

DIGITRON SEMICONDUCTORS

MBR2060CT-MBR20100CT

20A SCHOTTKY RECTIFIERS

MAXIMUM RATINGS

Rating	Symbol	MBR					Unit
		2060CT	2070CT	2080CT	2090CT	20100CT	
Peak repetitive reverse voltage	V_{RRM}	60	70	80	90	100	V
Working peak reverse voltage	V_{RWM}						
DC blocking voltage	V_R						
Average rectified forward current (Rated V_R)	$I_{F(AV)}$	10 @ $T_C = 133^\circ\text{C}$					A
Peak repetitive forward current (Rated V_R , square wave, 20kHz)	I_{FRM}	20 @ $T_C = 133^\circ\text{C}$					A
Non-repetitive peak surge current (surge applied at rated load conditions, halfwave, single phase, 60Hz)	I_{FSM}	150					A
Peak repetitive reverse surge current (2.0 μs , 1.0kHz)	I_{RRM}	0.5					A
Operating junction temperature range	T_J	-65 to +150					$^\circ\text{C}$
Storage temperature range	T_{stg}	-65 to +175					$^\circ\text{C}$
Voltage rate of change (Rated V_R)	dv/dt	1000					V/ μs
Maximum thermal resistance							$^\circ\text{C}/\text{W}$
Junction to case	$R_{\theta JC}$	2.0					
Junction to ambient	$R_{\theta JA}$	60					

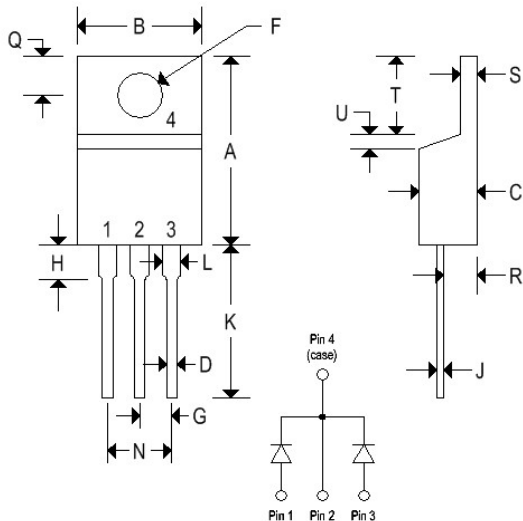
ELECTRICAL CHARACTERISTICS ($T_C = 25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	MBR					Unit
		2060CT	2070CT	2080CT	2090CT	20100CT	
Maximum instantaneous forward voltage ⁽¹⁾ ($I_F = 10\text{A}$, $T_C = 125^\circ\text{C}$) ($I_F = 10\text{A}$, $T_C = 25^\circ\text{C}$) ($I_F = 20\text{A}$, $T_C = 125^\circ\text{C}$) ($I_F = 20\text{A}$, $T_C = 25^\circ\text{C}$)	V_F			0.75 0.85 0.85 0.95			V
Maximum instantaneous reverse current ⁽¹⁾ (Rated dc voltage, $T_C = 125^\circ\text{C}$) (Rated dc voltage, $T_C = 25^\circ\text{C}$)	I_R			150 0.15			mA

Note 1: Pulse test: Pulse width = 300ms, duty cycle $\leq 2\%$.

MECHANICAL CHARACTERISTICS

Case	TO-220AB
Marking	Alpha-numeric
Polarity	Cathode band



	TO-220AB			
	Inches		Millimeters	
	Min	Max	Min	Max
A	0.570	0.620	14.480	15.750
B	0.380	0.405	9.660	10.280
C	0.160	0.190	4.070	4.820
D	0.025	0.035	0.640	0.880
F	0.142	0.147	3.610	3.730
G	0.095	0.105	2.420	2.660
H	0.110	0.155	2.800	3.930
J	0.018	0.025	0.460	0.640
K	0.500	0.562	12.700	14.270
L	0.045	0.060	1.150	1.520
N	0.190	0.210	4.830	5.330
Q	0.100	0.120	2.540	3.040
R	0.080	0.110	2.040	2.790
S	0.045	0.055	1.150	1.390
T	0.235	0.255	5.970	6.470
U	-	0.050	-	1.270

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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.

