FAIRCHILD SEMICONDUCTOR®

October 2008

FYD0504SA/FYD0504SATM

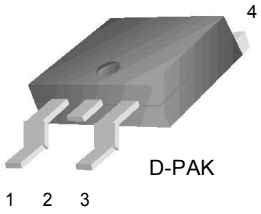
Schottky Barrier Rectifier

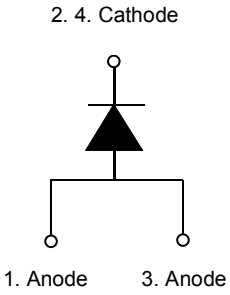
Features

- Low forward voltage drop
- High frequency properties and switching speed
- Guard ring for over-voltage protection
- "TM" is a packing option

Applications

- Switched mode power supply
- Freewheeling diodes





Absolute Maximum Ratings* T_a = 25°C unless otherwise noted

Symbol	Parameter	Ratings	Units
V_{RRM}	Maximum Repetitive Reverse Voltage	40	V
V_R	Maximum DC Reverse Voltage	40	V
$I_{F(AV)}$	Average Rectified Forward Current @ T_C = 135°C	5	A
I_{FSM}	Non-repetitive Peak Surge Current 60Hz Single Half-Sine Wave	80	A
T_J, T_{STG}	Operating Junction and Storage Temperature	-65 to +150	°C

* These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

Thermal Characteristics T_C=25°C unless otherwise noted

Symbol	Parameter	Value	Units
$R_{\theta JC}$	Maximum Thermal Resistance, Junction to Case	3.5	°C/W

Electrical Characteristics T_C=25 °C unless otherwise noted

Symbol	Parameter		Value	Units
V_{FM} *	Maximum Instantaneous Forward Voltage			V
	I_F = 5A	T_C = 25 °C	0.55	
	I_F = 5A	T_C = 125 °C	0.49	
	I_F = 10A	T_C = 25 °C	0.67	
	I_F = 10A	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	40	

