MAXIMUM RATINGS

Rating	Symbol	MUR						Unit
		405	410	415	420	440	460	
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	50	100	150	200	400	600	V
Average Rectified Forward Current (Square Wave) (Mounting Method #3 Per Note 2)	$I_{F(AV)}$	4.0 @ T_A = 80°C				4.0 @ T_A = 40°C		A
Nonrepetitive Peak Surge Current (Surge applied at rated load conditions, half wave, single phase, 60 Hz)	I_{FSM}	125				110		A
Operating Junction Temperature & Storage Temperature	T_J, T_{stg}	−65 to +175						°C

Maximum ratings are those values beyond which device damage can occur. Maximum ratings applied to the device are individual stress limit values (not normal operating conditions) and are not valid simultaneously. If these limits are exceeded, device functional operation is not implied, damage may occur and reliability may be affected.

THERMAL CHARACTERISTICS

Rating	Symbol	MUR						Unit
		405	410	415	420	440	460	
Maximum Thermal Resistance, Junction−to−Ambient	$R_{\theta JA}$	See Note 2						°C/W

ELECTRICAL CHARACTERISTICS

Rating	Symbol	MUR						Unit
		405	410	415	420	440	460	
Maximum Instantaneous Forward Voltage (Note 1) (i_F = 3.0 A, T_J = 150°C) (i_F = 3.0 A, T_J = 25°C) (i_F = 4.0 A, T_J = 25°C)	v_F		0.71 0.88 0.89				1.05 1.25 1.28	V
Maximum Instantaneous Reverse Current (Note 1) (Rated dc Voltage, T_J = 150°C) (Rated dc Voltage, T_J = 25°C)	i_R		150 5				250 10	μA
Maximum Reverse Recovery Time (I_F = 1.0 Amp, di/dt = 50 Amp/μs) (I_F = 0.5 Amp, i_R = 1.0 Amp, I_{REC} = 0.25 Amp)	t_{rr}		35 25				75 50	ns
Maximum Forward Recovery Time (I_F = 1.0 A, di/dt = 100 A/μs, Recovery to 1.0 V)	t_{fr}		25				50	ns

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

ORDERING INFORMATION

Device	Package	Shipping†
MUR405	AXIAL LEAD	5000 Units / Bag
MUR405RL	AXIAL LEAD	1500 / Tape & Reel
MUR410	AXIAL LEAD	5000 Units / Bag
MUR410RL	AXIAL LEAD	1500 / Tape & Reel
MUR415	AXIAL LEAD	5000 Units / Bag
MUR415RL	AXIAL LEAD	1500 / Tape & Reel
MUR420	AXIAL LEAD	5000 Units / Bag
MUR420RL	AXIAL LEAD	1500 / Tape & Reel
MUR440	AXIAL LEAD	5000 Units / Bag
MUR440RL	AXIAL LEAD	1500 / Tape & Reel
MUR460	AXIAL LEAD	5000 Units / Bag
MUR460RL	AXIAL LEAD	1500 / Tape & Reel

†For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, BRD8011/D.

