

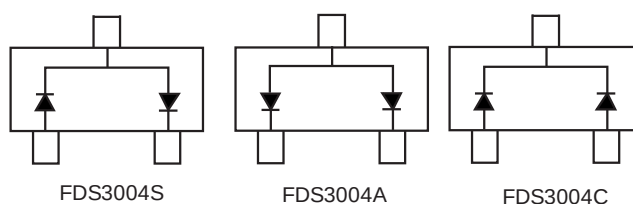
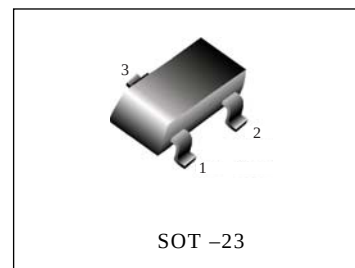
## HIGH VOLTAGE SURFACE MOUNT SWITCHING DIODE

### FEATURES

- Fast Switching Speed
- High Conductance
- High Reverse Breakdown Voltage Rating
- We declare that the material of product compliance with RoHS requirements.

### Ordering Information

| Device   | Marking | Shipping       |
|----------|---------|----------------|
| FDS3004S | KAE     | 3000/Tape&Reel |
| FDS3004A | KAD     | 3000/Tape&Reel |
| FDS3004C | KAC     | 3000/Tape&Reel |



### Maximum Ratings @ Ta=25°C unless otherwise specified

| Characteristic                                     | Symbol   | Value       | Unit |
|----------------------------------------------------|----------|-------------|------|
| Repetitive Peak Reverse Voltage                    | VRRM     | 350         | V    |
| Working Peak Reverse Voltage                       | VRWM     | 300         | V    |
| DC Blocking Voltage                                | VR       |             |      |
| RMS Reverse Voltage                                | VR(RMS)  | 212         | V    |
| Forward Continuous Current(Note 2)                 | IF       | 225         | mA   |
| Peak Repetitive Forward Current(Note 2)            | IFRM     | 625         | mA   |
| Non-Repetitive Peak Forward Surge Current @t=1.0μs | IFSM     | 4.0         | A    |
| @t=1.0s                                            |          | 1.0         |      |
| Power Dissipation(Note 2)                          | Pd       | 350         | mW   |
| Thermal Resistance Junction to Ambient Air(Note 2) | ROJA     | 357         | °C/W |
| Operating and Storage Temperature Range            | Tj, TSTG | -65 to +150 | °C   |

### Electrical Characteristics @ Ta=25°C unless otherwise specified, per element

| Characteristic                    | Symbol | Min | Typ  | MAX  | Unit | Test Condition     |
|-----------------------------------|--------|-----|------|------|------|--------------------|
| Reverse Breakdown Voltage(Note 1) | V(BR)R | 350 |      |      | V    | IR=100μA           |
| Forward Voltage(Note 1)           | VF     |     | 0.78 | 0.87 | V    | IF=20mA            |
|                                   |        |     | 0.93 | 1.0  |      | IF=100mA           |
|                                   |        |     | 1.03 | 1.25 |      | IF=200mA           |
| Reverse Current(Note 1)           | IR     |     | 30   | 100  | nA   | VR=240V            |
|                                   |        |     | 35   | 100  | μA   | VR=240V, Tj=150°C  |
| Total Capacitance                 | CT     |     | 1.0  | 5.0  | pF   | VR=0V, f=1.0MHZ    |
| Reverse Recovery Time             | Trr    |     |      | 50   | ns   | IF=IR=30mA         |
|                                   |        |     |      |      |      | Irr=3.0mA, RL=100Ω |

- Notes:
1. Short duration test pulse used to minimize self-heating effect.
  2. Part mounted on FR-4 board with recommended pad layout.

