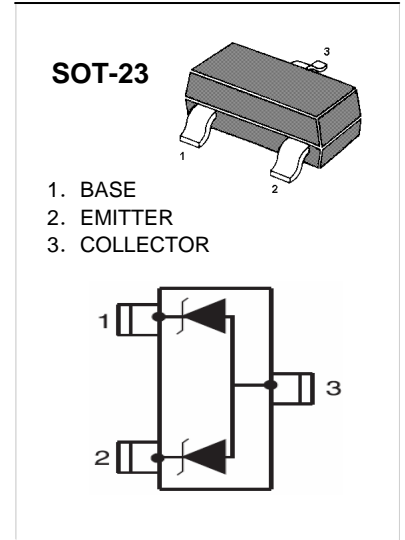


Features

- SOT-23 Package
- 2 Unidirectional Transil functions
- Peak Power Dissipation 300W @8 x 20 us Pulse
- Low Leakage
- Fast Response Time < 1 ns
- Protects I/O Port
- ESD Protection to IEC 61000-4-2 Level 4,15KV(Air), 8KV(Contact)
- 16KV Human Body Model ESD Requirements
- RoHS Compliant in Lead-Free Versions

Applications

- Computers
- Printers
- Communication Systems

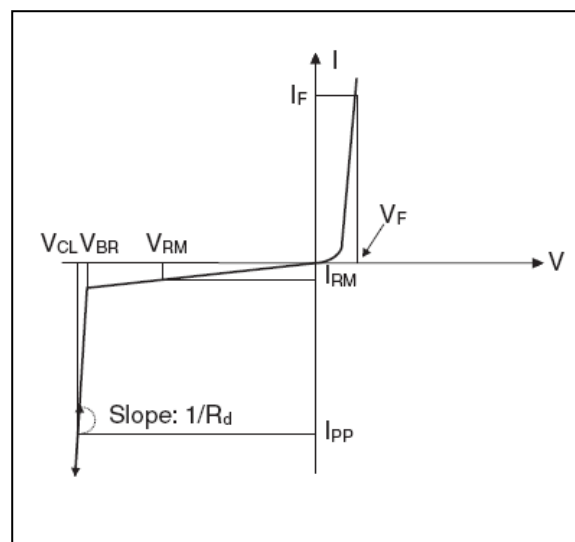


Absolute Maximum Ratings

| Symbol | Parameter | Value | Units |
|--------------------------------|---|-------------|-------------|
| P_{PP} | Peak Pulse Power ($t_p = 8/20\mu s$) | 300 | W |
| T_L | Maximum lead temperature for soldering during 10s | 260 | $^{\circ}C$ |
| T_{stg} | Storage Temperature Range | -55 to +15 | $^{\circ}C$ |
| T_{op} | Operating Temperature Range | -40 to +125 | $^{\circ}C$ |
| T_j | Maximum junction temperature | 150 | $^{\circ}C$ |
| V_{PP} | Electrostatic discharge | | |
| | MIL STD 883C -Method 3015-6 | 25 | kv |
| | IEC61000-4-2 air discharge | 16 | |
| IEC61000-4-2 contact discharge | 9 | | |

Electrical Characteristics

| Symbol | Parameter |
|------------|---------------------------------|
| V_{RM} | Stand-off voltage |
| V_{BR} | Breakdown voltage |
| V_{CL} | Clamping voltage |
| I_{RM} | Leakage current |
| I_{PP} | Peak pulse current |
| αT | Voltage temperature coefficient |
| V_F | Forward voltage drop |
| C | Capacitance |
| R_d | Dynamic resistance |



Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

| Part Numbers | Marking | Rated Stand-off Voltage | Maximum Leakage Current | Minimum Breakdown Voltage | Maximum Clamping Voltage | | Maximum Pulse Peak Current | Maximum Capacitance |
|--------------|---------|-------------------------|-------------------------|---------------------------|--------------------------|------------------|----------------------------|---------------------|
| | | | @ V_{RM} | 1mA | 1A ¹⁾ | 5A ¹⁾ | $t_p=8/20\mu s$ | 0v, 1MHz |
| | | V_{RM} | I_{RM} | V_{BR} | V_{CL} | | I_{PPM} | C |
| | | V | μA | V | V | V | A | pF |
| KGSOT04C | 04C | 4.0 | 3.0 | 5.0 | 8.5 | 10.5 | 17 | 300 |
| KGSOT05C | 05C | 5.0 | 1.0 | 6.0 | 9.8 | 12.5 | 17 | 220 |
| KGSOT08C | 08C | 8.0 | 1.0 | 8.5 | 13.4 | 15.0 | 15 | 190 |
| KGSOT12C | 12C | 12.0 | 1.0 | 13.3 | 19.0 | 28.0 | 12 | 150 |
| KGSOT15C | 15C | 15.0 | 1.0 | 16.7 | 24.0 | 35.0 | 10 | 140 |
| KGSOT24C | 24C | 24.0 | 1.0 | 26.7 | 43.0 | 60.0 | 5 | 83 |
| KGSOT36C | 36C | 36.0 | 1.0 | 40 | 60.0 | 75.0 | 2 | 80 |

1).8/20 waveform used. (see fig2.)

