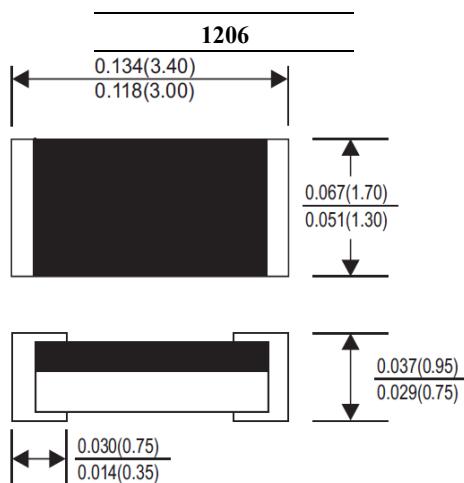


### FEATURES

- Silicon epitaxial planar diode
- SMD chip pattern, available in various dimension included 0805 & 0603
- 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.
- CM4148WN is suitable for those application
- Suffix "H" indicates Halogen-free parts, ex. CM4148WH



**Dimensions in inches and (millimeter)**

### Mechanical Data

Case: 1206

Weight: approx. 10mg

Marking: Cathode band

### **Thermal Characteristics<sup>1)</sup> @ $T_A = 25^\circ C$ , unless otherwise specified**

Parameter	Symbol	Value	Unit
Forward Power Dissipation	$P_{tot}$	400	mW
Power derating above 25°C		3.2	mW/ °C
Junction Temperature	$T_j$	150	°C
Thermal Resistance Junction to Ambient air	$R_{\theta JA}$	375	°C/W
Operating& Storage Temperature range	$T_{stg}$	-55 to 150	°C

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

### **Electrical Rating<sup>1)</sup> @ $T_A = 25^\circ C$ , unless otherwise specified**

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	$V_{RRM}$	75	V
Average rectified current sin half wave rectification with resistive load	$I_{F(AV)}$	150	mA
Repetitive Peak Forward Current at Tamb=25°C	$I_{FRM}$	300	mA
Non-Repetitive Surge Forward Current at t<1s and Tj=25°C	$I_{FSM}$	500	mA
at t≤8.3ms and Tj=25°C		1000	mA

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

### **Electrical Characteristics<sup>1)</sup> @ $T_A = 25^\circ C$ , unless otherwise specified**

Parameter	Symbol	MAX.	Unit
Forward Voltage at $I_F = 10\text{mA}$ at $I_F = 100\text{mA}$	$V_F$	1.0	V
		1.25	V
Leakage Current at $V_R = 20\text{V}$ Leakage Current at $V_R = 75\text{V}$	$I_R$	0.025	µA
		5	µA
Capacitance at $V_R = 0\text{V}$ , f=1MHz	$C_{tot}$	4	pF
Reverse Recovery Time at $I_F = I_R = 10\text{mA}$ , $R_L = 100\Omega$	$t_{rr}$	4	nS

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

**Typical Characteristics@ $T_A = 25^\circ C$ , unless otherwise specified**

Figure 1. Forward Characteristic

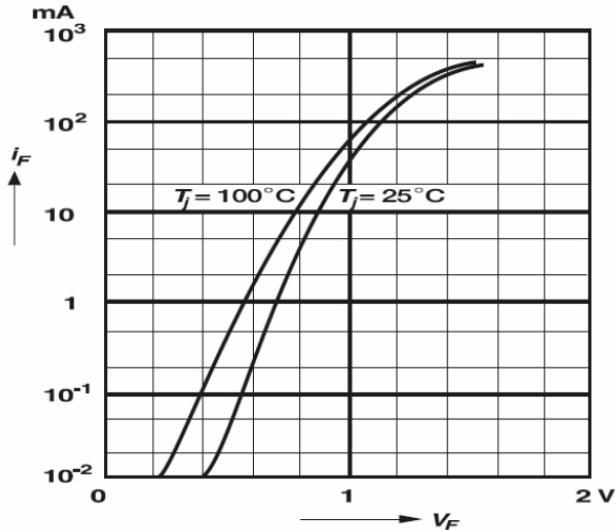


Figure 3. Forward Current De-rating

Figure 2. Power De-rating

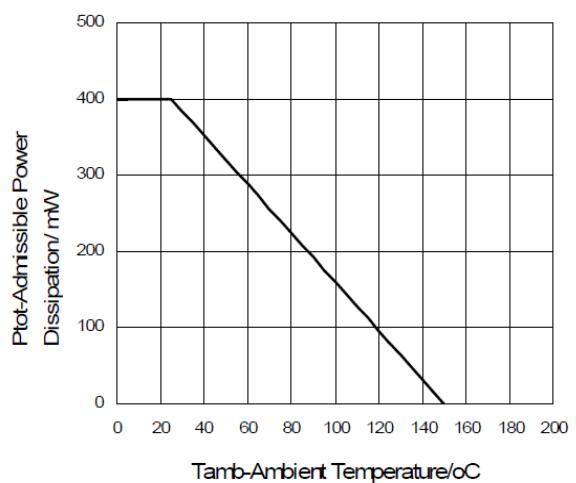


Figure 4. Reverse Voltage De-rating

