

1. Scope

This applies to the CFL Inverter (cold-cathode tube inverter) HBL-0214.

2. Electrical Characteristics

a. Absolute Maximum Rating

Input voltage	5.5V MAX.
Max. output power	3.0W MAX.

b. Input/Output Characteristics

The measuring circuit and method shall be as set forth in Section 4.

(Unless otherwise specified, $T_a = 25^\circ\text{C}$)

Values are obtained 3 minutes after the power is turned on.

Item	Symbol	Specification
Input Voltage	V_{in}	$5.0V \pm 10\%$
Output current	I_o	$4.0\text{mArms} \pm 7\%$ (H/L signal : Terminal (5,6,7) = (H,H,H))
Operating Frequency	f	$70\text{KHz} \pm 10\%$
Output open voltage	V_{oc}	1200Vrms min (at ambient temperature 0°C)
Input current	I_{in}	1A MAX ($V_{in} = 4.5V$)
H/L signal	H	2.7V ~ 5.5V
	L	0.76V MAX or terminal OPEN

c. Output current control

The output current must be controllable by applying the H/L signal as follows.

The measuring circuit and meathod shall be as set forth in Section 4.

(Unless otherwise specified, $T_a = 25^\circ$)

Values are obtained 3 minutes after the power is turned on.

H/L Signal			Output current
Pin No.	Pin No.	Pin No.	
5	6	7	
L	L	L	2.0 mArms
L	L	H	2.25 mArms
L	H	L	2.44 mArms
L	H	H	2.69 mArms
H	L	L	2.97 mArms
H	L	H	3.34 mArms
H	H	L	3.62 mArms
H	H	H	4.0 mArms

FILE NAME: ACAD\MXFMR\A3121991.DWG	SCALE: NONE	REV: -	DATE: 10/14/99	SHEET 1 OF 4
TAMURA CORPORATION OF AMERICA 43352 BUSINESS PARK DRIVE • TEMECULA • CA • 92590 TEL: (909)699-1270 • FAX: 9096769482	TITLE: HBL-0214		PIEZOELECTRIC INVERTER 2.5W/5V/500VAC/4mA	
	DOCUMENT NUMBER:		P-A3-12199	
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3. Input/Output Interface Connection

a. Input

CN1: SM07B-SRSS-TB (JST)

Mating Connector : SRH-07V-S-B (JST)

Pin No.	Function
1	Vin
2	Vin
3	GND
4	GND
5	H/L signal : H or L
6	H/L signal : H or L
7	H/L signal : H or L

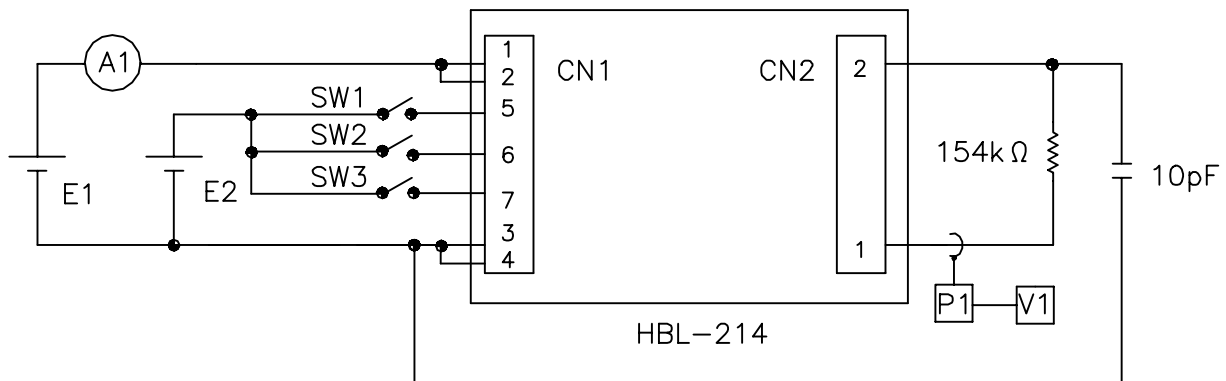
b. Output

CN2: HV-2P-HF (JAE)

Mating Connector : HV-2S-C1 (JAE)

Pin No.	Function
1	COLD
2	HOT (HIGH VOLTAGE)

4. Measuring Circuit and Method for Electrical Characteristic



E1: DC regulated power supply

5.0V±2%

E2: DC regulated power supply

5.0V±10%

V1: RMS value voltmeter

3400B (YHP) or equivalent

A1: DC ammeter

Type 2011 Class 0.5 (YEW) or equivalent

P1: Probe

P6021 (Tektronix) or equivalent

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5. Outline Dimension Drawing

Refer to Page 4 of 4.

