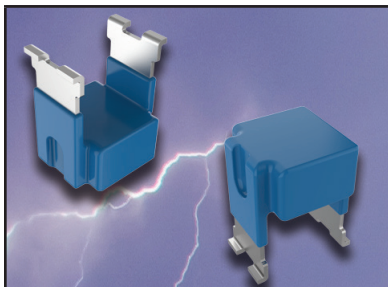


## HIGH CURRENT TVS DIODES



**ENCAPSULATED DEVICE**

### DESCRIPTION

The PDTVSxxCA Series of high current bidirectional TVS diodes are designed for use in high powered DC bus clamping applications. These devices offer bidirectional port protection and are available in 58 and 76 Volts. The PDTVSxxCA Series are IEC 61000-4-5 complaint.

### APPLICATIONS

- High Power DC Bus

### FEATURES

- UL Registered
- Compatible with IEC 61000-4-5
- 3kA, 8/20μs Surge Capability
- Low Clamping Voltage Under Surge
- Bidirectional
- Surface Mount Package
- RoHS Complaint

### MECHANICAL CHARACTERISTICS

- Epoxy Encapsulated Device
- Flammability Rating UL 94V-0
- Marking: Logo, Date Code & Marking Code

Bidirectional



#### MAXIMUM RATINGS @ 25°C Unless Otherwise Specified

PARAMETER	SYMBOL	VALUE	UNITS
Operating Junction Temperature	$T_J$	-55 to 125	°C
Storage Temperature	$T_S$	-55 to 150	°C
Peak Current Rating per 8/20μs IEC 61000-4-5	$I_{PPM}$	3	kA

## TYPICAL DEVICE CHARACTERISTICS

## ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified

PART NUMBER	MARKING CODE	REPETITIVE STAND-OFF VOLTAGE $V_{WM}$ VOLTS	MINIMUM BREAKDOWN VOLTAGE $V_{(BR)}$ @ 10mA VOLTS	MAXIMUM STANDBY CURRENT $I_D$ @ $V_{WM}$ $\mu A$	MAXIMUM CLAMPING VOLTAGE (Note 1) @ $I_{PP} = 3kA$ $V_C$ VOLTS	TEMPERATURE COEFFICIENT OF $V_{(BR)}$ $qV_{(BR)}$ mV/°C	TYPICAL CAPACITANCE @ 1V, 10kHz C nF
PDTV558CA	58V	58.0	64.0	5	110	0.1	2.3
PDTV576CA	76V	76.0	85.0	5	140	0.1	1.7

## NOTE

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

FIGURE 1  
PULSE WAVE FORM

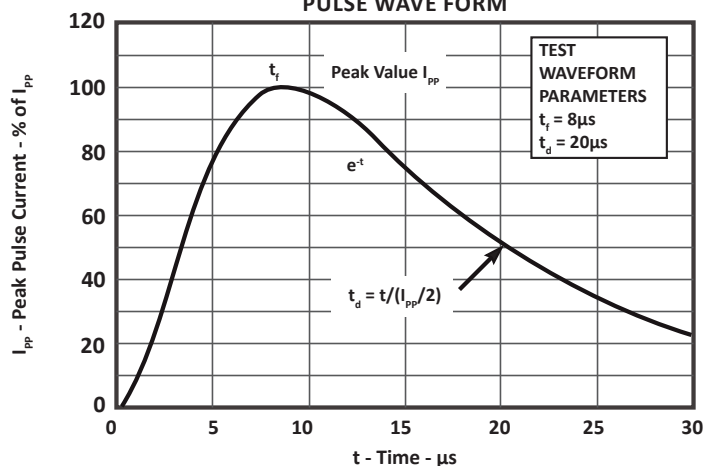
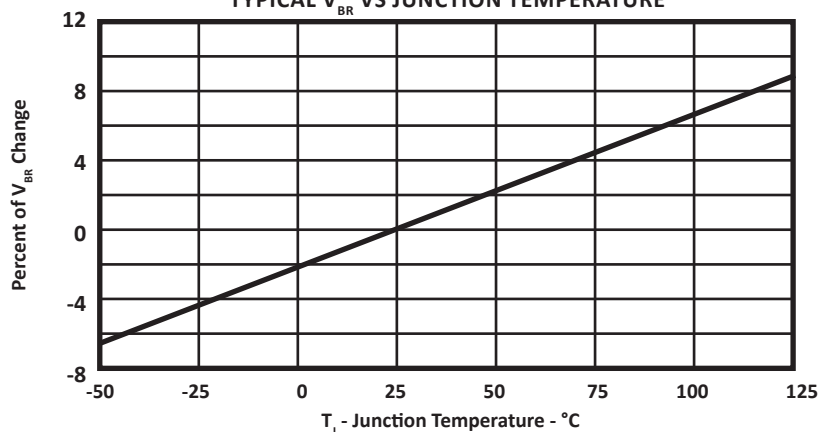
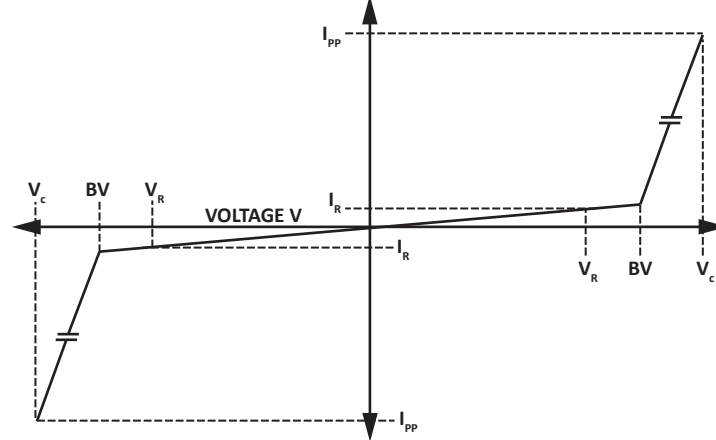


