

1N4454

HIGH SPEED SWITCHING DIODE

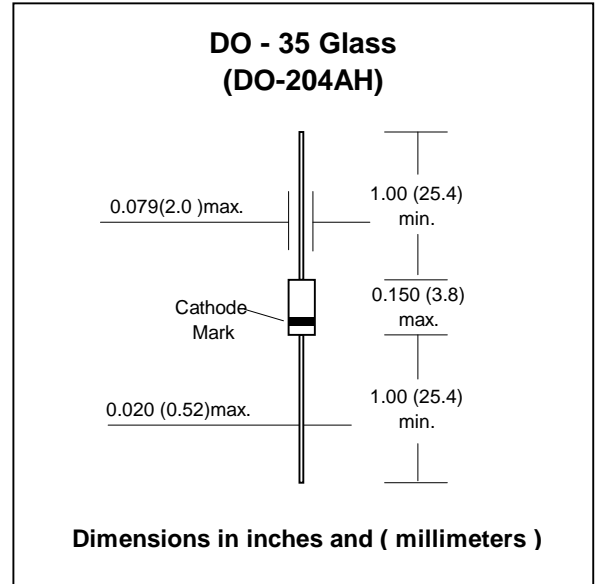
FEATURES :

- 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



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 , $f \geq 50\text{Hz}$ ⁽¹⁾	$I_{F(AV)}$	150	mA
Maximum Surge Forward Current at $t < 1\text{s}$, $T_j = 25\text{ }^\circ\text{C}$ ⁽¹⁾	I_{FSM}	0.5	A
Maximum Power Dissipation ⁽¹⁾	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 ($T_a = 25^\circ\text{C}$ 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	μA
Forward Voltage	V_F	$I_F = 10\text{ mA}$	-	-	1	V
Reverse Breakdown Voltage	$V_{(BR)R}$	test with 100 μA 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**

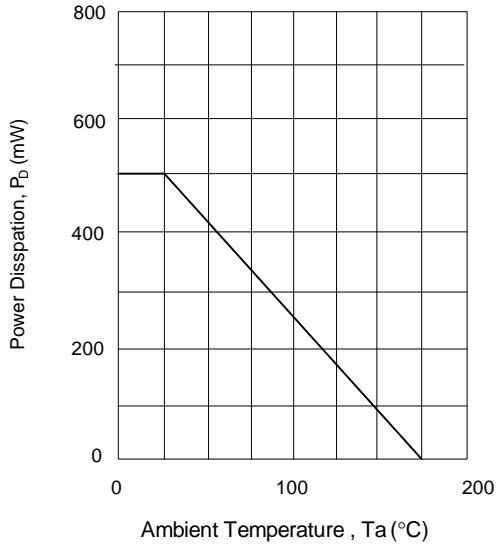
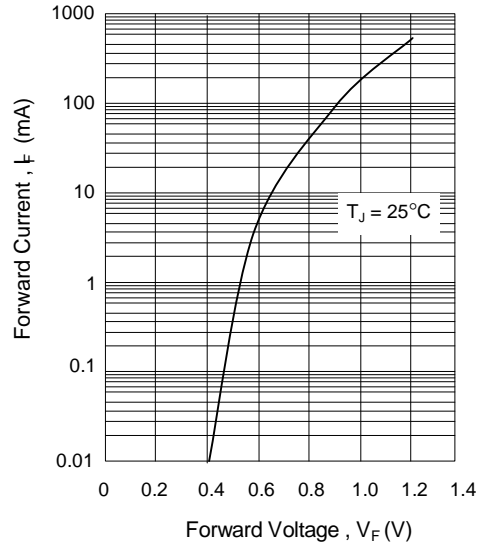
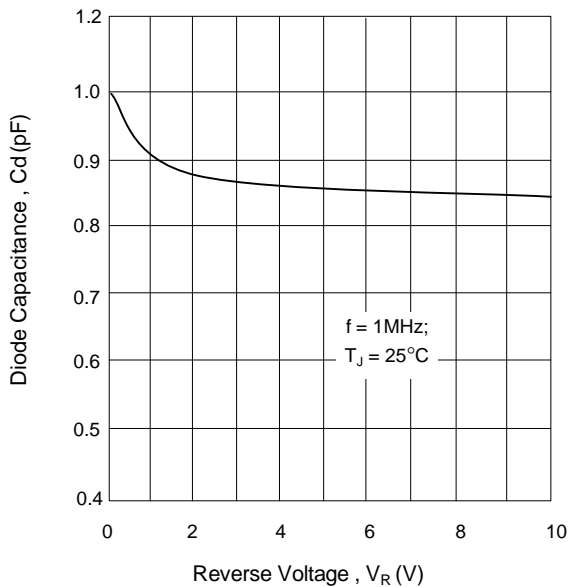


FIG. 2 TYPICAL FORWARD VOLTAGE



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



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

