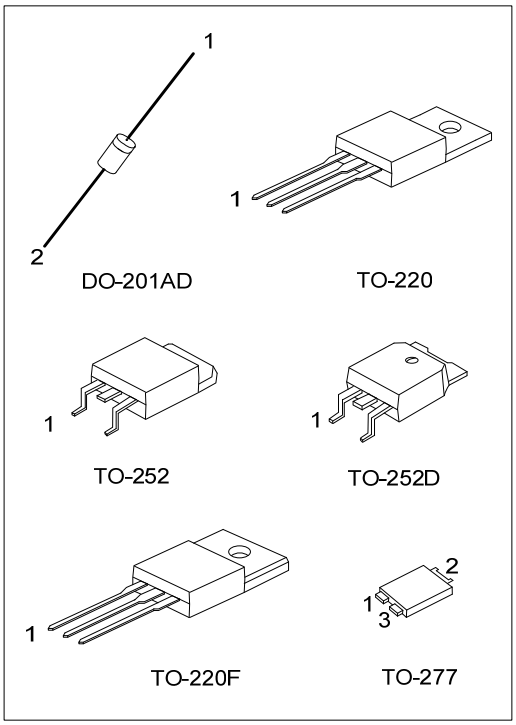
10A SCHOTTKY BARRIER RECTIFIER



■ DESCRIPTION

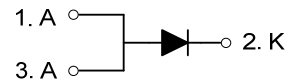
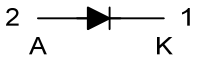
The UTC **MBR10150** is a 10A schottky barrier rectifier, it uses UTC's advanced technology to provide the customers with high surge capability, high efficiency, high current capability, low power loss and low forward voltage drop, etc.

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

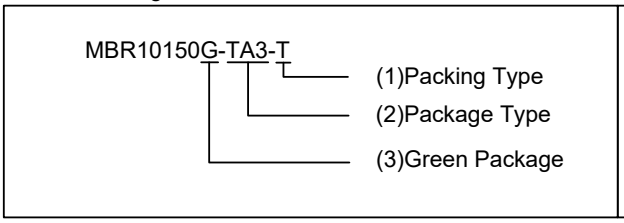
■ SYMBOL

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

■ ORDERING INFORMATION

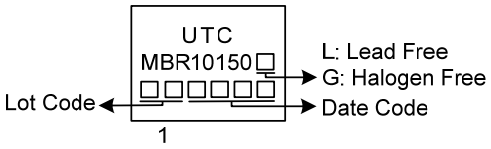
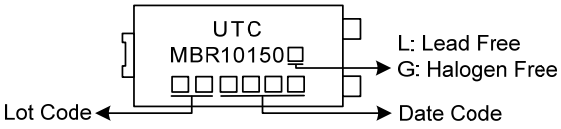
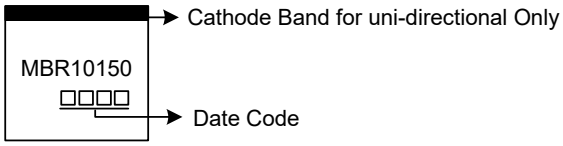
Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MBR10150L-TA3-T	MBR10150G-TA3-T	TO-220	A	K	A	Tube
MBR10150L-TF3-T	MBR10150G-TF3-T	TO-220F	A	K	A	Tube
MBR10150L-TN3-R	MBR10150G-TN3-R	TO-252	A	K	A	Tape Reel
MBR10150L-TND-R	MBR10150G-TND-R	TO-252D	A	K	A	Tape Reel
MBR10150L-T27-R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



(1) T: Tube, R: Tape Reel, B: Tape Box
(2) TA3: TO-220, TF3: TO-220F, TN3: TO-252
TND: TO-252D, T27: TO-277, Z21D: DO-201AD
(3) G: Halogen Free and Lead Free, L: Lead Free

■ MARKING

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

■ 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	θ_{JC}	2	°C/W
	TO-220F		4	°C/W
	TO-252/TO-252D		2.5	°C/W
	DO-201AD		22	°C/W
	TO-277	θ_{JA}	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%.