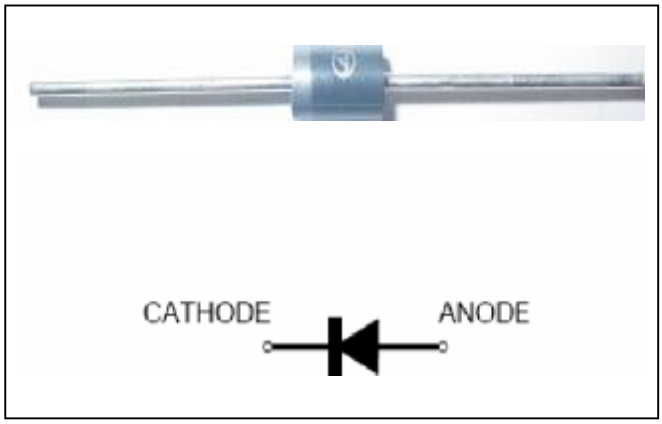
SF31G thru SF36G

1.FEATURES

Glass Passivated Junction
Super Fast Plastic Rectifiers
Reverse Voltage 50 to 600V
Forward Current 3.0A

* 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 precautin:None

3.Electrical Characteristic

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

Parameter Symbol	symbol	SF31G	SF32G	SF33G	SF34G	SF35G	SF36G	SF38G	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°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)	RθJA	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	SF31G	SF32G	SF33G	SF34G	SF35G	SF36G	SF38G	Unit
Maximum instantaneous forward voltage at 3.0A	V_F	0.95				1.25		1.7	V
Maximum DC reverse current TA = 25°C at rated DC blocking voltage TA = 125°C	IR	10 200							μA
Typical reverse recovery time (Note 1)	trr	35							ns
Typical junction capacitance at 4.0V, 1MHz	CJ	50				30			PF

NOTES:
1. IF = 0.5A, IR = 1.0A, IRR = 0.25A
2. Thermal resistance from junction to ambient at 0.375” (9.5mm) lead length, P.C.B. mounted

