

DIGITRON SEMICONDUCTORS

MUR405-MUR460

4A SCHOTTKY RECTIFIER

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 per note 2	$I_{F(AV)}$	4.0 @ $T_A = 80^{\circ}\text{C}$				4.0 @ $T_A = 40^{\circ}\text{C}$		A
Non-repetitive peak surge current (surge applied at rated load conditions halfwave, single phase, 60Hz)	I_{FSM}	125				110		A
Operating and storage junction temperature range	T_J, T_{stg}	-65 to +175						$^{\circ}\text{C}$
Maximum thermal resistance Junction to ambient	$R_{\theta JA}$	Note 2						$^{\circ}\text{C/W}$

ELECTRICAL CHARACTERISTICS ($T_L = 25^\circ\text{C}$ unless otherwise noted)

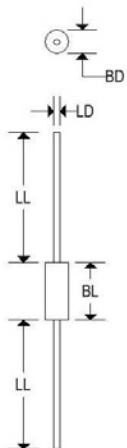
Parameter	Symbol	MUR						Unit
		405	410	415	420	440	460	
Maximum instantaneous forward voltage ⁽¹⁾ ($I_F = 3.0\text{A}, T_J = 150^\circ\text{C}$) ($I_F = 3.0\text{A}, T_J = 25^\circ\text{C}$) ($I_F = 4.0\text{A}, T_J = 25^\circ\text{C}$)	V_F	0.71 0.88 0.89				1.05 1.25 1.28		V
Maximum instantaneous reverse current ⁽¹⁾ (Rated dc voltage, $T_J = 150^\circ\text{C}$) (Rated dc voltage, $T_J = 25^\circ\text{C}$)	I_R	150 5				250 10		μA
Maximum reverse recovery time ($I_F = 1.0\text{A}, di/dt = 50\text{A}/\mu\text{s}$) ($I_F = 0.5\text{A}, I_R = 1.0\text{A}, I_{REC} = 0.25\text{A}$)	t_{rr}	35 25				75 50		ns
Maximum forward recovery time ($I_F = 1.0\text{A}, di/dt = 100\text{A}/\mu\text{s}, I_{REC} \text{ to } 1.0\text{V}$)	t_{fr}	25				50		ns
Controlled avalanche energy	W_{AVAL}	-			5	-		mJ

Note 1: Pulse test: Pulse width = 300 μs , duty cycle $\leq 2.0\%$.

Note 2: PC board with 1 1/2" x 1 1/2" copper surface.

MECHANICAL CHARACTERISTICS

Case	DO-201A
Marking	Body painted, alpha-numeric
Polarity	Cathode band



	DO-201A			
	Inches		Millimeters	
	Min	Max	Min	Max
BD	0.190	0.260	4.826	6.604
BL	0.285	0.375	7.240	9.530
LD	0.048	0.052	1.219	1.321
LL	1.000	-	25.400	-

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MUR405-MUR460 10A SCHOTTKY RECTIFIER

