



DONGGUAN NANJING ELECTRONICS LTD.,
SOD-523 Plastic-Encapsulate Diodes

B5819WTL Schottky Diode

■ **FEATURES**

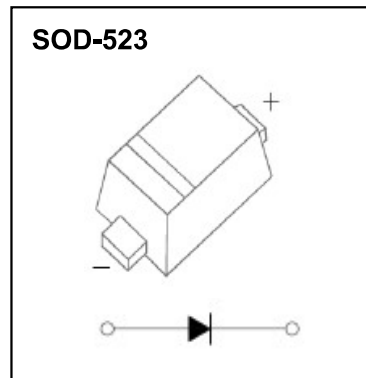
- Low forward voltage drop.
- Guard ring construction for transient protection.
- Low reverse recovery time.
- Low reverse capacitance.

■ **APPLICATIONS**

- Schottky barrier application.

■ **Marking**

Marking	SL
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Maximum Ratings ($T_a = 25\text{ }^{\circ}\text{C}$)

Symbol	Parameter	Value	Units
V_{RRM}	Repetitive Peak Reverse Voltage	40	V
$I_{F(AV)}$	Average Forward Rectified Current	1	A
I_{FSM}	Non-Repetitive Peak Forward Surge Current (@ $t=8.3\text{ms}$)	6	A
T_J	Operating Junction Temperature	125	$^{\circ}\text{C}$
T_{STG}	Storage Temperature Range	-50 to +125	$^{\circ}\text{C}$

Electrical Characteristics ($T_a = 25\text{ }^{\circ}\text{C}$)

Symbol	Parameter	Conditions	Min	Max	Units
V_F	Forward Voltage	$I_F = 0.3\text{A}$		0.5	V
		$I_F = 1\text{A}$		0.68	V
I_R	Reverse current	$V_R = 40\text{V}$		100	μA
V_{BR}	Reverse breakdown voltage	$I_R = 0.5\text{mA}$	40		V
C_T	Capacitance	$V_R = 0\text{V}$, $f = 1\text{MHz}$		100	pF

