



# MBR160

**DIODE**

## 1.0A SCHOTTKY BARRIER RECTIFIER

### DESCRIPTION

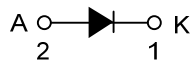
The UTC **MBR160** is a 1.0A schottky barrier rectifier, it uses UTC's advanced technology to provide the customers with high surge capability, high efficiency, high current capability, low power loss and low forward voltage drop, etc.

The UTC **MBR160** 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

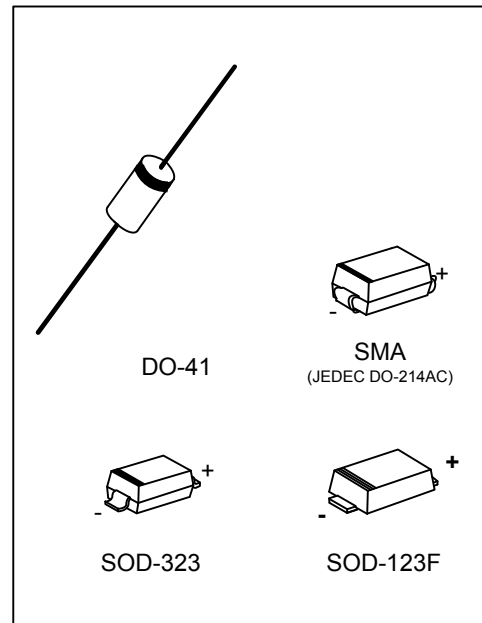


### ORDERING INFORMATION

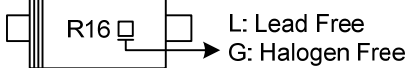
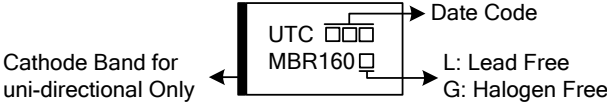
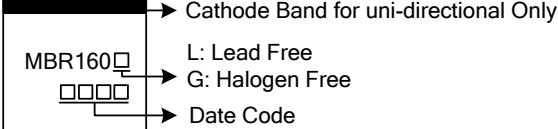
Ordering Number		Package	Pin Assignment		Packing
Lead Free	Halogen Free		1	2	
MBR160L-CA2F-R	MBR160G-CA2F-R	SOD-123F	K	A	Tape Reel
MBR160L-CB2-R	MBR160G-CB2-R	SOD-323	K	A	Tape Reel
MBR160L-SMA-R	MBR160G-SMA-R	SMA	K	A	Tape Reel
MBR160L-Z41-R	MBR160G-Z41-R	DO-41	K	A	Tape Reel
MBR160L-Z41-B	MBR160G-Z41-B	DO-41	K	A	Tape Box

Note: Pin Assignment: A: Anode K: Cathode

<p>MBR160G-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-123F, SMA: SMA, CB2: SOD-323 Z41: DO-41 (3) G: Halogen Free and Lead Free, L: Lead Free</p>
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■ MARKING

PACKAGE	MARKING
SOD-123F SOD-323	 <p>R16 □ → L: Lead Free G: Halogen Free</p>
SMA	 <p>Cathode Band for uni-directional Only ← UTC □□□ → Date Code MBR160 □ → L: Lead Free G: Halogen Free</p>
DO-41	 <p>→ Cathode Band for uni-directional Only MBR160 □ → L: Lead Free G: Halogen Free □□□ → Date Code</p>

■ ABSOLUTE MAXIMUM RATING ( $T_A=25^{\circ}\text{C}$ , unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	UNIT
Working Peak Reverse Voltage	$V_{RWM}$	60	V
Repetitive Peak Reverse Voltage	$V_{RRM}$	60	V
Maximum RMS Reverse Voltage	$V_{RMS}$	42	V
DC Blocking Voltage	$V_R$	60	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	$T_J$	+125	$^{\circ}\text{C}$
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
Typical Thermal Resistance	SOD-123F	30	$^{\circ}\text{C}/\text{W}$
	SOD-323	60	
	SMA	20	$^{\circ}\text{C}/\text{W}$
	DO-41	$\theta_{JC}$	25

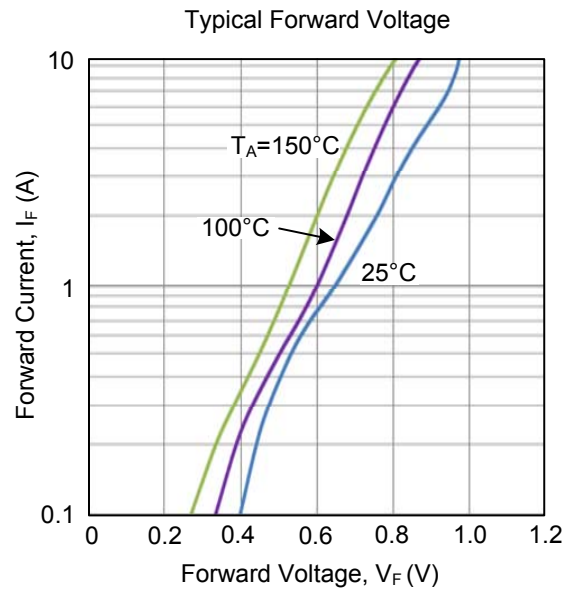
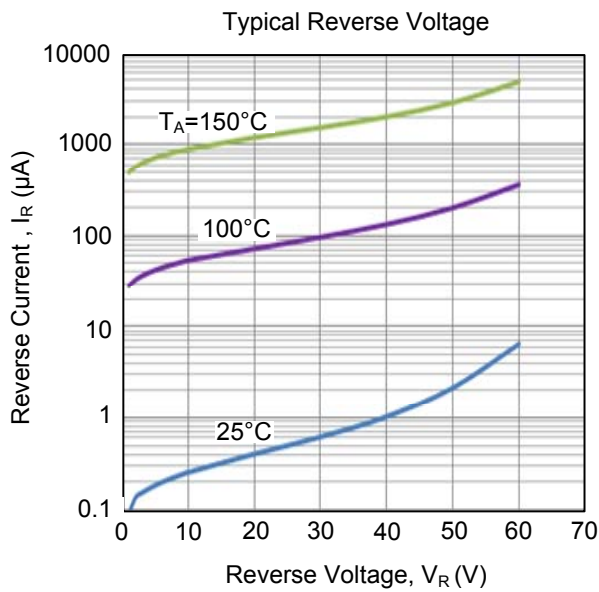
Note: FR-4 PCB, 2 oz Copper. Minimum recommended pad layout.

■ ELECTRICAL CHARACTERISTICS

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R=0.50\text{mA}$	60			V
Forward Voltage Drop	$V_{FM}$	$I_F=1.0\text{A}, T_C=25^{\circ}\text{C}$			0.74	V
		$I_F=1.0\text{A}, T_C=125^{\circ}\text{C}$			0.69	V
Peak Reverse Current at Rated DC Blocking Voltage	$I_{RM}$	Rated DC Voltage, $T_C=25^{\circ}\text{C}$			50	$\mu\text{A}$
		Rated DC Voltage, $T_C=125^{\circ}\text{C}$			10	mA

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

■ TYPICAL CHARACTERISTICS



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