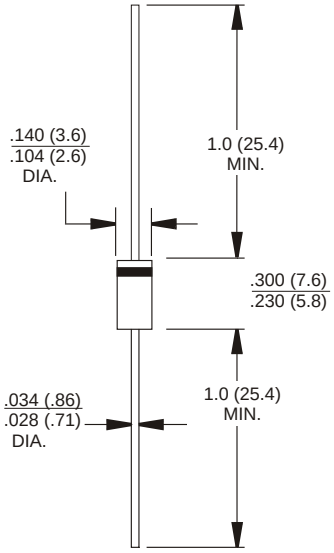
SEMICONDUCTOR

DATA SHEET

MUR220

Power Rectifier
designed for use in switching power supplies, inverters and as free wheeling diodes, these state–of–the–art devices have the following features:

DO-15 Unit:inch(mm)



FEATURES

- Ultrafast 50 Nanosecond Recovery Times
- 150°C Operating Junction Temperature
- Low Forward Voltage
- Low Leakage Current
- High Temperature Glass Passivated Junction
- High temperature soldering : 260°C / 10 seconds at terminals
- Pb free product at available : 99% Sn above meet RoHS environment substance directive request

Mechanical Characteristics

- Case: Epoxy, Molded
- Weight: 0.4 gram (approximately)
- Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- Lead and Mounting Surface Temperature for Soldering Purposes: 220°C Max. for 10 Seconds, 1/16, from case
- Shipped in plastic bags, 1000 per bag
- Available Tape and Reeled, 5000 per reel, by adding a “RL’’ suffix to the part number
- Polarity: Cathode Indicated by Polarity Band
- Marking: MUR220

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Peak Repetitive Reverse Voltage **Working Peak Reverse Voltage** **DC Blocking Voltage**	V_{RRM} V_{RWM} V_R	200 —	Volts
Average Rectified Forward Current (Note 1.) (Square Wave Mounting Method #3 Per Note 3.)	$I_{F(AV)}$	2.0 @ T_A = 90°C	Amps
Non-Repetitive Peak Surge Current (Surge applied at rated load conditions, halfwave, single phase, 60 Hz)	I_{FSM}	60	Amps
Operating Junction Temperature and Storage Temperature Range	T_J, T_{stg}	–55 to +150	°C

1. Pulse Test: Pulse Width = 300 _s, Duty Cycle 3 2.0%.

MUR220

ELECTRICAL CHARACTERISTICS

Characteristic	Symbol	Value	Unit
Maximum Instantaneous Forward Voltage (Note 2) **(I_F = 2.0 Amp, T_J = 150°C)** **(I_F = 2.0 Amp, T_J = 25°C)**	V_F	0.85 1.0	V
Maximum Instantaneous Reverse Current (Note 2) **(Rated dc Voltage, T_J = 150°C)** **(Rated dc Voltage, T_J = 25°C)**	I_R	150 5	μA
Maximum Reverse Recovery Time **(I_F = 0.5 Amp, IR = 1.0 Amp, IREC = 0.25 A)**	t_{rr}	50	ns
Maximum Forward Recovery Time **(I_F = 1.0 A, di/dt = 100 A/μs)**	t_{rr}	50	ns

