PIEZOELECTRIC INVERTER 1.0W/3.6V/500VAC/2mA

1. Scope
   This applies to the CFL Inverter (cold-cathode tube inverter) HBL-0204.

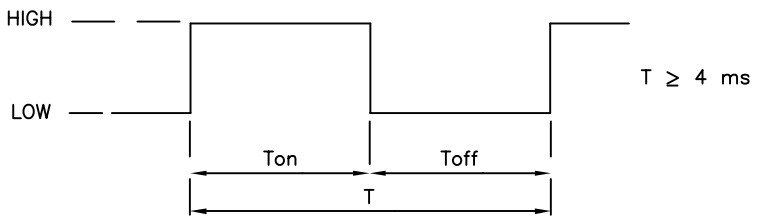
2. Electrical Characteristics
   a. Absolute Maximum Rating

Input voltage	6.5V MAX.
Max. output power	1.0W MAX.

   b. Input/Output Characteristics
      The measuring circuit and measuring method shall be as set forth in Section 3.
      (Unless otherwise specified, Ta = 25°C)
      Values are those obtained 3 minutes after the power is turned on.

Item	Specification
Input Voltage	3.0V ~ 5.5V
Rated tube current	2.0mArms ± 10%
Frequency	160KHz ± 10%
Output open voltage	900Vrms min (at ambient temperature 0°C)
Input current	350mA MAX (Vin = 3.0V Equivalent load resistance 380KΩ)
ON/OFF function	ON: ON/OFF terminal signal HIGH (2.5V ~ 5.5V) OFF: ON/OFF terminal signal LOW (0.7V MAX) (To turn on the inverter, apply voltage to the Vin terminal, then turn on the ON/OFF terminal.)
Vcc voltage	5.0V ± 5%
Vcc current	15mA MAX.

   c. Dimming
      To use the dimming function, apply the following signal to the ON/OFF terminal, with a Duty rate of 20% ~ 95%.
      No Dimming function with 100% Duty rate (always High)

