

1N4152



DO-35
Color Band Denotes Cathode

Small Signal Diode

Absolute Maximum Ratings*

$T_A = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
V_{RRM}	Maximum Repetitive Reverse Voltage	40	V
$I_{F(AV)}$	Average Rectified Forward Current	200	mA
I_{FSM}	Non-repetitive Peak Forward Surge Current Pulse Width = 1.0 second Pulse Width = 1.0 microsecond	1.0	A
		4.0	A
T_{stg}	Storage Temperature Range	-65 to +200	$^\circ\text{C}$
T_J	Operating Junction Temperature	175	$^\circ\text{C}$

*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

NOTES:

- 1) These ratings are based on a maximum junction temperature of 200 degrees C.
- 2) These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

Thermal Characteristics

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

Electrical Characteristics

$T_A = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Test Conditions	Min	Max	Units
V_R	Breakdown Voltage	$I_R = 5.0 \mu\text{A}$	40		V
V_F	Forward Voltage	$I_F = 0.1 \text{ mA}$	0.49	0.55	V
		$I_F = 0.25 \text{ mA}$	0.53	0.59	V
		$I_F = 1.0 \text{ mA}$	0.59	0.67	V
		$I_F = 2.0 \text{ mA}$	0.62	0.70	V
		$I_F = 10 \text{ mA}$	0.70	0.81	V
		$I_F = 20 \text{ mA}$	0.74	0.88	V
I_R	Reverse Current	$V_R = 30 \text{ V}$		50	nA
		$V_R = 30 \text{ V}, T_A = 150^\circ\text{C}$		50	μA
C_T	Total Capacitance	$V_R = 0, f = 1.0 \text{ MHz}$		2	pF
t_{rr1}	Reverse Recovery Time	$I_F = I_R = 10 \text{ mA}, R_L = 100 \Omega$ $I_{rr} = 1.0 \text{ mA}$		4	ns
t_{rr2}	Reverse Recovery Time	$I_F = 10 \text{ mA}, V_R = 6.0 \text{ V},$ $R_L = 100 \Omega, I_{rr} = 1.0 \text{ mA}$		2	ns

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