

MUR170E-MUR1100E

1 AMP ULTRA FAST RECTIFIER

FEATURES

- Available as "HR" (high reliability) screened per MIL-PRF-19500, JANTX level. Add "HR" suffix to base part number.
- Available as non-RoHS (Sn/Pb plating), standard, and as RoHS by adding "-PBF" suffix.

MAXIMUM RATINGS

Rating	Symbol	MUR170E	MUR180E	MUR190E	MUR1100E	Unit
Peak repetitive reverse voltage	V_{RRM}					
Working peak reverse voltage	V_{RWM}	700	800	900	1000	V
DC blocking voltage	V_R					
Average rectified forward current (square wave) Mounting method per note 2	$I_{F(AV)}$	1.0 @ $T_A = 95^\circ\text{C}$				A
Non-repetitive peak surge current (surge applied at rated load conditions halfwave, single phase, 60Hz)	I_{FSM}	35				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 1				$^\circ\text{C/W}$

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

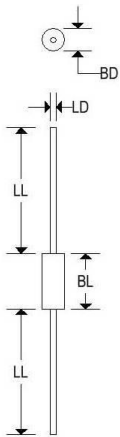
Parameter	Symbol	MUR170E	MUR180E	MUR190E	MUR1100E	Unit
Maximum instantaneous forward voltage ⁽¹⁾ ($I_F = 1.0\text{A}$, $T_J = 150^\circ\text{C}$) ($I_F = 1.0\text{A}$, $T_J = 25^\circ\text{C}$)	V_F		1.50 1.75			V
Maximum instantaneous reverse current ⁽¹⁾ (Rated dc voltage, $T_J = 100^\circ\text{C}$) (Rated dc voltage, $T_J = 25^\circ\text{C}$)	I_R		600 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}		100 75			ns
Maximum forward recovery time ($I_F = 1.0\text{A}$, $di/dt = 100\text{A}/\mu\text{s}$, I_{REC} to 1.0V)	t_{fr}		75			ns
Controlled avalanche energy	W_{AVAL}		10			mJ

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MECHANICAL CHARACTERISTICS

Case	DO-41
Marking	Body painted, alpha-numeric
Polarity	Cathode band



	DO-41			
	Inches		Millimeters	
	Min	Max	Min	Max
BD	-	0.107	-	2.720
BL	-	0.205	-	5.207
LD	0.028	0.034	0.711	0.864
LL	1.000	-	25.400	-

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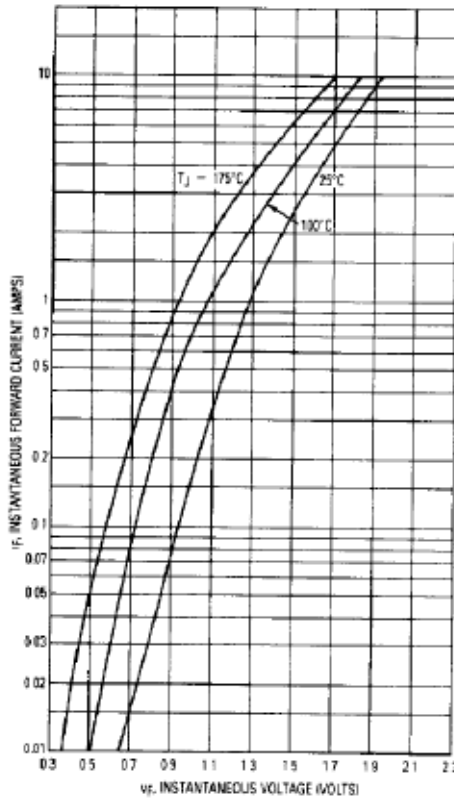


Figure 1. Typical Forward Voltage

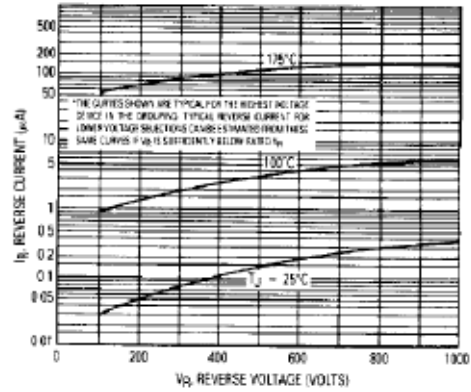


Figure 2. Typical Reverse Current*

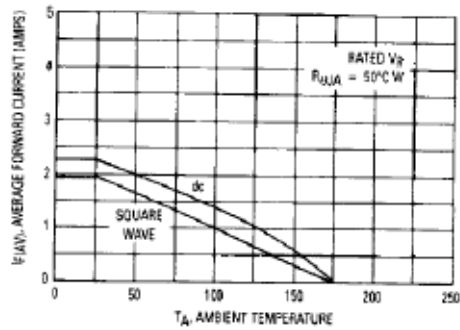


Figure 3. Current Derating
(Mounting Method #3 Per Note 1)

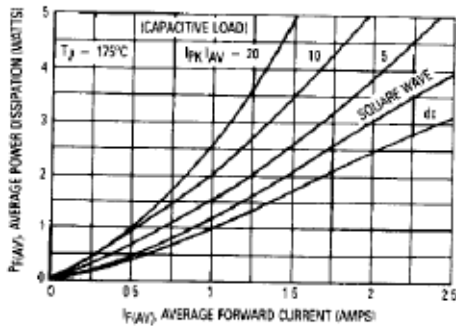


Figure 4. Power Dissipation

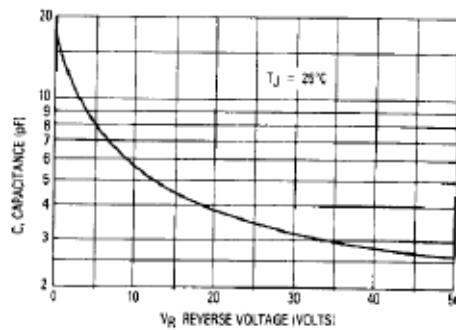


Figure 5. Typical Capacitance

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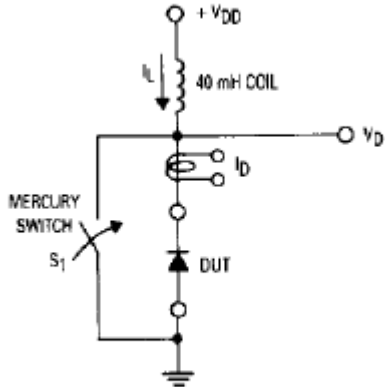


Figure 6. Test Circuit

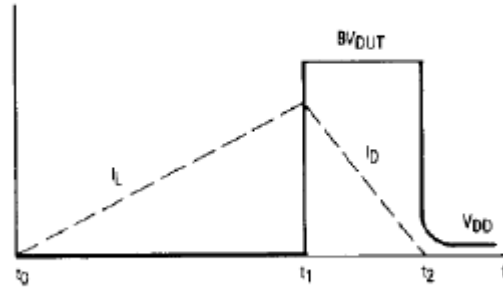


Figure 7. Current-Voltage Waveforms