DC-AC INVERTER UNIT

CXA-0308 (8W DUAL OUTPUTS WITH DIMMING FUNCTION)

DESCRIPTION :

This low profile DC to AC Inverter is developed for dual lamps, low power LCD back-light. Application includes industrial PC and LCD monitor.

Applicable LCD; 10 to 12 inches double lamp type
Lamp Voltage 600Vrms
Lamp Current 5mArms
Lamp Start Up Voltage 1250Vrms (Vin : 12V)

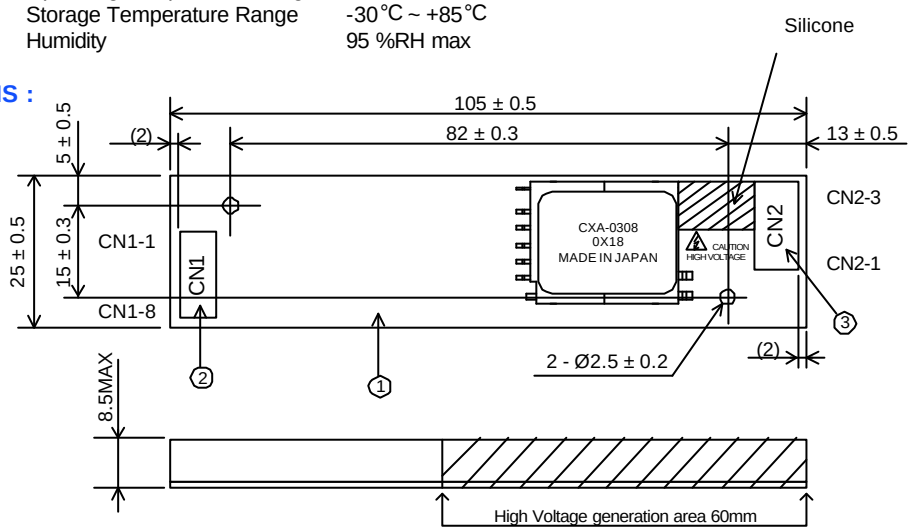
FEATURES :

Wide operating temperature range
Alarm signal function
PWM dimming type.
Current Feedback Circuit
Silicon Coating in High Voltage area

TEMPERATURE & HUMDITY :

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

DIMENSIONS :



Unit : mm
Weight :20 (g) typ.

No.	Part Description	Qty.	Note	
1	PWB	1	UL94V-0	t=1.0mm
2	Connector CN1	1	53261-0890	(Molex)
3	Connector CN2	1	SM03(4.0)B-BHS	(JST)

CN1 : 53261-0890 (Molex)

Pin	Symbol	Note
CN1-1	Vin	10.8 ~ 13.2V
CN1-2		
CN1-3	GND	0 V
CN1-4		
CN1-5	Vrmt	0 ~ 0.4V : OFF 2.5V ~ Vin : ON
CN1-6	Vbr1 / Rbr1	0 ~ 2.5V / 0 ~ 50kΩ
CN1-7	Vbr2 / Rbr2	GND / 0 ~ 50kΩ
CN1-8	Vst*1	0V / 5V

CN2 : SM03(4.0)B-BHS (JST)

Pin	Symbol	Note
CN2-1	Vlow	(2V)
CN2-2	Vhigh2	600Vrms (5mArms)
CN2-3	Vhigh1	600Vrms (5mArms)

