FAIRCHILD
SEMICONDUCTOR®

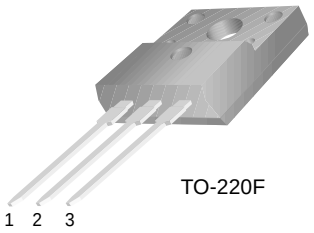
# FYPF1545DN

## Features

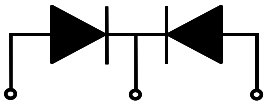
- Low forward voltage drop
- High frequency properties and switching speed
- Guard ring for over-voltage protection

## Applications

- Switched mode power supply
- Freewheeling diodes




TO-220F



1. Anode 2.Cathode 3. Anode

# SCHOTTKY BARRIER RECTIFIER

## Absolute Maximum Ratings $T_C$=25°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 @ $T_C$ = 110°C | 15 | A |
| $I_{FSM}$ | Non-repetitive Peak Surge Current (per diode) 60Hz Single Half-Sine Wave | 100 | A |
| $T_J$, $T_{STG}$ | Operating Junction and Storage Temperature | -65 to +150 | °C |

## Thermal Characteristics

| Symbol | Parameter | Value | Units |
|---|---|---|---|
| $R_{\theta JC}$ | Maximum Thermal Resistance, Junction to Case (per diode) | 4.0 | °C/W |

## Electrical Characteristics (per diode)

| Symbol | Parameter | | Value | Units |
|---|---|---|---|---|
| $V_{FM}$ * | Maximum Instantaneous Forward Voltage | | | V |
| | $I_F$ = 7.5A | $T_C$ = 25 °C | 0.55 | |
| | $I_F$ = 7.5A | $T_C$ = 125 °C | 0.49 | |
| | $I_F$ = 15A | $T_C$ = 25 °C | 0.70 | |
| | $I_F$ = 15A | $T_C$ = 125 °C | 0.65 | |
| $I_{RM}$ * | Maximum Instantaneous Reverse Current | | | mA |
| | @ rated $V_R$ | $T_C$ = 25 °C | 1 | |
| | | $T_C$ = 125 °C | 60 | |

