



**Direct Channel Worldwide Corp.**

8F., No. 14, San Ming Rd., Shindian City, Taipei County 231,  
Taiwan (R.O.C)  
T: 886 2 8911 3828 F: 886 2 8911 3829

# UF5400 THRU UF5408

## Features

- High Surge Capability
- Low Leakage
- Low Forward Voltage Drop
- Ultra Fast Switching Speed For High Efficiency

## Maximum Ratings

- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- Typical Thermal Resistance 20°C/W

| Item Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|-------------|----------------|--|---------------------|-----------------------------|
| UF5400      | ---            | 50V                                    | 35V                 | 50V                         |
| UF5401      | ---            | 100V                                   | 70V                 | 100V                        |
| UF5402      | ---            | 200V                                   | 140V                | 200V                        |
| UF5404      | ---            | 400V                                   | 280V                | 400V                        |
| UF5406      | ---            | 600V                                   | 420V                | 600V                        |
| UF5407      | ---            | 800V                                   | 560V                | 800V                        |
| UF5408      | ---            | 1000V                                  | 700V                | 1000V                       |

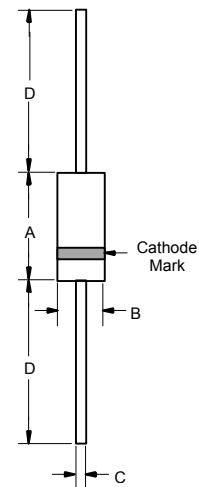
Electrical Characteristics @ 25°C Unless Otherwise Specified

|   |             |                                      |   |
|---|-------------|--------------------------------------|---|
| Average Forward Current                                   | $I_{F(AV)}$ | 3 A                                  | $T_A = 55^\circ\text{C}$                              |
| Peak Forward Surge Current                                | $I_{FSM}$   | 150A                                 | 8.3ms, half sine                                      |
| Maximum Instantaneous Forward Voltage                     | $V_F$       | 1.0V<br>1.3V<br>1.7V                 | $I_{FM} = 3.0A;$<br>$T_A = 25^\circ\text{C}$          |
| Reverse Current At Rated DC Blocking Voltage (Maximum DC) | $I_R$       | 10 $\mu\text{A}$<br>50 $\mu\text{A}$ | $T_A = 25^\circ\text{C}$<br>$T_A = 100^\circ\text{C}$ |
| Maximum Reverse Recovery Time                             | $T_{rr}$    | 50ns<br>75ns                         | $I_F=0.5A, I_R=1.0A,$<br>$I_{rr}=0.25A$               |
| Typical Junction Capacitance                              | $C_J$       | 75pF<br>50pF                         | Measured at<br>1.0MHz, $V_R=4.0V$                     |

\*Pulse test: Pulse width 300 $\mu\text{sec}$ , Duty cycle 1%

## 3 Amp Ultra Fast Recovery Rectifier 50 to 1000 Volts

### DO-201AD



| DIM | DIMENSIONS |      |       |      | NOTE |
|-----|------------|------|-------|------|------|
|     | INCHES     |      | MM    |      |      |
| A   | .287       | .374 | 7.30  | 9.50 |      |
| B   | .189       | .208 | 4.80  | 5.30 |      |
| C   | .048       | .052 | 1.20  | 1.30 |      |
| D   | 1.000      | ---  | 25.40 | ---  |      |

