Features

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

Applications

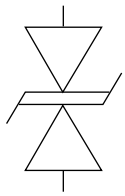
- High power DC bus protection

PTVS6-xxxC-M Series High Current TVS Diodes

General Information

Bourns® Model PTVS6-xxxC-M high current bidirectional TVS diodes are designed for use in high power DC bus clamping applications. These devices offer bidirectional port protection and are available with standoff voltage ratings of 66 V and 76 V.

The devices are RoHS* compliant and are designed to 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 Recognition

Description	
UL	File Number: E215609

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

Rating		Symbol	Value	Unit
Repetitive Standoff Voltage	PTVS6-066C-M PTVS6-076C-M	V_{WM}	66 76	V
Peak Current Rating per 8/20 µs IEC 61000-4-5		I_{PPM}	6	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	PTVS6-066C-M PTVS6-076C-M	72 85	76 90	80 95	V
V_C	Clamping Voltage	I_{PP} = 6 kA	PTVS6-066C-M PTVS6-076C-M			120 135	V
$V_{(BR)}$	Temperature Coefficient				0.1		%/°C
C	Capacitance	F = 10 kHz, V_d = 1 Vrms	PTVS6-066C-M PTVS6-076C-M		4.1 3.3		nF

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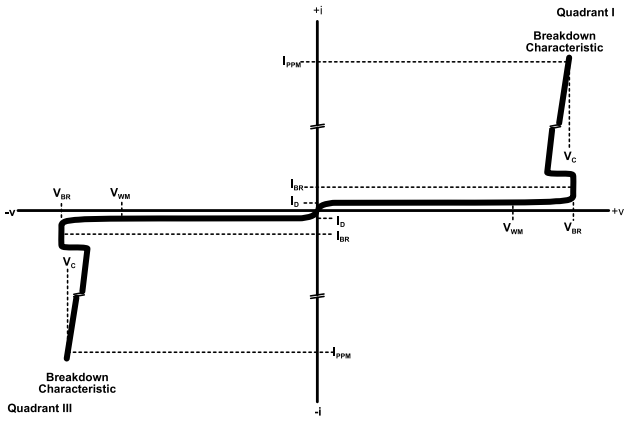
WARNING Cancer and Reproductive Harm - www.P65Warnings.ca.gov

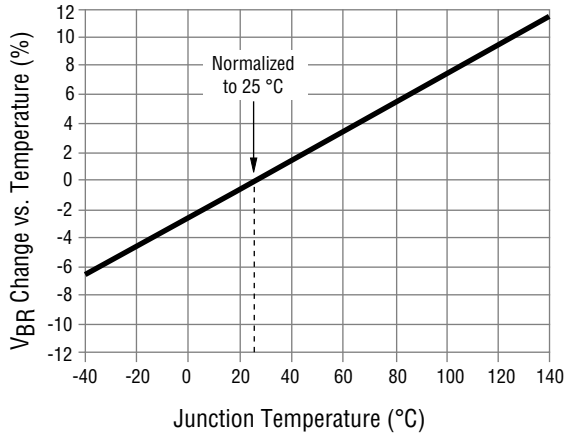
*RoHS Directive 2015/863, Mar 31, 2015 and Annex.
Specifications are subject to change without notice.
Users should verify actual device performance in their specific applications.

