



## SB120

DIODE

### 1.0A SCHOTTKY BARRIER RECTIFIER

#### DESCRIPTION

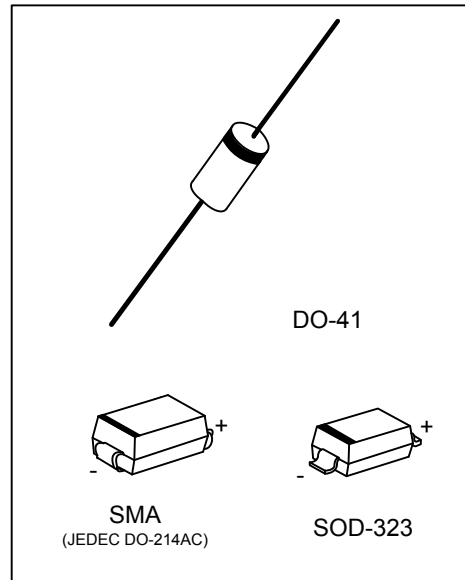
The UTC **SB120** is a 1.0A schottky barrier rectifier, it uses UTC's advanced technology to provide customers with low forward voltage drop, high current capability and high efficiency, etc.

The UTC **SB120** is suitable for use in free wheeling, high frequency inverters, low voltage and polarity protection applications.

#### FEATURES

- \* Low forward voltage drop
- \* High current capability
- \* High surge capability
- \* Low power loss
- \* High efficiency

#### ORDERING INFORMATION

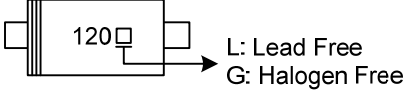
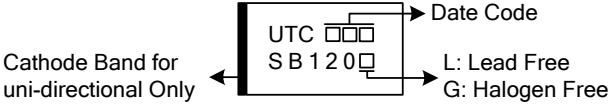
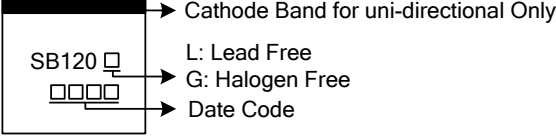


Ordering Number		Package	Pin Assignment		Packing
Lead Free	Halogen Free		1	2	
SB120L-CB2-R	SB120G-CB2-R	SOD-323	K	A	Tape Reel
SB120L-SMA-R	SB120G-SMA-R	SMA	K	A	Tape Reel
SB120L-Z41-B	SB120G-Z41-B	DO-41	K	A	Tape Box
SB120L-Z41-R	SB120G-Z41-R	DO-41	K	A	Tape Reel

Note: Pin Assignment: A: Anode K: Cathode

<p>SB120G-SMA-R</p> <p>(1)Packing Type</p> <p>(2)Package Type</p> <p>(3)Green Package</p>	<p>(1) R: Tape Reel, B: Tape Box</p> <p>(2) SMA: SMA, Z41: DO-41</p> <p>(3) G: Halogen Free and Lead Free, L: Lead Free</p>
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■ MARKING

PACKAGE	MARKING
SOD-323	 <p>120 □ → L: Lead Free G: Halogen Free</p>
SMA	 <p>Cathode Band for uni-directional Only ← UTC □□□ → Date Code S B 1 2 0 □ → L: Lead Free G: Halogen Free</p>
DO-41	 <p>→ Cathode Band for uni-directional Only SB120 □ → L: Lead Free G: Halogen Free □□□□ → Date Code</p>

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

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitance load, derate current by 20%.

PARAMETER	SYMBOL	RATINGS	UNIT
Peak Repetitive Reverse Voltage	$V_{RRM}$	20	V
Working Peak Reverse Voltage	$V_{RWM}$	20	V
RMS Reverse Voltage	$V_{R(RMS)}$	14	V
DC Blocking Voltage	$V_R$	20	V
Average Rectified Output Current	$I_O$	1.0	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	$I_{FSM}$	25	A
Operating Junction Temperature	$T_J$	-65 ~ +125	$^\circ\text{C}$
Storage Temperature	$T_{STG}$	-65 ~ +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	SOD-323	$\theta_{JA}$	200	$^\circ\text{C/W}$
	SMA		95	$^\circ\text{C/W}$
	DO-41		50	$^\circ\text{C/W}$

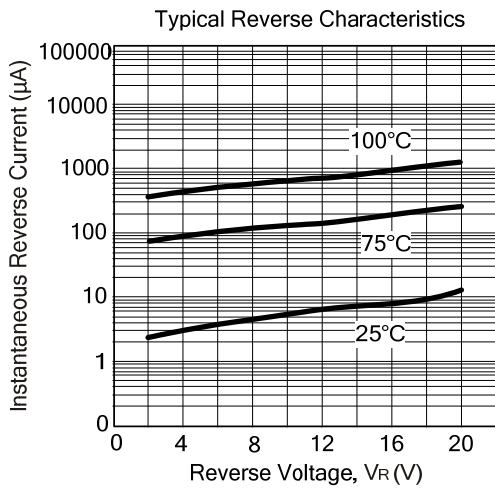
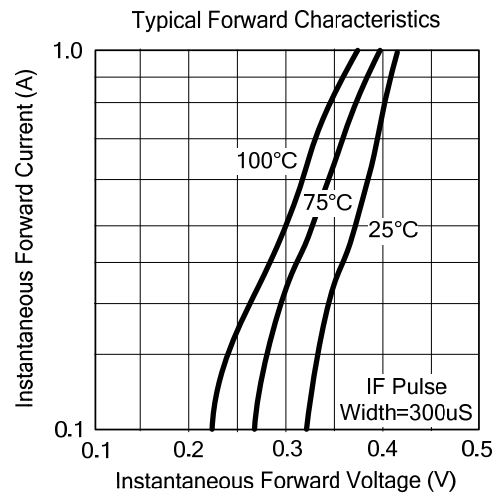
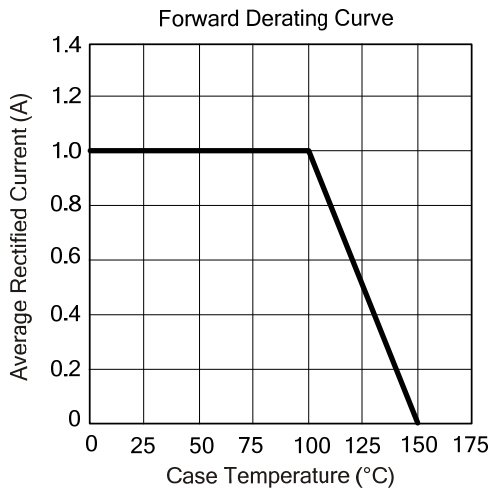
■ ELECTRICAL CHARACTERISTICS (Note 2) ( $T_A=25^\circ\text{C}$  unless otherwise specified.)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R=0.50\text{mA}$	20			V
Forward Voltage Drop	$V_{FM}$	$I_F=1.0\text{A}$			0.5	V
Peak Reverse Current at Rated DC Blocking Voltage	$I_{RM}$	$T_A=25^\circ\text{C}$			1.0	mA
		$T_A=100^\circ\text{C}$			10	mA

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

2. Short duration test pulse used to minimize self-heating effect.

■ TYPICAL CHARACTERISTICS



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