

# 1N4148

## Features

- High Reliability
- Low Current Leakage
- Metallurgically Bonded Construction

## Maximum Ratings

- Operating Temperature: -65°C to +175°C
- Storage Temperature: -65°C to +175°C
- Maximum Thermal Resistance: 350K/W Junction To Ambient  
Test Conditions: l = 4mm T<sub>L</sub> = constant

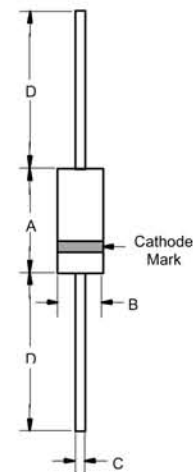
### Electrical Characteristics @ 25°C Unless Otherwise Specified

Reverse Voltage	V <sub>R</sub>	75V	
Breakdown Voltage	V <sub>BR</sub>	100V	I <sub>R</sub> =100 μA
Average Forward Current	I <sub>O</sub>	150mA	
Power Dissipation	P <sub>TOT</sub>	500mW	
Junction Temperature	T <sub>J</sub>	175°C	
Peak Forward Surge Current	I <sub>FSM</sub>	2.0A	t <sub>p</sub> = 1.0 μs
Maximum Instantaneous Forward Voltage	V <sub>F</sub>	1.0V	I <sub>FM</sub> = 10mA
Maximum DC Reverse Current At Rated DC Blocking Voltage	I <sub>R</sub>	25nA 5.0μA 50μA	V <sub>R</sub> =20V; T <sub>J</sub> = 25°C V <sub>R</sub> =75V; T <sub>J</sub> = 25°C V <sub>R</sub> =20V; T <sub>J</sub> = 150°C
Maximum Junction Capacitance	C <sub>J</sub>	4.0pF	Measured at 1.0MHz, V <sub>R</sub> =0V
Maximum Reverse Recovery Time	T <sub>rr</sub>	4.0ns	I <sub>F</sub> =10mA; V <sub>R</sub> = 6V R <sub>L</sub> =100Ω

