

## Features

- ◆ Ultra low capacitance: 1 pF(Max)
- ◆ Ultra low leakage: nA level
- ◆ Low operating voltage: 5.5V
- ◆ Low clamping voltage
- ◆ Complies with following standards:
  - IEC 61000-4-2 (ESD) immunity test  
Air discharge: ±20kV  
Contact discharge: ±15kV
  - IEC61000-4-4 (EFT) 40A (5/50ns)
- ◆ ROHS Compliant

## Mechanical Characteristics

- ◆ Package: SOT23-6
- ◆ Lead Finish: Matte Tin
- ◆ Case Material: “Green” Molding Compound.
- ◆ UL Flammability Classification Rating 94V-0
- ◆ Moisture Sensitivity: Level 3 per J-STD-020

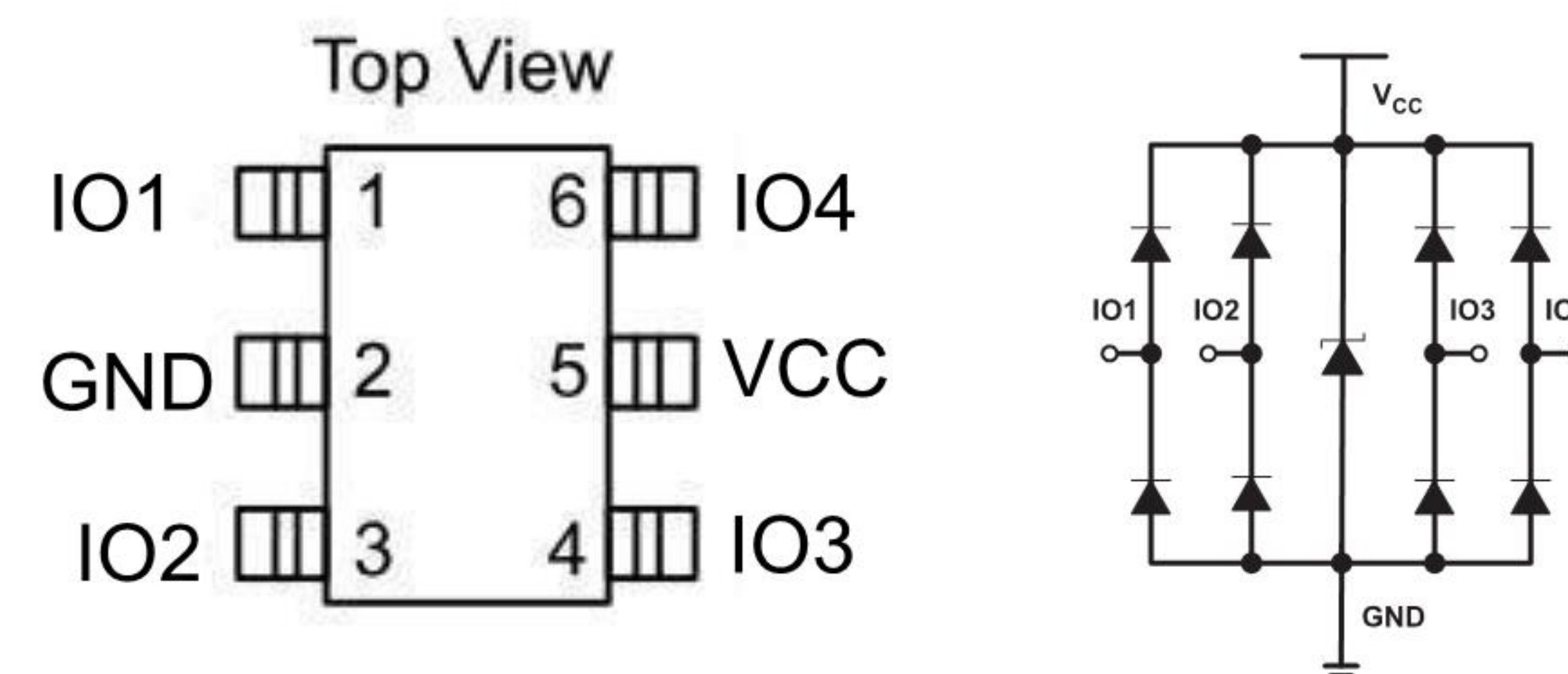
## Ordering Information

Part Number	Qty per Reel	Reel Size
TPD4E001DBVR	3000	7"

