



## SB5100

DIODE

### 5.0A SCHOTTKY BARRIER RECTIFIER

#### DESCRIPTION

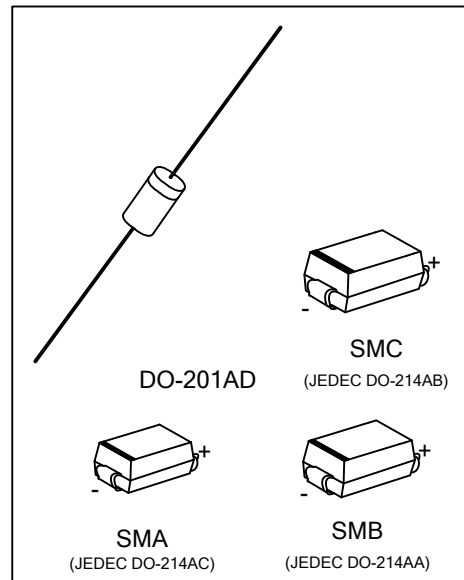
The UTC **SB5100** is a 5.0A schottky barrier rectifier, it uses UTC's advanced technology to provide customers with high surge capability, high current capability and high efficiency, etc.

The UTC **SB5100** is suitable for use in free wheeling, high frequency inverters, low voltage and polarity protection applications.

#### FEATURES

- \* High current capability
- \* High surge capability
- \* Low power loss
- \* High efficiency

#### SYMBOL



#### ORDERING INFORMATION

Ordering Number		Package	Pin Assignment		Packing
Lead Free	Halogen Free		1	2	
SB5100L-SMA-R	SB5100G-SMA-R	SMA	K	A	Tape Reel
SB5100L-SMB-R	SB5100G-SMB-R	SMB	K	A	Tape Reel
SB5100L-SMC-R	SB5100G-SMC-R	SMC	K	A	Tape Reel
SB5100L-Z21D-B	SB5100G-Z21D-B	DO-201AD	K	A	Tape Box

Note: Pin Assignment: A: Anode K: Cathode

<p>SB5100L-SMA-R</p> <p>(1) Packing Type (2) Package Type (3) Green Package</p>	<p>(1) R: Tape Reel, B: Tape Box (2) SMA: SMA, SMB: SMB, SMC: SMC, Z21D: DO-201AD (3) G: Halogen Free and Lead Free</p>
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#### MARKING

SMA / SMB / SMC	DO-201AD
<p>Cathode Band for uni-directional Only</p> <p>UTC □□□ → Date Code</p> <p>SB5100 □ → L: Lead Free G: Halogen Free</p>	<p>Cathode Band for uni-directional Only</p> <p>SB5100 □ → L: Lead Free G: Halogen Free □□□ → Date Code</p>

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

Single phase, half wave, 60Hz, resistive or inductive load.  
For capacitance load, derate current by 20%.

PARAMETER	SYMBOL	RATINGS	UNIT
DC Blocking Voltage	V <sub>R</sub>	100	V
Working Peak Reverse Voltage	V <sub>RWM</sub>	100	V
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	100	V
RMS Reverse Voltage	V <sub>R(RMS)</sub>	70	V
Average Rectified Output Current	I <sub>O</sub>	5.0	A
T <sub>L</sub> =80°C			
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	I <sub>FSM</sub>	150	A
Operating 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
Junction to Ambient	θ <sub>JA</sub>	75	°C/W
		40	
	SMA/SMB/SMC		
	DO-201AD		

■ ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C unless otherwise specified.)

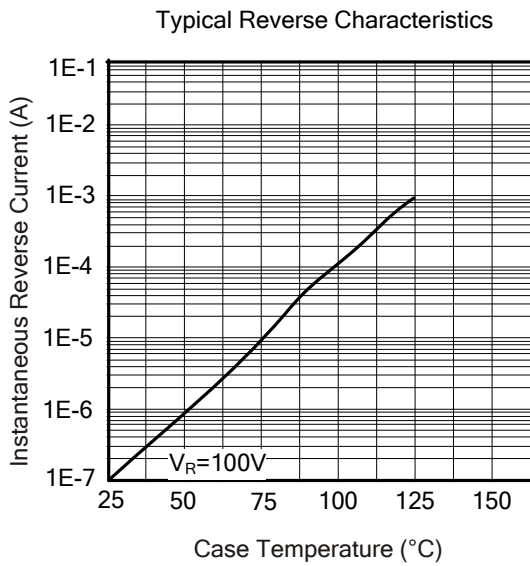
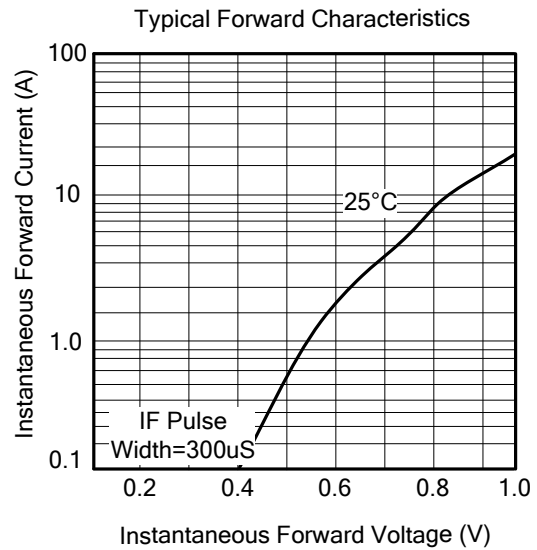
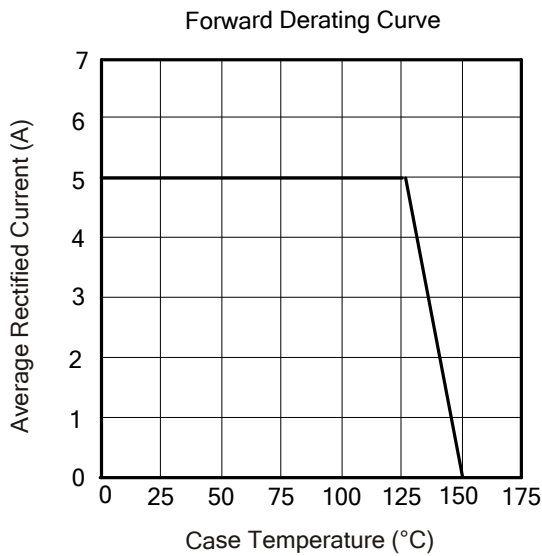
Single phase, half wave, 60Hz, resistive or inductive load.  
For capacitance load, derate current by 20%.

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage (Note 1)	V <sub>(BR)R</sub>	I <sub>R</sub> =0.50mA	100			V
Forward Voltage Drop	V <sub>FM</sub>	I <sub>F</sub> =5A, T <sub>J</sub> =25°C			0.80	V
		I <sub>F</sub> =5A, T <sub>J</sub> =125°C			0.75	V
Leakage Current (Note 1)	I <sub>RM</sub>	V <sub>R</sub> =100V, T <sub>A</sub> =25°C			500	µA
		V <sub>R</sub> =100V, T <sub>A</sub> =125°C			50	mA

Notes: 1. Short duration pulse test used to minimize self-heating effect.

2. Thermal resistance junction to case mounted on heatsink.

■ TYPICAL CHARACTERISTICS



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