BORN SEMICONDUCTOR

BAS40WS

Schottky Barrier Diode

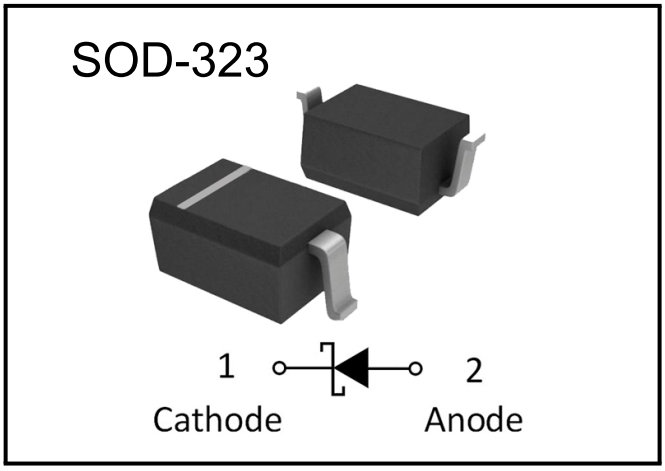
Features

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

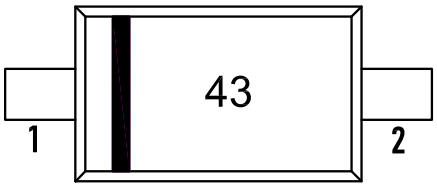
General Description

- Case: molded plastic
- Polarity: Color band denotes cathode
- Package: SOD-323 Plastic Package

Package



Marking



Ordering information

Order code	Package	Marking	Base qty	Delivery mode
BAS40WS	SOD-323	43	3K	Tape and reel

Maximum Ratings@T_A=25°C unless otherwise noted

Symbol	Parameters	Value	Unit
V_{RRM}	Repetitive Peak Reverse voltage	40	V
V_{RWM}	Working Peak Reverse Voltage		
V_R	DC Blocking Voltage		
$I_{F(AV)}$	Maximum average forward rectified current	200	mA
I_{FSM}	Non-repetitive peak forward surge current 8.3 ms singlehalf sine-wave	0.6	A
P_d	Power Dissipation	200	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	500	°C/W
T_j	Operating junction temperature range	-40 to +125	°C
T_{STG}	Storage temperature range	-55 to +150	°C

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Electrical Characteristics@T_A=25°C unless otherwisenoted

Symbol	Parameters	Test conditions	Min.	Typ.	Max.	Unit
V_{BR}	Reverse breakdown voltage	I_R=10uA	40	–	–	V
$V_{F(1)}$	Forward voltage	I_F=1mA	–	–	0.38	V
$V_{F(2)}$		I_F=10mA	–	–	0.50	
$V_{F(3)}$		I_F=40mA	–	–	1.0	
I_R	Reverse voltage leakage current	V_R=30V	–	20	200	nA
C_T	Capacitance between terminals	V_R=0V,f=1MHz	–	4.0	5.0	pF
t_{rr}	Reverse recovery time	I_F=I_R=10mA, I_{rr}=0.1XI_R,R_L=100Ω	–	–	5	ns

