U_{cisp}$  of Table 1, then:

- compliance is deemed to occur if no measured disturbance level, increased by  $(U_{lab} - U_{cisp})$ , exceeds the disturbance limit;
- non-compliance is deemed to occur if any measured disturbance level, increased by  $(U_{lab} - U_{cisp})$ , exceeds the disturbance limit.

Based on CISPR 16-4-2: 2011, measurement uncertainty of radiated emission at a distance of 3m at Bay Area Compliance Laboratories Corp. (Dongguan) is: 30M~200MHz: 5.0 dB; 200M~1GHz: 6.2 dB; 1G~6GHz: 4.45 dB, 6G~18GHz: 5.23 dB

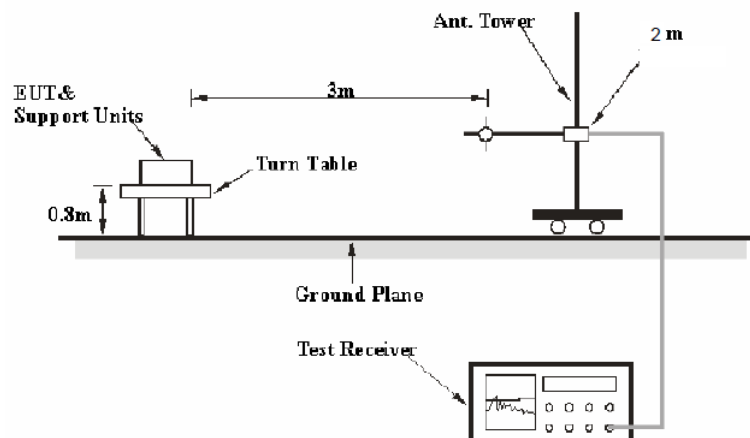
Table 1 – Values of  $U_{cisp}$

Measurement	$U_{cisp}$
Radiated disturbance (electric field strength at an OATS or in a SAC) (30 MHz to 1000 MHz)	6.3 dB
Radiated disturbance (electric field strength in a FAR) (1 GHz to 6 GHz)	5.2 dB
Radiated disturbance (electric field strength in a FAR) (6 GHz to 18 GHz)	5.5 dB

### Applicable Standard

FCC §18.305(b)

### EUT Setup





The radiated emission tests were performed in the 3 meters chamber test site, using the setup accordance with the FCC MP - 5.

The EUT was connected to 120 VAC/60 Hz power source.

### EMI Test Receiver Setup and Spectrum Analyzer Setup

The system was investigated from 9 kHz to 1000 MHz.

During the radiated emission test, the EMI test receiver and Spectrum Analyzer were set with the following configurations:

Frequency Range	RBW	Video B/W	IF B/W	Detector
9 kHz – 150 kHz	200 Hz	1 kHz	200 Hz	QP
150 kHz – 30 MHz	9 kHz	30 kHz	9 kHz	QP
30MHz – 1000 MHz	100 kHz	300 kHz	120kHz	QP

### Test Procedure

During the conducted emission test, the EUT was connected to the AC floor outlet.

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

All final data was recorded in the Quasi-peak detection mode.

### Corrected Amplitude Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain from the Meter Reading. The basic equation is as follows:

$$\text{Corrected Amplitude} = \text{Reading} + \text{Antenna Factor} + \text{Cable Loss}$$

The “**Margin**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of 7 dB means the emission is 7 dB below the limit. The equation for margin calculation is as follows:

$$\text{Margin} = \text{Limit} - \text{Corrected Amplitude}$$

### Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	EMI Test Receiver	ESCI	100224	2015-05-09	2016-05-09
Sunol Sciences	Antenna	JB3	A060611-3	2014-11-06	2017-11-05
HP	Amplifier	8447E	2434A02181	2014-09-01	2015-09-01
Farad	Test Software	EZ-EMC	V1.1.4.2	N/A	N/A

\* Statement of Traceability: Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

**Test Data****Environmental Conditions**

<b>Temperature:</b>	23.9°C
<b>Relative Humidity:</b>	59 %
<b>ATM Pressure:</b>	100.2 kPa

Testing was performed by Jone Lv on 2015-05-27.