MUR405, MUR410, MUR415, MUR420

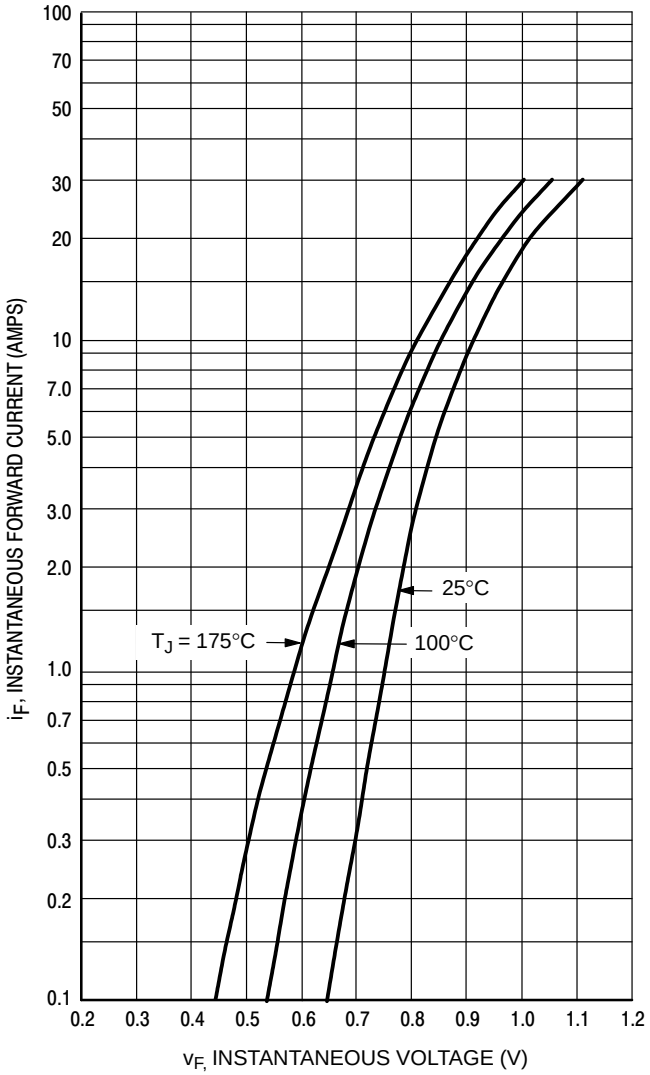


Figure 1. Typical Forward Voltage

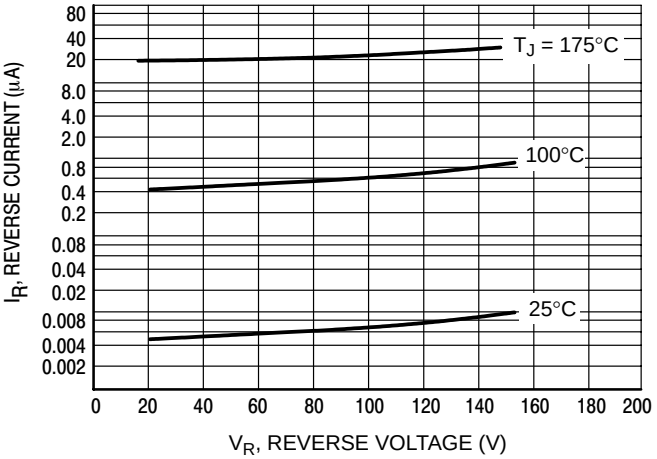


Figure 2. Typical Reverse Current

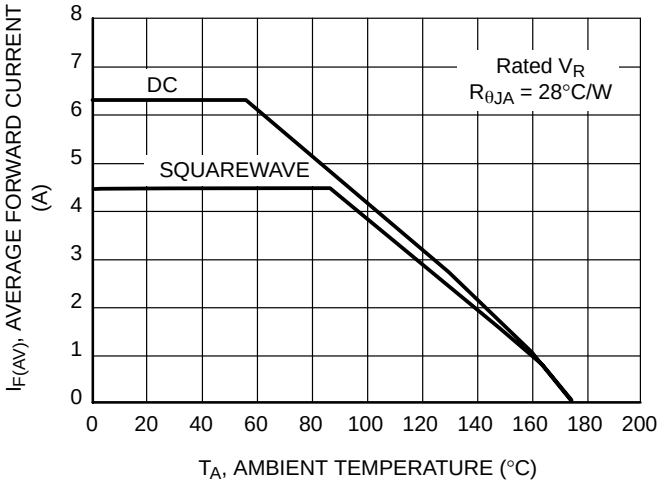


Figure 3. Current Derating (Mounting Method #3 Per Note 2)

