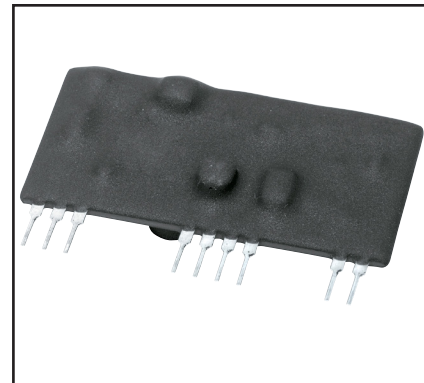
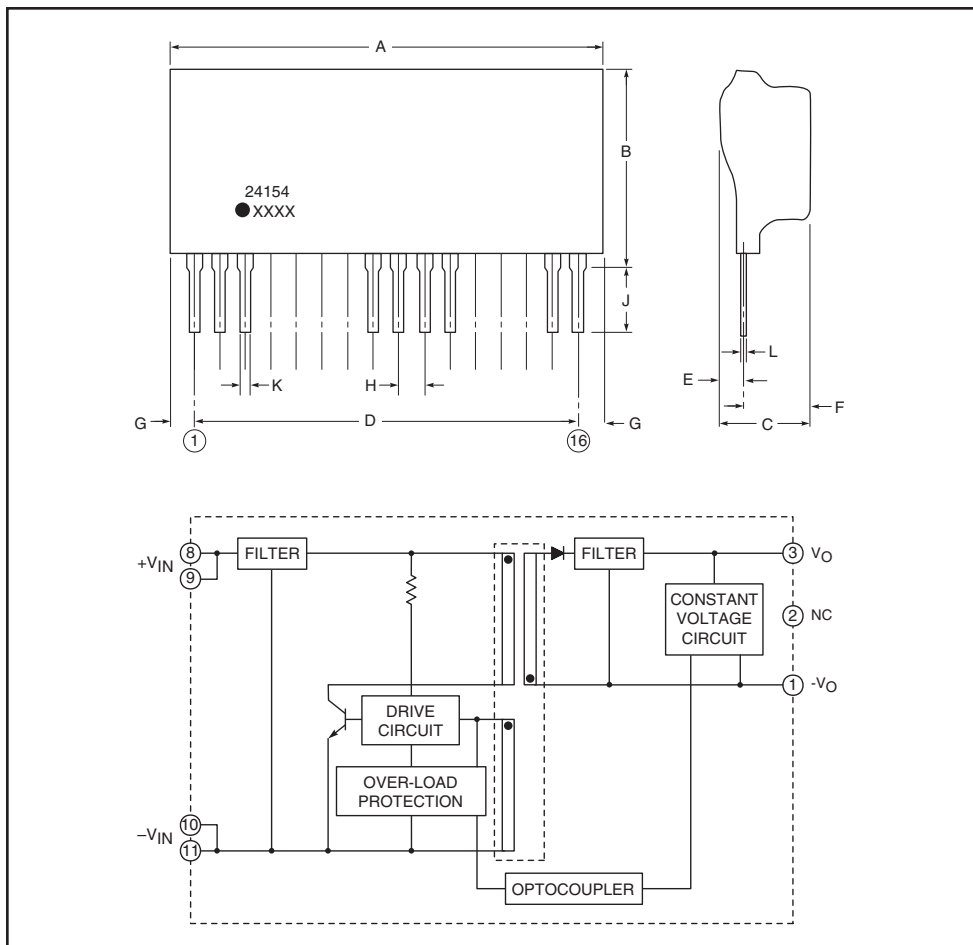


Isolated DC/DC Converter



Description:

VLA106-24154 is a DC-DC converter. Its output power is 4.5W and the input is isolated from the output. The over-load protection circuit is built-in. This device is used for on-board power supplies and industrial control equipment.

Features:

- ☐ Input Voltage Range: 21.6 to 26.4V DC
- ☐ Output: +15V, 300mA (Output Power: 4.5W)
- ☐ 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.