2. Pulse Test: Pulse Width = 300 _s, Duty Cycle ≤ 2.0%.

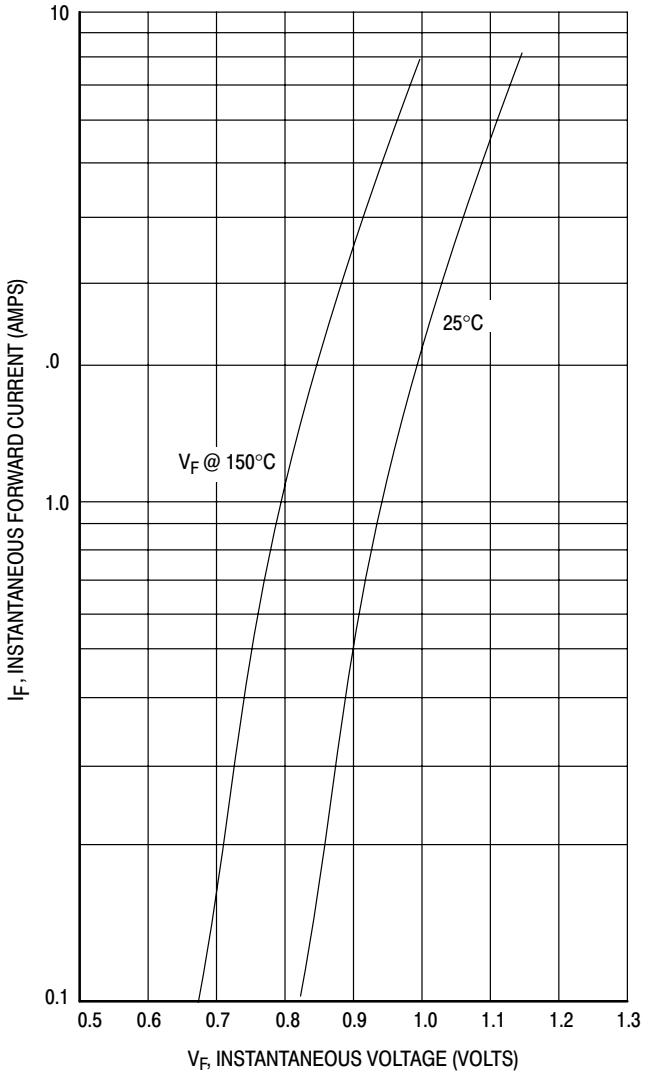


Figure 1. Maximum Forward Voltage

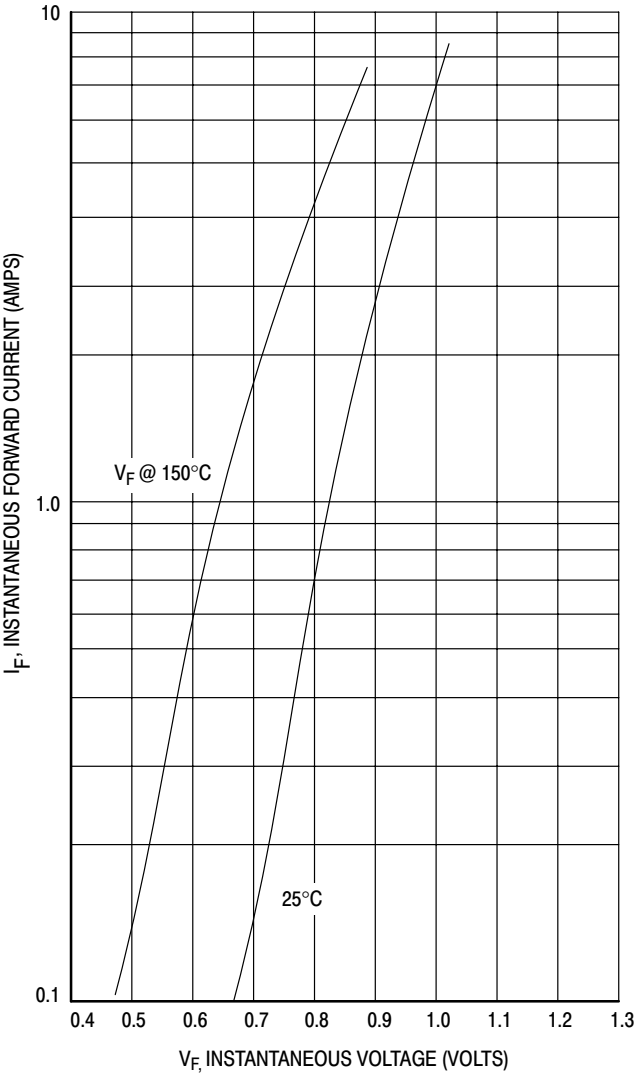


Figure 2. Typical Forward Voltage

RATING AND CHARACTERISTIC CURVES

MUR220

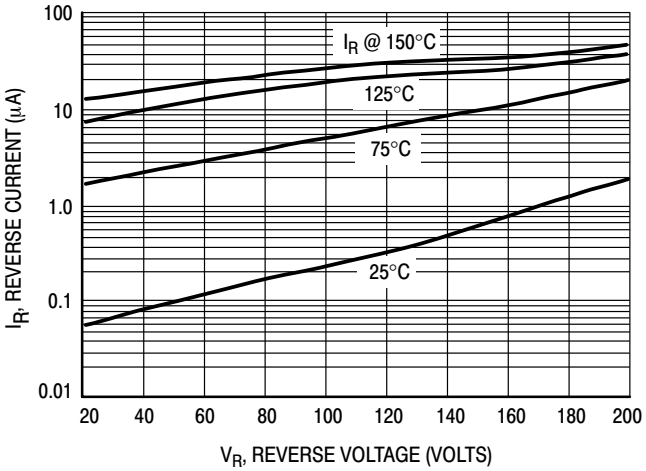