1) 9 kHz-30 MHz

Test Mode: Running (600W)

<b>Polarization</b>	<b>Frequency (MHz)</b>	<b>Reading (dBμV/m)</b>	<b>Corrected (dB/m)</b>	<b>Result (dBμV/m)</b>	<b>Limit (dBμV/m)</b>	<b>Margin (dB)</b>
<b>Horizontal</b>	0.009	-51.43	88.1	36.67	106.5	69.83
	0.6802	20.25	50.05	70.3	106.5	36.2
	1.5219	7.33	43.5	50.83	106.5	55.67
	3.0785	-2.16	38.6	36.44	106.5	70.06
	4.1669	7.5	36.4	43.9	106.5	62.6
	5.2833	16.12	35.35	51.47	106.5	55.03
<b>Vertical</b>	0.009	-50.85	88.1	37.25	106.5	69.25
	0.6497	20.78	50.05	70.83	106.5	35.67
	1.7682	11.48	40.8	52.28	106.5	54.22
	3.1084	-3.57	38.6	35.03	106.5	71.47
	7.4541	25.71	33.6	59.31	106.5	47.19
	16.3178	23.65	32	55.65	106.5	50.85

*Test Mode: Running (825W)*

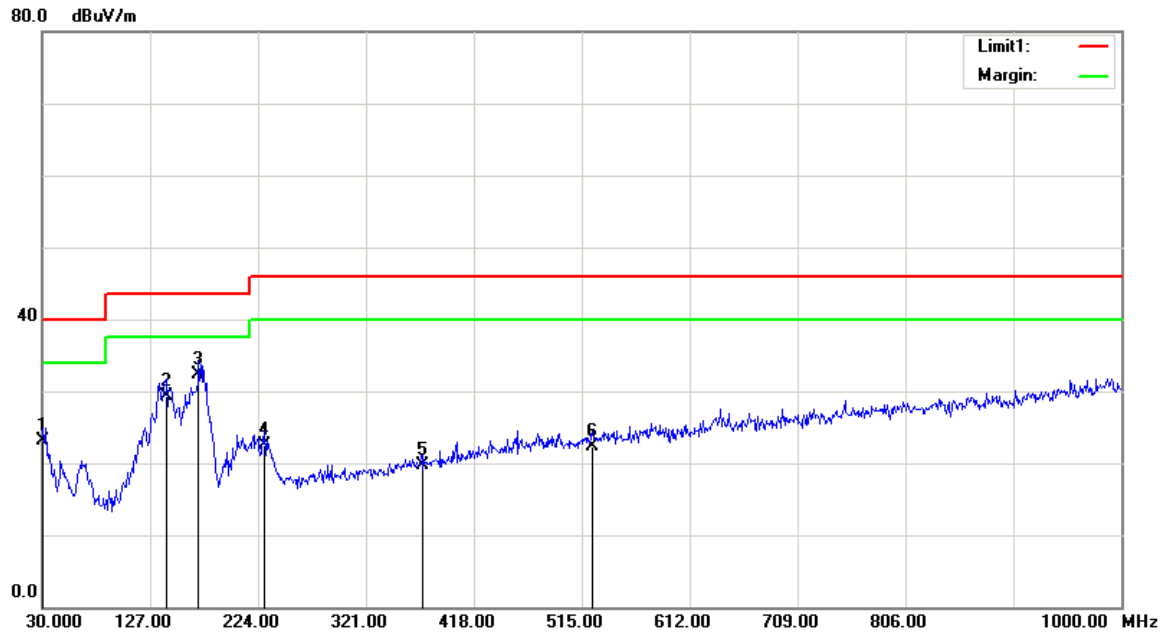
Polarization	Frequency (MHz)	Reading (dBμV/m)	Corrected (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
Horizontal	0.009	-50.64	88.1	37.46	106.5	69.04
	0.6773	19.6	50.05	69.65	106.5	36.85
	1.7052	5.95	43.5	49.45	106.5	57.05
	2.9831	-3.72	38.6	34.88	106.5	71.62
	4.1742	7.41	36.4	43.81	106.5	62.69
	5.3658	17.70	35.35	53.05	106.5	53.45
Vertical	0.009	-48.56	88.1	39.54	106.5	66.96
	0.6256	20.76	50.05	70.81	106.5	35.69
	1.7035	10.31	40.8	51.11	106.5	55.39
	3.0691	-3.37	38.6	35.23	106.5	71.27
	7.5447	25.92	33.6	59.52	106.5	46.98
	16.3254	20.49	32	52.49	106.5	54.01

