

## Features

- 3 kA, 8/20  $\mu$ s surge capability
- Low clamping voltage under surge
- Bidirectional TVS
- Excellent performance over temperature

## Applications

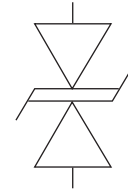
- High power DC bus protection

# Model PTVS3-015C-TH High Current TVS Diode

## General Information

The Model PTVS3-015C-TH high current bidirectional TVS diode is designed for use in high power DC bus clamping applications. This device offers bidirectional port protection.

The device is RoHS\* compliant and halogen free\*\*. It also meets IEC 61000-4-5 8/20  $\mu$ s current surge requirements.



## Absolute Maximum Ratings (@ $T_A = 25^\circ\text{C}$ Unless Otherwise Noted)

Rating	Symbol	Value	Unit
Repetitive Standoff Voltage	$V_{WM}$	15	V
Peak Current Rating per 8/20 $\mu$ s IEC 61000-4-5	$I_{PPM}$	3	kA
Operating Junction Temperature Range	$T_J$	-40 to +125	$^\circ\text{C}$
Storage Temperature Range	$T_S$	-55 to +150	$^\circ\text{C}$
Lead Temperature, Soldering (10 s)		260	$^\circ\text{C}$

## Electrical Characteristics (@ $T_A = 25^\circ\text{C}$ Unless Otherwise Noted)

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
$I_D$ Standby Current	$V_D = V_{WM}$			10	$\mu\text{A}$
$V_{(BR)}$ Breakdown Voltage	$I_{BR} = 10\text{ mA}$	16	17.5	19	V
$V_C$ Clamping Voltage (1) per IEC61000-4-5 (8/20 $\mu$ s current waveform)	$I_{PP} = 3\text{ kA}$		28		V
$V_{(BR)}$ Temperature Coefficient			0.1		$\%/^\circ\text{C}$
C Capacitance	$F = 10\text{ kHz}$ , $V_d = 1\text{ Vrms}$		7.5		nF

(1)  $V_C$  measured at the time which is coincident with the peak surge current.

# BOURNS®

Asia-Pacific: Tel: +886-2 2562-4117 • Fax: +886-2 2562-4116

EMEA: Tel: +36 88 520 390 • Fax: +36 88 520 211

The Americas: Tel: +1-951 781-5500 • Fax: +1-951 781-5700

[www.bourns.com](http://www.bourns.com)

\* RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.

\*\*Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.

Specifications are subject to change without notice.

The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time. Users should verify actual device performance in their specific applications.

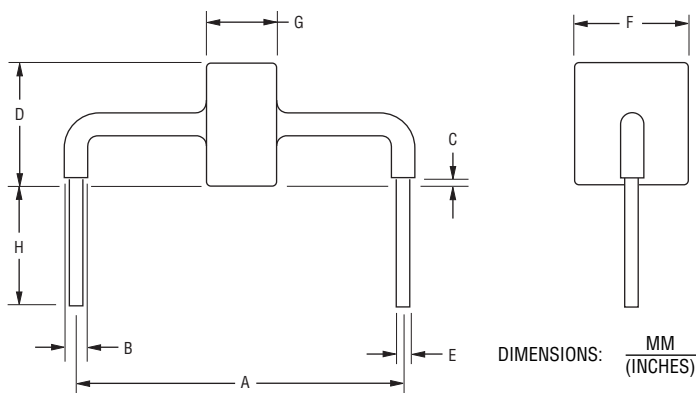


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## Product Dimensions

Epoxy encapsulation materials conform to UL 94V-0. Silver plated lead finish conforms to the solderability requirements of JESD22-B102, Pb free solder. Package dimensions are shown below:



Dim.	PTVS3-015C-TH
A	$\frac{24.15 \pm 0.72}{(0.951 \pm 0.028)}$
B	$\frac{2.40 \pm 0.50}{(0.094 \pm 0.020)}$
C	$\frac{1.75 \pm 1.25}{(0.069 \pm 0.049)}$
D	$\frac{10.80}{(0.425)}$ Max.
E	$\frac{1.25 \pm 0.05}{(0.049 \pm 0.002)}$
F	$\frac{9.30}{(0.366)}$ Max.
G	$\frac{4.00}{(0.157)}$ Max.
H	$\frac{6.00 \pm 1.00}{(0.236 \pm 0.039)}$

## Typical Part Marking

PTVS3-015C-TH .....3015

## How to Order

