



DATA SHEET

SEMICONDUCTOR

MUR240

Power Rectifier

These state-of-the-art devices are designed for use in switching power supplies, inverters and as free wheeling diodes.



Features

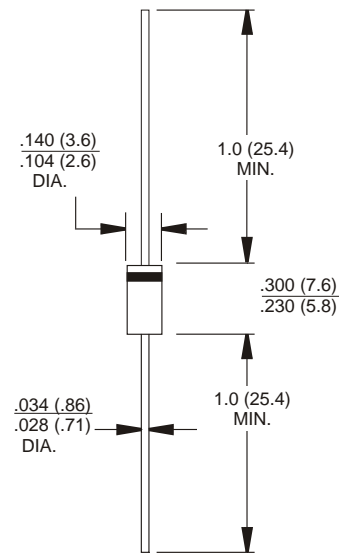
- Ultrafast Recovery Times
- 175°C Operating Junction Temperature
- Low Forward Voltage
- Low Leakage Current
- High Temperature Glass Passivated Junction
- These are Pb-Free Devices*
- High temperature soldering : 260°C / 10 seconds at terminals
- Pb free product at available : 99% Sn above meet RoHS 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 Temperature for Soldering Purposes: 260°C Max. for 10 Seconds
- Polarity: Cathode Indicated by Polarity Band
- Shipped in Plastic Bags; 1,000 per Bag
- Available Tape and Reel; 5,000 per Reel, by Adding a "RL" Suffix to the Part Number

DO-15

Unit:inch(mm)



MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	VRRM	400	V
Working Peak Reverse Voltage	VRWM	—	V
DC Blocking Voltage	VR	—	V
Average Rectified Forward Current (Note 1) (Square Wave Mounting Method #3 Per Note 3)	IF(AV)	2.0 @ TA = 85°C	A
Non-Repetitive Peak Surge Current (Surge applied at rated load conditions, halfwave, single phase, 60 Hz)	IFSM	60	A
Operating Junction Temperature and Storage Temperature Range	TJ, Tstg	-55 to +150	°C

THERMAL CHARACTERISTICS

Characteristic	Symbol	Value	Unit
Maximum Thermal Resistance, Junction-to-Ambient	RθJA	See Note 3	°C/W

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

1. Pulse Test: Pulse Width = 300 μs, Duty Cycle ≤ 2.0%.

*For additional information on our Pb-Free strategy and soldering details, please download the ON Semiconductor Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.