*Test Mode: Running (1000W)*

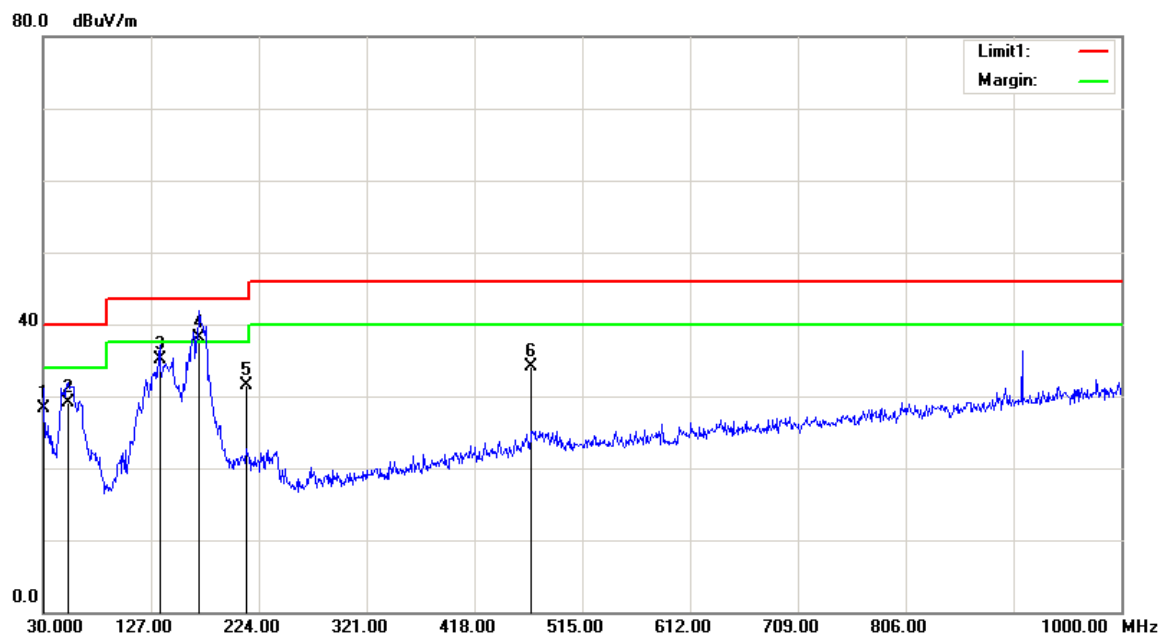
Polarization	Frequency (MHz)	Reading (dBμV/m)	Corrected (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
Horizontal	0.009	-49.38	88.1	38.72	106.5	67.78
	0.6687	21.86	50.05	71.91	106.5	34.59
	1.6884	6.54	43.5	50.04	106.5	56.46
	2.9481	-1.97	38.6	36.63	106.5	69.87
	4.0577	8.03	36.4	44.43	106.5	62.07
	5.2873	15.09	35.35	50.44	106.5	56.06
Vertical	0.009	-52.67	88.1	35.43	106.5	71.07
	0.6388	21.95	50.05	72	106.5	34.5
	1.7784	10.05	40.8	50.85	106.5	55.65
	3.0081	-2.62	38.6	35.98	106.5	70.52
	7.4467	26.3	33.6	59.9	106.5	46.6
	16.2341	23.47	32	55.47	106.5	51.03

