# 10A SCHOTTKY BARRIER RECTIFIER

## Features

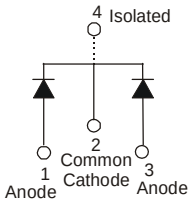
- Low Forward Voltage Drop
- Soft, Fast Switching Capability
- Schottky Barrier Chip
- ITO-220S Heat Sink Tab Electrically Isolated from Cathode
- UL Approval in Accordance with UL 1557, Reference No. E94661

## 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 e3
- Weight: 1.335 grams (approximate)

Top View

Bottom View



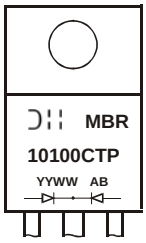

Package Pin Out Configuration

## Ordering Information (Notes 1 & 2)

| Part Number | Case | Packaging |
|---|---|---|
| MBR10100CTP | ITO-220S | 50 pieces/tube |
| MBR10100CTP-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: MBR10100CTP-G.

## Marking Information




MBR10100CTP = 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) @$T_A$ = 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<br>Working Peak Reverse Voltage<br>DC Blocking Voltage | | $V_{RRM}$<br>$V_{RWM}$<br>$V_{RM}$ | 100 | V |
| Average Rectified Output Current | (Per Leg) | $I_O$ | 5 | A |
| | (Total) | | 10 | |
| Non-Repetitive Peak Forward Surge Current 8.3ms<br>Single Half Sine-Wave Superimposed on Rated Load | | $I_{FSM}$ | 100 | A |
| Isolation Voltage<br>From Terminal Heatsink t = 1 min. | | $V_{AC}$ | 2000 | V |

## Thermal Characteristics (Per Leg)

| Characteristic | Symbol | Value | Unit |
|---|---|---|---|
| Typical Thermal Resistance Junction to Case | $R_{\theta JC}$ | 3 | °C/W |
| Operating and Storage Temperature Range | $T_J$, $T_{STG}$ | -65 to +175 | ºC |

## Electrical Characteristics (Per Leg) @$T_A$ = 25°C unless otherwise specified

| Characteristic | Symbol | Min | Typ | Max | Unit | Test Condition |
|---|---|---|---|---|---|---|
| Forward Voltage Drop | $V_F$ | - | 0.79 | 0.85 | V | $I_F$ = 5A, $T_J$ = 25ºC |
| | | - | 0.65 | 0.75 | | $I_F$ = 5A, $T_J$ = 125ºC |
| Leakage Current (Note 3) | $I_R$ | - | - | 0.1 | mA | $V_R$ = 100V, $T_J$ = 25ºC |
| | | - | - | 15 | | $V_R$ = 100V, $T_J$ = 125ºC |

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

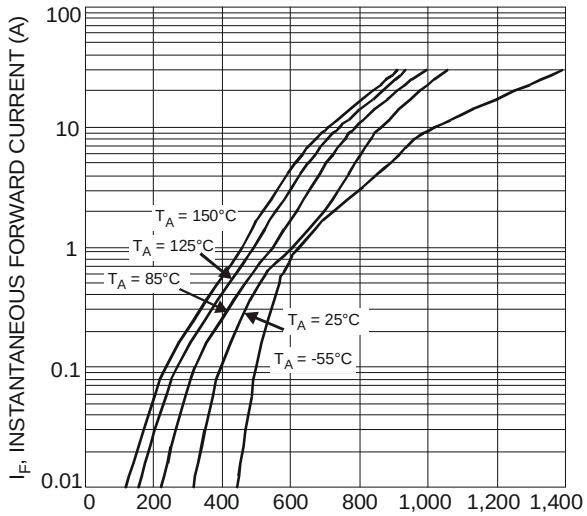


Fig. 1 Typical Forward Characteristics

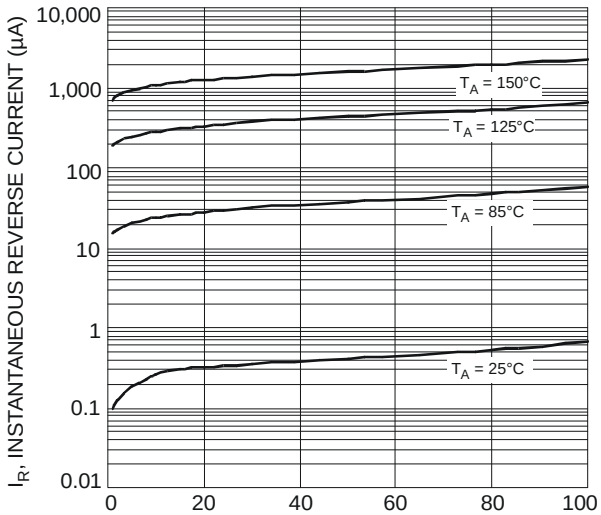


Fig. 2 Typical Reverse Characteristics

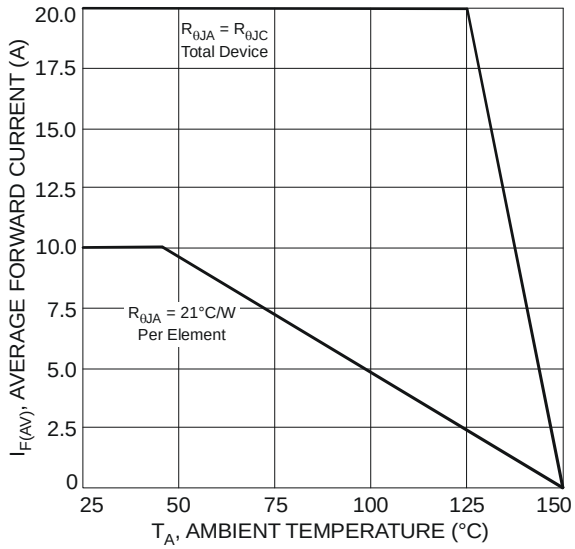
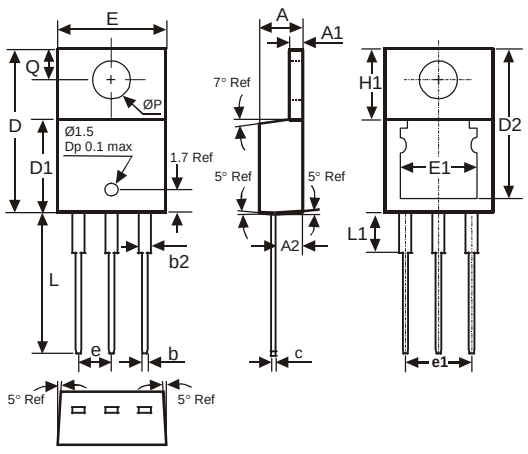



Fig. 3 Forward Current Derating Curve

## 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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