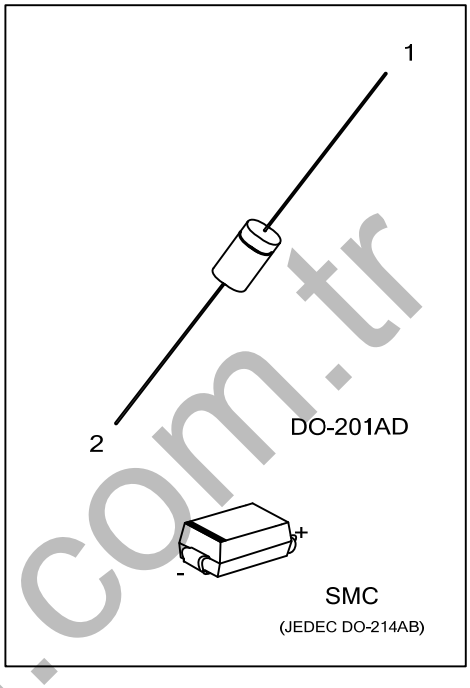
SB5100

DIODE

5.0A SCHOTTKY BARRIER RECTIFIER



■ DESCRIPTION

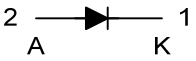
The UTC **SB5100** is a 5.0A schottky barrier rectifier, it uses UTC's advanced technology to provide customers with high surge capability, high current capability and high efficiency, etc.

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



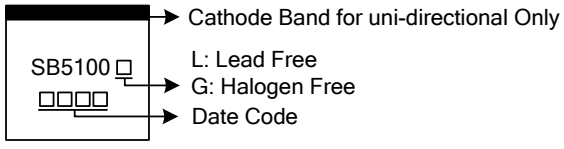
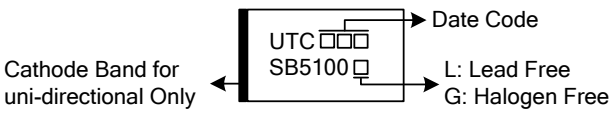
■ ORDERING INFORMATION

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

Note: Pin Assignment: A: Anode K: Cathode

SB5100L-SMC-R (1)Packing Type (2)Package Type (3)Lead Free	(1) R: Tape Reel (2) SMC: SMC, Z21D: DO-201AD (3) L: Lead Free, G: Halogen Free

■ MARKING

DO-201AD	SMC
	

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■ ABSOLUTE MAXIMUM RATINGS (T_A=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_R	100	V
Working Peak Reverse Voltage		V_{RWM}	100	V
Peak Repetitive Reverse Voltage		V_{RRM}	100	V
RMS Reverse Voltage		$V_{R(RMS)}$	70	V
Average Rectified Output Current	T_L=80°C	I_O	5.0	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)		I_{FSM}	150	A
Operating Junction Temperature		T_J	-65~+150	°C
Storage Temperature		T_{STG}	-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	SMC	θ_{JA}	75	°C/W
	DO-201AD		50	

■ ELECTRICAL CHARACTERISTICS (T_A =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)	$V_{(BR)R}$	I_R=0.50mA	100			V
Forward Voltage Drop	V_{FM}	I_F=5A, T_J=25°C			0.80	V
		I_F=5A, T_J=125°C			0.75	V
Leakage Current (Note 1)	I_{RM}	V_R=100V, T_A=25°C			500	μA
		V_R=100V, T_A=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.

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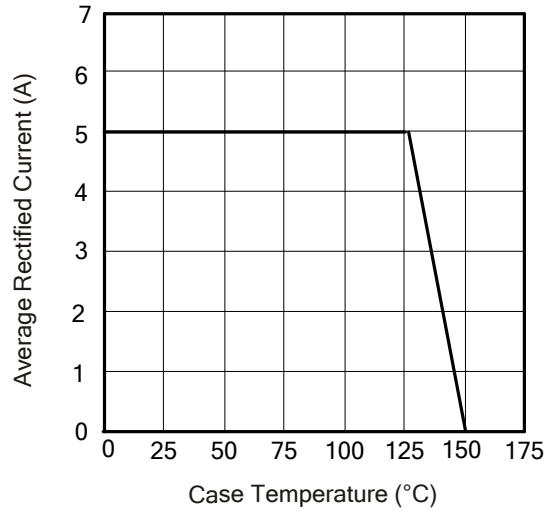
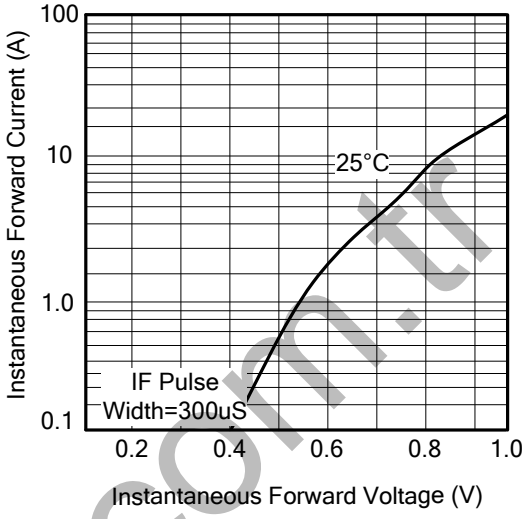
■ TYPICAL CHARACTERISTICS

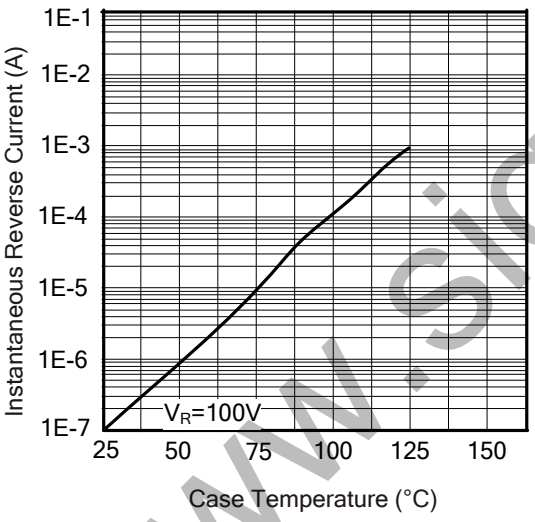
Forward Derating Curve



Typical Forward Characteristics



Typical Reverse Characteristics



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