*1. This is an output pin and it is active high (+5V) if any Lamp opens / fails

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Tel : +1-847-390-4439 (USA)
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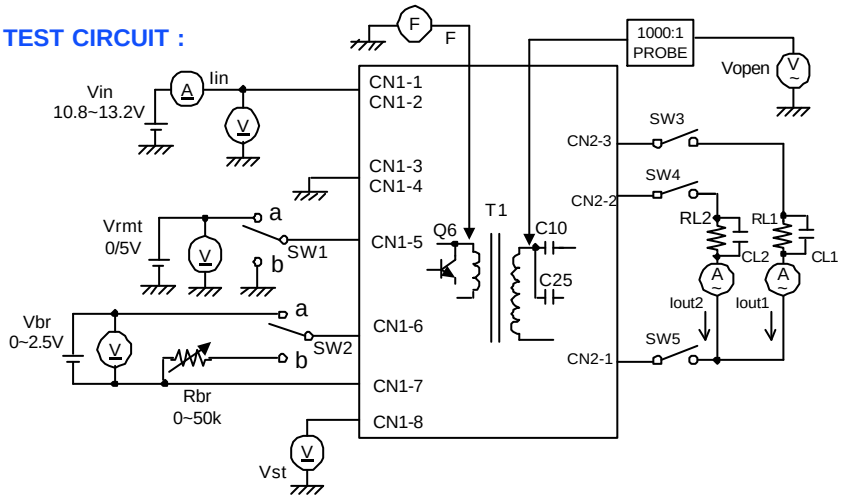
ELECTRICAL CHARACTERISTICS :

Parameters	Symbol	Conditions					Specifications			Unit	Note
		Vin (V)	Vrmt (V)	Vbr / VR	Ta (℃)	RL1 (kΩ) // CL1(pF) RL2 (kΩ) // CL2(pF)	min.	typ.	max.		
Output Current	Iout1 / Iout2	12 ± 1.2	5 ± 0.25	0V / 0Ω	-10 ~ +70	95 ~ 105 // 5 95 ~ 105 // 5	4.3	5.0	5.7	mArms	Max Brightness.
		12 ± 0.6	5 ± 0.25	0V / 0Ω	23 ± 5	100 // 5 100 // 5	4.5	5.0	5.5	mArms	
		12 ± 0.6	5 ± 0.25	2.5V / 50kΩ	23 ± 5	95 ~ 105 // 5 95 ~ 105 // 5	1.8	2.5	3.2	mArms	Min Brightness.
Input Current 1	Iin1	12 ± 0.6	5 ± 0.25	0V / 0Ω	-10 ~ +70	100 // 5 100 // 5	-	0.55	0.9	Adc	
Input Current 2	Iin2	12 ± 0.6	0 ± 0.25	0V / 0Ω	-10 ~ +70	95 ~ 105 // 5 95 ~ 105 // 5	-	-	1	mAdc	
Frequency	F1	12 ± 0.6	5 ± 0.25	0V / 0Ω	-10 ~ +70	95 ~ 105 // 5 95 ~ 105 // 5	50	55	60	kHz	
Frequency (Duty)	F2	12 ± 0.6	5 ± 0.25	2.5V / 50kΩ	-10 ~ +70	95 ~ 105 // 5 95 ~ 105 // 5	220	250	280	Hz	
Open Voltage	Vopen	10.8	5 ± 0.25	0V / 0Ω	-10 ~ +70	∞ ∞	1200	1250	1500	Vrms	
Alarm SIgnal (Note 4)	Vst	12 ± 1.2	5 ± 0.25	0V / 0Ω	-10 ~ +70	95 ~ 105 // 5 ∞	4.5	5.0	5.5	Vdc	RL2 // CL2 open
		12 ± 1.2	5 ± 0.25	0V / 0Ω	-10 ~ +70	∞ 95 ~ 105 // 5	4.5	5.0	5.5	Vdc	RL1 // CL1 open
		12 ± 1.2	5 ± 0.25	0V / 0Ω	-10 ~ +70	95 ~ 105 // 5 95 ~ 105 // 5	-	0	0.5	Vdc	Normal

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 : Open circuit on all lamps for more than 3 seconds, will shut the inverter down.

TEST CIRCUIT :



SW1	Operation of unit
a	Operation
b	Non operation

SW2	Operation of unit
a	Voltage dimming Vbr=0~2.5V
b	Variable resistance dimming VR=0~50kΩ

Note 3: In test circuit; 5pF capacitor across the load resistor is add to simulate LCD back-light stray capacitor.

Note 4 : In test circuit; if any of switches SW3, Sw4 or SW5 opens , then the alarm signal will be activated (+5V).

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