Outline Drawing and Circuit Diagram

Dimensions	Inches	Millimeters
A	1.81	46.0
B	1.063	27.0
C	0.71	18.0
D	1.5	38.1
E	0.22	5.5
F	0.53	13.5

Note: All dimensions listed are maximums except D.

Dimensions	Inches	Millimeters
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



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

VLA106-24154

Isolated DC/DC Converter

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

Characteristics	Symbol	VLA106-24154	Units
Input Voltage (Between Pins 8, 9, and 10, 11)	V_{IN}	27	Volts
Output Current (Between Pins 3 and 1)	I_O	300	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.

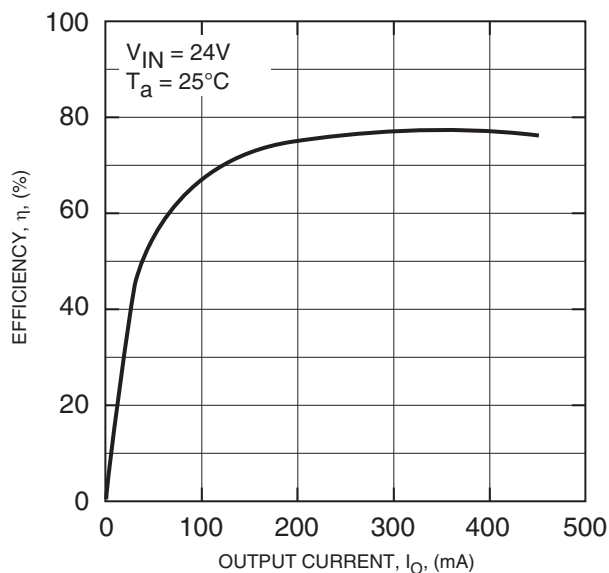
Electrical and Mechanical Characteristics, $T_a = 25^\circ\text{C}$, $V_{IN} = 24\text{V}$ unless otherwise specified

Characteristics	Symbol	Test Conditions	Min.	Typ.	Max.	Units
Input Voltage	V_{IN}	Recommended Range	21.6	24.0	26.4	Volts
		Maximum Operating Range	18.0	—	26.4	Volts
Output Voltage	V_O	$I_O = 0 \sim 300\text{mA}$	14.25	15.0	15.75	Volts
Input Regulation	R_{eg-I}	$I_O = 0 \sim 300\text{mA}$, $V_{IN} = 21.6 \sim 26.4\text{V}$	—	—	75	mV
Load Regulation	R_{eg-L}	$I_O = 0 \sim 300\text{mA}$	—	—	120	mV
Ripple Voltage	V_{P-P}	$I_O = 300\text{mA}$	—	—	120	mV
Efficiency	η	$I_O = 300\text{mA}$	—	75	—	%