## Applications

- ◆ USB 2.0 and USB 3.0 Ports
- ◆ USB OTG
- ◆ Digital video interface(DVI)
- ◆ Monitor and Flat Panel Displays
- ◆ PCI Express and Serial SATA Ports
- ◆ Gigabit Ethernet
- ◆ IEEE 1394 firewire ports
- ◆ Consumer products (STB, DVD, DSC, DVC...)

## Dimensions and Pin Configuration





**Absolute Maximum Ratings** (Tamb=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
ESD Protection (per IEC 61000-4-2) Air Discharge Contact Discharge	WM	20	kV
	BR	15	

Parameter	Symbol	Min.	Nom.	Max.	Unit
Operating Temperature	T <sub>J</sub>	-55	+25	+150	°C
Storage Temperature	T <sub>STG</sub>	-55	+25	+150	°C

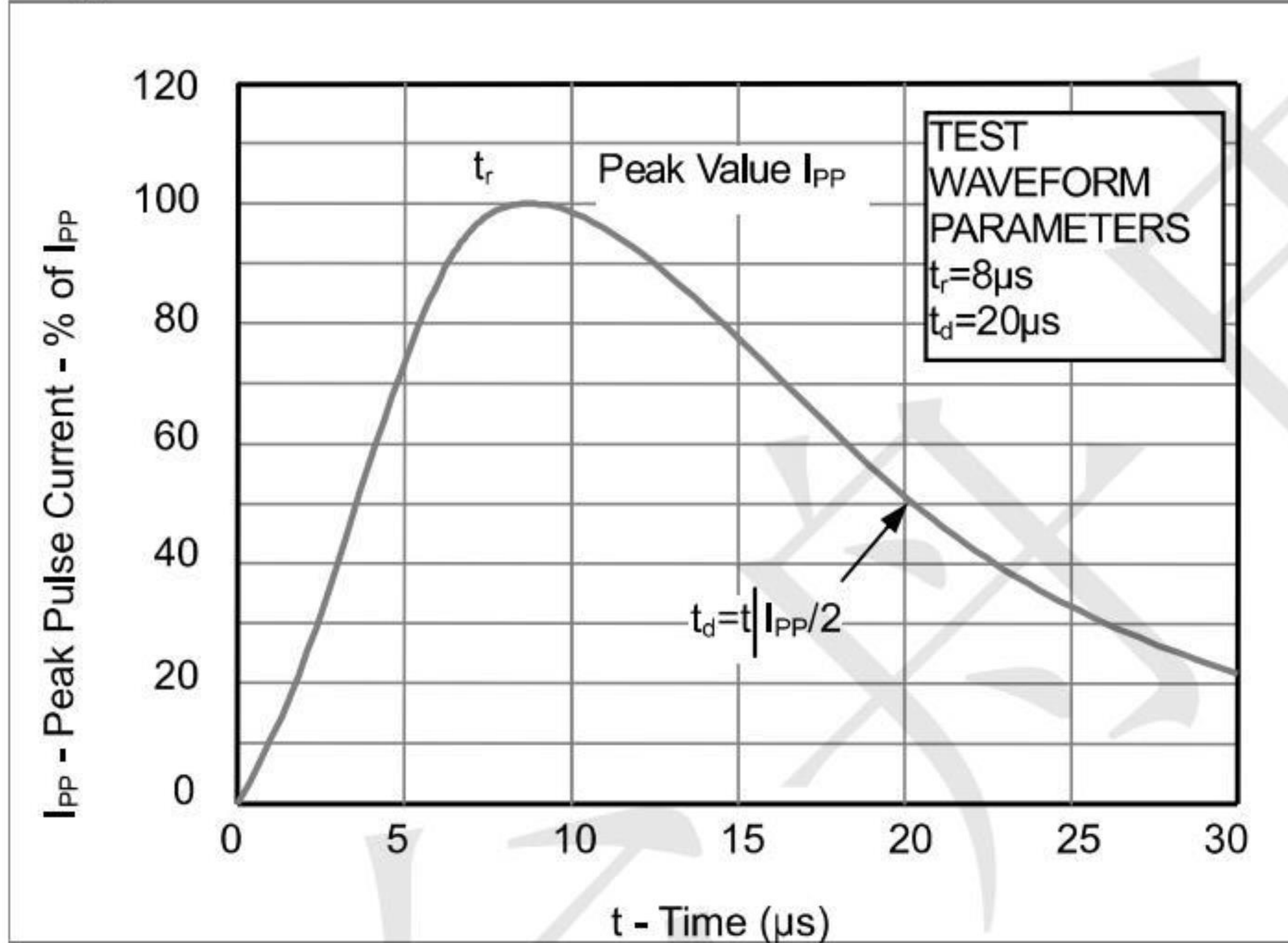
**Electrical Characteristics** (TA=25°C unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit
Working Peak Reverse Voltage	V <sub>WM</sub>			5.5	V
Breakdown Voltage @ 1 mA	V <sub>BR</sub>	6.5		9	V
Leakage Current @ V <sub>WM</sub>	I <sub>D</sub>			0.1	μA
Capacitance	C <sub>j(SD)</sub>			1	pF
Forward Surge Rating (1/20 s @ 25 °C, I <sub>F</sub> = 10 mA)	V <sub>F</sub>	0.6		9	V
Clamping Voltage (per IEC 61000-4-5) 8/20 μs)	@ I <sub>PP</sub> = 1 A			12	V
	@ I <sub>PP</sub> = 5 A			15	

