



SB540

Preliminary

DIODE

5.0A SCHOTTKY BARRIER RECTIFIER

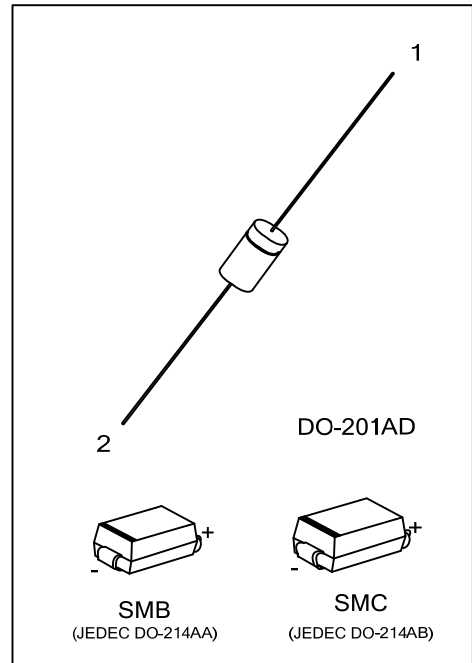
■ DESCRIPTION

The UTC **SB540** is 5.0A schottky barrier rectifier. it uses UTC's advanced technology to provide customers with high current capability and low forward voltage drop, etc.

The UTC **SB540** is suitable for free wheeling, low voltage and polarity protection applications, etc.

■ FEATURES

- * Metal to silicon rectifier, majority carrier conduction.
- * For use in low voltage, high frequency inverters free wheeling, and polarity protection applications.
- * Low power loss, high efficiency.
- * High current capability, low V_F .
- * High surge capacity.



■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment		Packing
Lead Free	Halogen Free		1	2	
SB540L-SMB-R	SB540G-SMB-R	SMB	K	A	Tape Reel
SB540L-SMC-R	SB540G-SMC-R	SMC	K	A	Tape Reel
SB540L-Z21D-R	SB540G-Z21D-R	DO-201AD	K	A	Tape Reel

Note: Pin Assignment: A: Anode, K: Cathode

<p>SB540L-SMB-R</p> <p>(1) Packing Type (2) Package Type (3) Lead Free</p>	<p>(1) R: Tape Reel (2) SMB: SMB, SMC: SMC, Z21D: DO-201AD (3) L: Lead Free, G: Halogen Free</p>
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■ MARKING INFORMATION

PACKAGE	MARKING
SMB SMC	<p>UTC SB540 □ □ □ □ → Date Code Cathode Band for uni-directional Only ← L: Lead Free G: Halogen Free</p>
DO-201AD	<p>UTC SB540 □ □ □ □ → Date Code Cathode Band for uni-directional Only L: Lead Free G: Halogen Free</p>

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

PARAMETER	SYMBOL	RATINGS	UNIT
DC Blocking Voltage	V_R	40	V
Peak Repetitive Reverse Voltage	V_{RRM}	40	V
Working Peak Reverse Voltage	V_{RWM}	40	V
RMS Reverse Voltage	$V_{R(RMS)}$	28	V
Average Rectified Output Current	I_O	5.0	A
Non-repetitive Peak Forward Surge Current 8.3 ms Single Half-Sine-Wave	I_{FSM}	150	A
Power Dissipation	P_D	SMB/SMC	3.7
		DO-201AD	5.0
Junction Temperature	T_J	-65 ~ +150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-65 ~ +150	$^\circ\text{C}$

Notes: 1. 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.

2. These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

■ THERMAL DATA

PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Ambient (Note 3)	θ_{JA}	SMB/SMC	75
		DO-201AD	40

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage (Note 1)	$V_{(BR)R}$	$I_R=0.50\text{mA}$	40			V
Forward Voltage Drop	V_{FM}	$I_F=5.0\text{A}, T_J=25^\circ\text{C}$			0.55	V
		$I_F=5.0\text{A}, T_J=100^\circ\text{C}$			0.50	V
Leakage Current (Note 1)	I_{RM}	$V_R=40\text{V}, T_J=25^\circ\text{C}$			0.50	mA
		$V_R=40\text{V}, T_J=100^\circ\text{C}$			50	mA

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

2. Thermal resistance junction to case mounted on heatsink.

3. 1 inch square pad size (1x0.5 inch for each lead) on FR4 board.

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