

## Plastic-Encapsulate ESD Protection Diodes

### Features

- 300 Watts Peak Pulse Power per (8/20 $\mu$ s)
- IEC61000-4-2 (ESD)  $\pm$ 16kV (air),  $\pm$ 9kV (contact)
- Protects one bidirectional line or two unidirectional lines
- Low clamping voltage
- Low leakage current
- Working voltages : 5.25V
- Qualified to AEC-Q101 Standards for High Reliability

### Mechanical Characteristics

- Package: SOT-23
- Flammability Rating: UL 94V-0
- High temperature soldering guaranteed:  
260 $^{\circ}$ C/10s
- Packaging: Tape and Reel

### Absolute Maximum Ratings And Characteristics (Ta = 25 $^{\circ}$ C)

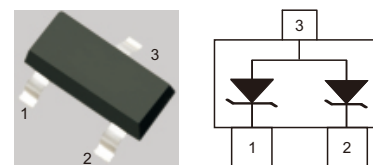
Parameter	Symbol	Value	Unit
Peak Pulse Power(8/20 $\mu$ s)	P <sub>pk</sub>	300	W
ESD per IEC 61000-4-2(Air) ESD per IEC 61000-4-2(Contact)	V <sub>ESD</sub>	$\pm$ 16 $\pm$ 9	kV
Maximum Junction Temperature	T <sub>J</sub>	150	$^{\circ}$ C
Storage Temperature Range	T <sub>stg</sub>	-55 to +150	$^{\circ}$ C

### Characteristics at Ta = 25 $^{\circ}$ C

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse Stand-off Voltage	V <sub>RWM</sub>				5.25	V
Breakdown Voltage	V <sub>BR</sub>	I <sub>T</sub> =1mA	6.1		7.2	V
Reverse Leakage Current	I <sub>R</sub>	V=V <sub>RWM</sub> , T <sub>a</sub> =25 $^{\circ}$ C		20		$\mu$ A
Clamping Voltage	V <sub>C</sub>	I <sub>PP</sub> =1A, t <sub>p</sub> =8/20 $\mu$ s			10	V
		I <sub>PP</sub> =26A, t <sub>p</sub> =8/20 $\mu$ s			15	V
Junction Capacitance	C <sub>j</sub>	V <sub>R</sub> =0V , f=1MHz		166		pF

