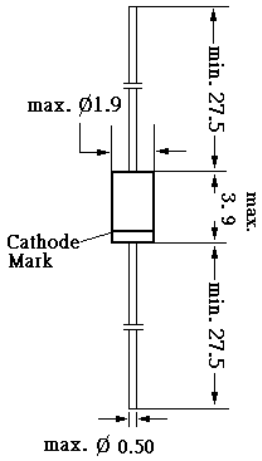
1N916, 1N916A, 1N916B

HIGH CONDUCTANCE FAST DIODES



Glass case JEDEC DO-35
Dimensions in mm

Absolute Maximum Ratings ($T_a = 25^oC$)

	Symbol	Value	Unit
Working Inverse Voltage	W_{IV}	75	V
Average Rectified Current	I_O	200	mA
DC Forward Current	I_F	300	mA
Recurrent Peak Forward Current	i_f	400	mA
Peak Forward Surge Current Pulse width = 1 second Pulse width = 1 microsecond	 $i_{f(surge)}$ $i_{f(surge)}$	 1 4	 A A
Total Device Dissipation Derate above 25^oC	P_D	500 3.33	mW $mW/^oC$
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	300	$^oC/W$
Junction Temperature	T_j	175	^OC
Storage Temperature Range	T_S	-65 to +200	^OC

Characteristics at $T_A = 25^oC$

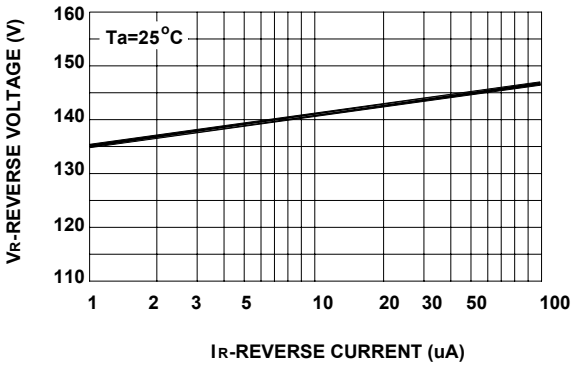
		Symbol	Min.	Typ.	Max.	Unit
Breakdown Voltage						
at $I_R = 100\mu A$		B_V	100	-	-	V
at $I_R = 5\mu A$		B_V	75	-	-	V
Reverse Current						
at $V_R = 20V$		I_R	-	-	25	nA
at $V_R = 20V$, $T_A = 150^oC$		I_R	-	-	50	μA
at $V_R = 75V$		I_R	-	-	5	μA
Forward Voltage						
at $I_F = 5mA$	1N916B	V_F	630	-	730	mV
at $I_F = 10mA$	1N916	V_F	-	-	1	V
at $I_F = 20mA$	1N916A	V_F	-	-	1	V
at $I_F = 30mA$	1N916B	V_F	-	-	1	V
Diode Capacitance						
at f = 1MHz		C_O	-	-	2	pF
Reverse Recovery Time						
at $I_F = 10mA$, $V_R = 6V(60mA)$, $I_{RR} = 1mA$, $R_L = 100\Omega$		t_{rr}	-	-	4	ns

Notes:

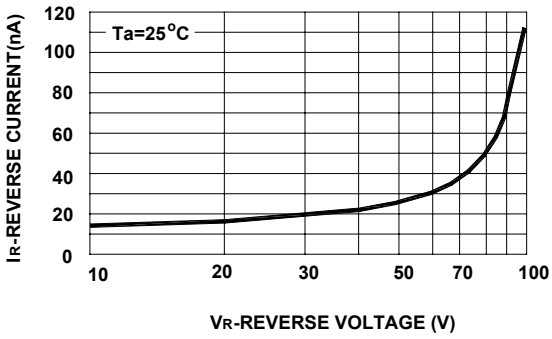
1. These ratings are based on a maximum junction temperature of 200 degrees C.
2. These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

