

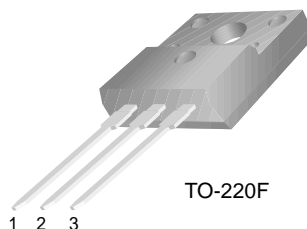
## FYPF1045DN

### Features

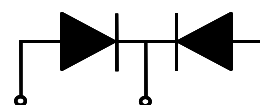
- Low forward voltage drop
- High frequency properties and switching speed
- Guard ring for over-voltage protection

### Applications

- Switched mode power supply
- Freewheeling diodes



TO-220F



1. Anode 2.Cathode 3. Anode

## 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  | 45          | V                |
| $V_R$          | Maximum DC Reverse Voltage  | 45          | V                |
| $I_{F(AV)}$    | Average Rectified Forward Current @ $T_C = 120^\circ\text{C}$               | 10          | A                |
| $I_{FSM}$      | Non-repetitive Peak Surge Current (per diode)<br>60Hz Single Half-Sine Wave | 80          | A                |
| $T_J, T_{STG}$ | Operating Junction and Storage Temperature                                  | -65 to +150 | $^\circ\text{C}$ |

### Thermal Characteristics

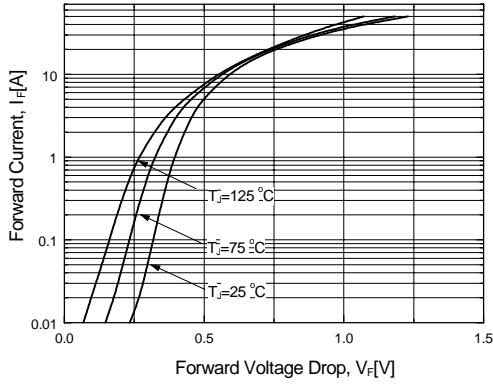
| Symbol          | Parameter  | Value | Units              |
|-----------------|--|-------|--------------------|
| $R_{\theta JC}$ | Maximum Thermal Resistance, Junction to Case (per diode) | 4.5   | $^\circ\text{C/W}$ |

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

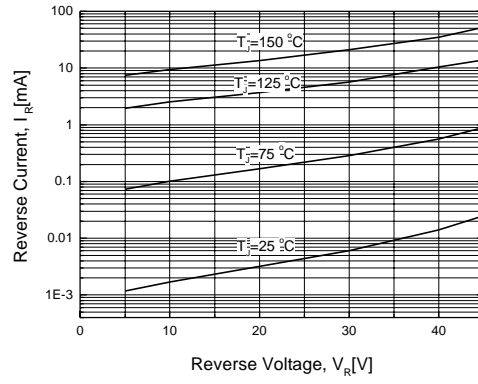
| Symbol     | Parameter   | Value                     | Units |    |
|------------|---|---------------------------|-------|----|
| $V_{FM}^*$ | Maximum Instantaneous Forward Voltage<br>$I_F = 5\text{A}$<br>$I_F = 5\text{A}$<br>$I_F = 10\text{A}$<br>$I_F = 10\text{A}$ | $T_C = 25^\circ\text{C}$  | 0.55  | V  |
|            |   | $T_C = 125^\circ\text{C}$ | 0.49  |    |
|            |   | $T_C = 25^\circ\text{C}$  | 0.70  |    |
|            |   | $T_C = 125^\circ\text{C}$ | 0.65  |    |
| $I_{RM}^*$ | Maximum Instantaneous Reverse Current<br>@ rated $V_R$  | $T_C = 25^\circ\text{C}$  | 1     | mA |
|            |   | $T_C = 125^\circ\text{C}$ | 40    |    |

\* Pulse Test: Pulse Width=300 $\mu\text{s}$ , Duty Cycle=2%

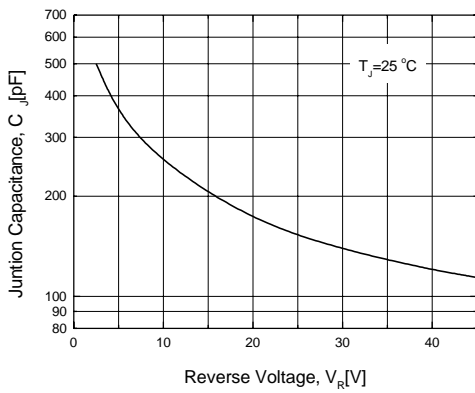
# Typical Characteristics



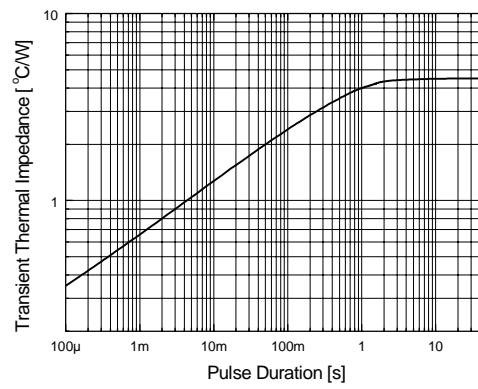
**Figure 1. Typical Forward Voltage Characteristics (per diode)**



