

# 1N4454

## FEATURES :

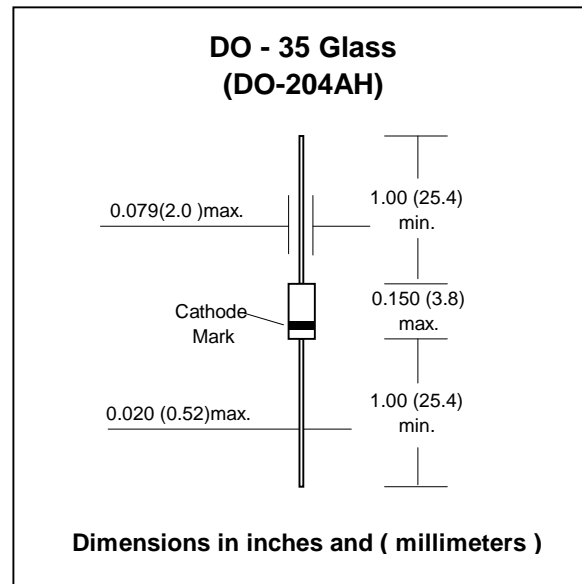
- High switching speed: max. 4 ns
- General application
- Continuous reverse voltage: max. 75 V
- peak reverse voltage: max. 100 V
- Pb / RoHS Free

## MECHANICAL DATA :

**Case:** DO-35 Glass Case

**Weight:** approx. 0.13g

## HIGH SPEED SWITCHING DIODE



## Maximum Ratings and Thermal Characteristics (Rating at 25 °C ambient temperature unless otherwise specified.)

Parameter	Symbol	Value	Unit
Maximum Reverse Voltage	$V_{RRM}$	75	V
Maximum Peak Reverse Voltage	$V_{RM}$	100	V
Maximum Continuous Forward Current	$I_F$	200	mA
Maximum Average Forward Current, Half wave Rectification with Resistive Load , $f \geq 50\text{Hz}$ <sup>(1)</sup>	$I_{F(AV)}$	150	mA
Maximum Surge Forward Current at $t < 1\text{s}$ , $T_j = 25\text{ }^\circ\text{C}$ <sup>(1)</sup>	$I_{FSM}$	0.5	A
Maximum Power Dissipation <sup>(1)</sup>	$P_D$	500	mW
Maximum Junction Temperature	$T_J$	175	$^\circ\text{C}$
Storage Temperature Range	$T_S$	-65 to + 175	$^\circ\text{C}$

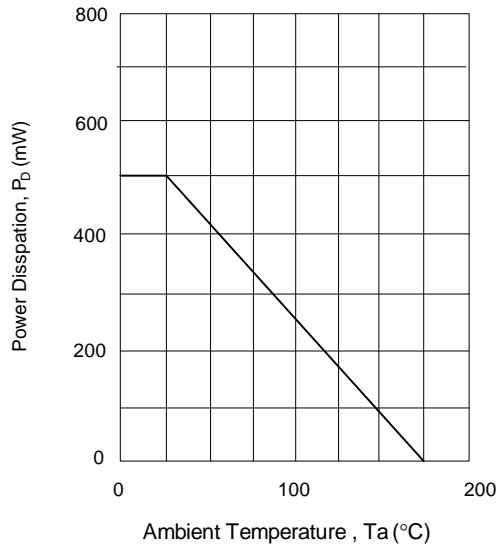
**Note:** (1) Valid provided that leads at a distance of 8mm from case are kept at ambient temperature

## Electrical Characteristics (Ta = 25°C unless otherwise noted)

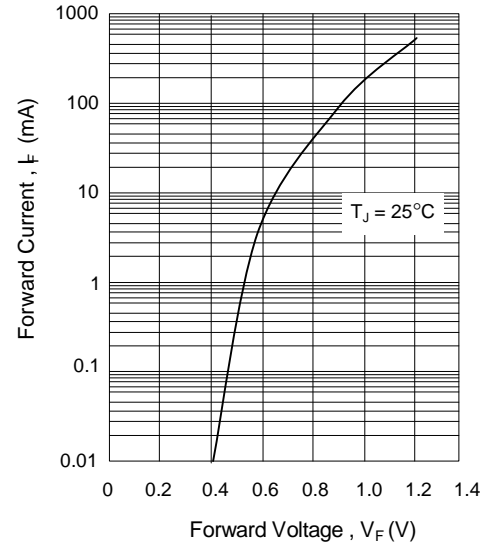
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Current	$I_R$	$V_R = 50\text{ V}$	-	-	100	nA
		$V_R = 75\text{ V}$	-	-	5	$\mu\text{A}$
Forward Voltage	$V_F$	$I_F = 10\text{ mA}$	-	-	1	V
Reverse Breakdown Voltage	$V_{(BR)R}$	test with 100 $\mu\text{A}$ pulses	100	-	-	V
Diode Capacitance	$C_d$	$f = 1\text{MHz}$ ; $V_R = 0$	-	-	2.0	pF
Reverse Recovery Time	$T_{rr}$	$I_F = 10\text{ mA}$ to $I_R = 1\text{ mA}$ $V_R = 6\text{ V}$ , $R_L = 100\ \Omega$	-	-	4	ns

## RATING AND CHARACTERISTIC CURVES ( 1N4454 )

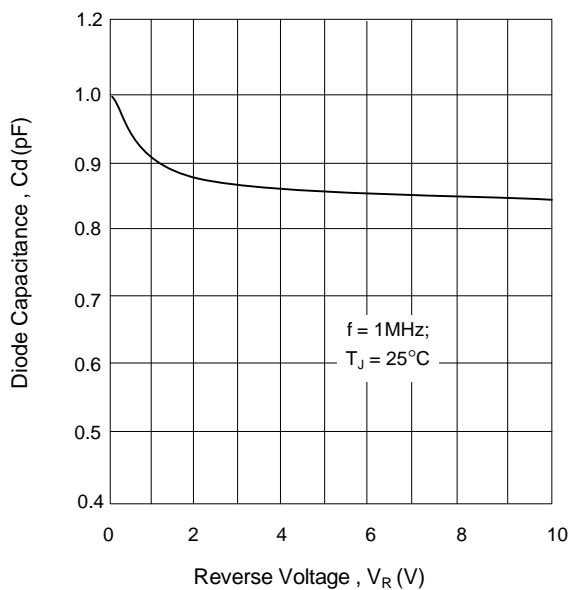
**FIG. 1 ADMISSIBLE POWER DISSIPATION VERSUS AMBIENT TEMPERATURE**



**FIG. 2 TYPICAL FORWARD VOLTAGE**



**FIG. 3 TYPICAL DIODE CAPACITANCE AS A FUNCTION OF REVERSE VOLTAGE**



**FIG. 4 TYPICAL REVERSE CURRENT VERSUS JUNCTION TEMPERATURE**

