

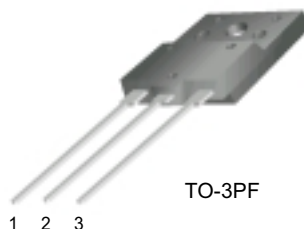
## FYAF3004DN

### Features

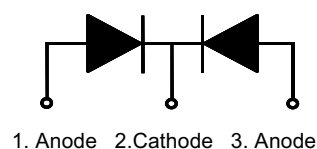
- Low forward voltage drop
- High frequency properties and switching speed
- Guard ring for over-voltage protection

### Applications

- Switched mode power supply
- Freewheeling diodes



TO-3PF



## 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 @ $T_C = 120^\circ\text{C}$           | 30          | A                |
| $I_{FSM}$      | Maximum Forward Surge Current (per diode)<br>60Hz Single Half-Sine Wave | 300         | A                |
| $T_J, T_{STG}$ | Operating Junction and Storage Temperature                              | -40 to +150 | $^\circ\text{C}$ |

### Thermal Characteristics

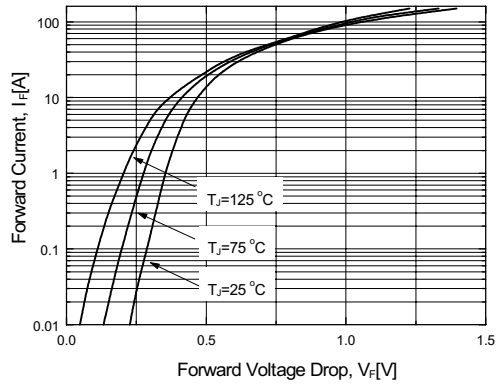
| Symbol          | Parameter                                                | Value | Units              |
|-----------------|----------------------------------------------------------|-------|--------------------|
| $R_{\theta JC}$ | Maximum Thermal Resistance, Junction to Case (per diode) | 2.2   | $^\circ\text{C/W}$ |

### Electrical Characteristics (per diode)

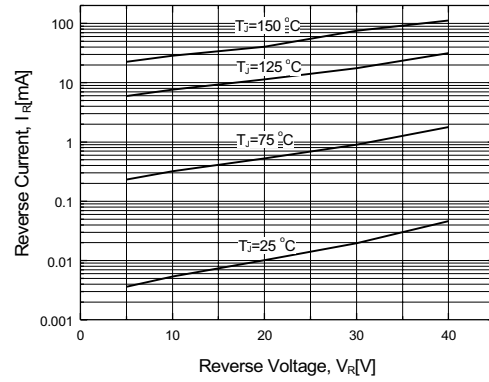
| Symbol     | Parameter                             | Value                     | Units |
|------------|---------------------------------------|---------------------------|-------|
| $V_{FM}^*$ | Maximum Instantaneous Forward Voltage |                           | V     |
|            | $I_F = 15\text{A}$                    | $T_C = 25^\circ\text{C}$  | 0.55  |
|            | $I_F = 15\text{A}$                    | $T_C = 125^\circ\text{C}$ | 0.49  |
|            | $I_F = 30\text{A}$                    | $T_C = 25^\circ\text{C}$  | 0.67  |
|            | $I_F = 30\text{A}$                    | $T_C = 125^\circ\text{C}$ | 0.65  |
| $I_{RM}^*$ | Maximum Instantaneous Reverse Current |                           | mA    |
|            | @ rated $V_R$                         | $T_C = 25^\circ\text{C}$  | 1     |
|            |                                       | $T_C = 125^\circ\text{C}$ | 120   |

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

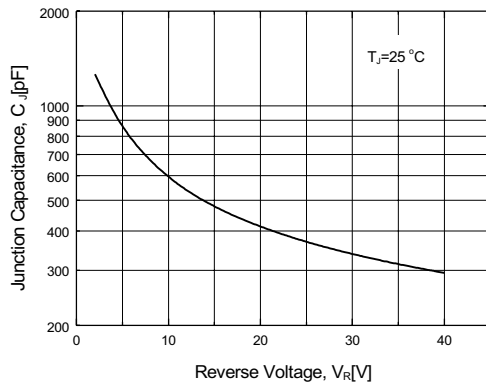
## Typical Characteristics



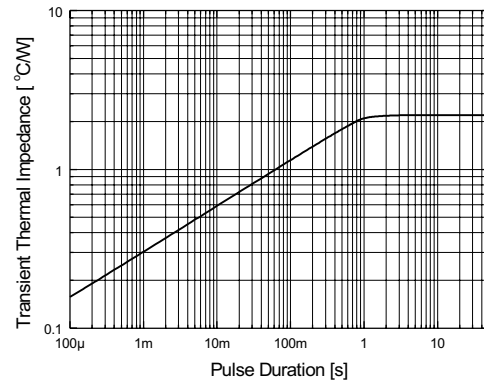
**Figure 1. Typical Forward Voltage Characteristics (per diode)**