Typical Characteristics

REVERSE VOLTAGE vs REVERSE CURRENT
BV-1.0 to 100 uA

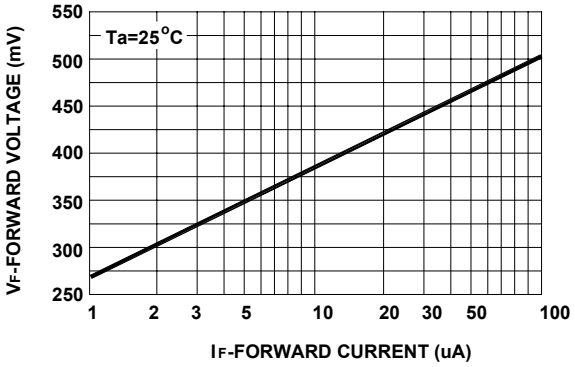


REVERSE CURRENT vs REVERSE VOLTAGE
IR-10 to 100 V

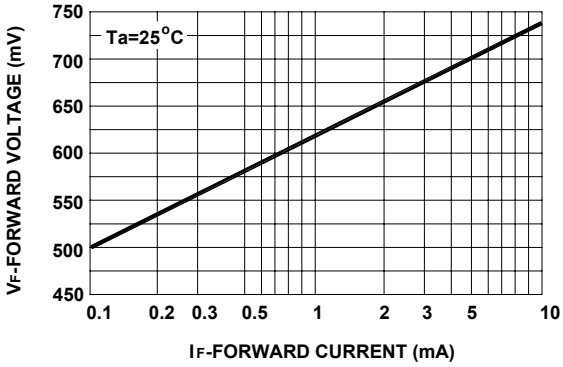


GENERAL RULE:The Reverse Current of a diode will approximately double for every ten (10) Degree C increase in Temperature

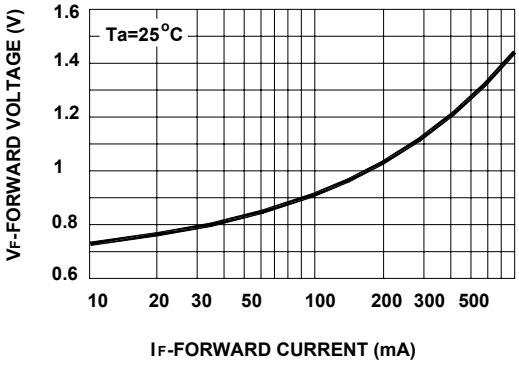
FORWARD VOLTAGE vs FORWARD CURRENT
VF-1 to 100 uA



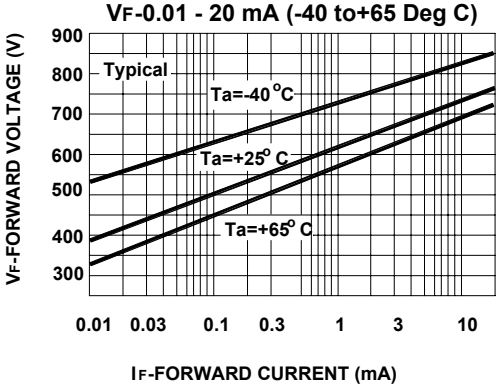
FORWARD VOLTAGE vs FORWARD CURRENT
VF-0.1 to 100 mA



FORWARD VOLTAGE vs FORWARD CURRENT
VF-10 to 800 mA

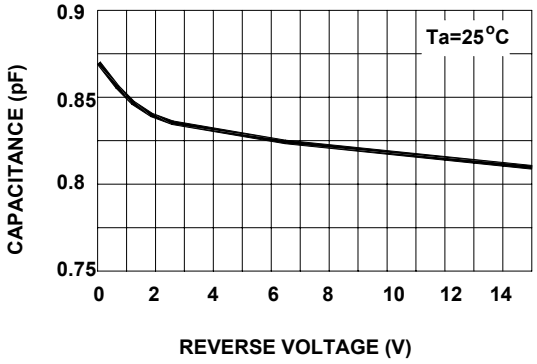


FORWARD VOLTAGE vs
AMBIENT TEMPERATURE
VF-0.01 - 20 mA (-40 to+65 Deg C)

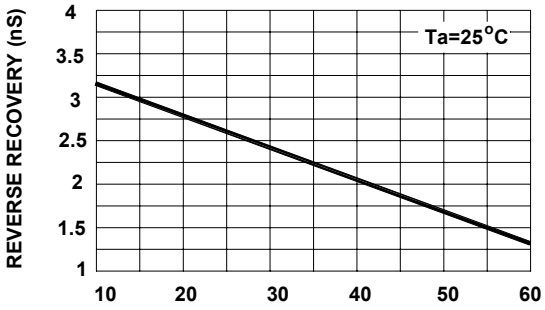


Typical Characteristics

CAPACITANCE vs REVERSE VOLTAGE
$V_{R=0.0}$ to 15 V

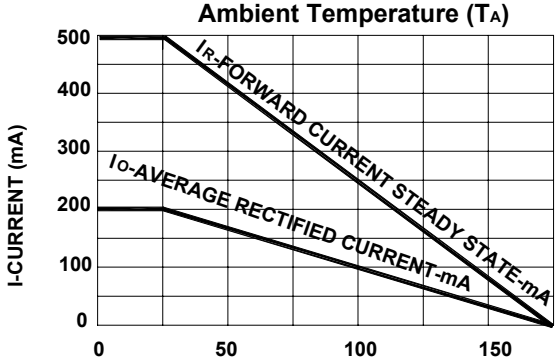


REVERSE RECOVERY TIME vs REVERSE CURRENT



I_F=10mA-I_{RR}=1.0mA-Rloop=100 Ohms

Average Rectified Current (Io) & Forward Current (I_F) versus Ambient Temperature (T_A)



POWER DERATING CURVE