

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.

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 ($T_C = 100\text{ }^\circ\text{C}$)	$I_{F(AV)}$	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	$^\circ\text{C}$

THERMAL CHARACTERISTICS

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

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)

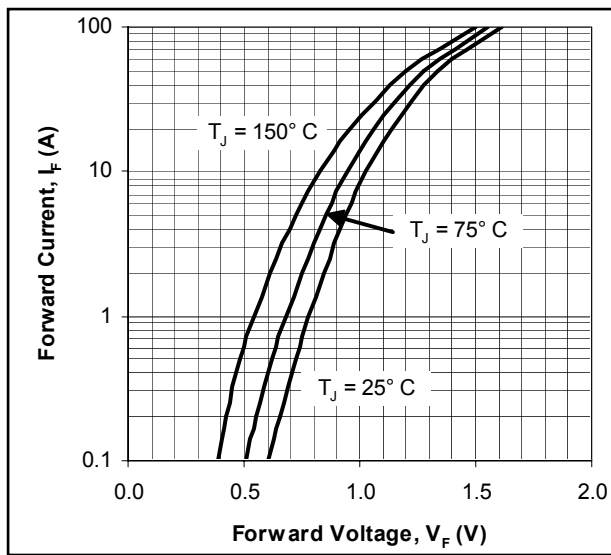


Figure 1. Typical Forward Characteristics

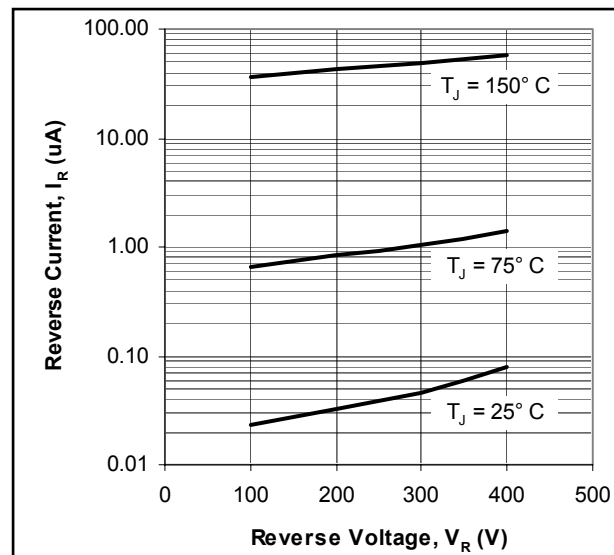


Figure 2. Typical Reverse Characteristics

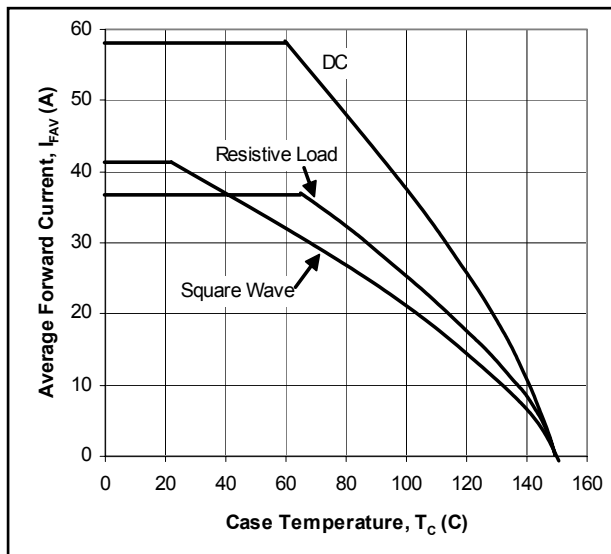


Figure 3. Current Derating Curves

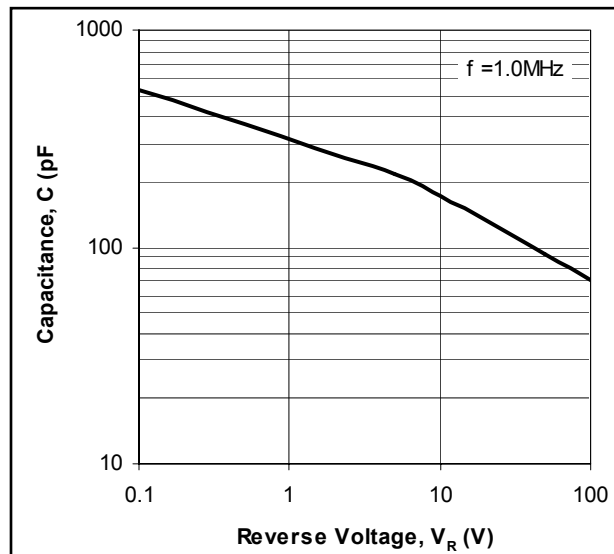


Figure 4. Typical Capacitance

