

**FAIRCHILD**  
SEMICONDUCTOR®

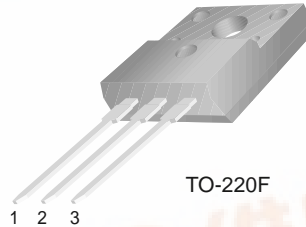
## FYPF1545DN

### Features

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

### Applications

- Switched mode power supply
- Freewheeling diodes



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 @ $T_C = 110^\circ\text{C}$	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	$^\circ\text{C}$

### Thermal Characteristics

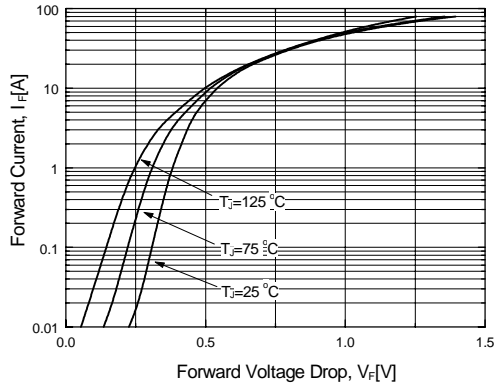
Symbol	Parameter	Value	Units
$R_{\theta JC}$	Maximum Thermal Resistance, Junction to Case (per diode)	4.0	$^\circ\text{C}/\text{W}$

### Electrical Characteristics (per diode)

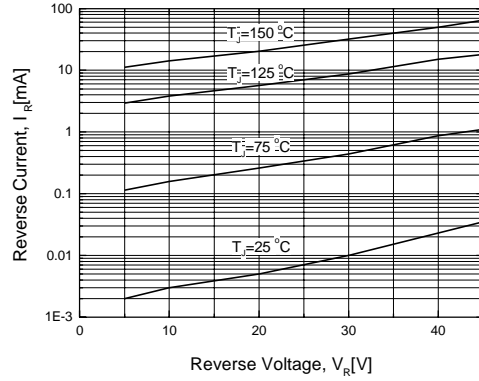
Symbol	Parameter	Value	Units	
$V_{FM}^*$	Maximum Instantaneous Forward Voltage	$I_F = 7.5\text{A}$ $T_C = 25^\circ\text{C}$	0.55	V
		$I_F = 7.5\text{A}$ $T_C = 125^\circ\text{C}$	0.49	
		$I_F = 15\text{A}$ $T_C = 25^\circ\text{C}$	0.70	
		$I_F = 15\text{A}$ $T_C = 125^\circ\text{C}$	0.65	
$I_{RM}^*$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

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

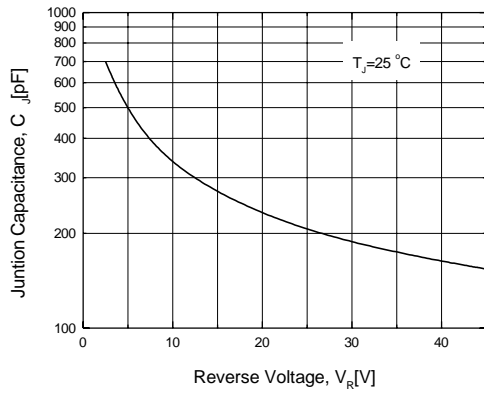
# Typical Characteristics



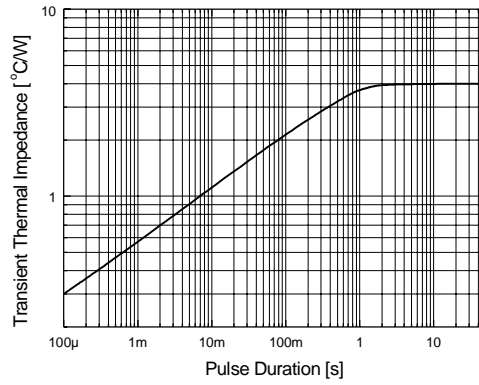
**Figure 1. Typical Forward Voltage Characteristics (per diode)**



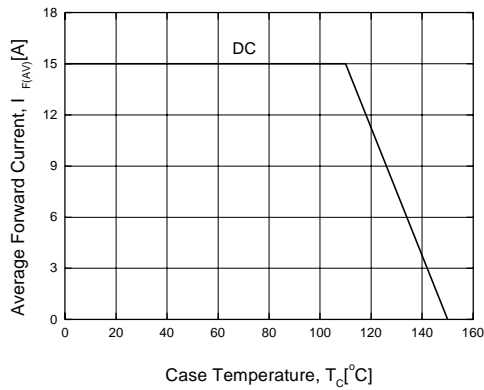
**Figure 2. Typical Reverse Current vs. Reverse Voltage (per diode)**



