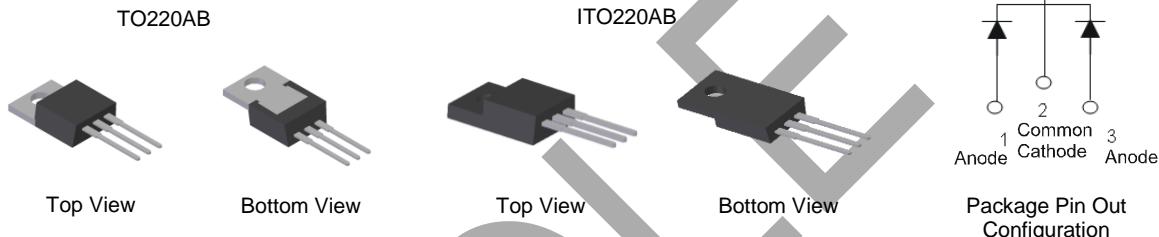


**Features**

- Schottky Barrier Chip
- Guard Ring Die Construction for Transient Protection
- Low Power Loss, High Efficiency
- High Surge Capability
- High Current Capability and Low Forward Voltage Drop
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Application
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **For automotive applications requiring specific change control (i.e. parts qualified to AEC-Q100/101/104/200, PPAP capable, and manufactured in IATF 16949 certified facilities), please [contact us](#) or your local Diodes representative.**

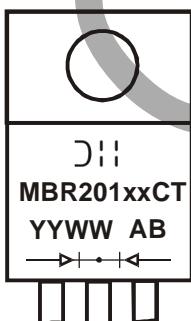
<https://www.diodes.com/quality/product-definitions/>

**Ordering Information** (Note 3)

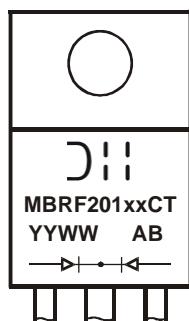
Part Number	Package	Packing	
		Qty.	Carrier
MBR20100CT	TO220AB	50 pieces	Tube
MBRF20100CT-JT	ITO220AB	50 pieces	Tube
MBRF20150CT-JT	ITO220AB	50 pieces	Tube

Notes:

1. EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3).compliant. All applicable RoHS exemptions applied.
2. See <https://www.diodes.com/quality/lead-free/> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
3. For packaging details, go to our website at <https://www.diodes.com/design/support/packaging/diodes-packaging/>.

**Marking Information**

○ = Manufacturer's Marking  
 MBR201XXCT = Product Type Marking Code  
 AB = Foundry and Assembly Code  
 YYWW = Date Code Marking  
 YY = Last Two Digits of Year (ex: 22 = 2022)  
 WW = Week (01 to 53)



○ = Manufacturer's Marking  
 MBRF201XXCT = Product Type Marking Code  
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 YYWW = Date Code Marking  
 YY = Last Two Digits of Year (ex: 22 = 2022)  
 WW = Week (01 to 53)

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

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

Characteristic	Symbol	MBRF20100CT	MBR(F)20150CT	Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$			
Working Peak Reverse Voltage	$V_{RWM}$	100	150	V
DC Blocking Voltage	$V_{RM}$			
Average Rectified Output Current @ $T_c = +125^\circ\text{C}$	$I_o$	10	10	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	$I_{FSM}$	240	200	A

