FR2504

25A / 400V FAST RECOVERY RECTIFIER

High current Fast Recovery Rectifier housed in the industry-standard TO-220AC package. These are high-efficiency, silicon rectifiers for industrial applications.

TO-220 AC



SPECIFICATION FEATURES

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

APPLICATIONS

- **Voltage Regulators**
- **Automotive and Industrial Rectification**

MARKING CODE: FR2504

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)

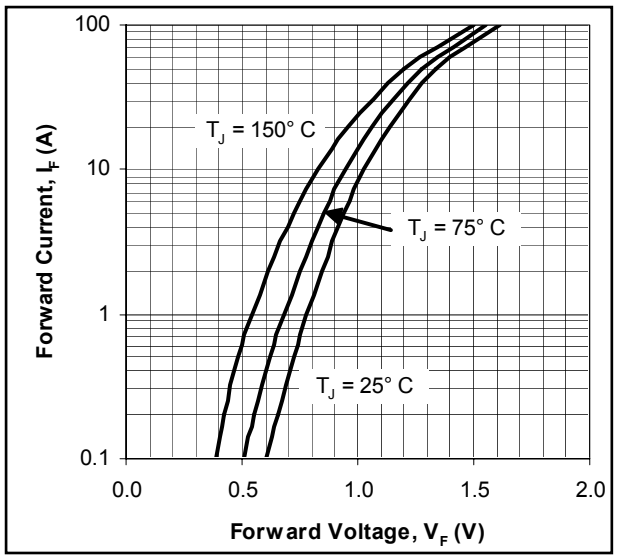


