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FCC PART 18 INDUSTRIAL, SCIENTIFIC, AND MEDICAL EQUIPMENT TEST REPORT

APPLICANT	HID HUT INC.
ADDRESS	27 SYCAMORE CIRCLE
	ORMOND BEACH, FL 32174 USA
FCC ID	T98SUNWAY
MODEL NUMBER	SUNWAY
PRODUCT DESCRIPTION	ELECTRONIC HID BALLAST
DATE SAMPLE RECEIVED	MAY 23, 2006
DATE TESTED	JUNE 14, 2006
TESTED BY	Nam Nguyen
APPROVED BY	Mario de Aranzeta
TIMCO REPORT NO.	1053UT6
TOTAL PAGES	8
TEST RESULTS	☒ PASS ☐ FAIL

THE ATTACHED REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL WITHOUT THE WRITTEN APPROVAL OF TIMCO ENGINEERING, INC.

ACCREDITED
Certificate # 0955-01

TABLE OF CONTENTS

STATEMENT OF COMPLIANCE

This equipment has been tested in accordance with the standards identified in the referenced test report. To the best of my knowledge and belief, these tests were performed using the measurement procedures described in this report and demonstrate that the equipment complies with the appropriate standards. No modifications were made to the equipment during testing in order to demonstrate compliance with these standards.

I attest that the necessary measurements were made by me or under my supervision, at Timco Engineering, Inc. located at 849 N.W. State Road 45, Newberry, Florida 32669 USA.

Authorized by: Mario de Aranzeta

Signature:

Function: Engineer

Date: June 15, 2006

Tested by: Nam Nguyen

Signature: on file

Date: June 14, 2006

GENERAL INFORMATION

DUT Specification

The test results relate only to the items tested.			
DUT Description	Electrical Ballast		
FCC ID	T98SUNWAY		
Model Number	EBX-YYY X stands for number from 1 to 9. YYY stands for number from 001 to 999 All models are electrically identical except the cosmetic design and power level for marketing purpose. The model with highest power level was tested to represent worst case scenario.		
Serial Number	N/A		
Operating Frequency			
Modulation	N/A		
Emission	N/A		
No. of Channels	N/A		
DUT Power Source	☒ 110–120Vac/50– 60Hz		
	☐ DC Power		
	☐ Battery Operated Exclusively		
Test Item	☐ Prototype	☐ Pre-Production	☒ Production
Type of Equipment	☒ Fixed	☐ Mobile	☐ Portable
Antenna	N/A		
Antenna Connector	N/A		

Test Facility: The test sites used by Timco Engineering Inc. for radiated and conducted emission data is located at 849 NW State Road 45 Newberry, FL 32669 USA.

Test Condition: The DUT was tested in the laboratory in an environment with normal temperature and humidity. The temperature was 26ºC with a relative humidity of 50%.

Modification to the DUT: No modification was made to the DUT during testing.

Test Exercise (e.g software description, test signal, etc.): The DUT was placed in continuous transmit mode of operation.

Applicable Standards: ANSI Standard C63.4: 2003
FCC CFR 47 Part 18
FCC/OET MP5

EMC EQUIPMENT LIST

Device	Manufacturer	Model	Serial Number	Cal/Char Date	Due Date
3/10-Meter OATS	TEI	N/A	N/A	Listed 3/27/04	3/26/07
3-Meter OATS	TEI	N/A	N/A	Listed 1/11/06	1/10/09
Biconnical Antenna	Eaton	94455-1	1057	CAL 12/12/05	12/12/07
Biconnical Antenna	Eaton	94455-1	1096	CAL 8/17/04	8/17/06
Biconnical Antenna	Electro-Metrics	BIA-25	1171	CAL 4/29/05	4/29/07
Blue Tower Quasi-Peak Adapter	HP	85650A	2811A01279	CAL 4/13/05	4/13/07
Blue Tower RF Preselector	HP	85685A	2926A00983	CAL 9/5/05	9/5/07
Blue Tower Spectrum Analyzer	HP	8568B	2928A04729 2848A18049	CAL 4/13/05	4/13/07
LISN	Electro-Metrics	ANS-25/2	2604	CAL 8/27/04	8/27/06
LISN	Electro-Metrics	EM-7820	2682	CAL 4/28/05	4/28/07
Log-Periodic Antenna	Eaton	96005	1243	CAL 12/14/05	12/14/07

