



SFR101 THRU SFR107

1.0 AMP. Soft Fast Recovery Rectifiers



Voltage Range
50 to 1000 Volts
Current
1.0 Ampere

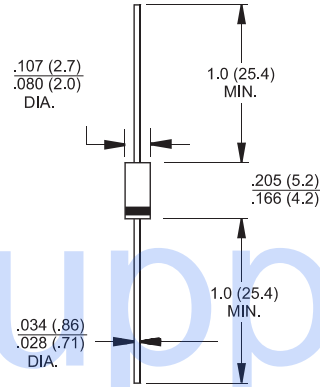
Features

- ✧ Low forward voltage drop
- ✧ High current capability
- ✧ High reliability
- ✧ High surge current capability
- ✧ Fast switching for high efficiency

Mechanical Data

- ✧ Cases: Molded plastic
- ✧ Epoxy: UL 94V-0 rate flame retardant
- ✧ Lead: Axial leads, solderable per MIL-STD-202, Method 208 guaranteed
- ✧ Polarity: Color band denotes cathode end
- ✧ High temperature soldering guaranteed:
260°C/10 seconds/.375", (9.5mm) lead lengths at 5 lbs., (2.3kg) tension
- ✧ Weight: 0.34 gram

DO-41



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	SFR 101	SFR 102	SFR 103	SFR 104	SFR 105	SFR 106	SFR 107	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current .375" (9.5mm) Lead Length @ $T_A = 55^\circ C$	$I_{(AV)}$	1.0							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	30							A
Maximum Instantaneous Forward Voltage @ 1.0A	V_F	1.2							V
Maximum DC Reverse Current @ $T_A=25^\circ C$ at Rated DC Blocking Voltage @ $T_A=75^\circ C$	I_R	5.0 100							μA μA
Maximum Reverse Recovery Time (Note 1)	T_{rr}	120			200		350		nS
Typical Junction Capacitance (Note 2)	C_j	10							pF
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$	65							$^\circ C/W$
Operating Temperature Range	T_J	-65 to +150							$^\circ C$
Storage Temperature Range	T_{STG}	-65 to +150							$^\circ C$

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 Volts D.C.

3. Mount on Cu-Pad Size 5mm x 5mm on P.C.B.

RATINGS AND CHARACTERISTIC CURVES (SFR101 THRU SFR107)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

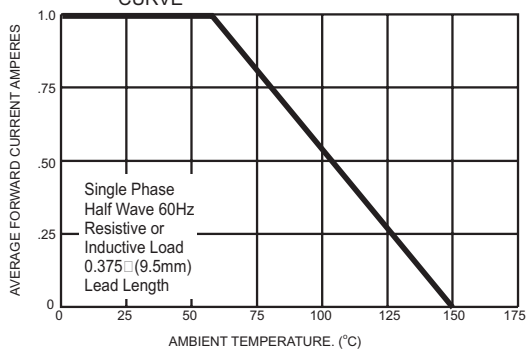


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

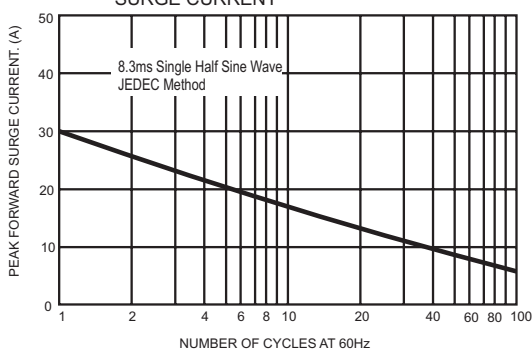


FIG.3- TYPICAL FORWARD CHARACTERISTICS

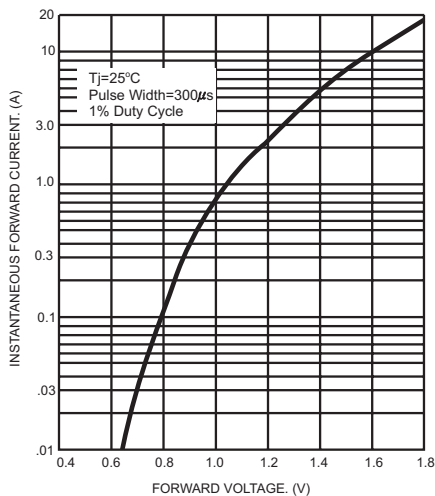


FIG.4- TYPICAL JUNCTION CAPACITANCE

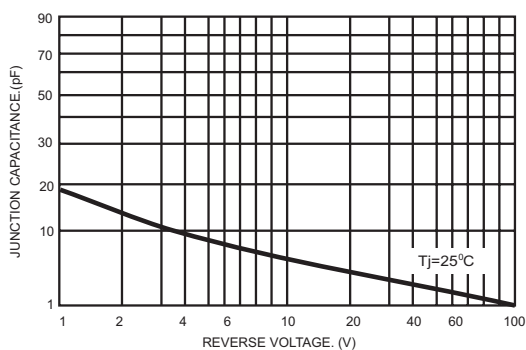
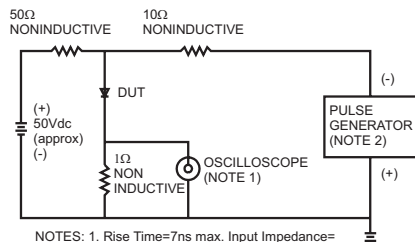


FIG.5- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



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

