FAIRCHILD SEMICONDUCTOR®

July 2009

1N4154
High Conductance Fast Diode

Features

- 500 milliwatt Power Dissipation package.
- Fast Switching Speed.
- Typical capacitance less than 1.0 picofarad.

General Description

The high breakdown voltage, fast switching speed and high forward conductance of this diode packaged in a DO-35 miniature Glass Axial leaded package makes it desirable also as a general purpose diode.

DO-35
Color Band Denotes Cathode

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

Symbol	Parameter	Value	Unit
W_{IV}	Working Inverse Voltage	35	V
I_O	Average Rectified Current	100	mA
I_F	DC Forward Current (I_F)	300	mA
i_f	Recurrent Peak Forward Current (I_F)	400	mA
$i_{F(surge)}$	Peak Forward Surge Current (I_{FSM}) 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 any semiconductor device may be impaired.

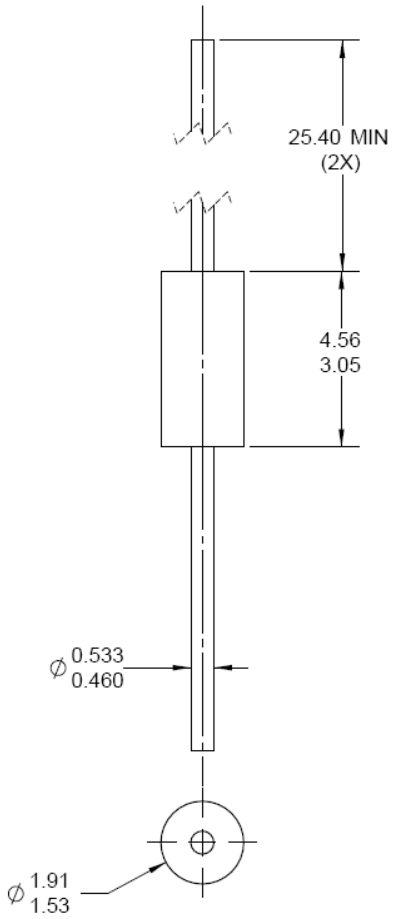
Thermal Characteristics

Symbol	Parameter	Value	Unit
P_D	Total Power Dissipation at T_A = 25°C Linear Derating Factor from T_A = 25°C	500 3.33	mW mW/°C
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	300	°C/W

Electrical Characteristics T_A = 25°C unless otherwise noted

Symbol	Parameter	Conditions	Min.	Max	Units
B_V	Breakdown Voltage	I_R = 5.0μA	35		V
I_R	Reverse Leakage	V_R = 25V V_R = 25V, T_A = 150°C		100 100	nA μA
V_F	Forward Voltage	I_F = 30mA		1.0	V
C_T	Capacitance	V_R = 0, f = 1.0MHz		4.0	pF
T_{RR}	Reverse Recovery Time	I_F = 10mA, V_R = 6.0V I_{RR} = 1.0mA, R_L = 100Ω		4.0	ns

Physical Dimensions (DO-35)



NOTES: UNLESS OTHERWISE SPECIFIED

A) PACKAGE STANDARD REFERENCE:
JEDEC DO-204, VARIATION AH.
B) HERMETICALLY SEALED GLASS PACKAGE.
C) PACKAGE WEIGHT IS 0.137 GRAM.
D) ALL DIMENSIONS ARE IN MILLIMETERS.
E) DRAWING FILE NAME: DO35AREV02

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Preliminary	First Production	Datasheet contains preliminary data; supplementary data will be published at a later date. Fairchild Semiconductor reserves the right to make changes at any time without notice to improve design.
No Identification Needed	Full Production	Datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice to improve the design.
Obsolete	Not In Production	Datasheet contains specifications on a product that is discontinued by Fairchild Semiconductor. The datasheet is for reference information only.

Rev. I41

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