



# R3500F THRU R6000F

## Features

- AVALANCHE OPERATION
- UL 94V0 FLAME RETARDANT EPOXY MOLDING COMPOND
- BEVELED ROUND CHIP
- LOW COST

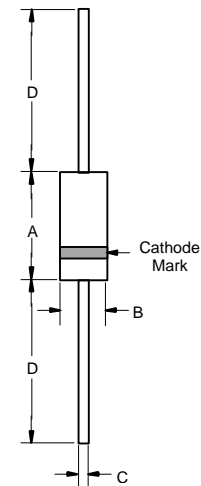
**0.2mA Fast Recovery  
High Voltage Rectifier  
3500 - 6000 Volts**

## Maximum Ratings

- Operating Temperature -55 °C to +125 °C
- Storage Temperature: - 55°C to +150°C

| MCC Catalog Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|--------------------|----------------|--|---------------------|-----------------------------|
| R3500F             | R3500F         | 3500V                                  | 2450V               | 3500V                       |
| R4000F             | R4000F         | 4000V                                  | 2800V               | 4000V                       |
| R5000F             | R5000F         | 5000V                                  | 3500V               | 5000V                       |
| R6000F             | R6000F         | 6000V                                  | 4200V               | 6000V                       |

## DO-15

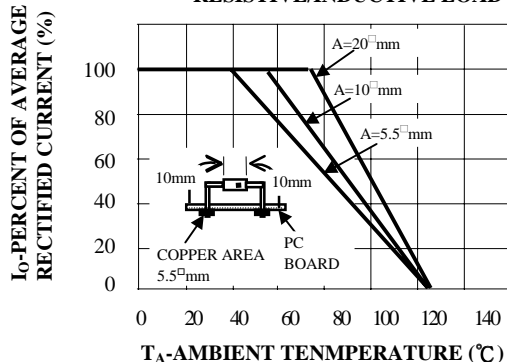


## Electrical Characteristics @ 25°C Unless Otherwise Specified

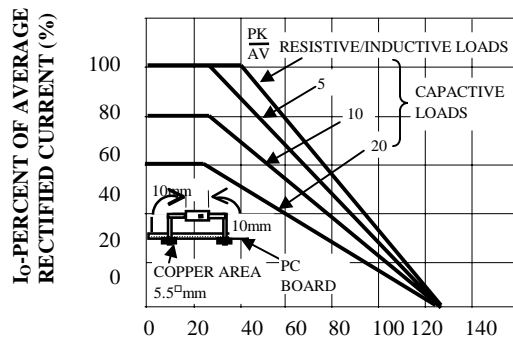
|   |             |                   |  |
|---|-------------|-------------------|--|
| Average Forward Current   | $I_{F(AV)}$ | 0.2A              | $T_A = 55^\circ\text{C}$                                     |
| Peak Forward Surge Current<br>R3500F~4000F<br>R5000F~6000F            | $I_{FSM}$   | 25 A<br>20 A      | 8.3ms, half sine   |
| Maximum Instantaneous Forward Voltage<br>R3500F~4000F<br>R5000F~6000F | $V_F$       | 8.0 V<br>12.0 V   | $I_{FM} = 0.2\text{A};$<br>$T_A = 25^\circ\text{C}$          |
| Maximum DC Reverse Current At Rated DC Blocking Voltage               | $I_R$       | 5.0 $\mu\text{A}$ | $T_A = 25^\circ\text{C}$                                     |
| Typical Junction Capacitance<br>R3500F~4000F<br>R5000F~6000F          | $C_J$       | 6 pF<br>4 pF      | Measured at<br>1.0MHz, $V_R=4.0\text{V}$                     |
| Maximum Reverse Recovery Time   | $T_{rr}$    | 500nS             | $I_F=0.5\text{A}, I_R=1.0\text{A},$<br>$I_{rr}=0.25\text{A}$ |

| DIM | DIMENSIONS |      |       |      | NOTE |
|-----|------------|------|-------|------|------|
|     | INCHES     |      | MM    |      |      |
|     | MIN        | MAX  | MIN   | MAX  |      |
| A   | .230       | .300 | 5.80  | 7.60 |      |
| B   | .104       | .140 | 2.60  | 3.60 |      |
| C   | .026       | .034 | .70   | .90  |      |
| D   | 1.000      | ---  | 25.40 | ---  |      |

