

Features

- ◆ 250W peak pulse power(8/20 μ s)
- ◆ Protects two bi-directional lines
- ◆ Ultra low leakage: nA level
- ◆ Operating voltage: 24V
- ◆ Low clamping voltage
- ◆ Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
 - Air discharge: ± 30 kV
 - Contact discharge: ± 30 kV
 - IEC61000-4-4 (EFT) 40A (5/50ns)
 - IEC61000-4-5 (Lightning)5A (8/20 μ s)
- ◆ RoHS Compliant

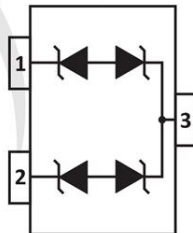
Mechanical Characteristics

- ◆ SOT-23 package
- ◆ Molding compound flammability rating:
 - ◆ UL 94V-0
- ◆ Packaging: Tape and Reel per EIA 481
- ◆ Shipping Qty :3000pcs/7Inch Tape & Reel

Applications

- ◆ CAN Bus Protection
- ◆ Automotive Appllcatrons

Dimensions and Pin Configuration



Marking: 24C Or M24CB

Absolute Maximum Ratings (Tamb=25°C unless otherwise specified)

| Parameter | Symbol | Value | Unit |
|---------------------------------|--------|-------------|------|
| Peak Pulse Power(8/20μs) | Ppk | 250 | W |
| ESD per IEC 61000-4-2 (Air) | VESD | ±30 | kV |
| ESD per IEC 61000-4-2 (Contact) | | ±30 | |
| Operating Temperature Range | TJ | -55 to +125 | °C |
| Storage Temperature Range | Tstg | -55 to +150 | °C |

Electrical Characteristics (TA=25°C unless otherwise specified)

| Parameter | Symbol | Min | Typ | Max | Unit | Test Condition |
|-------------------------|-----------------|------|-----|------|------|---------------------------------------|
| Reverse Working Voltage | VRWM | | | 24 | V | |
| Breakdown Voltage | VBR | 26.5 | | 32 | V | IT = 1mA |
| Reverse Leakage Current | IR | | | 0.08 | uA | VRWM = 24V |
| Clamping Voltage | VC | | 33 | | V | I _{PP} = 1A (8 x 20μs pulse) |
| Clamping Voltage | VC | | | 50 | V | I _{PP} = 5A (8 x 20μs pulse) |
| Peak Pulse Current | I _{PP} | | | 5.5 | A | t _p = 8/20μs |
| Junction Capacitance | CJ | | 17 | | pF | VR = 0V, f = 1MHz, Pin 1 to Pin 2 |

Typical Performance Characteristics ($T_A=25^\circ\text{C}$ unless otherwise Specified)