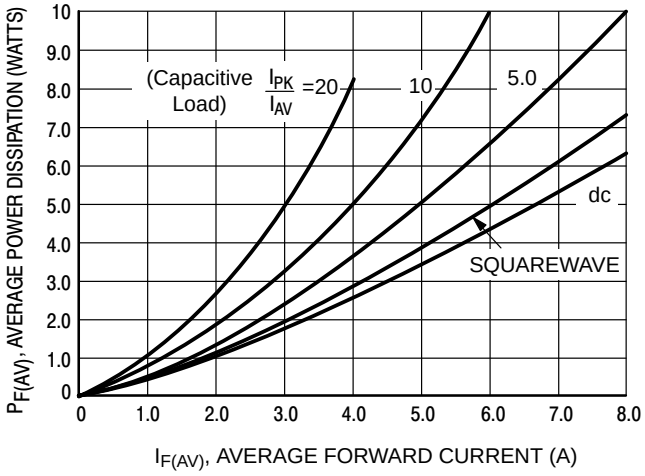


Figure 4. Power Dissipation

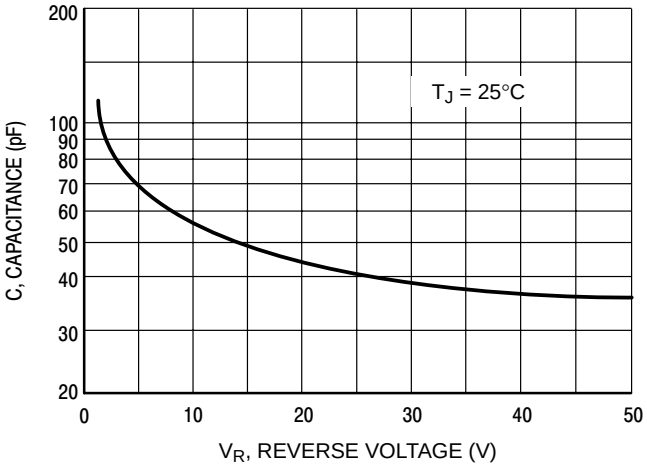


Figure 5. Typical Capacitance

MUR440, MUR460

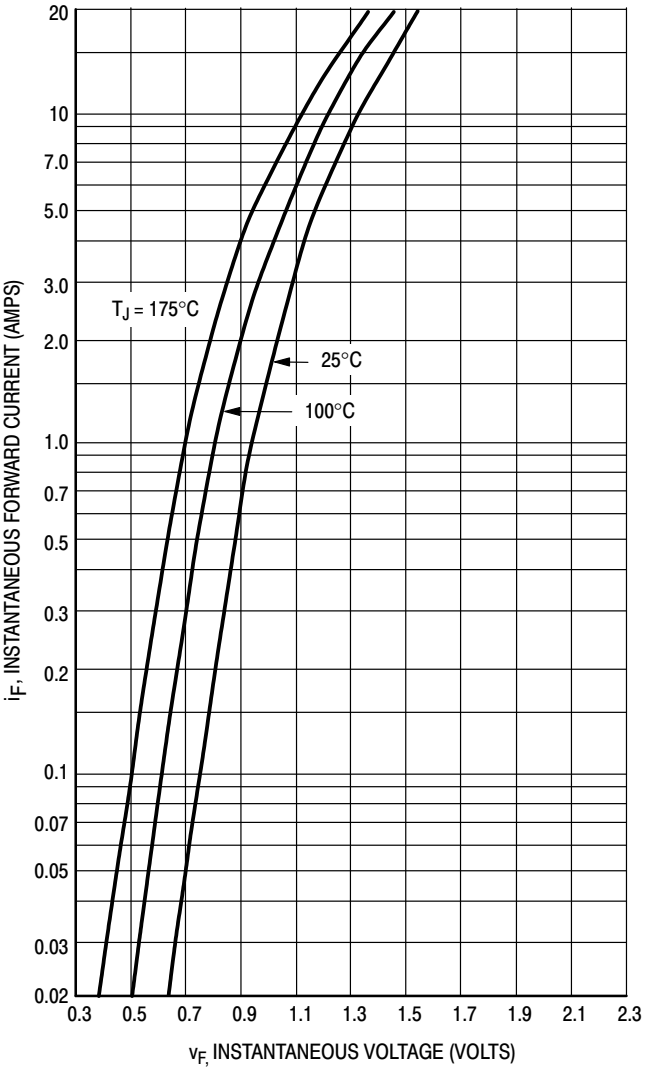


