

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°C ambient temperature unless otherwise specified.)

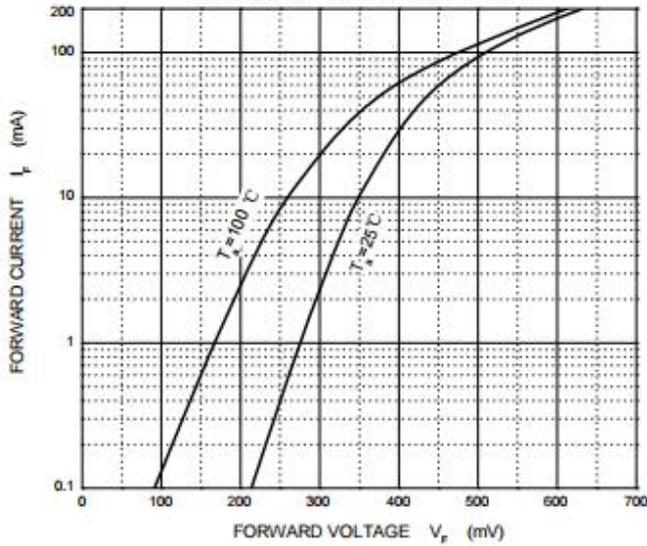
Parameters	Symbol	BAT42WS/BAT43WS	Unit
Maximum repetitive peak reverse voltage	VRRM	30	V
Maximum RMS voltage	VRMS	21	V
Maximum DC blocking voltage	VDC	30	V
Maximum average forward rectified current	IFM	200	mA
Repetitive Peak Forward Current @t<1.0s	IFRM	500	mA
Peak forward surge current 8.3 ms single half sine-wave	IFSM	4.0	A
Typical thermal resistance	RθJA	500	°C/W
Power Dissipation	PD	200	mW
Junction Temperature	Tj	125	°C
Storage temperature range	TSTG	-55-+150	°C

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

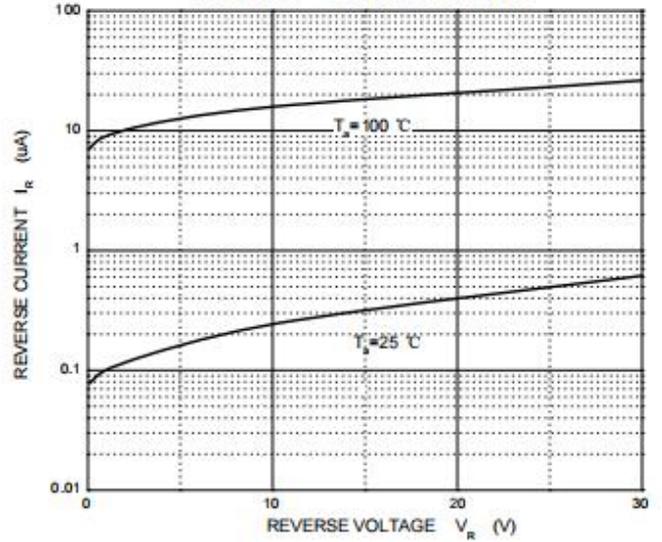
Parameters	Symbol	Test conditions	Min	Typ	Max	Unit
Maximum forward voltage	BAT42WS/BAT43WS	VF	IF = 200mA		1.0	V
	BAT42WS	VF	IF = 10mA		0.40	
		VF	IF = 50mA		0.65	
	BAT43WS	VF	IF = 2.0mA	0.26		
VF		IF = 15mA			0.45	
Maximum reverse breakdown voltage	VR	IR=10uA	30			V
Maximum reverse current	IR	VR=25V			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=100 Ω			5	nS

RATING AND CHARACTERISTICS CURVES (BAT42WS, BAT43WS)