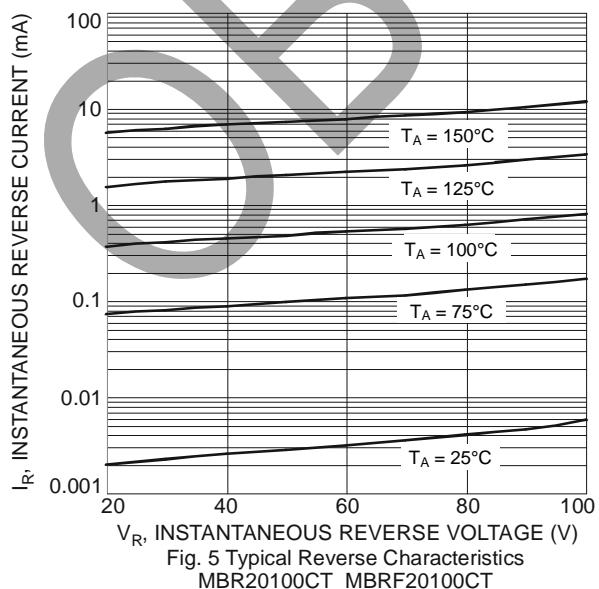
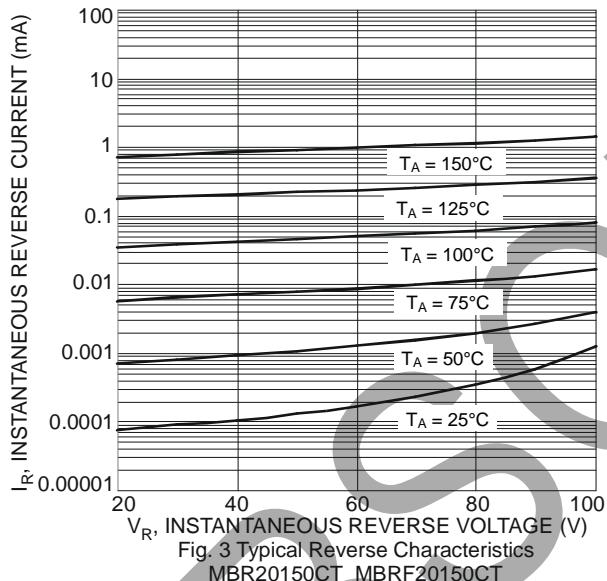
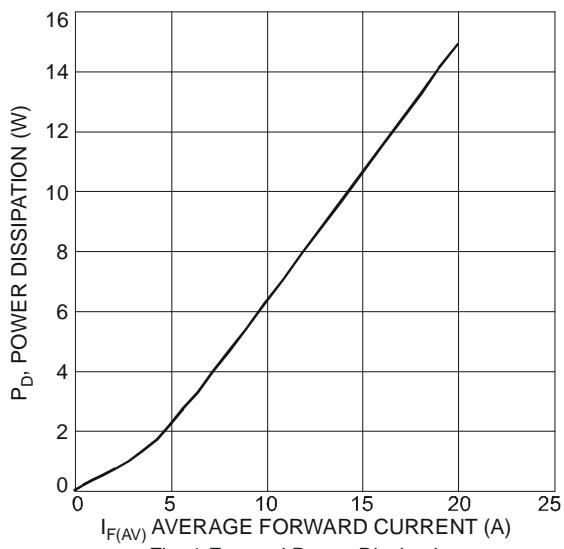
## Thermal Characteristics (Per Leg)

Characteristic	Symbol	MBRF20100CT	MBR(F)20150CT	Unit
Typical Thermal Resistance	$R_{\theta JC}$	3		$^\circ\text{C}/\text{W}$
Operating and Storage Temperature Range	$T_J, T_{STG}$	-65 to +150		$^\circ\text{C}$