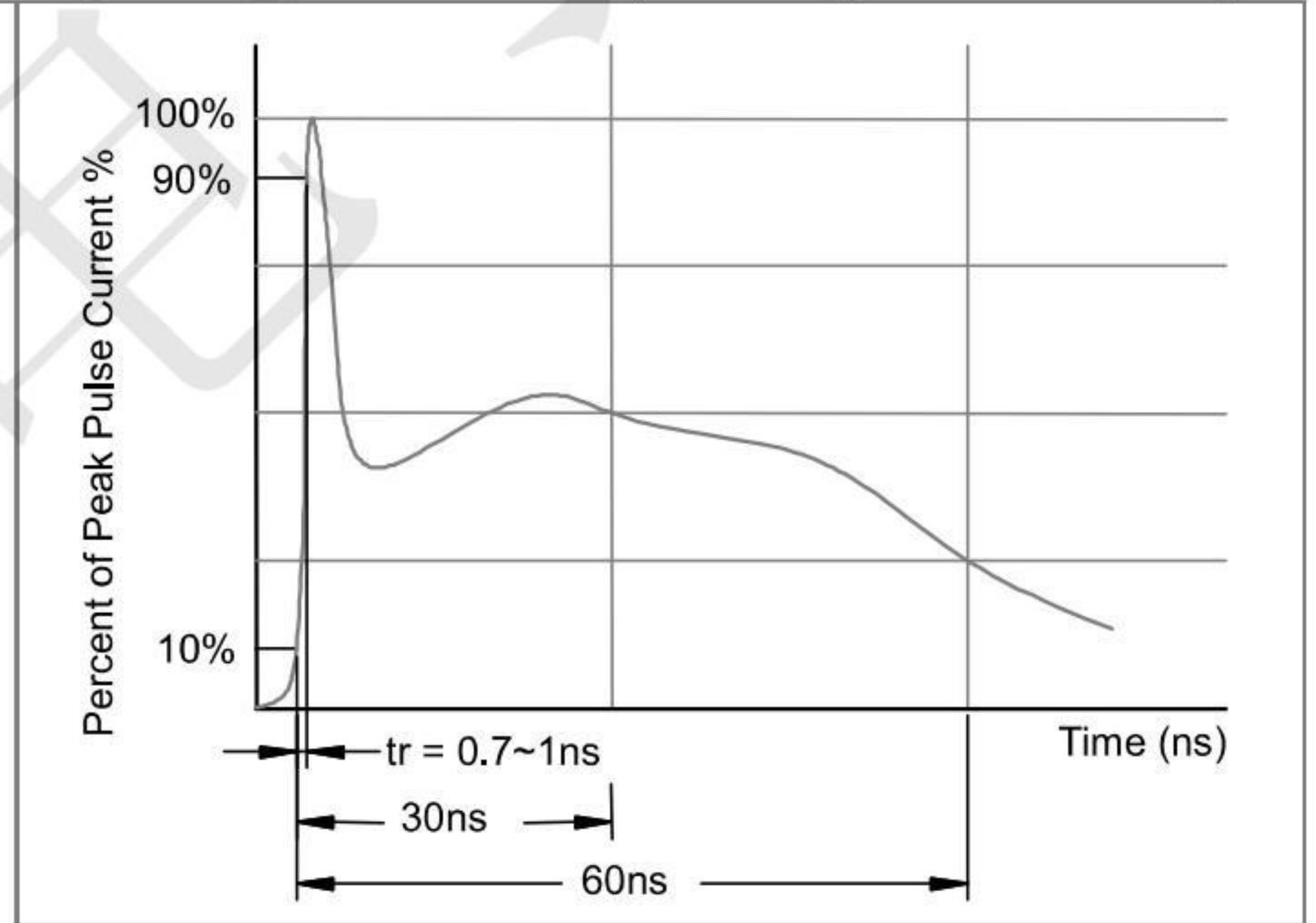


**Typical Performance Characteristics ( $T_A=25^\circ\text{C}$  unless