BORN SEMICONDUCTOR

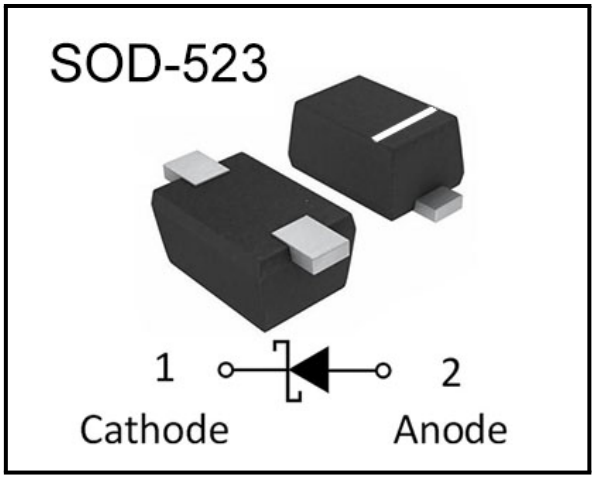
B5819WT

Schottky Barrier Diode

Features

- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability
- Epitaxial construction

Package



General Description

- Case: molded plastic
- Polarity: Color band denotes cathode
- Package: SOD-523 Plastic Package

Marking



Ordering information

Order code	Package	Marking	Base qty	Delivery mode
B5819WT	SOD-523	S4	5K	Tape and reel

Maximum Ratings (@T_A=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{RRM}	Maximum repetitive peak reverse voltage	40	V
V_{RMS}	Maximum RMS voltage	28	V
V_{DC}	Maximum DC blocking voltage	40	V
I_{FM}	Maximum average forward rectified current	350	mA
I_{FSM}	Peak forward surge current 8.3 ms single half sine-wave	1.5	A
$R_{\theta JA}$	Typical thermal resistance	660	°C/ W
P_D	Power Dissipation	150	mW
T_j	Operating junction temperature	125	°C
T_{STG}	Storage temperature range	-55 to +150	°C

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Revision: 2022-Jan-1-A

B5819WT

Schottky Barrier Diode

Electrical Characteristics(@T_A=25°C unless otherwise noted)

Symbol	Parameter	Test Condition	Value	Unit
V_F	Maximum forward voltage	I_F=20mA	0.37	V
		I_F=200mA	0.6	V
I_R	Maximum reverse current	V_R=30V	5	uA
T_{rr}	Reverse recovery time	I_F =I_R = 200mA	10	nS
		I_{rr} =0.1× I_R		
		R_L = 100Ω		
C_j	Type junction capacitance	V_R = 4.0V, f=1MHZ	50	pF

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Schottky Barrier Diode

Typical Performance Characteristics(T_J = 25 °C, unless otherwise noted)

