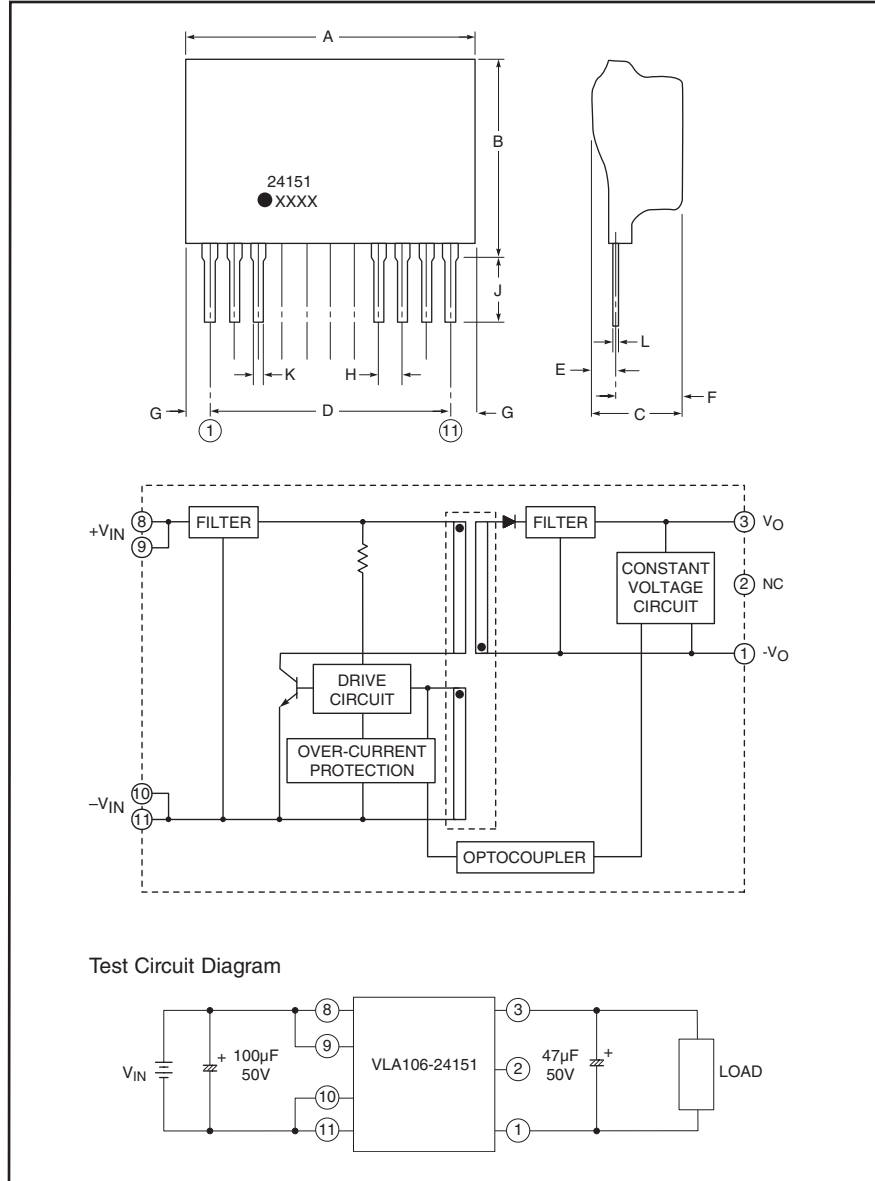


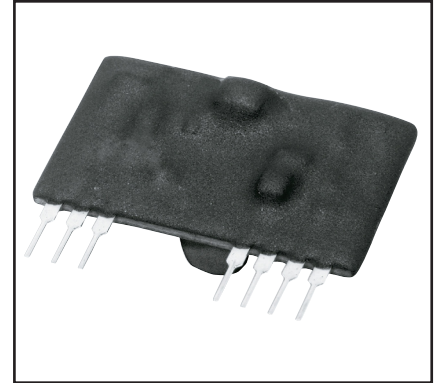
### Isolated DC/DC Converter



Outline Drawing and Circuit Diagram

| Dimensions | Inches            | Millimeters    |
|------------|-------------------|----------------|
| A          | 1.3               | 33.0           |
| B          | 0.945             | 24.0           |
| C          | 0.71              | 18.0           |
| D          | 1.0               | 25.4           |
| E          | 0.22              | 5.5            |
| F          | 0.53              | 13.5           |
| G          | 0.18              | 4.5            |
| H          | 0.10              | 2.54           |
| J          | 0.18±0.06         | 4.5±1.5        |
| K          | 0.02+0.004/-0.002 | 0.5+0.1/-0.05  |
| L          | 0.01+0.01/-0.002  | 0.25+0.2/-0.05 |

Note: All dimensions listed are maximums except D.



#### Description:

VLA106-24151 is a DC-DC converter. Its output power is 1.5W and the input is isolated from the output. The over-current protection circuit is built-in. This device is used for on-board power supplies in industrial control equipment.

#### Features:

- ☐ Input Voltage Range: 21.6 to 26.4V DC
- ☐ Output: +15V, 100mA (Output Power: 1.5W)
- ☐ Thin Profile, Lightweight Design
- ☐ Electrical Isolation Voltage Between Input and Output: 2500 V<sub>rms</sub> for 1 Minute
- ☐ Built in Over-current Protection Circuit

#### Application:

On-board power supplies such as industrial equipment and control equipment.

## VLA106-24151

### Isolated DC/DC Converter

#### Absolute Maximum Ratings, $T_a = 25^\circ\text{C}$ unless otherwise specified

| Characteristics                               | Symbol    | VLA106-24151 | Units            |
|-----------------------------------------------|-----------|--------------|------------------|
