

Features

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

Applications

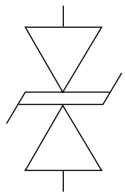
- High power DC bus protection

PTVS3-xxxC-SH Series High Current TVS Diodes

General Information

The PTVS3-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.



Additional Information

Click these links for more information:

PRODUCT SELECTOR | TECHNICAL LIBRARY | INVENTORY | SAMPLES | CONTACT

Agency Approval

Description	
UL	File Number: E313168

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

Rating		Symbol	Value	Unit
Repetitive Standoff Voltage	PTVS3-058C-SH PTVS3-076C-SH	V_{WM}	58 76	V
Peak Current Rating per 8/20 μs IEC 61000-4-5		I_{PPM}	3	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	PTVS3-058C-SH PTVS3-076C-SH	64 85	67 90	70 95	V
V_C	Clamping Voltage (1)	I_{PP} = 3 kA	PTVS3-058C-SH PTVS3-076C-SH			110 140	V
$V_{(BR)}$	Temperature Coefficient				0.1		%/°C
C	Capacitance	F = 10 kHz, V_d = 1 Vrms	PTVS3-058C-SH PTVS3-076C-SH		2.3 1.7		nF

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

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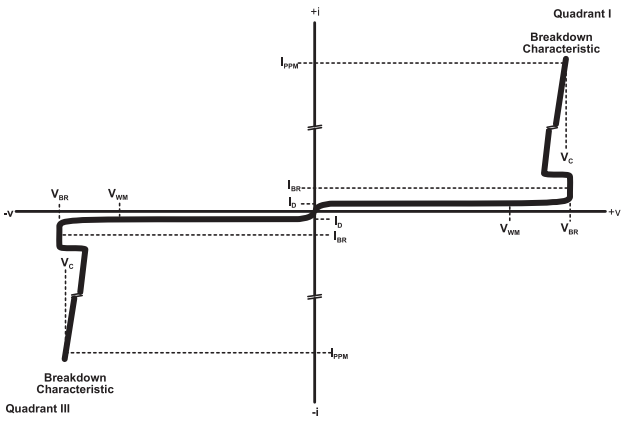
WARNING Cancer and Reproductive Harm - www.P65Warnings.ca.gov

*RoHS Directive 2015/863, Mar 31, 2015 and Annex.
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Users should verify actual device performance in their specific applications.
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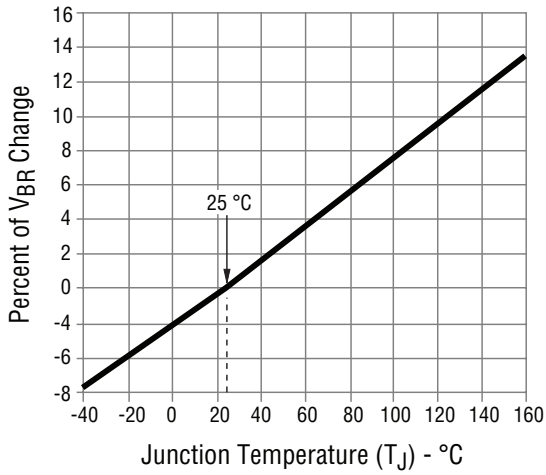
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Performance Graphs