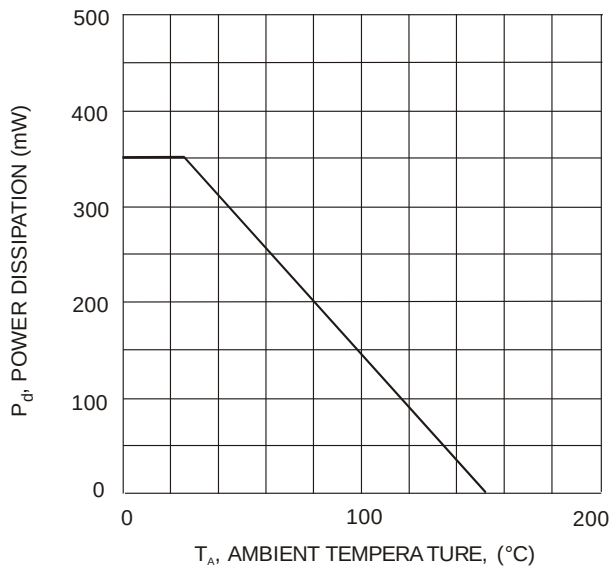


Fig. 1 Power Derating Curve, tat package

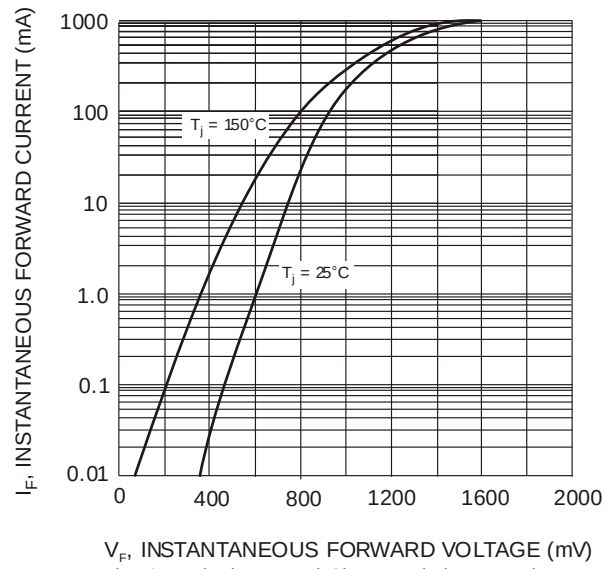


Fig. 2 Typical Forward Characteristics, per element

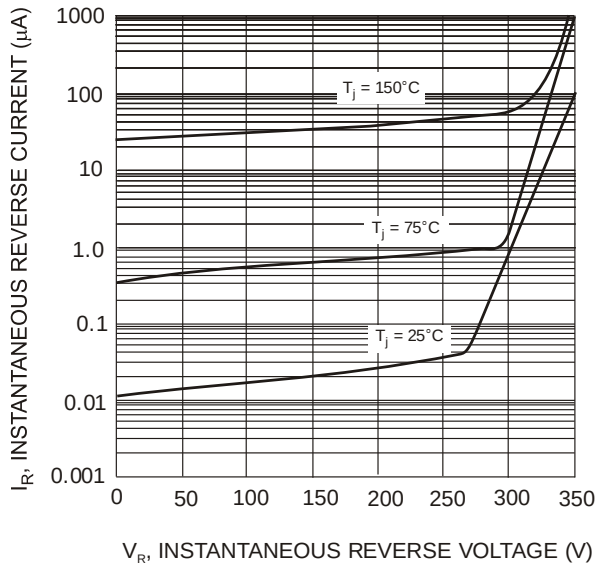


Fig. 3 Typical Reverse Characteristics, per element

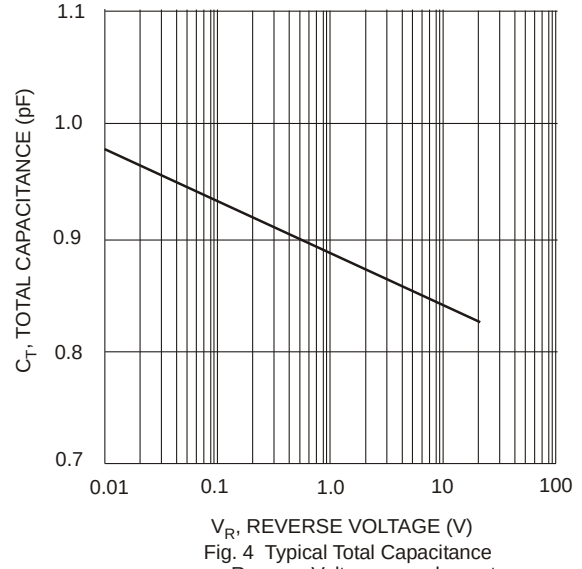
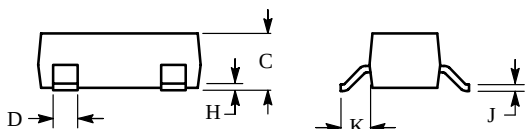
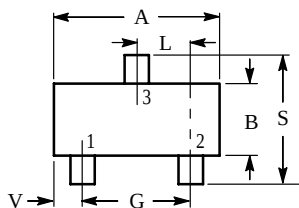


Fig. 4 Typical Total Capacitance vs. Reverse Voltage, per element

## SOT-23

### NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M,1982
2. CONTROLLING DIMENSION: INCH.



| DIM | INCHES |        | MILLIMETERS |       |
|-----|--------|--------|-------------|-------|
|     | MIN    | MAX    | MIN         | MAX   |
| A   | 0.1102 | 0.1197 | 2.80        | 3.04  |
| B   | 0.0472 | 0.0551 | 1.20        | 1.40  |
| C   | 0.0350 | 0.0440 | 0.89        | 1.11  |
| D   | 0.0150 | 0.0200 | 0.37        | 0.50  |
| G   | 0.0701 | 0.0807 | 1.78        | 2.04  |
| H   | 0.0005 | 0.0040 | 0.013       | 0.100 |
| J   | 0.0034 | 0.0070 | 0.085       | 0.177 |
| K   | 0.0140 | 0.0285 | 0.35        | 0.69  |
| L   | 0.0350 | 0.0401 | 0.89        | 1.02  |
| S   | 0.0830 | 0.1039 | 2.10        | 2.64  |
| V   | 0.0177 | 0.0236 | 0.45        | 0.60  |

