



BIDIRECTIONAL ESD PROTECTION DIODES

Features

- 75W Peak Pulse Power Per Line (8/20 μ s)
- 5V Working Peak Reverse Voltage
- Maximum Reverse Peak Pulse Current : 5A
- ESD per IEC 61000-4-2 (Contact) : 20KV
- ESD per IEC 61000-4-2 (Air) : 25
- Clamping Voltage @ IPP = 1A : 10V
- Junction Capacitance : 0.5PF
- Package : SOD-523 (0603)
- Polarity : Bidirectional

Mechanical Characteristics

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- Lead Finish : NiPdAu
- Case Material : "Green" Molding Compound
- UL Flammability Classification Rating 94V-0
- Moisture Sensitivity : Level 3 per J-STD-020
- Terminal Connections : See Diagram Below
- Marking Information : See Below

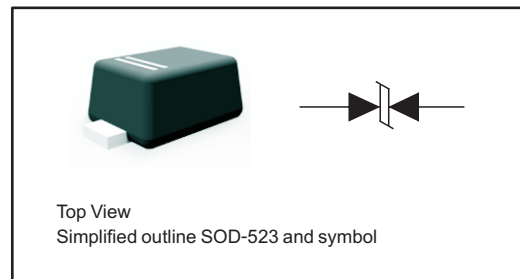
Electronics Parameter

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
Trigger Voltage @ I_T	V_T
Test Current	I_T

- Note: 8/20us pulsed waveform

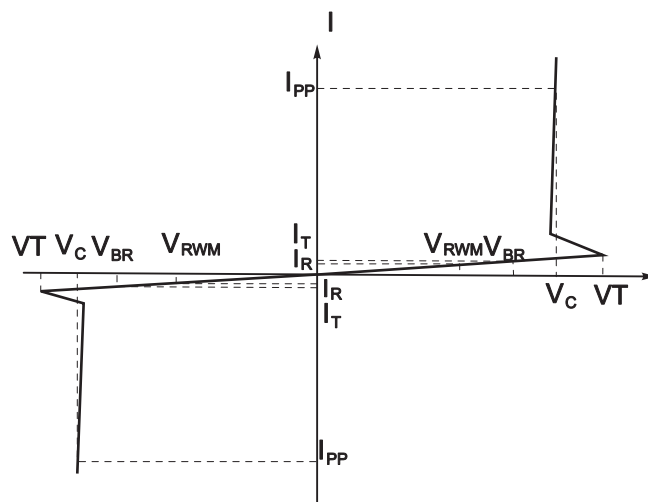
PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



APPLICATION

- SOD523 package
- Packaging: Tape and Reel





Absolute Ratings

(Tamb=25°C)

Parameter	Symbol	Value	Unit
Peak Pulse Power(tp=8/20us)	P _{PPM}	75	W
Operating Junction Temperature	T _J	-55 to +125	°C
Storage Temperature	T _{STG}	-55 to +125	°C

Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	Conditions	Minimum	Typical	Maximum	Units
Reverse Stand-Off Voltage	VRWM				5.0	V
Reverse Breakdown Voltage	VBR	IT=1mA	6.0			V
Reverse Leakage Current	IR	VRWM=5V,Ta=25°C			0.1	uA
Clamping Voltage	VC	IPP=1A,tp=8/20us		9.3	10	V
Junction Capacitance	Cj	VR=0V,f=1MHz		0.5	0.8	pF



