



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

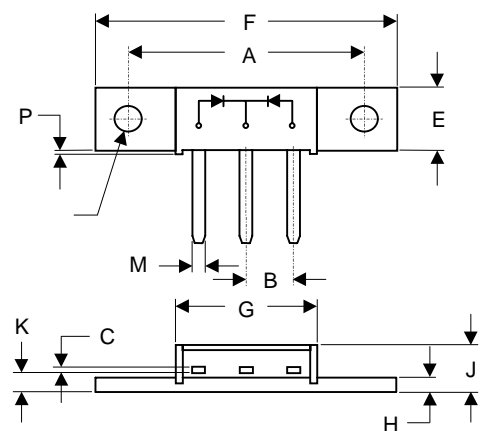
70 Amp Supre Fast Recovery Rectifier 50 to 600 Volts

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

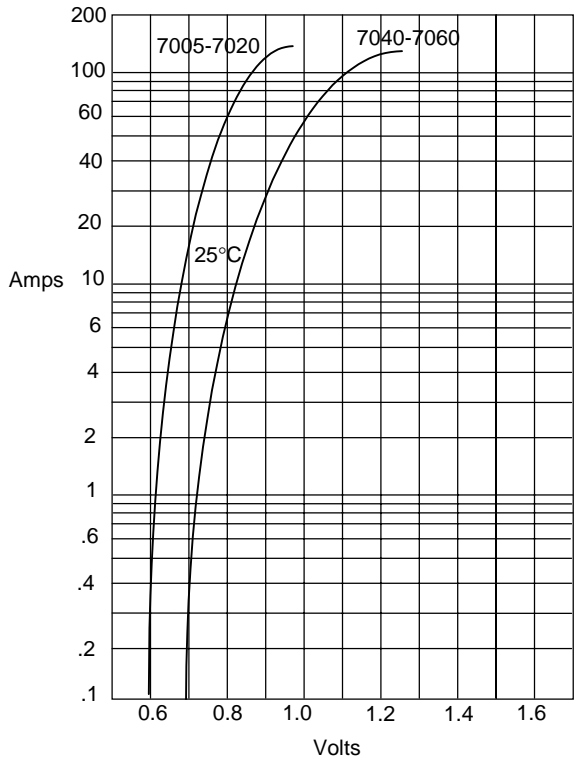
| | | | |
|--|-------------|-------------------------|--|
| Average Forward Current | $I_{F(AV)}$ | 70 A | $T_L = 125^\circ\text{C}$ |
| Peak Forward Surge Current 7040 7060 | I_{FSM} | 700A 600 A 500 A | 8.3ms, half sine |
| Maximum Instantaneous Forward Voltage 7005-7020 7040 7060 | V_F | 0.95V 1.25V 1.35V | $I_{FM} = 35.0\text{A};$ $T_A = 25^\circ\text{C}$ |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | I_R | 25 μ A | $T_A = 25^\circ\text{C}$ |
| Maximum Reverse Recovery Time 7005-7020 7040 7060 | T_{rr} | 50ns 60ns 75ns | $I_F=0.5\text{A}, I_R=1.0\text{A},$ $I_{rr}=0.25\text{A}$ |
| Typical Junction Capacitance | C_J | 240pF | Measured at 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 μ sec, Duty Cycle 1%

