BAT42WS THRU BAT43WS

SOD-323 Plastic-Encapsulate Schottky Barrier Diode

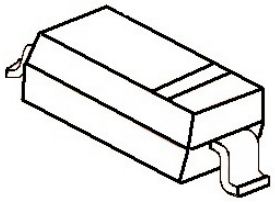
Features

- 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

SOD-323



Marking: BAT42WS: S7
BAT43WS: S8

Maximum Ratings & Thermal Characteristics (Ratings at 25℃ ambient temperature unless otherwise specified.)

Parameters	Symbol	BAT42WS/BAT43WS	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	30	V
Maximum RMS voltage	V_{RMS}	21	V
Maximum DC blocking voltage	V_{DC}	30	V
Maximum average forward rectified current	I_{FM}	200	mA
Repetitive Peak Forward Current @t<1.0s	I_{FRM}	500	mA
Peak forward surge current 8.3 ms single half sine-wave	I_{FSM}	4.0	A
Typical thermal resistance	$R_{\theta JA}$	500	℃/W
Power Dissipation	PD	200	mW
Junction Temperature	Tj	125	℃
Storage temperature range	T_{STG}	-55-+150	℃

Electrical Characteristics (Ratings at 25℃ ambient temperature unless otherwise specified.)

Parameters		Symbol	Test conditions	Min	Typ	Max	Unit
Maximum forward voltage	BAT42WS/BAT43WS	V_F	IF = 200mA			1.0	
	BAT42WS	V_F	IF = 10mA			0.40	V
		V_F	IF = 50mA			0.65	
	BAT43WS	V_F	IF = 2.0mA	0.26		0.33	
		V_F	IF = 15mA			0.45	
Maximum reverse breakdown voltage		VR	IR=10uA	30			V
Maximum reverse current		I_R	VR=25V			0.5	uA
Type junction capacitance		Cj	VR = 1.0V, f = 1MHz			10	pF
Reverse recovery time		Trr	IF=IR=10mA Irr=0.1xIR,RL=100Ω			5	nS

Typical Characteristics

Fig.1 Forward Characteristics

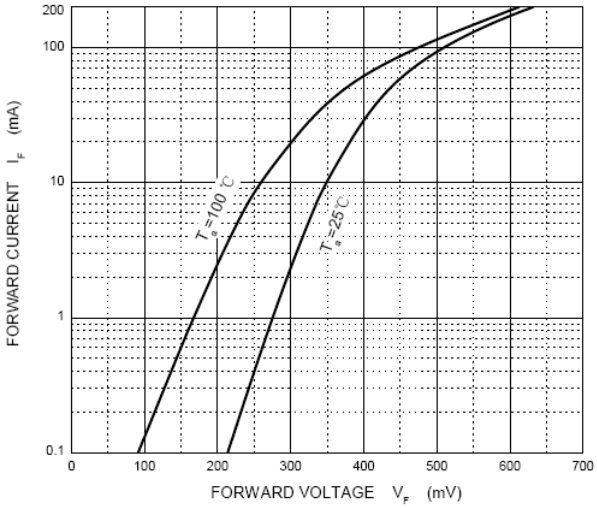


Fig.2 Reverse Characteristics

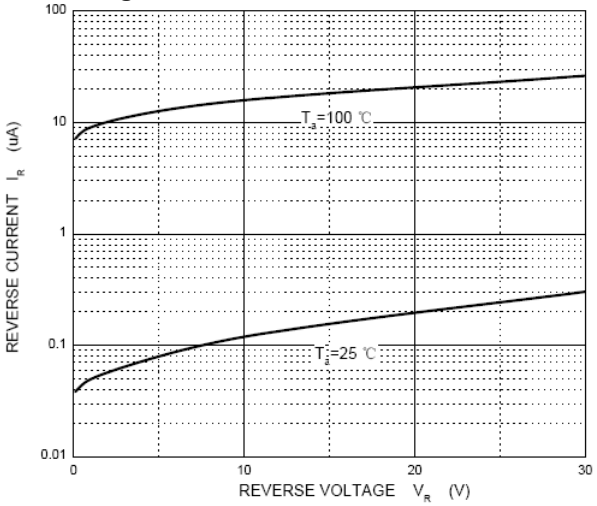


Fig.3 Capacitance Characteristics

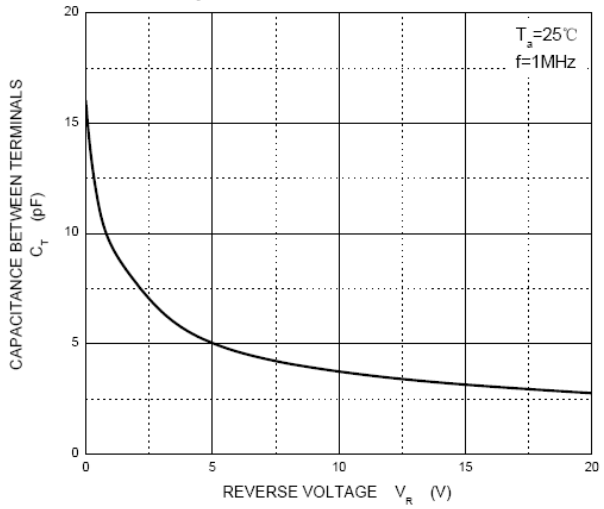
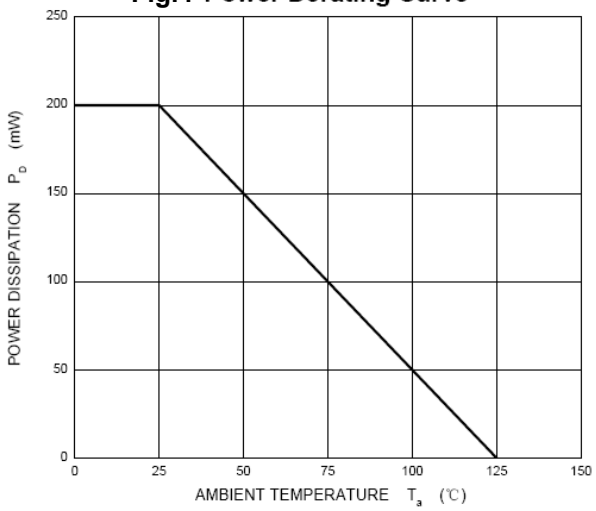
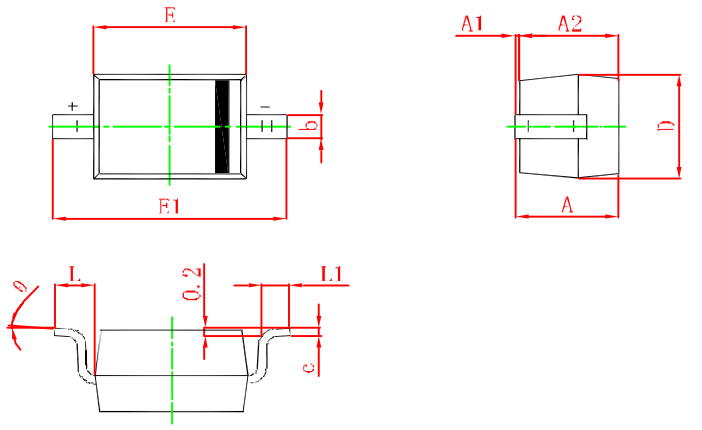


Fig.4 Power Derating Curve



SOD-S23 PACKAGE OUTLINE Plastic surface mounted package

SOD-323



Symbol	Min.(mm)	Max.(mm)
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
θ	0°	8°

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