

Features

- 10 kA, 8/20 µs surge capability
- Low clamping voltage under surge
- Bidirectional TVS
- Surface mount package
- Excellent performance over temperature

Applications

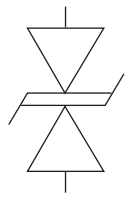
- High power DC bus protection

PTVS10-xxxC-SH Series High Current TVS Diodes

General Information

The PTVS10-xxxC-SH range of high current bidirectional TVS diodes is designed for use in high power DC bus clamping applications. These devices offer bidirectional port protection and are available with standoff voltage ratings of 58 V and 76 V.

The devices are RoHS* compliant. They also meet IEC 61000-4-5 8/20 µs current surge requirements.



Absolute Maximum Ratings (@ T_A = 25 °C Unless Otherwise Noted)

Rating		Symbol	Value	Unit
Repetitive Standoff Voltage	PTVS10-058C-SH PTVS10-076C-SH	V_{WM}	58 76	V
Peak Current Rating per 8/20 µs IEC 61000-4-5		I_{PPM}	10	kA
Operating Junction Temperature Range		T_J	-55 to +125	°C
Storage Temperature Range		T_S	-55 to +150	°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	PTVS10-058C-SH PTVS10-076C-SH	64 85	67 90	70 95	V
V_C Clamping Voltage (1)	I_{PP} = 10 kA	PTVS10-058C-SH PTVS10-076C-SH			110 140	V
$V_{(BR)}$ Temperature Coefficient				0.1		%/°C
C Capacitance	F = 10 kHz, V_d = 1 Vrms	PTVS10-058C-SH PTVS10-076C-SH		8 6		nF

(1) 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

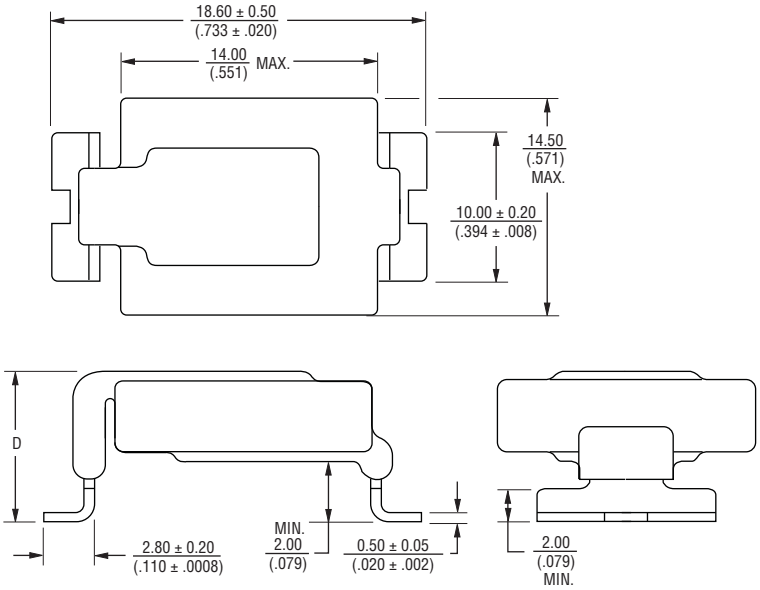
*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.
Specifications are subject to change without notice.
Users should verify actual device performance in their specific applications.
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PTVS10-xxxC-SH Series High Current TVS Diodes

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Product Dimensions

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

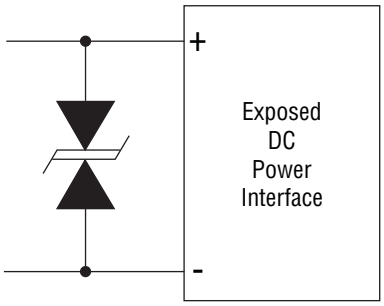


Device	Dimension D
PTVS10-058C-SH	11.00 (0.433) Max.
PTVS10-076C-SH	12.00 (0.472) Max.

