



Micro Commercial Components

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**FR601
THRU
FR607**

Features

- Halogen free available upon request by adding suffix "-HF"
- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Low Forward Voltage Drop
- High Current Capability
- Fast Switching Speed For High Efficiency

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 |
|--------------------|----------------|--|---------------------|-----------------------------|
| FR601 | FR601 | 50V | 35V | 50V |
| FR602 | FR602 | 100V | 70V | 100V |
| FR603 | FR603 | 200V | 140V | 200V |
| FR604 | FR604 | 400V | 280V | 400V |
| FR605 | FR605 | 600V | 420V | 600V |
| FR606 | FR606 | 800V | 560V | 800V |
| FR607 | FR607 | 1000V | 700V | 1000V |

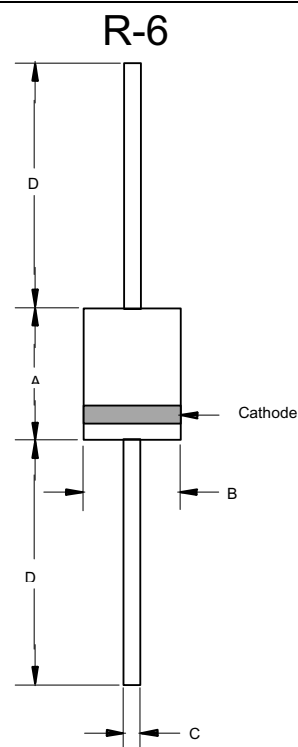
Electrical Characteristics @ 25°C Unless Otherwise Specified

| | | | |
|---|-------------|---------------------------------------|---|
| Average Forward Current | $I_{F(AV)}$ | 6 A | $T_A = 55^\circ\text{C}$ |
| Peak Forward Surge Current | I_{FSM} | 300A | 8.3ms, half sine |
| Maximum Instantaneous Forward Voltage | V_F | 1.3V | $I_{FM} = 6.0\text{A}; T_A = 25^\circ\text{C}$ |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | I_R | 10 μA 150 μA | $T_A = 25^\circ\text{C}$ $T_A = 55^\circ\text{C}$ |
| Maximum Reverse Recovery Time | T_{rr} | 150ns 250ns 500ns | $I_F=0.5\text{A}, I_R=1.0\text{A}, I_{rr}=0.25\text{A}$ |
| Typical Junction Capacitance | C_J | 150pF | Measured at 1.0MHz, $V_R=4.0\text{V}$ |

*Pulse Test: Pulse Width 300 μsec , Duty Cycle 1%

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

**6 Amp Fast Recovery
Rectifier
50 to 1000 Volts**

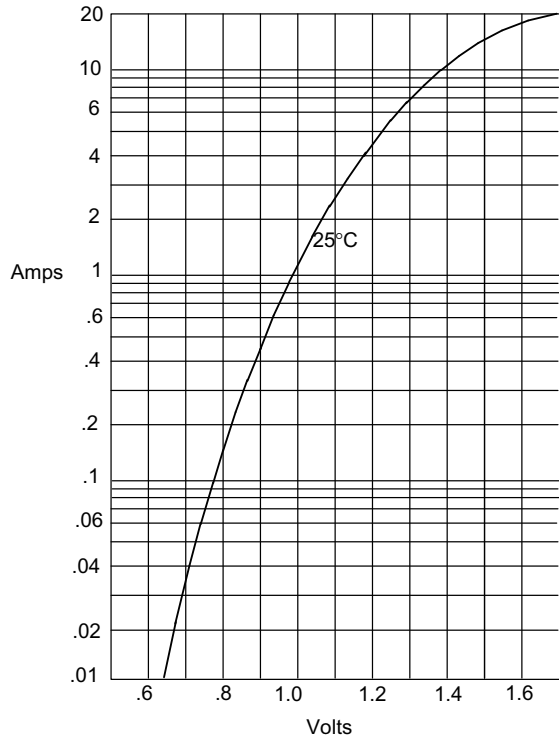


| DIM | DIMENSIONS | | | | NOTE |
|-----|------------|------|-------|------|------|
| | INCHES | | MM | | |
| | MIN | MAX | MIN | MAX | |
| A | .340 | .360 | 8.60 | 9.10 | |
| B | .340 | .360 | 8.60 | 9.10 | |
| C | .048 | .052 | 1.20 | 1.30 | |
| D | 1.000 | --- | 25.40 | --- | |

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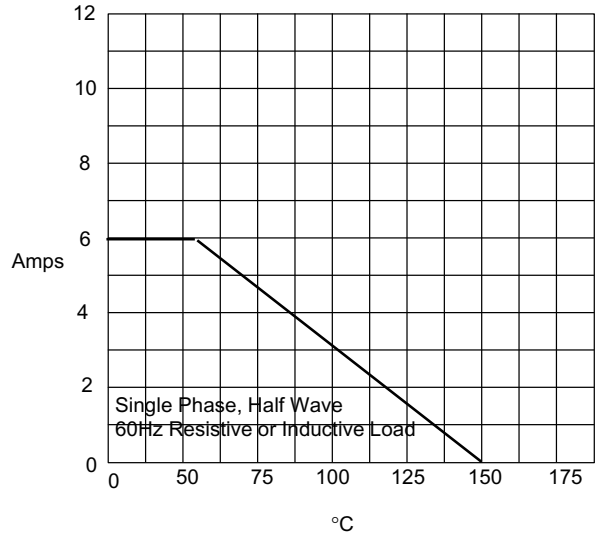
FR601 thru FR607

