



## PTVS10-xxxC Series High Current TVS Diodes

### Features

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

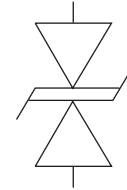
### Applications

- AC line protection
- High power DC bus protection

### General Information

The PTVS10-xxxC 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 470 volts.

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



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

Rating	Symbol	Value	Unit
Repetitive Standoff Voltage	$V_{WM}$	58	V
		76	
		170	
		320	
		380	
		470	
Peak Current Rating per 8/20 $\mu$ s IEC 61000-4-5	$I_{PPM}$	10	kA
Operating Junction Temperature Range	$T_J$	-40 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	$I_{BR} = 10\text{ mA}$	PTVS10-058C	64	66	70	V
		PTVS10-076C	85	92	95	
		PTVS10-170C	190	200	210	
		PTVS10-320C	336	350	368	
		PTVS10-380C	401	420	443	
		PTVS10-470C	490	500	530	
$V_C$ Clamping Voltage	$I_{PP} = 10\text{ kA}$	PTVS10-058C		120	130	V
		PTVS10-076C		150	160	
		PTVS10-170C		250	300	
		PTVS10-320C		440	500	
		PTVS10-380C		520	570	
		PTVS10-470C		620	680	
$V_{(BR)}$ Temperature Coefficient			0.1		$\%/^\circ\text{C}$	
C Capacitance	F = 10 kHz, $V_d = 1\text{ Vrms}$	PTVS10-058C		11.7	12.5	nF
		PTVS10-076C		8.6	10.0	
		PTVS10-170C		4.0	5.0	
		PTVS10-320C		2.7	3.5	
		PTVS10-380C		2.0	2.5	
		PTVS10-470C		1.7	2.2	

PTVS20-015C-TH PTVS 二极管具备20 kA 浪涌电流和低箝位电压处理能力 符合 IEC 61000-4-2 第 4 级 ESD 保护要求, 且具有峰值脉冲电流下的低箝位电压, 有助于满足 IEC 61000-4-5 8/20  $\mu$ s 雷击保护的浪涌电流要求。