



## MBR5150

DIODE

### SCHOTTKY BARRIER RECTIFIER

#### DESCRIPTION

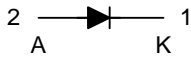
The UTC **MBR5150** is a schottky barrier rectifier, it uses UTC's advanced technology to provide customers with low forward voltage drop, high current capability and high efficiency, etc.

The UTC **MBR5150** is suitable for free wheeling, high frequency inverters, low voltage and polarity protection applications.

#### FEATURES

- \* Low forward voltage drop
- \* High efficiency
- \* Low power loss
- \* High surge capability

#### SYMBOL

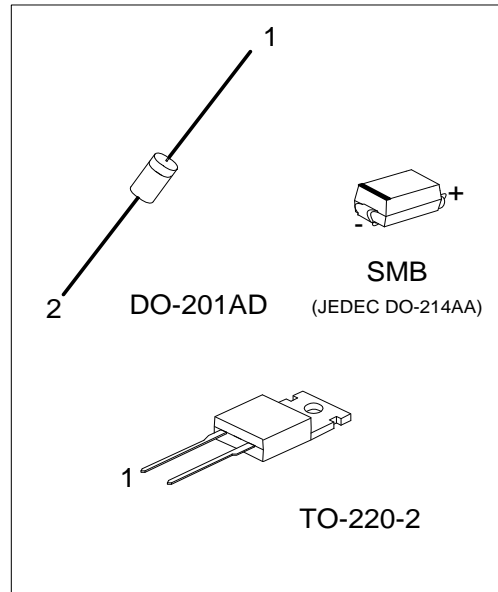


#### ORDERING INFORMATION

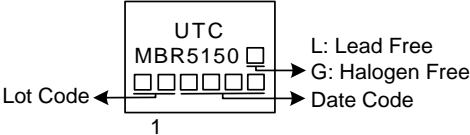
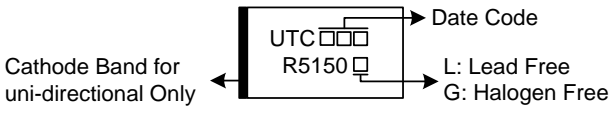
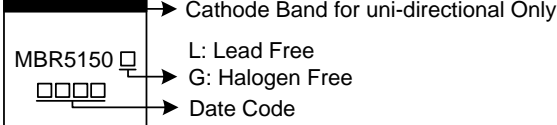
Ordering Number		Package	Pin Assignment		Packing
Lead Free	Halogen Free		1	2	
MBR5150L-TA2-T	MBR5150G-TA2-T	TO-220-2	K	A	Tube
MBR5150L-SMB-R	MBR5150G-SMB-R	SMB	K	A	Tape Reel
MBR5150L-Z21D-B	MBR5150G-Z21D-B	DO-201AD	K	A	Tape Box

Note: Pin Assignment: A: Anode K: Common Cathode

<p>MBR5150G-TA2-R</p> <p>(1) Packing Type</p> <p>(2) Package Type</p> <p>(3) Green Package</p>	<p>(1) T: Tube, R: Tape Reel, B: Tape Box</p> <p>(2) TA2: TO-220-2, SMB: SMB, Z21D: DO-201AD</p> <p>(3) G: Halogen Free and Lead Free, L: Lead Free</p>
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■ MARKING

PACKAGE	MARKING
TO-220-2	 <p>UTC MBR5150 □ □□□□□ □ Lot Code ← → Date Code 1</p> <p>L: Lead Free G: Halogen Free</p>
SMB	 <p>UTC □□□ → Date Code R5150 □ Cathode Band for uni-directional Only ← → L: Lead Free G: Halogen Free</p>
DO-201AD	 <p>MBR5150 □ → Cathode Band for uni-directional Only □□□□ □ → L: Lead Free G: Halogen Free □□□□ □ → Date Code</p>

## ■ ABSOLUTE MAXIMUM RATINGS

Ratings at 25°C ambient temperature unless otherwise specified.  
Single phase, half wave, 60Hz, resistive or inductive load.