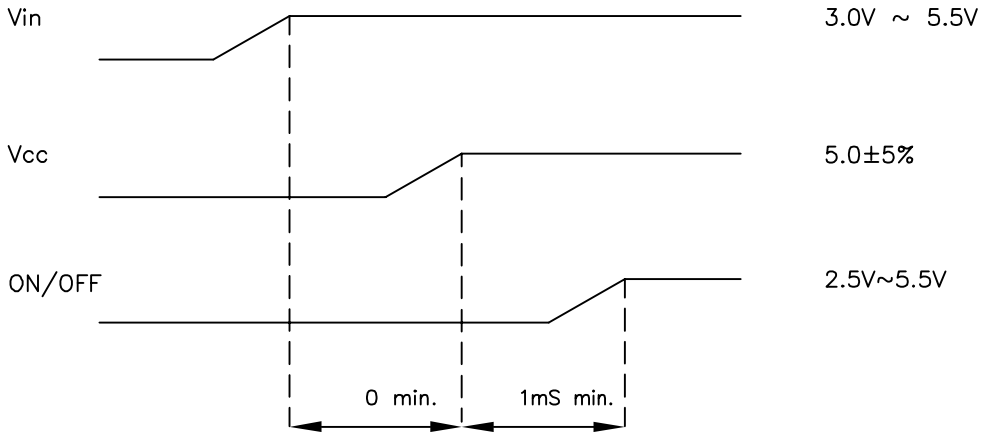


FILE NAME: ACAD\MXFMR\A3121961.DWG	SCALE: NONE	REV: D	DATE: 11/27/00	SHEET 1 OF 5
TAMURA CORPORATION OF AMERICA 43352 BUSINESS PARK DRIVE • TEMECULA • CA • 92590 TEL: (909)699-1270 • FAX: 9096769482	TITLE: HBL-0204		PIEZOELECTRIC INVERTER 1.0W/3.6V/500VAC/2mA	
	DOCUMENT NUMBER:		P-A3-12196	
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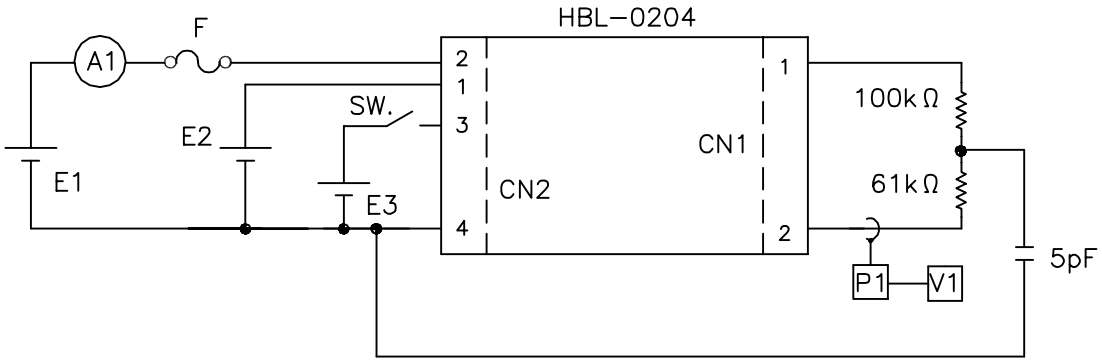
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d. Standby Current
5μA MAX @ ON/OFF terminal signal LOW, Vin=3.0V ~ 5.5V

e. Input Sequence



3. Measuring Circuit and Method for Electrical Characteristic



E1: DC regulated power supply	3.0V ~ 5.5V
E2: DC regulated power supply	5.0V±5%
E3: DC regulated power supply	2.5V ~ 5.5V
V1: RMS voltmeter	3400B (YHP) or equivalent
A1: DC ammeter	Type 2011 Class 0.5 (YEW) or equivalent
P1: Probe	P6021 (Tektronix) or equivalent
F1: Fuse	CCP2E25 (KOA)

FILE NAME: ACAD\MXFMR\A3121962.DWG	SCALE: NONE	REV: D	DATE: 11/27/00	SHEET 2 OF 5
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4. Ambient Conditions

a. Temperature
Operating temperature: 0°C ~ 60°C
Storage temperature: −20°C ~ 70°C

b. Humidity
Operating humidity: 20% ~ 80% (No condensation)
Storage humidity: 5% ~ 90% (No condensation)

5. Reliability
The reliability is verified on the following items

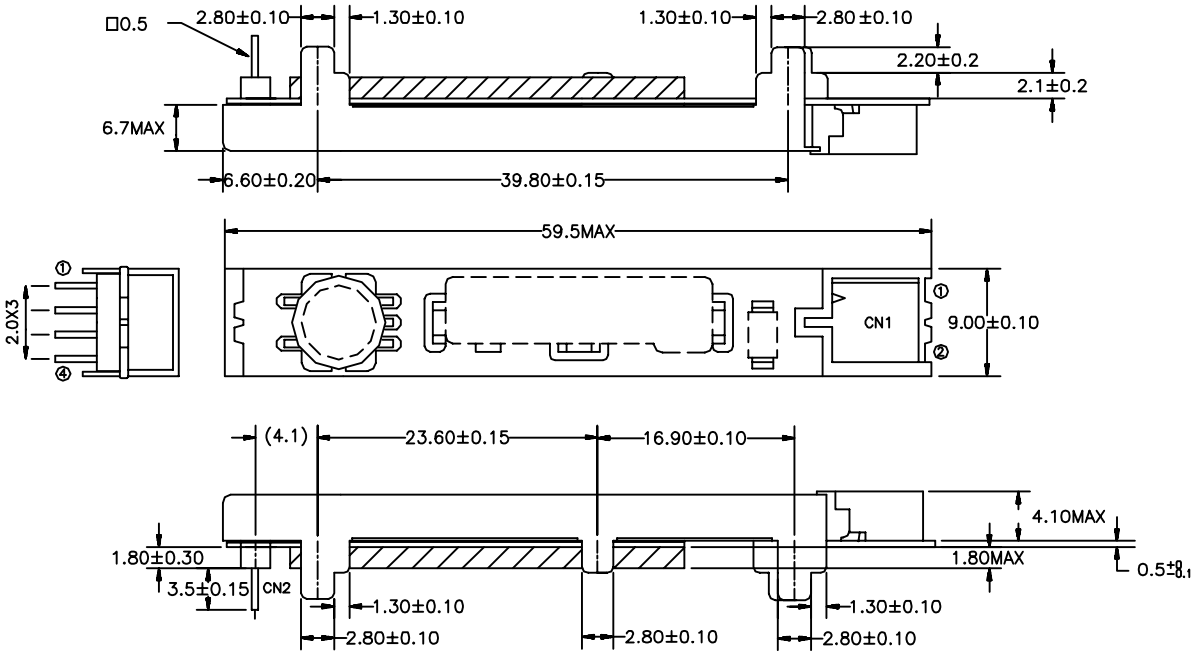
Item	Specification
High temp. storage	Ambient temperature 70°C, 240H
Low temp. storage	Ambient temperature −20°C, 240H
High temp. and humidity storage	Ambient temperature 40°C, Humidity 95%, 240H
Temperature Cycle	−20°C ~ 70°C, 5 cycles
High temperature operation	Ambient temperature 60°C, input voltage 5.5V, output current 2.0mArms, 500H (Equivalent load resistance)
ON/OFF test	1 min:ON, 1min:OFF, 50000 times (Input voltage 5.5V, output current 2.0mArms, 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.

