



## MBR40150C

Preliminary

DIODE

### 40A SCHOTTKY BARRIER RECTIFIER

#### DESCRIPTION

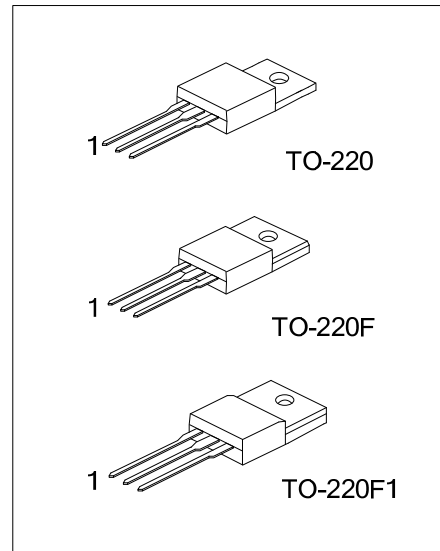
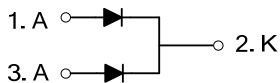
The UTC **MBR40150C** is a 40A schottky barrier rectifier, it uses UTC's advanced technology to provide the customers with high surge capability, high efficiency, high current capability, low power loss and low forward voltage drop, etc.

The UTC **MBR40150C** is suitable for free wheeling and polarity protection, etc.

#### FEATURES

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

#### SYMBOL



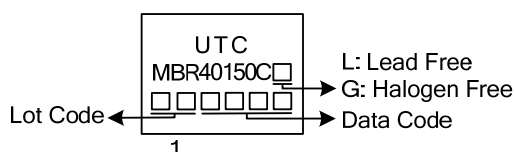
#### ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MBR40150CL-TA3-T	MBR40150CG-TA3-T	TO-220	A	K	A	Tube
MBR40150CL-TF1-T	MBR40150CG-TF1-T	TO-220F1	A	K	A	Tube
MBR40150CL-TF3-T	MBR40150CG-TF3-T	TO-220F	A	K	A	Tube

Note: Pin Assignment: A: Anode K: Cathode

<p>MBR40150CG-TA3-T</p> <p>(1)Packing Type</p> <p>(2)Package Type</p> <p>(3)Green Package</p>	<p>(1) T: Tube</p> <p>(2) TA3: TO-220, TF1: TO-220F1, TF3: TO-220F</p> <p>(3) G: Halogen Free and Lead Free, L: Lead Free</p>
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#### MARKING



■ ABSOLUTE MAXIMUM RATING ( $T_A=25^\circ\text{C}$ , unless otherwise specified)

PARAMETER		SYMBOL	RATINGS	UNIT
Repetitive Peak Reverse Voltage		$V_{RRM}$	150	V
Working Peak Reverse Voltage		$V_{RWM}$	150	V
DC Blocking Voltage		$V_R$	150	V
Average Rectified Output Current $T_C = 105^\circ\text{C}$ (Note 2)	Per Leg	$I_O$	20	A
	Total		40	
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load		$I_{FSM}$	250	A
Junction Temperature		$T_J$	-55 ~ +150	$^\circ\text{C}$
Storage Temperature		$T_{STG}$	-55 ~ +150	$^\circ\text{C}$

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 CHARACTERISTICS (PER LEG)

PARAMETER		SYMBOL	RATINGS	UNIT
Typical Thermal Resistance	TO-220	$\theta_{JC}$	2	$^\circ\text{C}/\text{W}$
	TO-220F		4	$^\circ\text{C}/\text{W}$
	TO-220F1			

■ ELECTRICAL CHARACTERISTICS (PER LEG) ( $T_A=25^\circ\text{C}$ , unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R=0.50\text{mA}$	150			V
Forward Voltage Drop	$V_{FM}$	$I_F=5\text{A}, T_C=25^\circ\text{C}$		0.68	0.75	V
		$I_F=5\text{A}, T_C=125^\circ\text{C}$		0.54		V
		$I_F=10\text{A}, T_C=25^\circ\text{C}$		0.79	0.85	V
		$I_F=10\text{A}, T_C=125^\circ\text{C}$		0.60		V
		$I_F=20\text{A}, T_C=25^\circ\text{C}$		0.82	0.90	V
		$I_F=20\text{A}, T_C=125^\circ\text{C}$		0.67	0.80	V
Leakage Current	$I_{RM}$	Rated DC Voltage, $T_C=25^\circ\text{C}$		0.5	50	$\mu\text{A}$
		Rated DC Voltage, $T_C=125^\circ\text{C}$		1	30	mA

Note: Pulse Test: Pulse width  $\leq 300\mu\text{s}$ , Duty cycle  $\leq 2\%$ .

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