

Features

- ◆ 300W peak pulse power(8/20μs)
- ◆ Ultra low leakage: nA level
- ◆ Operating voltage: 24V
- ◆ Low clamping voltage
- ◆ Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
Air discharge: ±30kV
Contact discharge: ±30kV
 - IEC61000-4-4 (EFT) 40A (5/50ns)
 - IEC61000-4-5 (Lightning) 7A (8/20μs)
- ◆ RoHS Compliant

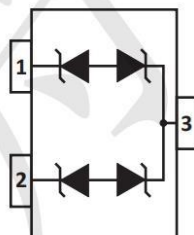
Mechanical Characteristics

- ◆ Package: SOT-23
- ◆ Lead Finish: Matte Tin
- ◆ Case Material: "Green" Molding Compound.
- ◆ UL Flammability Classification Rating 94V-0
- ◆ Moisture Sensitivity: Level 3 per J STD 020
- ◆ Shipping Qty :3000pcs/7Inch Tape & Reel

Applications

- ◆ Cellular Handsets and Accessories
- ◆ Notebooks and Handhelds
- ◆ Portable Instrumentation
- ◆ Set Top Box
- ◆ Industrial Controls
- ◆ CAN Bus Protection
- ◆ Automotive Appllcatrons

Dimensions and Pin Configuration



Marking: P 24KC
P=TECH PUBLIC LOGOO

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

| Parameter | Symbol | Value | Unit |
|---------------------------------|------------------|-------------|------|
| Peak Pulse Power (8/20μs) | Ppk | 300 | W |
| Peak Pulse Current (8/20μs) | I _{PP} | 7 | A |
| ESD per IEC 61000-4-2 (Air) | VESD | ± 30 | kV |
| ESD per IEC 61000-4-2 (Contact) | | ± 30 | |
| Operating Temperature Range | T _J | -55 to +125 | °C |
| Storage Temperature Range | T _{stg} | -55 to +150 | °C |

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

| Parameter | Symbol | Min | Typ | Max | Unit | Test Condition |
|-------------------------|------------------|------|-----|------|------|---|
| Reverse Working Voltage | V _{RWM} | | | 24 | V | |
| Breakdown Voltage | V _{BR} | 26.7 | | | V | I _T = 1mA |
| Reverse Leakage Current | I _R | | | 0.08 | μA | V _{RWM} = 24V |
| Forward Voltage | V _F | | 0.8 | 1.2 | V | I _F = 10mA |
| Clamping Voltage | V _C | | 33 | | V | I _{PP} = 1A (8 x 20μs pulse) |
| Clamping Voltage | V _C | | | 43 | V | I _{PP} = 7A (8 x 20μs pulse) |
| Junction Capacitance | C _J | | 25 | | pF | V _R =0, 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

