

## Features

- \* 450W peak pulse power (8/20 $\mu$ s)
- \* Protects one data or power line
- \* Operating voltage: 3.3V
- \* Ultra low clamping voltage
- \* Complies with following standards:
  - IEC 61000-4-2 (ESD) immunity test
    - Air discharge:  $\pm 30$ kV
    - Contact discharge:  $\pm 30$ kV
  - IEC61000-4-4 (EFT) 80A (5/50ns)
  - IEC61000-4-5 (SURGE) 38A (8/20us)

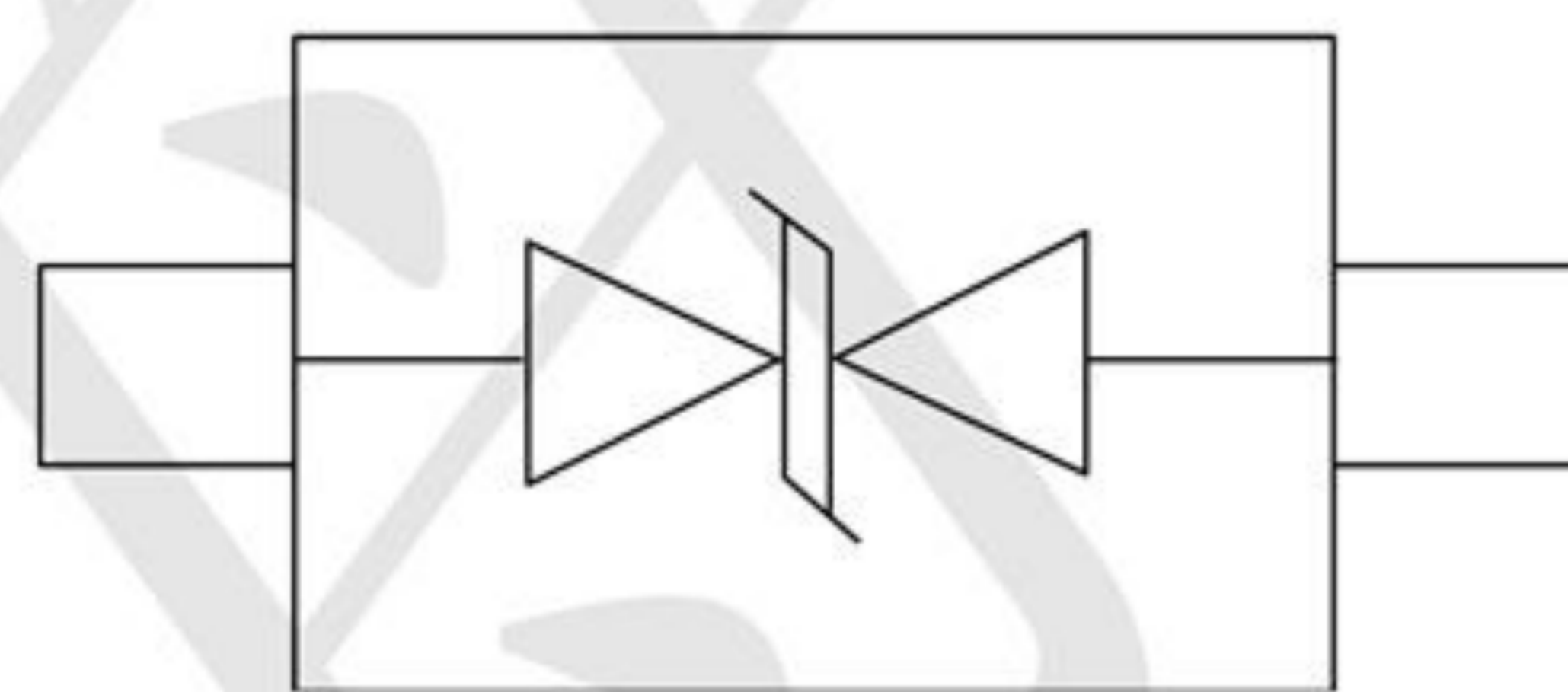
## Mechanical Characteristics

- \* Package: SOD123
- \* Ultra low leakage: nA level
- \* Case Material: "Green" Molding Compound.
- \* UL Flammability Classification Rating 94V-0
- \* Moisture Sensitivity: Level 3 per J-STD-020
- \* Shipping Qty : 3000pcs/7Inch Tape & Reel

