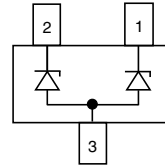


Two-Line ESD Protection in SOT-23

FEATURES

- Two-line ESD-protection device
- ESD-protection acc. IEC 61000-4-2
± 30 kV contact discharge
± 30 kV air discharge
- ESD capability according to AEC-Q101:
human body model: class H3B: > 8 kV
- Space saving SOT-23 package
- e3 - Sn
- AEC-Q101 qualified available



| ABSOLUTE MAXIMUM RATINGS | | | | |
|--------------------------|---|-----------|-------------|------|
| PARAMETER | TEST CONDITIONS | SYMBOL | VALUE | UNIT |
| Peak pulse current | Pin 1 to 3 or pin 2 to 3 acc. IEC 61000-4-5, $t_p = 8/20 \mu s$; single shot | I_{PPM} | 30 | A |
| | Pin 1 to 2 or pin 2 to 1; pin 3 not connected acc. IEC 61000-4-5, $t_p = 8/20 \mu s$; single shot | | 30 | A |
| Peak pulse power | Pin 1 to 3 or pin 2 to 3 acc. IEC 61000-4-5, $t_p = 8/20 \mu s$; single shot | P_{PP} | 480 | W |
| | Pin 1 to 2 or pin 2 to 1; pin 3 not connected acc. IEC 61000-4-5, $t_p = 8/20 \mu s$; single shot | | 612 | W |
| ESD immunity | Contact discharge acc. IEC 61000-4-2; 10 pulses | V_{ESD} | ± 30 | kV |
| | Air discharge acc. IEC 61000-4-2; 10 pulses | | ± 30 | kV |
| Operating temperature | Junction temperature | T_J | -55 to +150 | °C |
| Storage temperature | | T_{STG} | -55 to +150 | °C |

| ELECTRICAL CHARACTERISTICS ($T_{amb} = 25 \text{ }^\circ\text{C}$ unless otherwise specified) | | | | | | |
|---|--|---------------|------|------|------|---------|
| between pin 1 to pin 3 or pin 2 to pin 3 | | | | | | |
| PARAMETER | TEST CONDITIONS/REMARKS | SYMBOL | MIN. | TYP. | MAX. | UNIT |
| Protection paths | Number of lines which can be protected | $N_{channel}$ | - | - | 2 | lines |
| Reverse stand-off voltage | Max. reverse working voltage | V_{RWM} | - | - | 5 | V |
| Reverse voltage | at $I_R = 10 \mu A$ | V_R | 5 | - | - | V |
| Reverse current | at $V_R = 5 V$ | I_R | - | - | 10 | μA |
| Reverse breakdown voltage | at $I_R = 1 mA$ | V_{BR} | 6 | 6.8 | 8 | V |
| Reverse clamping voltage | at $I_{PP} = 1 A$ | V_C | - | 7 | 8.7 | V |
| | at $I_{PP} = I_{PPM} = 30 A$ | | - | 12 | 16 | V |
| Forward clamping voltage | at $I_{PP} = 1 A$ | V_F | - | 1 | 1.2 | V |
| | at $I_{PP} = I_{PPM} = 30 A$ | | - | 4.5 | - | V |
| Capacitance | at $V_R = 0 V$; $f = 1 MHz$ | C_D | - | 60 | 80 | pF |
| | at $V_R = 2.5 V$; $f = 1 MHz$ | | - | 30 | - | pF |

