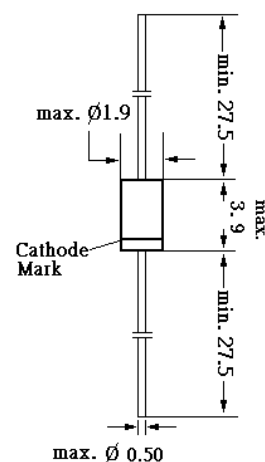


1N916, 1N916A, 1N916B

HIGH CONDUCTANCE FAST DIODES

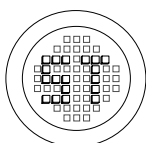


Glass case JEDEC DO-35

Dimensions in mm

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

	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	$i_{f(surge)}$	1	A
Pulse width = 1 microsecond	$i_{f(surge)}$	4	A
Total Device Dissipation	P_D	500	mW
Derate above 25°C		3.33	mW/ $^\circ\text{C}$
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	300	$^\circ\text{C/W}$
Junction Temperature	T_j	175	$^\circ\text{C}$
Storage Temperature Range	T_s	-65 to +200	$^\circ\text{C}$



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Эл. почта: info@rct.ru
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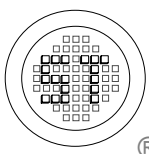
1N916, 1N916A, 1N916B

Characteristics at $T_A = 25^\circ\text{C}$

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

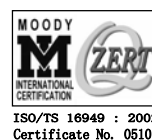
Notes:

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.



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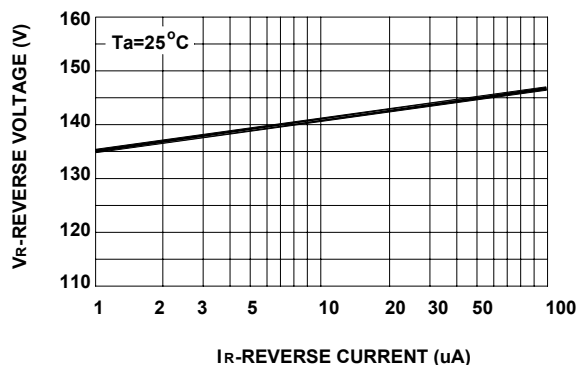


Dated : 31/12/2002

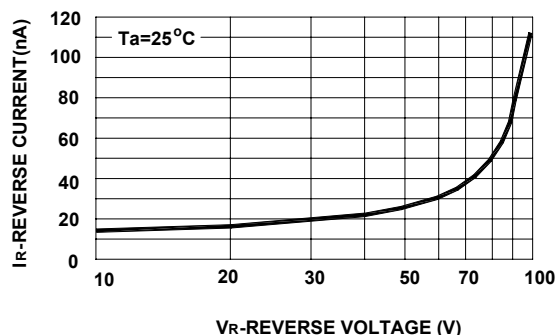
1N916, 1N916A, 1N916B

Typical Characteristics

REVERSE VOLTAGE vs REVERSE CURRENT
BV-1.0 to 100 μ A

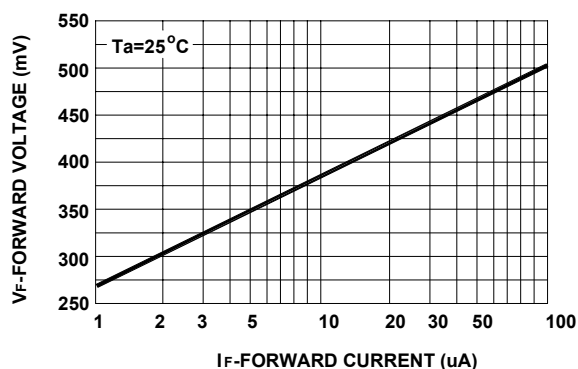


REVERSE CURRENT vs REVERSE VOLTAGE
Ir-10 to 100 V

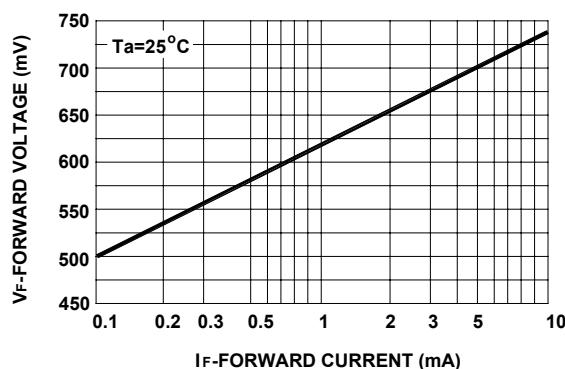


GENERAL RULE: The Reverse Current of a diode will approximately double for every ten (10) Degree C increase in Temperature

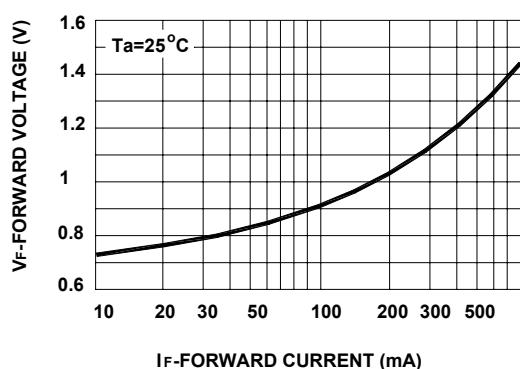
FORWARD VOLTAGE vs FORWARD CURRENT
Vf-1 to 100 μ A



