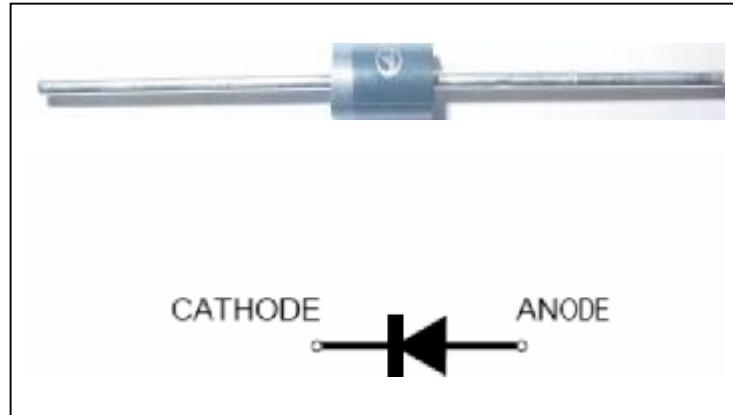


# SF61G thru SF68G

**Glass Passivated Junction Ultra Fast Rectifiers  
Reverse Voltage 50 to 600V Forward Current 6.0A**

## 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



## 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

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

Parameter Symbol		symbol	SF61G	SF62G	SF63G	SF64G	SF65G	SF66G	SF68G	Unit
Marking spec			SF61G	SF62G	SF63G	SF64G	SF65G	SF66G	SF68G	
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 $T_A = 55^\circ C$	$I_{F(AV)}$		6.0						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	SF61G	SF62G	SF63G	SF64G	SF65G	SF66G	SF68G	Unit		
Maximum instantaneous forward voltage at 6.0A	$V_F$		0.95				1.25		1.7	V		
Maximum DC reverse current $T_A = 25^\circ C$ at rated DC blocking voltage $T_A = 125^\circ C$	$IR$		10 100						$\mu A$			
Typical reverse recovery time (Note 1)	$trr$		35						ns			
Typical junction capacitance at 4.0V, 1MHz	$C_J$		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