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ELECTRICAL CHARACTERISTICS

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

2. Pulse Test: Pulse Width = 300 μs , Duty Cycle $\leq 2.0\%$.

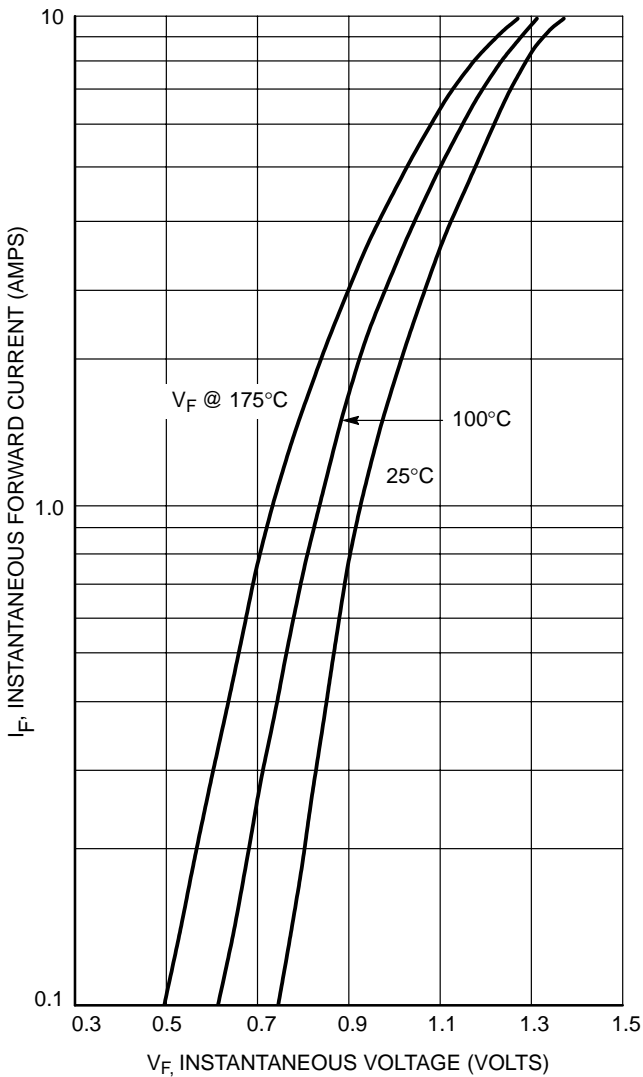


Figure 1. Typical Forward Voltage

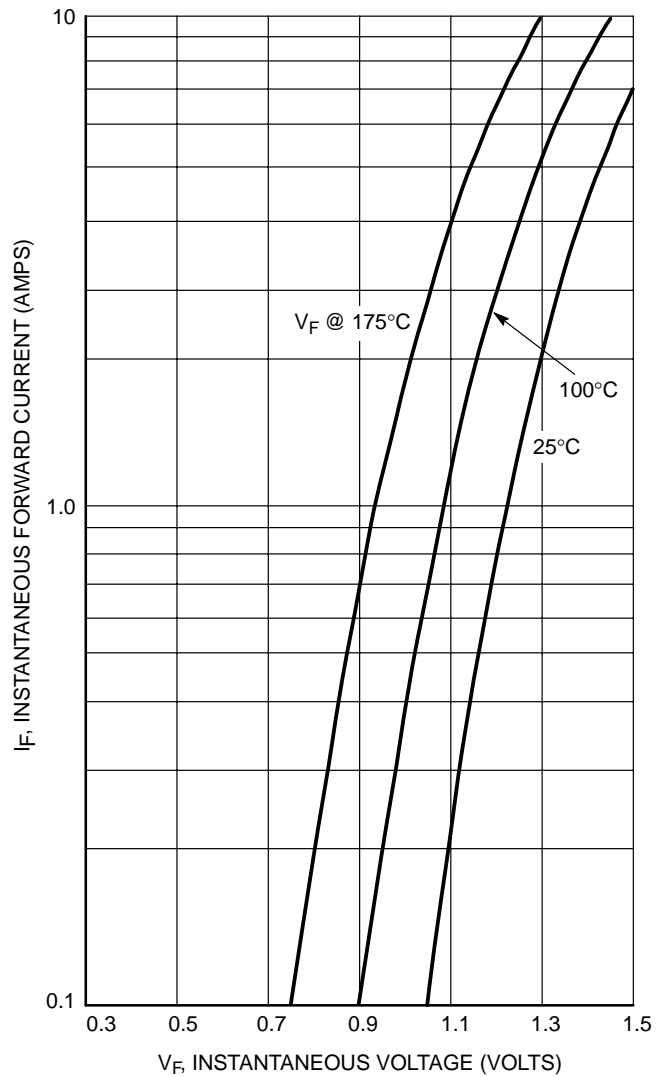


Figure 2. Maximum Forward Voltage

RATING AND CHARACTERISTIC CURVES