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

Figure 1: Forward Characteristics

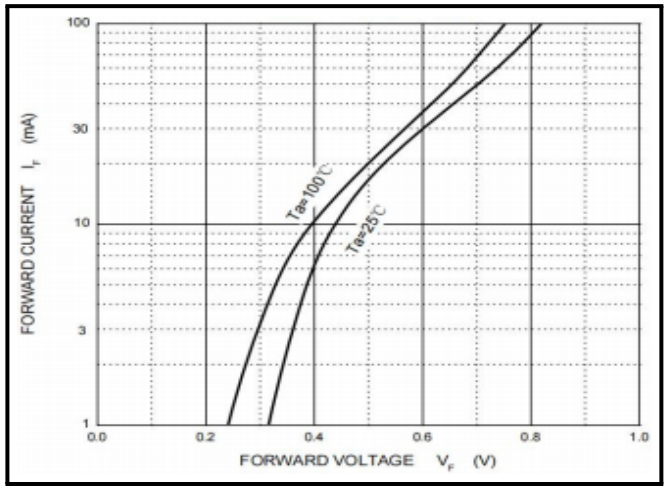


Figure 2:Reverse Characteristics

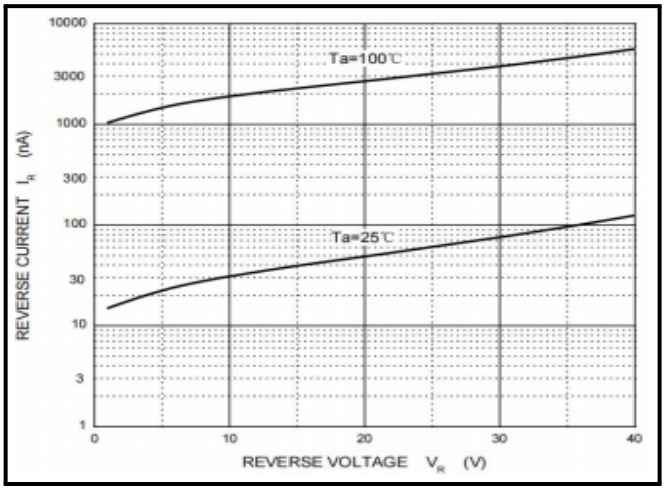


Figure 3:Capacitance Characteristics

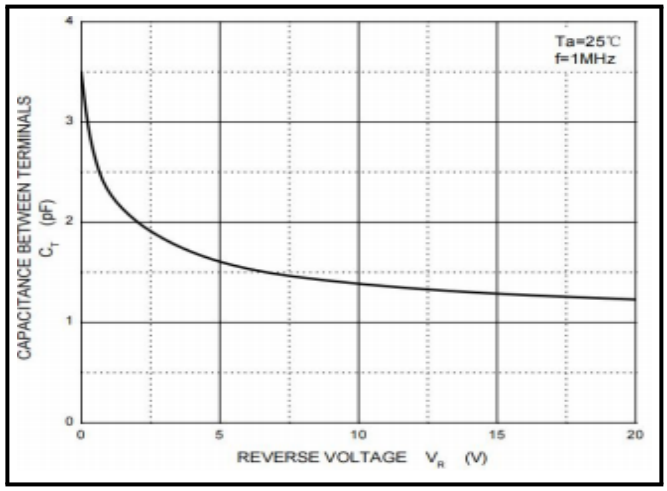
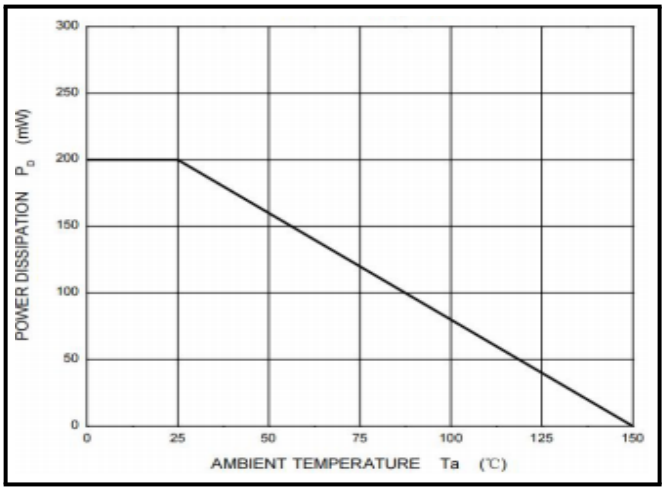


