DIGITRON™ Semiconductors

High-reliability discrete products
and engineering services since 1977

MBR20200CT

20 A SCHOTTKY 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	MBR20200CT	Unit
Peak repetitive reverse voltage **Working peak reverse voltage** **DC blocking voltage**	V_{RRM} V_{RWM} V_R	200	V
Average rectified forward current (Rated V_R)	$I_{F(AV)}$	20 @ T_C = 125°C	A
Peak repetitive forward current (Rated V_R) square wave, 20 kHz)	I_{FRM}	20 @ T_C = 90°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 (2.0µs, 1.0kHz)	I_{RRM}	1.0	A
Operating junction temperature range	T_J	-65 to +150	°C
Storage temperature range	T_{stg}	-65 to +175	°C
Voltage rate of change (Rated V_R)	dv/dt	10000	V/µs
Maximum thermal resistance Junction to case	$R_{\Theta JC}$	2.0	°C/W

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise specified)

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

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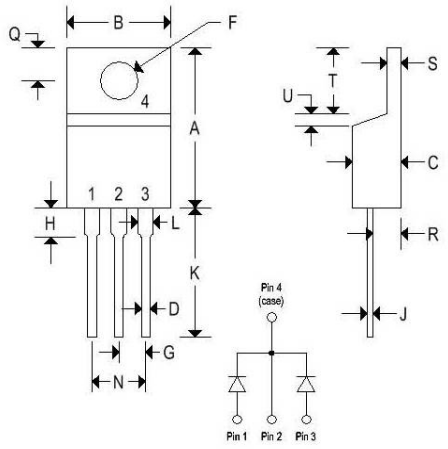
MECHANICAL CHARACTERISTICS

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	0.160	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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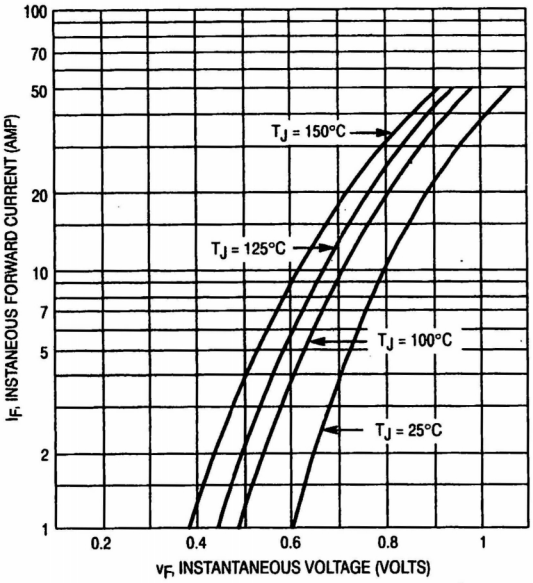

Figure 1. Typical Forward Voltage (Per Leg)

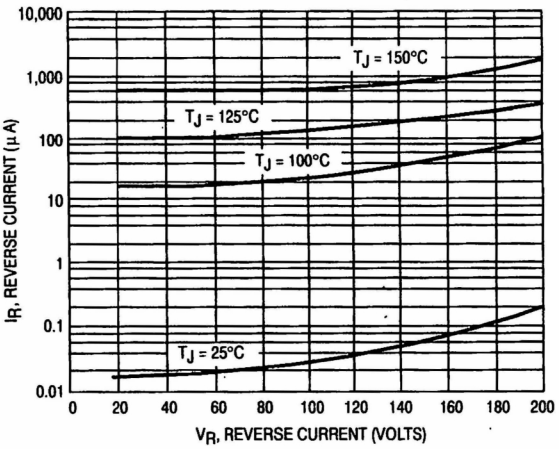

Figure 2. Typical Reverse Current (Per Leg)

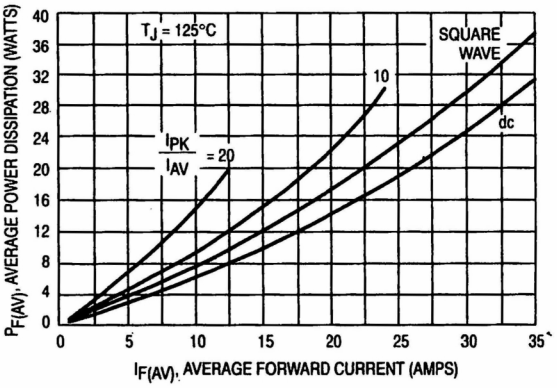

Figure 3. Forward Power Dissipation

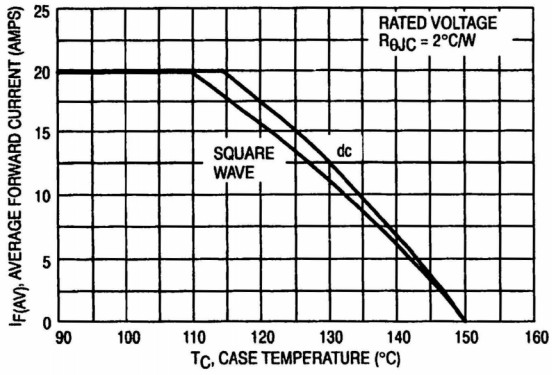

Figure 4. Current Derating, Case

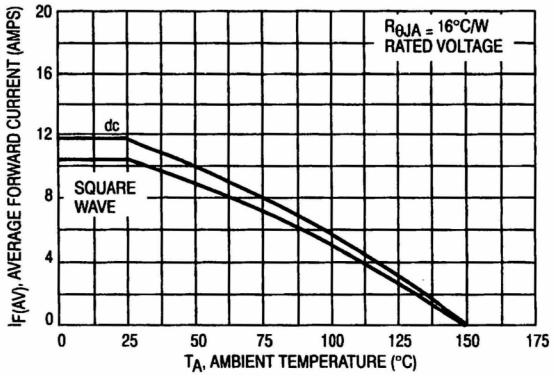

Figure 5. Current Derating, Ambient

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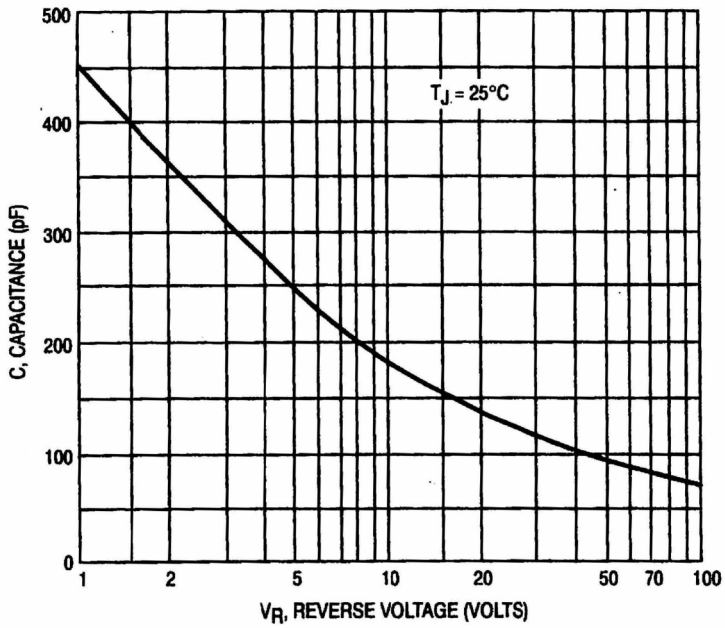

Figure 6. Typical Capacitance (Per Leg)