

DIGITRON SEMICONDUCTORS

MBR20200CT

20A SCHOTTKY RECTIFIER

MAXIMUM RATINGS

Rating	Symbol	MBR20200CT	Unit
Peak repetitive reverse voltage	V_{RRM}	200	V
Working peak reverse voltage	V_{RWM}		
DC blocking voltage	V_R		
Average rectified forward current (Rated V_R)	$I_{F(AV)}$	20 @ $T_C = 125^\circ\text{C}$	A
Peak repetitive forward current (Rated V_R) square wave, 20 kHz)	I_{FRM}	20 @ $T_C = 90^\circ\text{C}$	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}	1.0	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	10000	V/ μs
Maximum thermal resistance Junction to case	$R_{\theta JC}$	2.0	$^\circ\text{C}/\text{W}$

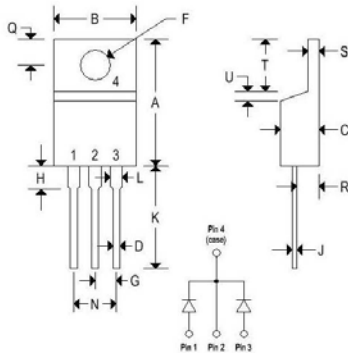
ELECTRICAL CHARACTERISTICS ($T_C = 25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	MBR20200CT	Unit
Maximum instantaneous forward voltage ⁽¹⁾ ($I_F = 10\text{A}$, $T_C = 25^\circ\text{C}$) ($I_F = 10\text{A}$, $T_C = 125^\circ\text{C}$) ($I_F = 20\text{A}$, $T_C = 25^\circ\text{C}$) ($I_F = 20\text{A}$, $T_C = 125^\circ\text{C}$)	V_F	0.9 0.8 1.0 0.9	V
Maximum instantaneous reverse current ⁽¹⁾ (Rated dc voltage, $T_C = 25^\circ\text{C}$) (Rated dc voltage, $T_C = 125^\circ\text{C}$)	I_R	1.0 50	mA
Capacitance ($V_R = -5.0\text{V}$, $T_C = 25^\circ\text{C}$, $f = 1.0\text{MHz}$)	C_t	500	pF

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

MECHANICAL CHARACTERISTICS

Case	TO-220AB
Marking	Alpha-numeric
Pin out	See below



	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	0.180	0.190	4.070	4.820
D	0.025	0.035	0.640	0.890
F	0.142	0.147	3.610	3.730
G	0.095	0.105	2.420	2.680
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	0.090	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.

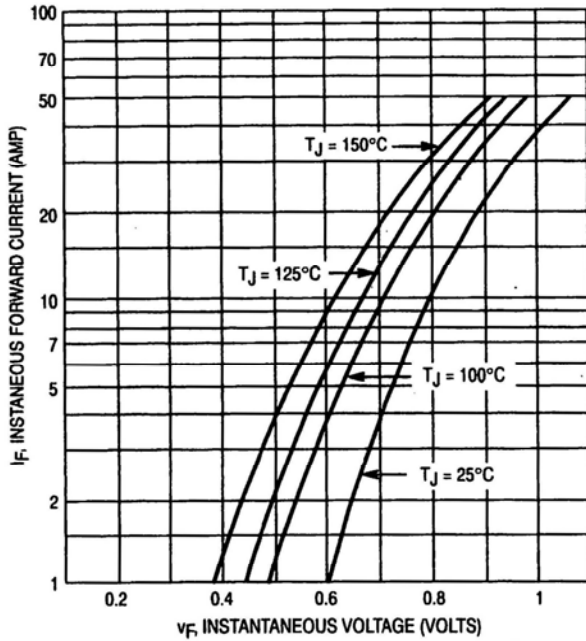


Figure 1. Typical Forward Voltage (Per Leg)

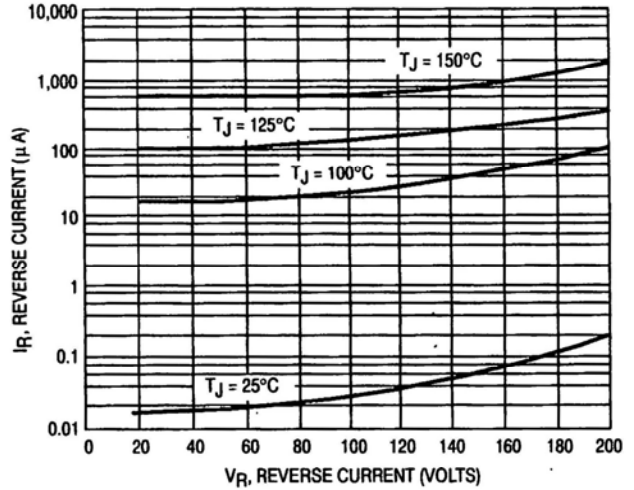


Figure 2. Typical Reverse Current (Per Leg)

