



Micro Commercial Components  
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# UFT7005SM THRU UFT7060SM

## Features

- Supre Fast switching for high efficiency
- High Surge Capability
- Low Leakage
- Low Forward Voltage Drop
- High Current Capability

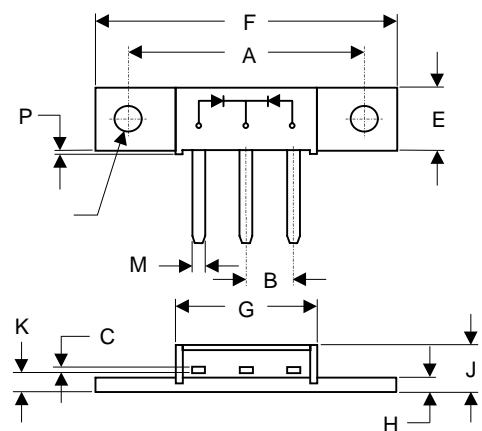
## 70 Amp Supre Fast Recovery Rectifier 50 to 600 Volts

## Maximum Ratings

- Operating Temperature: -65°C to +175°C
- Storage Temperature: -65°C to +175°C

| MCC Part Number | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|-----------------|--|---------------------|-----------------------------|
| UFT7005SM       | 50V                                    | 35V                 | 50V                         |
| UFT7010SM       | 100V                                   | 70V                 | 100V                        |
| UFT7020SM       | 200V                                   | 40V                 | 200V                        |
| UFT7040SM       | 400V                                   | 280V                | 400V                        |
| UFT7060SM       | 600V                                   | 420V                | 600V                        |

## MINIMOD-SM



## Electrical Characteristics @ 25°C Unless Otherwise Specified

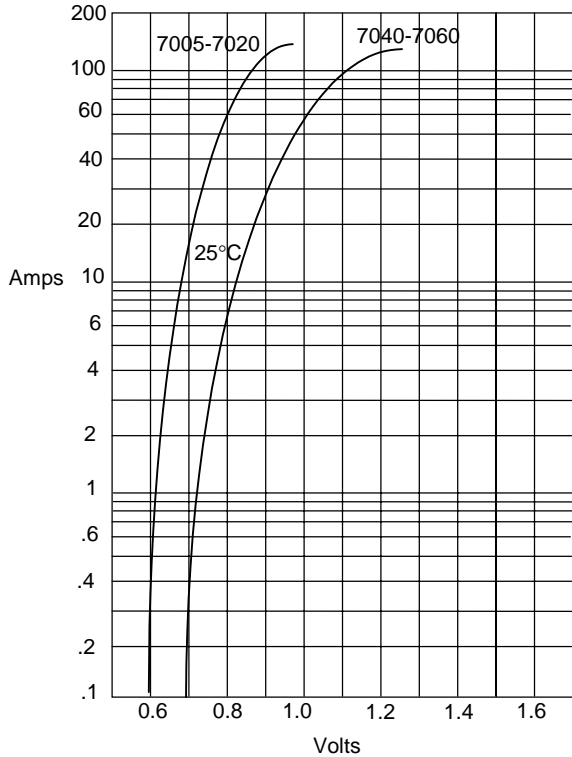
|  |             |                         |  |
|--|-------------|-------------------------|--|
| Average Forward Current  | $I_{F(AV)}$ | 70 A                    | $T_L = 125^\circ\text{C}$                                    |
| Peak Forward Surge Current<br>7040<br>7060                         | $I_{FSM}$   | 700A<br>600 A<br>500 A  | 8.3ms, half sine   |
| Maximum Instantaneous Forward Voltage<br>7005-7020<br>7040<br>7060 | $V_F$       | 0.95V<br>1.25V<br>1.35V | $I_{FM} = 35.0\text{A};$<br>$T_A = 25^\circ\text{C}$         |
| Maximum DC Reverse Current At Rated DC Blocking Voltage            | $I_R$       | 25 $\mu$ A              | $T_A = 25^\circ\text{C}$                                     |
| Maximum Reverse Recovery Time<br>7005-7020<br>7040<br>7060         | $T_{rr}$    | 50ns<br>60ns<br>75ns    | $I_F=0.5\text{A}, I_R=1.0\text{A},$<br>$I_{rr}=0.25\text{A}$ |
| Typical Junction Capacitance                                       | $C_J$       | 240pF                   | Measured at<br>1.0MHz, $V_R=4.0\text{V}$                     |