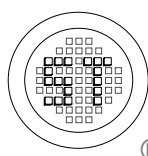
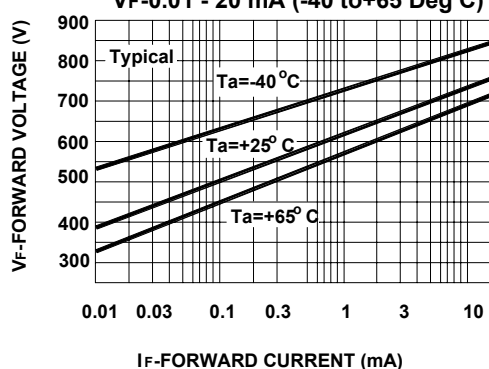
FORWARD VOLTAGE vs FORWARD CURRENT
Vf-0.1 to 100 mA



FORWARD VOLTAGE vs FORWARD CURRENT
Vf-10 to 800 mA

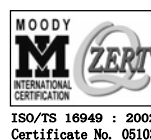


FORWARD VOLTAGE vs AMBIENT TEMPERATURE
Vf-0.01 - 20 mA (-40 to +65 Deg C)



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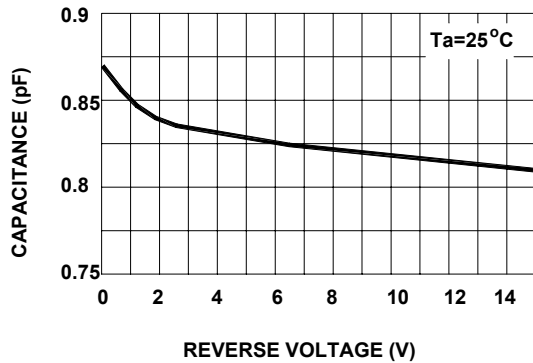


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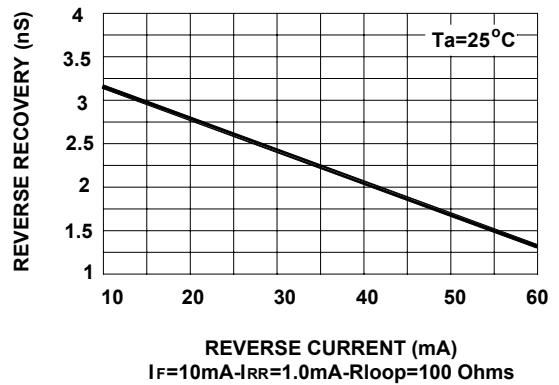
1N916, 1N916A, 1N916B

Typical Characteristics

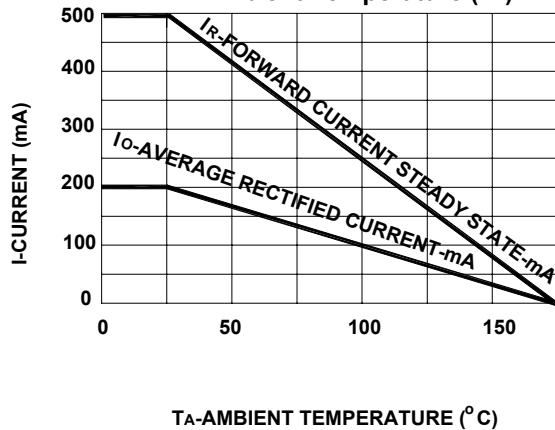
CAPACITANCE vs REVERSE VOLTAGE
 $V_R=0.0$ to 15 V



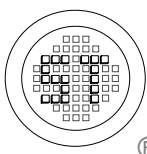
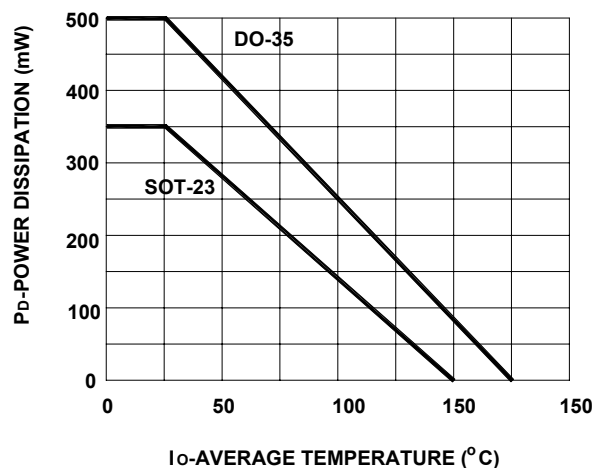
REVERSE RECOVERY TIME vs
REVERSE CURRENT



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

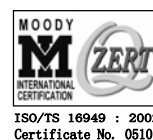


POWER DERATING CURVE



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