6. Precautions for static electricity
When transporting this product, use materials that will not develop an electrical charge. 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.

7. This inverter does not have a fuse.

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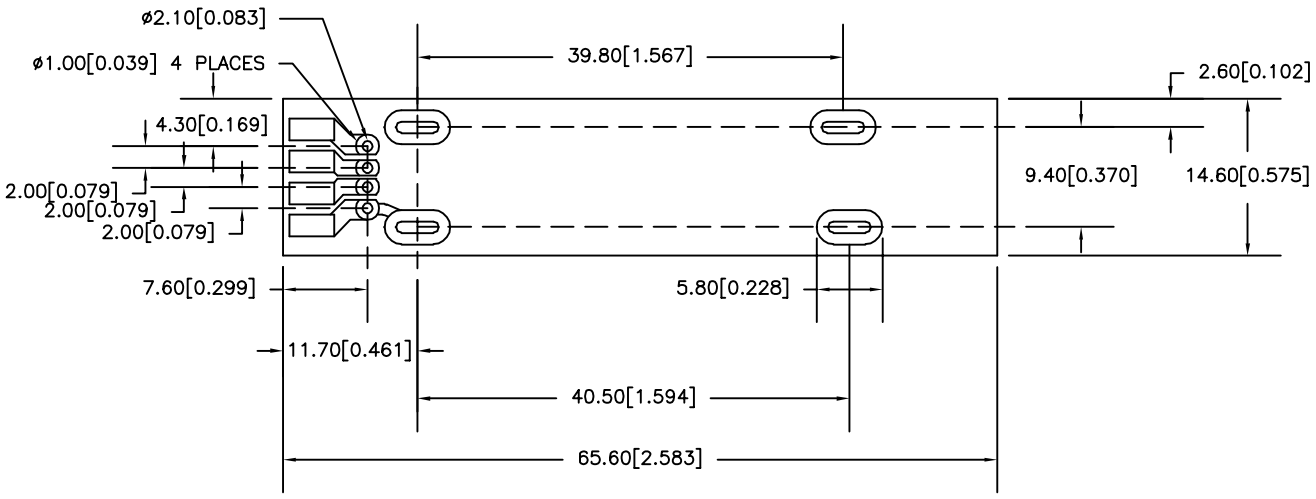
CN1: HV−2P−HF (JAE)
① High
② Low

Mating Connector: HV−2S−C1 (JAE)
IL−Z−C1−A−7000 (Contact)