Typical Characteristics

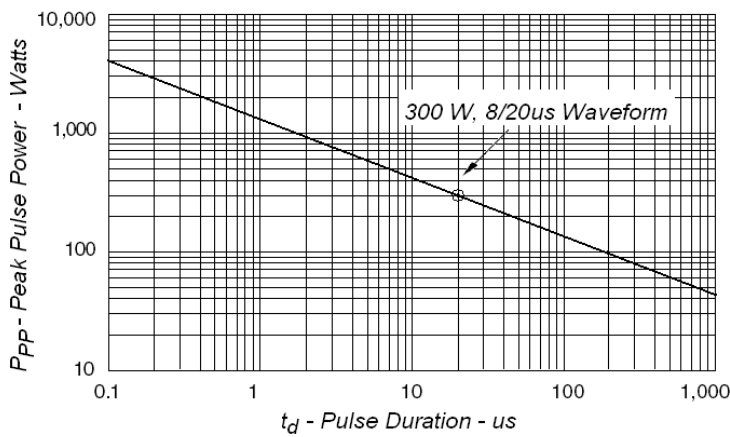


Fig1. Peak Pulse Power VS Pulse Time

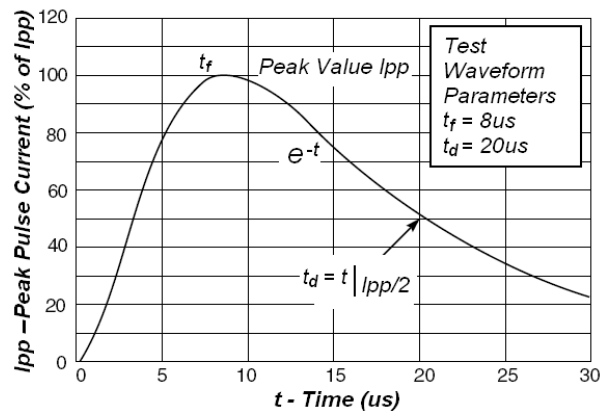


Fig2. Pulse Waveform

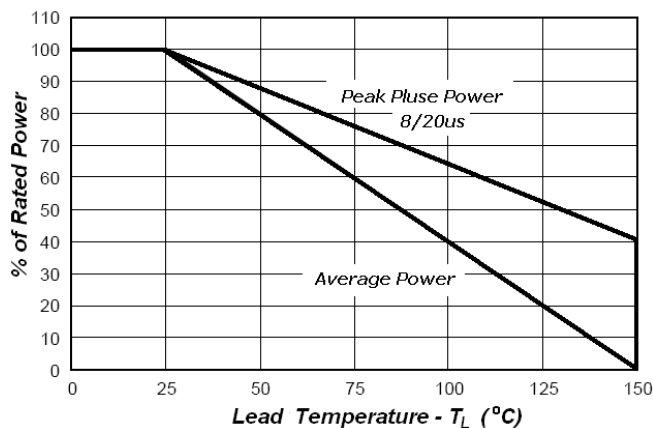
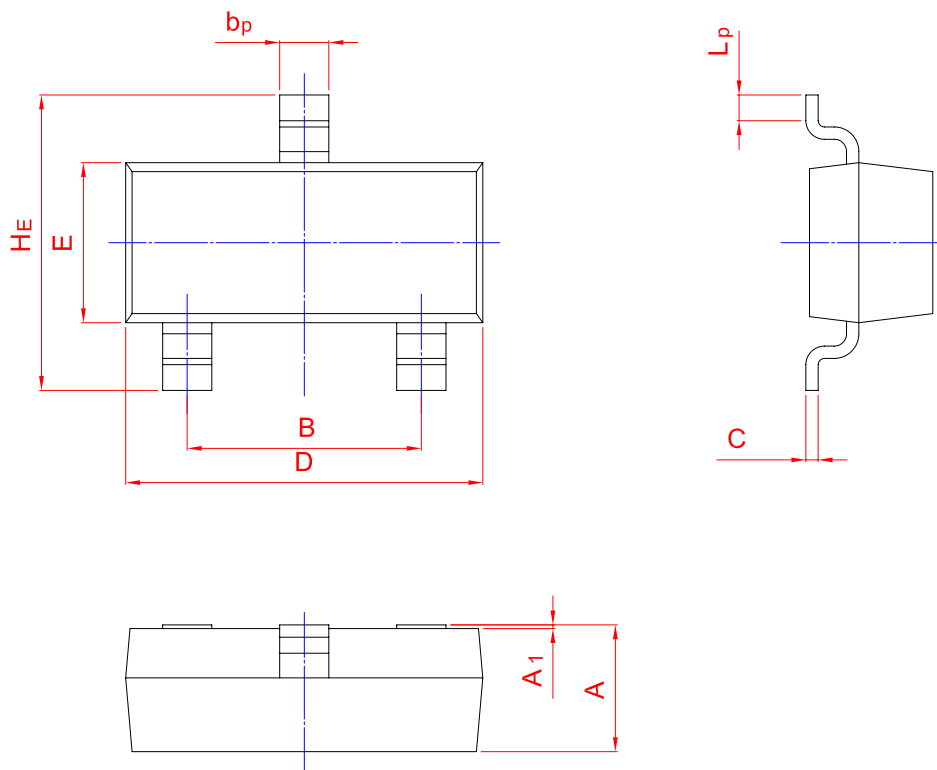


Fig3. Power Derating

PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT-23



| UNIT | A | B | bp | C | D | E | HE | A1 | Lp |
|------|------|------|------|------|------|------|------|-------|------|
| mm | 1.40 | 2.04 | 0.50 | 0.19 | 3.10 | 1.65 | 3.00 | 0.100 | 0.50 |
| | 0.95 | 1.78 | 0.35 | 0.08 | 2.70 | 1.20 | 2.20 | 0.013 | 0.20 |