



Micro Commercial Components



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# R1200F THRU R2000F

## Features

- Lead Free Finish/RoHS Compliant (Note1) ("P" Suffix designates Compliant. See ordering information)
- High Current Capability
- Fast Switching For Higher Efficiency
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

## Maximum Ratings

- Operating Temperature: -55°C to +150°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 |
|--------------------|----------------|--|---------------------|-----------------------------|
| R1200F             | R1200F         | 1200V                                  | 840V                | 1200V                       |
| R1500F             | R1500F         | 1500V                                  | 1050V               | 1500V                       |
| R1800F             | R1800F         | 1800V                                  | 1260V               | 1800V                       |
| R2000F             | R2000F         | 2000V                                  | 1400V               | 2000V                       |

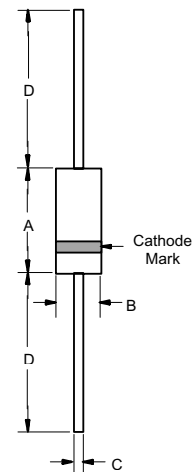
## Electrical Characteristics @ 25°C Unless Otherwise Specified

|  |             |               |   |
|--|-------------|---------------|---|
| Average Forward Current  | $I_{F(AV)}$ | 500mA         | $T_A = 50^\circ\text{C}$                              |
| Peak Forward Surge Current                                       | $I_{FSM}$   | 30A           | 8.3ms, half sine                                      |
| Maximum Instantaneous Forward Voltage<br>R1200F-R1800F<br>R2000F | $V_F$       | 2.4V<br>4.0V  | $I_{FM} = 0.5A$ ;<br>$T_A = 50^\circ\text{C}$         |
| Maximum DC Reverse Current At Rated DC Blocking Voltage          | $I_R$       | 5.0μA<br>50μA | $T_A = 25^\circ\text{C}$<br>$T_A = 100^\circ\text{C}$ |
| Typical Junction Capacitance                                     | $C_J$       | 30pF          | Measured at 1.0MHz, $V_R=4.0V$                        |
| Maximum Reverse Recovery Time                                    | $T_{rr}$    | 500nS         |   |

Note: 1. High Temperature Solder Exemption Applied, see EU Directive Annex 7.

## 500 Milliamp High Voltage Fast Recovery Silicon Rectifier 1200 to 2000 Volts

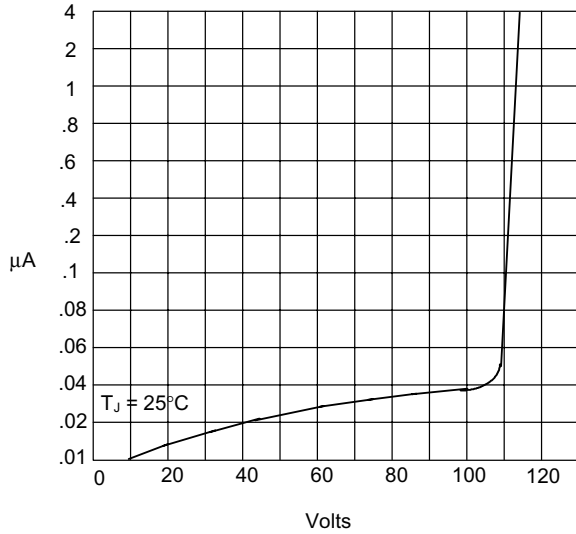
### DO-41



| DIM | DIMENSIONS |      |       |      | NOTE |
|-----|------------|------|-------|------|------|
|     | INCHES     |      | MM    |      |      |
| A   | MIN        | MAX  | MIN   | MAX  |      |
| A   | .166       | .205 | 4.10  | 5.20 |      |
| B   | .080       | .107 | 2.00  | 2.70 |      |
| C   | .028       | .034 | .70   | .90  |      |
| D   | 1.000      | ---  | 25.40 | ---  |      |

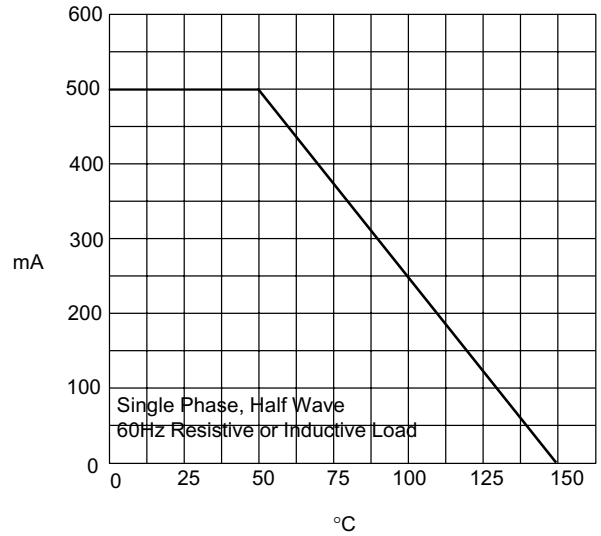
R1200F thru R2000F

Figure 1  
Typical Reverse Characteristics



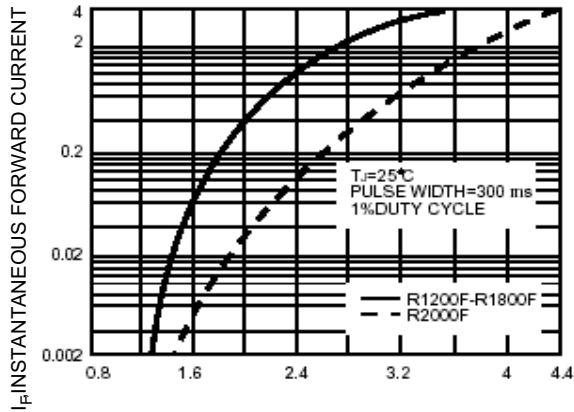
Instantaneous Reverse Current - Micro Amps versus  
Percent Of Rated Peak Reverse Voltage - Volts

Figure 2  
Forward Derating Curve



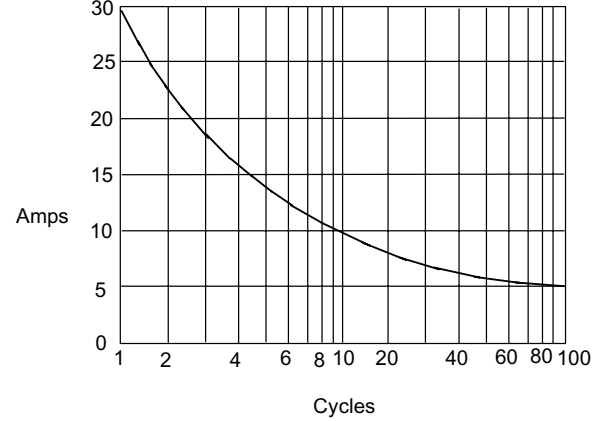
Average Forward Rectified Current - Amperes versus  
Ambient Temperature - °C

Figure 3  
Typical Forward Characteristics



$I_F$ , INSTANTANEOUS FORWARD CURRENT (A)  
 $V_F$ , INSTANTANEOUS FORWARD VOLTAGE (V)

Figure 4  
Peak Forward Surge Current



Peak Forward Surge Current - Amperes versus  
Number Of Cycles At 60Hz - Cycles



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### Ordering Information :

| Device         | Packing                      |
|----------------|------------------------------|
| Part Number-TP | Tape&Reel: 5Kpcs/Reel        |
| Part Number-AP | Ammo Packing: 5Kpcs/Ammo Box |
| Part Number-BP | Bulk: 50Kpcs/Carton          |

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