

# DC-AC INVERTER UNIT

**PS-DA0129-183 (S) (5 W SINGLE OUTPUT)**

(PRELIMINARY INFORMATION)

## DESCRIPTION :

This DC to AC Inverter was developed for notebook computer and many other low LCD Backlight power supply as low profile applications, either for Note Book PC or Industrial. Optimized for **Kyocera: TCG057QV1AC-G50 and KCG047QV1AA-A21**

## APPLICABLE LCD:

10 to 12 inches single lamp type  
Lamp Voltage 685 Vrms  
Lamp Current 5.0 mArms  
Lamp Start Up Voltage 1.600 Vrms (Vin : 5 Vdc)



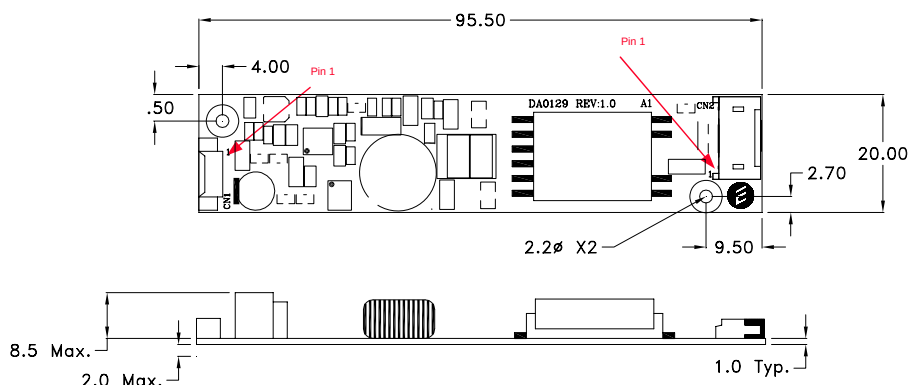
## FEATURES :

Current Feedback Circuit  
High Efficiency  
Low noise with voltage resonant circuit  
Regulated output current  
RoHS compliant (S)

## TEMPERATURE & HUMIDITY :

Operating Temperature Range -10°C ~ +55°C  
Storage Temperature Range -20°C ~ +85°C  
Humidity 95 %RH max

**DIMENSIONS : L x B x H 95.5 x 20.0 x 9.5**



Unit : mm  
Weight :20(g) typ.

Note: Please use plastic screw in case of a non-insulating mounting base!

## Components

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

### Input side CN1:

| Pin No. | Symbols | Ratings                        |
|---------|---------|--------------------------------|
| CN 1-1  | Vin     | 4.5 ~ 5.5 Vdc                  |
| CN 1-2  | GND     | -                              |
| CN 1-3  | Vrmt    | 0 ~ 0.5 = OFF / 2.5 ~ Vin = ON |
| CN 1-4  | Vbr     | 0 ~ 3 Vdc                      |
| CN 1-5  | N.C.    | -                              |

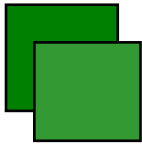
### Output side CN2

| Pin No. | Symbols | Ratings             |
|---------|---------|---------------------|
| CN 2-1  | Vhigh   | 685Vrms (5.0 mArms) |
| CN 2-2  | N.C.    | -                   |
| CN 2-3  | Vlow    | (GND)               |

## Power Systems – The Power Solution

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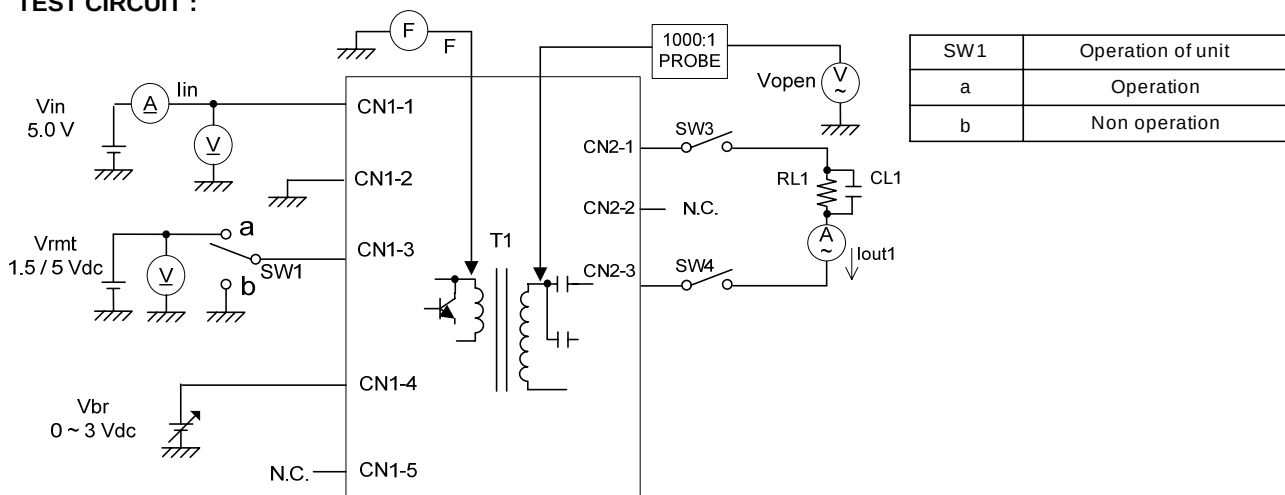
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## ELECTRICAL CHARACTERISTICS :

| Symbols | Conditions |         |           | Specification |       |       | Unit  | Note           |
|---------|------------|---------|-----------|---------------|-------|-------|-------|----------------|
|         | Vin (V)    | Vbr (V) | Tu (°C)   | Min.          | Typ.  | Max.  |       |                |
| Iout    | 5±0.25     | 0.0     | -10 ~ +55 | 4.5           | 5.0   | 5.5   | mArms | Duty = 100%    |
| Iout    | 5±0.25     | 3.0     | -10 ~ +55 | 2.0           | 2.5   | 3.0   | mArms | Duty = 50%min. |
| Iin     | 5±0.25     | 0.0     | -10 ~ +55 | -             | 0.8   | 1.0   | Adc   |                |
| F       | 5±0.25     | 0.0     | -10 ~ +55 | 35            | 45    | 55    | kHz   |                |
| Vopen   | 5±0.25     | 0.0     | -10 ~ +55 | 1.500         | 1.600 | 1.800 | Vrms  |                |
| Tsd     | 5±0.25     | 0.0     | -10 ~ +55 | -             | 1.0   | -     | sec   | without load   |

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

## TEST CIRCUIT :



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