PT10k-086C

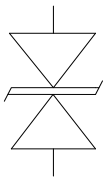
High Current TVS Diode

Features

- 10 kA, 8/20 µs surge capability
- 1 kA, 10/350 µs surge capability
- Low clamping voltage under surge
- Bidirectional TVS
- Surface mount package
- RoHS Compliant

Application

■ High power DC bus protection



Schematic Diagram

Absolute Maximum Ratings (T_A=25℃, Unless otherwise specified)

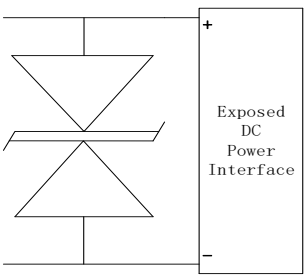
Parameter	Symbol	Value	Unit
Repetitive Standoff Voltage	V_{WM}	86	V
Peak Current Rating per 8/20 µs IEC 61000-4-5	I_{PPM}	10	kA
Peak Current Rating per 10/350 µs	I_{PPM}	1	kA
Operating Junction Temperature Range	T_J	-55 to +125	℃
Storage Temperature Range	T_S	-55 to +150	℃

Electrical Characteristics (T_A=25℃, Unless otherwise specified)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Standby Current	I_D	$V_D = V_{WM}$			10	µA
Breakdown Voltage	V_{BR}	I_{BR} = 10 mA	95	100		V
Clamping Voltage	V_C	I_{PP} = 10 kA (8/20 µs waveshape)			157	V
$V_{(BR)}$ Temperature Coefficient				0.1		%/°C
Capacitance	C	F = 10 kHz, Vd = 1 Vrms		5		nF

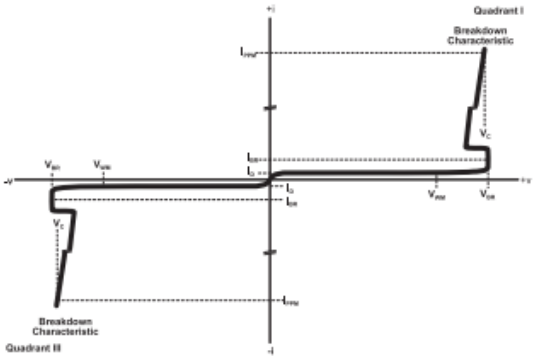
Application

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

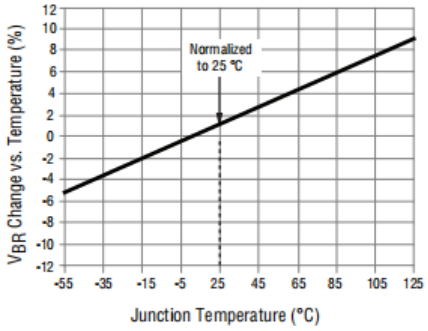


Performance Graphs

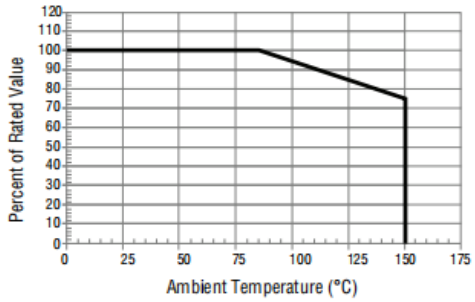
V-I Characteristic



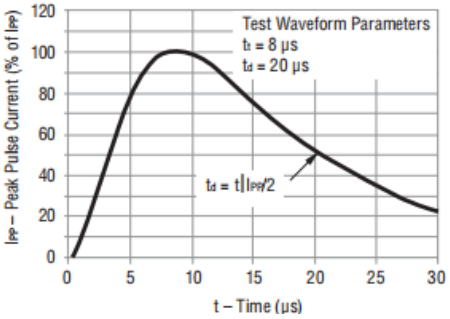
Typical VBR vs. Junction Temperature



Typical Surge Current Derating



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

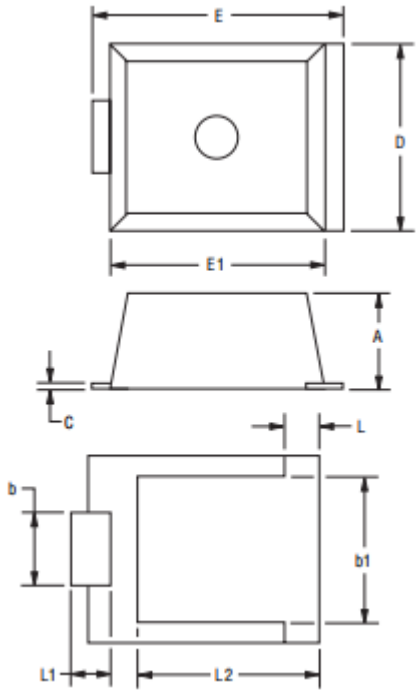


How TO Order

PT 10k-086 C

- C — Bidirectional Device
- 086 — 86V
- 10k — 10kA
- PT — Power Tvs High Current Diode

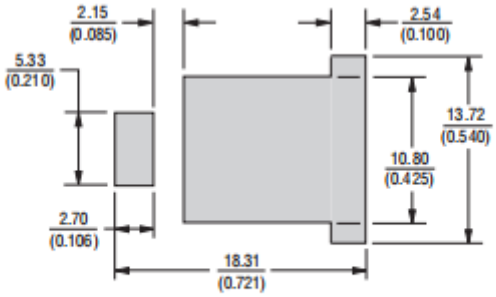
Product Dimensions



DIMENSIONS: MM / (INCHES)

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	2.50 (0.098)	2.90 (0.114)
L2	13.16 (0.518)	13.76 (0.518)

Recommended Pad Layout



DIMENSIONS: MM / (INCHES)

Packaging Information

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