Figure 4:Power Derating Curve



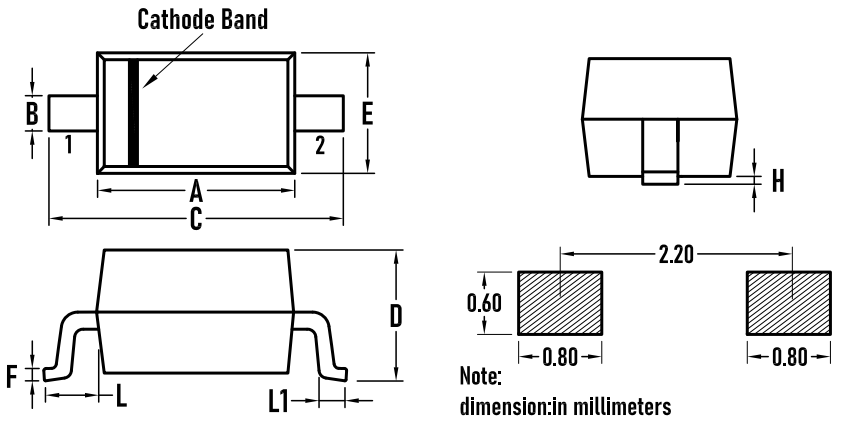
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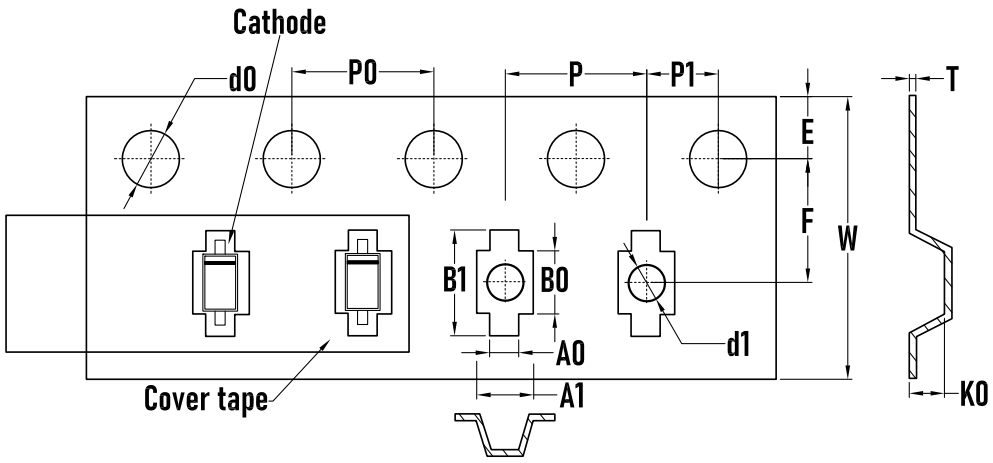
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Outline Drawing - SOD-323



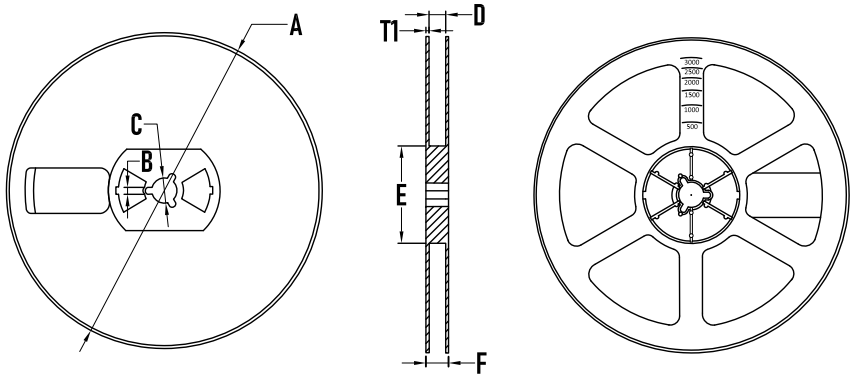
SYMBOL	MILLIMETER		INCHES	
	MIN.	MAX.	MIN.	MAX.
A	1.600	1.800	0.063	0.071
B	0.250	0.350	0.010	0.014
C	2.400	2.800	0.094	0.110
D	–	1.100	–	0.043
E	1.100	1.500	0.043	0.059
F	0.080	0.150	0.003	0.006
L	0.475REF		0.019REF	
L1	0.250	0.400	0.010	0.016
H	0.000	0.100	0.000	0.004

Packaging Tape - SOD-323



SYMBOL	MILLIMETER
A0	0.80±0.10
A1	1.48±0.10
B0	1.80±0.10
B1	3.00±0.10
d0	1.55±0.10
d1	1.00±0.05
E	1.75±0.10
F	3.50±0.10
K0	1.05±0.10
P	4.00±0.10
P0	4.00±0.10
P1	2.00±0.10
W	8.00±0.30
T	0.25 ±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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