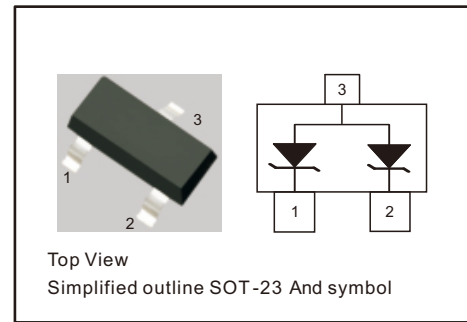




Plastic-Encapsulate ESD Protection Diodes

Features

- . 460 Watts Peak Pulse Power per (8/20 μ s)
- . IEC61000-4-2 (ESD) \pm 30kV (air), \pm 30kV (contact)
- . Protects one bidirectional line or two unidirectional lines
- . Low clamping voltage
- . Working voltages : 12V



Applications

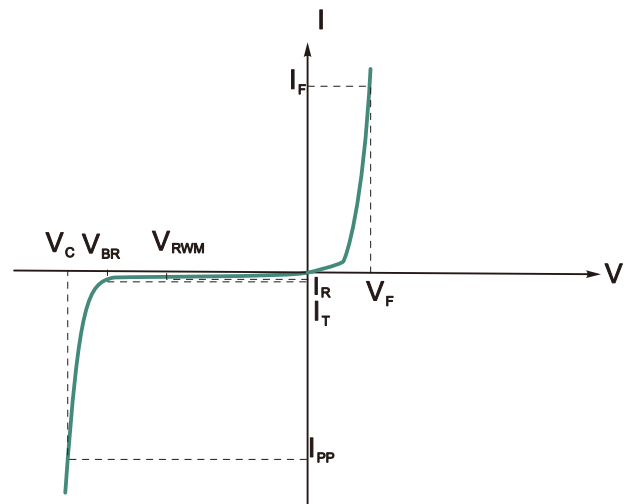
- . Power supply protection
- . Power management

Mechanical Characteristics

- . Package: SOT-23
- . Flammability Rating: UL 94V-0
- . High temperature soldering guaranteed:
260°C/ 10s
- . Packaging: Tape and Reel

Electronics Parameter

Parameter	Symbol
Maximum Reverse Peak Pulse Current	I_{PP}
Clamping Voltage @ I_{PP}	V_C
Peak Reverse Working Voltage	V_{RWM}
Reverse Leakage Current @ V_{RWM}	I_R
Breakdown Voltage @ I_T	V_{BR}
Test Current	I_T
Forward Current	I_F
Forward Voltage @ I_F	V_F





MAXIMUM RATINGS($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 μs)	Ppk	460	W
Peak Pulse Current	Ipp	20	A
ESD per IEC 61000-4-2(Air)	VESD	± 30	KV
ESD per IEC 61000-4-2(Contact)		± 30	
Operating Temperature Range	Tj	-55~+150	$^{\circ}\text{C}$
Storage Temperature Range	Tstg	-55~+150	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse Stand-off Voltage	VRWM				12.0	V
Breakdown Voltage	VBR	$I_T=1\text{mA}$	12.8		17	V
Reverse Leakage Current	IR	$V=VRWM, T_a=25^{\circ}\text{C}$			0.1	μA
Clamping Voltage	VC	$I_{PP}=1\text{A}, t_p=8/20\mu\text{s}$			16.5	V
Clamping Voltage	VC	$I_{PP}=20\text{A}, t_p=8/20\mu\text{s}$			32	V
Junction Capacitance	Cj	$V_R=0\text{V}, f=1\text{MHz}_{(\text{Pin 1 to Pin 2})}$		53	65	pF
Junction Capacitance	Cj	$V_R=0\text{V}, f=1\text{MHz}_{(\text{Pin 1,2 to Pin 2})}$		106	130	pF