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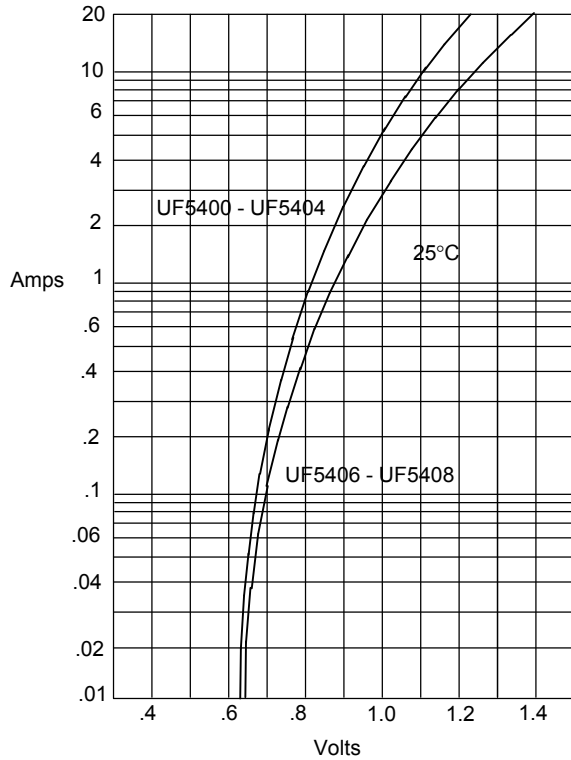


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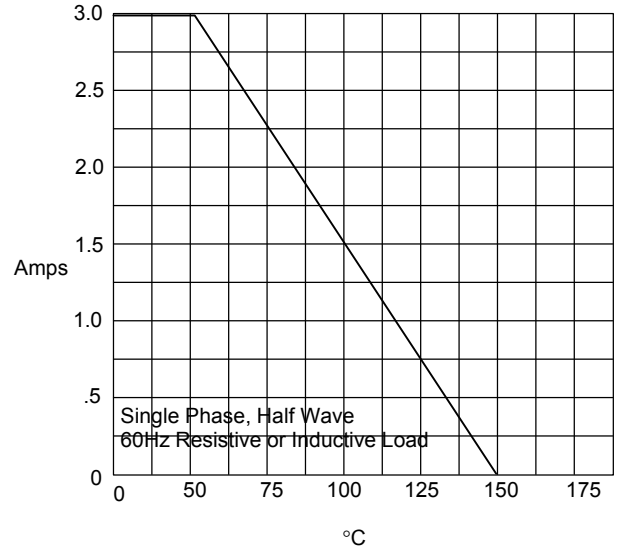
## UF5400 thru UF5408

Figure 1  
Typical Forward Characteristics



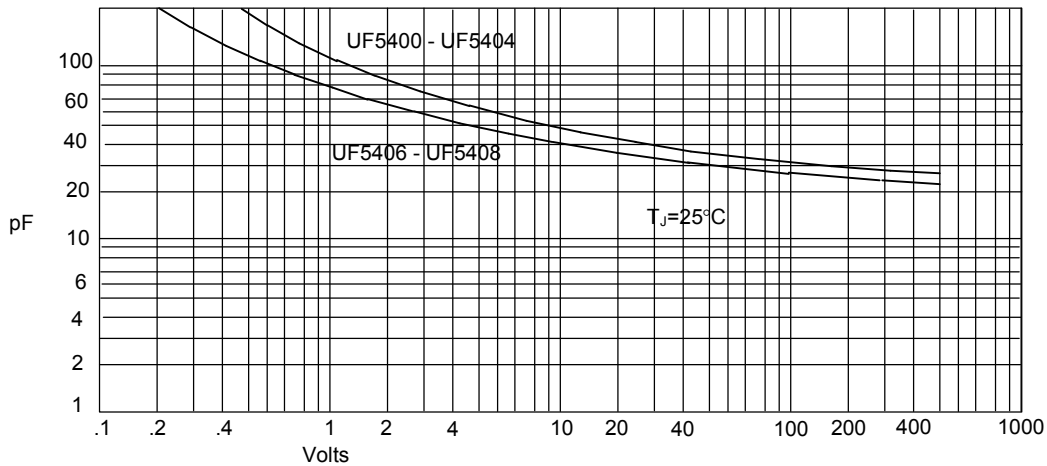
Instantaneous Forward Current - Amperes versus  
Instantaneous Forward Voltage - Volts

