

# SMD Switching Diode



SMD Diodes Specialist

## CDSUR4148(RoHs Device)

High Speed

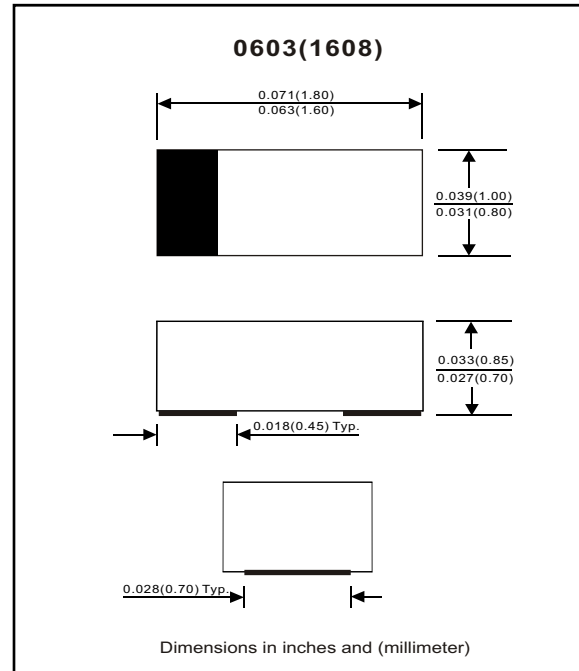


### Features

- Designed for mounting on small surface.
- Extremely thin/leadless package.
- High mounting capability, strong surge withstand, high reliability.

### Mechanical data

- Case: 0603(1608) standard package, molded plastic.
- Terminals: Gold plated, solderable per MIL-STD-750, method 2026.
- Polarity: Indicated by cathode band.
- Mounting position: Any
- Weight: 0.003 gram(approx.).



### Maximum Rating (at TA=25°C unless otherwise noted)

| Parameter                       | Conditions                                   | Symbol           | Min | Typ    | Max  | Unit |
|---------------------------------|--|------------------|-----|--------|------|------|
| Repetitive peak reverse voltage |  | V <sub>RRM</sub> |     |        | 100  | V    |
| Reverse voltage                 |  | V <sub>R</sub>   |     |        | 75   | V    |
| Average forward current         |  | I <sub>O</sub>   |     |        | 150  | mA   |
| Forward current,surge peak      | T <sub>P</sub> = 1μS<br>T <sub>P</sub> = 1mS | I <sub>FSM</sub> |     | 4<br>1 |      | A    |
| Repetitive peak forward current |  | I <sub>FRM</sub> |     |        | 300  | mA   |
| Power Dissipation               |  | P <sub>D</sub>   |     |        | 150  | mW   |
| Storage temperature             |  | T <sub>STG</sub> | -40 |        | +125 | °C   |
| Junction temperature            |  | T <sub>J</sub>   |     |        | +125 | °C   |

### Electrical Characteristics (at TA=25°C unless otherwise noted)

| Parameter                     | Conditions   | Symbol          | Min | Typ | Max       | Unit     |
|-------------------------------|--|-----------------|-----|-----|-----------|----------|
| Forward voltage               | I <sub>F</sub> = 50 mA DC  | V <sub>F</sub>  |     |     | 1.0       | V        |
| Reverse current               | V <sub>R</sub> = 20 V<br>V <sub>R</sub> = 75 V   | I <sub>R</sub>  |     |     | 25<br>2.5 | nA<br>uA |
| Capacitance between terminals | f = 1 MHz, and 0VDC reverse voltage  | C <sub>T</sub>  |     |     | 4         | pF       |
| Reverse recovery time         | I <sub>F</sub> = I <sub>R</sub> = 10 mA, R <sub>L</sub> = 100 ohms, I <sub>rr</sub> = 1 mA | T <sub>rr</sub> |     |     | 4         | nS       |

## RATING AND CHARACTERISTIC CURVES (CDSUR4148)

Fig. 1 - Forward characteristics

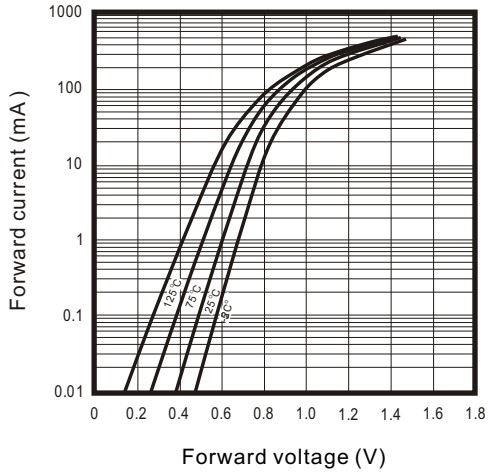


Fig. 2 - Reverse characteristics

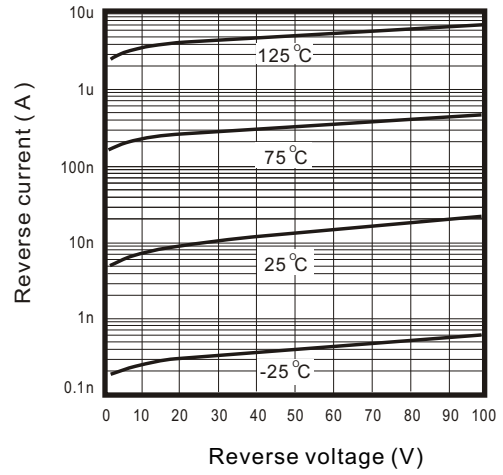


Fig. 3 - Capacitance between terminals characteristics

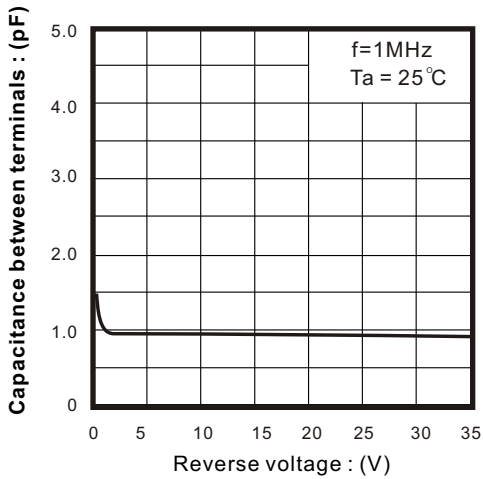


Fig. 4 - Current derating curve

