



**MBR145**

Preliminary

**DIODE**

**1.0A SCHOTTKY BARRIER RECTIFIER**

■ DESCRIPTION

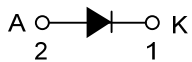
The UTC **MBR145** is a 1.0A schottky barrier rectifier, it uses UTC's advanced technology to provide the customers with high surge capability, high efficiency, high current capability, low power loss and low forward voltage drop, etc.

The UTC **MBR145** 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

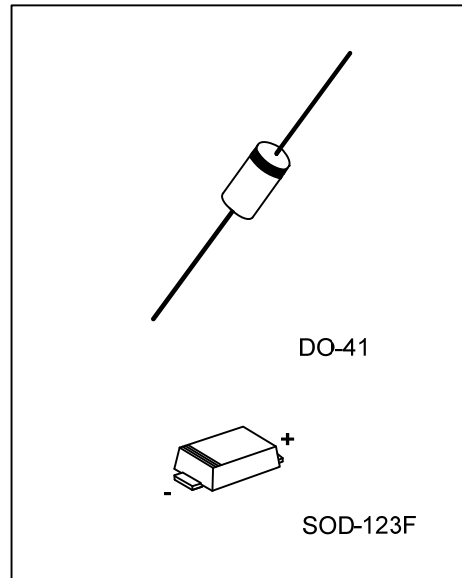
Ordering Number		Package	Pin Assignment		Packing
Lead Free	Halogen Free		1	2	
MBR145L-CA2F-R	MBR145G-CA2F-R	SOD-123F	K	A	Tape Reel
MBR145L-Z41-R	MBR145G-Z41-R	DO-41	K	A	Tape Reel
MBR145L-Z41-B	MBR145G-Z41-B	DO-41	K	A	Tape Box

Note: Pin Assignment: A: Anode K: Cathode

<p>SB145G-CA2F-R</p> <p>(1)Packing Type (2)Package Type (3)Green Package</p>	<p>(1) R: Tape Reel, B: Tape Box (2) CA2F: SOD-123, Z41: DO-41 (3) G: Halogen Free and Lead Free, L: Lead Free</p>
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■ MARKING

SOD-123F	DO-41
<p>L: Lead Free G: Halogen Free</p>	<p>→ Cathode Band for uni-directional Only L: Lead Free G: Halogen Free → Date Code</p>



■ ABSOLUTE MAXIMUM RATING (T<sub>A</sub>=25°C, unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	UNIT
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	45	V
Working Peak Reverse Voltage	V <sub>RWM</sub>	45	V
DC Blocking Voltage	V <sub>R</sub>	45	V
RMS Reverse Voltage	V <sub>R(RMS)</sub>	31.5	V
Average Rectified Forward Current (Rated VR-20Khz Square Wave) - 50% Duty Cycle	I <sub>O</sub>	1.0	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave	I <sub>FSM</sub>	30	A
Typical Junction Capacitance	C <sub>J</sub>	650	pF
Junction Temperature	T <sub>J</sub>	-65 ~ +150	°C
Storage Temperature	T <sub>STG</sub>	-65 ~ +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	SOD-123F	θ <sub>JL</sub>	30 (Note)	°C/W
	DO-41	θ <sub>JC</sub>	25	

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

■ ELECTRICAL CHARACTERISTICS

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage	V <sub>(BR)R</sub>	I <sub>R</sub> =0.50mA	45			V
Instantaneous Forward Voltage Drop	V <sub>F</sub>	I <sub>F</sub> =1.0A, T <sub>C</sub> =25°C			0.70	V
		I <sub>F</sub> =1.0A, T <sub>C</sub> =125°C			0.65	
Instantaneous Reverse Current	I <sub>R</sub>	Rated DC Voltage, T <sub>C</sub> =25°C			500	μA
		Rated DC Voltage, T <sub>C</sub> =125°C			10	mA

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

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