otherwise Specified)**

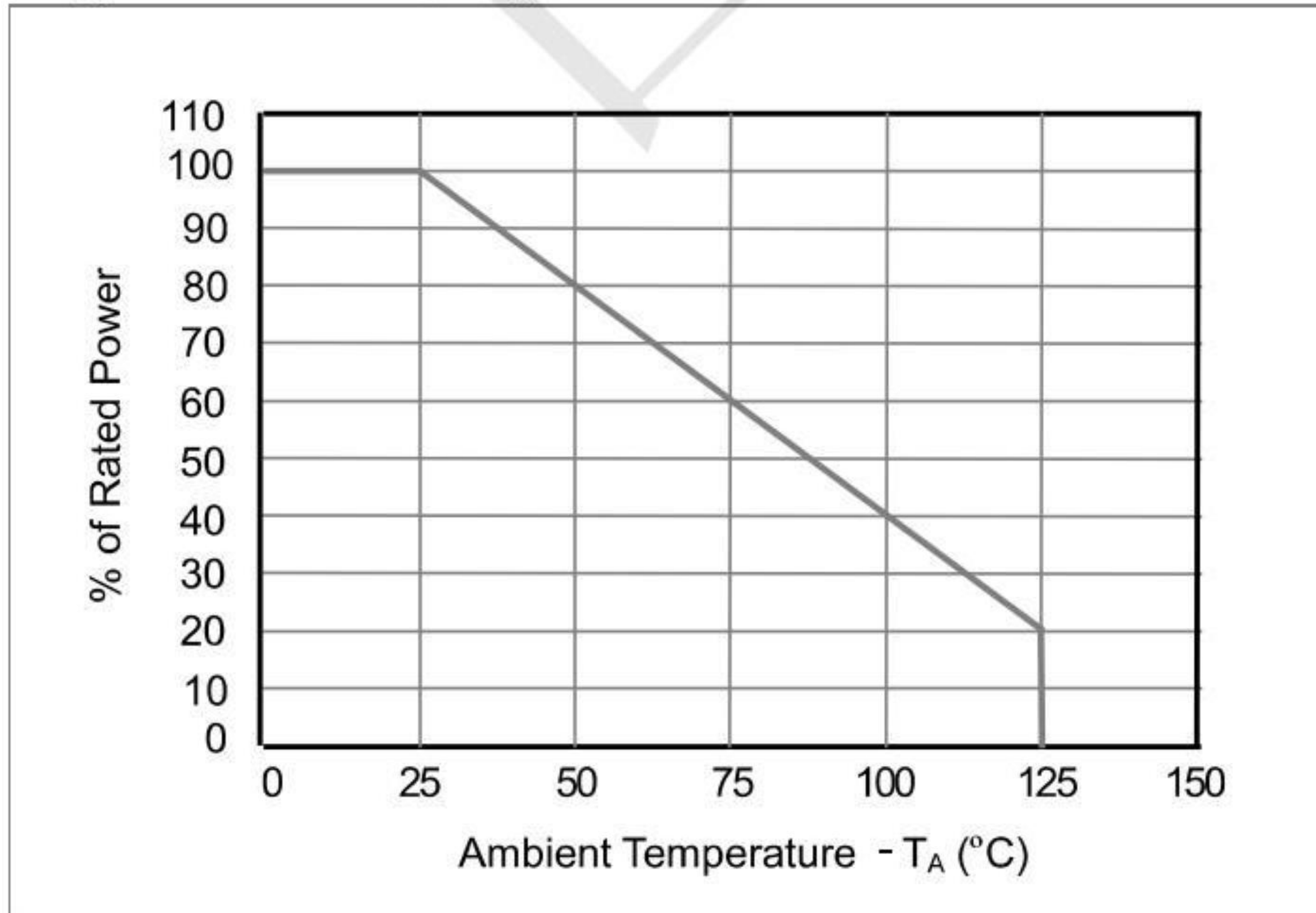
**Fig1. 8/20 $\mu\text{s}$  Pulse Waveform**



**Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)**

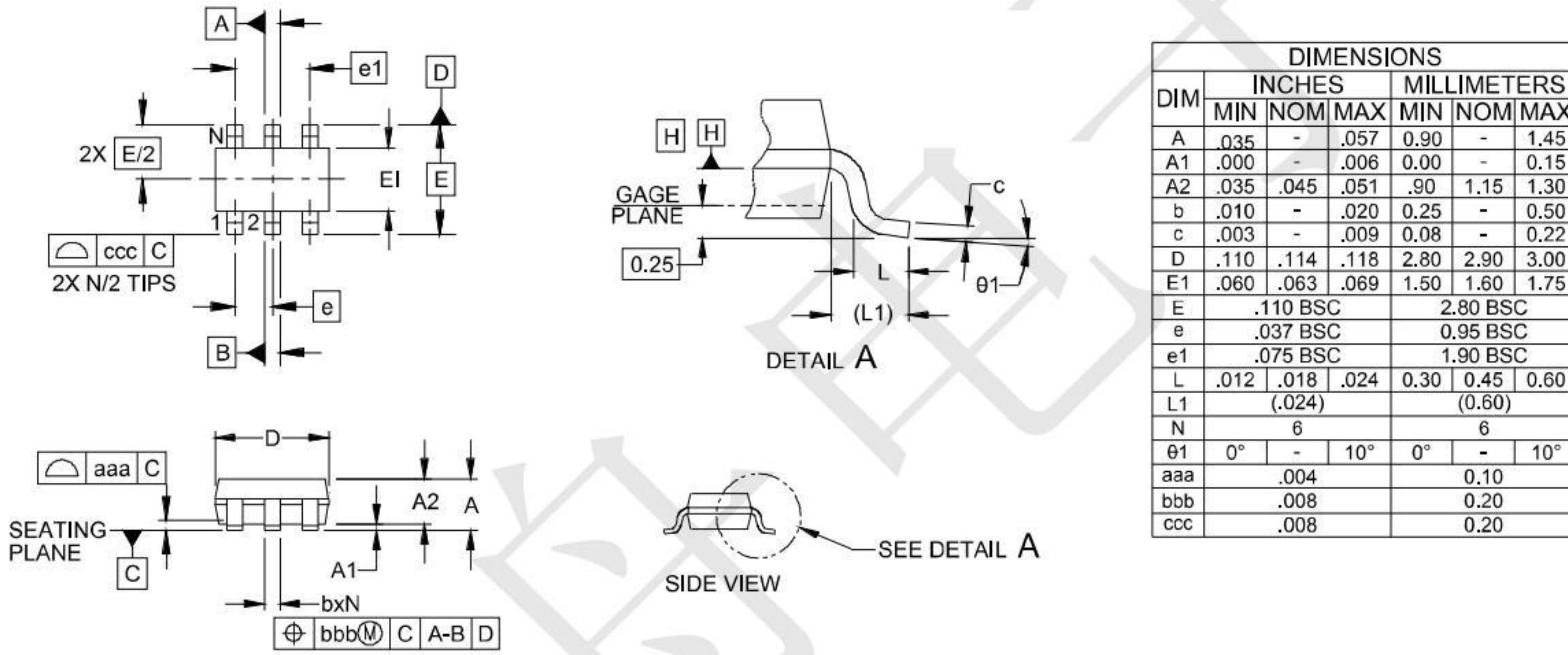


**Fig3. Power Derating Curve**

