

DC-AC INVERTER UNIT

PS-DA0143-291(S) (5 W SINGLE OUTPUT)

(PRELIMINARY INFORMATION)

DESCRIPTION :

This low profile DC/AC inverter is developed for single lamps.

Optimized for Kyocera: TCG057VG1AC-H50-8X-16-20, 18th Feb. 2008

APPLICABLE LCD:

- Lamp Voltage 655 Vrms
- Lamp Current : 5.0 mArms
- Lamp Start Up Voltage 2.400 Vrms (Vin : 12 Vdc)



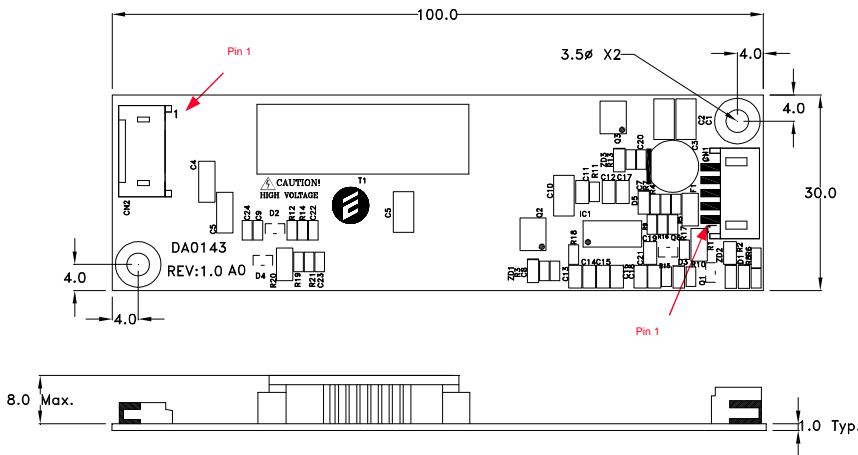
FEATURES :

- Current balance circuit
- Extra high starting Voltage
- RoHS compliant (S)
- Ext. PWM Dimming

TEMPERATURE & HUMIDITY :

- Operating Temperature Range -10°C ~ +70°C
- Storage Temperature Range -30°C ~ +85°C
- Humidity 95 %RH max

DIMENSIONS : L x B x H 100 x 30 x 9 mm



Unit : mm
Weight :15 (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	S5B-PH-SM3	JST or equal
3	Connector CN2	1	SM02(8.0)B-BHS-1-TB	JST or equal

Power Systems – The Power Solution

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Input side CN1:

Pin No.	Symbols	Ratings
CN 1-1	Vin	10.8~13.2 Vdc
CN 1-2	GND	-
CN 1-3	Ext. PWM	0~1 Vdc Low / 3~5 Vdc High(L activ)
CN 1-4	N.C.	-
CN 1-5	Vrmt	0 ~ 0.4 = OFF / 3.0 ~ 5.5 = ON

Output side CN2

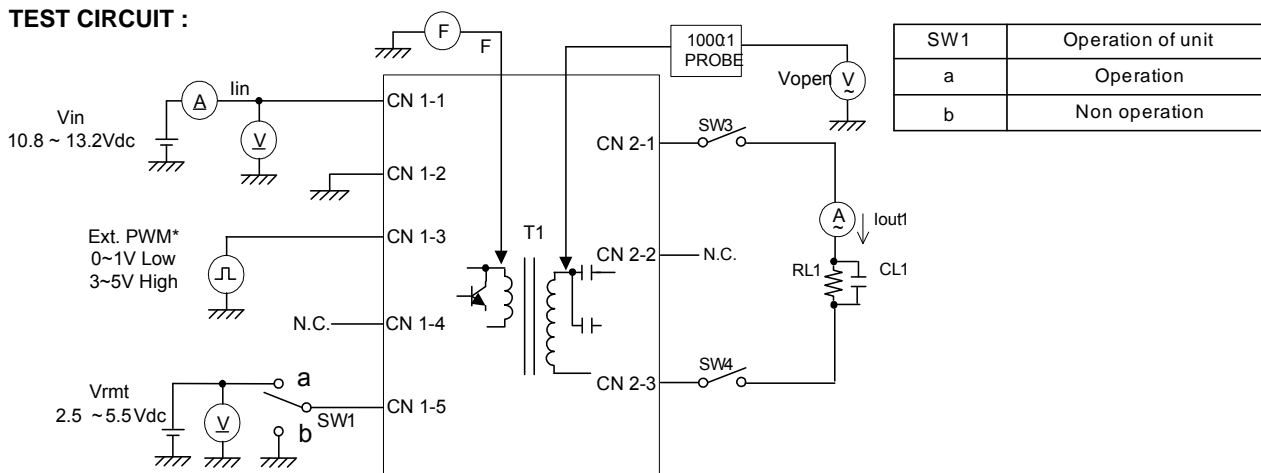
Pin No.	Symbols	Ratings
CN 2-1	Vhigh	655Vrms (5mArms)
CN 2-2	N.C.	-
CN 2-3	Vlow	GND

ELECTRICAL CHARACTERISTICS :

Parameters	Symbols	Conditions			Specification			Unit	Note
		Vin (V)	Vbr (V)	Tu (°C)	Min.	Typ.	Max.		
Output Current	Iout	12±1.2	0.0	-10 ~ +70	4.5	5.0	5.5	mArms	Duty 100%
Output Current	Iout	12±0.6	5.0	-10 ~ +70	-	20	-	%	
Input Current	Iin	12±1.2	0.0	-10 ~ +70	-	0.4	0.5	Adc	
Inrush Current	Ipeak	12±1.2	0.0	-10 ~ +70			1.5	Adc	max 6msec
Frequency	F	12±1.2	0.0	-10 ~ +70	50	60	70	kHz	
Open Circuit Voltage	Vopen	11.4	0.0	-10 ~ +70	2.200	2.400	2.700	Vrms	
No Load Shutdown	Tsd	12±1.2	0.0	-10 ~ +70	-	1.0	-	sec	without load

- Note 1 : Please keep a minimum of 2mm clearance in all directions between inverter high voltage areas and any conductors as marked on mechanical drawing.
- Note 2: The external PWM-frequency should be within the range of 100 ~ 500Hz. For other frequencies please request. The optimum frequency is normally 250 Hz and this minimizes the interference of the vertical sync frequency.
- Note 3: Please provide Vcc before applying any control signals into inverter. Reverse the sequence during power off which is control signal off first then Vcc.
- Note 4: The input current could vary according to the parasitic capacities inside the panel.

TEST CIRCUIT :



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