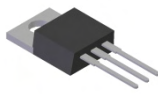


Features

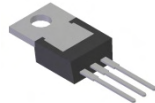
- Schottky Barrier Chip
- Guard Ring Die Construction for Transient Protection.
- Low Power Loss, High Efficiency.
- High Surge Capability.
- High Current Capability and Low Forward Voltage Drop.
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Application
- **Lead Free Finish, RoHS Compliant (Note 1)**

Mechanical Data

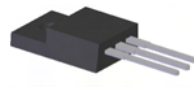
- Case: TO-220AB, ITO-220AB
- Case Material: Molded Plastic, UL Flammability Classification Rating 94V-0
- Terminals: Matte Tin Finish annealed over Copper leadframe. Solderable per MIL-STD-202, Method 208 ⁽³⁾
- Polarity: As Marked on body
- Marking: Type Number
- Weight: TO-220AB – 1.95 grams (approximate)
ITO-220AB – 1.69 grams (approximate)



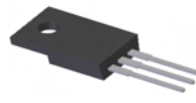
TO-220AB
Top View



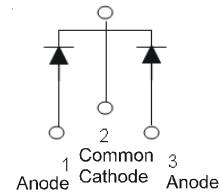
TO-220AB
Bottom View



ITO-220AB
Top View



ITO-220AB
Bottom View



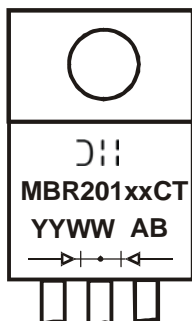
Package Pin Out
Configuration

Ordering Information (Notes 2 & 3)

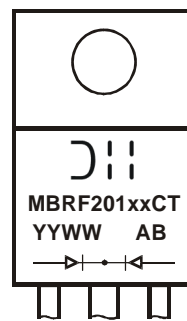
Part Number	Case	Packaging
MBR20100CT	TO-220AB	50 pieces/tube
MBR20150CT	TO-220AB	50 pieces/tube
MBRF20100CT-JT	ITO-220AB (Alternate)	50 pieces/tube
MBRF20150CT-JT	ITO-220AB (Alternate)	50 pieces/tube

- Notes:
1. EU Directive 2002/95/EC (RoHS). All applicable RoHS exemptions applied, see EU Directive 2002/95/EC Annex Notes
 2. For packaging details, go to our website at <http://www.diodes.com>.
 3. For Green Molding Compound version part numbers.

Marking Information



MBR201XXCT = Product Type Marking Code
 AB = Foundry and Assembly Code
 YYWW = Date Code Marking
 YY = Last two digits of year (ex: 12 = 2012)
 WW = Week (01 - 53)



MBRF201XXCT = Product Type Marking Code
 AB = Foundry and Assembly Code
 YYWW = Date Code Marking
 YY = Last two digits of year (ex: 12 = 2012)
 WW = Week (01 - 53)

Maximum Ratings (Per Leg) @T_A = 25°C unless otherwise specified

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

Characteristic	Symbol	MBR(F)20100CT	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 @ TC= 125°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	MBR(F)20100CT	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	MBR(F)20100CT	MBR(F)20150CT	Unit	Test Condition
Forward Voltage Drop	V _{FM}	0.83	0.90	V	I _F = 10A, T _J = 25°C
		0.72	0.74		I _F = 10A, T _J = 125°C
Leakage Current (Note 4)	I _{RM}	0.1	0.05	mA	V _R = 100V, T _J = 25°C
		50	30		V _R = 100V, T _J = 125°C

