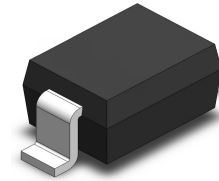


FEATURES:

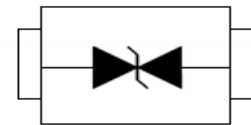
- ✧ Protects one bi-directional I/O line
- ✧ Low clamping voltage
- ✧ Low operating voltage: 5V
- ✧ ROHS compliant



SOD-323

MAIN APPLICATIONS

- ✧ Cell Phone Handsets and Accessories
- ✧ Personal Digital Assistants (PDA's)
- ✧ Notebooks, Desktops, and Servers
- ✧ Portable Instrumentation
- ✧ Pagers
- ✧ Microprocessor based equipment



PIN Configuration

PROTECTION SOLUTION TO MEET

- ✧ IEC61000-4-2 (ESD) ±15kV (air), ±8kV (contact)
- ✧ IEC61000-4-4 (EFT) 40A (5/50ns)

MECHANICAL CHARACTERISTICS

- ✧ Package SOD-323
- ✧ Molding Compound Flammability Rating : UL 94V-O
- ✧ Quantity Per Reel : 3,000pcs
- ✧ Lead Finish : Lead Free
- ✧ Mariking : 3M

ABSOLUTE MAXIMUM RATINGS (T_A=25°C, RH=45%-75%, unless otherwise noted)

Parameter	Symbol	Value	Unit
Storage temperature range	T _{stg}	-55 to +150	°C
Operating junction temperature range	T _j	-55 to +125	°C
Lead Soldering Temperature	T _L	260 (10 sec.)	°C
Peak pulse power dissipation on 8/20 μs waveform	P _{PP}	200	W
ESD per IEC 61000-4-2 (Air)	V _{ESD}	+/- 15	kV
ESD per IEC 61000-4-2 (Contact)		+/- 8	

ELECTRICAL CHARACTERISTICS (T_A=25°C)

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Reverse Working Voltage	V _R				5	V
Reverse Breakdown Voltage	V _{BR}	I _T = 1mA	5.6			V
Reverse Leakage Current	I _R	V _R = 5V			1.0	μA
Peak Pulse Current	I _{pp}	t _p = 8/20μs			9.5	A
Clamping Voltage	V _C	I _{PP} = 5A, t _p = 8/20μs			11.6	V
		I _{PP} = 9A, t _p = 8/20μs			18.6	V
Junction Capacitance	C _J	V _R = 0V, f = 1MHz		25		pF

RATINGS AND V-I CHARACTERISTICS CURVES (T_A=25°C, unless otherwise noted)

FIG.1: V- I curve characteristics (Bi-directional)

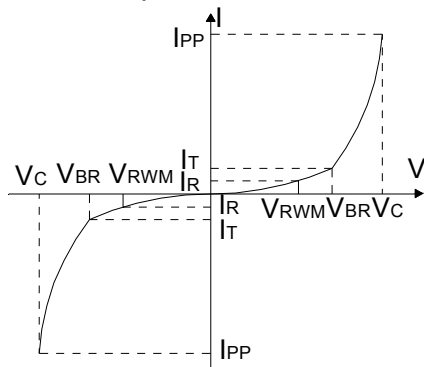


FIG.2: Pulse waveform (8/20μs)