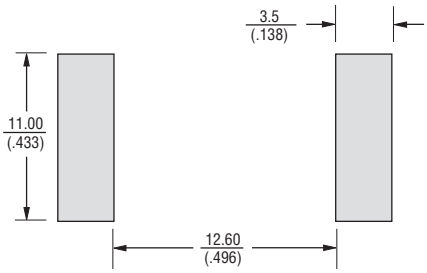
DIMENSIONS: MM (INCHES)

Application

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



Recommended Printed Wiring Land Pattern Dimensions



Typical Part Marking

PTVS10-058C-SH 10058
PTVS10-076C-SH 10076

How to Order

PTVS 10 - xxx C - S H

Series
PTVS = Power TVS High Current Diode

Peak Current Rating
10 = 10 kA

Repetitive Standoff Voltage
058 = 58 V
076 = 76 V

Suffix
C = Bidirectional Device

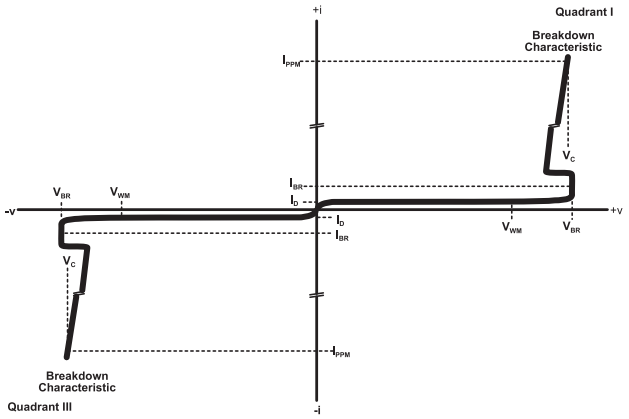
Package
S = Surface Mount

Temperature
H = High Temperature Series

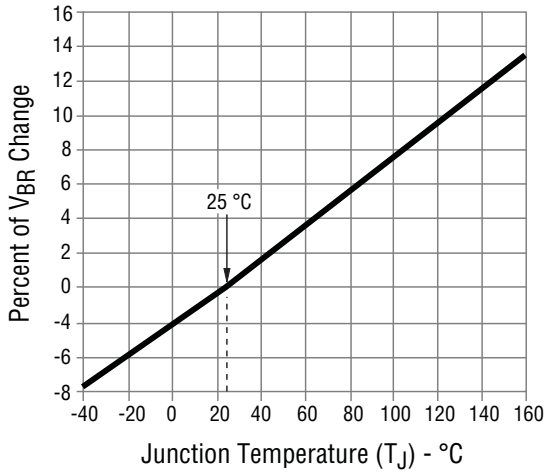
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Performance Graphs

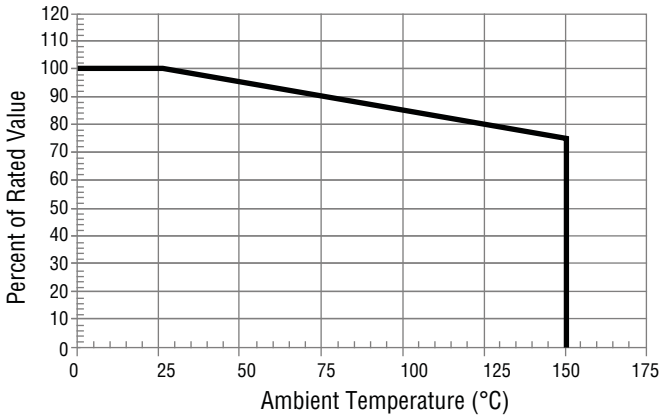
V-I Characteristic



Typical V_{BR} vs. Junction Temperature

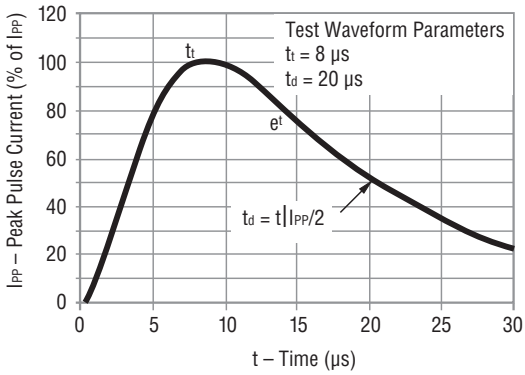


Typical Surge Current Derating



This graph shows the typical device surge current derating versus ambient temperature when subjected to the 8/20 µs current waveform per the IEC 61000-4-5 specification. This device is not intended for continuous operation at temperatures above 125 °C.

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



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