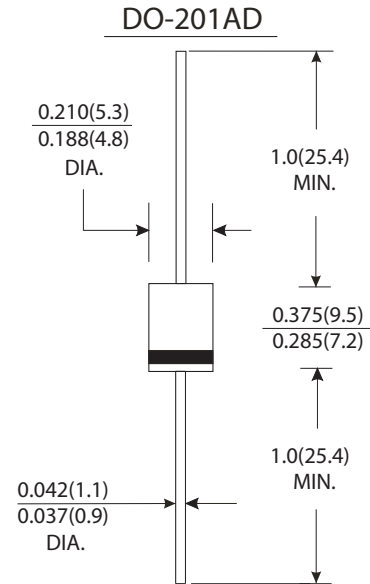


Features

- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability
- Super fast recovery time
- Good for use in switching mode circuits
- Plastic package has Underwrites Laboratory Flammability Classification 94V-0

Mechanical Data

- Case : JEDEC DO-201AD molded plastic body
- Terminals : Plated axial lead solderable per MIL-STD-750, method 2026
- Polarity : Color band denotes cathode end
- Mounting Position : Any
- Weight : 0.042 ounce, 1.18 gram



Dimensions in inches and (millimeters)

Maximum Ratings And Electrical Characteristics

(Ratings at 25 °C ambient temperature unless otherwise specified, Single phase, half wave 60Hz, resistive or inductive load. For capacitive load, derate by 20%)

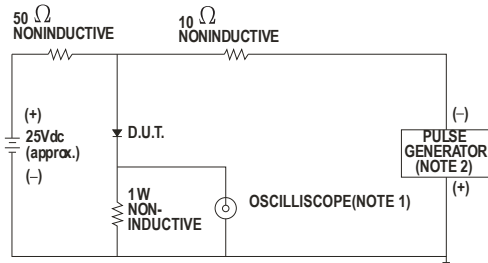
	Symbols	SF51	SF52	SF53	SF54	SF55	SF56	SF57	Units
Maximum recurrent peak reverse voltage	V _{RRM}	50	100	150	200	300	400	600	Volts
Maximum RMS voltage	V _{RMS}	35	70	105	140	210	280	420	Volts
Maximum DC blocking voltage	V _{DC}	50	100	150	200	300	400	600	Volts
Maximum average forward rectified current 0.375"(9.5mm) lead length at T _A =55 °C	I _(AV)	5.0							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	150							Amps
Maximum instantaneous forward voltage at 5.0A	V _F	0.95			1.25		1.50		Volts
Maximum DC reverse current at rated DC blocking voltage	T _A =25 °C	10.0							μA
	T _A =100 °C	100							
Maximum reverse recovery time (Note 1)	T _{rr}	35							ns
Typical junction capacitance (Note 2)	C _J	50							pF
Operating junction and storage temperature range	T _J T _{STG}	-55 to +150							°C

Notes:

- (1) Test conditions: I_F=0.5A, I_R=1.0A, I_{rr}=0.25A.
- (2) Measured at 1MHz and applied reverse voltage of 4.0 Volts.

RATINGS AND CHARACTERISTIC CURVES SF51 THRU SF57

FIG.1- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES: 1. Rise Time = 7ns max., Input Impedance = 1 megohm, 22pF.
2. Rise Time = 10ns max., Source Impedance = 50 ohms

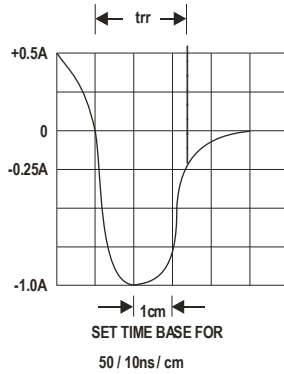


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

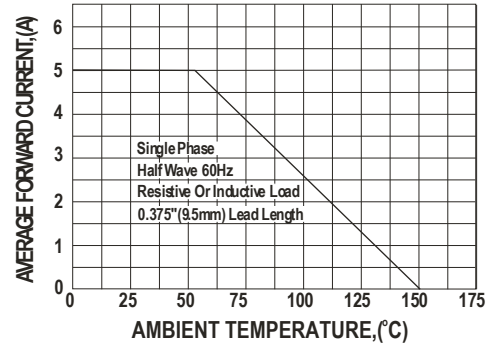


FIG.3-TYPICAL FORWARD CHARACTERISTICS

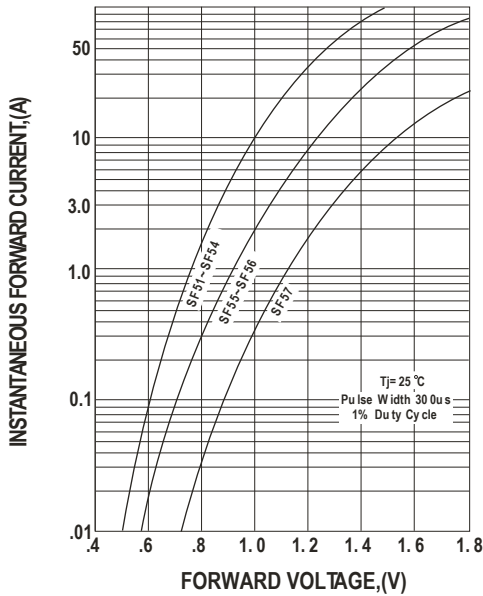


FIG.4-TYPICAL REVERSE CHARACTERISTICS

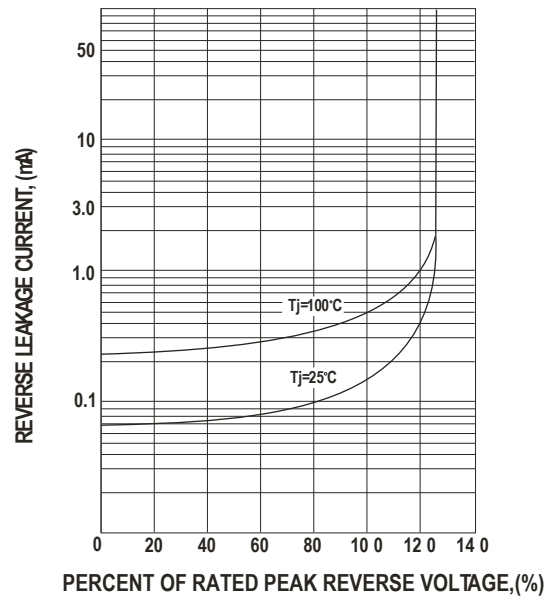


FIG.5-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

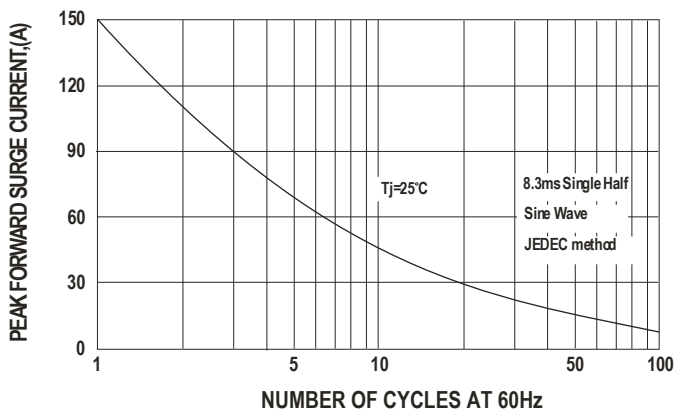


FIG.6-TYPICAL JUNCTION CAPACITANCE