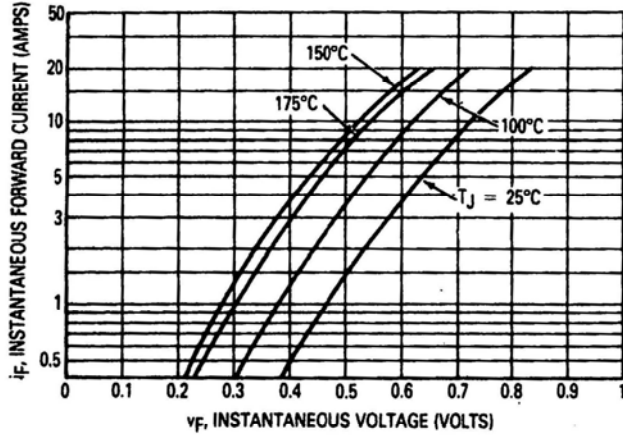


Figure 1. Typical Forward Voltage Per Diode

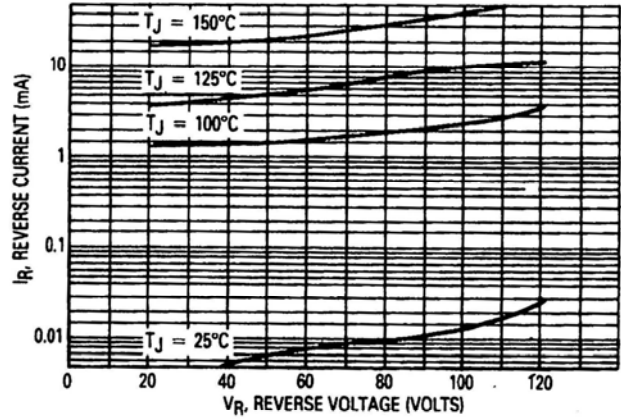


Figure 2. Typical Reverse Current Per Diode

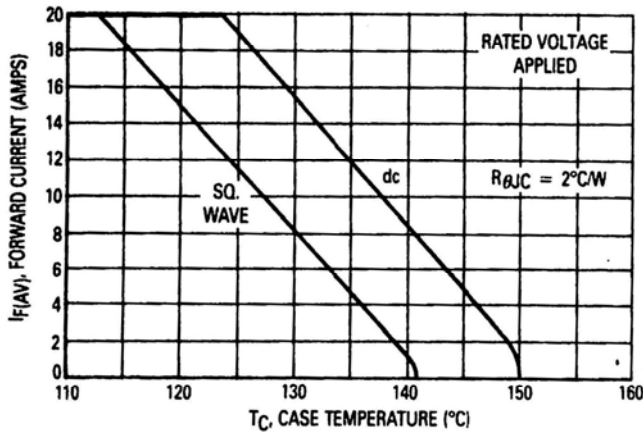


Figure 3. Current Derating, Case

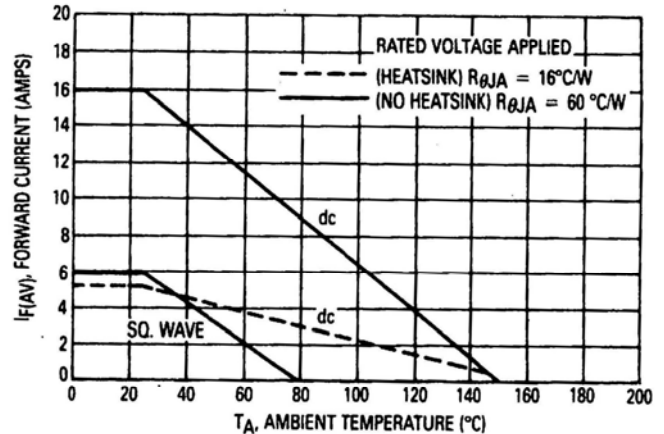


Figure 4. Current Derating, Ambient

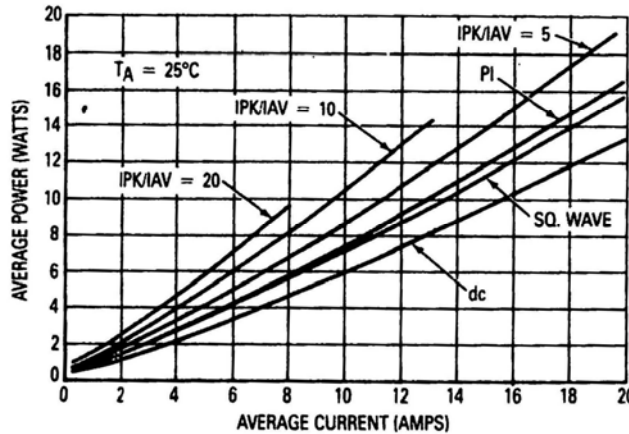


Figure 5. Average Power Dissipation and Average Current