Features

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

Applications

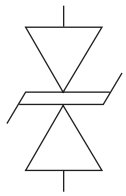
- AC line protection
- High power DC bus protection

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 µs current surge requirements.



Additional Information

Click these links for more information:

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Agency Approval

Description	
UL	File Number: E313168

Absolute Maximum Ratings (@ T_A = 25 °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 µs IEC 61000-4-5		I_{PPM}	15	kA
Operating Junction Temperature Range		T_J	-55 to +125	°C
Storage Temperature Range		T_S	-55 to +150	°C
Lead Temperature, Soldering (10 s)			260	°C

Electrical Characteristics (@ T_A = 25 °C Unless Otherwise Noted)

Parameter		Test Conditions		Min.	Typ.	Max.	Unit
I_D	Standby Current	$V_D = V_{WM}$				10	µA
$V_{(BR)}$	Breakdown Voltage	I_{BR} = 10 mA	PTVS15-058C-TH PTVS15-076C-TH	64 85	66 92	70 95	V
V_C	Clamping Voltage (1)	I_{PP} = 15 kA	PTVS15-058C-TH PTVS15-076C-TH			110 150	V
$V_{(BR)}$	Temperature Coefficient				0.1		%/°C
C	Capacitance	F = 10 kHz, V_d = 1 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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WARNING Cancer and Reproductive Harm - www.P65Warnings.ca.gov

*RoHS Directive 2015/863, Mar 31, 2015 and Annex.
Specifications are subject to change without notice.
Users should verify actual device performance in their specific applications.
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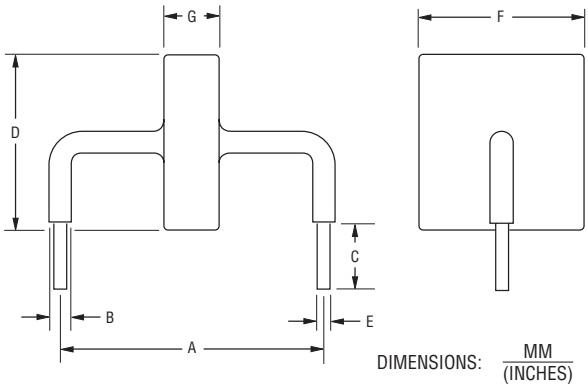
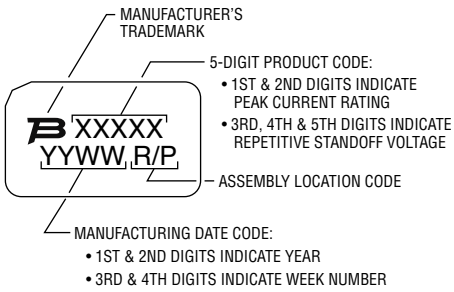
Product Dimensions

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 ± 0.72 (0.951 ± 0.028)	
B	2.40 ± 0.50 (0.094 ± 0.020)	
C	6.00 ± 1.00 (0.236 ± 0.039)	
D	17.50 (0.689) Max.	
E	1.25 ± 0.05 (0.049 ± 0.002)	
F	16.00 (0.63) Max.	
G	5.00 (0.197) Max.	6.00 (0.236) Max.

Typical Part Marking



How to Order

PTVS 15 - xxx C - TH

Series
PTVS = Power TVS High Current Diode

Peak Current Rating
15 = 15 kA

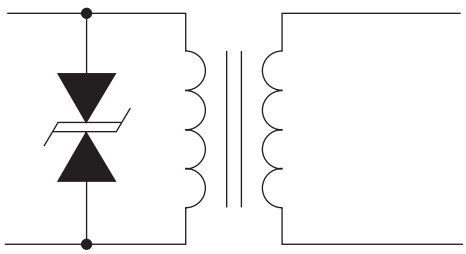
Repetitive Standoff Voltage
058 = 58 V
076 = 76 V

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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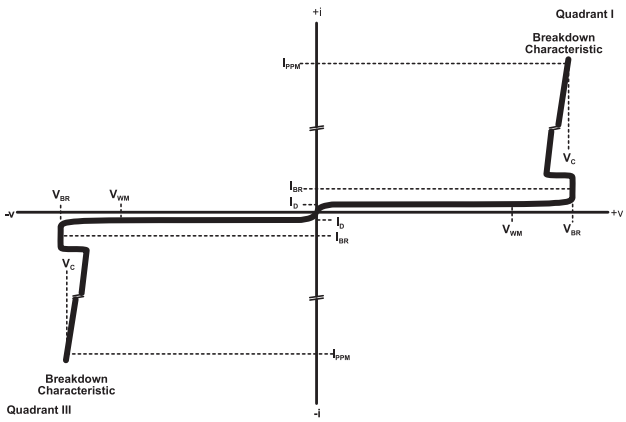
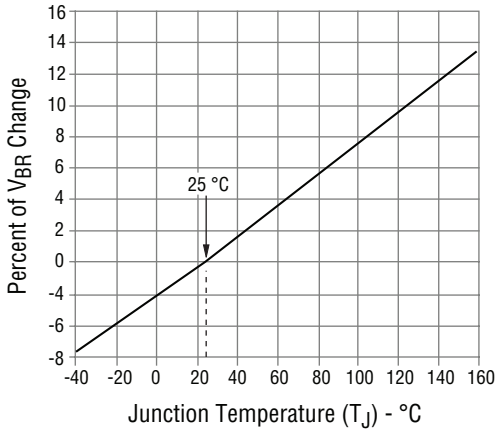
Performance Graphs

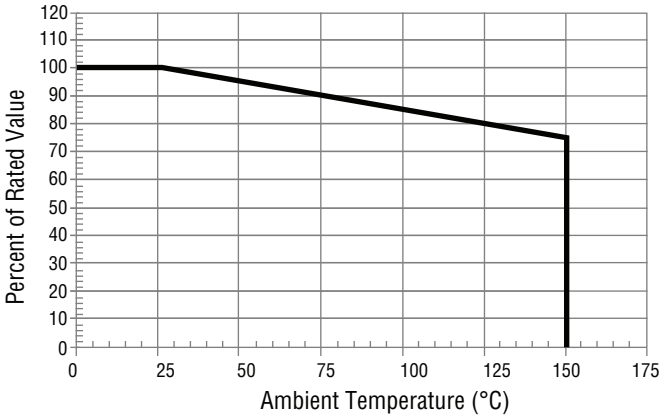
V-I Characteristic



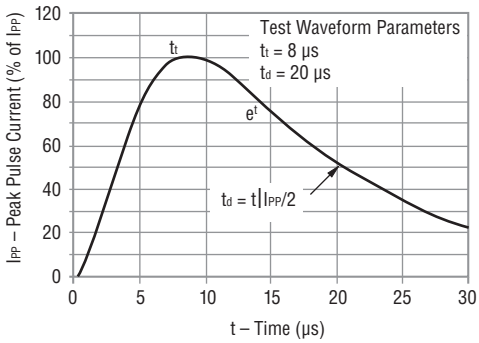
Typical V_{BR} vs. Junction Temperature



Typical Surge Current Derating



Current 8/20 μs Waveform per IEC 61000-4-5



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