

## Product Summary

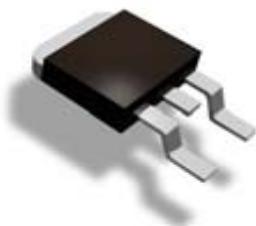
MBRB10200CT (Per Leg)

<b>V<sub>RRM</sub> (V)</b>	<b>I<sub>o</sub> (A)</b>	<b>V<sub>F</sub> (MAX) (V) @ +25°C</b>	<b>I<sub>R</sub> (MAX) (mA) @ +25°C</b>
200	5	0.91	0.1

## Description and Applications

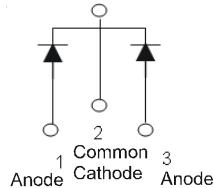
This Schottky Barrier Rectifier is designed to meet the general requirements of Commercial Applications. It is ideally suited for use as:

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



TO263AB (D2PAK)

Top View



Package Pin Out

Configuration

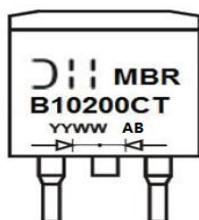
## Ordering Information (Note 4)

Part Number	Case	Packaging
MBRB10200CT	TO263AB (D2PAK)	50 pieces/Tube
MBRB10200CT-13	TO263AB (D2PAK)	800 pieces/Reel

## 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](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



MBRB10200CT = Product Type Marking Code

AB = Foundry and Assembly Code

YYWW = Date Code Marking

YY = Last Two Digits of Year (ex: 14 = 2014)

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)	$I_O$	5 10	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	$I_{FSM}$	110	A

**Thermal Characteristics (Per Leg)**

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance, Junction to Case (Note 5)	$R_{\theta JC}$	5	$^\circ\text{C}/\text{W}$
Typical Thermal Resistance, Junction to Ambient (Note 5)	$R_{\theta JA}$	20	$^\circ\text{C}/\text{W}$
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 0.84	0.91	V	$I_F = 5\text{A}, T_J = +25^\circ\text{C}$ $I_F = 5\text{A}, T_J = +125^\circ\text{C}$
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. Test with 2 inch Al board.