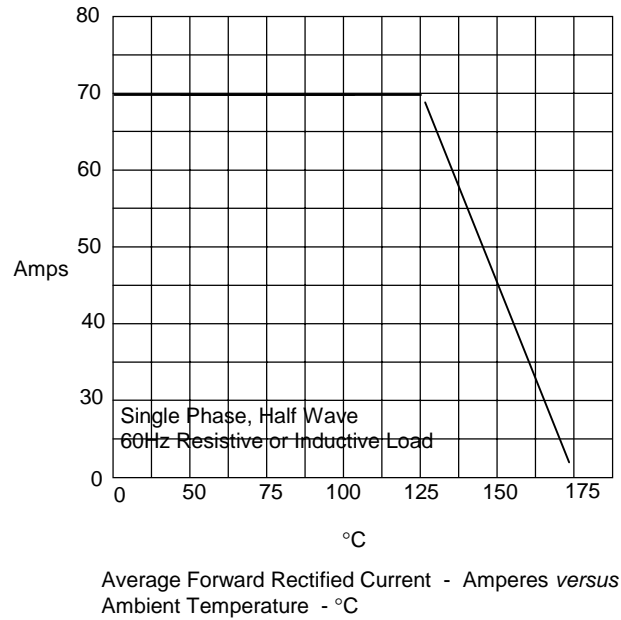


Figure 1
Typical Forward Characteristics



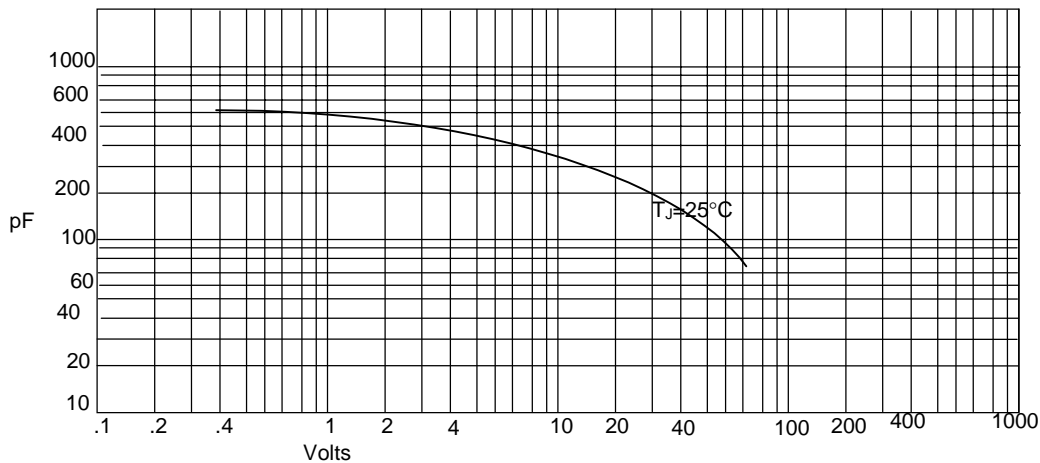
Instantaneous Forward Current - Amperes versus
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



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

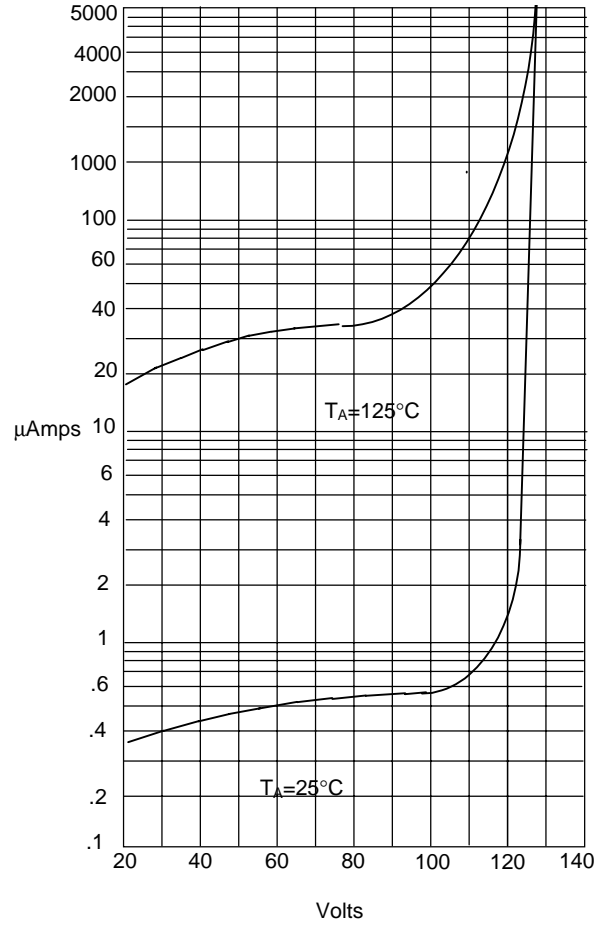
Figure 3
Junction Capacitance



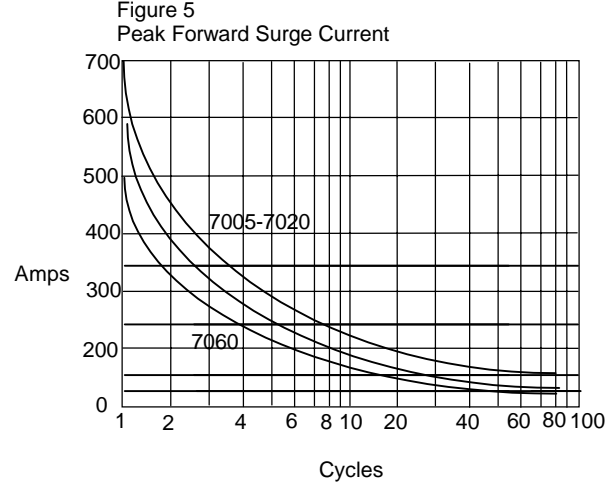
Junction Capacitance - pF versus
Reverse Voltage - Volts



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