

## Features

- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Fast Switching Speed For High Efficiency
- Glass Passivated Junction
- Lead Free Finish/RoHS Compliant(Note 1)("P" Suffix Designates Compliant. See Ordering Information)

## Maximum Ratings

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Typical Thermal Resistance: 30 °C/W Junction to Ambient

| MCC Part Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|-----------------|----------------|----------------------------------------|---------------------|-----------------------------|
| FR301GP         | FR301GP        | 50V                                    | 35V                 | 50V                         |
| FR302GP         | FR302GP        | 100V                                   | 70V                 | 100V                        |
| FR303GP         | FR303GP        | 200V                                   | 140V                | 200V                        |
| FR304GP         | FR304GP        | 400V                                   | 280V                | 400V                        |
| FR305GP         | FR305GP        | 600V                                   | 420V                | 600V                        |
| FR306GP         | FR306GP        | 800V                                   | 560V                | 800V                        |
| FR307GP         | FR307GP        | 1000V                                  | 700V                | 1000V                       |

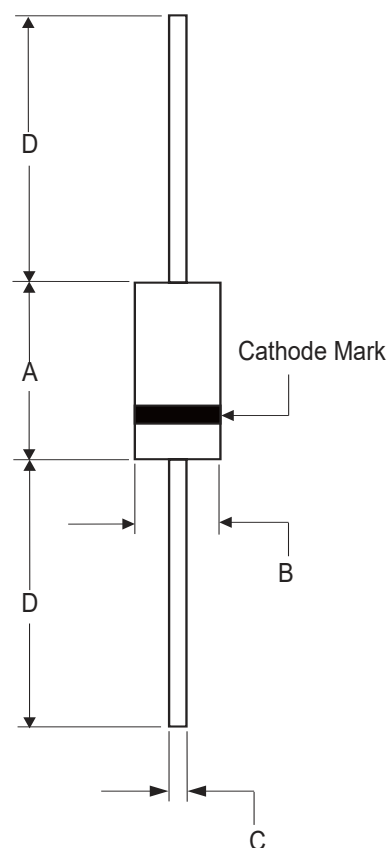
## Electrical Characteristics @ 25°C Unless Otherwise Specified

|                                                                            |             |                         |                                                         |
|----------------------------------------------------------------------------|-------------|-------------------------|---------------------------------------------------------|
| Average Forward Current                                                    | $I_{F(AV)}$ | 3.0A                    | $T_A=55^\circ\text{C}$                                  |
| Peak Forward Surge Current                                                 | $I_{FSM}$   | 150A                    | 8.3ms, Half Sine                                        |
| Maximum Instantaneous Forward Voltage                                      | $V_F$       | 1.30V                   | $I_F=3.0\text{A}; T_J=25^\circ\text{C}$                 |
| Maximum DC Reverse Current At Rated DC Blocking Voltage                    | $I_R$       | 5.0μA<br>100μA          | $T_J=25^\circ\text{C}; T_J=55^\circ\text{C}$            |
| Maximum Reverse Recovery Time<br>FR301GP-304GP<br>FR305GP<br>FR306GP-307GP | $t_{rr}$    | 150ns<br>250ns<br>500ns | $I_F=0.5\text{A}; I_R=1.0\text{A}; I_{rr}=0.25\text{A}$ |
| Typical Junction Capacitance                                               | $C_J$       | 50pF                    | Measured at 1.0MHz<br>$V_R=4.0\text{V}$                 |

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

# 3.0 Amp Fast Recovery Rectifier 50 to 1000 Volts

## DO-201AD



| DIM | INCHES |       | MM    |       | NOTE |
|-----|--------|-------|-------|-------|------|
|     | MIN    | MAX   | MIN   | MAX   |      |
| A   | 0.287  | 0.374 | 7.30  | 9.50  |      |
| B   | 0.189  | 0.208 | 4.80  | 5.30  |      |
| C   | 0.048  | 0.052 | 1.20  | 1.30  |      |
| D   | 1.000  | ----- | 25.40 | ----- |      |

