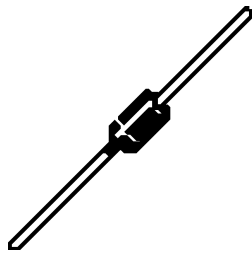


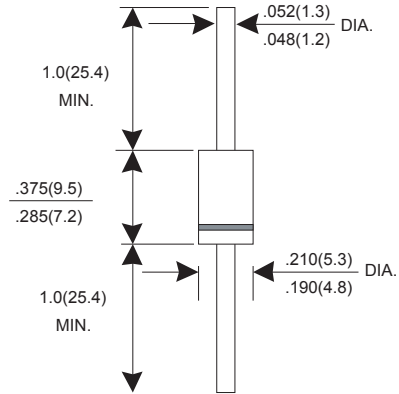
## Description

SF51G~56G



DO-201AD

## Mechanical Dimensions



Dimensions in inches and (millimeters)

### Features

- ★ Fast switching for high efficiency
- ★ Low forward voltage drop
- ★ High current capability
- ★ Low reverse leakage current
- ★ High surge current capability
- ★ Weight: 1.1 grams

### Mechanical Data

- ★ Case: Molded plastic DO-201AD
- ★ Epoxy: UL 94V-0 rate flame retardant
- ★ Terminals: Solderable per MIL-STD-202 method 208
- ★ Polarity: Color band denotes cathode
- ★ Mounting position: Any

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

	SYMBOL	SF 5 G	SF 52G	SF 53G	SF 54G	SF 55G	SF 56G	UNIT
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	200	300	400	600	V
Maximum RMS Voltage	VRMS	35	70	140	210	280	420	V
Maximum DC Blocking Voltage	VDC	50	100	200	300	400	600	V
Maximum Average Forward Rectified Current $T_L=55^\circ\text{C}$	IF(AV)	5.0						A
Peak Forward Surge Current, 8.3ms single Half sine-wave superimposed on rated load (JEDEC method)	IFSM	150						A
Maximum Instantaneous Forward Voltage @ 5.0 A	VF	0.95			1.3		1.5	V
Maximum DC Reverse Current @ $T_J=25^\circ\text{C}$ At Rated DC Blocking Voltage @ $T_J=125^\circ\text{C}$	IR	5.0 250						uA uA
Maximum Reverse Recovery Time (Note 1)	Trr	35					50	nS
Typical junction Capacitance (Note 2)	CJ	100				65		pF
Typical Thermal Resistance (Note 3)	RθJA	20						°CW
Operating Junction and Storage Temperature Range	TJ, TSTG	-55 to +150						°C

NOTES : (1) Reverse recovery test conditions  $I_F = 0.5A$ ,  $I_R = 1.0A$ ,  $I_{rr} = 0.25A$ .  
 (2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts DC.  
 (3) Thermal Resistance junction to lead.

**RATINGS AND CHARACTERISTIC CURVES SF51G THRU SF56G**

FIG.1 - FORWARD CURRENT DERATING CURVE

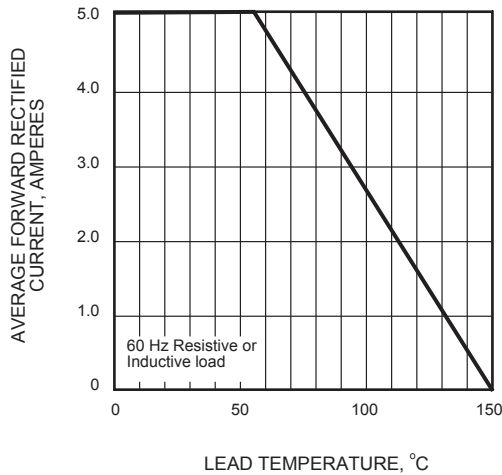


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

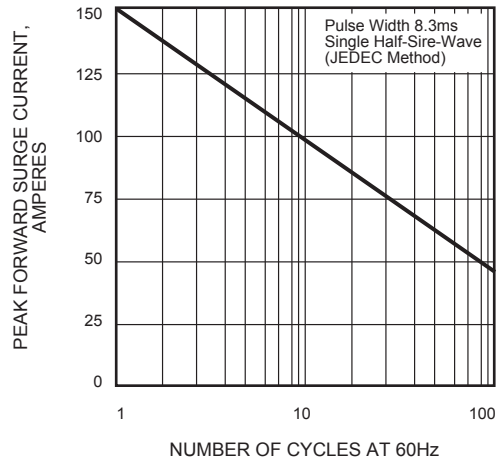


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

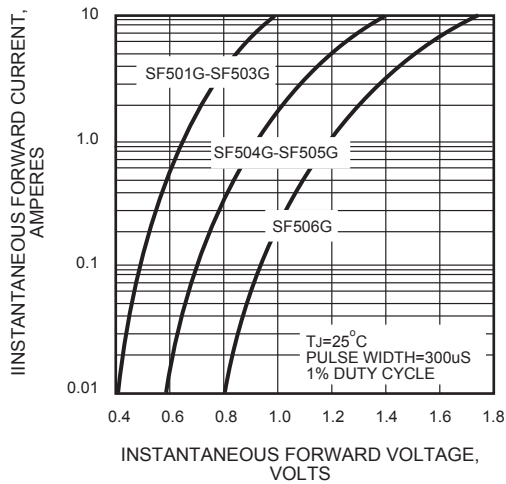


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

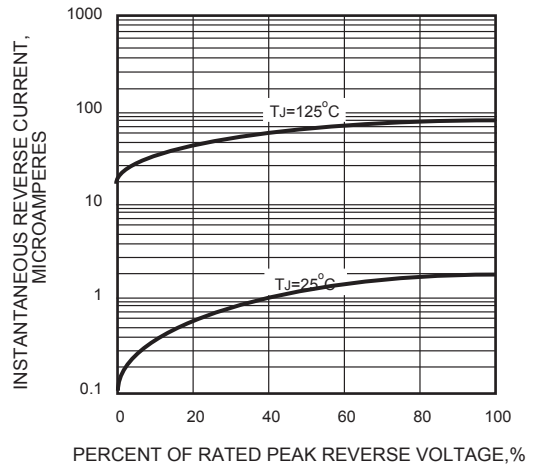


FIG.5 - TYPICAL JUNCTION CAPACITANCE