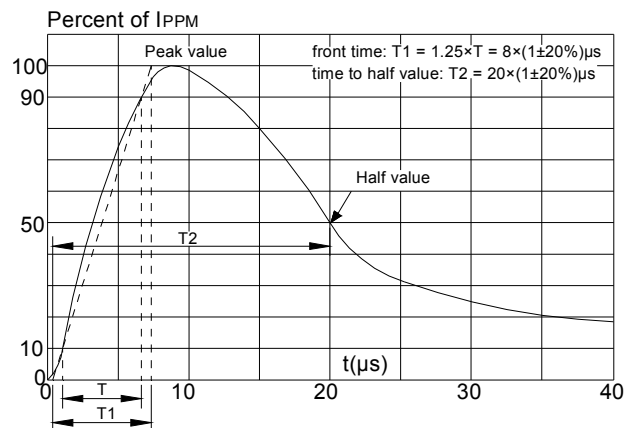


FIG.3: Pulse derating curve

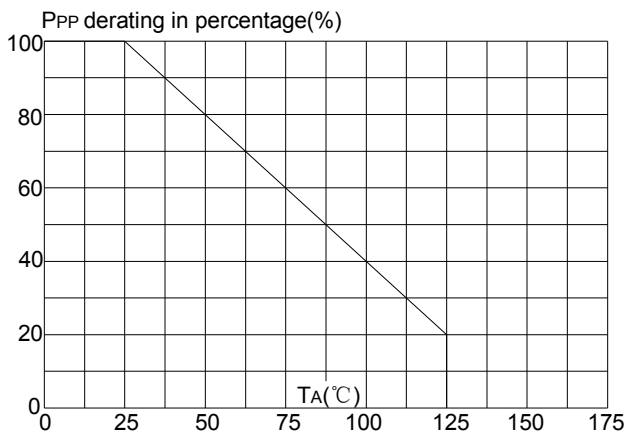
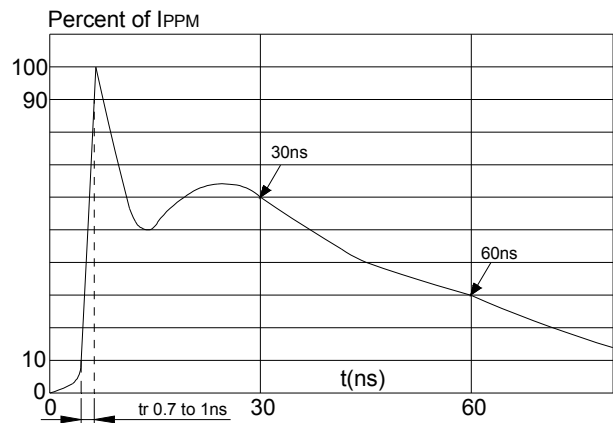
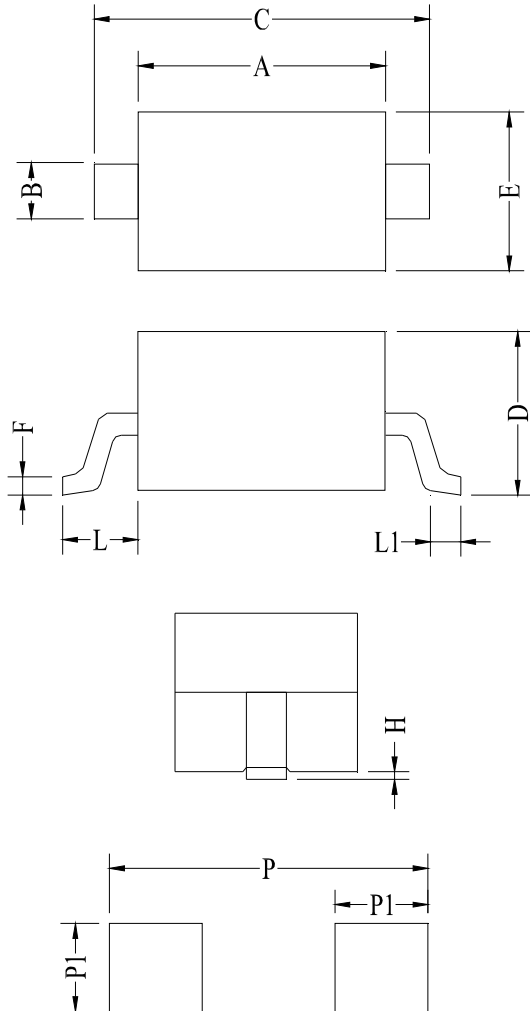


FIG.4: ESD clamping



PACKAGE MECHANICAL DATA



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	

Land Pattern

Suggested thermal profiles for soldering processes

- 1.Storage environment: Temperature=5°C~40°C Humidity=55%±25%
- 2.Reflow soldering of surface-mount devices



3.Reflow soldering

Profile Feature	Soldering Condition
Average ramp-up rate(TL to TP)	<3°C/sec
Preheat -Temperature Min(Tsmin) -Temperature Max(Tsmax) -Time(min to max)(ts)	150°C 200°C 60~120sec
Tsmax to TL -Ramp-upRate	<3°C/sec
Time maintained above: -Temperature(TL) -Time(tL)	217°C 60~260sec
Peak Temperature(TP)	255°C-0/+5°C
Time within 5°C of actual Peak Temperature(tp)	10~30sec
Ramp-down Rate	<6°C/sec
Time 25°C to Peak Temperature	<6minutes

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