

## Features

- 400W peak pulse power (8/20 $\mu$ s)
- Ultra low leakage: nA level
- Operating voltage: 7V or 12V
- 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) 40A (5/50ns)
  - IEC61000-4-5 (Lightning) 17A (8/20 $\mu$ s)
- RoHS Compliant

## Mechanical Characteristics

- Package: SOT-23
- Lead Finish: Matte Tin
- Case Material: "Green" Molding Compound.
- UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 3 per J-STD-020
- Terminal Connections: See Diagram Below

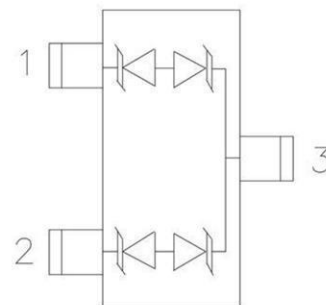
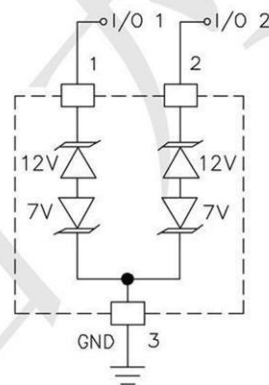
## Applications

- Wireless System
- Networks
- Portable Instrumentation
- RS485 Ports

## Ordering Information

Part Number	Qty per Reel	Reel Size
CDSOT23-SM712	3000	7"

## Dimensions and Pin Configuration



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

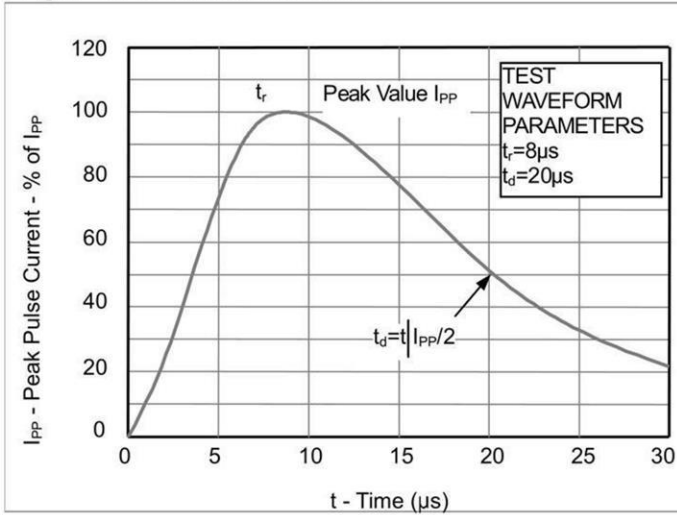
Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	Ppk	400	W
Peak Pulse Current (8/20μs)	Ipp	17	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	VESD	±30 ±30	kV
Operating Temperature Range	TJ	-55 to +125	°C
Storage Temperature Range	Tstg	-55 to +150	°C

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

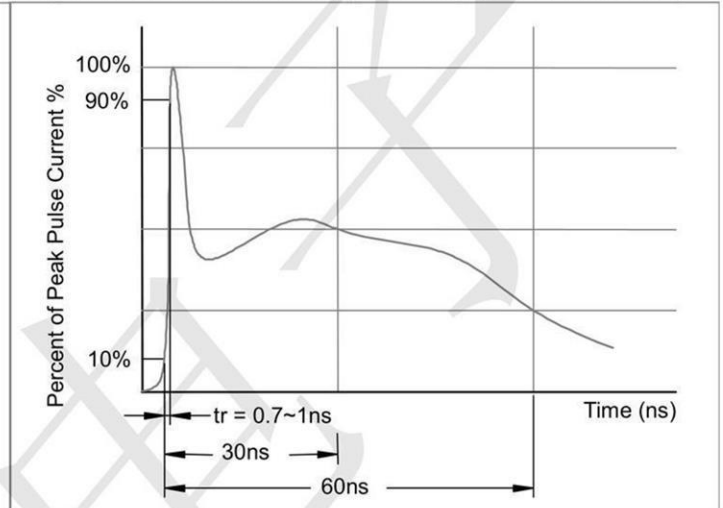
Parameter	Symbol	Pin 1 to 3 and 2 to 3 (12V TVS)			Pin 3 to 1 and 3 to 2 (7V TVS)			Unit	Test Condition
		Min	Typ	Max	Min	Typ	Max		
Reverse Working Voltage	VRWM			12			7	V	
Breakdown Voltage	VBR	13.3			7.5			V	IT = 1mA
Reverse Leakage Current	IR			0.05			2.0	uA	VR = VRWM
Clamping Voltage	VC			20			10	V	I <sub>PP</sub> = 5A (8 x 20μs pulse)
Clamping Voltage	VC			26			12	V	I <sub>PP</sub> = 17A (8 x 20μs pulse)
Junction Capacitance	CJ			75			75	pF	VR = 0V, f = 1MHz
Junction Capacitance	CJ		45			45		pF	VR = VRWM, f = 1MHz