### PINNING

PIN	DESCRIPTION
1, 2	Cathode
3	Anode



Top View

Simplified outline SOT-23 And symbol





Fig.1 Power Derating Curve

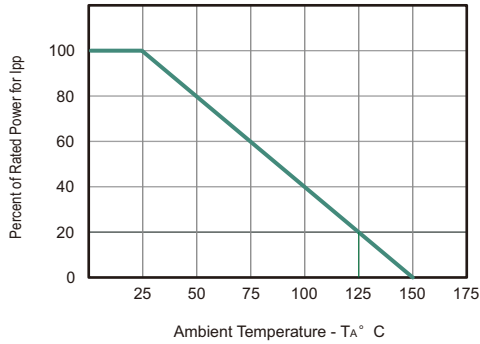


Fig.2 Contact discharge current waveform per IEC61000-4-2

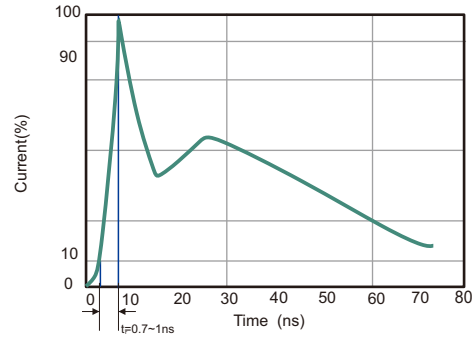


Fig.3 Pulse Waveform

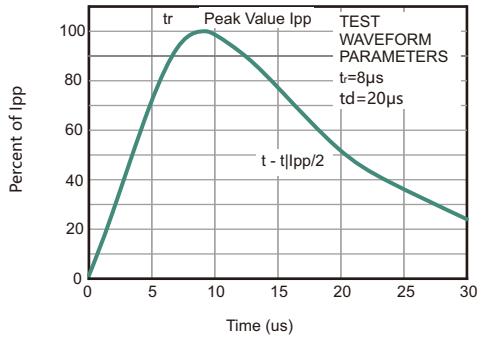


Fig.4 Peak Pulse Power vs. Pulse Time

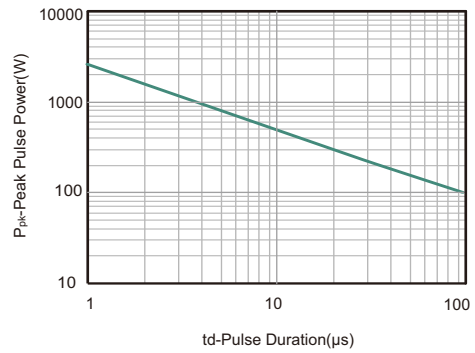
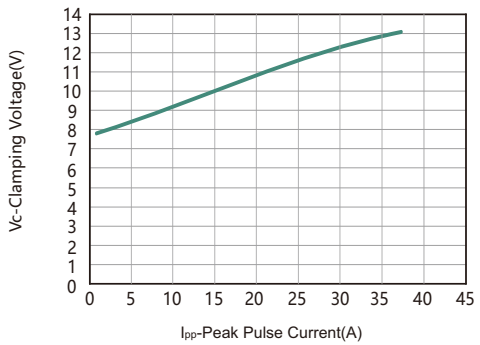
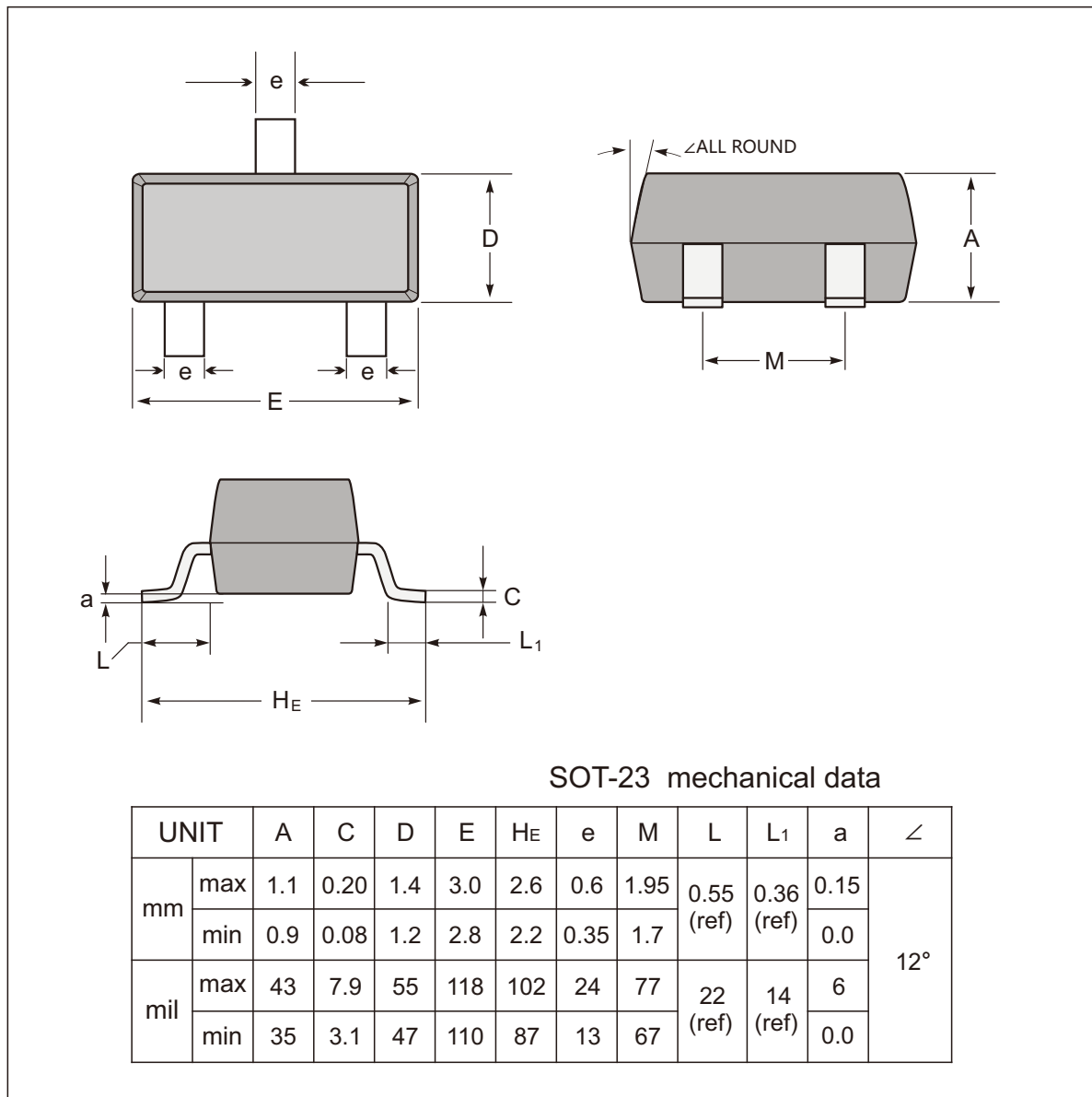


Fig.5 Clamping Voltage vs. Peak Pulse Current

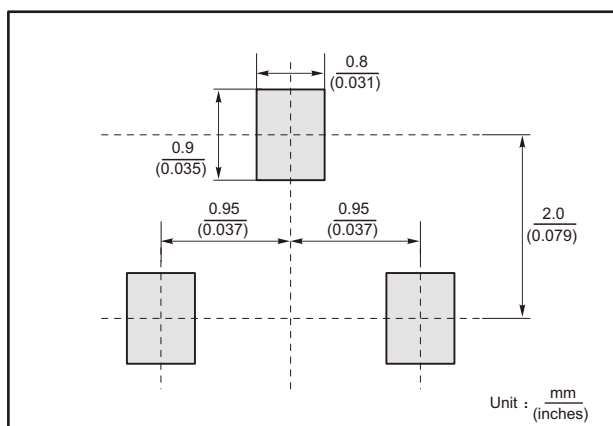




### SOT-23 Package Outline Dimensions



#### The recommended mounting pad size



#### Marking

Type number	Marking code
AT-ESD5V25T2	300



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