



# SF61 THRU SF68

## 6.0 AMPS. Super Fast Rectifiers

	<b>Voltage Range</b> 50 to 600 Volts <b>Current</b> 6.0 Amperes
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<p><b>Features</b></p> <ul style="list-style-type: none"> <li>✧ Low forward voltage drop</li> <li>✧ High current capability</li> <li>✧ High reliability</li> <li>✧ High surge current capability</li> </ul> <p><b>Mechanical Data</b></p> <ul style="list-style-type: none"> <li>✧ Cases: Molded plastic</li> <li>✧ Epoxy: UL 94V-O rate flame retardant</li> <li>✧ Lead: Axial leads, solderable per MIL-STD-202, Method 208 guaranteed</li> <li>✧ Polarity: Color band denotes cathode end</li> <li>✧ High temperature soldering guaranteed: 260°C/10 seconds/.375", (9.5mm) lead lengths at 5 lbs., (2.3kg) tension</li> <li>✧ Weight: 1.2 grams</li> </ul>	<p><b>DO-201AD</b></p> <p><b>Dimensions in inches and (millimeters)</b></p>
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**Maximum Ratings and Electrical Characteristics**  
 Rating at 25°C ambient temperature unless otherwise specified.  
 Single phase, half wave, 60 Hz, resistive or inductive load.  
 For capacitive load, derate current by 20%

Type Number	Symbol	SF 61	SF 62	SF 63	SF 64	SF 65	SF 66	SF 67	SF 68	Units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	150	200	300	400	500	600	V
Maximum RMS Voltage	$V_{RMS}$	35	70	105	140	210	280	350	420	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	150	200	300	400	500	600	V
Maximum Average Forward Rectified Current .375 (9.5mm) Lead Length @ $T_A = 55^\circ C$	$I_{(AV)}$	6.0								A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	150								A
Maximum Instantaneous Forward Voltage @ 6.0A	$V_F$	0.975			1.3		1.7			V
Maximum DC Reverse Current @ $T_A=25^\circ C$ at Rated DC Blocking Voltage @ $T_A=100^\circ C$	$I_R$					5.0				$\mu A$
						100				$\mu A$
Maximum Reverse Recovery Time (Note 1)	$T_{rr}$					35				nS
Typical Junction Capacitance (Note 2)	$C_j$	120			70					pF
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$	30								$^{\circ}C/W$
Operating Temperature Range	$T_J$	-65 to +125								$^{\circ}C$
Storage Temperature Range	$T_{STG}$	-65 to +150								$^{\circ}C$

Notes: 1. Reverse Recovery Test Conditions:  $I_F=0.5A$ ,  $I_R=1.0A$ ,  $I_{RR}=0.25A$   
 2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.  
 3. Mount on Cu-Pad Size 16mm x 16mm on PCB.

## RATINGS AND CHARACTERISTIC CURVES (SF61 THRU SF68)

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

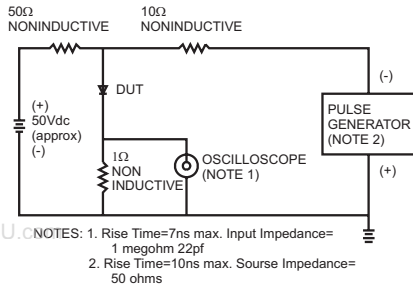


FIG.2- MAXIMUM AVERAGE FORWARD CURRENT DERATING

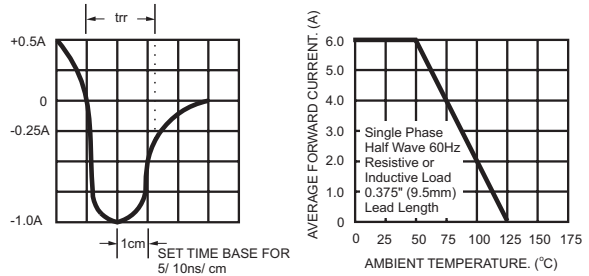


FIG.3- TYPICAL REVERSE CHARACTERISTICS

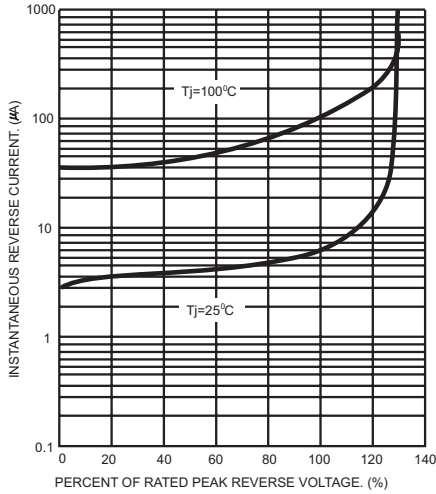


FIG.4- TYPICAL FORWARD CHARACTERISTICS

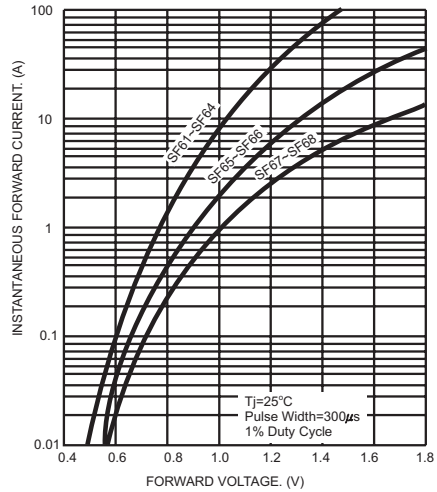


FIG.5- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

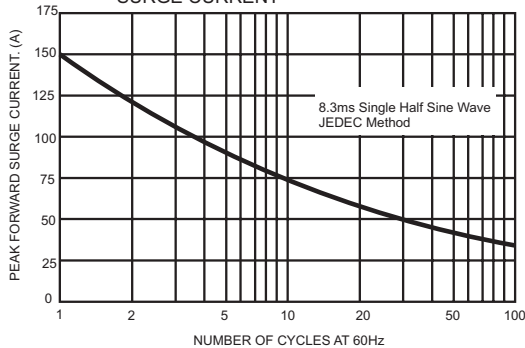


FIG.6- TYPICAL JUNCTION CAPACITANCE

