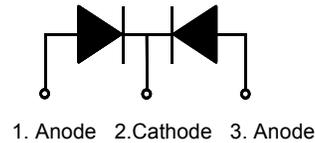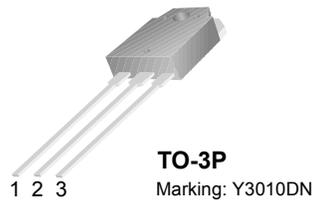**FAIRCHILD**

SEMICONDUCTOR®

FYA3010DN
Schottky Barrier Rectifier

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-3P
Marking: Y3010DN

1 2 3

1. Anode   2.Cathode   3. Anode

Absolute Maximum Ratings (per diode) T_a = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{RRM}	Maximum Repetitive Reverse Voltage	100	V
V_R	Maximum DC Reverse Voltage	100	V
$I_{F(AV)}$	Average Rectified Forward Current @ T_C = 135°C	30	A
I_{FSM}	Non-repetitive Peak Surge Current (per diode) 60Hz Single Half-Sine Wave	250	A
T_J, T_{STG}	Operating Junction and Storage Temperature	- 65 to +150	°C

Thermal Characteristics T_a = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
$R_{\theta JC}$	Maximum Thermal Resistance, Junction to Case (per diode)	0.78	°C/W
$R_{\theta JC}$	Maximum Thermal Resistance, Junction to Case (per PKG)	0.48	°C/W
$R_{\theta JC}$	Maximum Thermal Resistance, Case to Heatsink	0.2	°C/W

Electrical Characteristics (per diode) T_a = 25°C unless otherwise noted

Symbol	Parameter		Value	Units
V_{FM} *	Maximum Instantaneous Forward Voltage I_F = 15A I_F = 15A I_F = 30A I_F = 30A	T_C = 25 °C T_C = 125 °C T_C = 25 °C T_C = 125 °C	0.85 0.67 1.05(Typ.) 0.80	V
I_{RM} *	Maximum Instantaneous Reverse Current @ rated V_R	T_C = 25 °C T_C = 125 °C	1 20	mA

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

Typical Performance Characteristics

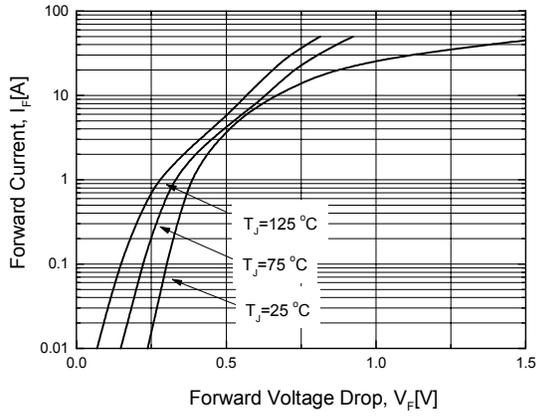**Figure 1. Typical Forward Voltage Characteristics (per diode)**

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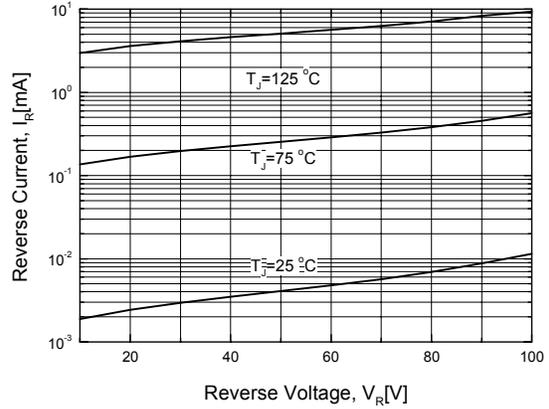

