

## Features

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

## Applications

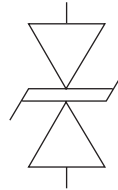
- High power DC bus protection

# 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.



### Additional Information

Click these links for more information:



### 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		19	V
$V_C$ Clamping Voltage <sup>(1)</sup> 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

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



**WARNING Cancer and Reproductive Harm - [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)**

\* RoHS Directive 2015/863, Mar 31, 2015 and Annex.

\*\*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.

Users should verify actual device performance in their specific applications.

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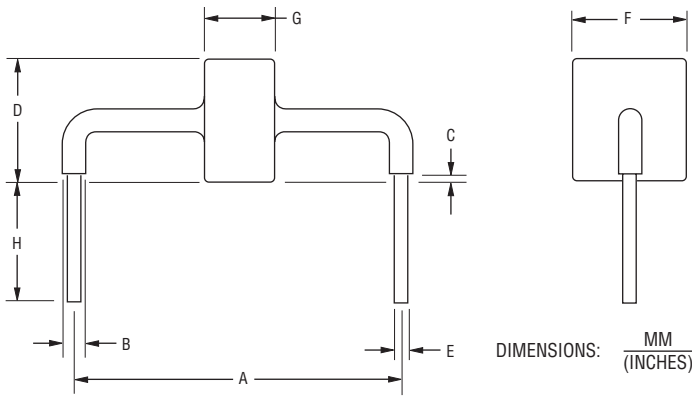


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**BOURNS®**

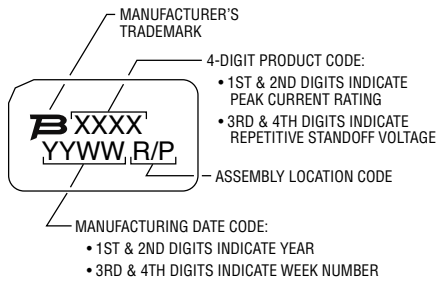
## Product Dimensions

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:

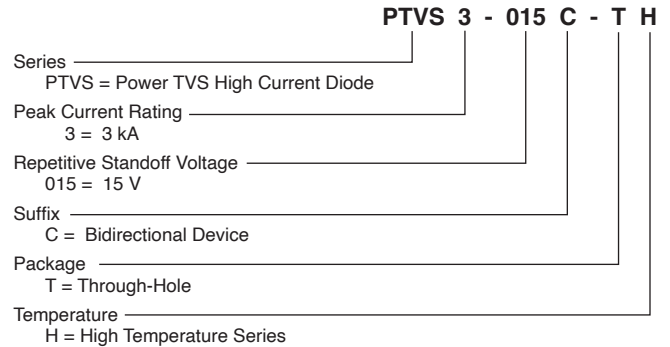


Dim.	PTVS3-015C-TH
A	$24.15 \pm 0.72$ ( $0.951 \pm 0.028$ )
B	$2.40 \pm 0.50$ ( $0.094 \pm 0.020$ )
C	$1.75 \pm 1.25$ ( $0.069 \pm 0.049$ )
D	$10.80$ Max. ( $0.425$ )
E	$1.25 \pm 0.05$ ( $0.049 \pm 0.002$ )
F	$9.30$ Max. ( $0.366$ )
G	$4.00$ Max. ( $0.157$ )
H	$6.00 \pm 1.00$ ( $0.236 \pm 0.039$ )

## Typical Part Marking



## How to Order



REV. 05/24

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