



DATA SHEET

SEMICONDUCTOR

MUR405 / 410 / 415 / 420 / 440 / 460

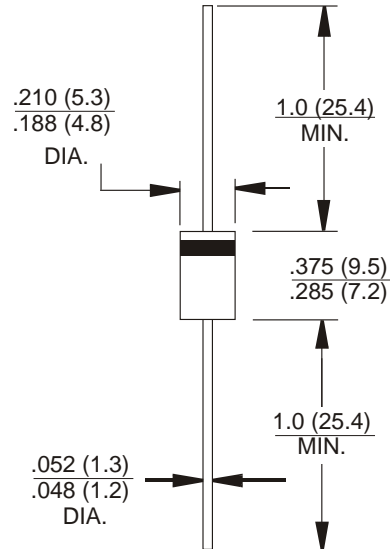
Power Rectifiers

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
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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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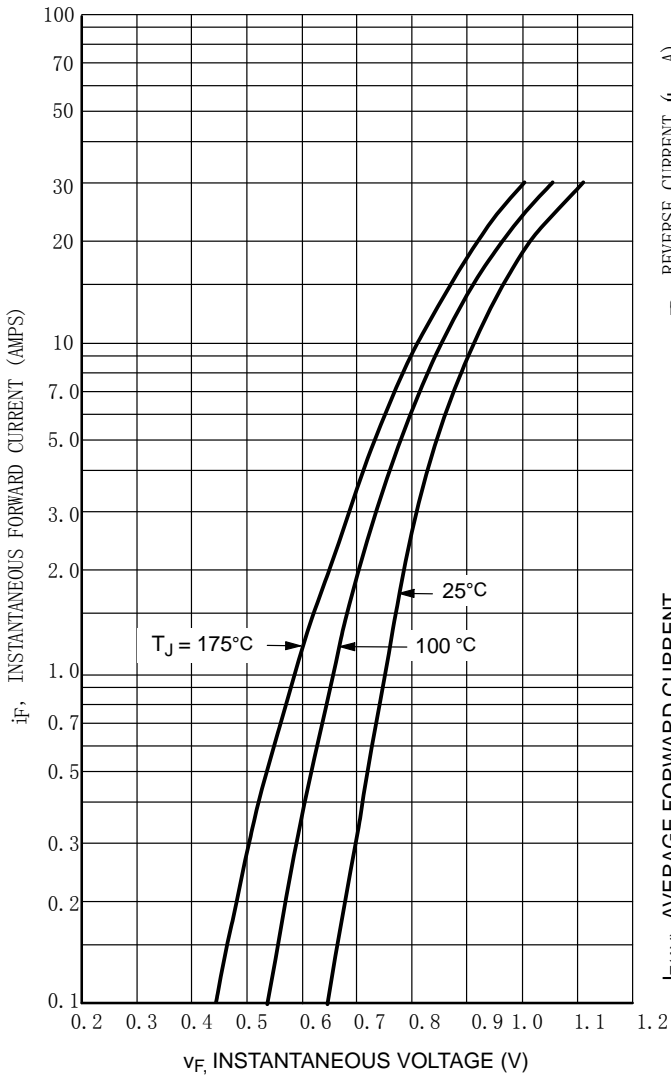


Figure 1. Typical Forward Voltage

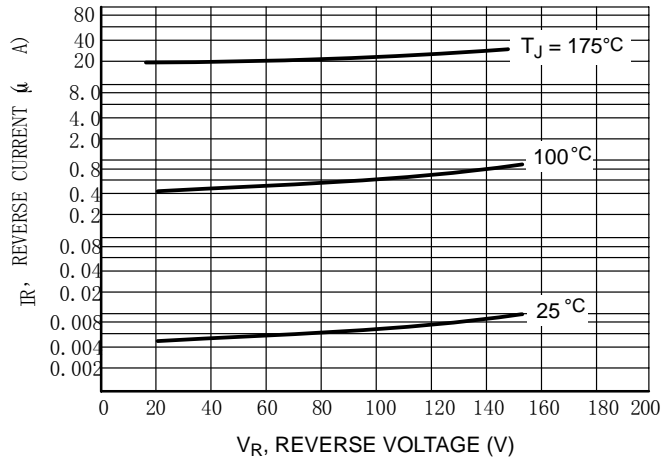


Figure 2. Typical Reverse Current

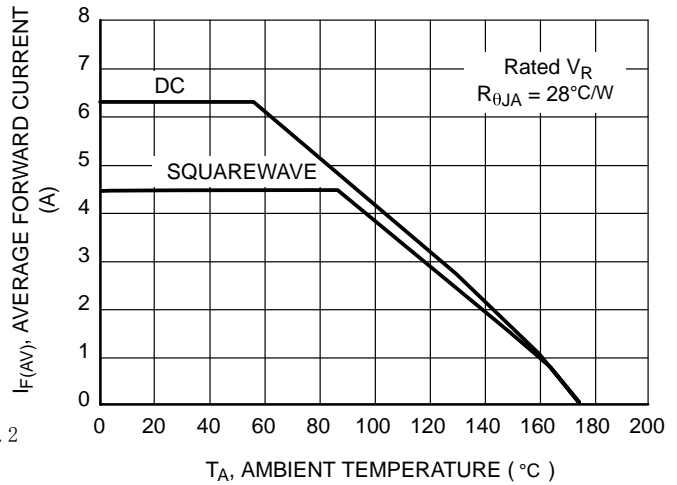


Figure 3. Current Derating
(Mounting Method #3 Per Note 2)

