



BIDIRECTIONAL ESD PROTECTION DIODES

Features

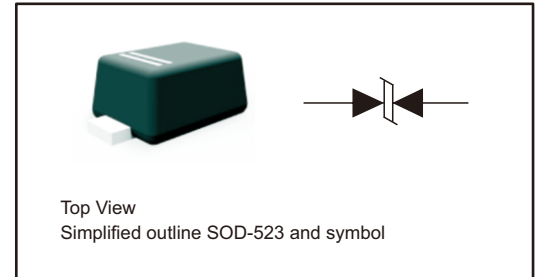
- 55W Peak Pulse Power Per Line (8/20 μ s)
- 5V Working Peak Reverse Voltage
- Maximum Reverse Peak Pulse Current : 5A
- ESD per IEC 61000-4-2 (Contact) : \pm 30KV
- ESD per IEC 61000-4-2 (Air) : \pm 30KV
- Clamping Voltage @ IPP = 5A : 11V
- Junction Capacitance : 8 pF
- Package : SOD-523
- Polarity : Bidirectional

Mechanical Characteristics

- Mechanical Characteristics
- 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

PINNING

| PIN | DESCRIPTION |
|-----|-------------|
| 1 | Cathode |
| 2 | Anode |

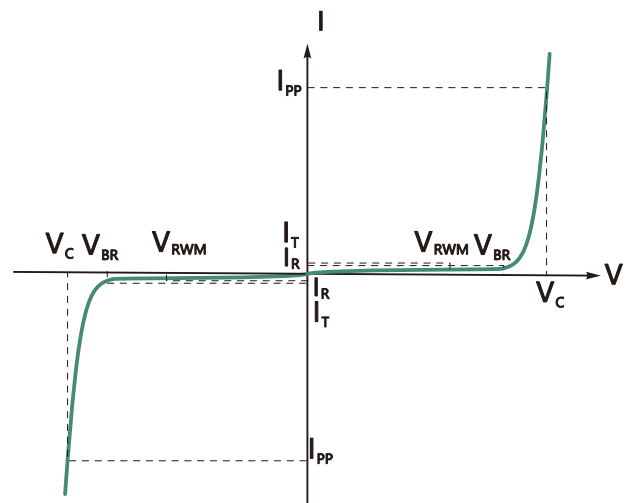


APPLICATION

- SOD-523 package
- 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 |





Absolute Maximum Ratings (Ta = 25 °C)

| Parameter | Symbol | Value | Unit |
|---------------------------------|------------------|-----------|------|
| Peak Pulse Power (8/20 μS) | P _{pk} | 55 | W |
| Peak Pulse Current | I _{pp} | 5 | A |
| ESD per IEC 61000-4-2 (Air) | V _{ESD} | ±30 | KV |
| ESD per IEC 61000-4-2 (Contact) | | ±30 | |
| Operating Junction Temperature | T _J | -55~ +125 | °C |
| Storage Temperature Range | T _{stg} | -55~ +150 | °C |

Characteristics at Ta = 25°C

| Parameter | Symbol | Test conditions | Min | Typ | Max | Unit |
|---------------------------|------------------|---|-----|-----|-----|------|
| Reverse Stand-off Voltage | V _{RWM} | | | | 5 | V |
| Breakdown Voltage | V _{BR} | I _T =1mA | 5.6 | | | V |
| Reverse Leakage Current | I _R | V=V _{RWM} , T _a =25°C | | | 0.2 | μA |
| Clamping Voltage | V _C | I _{PP} =5A, t _p =8/20μs | | | 11 | V |
| Junction Capacitance | C _j | V _R =0V, f=1MHz | | 8 | 12 | pF |



Fig.1 Peak Pulse Power Vs. Pulse Time

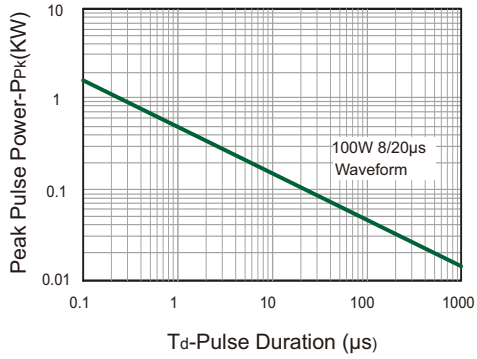


Fig.2 Power Derating Curve

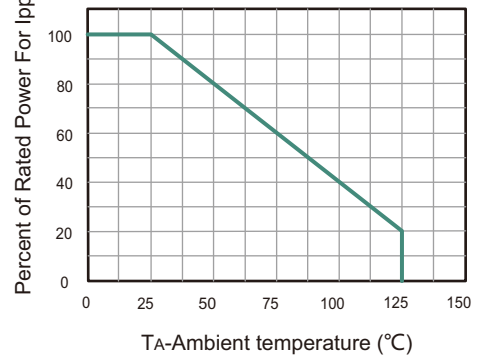


Fig.3 Clamping Voltage Vs. Peak Pulse Current

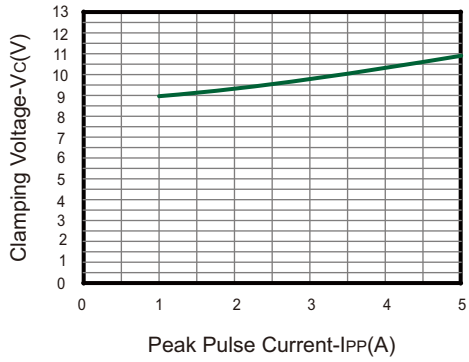
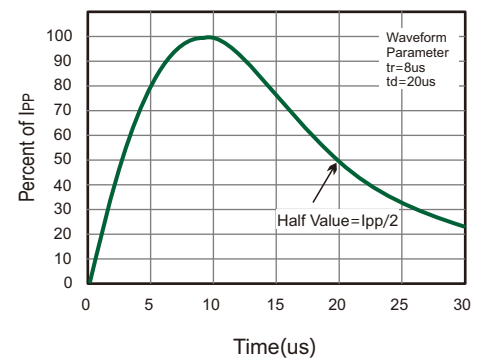