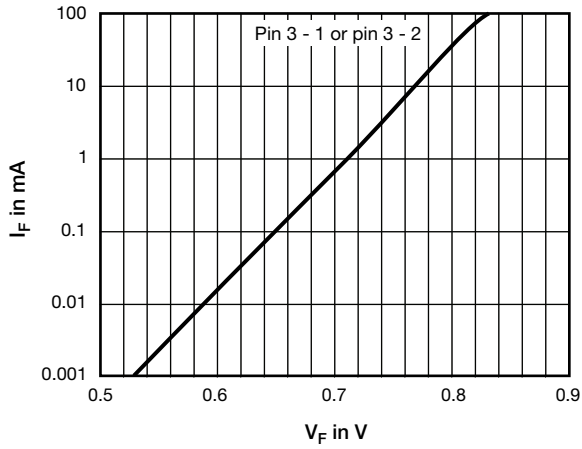


Fig. 1 - Typical Forward Current I_F vs. Forward Voltage V_F

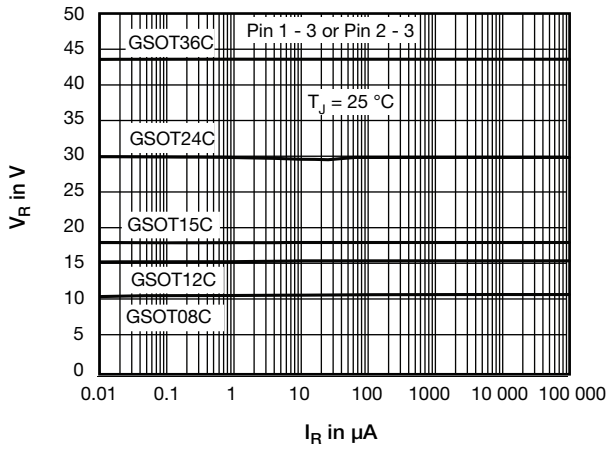


Fig. 2 - Typical Reverse Voltage V_R vs. Reverse Current I_R

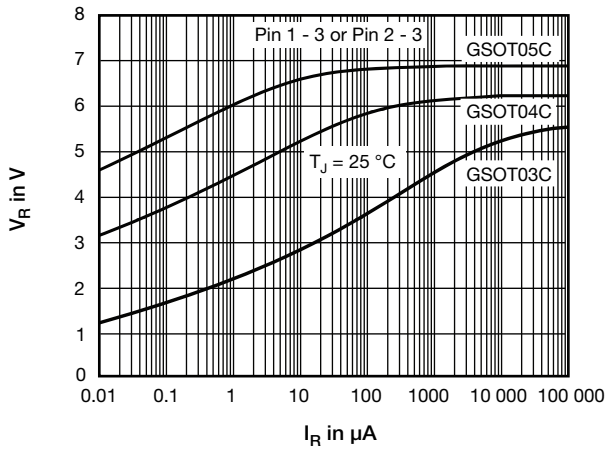
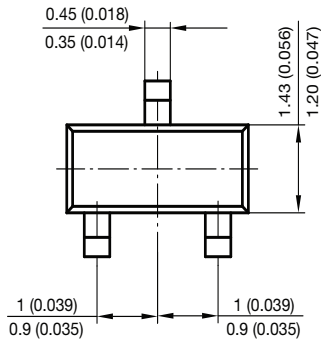
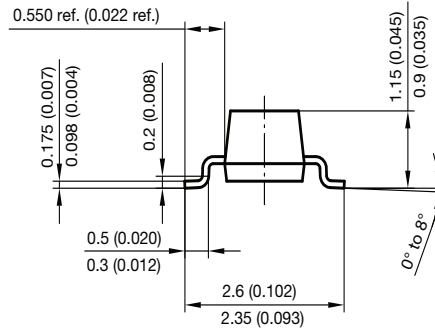
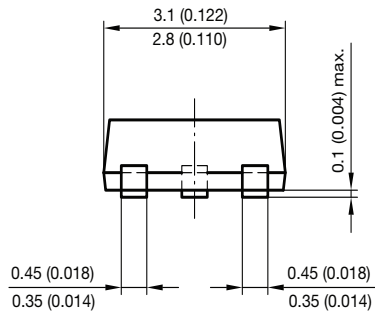


Fig. 3 - Typical Reverse Voltage V_R vs. Reverse Current I_R

PACKAGE DIMENSIONS in millimeters (inches): **SOT-23**



Foot print recommendation:

