

BAS40/04/05/06

Schottky Barrier Diode

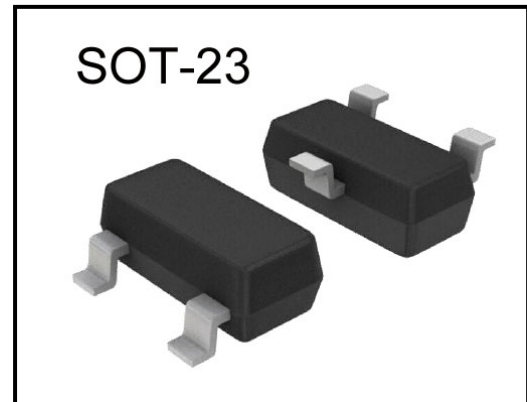
Features

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

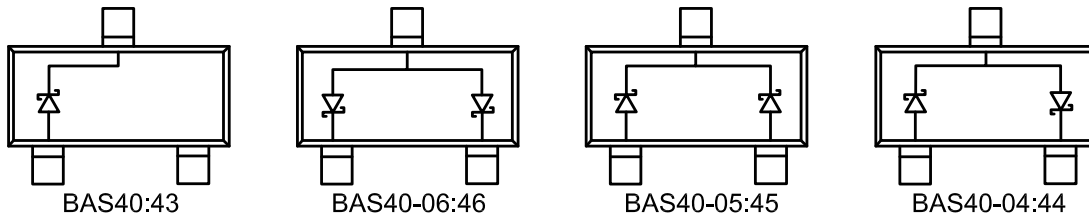
General Description

- Case: molded plastic
- Polarity: Color band denotes cathode
- Package: SOT-23 Plastic Package

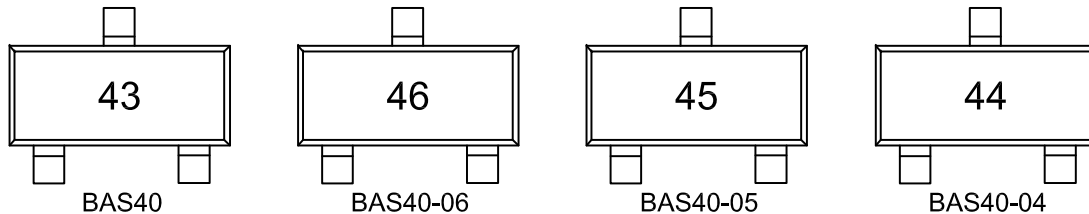
Package



Circuit



Marking



Ordering information

Order code	Package	Marking	Base qty	Delivery mode
BAS40	SOT-23	43	3K	Tape and reel
BAS40-04	SOT-23	44	3K	Tape and reel
BAS40-05	SOT-23	45	3K	Tape and reel
BAS40-06	SOT-23	46	3K	Tape and reel



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Maximum Ratings@ $T_A=25^{\circ}\text{C}$ unless otherwise noted

Symbol	Parameters	Value	Unit
V_{RRM}	Repetitive Peak Reverse voltage	40	V
V_{RWM}	Working Peak Reverse Voltage	40	V
V_R	DC Blocking Voltage	40	V
$I_{F(AV)}$	Maximum average forward rectified current	200	mA
I_{FSM}	Non-repetitive peak forward surge current 8.3 ms singlehalf sine-wave	600	mA
P_d	Power Dissipation	200	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	450	$^{\circ}\text{C/W}$
T_j	Operating junction temperature range	-40 to +125	$^{\circ}\text{C}$
T_{STG}	Storage temperature range	-55 to +150	$^{\circ}\text{C}$

Electrical Characteristics@ $T_A=25^{\circ}\text{C}$ unless otherwisenoted

Symbol	Parameters	Test conditions	Min	Max	Unit
$V_{(BR)}$	Reverse breakdown voltage	$I_R=10\mu\text{A}$	40	—	V
I_R	Reverse current	$V_R=30\text{V}$	—	200	nA
V_F	Forward voltage	$I_F=1\text{mA}$	—	380	mV
		$I_F=40\text{mA}$	—	1000	
C_D	Diode capacitance	$V_R=0\text{V}, f=1\text{MHz}$	—	5.0	pF
t_{rr}	Reverse recovery time	$I_F=I_R=10\text{mA}$, $I_{rr}=1\text{mA}, R_L=100\Omega$	—	5	ns



