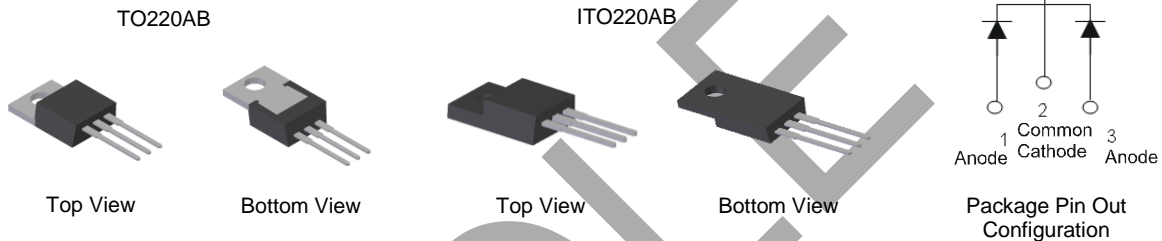


Features

- 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](https://www.diodes.com/quality/product-definitions/) or your local Diodes representative.**
<https://www.diodes.com/quality/product-definitions/>

Mechanical Data

- Package: TO220AB, ITO220AB
- Package Material: Molded Plastic, UL Flammability Classification Rating 94V-0
- Terminals: Matte Tin Finish Annealed over Copper Leadframe. Solderable per MIL-STD-202, Method 208 (E3)
- Polarity: As Marked on Body
- Marking: Type Number
- Weight: TO220AB – 1.95 grams (Approximate)
ITO220AB – 1.69 grams (Approximate)

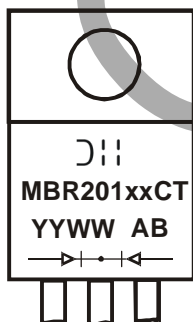


Ordering Information (Note 3)

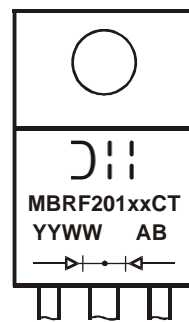
Part Number	Package	Packing	
		Qty.	Carrier
MBR20100CT	TO220AB	50 pieces	Tube
MBRF20100CT-JT	ITO220AB	50 pieces	Tube
MBRF20150CT-JT	ITO220AB	50 pieces	Tube

- 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
 AB = Foundry and Assembly Code
 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°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}	100	150	V
Working Peak Reverse Voltage	V _{RWM}			
DC Blocking Voltage	V _{RM}			
Average Rectified Output Current @ T _C = +125°C	I _O	10	10	A
Non-Repetitive Peak Forward Surge Current 8.3ms	I _{FSM}	240	200	A
Single Half Sine-Wave Superimposed on Rated Load				

Thermal Characteristics (Per Leg)

Characteristic	Symbol	MBRF20100CT	MBR(F)20150CT	Unit
Typical Thermal Resistance	R _{θJC}	3		°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +150		°C

Electrical Characteristics (Per Leg) (@T_A = +25°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 = 10A, T _J = +25°C I _F = 10A, T _J = +125°C
Leakage Current (Note 4)	I _{RM}	0.1 50	0.05 30	mA	V _R = 100V, T _J = +25°C V _R = 100V, T _J = +125°C