Figure 1: Forward Characteristics

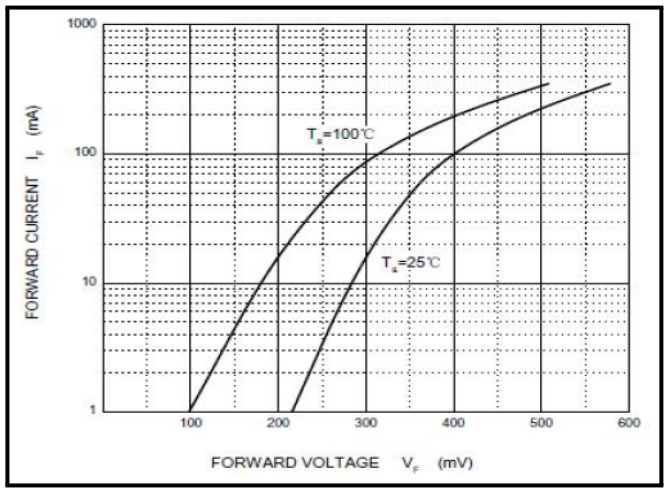


Figure 2: Reverse Characteristics

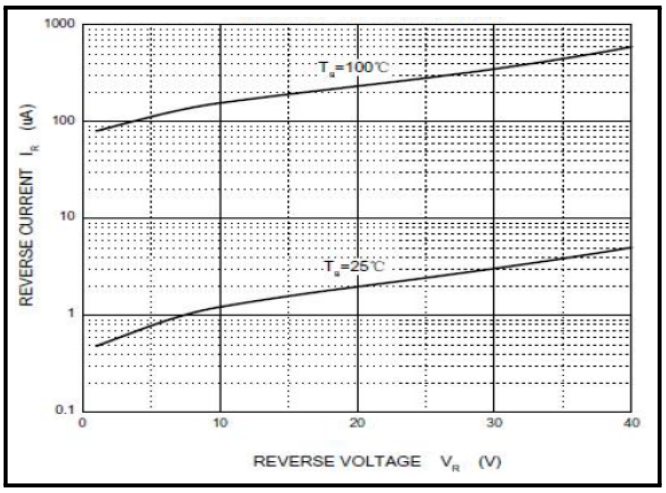


Figure 3: Capacitance Characteristics

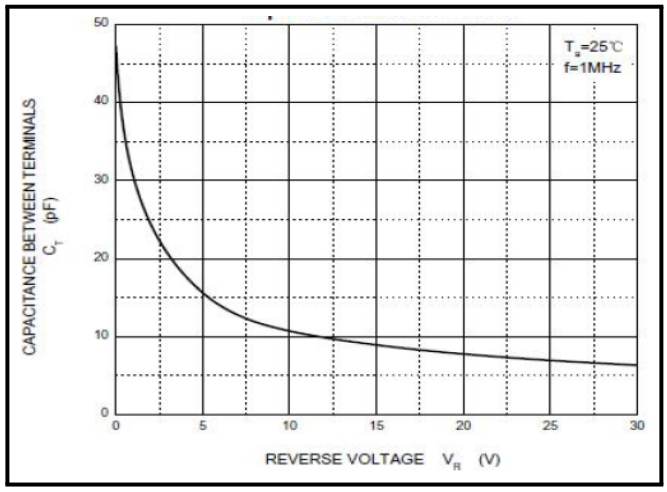
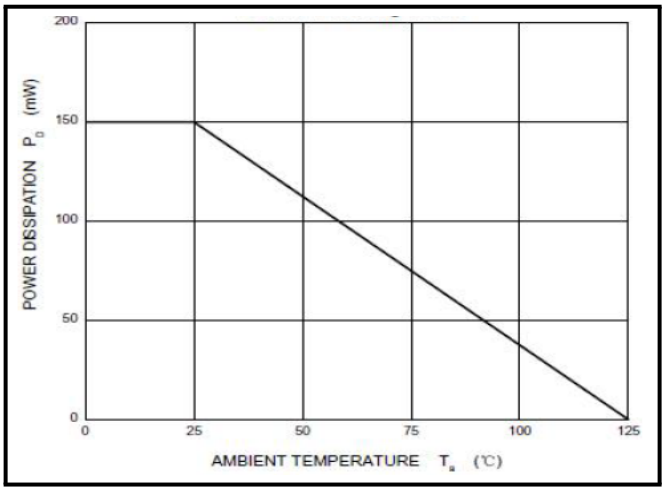


Figure 4: Power Derating Curve



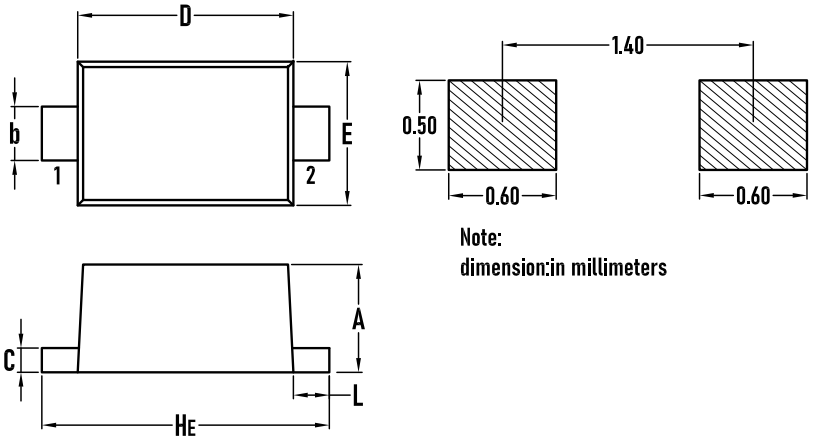
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B5819WT