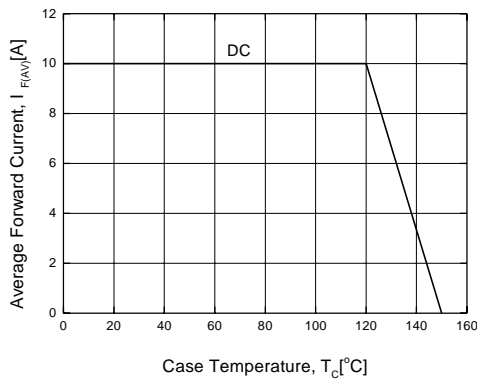
**Figure 2. Typical Reverse Current vs. Reverse Voltage (per diode)**



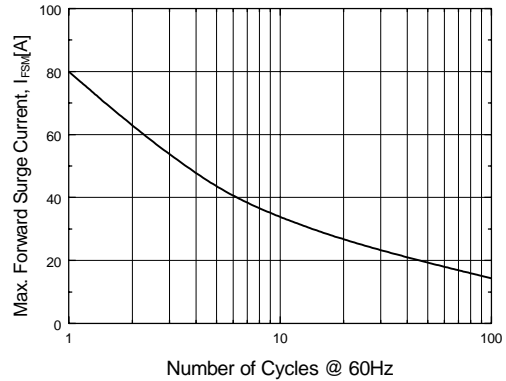
**Figure 3. Typical Junction Capacitance (per diode)**



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



**Figure 5. Forward Current Derating Curve**

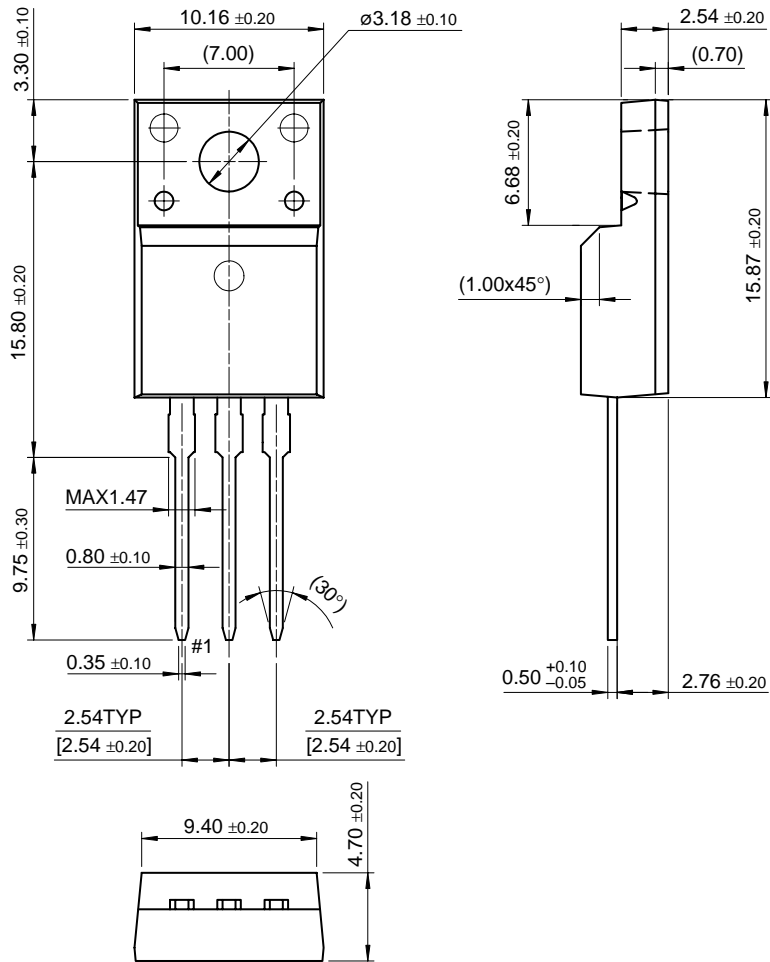


**Figure 6. Non-Repetitive Surge Current (per diode)**

# Package Dimensions

FYPF1045DN

## TO-220F



Dimensions in Millimeters

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