

## Features

- Low Forward Voltage Drop
- Soft, Fast Switching Capability
- Schottky Barrier Chip
- ITO-220S Heat Sink Tab Electrically Isolated from Cathode
- UL Approval in Accordance with UL 1557, Reference No. E94661

## Mechanical Data

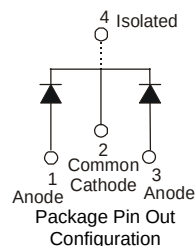
- Case: ITO-220S
- Case Material: Molded Plastic, UL Flammability Classification Rating 94V-0
- Terminals: Matte Tin Finish annealed over Copper leadframe. Solderable per MIL-STD-202, Method 208 
- Weight: 1.335 grams (approximate)



Top View



Bottom View

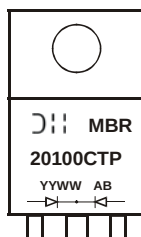


## Ordering Information (Notes 1 & 2)

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

Notes: 1. For packaging details, go to our website at <http://www.diodes.com>.  
 2. For Green Molding compound version part number, add "-G" suffix to part number. Example: MBR20100CTP-G.

## 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 - 53)

**Maximum Ratings (Per Leg)** @T<sub>A</sub> = 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                                                                     | V <sub>RRM</sub> | 100   | V    |
| Working Peak Reverse Voltage                                                                        | V <sub>RWM</sub> |       |      |
| DC Blocking Voltage                                                                                 | V <sub>RM</sub>  |       |      |
| Average Rectified Output Current                                                                    | (Per Leg)        | 10    | A    |
|                                                                                                     | (Total)          | 20    |      |
| Non-Repetitive Peak Forward Surge Current 8.3ms<br>Single Half Sine-Wave Superimposed on Rated Load | I <sub>FSM</sub> | 130   | A    |

**Thermal Characteristics (Per Leg)**

| Characteristic                              | Symbol                            | Value       | Unit |
|---------------------------------------------|-----------------------------------|-------------|------|
| Maximum Thermal Resistance Junction to Case | R <sub>θJC</sub>                  | 3           | °C/W |
| Operating and Storage Temperature Range     | T <sub>J</sub> , T <sub>STG</sub> | -65 to +175 | °C   |

**Electrical Characteristics (Per Leg)** @T<sub>A</sub> = 25°C unless otherwise specified

| Characteristic           | Symbol         | Min | Typ  | Max  | Unit | Test Condition                                |
|--------------------------|----------------|-----|------|------|------|-----------------------------------------------|
| Forward Voltage Drop     | V <sub>F</sub> | -   | 0.80 | 0.85 | V    | I <sub>F</sub> = 10A, T <sub>J</sub> = 25°C   |
| Leakage Current (Note 3) | I <sub>R</sub> | -   | -    | 0.1  | mA   | V <sub>R</sub> = 100V, T <sub>J</sub> = 25°C  |
|                          |                | -   | -    | 20   |      | V <sub>R</sub> = 100V, T <sub>J</sub> = 125°C |

Notes: 3. Short duration pulse test used to minimize self-heating effect.

