

SMD Switching Diode



SMD Diodes Specialist

CDSNC4148

High Speed



Features

Designed for mounting on small surface.

Silicon Epitaxial Planar Diode.

Fast switching diode.

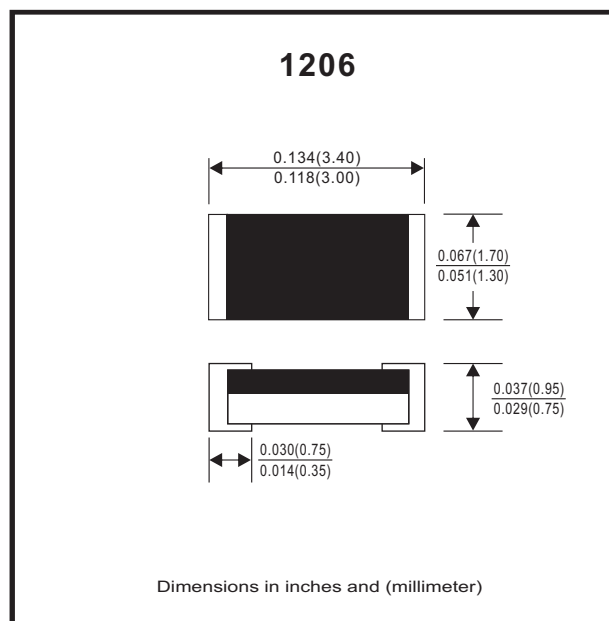
Use in sensitive electronics protection against voltage transients induced by inductive load switching and lighting on ICs, MOSFET, signal lines of sensor units for consumer, computer, industrial, automotive and telecommunication.

Mechanical data

Case: 1206

Marking: Cathode Band.

Weight: 0.01 gram(approx.).



Maximum Rating (at TA=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 T _j = 25 °C	I _{FSM}			500	mA
Power Dissipation		P _D			400 ¹⁾	mW
Thermal Resistance Junction To ambient air		R _{θJA}		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 TA=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 = 10 mA to I _R = 1 mA, V _R = 6V, R _L = 100 ohms	T _{RR}			4	nS
Voltage rise when switching on	Tested with 50 mA pulses, t _p = 0.1s, rise time < 30ns, f _p = (5 to 100)kHz	V _{FR}			2.5	V
Rectification efficiency	f = 100MHz, V _{RF} = 2V		0.45			

REV:C

RATING AND CHARACTERISTIC CURVES (CDSNC4148)

Fig. 1 - Forward characteristics

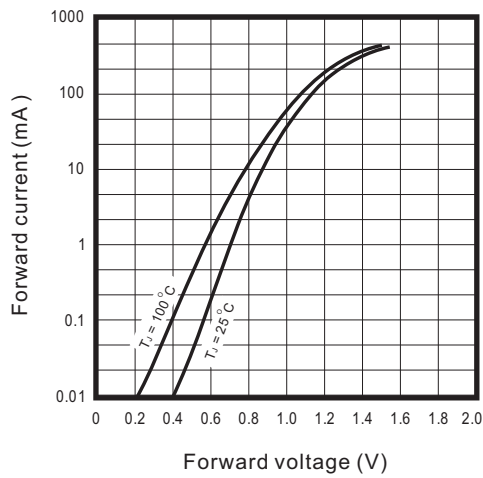


Fig. 2 - Dynamic Forward Resistance vs. Forward Current

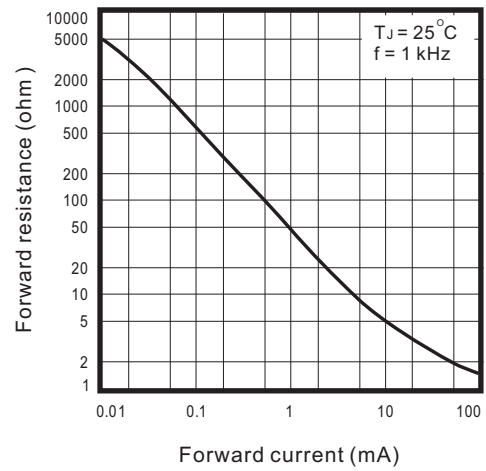


Fig.3 - Admissible Power Dissipation vs. Ambient Temperature

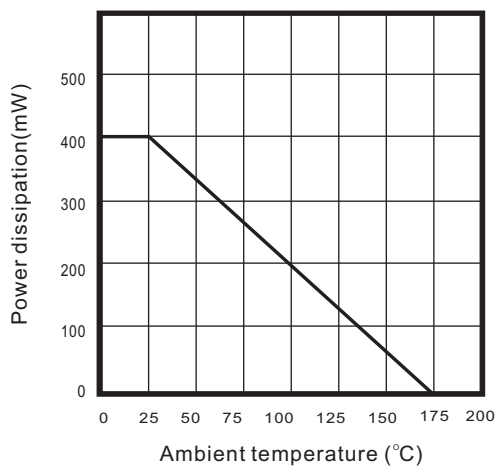


Fig.4 - Relative Capacitance vs. Reverse Voltage

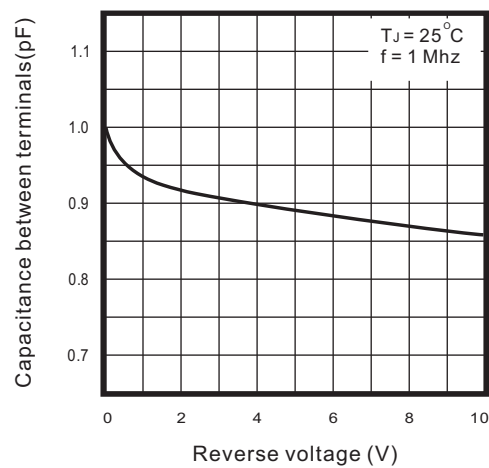


Fig.5 - Leakage Current vs. Junction Temperature

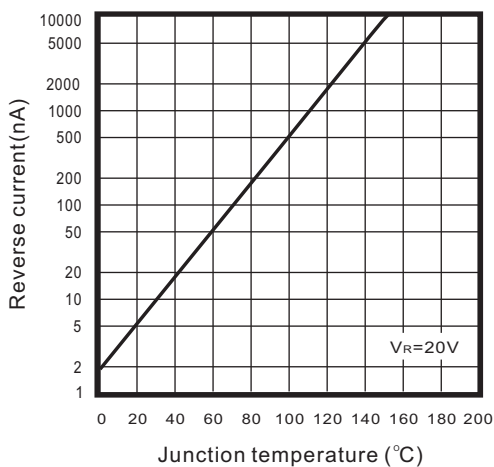


Fig.6 - Admissible Repetitive Peak Forward Current vs. Pulse Duration