Fig1. 8/20 μs Pulse Waveform

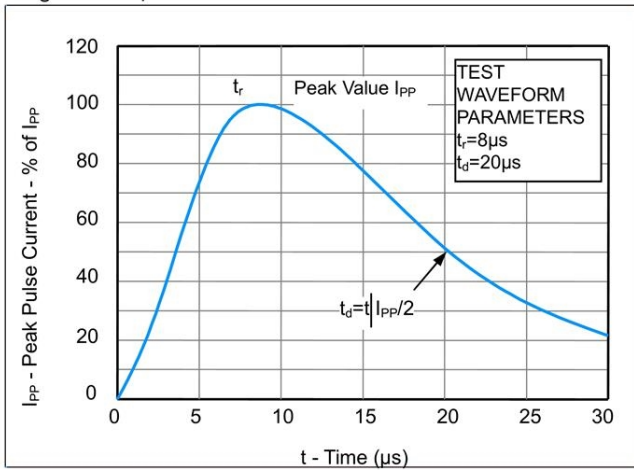


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

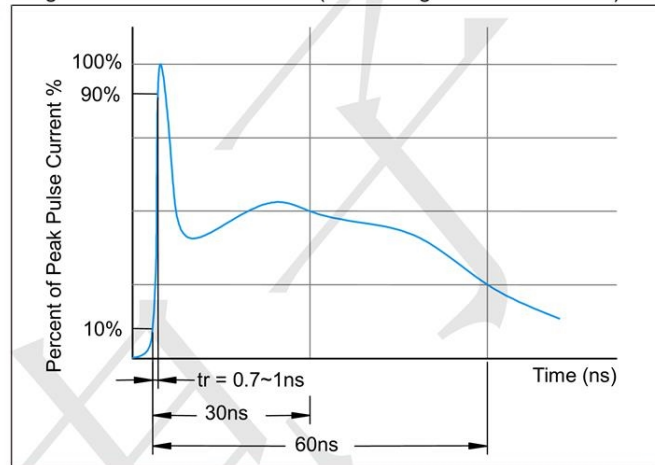
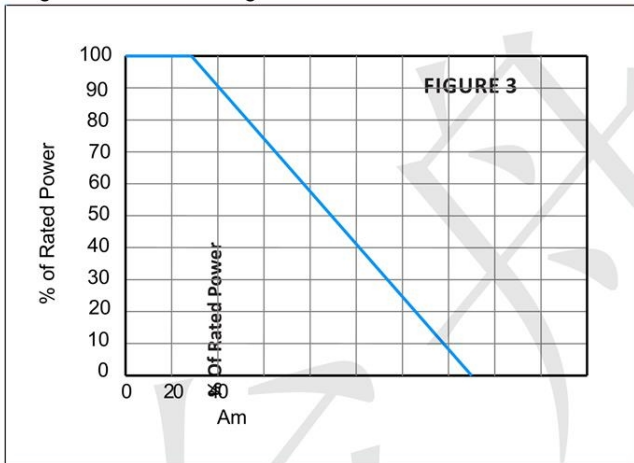
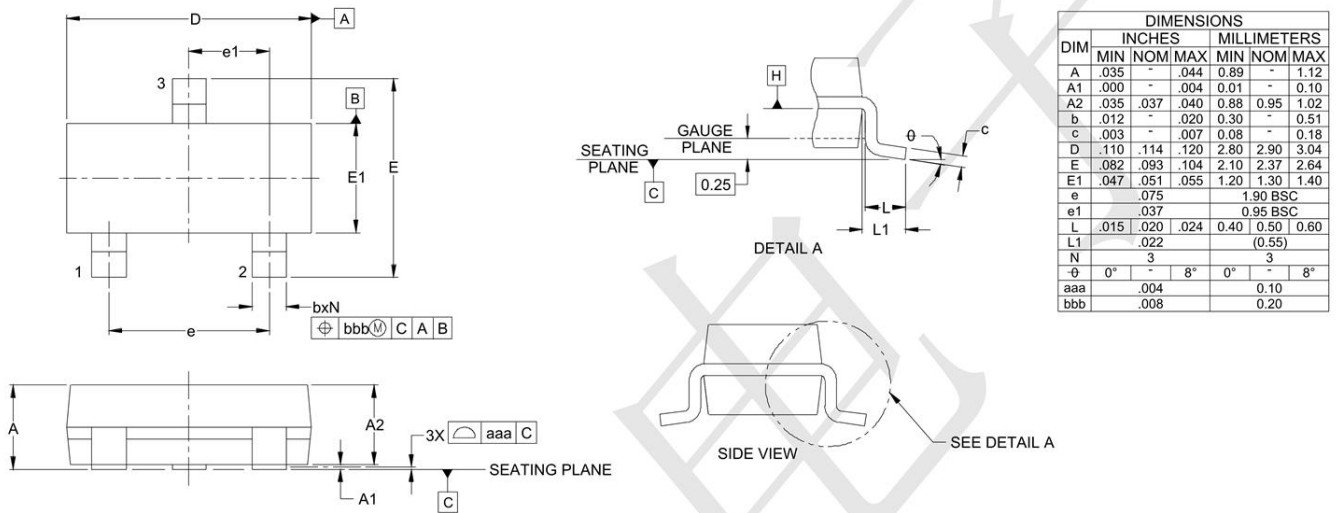


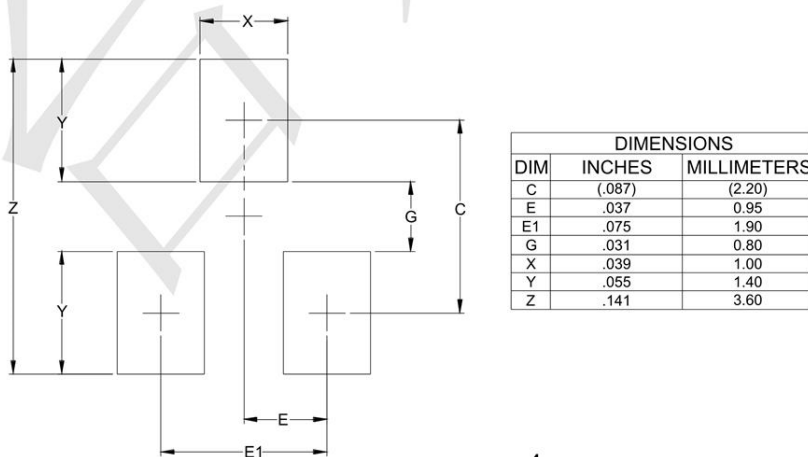
Fig3. Power Derating Curve



Outline Drawing - SOT23



Land Pattern - SOT23



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