| DIM | DIMENSIONS |       |       |       | NOTE |
|-----|------------|-------|-------|-------|------|
|     | INCH ES    |       | MM    |       |      |
|     | MIN        | MAX   | MIN   | MAX   |      |
| A   | 1.180      | 1.195 | 29.97 | 30.35 |      |
| B   | .220       | NOM   | 5.08  | NOM   | 2PL  |
| C   | .027       | .037  | 0.69  | 0.94  |      |
| E   | .350       | .370  | 8.89  | 9.40  |      |
| F   | 1.490      | 1.510 | 37.85 | 38.35 |      |
| G   | .695       | .715  | 17.65 | 18.16 |      |
| H   | .088       | .098  | 2.24  | 2.49  |      |
| J   | .240       | .260  | 6.10  | 6.60  |      |
| K   | .115       | .135  | 2.92  | 3.43  |      |
| L   | .230       | .250  | 5.84  | 6.35  |      |
| M   | .065       | .085  | 1.65  | 2.16  |      |
| N   | .151       | .161  | 3.84  | 4.09  | ∅    |
| P   | .015       | .025  | 0.38  | 0.64  |      |

\*Pulse Test: Pulse Width 300 $\mu$ sec, Duty Cycle 1%

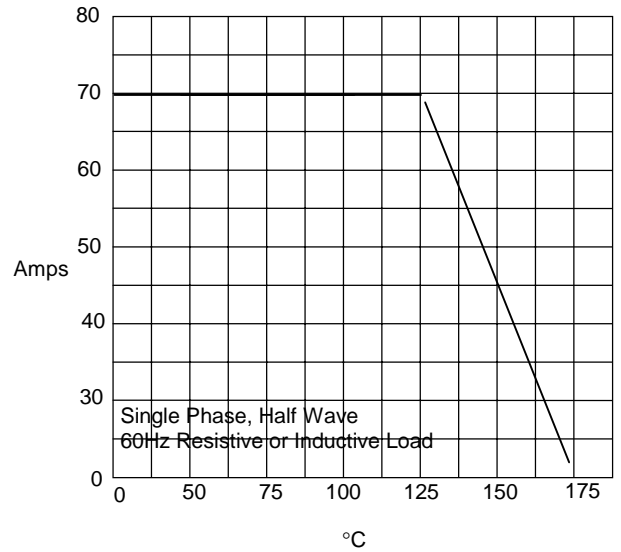


Figure 1  
Typical Forward Characteristics



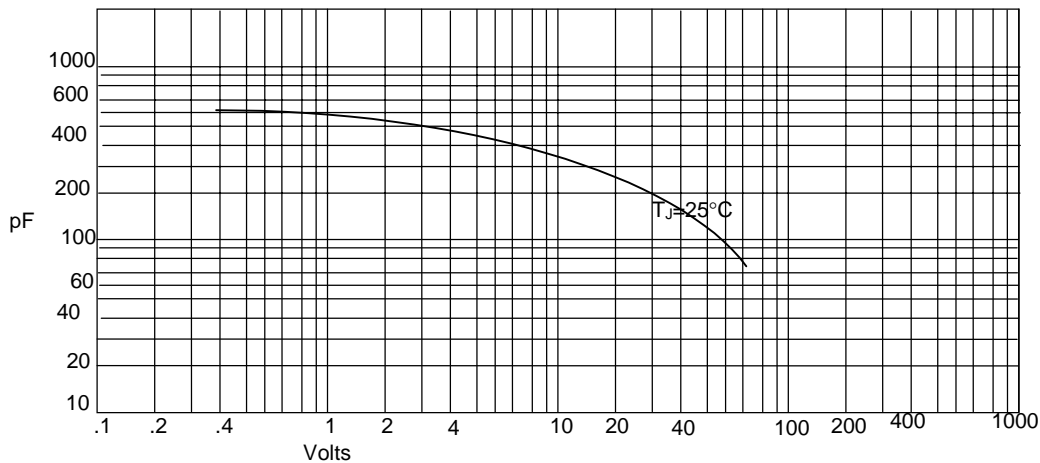
Instantaneous Forward Current - Amperes versus  
Instantaneous Forward Voltage - Volts