2)30 MHz – 1000 MHz

Test Mode: Running (600W)

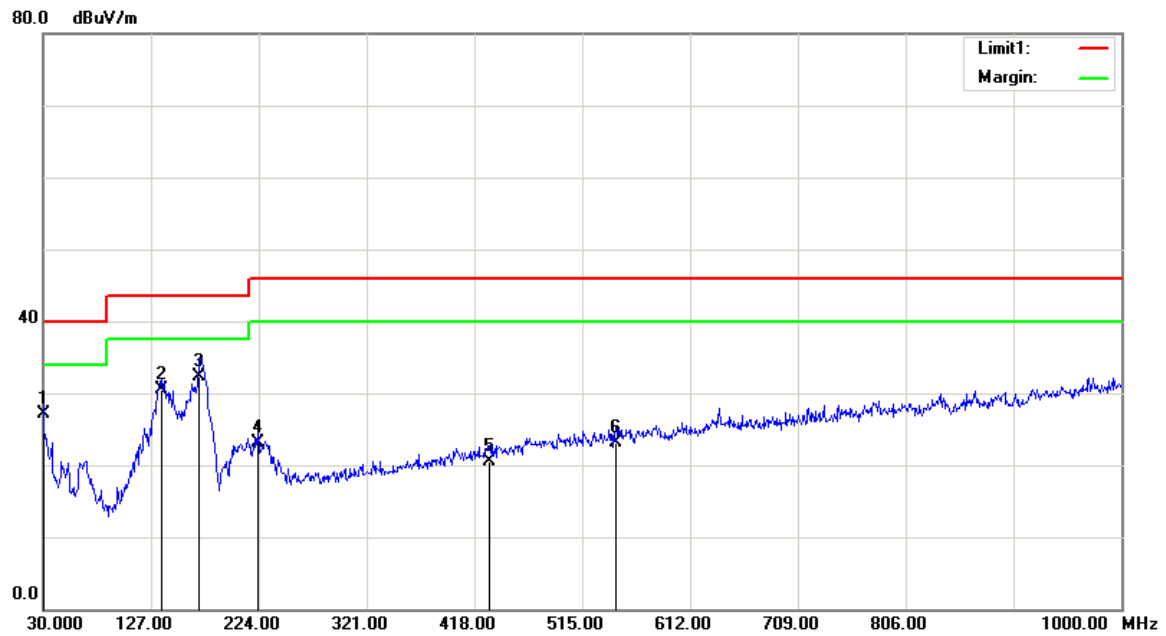
**Horizontal**

Frequency (MHz)	Receiver Reading (dBμV)	Detector (PK/QP/Ave)	Correction Factor (dB/m)	Cord. Amp. (dBμV/m)	Limit (dBμV/m)	Margin (dB)
30.0000	22.32	QP	0.88	23.20	40.00	16.80
141.5500	36.40	QP	-7.10	29.30	43.50	14.20
170.6500	40.46	QP	-8.06	32.40	43.50	11.10
229.8200	31.06	QP	-8.46	22.60	46.00	23.40
371.4400	24.26	QP	-4.56	19.70	46.00	26.30
524.7000	23.74	QP	-1.34	22.40	46.00	23.60