MUR240

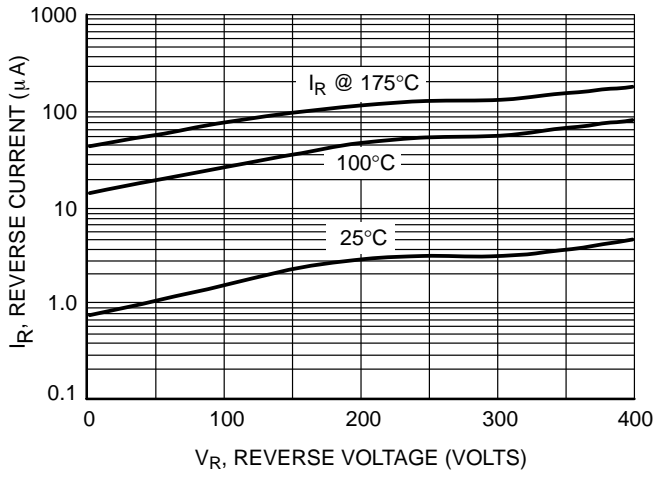


Figure 3. Maximum Reverse Current

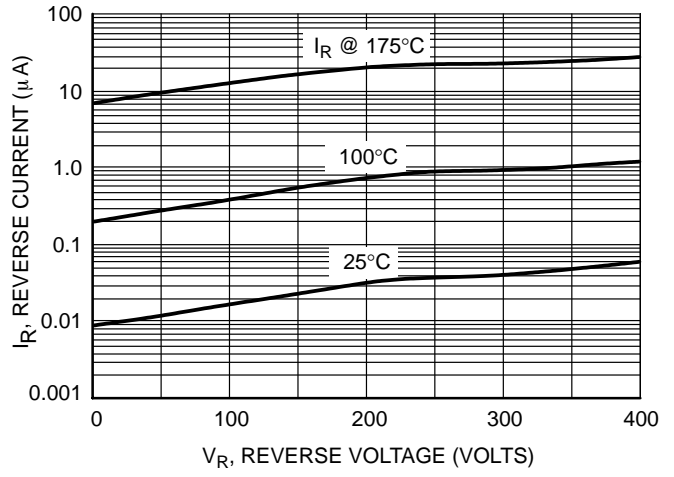


Figure 4. Typical Reverse Current

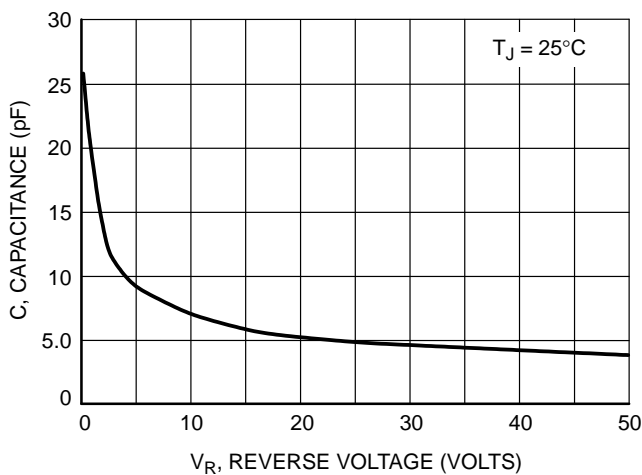
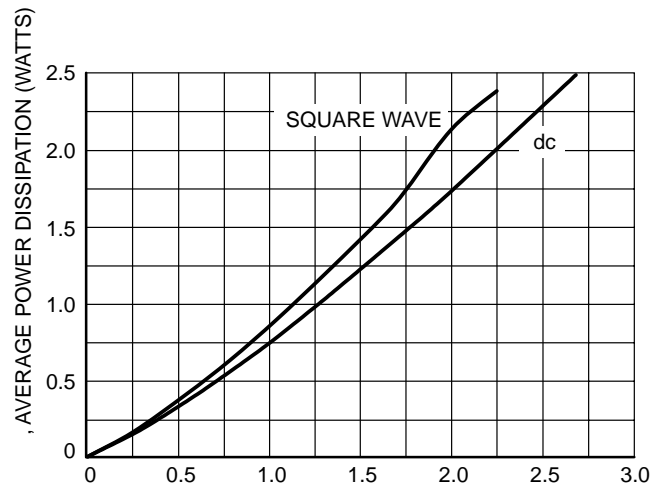
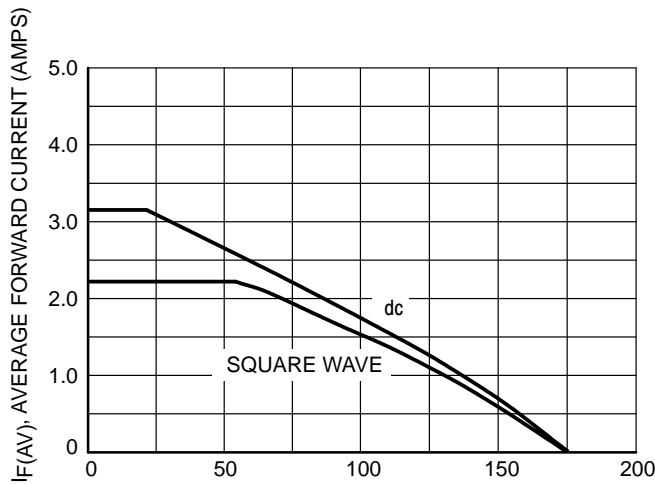


Figure 7. Typical Capacitance

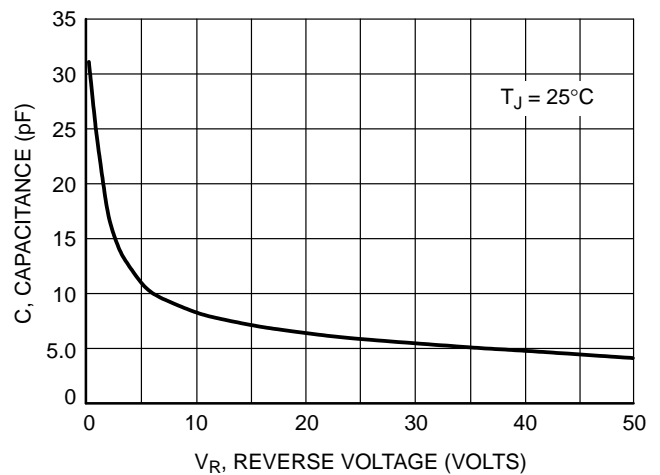


Figure 8. Maximum Capacitance