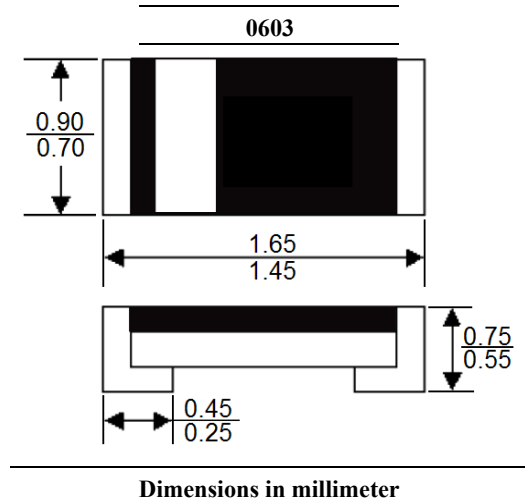


# CM4148WT

## Switching Diode

### FEATURES

- Silicon epitaxial planar diode
- SMD chip pattern, available in various dimension included 1206 & 0805
- Leadfree and RoHS compliance components
- For small signal switching and operating ambient temperature less than 55 °C and voltage withstand less than 60V; not suitable for AC switching input as rectified circuit and high reverse voltage location. CM4148WTN is suitable for those application.
- Suffix "H" indicates Halogen-free parts, ex. CM4148WTH



### Mechanical Data

Case : 0603

Marking : Cathode band

### Thermal Characteristics <sup>1)</sup> @T<sub>A</sub>=25 °C, unless otherwise specified

| Parameter                                  | Symbol           | Value      | Unit  |
|--|------------------|------------|-------|
| Forward Power Dissipation                  | P <sub>tot</sub> | 200        | mW    |
| Power derating above 25°C                  |                  | 1.6        | mW/°C |
| Junction Temperature                       | T <sub>j</sub>   | 150        | °C    |
| Thermal Resistance Junction to Ambient air | R <sub>θJA</sub> | 375        | °C/W  |
| Operating& Storage Temperature range       | T <sub>stg</sub> | -55 to 150 | °C    |

<sup>1)</sup> Valid provided that electrodes are kept at ambient temperature.

### Electrical Rating <sup>1)</sup> @T<sub>A</sub>=25 °C, unless otherwise specified

| Parameter  | Symbol             | Value | Unit |
|--|--------------------|-------|------|
| Repetitive Peak Reverse Voltage  | V <sub>RRM</sub>   | 75    | V    |
| Average rectified current sin half wave rectification with resistive load            | I <sub>F(AV)</sub> | 100   | mA   |
| Repetitive Peak Forward Current at Tamb=25°C   | I <sub>FRM</sub>   | 200   | mA   |
| Non-Repetitive Surge Forward Current at t<1s and Tj=25°C<br>at t ≤ 8.3ms and Tj=25°C | I <sub>FSM</sub>   | 400   | mA   |
|  |                    | 800   | mA   |

<sup>1)</sup> Valid provided that electrodes are kept at ambient temperature.

### Electrical Characteristics <sup>1)</sup> @T<sub>A</sub>=25 °C, unless otherwise specified

| Parameter   | Symbol           | MAX.  | Unit |
|---|------------------|-------|------|
| Forward Voltage at I <sub>F</sub> =10mA<br>at I <sub>F</sub> =100mA                 | V <sub>F</sub>   | 1.0   | V    |
|   |                  | 1.25  | V    |
| Leakage Current at V <sub>R</sub> =20V  | I <sub>R</sub>   | 0.025 | μA   |
| Leakage Current at V <sub>R</sub> =75V  |                  | 5     | μA   |
| Capacitance at V <sub>R</sub> =0V, f=1MHz   | C <sub>tot</sub> | 4     | pF   |
| Reverse Recovery Time at I <sub>F</sub> =I <sub>R</sub> =10mA, R <sub>L</sub> =100Ω | t <sub>rr</sub>  | 4     | nS   |

<sup>1)</sup> Valid provided that electrodes are kept at ambient temperature.