TEST PROCEDURE

Radiation Interference: The test procedure used was ANSI STANDARD C63.4-2003 using a HEWLETT PACKARD spectrum analyzer with a pre-selector. The bandwidth of the spectrum analyzer was 100 kHz with an appropriate sweep speed. The analyzer was calibrated in dB above a microvolt at the output of the antenna. The resolution bandwidth was 100KHz and the video bandwidth was 300kHz. The ambient temperature of the UUT was 86oF with a humidity of 56%.

Formula Of Conversion Factors: The field strength at 3m was established by adding the meter reading of the spectrum analyzer (which is set to read in units of dBuV) to the antenna correction factor supplied by the antenna manufacturer. The antenna correction factors are stated in terms of dB/m. The gain of the Pre-selector was accounted for in the Spectrum Analyzer Meter Reading.

Example:

Freq (MHz)	Meter Reading	+ ACF +coax loss	= FS
33	20 dBuV	+ 10.36 dB+3.10	= 46.66 dBuV/m @ 3m

Power Line Conducted Interference: The procedure used was ANSI Standard C63.4-2003 using a 50uH LISN. Both lines were observed. The bandwidth of the spectrum analyzer was 10kHz with an appropriate sweep speed.

ANSI Standard C63.4-2003 10.1.7 Measurement Procedures: The unit under test was placed on a table 80 cm high and with dimensions of 1m by 1.5m. The table used for radiated measurements is capable of continuous rotation. When an emission was found, the table was rotated to produce the maximum signal strength. At this point, the antenna was raised and lowered from 1m to 4m. The antenna was placed in both the horizontal and vertical planes.

POWER LINE CONDUCTED INTERFERENCE

Rules Part No.: Part 18.309, Part:18.311

Requirements:

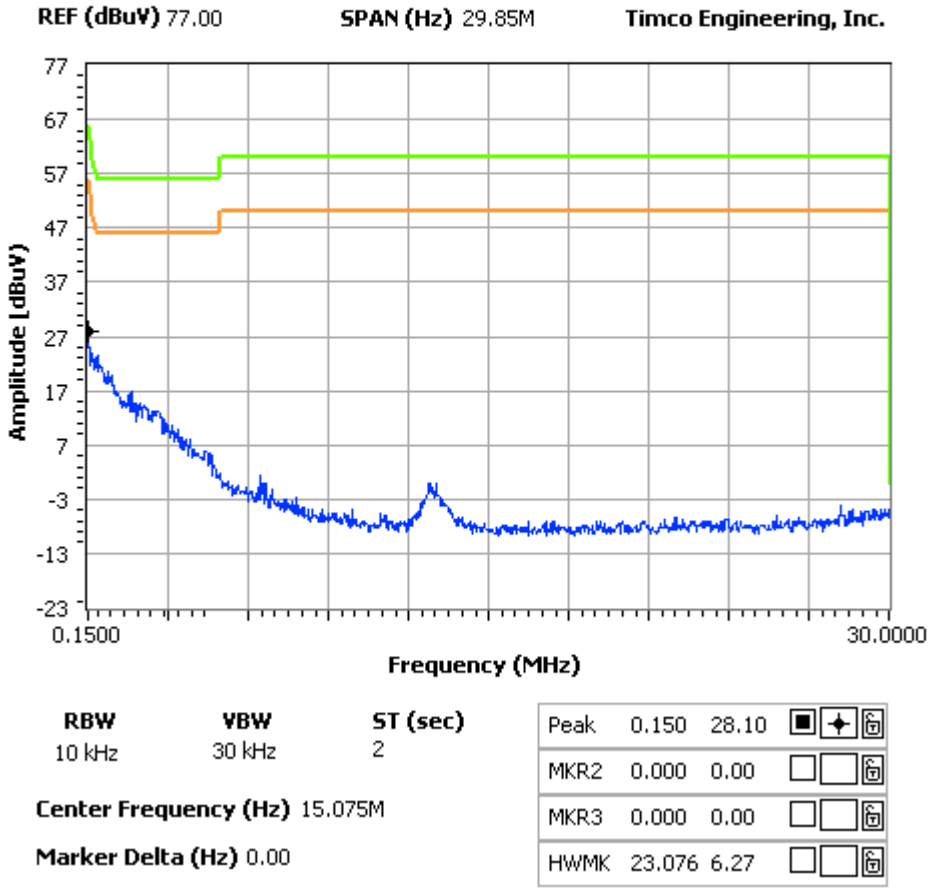
Frequency (MHz)	Quasi Peak Limits (dBuv)	Average Limits (dBuV)
0.45 – 1.6	60	60
1.60-30	69.5	69.5

