

25A SURFACE MOUNT FAST RECOVERY RECTIFIER

High current Fast Recovery Rectifier housed in the industry-standard D2PAK package. These are high-efficiency, silicon rectifiers for industrial applications requiring surface mount form factor.

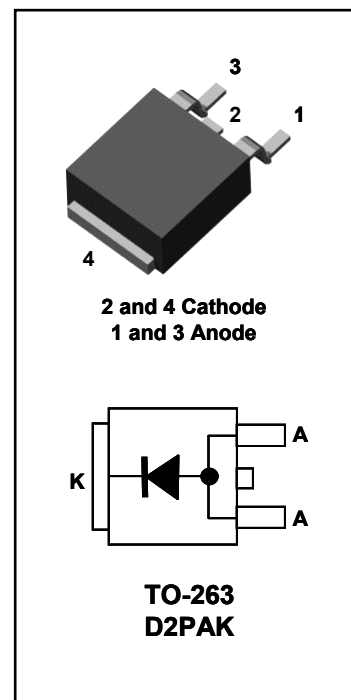
SPECIFICATION FEATURES

- High Current ($I_{F(AV)} = 25A$)
- Low V_F for Lower Forward Conduction Losses
- Soft Recovery Characteristic
- Glass Passivated Junction
- Y-Clip Construction for High Surge Current Capability

APPLICATIONS

- Voltage Regulators
- Automotive and Industrial Rectification

MARKING CODE: FR2504DY



MAXIMUM RATINGS

Rating	Symbol	Value	Units
Peak Repetitive Reverse Voltage	V_{RRM}	400	V
Working Peak Reverse Voltage	V_{RWM}	400	V
DC Blocking Voltage	V_{DC}	400	V
Average Rectified Forward Current ($T_C = 100^\circ C$)	$I_{F(AV)}$	25	A
Non-Repetitive Peak Forward Surge Current	I_{FSM}	280	A
Operating Junction and Storage Temperature Range	T_J, T_{stg}	-50 to 150	$^\circ C$

THERMAL CHARACTERISTICS

Rating	Symbol	Value	Units
Thermal Resistance junction to case	$R_{\theta JC}$	1.0	$^\circ C/Watt$



ELECTRICAL CHARACTERISTICS ($T_J = 25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Forward voltage (Note 1)	V_F	$I_F = 25\text{A}$	-	1.17	1.3	V
		$I_F = 50\text{A}$	-	1.35	1.5	
Reverse Leakage Current	I_R	$V_R = 400\text{V}$	-	-	10	μA
Reverse Recovery Time	t_{rr}	$I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{RR} = 0.25\text{A}$	-	110	250	ns

Note 1. Short duration pulse to minimize self-heating

TYPICAL CHARACTERISTICS ($T_J = 25^\circ\text{C}$ unless otherwise noted)

