SMD Switching Diode

COMCHIP
SMD Diodes Specialist

CDSNC4148

High Speed

Features

Designed for mounting on small surface.

Silicon Epitaxial Planar Diode.

Fast switching diode.

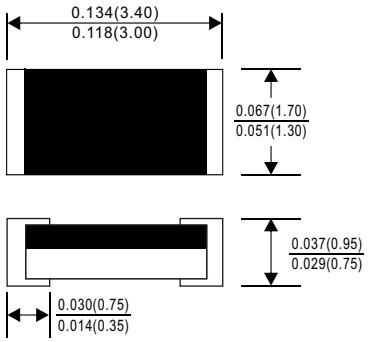
Mechanical data

Case: 1206

Marking: Cathode Band.

Weight: 0.01 gram(approx.).

1206



Dimensions in inches and (millimeter)

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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Peak reverse voltage		V_{RM}			100	V
Reverse voltage		V_R			75	V
Forward continuous current		I_{FM}			150	mA
Average rectified current sin half wave rectification with resistive load	f >= 50 HZ	$I_{F(AV)}$			150 [1)]	mA
Surge forward current	T < 1 s and Tj = 25 °C	I_{FSM}			500	mA
Power Dissipation		P_D			400 [1)]	mW
Thermal Resistance Junction To ambient air		$R_{\theta JA}$		450 [1)]		K/W
Storage temperature		T_{STG}	-65		+175	°C
Junction temperature		T_j			+150	°C

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

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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Forward voltage	I_F = 10 mA DC	V_F			1.0	V
Reverse current	V_R = 20 V V_R = 75 V V_R = 20 V, T_J = 150°C	I_R			25 5 50	nA uA uA
Capacitance	V_F = V_R = 0V	C_T			4	pF
Reverse recovery time	I_F=10mA to I_R = 1mA, V_R=6V, R_L=100 ohms	T_{RR}			4	nS
Voltage rise when switching on	Tested with 50 mA pulses, tp = 0.1s, rise time < 30ns, fp = (5 to 100)kHz	V_{FR}			2.5	V
Rectification efficiency	f = 100MHz, V_{RF} = 2V		0.45			

RATING AND CHARACTERISTIC CURVES (CDSNC4148)

Fig. 1 - Forward characteristics

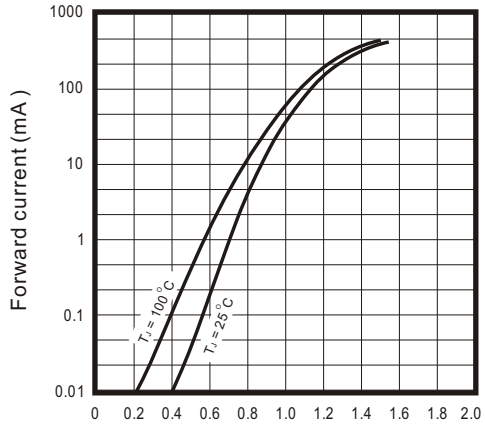


Fig. 2 - Dynamic Forward Resistance vs. Forward Current

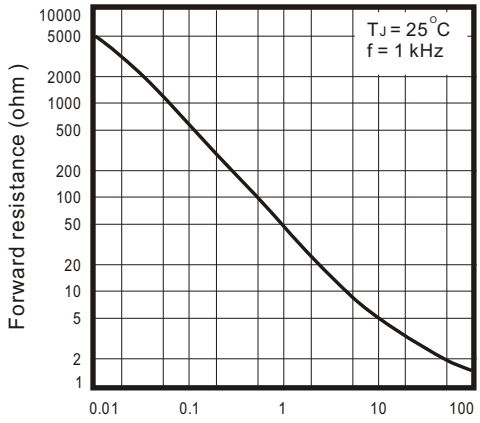


Fig.3 - Admissible Power Dissipation vs. Ambient Temperature

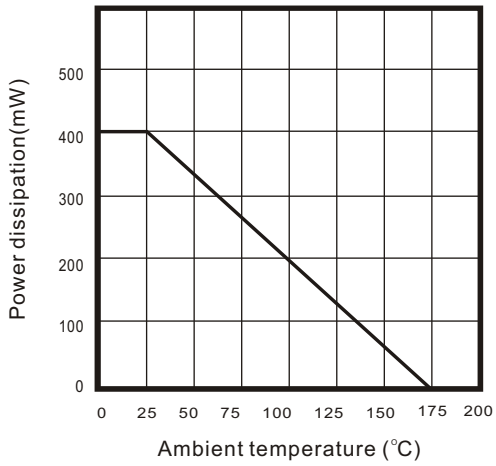


Fig.4 - Relative Capacitance vs. Reverse Voltage

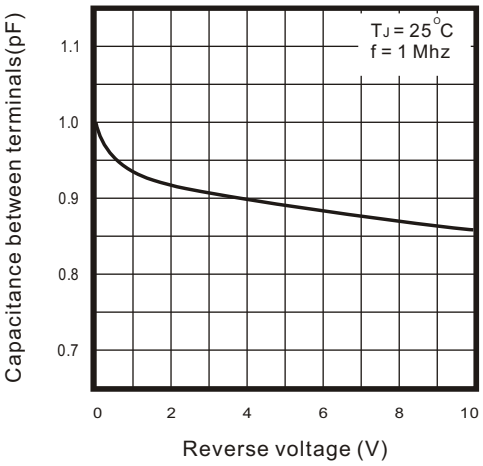


Fig.5 - Leakage Current vs. Junction Temperature

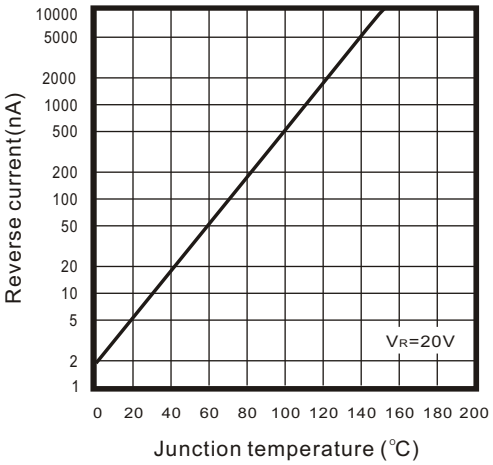


Fig.6 - Admissible Repetitive Peak Forward Current vs.Pulse Duration