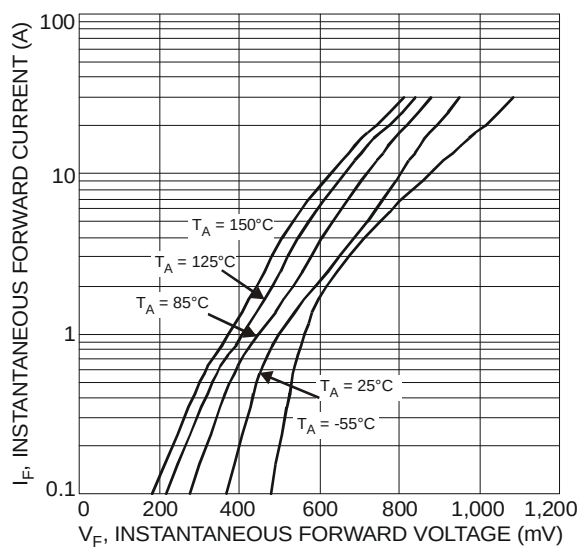


Fig. 1 Typical Forward Characteristics

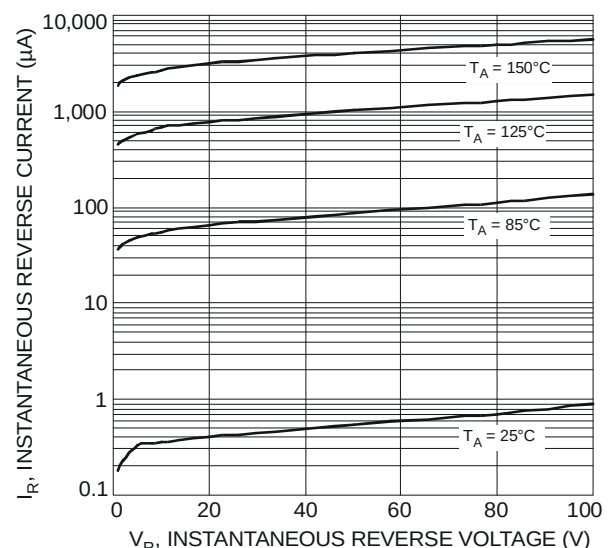


Fig. 2 Typical Reverse Characteristics

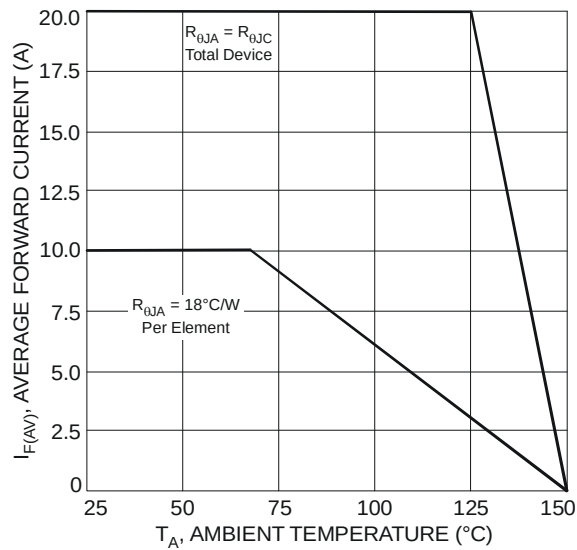
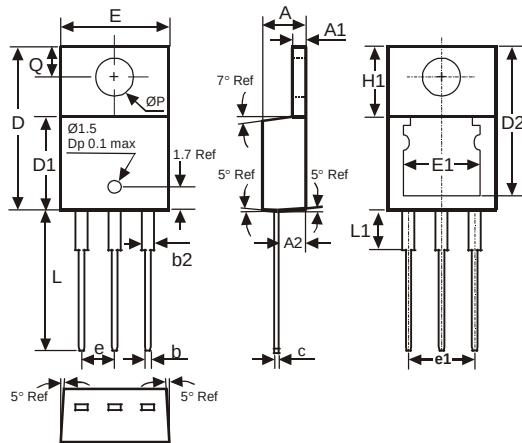


Fig. 3 Forward Current Derating Curve

## Package Outline Dimensions



| ITO-220S             |       |       |       |
|----------------------|-------|-------|-------|
| DIM.                 | MIN.  | MAX.  | TYP.  |
| A                    | 4.52  | 4.62  | 4.57  |
| A1                   | 1.17  | 1.39  | —     |
| A2                   | 2.57  | 2.77  | 2.67  |
| b                    | 0.72  | 0.95  | 0.84  |
| b2                   | 1.15  | 1.54  | 1.26  |
| c                    | 0.356 | 0.61  | —     |
| D                    | 14.22 | 16.51 | 15.00 |
| D1                   | 8.60  | 8.80  | 8.70  |
| D2                   | 13.68 | 14.08 | —     |
| e                    | 2.49  | 2.59  | 2.54  |
| e1                   | 4.98  | 5.18  | 5.08  |
| E                    | 10.01 | 10.21 | 10.11 |
| E1                   | 6.86  | 8.89  | —     |
| H1                   | 5.85  | 6.85  | —     |
| L                    | 13.30 | 13.90 | 13.60 |
| L1                   | —     | 4.00  | —     |
| P                    | 3.54  | 4.08  | —     |
| Q                    | 2.54  | 3.42  | —     |
| All Dimensions in mm |       |       |       |

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