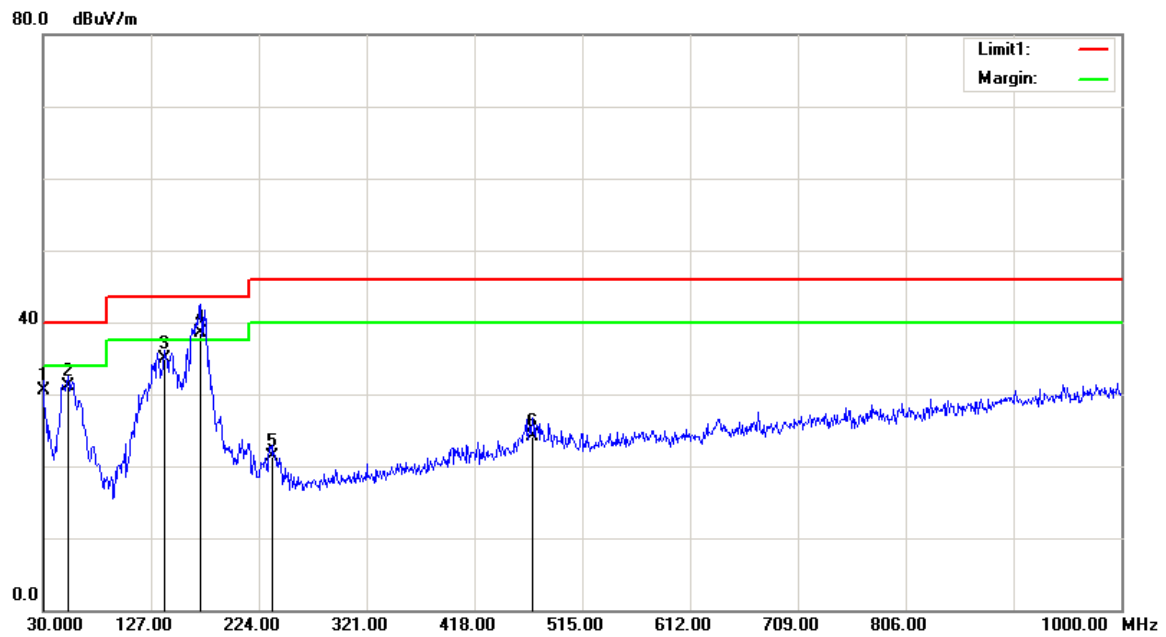
**Vertical**

Frequency (MHz)	Receiver Reading (dBμV)	Detector (PK/QP/Ave)	Correction Factor (dB/m)	Cord. Amp. (dBμV/m)	Limit (dBμV/m)	Margin (dB)
30.0000	27.42	QP	0.88	28.30	40.00	11.70
52.3100	41.79	QP	-12.69	29.10	40.00	10.90
134.7600	41.60	QP	-6.40	35.20	43.50	8.30
170.6500	46.16	QP	-8.06	38.10	43.50	5.40
212.3600	40.83	QP	-9.23	31.60	43.50	11.90
469.4100	35.92	QP	-1.82	34.10	46.00	11.90

Test Mode: Running (825W)