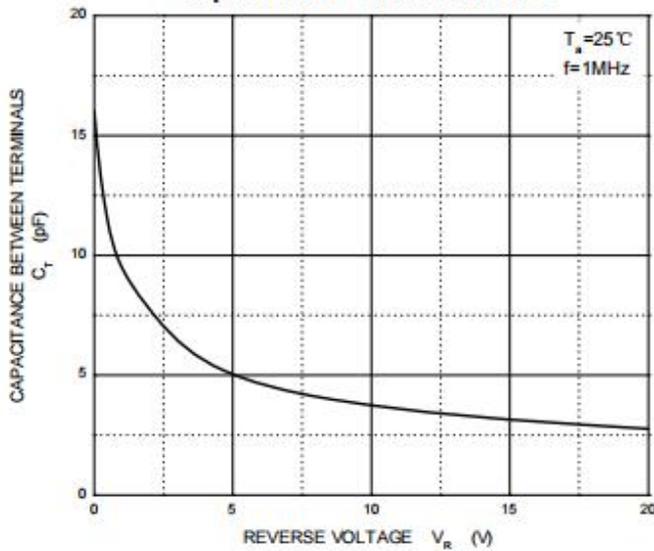
Forward Characteristics



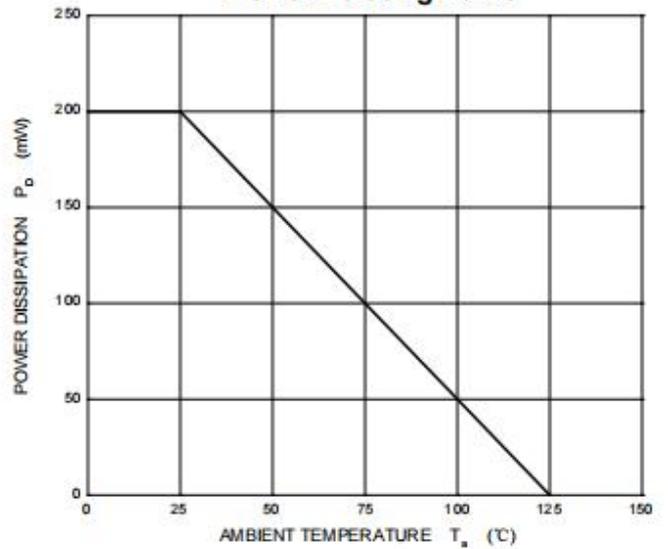
Reverse Characteristics



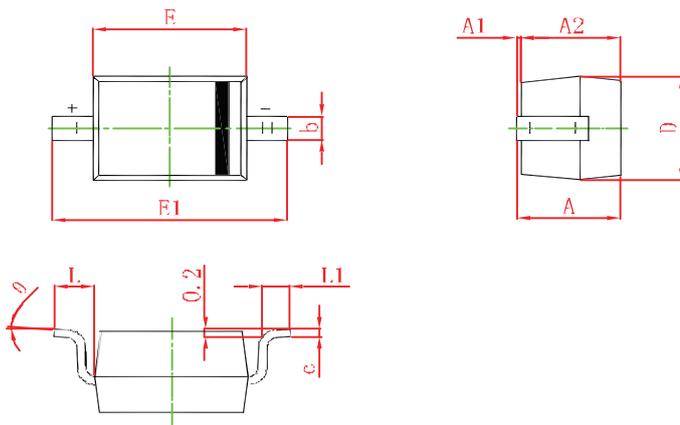
Capacitance Characteristics



Power Derating Curve



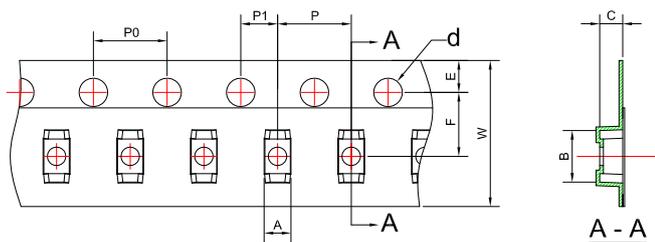
SOD-323 PACKAGE OUTLINE



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°

SOD-323 Tape and Reel

SOD-323 Embossed Carrier Tape



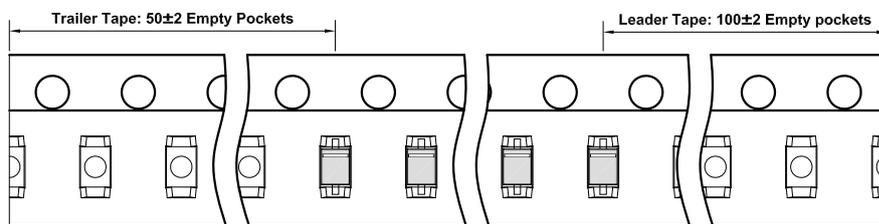
Packaging Description:

SOD-323 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. The reels are blue in color and made of recyclable plastic.

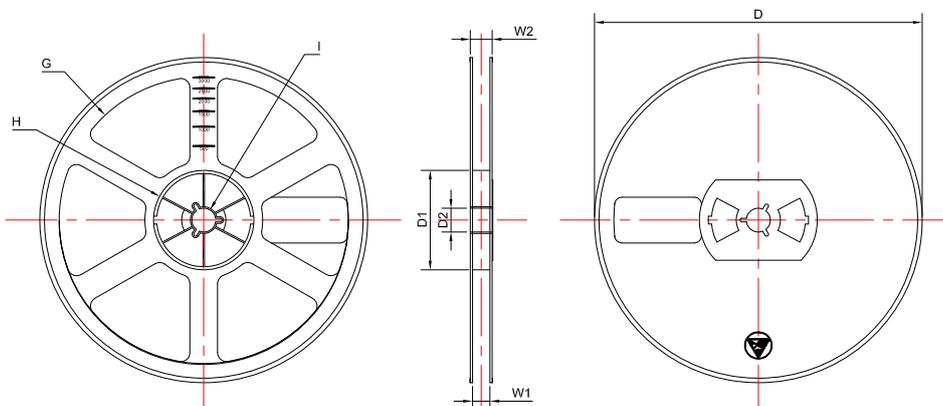
Dimensions are in millimeter

Pkg Type	A	B	C	d	E	F	P0	P	P1	W
SOD-323	1.46	2.90	1.25	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00
(Tolerance)	±0.05	±0.05	±0.05	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	+0.3/-0.1

SOD-323 Tape Leader and Trailer



SOD-323 Reel



Unit: mm

Reel Option	D	D1	D2	G	H	I	W1	W2
7" Dia	Ø178.00	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30
Tolerance	±2	±1	±1	±1	±1	±1	±1	±1

Packaging Quantity

Reel	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)
3,000	7 inch	45,000	210*208*203	180,000	440*440*230

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