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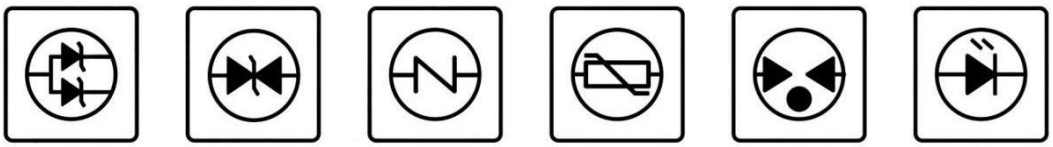
SEMICONDUCTOR



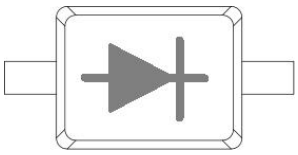
BAT42WS~BAT43WS

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	BAT42WS
			
SOD-323		MARKING:S7	MARKING:S8

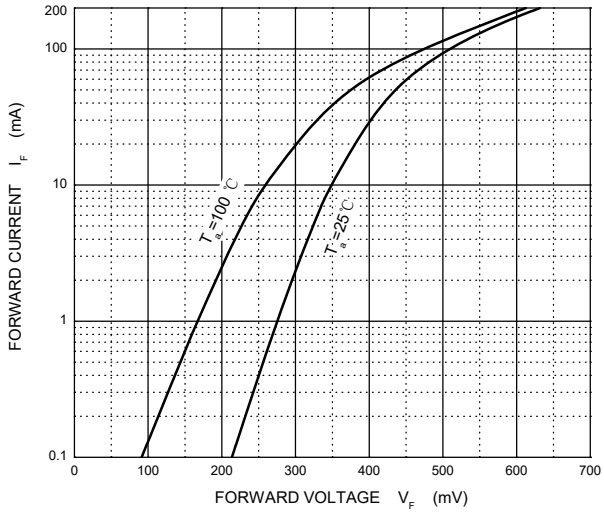
Maximum Ratings and Electrical Characteristics, Single Diode @Ta=25℃

Parameter	Symbol	Limit	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	200	mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	500	℃/W
Operating Junction Temperature Range	T_J	-40 ~ +125	℃
Storage Temperature Range	T_{STG}	-55 ~ +150	℃

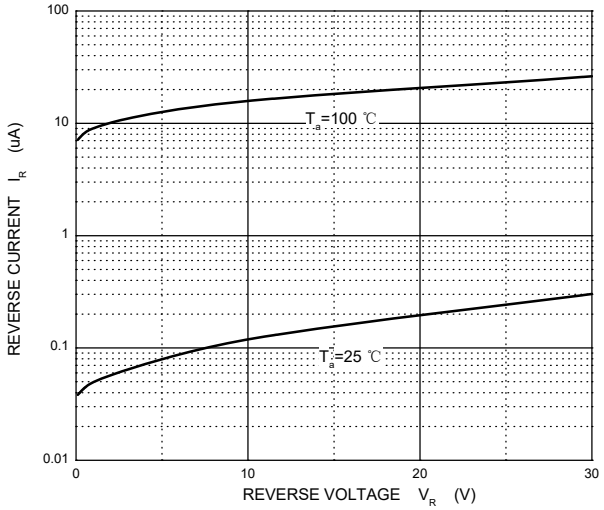
Electrical Ratings @Ta=25℃

Parameter		Symbol	Min	Typ	Max	Unit	Conditions
Reverse breakdown voltage		$V_{(BR)}$	30			V	I_R=10μA
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	μA	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 Irr=0.1XI_R,R_L=100Ω

