

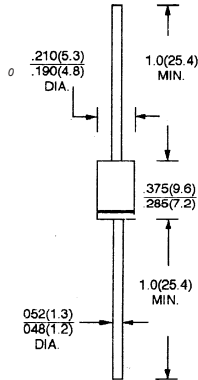


SF31G THRU SF38G

GLASS PASSIVATED SUPER FAST RECTIFIER

Reverse Voltage - 50 to 600 Volts Forward Current - 3.0 Ampere

DO-201AD



Dimensions in inches and (millimeters)

FEATURES

- ◆ Low forward voltage drop
- ◆ High current capability
- ◆ High reliability
- ◆ High surge current capability

MECHANICAL DATA

Case: Molded plastic

Epoxy: UL94V-0 rate flame retardant

Lead: Axial leads, solderable per MIL-STD-202, method 208 guaranteed

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 1.18 grams

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 current derate by 20%.

TYPE NUMBER	SYMBOLS	SF31G	SF32G	SF33G	SF34G	SF35G	SF36G	SF38G	UNITS
Maximum repetitive 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 $T_A=55^\circ\text{C}$ (Note 1)	$I_{(AV)}$	3.0							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	100							Amps
Maximum instantaneous forward voltage at 3.0A	V_F	0.95			1.25			Volts	
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=125^\circ\text{C}$	I_R	5.0 50							μA
Maximum reverse recovery time (NOTE 2)	t_{rr}	35							ns
Typical junction capacitance (NOTE 3)	C_J	60			30			pF	
Operating junction and storage temperature range	T_J, T_{STG}	-65 to +150							$^\circ\text{C}$

Note: 1. Each lead mounted on a 0.8X0.8X0.04"(20X20X1mm) copper heat-sink.

2. Reverse recovery condition $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{rr}=0.25\text{A}$

3. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

RATINGS AND CHARACTERISTIC CURVES SF31G THRU SF38G

FIG. 1 – TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS

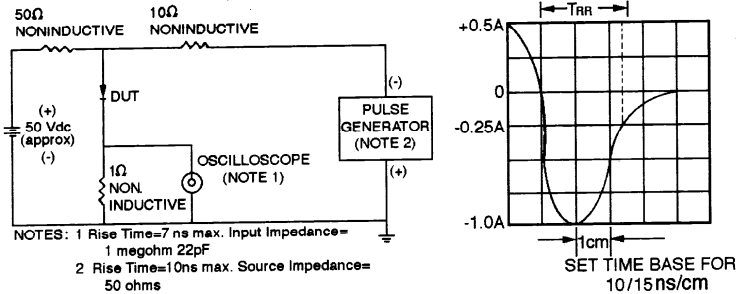


FIG. 2 – TYPICAL FORWARD CURRENT DERATING CURVE

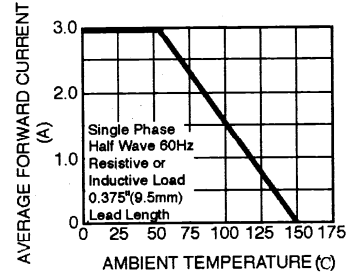


FIG. 3 – TYPICAL REVERSE CHARACTERISTICS

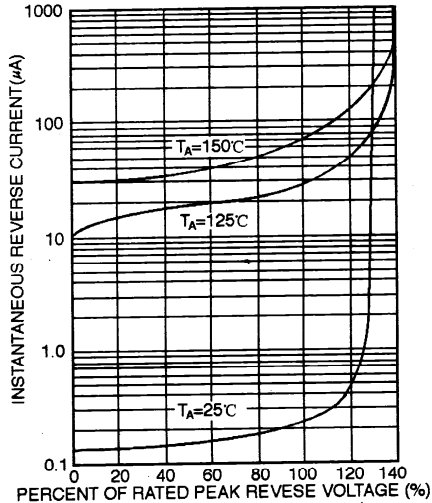


FIG. 4 – TYPICAL FORWARD CHARACTERISTICS

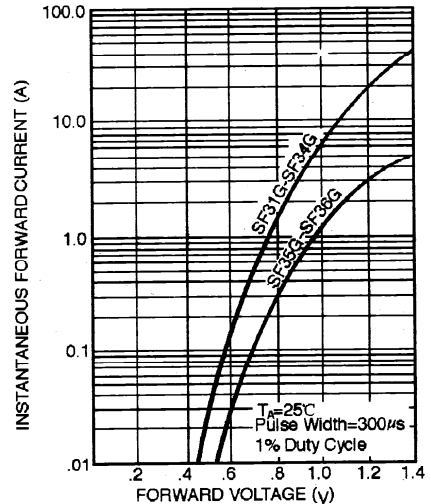


FIG. 5 – MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

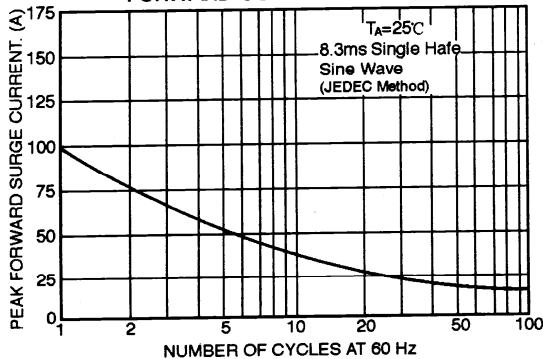


FIG. 6 – TYPICAL JUNCTION CAPACITANCE

