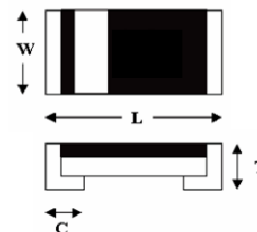


## Switching Diode

**CD4148WP**
**FEATURES**

- Silicon epitaxial planar diode
- SMD chip pattern, available in various dimension included 0805 & 0603
- 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


**MECHANICAL CHARACTERISTICS**

- Size: 1206
- Weight: approx.10mg
- Marking: Cathode terminal

1206	
L	3.2±0.2 mm
W	1.5±0.2 mm
T	0.85±0.1 mm
C	0.55±0.2 mm

**THERMAL CHARACTERISTICS<sup>1)</sup>**

Parameter at $T_{amb}=25^{\circ}C^{1)}$	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	$R_{JA}$	375	°C/W
Operating & Storage Temperature range	$T_{stg}$	-55 to 150	°C

**MAXIMUM RATING<sup>1)</sup>**

Parameter at $T_{amb}=25^{\circ}C^{1)}$	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 $T_{amb}=25^{\circ}C$	$I_{FRM}$	300	mA
Non-Repetitive Surge Forward Current at $t < 1s$ and $T_j=25^{\circ}C$	$I_{FSM}$	500	mA
at $t \leq 8.3ms$ and $T_j=25^{\circ}C$		1000	mA

**ELECTRICAL CHARACTERISTICS<sup>1)</sup>**

Parameter at $T_{amb}=25^{\circ}C^{1)}$	Symbol	Value	Unit
Forward Voltage at $I_F=10mA$	$V_F$	1.0 MAX	V
at $I_F=100mA$		1.25 MAX	V
Leakage Current at $V_R=20V$ Leakage Current at $V_R=75V$	$I_R$	0.025 MAX	uA
		5 MAX	uA
Capacitance at $V_R=0V$ , $f=1MHz$	$C_{tot}$	4 MAX	pF
Reverse Recovery Time at $I_F=I_R=10mA, R_L=100$	$t_{rr}$	4 MAX	ns

1) Valid provided that electrodes are kept at ambient temperature.

**CD4148WP** Typical Characteristics

Figure 1. Forward Characteristic

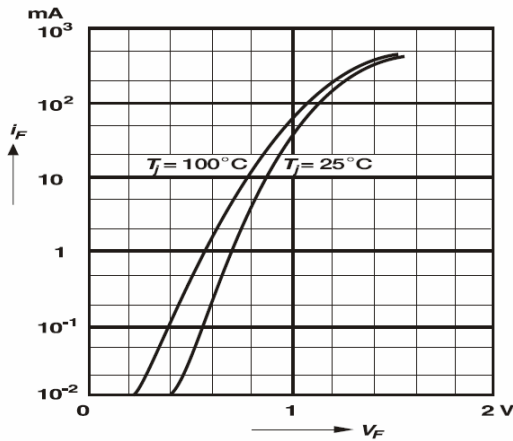


Figure 2. Power De-rating

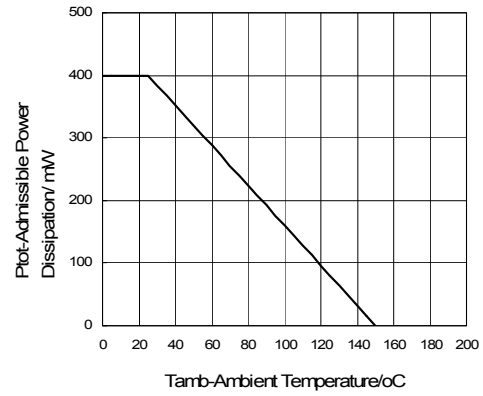


Figure 3. Forward Current De-rating

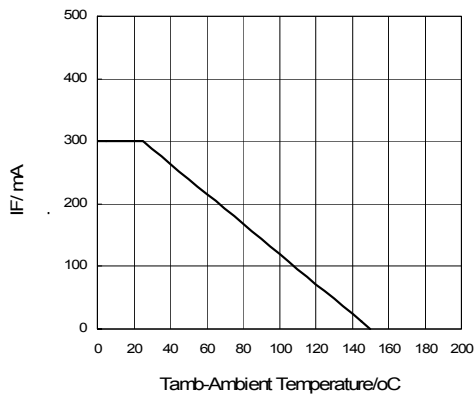


Figure 4. Reverse Voltage De-rating