Fig.1 Power Derating Curve

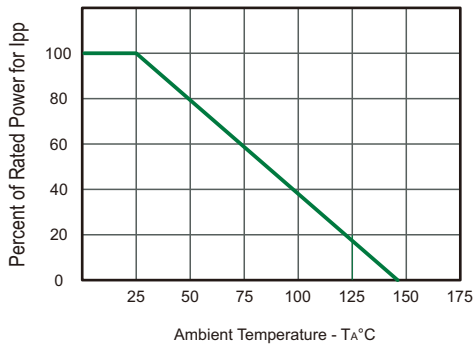


Fig.2 Clamping Voltage vs. Peak Pulse Current according to IEC 61000-4-5

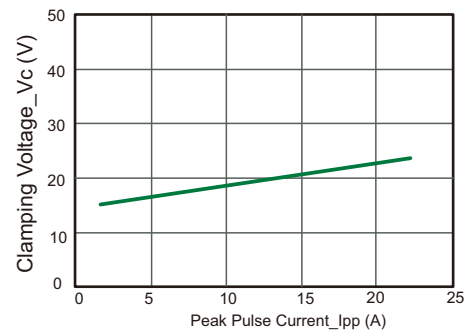
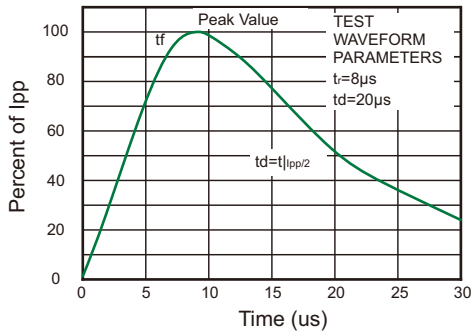
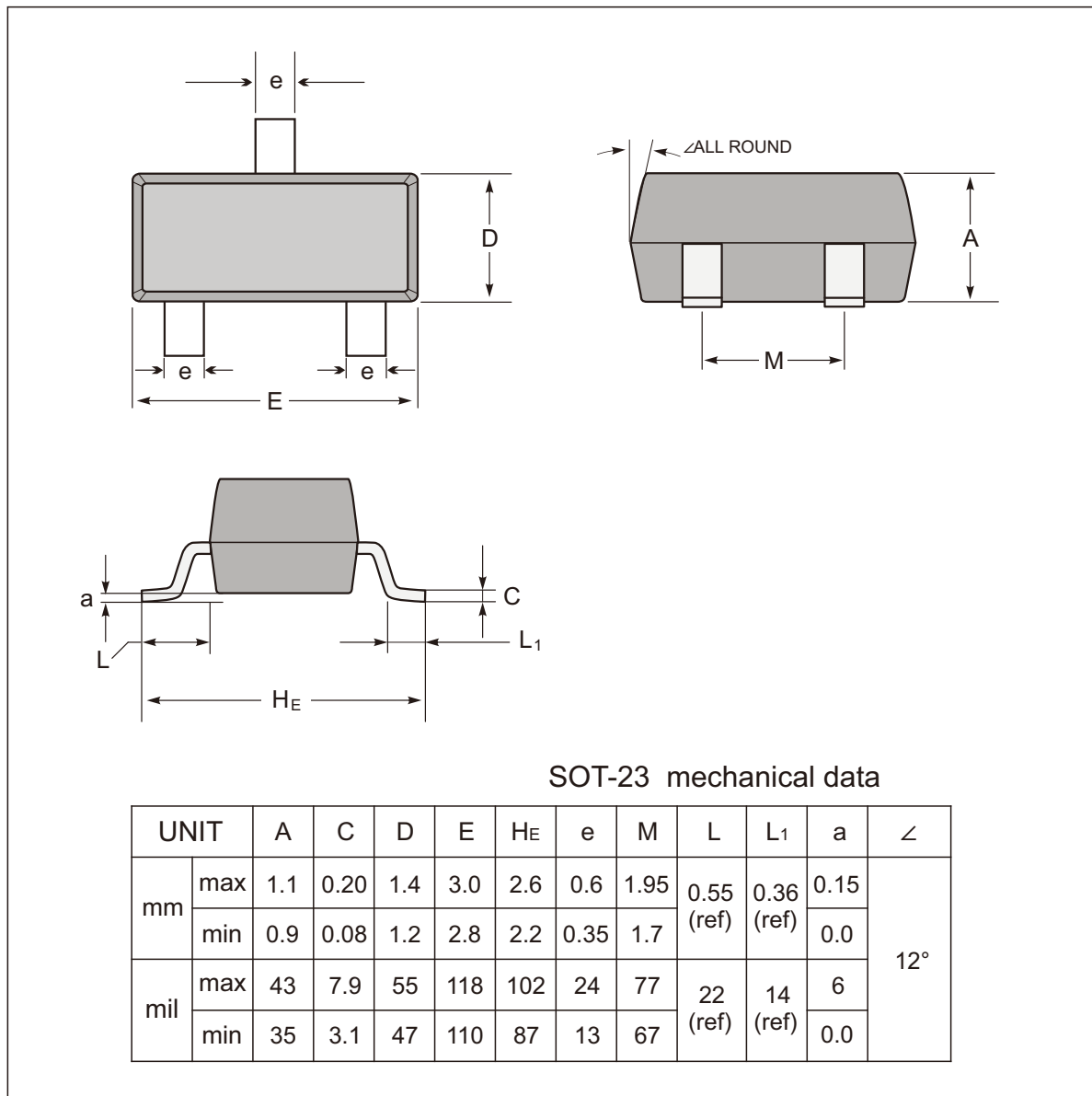


Fig.3 Pulse Waveform

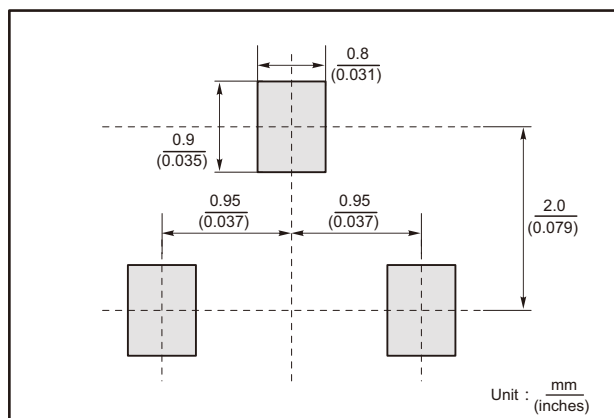




SOT-23 Package Outline Dimensions



The recommended mounting pad size



Marking

Type number	Marking code
ESD12V0T2P	12P



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