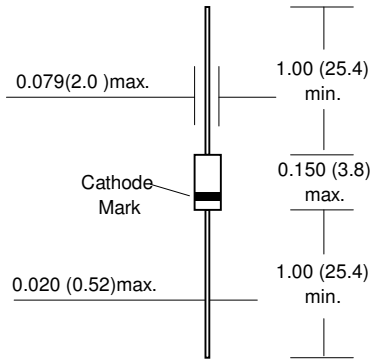
SYNSEMI SEMICONDUCTOR

1N4454

HIGH SPEED SWITCHING DIODE

DO - 35 Glass
(DO-204AH)



Dimensions in inches and (millimeters)

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 ≥ 50Hz (1)	$I_{F(AV)}$	150	mA
Maximum Surge Forward Current at t < 1s, Tj = 25 °C (1)	I_{FSM}	0.5	A
Maximum Power Dissipation (1)	P_D	500	mW
Maximum Junction Temperature	T_J	175	°C
Storage Temperature Range	T_S	-65 to + 175	°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 V V_R = 75 V	- -	- -	100 5	nA µA
Forward Voltage	V_F	I_F = 10 mA	-	-	1	V
Revwrse Breakdown Voltage	$V_{(BR)R}$	test with 100µA pulses	100	-	-	V
Diode Capacitance	Cd	f = 1MHz ; V_R = 0	-	-	2.0	pF
Reverse Recovery Time	Trr	I_F = 10 mA to I_R = 1mA V_R = 6V , R_L = 100 Ω	-	-	4	ns

RATING AND CHARACTERISTIC CURVES (1N4454)

FIG. 1 ADMISSIBLE POWER DISSIPATION VERSUS AMBIENT TEMPERATURE

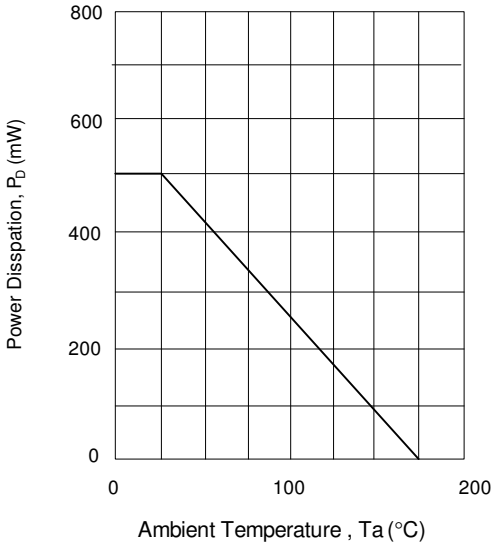


FIG. 2 TYPICAL FORWARD VOLTAGE

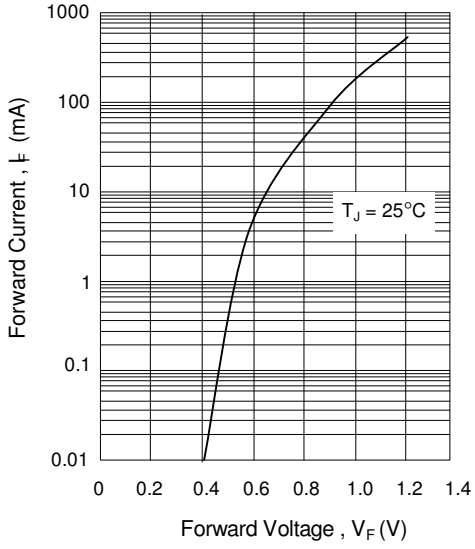


FIG. 3 TYPICAL DIODE CAPACITANCE AS A FUNCTION OF REVERSE VOLTAGE

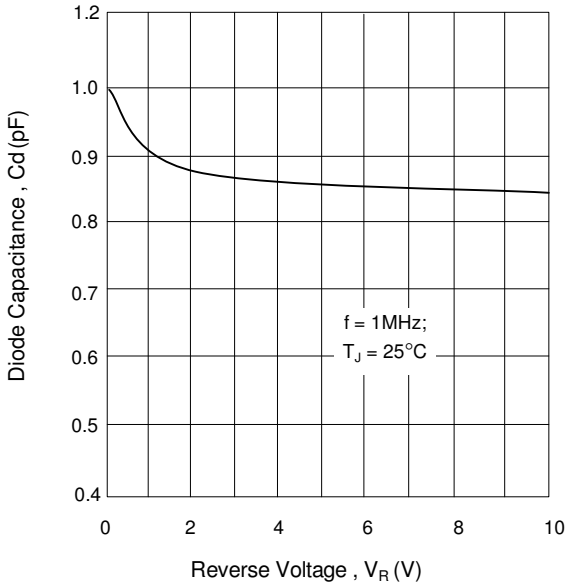


FIG. 4 TYPICAL REVERESE CURRENT VERSUS JUNCTION TEMPERATURE