Fig. 1 - Forward Current Derating Curve

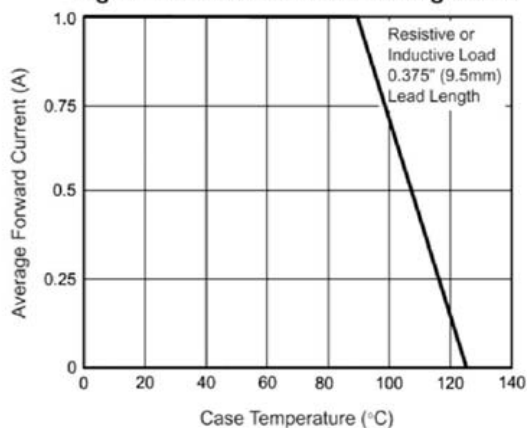


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

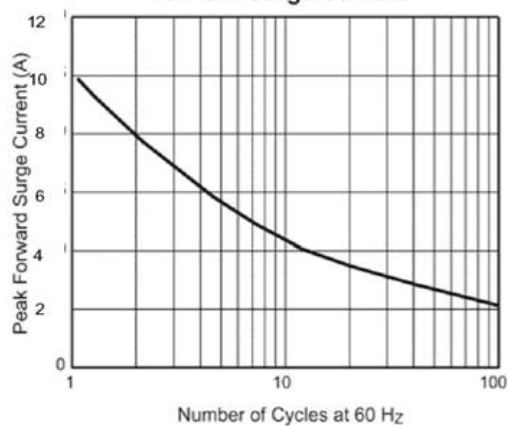


Fig. 3 - Typical Instantaneous Forward Characteristics

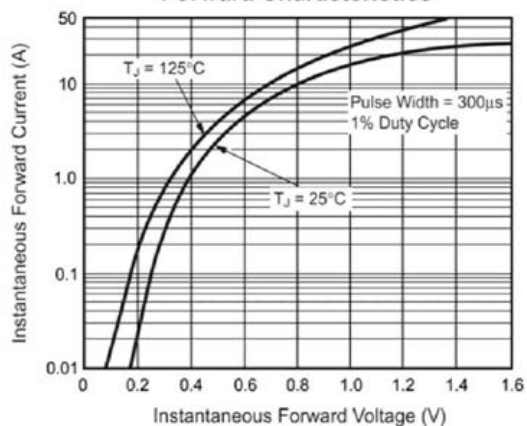


Fig. 4 - Typical Reverse Characteristics

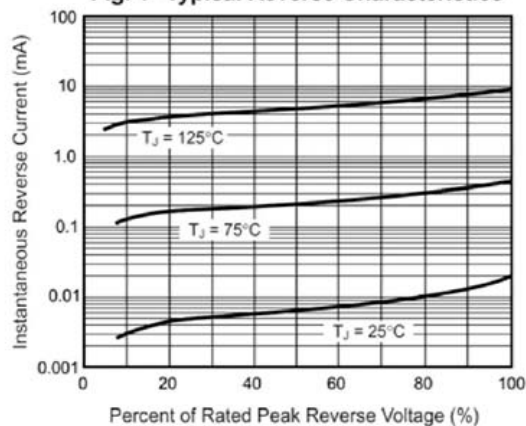


Fig. 5 - Typical Junction Capacitance

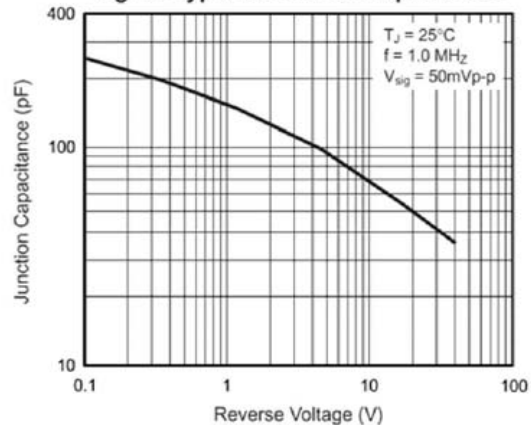
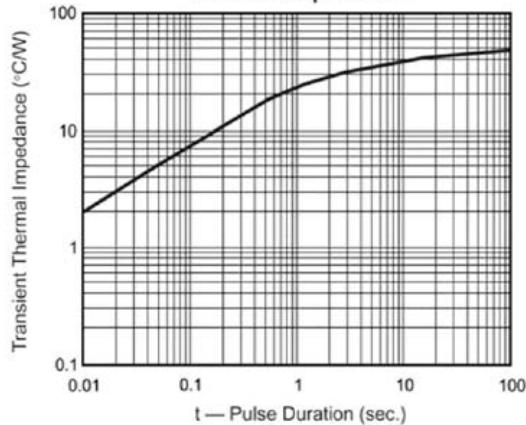
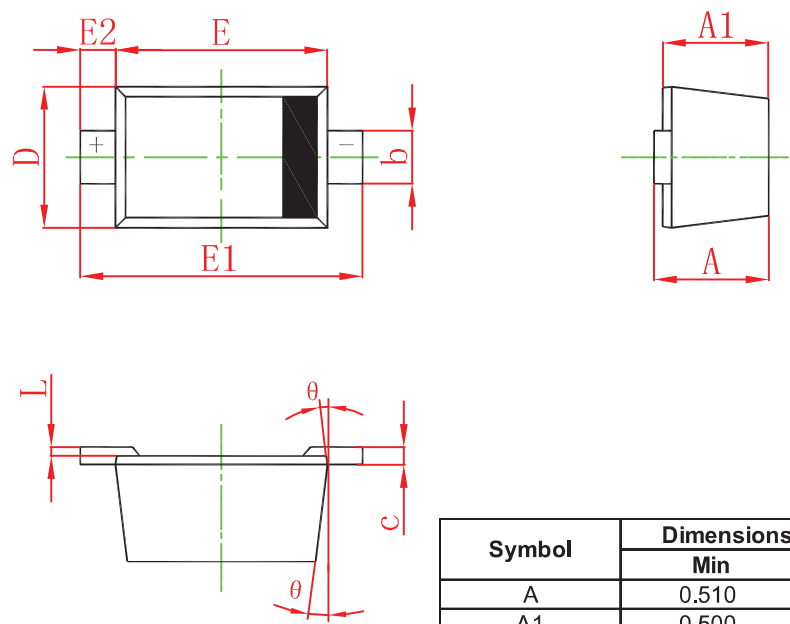


Fig. 6 - Typical Transient Thermal Impedance

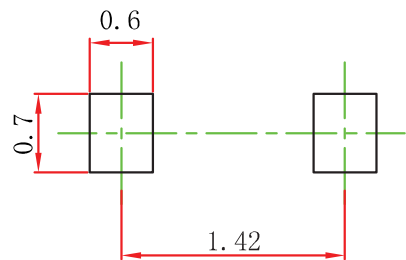


SOD-523 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.510	0.770	0.020	0.031
A1	0.500	0.700	0.020	0.028
b	0.250	0.350	0.010	0.014
c	0.080	0.150	0.003	0.006
D	0.750	0.850	0.030	0.033
E	1.100	1.300	0.043	0.051
E1	1.500	1.700	0.059	0.067
E2	0.200 REF		0.008 REF	
L	0.010	0.070	0.001	0.003
θ	7° REF		7° REF	