Figure 2  
Forward Derating Curve



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

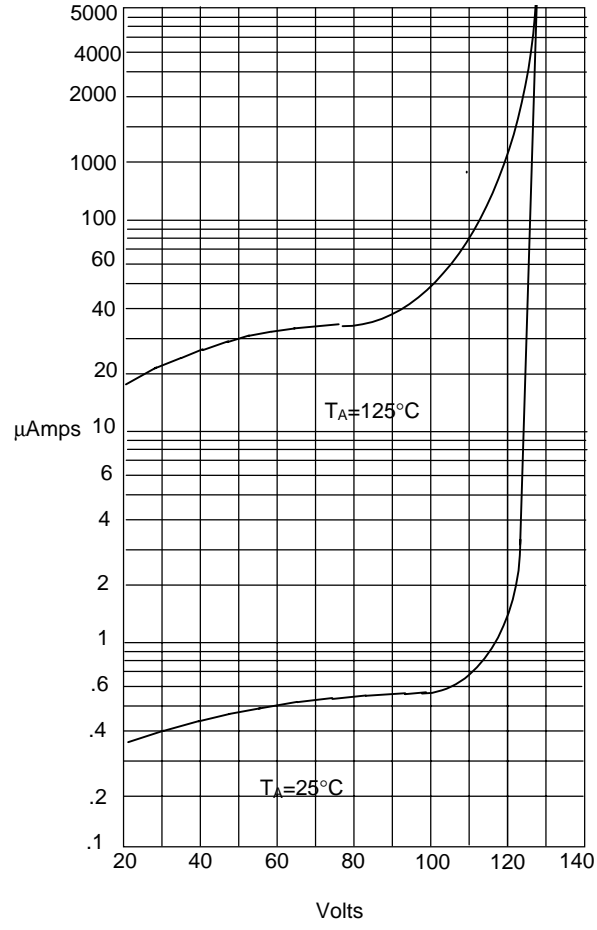
Figure 3  
Junction Capacitance



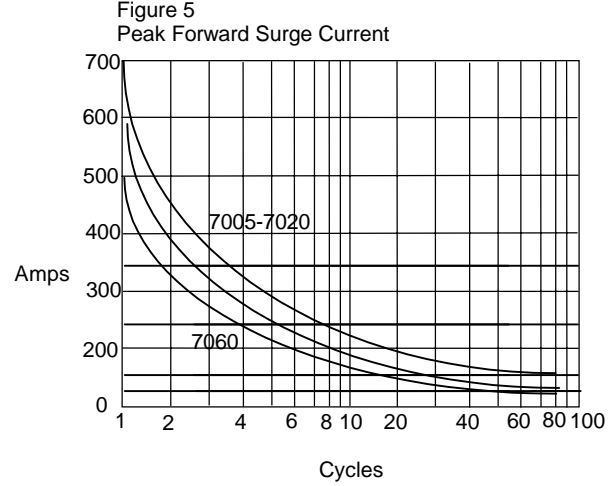
Junction Capacitance - pF versus  
Reverse Voltage - Volts



Figure 4  
Typical Reverse Characteristics



Instantaneous Reverse Leakage Current - MicroAmperes versus  
Percent Of Rated Peak Reverse Voltage - Volts



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