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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)

See DO35-1 Package Outline & Note 1

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
$I_{f(surge)}$	Peak Forward Surge Current	
	Pulse Width = 1.0 s	1.0 A
	Pulse Width = 1.0 μs	4.0 A

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

SYMBOL	CHARACTERISTIC		MIN.	MAX.	UNITS	TEST CONDITIONS
BV	Breakdown Voltage		100		V	I_R = 100 μA
			75		V	I_R = 5.0 μA
I_R	Reverse Current			25	nA	V_R = 20 V
				50	μA	V_R = 20 V, T_A = 150°C
				5.0	μA	V_R = 75 V
V_F	Forward Voltage Drop	1N914B, 1N4448	0.62	0.72	V	I_F = 5.0 mA
		1N916B, 1N4449	0.63	0.73	V	
		1N914, 1N916				
		1N4148, 1N4149		1.0	V	I_F = 10 mA
		1N914A, 1N916A				
		1N4446, 1N4447		1.0	V	I_F = 20 mA
		1N916B, 1N4449		1.0	V	I_F = 30 mA
		1N914B, 1N4448		1.0	V	I_F = 100 mA
t_{rr}	Reverse Recovery Time			4.0	ns	I_f = 10 mA, V_r = 6.0 V,
						R_L = 100 Ω Rec. to 1.0 mA
C	Capacitance	1N914, 1N914A				
		1N914B, 1N4148		4.0	pF	V_R = 0 V (Note 3)
		1N4446, 1N4447				
		1N916, 1N916A				
		1N916B, 1N4149		2.0	pF	
		1N4448, 1N4449				
V_{fr}	Peak Forward Recovery Voltage	1N914, 1N916				50 mA Peak Square Wave,
		1N914B, 1N916B		2.5	V	0.1 μs pulse width,
		1N4448, 1N4449				5 kHz - 100 kHz rep. rate
RE	Rectification Efficiency	1N914A, 1N914B				
		1N916A, 1N916B	45		%	2.0 V rms , f = 100 MHz