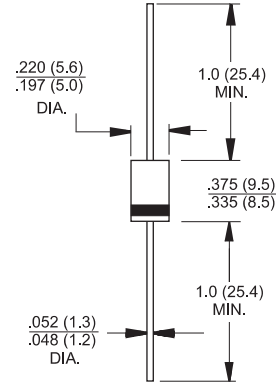




DO-201AD



Features

- ✦ High efficiency, low VF
- ✦ High current capability
- ✦ High reliability
- ✦ High surge current capability
- ✦ Low power loss.
- ✦ For use in low voltage, high frequency inverter, free wheeling, and polarity protection application

Mechanical Data

- ✦ Case: Molded plastic
- ✦ Epoxy: UL 94V-0 rate flame retardant
- ✦ Polarity: Color band denotes cathode
- ✦ High temperature soldering guaranteed:
260°C/10 seconds/.375" (9.5mm) lead lengths at 5 lbs., (2.3kg) tension
- ✦ Mounting position: Any
- ✦ Weight: 1.2 grams

Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.

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

For capacitive load, derate current by 20%

Type Number	Symbol	SF 41G	SF 42G	SF 43G	SF 44G	SF 45G	SF 46G	SF 47G	SF 48G	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	150	200	300	400	500	600	V
Maximum RMS Voltage	V_{RMS}	35	70	105	140	210	280	350	420	V
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	300	400	500	600	V
Maximum Average Forward Rectified Current .375 (9.5mm) Lead Length @ $T_A = 55^\circ C$	$I_{(AV)}$	4.0								A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	125								A
Maximum Instantaneous Forward Voltage @ 4.0A	V_F	1.0			1.3		1.7			V
Maximum DC Reverse Current @ $T_A=25^\circ C$ at Rated DC Blocking Voltage @ $T_A=100^\circ C$	I_R	5.0				500				uA uA
Maximum Reverse Recovery Time (Note 1)	T_{rr}	35								nS
Typical Junction Capacitance (Note 2)	C_j	100				80				pF
Thermal Resistance	$R_{\theta JA}$	25								°C/W
Operating Temperature Range	T_J	-65 to +150								°C
Storage Temperature Range	T_{STG}	-65 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 MHz and Applied Reverse Voltage of 4.0 V D.C.
 3. Mount on Cu-Pad Size 16mm x 16mm on P.C.B

RATINGS AND CHARACTERISTIC CURVES (SF41G THRU SF48G)

FIG.1- MAXIMUM AVERAGE FORWARD CURRENT DERATING

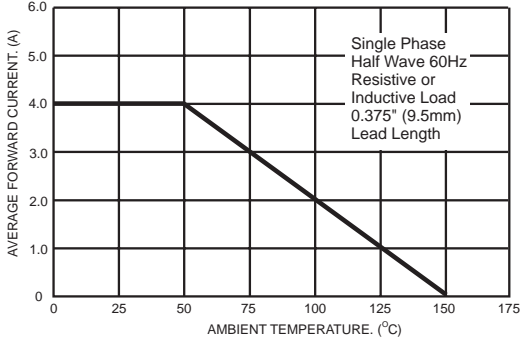


FIG.2- TYPICAL REVERSE CHARACTERISTICS

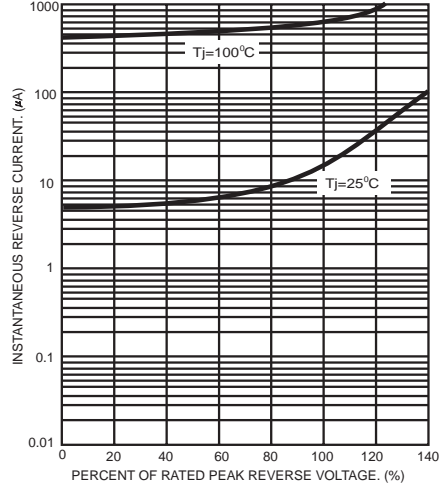


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

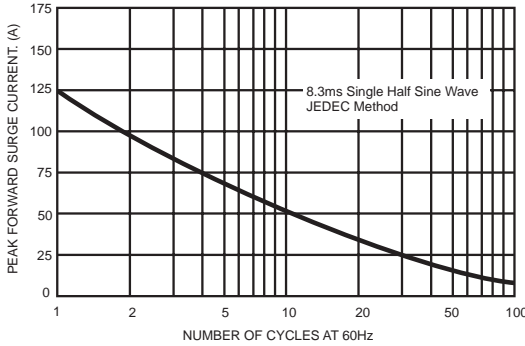


FIG.5- TYPICAL FORWARD CHARACTERISTICS

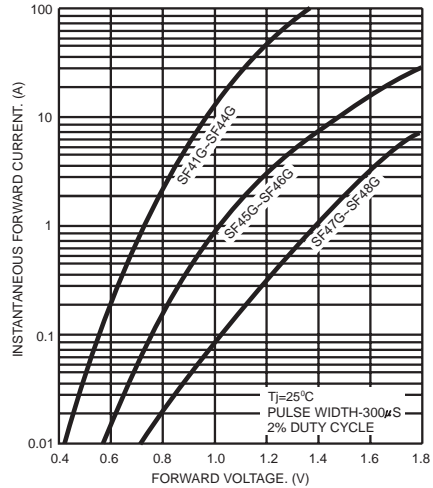


FIG.4- TYPICAL JUNCTION CAPACITANCE

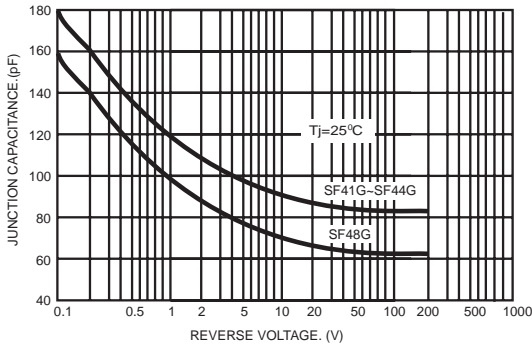


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