Figure 1
Typical Forward Characteristics



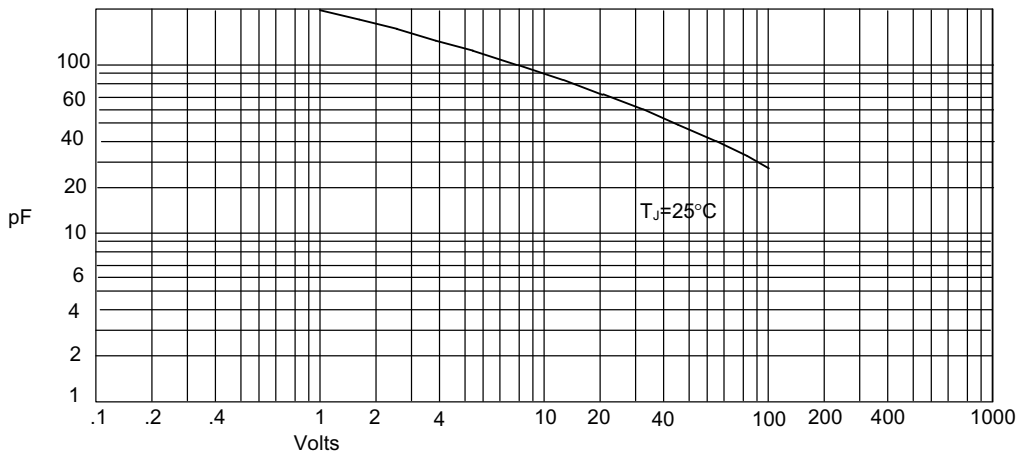
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



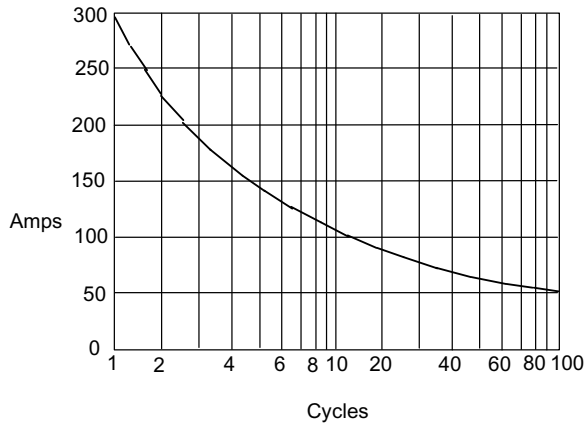
Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 3
Junction Capacitance



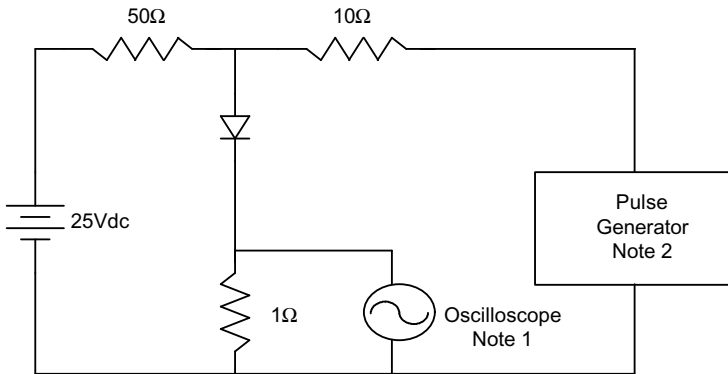
Junction Capacitance - pF *versus*
Reverse Voltage - Volts

Figure 4
 Peak Forward Surge Current

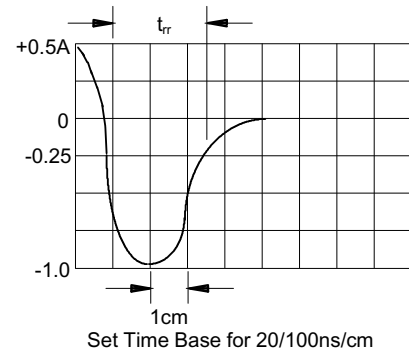


Peak Forward Surge Current - Amperes versus
 Number Of Cycles At 60Hz - Cycles

Figure 5
 Reverse Recovery Time Characteristic And Test Circuit Diagram



- Notes:
1. Rise Time = 7ns max.
 Input impedance = 1 megohm, 22pF
 2. Rise Time = 10ns max.
 Source impedance = 50 ohms
 3. Resistors are non-inductive





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Ordering Information :

| Device | Packing |
|----------------|-------------------------------|
| Part Number-TP | Tape&Reel: 500pcs/Reel |
| Part Number-AP | Ammo Packing: 450pcs/Ammo Box |
| Part Number-BP | Bulk: 4.8Kpcs/Carton |

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

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