PARAMETER	SYMBOL	RATINGS	UNIT
DC Blocking Voltage	$V_{DC}$	150	V
RMS Voltage	$V_{RMS}$	105	V
Recurrent Peak Reverse Voltage	$V_{RRM}$	150	V
Average Rectified Output Current	$I_{F(AV)}$	5.0	A
Non-Repetitive Peak Forward Surge Current: 8.3ms Single Half Sine-Wave Superimposed on Rated Load	$I_{FSM}$	150	A
Operating Junction Temperature	$T_J$	-65 ~ +150	°C
Storage Temperature	$T_{STG}$	-65 ~ +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	TO-220-2	60	°C/W
	SMB	70 (Note)	°C/W
	DO-201AD	50	°C/W
Junction to Case	TO-220-2	4.5	°C/W
	SMB	20 (Note)	°C/W
	DO-201AD	12	°C/W

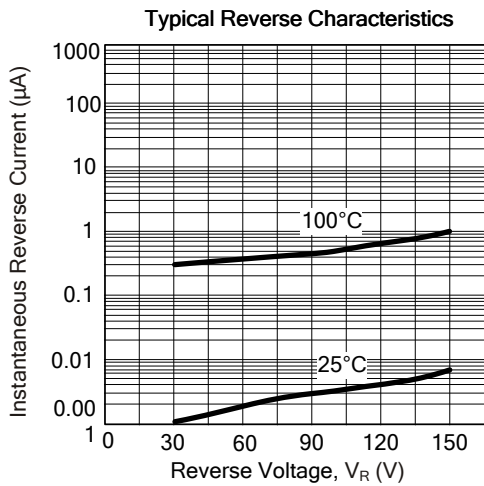
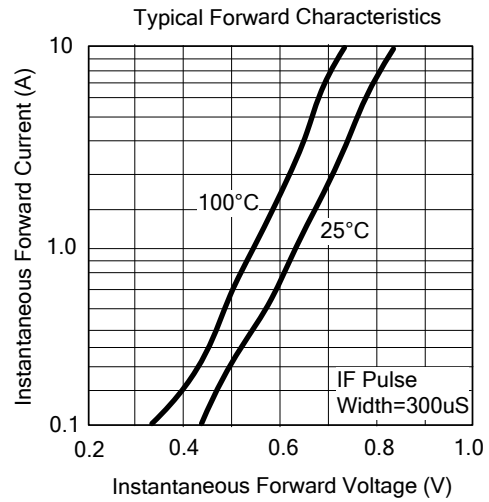
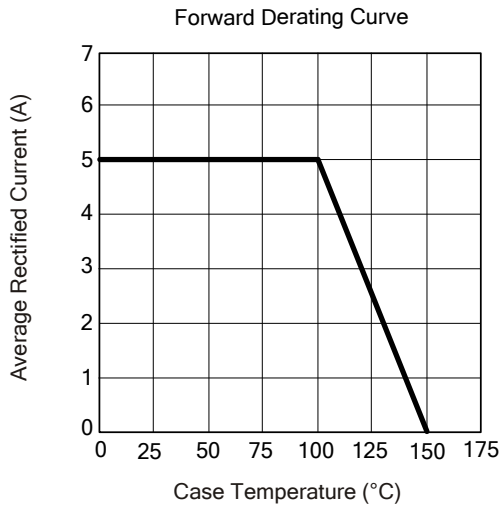
Note: Device mounted on FR-4 substrate PC board, 2oz copper, with 1inch square copper plate.

## ■ ELECTRICAL CHARACTERISTICS

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Forward Voltage Drop (Note)	$V_F$	$I_F=5.0A$ $T_J=25^\circ C$			0.9	V
		$I_F=5.0A$ , $T_J=100^\circ C$			0.7	V
Peak Reverse Current at Rated DC Blocking Voltage	$I_R$	$T_J=25^\circ C$			50	$\mu A$
		$T_J=100^\circ C$			10	mA

Note: Pulse Test: Pulse width  $\leq 300\mu s$ , Duty cycle  $\leq 1\%$ .

## ■ TYPICAL CHARACTERISTICS



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