Performance Graphs

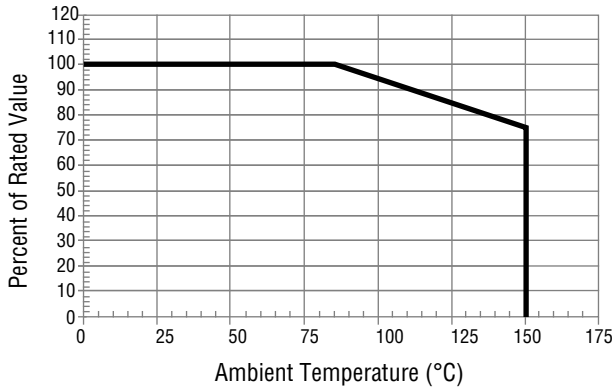
V-I Characteristic



Typical V_{BR} vs. Junction Temperature

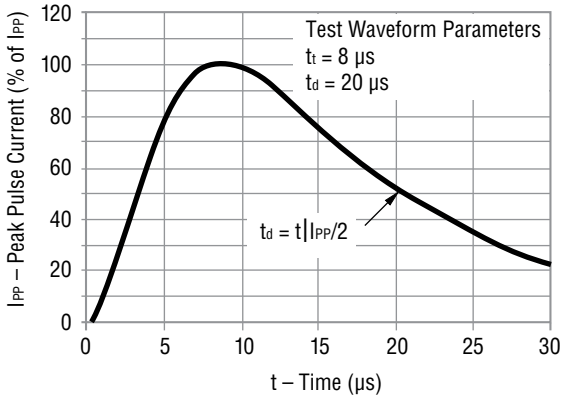


Typical Surge Current Derating



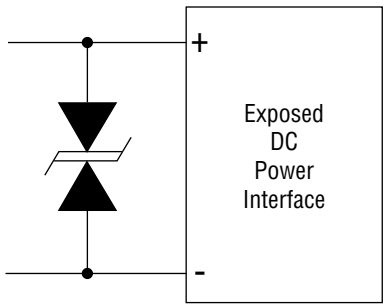
This graph shows the typical device surge current derating versus ambient temperature when subjected to the 8/20 µs current waveform per the IEC 61000-4-5 specification. This device is not intended for continuous operation at temperatures above 125 °C.

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



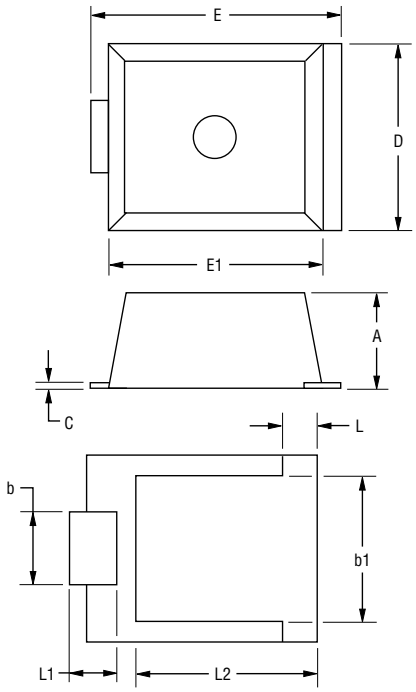
Application

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



Product Dimensions

This is an RoHS compliant*, molded package with 100 % Sn on the terminations, and a flammability rating of UL 94-V-0.

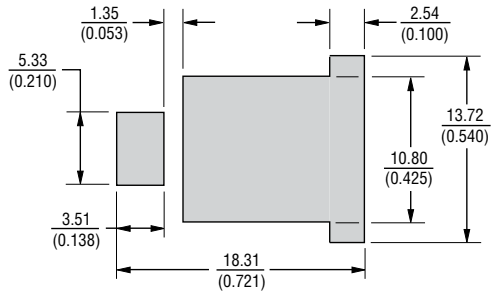


Dim.	Min.	Max.
A	6.94 (0.273)	7.24 (0.285)
b	5.15 (0.203)	5.65 (0.222)
b1	10.55 (0.415)	11.05 (0.435)
C	0.37 (0.015)	0.45 (0.018)
D	13.45 (0.530)	14.60 (0.575)
E	17.85 (0.703)	18.72 (0.737)
E1	15.50 (0.610)	16.05 (0.632)
L	2.30 (0.091)	2.80 (0.110)
L1	3.35 (0.132)	3.75 (0.148)
L2	13.16 (0.518)	13.76 (0.518)

Mold flash or protrusion shall not exceed 0.25 mm.

DIMENSIONS: MM (INCHES)

Recommended Pad Layout



DIMENSIONS: MM (INCHES)

