

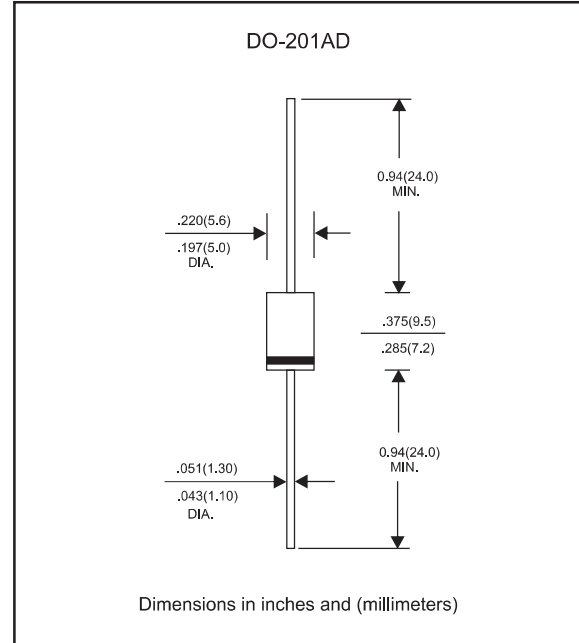
Features

- Low reverse leakage current
- Low forward drop down voltage & high current capability
- High surge current capability
- Super fast switching speed for high efficiency
- Glass passivated chip junction.
- High Reliability
- Lead-free parts for green partner, meet RoHS requirements
- Suffix "-H" indicates Halogen free parts, ex. SF61G-H.

Mechanical data

- Epoxy : UL94-V0 rated flame retardant
- Case : Molded plastic, DO-201AD
- Lead : Axial leads, solderable per MIL-STD-202, Method 208 guaranteed
- Polarity: Color band denotes cathode end
- Mounting Position : Any

Package outline



Maximum ratings and Electrical Characteristics (AT $T_A=25^\circ\text{C}$ unless otherwise noted)

PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Forward rectified current	Ambient temperature = 55°C	I_O			6.0	A
Forward surge current	8.3ms single half sine-wave (JEDEC method)	I_{FSM}			150	A
Reverse current	$V_R = V_{RRM}$ $T_J = 25^\circ\text{C}$	I_R			5.0	μA
	$V_R = V_{RRM}$ $T_J = 125^\circ\text{C}$				100	
Diode junction capacitance	$f=1\text{MHz}$ and applied 4V DC reverse voltage	C_J		80		pF
Storage temperature		T_{STG}	-65		+175	$^\circ\text{C}$

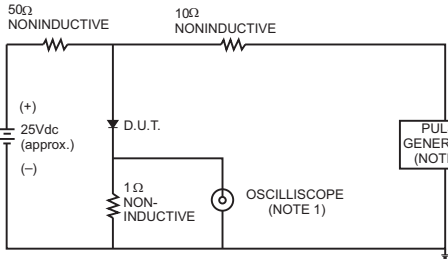
SYMBOLS	V_{RRM}^{*1} (V)	V_{RMS}^{*2} (V)	V_R^{*3} (V)	V_F^{*4} (V)	t_{rr}^{*5} (ns)	Operating temperature T_J , ($^\circ\text{C}$)
SF61G	50	35	50	0.95	35	-55 to +150
SF62G	100	70	100			
SF63G	150	105	150			
SF64G	200	140	200			
SF65G	300	210	300	1.25	35	-55 to +150
SF66G	400	280	400			
SF67G	500	350	500			
SF68G	600	420	600	1.70	35	-55 to +150

- *1 Repetitive peak reverse voltage
- *2 RMS voltage
- *3 Continuous reverse voltage
- *4 Maximum forward voltage@ $I_F=6.0\text{A}$
- *5 Maximum Reverse recovery time, note 1

Note 1. Reverse recovery time test condition, $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$

Rating and characteristic curves (SF61G THRU SF68G)