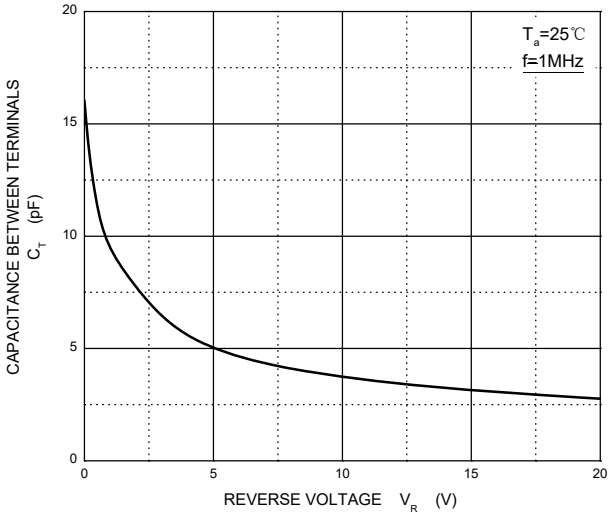
Forward Characteristics



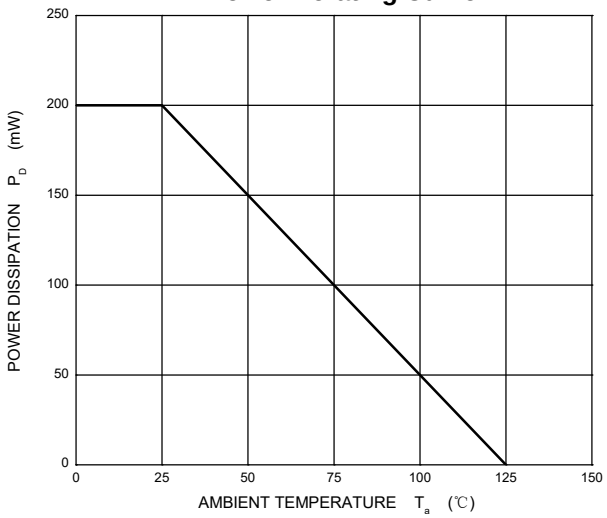
Reverse Characteristics



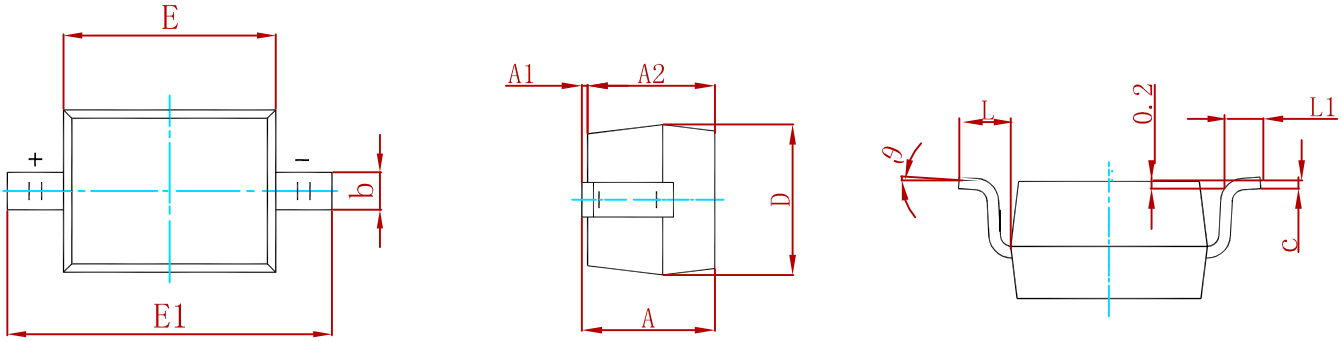
Capacitance Characteristics



Power Derating Curve

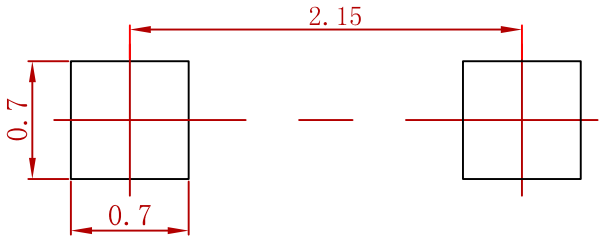


PACKAGE MECHANICAL DATA



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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