

**R3000GP  
 THRU  
 R6000GP**

**200 Milliamp  
 High Voltage  
 Silicon Rectifier  
 3000 to 6000 Volts**

**Features**

- Halogen free available upon request by adding suffix "-HF"
- High Voltage
- Low Leakage
- Low Forward Voltage Drop
- Glass passivated chip
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Lead Free Finish/Rohs Compliant (Note1) ("P" Suffix designates Compliant. See ordering information)

**Maximum Ratings**

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

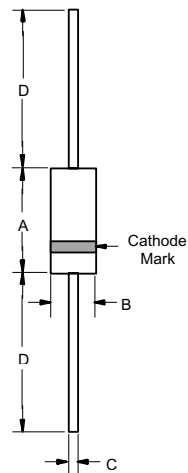
| Microsemi Catalog Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|--------------------------|----------------|--|---------------------|-----------------------------|
| R3000GP                  | R3000GP        | 3000V                                  | 2100V               | 3000V                       |
| R4000GP                  | R4000GP        | 4000V                                  | 2800V               | 4000V                       |
| R5000GP                  | R5000GP        | 5000V                                  | 3500V               | 5000V                       |
| R6000GP                  | R6000GP        | 6000V                                  | 4200V               | 6000V                       |

**Electrical Characteristics @ 25°C Unless Otherwise Specified**

|   |             |                                       |   |
|---|-------------|---------------------------------------|---|
| Average Forward Current                                 | $I_{F(AV)}$ | 200mA                                 | $T_A = 60^\circ\text{C}$                                    |
| Peak Forward Surge Current                              | $I_{FSM}$   | 15A                                   | 8.3ms, half sine  |
| Maximum Instantaneous Forward Voltage                   | $V_F$       | R3000GP<br>R4000GP<br>R5000GP~R6000GP | $I_{FM} = 0.5A;$<br>$T_A = 50^\circ\text{C}$                |
|   |             | 2.3V                                  |   |
|   |             | 3.5V<br>5.0V                          |   |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | $I_R$       | 5.0µA                                 | $T_A = 25^\circ\text{C}$                                    |
| Maximum reverse recovery time                           | $T_{rr}$    | >1200                                 | $I_F=0.5A, I_R=1.0A,$<br>$I_{RR}=0.25A(\text{RG1 circuit})$ |

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

**DO-15**



| 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 | ---  |      |

## Ratings and Characteristics Curves ( $T_A=25^\circ\text{C}$ unless otherwise noted)

Fig.1 Forward Current Derating Curve

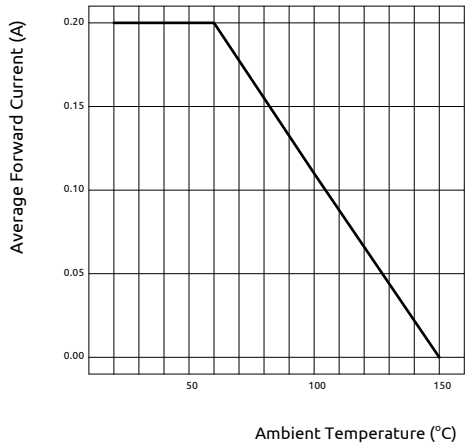


Fig.2 Typical Reverse Characteristics

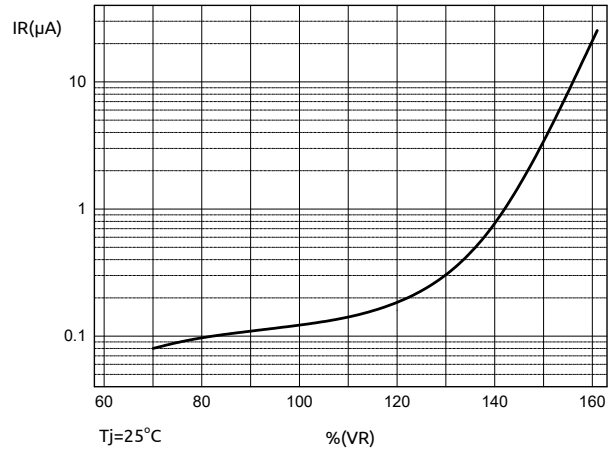


Fig.3 - Typical Forward Characteristics

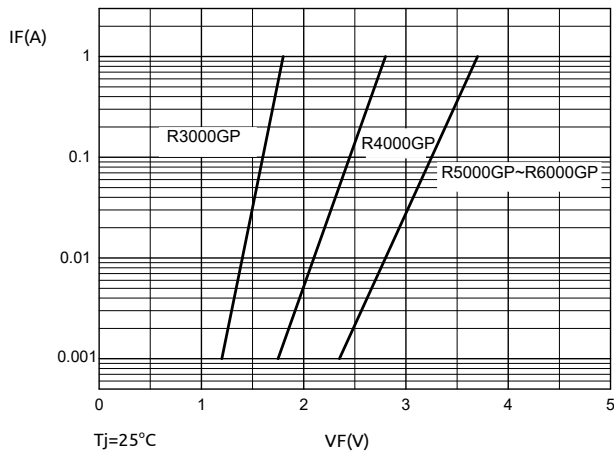
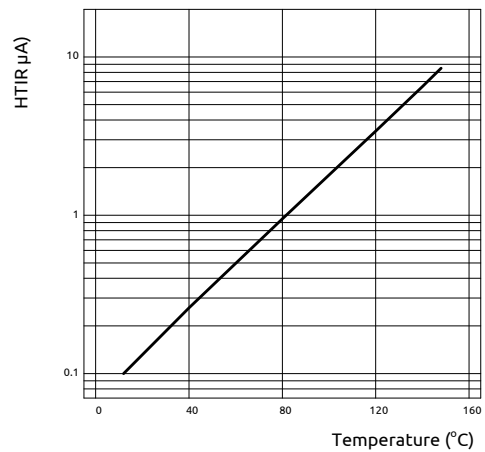


Fig.4 - Typical High Temperature Reverse Leakage





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Ordering Information :

| Device         | Packing                      |
|----------------|------------------------------|
| Part Number-TP | Tape&Reel: 4Kpcs/Reel        |
| Part Number-AP | Ammo Packing: 3Kpcs/Ammo Box |
| Part Number-BP | Bulk: 25Kpcs/Carton          |

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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