FR151G thru FR157G
Glass Passivated Fast Recovery Rectifiers
Reverse Voltage 50 to 1000 Volts  Forward Current 1.5 Amperes

Features
- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability

Mechanical Data
- Case: Molded plastic DO-204AC (DO-15)/DO-204AL (DO-41)
- Epoxy: UL 94V-O rate flame retardant
- Lead: Axial leads, solderable per MIL-STD-202, Method 208 guaranteed
- Polarity: Color band denotes cathode end
- High temperature soldering guaranteed: 250°C/10 seconds .375" (9.5mm) lead lengths at 5 lbs., (2.3kg) tension
- Weight: DO-15 - 0.014 ounce, 0.395 gram
  DO-41 - 0.012 ounce, 0.34 gram

Maximum Ratings and Electrical Characteristics
Ratings at 25°C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%

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<tbody>
<tr>
<td>Maximum repetitive peak reverse voltage</td>
<td>$V_{mm}$</td>
<td>50</td>
<td>100</td>
<td>200</td>
<td>400</td>
<td>600</td>
<td>800</td>
<td>1000</td>
<td>Volts</td>
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<tr>
<td>Maximum RMS voltage</td>
<td>$V_{rms}$</td>
<td>35</td>
<td>70</td>
<td>140</td>
<td>280</td>
<td>420</td>
<td>560</td>
<td>700</td>
<td>Volts</td>
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<tr>
<td>Maximum DC blocking voltage</td>
<td>$V_{dc}$</td>
<td>50</td>
<td>100</td>
<td>200</td>
<td>400</td>
<td>600</td>
<td>800</td>
<td>1000</td>
<td>Volts</td>
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<tr>
<td>Maximum average forward rectified current 0.375&quot; (9.5mm) lead length at $T_a=55°C$</td>
<td>$I_{AV1}$</td>
<td></td>
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<td></td>
<td>1.5</td>
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<td>Amps</td>
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<td>Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)</td>
<td>$I_{FSSM}$</td>
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<td>50.0</td>
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<td>Amps</td>
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<td>Maximum instantaneous forward voltage @ 1.5A DC</td>
<td>$V_i$</td>
<td></td>
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<td></td>
<td>1.3</td>
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<td>Volts</td>
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<tr>
<td>Maximum DC reverse current at rated DC blocking voltage @ $T_a=25°C$</td>
<td>$I_i$</td>
<td></td>
<td></td>
<td></td>
<td>5.0</td>
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<td>uA</td>
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<tr>
<td>Maximum DC reverse current at $T_a=125°C$</td>
<td>$I_{i}$</td>
<td></td>
<td></td>
<td></td>
<td>100</td>
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<tr>
<td>Maximum reverse recovery time (Note 1)</td>
<td>$t_r$</td>
<td>150</td>
<td></td>
<td>250</td>
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<td>500</td>
<td></td>
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<td>nS</td>
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<td>Typical junction capacitance (Note 2)</td>
<td>$C_j$</td>
<td></td>
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<td></td>
<td></td>
<td>25</td>
<td></td>
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<td>pF</td>
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<td>Operating junction temperature range</td>
<td>$T_j$</td>
<td></td>
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<td>-55 to +150</td>
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<td>°C</td>
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<td>Storage temperature range</td>
<td>$T_{STG}$</td>
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<td>°C</td>
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Notes:
1. Reverse Recovery Test Conditions: $I_{L}=0.5A$, $I_{P}=1.0A$, $I_{RMS}=0.25A$
2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.
RATINGS AND CHARACTERISTIC CURVES

FIG. 1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

FIG. 2 - TYPICAL JUNCTION CAPACITANCE

FIG. 3 - TYPICAL FORWARD CHARACTERISTICS

FIG. 4 - MAXIMUM FORWARD CURRENT DERATING CURVE

FIG. 5 - MAXIMUM NON-REPEETITIVE PEAK FORWARD SURGE CURRENT

NOTES:
1. Rise Time=7mS max. Input Impedance:
   - 1 megohm 22pf
2. Rise Time=10ns max. Source Impedance:
   - 50 ohms

SET TIME BASE FOR
5 ns/10ns/cm

INSTANTANEOUS FORWARD CURRENT (A)

FORWARD VOLTAGE (V)

JUNCTION CAPACITANCE (pF)

REVERSE VOLTAGE (V)

PEAK FORWARD SURGE CURRENT (A)

NUMBER OF CYCLES AT 50Hz

AVERAGE FORWARD CURRENT AMPLIFIER

AMBIENT TEMPERATURE (°C)

Single Phase
Half Wave 60Hz
Resistive or
Inductive Load
0.375V/0.6A
Lead Length