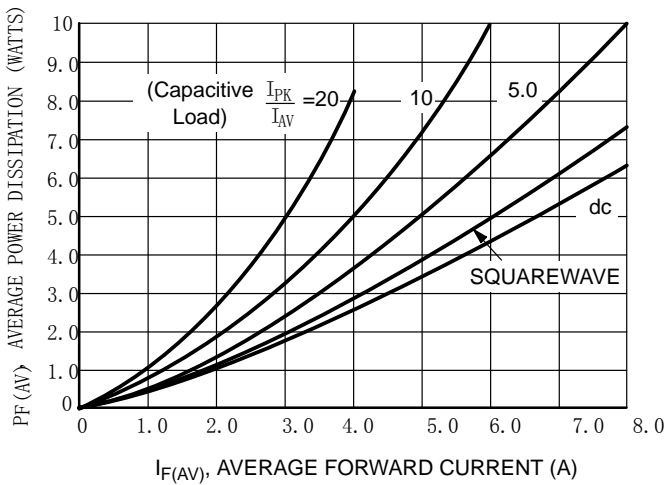


Figure 4. Power Dissipation

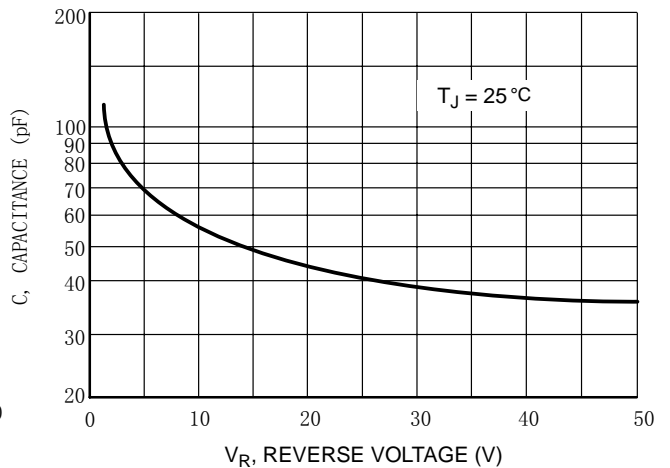


Figure 5. Typical Capacitance

MUR405 / 410 / 415 / 420 / 440 / 460

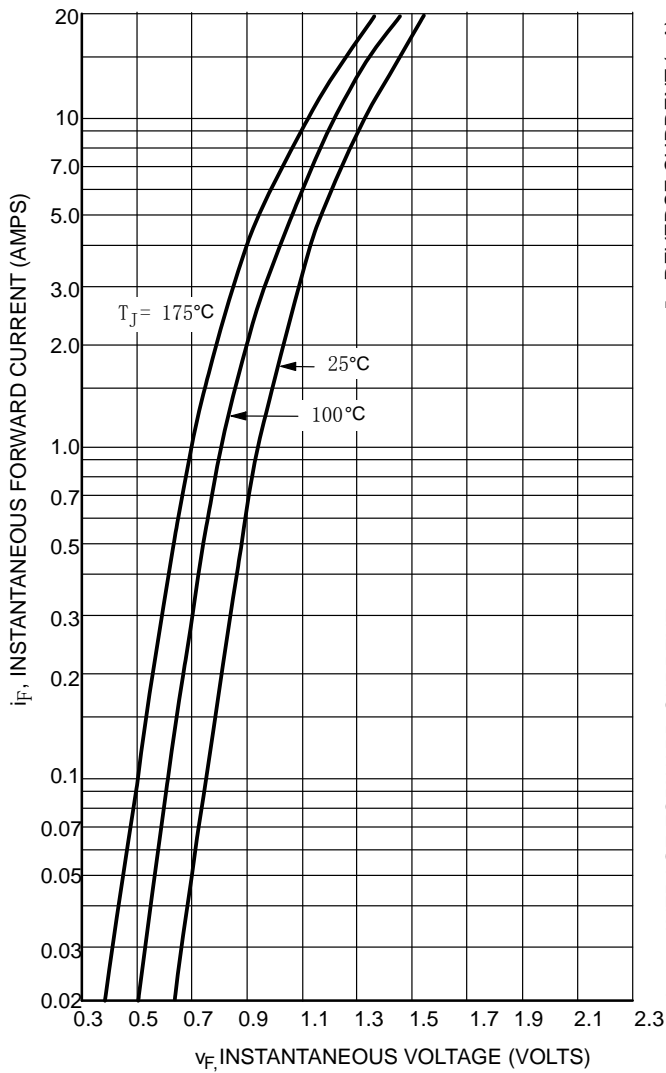


Figure 6. Typical Forward Voltage

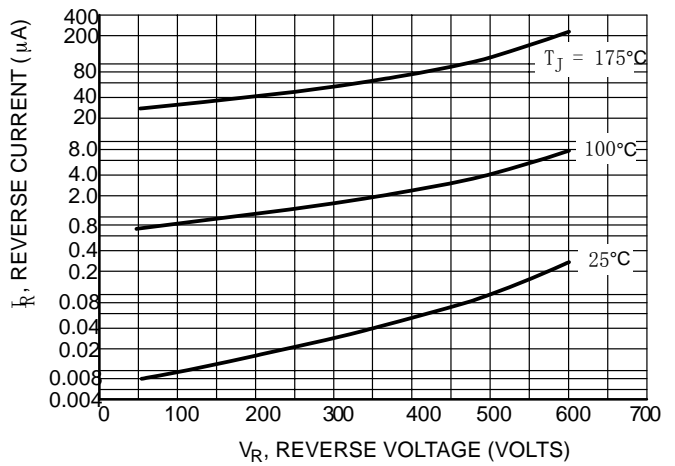


