

## CDSNC4148

### High Speed

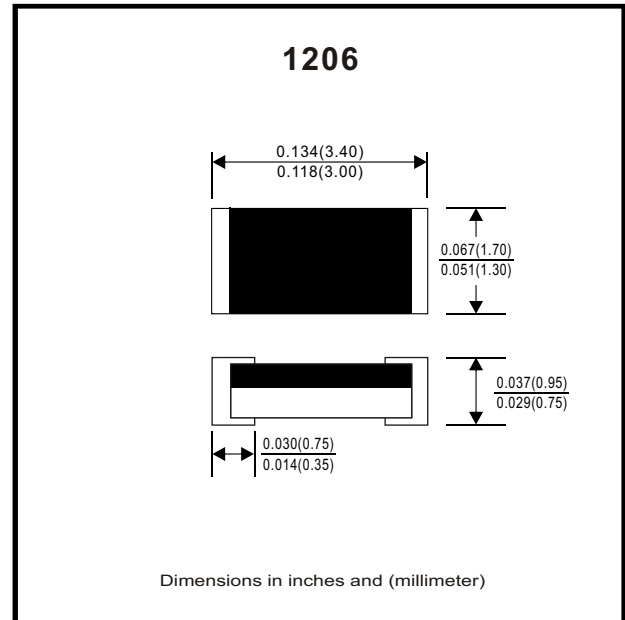


### Features

- 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.).



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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Peak reverse voltage		V <sub>RM</sub>			100	V
Reverse voltage		V <sub>R</sub>			75	V
Forward continuous current		I <sub>FM</sub>			150	mA
Average rectified current sin half wave rectification with resistive load	f >= 50 HZ	I <sub>F(AV)</sub>			150 <sup>1)</sup>	mA
Surge forward current	T < 1 s and T <sub>j</sub> = 25 °C	I <sub>FSM</sub>			500	mA
Power Dissipation		P <sub>D</sub>			400 <sup>1)</sup>	mW
Thermal Resistance Junction To ambient air		R <sub>θJA</sub>		450 <sup>1)</sup>		K/W
Storage temperature		T <sub>STG</sub>	-65		+175	°C
Junction temperature		T <sub>j</sub>			+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 <sub>F</sub> = 10 mA DC	V <sub>F</sub>			1.0	V
Reverse current	V <sub>R</sub> = 20 V V <sub>R</sub> = 75 V V <sub>R</sub> = 20 V, T <sub>j</sub> = 150°C	I <sub>R</sub>			25 5 50	nA uA uA
Capacitance	V <sub>F</sub> = V <sub>R</sub> = 0V	C <sub>T</sub>			4	pF
Reverse recovery time	I <sub>F</sub> =10mA to I <sub>R</sub> = 1mA, V <sub>R</sub> =6V, R <sub>L</sub> =100 ohms	T <sub>RR</sub>			4	nS
Voltage rise when switching on	Tested with 50 mA pulses, t <sub>p</sub> = 0.1s, rise time < 30ns, f <sub>p</sub> = (5 to 100)kHz	V <sub>FR</sub>			2.5	V
Rectification efficiency	f = 100MHz, V <sub>RF</sub> = 2V		0.45			

## RATING AND CHARACTERISTIC CURVES (CDSNC4148)

Fig. 1 - Forward characteristics

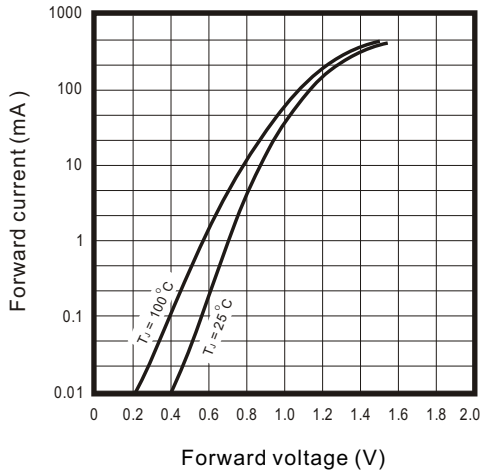


Fig. 2 - Dynamic Forward Resistance vs. Forward Current

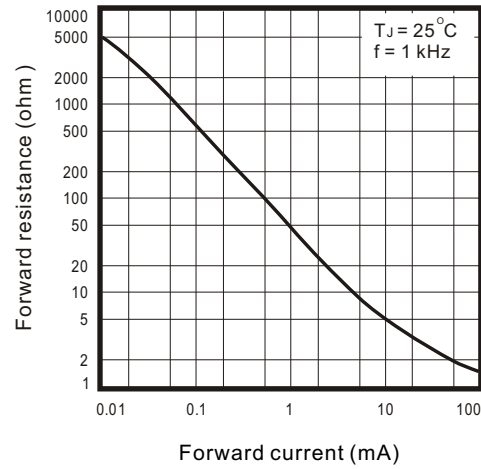


Fig.3 - Admissible Power Dissipation vs. Ambient Temperature

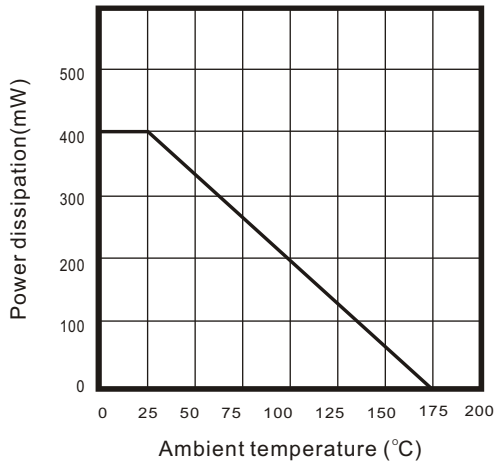


Fig.4 - Relative Capacitance vs. Reverse Voltage

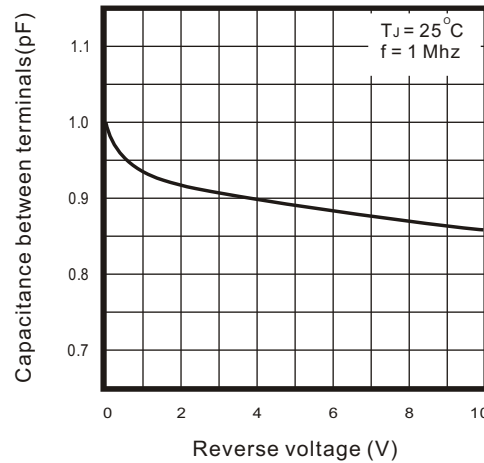


Fig.5 - Leakage Current vs. Junction Temperature

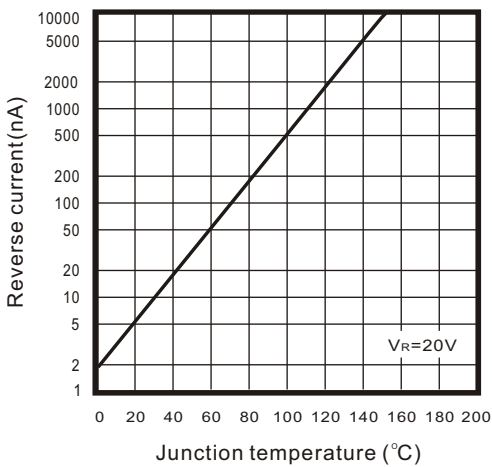


Fig.6 - Admissible Repetitive Peak Forward Current vs. Pulse Duration

