

SF31G thru SF36G

1. FEATURES

- * Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- * High temperature metallurgically bonded construction
- * Glass passivated chip
- * Capable of meeting environmental standards of MIL-S-19500
- * For use in high frequency rectifier circuits
- * Fast switching for high efficiency
- * High temperature soldering guaranteed: 260°C/10 seconds
- * 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

2. Mechanical Data

Case: JEDEC DO-201AD, molded plastic

Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.038 oz., 1.03 g

Handling precaution: None

3. Electrical Characteristic

Maximum Ratings & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter Symbol	symbol	SF31 G	SF32 G	SF33 G	SF34 G	SF35 G	SF36 G	SF38 G	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	150	200	300	400	600	V
Maximum RMS voltage	V_{RMS}	35	70	105	140	210	280	420	V
Maximum DC blocking voltage	V_{DC}	50	100	150	200	300	400	600	V
Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A = 55^\circ\text{C}$	$I_{F(AV)}$	3.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	150							A
Maximum DC blocking voltage temperature	T_A	150							°C
Typical thermal resistance (Note 2)	$R_{\theta JA}$	20							°C/W
Operating junction temperature range	T_J	-50 to +150							°C
Storage temperature range	T_{STG}	-50 to +150							°C

Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

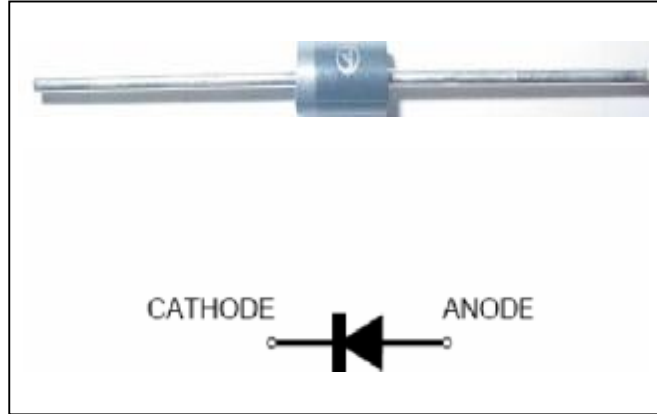
Parameter Symbol	symbol	SF31 G	SF32 G	SF33 G	SF34 G	SF35 G	SF36 G	SF38 G	Unit
Maximum instantaneous forward voltage at 3.0A	V_F	0.95				1.25		1.7	V
Maximum DC reverse current $T_A = 25^\circ\text{C}$ at rated DC blocking voltage $T_A = 125^\circ\text{C}$	I_R	10 200							μA
Typical reverse recovery time (Note 1)	t_{rr}	35							ns
Typical junction capacitance at 4.0V, 1MHz	C_J	50				30			PF

NOTES:

1. $I_F = 0.5A$, $I_R = 1.0A$, $IRR = 0.25A$
2. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