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

# Typical Characteristics

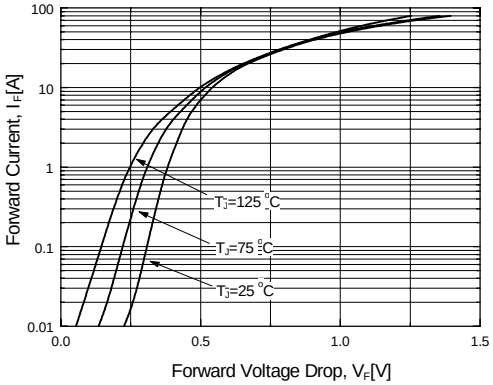



**Figure 1. Typical Forward Voltage Characteristics (per diode)**

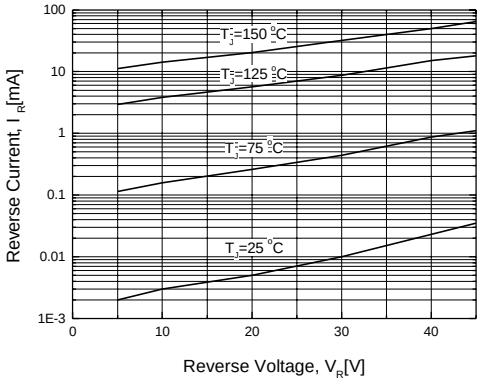



**Figure 2. Typical Reverse Current vs. Reverse Voltage (per diode)**

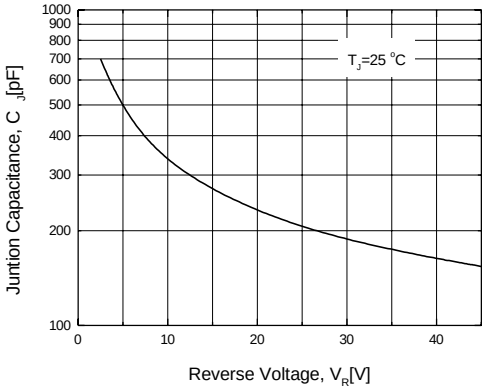



**Figure 3. Typical Junction Capacitance (per diode)**

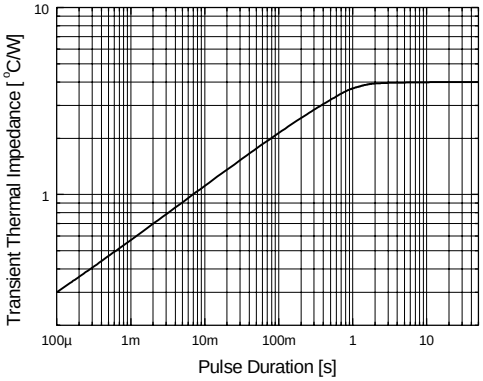



**Figure 4. Thermal Impedance Characteristics (per diode)**

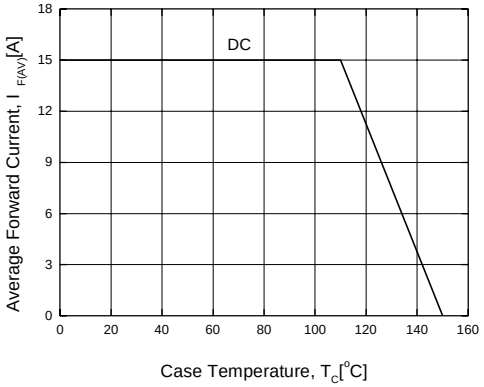



**Figure 5. Forward Current Derating Curve**

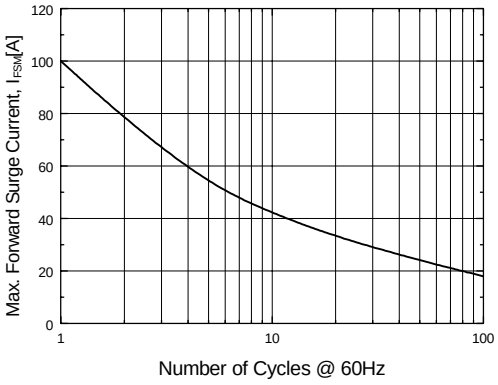
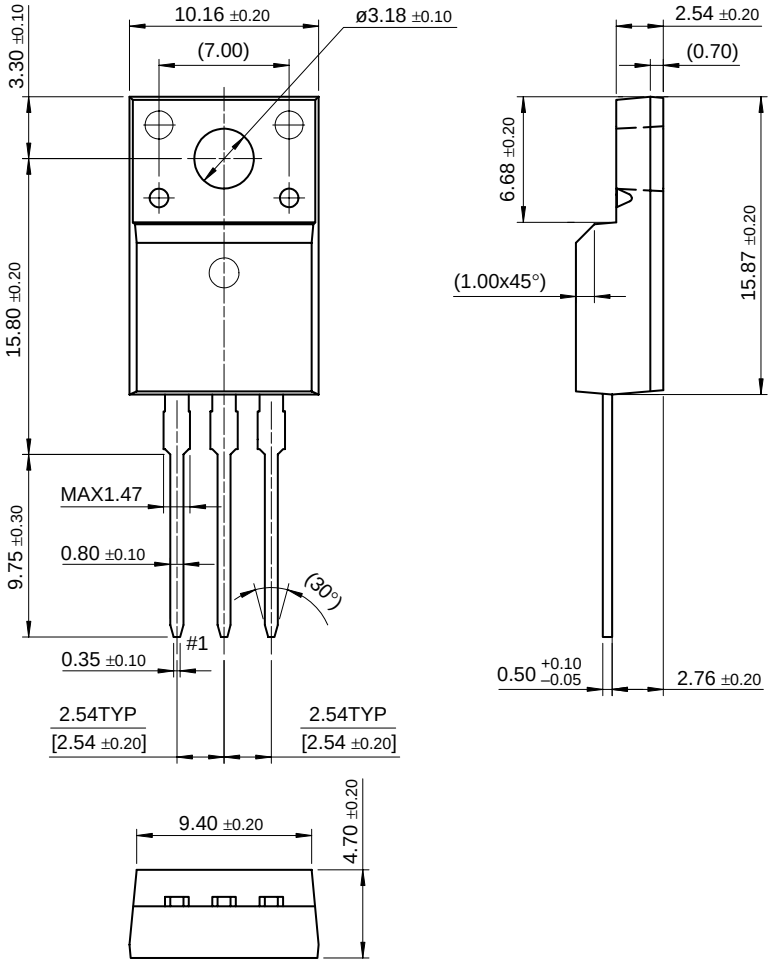



**Figure 6. Non-Repetitive Surge Current (per diode)**

## Package Dimensions

# TO-220F




Dimensions in Millimeters

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| CoolFET™ | FASTr™ | MicroFET™ | PowerTrench® | SuperSOT™-6 |
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| EnSigna™ | $I^2C$™ | OCX™ | RapidConfigure™ | UHC™ |
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|---|---|---|
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