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

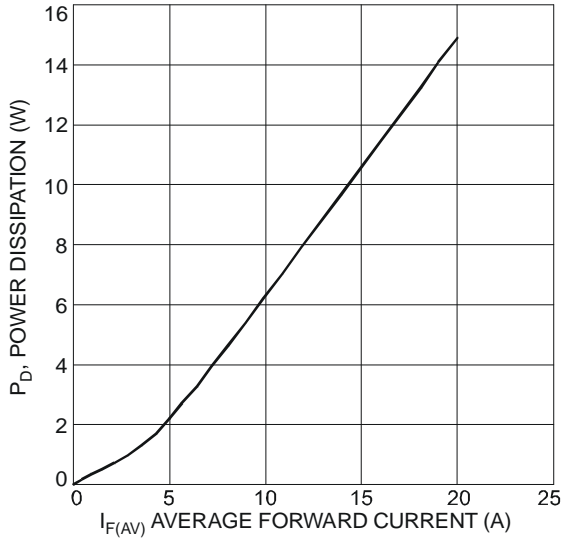


Fig. 1 Forward Power Dissipation
MBR20150CT_MBRF20150CT

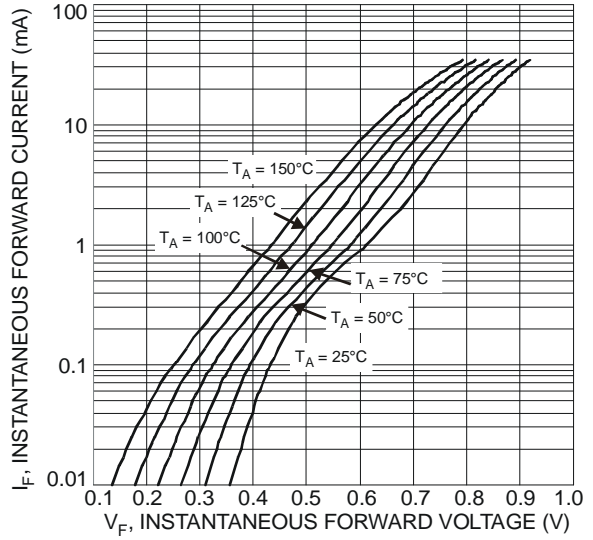


Fig. 2 Typical Forward Characteristics
MBR20150CT_MBRF20150CT

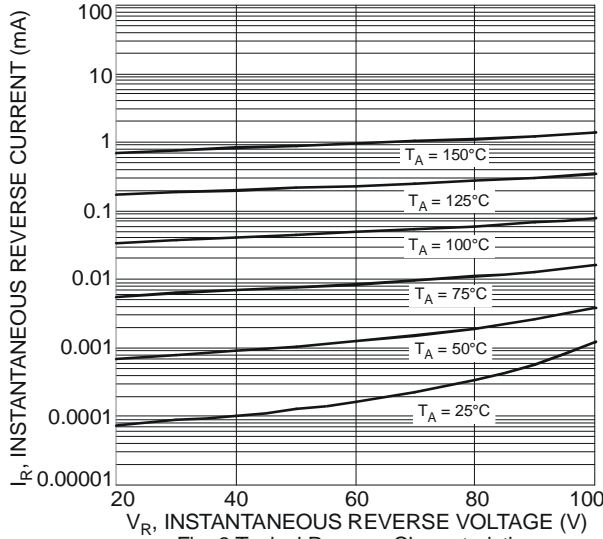


Fig. 3 Typical Reverse Characteristics
MBR20150CT_MBRF20150CT

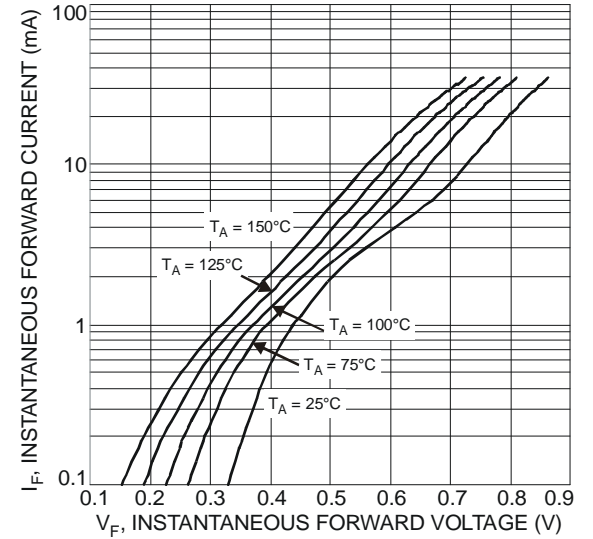


Fig. 4 Typical Forward Characteristics
MBR20100CT_MBRF20100CT

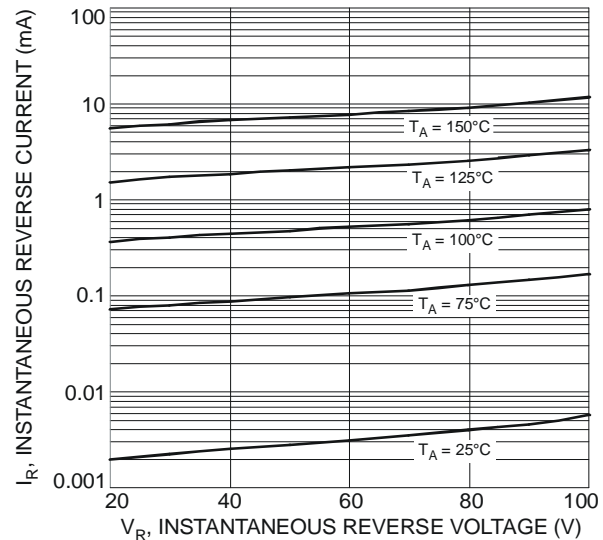


Fig. 5 Typical Reverse Characteristics
MBR20100CT_MBRF20100CT

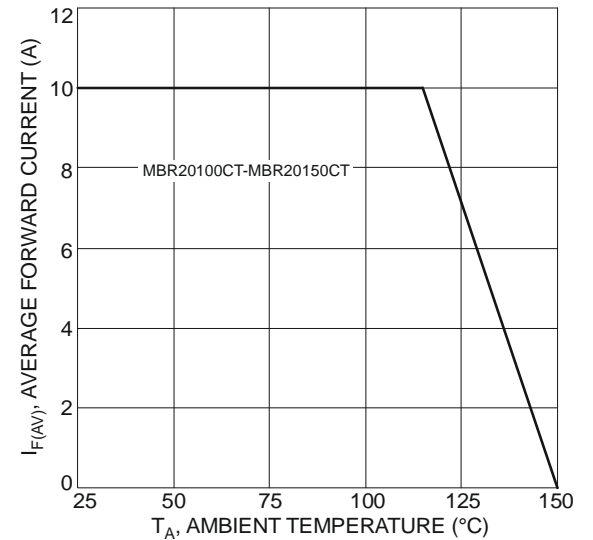
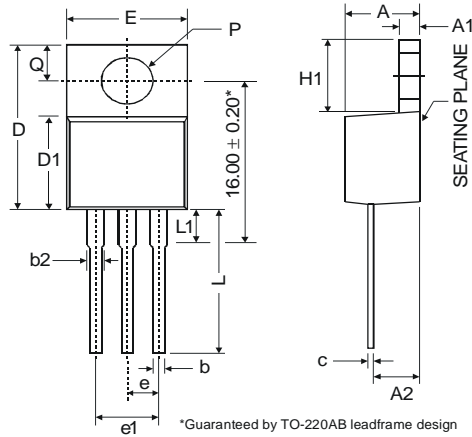
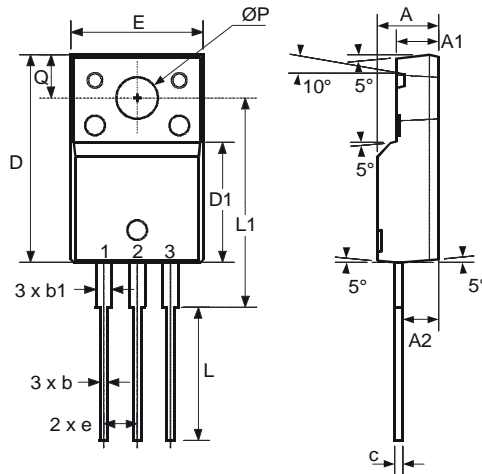


Fig. 6 Forward Current Derating Curve

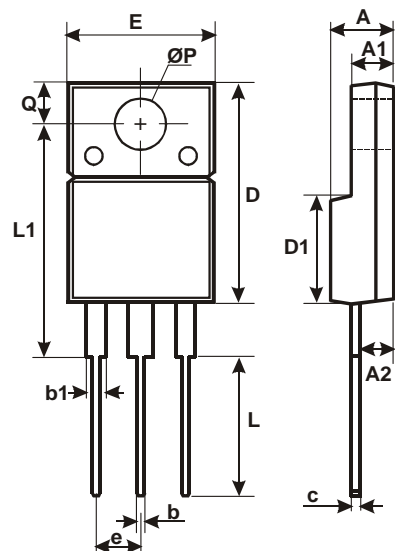
Package Outline Dimensions



TO-220AB			
Dim	Min	Typ	Max