## Applications

- \* Cellular Handsets and Accessories
- \* Personal Digital Assistants
- \* Notebooks and Handhelds
- \* Portable Instrumentation
- \* Peripherals

## Dimensions and Pin Configuration



Marking: 3V3B

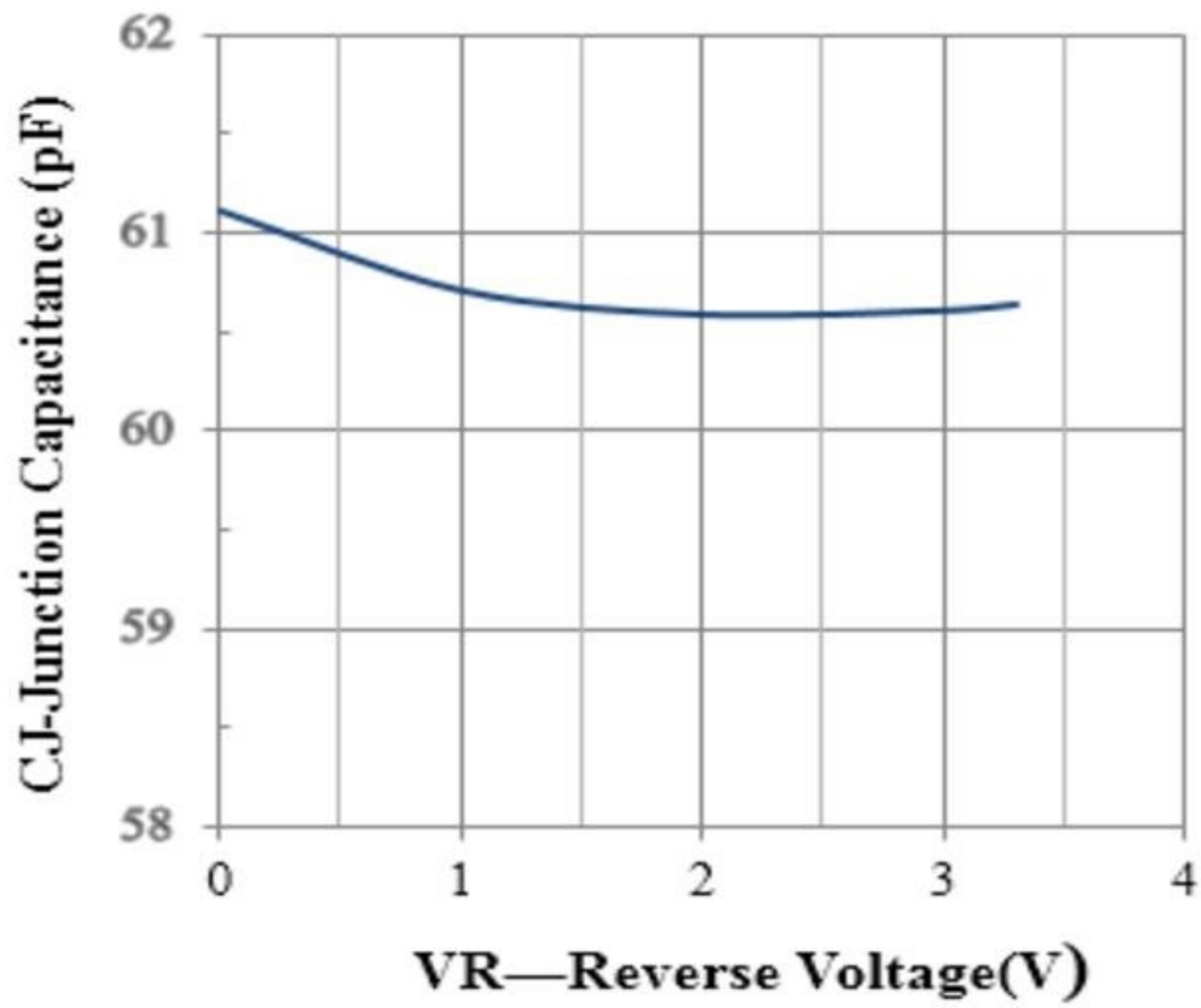
**Absolute Maximum Ratings** (Tamb=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	Ppk	450	W
Peak Pulse Current (8/20μs)	I <sub>PP</sub>	38	A
ESD per IEC 61000-4-2 (Air)	VESD	± 30	kV
ESD per IEC 61000-4-2 (Contact)		± 30	
Operating Temperature Range	T <sub>J</sub>	-55 to +125	°C
Storage Temperature Range	T <sub>stg</sub>	-55 to +150	°C