Fig.1 Peak Pulse Power vs. Pulse Time

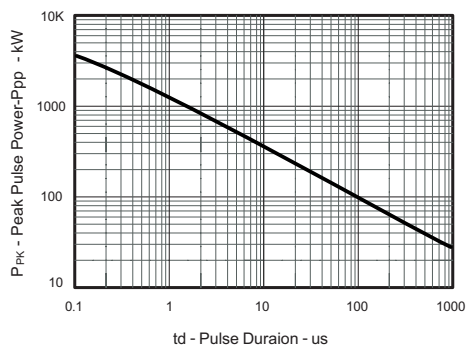


Fig.2 Power Derating Curve

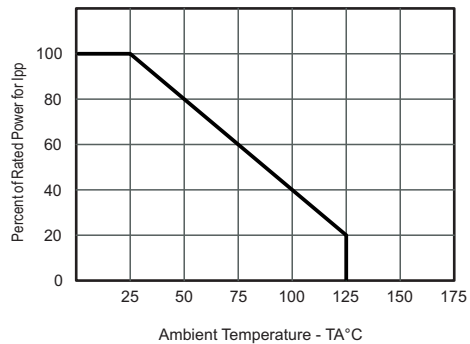


Fig.3 Clamping voltage vs Ipp

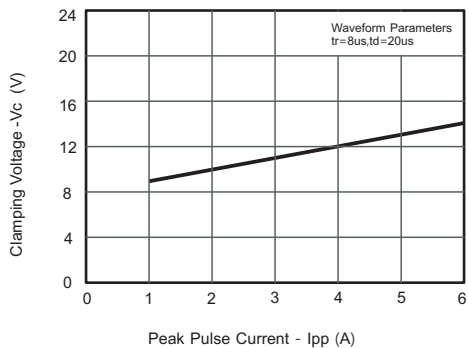
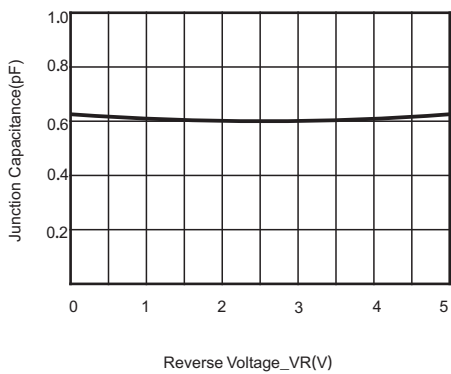
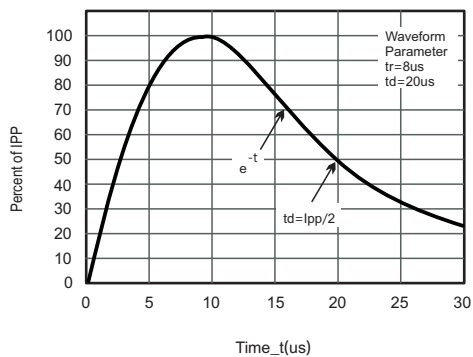


Fig.4 Pulse Waveform

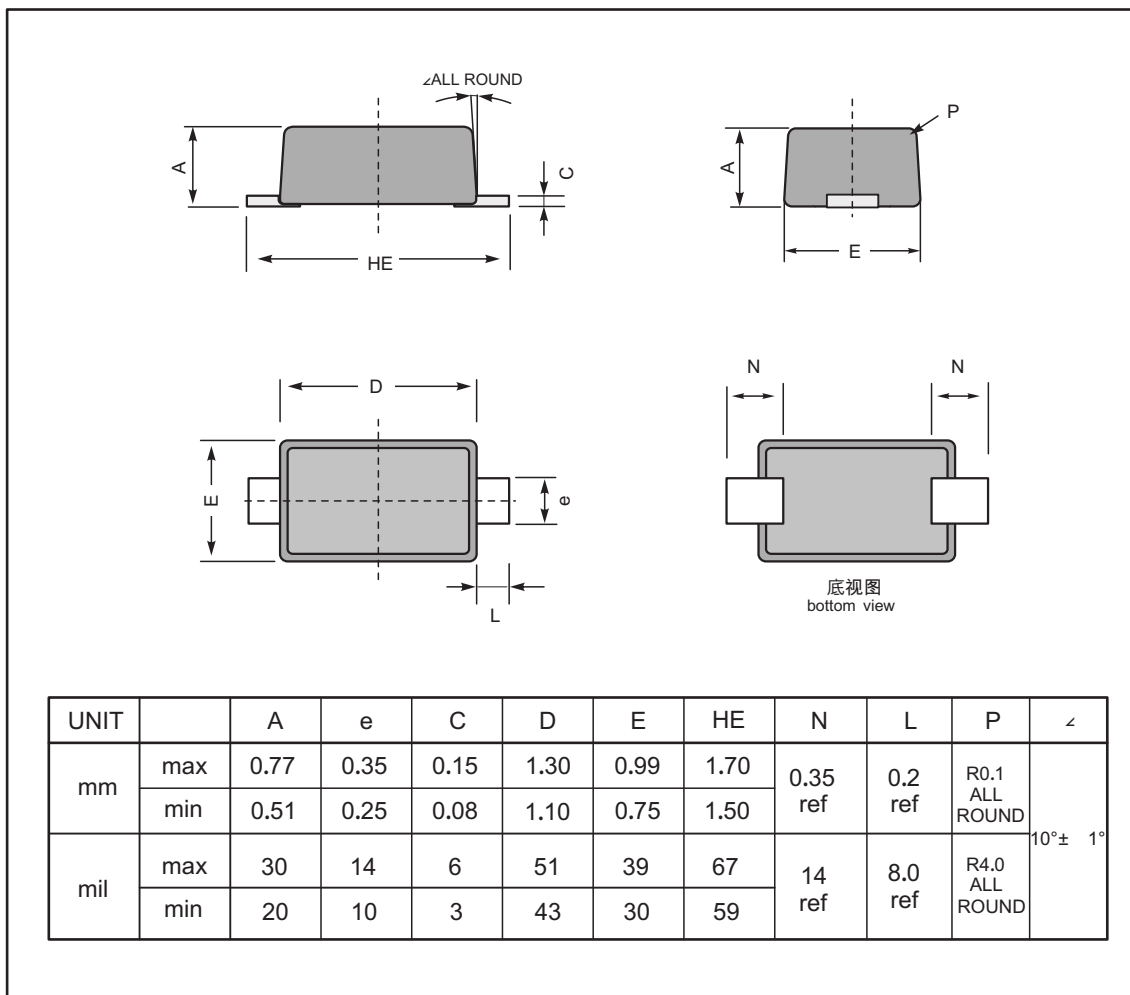




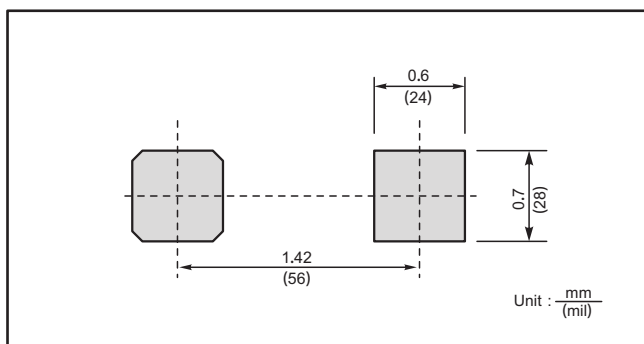
PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-523



The recommended mounting pad size



Marking

Type number	Marking code
ESDBULC5V0D5	5B