



DATA SHEET

SEMICONDUCTOR

MUR405 / 410 / 415 / 420 / 440 / 460

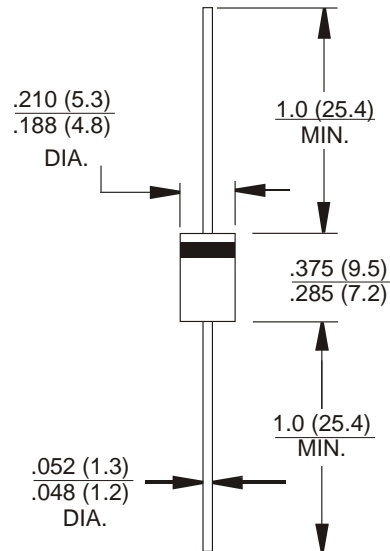
Power Rectifiers

Features

- Ultrafast 25, 50 and 75 Nanosecond Recovery Times
- 175°C Operating Junction Temperature
- Low Forward Voltage
- Low Leakage Current
- High Temperature Glass Passivated Junction
- Reverse Voltage to 600 Volts
- High temperature soldering : 260°C / 10 seconds at terminals
- Pb free product at available : 99% Sn above meet RoHS environment substance directive request



DO-201AD Unit:inch(mm)



Mechanical Characteristics

- Case: Epoxy, Molded
- Weight: 1.1 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, 5,000 per bag
- Available Tape and Reeled, 1500 per reel, by adding a "RL" suffix to the part number
- Polarity: Cathode indicated by Polarity Band
- Marking: MUR405, MUR410, MUR415, MUR420, MUR440, MUR460

MAXIMUM RATINGS

| Rating | Symbol | MUR | | | | | | Unit |
|--|----------|-----------------|-----|-----|-----|-----------------|-----|-------|
| | | 405 | 410 | 415 | 420 | 440 | 460 | |
| Peak Repetitive Reverse Voltage | VRRM | | | | | | | Volts |
| Working Peak Reverse Voltage | VRWM | 50 | 100 | 150 | 200 | 400 | 600 | |
| DC Blocking Voltage | VR | | | | | | | |
| Average Rectified Forward Current (Square Wave) (Mounting Method #3 Per Note 2) | IF(AV) | 4.0 @ TA = 80°C | | | | 4.0 @ TA = 40°C | | Amps |
| Nonrepetitive Peak Surge Current (Surge applied at rated load conditions, half wave, single phase, 60 Hz) | IFSM | 150 | | | | | | Amps |
| Operating Junction Temperature & Storage Temperature | TJ, Tstg | -65 to +150 | | | | | | °C |

THERMAL CHARACTERISTICS

| | | | |
|---|------|------------|------|
| Maximum Thermal Resistance, Junction to Ambient | RθJA | See Note 2 | °C/W |
|---|------|------------|------|

ELECTRICAL CHARACTERISTICS

| | | | | |
|--|-----|-----|-----|-------|
| Maximum Instantaneous Forward Voltage (Note 1) (IF = 4.0 Amps, TJ = 25°C) | VF | 1.0 | 1.3 | Volts |
| Maximum Instantaneous Reverse Current (Note 1) (Rated dc Voltage, TJ = 150°C) | IR | 150 | 250 | μA |
| (Rated dc Voltage, TJ = 25°C) | | 10 | 10 | |
| Maximum Reverse Recovery Time (IF = 0.5 Amp, iR = 1.0 Amp, IREC = 0.25 Amp) | trr | 50 | | ns |
| Maximum Forward Recovery Time (IF = 1.0 A, di/dt = 100 A/ms, Recovery to 1.0 V) | tfr | 25 | 50 | ns |

