

FEATURES

- Single Output
- RoHS Compliant
- 1 Watt Output Power
- 1000VDC I/O Isolation
- Industry Standard Pin-out
- Output Regulation < 1.5%
- Internal SMT Construction
- No External Component Required
- Ultra Miniature 7 Pin SIP Package



RoHS

DESCRIPTION

The LANE-C series consists of 1 Watt miniature, isolated, and regulated dc/dc converters. These units have input operation at 5, 12, 15, and 24VDC, and outputs of 5, 9, 12, and 15VDC. This series is specifically designed for use with flash PROM devices providing the required stability at programming voltages. A control pin is provided to reduce the output voltage to a low 1.2VDC, to program flash PROMs.

SPECIFICATIONS: LANE-C Series

All specifications apply @ 25°C ambient unless otherwise noted

INPUT SPECIFICATIONS

| | |
|-----------------------------|----------------|
| Input Voltage Ranges | |
| 5VDC nominal Input Voltage | 4.5 - 5.5VDC |
| 12VDC nominal input voltage | 10.8 - 13.2VDC |
| 15VDC nominal input voltage | 13.5 - 16.5VDC |
| 24VDC nominal input voltage | 21.6 - 26.4VDC |

Input Voltage Tolerance ±5%

Input Filtering Capacitor

OUTPUT SPECIFICATIONS

Output Voltage see table

Voltage Tolerance ±5% (nom. Line, 100% load)

Output Current see table

Output Power 1 Watt max.

Line Regulation (HL - LL) 1% of Vin

Load Regulation (10% to 100% FL) 1.5% of Vin

Ripple/Noise (20 MHz BW) 60mVp-p

Transient Response Setting Time (50% load step change) 350µs typ.

PROTECTION SPECIFICATIONS

Short Circuit Protection continuous

GENERAL SPECIFICATIONS

Efficiency see table

Switching Frequency 100KHz typ.

Isolation Voltage (Input to Output) 1000VDC

Isolation Resistance 1000MΩ min. @ 500VDC

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature -40°C ~ +85°C

Storage Temperature -40°C ~ +100°C

Humidity (non-condensing) 95%

Cooling Free air convection

MTBF (MIL-HDBK-217F @ 25°C) 2,000,000 Hours

PHYSICAL SPECIFICATIONS

Dimensions (L x W x H)
5, 12, & 15V input models 0.77 x 0.24 x 0.37 in (19.5 x 6 x 10 mm)
24V input models 0.77 x 0.28 x 0.37 in (19.5 x 7.1 x 10 mm)

Weight
5, 12, & 15V input models 2.1g (0.07oz)
24V input models 2.7g (0.1oz)