Schottky Barrier Diode

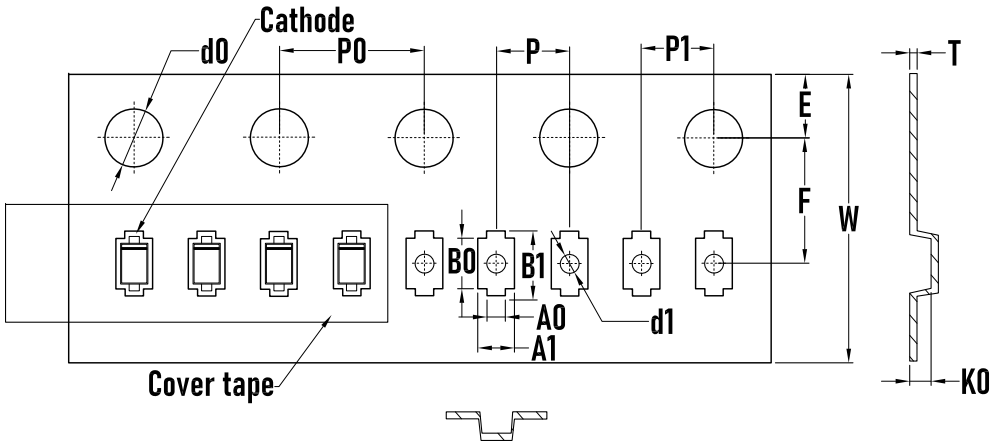
Outline Drawing - SOD-523



Note:
dimension:in millimeters

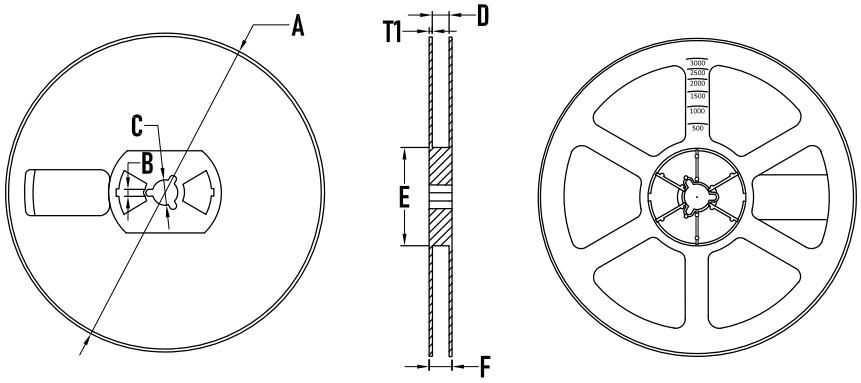
SYMBOL	MILLIMETER		INCHES	
	MIN.	MAX.	MIN.	MAX.
A	0.50	0.70	0.020	0.028
b	0.25	0.35	0.010	0.014
C	0.07	0.20	0.0028	0.0079
D	1.10	1.30	0.043	0.051
E	0.70	0.90	0.028	0.035
H_E	1.50	1.70	0.059	0.067
L	0.15	0.25	0.006	0.010

Packaging Tape - SOD-523



SYMBOL	MILLIMETER
A0	0.50±0.10
A1	1.00±0.10
B0	1.30±0.10
B1	1.80±0.10
d0	1.55±0.10
d1	0.50±0.05
E	1.75±0.10
F	3.50±0.10
K0	0.65±0.10
P	2.00±0.10
P0	4.00±0.10
P1	2.00±0.10
W	8.00±0.30
T	0.2 ±0.05

Packaging Reel



SYMBOL	MILLIMETER
A	177.8±0.2
B	2.7±0.2
C	13.5±0.2
D	9.6±0.3
E	54.5±0.2
F	12.3±0.3
T1	1.0±0.2
Quantity	5000PCS

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