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

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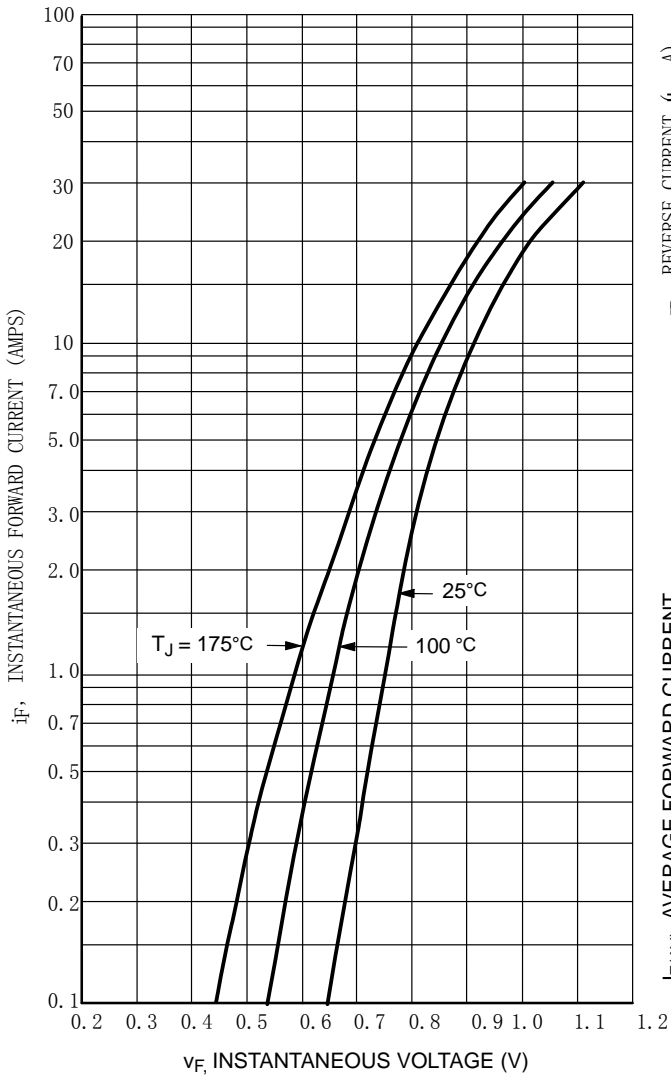


Figure 1. Typical Forward Voltage

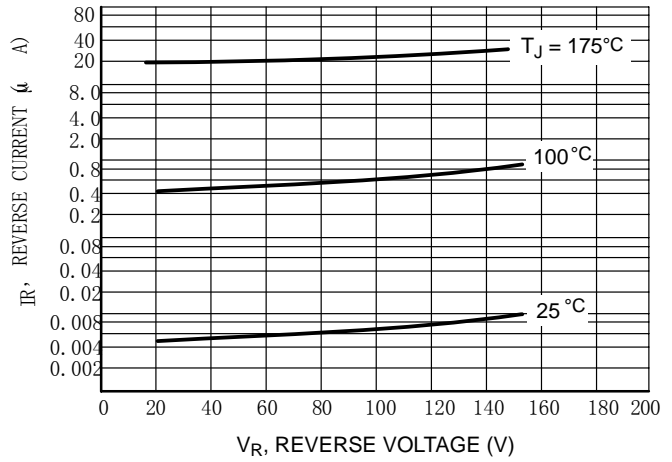


Figure 2. Typical Reverse Current

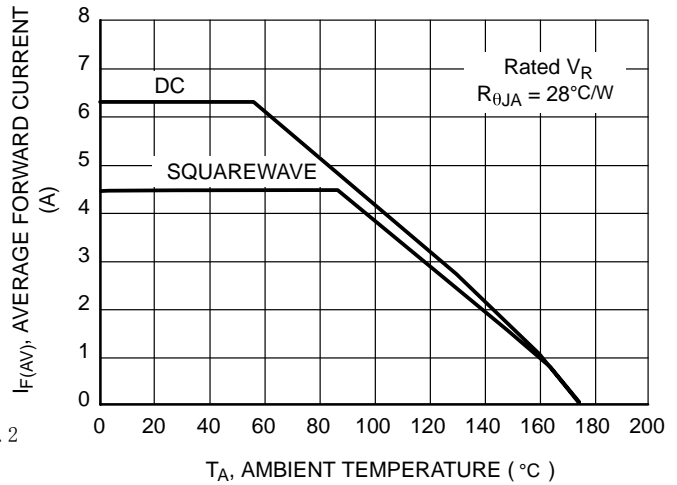


Figure 3. Current Derating
(Mounting Method #3 Per Note 2)