FIGURE 2  
TYPICAL  $V_{BR}$  VS JUNCTION TEMPERATURE

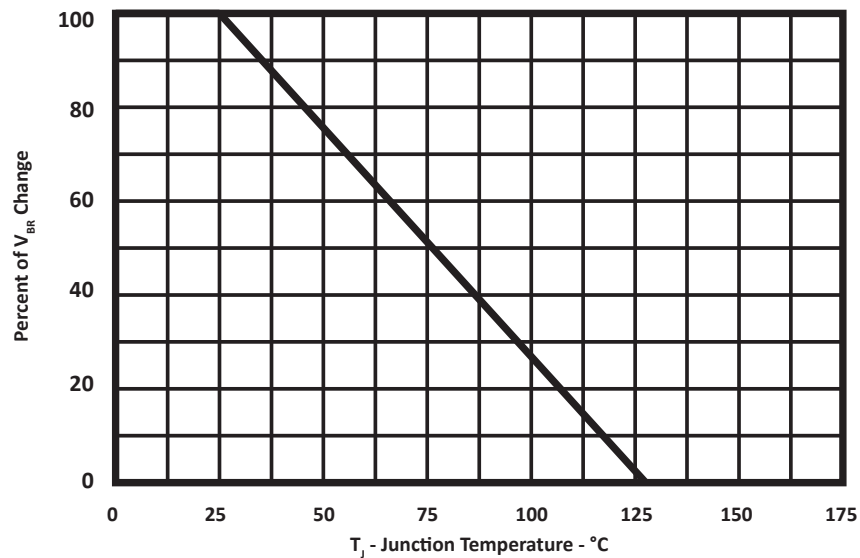



**TYPICAL DEVICE CHARACTERISTICS**

**FIGURE 3**  
**V-I CHARACTERISTIC**  
**CURRENT I**



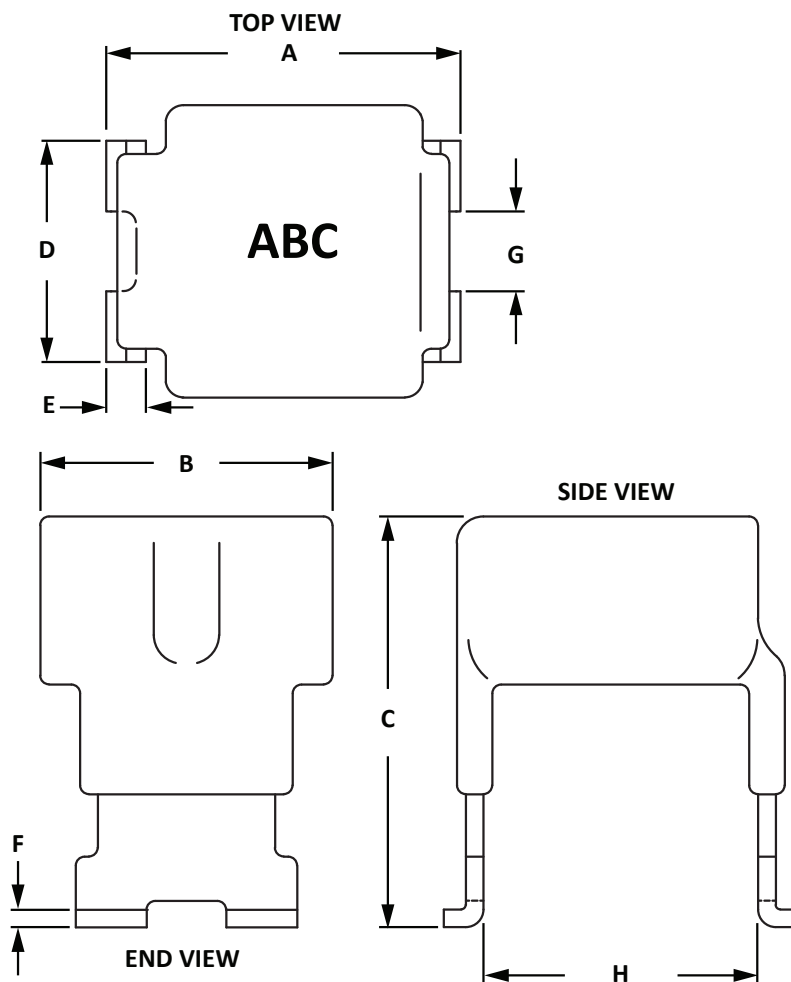
**FIGURE 4**  
**TYPICAL  $V_{BR}$  VS JUNCTION TEMPERATURE**



## PACKAGE INFORMATION

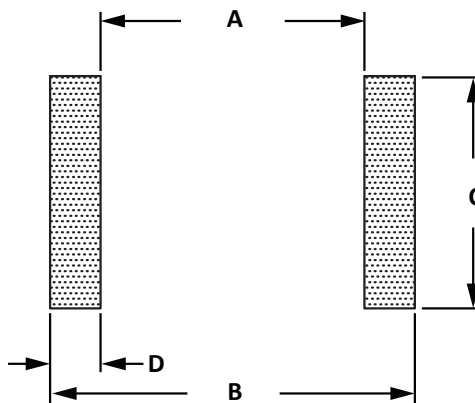
OUTLINE DIMENSIONS				
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	9.78	10.50	0.385	0.415
B	7.87	8.89	0.310	0.350
C	11.43	12.46	0.450	0.490
D	6.22	6.47	0.245	0.255
E	1.02	1.27	0.040	0.050
F	0.51		0.020	
G	2.17	2.41	0.085	0.095
H	7.37	8.13	0.290	0.320

**NOTES**  
1. Dimensions are exclusive of mold flash and metal burrs.

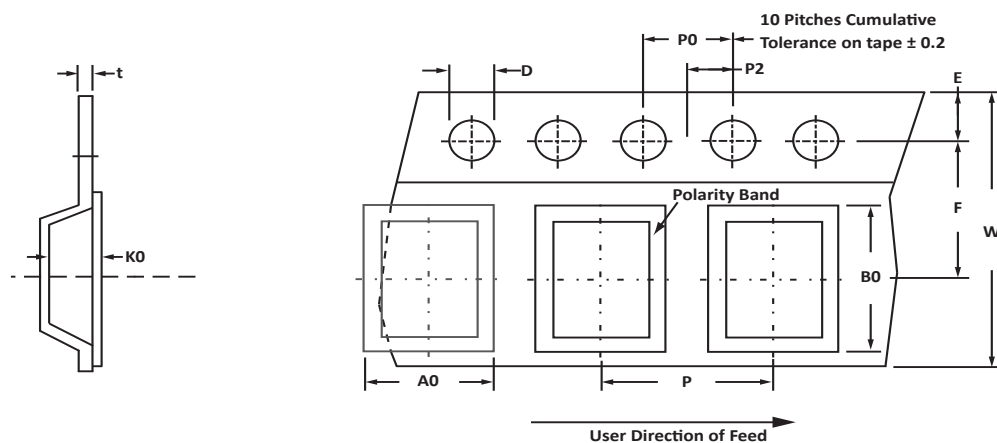


PAD LAYOUT DIMENSIONS		
DIM	MILLIMETERS	INCHES
	NOMINAL	NOMINAL
A	7.57	0.298
B	10.46	0.412
C	6.65	0.262
D	1.45	0.057

**NOTES**  
1. Decimal tolerances:  $\pm 0.003''$



## TAPE AND REEL



## SPECIFICATIONS

REEL DIA.	TAPE WIDTH	A0	B0	K0	D	E	F	W	P0	P2	P	tmax
330mm (13")	12mm	$7.82 \pm 0.3$	$10.60 \pm 0.3$	$12.50 \pm 0.2$	$1.50 \pm 0.1$	$1.75 \pm 0.1$	$11.50 \pm 0.05$	$24.00 \pm 0.3$	$4.00 \pm 0.1$	$2.00 \pm 0.1$	$16.00 \pm 0.2$	0.4

## NOTES

- Dimensions are in millimeters.
- Surface mount product is taped and reeled in accordance with EIA-481.
- Marking on Part - marking code (see page 2), date code and logo.

## ORDERING INFORMATION

BASE PART NUMBER (Voltage = xx)	LEADFREE SUFFIX	TAPE SUFFIX	QTY/REEL	REEL SIZE	TUBE QTY
PDTV5xxCA	N/A	-T13	250	13"	N/A

This device is only available in a Lead-Free configuration.

## COMPANY INFORMATION

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### COMPANY PROFILE

In business more than 30 years, ProTek Devices™ is a privately held semiconductor company. The company offers a product line of overvoltage protection that include Transient Voltage Suppressor (TVS) Arrays, Steering Diode Array Hybrids, High-power Components and Modules, as well as Steering Diodes, EMI Filter/TVS Arrays and Thyristor Surge Suppressors. These components deliver circuit protection in electronic systems from numerous overvoltage events. They include lightning; electrostatic discharge (ESD); nuclear electromagnetic pulses (NEMP); inductive switching; and electromagnetic interference (EMI) / radio frequency interference (RFI). ProTek Devices is an ISO 9001 certified company.

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