Figure 3. Maximum Reverse Current

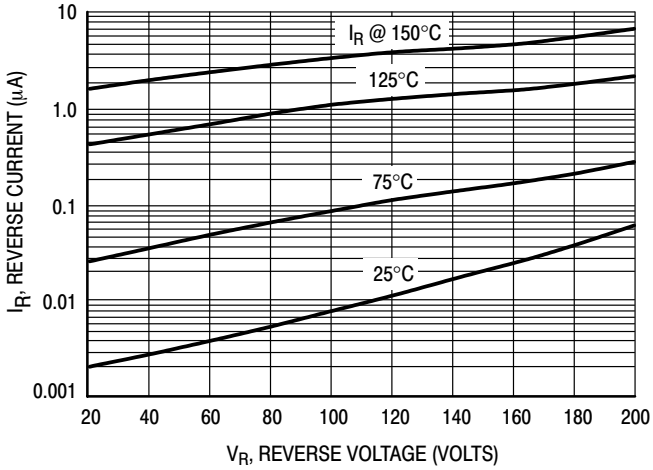


Figure 4. Typical Reverse Current

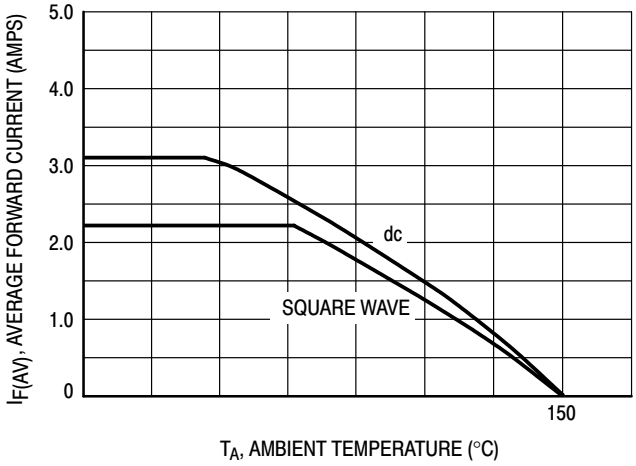


Figure 5. Current Derating

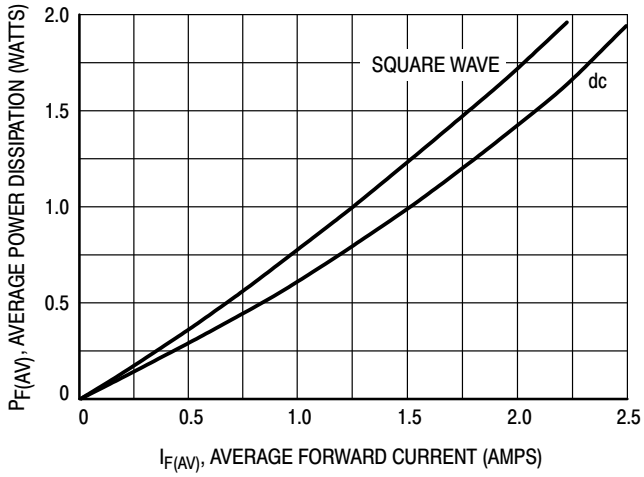


Figure 6. Power Dissipation

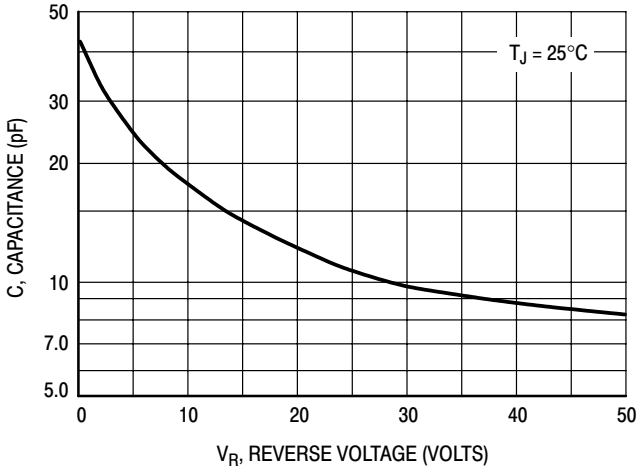


Figure 7. Typical Capacitance