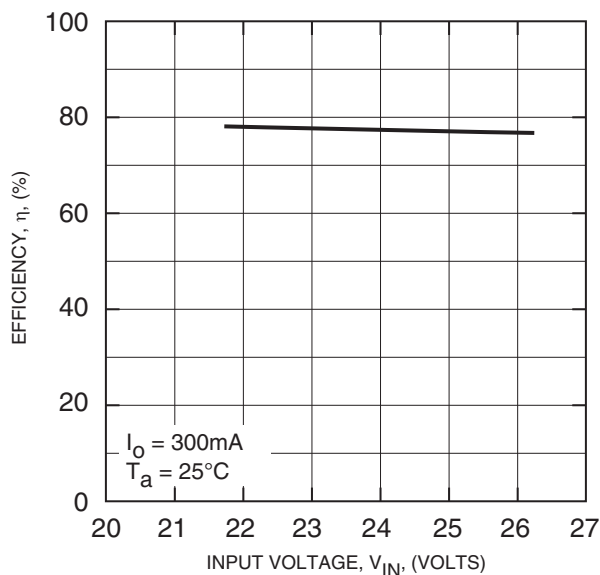
VLA106-24154

Isolated DC/DC Converter

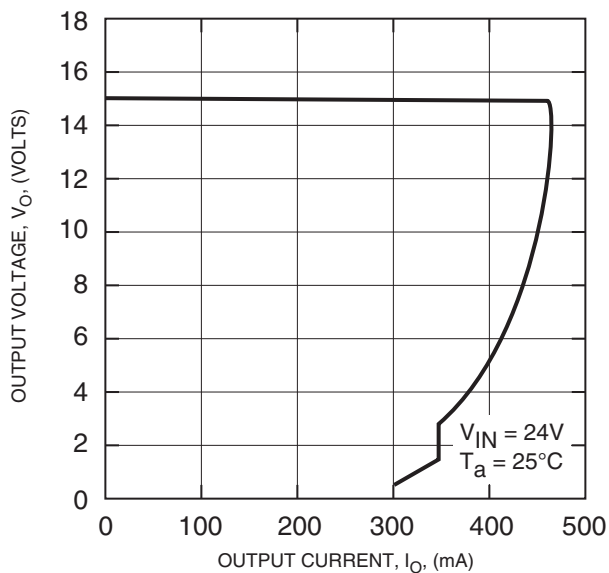
EFFICIENCY VS. OUTPUT CURRENT CHARACTERISTICS



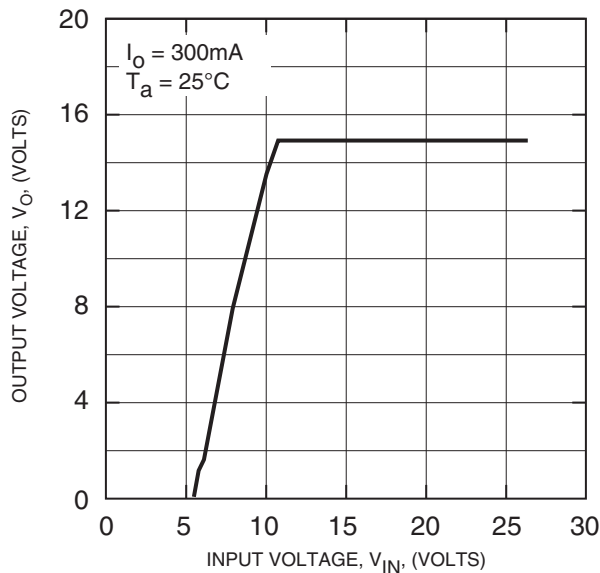
EFFICIENCY VS. INPUT VOLTAGE CHARACTERISTICS



OUTPUT VOLTAGE VS. OUTPUT CURRENT CHARACTERISTICS



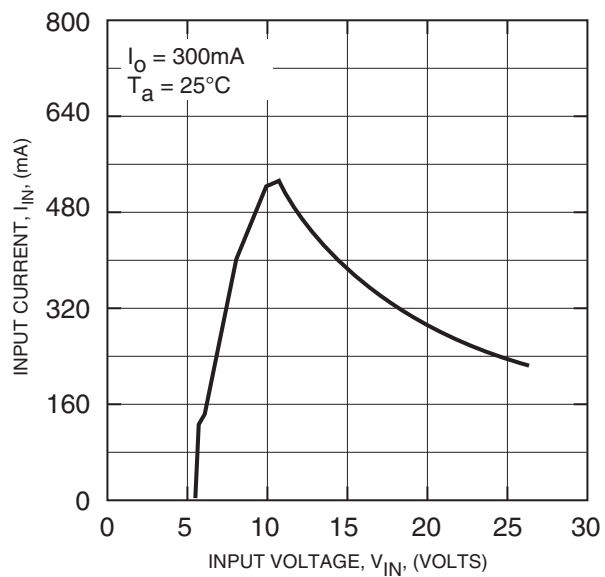
OUTPUT VOLTAGE VS. INPUT VOLTAGE CHARACTERISTICS



VLA106-24154

Isolated DC/DC Converter

INPUT CURRENT VS. INPUT VOLTAGE
CHARACTERISTICS



DERATING
CHARACTERISTICS

