UF4001 THRU UF4007
ULTRAFAST EFFICIENT PLASTIC RECTIFIER
Reverse Voltage - 50 to 1000 Volts  Forward Current - 1.0 Ampere

FEATURES
♦ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
♦ 1.0 ampere operation at TA=55°C with no thermal runaway
♦ Glass passivated chip junction
♦ Low cost
♦ Ultrafast recovery time for high efficiency
♦ Low forward voltage
♦ Low leakage current
♦ High surge current capability
♦ High temperature soldering guaranteed: 250°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

MECHANICAL DATA
Case: JEDEC DO-204AL molded plastic body over passivated chip
Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026
Polarity: Color band denotes cathode end
Mounting Position: Any
Weight: 0.012 ounce, 0.3 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS
Ratings at 25°C ambient temperature unless otherwise specified.

<table>
<thead>
<tr>
<th>SYMBOLS</th>
<th>UF 4001</th>
<th>UF 4002</th>
<th>UF 4003</th>
<th>UF 4004</th>
<th>UF 4005</th>
<th>UF 4006</th>
<th>UF 4007</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum repetitive peak reverse voltage</td>
<td>VRRM</td>
<td>50</td>
<td>100</td>
<td>200</td>
<td>400</td>
<td>600</td>
<td>800</td>
<td>1000</td>
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<tr>
<td>Maximum RMS voltage</td>
<td>VRMS</td>
<td>35</td>
<td>70</td>
<td>140</td>
<td>280</td>
<td>420</td>
<td>560</td>
<td>700</td>
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<tr>
<td>Maximum DC blocking voltage</td>
<td>VDC</td>
<td>50</td>
<td>100</td>
<td>200</td>
<td>400</td>
<td>600</td>
<td>800</td>
<td>1000</td>
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<tr>
<td>Maximum average forward rectified current 0.375&quot; (9.5mm) lead length at TA=55°C</td>
<td>I(AV)</td>
<td>1.0</td>
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<td>Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)</td>
<td>IFSM</td>
<td>30.0</td>
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<tr>
<td>Maximum instantaneous forward voltage at 1.0A</td>
<td>VF</td>
<td>1.0</td>
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<td>1.7</td>
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<tr>
<td>Maximum DC reverse current at rated DC blocking voltage TA=25°C</td>
<td>IR</td>
<td>10.0</td>
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<td></td>
<td>50.0</td>
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<tr>
<td>Maximum reverse recovery time (NOTE 1)</td>
<td>trr</td>
<td>50.0</td>
<td></td>
<td></td>
<td>75.0</td>
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<tr>
<td>Typical junction capacitance (NOTE 2)</td>
<td>CJ</td>
<td>17.0</td>
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<td>Typical thermal resistance (NOTE 3)</td>
<td>RθJA</td>
<td>60.0</td>
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<td>RθJL</td>
<td>15.0</td>
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<td>Operating junction and storage temperature range</td>
<td>TJ, TSTG</td>
<td>-.55 to 150</td>
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NOTES:
(1) Reverse recovery test conditions: IR=0.5A, IL=1.0A, IL=0.25A
(2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts
(3) Thermal resistance from junction to ambient and from junction to lead length 0.375" (9.5mm), P.C.B. mounted
RATINGS AND CHARACTERISTIC CURVES UF4001 THRU UF4007

FIG. 1 - MAXIMUM FORWARD CURRENT DERATING CURVE

RESISTIVE OR INDUCTIVE LOAD 0.375" (9.5mm) LEAD LENGTH

AMBIENT TEMPERATURE, °C

FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

TA=55°C 8.3ms SINGLE HALF SINE-WAVE (JEDEC Method)

NUMBER OF CYCLES AT 60 Hz

FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

PULSE WIDTH=300µs 1% DUTY CYCLE

FIG. 4 - TYPICAL REVERSE LEAKAGE CHARACTERISTICS

INSTANTANEOUS FORWARD CURRENT, AMPERES

INSTANTANEOUS FORWARD VOLTAGE, VOLTS

INSTANTANEOUS REVERSE LEAKAGE CURRENT, MICROAMPERES

PERCENT OF RATED PEAK REVERSE VOLTAGE, %

FIG. 5 - TYPICAL JUNCTION CAPACITANCE

T=25°C f=1.0 MHz Vsig=50mVp-p

GENERAL SEMICONDUCTOR