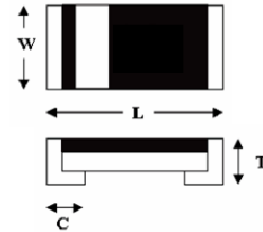


Switching Diode

**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 55oC 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 <sub>amb</sub> =25°C <sup>1)</sup>	Symbol	Value	Unit
Forward Power Dissipation	P <sub>tot</sub>	400	mW
Power derating above 25°C		3.2	mW/°C
Junction Temperature	T <sub>j</sub>	150	°C
Thermal Resistance Junction to Ambient air	R <sub>JA</sub>	375	°C/W
Operating & Storage Temperature range	T <sub>stg</sub>	-55 to 150	°C

MAXIMUM RATING<sup>1)</sup>

Parameter at T <sub>amb</sub> =25°C <sup>1)</sup>	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>	150	mA
Repetitive Peak Forward Current at T <sub>amb</sub> =25°C	I <sub>FRM</sub>	300	mA
Non-Repetitive Surge Forward Current at t<1s and T <sub>j</sub> =25°C	I <sub>FSM</sub>	500	mA
at t ≤ 8.3ms and T <sub>j</sub> =25°C		1000	mA

ELECTRICAL CHARACTERISTICS<sup>1)</sup>

Parameter at T <sub>amb</sub> =25°C <sup>1)</sup>	Symbol	Value	Unit
Forward Voltage at I <sub>F</sub> =10mA	V <sub>F</sub>	1.0 MAX	V
at I <sub>F</sub> =100mA		1.25 MAX	V
Leakage Current at V <sub>R</sub> =20V Leakage Current at V <sub>R</sub> =75V	I <sub>R</sub>	0.025 MAX	uA
		5 MAX	uA
Capacitance at V <sub>R</sub> =0V, f=1MHz	C <sub>tot</sub>	4 MAX	pF
Reverse Recovery Time at I <sub>F</sub> =I <sub>R</sub> =10mA, R <sub>L</sub> =100	t <sub>rr</sub>	4 MAX	ns

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

CD4148WP Typical Characteristics

Figure 1. Forward Characteristic

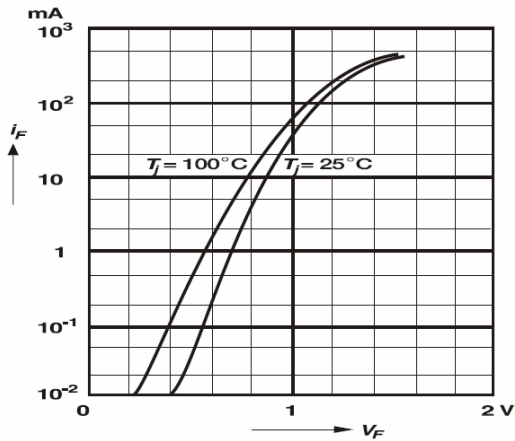


Figure 2. Power De-rating

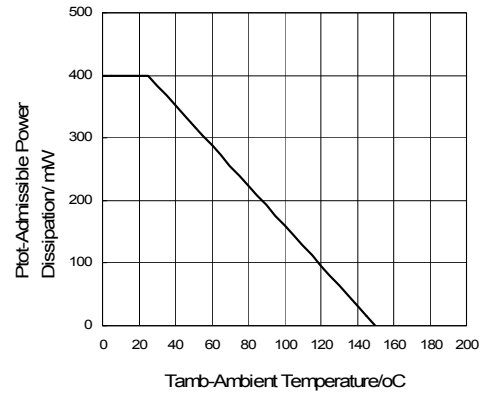


Figure 3. Forward Current De-rating

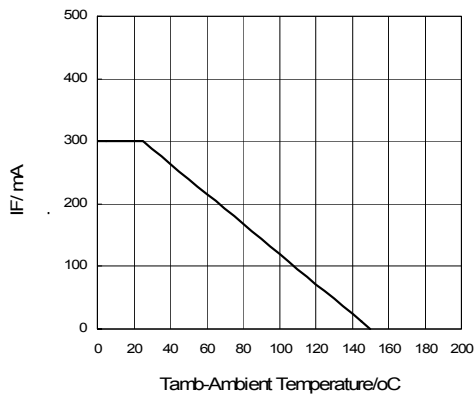


Figure 4. Reverse Voltage De-rating