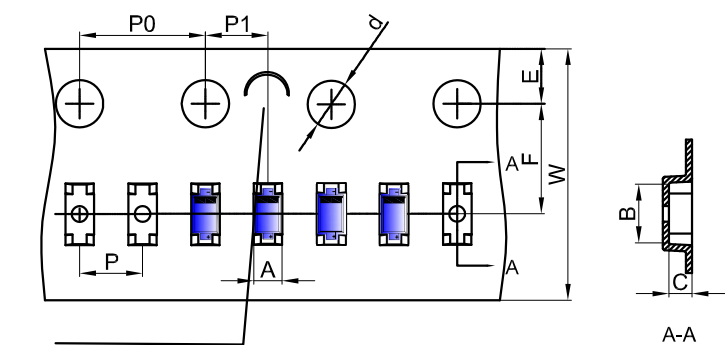
SOD-523 Suggested Pad Layout



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

SOD-523 Tape and Reel

SOD-523 Embossed Carrier Tape



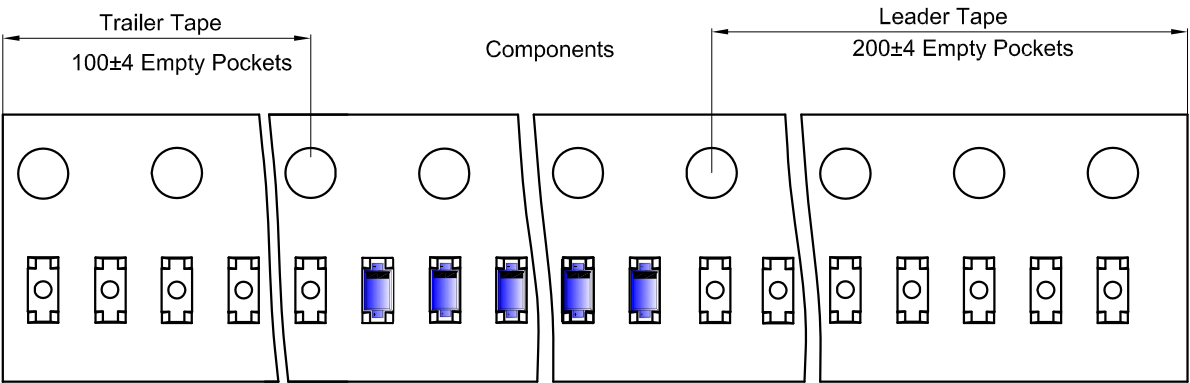
NOTE: TO CAVE 'C' ON CARRIER TAPE PER 120MM

Packaging Description:

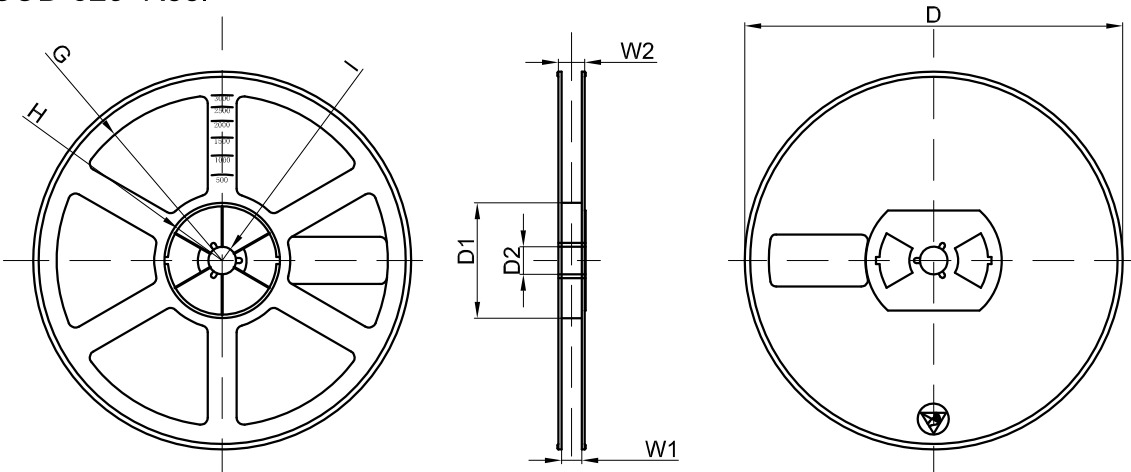
SOD-523 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 8,000 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-523	0.9	1.94	0.73	Ø1.50	1.75	3.50	4.00	2.00	2.00	8.00

SOD-523 Tape Leader and Trailer



SOD-523 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)
8000 pcs	7 inch	120,000 pcs	203×203×195	480,000 pcs	438×438×220	