Glass Passivated Junction Super Fast Plastic Rectifiers

Reverse Voltage 50 to 600V
Forward Current 3.0A



SF31G thru SF38G

4. Ratings and Characteristic Curves (TA = 25°C unless otherwise noted)

Fig. 1 - Forward Current Derating Curve

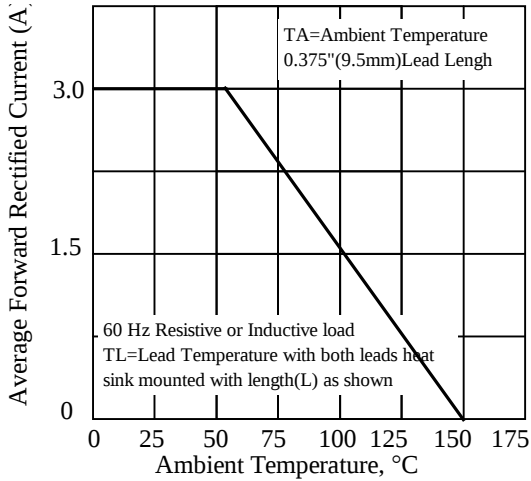


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

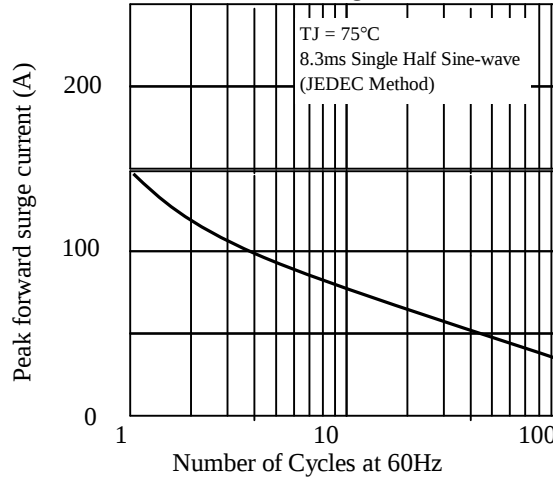


Fig 3. - Typical Instantaneous Forward Characteristics

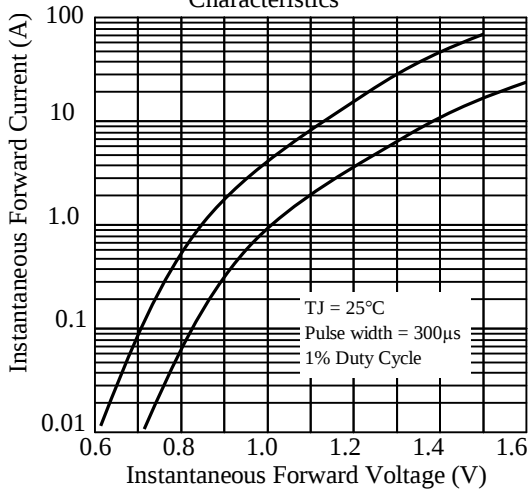


Fig 4. - Typical Reverse Characteristics

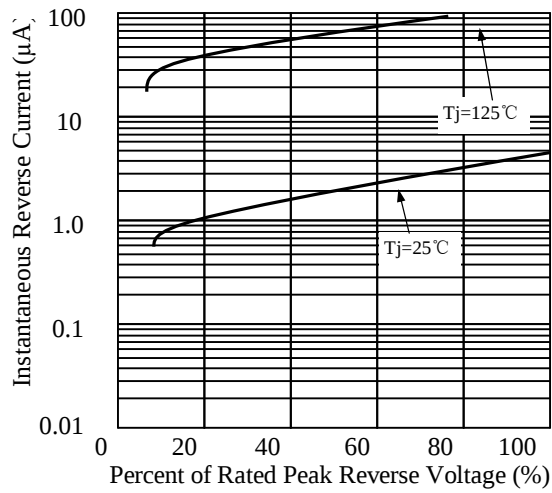


Fig 5. - typical transient thermal impedance

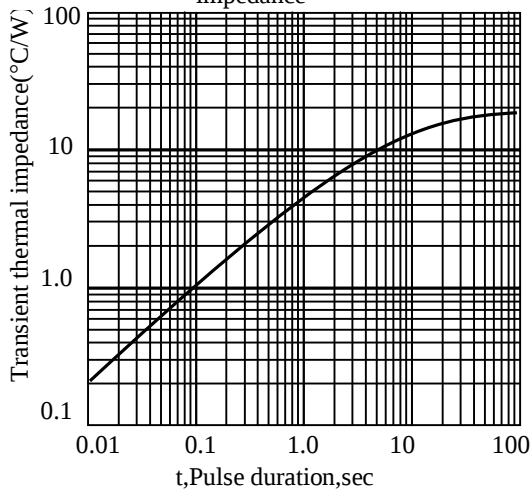
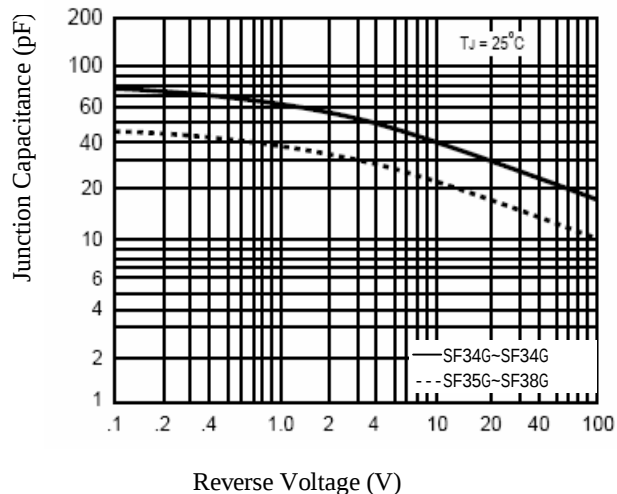


Fig 6. - Typical Junction Capacitance



5.Package Dimensions in inches and (millimeters)

