



MBR10100

Preliminary

DIODE

10A SCHOTTKY BARRIER RECTIFIER

DESCRIPTION

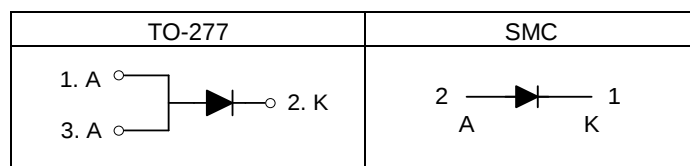
The UTC **MBR10100** is a 10A schottky barrier rectifier, it uses UTC's advanced technology to provide the customers with high surge capability, high efficiency, high current capability, low power loss and low forward voltage drop, etc.

The UTC **MBR10100** 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

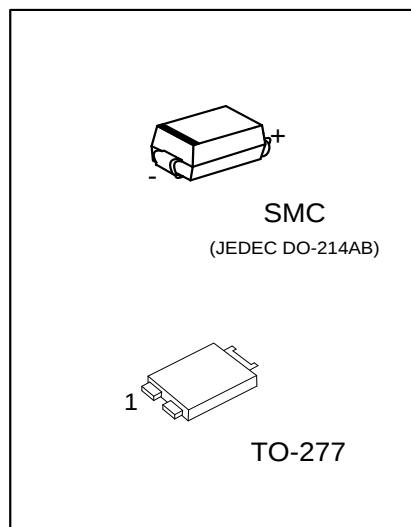


ORDERING INFORMATION

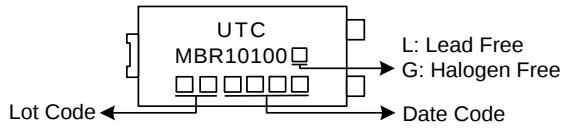
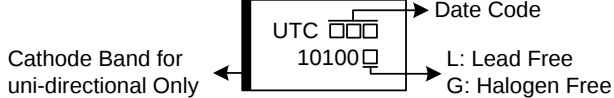
Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MBR10100L-T27-R	MBR10100G-T27-R	TO-277	A	K	A	Tape Reel
MBR10100L-SMC-R	MBR10100G-SMC-R	SMC	K	A	-	Tape Reel

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

	(1) R: Tape Reel (2) T27: TO-227, SMC: SMC (3) G: Halogen Free and Lead Free, L: Lead Free
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■ MARKING

PACKAGE	MARKING
TO-277	 Diagram of MBR10100 TO-277 package marking. The package is a TO-277 diode. The marking includes: UTC (top), MBR10100 (middle), Lot Code (bottom left), Date Code (bottom right), L: Lead Free (top right), and G: Halogen Free (middle right).
SMC	 Diagram of MBR10100 SMC package marking. The package is a SMC diode. The marking includes: UTC (top), 10100 (middle), Cathode Band for uni-directional Only (bottom left), Date Code (bottom right), L: Lead Free (top right), and G: Halogen Free (middle right).

■ 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}	100	V
Repetitive Peak Reverse Voltage	V _{RRM}	100	V
Maximum RMS Reverse Voltage	V _{RMS}	70	V
DC Blocking Voltage	V _R	100	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}	150	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 CHARACTERISTICS

PARAMETER		SYMBOL	RATINGS	UNIT
Junction to Ambient	TO-277	θ _{JA}	73	°C/W
	SMC		90	°C/W

Note: Mounted on an FR4 PCB, single-sided copper, with 100 cm² copper pad area.

■ ELECTRICAL CHARACTERISTICS (Note 2)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Instantaneous Forward Voltage Drop	V _F	I _F =10A, T _C =25°C			0.80	V
		I _F =10A, T _C =125°C			0.75	
Instantaneous Reverse Current	I _R	Rated DC Voltage, T _C =25°C			50	μA
		Rated DC Voltage, T _C =125°C			15	mA

Notes: 1. Measured at 1.0MHz and applied reverse voltage of 4.0V DC

2. Pulse Test: Pulse Width = 300μs, Duty Cycle ≤ 2.0%

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