



## Features

- 15 kA, 8/20  $\mu$ s surge capability
- Low clamping voltage under surge
- Bidirectional TVS
- UL Recognized 
- RoHS compliant\*

## Applications

- AC line protection
- High power DC bus protection

# PTVS15-xxxC-TH Series High Current TVS Diodes

## General Information

The PTVS15-xxxC-TH range of high current bidirectional TVS diodes is designed for use in AC line protection and high power DC bus clamping applications. These devices offer bidirectional port protection from 58 volts to 76 volts.

The devices are RoHS\* compliant and UL Recognized. They also meet IEC 61000-4-5 8/20  $\mu$ s current surge requirements.



## Agency Approval

Description	
UL	File Number: E313168

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

Rating		Symbol	Value	Unit
Repetitive Standoff Voltage	PTVS15-058C-TH PTVS15-076C-TH	$V_{WM}$	58 76	V
Peak Current Rating per 8/20 $\mu$ s IEC 61000-4-5		$I_{PPM}$	15	kA
Operating Junction Temperature Range		$T_J$	-55 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	$I_{BR} = 10\text{ mA}$	PTVS15-058C-TH PTVS15-076C-TH	64 85	66 92	70 95	V
$V_C$ Clamping Voltage (1)	$I_{PP} = 15\text{ kA}$	PTVS15-058C-TH PTVS15-076C-TH			110 150	V
$V_{(BR)}$ Temperature Coefficient				0.1		$\%/^\circ\text{C}$
C Capacitance	$F = 10\text{ kHz}$ , $V_d = 1\text{ Vrms}$	PTVS15-058C-TH PTVS15-076C-TH		12 9		nF

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

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

Specifications are subject to change without notice.

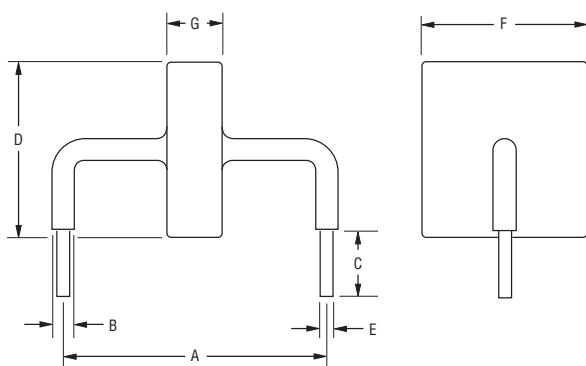
The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time. Users should verify actual device performance in their specific applications.

# PTVS15-xxxC-TH Series High Current TVS Diodes

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## Product Dimensions

This is an RoHS compliant product, with epoxy encapsulations meeting UL Class 94V-0. Ag plated leads meet solderability requirements of JESD22-B102. Package dimensions are shown below.



Dim.	PTVS15-058C-TH	PTVS15-076C-TH
A	$24.15 \pm 0.72$ (0.951 ± 0.028)	
B	$2.40 \pm 0.50$ (0.094 ± 0.020)	
C	$6.00 \pm 1.00$ (0.236 ± 0.039)	
D	$17.50$ (0.689) Max.	
E	$1.25 \pm 0.05$ (0.049 ± 0.002)	
F	$16.00$ (0.63) Max.	
G	$5.00$ (0.197) Max.	$6.00$ (0.236) Max.

DIMENSIONS:  $\frac{\text{MM}}{(\text{INCHES})}$

## Typical Part Marking

PTVS15-058C-TH .....15058  
PTVS15-076C-TH .....15076

## How to Order

**PTVS 15 - xxx C - TH**

Series \_\_\_\_\_  
PTVS = Power TVS High Current Diode

Peak Current Rating \_\_\_\_\_  
15 = 15 kA

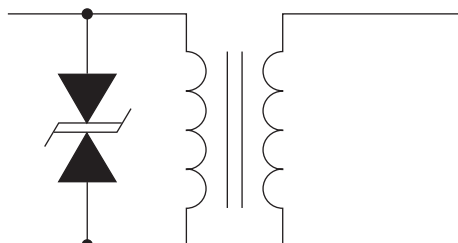
Repetitive Standoff Voltage \_\_\_\_\_  
058 = 58 V  
076 = 76 V

Suffix \_\_\_\_\_  
C = Bidirectional Device

Package \_\_\_\_\_  
TH = Through-Hole

## Application

A typical application for Power TVS products includes AC power line primary protection.