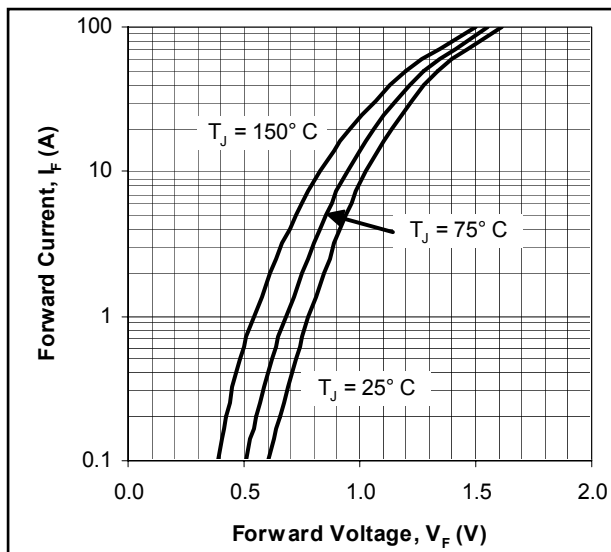


Figure 1. Typical Forward Characteristics

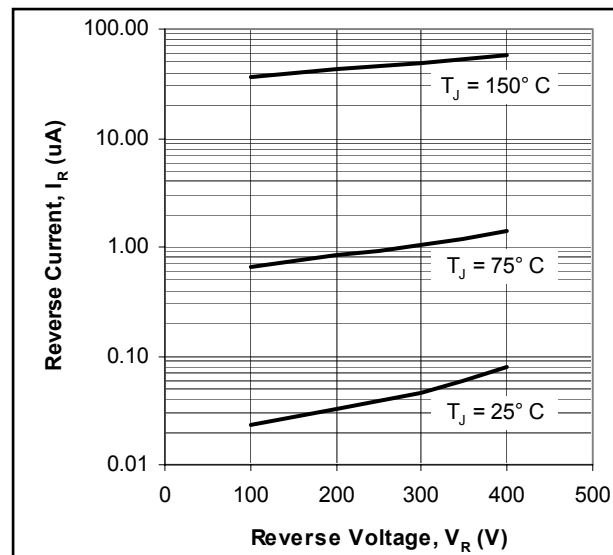


Figure 2. Typical Reverse Characteristics

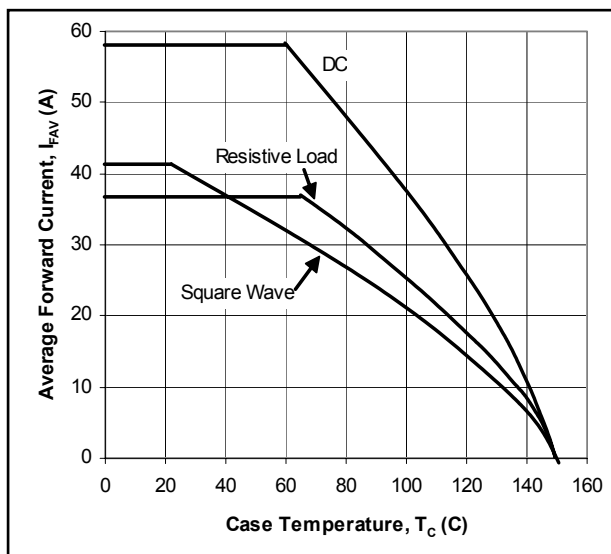


Figure 3. Current Derating Curves

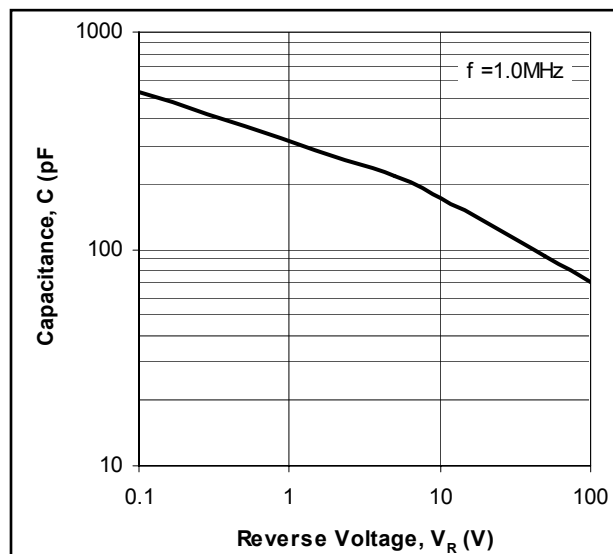
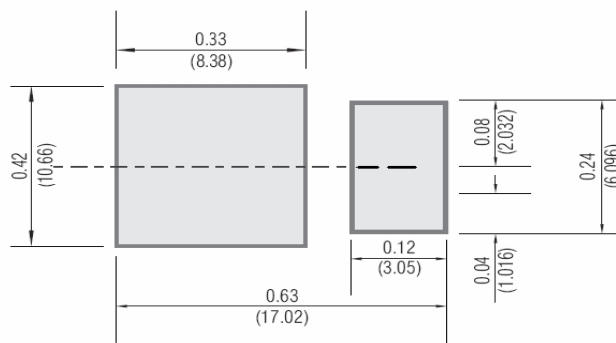
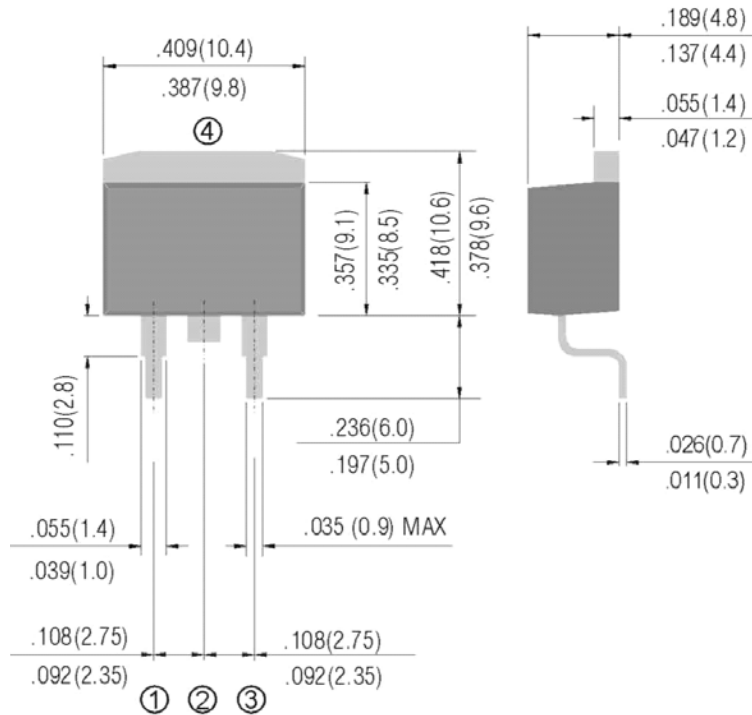


Figure 4. Typical Capacitance

PACKAGE DIMENSIONS AND SUGGESTED PAD LAYOUT

TO-263 / D2PAK Units: inch (mm)



ORDERING INFORMATION

FR2504DY T/R - Tape and Reel, 800 Units Per Reel

Copyright PanJit International, Inc 2005

The information presented in this document is believed to be accurate and reliable. The specifications and information herein are subject to change without notice. Pan Jit makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose. Pan Jit products are not authorized for use in life support devices or systems. Pan Jit does not convey any license under its patent rights or rights of others.