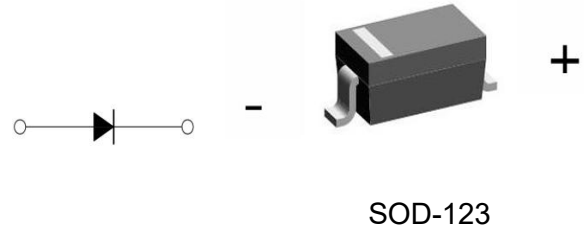


### Schottky Barrier Diode

Parameter	Value	Unit
$V_R$	30	V
$I_F$	200	mA



### Features

- Low Forward Voltage Drop
- Fast Switching Time
- Surface Mount Package Ideally Suited for Automatic Insertion

### Absolute Maximum Ratings (Ta=25°C unless otherwise noted)

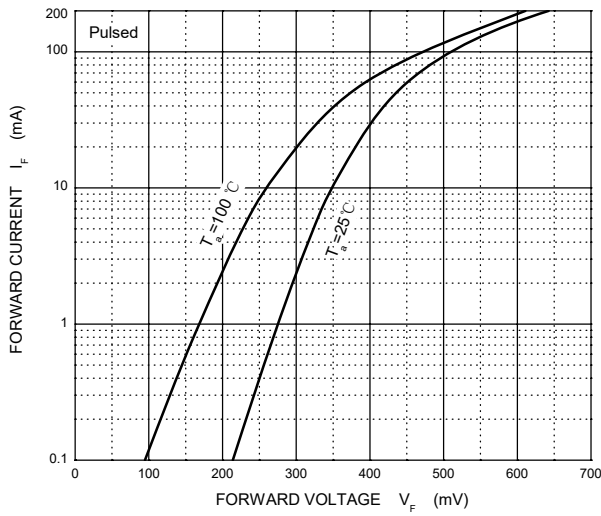
Parameter	Symbol	Value	Unit
Peak Repetitive Peak Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	30	V
RMS Reverse Voltage	$V_{R(RMS)}$	21	V
Forward Continuous Current	$I_{FM}$	200	mA
Repetitive Peak Forward Current @t<1.0s	$I_{FRM}$	500	mA
Non-repetitive Peak Forward Surge Current @t=8.3ms	$I_{FSM}$	4.0	A
Power Dissipation	$P_D$	500	mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	200	°C/W
Operating Junction Temperature Range	$T_J$	-40 ~ +125	°C
Storage Temperature Range	$T_{STG}$	-55 ~ +150	°C

### Electrical Characteristics (Ta=25°C unless otherwise noted)

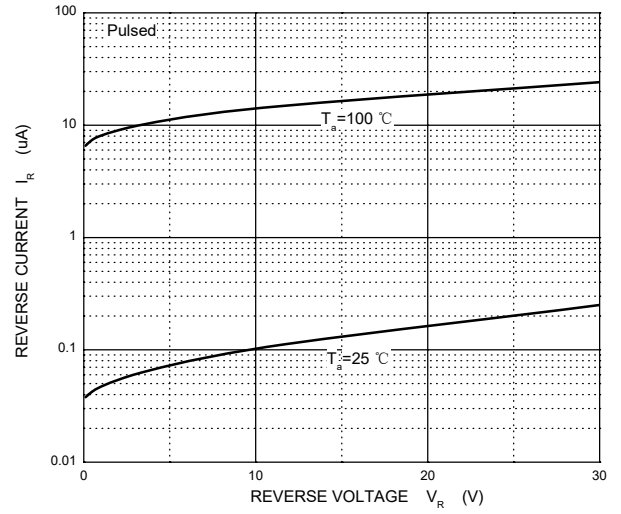
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse voltage	$V_{(BR)}$	$I_R=10\mu A$	30			V
Reverse current	$I_R$	$V_R=25V$			0.5	$\mu A$
Forward voltage	All Types	$I_F=200mA$			1.0	V
	BAT42W	$I_F=10mA$			0.4	
	BAT42W	$I_F=50mA$			0.65	
	BAT43W	$I_F=2mA$			0.33	
	BAT43W	$I_F=15mA$			0.45	
Capacitance between terminals	$C_T$	$V_R=1V, f=1MHz$			10	pF
Reverse recovery time	$t_{rr}$	$I_F=I_R=10mA, I_{rr}=0.1 \times I_R, R_L=100\Omega$			5	ns