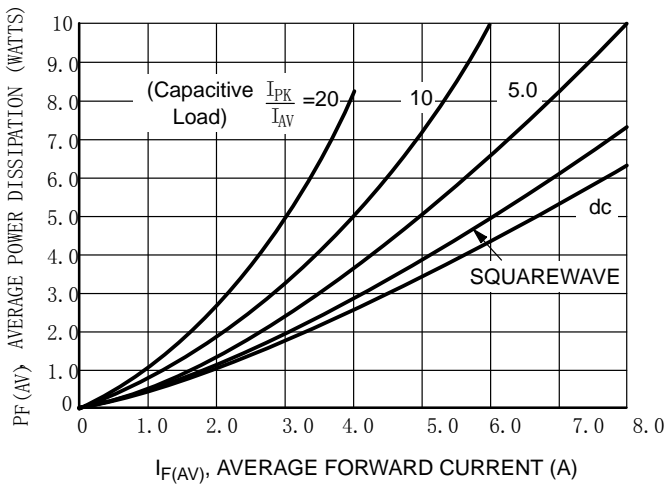


Figure 4. Power Dissipation

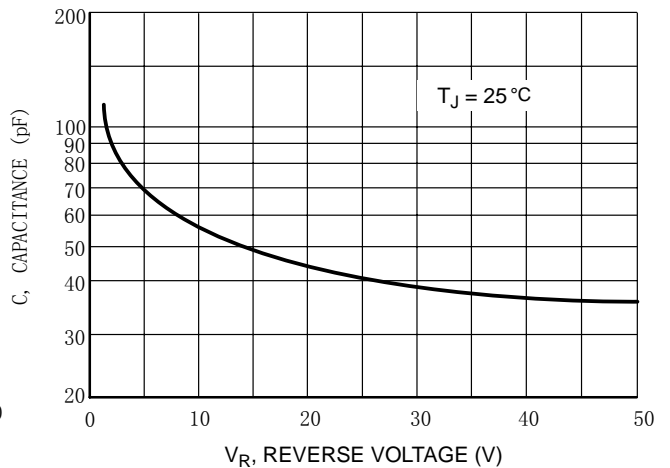


Figure 5. Typical Capacitance

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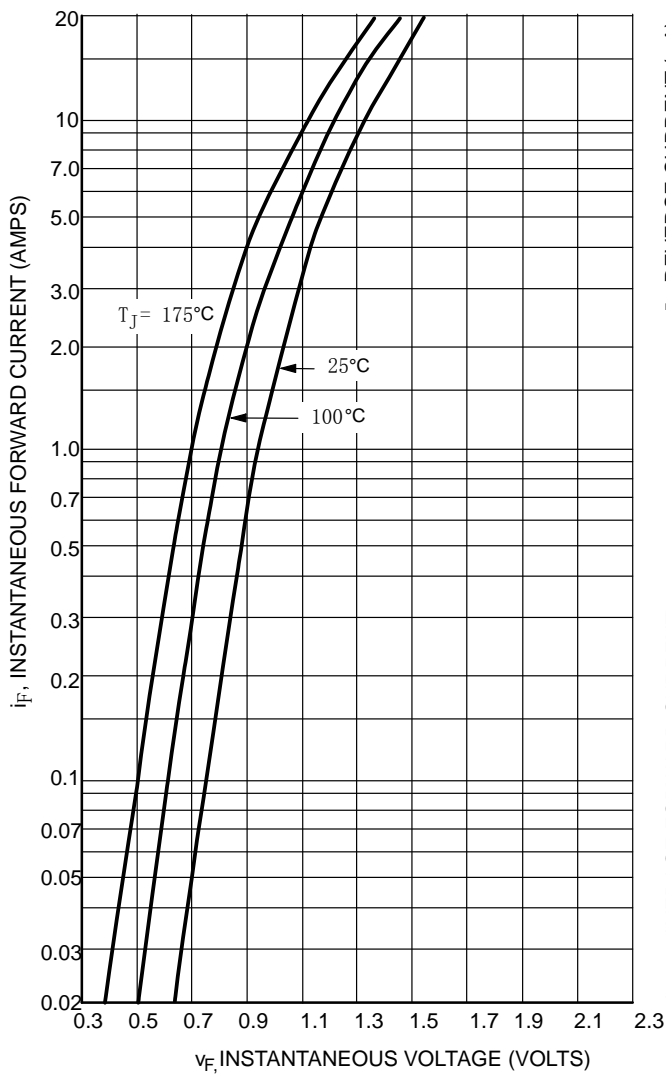


