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1N3062 • 1N3063 • 1N3064 • 1N4305 • 1N4454

ULTRA FAST LOW CAPACITANCE

DIFFUSED SILICON PLANAR* DIODES

- C . . . 2.0 pF @ V_R = 0, f = 1.0 MHz
- t_{rr} . . . 4.0 ns @ I_f = 10 mA, R_r = 10 mA, V_r = 1.0 V
- BV . . . 75 V (MIN)

ABSOLUTE MAXIMUM RATINGS (T_A = 25°C) (Note 1)

		1N3062 1N3063	1N3064	1N4454	1N4305
Maximum Temperatures					
Storage Temperature		−65°C to +200°C	−65°C to +175°C		−65°C to +200°C
Operating Temperature		−65°C to +175°C	−65°C to +150°C		
Maximum Power Dissipation					
Total Dissipation		250 mW	250 mW	500 mW	500 mW
Linear Derating Factor		1.67 mW/°C	2.0 mW/°C	4.0 mW/°C	2.85 mW/°C
Maximum Voltages and Currents					
WIV	Working Inverse Voltage	50 V	50 V	40 V	75 V
I_O	Average Rectified Current	75 mA	75 mA	200 mA	
I_F	Forward Current Steady State dc	115 mA	115 mA	400 mA	
i_f	Recurrent Peak Forward Current	225 mA	225 mA	600 mA	
i_f (surge)	Peak Forward Surge Current				
	Pulse Width = 1.0 s	500 mA	500 mA	1.0 A	
	Pulse Width = 1.0 μs	2.0 A	2.0 A	4.0 A	

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

SYMBOL	CHARACTERISTIC		MIN.	MAX.	UNITS	TEST CONDITIONS
V_F	Forward Voltage	1N3062		1.0	V	I_F = 20 mA
		1N3063, 1N4305	0.700	0.850	V	I_F = 10 mA
			0.610	0.710	V	I_F = 2.0 mA
			0.550	0.650	V	I_F = 1.0 mA
			0.505	0.575	V	I_F = 250 μA
		1N3064, 1N4454		1.0	V	I_F = 10 mA
I_R	Reverse Current			0.1	μA	V_R = 50 V
I_R				100	μA	V_R = 50 V, T_A = 150°C
BV	Breakdown Voltage		75		V	I_R = 5.0 μA
t_{rr}	Reverse Recovery Time	1N4305, 1N3062		2.0	ns	I_f = 10 mA, V_r = 6.0 V, R_L = 100 Ω
		1N3063, 1N3064, 1N4454, 1N4305		4.0	ns	I_f = I_r = 10 mA, R_L = 100 Ω, V_r = 1.0 V
C	Capacitance	1N3062		1.0	pF	V_R = 0, f = 1.0 MHz
		1N3063, 1N3064, 1N4454, 1N4305		2.0	pF	V_R = 0, f = 1.0 MHz
RE	Rectification Efficiency		45		%	f = 1.0 MHz
$\Delta V_F/°C$	Forward Voltage Temperature Coefficient	1N3062, 1N3063, 1N3064		1.8		mV/°C
		1N4454, 1N4305		3.0		mV/°C