**Typical Characteristics**

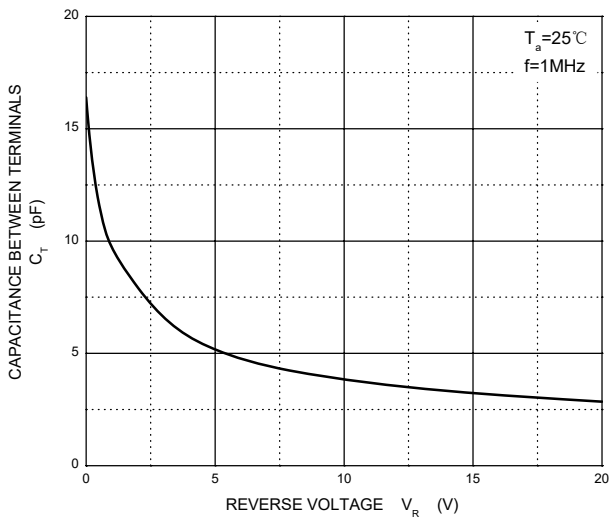
**Fig. 1 Forward Characteristics**



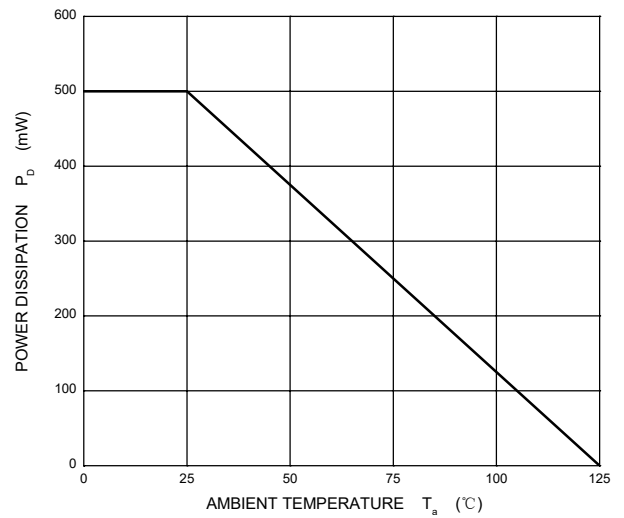
**Fig. 2 Reverse Characteristics**



**Fig. 3 Capacitance Characteristics**

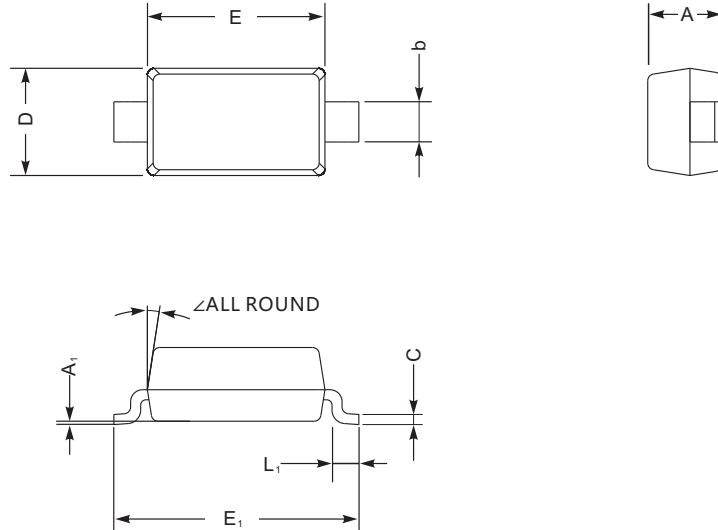


**Fig. 4 Power Derating Curve**



### Package Outlines (Units: mm)

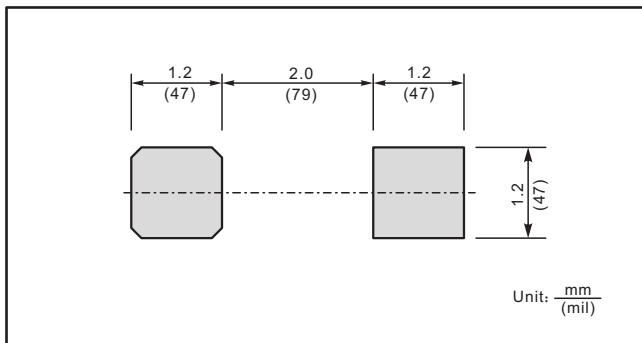
Plastic surface mounted package; 2 leads



SOD-123 mechanical data

UNIT		A	C	D	E	E <sub>1</sub>	L <sub>1</sub>	b	A <sub>1</sub>	∠
mm	max	1.3	0.22	1.8	2.8	3.9	0.45	0.7	0.2	9°
	min	0.9	0.09	1.5	2.5	3.6	0.25	0.5	—	
mil	max	51	8.7	71	110	154	18	28	8	
	min	35	3.5	59	98	142	10	20	—	

### The recommended mounting pad size



### Marking

Type number	Marking code
BAT42W	S7
BAT43W	S8

**\*Important Usage Information and Disclaimer**

The specifications of Zhuhai Hypersemi Co., Ltd. products are not guarantees of product characteristics. They reflect typical performance expected in standard applications, which may vary with specific uses. Users must conduct prior testing for their applications and make necessary adjustments.

Users are responsible for the safety of applications utilizing our products and must implement adequate safety measures to prevent physical injury, fire, or other risks in case of product failure. It is the user's duty to ensure that application designs comply with all applicable laws and standards. Our products must not be used in any applications where a product failure could reasonably result in personal injury, unless specifically authorized in a signed document by Zhuhai Hypersemi Co., Ltd.

No representations or warranties are made regarding the accuracy or completeness of this information, including any claims of non-infringement of third-party intellectual property rights. Zhuhai Hypersemi Co., Ltd. assumes no liability for any applications or uses of its products and does not grant any licenses to its intellectual property rights or those of others. We also make no claims regarding non-infringement of third-party intellectual property rights that may arise from applications.

Due to technical requirements, our products may contain hazardous substances. For details, please contact your nearest sales office. This document replaces all previous information and may be updated. We reserve the right to make changes.