FIG.1- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



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

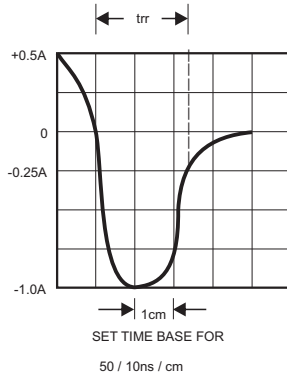


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

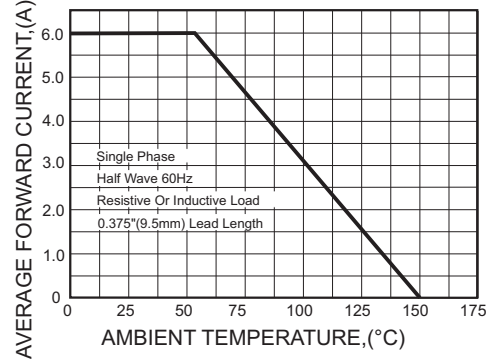


FIG.3 - TYPICAL FORWARD CHARACTERISTICS

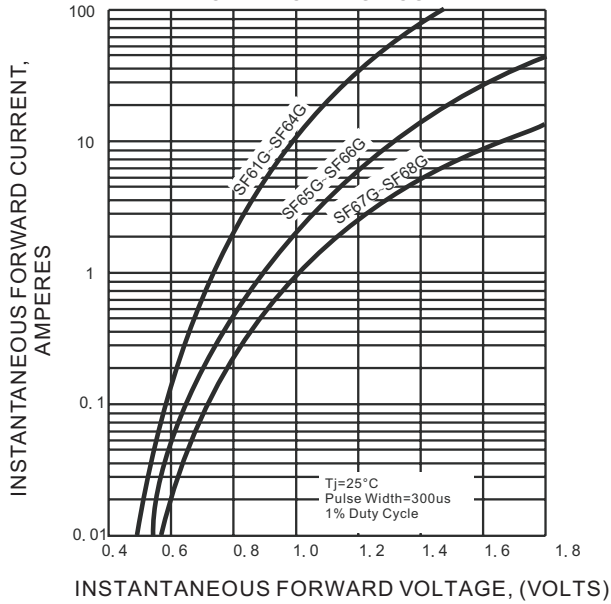


FIG.4-TYPICAL REVERSE CHARACTERISTICS

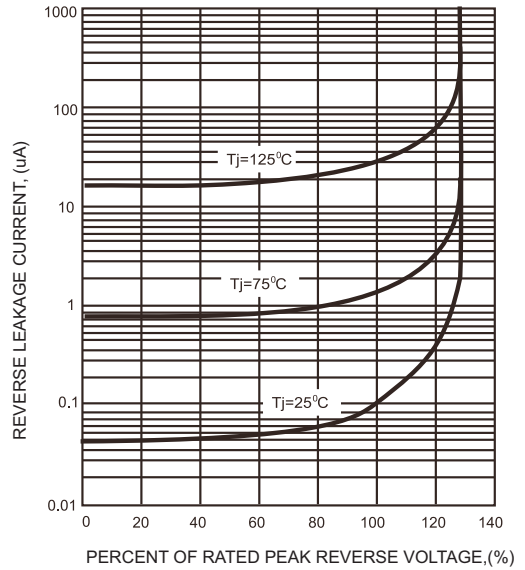


FIG.5-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

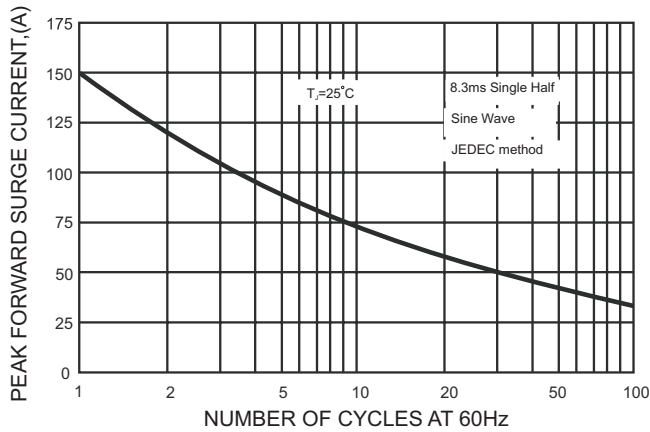
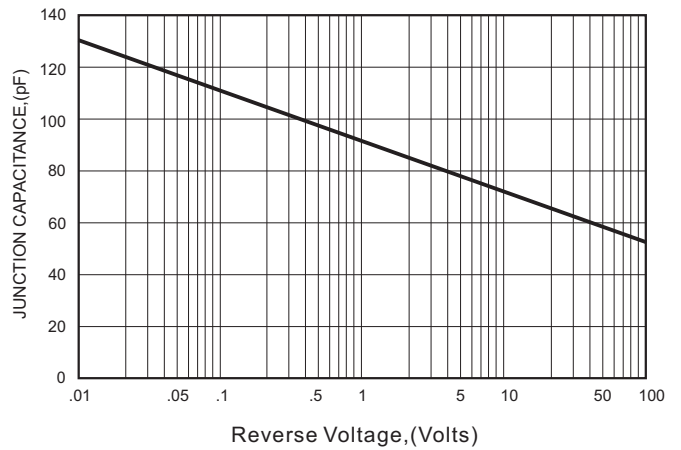




FIG.6-TYPICAL JUNCTION CAPACITANCE



Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

Marking

Type number	Marking code
SF61G	SF61G
SF62G	SF62G
SF63G	SF63G
SF64G	SF64G
SF65G	SF65G
SF66G	SF66G
SF67G	SF67G
SF68G	SF68G