6. Short duration pulse test used to minimize self-heating effect.

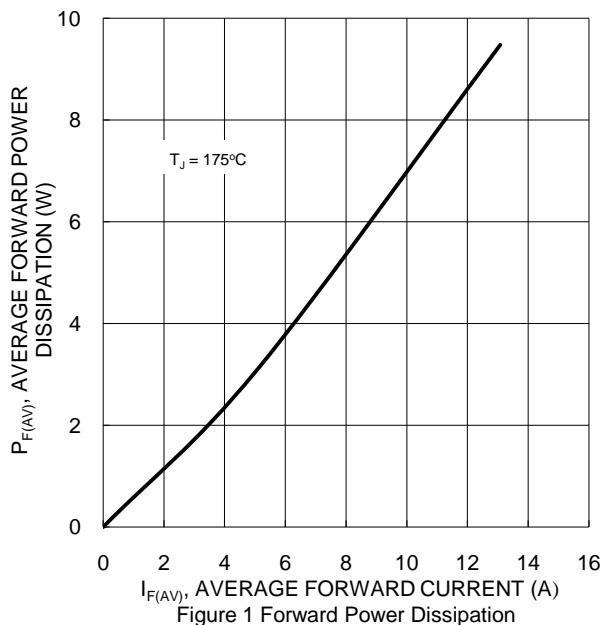


Figure 1 Forward Power Dissipation

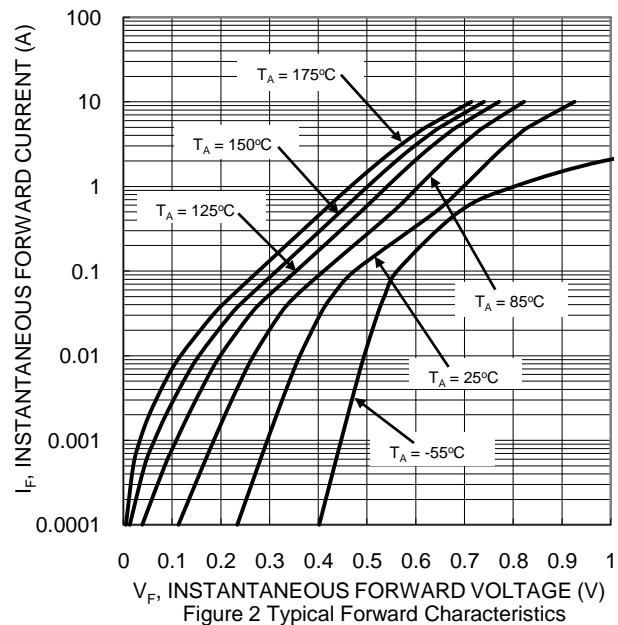


Figure 2 Typical Forward Characteristics

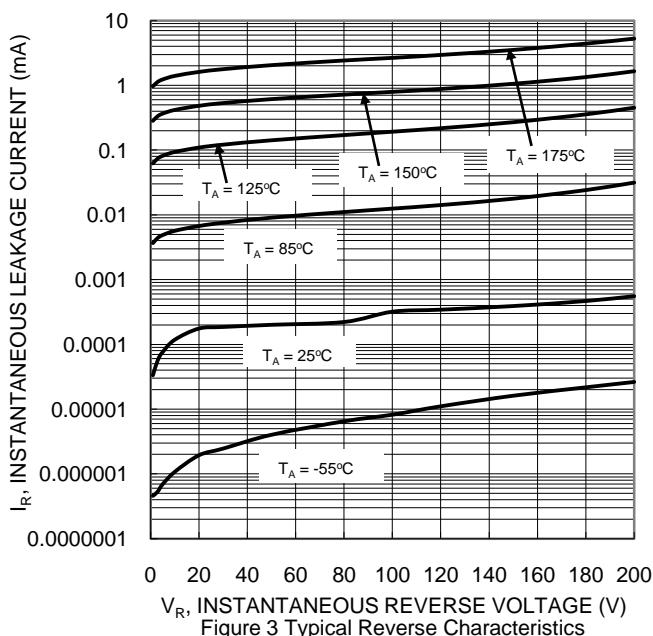


Figure 3 Typical Reverse Characteristics

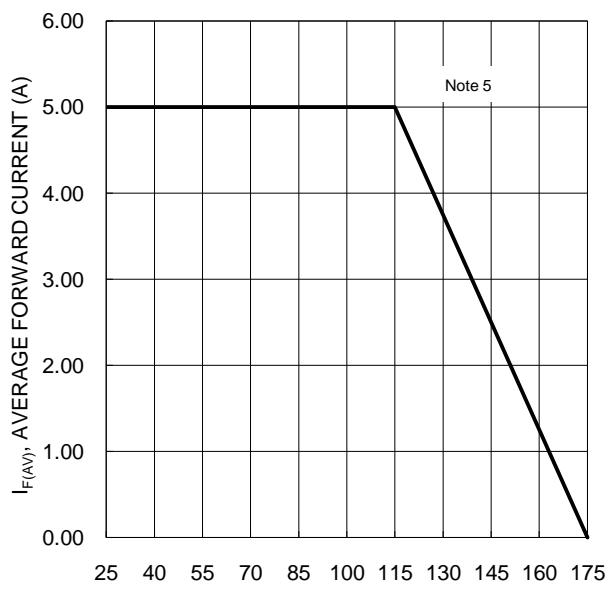
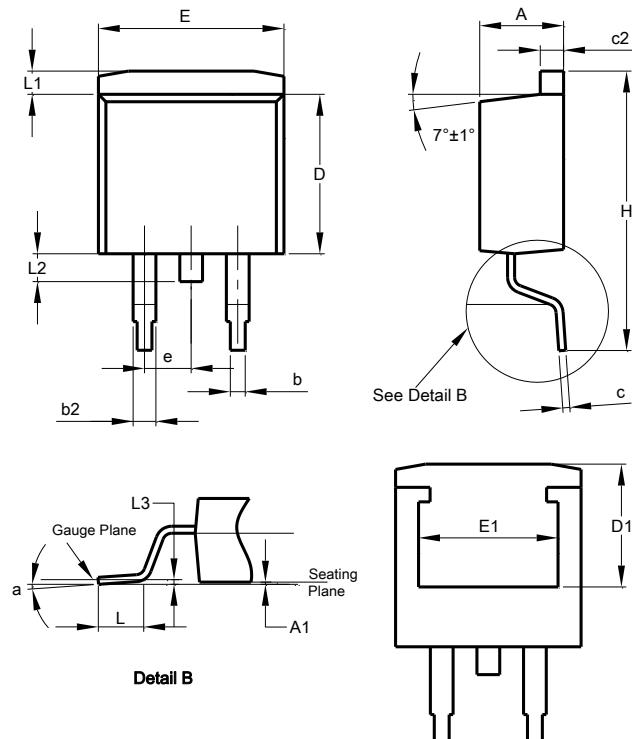


