

# SF21 THRU SF28

## SUPERFAST RECOVERY RECTIFIER



康比電子  
HORNBY ELECTRONIC

**REVERSE VOLTAGE:** 50 to 600 VOLTS

**FORWARD CURRENT:** 2.0 AMPERE

### FEATURES

- High surge capability
- Low forward voltage, high current capability
- Hermetically sealed
- Superfast recovery times
- Exceeds environmental standards of MIL-S-19500/228
- Low leakage.

### MECHANICAL DATA

Case: Molded plastic, DO-15

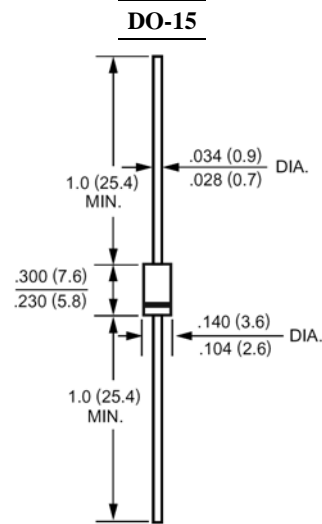
Epoxy: UL 94V-O rate flame retardant

Lead: Axial leads, solderable per MIL-STD-202,  
method 208 guaranteed

Polarity: Color band denotes cathode end

Mounting position: Any

Weight: 0.015ounce, 0.4gram



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, derate current by 20%.

	Symbols	SF21	SF22	SF23	SF24	SF25	SF26	SF27	SF28	Units
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	150	200	300	400	500	600	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	105	140	210	280	350	420	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	150	200	300	400	500	600	Volts
Maximum Average Forward Rectified Current .375"(9.5mm) Lead Length at T <sub>A</sub> =55°C	I <sub>(AV)</sub>	2.0								Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	50								Amp
Maximum Forward Voltage at 2.0A DC and 25°C	V <sub>F</sub>	0.95				1.25		1.7		Volts
Maximum Reverse Current at T <sub>A</sub> =25°C at Rated DC Blocking Voltage T <sub>A</sub> =100°C	I <sub>R</sub>	5.0 50								uAmp
Typical Junction Capacitance (Note 1)	C <sub>J</sub>	60				30				pF
Typical Thermal Resistance (Note 2)	R <sub>θJA</sub>	40								°C/W
Maximum Reverse Recovery Time (Note 3)	T <sub>RR</sub>	35							50	nS
Operating Junction Temperature Range	T <sub>J</sub>	-55 to +125								°C
Storage Temperature Range	T <sub>stg</sub>	-55 to +150								°C

### NOTES:

1- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.

2- Thermal Resistance from Junction to Ambient 0.375"(9.5mm) lead length P.C.B. Mounted.

3- Reverse Recovery Test Conditions:  $I_F=.5A$ ,  $I_R=1A$ ,  $I_{RR}=.25A$ .

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### RATINGS AND CHARACTERISTIC CURVES

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

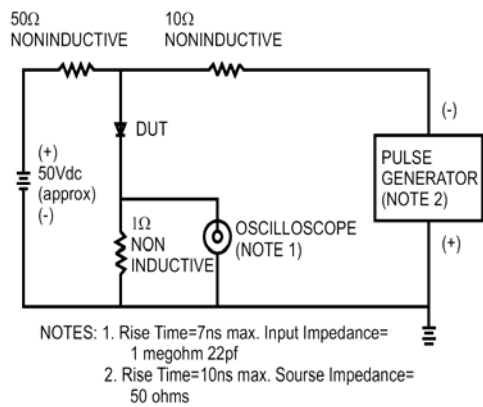


FIG.2- MAXIMUM AVERAGE FORWARD CURRENT DERATING

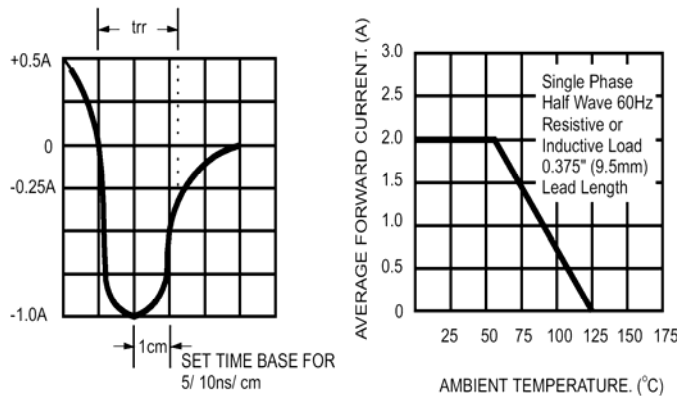


FIG.3- TYPICAL REVERSE CHARACTERISTICS

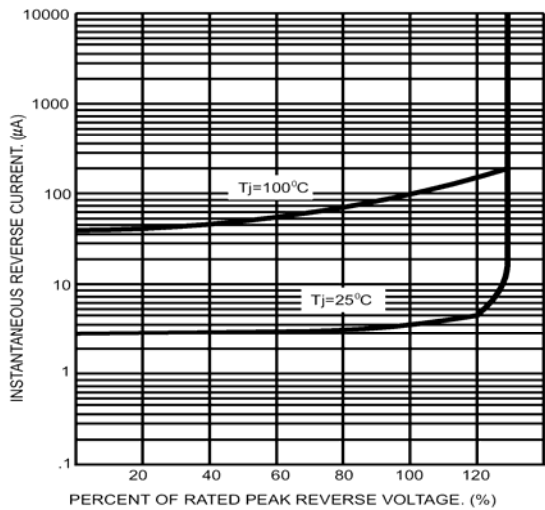


FIG.4- TYPICAL FORWARD CHARACTERISTICS

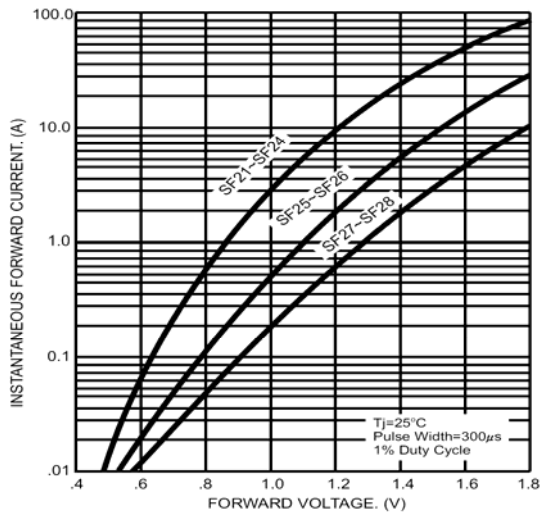


FIG.5- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

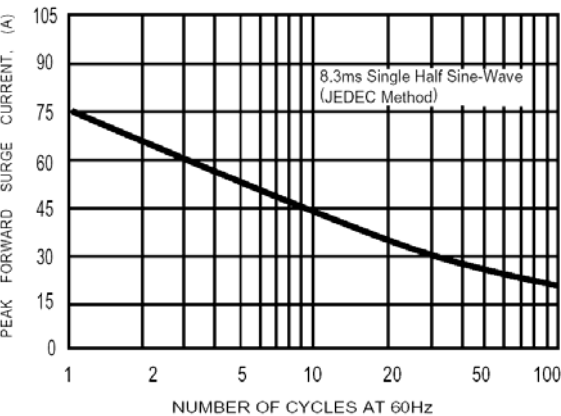


FIG.6- TYPICAL JUNCTION CAPACITANCE