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

Fig. 1 - Forward Current Derating Curve

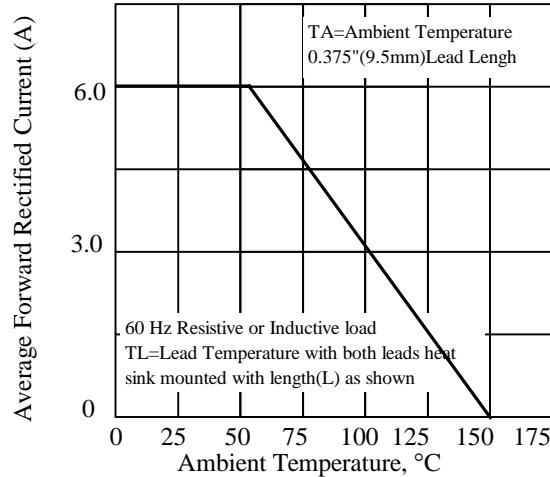


Fig 3. - Typical Instantaneous Forward Characteristics

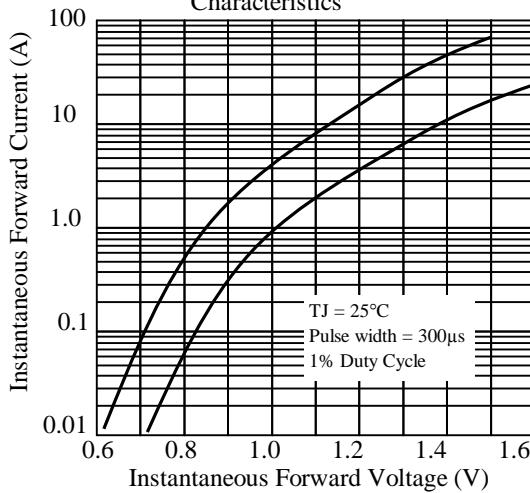


Fig 5. - typical transient thermal impedance

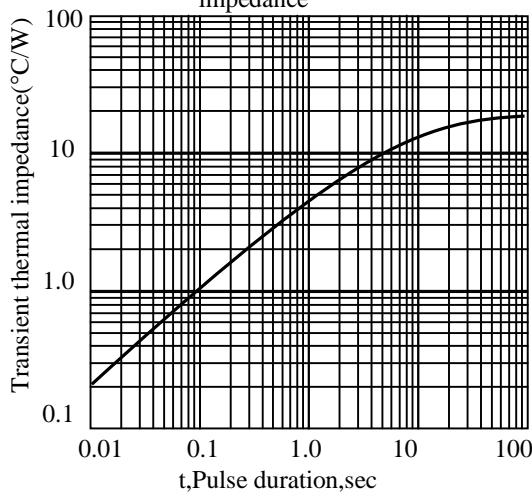


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

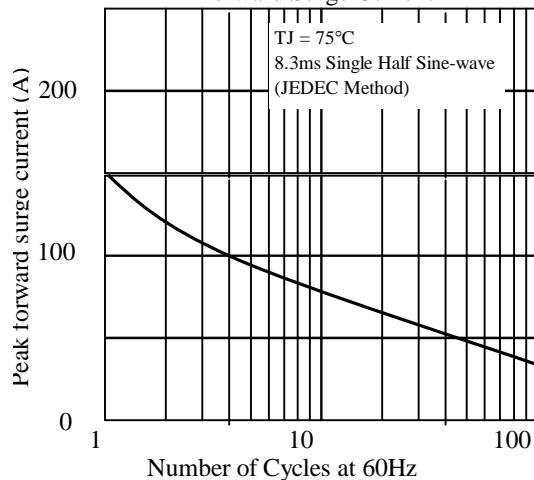


Fig 4. - Typical Reverse Characteristics

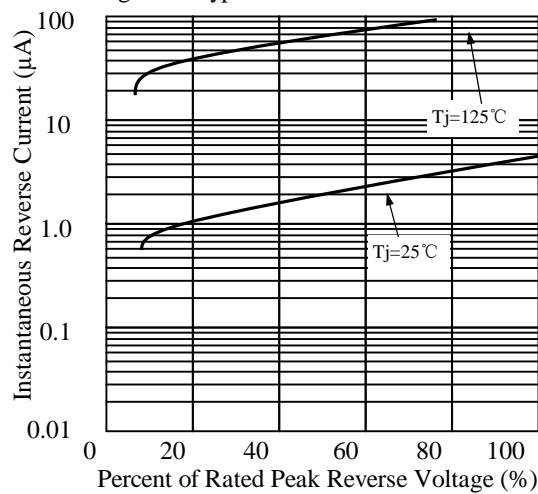
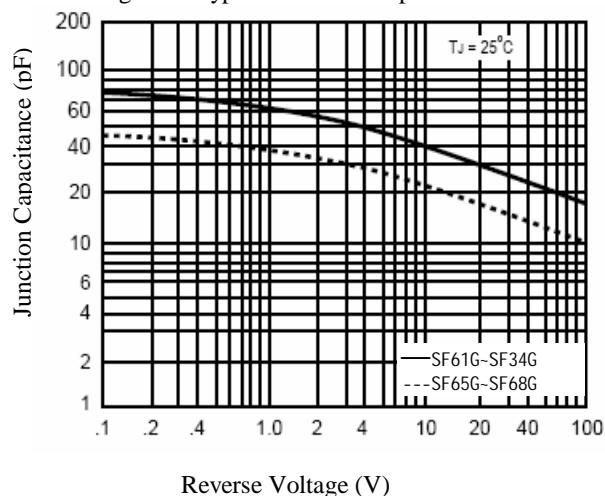


Fig 6. - Typical Junction Capacitance



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### 3. dimension:

Package outline				
Dimensions				
	inches		mm	
L	Min.	Max.	Min.	Max.
L1	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



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