

## SF51~SF58

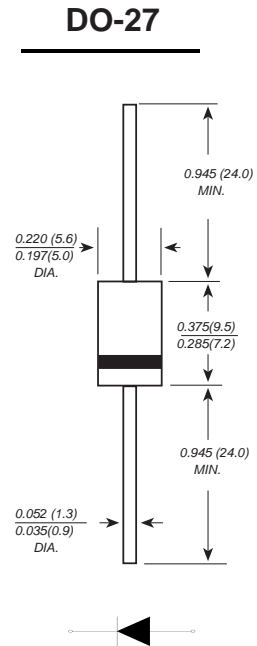
### 5.0Amp Super Fast Silicon Rectifiers

### Features

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Open Junction chip
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed  
250°C/10 seconds at terminals

### Mechanical Data

- Case** : Molded plastic body  
**Terminals** : Solder plated, solderable per MIL-STD-750, Method 2026  
**Polarity** : Polarity symbol marking on body  
**Mounting Position** : Any  
**Weight** : 0.0345 ounce, 0.98 grams



Dimensions in inches and (millimeters)

### Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified. Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

Parameter	SYMBOLS	SF51	SF52	SF53	SF54	SF55	SF56	SF57	SF58	UNITS	
Maximum repetitive 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 at $T_L=100^\circ\text{C}$	$I_{(AV)}$	5.0								A	
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	200.0								A	
Maximum instantaneous forward voltage at 5.0A	$V_F$	0.95				1.25		1.7		V	
Maximum DC reverse current at rated DC blocking voltage $T_A=25^\circ\text{C}$ $T_A=125^\circ\text{C}$	$I_R$	10.0				500				$\mu\text{A}$	
Maximum reverse recovery time(Note 1)	$T_{rr}$	35									ns
Typical junction capacitance (Note2)	$C_J$	80.0									pF
Typical thermal resistance	$R_{qJA}$	45.0									$^\circ\text{C/W}$
Operating junction and storage temperature range	$T_J, T_{STG}$	-55 to +150								$^\circ\text{C}$	

**Note:** 1.Reverse recovery time test condition:  $I_F=0.5A$   $I_R=1.0A$   $I_{rr}=0.25A$   
 2.Measured at 1MHz and applied reverse voltage of 4.0V D.C.

## Ratings And Characteristic Curves

FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

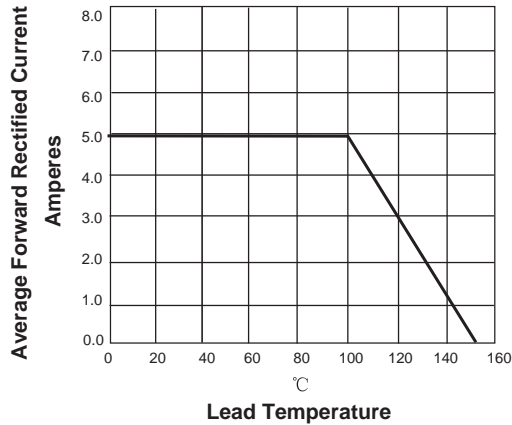


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

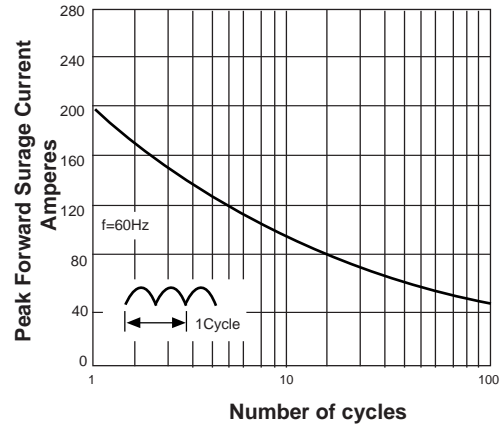


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

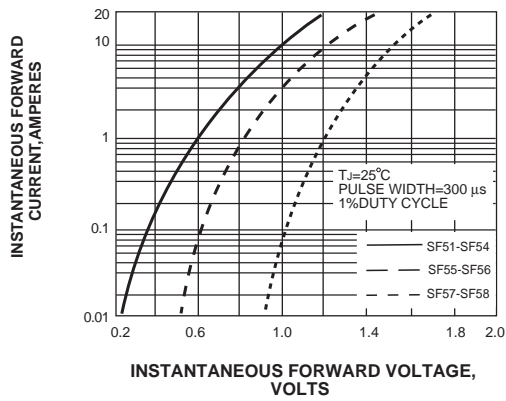


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS

