

DC-AC INVERTER UNIT

PS-DA0250-01(S) (4 W SINGLE OUTPUTS)

(PRELIMINARY INFORMATION)

DESCRIPTION :

This low profile DC to AC Inverter is developed for single lamps.

Please contact us for confirmation regarding compatibility with your display.

APPLICABLE LCD:

- 6 to 12 inches single lamp type
- Lamp Voltage: 600 Vrms
- Lamp Current: 6.0 mArms
- Lamp Start Up Voltage: 1.500 Vrms (Vin : 5 Vdc)



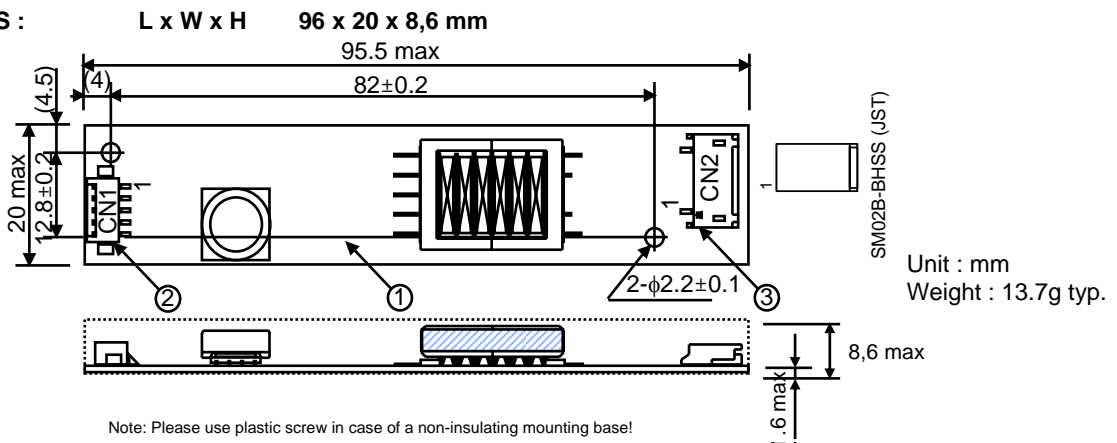
FEATURES :

- Wide Operating temperature range
- Ext. PWM-Dimming
- Remote ON/OFF
- RoHS compliant (S)

TEMPERATURE & HUMIDITY :

- Operating Temperature Range -10°C ~ +60°C
- Storage Temperature Range -30°C ~ +85°C
- Humidity 95 %RH max

DIMENSIONS :



Components

| No. | Part Description | Qty. | Material | Note |
|-----|------------------|------|-------------------------|----------------|
| 1 | PCB | 1 | UL94V-0 (FR-4 or CEM-3) | t=1.6mm |
| 2 | Connector CN1 | 1 | 53261-0590 | Molex or equal |
| 3 | Connector CN2 | 1 | SM02(8.0)B-BHS-1-TB | JST or equal |
| | | | SM02B-BHSS-1-TB | JST or equal |

Input side CN1:

| Pin No. | Symbols | Ratings |
|---------|---------|--------------------------------|
| CN 1-1 | Vin | 4.75 ~ 5.25 Vdc |
| CN 1-2 | GND | |
| CN 1-3 | Vrmt | 0 ~ 0.5 = OFF / 2.5 ~ Vin = ON |
| CN 1-4 | Vbr | ext. PWM (low-active) |
| CN 1-5 | N.C. | |

Output side CN2 SM02(8.0)B-BHS:

| Pin No. | Symbols | Ratings |
|---------|---------|----------------------|
| CN 2-1 | Vhigh | 600 Vrms (6.0 mArms) |
| CN 2-2 | N.C. | - |
| CN 2-3 | Vlow | (GND) |

Output side CN2 SM02B-BHSS:

| Pin No. | Symbols | Ratings |
|---------|---------|----------------------|
| CN 2-1 | Vhigh | 600 Vrms (6.0 mArms) |
| CN 2-2 | GND | - |

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(PRELIMINARY INFORMATION)