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

Typical Characteristics

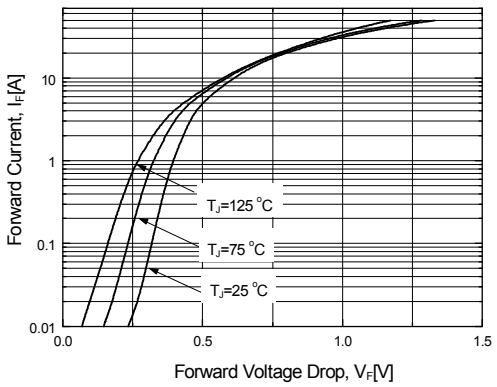


Figure 1. Typical Forward Voltage Characteristics

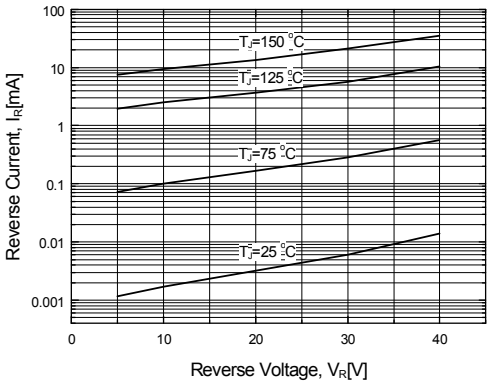


Figure 2. Typical Reverse Current vs. Reverse Voltage

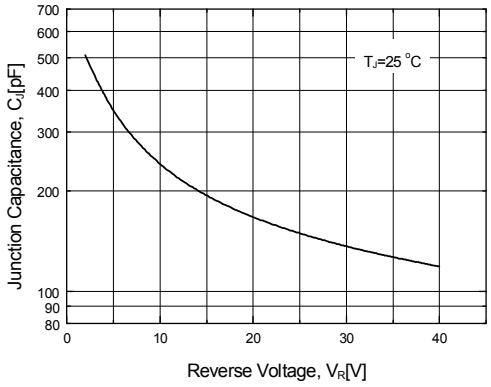


Figure 3. Typical Junction Capacitance

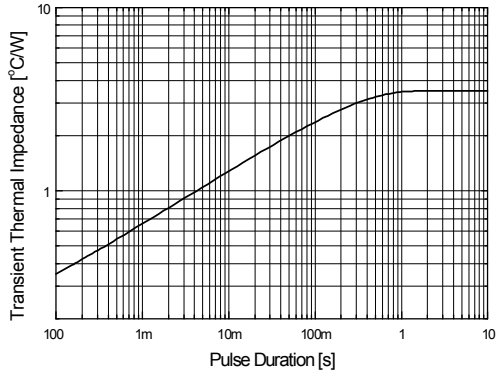


Figure 4. Thermal Impedance Characteristics

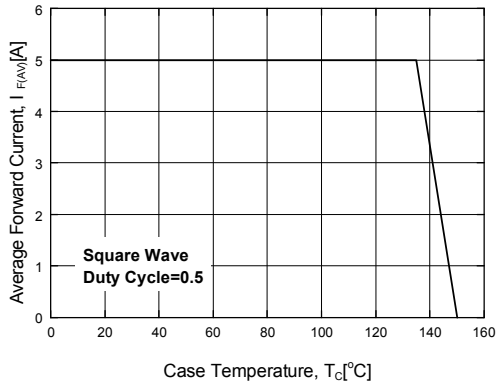


Figure 5. Forward Current Derating Curve

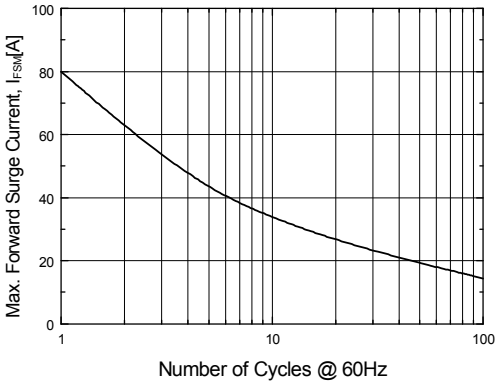
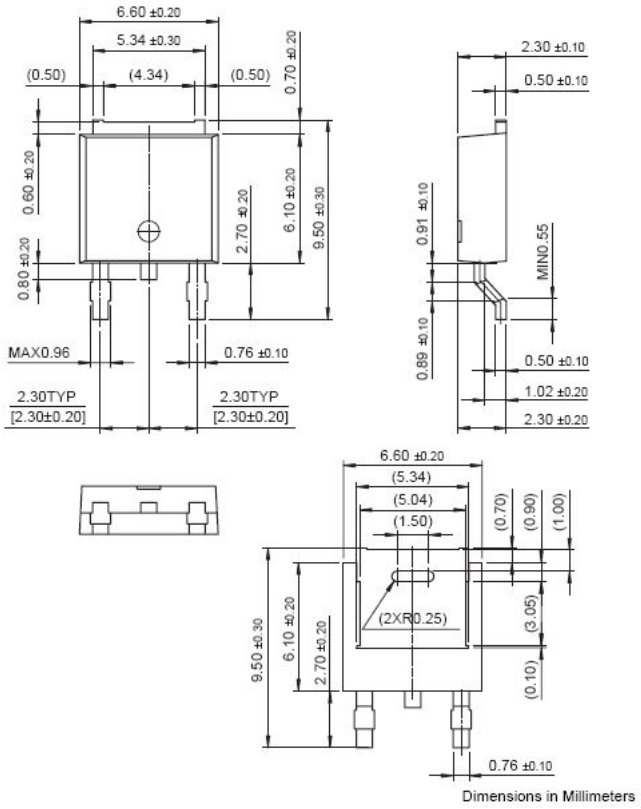


Figure 6. Non-Repetive Sureg Current

Package Dimensions

D-PAK



Dimensions in Millimeters

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