



MBR10150

Preliminary

DIODE

10A SCHOTTKY BARRIER RECTIFIER

DESCRIPTION

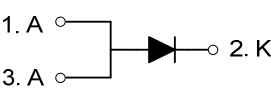
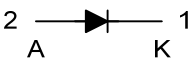
The UTC **MBR10150** is a 10A schottky barrier rectifier, it uses UTC's advanced technology to provide the customers with high surge capability, high efficiency, high current capability, low power loss and low forward voltage drop, etc.

The UTC **MBR10150** 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

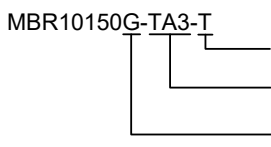
SYMBOL

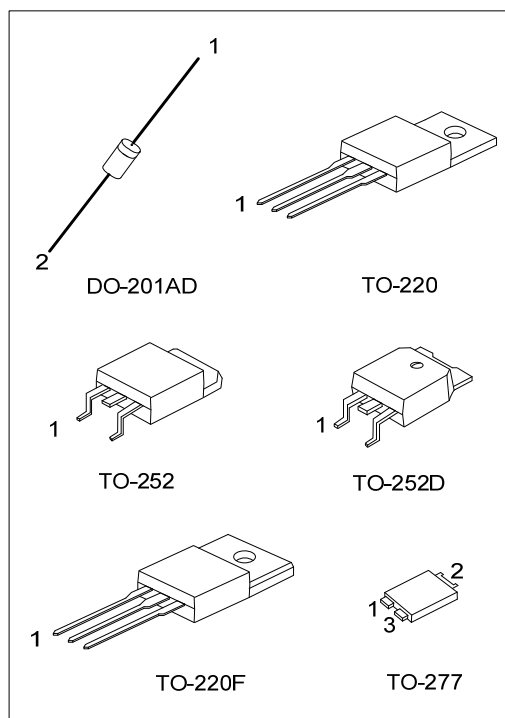
TO-220 / TO-220F TO-252 / TO-252D / TO-277	DO-201AD
	

ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MBR10150L-TA3-T	MBR10150G-TA3-T	TO-220	A	K	A	Tube
MBR10150L-TF3-T	MBR10150G-TF3-T	TO-220F	A	K	A	Tube
MBR10150L-TN3-R	MBR10150G-TN3-R	TO-252	A	K	A	Tape Reel
MBR10150L-TND-R	MBR10150G-TND-R	TO-252D	A	K	A	Tape Reel
MBR10150L-T27-R	MBR10150G-T27-R	TO-277	A	K	A	Tape Reel
MBR10150L-Z21D-B	MBR10150G-Z21D-B	DO-201AD	K	A	-	Tape Box

Note: Pin Assignment: A: Anode K: Cathode

	<p>(1) T: Tube, R: Tape Reel, B: Tape Box</p> <p>(2) TA3: TO-220, TF3: TO-220F, TN3: TO-252</p> <p>TND: TO-252D, T27: TO-277, 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 / TO-220F TO-252 / TO-252D	<p>UTC MBR10150</p> <p>Lot Code → → → → → Date Code</p> <p>1</p> <p>L: Lead Free G: Halogen Free</p>
TO-277	<p>UTC MBR10150</p> <p>Lot Code → → → → → Date Code</p> <p>L: Lead Free G: Halogen Free</p>
DO-201AD	<p>MBR10150</p> <p>→ Cathode Band for uni-directional Only</p> <p>→ → → → → Date Code</p>

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

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

PARAMETER	SYMBOL	RATINGS	UNIT
Working Peak Reverse Voltage	V _{RWM}	150	V
Repetitive Peak Reverse Voltage	V _{RRM}	150	V
DC Blocking Voltage	V _R	150	V
Average Rectified Output Current (T _A =105°C)	I _O	10	A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I _{FSM}	170	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
Typical Thermal Resistance	TO-220	2	°C/W
	TO-220F	4	°C/W
	TO-252/TO-252D	2.5	°C/W
	DO-201AD	22	°C/W
	TO-277	72 (Note)	°C/W

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

■ ELECTRICAL CHARACTERISTICS

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Instantaneous Forward Voltage Drop	V _F	I _F =10A, T _C =25°C			0.93	V
		I _F =10A, T _C =125°C			0.83	V
Instantaneous Reverse Current	I _R	Rated DC Voltage, T _C =25°C			500	μA
		Rated DC Voltage, T _C =125°C			20	mA

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

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