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

OBSOLETE - PART DISCONTINUED

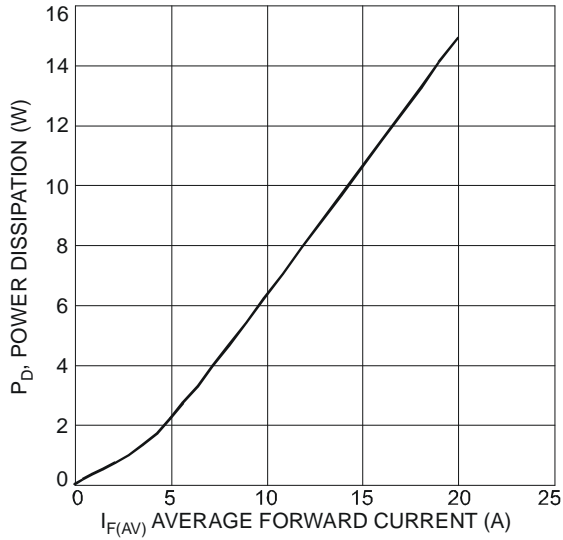


Fig. 1 Forward Power Dissipation
MBR20150CT_MBRF20150CT

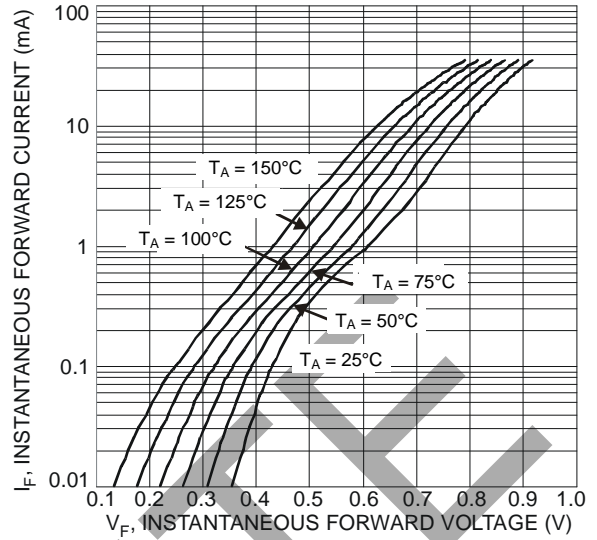


Fig. 2 Typical Forward Characteristics
MBR20150CT_MBRF20150CT

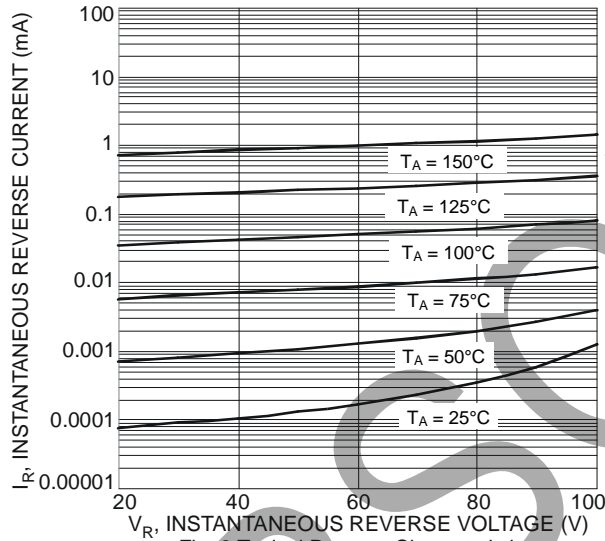


Fig. 3 Typical Reverse Characteristics
MBR20150CT_MBRF20150CT

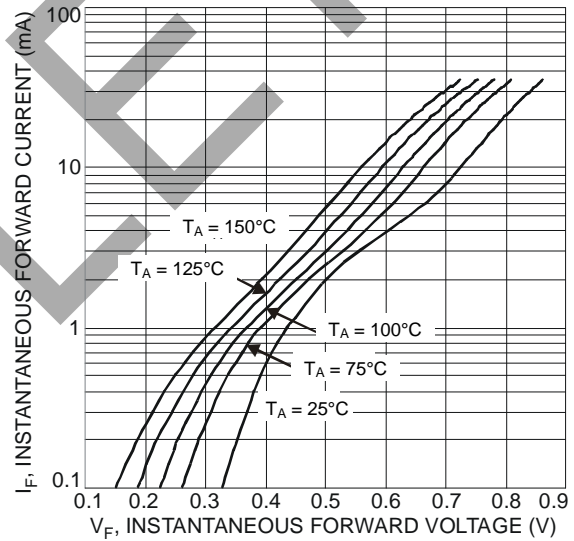


Fig. 4 Typical Forward Characteristics
MBR20100CT_MBRF20100CT

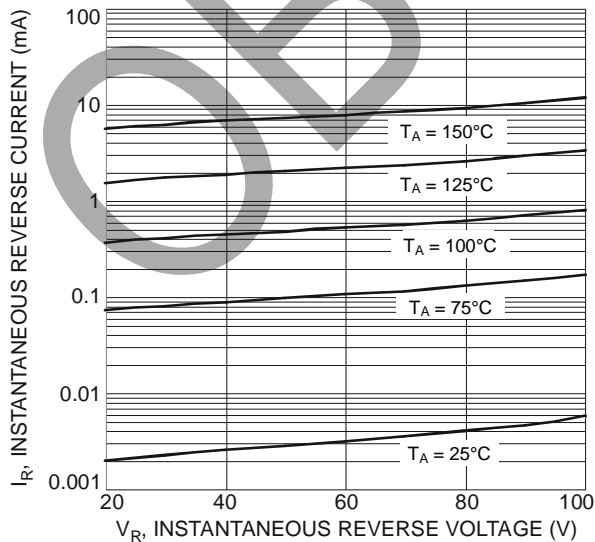


Fig. 5 Typical Reverse Characteristics
MBR20100CT_MBRF20100CT

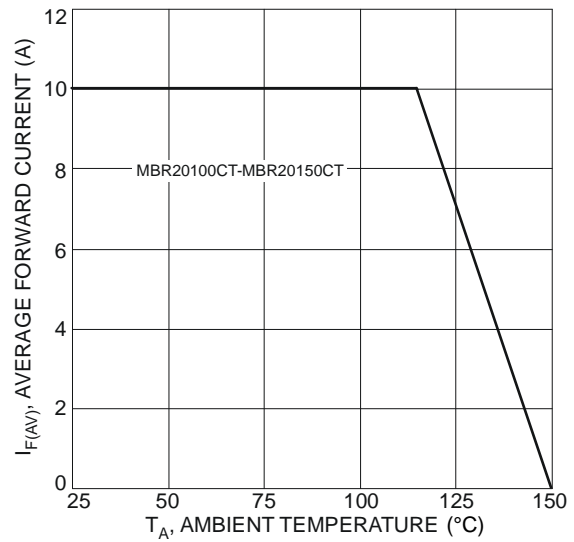