Figure 7. Typical Reverse Current

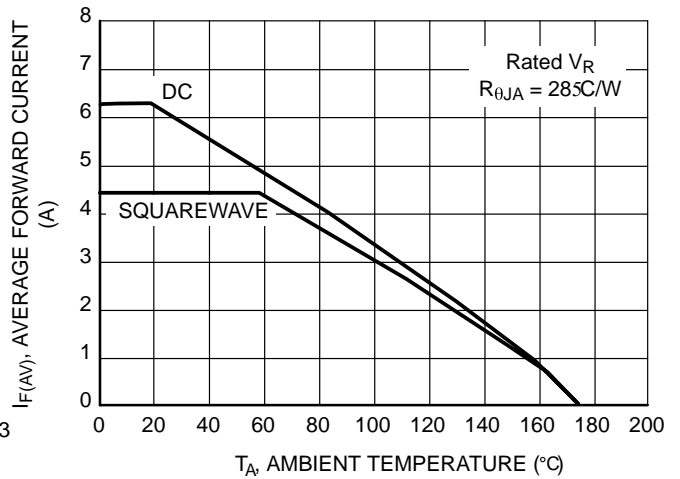


Figure 8. Current Derating
(Mounting Method #3 Per Note 2)

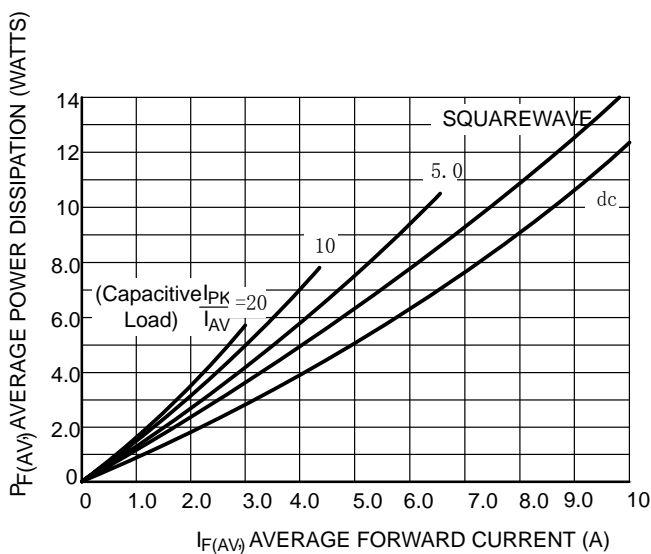


Figure 9. Power Dissipation

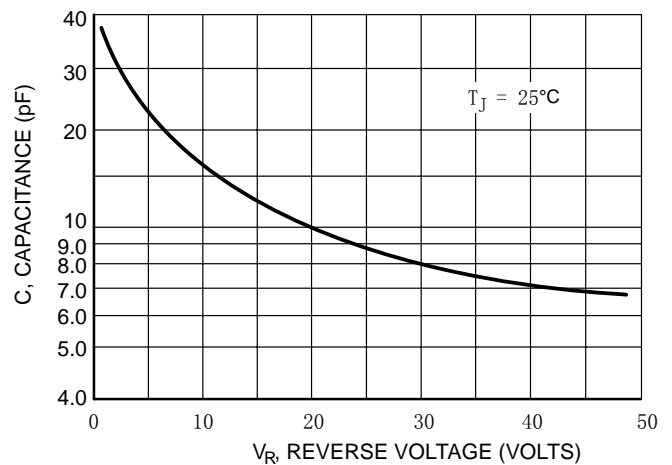


Figure 10. Typical Capacitance