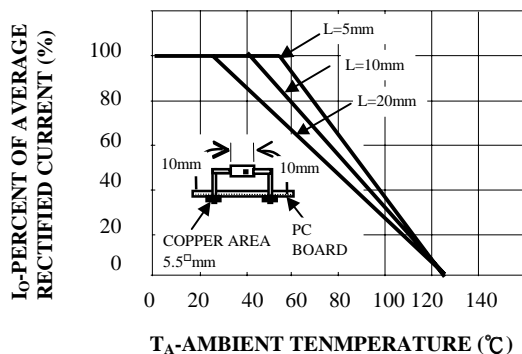
**FIG. 1-MAXIMUM CURRENT RATING  
 EFFECT OF COPPER AREA.  
 RESISTIVE/INDUCTIVE LOAD**



**FIG. 2-MAXIMUM CURRENT RATING  
 CAPACITIVE LOAD,  
 10mm LEAD LENGTHS**



**FIG. 3-MAXIMUM CURRENT RATING  
 EFFECT OF COPPER AREA.  
 RESISTIVE/INDUCTIVE LOAD**



**FIG. 4-TYPICAL REVERSE CHARACTERISTICS  
 AT Tj=25°C**

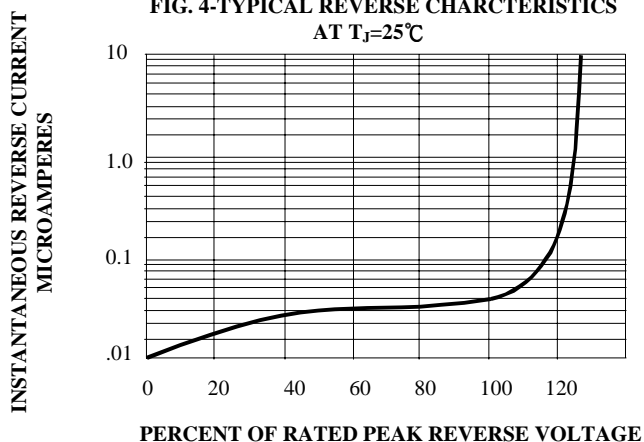


FIG. 5-MAXIMUM FORWARD SURGE VS NUMBER OF CYCLES

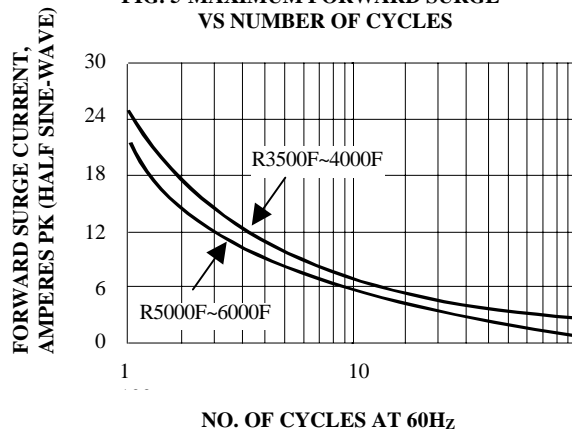


FIG. 6-TYPICAL JUNCTION CAPACITANCE

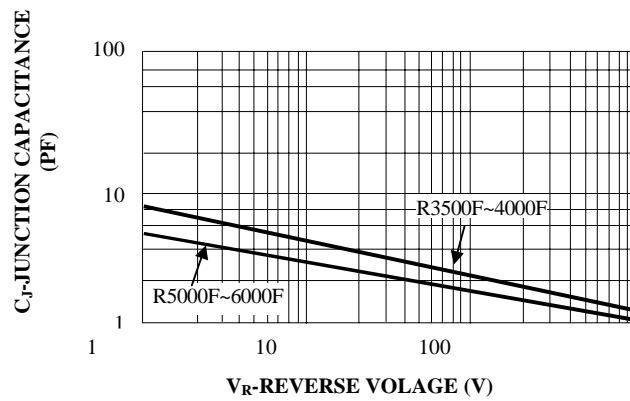
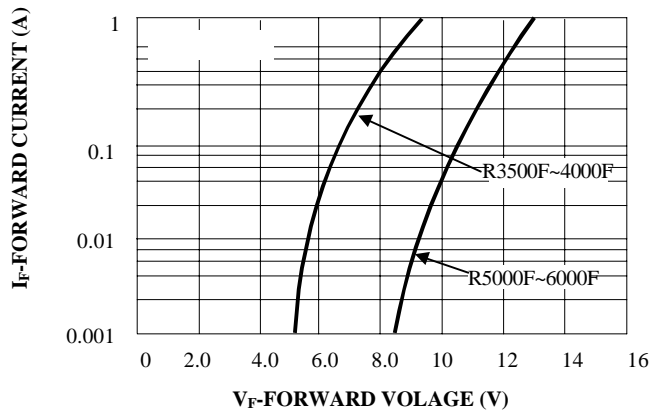


FIG. 7-TYPICAL FORWARD CHARACTERISTICS



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