



MBR140

Preliminary

DIODE

1.0A SCHOTTKY BARRIER RECTIFIER

DESCRIPTION

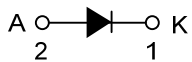
The UTC **MBR140** is a 1.0A schottky barrier rectifier, it uses UTC's advanced technology to provide the customers with high surge capability, high efficiency, high current capability, low power loss and low forward voltage drop, etc.

The UTC **MBR140** 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



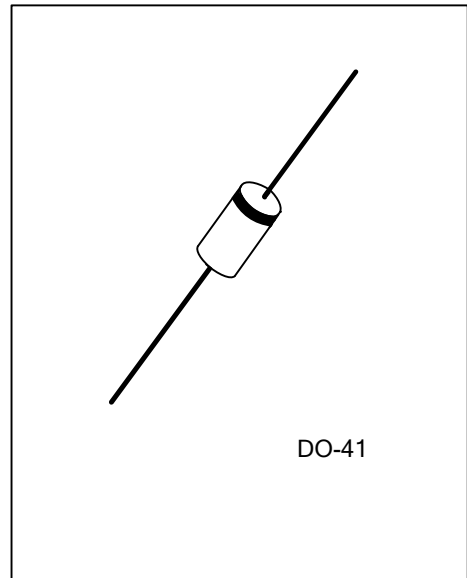
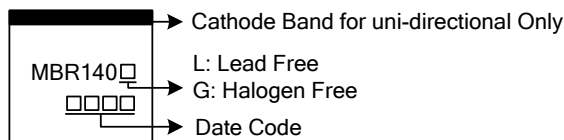
ORDERING INFORMATION

Ordering Number		Package	Pin Assignment		Packing
Lead Free	Halogen Free		1	2	
MBR140L-Z41-B	MBR140G-Z41-B	DO-41	K	A	Tape Box
MBR140L-Z41-R	MBR140G-Z41-R	DO-41	K	A	Tape Reel

Note: Pin Assignment: A: Anode K: Cathode

<p>MBR140L-Z41-B</p> <p>(1) Packing Type (2) Package Type (3) Green Package</p>	<p>(1) B: Tape Box, R: Tape Reel (2) Z41: DO-41 (3) L: Lead Free, G: Halogen Free and Lead Free</p>
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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
Working Peak Reverse Voltage	V_{RWM}	40	V
Repetitive Peak Reverse Voltage	V_{RRM}	40	V
Maximum RMS Reverse Voltage	V_{RMS}	28	V
DC Blocking Voltage	V_R	40	V
Average Rectified Output Current ($T_A=105^{\circ}\text{C}$)	I_O	1.0	A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	30	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 DATA

PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Ambient	θ_{JA}	50	$^{\circ}\text{C}/\text{W}$

■ ELECTRICAL CHARACTERISTICS

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Instantaneous Forward Voltage Drop (Note 2)	V_F	$I_F=1.0\text{A}, T_C=25^{\circ}\text{C}$			0.70	V
		$I_F=1.0\text{A}, T_C=125^{\circ}\text{C}$			0.65	
Instantaneous Reverse Current (Note 2)	I_R	Rated DC Voltage, $T_C=25^{\circ}\text{C}$			50	μA
		Rated DC Voltage, $T_C=125^{\circ}\text{C}$			10	mA

Notes: 1. $2.0\mu\text{s}$ Pulse Width, $f = 1.0\text{KHz}$.

2. Pulse Test: Pulse Width $\leq 300\mu\text{s}$, Duty Cycle $\leq 2.0\%$.

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