Typical Characteristics @  $T_A = 25^\circ\text{C}$ , unless otherwise specified

Figure 1. Forward Characteristic

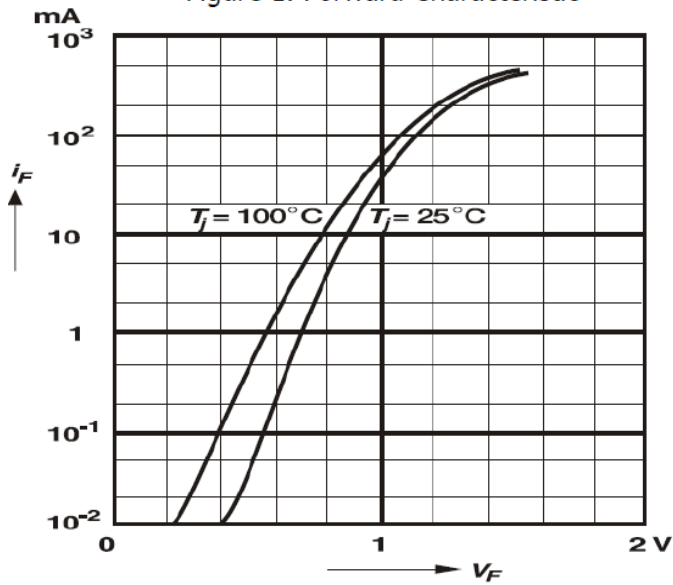


Figure 2. Power De-rating

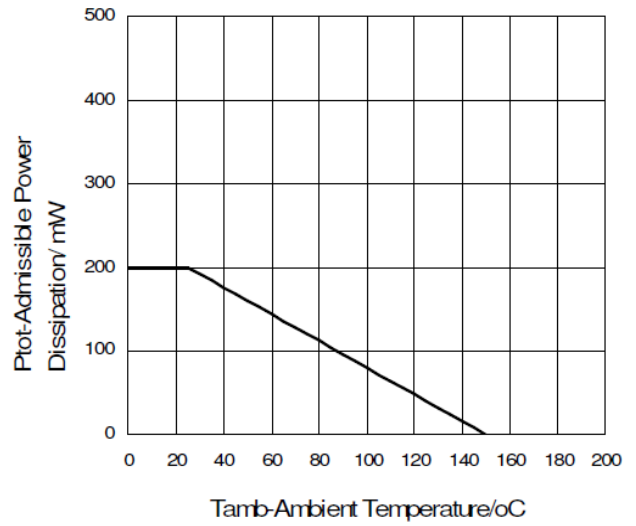


Figure 3. Forward Current De-rating

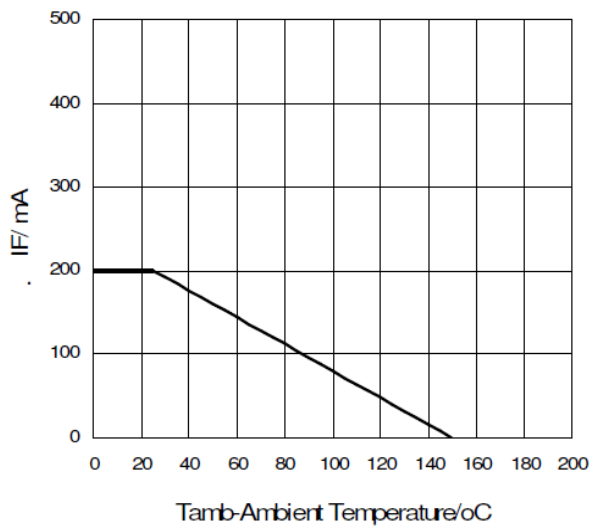


Figure 4. Reverse Voltage De-rating