**Horizontal**

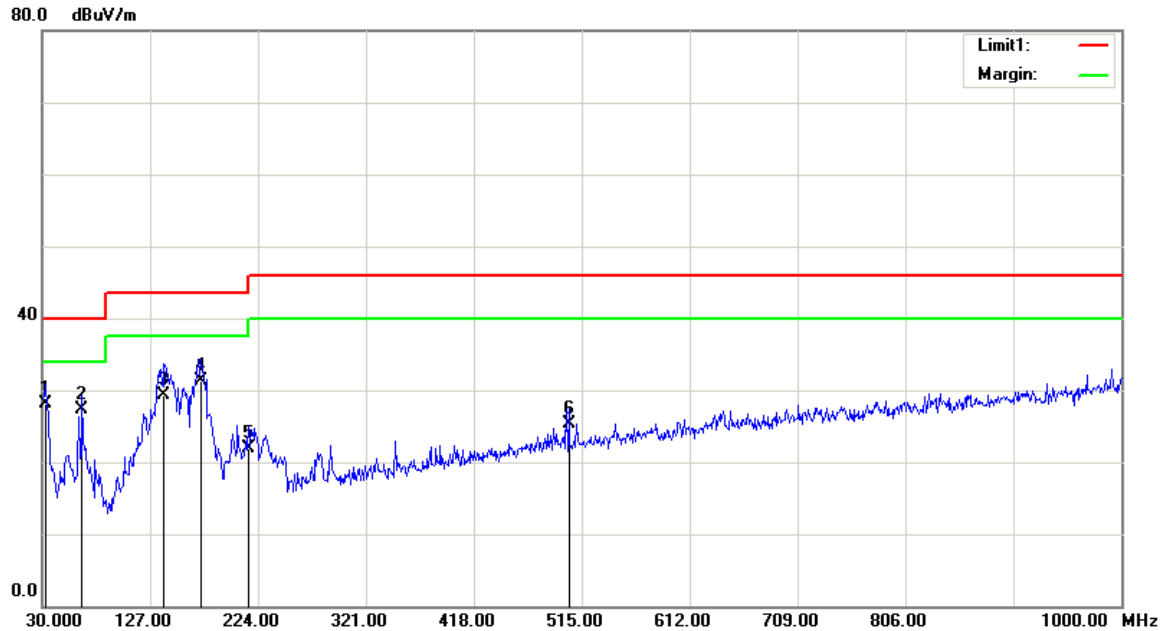
Frequency (MHz)	Receiver Reading (dBμV)	Detector (PK/QP/Ave)	Correction Factor (dB/m)	Cord. Amp. (dBμV/m)	Limit (dBμV/m)	Margin (dB)
30.0000	26.32	QP	0.88	27.20	40.00	12.80
136.7000	37.20	QP	-6.60	30.60	43.50	12.90
170.6500	40.46	QP	-8.06	32.40	43.50	11.10
223.0300	31.81	QP	-8.71	23.10	46.00	22.90
431.5800	23.32	QP	-2.82	20.50	46.00	25.50
545.0700	24.20	QP	-1.00	23.20	46.00	22.80

**Vertical**

Frequency (MHz)	Receiver Reading (dBμV)	Detector (PK/QP/Ave)	Correction Factor (dB/m)	Cord. Amp. (dBμV/m)	Limit (dBμV/m)	Margin (dB)
30.0000	29.62	QP	0.88	30.50	40.00	9.50
52.3100	43.89	QP	-12.69	31.20	40.00	8.80
138.6400	41.87	QP	-6.87	35.00	43.50	8.50
171.6200	46.69	QP	-8.19	38.50	43.50	5.00
235.6400	29.58	QP	-8.28	21.30	46.00	24.70
470.3800	26.01	QP	-1.81	24.20	46.00	21.80

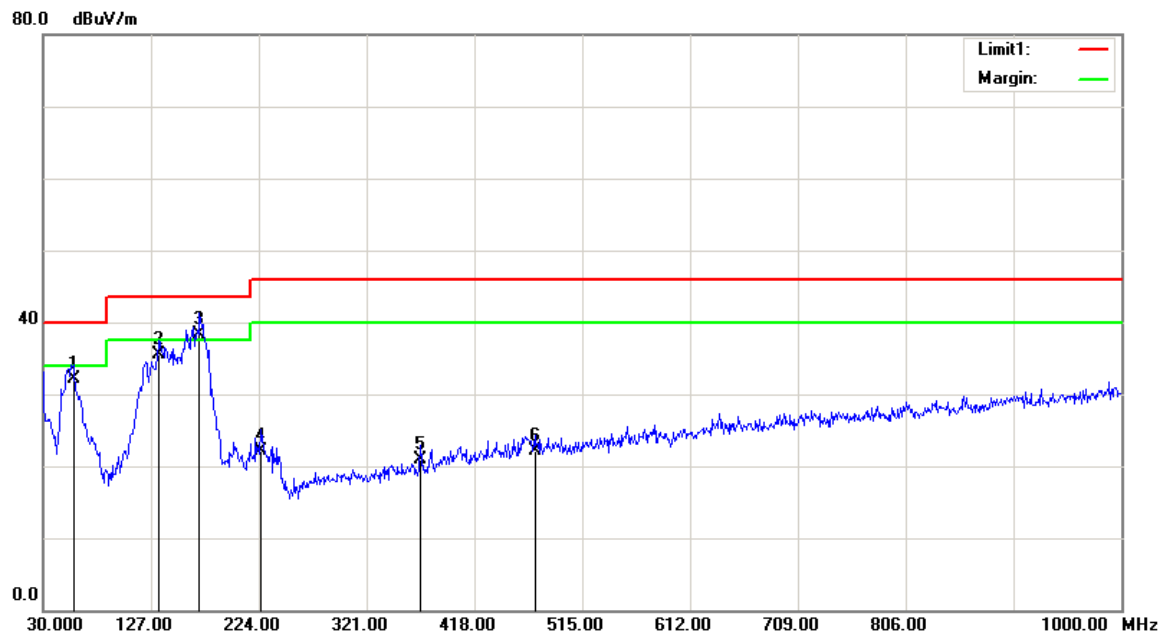
Test Mode: Running (1000W)