A	3.56	-	4.82
A1	0.51	-	1.39
A2	2.04	-	2.92
b	0.39	0.81	1.01
b2	1.15	1.24	1.77
c	0.356	-	0.61
D	14.22	-	16.51
D1	8.39	-	9.01
e	2.54		
e1	5.08		
E	9.66	-	10.66
H1	5.85	-	6.85
L	12.70	-	14.73
L1	-	-	6.35
P	3.54	-	4.08
Q	2.54	-	3.42
All Dimensions in mm			



ITO-220AB			
Dim	Min	Typ	Max
A	4.50	4.70	4.90
A1	3.04	3.24	3.44
A2	2.56	2.76	2.96
b	0.50	0.60	0.75
b1	1.10	1.20	1.35
c	0.50	0.60	0.70
D	15.67	15.87	16.07
D1	8.99	9.19	9.39
e	2.54		
E	9.91	10.11	10.31
L	9.45	9.75	10.05
L1	15.80	16.00	16.20
P	2.98	3.18	3.38
Q	3.10	3.30	3.50
All Dimensions in mm			



ITO-220AB Alternate		
Dim	Min	Max
A	4.36	4.77
A1	2.54	3.1
A2	2.54	2.8
b	0.55	0.75
b1	1.2	1.5
c	0.38	0.68
D	14.5	15.5
D1	8.38	8.89
E	9.72	10.27
e	2.41	2.67
L	9.87	10.67
L1	15.8	17
ØP	3.08	3.39
Q	2.6	3.0
All Dimensions in mm		

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