



## SUPER FAST RECOVERY RECTIFIER

**SF21 - SF28**

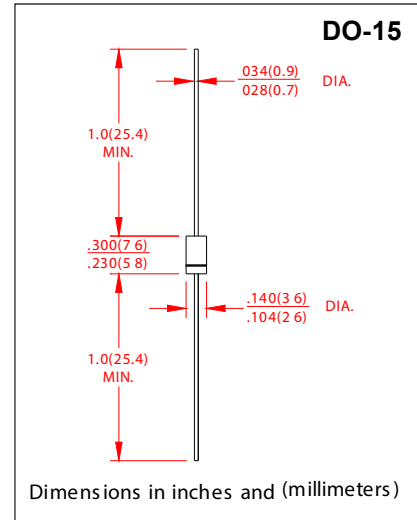
**VOLTAGE RANGE - 50 to 600 V**  
**CURRENT - 2 A**

### FEATURES

- Low cost construction
- Fast switching for high efficiency.
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed:  
260°C/10 seconds/.375”(9.5mm)lead length at 5 lbs(2.3kg) tension

### MECHANICAL DATA

- Case: Transfer molded plastic
- Epoxy: UL94V-O rate flame retardant
- Polarity: Color band denotes cathode end
- Lead: Plated axial lead, solderable per MIL-STD-202E method 208C
- Mounting position: Any
- Weight: 0.014ounce, 0.39grams



### 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 derate current by 20%.

	SYMBOLS	SF 21	SF 22	SF 23	SF 24	SF 25	SF 26	SF 27	SF 28	UNITS
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	50	100	150	200	300	400	500	600	Volts
Maximum RMS Voltage	$V_{RMS}$	35	70	105	140	210	280	350	420	Volts
Maximum DC Blocking Voltage	$V_{DC}$	50	100	150	200	300	400	500	600	Volts
Maximum Average Forward Rectified Current 0.375”(9.5mm) lead length at $T_A=55^\circ\text{C}$	$I_{(AV)}$	2.0								Amp
Peak Forward Surge Current 8.3mS single half sine wave superimposed on rated load (JEDEC method)	$I_{FSM}$	50								Amps
Maximum Instantaneous Forward Voltage @ 2.0A	$V_F$	0.95				1.25		1.7		Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	$I_R$	$T_A = 25^\circ\text{C}$ 5.0								$\mu\text{A}$
		$T_A = 125^\circ\text{C}$ 50								
Maximum Reverse Recovery Time Test conditions $I_F=0.5\text{A}, I_R=1.0\text{A}, I_{RR}=0.25\text{A}$	$t_{rr}$	35								ns
Typical Thermal Capacitance (Measured at 1.0MHz and applied rever voltage of 4.0V)	$C_J$	30				20				PF
Typical Thermal Resistance(NOTE 1)	$R_{\theta JA}$	40								$^\circ\text{C}/\text{W}$
Operating Junction Temperature Range	$T_J$	(-55 to +150)								$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	(-55 to +150)								$^\circ\text{C}$

**Notes:**

1. Thermal resistance from junction to ambient with .375”(9.5mm)lead length, P.C.B. mounted.



# SUPER FAST RECOVERY RECTIFIER

## SF21 - SF28

## VOLTAGE RANGE - 50 to 600 V CURRENT - 2 A

### RATING AND CHARACTERISTIC CURVES SF21 - SF28

FIG. 1-TYPICAL FORWARD CURRENT DERATING CURVE

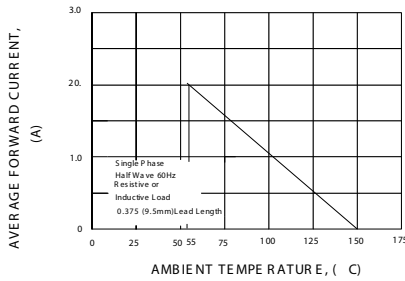


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

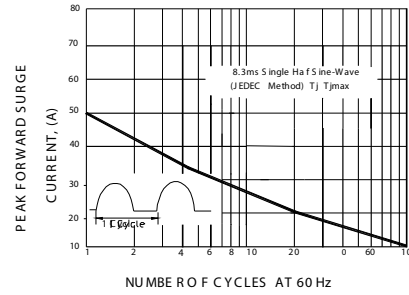


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

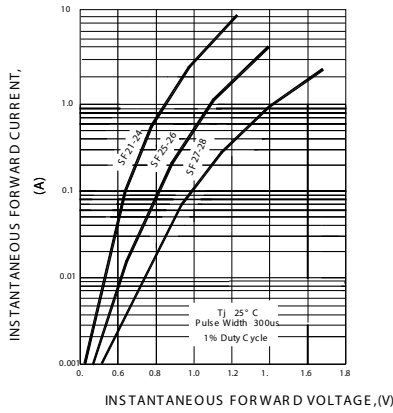


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

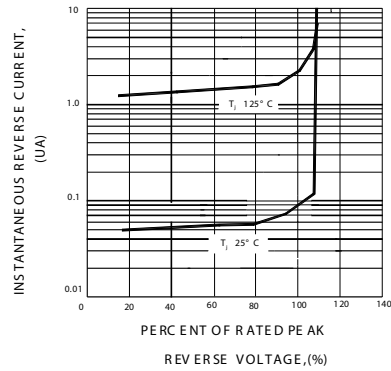


FIG. 5-TYPICAL JUNCTION CAPACITANCE

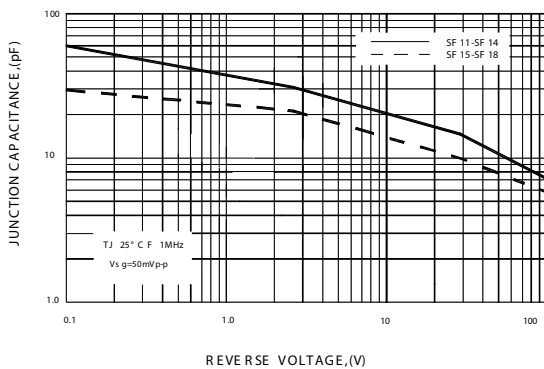


FIG. 6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

