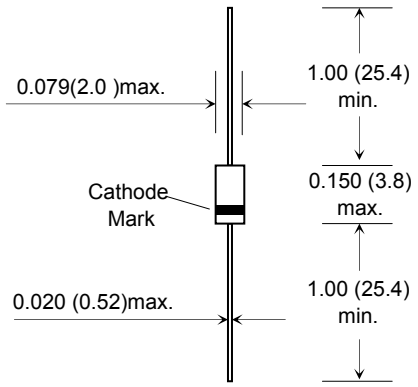
SYNSEMI SEMICONDUCTOR

1N4154

HIGH SPEED SWITCHING DIODE

DO - 35 Glass
(DO-204AH)



Dimensions in inches and (millimeters)

FEATURES :

- High switching speed: max. 2 ns
- Reverse voltage:max. 25 V
- Repetitive peak reverse voltage:max. 35 V
- Pb / RoHS Free

MECHANICAL DATA :

Case: DO-35 Glass Case
Weight: approx. 0.13g

Maximum Ratings and Thermal Characteristics (Ta = 25 °C unless otherwise noted)

Parameter	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	35	V
Maximum Reverse Voltage	V_R	25	V
Maximum Average Forward Current	$I_{F(AV)}$	150	mA
Maximum Forward Current	I_F	300	mA
Maximum Repetitive Peak Forward Current	I_{FRM}	500	mA
Maximum Peak Forward Surge Current at tp = 1μs	I_{FSM}	2.0	A
Thermal Resistance Junction to Ambient (l =4mm, T_L = constant)	$R_{\Theta JA}$	350	K/W
Power Dissipation (l = 4mm, T_L ≤ 25 °C)	P_D	500	mW
Operating Junction Temperature	T_J	175	°C
Storage Temperature Range	T_{STG}	-65 to + 175	°C

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

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Current	I_R	V_R = 25 V	-	9	100	nA
		V_R = 25 V , Ta = 150 °C	-	-	100	μA
Forward Voltage	V_F	I_F = 30 mA	-	0.88	1.0	V
Reverse Breakdown Voltage	$V_{(BR)R}$	I_R = 5 μA ,tp/T =0.01,tp=0.3ms	35	-	-	V
Diode Capacitance	Cd	f = 1MHz ; V_R = 0, V_{HF} = 50mV	-	-	4	pF
Reverse Recovery Time	Trr	I_F = I_R = 10 mA, i_R = 1 mA	-	-	4	ns
		I_F = 10 mA , V_R = 6 V, R_L = 100 Ω, i_R= 0.1 x I_R	-	-	2	ns

RATING AND CHARACTERISTIC CURVES (1N4154)

FIG1. - FORWARD CURRENT VS. FORWARD VOLTAGE

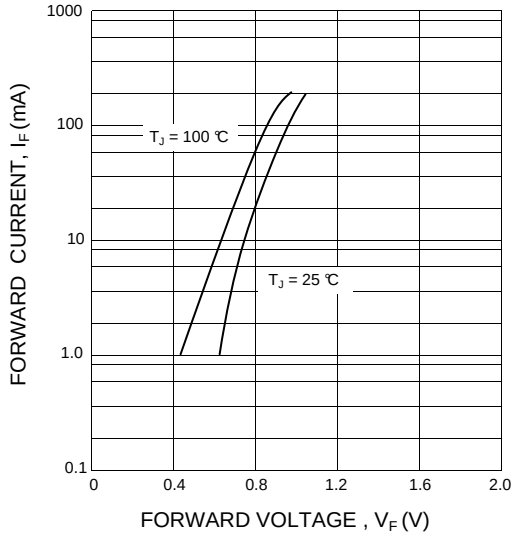


FIG.2 - REVERSE CURRENT VS. JUNCTION TEMPERATURE

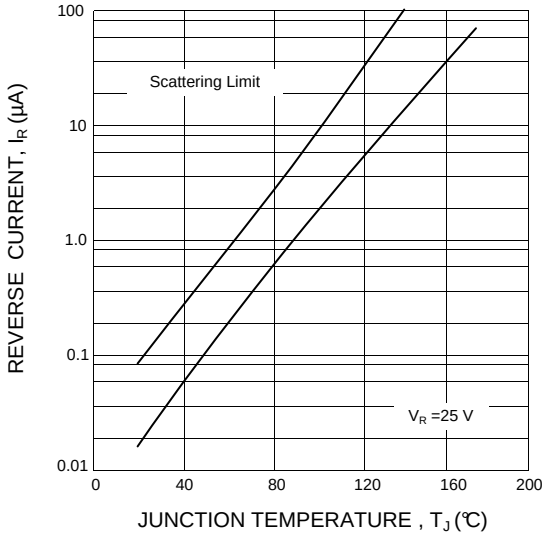


FIG3. - DIODE CAPACITANCE VS. REVERSE VOLTAGE