

# BAS716

Schottky Barrier Diode

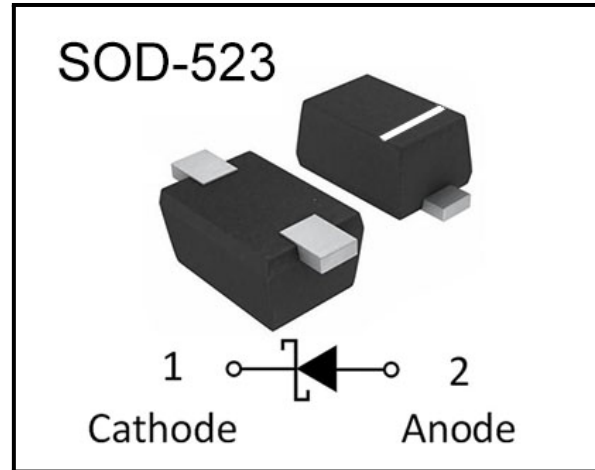
## Features

- Small Package.
- Low Reverse Current.
- Fast Switching Speed.
- Surface Mount Package Ideally Suited for Automatic Insertion.

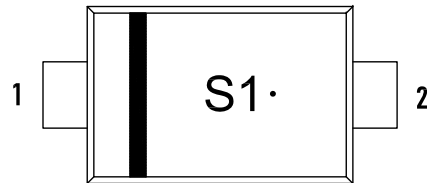
## General Description

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

## Package



## Marking



## Ordering information

Order code	Package	Marking	Base qty	Delivery mode
BAS716	SOD-523	S1.	3K	Tape and reel

## Maximum Ratings (@T<sub>A</sub>=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V <sub>RM</sub>	Non-Repetitive Peak Reverse Voltage	100	V
V <sub>R(RM)</sub>	Peak Repetitive Peak Reverse Voltage	75	V
V <sub>R(WM)</sub>	Working Peak Reverse Voltage		
V <sub>R(RMS)</sub>	RMS Reverse Voltage	53	V
I <sub>O</sub>	Average Rectified Output Current	0.2	A
I <sub>FSM</sub>	Non-repetitive Peak Forward Surge Current @8.3mS	1	A
P <sub>D</sub>	Power Dissipation	225	mW
R <sub>θJA</sub>	Thermal Resistance From Junction To Ambient	556	°C/ W
T <sub>j</sub>	Operating junction Temperature Range	-40 to +125	°C
T <sub>STG</sub>	Storage temperature Range	-55 to +150	°C

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Electrical Characteristics( @T<sub>A</sub>=25°C unless otherwise noted)

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Unit
V <sub>(BR)</sub>	Reverse breakdown voltage	I <sub>R</sub> =100μA	75	–	–	V
I <sub>R</sub> I <sub>R</sub>	Reverse voltage leakage current	V <sub>R</sub> =75V	–	–	5	nA
		V <sub>R</sub> =100V	–	–	80	
V <sub>F</sub>	Forward voltage	I <sub>F</sub> =1mA	–	–	0.9	V
		I <sub>F</sub> =10mA	–	–	1	
		I <sub>F</sub> =50mA	–	–	1.1	
		I <sub>F</sub> =150mA	–	–	1.25	
C <sub>tot</sub>	Total capacitance	V <sub>R</sub> =0V, f=1MHZ	–	2	–	pF
T <sub>rr</sub>	Reverse recovery time	I <sub>F</sub> =I <sub>R</sub> = 10mA, I <sub>rr</sub> =0.1XI <sub>R</sub>	–	–	3	nS



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Typical Performance Characteristics ( $T_J = 25^\circ\text{C}$ , unless otherwise noted)