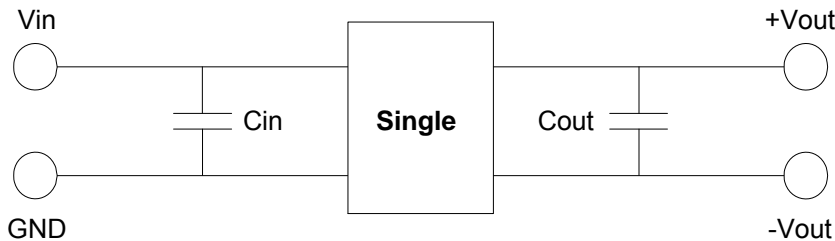
Case Material DAP

Due to advances in technology, specifications subject to change without notice

MODEL SELECTION TABLE

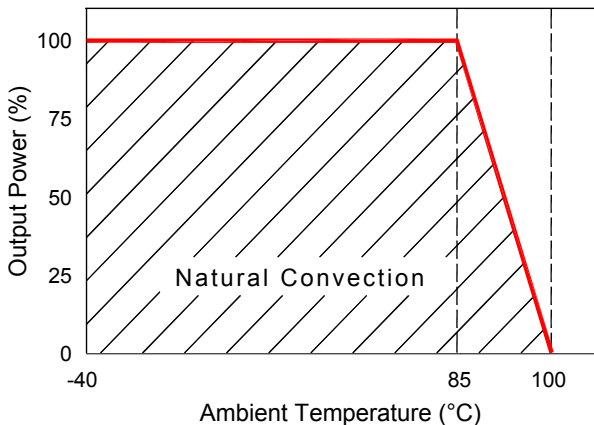
| Model Number | Input Voltage | Output Voltage | Output Current | Efficiency (Typ.) | Output Power |
|---------------|-----------------------------|----------------|----------------|-------------------|--------------|
| LANE505RC | 5 VDC (4.5 - 5.5 VDC) | 5 VDC | 100mA | 45% | 0.5W |
| LANE509RC | | 9 VDC | 100mA | 55% | 0.9W |
| LANE512RC | | 12 VDC | 83mA | 55% | 1W |
| LANE512.75RC | | 12.75 VDC | 78mA | - | 1W |
| LANE515RC | | 15 VDC | 67mA | 60% | 1W |
| LANE1205RC | 12 VDC (10.8 - 13.2 VDC) | 5 VDC | 100mA | 45% | 0.5W |
| LANE1209RC | | 9 VDC | 100mA | 55% | 0.9W |
| LANE1212RC | | 12 VDC | 83mA | 55% | 1W |
| LANE1212.75RC | | 12.75 VDC | 78mA | - | 1W |
| LANE1215RC | | 15 VDC | 67mA | 60% | 1W |
| LANE1505RC | 15 VDC (13.5 - 16.5 VDC) | 5 VDC | 100mA | 45% | 0.5W |
| LANE1509RC | | 9 VDC | 100mA | 55% | 0.9W |
| LANE1512RC | | 12 VDC | 83mA | 55% | 1W |
| LANE1512.75RC | | 12.75 VDC | 78mA | - | 1W |
| LANE1515RC | | 15 VDC | 67mA | 60% | 1W |
| LANE2405RC | 24 VDC (21.6 - 26.4 VDC) | 5 VDC | 100mA | 45% | 0.5W |
| LANE2409RC | | 9 VDC | 100mA | 55% | 0.9W |
| LANE2412RC | | 12 VDC | 83mA | 55% | 1W |
| LANE2412.75RC | | 12.75 VDC | 78mA | - | 1W |
| LANE2415RC | | 15 VDC | 67mA | 60% | 1W |

RECOMMENDED TEST CIRCUIT

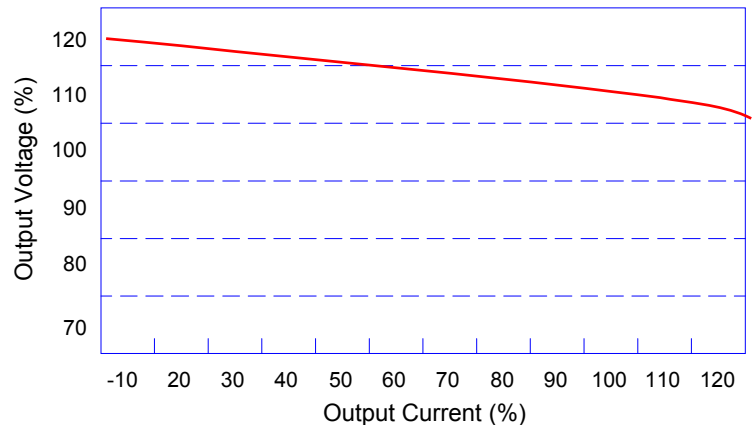


- | | |
|---------------------------|----------------------------|
| 5V: Cin 4.7 μ F, 25V | 5V: Cout 10 μ F, 25V |
| 9V: Cin 4.7 μ F, 25V | 9V: Cout 4.7 μ F, 25V |
| 12V: Cin 2.2 μ F, 25V | 12V: Cout 2.2 μ F, 25V |
| 15V: Cin 1 μ F, 50V | 15V: Cout 1 μ F, 50V |

