



MBR3100

Preliminary

DIODE

3.0A SCHOTTKY BARRIER RECTIFIER

DESCRIPTION

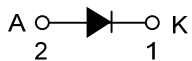
The UTC **MBR3100** is a 3.0A schottky barrier rectifier, it uses UTC's advanced technology to provide the customers with high surge capability, high efficiency, high current capability, low power loss and low forward voltage drop, etc.

The UTC **MBR3100** is suitable for free wheeling and polarity protection, etc.

FEATURES

- * Low forward voltage drop, High Current Capability
- * Low power loss, High efficiency
- * High Surge Capability
- * For Use in Low Voltage, High Frequency Inverters and Polarity Protection Applications.

SYMBOL



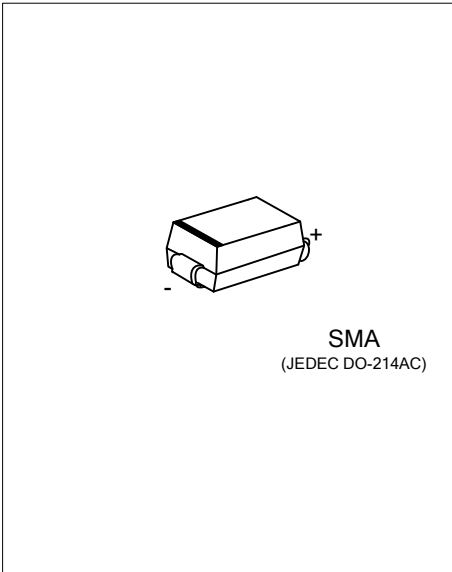
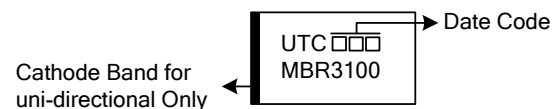
ORDERING INFORMATION

Ordering Number		Package	Pin Assignment		Packing
Lead Free	Halogen Free		1	2	
MBR3100L-SMA-R	MBR3100G-SMA-R	SMA	K	A	Tape Reel

Note: Pin Assignment: A: Anode K: Cathode

<p>MBR3100L-SMA-R</p> <ul style="list-style-type: none"> (1) Packing Type (2) Package Type (3) Green Package 	<ul style="list-style-type: none"> (1) R: Tape Reel (2) SMA: SMA (3) L: Lead Free, G: Halogen Free and Lead Free
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MARKING



■ ABSOLUTE MAXIMUM RATING ($T_A=25^\circ\text{C}$, 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
DC Blocking Voltage	V_{RM}	100	V
Working Peak Reverse Voltage	V_{RWM}	100	V
Peak Repetitive Reverse Voltage	V_{RRM}	100	V
Average Rectified Output Current	I_O	3.0	A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	80	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	θ_{JL}	20	$^\circ\text{C/W}$

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R=0.50\text{mA}$	100			V
Instantaneous Forward Voltage	V_{FM}	$I_F=3.0\text{A}, T_C=25^\circ\text{C}$			0.85	V
		$I_F=3.0\text{A}, T_C=125^\circ\text{C}$			0.70	V
Leakage Current	I_{RM}	$V_R=100\text{V}, T_C=25^\circ\text{C}$			500	μA
		$V_R=100\text{V}, T_C=125^\circ\text{C}$			2.0	mA

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

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