

Product Summary

MBR20200CT / MBRF20200CT (Per Leg)

V_{RRM} (V)	I_o (A)	V_F (MAX) (V) @ +25°C	I_R (MAX) (mA) @ +25°C
200	10	0.89	0.1

Description and Applications

This Schottky Barrier Rectifier is designed to meet the general requirements of commercial applications. It is ideally suited for use as:

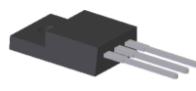
- Polarity Protection Diode
- Re-Circulating Diode
- Switching Diode



TO-220AB
Top View



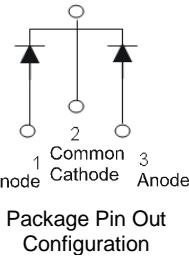
TO-220AB
Bottom View



ITO-220AB
Top View



ITO-220AB
Bottom View



Ordering Information (Note 4)

Part Number	Case	Packaging
MBR20200CT-LJ	TO-220AB (Type C)	50 pieces/tube
MBRF20200CT-LJ	ITO-220AB (TO220F-3)	50 pieces/tube

Notes:

1. EU Directive 2002/95/EC (RoHS) & 2011/65/EU (RoHS 2) compliant. All applicable RoHS exemptions applied.
2. See http://www.diodes.com/quality/lead_free.html for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
4. For packaging details, go to our website at <http://www.diodes.com/products/packages.html>.

Marking Information



MBR20200CT = Product Type Marking Code
AB = Foundry and Assembly Code
YYWW = Date Code Marking
YY = Last Two Digits of Year (ex: 15 = 2015)
WW = Week (01 - 53)



MBRF20200CT = Product Type Marking Code
AB = Foundry and Assembly Code
YYWW = Date Code Marking
YY = Last Two Digits of Year (ex: 15 = 2015)
WW = Week (01 - 53)

Maximum Ratings (Per Leg) (@ $T_A = +25^\circ\text{C}$, unless otherwise specified.)

Single phase, half wave, 60Hz, resistive or inductive load.
For capacitance load, derate current by 20%.

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V_{RRM}		
Working Peak Reverse Voltage	V_{RWM}	200	V
DC Blocking Voltage	V_{RM}		
Average Rectified Output Current (Per Leg) (Total)	I_O	10 20	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	170	A

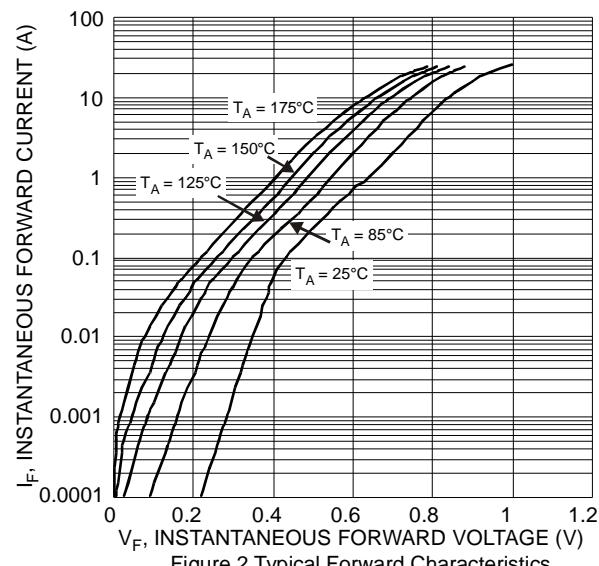
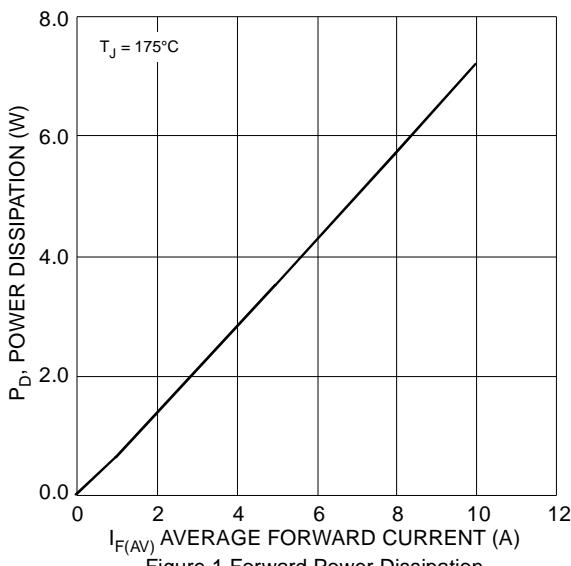
Thermal Characteristics (Per Leg)

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance, Junction to Case (Note 5) Package = TO-220AB	$R_{\theta JC}$	3	$^\circ\text{C}/\text{W}$
Package = ITO-220AB		5	
Typical Thermal Resistance, Junction to Ambient (Note 5) Package = TO-220AB	$R_{\theta JA}$	15	$^\circ\text{C}/\text{W}$
Package = ITO-220AB		25	
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +175	$^\circ\text{C}$

Electrical Characteristics (Per Leg) (@ $T_A = +25^\circ\text{C}$, unless otherwise specified.)