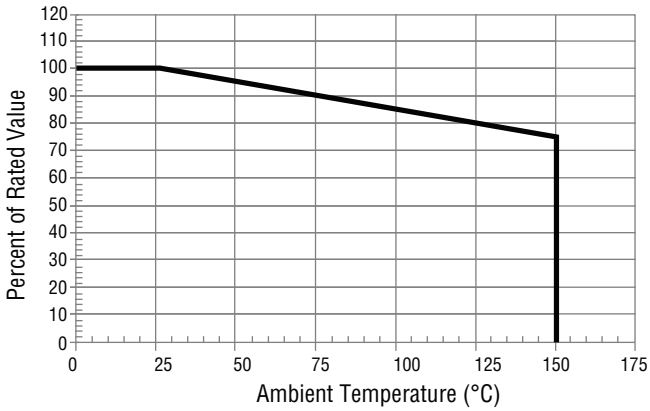
V-I Characteristic



Typical V_{BR} vs. Junction Temperature

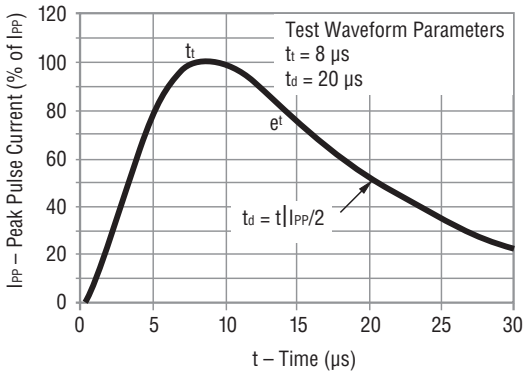


Typical Surge Current Derating



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

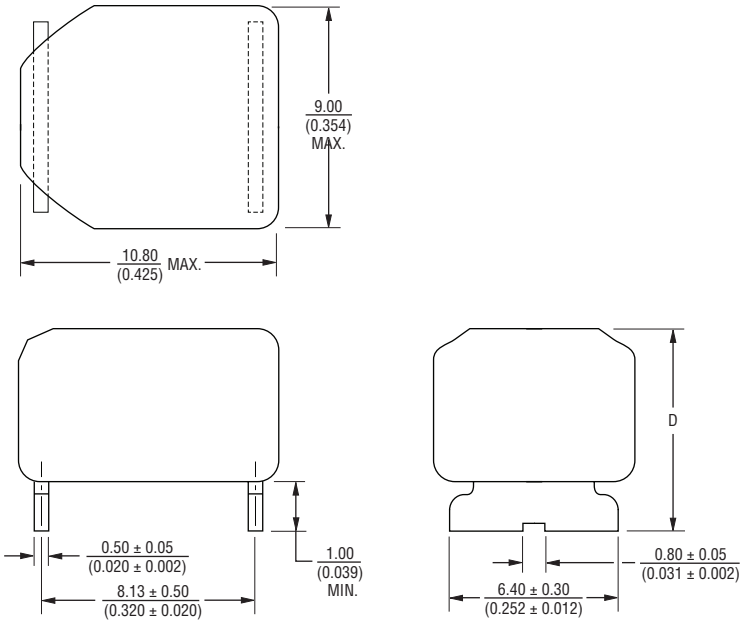


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Product Dimensions

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.

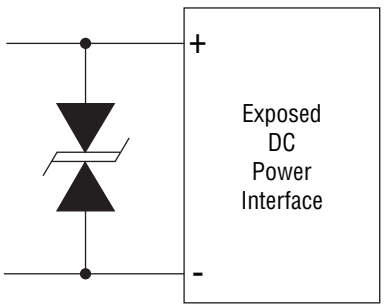


DIMENSIONS: MM / (INCHES)

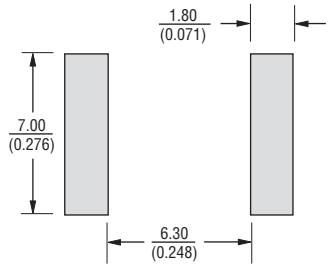
Device	Dimension D
PTVS3-058C-SH	7.00 ± 0.50 (0.276 ± 0.020)
PTVS3-076C-SH	7.90 ± 0.50 (0.311 ± 0.020)

Application

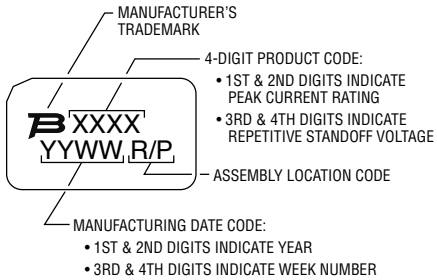
A typical application for Power TVS products includes DC power line protection.



Recommended Printed Wiring Land Pattern Dimensions



Typical Part Marking



How to Order

PTVS 3 - xxx C - S H - R

Series
PTVS = Power TVS High-Current Diode

Peak Current Rating
3 = 3 kA

Repetitive Standoff Voltage
058 = 58 V
076 = 76 V

Suffix
C = Bidirectional Device

Package
S = Surface Mount

Temperature
H = High Temperature Series

Packaging Option
(Blank) = Tray Packaging
R = Tape and Reel (400 pcs. per reel)

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