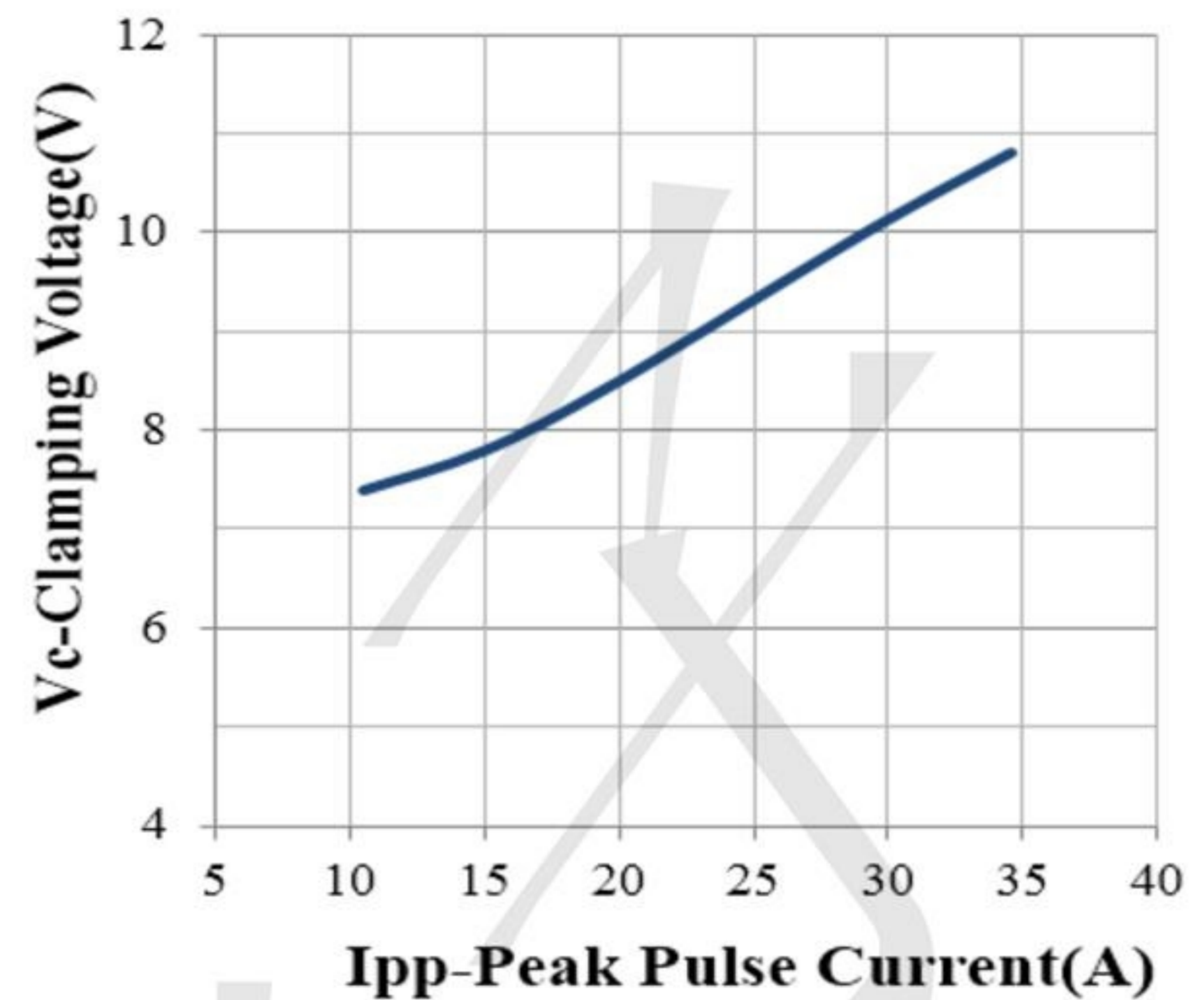
**Electrical Characteristics** (TA=25°C unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V <sub>RWM</sub>			3.3	V	
Breakdown Voltage	V <sub>BR</sub>	4.0	4.7	6.0	V	I <sub>T</sub> =1mA
Leakage Current	I <sub>Leak</sub>			200	nA	V <sub>RWM</sub> =3.3V
Clamping Voltage	V <sub>C</sub>			8.5	V	I <sub>PP</sub> =20A, T <sub>p</sub> =8/20μs
Clamping Voltage	V <sub>C</sub>			12.0	V	I <sub>PP</sub> =38A, T <sub>p</sub> =8/20μs
Dynamic Resistance	R <sub>DYN</sub>		0.1		Ω	TLP=0.2/100ns
Junction Capacitance	C <sub>J</sub>		50	70	pF	V <sub>R</sub> =0V, f=1MHz

