Endicott Research Group, Inc.
2601 Wayne St., Endicott, NY 13760
607-754-9187 Fax 607-754-9255
http://www.ergpower.com

SE3322

Specifications and Applications Information

02/10/11

8m Class
Single Lamp
DC to AC Inverter

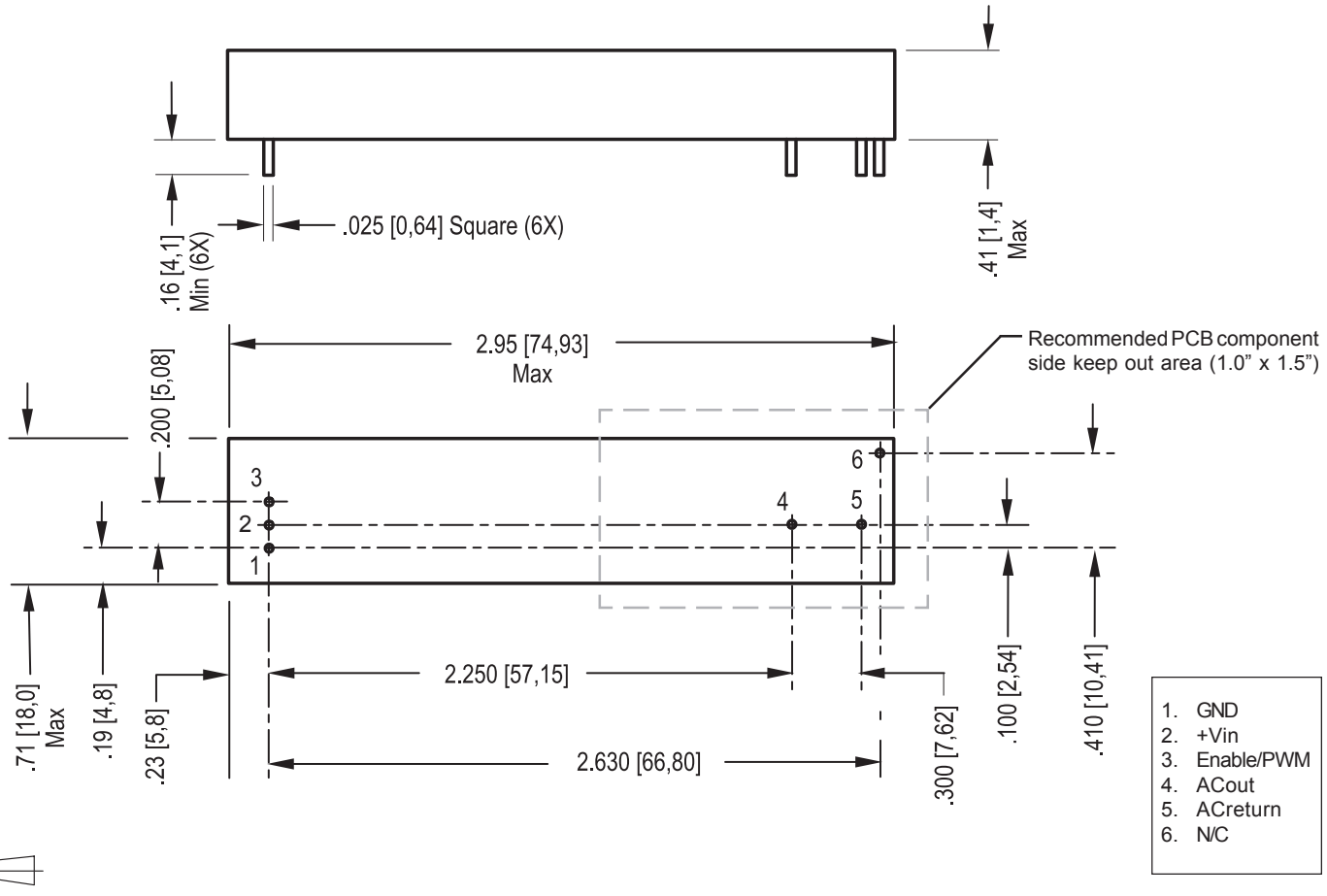
The SE3322 (*S-Series*) dc to ac inverter is specifically designed to power the backlights of the Hantronix HDM3224-C-WRDF and the Three-Five DG32240-19SNCW-H displays to a moderate brightness level from a +5 volt dc source.

The SE3322's small size and encapsulated package make it the ideal power source for applications where size, high efficiency and reliability are critical.

This standard inverter is designed to satisfy the most common cold-cathode lighting requirements for the HDM3224-C-WRDF and DG32240-19SNCW-H displays. Custom units, providing different inputs, outputs or package refinements are available.