DERATING CURVE



TOLERANCE ENVELOPE GRAPH

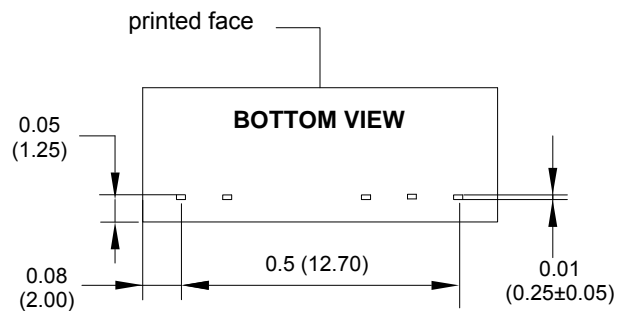
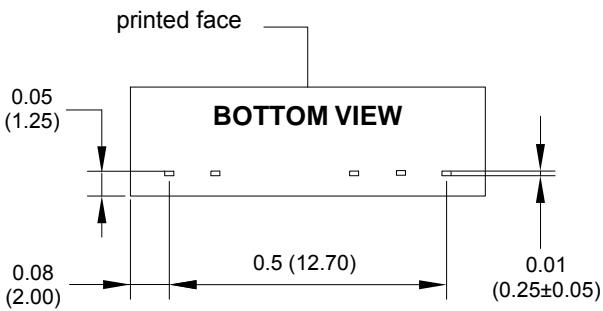
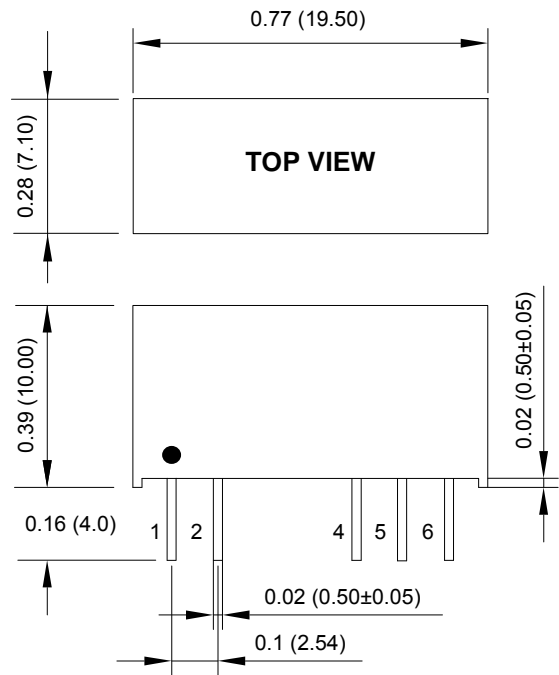
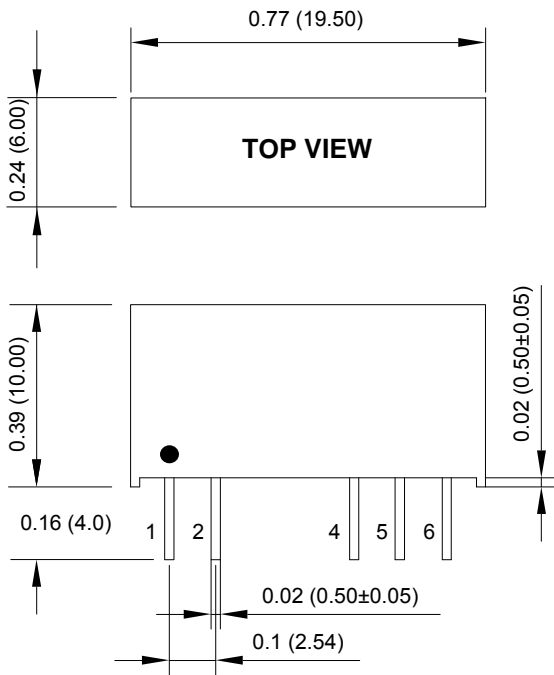


MECHANICAL DRAWING

Unit: inches (mm)

5, 12, & 15V INPUT MODELS

24V INPUT MODELS



| PIN CONNECTIONS | |
|-----------------|--------|
| PIN | SINGLE |
| 1 | +Vin |
| 2 | -Vin |
| 4 | -Vout |
| 5 | CTRL |
| 6 | +Vout |