Figure 6. Typical Forward Voltage

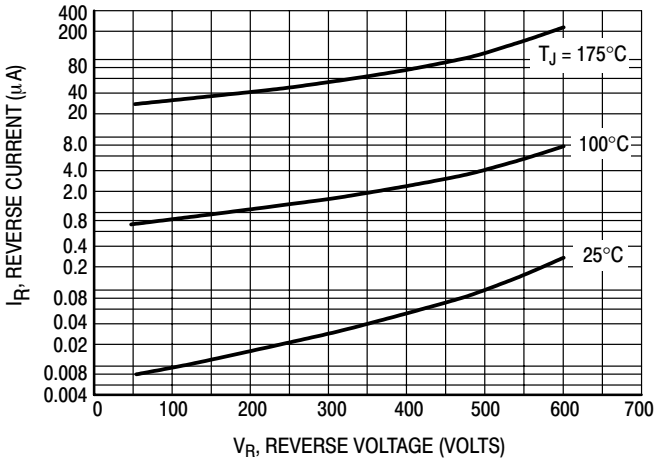


Figure 7. Typical Reverse Current

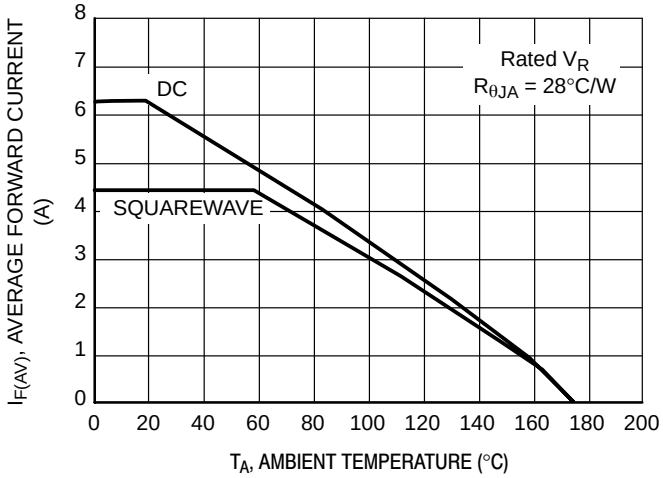


Figure 8. Current Derating (Mounting Method #3 Per Note 2)

