

1N4531

HIGH SPEED SWITCHING DIODE

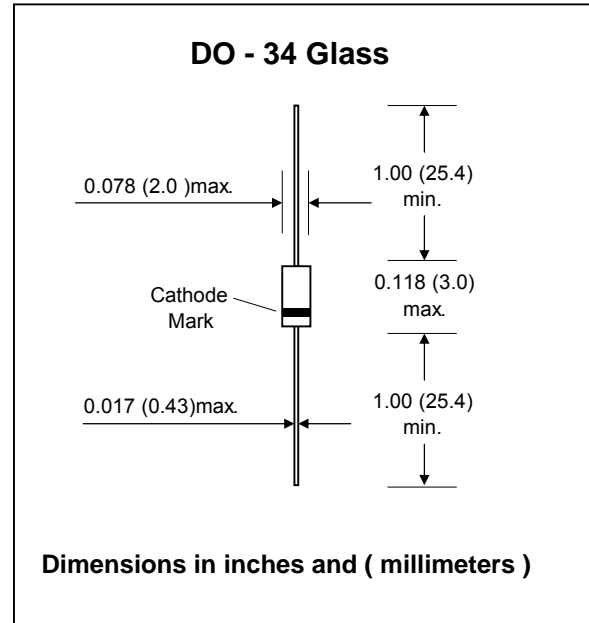
FEATURES :

- High switching speed: max. 4 ns
- Continuous reverse voltage: max. 75 V
- Repetitive peak reverse voltage: max. 75 V
- Repetitive peak forward current: max. 450 mA
- Protection diode in reed relays
- Pb / RoHS Free

MECHANICAL DATA :

Case: DO-34 Glass Case

Weight: approx. 0.093g



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

Parameter	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	75	V
Maximum Continuous Reverse Voltage	V_{RM}	75	V
Maximum Average Forward Current	I_F	200	mA
Maximum Non-Repetitive Peak Forward Current (Square wave, $T_j = 25\text{ }^\circ\text{C}$ prior to Surge)	$t = 1\ \mu\text{s}$	4	A
	$t = 1\ \text{ms}$	1	
	$t = 1\ \text{s}$	0.5	
Maximum Power Dissipation	P_D	500	mW
Thermal Resistance From Junction to Ambient, lead length 5 mm. (Note 1)	$R_{\theta JA}$	350	K/W
Maximum Junction Temperature	T_J	200	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65 to + 200	$^\circ\text{C}$

Note :

(1) Device mounted on a printed circuit-board without metallization pad.

Electrical Characteristics ($T_a = 25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Current	I_R	$V_R = 20\ \text{V}$	-	-	25	nA
		$V_R = 20\ \text{V}, T_j = 150\text{ }^\circ\text{C}$	-	-	50	μA
Forward Voltage	V_F	$I_F = 10\ \text{mA}$	-	-	1.0	V
Diode Capacitance	C_d	$f = 1\ \text{MHz}; V_R = 0$	-	-	4.0	pF
Reverse Recovery Time Measured at $I_R = 1\ \text{mA}$	T_{rr}	$I_F = 10\ \text{mA}$ to $I_R = 10\ \text{mA}$ $R_L = 100\ \Omega$	-	-	4.0	ns

RATING AND CHARACTERISTIC CURVES (1N4531)

FIG.1 - FORWARD CURRENT DERATING CURRENT

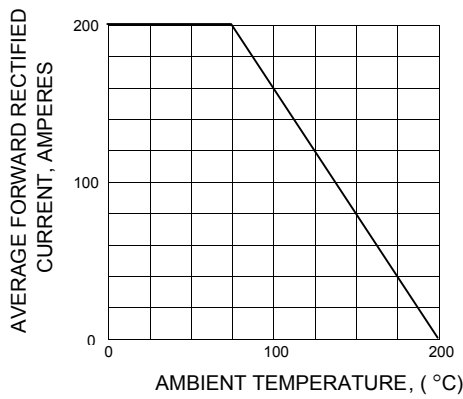


FIG.2 - FORWARD CURRENT AS A FUNCTION FORWARD VOLTAGE

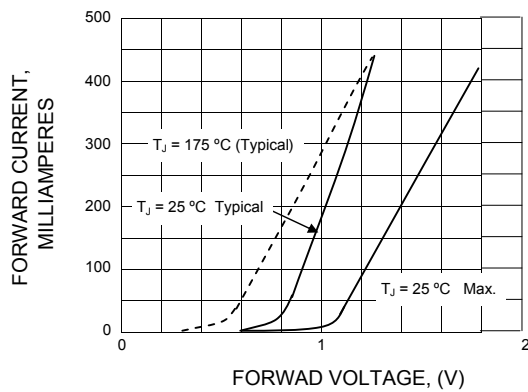


FIG.3 - MAXIMUM PERMISSIBLE NON-REPETITIVE PEAKFORWARD FORWARD CURRENT

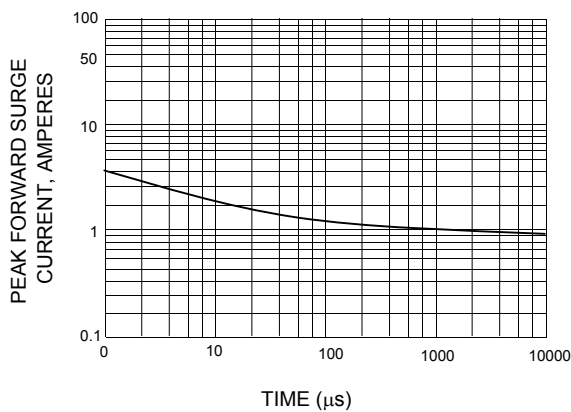


FIG. 4 - DIODE CAPACITANCE AS A FUNCTION OF REVERSE VOLTAGE; TYPICAL VALUES

