

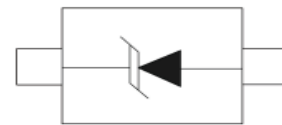


FEATURES

- ✧ 2000 Watts peak pulse power per line ($t_p=8/20\mu s$)
- ✧ Solid-state silicon-avalanche technology
- ✧ Protects one uni-directional I/O line
- ✧ Low clamping voltage
- ✧ Working voltages : 5V
- ✧ Low leakage current
- ✧ High surge capability
- ✧ RoHS compliant



SOD-323



PIN Configuration

MAIN APPLICATIONS

- ✧ Cell phone handsets and accessories
- ✧ Microprocessor based equipment
- ✧ Personal digital assistants (PDA's)
- ✧ Notebooks, desktops, and servers
- ✧ Portable instrumentation
- ✧ Power lines
- ✧ Peripherals

PROTECTION SOLUTION TO MEET

- ✧ IEC61000-4-2 (ESD) $\pm 30kV$ (air), $\pm 30kV$ (contact)
- ✧ IEC61000-4-4 (EFT) 40A (5/50ns)
- ✧ IEC61000-4-5 (Lightning) 110A (8/20 μs)

MECHANICAL CHARACTERISTICS

- ✧ SOD-323 package
- ✧ Molding compound flammability rating : UL 94V-0
- ✧ Weight 5 milligrams (approximate)
- ✧ Quantity per reel : 3,000pcs
- ✧ Lead finish : lead free
- ✧ Marking code : 5H

ABSOLUTE MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$, RH=45%-75%, unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak pulse power dissipation on 8/20 μs waveform	P_{PP}	2000	W
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	+/- 30 +/- 30	kV
Lead soldering temperature	T_L	260 (10 sec.)	$^{\circ}\text{C}$
Operating junction temperature range	T_J	-55 to +125	$^{\circ}\text{C}$
Storage temperature range	T_{STG}	-55 to +150	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reverse working voltage	V_{RWM}				5	V
Reverse breakdown voltage	V_{BR}	$I_T = 1\text{mA}$	6	7	8	V
Reverse leakage current	I_R	$V_{RWM} = 5\text{V}$			1	μA
Clamping voltage	V_C	$I_{PP} = 50\text{A}$, $t_P = 8/20\mu\text{s}$		11	13	V
		$I_{PP} = 110\text{A}$, $t_P = 8/20\mu\text{s}$		14	17	V
Junction capacitance	C_J	$V_{RWM} = 0\text{V}$, $f = 1\text{MHz}$		850	1050	pF

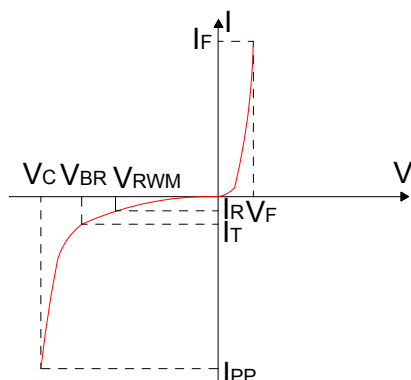
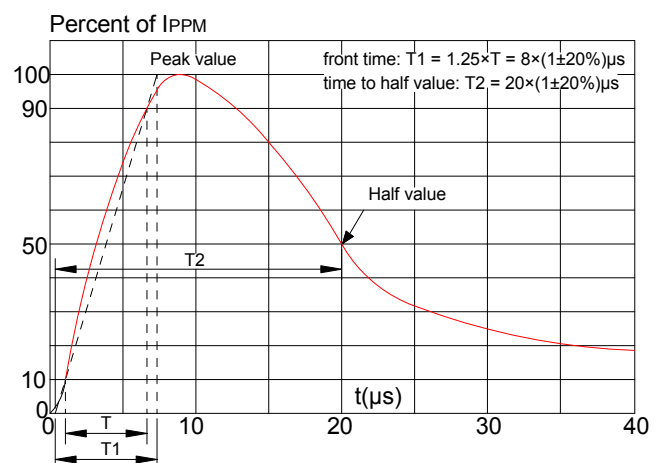
RATINGS AND V-I CHARACTERISTICS CURVES ($T_A=25^{\circ}\text{C}$, unless otherwise noted)**FIG.1: V- I curve characteristics (Uni-directional)****FIG.2: Pulse waveform (8/20 μs)**