### Horizontal



Frequency (MHz)	Receiver Reading (dBμV)	Detector (PK/QP/Ave)	Correction Factor (dB/m)	Cord. Amp. (dBμV/m)	Limit (dBμV/m)	Margin (dB)
32.9100	29.45	QP	-1.35	28.10	40.00	11.90
65.8900	39.96	QP	-12.56	27.40	40.00	12.60
139.6100	36.26	QP	-6.96	29.30	43.50	14.20
172.5900	39.58	QP	-8.28	31.30	43.50	12.20
215.2700	31.00	QP	-9.10	21.90	43.50	21.60
503.3600	26.98	QP	-1.68	25.30	46.00	20.70



**Vertical**

Frequency (MHz)	Receiver Reading (dBμV)	Detector (PK/QP/Ave)	Correction Factor (dB/m)	Cord. Amp. (dBμV/m)	Limit (dBμV/m)	Margin (dB)
57.1600	45.18	QP	-13.08	32.10	40.00	7.90
133.7900	41.80	QP	-6.30	35.50	43.50	8.00
170.6500	46.36	QP	-8.06	38.30	43.50	5.20
225.9400	30.71	QP	-8.61	22.10	46.00	23.90
369.5000	25.51	QP	-4.61	20.90	46.00	25.10
472.3200	23.98	QP	-1.78	22.20	46.00	23.80

## DECLARATION LETTER

Company Name :Golden Scorpion Co.,Ltd  
Add: Changping Science Park,No.27 Chuangxin Rd,Changping,Beijing,China  
Tel: 86-10- 52985603 Fax: 86-10- 52985601

### DECLARATION OF SIMILARITY

To:  
Bay Area Compliance Laboratories Corp. (Dongguan)  
69# Pulongcun, Puxinhu Industrial Zone Tangxia Town,  
Dongguan, Guangdong, China  
Tel: +86 769 86858888  
Website:<http://www.baclcorp.com.cn>

Dear Sir or Madam:

We Golden Scorpion Co.,Ltd, Hereby declare that product: Electronic Ballast,  
model(s): GS-SHW2U7AX12 、 GS-SHW3U7AX12 、 GS-SHW4U7AX12 are  
electrically identical with the same electromagnetic emissions and electromagnetic  
compatibility characteristics. with the model GS-SHW1U7AX12 that were tested by  
BACL, the results of which are featured in BACL project:

A description of the differences between the tested model and those that are declared  
similar areas follows:

Their differences are as following:

1. The software version will be different
2. model names are different for the marketing requirement.

Please contact me should there be need for any additional clarification or information.

Best Regards,

Signature:   
Printed Name: Changjun Lee  
Title: Manager

\*\*\*\*END OF REPORT\*\*\*\*