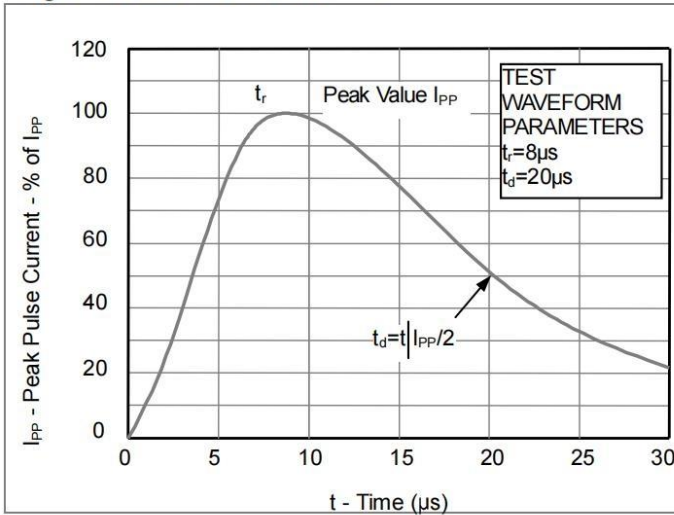


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

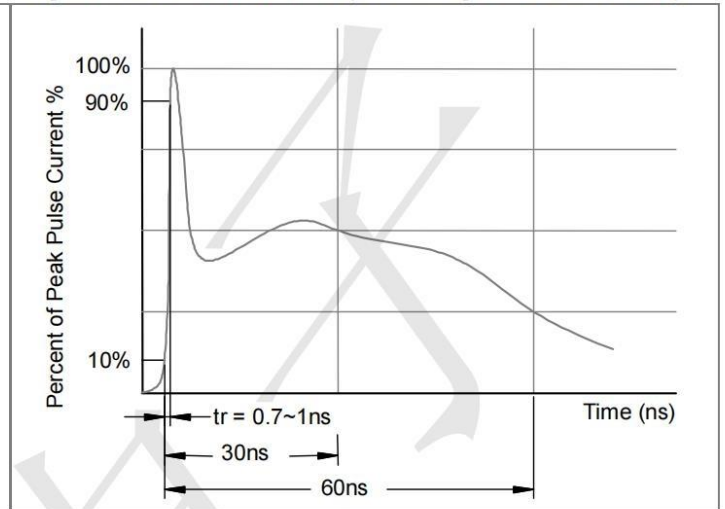
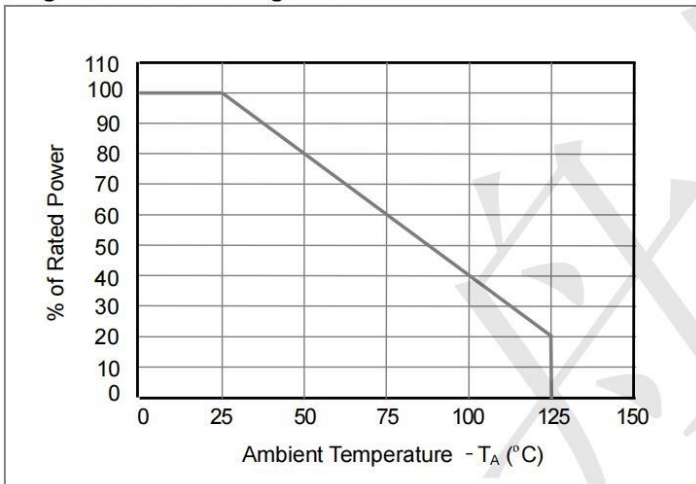
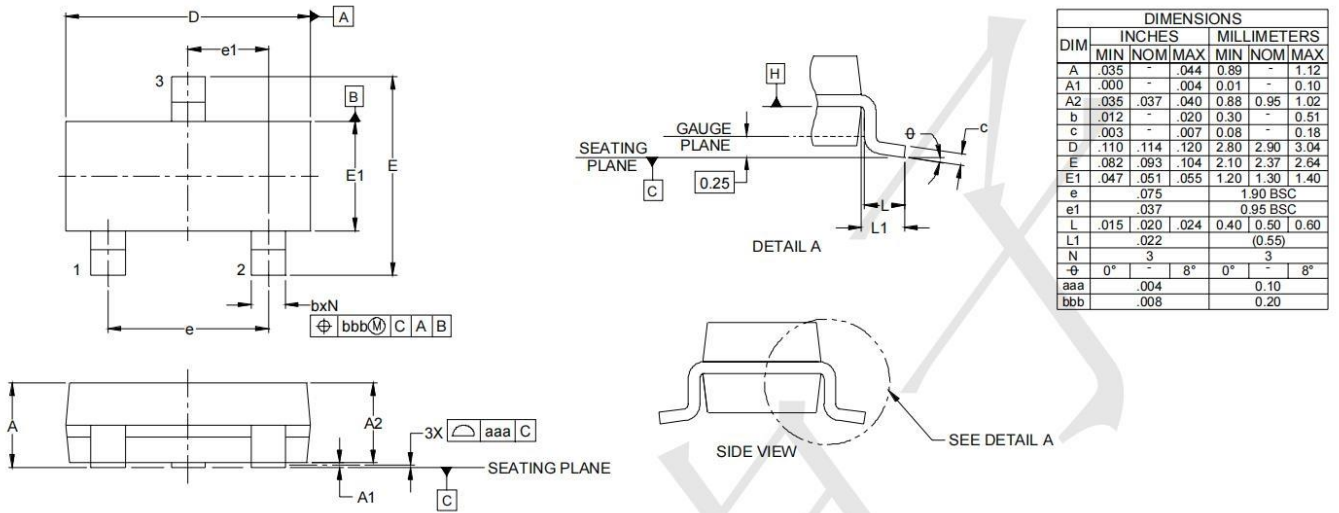


Fig3. Power Derating Curve



Outline Drawing - SOT23



Land Pattern - SOT23