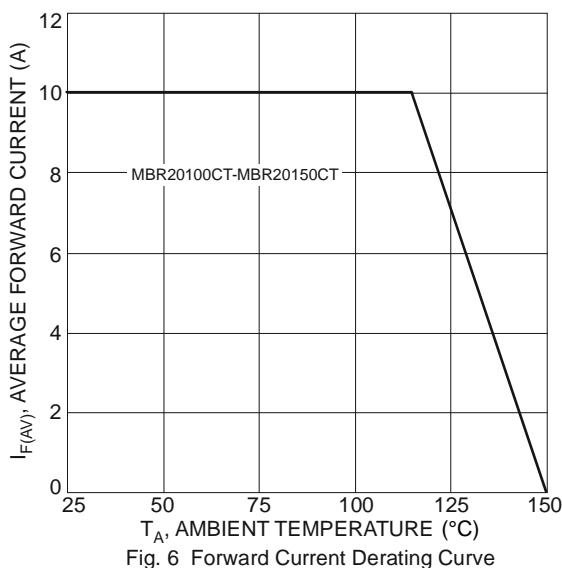
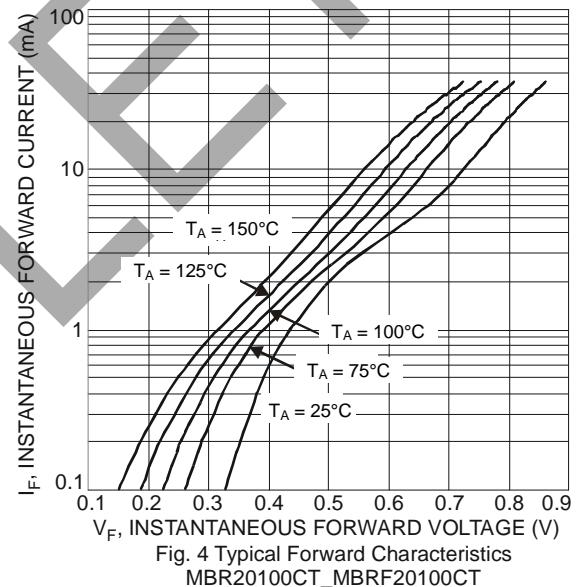
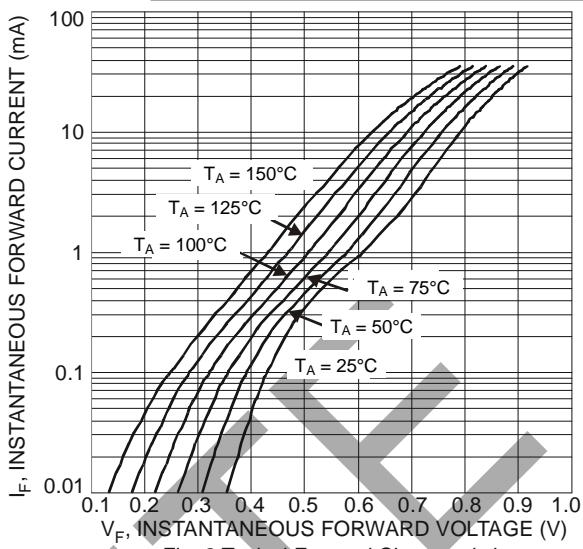
 Electrical Characteristics (Per Leg) (@ $T_A = +25^\circ\text{C}$ , unless otherwise specified.)

Characteristic	Symbol	MBRF20100CT	MBR(F)20150CT	Unit	Test Condition
Forward Voltage Drop	$V_{FM}$	0.83 0.72	0.90 0.74	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 4)	$I_{RM}$	0.1 50	0.05 30	mA	$V_R = 100\text{V}, T_J = +25^\circ\text{C}$ $V_R = 100\text{V}, T_J = +125^\circ\text{C}$

Note: 4. Short duration pulse test used to minimize self-heating effect.