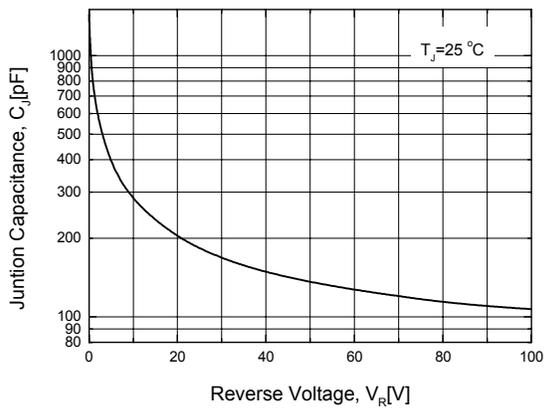**Figure 3. Typical Junction Capacitance (per diode)**

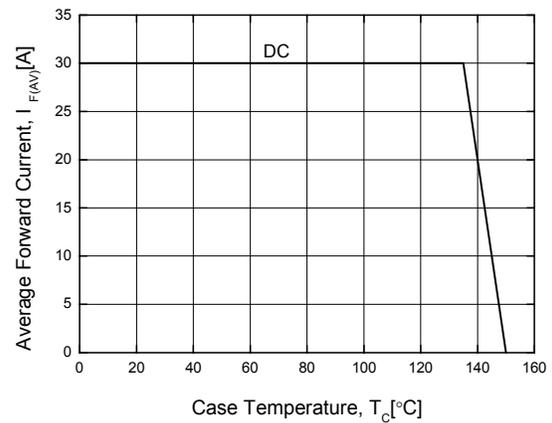**Figure 4. Forward Current Derating Curve**

Figure 5. Non-Repetive Surge Current (per diode)
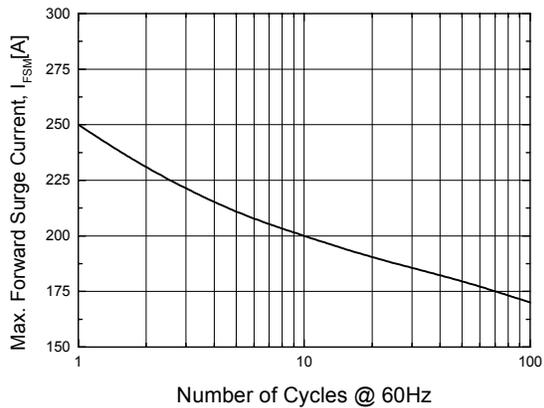
Figure 6. Thermal Impedance Characteristics (per diode)
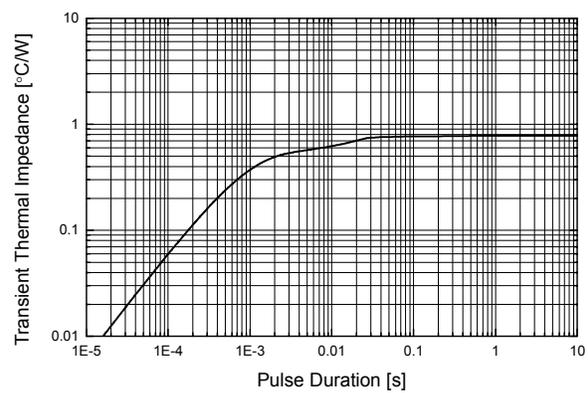
Mechanical Dimensions

TO-3P

15.60 ±0.20

13.60 ±0.20

ø3.20 ±0.10

9.60 ±0.20

3.80 ±0.20

4.80 ±0.20

1.50 +0.15 −0.05

12.76 ±0.20

19.90 ±0.20

23.40 ±0.20

18.70 ±0.20

13.90 ±0.20

2.00 ±0.20

3.00 ±0.20

1.00 ±0.20

3.50 ±0.20

16.50 −0.30

1.40 ±0.20

0.60 +0.15 −0.05

5.45TYP
[5.45 ±0.30]