Figure 1. Typical Forward Characteristics

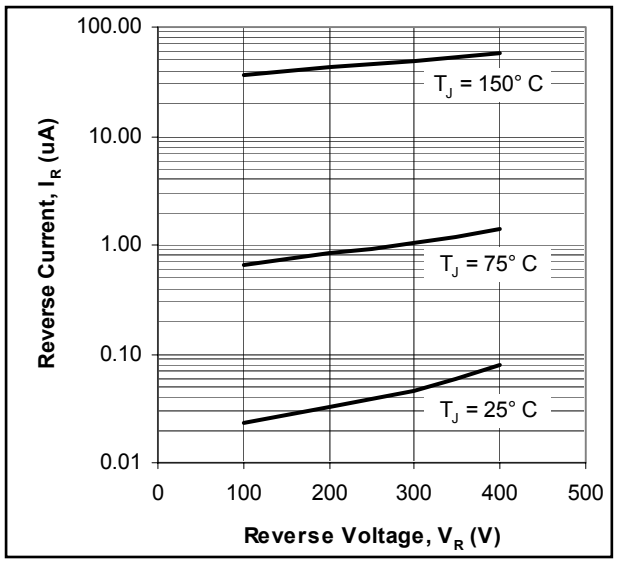


Figure 2. Typical Reverse Characteristics

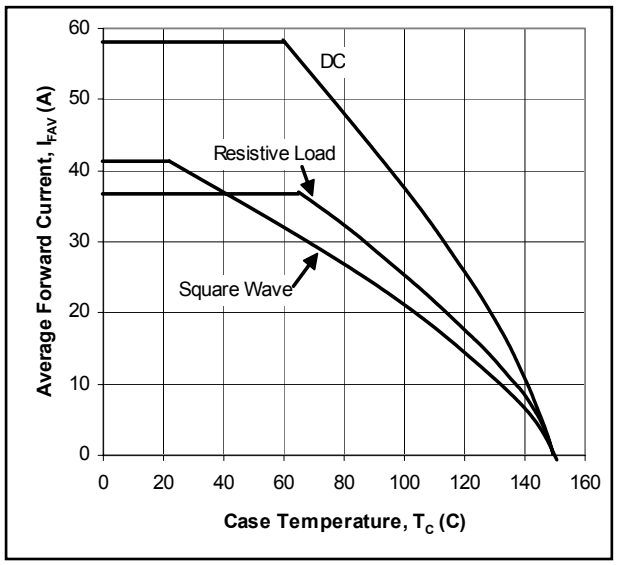


Figure 3. Current Derating Curves

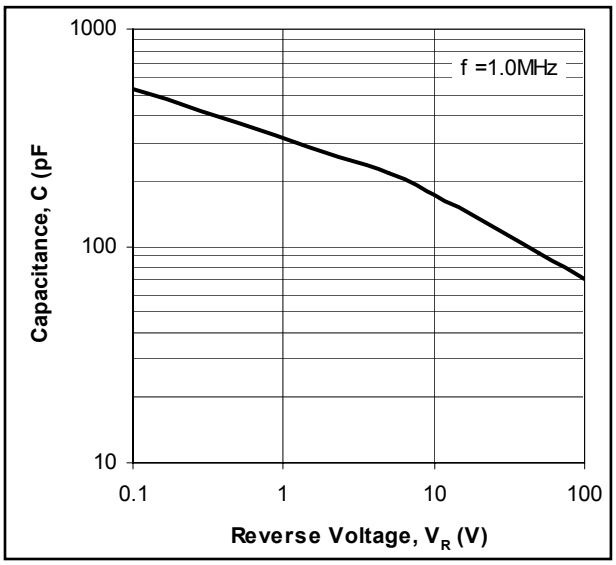
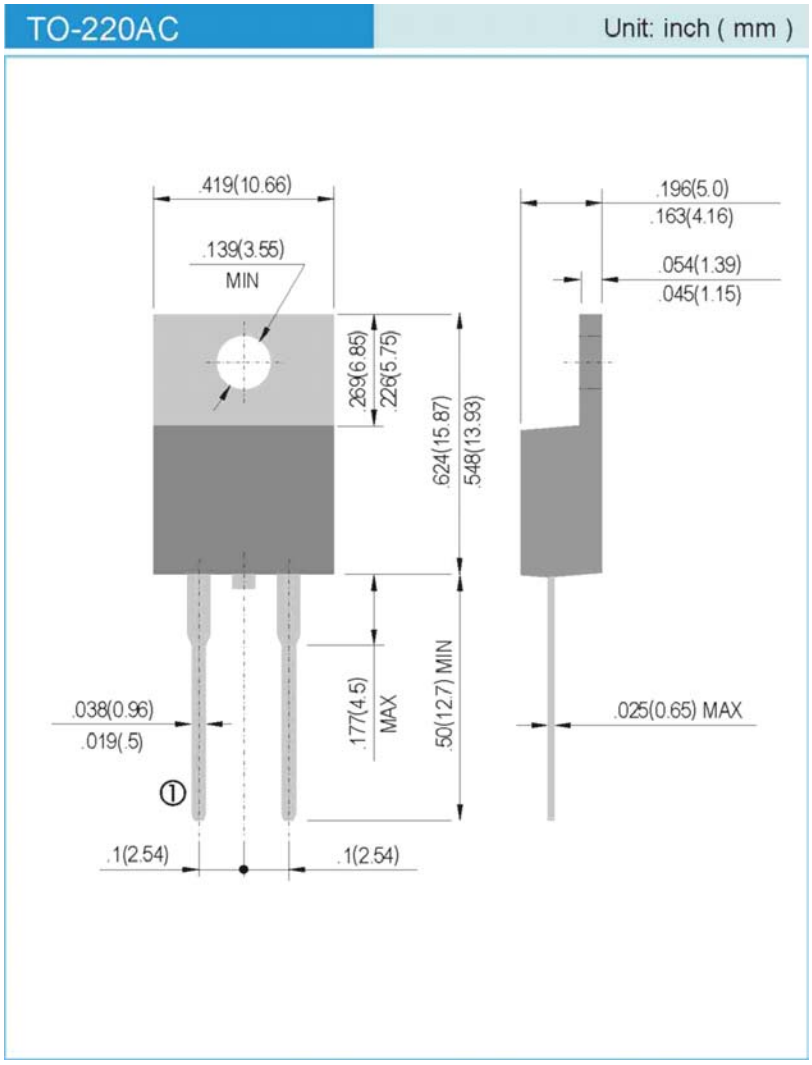


Figure 4. Typical Capacitance

PACKAGE DIMENSIONS



ORDERING INFORMATION

FR2504 B - Bulk, 50 units per tube, 2K per box

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