

# MSKSEMI 美森科

SEMICONDUCTOR



ESD



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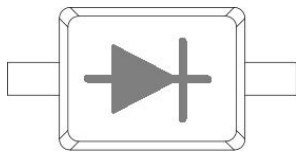


## BAT42WS~BAT43WS

Product specification

## FEATURES

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

## Reference News

PACKAGE OUTLINE	PIN CONFIGURATION	BAT42WS	BAT43WS
 SOD-323		 MARKING:S7	 MARKING:S8

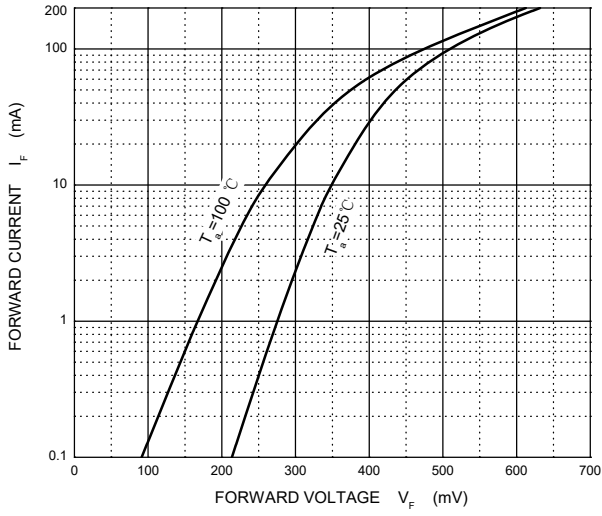
## Maximum Ratings and Electrical Characteristics, Single Diode @Ta=25°C

Parameter	Symbol	Limit	Unit
Peak Repetitive Peak Reverse Voltage	$V_{RRM}$	30	V
Working Peak Reverse Voltage	$V_{RWM}$		
DC Blocking Voltage	$V_R$		
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	$P_D$	200	mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	500	°C/W
Operating Junction Temperature Range	$T_J$	-40 ~ +125	°C
Storage Temperature Range	$T_{STG}$	-55 ~ +150	°C

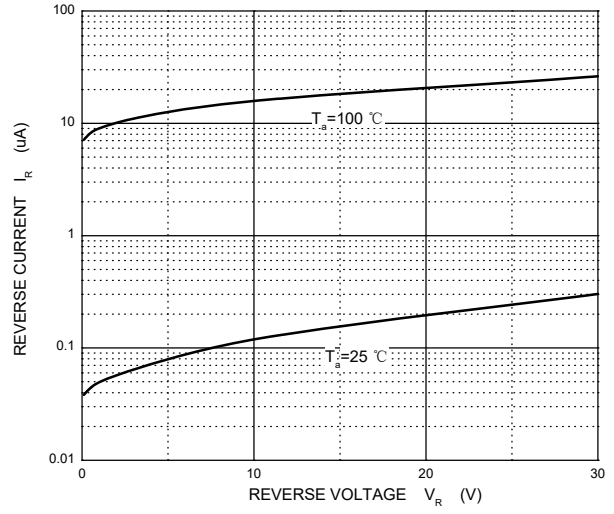
## Electrical Ratings @Ta=25°C

Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Reverse breakdown voltage	$V_{(BR)}$	30			V	$I_R=10\mu A$
Forward voltage	BothTypes	$V_F$		1.0	V	$I_F=200mA$
	BAT42WS	$V_F$		0.4	V	$I_F=10mA$
	BAT42WS	$V_F$		0.65	V	$I_F=50mA$
	BAT43WS		0.26	0.33	V	$I_F=2mA$
	BAT43WS	$V_F$		0.45	V	$I_F=15mA$
Reverse current	$I_R$			0.5	$\mu A$	$V_R=25V$
Capacitance between terminals	$C_T$			10	pF	$V_R=1.0V, f=1.0MHz$
Reverse recovery time	$t_{rr}$			5	ns	$I_F=I_R=10mA$ $I_{rr}=0.1 \times I_R, R_L=100\Omega$