Figure 1: Forward Characteristics

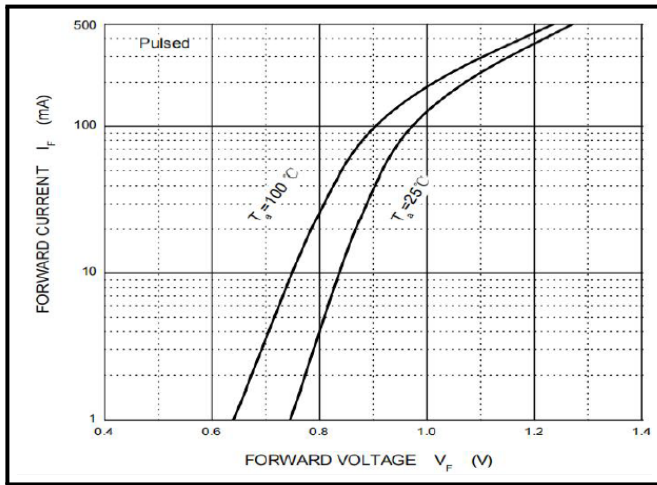


Figure 2: Reverse Characteristics

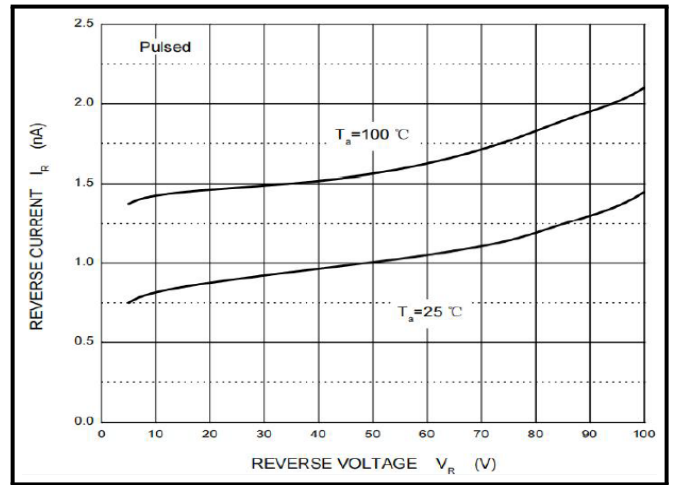


Figure 3: Capacitance Characteristics

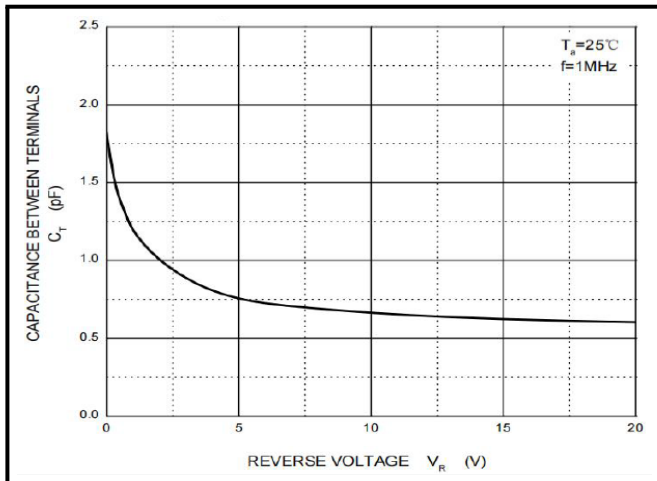
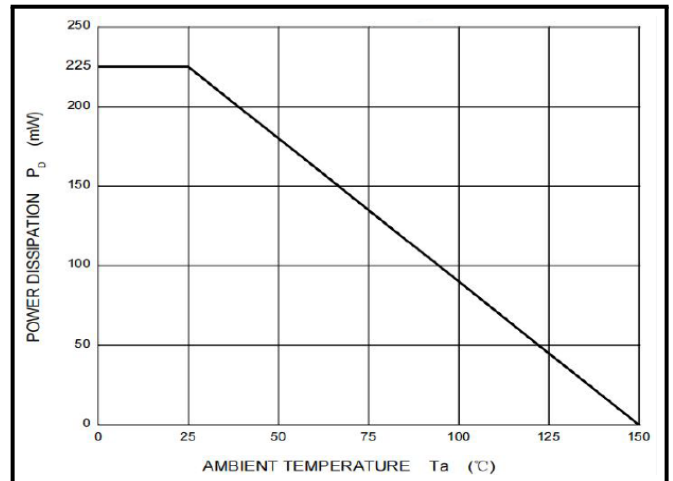