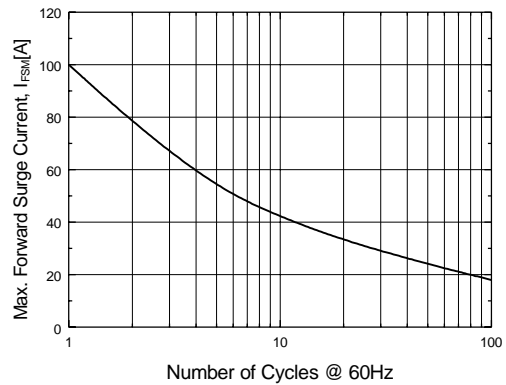
**Figure 3. Typical Junction Capacitance (per diode)**



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



**Figure 5. Forward Current Derating Curve**

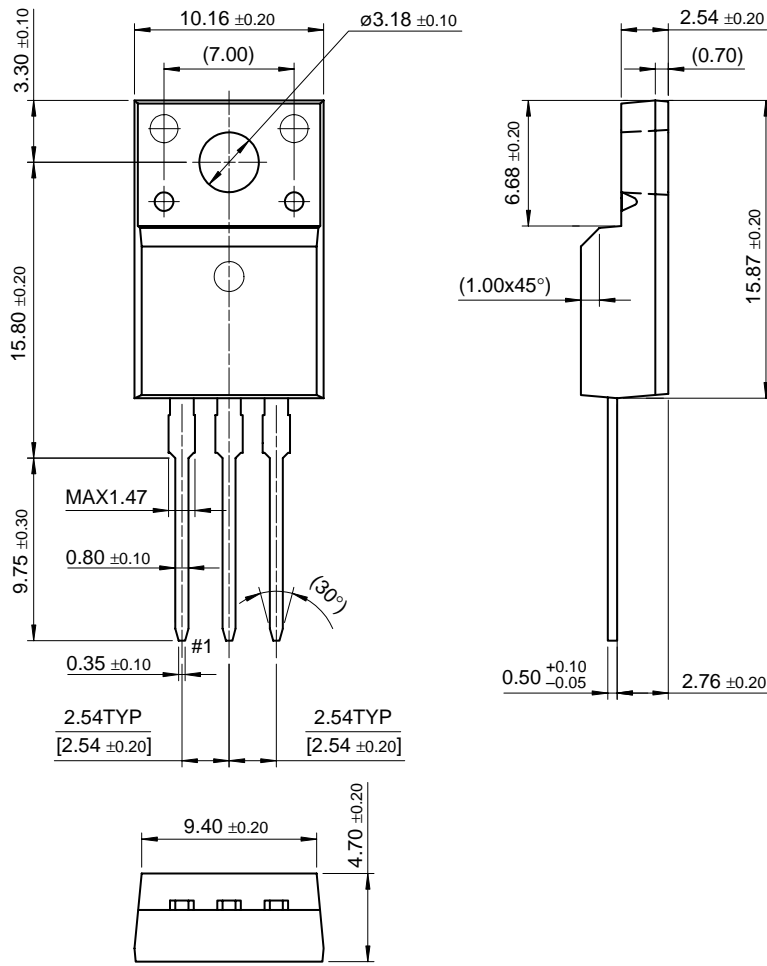


**Figure 6. Non-Repetitive Surge Current (per diode)**

# Package Dimensions

FYPF1545DN

## TO-220F



Dimensions in Millimeters

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CoolFET™	FASTr™	MicroFET™	PowerTrench®	SuperSOT™-6
CROSSVOLT™	FRFET™	MicroPak™	QFET™	SuperSOT™-8
DOMET™	GlobalOptoisolator™	MICROWIRE™	QS™	SyncFET™
EcoSPARK™	GTO™	MSX™	QT Optoelectronics™	TinyLogic™
E <sup>2</sup> CMOS™	HiSeC™	MSXPro™	Quiet Series™	TruTranslation™
EnSigna™	I <sup>2</sup> C™	OCX™	RapidConfigure™	UHC™
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Programmable Active Droop™		OPTOPLANAR™	SMART START™	

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