Figure 4 Forward Current Derating Curve

## Package Outline Dimensions

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

### (1) Package Type: TO263AB (D2PAK)



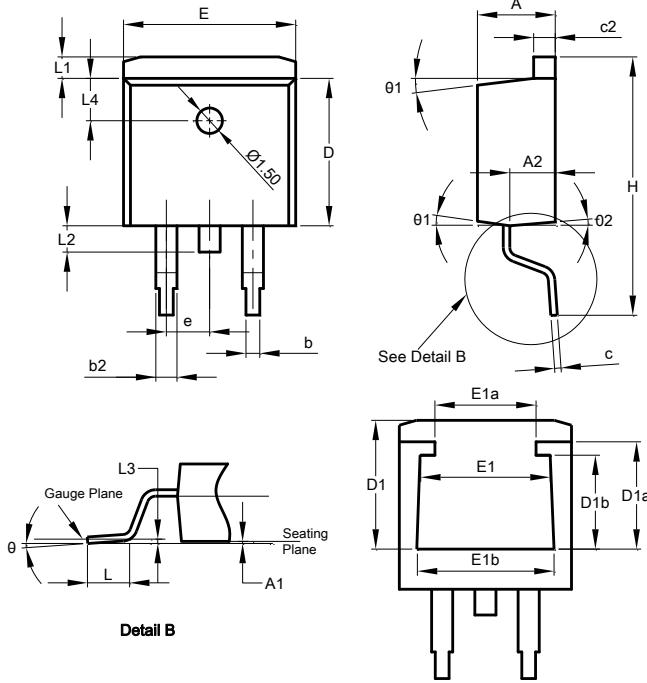
TO263AB (D2PAK)			
Dim	Min	Max	Typ
<b>A</b>	4.07	4.82	-
<b>A1</b>	0.00	0.25	-
<b>b</b>	0.51	0.99	-
<b>b2</b>	1.15	1.77	-
<b>c</b>	0.356	0.73	-
<b>c2</b>	1.143	1.65	-
<b>D</b>	8.39	9.65	-
<b>D1</b>	6.55	-	-
<b>e</b>	2.54 TYP		
<b>E</b>	9.66	10.66	-
<b>E1</b>	6.23	-	-
<b>H</b>	14.61	15.87	-
<b>L</b>	1.78	2.79	-
<b>L1</b>	-	1.67	-
<b>L2</b>	-	1.77	-
<b>a</b>	0°	8°	-