Figure 6. Typical Forward Voltage

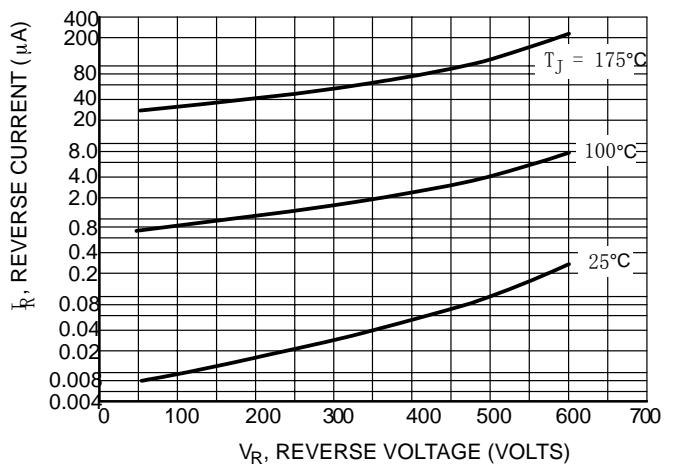


Figure 7. Typical Reverse Current

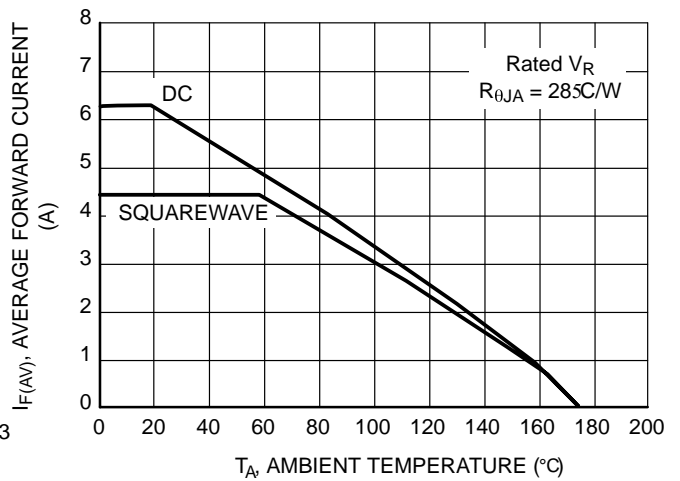


Figure 8. Current Derating
(Mounting Method #3 Per Note 2)

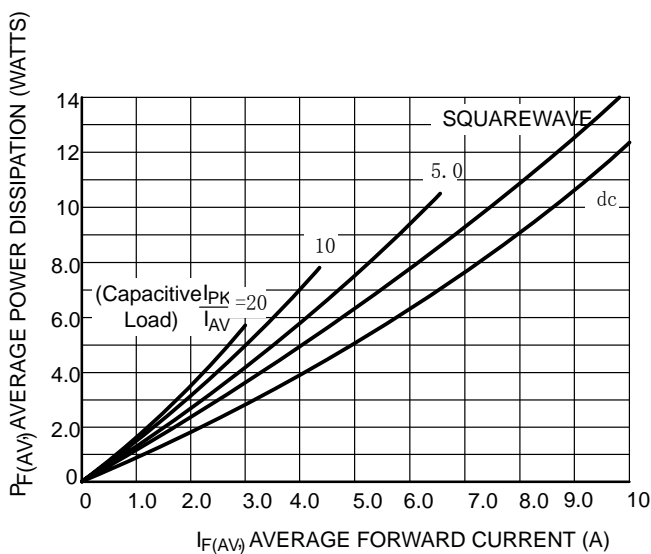


Figure 9. Power Dissipation

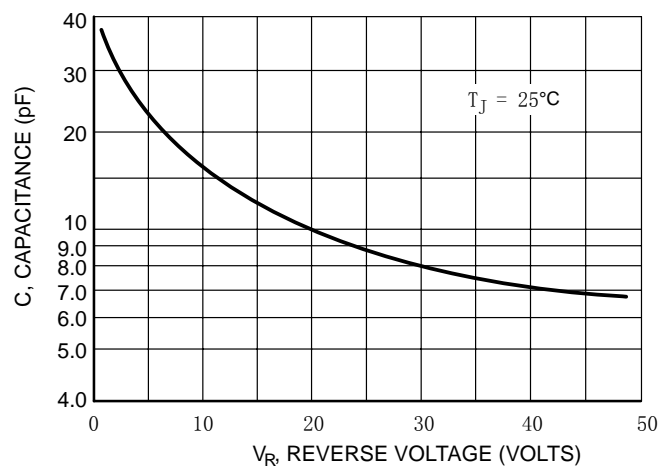


Figure 10. Typical Capacitance