POWEREX

Powerex, Inc., 173 Pavilion Lane, Youngwood, Pennsylvania 15697 (724) 925-7272

Isolated DC/DC Converter

15151
● XXXX

Test Circuit Diagram

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.
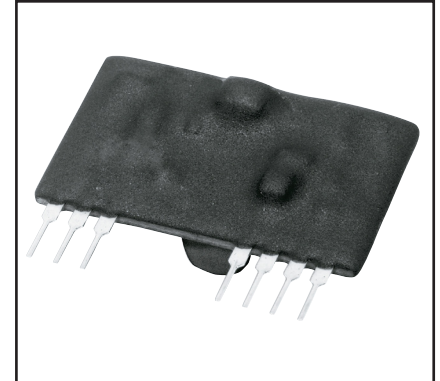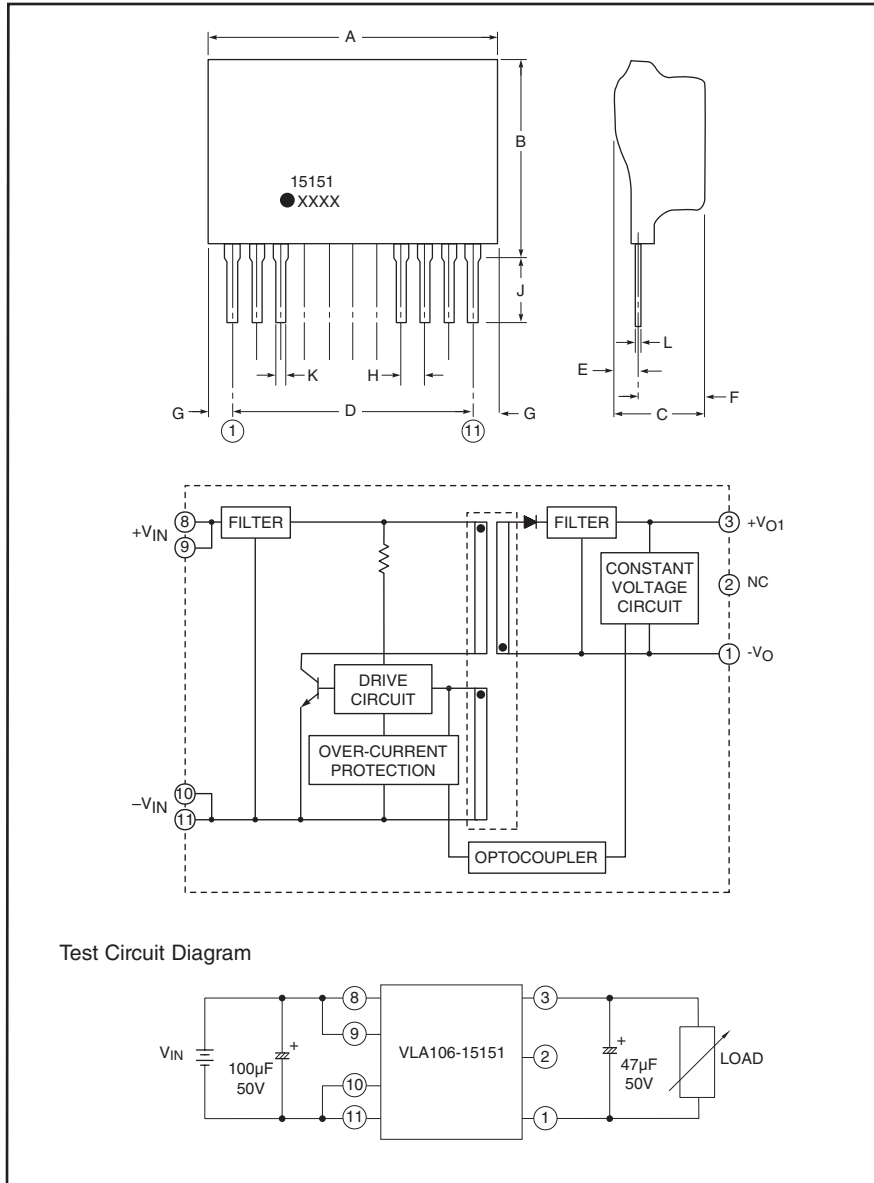

Description:
VLA106-15151 is a DC-DC converter. Its output power is 1.5W and the input is isolated from the output. The over-current protection circuit is built-in. This device is best for on-board power supplies such as industrial equipment and control equipment.

Features:
□ Input Voltage Range: 12 to 18V DC

□ Output: +15V, 100mA (Output Power: 1.5W)

□ Thin Profile, Lightweight Design

□ Electrical Isolation Voltage Between Input and Output: 2500 V_{rms} for 1 Minute

□ Built in Over-current Protection Circuit

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

VLA106-15151
Isolated DC/DC Converter

Absolute Maximum Ratings, T_a = 25°C unless otherwise specified

Characteristics	Symbol	VLA106-15151	Units
Input Voltage (Between Pins 8, 9, and 10, 11)	V_{IN}	18	Volts
Output Current (Between Pins 3 and 1)	I_O	100	mA
Operating Temperature (No Condensation)*	T_{opr}	-20 ~ +70	°C
Storage Temperature (No Condensation)	T_{stg}	-20 to +85	°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°C, V_{IN} = 15V unless otherwise specified

Characteristics	Symbol	Test Conditions	Min.	Typ.	Max.	Units
Input Voltage	V_{IN}	Recommended Range	12	15	18	Volts
Output Voltage	V_O	I_O = 0 ~ 100mA	14.25	15.0	15.75	Volts
Input Regulation	R_{eg-I}	I_O = 100mA, V_{IN} = 12 ~ 18V	—	—	50	mV
Load Regulation	R_{eg-L}	I_O = 0 ~ 100mA	—	—	50	mV
Ripple Voltage	V_{P-P}	I_O = 100mA	—	—	150	mV
Efficiency	η	I_O = 100mA	—	75	—	%

DERATING CHARACTERISTICS (TYPICAL)

OUTPUT VOLTAGE VS. OUTPUT CURRENT CHARACTERISTICS (TYPICAL)

EFFICIENCY VS. OUTPUT CURRENT CHARACTERISTICS (TYPICAL)

EFFICIENCY VS. INPUT VOLTAGE CHARACTERISTICS (TYPICAL)

OUTPUT VOLTAGE VS. INPUT VOLTAGE CHARACTERISTICS (TYPICAL)

INPUT CURRENT VS. INPUT VOLTAGE CHARACTERISTICS (TYPICAL)

Rev. 01/10