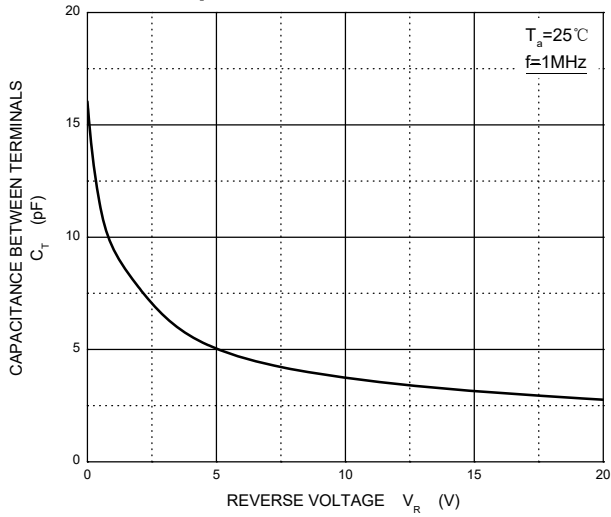
**Forward Characteristics**



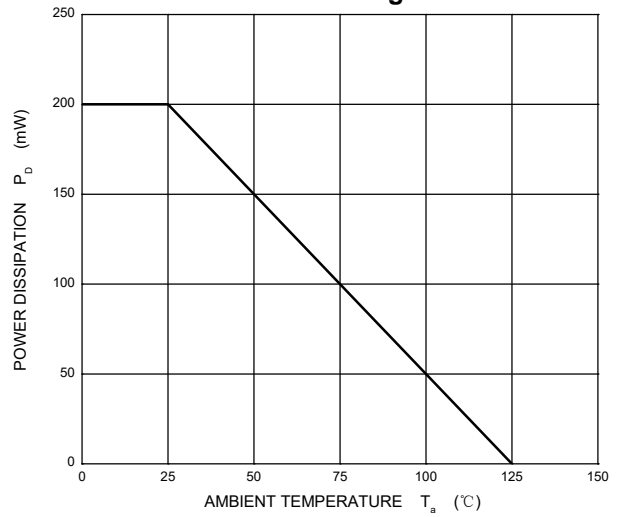
**Reverse Characteristics**



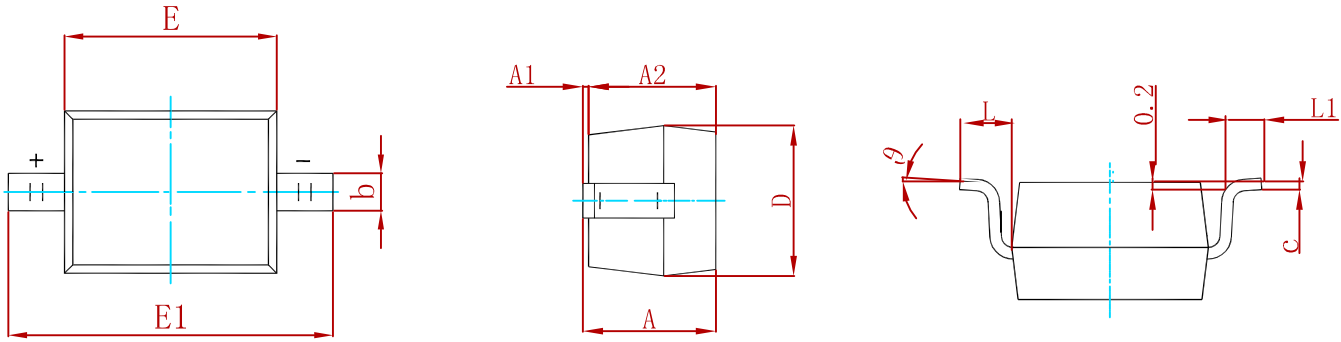
**Capacitance Characteristics**



**Power Derating Curve**

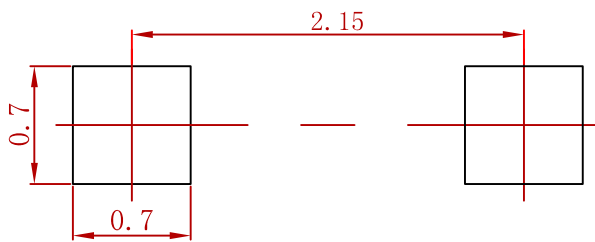


**PACKAGE MECHANICAL DATA**



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A		1.000		0.039
A1	0.000	0.100	0.000	0.004
A2	0.800	0.900	0.031	0.035
b	0.250	0.350	0.010	0.014
c	0.080	0.150	0.003	0.006
D	1.200	1.400	0.047	0.055
E	1.600	1.800	0.063	0.071
E1	2.550	2.750	0.100	0.108
L	0.475 REF.		0.019 REF.	
L1	0.250	0.400	0.010	0.016
θ	0°	8°	0°	8°

**Suggested Pad Layout**



Note:

1. Controlling dimension in millimeters.
2. General tolerance: ±0.05mm.
3. The pad layout is for reference purposes only.

**REEL SPECIFICATION**

P/N	PKG	QTY
BAT42WS~BAT43WS	SOD-323	3000

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