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

## 500mW High Speed Switching Diode 100 Volt

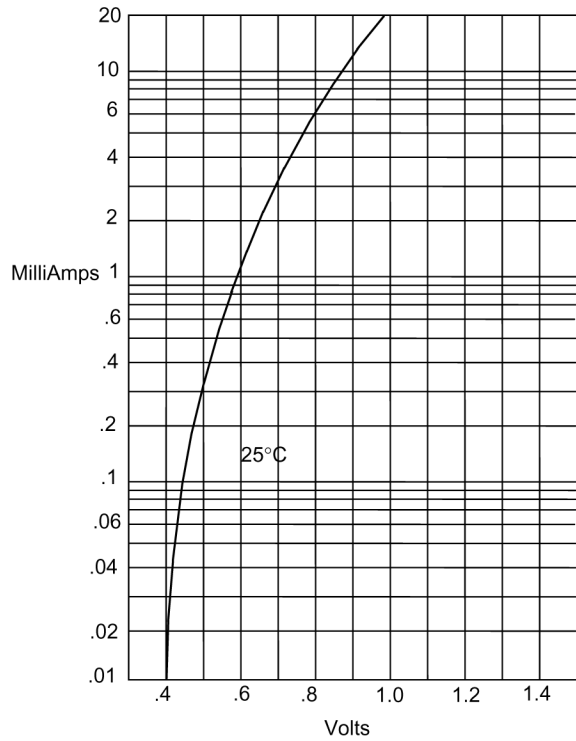
### DO-35



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	---	

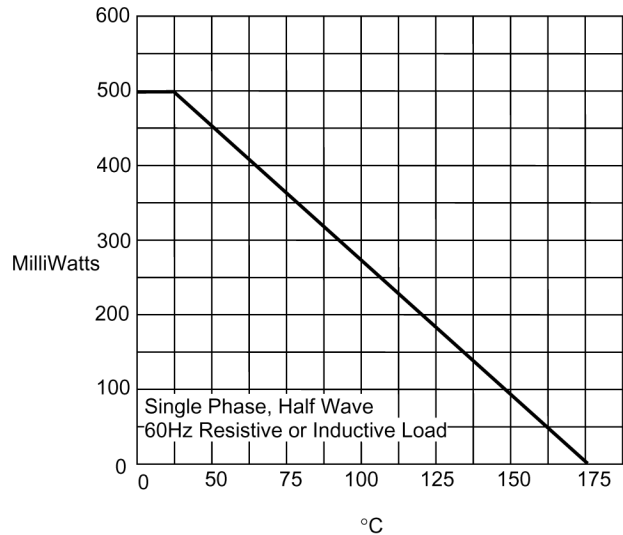
# 1N4148

Figure 1  
Typical Forward Characteristics



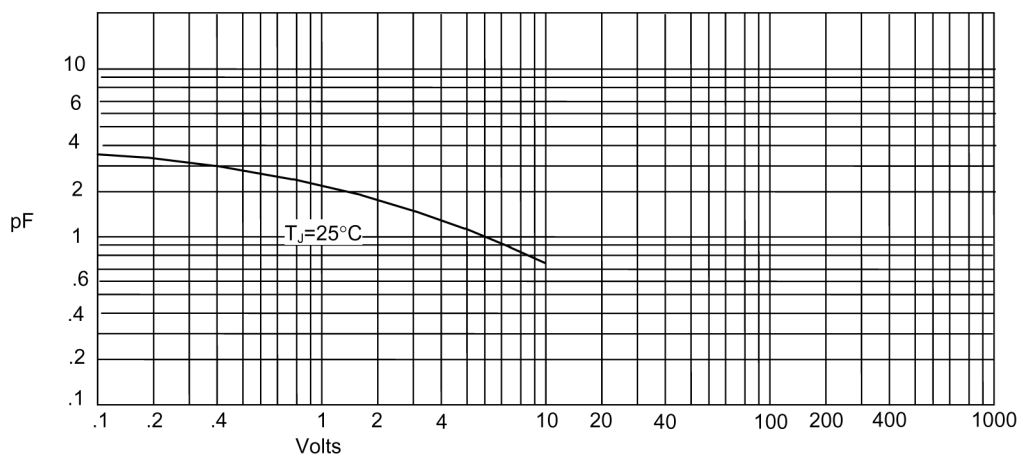
Instantaneous Forward Current - MilliAmperes versus  
Instantaneous Forward Voltage - Volts

Figure 2  
Forward Derating Curve



Admissible Power Dissipation - MilliWatts versus  
Ambient Temperature - °C

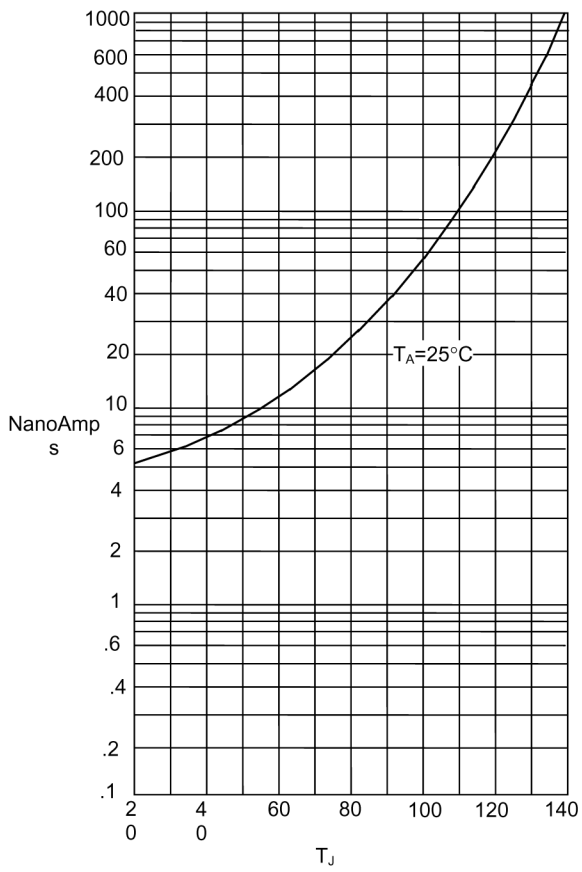
Figure 3  
Junction Capacitance



Junction Capacitance - pF versus  
Reverse Voltage - Volts

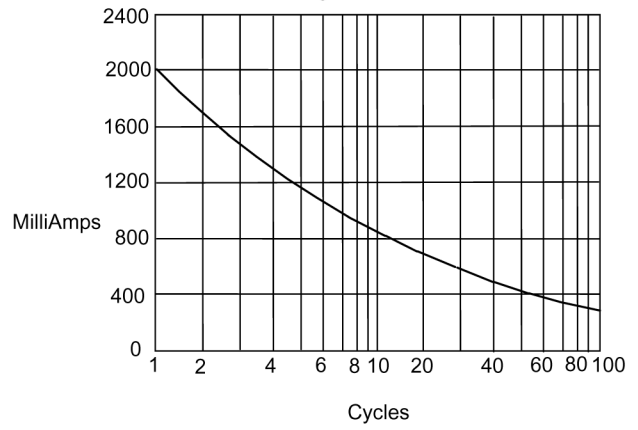
# 1N4148

Figure 4  
Typical Reverse Characteristics



Instantaneous Reverse Leakage Current - NanoAmperes versus Junction Temperature -  $^\circ\text{C}$

Figure 5  
Peak Forward Surge Current



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