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

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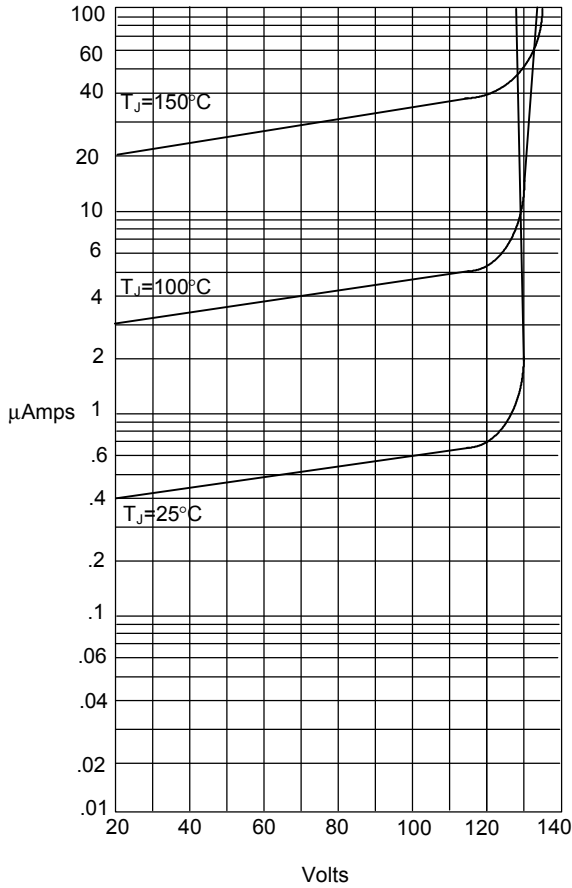
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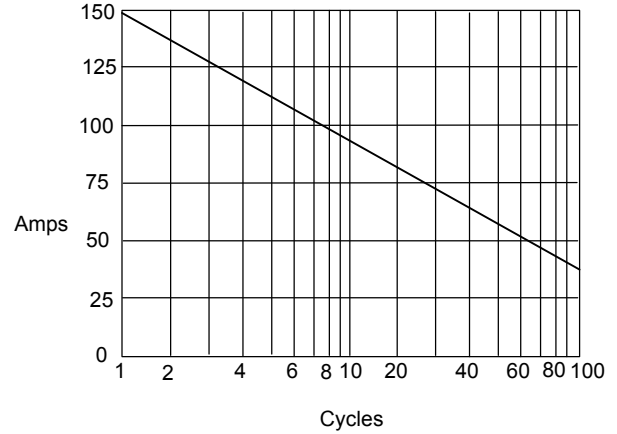
UF5400 thru UF5408

Figure 4  
Typical Reverse Characteristics



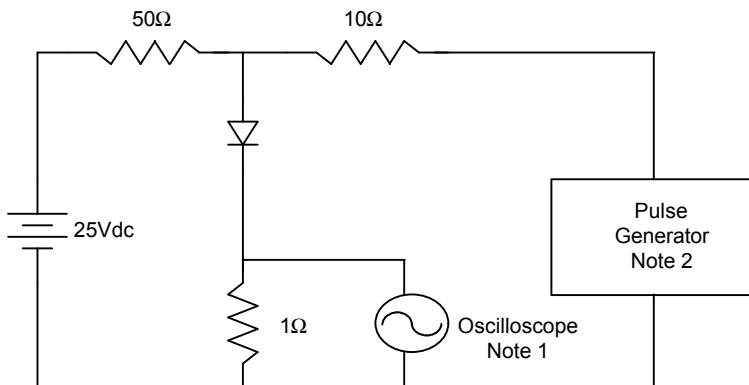
Instantaneous Reverse Leakage Current - MicroAmperes versus  
Percent Of Rated Peak Reverse Voltage - Volts

Figure 5  
Peak Forward Surge Current



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

Figure 6  
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

