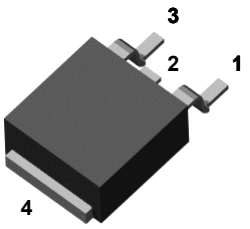
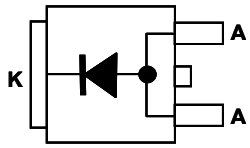
FR2504DY

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.



2 and 4 Cathode
1 and 3 Anode



TO-263
D2PAK

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 °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	°C

THERMAL CHARACTERISTICS

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

ELECTRICAL CHARACTERISTICS (T_J = 25°C unless otherwise noted)

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

Note 1. Short duration pulse to minimize self-heating

TYPICAL CHARACTERISTICS (T_J = 25°C unless otherwise noted)

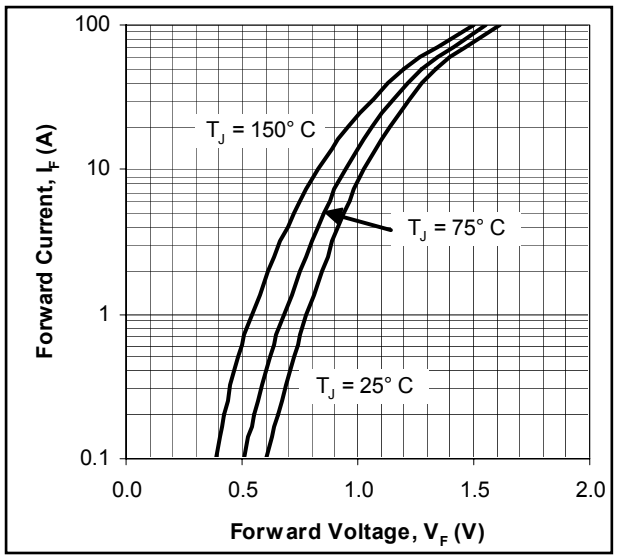


Figure 1. Typical Forward Characteristics

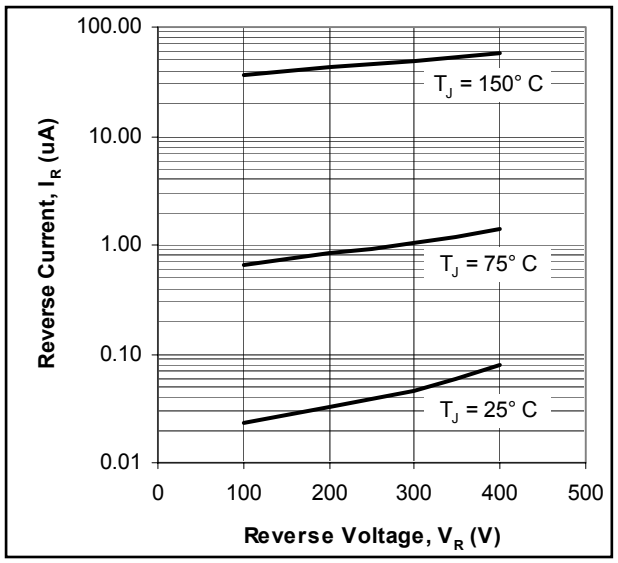


Figure 2. Typical Reverse Characteristics

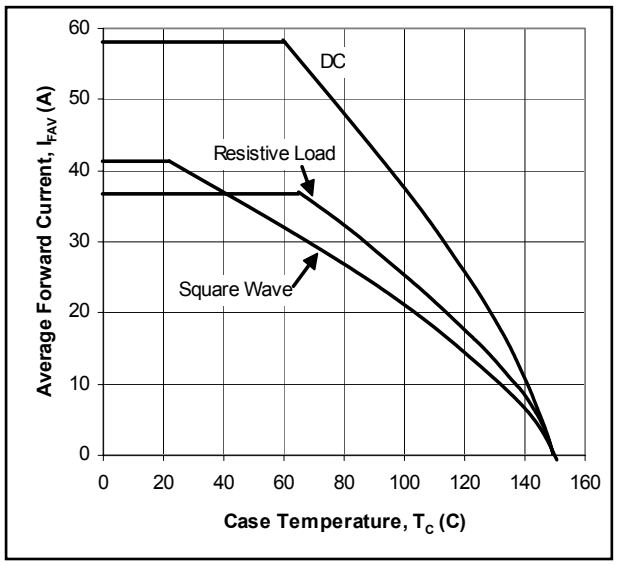


Figure 3. Current Derating Curves

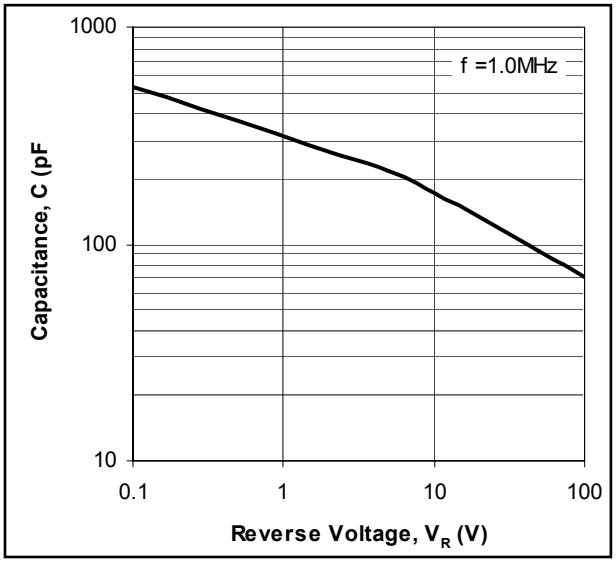
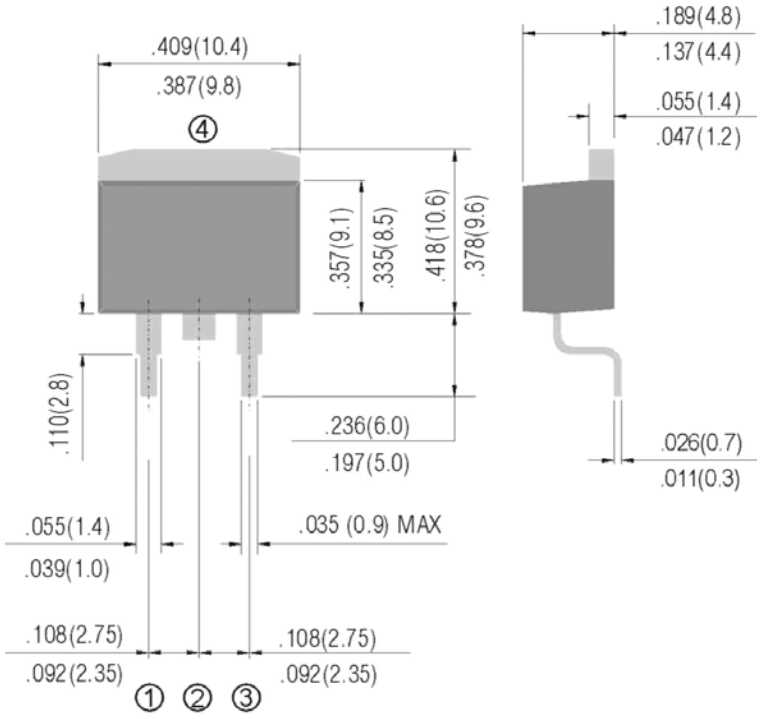
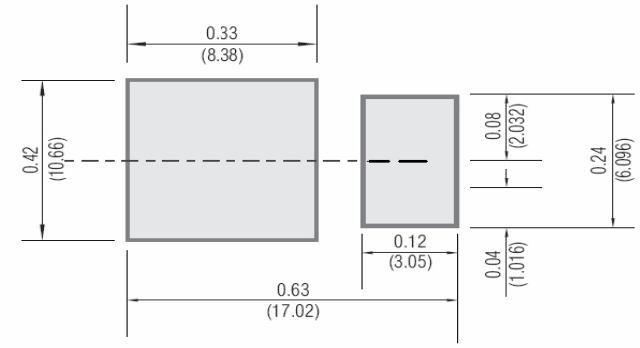


Figure 4. Typical Capacitance

PACKAGE DIMENSIONS AND SUGGESTED PAD LAYOUT

TO-263 / D2PAK Units: inch (mm)





ORDERING INFORMATION

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

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