



BAT165WS

Preliminary

DIODE

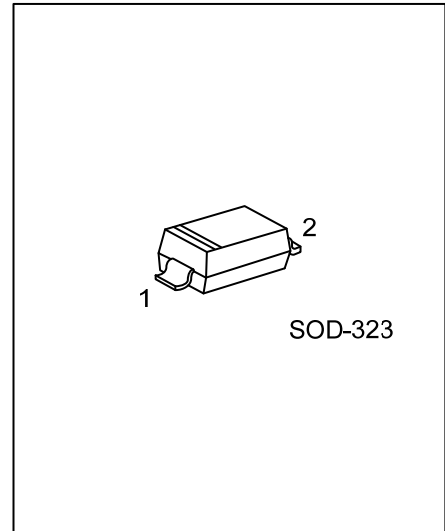
SCHOTTKY BARRIER DIODES

DESCRIPTION

Planar Schottky barrier diodes are encapsulated in the SOD-323 small plastic SMD package. Single diodes and dual diodes with different pin configuration are available.

FEATURES

- * Forward current: 750 mA
- * Reverse voltage: 40 V
- * For low-loss, fast-recovery, meter protection, bias isolation and clamping applications



SYMBOL



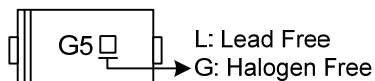
ORDERING INFORMATION

Ordering Number		Package	Pin Assignment		Packing
Lead Free	Halogen Free		1	2	
BAT165WSL-CB2-R	BAT165WSG-CB2-R	SOD-323	K	A	Tape Reel

Note: Pin Assignment: K: Cathode A: Anode

<p>BAT165WSG-CB2-R</p> <p>(1) Packing Type (2) Package Type (3) Green Package</p>	<p>(1) R: Tape Reel (2) CB2: SOD-323 (3) G: Halogen Free and Lead Free</p>
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MARKING



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

PARAMETER	SYMBOL	RATINGS	UNIT
PER DIODE			
Continuous Reverse Voltage	V_R	40	V
Continuous Forward Current	I_F	750	mA
Repetitive Peak Forward Current (50/60Hz, sinus)	I_{FRM}	500	mA
Non-repetitive Peak Forward Current ($t_P < 10\text{ms}$)	I_{FSM}	2.5	A
Junction Temperature	T_J	+125	$^\circ\text{C}$
Storage Temperature	T_{STG}	-60 ~ +150	$^\circ\text{C}$
PER DEVICE			
Power Dissipation ($T_A = 25^\circ\text{C}$)	P_D	550	mW

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_{JA}	230	$^\circ\text{C/W}$
Junction to Soldering Point (Note 2)	θ_{JS}	95	$^\circ\text{C/W}$

Notes: 1. Device mounted on an FR4 PCB, single-sided copper, tin-plated, mounting pad for cathode 1 cm².
2. Soldering point of the cathode tab.

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Forward Voltage	V_F	$I_F = 10\text{mA}$	0.23		0.4	V
		$I_F = 100\text{mA}$	0.32		0.47	V
		$I_F = 250\text{mA}$	0.35		0.54	V
		$I_F = 750\text{mA}$	0.44		0.74	V
Reverse Current (Note)	I_R	$V_R = 30\text{V}$			12	μA
		$V_R = 40\text{V}$			50	μA
		$V_R = 40\text{V}, T_A = 60^\circ\text{C}$			900	μA
Diode Capacitance	C_D	$V_R = 10\text{V}, f = 1\text{ MHz}$			12	pF

Note: Pulsed test: $t_P = 300\text{ }\mu\text{s}$; $D = 0.01$.

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