



SB120

Preliminary

DIODE

1.0A SCHOTTKY BARRIER RECTIFIER

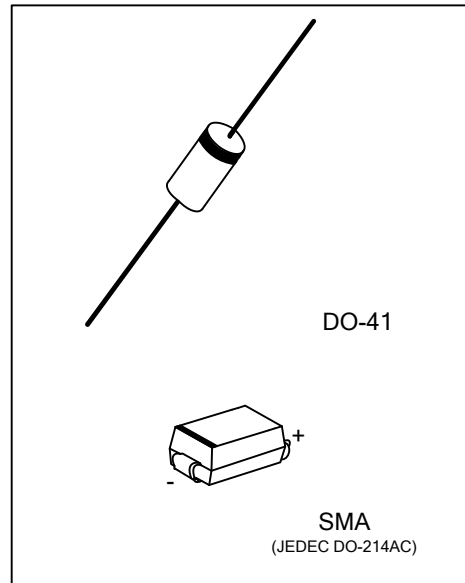
■ DESCRIPTION

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-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>SB120L-SMA-R</p>	<p>(1) R: Tape Reel, B: Tape Box (2) SMA: SMA, Z41: DO-41 (3) L: Lead Free, G: Halogen Free and Lead Free</p>
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■ MARKING

SMA	DO-41

■ 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	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}	$I_F=1.0\text{A}$			0.45	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.

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