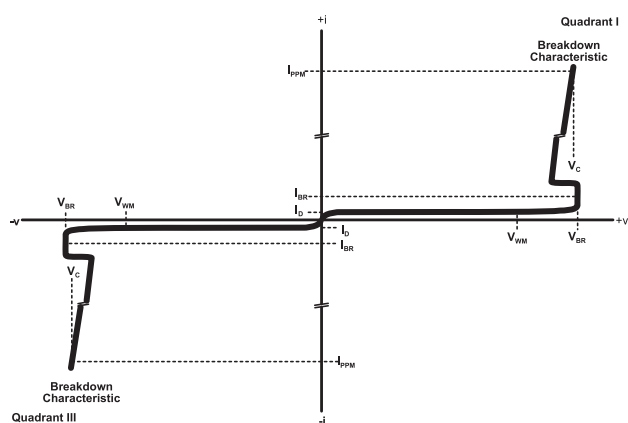


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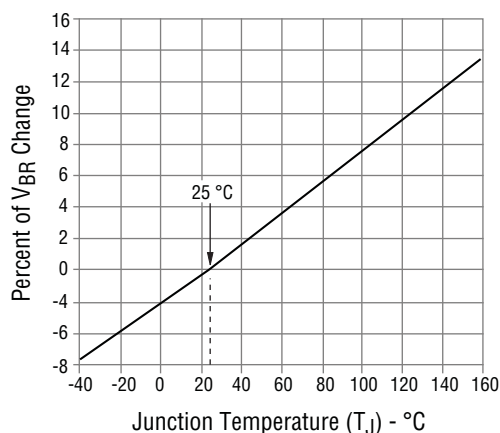
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## Performance Graphs

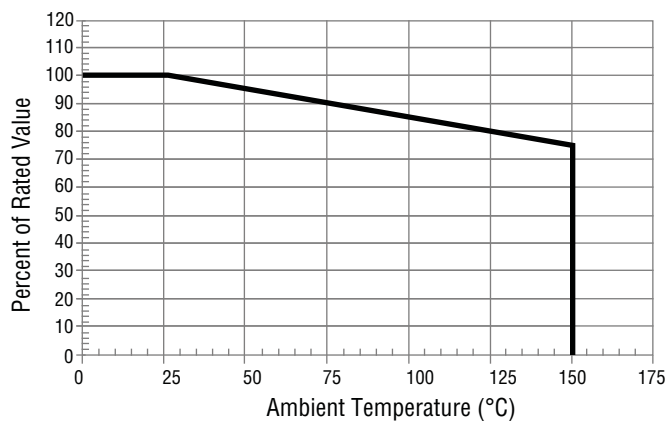
### V-I Characteristic



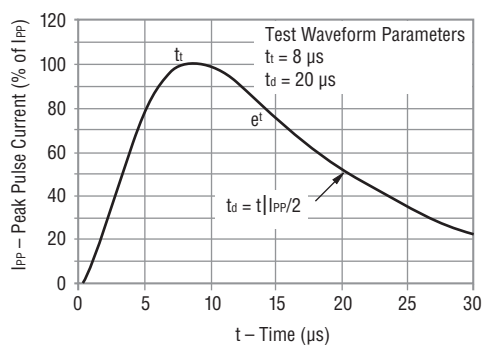
### Typical $V_{BR}$ vs. Junction Temperature



### Typical Surge Current Derating



### Current 8/20 $\mu$ s Waveform per IEC 61000-4-5



REV. 07/15

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