Typical Part Marking

PTVS6-066C-M 6066
PTVS6-076C-M 6076

How to Order

PTVS 6 - xxx C-M

Series
PTVS = Power TVS High Current Diode

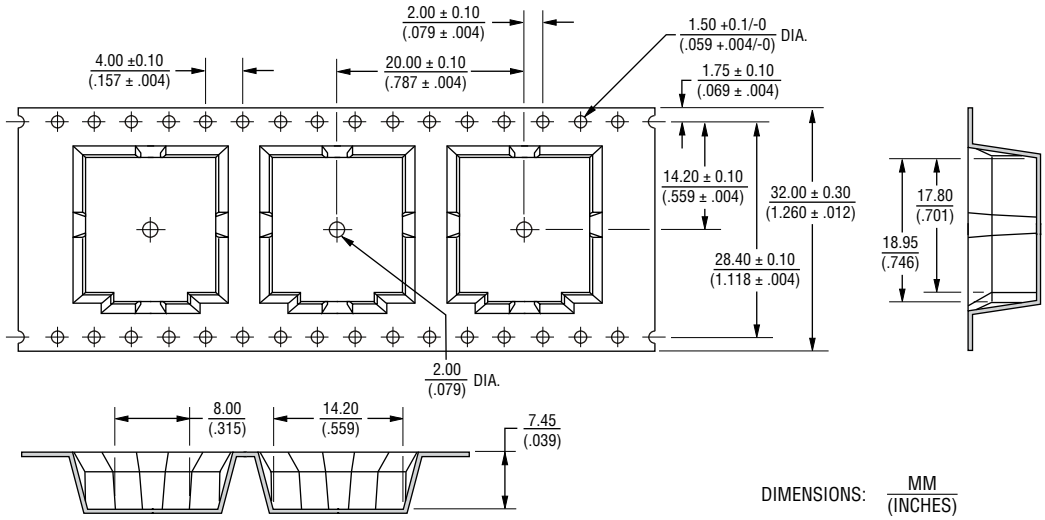
Peak Current Rating
6 = 6 kA

Repetitive Standoff Voltage
066 = 66 V
076 = 76 V

Suffix
C = Bidirectional Device
M = Surface Mount

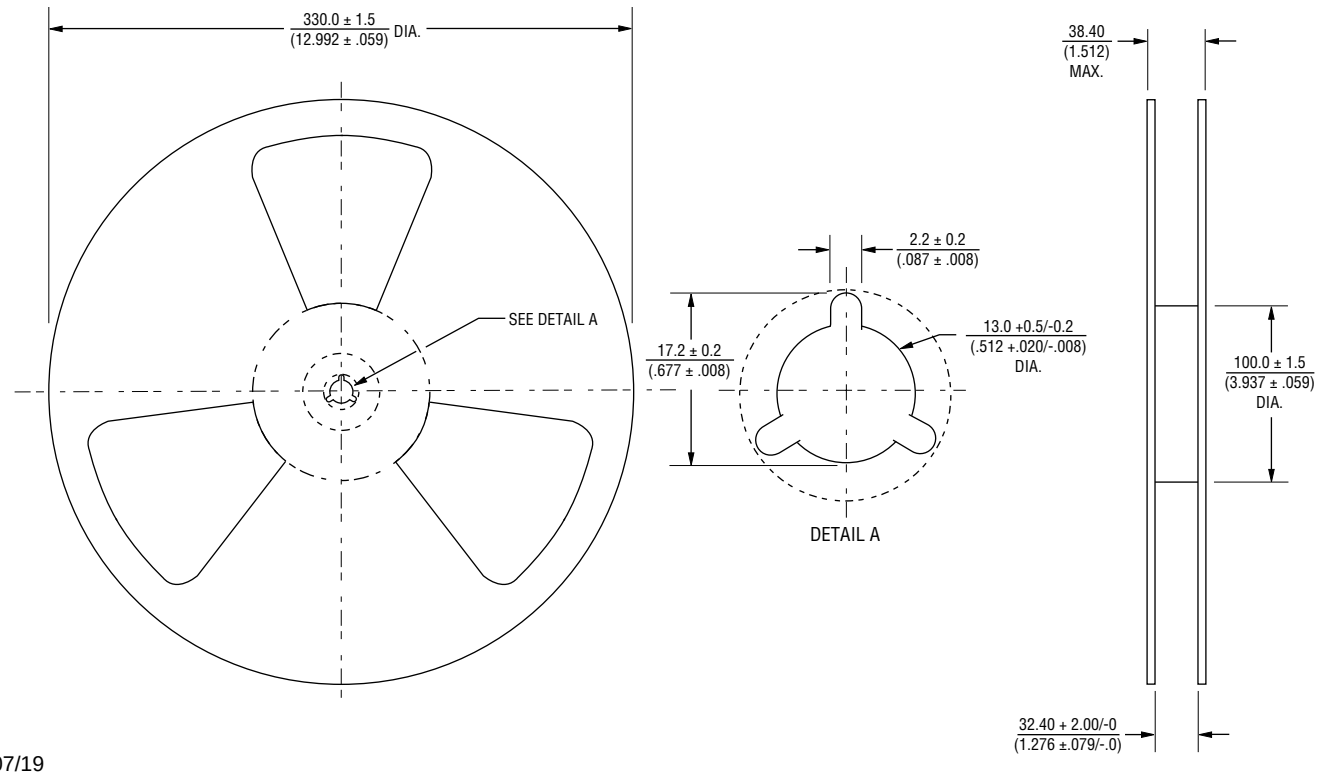
Packaging Information

The product will be dispensed in tape and reel format (see diagram below).



USER DIRECTION OF FEED

400 PCS. PER REEL



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