

### III. Fast / Ultra Fast / Super Fast Recovery Rectifier

#### 2.0A Super Fast Recovery Rectifier SF21~SF28

(Package: DO-15)

<p><b>FEATURES</b></p> <ul style="list-style-type: none"> <li>• The plastic package carries Underwriters Laboratory Flammability Classification 94V-0</li> <li>• Super fast switching for high efficiency</li> <li>• Low reverse leakage</li> <li>• High forward surge current capability</li> <li>• High temperature soldering guaranteed: 250 /10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3 kg) tension</li> </ul> <p><b>MECHANICAL DATA</b></p> <ul style="list-style-type: none"> <li>• Case : JEDEC DO-15 molded plastic body</li> <li>• Terminals : Plated axial leads, solderable per MIL-STD-750, Method 2026</li> <li>• Polarity : Color band denotes cathode end</li> <li>• Mounting Position : Any</li> <li>• Weight : 0.014 ounce, 0.40 grams</li> </ul>	<p>Case: DO-15 Dimensions in inches and (millimeters)</p>
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### Ratings & Electrical Characteristics

Ratings at 25 ambient temperature unless otherwise specified.

Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20%.

Characteristic	Symbol	SF21	SF22	SF23	SF24	SF25	SF26	SF28	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 $T_a = 55$	$I_o$	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			1.30		1.70		Volts
Maximum DC reverse current $T_a = 25$ at rated DC blocking voltage $T_a = 100$	$I_R$	5.0 200.0							$\mu A$
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)	$R_{th-JA}$	50.0							/ W
Operating junction and storage temperature range	$T_j, T_{stg}$	-65 to +150							

Note :

1. Reverse recovery conditions:  $I_F = 0.5A$ ,  $I_R = 1.0A$ ,  $I_{RR} = 0.25A$
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts DC
3. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

## Ratings and Characteristic Curves of SF21~SF28

