

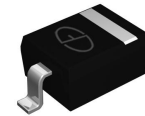
## SOD- 323 Plastic-Encapsulate Schottky Barrier Diode

### Features

- High Current Capability
- Low Forward Voltage Drop

### Mechanical Data

- SOD-323 Small Outline Plastic Package
- Polarity: Color band denotes cathode end
- Epoxy UL: 94V-0
- Mounting Position: Any



**Marking: SOD-323**  
 BAT42WS: S7  
 BAT43WS: S8

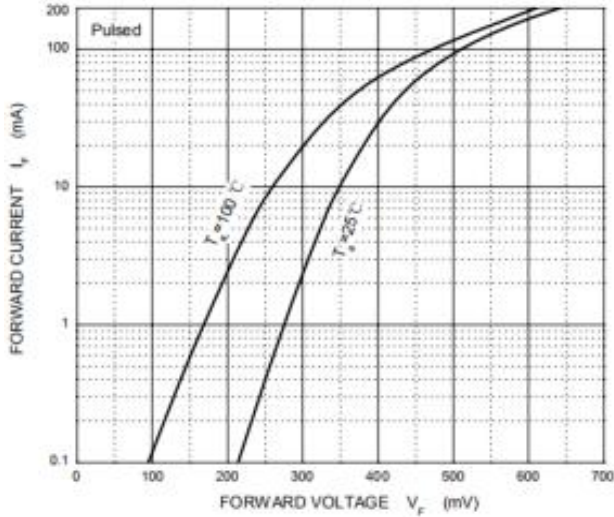
Maximum Ratings & Thermal Characteristics (T <sub>A</sub> =25°C unless otherwise noted)			
Parameters	Symbol	Value	Unit
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	30	V
Maximum RMS voltage	V <sub>RMS</sub>	21	V
Maximum DC blocking voltage	V <sub>DC</sub>	30	V
Non-repetitive Peak Forward Current	I <sub>FM</sub>	200	mA
Repetitive Peak Forward Current @t<1.0s	I <sub>FRM</sub>	500	mA
Peak forward surge current 8.3 ms single half sine-wave	I <sub>FSM</sub>	4.0	A
Power Dissipation	P <sub>D</sub>	200	mW
Typical thermal resistance	R <sub>θJA</sub>	500	°C/W
Storage temperature range	T <sub>STG</sub>	-55-+150	°C
Junction temperature	T <sub>J</sub>	125	°C

Electrical Characteristics (T <sub>A</sub> =25°C unless otherwise noted)							
Parameter	Symbols	Test Condition	Limits			Unit	
			Min	Typ	Max		
Maximum reverse breakdown voltage	V <sub>R</sub>	I <sub>R</sub> =10uA	30			V	
Maximum reverse current	I <sub>R</sub>	V <sub>R</sub> =25V			0.5	uA	
Maximum forward voltage	BAT42WS BAT43WS BAT42WS BAT43WS	V <sub>F</sub>	IF=200mA	0.26	1.0	V	
					IF=10mA		0.40
					IF=50mA		0.65
					IF=2.0mA		0.33
					IF=15mA		0.45
Type junction capacitance	C <sub>j</sub>	V <sub>R</sub> =1.0V, f=1MHZ			10	pF	
Reverse recovery time	T <sub>RR</sub>	IF=IR=10mA I <sub>rr</sub> =0.1xI <sub>R</sub> ,RL=100Ω			5	nS	

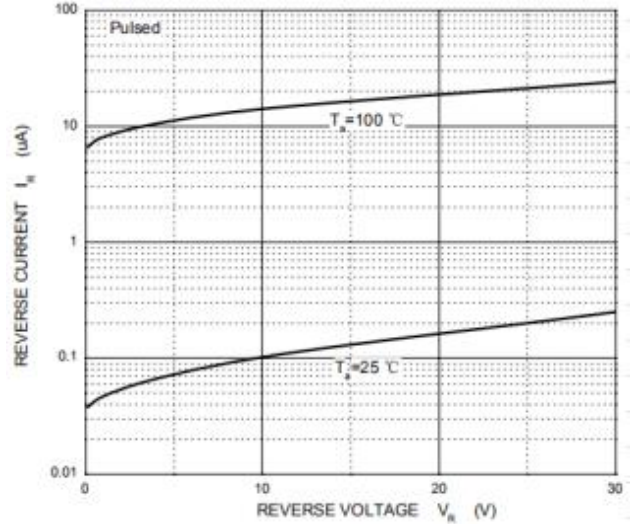
## Ratings and Characteristics Curves

( $T_A = 25^\circ\text{C}$  unless otherwise noted)

