

DIGITRON SEMICONDUCTORS

MBR170-MBR1100

1A SCHOTTKY RECTIFIERS

MAXIMUM RATINGS

Rating	Symbol	MBR				Unit
		170	180	190	1100	
Peak repetitive reverse voltage Working peak reverse voltage DC blocking voltage	V_{RRM} V_{RWM} V_R	70	80	90	100	V
Average rectified forward current ($V_{R(equiv)} \leq 0.2 V_{R(dc)}$, $R_{\theta JA} = 50^{\circ}C/W$, PC board mounting with 1 1/2" x 1 1/2" copper surface)	I_O	1 @ $T_A = 120^{\circ}C$				A
Non-repetitive peak surge current (surge applied at rated load conditions, halfwave, single phase, 60Hz)	I_{FSM}	50				A
Operating and storage junction temperature range	T_J, T_{stg}	-65 to +150				$^{\circ}C$
Voltage rate of change (Rated V_R)	dv/dt	10				V/ns
Maximum thermal resistance Junction to ambient (lead length = 1/2")	$R_{\theta JA}$	72				$^{\circ}C/W$

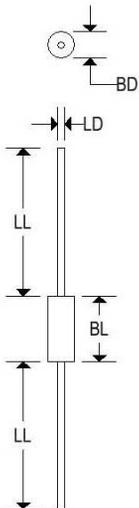
ELECTRICAL CHARACTERISTICS ($T_L = 25^{\circ}C$ unless otherwise noted)

Parameter	Symbol	MUR			Unit
		6020	6030	6040	
Maximum instantaneous forward voltage ⁽¹⁾ ($I_F = 1A$, $T_L = 25^{\circ}C$) ($I_F = 1A$, $T_L = 100^{\circ}C$)	V_F		0.79 0.69		V
Maximum instantaneous reverse current ⁽¹⁾ (Rated dc voltage, $T_L = 25^{\circ}C$) (Rated dc voltage, $T_L = 100^{\circ}C$)	I_R		0.5 5		mA

Note 1: Pulse test: Pulse width = 300 μ s, duty cycle = 2.0%.

MECHANICAL CHARACTERISTICS

Case	DO-41
Marking	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	-

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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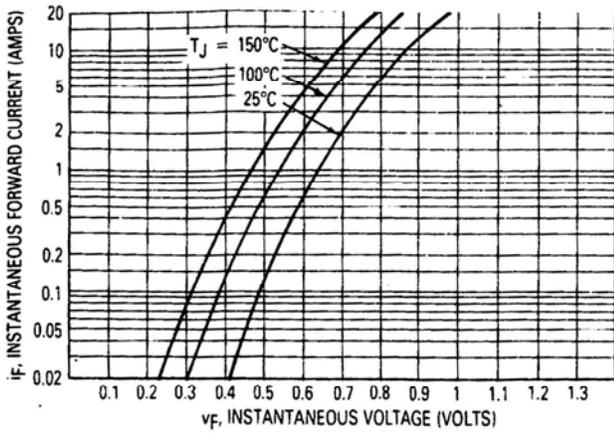


Figure 1. Typical Forward Voltage

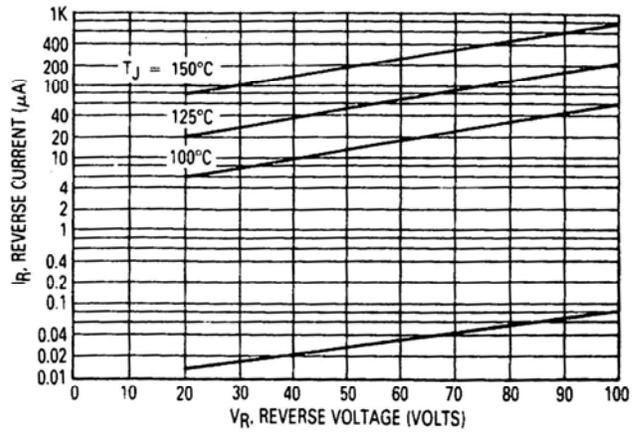


Figure 2. Typical Reverse Current*

*The curves shown are typical for the highest voltage device in the voltage grouping. Typical reverse current for lower voltage selections can be estimated from these same curves if V_R is sufficiently below rated V_R .

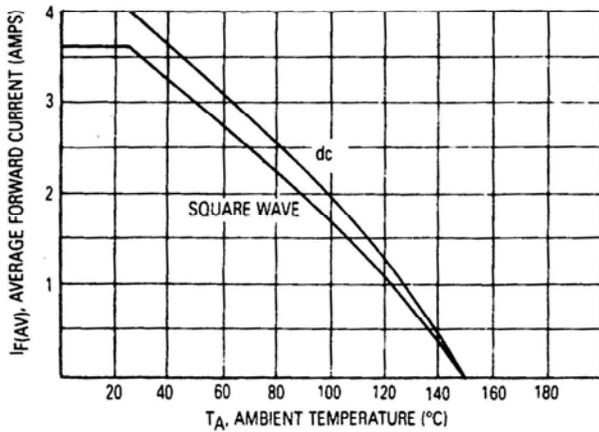


Figure 3. Current Derating
(Mounting method 3 per note 1.)

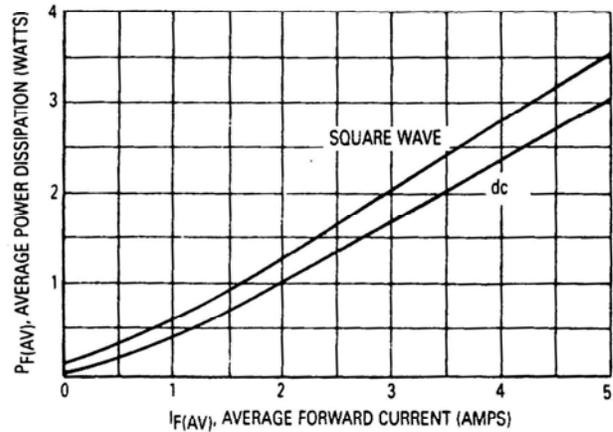


Figure 4. Power Dissipation

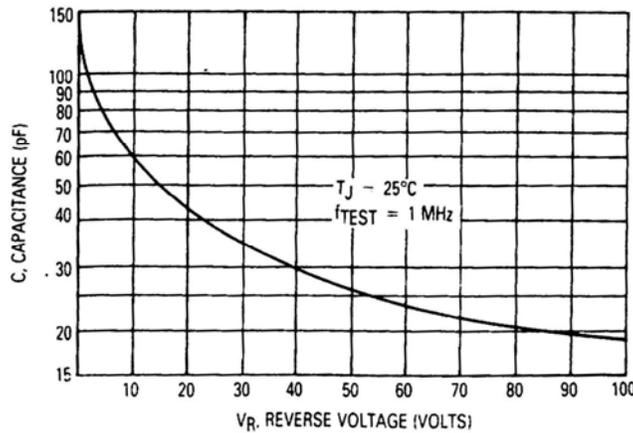


Figure 5. Typical Capacitance