S-Series

Package Configuration



Absolute Maximum Ratings

Rating	Symbol	Value	Units
Input Voltage Range	V_{in}	-0.3 to +5.5	Vdc
Storage Temperature	T_{stg}	-40 to +85	°C

Operating Characteristics

With the referenced display and lamp warm-up of 5 minutes.
Unless otherwise noted Vin = 5.00 Volts dc and Ta = 25°C

Characteristic	Symbol	Min	Typ	Max	Units
Input Voltage	V_{in}	+4.50	+5.00	+5.25	Vdc
Component Surface Temperature (note 1)	T_s	-20	-	+80	°C
Input Current (note 2)	I_{in}	-	0.47	0.55	Adc
Operating Frequency	F_o	33	38	43	kHz
Minimum Output Voltage (note 3)	V_{out} (min)	1400	-	-	Vrms
Efficiency	η	-	73	-	%
Output Current (per lamp)	I_{out}	-	5.7	-	mArms
Output Voltage	V_{out}	-	300	-	Vrms
Enable Pin Input Current Requirement (note 4)	I_{Enable}	-	4.2	-	mAdc

Specifications subject to change without notice.

(Note 1) Surface temperature must not exceed 80 degrees C; thermal management actions may be required.
(Note 2) Input current in excess of maximum may indicate a load/inverter mismatch condition, which can result in reduced reliability. Please contact ERG technical support.
(Note 3) Provided data is not tested but guaranteed by design.
(Note 4) Required User Enable/Disable Interface Circuit is shown on page 3.

Application Notes:

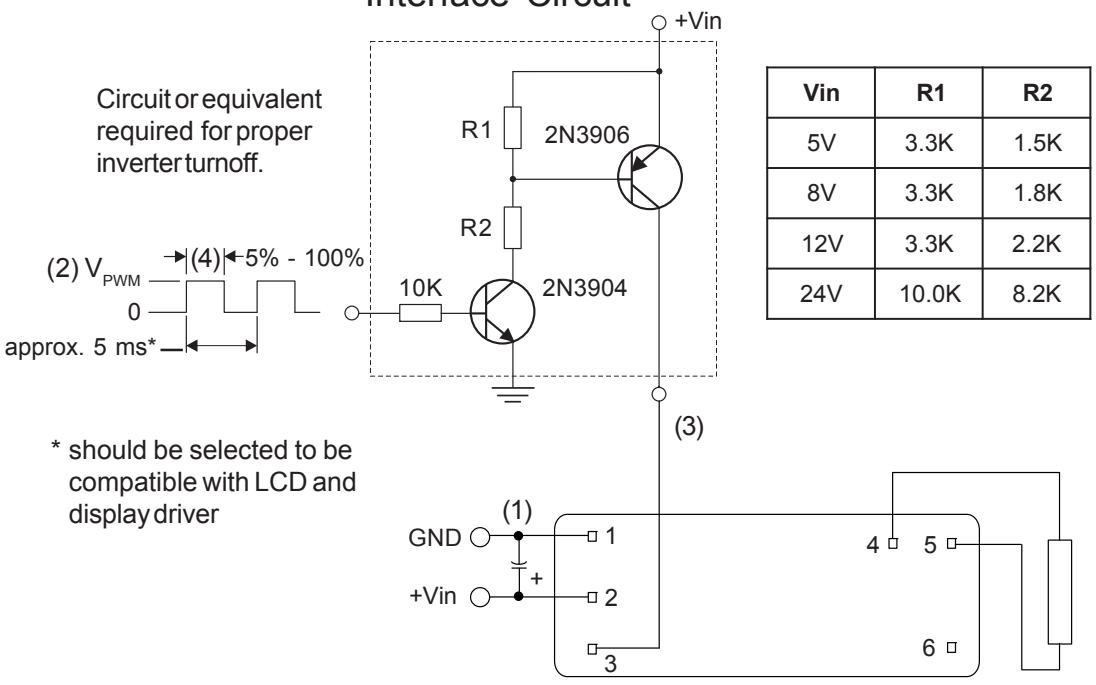
1) Printed circuit boards to be free of traces beneath the inverter.
2) The minimum distance from high voltage areas of the inverter to any conductive material should be .12 inches per kilovolt of starting voltage.
3) ACreturn should be left floating, not grounded.
4) Contact ERG for possible exceptions.

Endicott Research Group, Inc.
2601 Wayne St., Endicott, NY 13760
607-754-9187 Fax 607-754-9255
http://www.ergpower.com

Made in USA

PWM Dimming

Required User Enable/Disable Interface Circuit



Vin	R1	R2
5V	3.3K	1.5K
8V	3.3K	1.8K
12V	3.3K	2.2K
24V	10.0K	8.2K

(1) Low ESR type input by-pass capacitor (22 uF - 100 uF) may be required to reduce reflected ripple.
(2) V_{PWM} from 2.4V to less than or equal to +Vin.
(3) Full brightness without PWM control requires that pin 3 be tied to +Vin. Pin 3 must be at 0V to turn off.
(4) Duty Cycle 5% - 100%.

Endicott Research Group, Inc. (ERG) reserves the right to make changes in circuit design and/or specifications at any time without notice. Accordingly, the reader is cautioned to verify that data sheets are current before placing orders. Information furnished by ERG is believed to be accurate and reliable. However, no responsibility is assumed by ERG for its use.