All Dimensions in mm

**Package Outline Dimensions (cont.)**

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

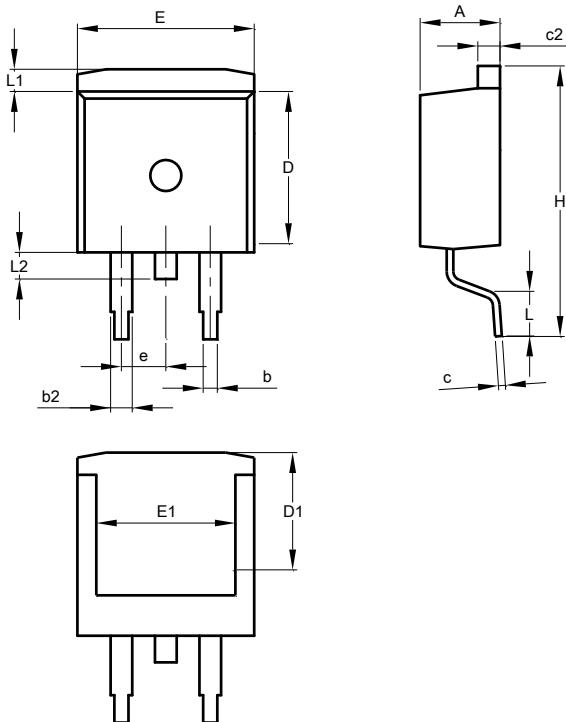
**(2) Package Type: TO263AB (D2PAK) (Type B)**



TO263AB (D2PAK) (Type B)			
Dim	Min	Max	Typ
<b>A</b>	4.40	4.70	4.57
<b>A1</b>	0.00	0.20	0.10
<b>A2</b>	2.59	2.79	2.69
<b>b</b>	0.77	0.90	0.813
<b>b2</b>	1.20	1.36	1.27
<b>c</b>	0.356	0.47	0.381
<b>c2</b>	1.22	1.32	1.27
<b>D</b>	8.60	8.80	8.70
<b>D1</b>	6.60	7.80	7.60
<b>D1a</b>	5.33	6.53	6.33
<b>D1b</b>	4.54	5.74	5.54
<b>e</b>	2.54 BSC		
<b>E</b>	10.00	10.20	10.10
<b>E1</b>	6.67	7.87	7.67
<b>E1a</b>	4.94	6.14	5.94
<b>E1b</b>	7.06	8.26	8.06
<b>H</b>	14.70	15.50	15.10
<b>L</b>	2.00	2.60	2.30
<b>L1</b>	1.17	1.40	1.27
<b>L2</b>	1.45	1.70	1.55
<b>L3</b>	0.25 BSC		
<b>L4</b>	2.50 REF		
<b>θ</b>	0°	8°	5°
<b>θ1</b>	5°	9°	7°
<b>θ2</b>	1°	5°	3°

All Dimensions in mm

**(3) Package Type: TO263AB (D2PAK) (Type C)**

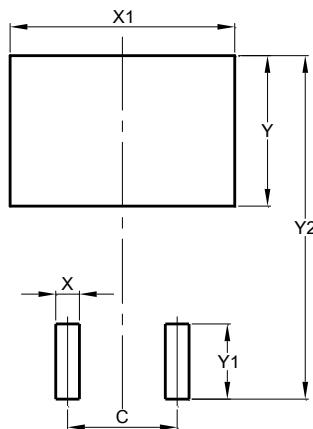


TO263AB (D2PAK) Type C			
Dim	Min	Max	Typ
<b>A</b>	4.30	4.70	-
<b>b</b>	0.70	0.90	-
<b>b2</b>	1.15	1.35	-
<b>c</b>	0.40	0.60	-
<b>c2</b>	1.20	1.40	-
<b>D</b>	9.00	9.40	-
<b>D1</b>	7.96	8.36	-
<b>E</b>	9.80	10.20	-
<b>E1</b>	7.85	8.05	-
<b>e</b>	2.34	2.74	-
<b>H</b>	15.00	15.87	-
<b>L</b>	2.24	2.84	-
<b>L1</b>	1.00	1.40	-
<b>L2</b>	1.20	1.60	-

All Dimensions in mm

**Suggested Pad Layout**

Please see AP02001 at <http://www.diodes.com/datasheets/ap02001.pdf> for latest version.



Dimensions	Value (in mm)
C	5.08
X	1.10
X1	10.41
Y	3.50
Y1	7.01
Y2	15.99

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