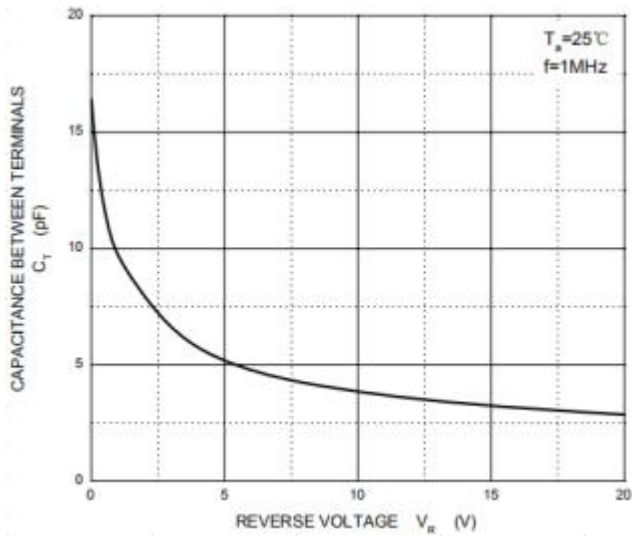
### Forward Characteristics



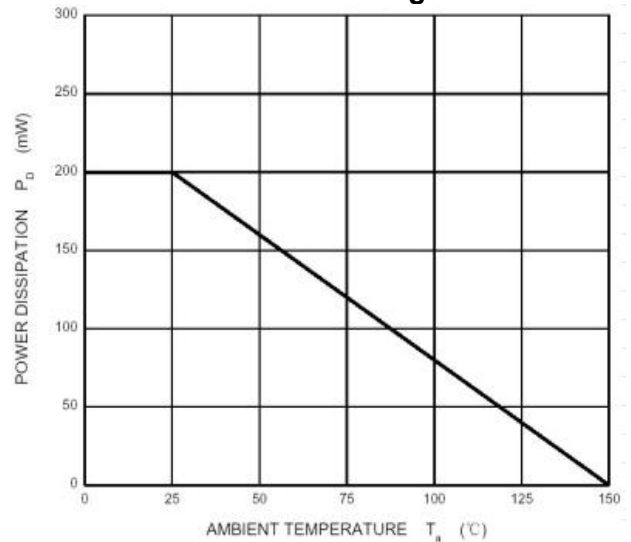
### Reverse Characteristics



### Capacitance Characteristics

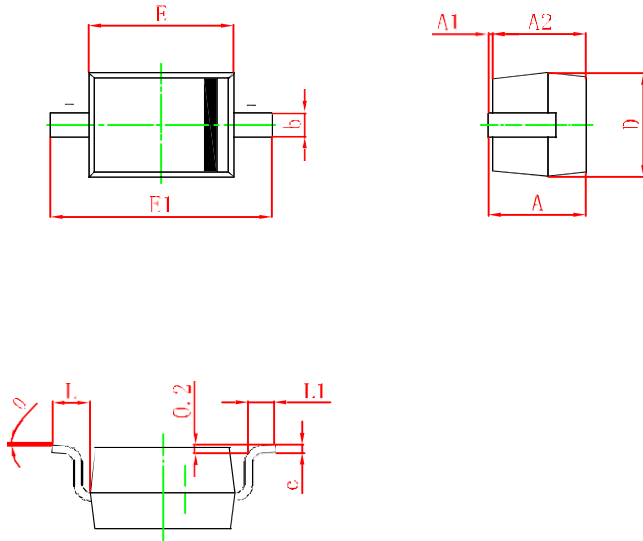


### Power Derating Curve



## Package Outline Dimensions

millimeters



Symbol	Min	Max
A		1.000
A1	0.000	0.100
A2	0.800	0.900
b	0.250	0.350
c	0.080	0.150
D	1.200	1.400
E	1.600	1.800
E1	2.500	2.700
L	0.475REF	
L1	0.250	0.400
$\theta$	0°	8°

## Revision History

Document Version	Date of release	Description of changes
Rev.A	2014.09.23	First issue

## **Disclaimers**

These materials are intended as a reference to assist our customers in the selection of the Suzhou Good-Ark product best suited to the customer's application; they do not convey any license under any intellectual property rights, or any other rights, belonging to Suzhou Good-Ark Electronics Co., Ltd. or a third party.

Suzhou Good-Ark Electronics Co., Ltd. assumes no responsibility for any damage, or infringement of any third-party's rights, originating in the use of any product data, diagrams, charts, programs, algorithms, or circuit application examples contained in these materials.

All information contained in these materials, including product data, diagrams, charts, programs and algorithms represents information on products at the time of publication of these materials, and are subject to change by Suzhou Good-Ark Electronics Co., Ltd. without notice due to product improvements or other reasons. It is therefore recommended that customers contact Suzhou Good-Ark Electronics Co., Ltd. or an authorized Suzhou Good-Ark Electronics Co., Ltd. for the latest product information before purchasing a product listed herein. The information described here may contain technical inaccuracies or typographical errors. Suzhou Good-Ark Electronics Co., Ltd. assumes no responsibility for any damage, liability, or other loss arising from these inaccuracies or errors. Please also pay attention to information published by Suzhou Good-Ark Electronics Co., Ltd. by various means, including our website home page. (<http://www.goodark.com>)

When using any or all of the information contained in these materials, including product data, diagrams, charts, programs, and algorithms, Please be sure to evaluate all information as a total system before making a final decision on the applicability of the information and products. Suzhou Good-Ark Electronics Co., Ltd. assumes no responsibility for any damage, liability or other loss resulting from the information contained herein.

The prior written approval of Suzhou Good-Ark Electronics Co., Ltd. is necessary to reprint or reproduce in whole or in part these materials.

Please contact Suzhou Good-Ark Electronics Co., Ltd. or an authorized distributor for further details on these materials or the products contained herein.