**PROTECTION PRODUCTS**  
Typical characteristics

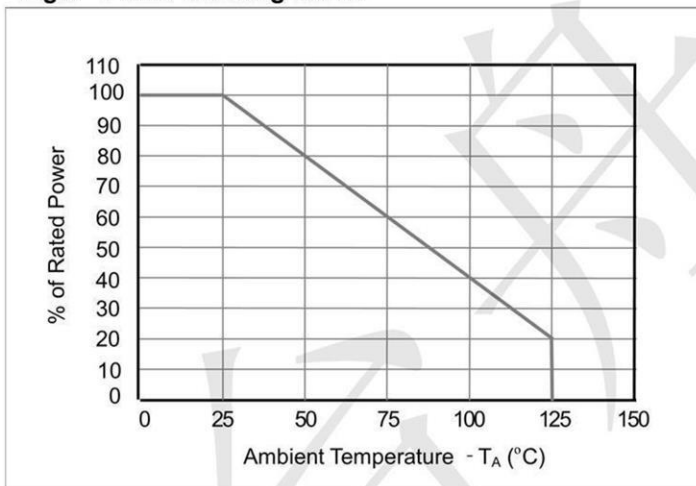
**Fig1. 8/20 $\mu$ s Pulse Waveform**



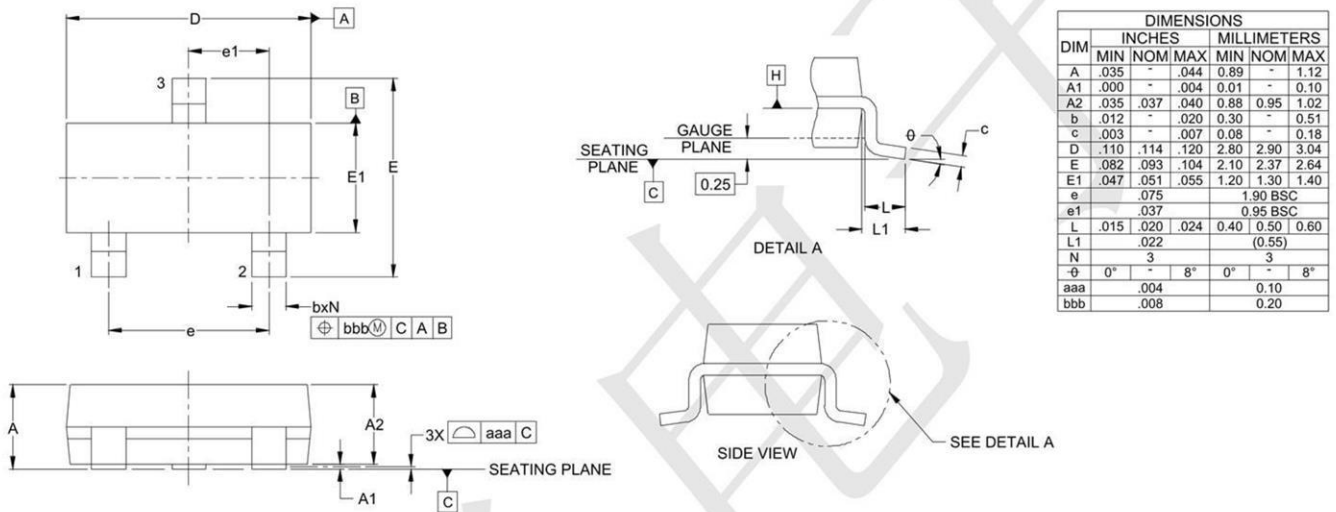
**Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)**



**Fig3. Power Derating Curve**



## Outline Drawing - SOT23



## Land Pattern - SOT23

