

20 STERN AVE.
 SPRINGFIELD, NEW JERSEY 07081
 U.S.A.

TELEPHONE: (201) 376-2922
 (212) 227-6005
 FAX: (201) 376-8960

1N914/A/B • 1N916/A/B • 1N4148/9 • 1N4446-1N4449
 HIGH CONDUCTANCE ULTRA FAST SWITCHES
 DIFFUSED SILICON PLANAR* DIODES

- t_{rr} ... 4.0 ns (MAX)
- BV ... 100 V (MIN)

ABSOLUTE MAXIMUM RATINGS (Note 2)

Maximum Temperatures		
Storage Temperature		-65°C to +200°C
Operating Temperature		175°C
Maximum Power Dissipation		
Total Dissipation		500 mW
Maximum Voltage and Currents		
WIV	Working Inverse Voltage	75 V
I_O	Average Rectified Current	200 mA
I_F	DC Forward Current	400 mA
I_f	Recurrent Peak Forward Current	600 mA
$I_f(\text{surge})$	Peak Forward Surge Current	
	Pulse Width = 1.0 s	1.0 A
	Pulse Width = 1.0 μ s	4.0 A

See DO35-1 Package Outline
 & Note 1



ELECTRICAL CHARACTERISTICS (25°C Ambient Temperature unless otherwise noted)

SYMBOL	CHARACTERISTIC	MIN.	MAX.	UNITS	TEST CONDITIONS
BV	Breakdown Voltage	100		V	$I_R = 100 \mu\text{A}$
		75		V	$I_R = 5.0 \mu\text{A}$
I_R	Reverse Current		25	nA	$V_R = 20 \text{ V}$
			50	μA	$V_R = 20 \text{ V}, T_A = 150^\circ\text{C}$
V_F	Forward Voltage Drop	0.62	0.72	μA	$V_R = 75 \text{ V}$
		0.63	0.73	V	$I_F = 5.0 \text{ mA}$
			1.0	V	$I_F = 10 \text{ mA}$
			1.0	V	$I_F = 20 \text{ mA}$
			1.0	V	$I_F = 30 \text{ mA}$
			1.0	V	$I_F = 100 \text{ mA}$
			1.0	V	$I_F = 10 \text{ mA}, V_r = 6.0 \text{ V}, R_L = 100 \Omega \text{ Rec. to } 1.0 \text{ mA}$
t_{rr}	Reverse Recovery Time		4.0	ns	
C	Capacitance		4.0	pF	$V_R = 0 \text{ V}$ (Note 3)
			2.0	pF	
V_{fr}	Peak Forward Recovery Voltage		2.5	V	50 mA Peak Square Wave, 0.1 μ s pulse width, 5 kHz - 100 kHz rep. rate
RE	Rectification Efficiency	45		%	2.0 V rms, f = 100 MHz