DIGITRON SEMICONDUCTORS

MBR370-MBR3100 3A SCHOTTKY RECTIFIERS

MAXIMUM RATINGS

Rating	Symbol	MBR				Unit
		370	380	390	3100	
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 ($R_{\Theta JA}$ = 28°C/W, PC board mounting where copper surface is small)	I_O	3 @ T_A = 100°C				A
Non-repetitive peak surge current (surge applied at rated load conditions, halfwave, single phase, 60Hz)	I_{FSM}	150				A
Operating and storage junction temperature range (reverse voltage applied)	T_J, T_{stg}	-65 to +150				°C
Voltage rate of change (Rated V_R)	dv/dt	10				V/ns
Maximum thermal resistance Junction to ambient	$R_{\Theta JA}$	28				°C/W

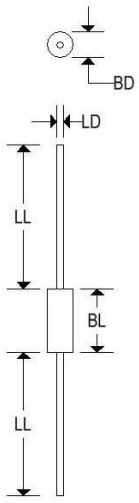
ELECTRICAL CHARACTERISTICS (T_L = 25°C unless otherwise noted)

Parameter	Symbol	MUR			Unit
		6020	6030	6040	
Maximum instantaneous forward voltage (1) (I_F = 3A, T_L = 25°C) (I_F = 3A, T_L = 100°C)	V_F	0.79 0.69			V
Maximum instantaneous reverse current (1) (T_L = 25°C) (T_L = 100°C)	I_R	0.6 20			mA

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

MECHANICAL CHARACTERISTICS

Case	DO-201A
Marking	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	-

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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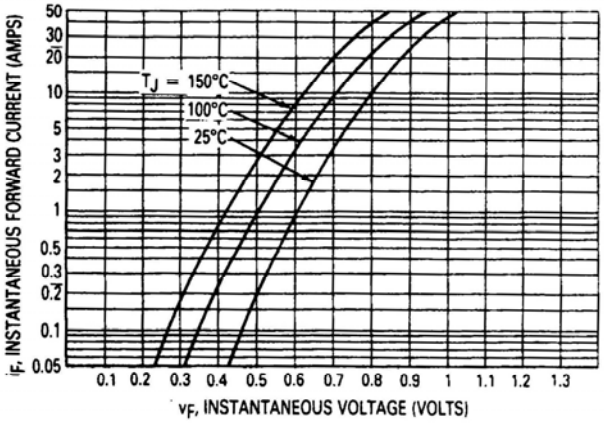

Figure 1. Typical Forward Voltage

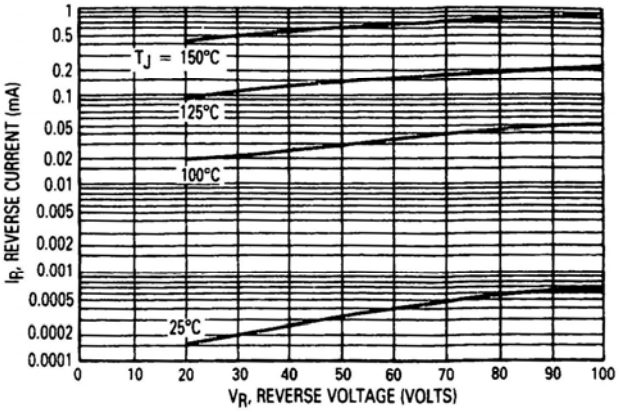

Figure 2. Typical Reverse Current*

*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.

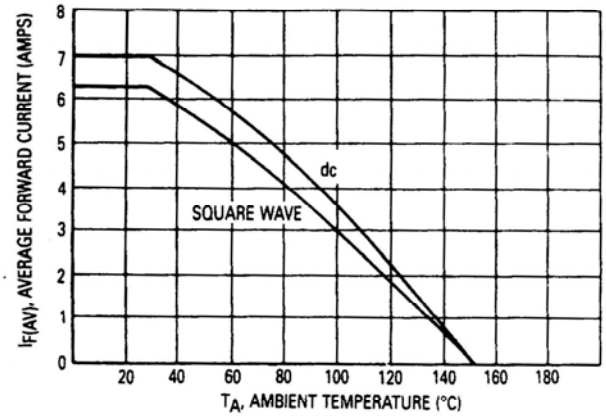

Figure 3. Current Derating (Mounting method 3 per note 1.)

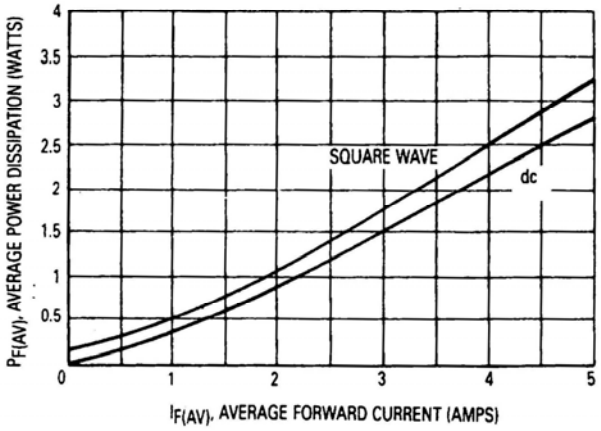

Figure 4. Power Dissipation

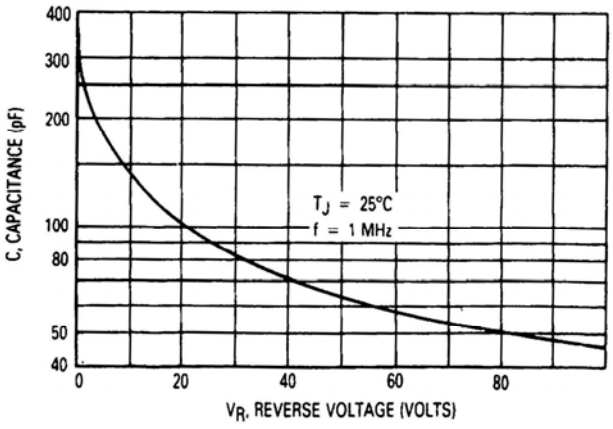

Figure 5. Typical Capacitance

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