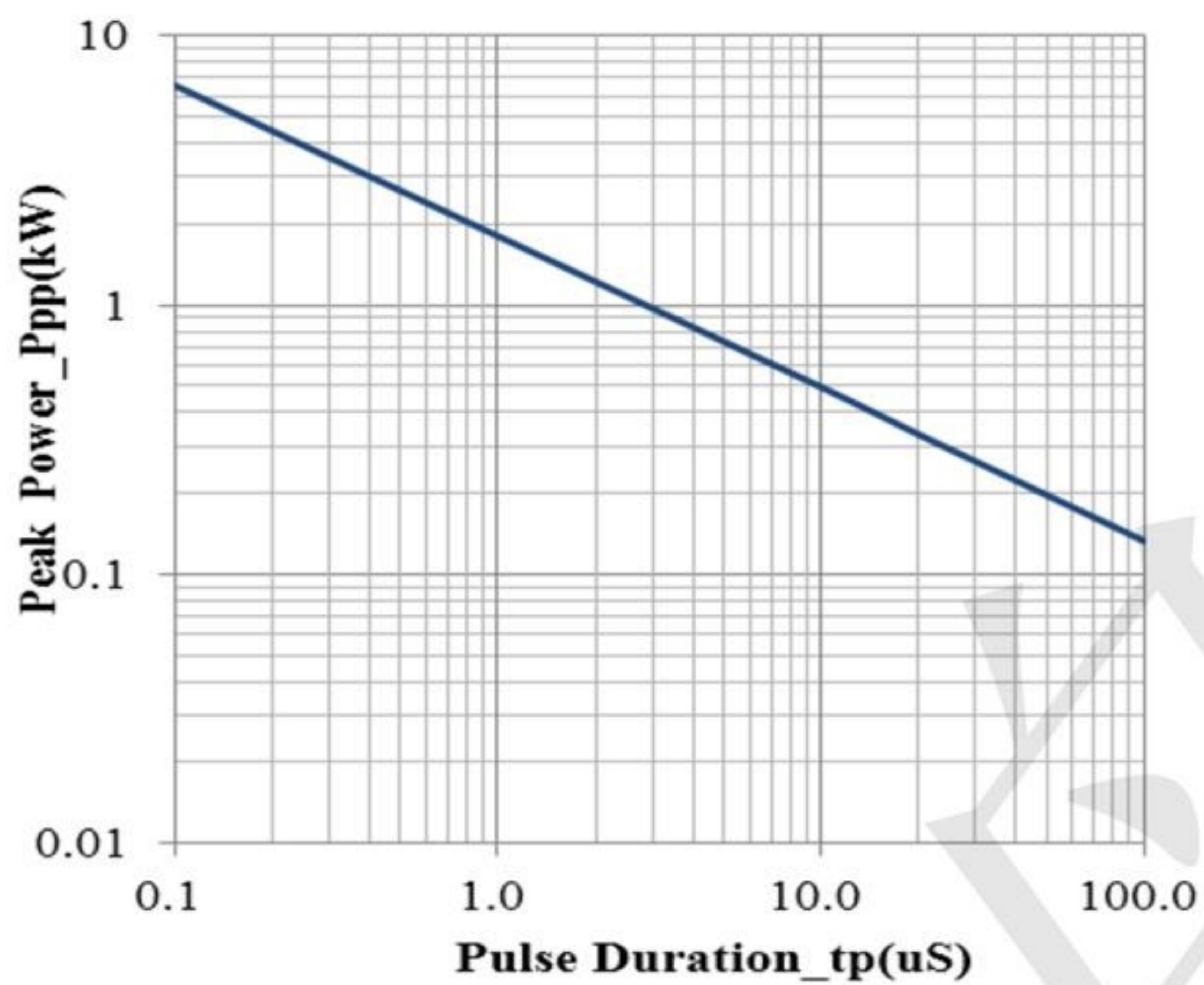
## Characteristic Curves