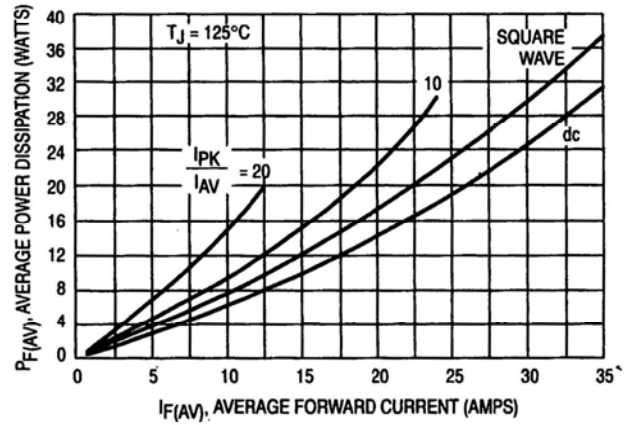


Figure 3. Forward Power Dissipation

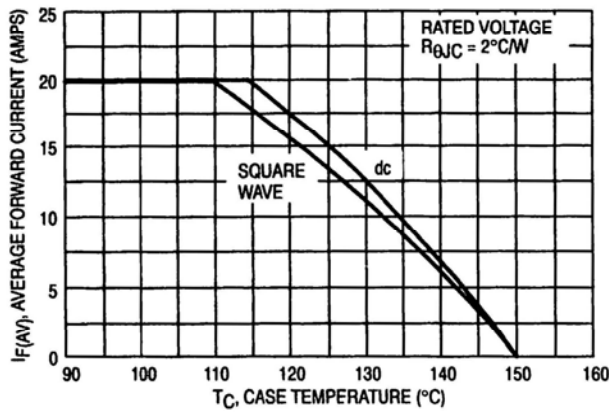


Figure 4. Current Derating, Case

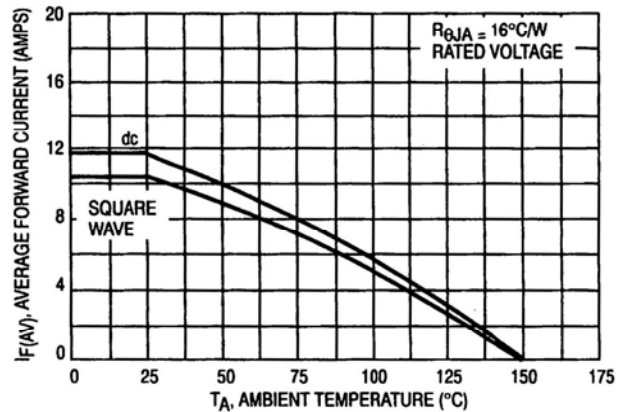


Figure 5. Current Derating, Ambient

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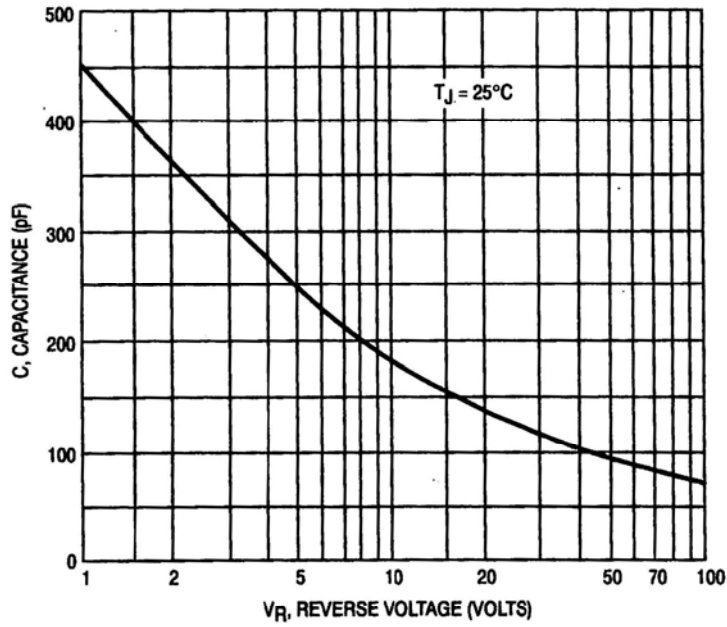


Figure 6. Typical Capacitance (Per Leg)