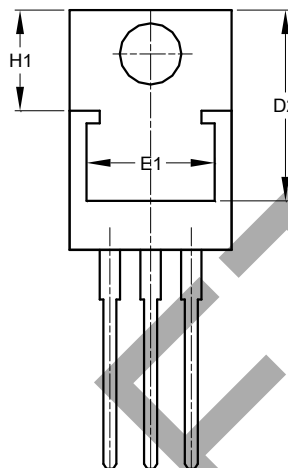
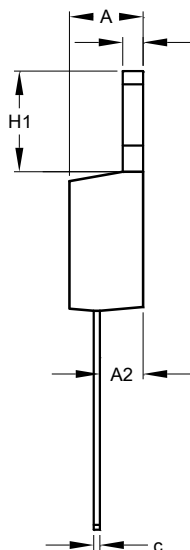
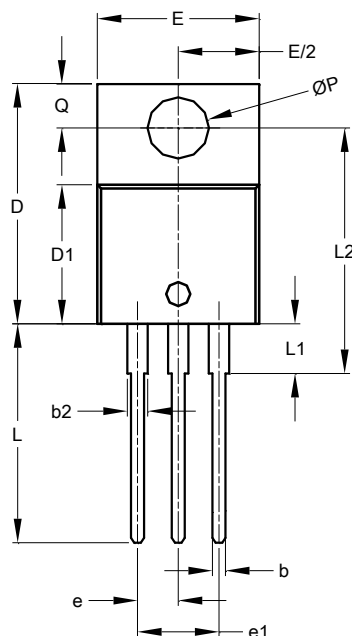


Fig. 6 Forward Current Derating Curve

Package Outline Dimensions

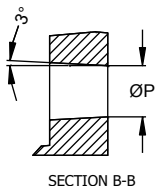
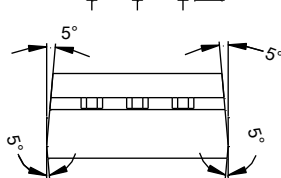
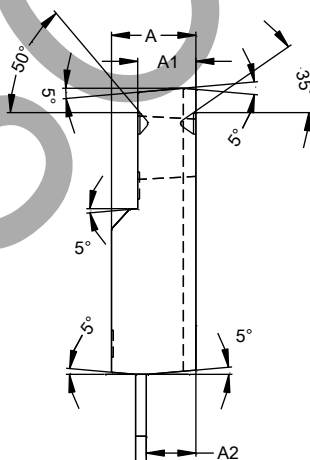
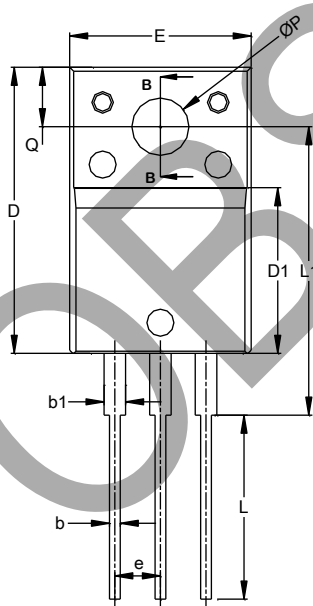
Please see <http://www.diodes.com/package-outlines.html> for the latest version.

TO220AB



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

ITO220AB



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

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