FIG.3: Pulse derating curve

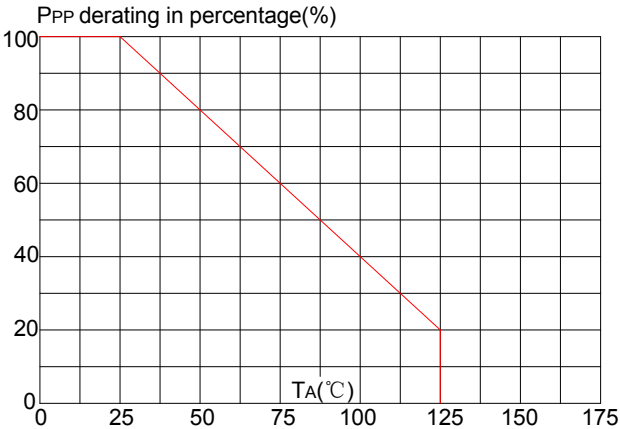
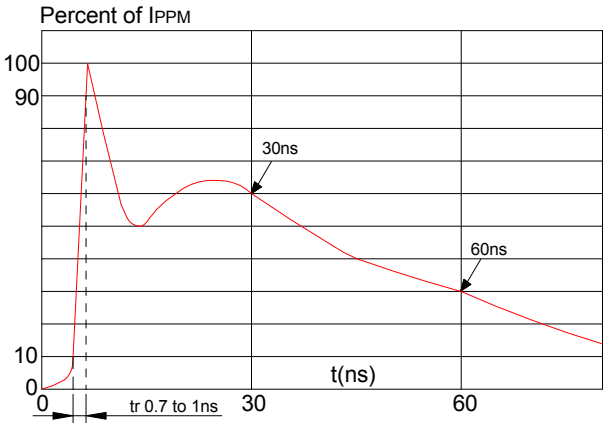
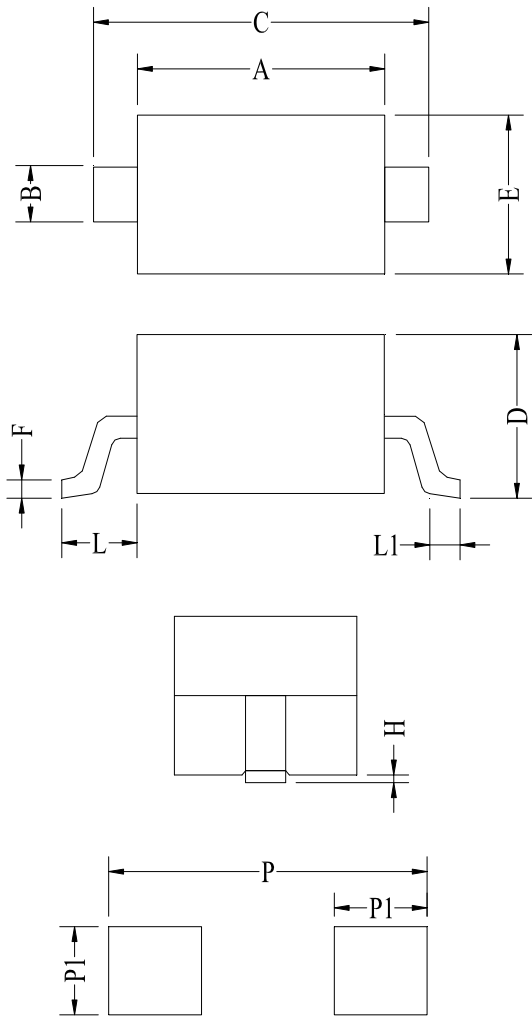


