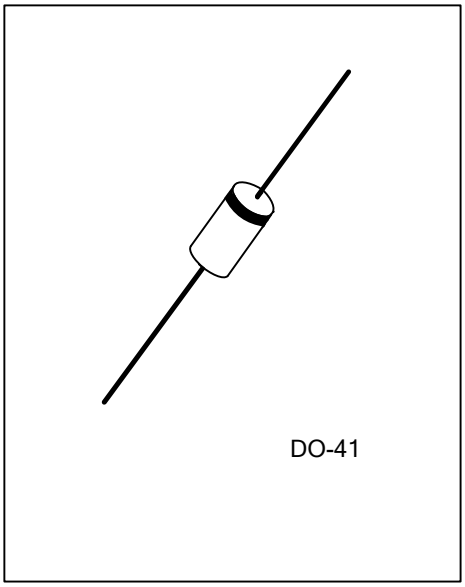
# MBR150

**DIODE**

## 1.0A SCHOTTKY BARRIER RECTIFIER



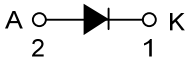

### ■ DESCRIPTION

The **MBR150** employs the 1.0A Schottky Barrier principle in a large area metal−to−silicon power diode. , it uses UTC's advancedState−of−the−art geometry features epitaxial construction with oxide passivation and metal overlap contact. Ideally suited for use as rectifiers in low voltage, high frequency inverters, free wheeling diodes, and polarity protection diodes.

### ■ FEATURES

* Low Reverse Current
* Low Stored Charge, Majority Carrier Conduction
* Low Power Loss/High Efficiency
* Highly Stable Oxide Passivated Junction

### ■ SYMBOL



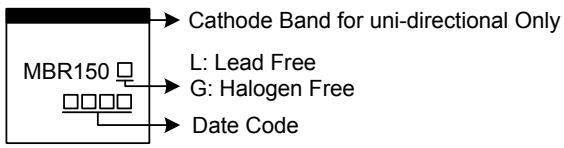

### ■ ORDERING INFORMATION

| Ordering Number | | Package | Pin Assignment | | Packing |
|---|---|---|---|---|---|
| Lead Free | Halogen Free | | 1 | 2 | |
| MBR150L-Z41-R | MBR150G-Z41-R | DO-41 | K | A | Tape Reel |
| MBR150L-Z41-B | MBR150G-Z41-B | DO-41 | K | A | Tape Box |

Note: Pin Assignment: A: Anode K: Cathode

| | |
|---|---|
| MBR150G-Z41-R<br>(1)Packing Type<br>(2)Package Type<br>(3)Green Package | (1) B: Tape Box, R: Tape Reel<br>(2) Z41: DO-41<br>(3) G: Halogen Free and Lead Free, L: Lead Free |

### ■ MARKING



## ■ ABSOLUTE MAXIMUM RATING ($T_A$=25°C, unless otherwise specified)

| PARAMETER | SYMBOL | RATINGS | UNIT |
|---|---|---|---|
| Working Peak Reverse Voltage | $V_{RWM}$ | 50 | V |
| Repetitive Peak Reverse Voltage | $V_{RRM}$ | 50 | V |
| Maximum RMS Reverse Voltage | $V_{RMS}$ | 35 | V |
| DC Blocking Voltage | $V_R$ | 50 | V |
| Average Rectified Output Current ($T_A$=70°C) | $I_O$ | 1.0 | A |
| Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load | $I_{FSM}$ | 25 | A |
| Junction Temperature | $T_J$ | -55 ~ +150 | °C |
| Storage Temperature | $T_{STG}$ | -55 ~ +150 | °C |

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

## ■ THERMAL DATA

| PARAMETER | SYMBOL | RATINGS | UNIT |
|---|---|---|---|
| Junction to Ambient | $\theta_{JA}$ | 80 | °C/W |

Note: FR-4 PCB, 2 oz Copper. Minimum recommended pad layout.

## ■ ELECTRICAL CHARACTERISTICS

| PARAMETER | SYMBOL | TEST CONDITIONS | MIN | TYP | MAX | UNIT |
|---|---|---|---|---|---|---|
| Reverse Breakdown Voltage | $V_{(BR)R}$ | $I_R$=0.50mA | 50 | | | V |
| Forward Voltage Drop | $V_{FM}$ | $I_F$=1.0A, $T_C$=25°C | | | 0.75 | V |
| | | $I_F$=1.0A, $T_C$=125°C | | | 0.70 | V |
| Peak Reverse Current at Rated DC Blocking Voltage | $I_{RM}$ | Rated DC Voltage, $T_C$=25°C | | | 50 | μA |
| | | Rated DC Voltage, $T_C$=125°C | | | 10 | mA |

Note: Pulse Test: Pulse width ≤ 300μs, Duty cycle ≤ 2%.

## ■ TYPICAL CHARACTERISTICS