

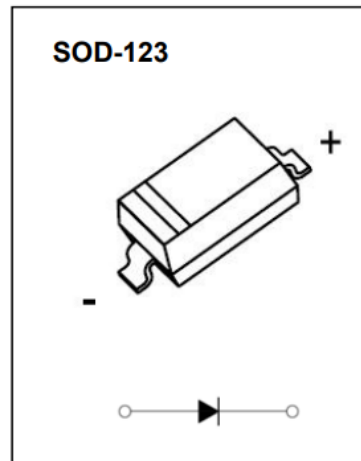


AD-B5817W/18W/19W Plastic-Encapsulated Diode

AD-B5817W/18W/19W Schottky barrier diode

FEATURES

- High frequency inverters
- Low voltage
- Free wheeling
- Polarity protection application
- AEC-Q101 qualified



MARKING

AD-B5817W:SJ	AD-B5818W:SK	AD-B5819W:SL

$\bar{S}J$ / $\bar{S}J$ / $\bar{S}L$ = Device code

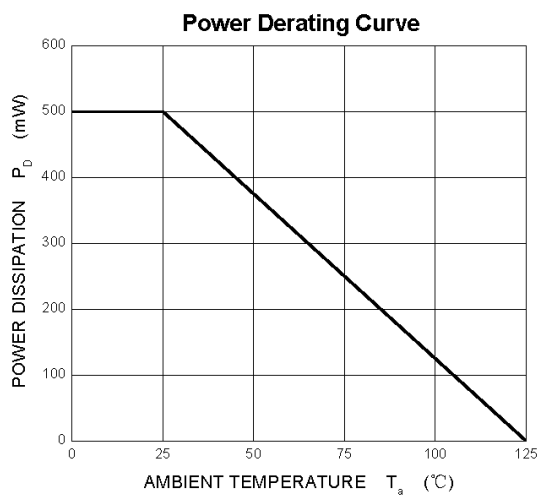
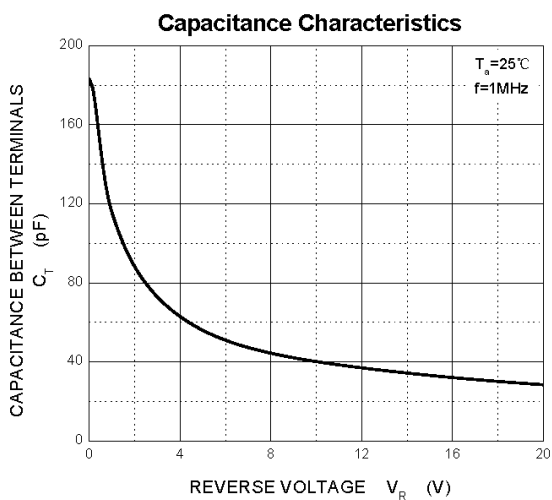
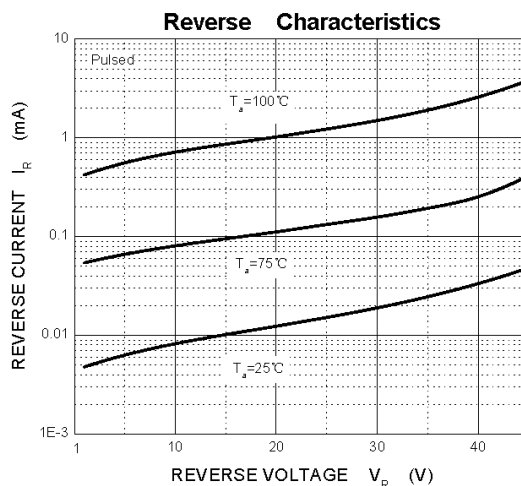
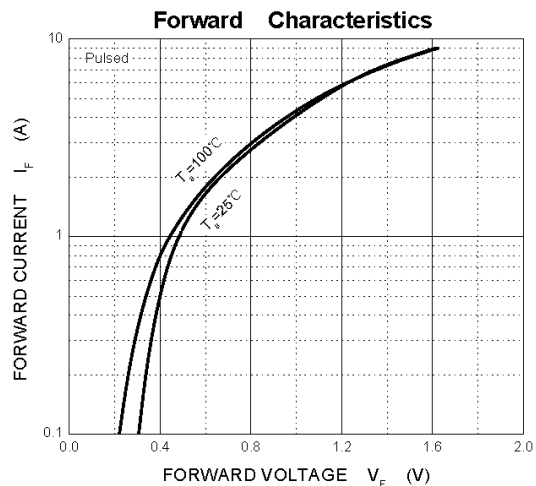
MAXIMUM RATINGS ($T_j = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	AD-B5817W	AD-B5818W	AD-B5819W	Unit
DC blocking voltage	V_R	20	30	40	V
Non-Repetitive Peak Reverse Voltage	V_{RM}				
Non-Repetitive Peak Revers	V_{RRM}				
Working Peak Reverse Voltage	V_{RWM}				
RMS reverse voltage	$V_{R(RMS)}$	14	21	28	V
Forward current	I_O	1			A
Non-repetitive peak forward surge current @ $t = 8.3\text{ms}$	I_{FSM}	9			A
Repetitive peak forward current	I_{FRM}	1.5			A
Power dissipation	P_D	500			mW
Thermal resistance from junction to ambient	$R_{\theta JA}$	200			$^\circ\text{C}/\text{W}$
Operating junction temperature range	T_j	-40 ~ 125			$^\circ\text{C}$
Storage temperature range	T_{stg}	-55 ~ 150			$^\circ\text{C}$