Test Procedure: The spectrum was scanned from 0.15 to 30 MHz.

Test Data: Please refer to the following plots.

NOTES:
HID HUT INC. - ELECTRICAL BALLAST
POWERLINE CONDUCTED EMISSIONS PLOT - LINE 1

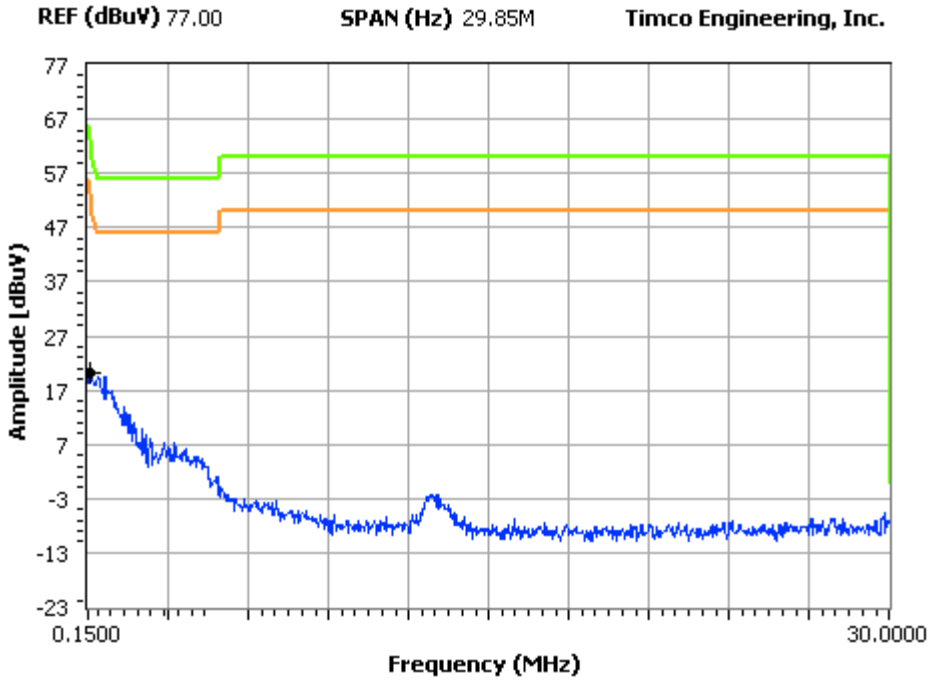
FCC 15.107 Mask Class B



NOTES:

HID HUT INC. - ELECTRICAL BALLAST
POWERLINE CONDUCTED EMISSIONS PLOT - LINE 2

FCC 15.107 Mask Class B



RBW	VBW	ST (sec)
10 kHz	30 kHz	2

Center Frequency (Hz) 15.075M

Marker Delta (Hz) 0.00

Peak	0.210	20.10
MKR2	0.000	0.00
MKR3	0.000	0.00
HWMK	23.076	6.27