

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

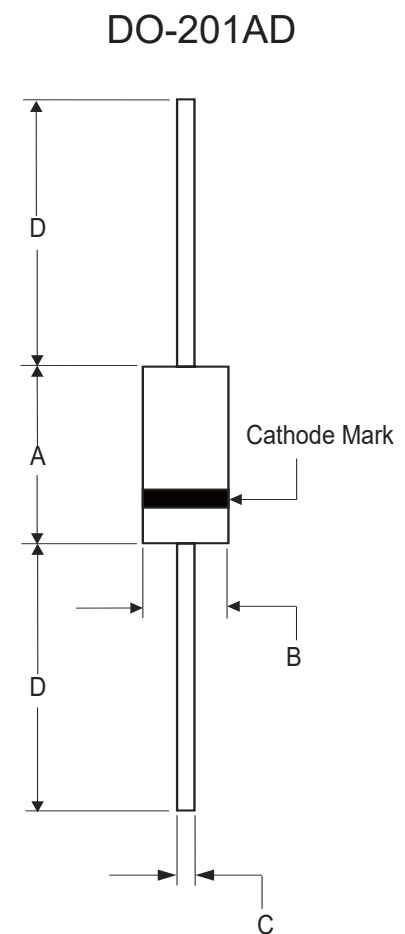
| MCC Part Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|-----------------|----------------|--|---------------------|-----------------------------|
| FR301GP | FR301GP | 50V | 35V | 50V |
| FR302GP | FR302GP | 100V | 70V | 100V |
| 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 | $I_{FM}=3.0A;$ $T_J=25^\circ\text{C}$ |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | I_R | 5.0 μ A 100 μ A | $T_J=25^\circ\text{C};$ $T_J=55^\circ\text{C}$ |
| Maximum Reverse Recovery Time FR301GP-304GP FR305GP FR306GP-307GP | t_{rr} | 150ns 250ns 500ns | $I_F=0.5A; I_R=1.0A;$ $I_{rr}=0.25A$ |
| Typical Junction Capacitance | C_J | 50pF | Measured at 1.0MHz $V_R=4.0V$ |

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

3.0 Amp Fast Recovery Rectifier 50 to 1000 Volts



| 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

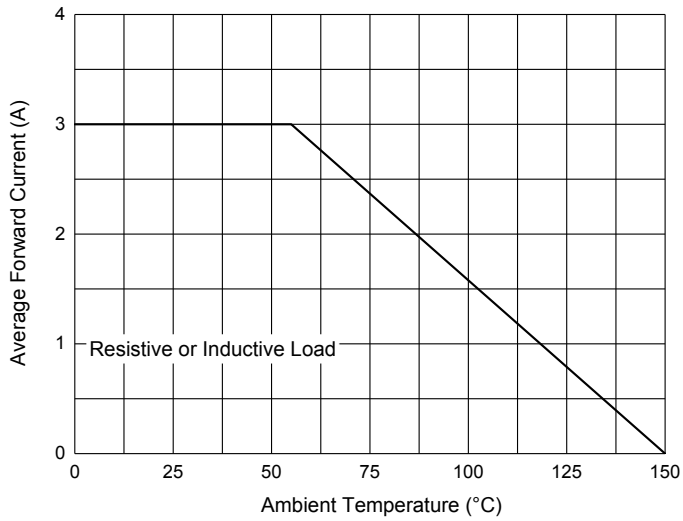


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

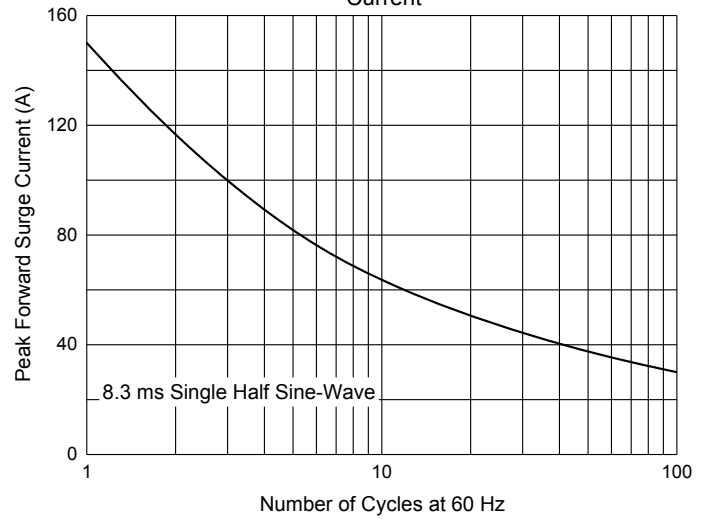


Fig. 3 - Typical Instantaneous Forward Characteristics

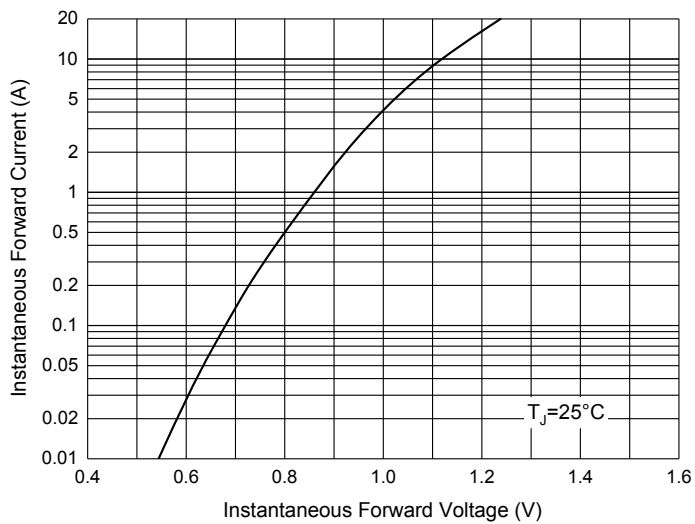
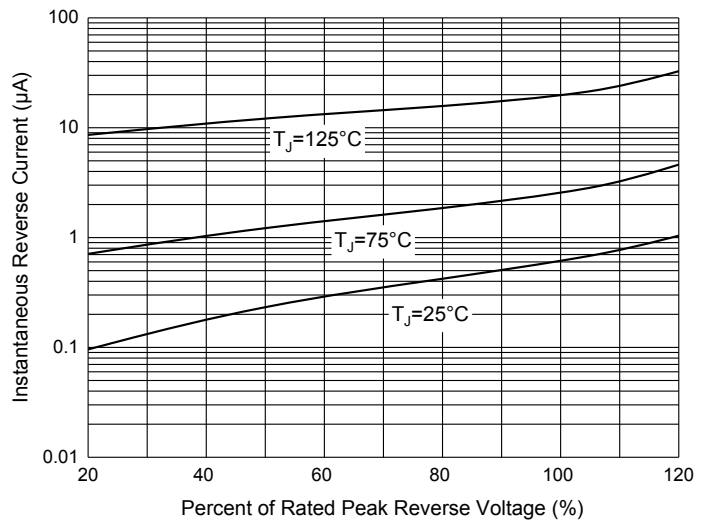


Fig. 4 - Typical Reverse Characteristics



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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