



**DC COMPONENTS CO., LTD.**

RECTIFIER SPECIALISTS

SF21  
THRU  
SF28

**TECHNICAL SPECIFICATIONS OF SUPER FAST RECTIFIER**

VOLTAGE RANGE - 50 to 600 Volts

CURRENT - 2.0 Amperes

**FEATURES**

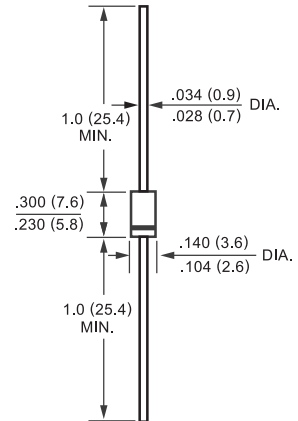
- \* High reliability
- \* Low leakage
- \* Low forward voltage
- \* High current capability
- \* Super fast switching speed
- \* High surge capability
- \* Good for switching mode circuit

**MECHANICAL DATA**

- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: MIL-STD-202E, Method 208 guaranteed
- \* Mounting position: Any
- \* Weight: 0.38 gram



DO-15



Dimensions in inches and (millimeters)

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings 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%.

	SYMBOL	SF21	SF22	SF23	SF24	SF25	SF26	SF28	UNITS	
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	150	200	300	400	600	Volts	
Maximum RMS Volts	V <sub>RMS</sub>	35	70	105	140	210	280	420	Volts	
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	150	200	300	400	600	Volts	
Maximum Average Forward Current T <sub>A</sub> = 55°C	I <sub>O</sub>	2.0							Amps	
Peak Forward Surge Current I <sub>FM</sub> (surge):8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	75							Amps	
Maximum Forward Voltage at 2.0A DC	V <sub>F</sub>	0.95			1.25		1.7		Volts	
Maximum DC Reverse Current at Rated DC Blocking Voltage	@ T <sub>A</sub> = 25°C	5.0							uAmps	
	@ T <sub>A</sub> =150°C	200								
Maximum Reverse Recovery Time (Note 1)	t <sub>rr</sub>	35								nSec
Typical Junction Capacitance (Note 2)	C <sub>J</sub>	30				20				pF
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to + 150							°C	

NOTES : 1. Test Conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>RR</sub>=0.25A.  
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.

## RATING AND CHARACTERISTIC CURVES ( SF21 THRU SF28 )

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

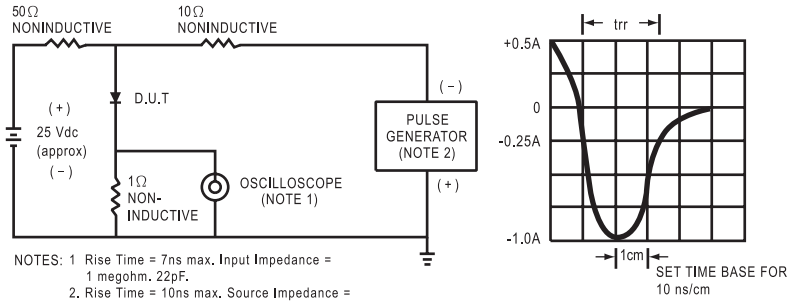


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

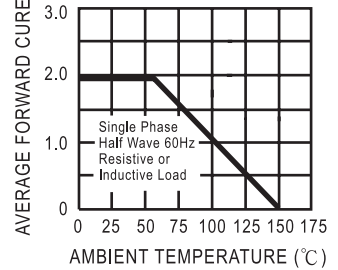


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

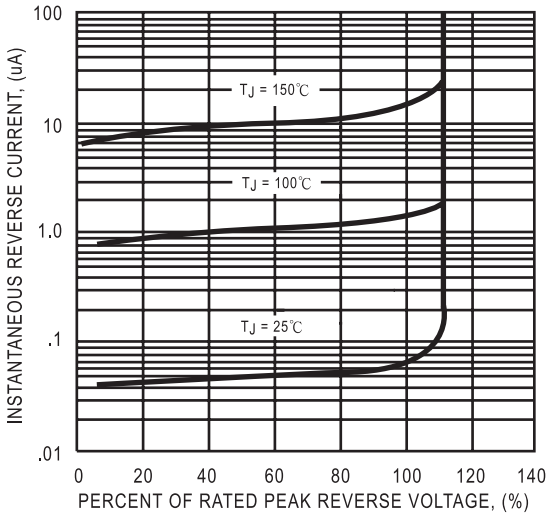


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

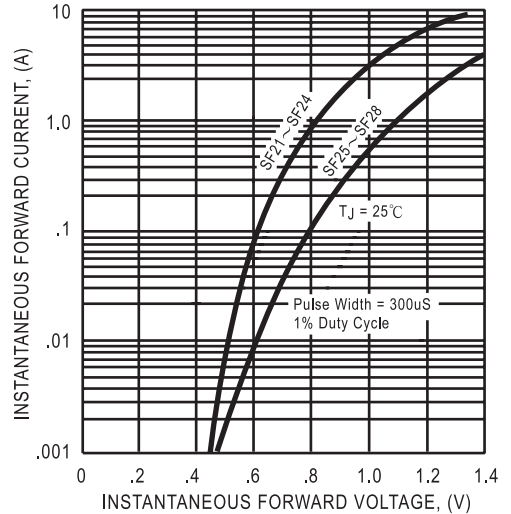


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

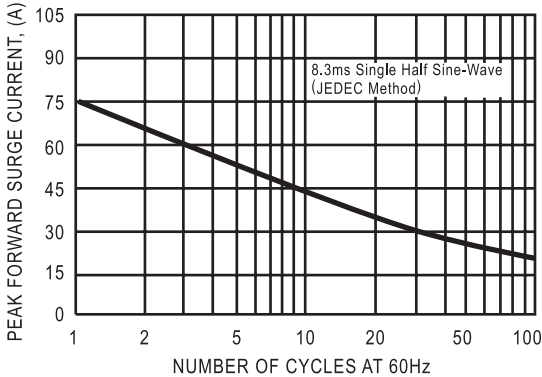


FIG. 6 - TYPICAL JUNCTION CAPACITANCE

