NEW PRODUCT

MBR20100CTP

20A SCHOTTKY BARRIER RECTIFIER

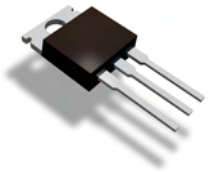
Please click here to visit our online spice models database.

Features

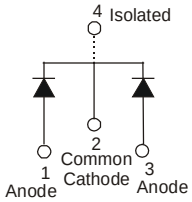
- Low Forward Voltage Drop
- Soft, Fast Switching Capability
- Schottky Barrier Chip
- ITO-220S Heat Sink Tab Electrically Isolated from Cathode

Mechanical Data

- Case: ITO-220S
- 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 e3
- Marking Information: See Page 2
- Ordering Information: See Page 2
- Weight: 1.335 grams (approximate)



Top View



Package Pin Out Configuration

Maximum Ratings @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	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_{RM}	100	V
RMS Reverse Voltage	$V_{R(RMS)}$	71	V
Average Rectified Output Current @ T_C = 115ºC	I_O	20	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	130	A

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Maximum Thermal Resistance (per leg) (Note 3)	$R_{\theta JA}$	18	°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +150	ºC

Electrical Characteristics @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 1)	$V_{(BR)R}$	100	-	-	V	I_R = 0.1mA
Forward Voltage Drop (per leg)	V_F	-	0.80	0.85	V	I_F = 10A, T_J = 25ºC
Leakage Current (Note 1)	I_R	-	-	0.1 20	mA	V_R = 100V, T_J = 25ºC V_R = 100V, T_J = 125ºC

Notes:
1. Short duration pulse test used to minimize self-heating effect.
2. Test without additional heatsink
3. Device mounted on heatsink (Black aluminum, 45mm x 20mm x 12mm)

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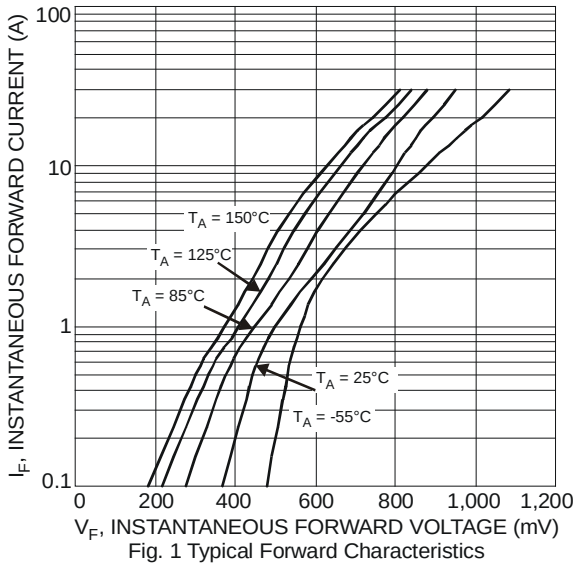


Fig. 1 Typical Forward Characteristics

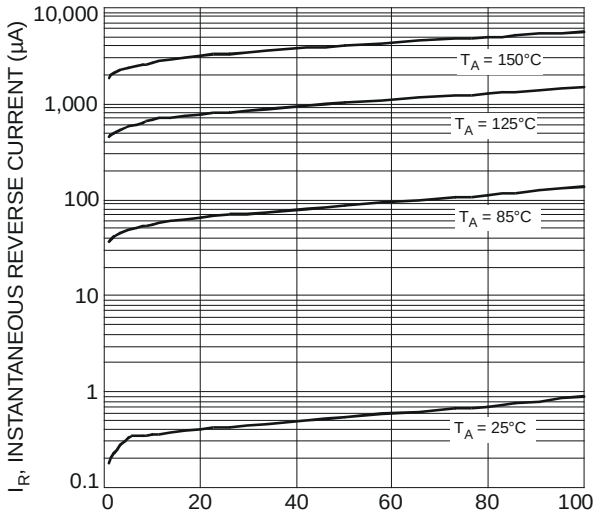


Fig. 2 Typical Reverse Characteristics

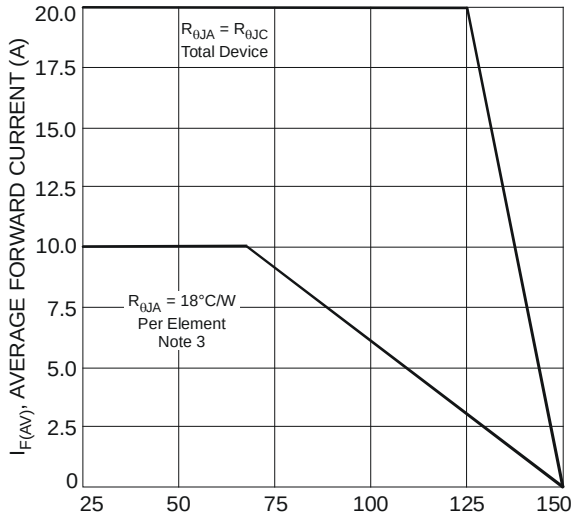


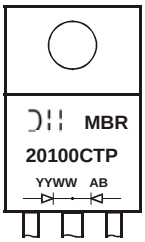
Fig. 3 Forward Current Derating Curve

Ordering Information (Note 4)

Part Number	Case	Packaging
MBR20100CTP	ITO-220S	50 pieces/tube

Notes: 4. For packaging details, go to our website at http://www.diodes.com/datasheets/ap02007.pdf.

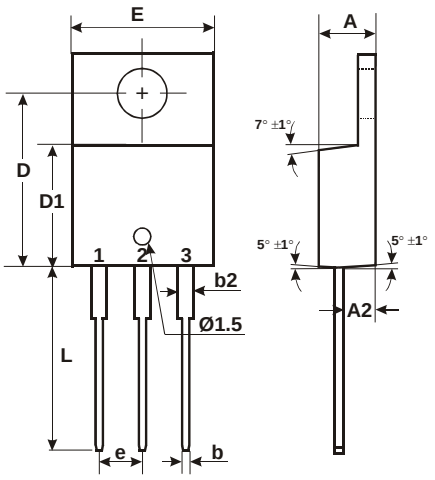
Marking Information



MBR20100CTP = Product Type Marking Code
AB = Foundry and Assembly Code
YYWW = Date Code Marking
YY = Last two digits of year, ex: 08 = 2008
WW = Week (01-52)

NEW PRODUCT

Package Outline Dimensions



ITO-220S			
DIM.	MIN.	TYP.	MAX.
A	4.52	4.57	4.62
A2	2.64	2.67	2.70
b	0.71	0.81	0.91
b2	1.14	1.24	1.34
D	12.16	12.26	12.36
D1	8.67	8.70	8.73
e	2.54 typ		
E	10.08	10.11	10.14
L	13.55	13.60	13.65
All Dimensions in mm			