MUR405, MUR410, MUR415, MUR420

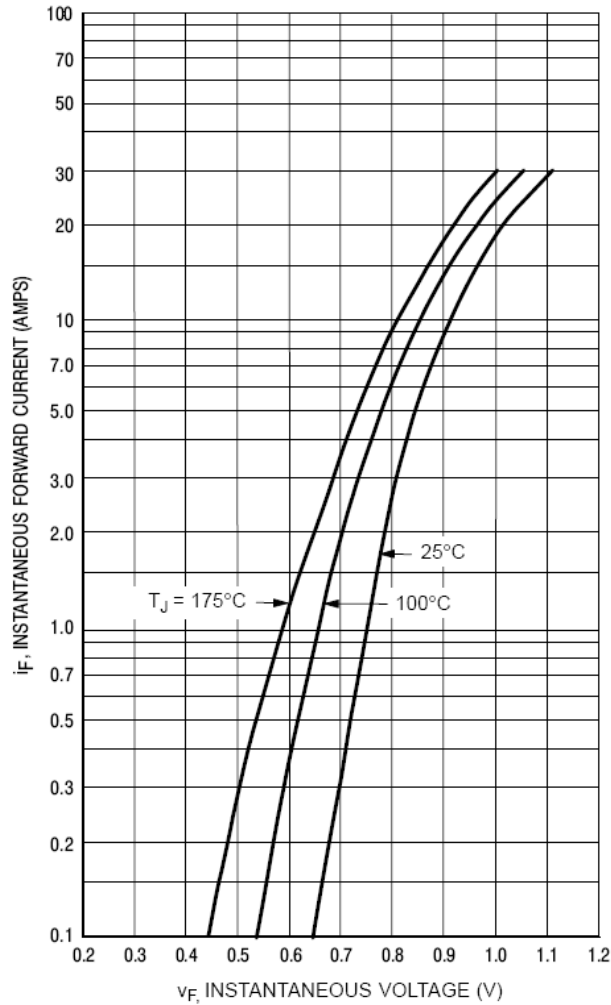


Figure 1. Typical Forward Voltage

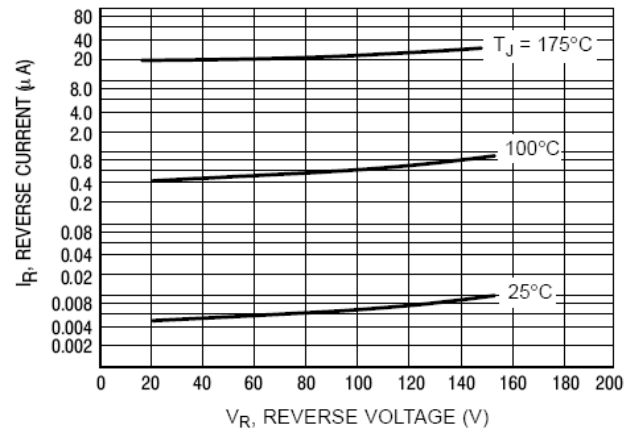


Figure 2. Typical Reverse Current

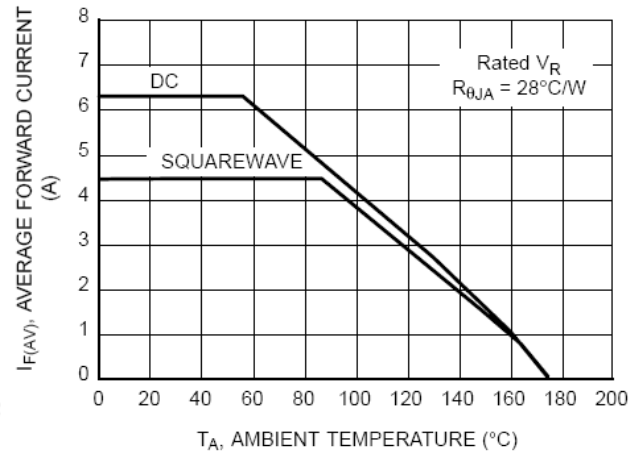


Figure 3. Current Derating
(Mounting Method #3 Per Note 2)