ELECTRICAL CHARACTERISTICS :

| Parameters | Symbols | Conditions | | | Specification | | | Unit | Note |
|----------------------|---------|------------|----------|---------|---------------|-------|------|-----------------|-----------|
| | | Vin (V) | Vrmt (V) | Tu (°C) | Min. | Typ. | Max. | | |
| Output Current | Iout | 5±0.25 | 5±0.25 | 0 ~ +60 | 5.3 | 6.0 | 6.7 | mArms | Duty 100% |
| | | 5±0.25 | 5±0.25 | 0 ~ +60 | - | 20 | - | % | Duty min |
| Input Current | Iin | 5 | 5±0.25 | 0 ~ +60 | - | 0.8 | 1.0 | A _{dc} | |
| Frequency | F | 5±0.25 | 5±0.25 | 0 ~ +60 | 35 | 45 | 55 | kHz | |
| Open Circuit Voltage | Vopen | 5±0.25 | 5±0.25 | 0 ~ +60 | 1.600 | 1.800 | - | Vrms | |

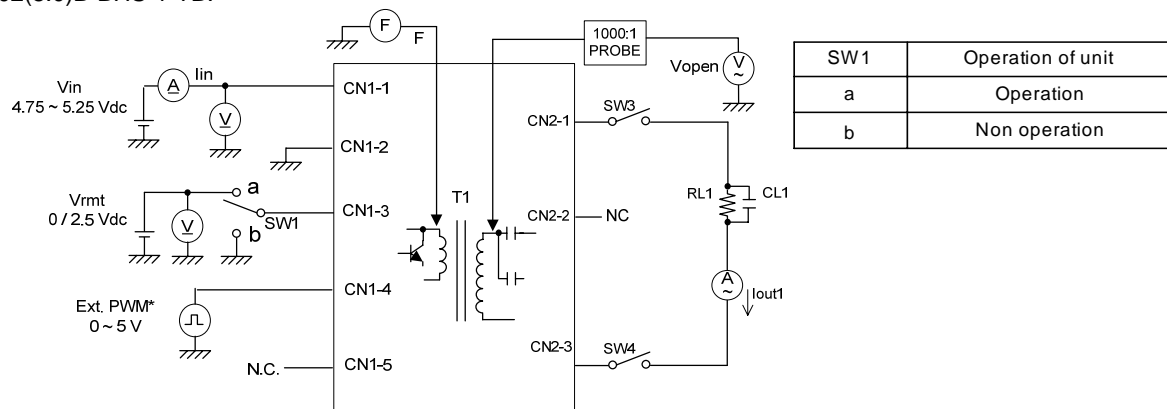
Note 1 : Please keep minimum of 2mm clearance (all directions) between inverter high voltage area as marked on mechanical drawing and any conductors.

Note 2 : Remote ON/OFF (CN1-3) has priority and can not be used in combination with External PWM Dimming (CN1-4). When 'Ext.PWM' (CN1-4) is used 'Vrmt' (CN1-3) should not be connected.

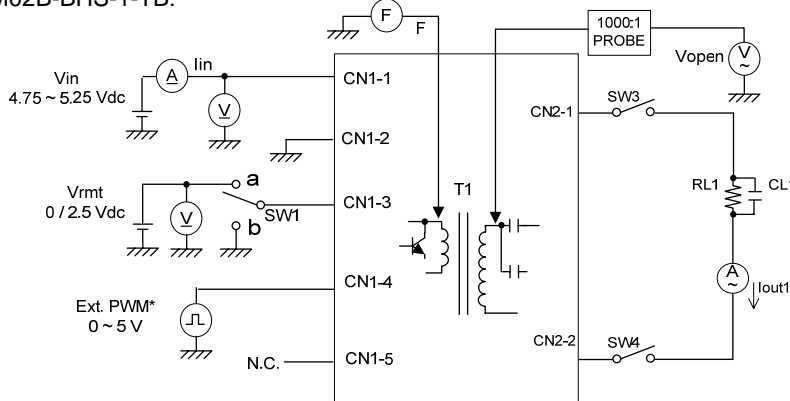
Note 3 : The inverter is optimized for external PWM Signal of 250 Hz (TTL High Active).
The frequency could be 100 Hz ~ 2 kHz. Please take care about the vertical frequency harmonics.

TEST CIRCUIT :

SM02(8.0)B-BHS-1-TB:



SM02B-BHS-1-TB:



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