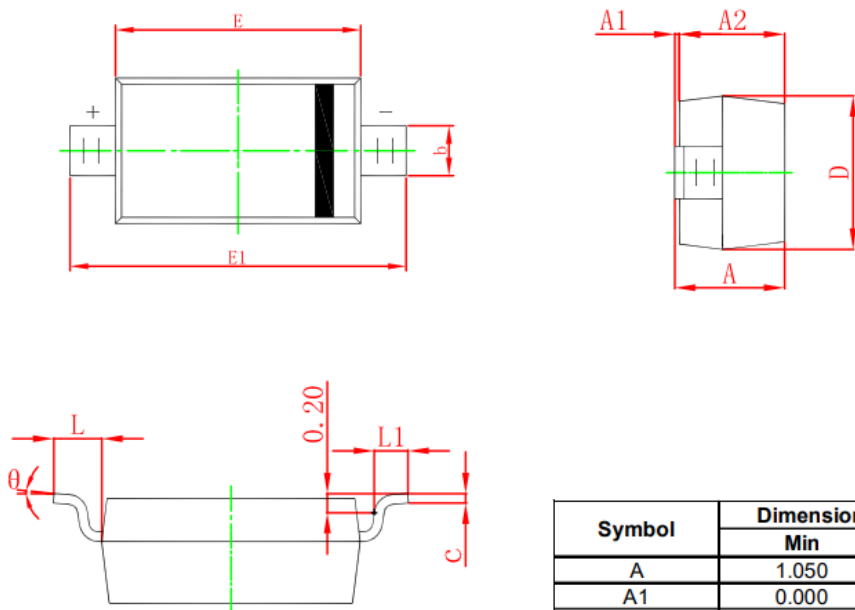
ELECTRICAL CHARACTERISTICS ($T_j = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test condition	Min	Type	Max	Unit	
Reverse breakdown voltage	$V_{(BR)}$	$I_R = 1\text{mA}$	AD-B5817W	20			V
			AD-B5818W	30			
			AD-B5819W	40			
Forward voltage	V_F	$I_F = 1\text{A}$	AD-B5817W			0.45	V
		$I_F = 3\text{A}$				0.75	
		$I_F = 1\text{A}$	AD-B5818W			0.55	
		$I_F = 3\text{A}$				0.875	
		$I_F = 1\text{A}$	AD-B5819W			0.6	
		$I_F = 3\text{A}$				0.9	
Reverse current	I_R	$V_R = 20\text{V}$	AD-B5817W		1	mA	
		$V_R = 30\text{V}$	AD-B5818W				
		$V_R = 40\text{V}$	AD-B5819W				
Diode capacitance	C_D	$V_R = 4\text{V}, f = 1\text{MHz}$			120	pF	

TYPICAL CHARACTERISTICS

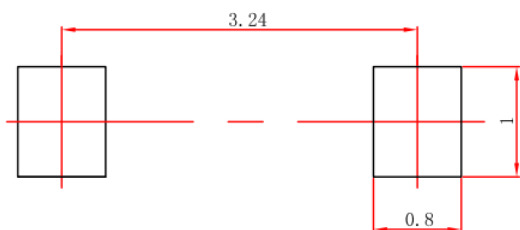


SOD-123 PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.450	0.650	0.018	0.026
c	0.080	0.150	0.003	0.006
D	1.500	1.700	0.059	0.067
E	2.600	2.800	0.102	0.110
E1	3.550	3.850	0.140	0.152
L	0.500 REF		0.020 REF	
L1	0.250	0.450	0.010	0.018
θ	0°	8°	0°	8°