## Curve Characteristics

Fig. 1 - Forward Current Derating Curve

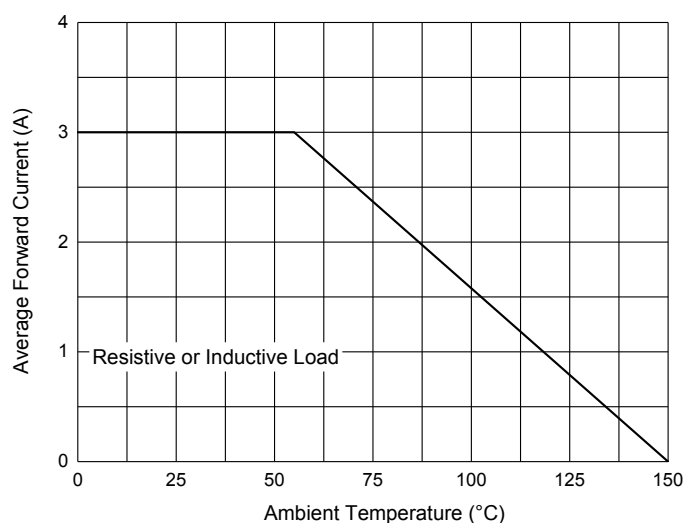


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

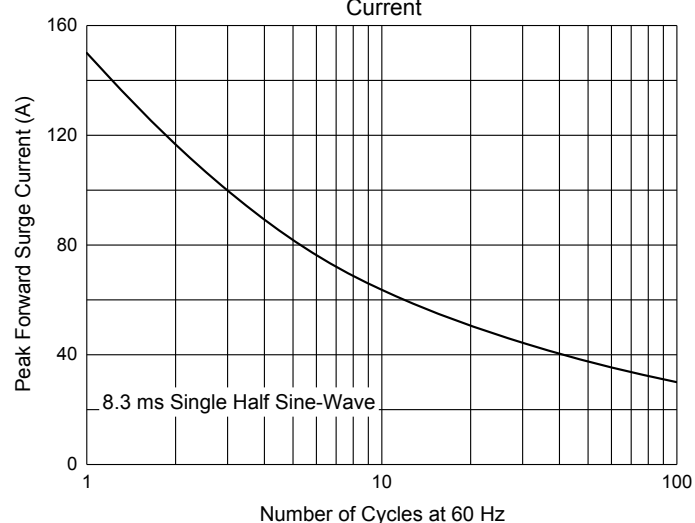


Fig. 3 - Typical Instantaneous Forward Characteristics

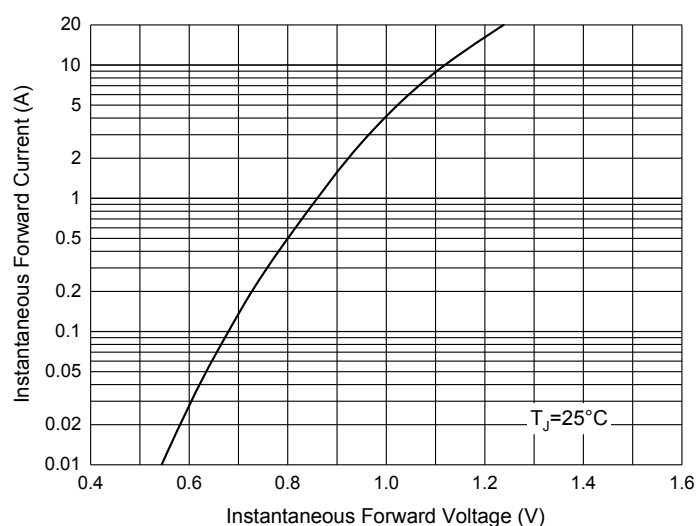
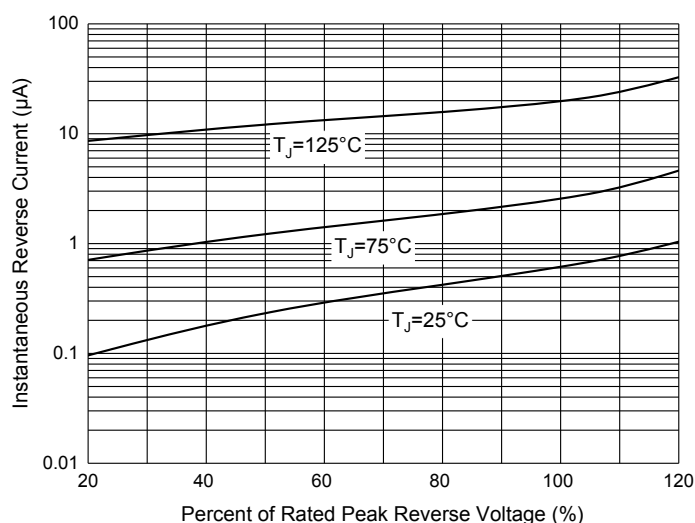


Fig. 4 - Typical Reverse Characteristics



## Ordering Information

| Device           | Packing                        |
|------------------|--------------------------------|
| (Part Number)-TP | Tape&Reel: 1.2Kpcs/Reel        |
| (Part Number)-AP | Ammo Packing: 1.2Kpcs/Ammo Box |
| (Part Number)-BP | Bulk: 12Kpcs/Carton            |

Note : Adding "-HF" Suffix For Halogen Free, eg. Part Number-TP-HF

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