High Conductance Ultra Fast Diode

1N4454

Sourced from Process 1R. See MMBD1201−1205 for characteristics.



AXIAL LEAD
(DO−35)
CASE 017AG

(Color Band Denotes Cathode)

MARKING DIAGRAM



4454 = Specific Device Code
XY = Date Code
Band Color: Black

ABSOLUTE MAXIMUM RATINGS

(T_A = 25°C unless otherwise noted) (Notes 1, 2, 3)

Symbol	Rating	Value	Unit
W_{IV}	Working Inverse Voltage	50	V
I_O	Average Rectified Current	200	mA
I_F	DC Forward Current	400	mA
i_f	Recurrent Peak Forward Current	600	mA
$i_{f(surge)}$	Peak Forward Surge Current Pulse Width = 1.0 s Pulse Width = 1.0 μs	 1.0 4.0	A
T_{STG}	Storage Temperature Range	−65 to +200	°C
T_J	Operating Junction Temperature	175	°C

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

1. These ratings are limiting values above which the serviceability of any semiconductor devices may be impaired.
2. These ratings are based on a maximum junction temperature of 200°C.
3. These are steady limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

THERMAL CHARACTERISTICS

Symbol	Parameter	Max	Unit
P_D	Total Power Dissipation Derate above 25°C	500 3.33	mW mW/°C
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	300	°C/W

ORDERING INFORMATION

Device	Package	Shipping†
1N4454	DO−35 (Pb−Free)	5,000 Units / Bulk
1N4454TR	DO−35 (Pb−Free)	10,000 Units / Tape & Reel

†For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, BRD8011/D.

ELECTRICAL CHARACTERISTICS

(T_A = 25°C unless otherwise noted)

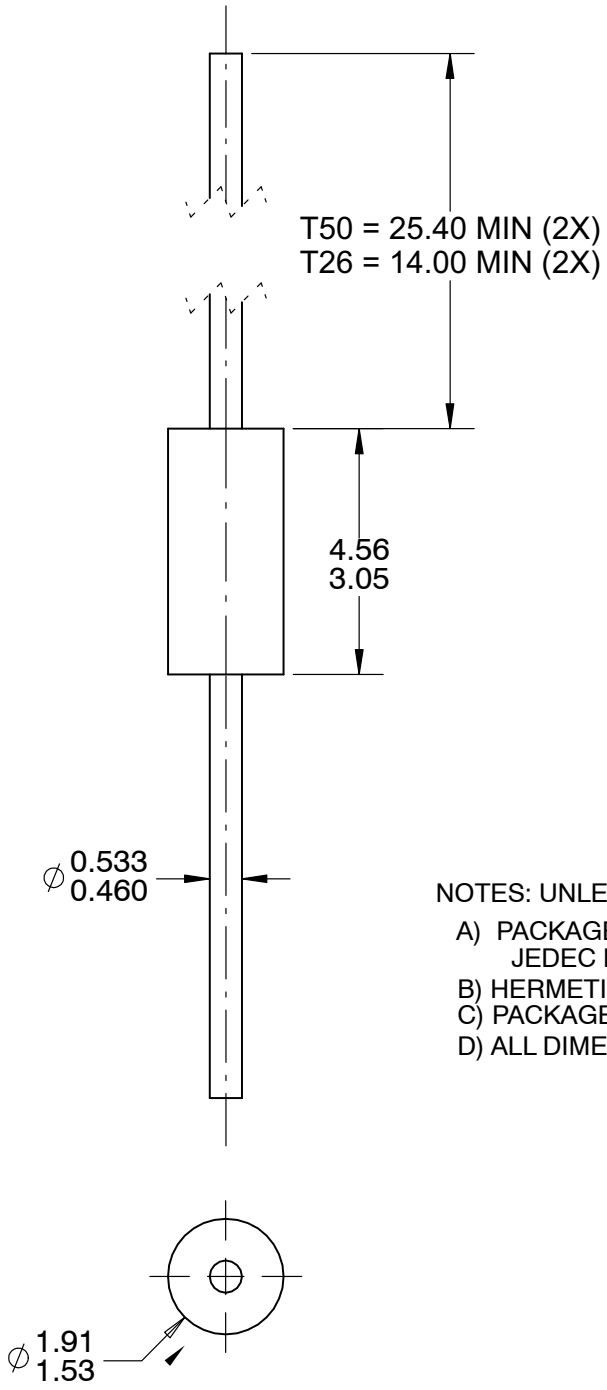
Symbol	Parameter	Conditions	Min	Max	Unit
B_V	Breakdown Voltage	I_R = 5.0 μA	75	–	V
I_R	Reverse Current	V_R = 50 V V_R = 50 V, T_A = 150°C	– –	100 100	nA μA
V_F	Forward Voltage	I_F = 250 μA I_F = 1.0 mA I_F = 2.0 mA I_F = 10 mA	505 550 610 –	575 650 710 1.0	mV mV mV V
C_O	Diode Capacitance	V_R = 0, f = 1.0 MHz	–	4.0	pF
T_{RR}	Reverse Recovery Time	I_F = 10 mA, V_R = 1.0 V, I_{rr} = 1.0 mA, R_L = 100 Ω	–	4.0	ns

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

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AXIAL LEAD
CASE 017AG
ISSUE O

DATE 31 AUG 2016



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.

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