SOD-123 SUGGESTED PAD LAYOUT

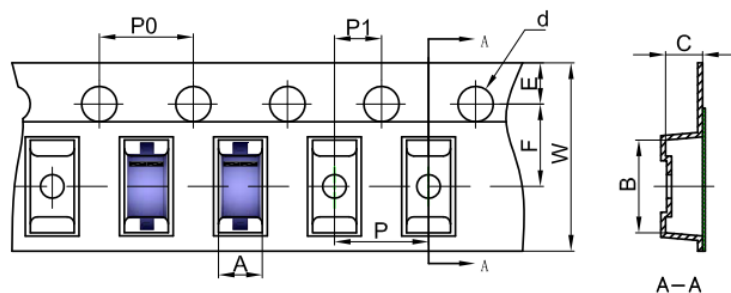


Note:

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

SOD-123 TAPE AND REEL

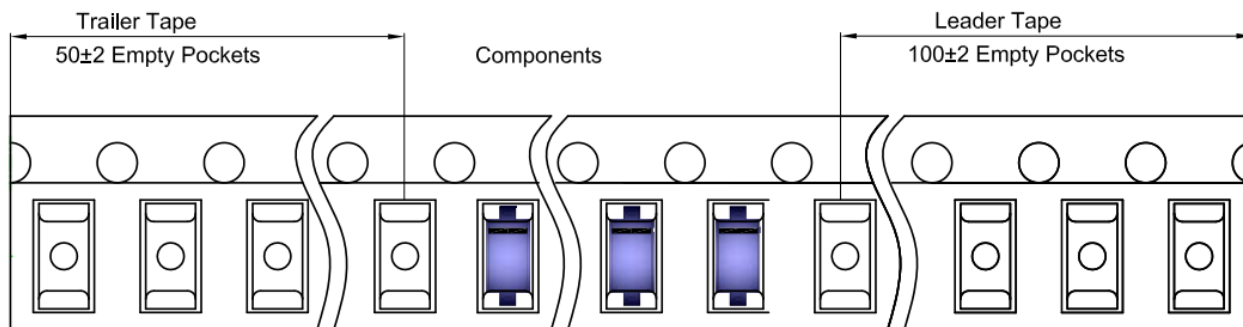
SOD-123 Embossed Carrier Tape



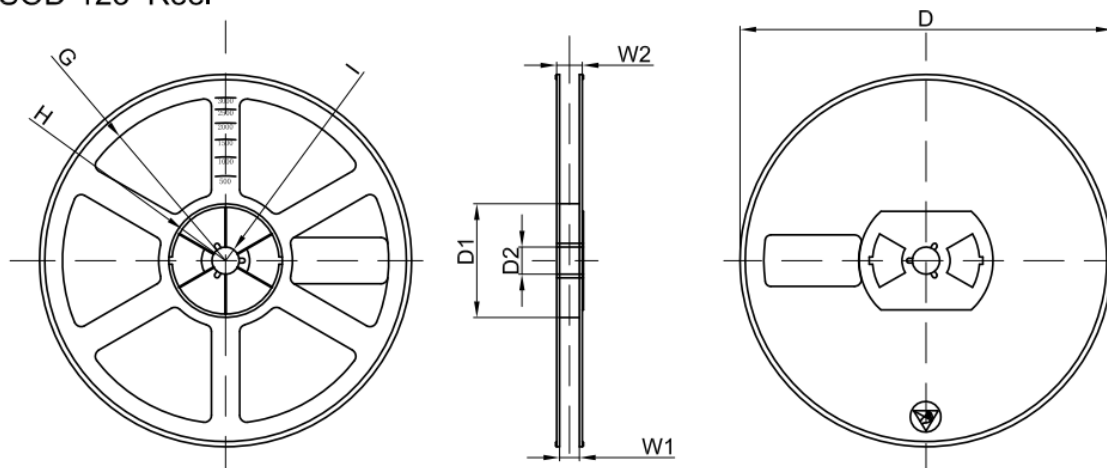
Packaging Description:
 SOD-123 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 3,000 units per 7" or 17.8cm diameter reel. The reels are clear in color and is made of polystyrene plastic (anti-static coated).

Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOD-123	1.85	3.95	1.57	Ø1.55	1.75	3.50	4.00	4.00	2.00	8.00

SOD-123 Tape Leader and Trailer



SOD-123 Reel



Dimensions are in millimeter								
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

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
3000 pcs	7 inch	45,000 pcs	203×203×195	180,000 pcs	438×438×220	

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