FAIRCHILD SEMICONDUCTOR®

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1N4305

Small Signal Diode

DO-35
Color Band Denotes Cathode

Absolute Maximum Ratings * T_a = 25°C unless otherwise noted

Symbol	Parameter	Value	Unit
V_{RRM}	Maximum Repetitive Reverse Voltage	75	V
$I_{F(AV)}$	Average Rectified Forward Current	300	mA
I_{FSM}	Non-repetitive Peak Forward Surge Current Pulse Width = 1.0 second Pulse Width = 1.0 microsecond	 1.0 4.0	 A A
T_{STG}	Storage Temperature Range	-65 to +200	°C
T_J	Operating Junction Temperature	175	°C

* These ratings are limiting values above which the serviceability of the diode may be impaired.

NOTES:
1) These ratings are based on a maximum junction temperature of 200 degrees C.

2) These are steady limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

Thermal Characteristics

Symbol	Parameter	Value	Unit
P_D	Power Dissipation	500	mW
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	300	°C/W

Electrical Characteristics T_C = 25°C unless otherwise noted

Symbol	Parameter	Conditions	Min.	Max	Units
V_R	Breakdown Voltage	I_R = 5µA	75		V
V_F	Forward Voltage	I_F = 250µA I_F = 1mA I_F = 2mA I_F = 10mA	0.505 0.550 0.610 0.700	0.575 0.650 0.710 0.850	V V V V
I_R	Reverse Leakage	V_R = 50V V_R = 50V, T_A = 150°C		100 100	nA µA
C_T	Total Capacitance	V_R = 0, f = 1.0MHz		2	pF
t_{rr}	Reverse Recovery Time	I_F = 10mA, V_R = 6.0V R_L = 100Ω, I_{rr} = 1mA I_F = I_R = 10mA, I_{rr} = 1.0mA, R_L = 100Ω		2 4	ns ns

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