6. Recommended CFL Applications

CFL: HMBS22JB14H280NS/AXG (Harison Electric Co., Ltd.) or equivalent

Parasitic capacitance: 8 pF ~ 12pF

7. Ambient Conditions

a. Temperature

Operating temperature: 0°C ~ 55°C

Storage temperature: -20°C ~ 70°C

b. Humidity

Operating humidity: 20% ~ 80% (No condensation)

Storage humidity: 5% ~ 90% (No condensation)

8. Reliability

The reliability has been verified on the following items

Item	Specification
High temp. storage	Ambient temperature 70°C, 240H
Low temp. storage	Ambient temperature -20°C, 240H
High temp. and humidity storage	Ambient temperature 40°C, Humidity 95%, 240H
Temperature Cycle	-20°C ~ 70°C, 5 cycle
High temperature operation	Ambient temperature 55°C, input voltage 5.5V, output current 4.0mArms, 500H (Equivalent load resistance)
ON/OFF test	1 min:ON, 1min:OFF, 50000 times (Input voltage 5.5V, output current 4.0mArms, Equivalent load resistance)
Vibration	Acceleration 3G, frequency 10~ 55Hz, sweep 45 min. Once in each of X, Y, and Z directions.
Shock	Acceleration 80G, acting time 11ms, 3 times in each of X, Y, and Z directions.

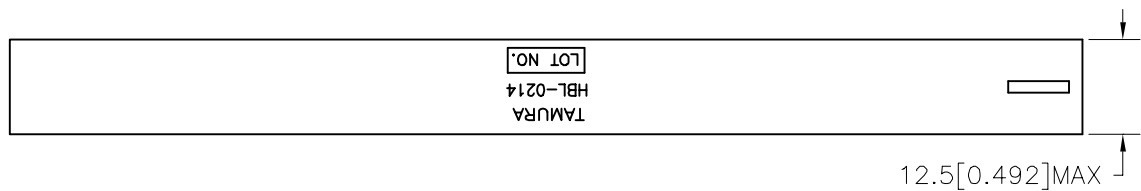
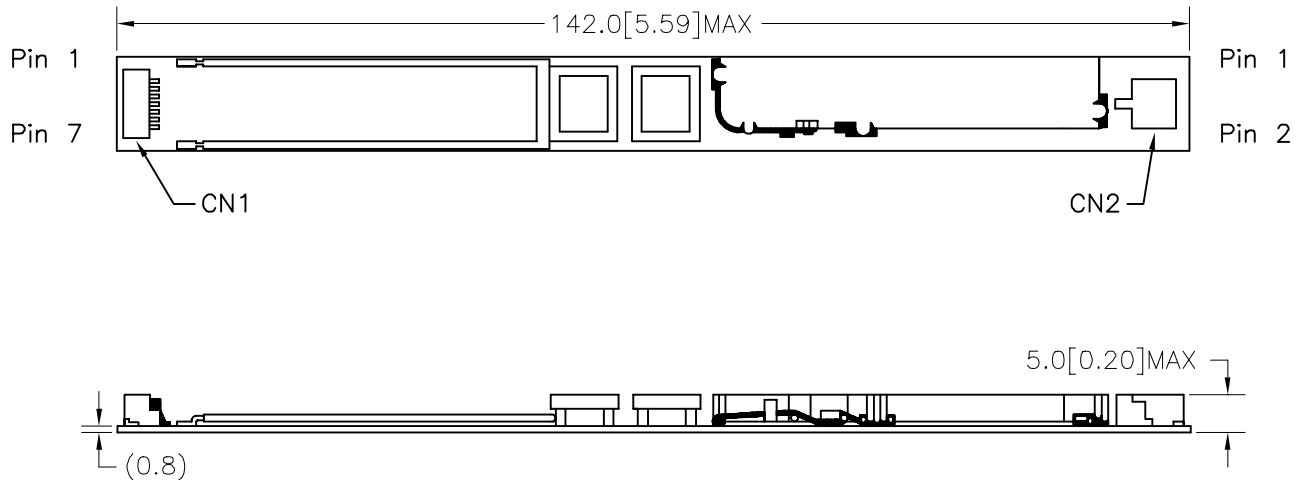
After the end of each test. leave the product at room temperature and humidity for 24 hours. The Electrical and Mechanical characteristics shall remain within spec.

9. Precautions for static electricity

When transporting this product, use materials that will not develop an electrical charge due to vibration during transportation nor will it generate any static electricity.

When handling this product, be sure to wear antistatic wrist bands or other protective equipment to prevent the product from being destroyed by any electric charge.

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CN1: SM07B-SRSS-TB (JST)

- ① Vin
- ② Vin
- ③ GND
- ④ GND
- ⑤ H/L signal
- ⑥ H/L signal
- ⑦ H/L signal

Mating Connector (JST)
 SHR-07V-S-B (Housing)
 SSH-003T-P.02 (Contact)

CN2: HV-2P-HF (JAE)

- ① COLD
- ② HOT

Mating Connector (JAE)
 HV-2S-C1 (Housing)
 IL-Z-C1-A-7000 (Contact)

Manufacturing lot number explanation

Example: The 1st lot in June, 1999

9 6 A 1

- Production Line Factory ID
- Lot number in a month A: 1st lot (ascending order of the alphabet
- Month (from January thru September : the digit, Oct: X, Nov: Y, Dec: Z)
- Last digit of the calendar year

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