| Input Voltage (Between Pins 8, 9, and 10, 11) | $V_{IN}$  | 27           | Volts            |
| Output Current (Between Pins 3 and 1)         | $I_O$     | 100          | mA               |
| Operating Temperature (No Condensation)*      | $T_{opr}$ | -20 ~ 70     | $^\circ\text{C}$ |
| Storage Temperature (No Condensation)         | $T_{stg}$ | -20 to 85    | $^\circ\text{C}$ |
| Input-Output Isolation Voltage (AC, 1 Minute) | $V_{ISO}$ | 2500         | $V_{rms}$        |

\*Please refer to derating characteristics.

#### Electrical and Mechanical Characteristics, $T_a = 25^\circ\text{C}$ , $V_{IN} = 24\text{V}$ unless otherwise specified

| Characteristics  | Symbol     | Test Conditions                                                 | Min.  | Typ. | Max.  | Units |
|------------------|------------|-----------------------------------------------------------------|-------|------|-------|-------|
| Input Voltage    | $V_{IN}$   | Recommended Range                                               | 21.6  | 24.0 | 26.4  | Volts |
|                  |            | Max Operating Range                                             | 18.0  | —    | 26.4  | Volts |
| Output Voltage   | $V_O$      | $I_O = 0 \sim 100\text{mA}$                                     | 14.25 | 15.0 | 15.75 | Volts |
| Input Regulation | $R_{eg-I}$ | $I_O = 0 \sim 100\text{mA}$ , $V_{IN} = 21.6 \sim 26.4\text{V}$ | —     | —    | 75    | mV    |
| Load Regulation  | $R_{eg-L}$ | $I_O = 0 \sim 100\text{mA}$                                     | —     | —    | 750   | mV    |
| Ripple Voltage   | $V_{P-P}$  | $I_O = 100\text{mA}$                                            | —     | —    | 120   | mV    |
| Efficiency       | $\eta$     | $I_O = 100\text{mA}$                                            | —     | 75   | —     | %     |