SF31G thru SF38G

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

Fig. 1 – Forward Current Derating Curve

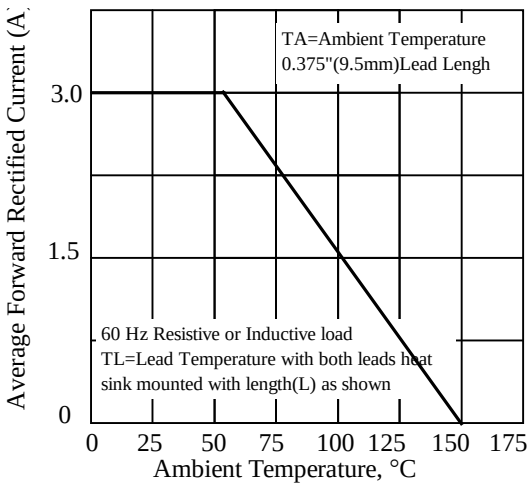


Fig. 2 – Maximum Non-repetitive Peak Forward Surge Current

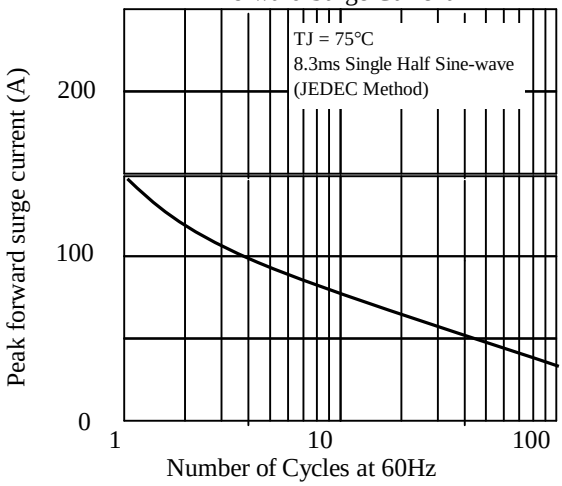


Fig 3. – Typical Instantaneous Forward Characteristics

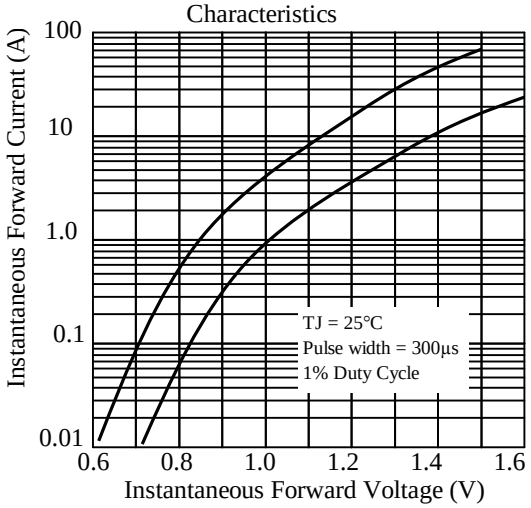


Fig 4. – Typical Reverse Characteristics

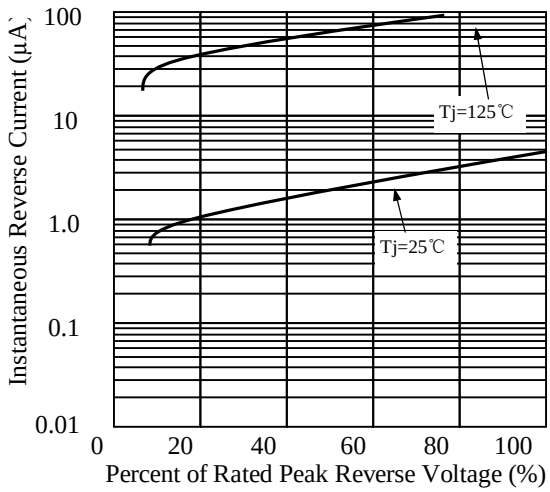


Fig 5. – typical transient thermal impedance

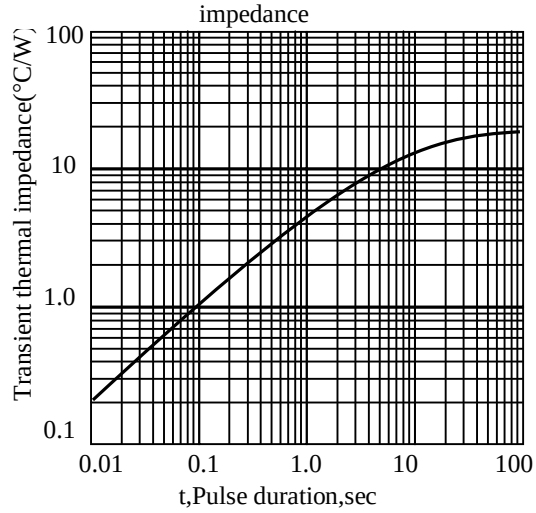
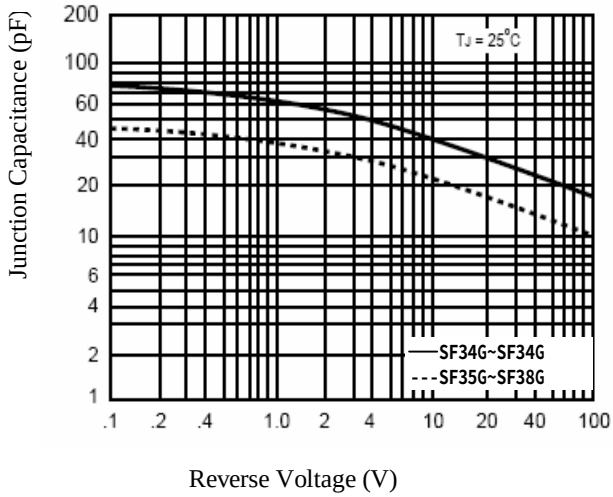
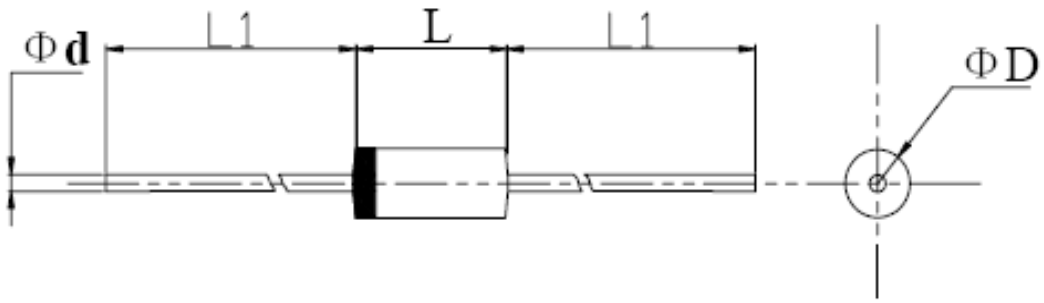


Fig 6. – Typical Junction Capacitance



5.Package Dimensions in inches and (millmeters)

Package outline



Dimensions				
	inches		mm	
	Min.	Max.	Min.	Max.
L	0.335	0.375	8.5	9.5
L1	1.0	-	25.4	-
ΦD	0.197	0.220	5.0	5.6
Φd	0.048	0.052	1.2	1.3

Note:
DO-201AD
molded plastic case
The marking band indicates the cathode