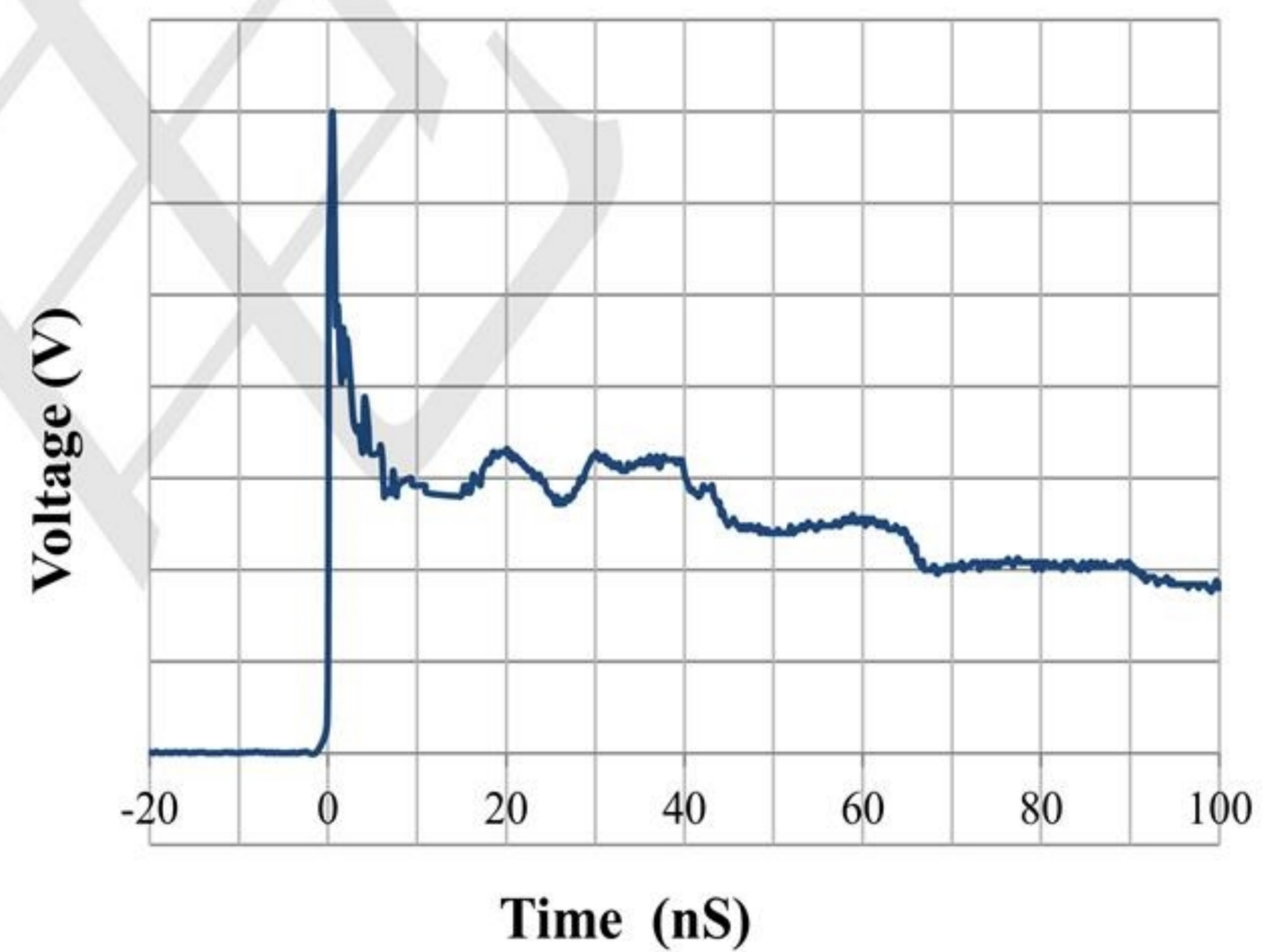
Junction Capacitance vs. Reverse Voltage