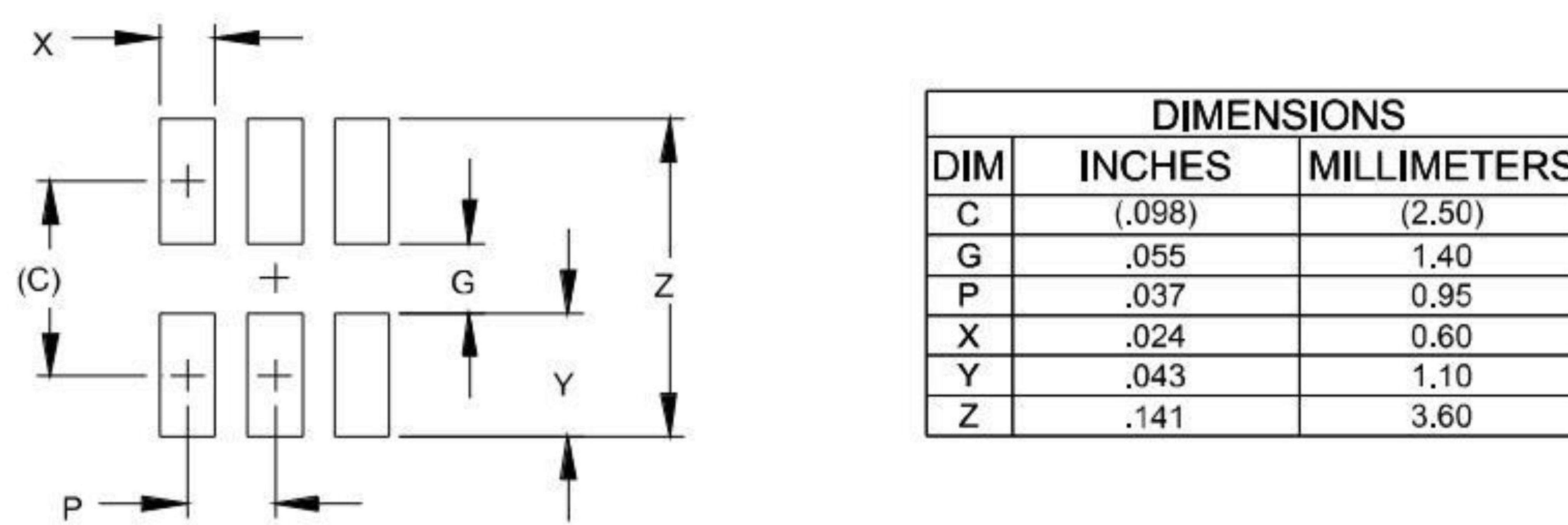




**Outline Drawing - SOT23-6**



**Land Pattern - SOT23-6**





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