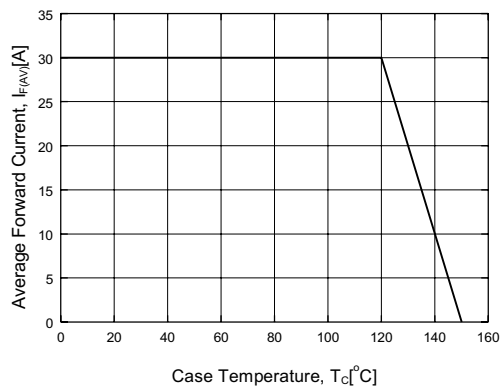
**Figure 2. Typical Reverse Current vs. Reverse Voltage (per diode)**



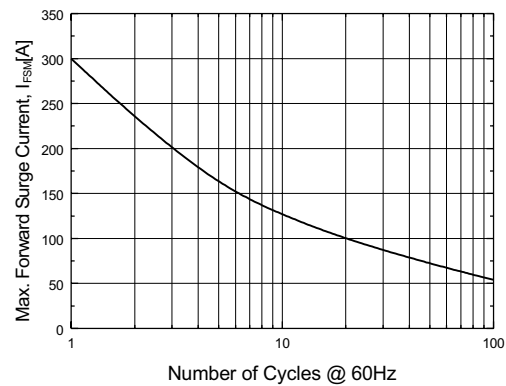
**Figure 3. Typical Junction Capacitance (per diode)**



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



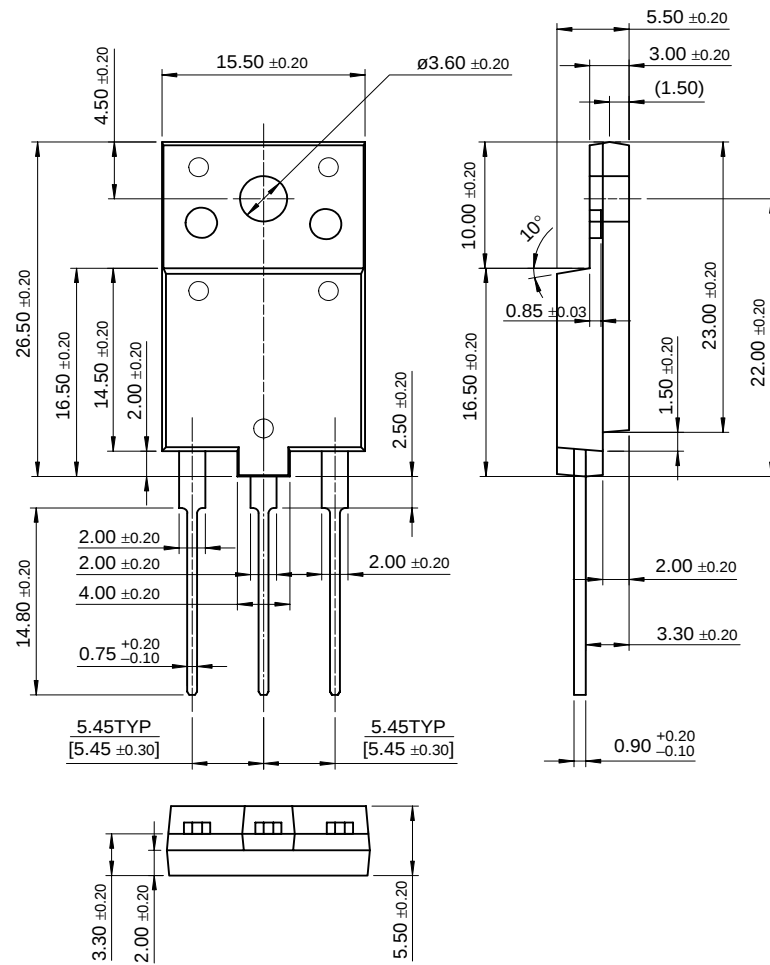
**Figure 5. Forward Current Derating Curve**



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

## Package Dimensions

## TO-3PF



Dimensions in Millimeters

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