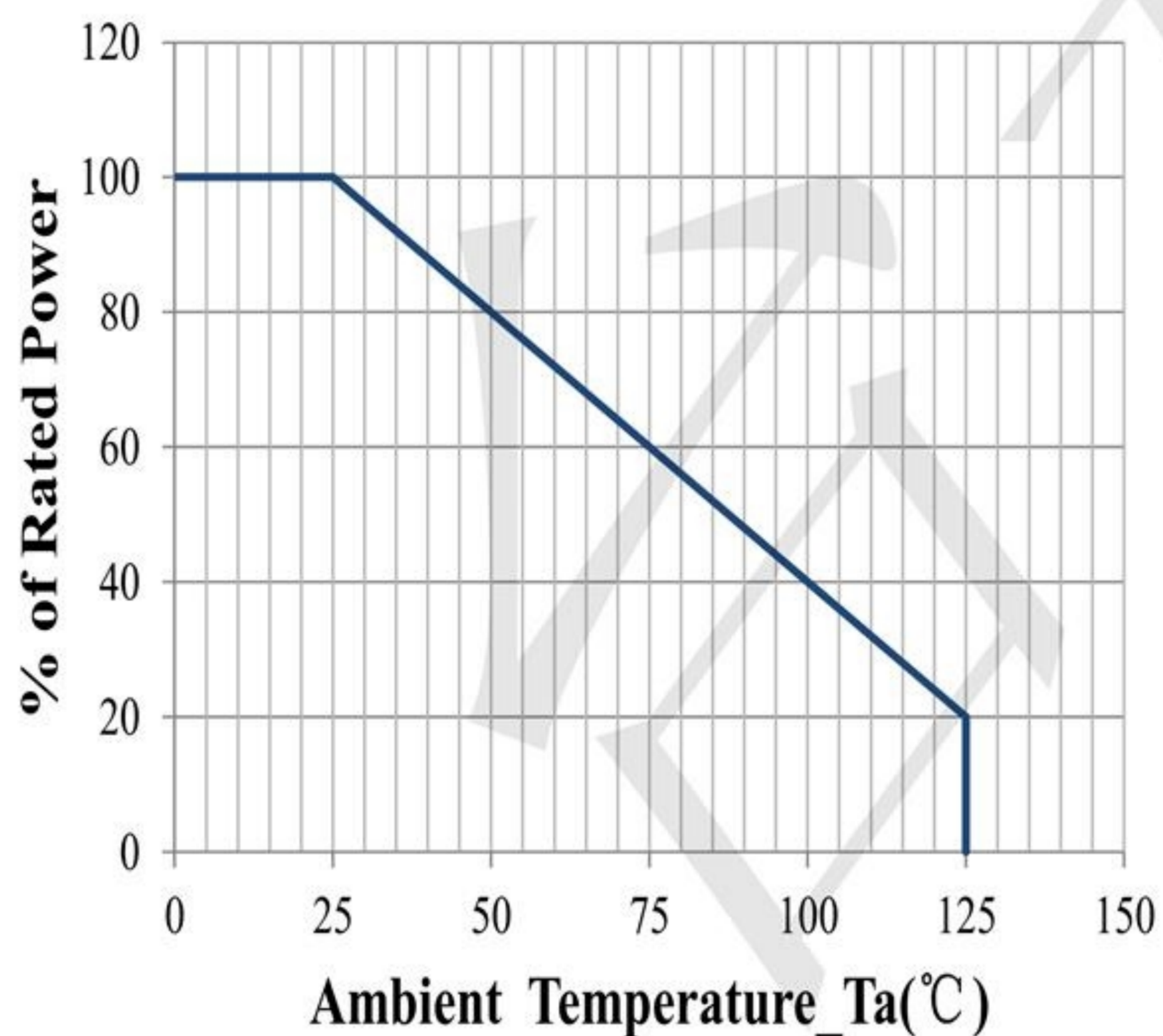
Clamping Voltage vs. Peak Pulse Current



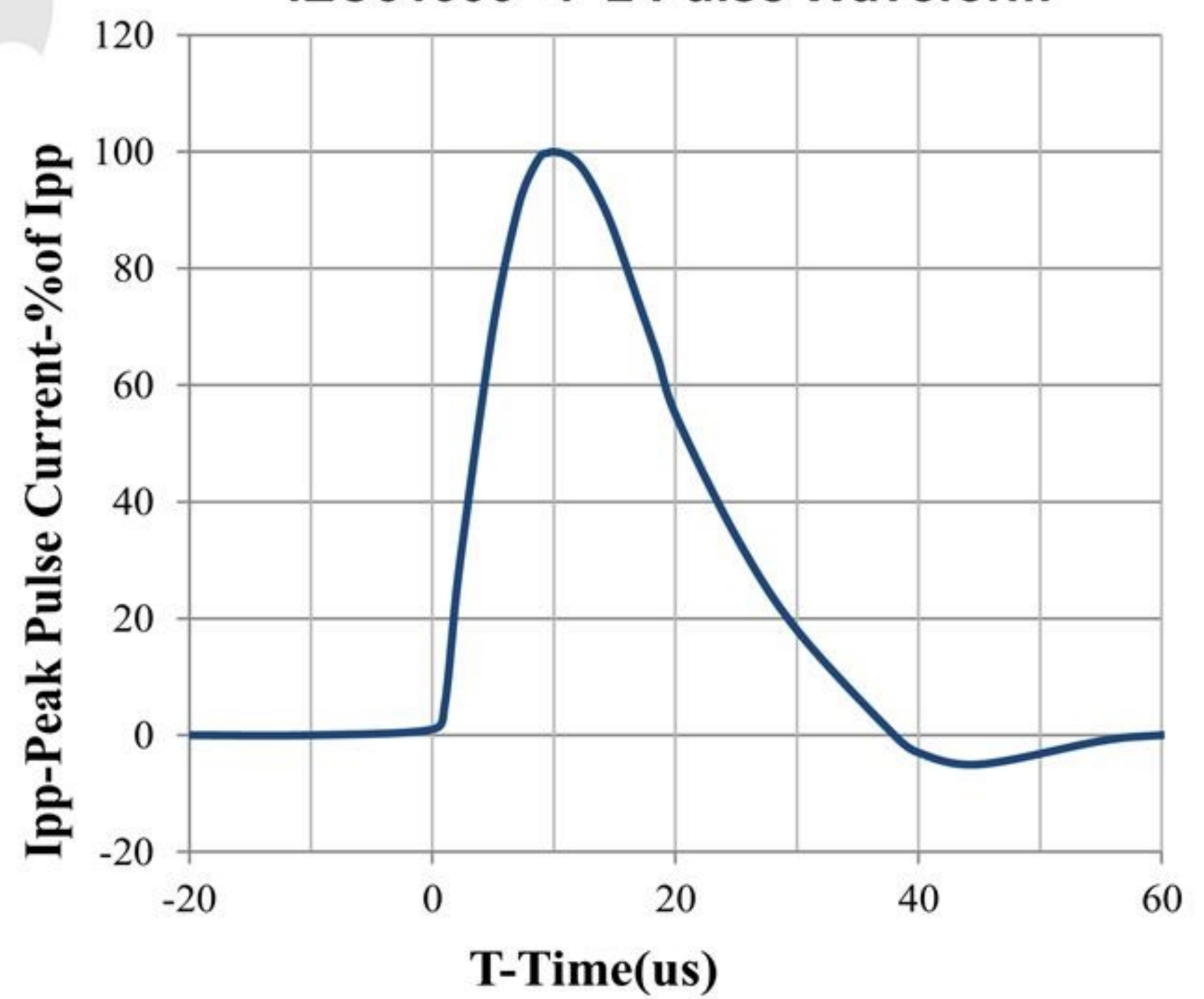
Peak Pulse Power vs. Pulse Time