CN2: A4B−4PA−2DSA (HRS)
① Vcc
② Vin
③ ON/OFF
④ GND

Through Hole Soldering

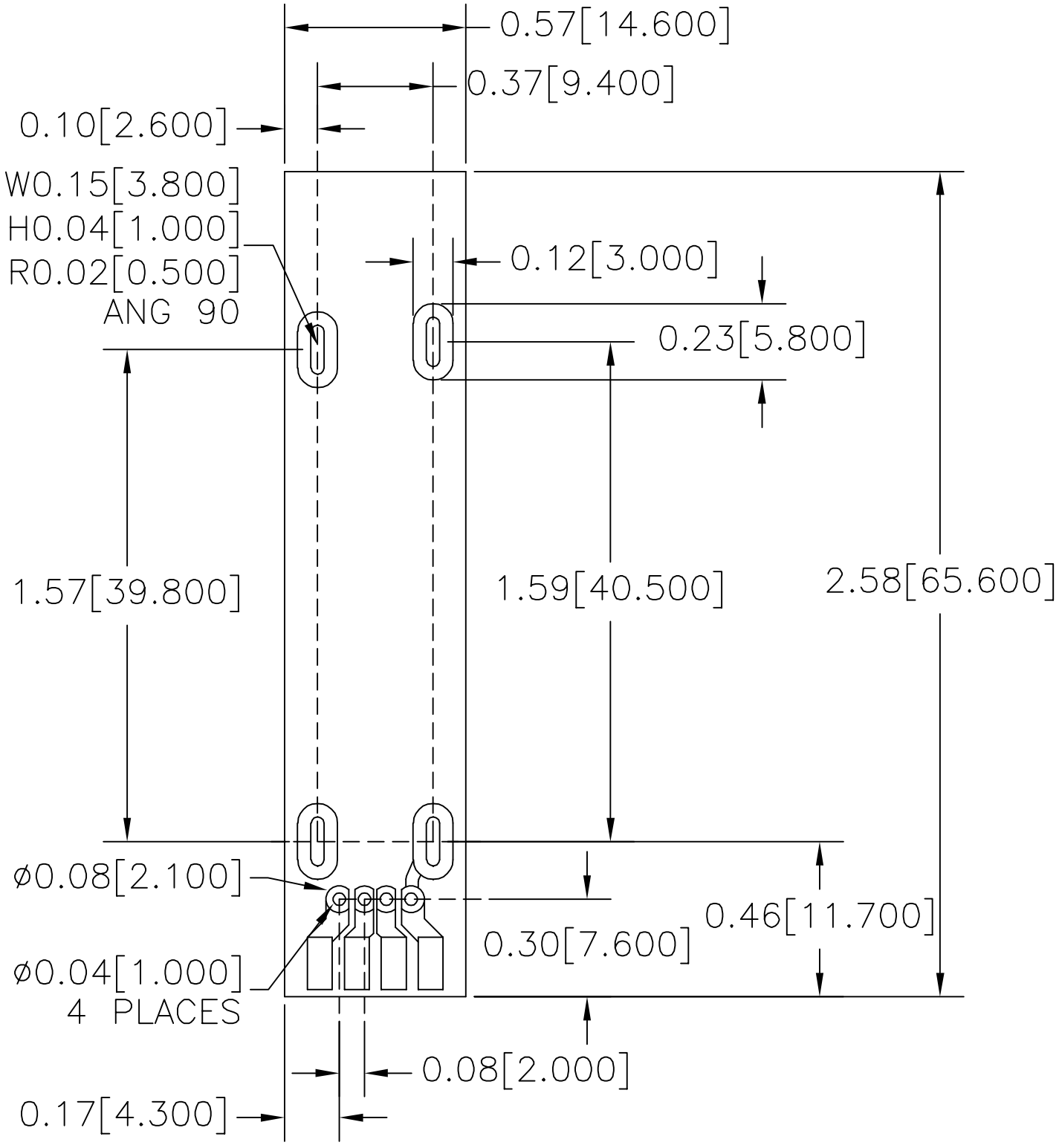
RECOMMENDED BOARD LAYOUT



FILE NAME: ACAD\MXFMR\A3121964.DWG	SCALE: NONE	REV: D	DATE: 11/27/00	SHEET 4 OF 5
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