

# FYD0504SA/FYD0504SATM

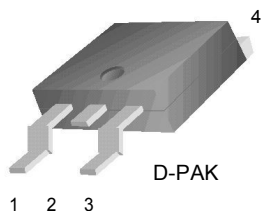
## Schottky Barrier Rectifier

### Features

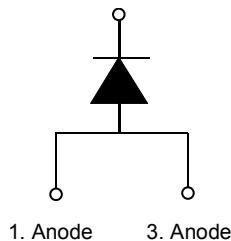
- Low forward voltage drop
- High frequency properties and switching speed
- Guard ring for over-voltage protection
- "TM" is a packing option

### Applications

- Switched mode power supply
- Freewheeling diodes



2. 4. Cathode



### Absolute Maximum Ratings\* $T_a = 25^\circ\text{C}$ 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 @ $T_C = 135^\circ\text{C}$	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	$^\circ\text{C}$

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

### Thermal Characteristics $T_C = 25^\circ\text{C}$ unless otherwise noted

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

### Electrical Characteristics $T_C = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
$V_{FM}^*$	Maximum Instantaneous Forward Voltage	$T_C = 25^\circ\text{C}$ $I_F = 5\text{A}$	0.55
		$T_C = 125^\circ\text{C}$ $I_F = 5\text{A}$	0.49
		$T_C = 25^\circ\text{C}$ $I_F = 10\text{A}$	0.67
		$T_C = 125^\circ\text{C}$ $I_F = 10\text{A}$	0.65
$I_{RM}^*$	Maximum Instantaneous Reverse Current @ rated $V_R$	$T_C = 25^\circ\text{C}$	1
		$T_C = 125^\circ\text{C}$	40

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

## Typical Characteristics

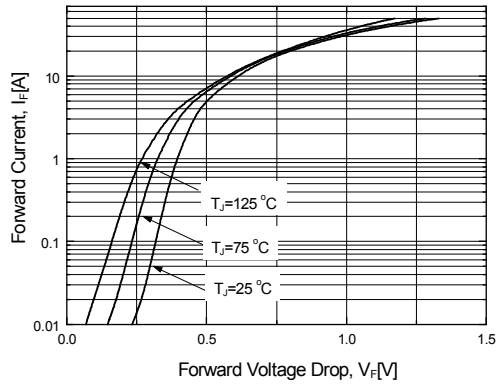


Figure 1. Typical Forward Voltage Characteristics

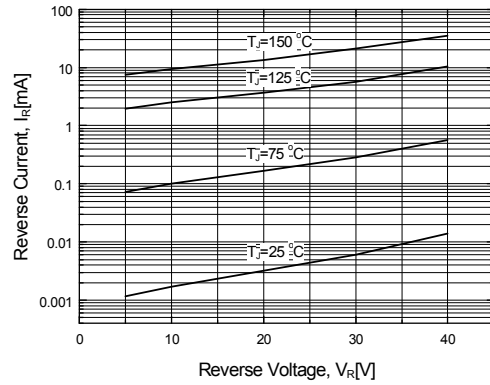


Figure 2. Typical Reverse Current vs. Reverse Voltage

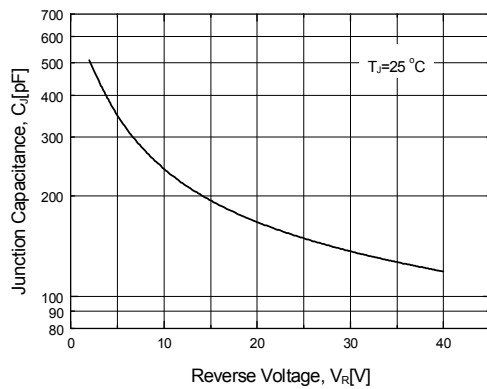


Figure 3. Typical Junction Capacitance

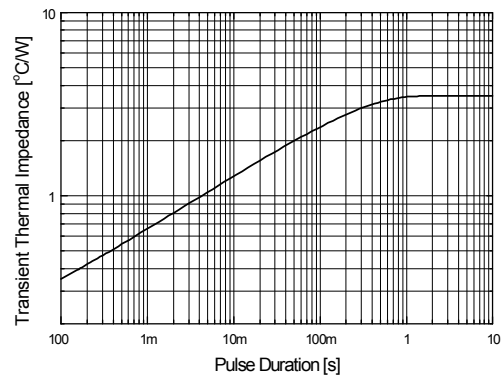


Figure 4. Thermal Impedance Characteristics

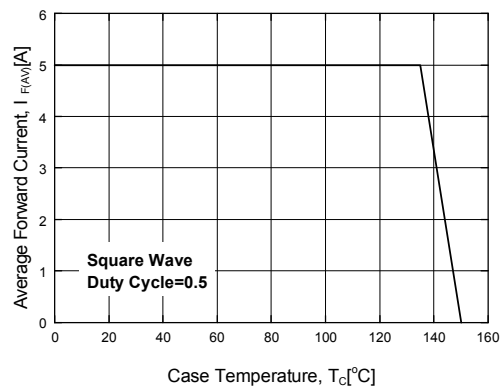


Figure 5. Forward Current Derating Curve

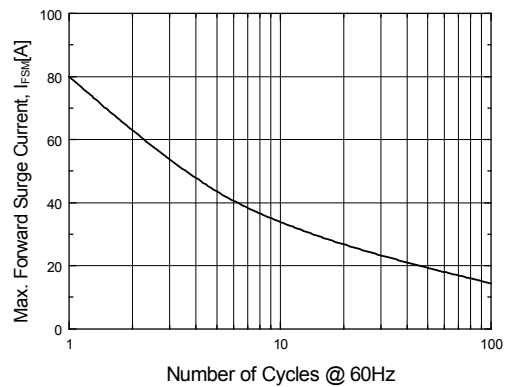
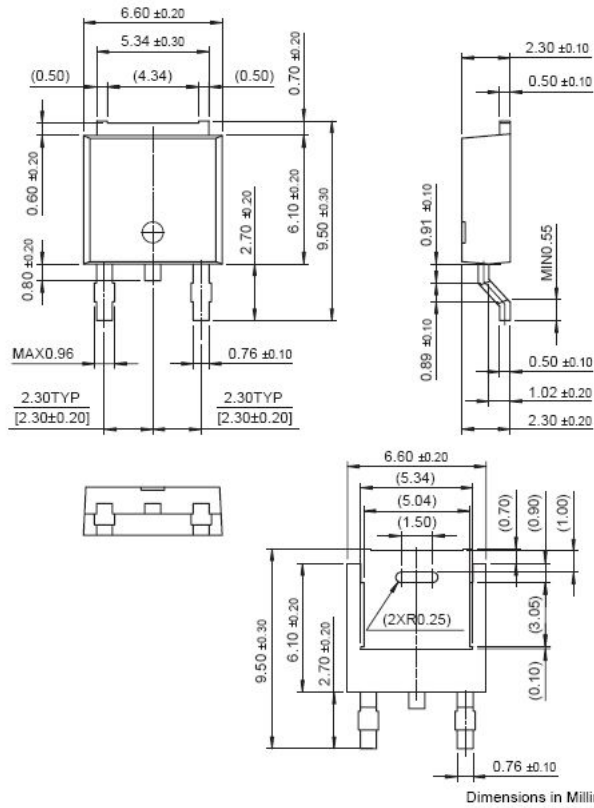


Figure 6. Non-Repetitive Surge Current

# Package Dimensions

## D-PAK



Dimensions in Millimeters

Dimensions in Millimeters



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FPS™	 ®	SuperSOT™-3	VCX™
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