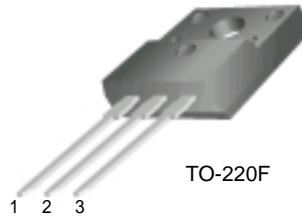




FYPF1004DN

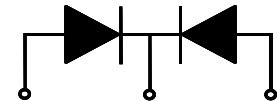
Features

- Low forward voltage drop
- High frequency properties and switching speed
- Guard ring for over-voltage protection



Applications

- Switched mode power supply
- Freewheeling diodes



SCHOTTKY BARRIER RECTIFIER

Absolute Maximum Ratings $T_C=25^\circ\text{C}$ unless otherwise noted

| Symbol | Parameter | Value | Units |
|----------------|---|-------------|-------|
| V_{RRM} | Maximum Repetitive Reverse Voltage | 40 | V |
| V_R | Maximum DC Reverse Voltage | 40 | V |
| $I_{F(AV)}$ | Maximum Average Rectified Current @ $T_C = 130^\circ\text{C}$ | 10 | A |
| I_{FSM} | Maximum Forward Surge Current (per diode) 60Hz Single Half-Sine Wave | 80 | A |
| T_J, T_{STG} | Operating Junction and Storage Temperature | -40 to +150 | °C |

Thermal Characteristics

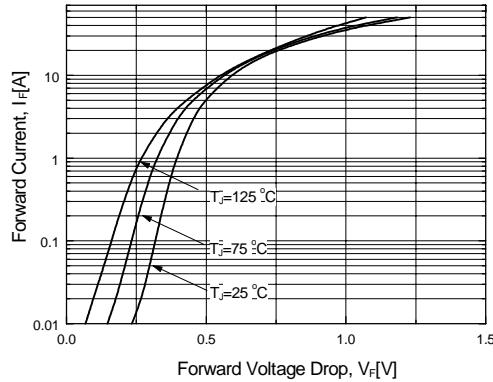
| Symbol | Parameter | Value | Units |
|-----------------|--|-------|-------|
| $R_{\theta JC}$ | Maximum Thermal Resistance, Junction to Case (per diode) | 4.5 | °C/W |

Electrical Characteristics (per diode) $T_C=25^\circ\text{C}$ unless otherwise noted

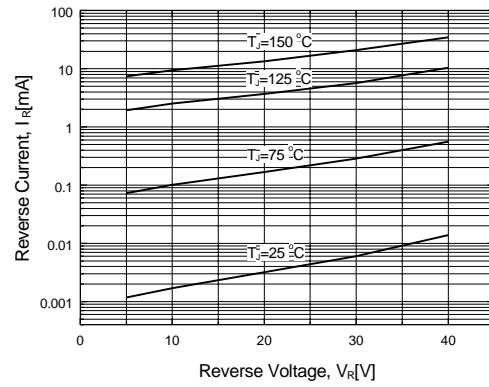
| Symbol | Parameter | Value | Units |
|------------|---|--|------------------------------|
| $V_{FM} *$ | Maximum Instantaneous Forward Voltage $I_F = 5\text{A}$ $I_F = 5\text{A}$ $I_F = 10\text{A}$ $I_F = 10\text{A}$ | $T_C = 25^\circ\text{C}$ $T_C = 125^\circ\text{C}$ $T_C = 25^\circ\text{C}$ $T_C = 125^\circ\text{C}$ | 0.55 0.49 0.67 0.65 |
| $I_{RM} *$ | Maximum Instantaneous Reverse Current @ rated V_R | $T_C = 25^\circ\text{C}$ $T_C = 125^\circ\text{C}$ | 1 40 |

* Pulse Test: Pulse Width=300μs, Duty Cycle=2%

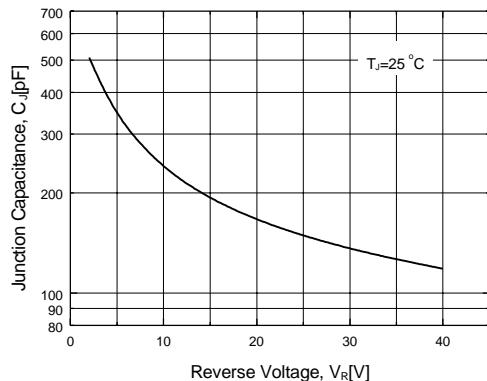
Typical Characteristics



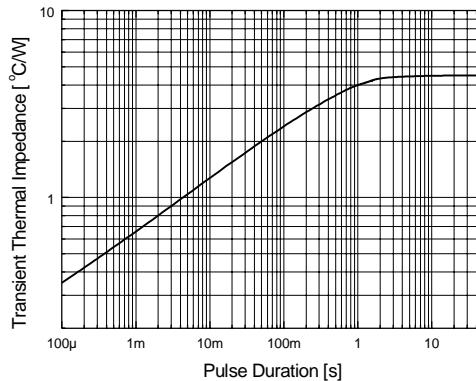
**Figure 1. Typical Forward Voltage Characteristics
(per diode)**



**Figure 2. Typical Reverse Current
vs. Reverse Voltage (per diode)**



**Figure 3. Typical Junction Capacitance
(per diode)**



**Figure 4. Thermal Impedance Characteristics
(per diode)**

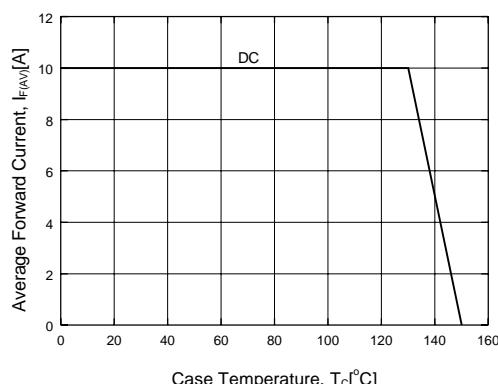
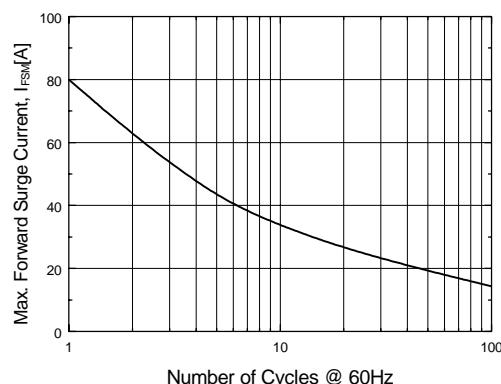


Figure 5. Forward Current Derating Curve



**Figure 6. Non-Repetitive Sureg Current
(per diode)**