Fig.4 Pulse Waveform

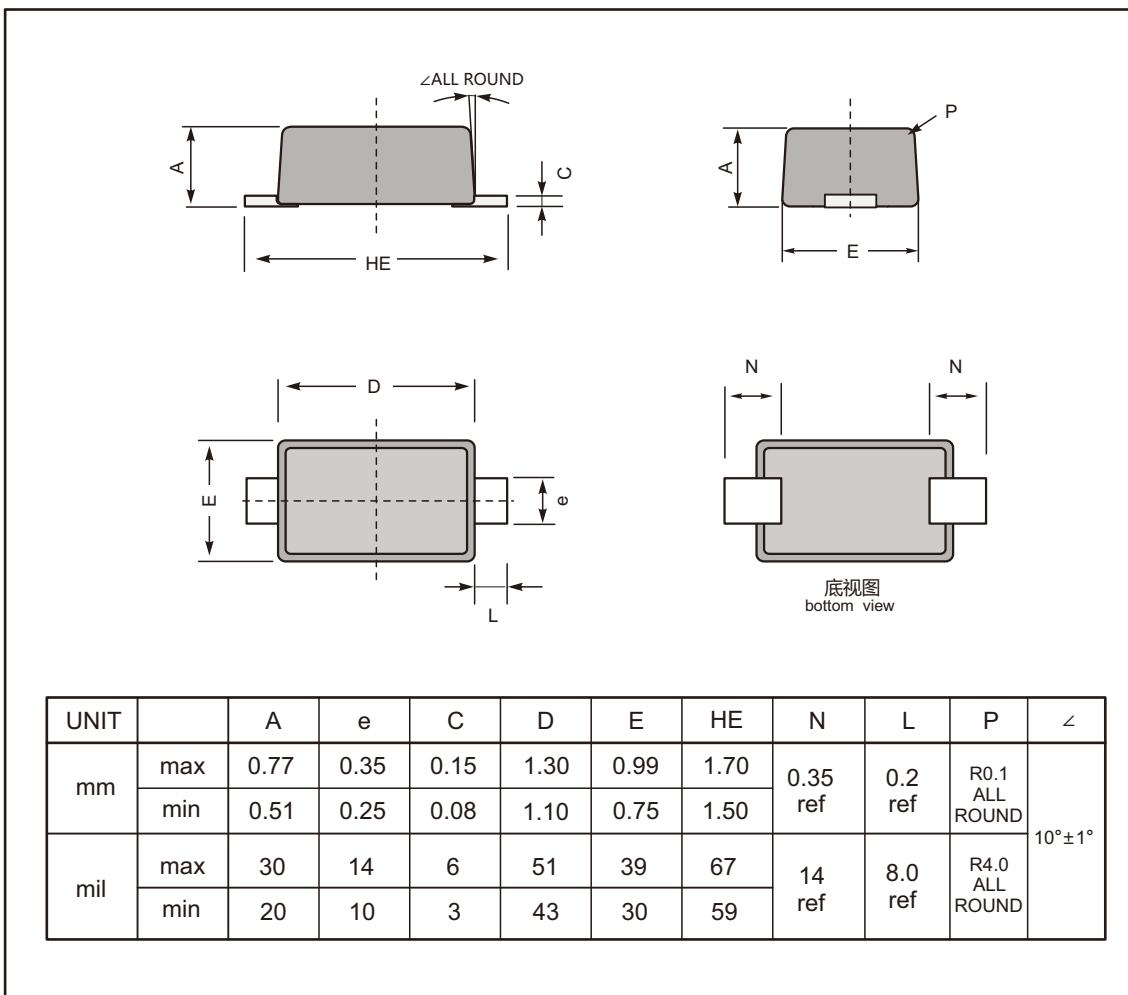




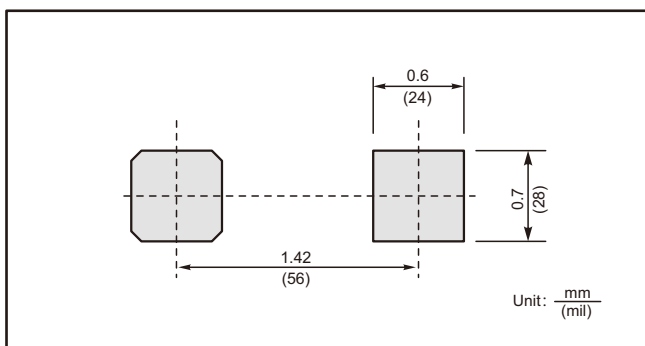
PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-523



The recommended mounting pad size



Marking

| Type number | Marking code |
|--------------|--------------|
| ESDBLC5V0D5A | 5Y |



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