IEC61000-4-2 Pulse Waveform



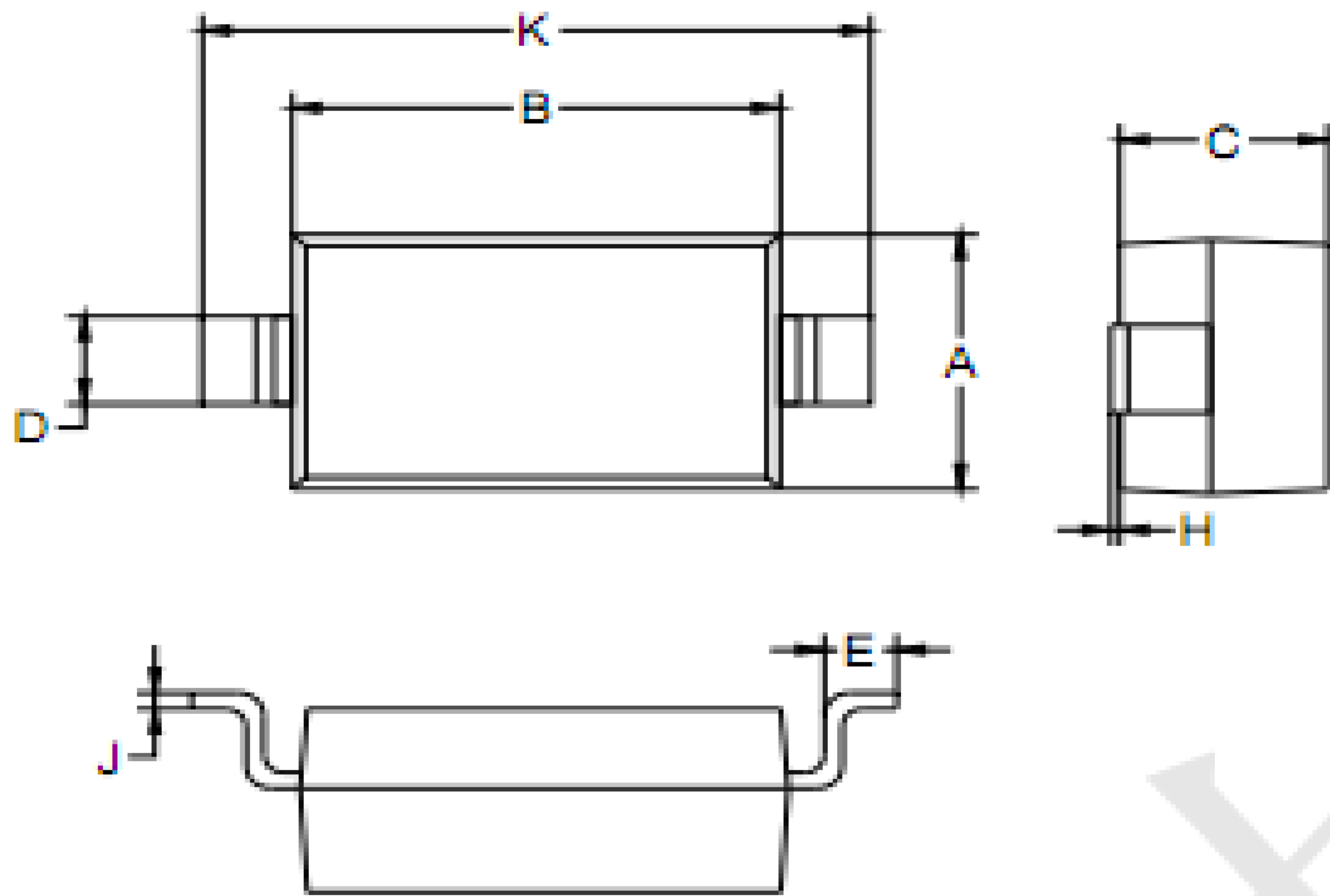
Power Derating Curve



8 X 20us Pulse Waveform



## Outline Drawing - SOD123 (unit: mm)



SOD-123		
Dim	Min	Max
A	1.45	1.75
B	2.55	2.85
C	1.00	1.30
D	0.50	0.60
E	0.25	0.45
H	0.02	0.10
J	0.05	0.15
K	3.55	3.85

## Mounting Pad Layout-SOD123 (unit: mm)

