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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, $R_f = 10$ mA, $V_f = 1.0$ V
- BV ... 75 V (MIN)

ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$) (Note 1)

Maximum Temperatures	1N3062 1N3063	1N3064	1N4454	1N4305
Storage Temperature	-65°C to +200°C	-65°C to +175°C	-65°C to +175°C	-65°C to +200°C
Operating Temperature	-65°C to +175°C	-65°C to +150°C	-65°C to +150°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 μ s	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 1N3063 1N4305	0.700	1.0	V	$I_F = 20$ mA							
				0.850	V	$I_F = 10$ mA							
				0.610	V	$I_F = 2.0$ mA							
		1N3064 1N4454	0.550	0.650	V	$I_F = 1.0$ mA							
				0.505	V	$I_F = 250$ μ A							
				1.0	V	$I_F = 10$ mA							
I_R	Reverse Current		0.1	μ A	$V_R = 50$ V								
I_R	Reverse Current		100	μ A	$V_R = 50$ V, $T_A = 150^\circ\text{C}$								
BV	Breakdown Voltage	75		V	$I_R = 5.0$ μ A								
t_{rr}	Reverse Recovery Time	1N4305 1N3062	2.0	2.0	ns	$I_f = 10$ mA, $V_f = 6.0$ V, $R_L = 100$ Ω							
							1N3063 1N3064 1N4454 1N4305	4.0	4.0	ns	$I_f = I_r = 10$ mA, $R_L = 100$ Ω , $V_f = 1.0$ V		
		C	Capacitance	1N3062 1N3063	1.0	pF						$V_R = 0$, $f = 1.0$ MHz	
													1N3064 1N4454 1N4305
				RE	Rectification Efficiency	45		%	$f = 1.0$ MHz				
$\Delta V_F/^\circ\text{C}$	Forward Voltage Temperature Coefficient									1N3062 1N3063 1N3064	1.8	mV/°C	
		1N4454 1N4305	3.0										mV/°C