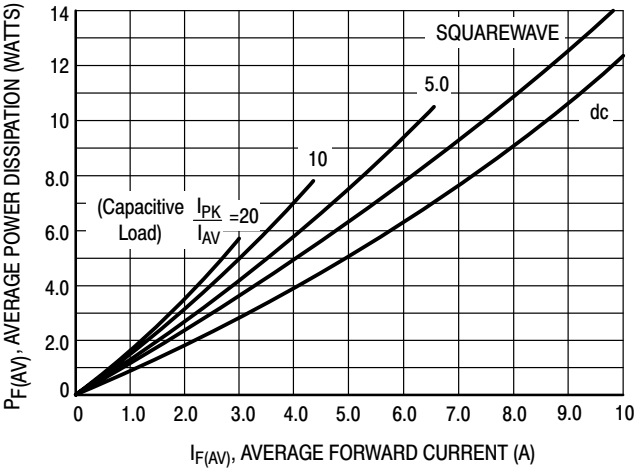


Figure 9. Power Dissipation

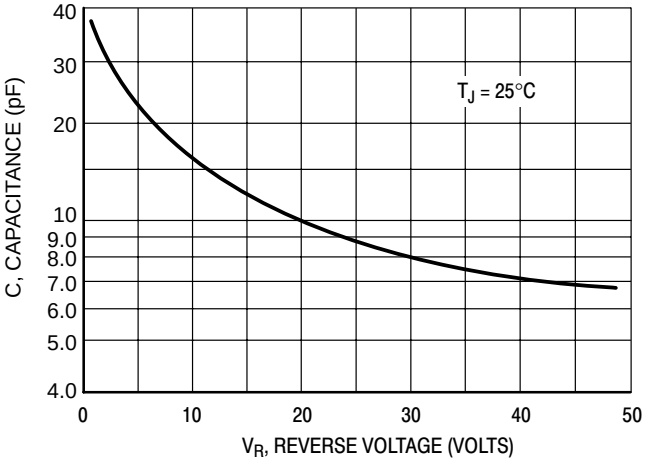


Figure 10. Typical Capacitance

NOTE 2 — AMBIENT MOUNTING DATA

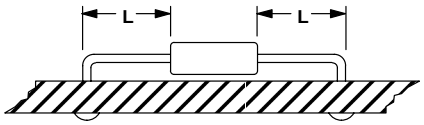
Data shown for thermal resistance junction−to−ambient ($R_{\theta JA}$) for the mountings shown is to be used as typical guideline values for preliminary engineering or in case the tie point temperature cannot be measured.

TYPICAL VALUES FOR $R_{\theta JA}$ IN STILL AIR

Mounting Method		Lead Length, L (IN)				Units
		1/8	1/4	1/2	3/4	
1	$R_{\theta JA}$	50	51	53	55	°C/W
2		58	59	61	63	°C/W
3		28				°C/W

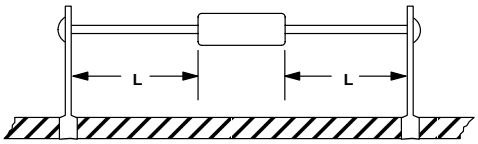
MOUNTING METHOD 1

P.C. Board Where Available Copper Surface area is small.



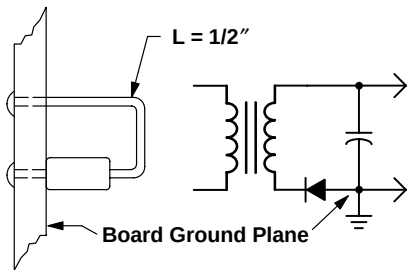
MOUNTING METHOD 2

Vector Push−In Terminals T−28



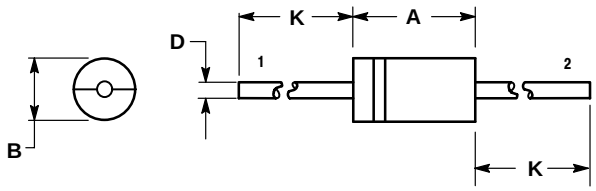
MOUNTING METHOD 3

P.C. Board with 1−1/2″ x 1−1/2″ Copper Surface



PACKAGE DIMENSIONS

AXIAL LEAD
CASE 267−05
ISSUE G



NOTES:
1. DIMENSIONS AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.
3. 267−04 OBSOLETE, NEW STANDARD 267−05.

	INCHES		MILLIMETERS	
DIM	MIN	MAX	MIN	MAX
A	0.287	0.374	7.30	9.50
B	0.189	0.209	4.80	5.30
D	0.047	0.051	1.20	1.30
K	1.000	−−−	25.40	−−−

STYLE 1:
PIN 1. CATHODE (POLARITY BAND)
2. ANODE

PUBLICATION ORDERING INFORMATION

LITERATURE FULFILLMENT:
Literature Distribution Center for ON Semiconductor
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Phone: 81−3−5773−3850

ON Semiconductor Website: http://onsemi.com

Order Literature: http://www.onsemi.com/litorder

For additional information, please contact your local Sales Representative.

MUR420/D