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Forward Voltage Drop	V_F	—	0.85 0.75	0.89 0.75	V	$I_F = 10\text{A}, T_J = +25^\circ\text{C}$ $I_F = 10\text{A}, T_J = +125^\circ\text{C}$
Leakage Current (Note 6)	I_R	—	—	0.1 10	mA	$V_R = 200\text{V}, T_J = +25^\circ\text{C}$ $V_R = 200\text{V}, T_J = +125^\circ\text{C}$

Notes: 5. Device mounted on heat sink (45mm x 20mm x12mm), with minimum recommended pad layout per <http://www.diodes.com>.
6. Short duration pulse test used to minimize self-heating effect



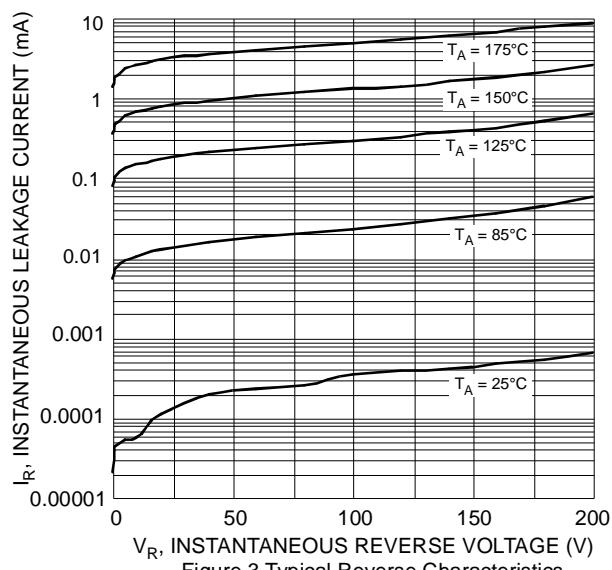


Figure 3 Typical Reverse Characteristics

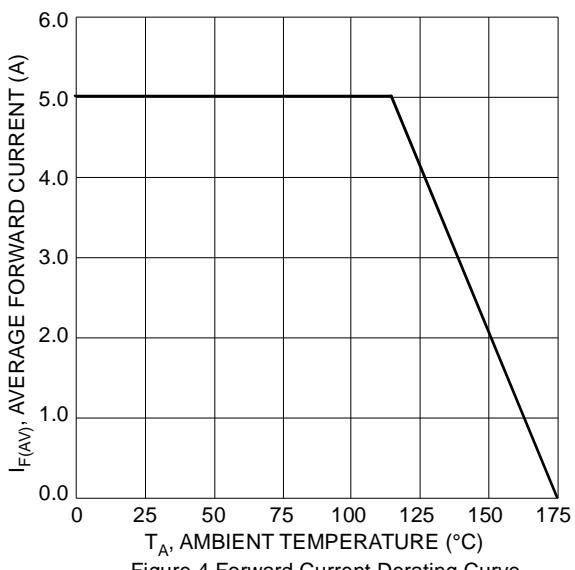
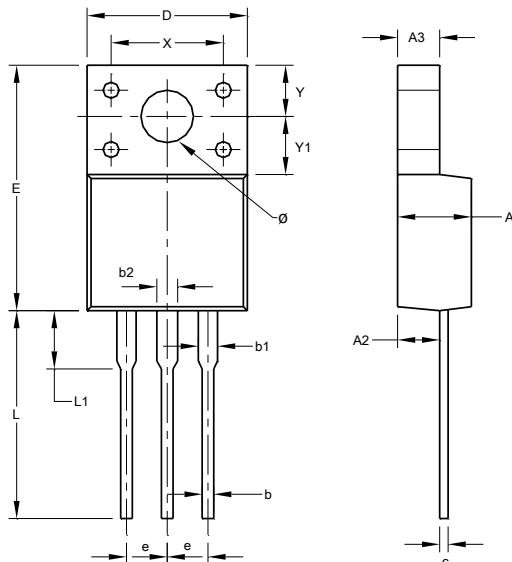


Figure 4 Forward Current Derating Curve

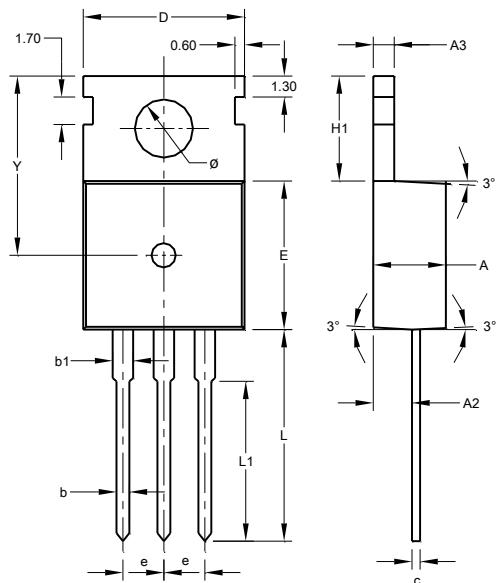
Package Outline Dimensions

Please see AP02002 at <http://www.diodes.com/datasheets/ap02002.pdf> for the latest version.



ITO-220AB (TO220F-3)			
Dim	Min	Max	Typ
A	4.300	4.900	-
A2	2.520	2.920	-
A3	2.350	2.900	-
b	0.550	0.900	-
b1	1.000	1.400	-
b2	1.100	1.500	-
c	0.450	0.600	-
D	9.70	10.30	-
E	14.70	16.00	-
e	-	-	2.540
L	12.50	13.50	-
L1	2.790	4.500	-
X	6.90	7.10	-
Y	3.000	3.400	-
Y1	3.370	3.900	-
Ø	3.000	3.550	-

All Dimensions in mm



TO-220AB (Type C)			
Dim	Min	Max	Typ
A	4.4	4.6	4.500
A2	2.2	2.5	2.400
A3	1.2	1.4	1.300
b	0.700	0.900	-
b1	1.17	1.39	1.270
c	0.400	0.600	-
D	9.800	10.200	-
E	9.000	9.400	-
e	-	-	2.54
H1	6.300	6.700	-
L	12.600	13.600	-
L1	9.600	10.600	-
Y	-	-	11.100
Ø	3.560	3.640	-

All Dimensions in mm

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