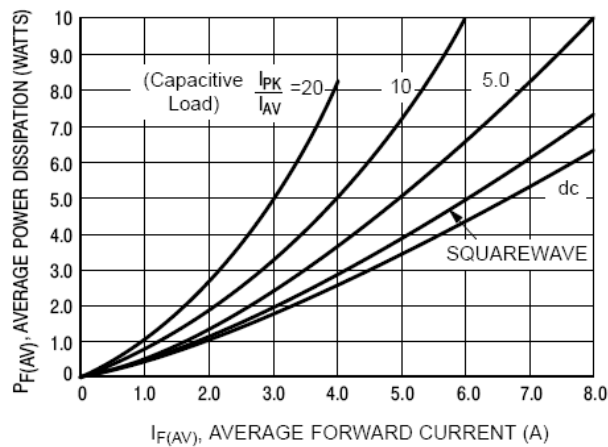


Figure 4. Power Dissipation

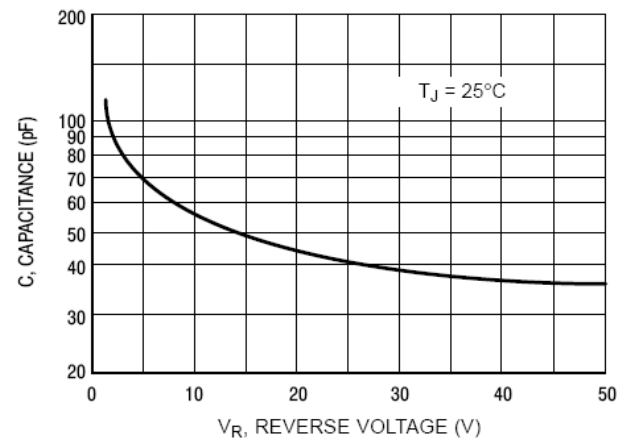


Figure 5. Typical Capacitance

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MUR440, MUR460

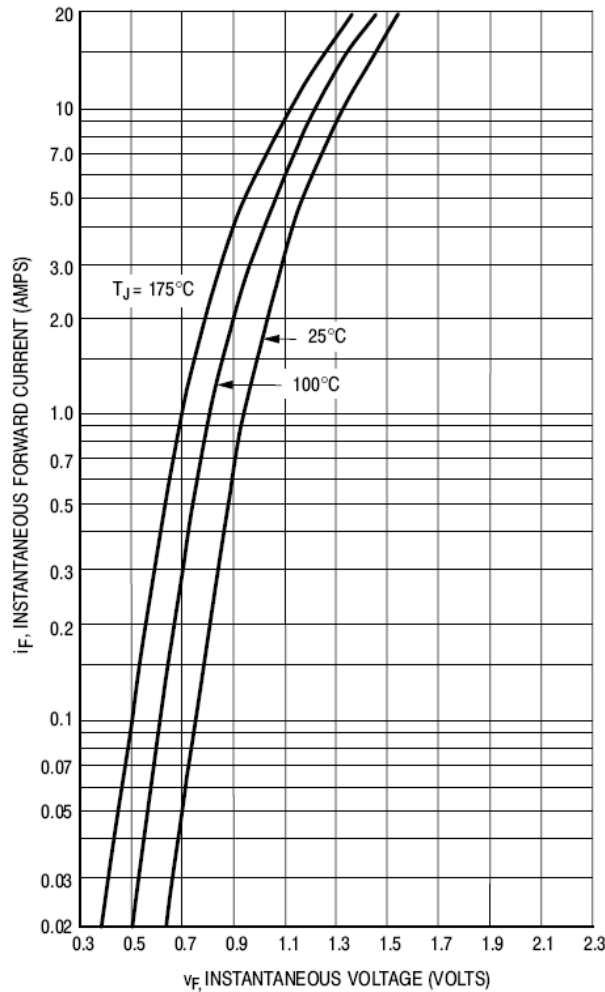


Figure 6. Typical Forward Voltage

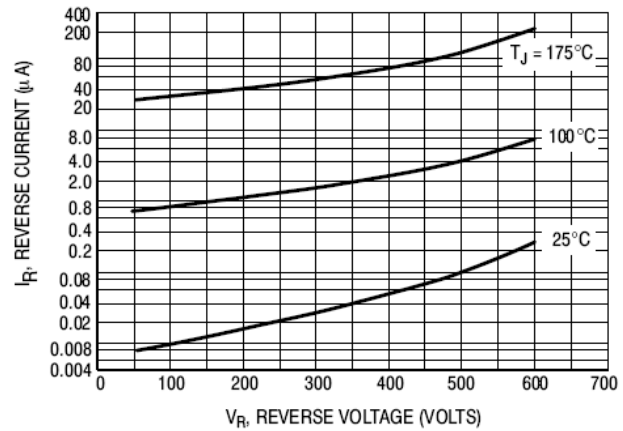


Figure 7. Typical Reverse Current

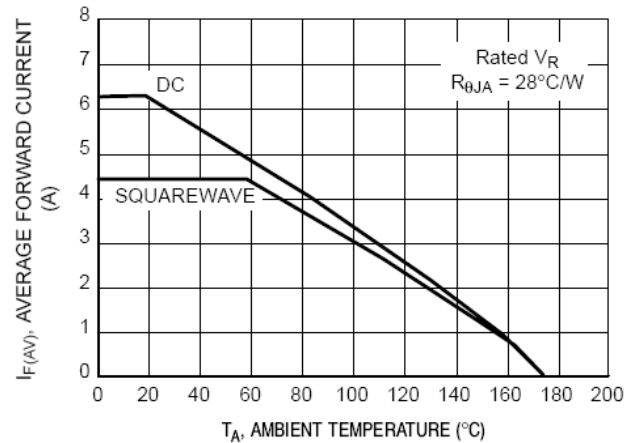


Figure 8. Current Derating
(Mounting Method #3 Per Note 2)

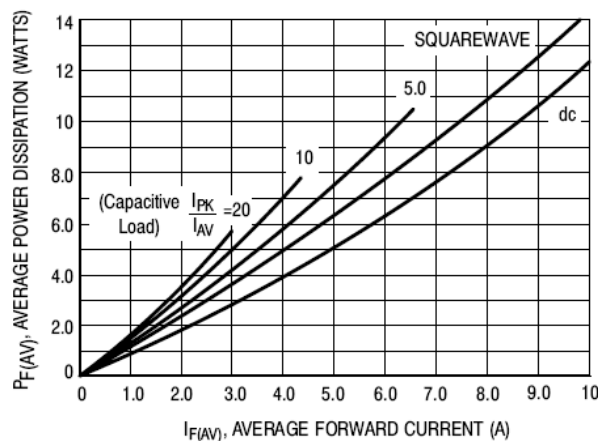


Figure 9. Power Dissipation

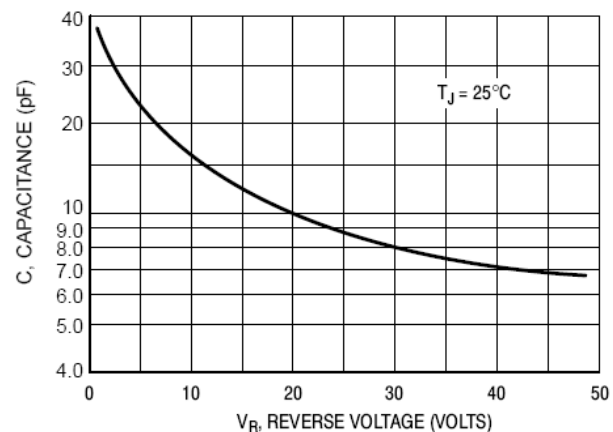


Figure 10. Typical Capacitance

Available Non-RoHS (standard) or RoHS compliant (add PBF suffix).
Available as "HR" (high reliability) screened per MIL-PRF-19500, JANTX level. Add "HR" suffix to base part number.

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