FIG.4: ESD clamping (30kV contact)



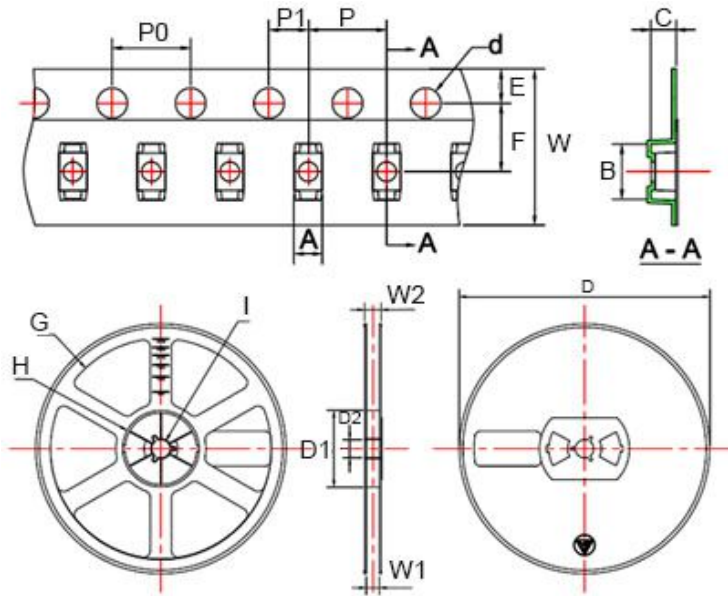
PACKAGE MECHANICAL DATA



Land Pattern

Symbol	Millimeter		Inches	
	Min	Max	Min	Max
A	1.60	1.80	0.063	0.071
B	0.25	0.35	0.010	0.014
C	2.50	2.70	0.098	0.106
D	0.00	1.00	0.000	0.039
E	1.20	1.40	0.047	0.055
F	0.08	0.15	0.003	0.006
L	0.475REF		0.019REF	
L1	0.25	0.40	0.010	0.016
H	0.00	0.10	0.000	0.004
P	3.00		0.118	
P1	0.80		0.031	

TAPE AND REEL INFORMATION



Packaging description:

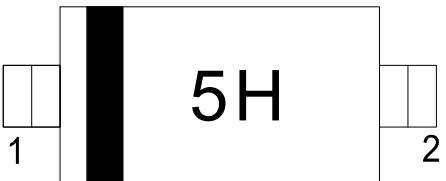
SOD-323 parts are shipped in tape. The carrier tape is made from a dissipative(carbon filled) polycarbonate resin. The cover tape is a multilayer film(heat activated adhesive in nature)primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. The reels are blue in color and made of recyclable plastic.

Symbol	Millimeters	Inches
A	1.46±0.05	0.057±0.002
B	2.90±0.05	0.114±0.002
C	1.25±0.05	0.049±0.002
d	ø1.50±0.1	ø0.059±0.004
E	1.75±0.1	0.069±0.004
F	3.50±0.1	0.138±0.004
P0	4.0±0.1	0.157±0.004
P	4.0±0.1	0.157±0.004
P1	2.0±0.1	0.079±0.004
W	8.00+0.3/-0.1	0.315+0.012/-0.004
D	ø178.0±2	ø7.008±0.079
D1	54.40±1	2.142±0.039
D2	13.0±1	0.512±0.039
G	R78.0±1	R3.071±0.039
H	R25.60±1	R1.008±0.039
I	R6.50±1	R0.256±0.039
W1	9.50±1	0.374±0.039
W2	12.30±1	0.484±0.039

ORDERING INFORMATION

OUTLINE	Package	Reel Size	Quantity Per Reel
TAPING	SOD-323	7 Inch	3,000 pcs

MARKING CODE

Part Number	Marking Code
JEU05D3U	

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