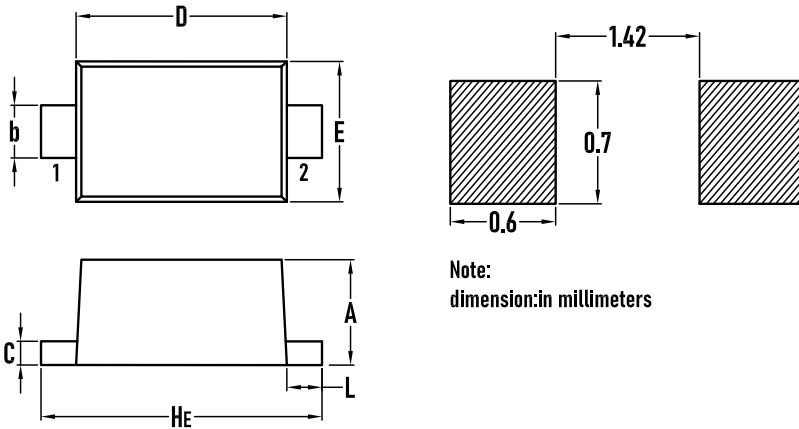
Figure 4: Power Derating Curve



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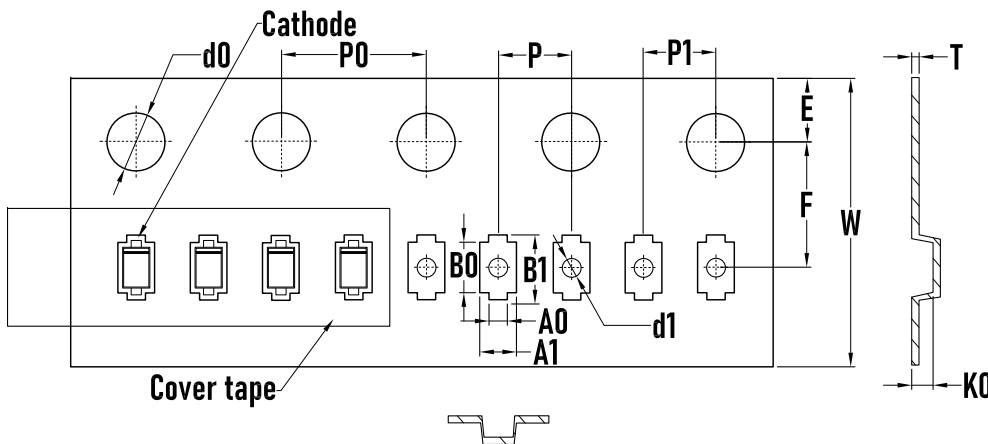
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## Outline Drawing - SOD-523



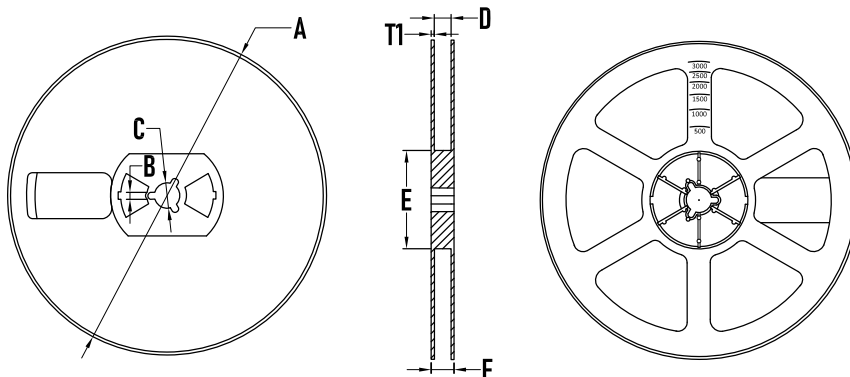
SYMBOL	MILLIMETER		INCHES	
	MIN.	MAX.	MIN.	MAX.
A	0.50	0.70	0.020	0.028
b	0.25	0.35	0.010	0.014
C	0.07	0.20	0.0028	0.0079
D	1.10	1.30	0.043	0.051
E	0.70	0.90	0.028	0.035
H <sub>E</sub>	1.50	1.70	0.059	0.067
L	0.15	0.25	0.006	0.010

## 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	3000PCS

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