



# SF21G THRU SF28G

## SUPER FAST RECTIFIER

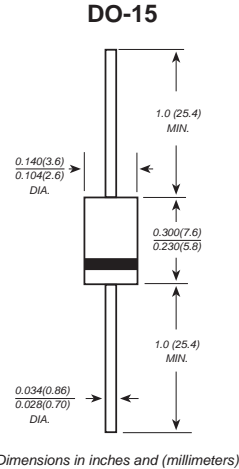
Reverse Voltage - 50 to 600 Volts    Forward Current - 2.0 Amperes

### FEATURES

The plastic package carries Underwriters Laboratory  
 Flammability Classification 94V-0  
 Super fast switching for high efficiency  
 Low reverse leakage  
 High forward surge current capability  
 High temperature soldering guaranteed:  
 260°C/10 seconds, 0.375" (9.5mm) lead length,  
 5 lbs. (2.3kg) tension  
 Glass passivated junction

### MECHANICAL DATA

**Case:** JEDEC DO-15 molded plastic body  
**Terminals:** Plated axial leads, solderable per MIL-STD-750,  
 Method 2026  
**Polarity:** Color band denotes cathode end  
**Mounting Position:** Any  
**Weight:** 0.014 ounce, 0.40 grams



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

	SYMBOLS	SF21G	SF22G	SF23G	SF24G	SF25G	SF26G	SF28G	UNITS	
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	150	200	300	400	600	VOLTS	
Maximum RMS voltage	$V_{RMS}$	35	70	105	140	210	280	420	VOLTS	
Maximum DC blocking voltage	$V_{DC}$	50	100	150	200	300	400	600	VOLTS	
Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A=55^\circ\text{C}$	$I_{AV}$	2.0							Amps	
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	50.0							Amps	
Maximum instantaneous forward voltage at 2.0A	$V_F$	0.95			1.25		1.7		Volts	
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=100^\circ\text{C}$	$I_R$	5.0				100.0				$\mu\text{A}$
Maximum reverse recovery time    (NOTE 1)	$t_{rr}$	35								ns
Typical junction capacitance (NOTE 2)	$C_J$	60.0			30.0					pF
Typical thermal resistance (NOTE 3)	$R_{\theta JA}$	50.0								$^\circ\text{C/W}$
Operating junction and storage temperature range	$T_J, T_{STG}$	-65 to +150							$^\circ\text{C}$	

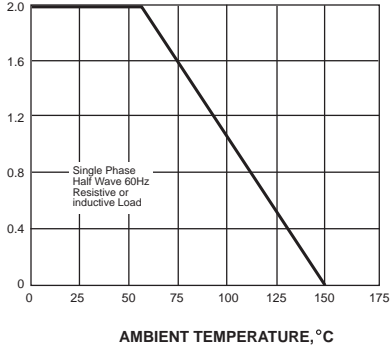
**Note:** 1. Reverse recovery condition  $I_F=0.5\text{A}, I_R=1.0\text{A}, I_{rr}=0.25\text{A}$   
 2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.  
 3. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted



# RATINGS AND CHARACTERISTIC CURVES SF21G THRU SF28G

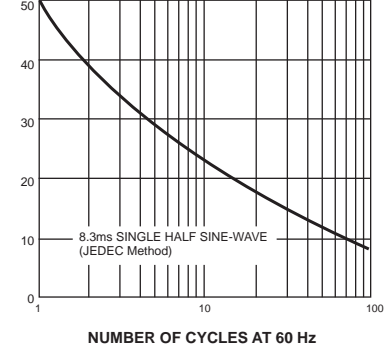
AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



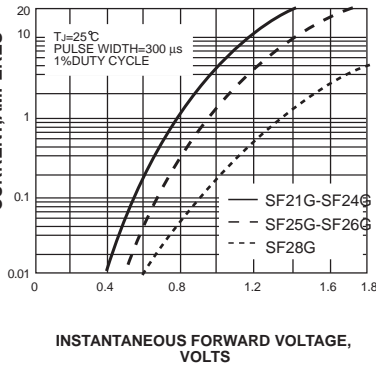
PEAK FORWARD SURGE CURRENT, AMPERES

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



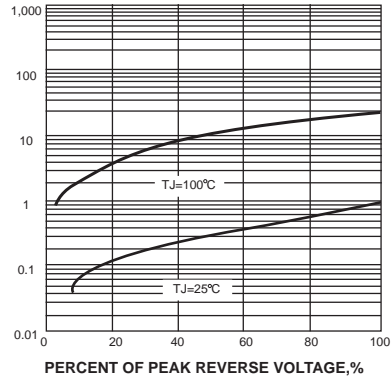
INSTANTANEOUS FORWARD CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



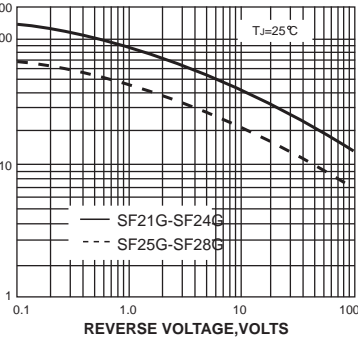
INSTANTANEOUS REVERSE CURRENT, MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE, °C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

