



Micro Commercial Components  
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**1N4148**

## Features

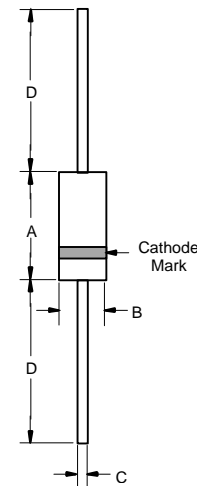
- Low Current Leakage
- Metalurgically Bonded Construction
- Low Cost

**500mW 100 Volt  
 Silicon Epitaxial Diode**

## Maximum Ratings

- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- Maximum Thermal Resistance; 35°C/W Junction To Ambient

**DO-35**



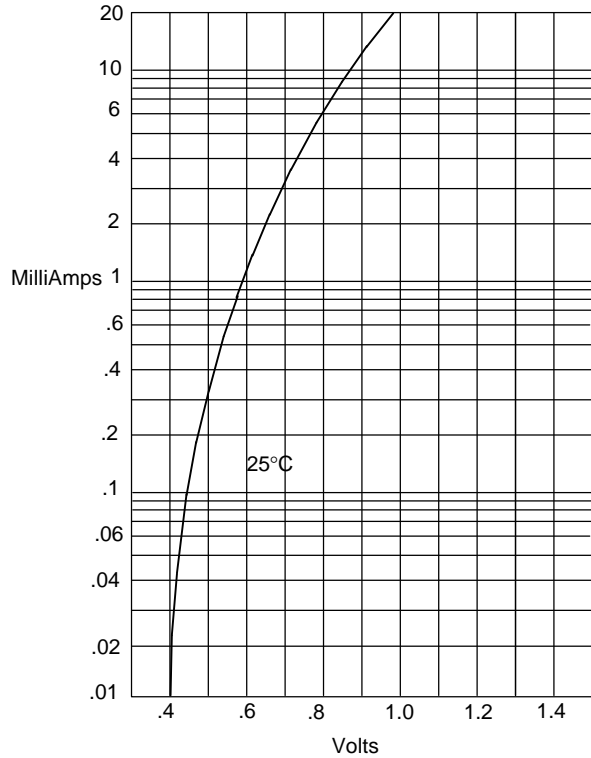
## Electrical Characteristics @ 25°C Unless Otherwise Specified

Reverse Voltage	$V_R$	75V	
Peak Reverse Voltage	$V_{RM}$	100V	
Average Rectified Current	$I_O$	150mA	Resistive Load f > 50Hz
Power Dissipation	$P_{TOT}$	500mW	
Junction Temperature	$T_J$	200°C	
Peak Forward Surge Current	$I_{FSM}$	500mA	t < 1s
Maximum Instantaneous Forward Voltage	$V_F$	1.0V	$I_{FM} = 10mA$ ; $T_J = 25°C^*$
Maximum DC Reverse Current At Rated DC Blocking Voltage	$I_R$	25nA 50µA 5µA	$V_R = 20Volts$ $T_J = 25°C$ $T_J = 150°C$ $V_R = 75Volts$
Typical Junction Capacitance	$C_J$	4pF	Measured at 1.0MHz, $V_R = 4.0V$
Reverse Recovery Time	$T_{rr}$	4nS	$I_F = 10mA$ $V_R = 6V$ $R_L = 100Ω$

\*Pulse test: Pulse width 300 µsec, Duty cycle 2%

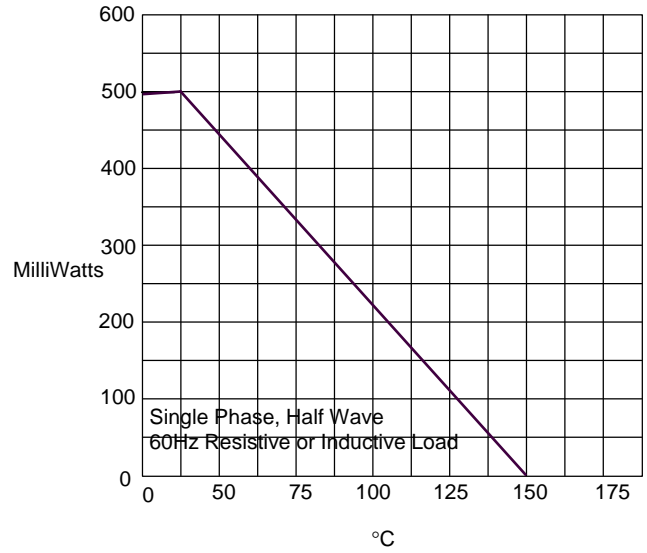
DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	---	.166	---	4.2	
B	---	.079	---	2.00	
C	---	.020	---	.52	
D	1.000	---	25.40	---	

Figure 1  
Typical Forward Characteristics



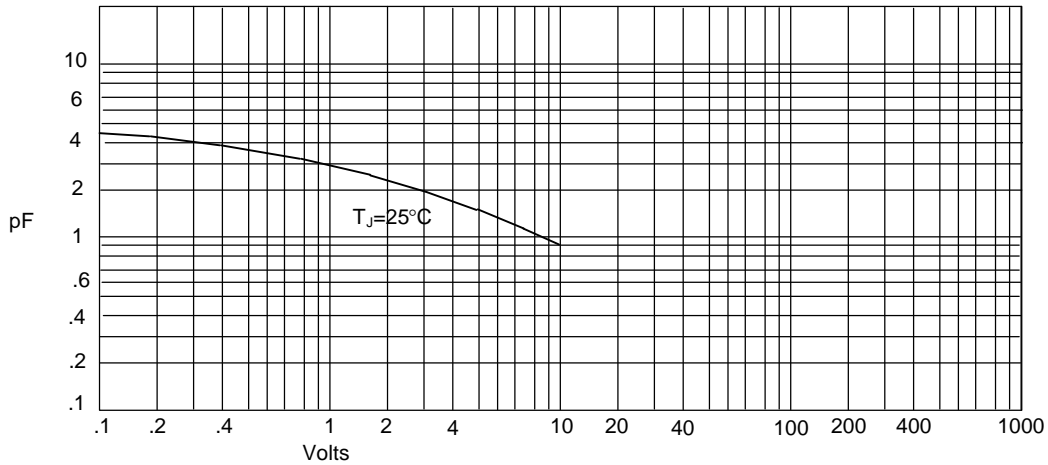
Instantaneous Forward Current - Amperes *versus*  
Instantaneous Forward Voltage - Volts

Figure 2  
Forward Derating Curve



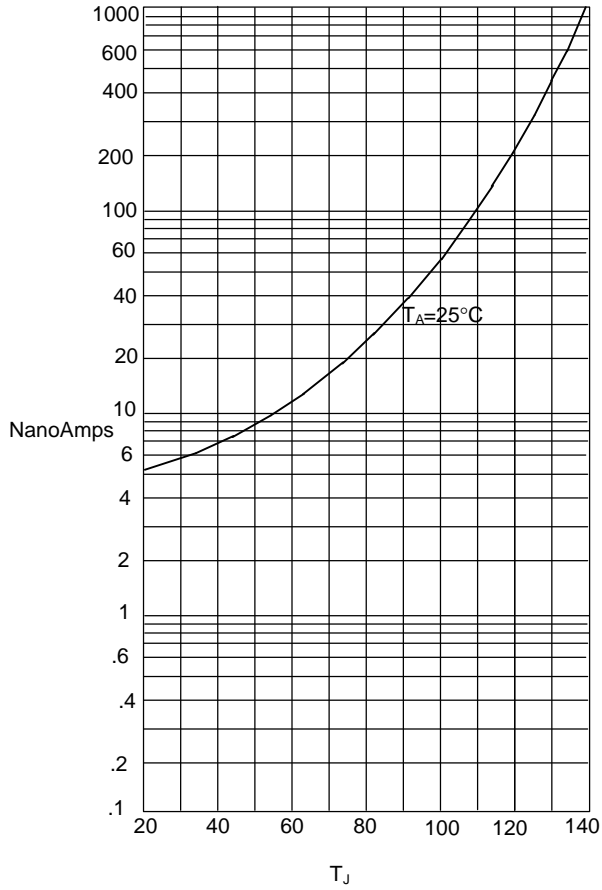
Admissible Power Dissipation - MilliWatts *versus*  
Ambient Temperature - °C

Figure 3  
Junction Capacitance



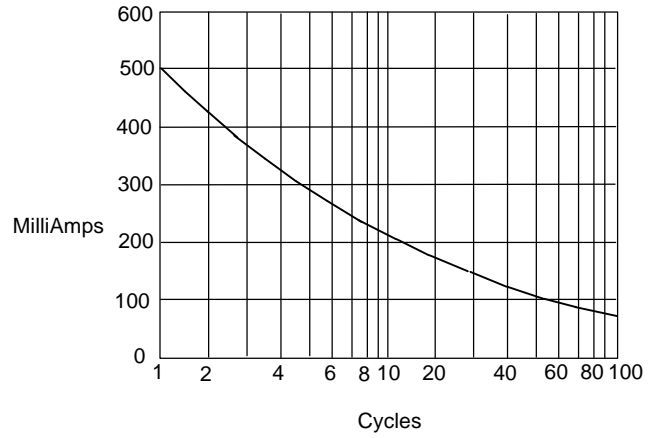
Junction Capacitance - pF *versus*  
Reverse Voltage - Volts

Figure 4  
Typical Reverse Characteristics



Instantaneous Reverse Leakage Current - NanoAmperes versus  
Junction Temperature - °C

Figure 5  
Peak Forward Surge Current



Peak Forward Surge Current - Amperes versus  
Number Of Cycles At 60Hz - Cycles