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DMC42643

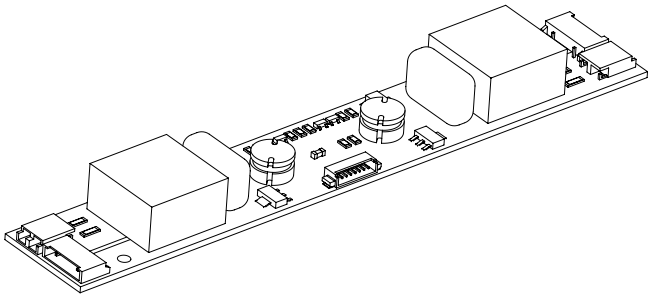
Specifications and Applications Information

11/27/01 Preliminary

Four Tube DC to AC Inverter

The ERG DMC42643 (DMC4 Series) DC to AC inverter features onboard connectors and can be easily dimmed using an external pulse-width modulated control signal. This unit is less than 13mm in height and the two mounting holes makes installation very straight forward.

Powered by a regulated 12 volt DC source the DMC42643 is specially designed to power the Acer L170E3-4 backlights.

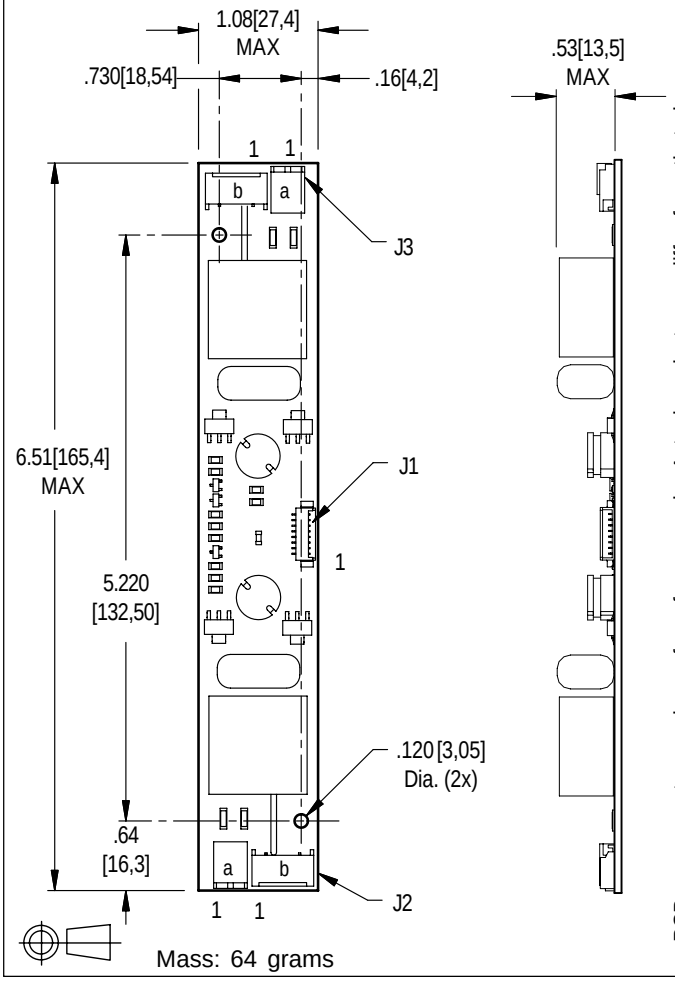


DMC4 Package

Product Features

- ✓ Small Package Size, less than 13mm in height.
- ✓ High Efficiency
- ✓ Made in U.S.A.

Package Configuration



Mass: 64 grams

Connectors

J1 - (Input)
MOLEX
22-05-3061

J1-1	V_{in}
J1-2	V_{in}
J1-3	GND
J1-4	GND
J1-5	Enable
J1-6	N/C
J1-7	N/C
J1-8	N/C

J2a,J3a - (Outputs)
N/A

J2a, J3a-1	N/A
J2a, J3a-2	N/A

J2b,J3b - (Outputs)
JST
SM04(4.0)B-BHS-1-TB

J2b, J3b-1	AC_{out}
J2b, J3b-2	AC_{out}
J2b, J3b-3	AC_{com}
J2b, J3b-4	AC_{com}

DMC42643

Absolute Maximum Ratings (Note 1)

Rating	Symbol	Value	Units
Input Voltage	V_{in}	-0.3 to +13.2	V_{DC}
Enable	V_{Enable}	-0.3 to +13.2	V_{DC}
Operating Temperature	T_a	0 to +70	°C
Storage Temperature	T_s	-40 to +85	°C

Recommended Operating Conditions

Rating	Symbol	Value	Units
Input Voltage	V_{in}	+6 to 13.2	V_{DC}
Operating Temperature (Note 2)	T_a	0 to +50	°C

Electrical Characteristics

Unless otherwise noted Vin = 12.00 Volts DC , T_a = 25 °C and unit has been running for 15 minutes.

Characteristic	Symbol	Min	Typ	Max	Units
Inverter					
Input Current	I_{in}	-	1.75	2.1	A_{DC}
Input Ripple Current	I_{rip}	-	-	-	mA_{pk-pk}
Operating Frequency	F_o	36	41	46	KHz
Efficiency	η	-	82	-	%
Output Voltage (no load) (Note 3)	V_{start}	1700	-	-	V
Output Voltage (with lamp)	V_{out}	-	720	-	V
Output Current (per tube)	I_{out}	-	6.0	-	mArms
Enable (pin J1-5)					
Turn-Off Threshold	V_{thoff}	-	-	0.7	V
Turn-On Threshold	V_{thon}	2.0	-	-	V

(Note 1) Reliable and predictable operation of the device are not guaranteed with applied stresses at or beyond those listed in "Absolute Maximum Ratings". Operation at these limits may reduce device reliability and is therefore not recommended. Please refer to "Recommended Operating Conditions" for reliable operation of the device.

(Note 2) Operation above 50°C is possible if airflow is provided.

(Note 3) Provided data is not tested but guaranteed by design.