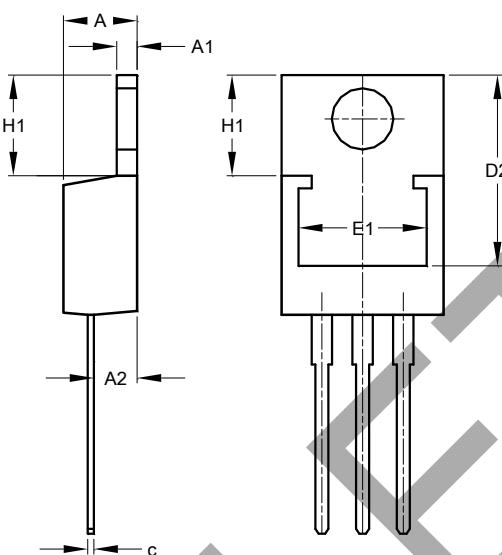
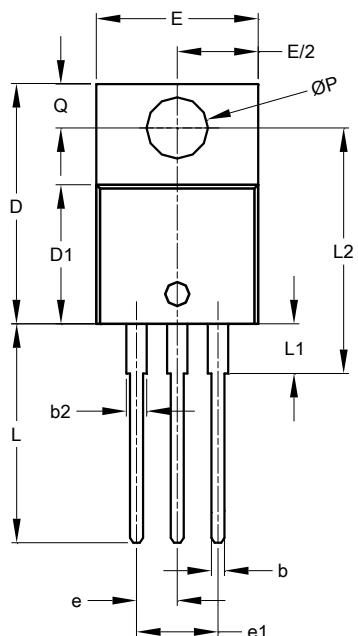
**MBR20100CT/MBRF20100CT/  
MBRF20150CT**



## Package Outline Dimensions

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

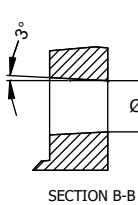
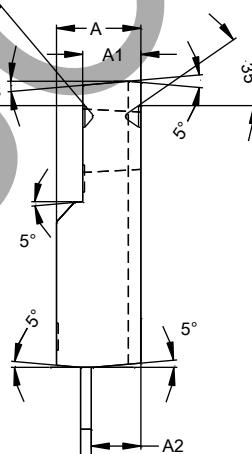
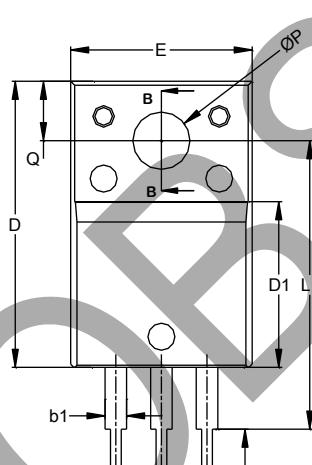
**TO220AB**



<b>TO220AB</b>			
Dim	Min	Max	Typ
<b>A</b>	3.56	4.82	-
<b>A1</b>	0.51	1.39	-
<b>A2</b>	2.04	2.92	-
<b>b</b>	0.39	1.01	0.81
<b>b2</b>	1.15	1.77	1.24
<b>c</b>	0.356	0.61	-
<b>D</b>	14.22	16.51	-
<b>D1</b>	8.39	9.01	-
<b>D2</b>	11.45	12.87	-
<b>e</b>	-	-	2.54
<b>e1</b>	-	-	5.08
<b>E</b>	9.66	10.66	-
<b>E1</b>	6.86	8.89	-
<b>H1</b>	5.85	6.85	-
<b>L</b>	12.70	14.73	-
<b>L1</b>	-	4.42	-
<b>L2</b>	15.80	17.51	16.00
<b>P</b>	3.54	4.08	-
<b>Q</b>	2.54	3.42	-

All Dimensions in mm

**ITO220AB**



<b>ITO220AB</b>			
Dim	Min	Max	Typ
<b>A</b>	4.50	4.90	4.70
<b>A1</b>	3.04	3.44	3.24
<b>A2</b>	2.56	2.96	2.76
<b>b</b>	0.50	0.75	0.60
<b>b1</b>	1.10	1.35	1.20
<b>c</b>	0.50	0.70	0.60
<b>D</b>	15.67	16.07	15.87
<b>D1</b>	8.99	9.39	9.19
<b>E</b>	9.91	10.31	10.11
<b>e</b>	--	--	2.54
<b>L</b>	9.45	10.05	9.75
<b>L1</b>	15.80	16.20	16.00
<b>P</b>	2.98	3.38	3.18
<b>Q</b>	3.10	3.50	3.30

All Dimensions in mm

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