5.45TYP
[5.45 ±0.30]
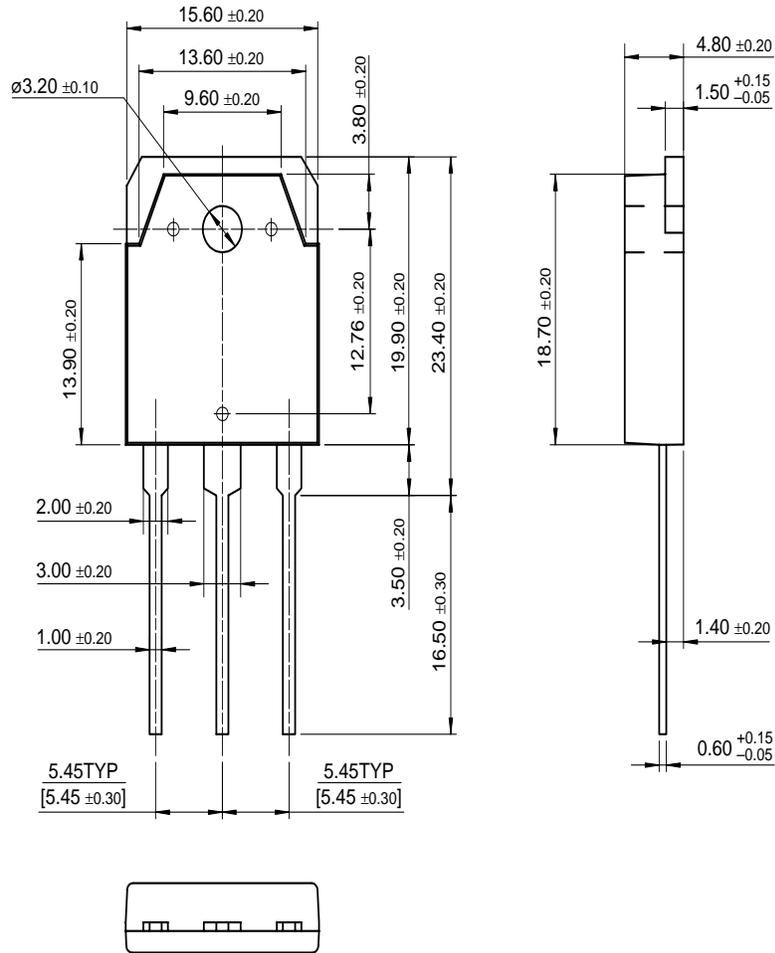
Package Marking and Ordering Information

Device Marking	Device	Package	Reel Size	Tape Width	Quantity
Y3010DN	FYA3010DN	TO-3P	-	-	30

Dimensions in Millimeters

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EnSigna™	ImpliedDisconnect™	OCXPro™	SILENT SWITCHER®	Wire™
FACT™	IntelliMAX™	OPTOLOGIC®	SMART START™	
FACT Quiet Series™		OPTOPLANAR™	SPM™	
		PACMAN™	Stealth™	
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No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
Obsolete	Not In Production	This datasheet contains specifications on a product that has been discontinued by Fairchild semiconductor. The datasheet is printed for reference information only.

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FYA3010DN

Schottky Barrier Rectifier

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

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- Freewheeling diodes

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Product status/pricing/packaging   **BUY**

Product	Product status	Pb-free Status	Pricing*	Package type	Leads	Packing method	Package Marking Convention**
FYA3010DNTU	Full Production	Full Production	$1.21	TO-3P	3	RAIL	Line 1: $Y (Fairchild logo) &Z (Asm. Plant Code) &3 (3-Digit Date Code) Line 2: Y3010DN

* Fairchild 1,000 piece Budgetary Pricing
** A sample button will appear if the part is available through Fairchild's on-line samples program. If there is no sample button, please contact a Fairchild distributor to obtain samples

Indicates product with Pb-free second-level interconnect. For more information click here.

Package marking information for product FYA3010DN is available. [Click here for more information](#) .

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FYA3010DNTU

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