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

Figure 1: Forward Characteristics

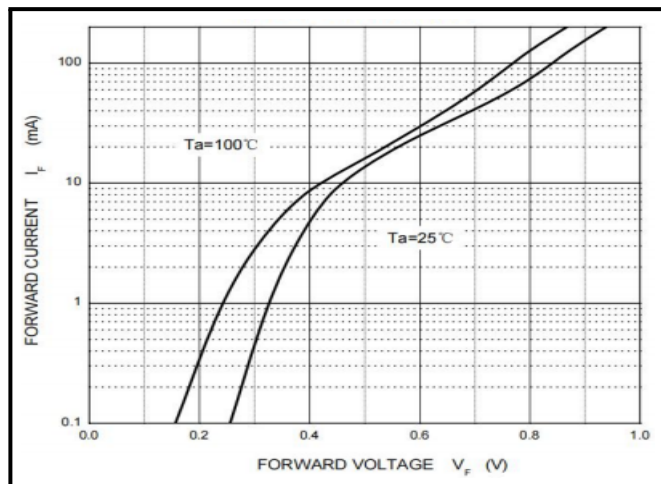


Figure 2: Reverse Characteristics

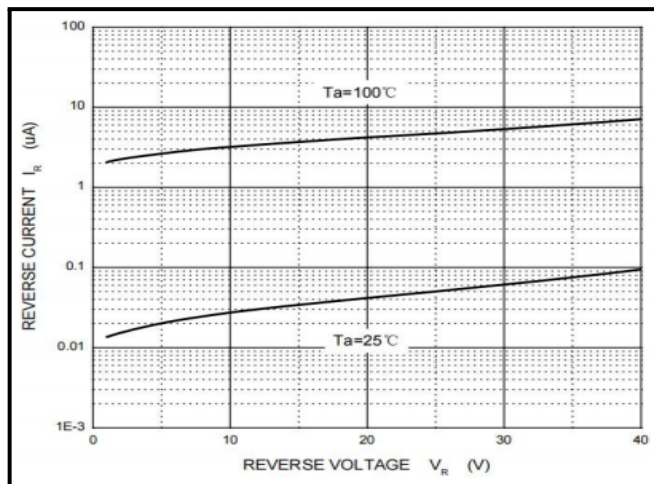


Figure 3: Capacitance Characteristics

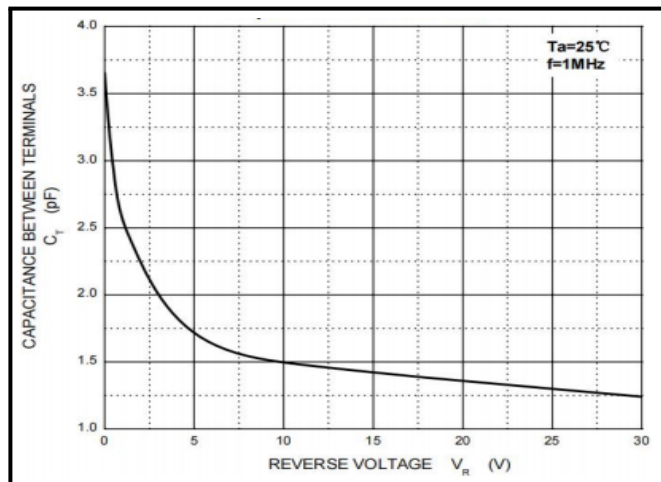
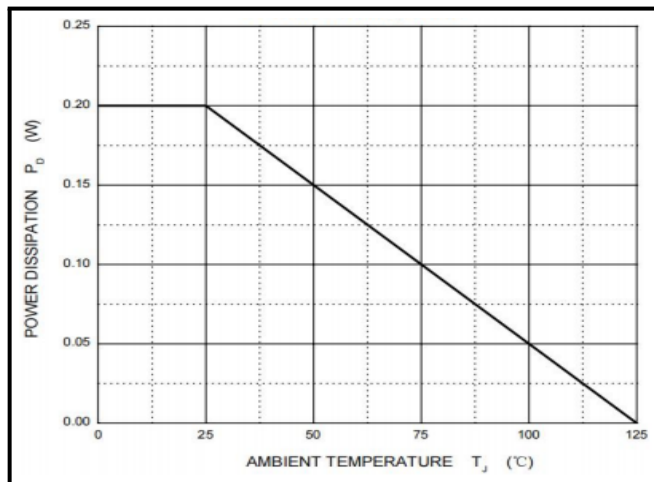


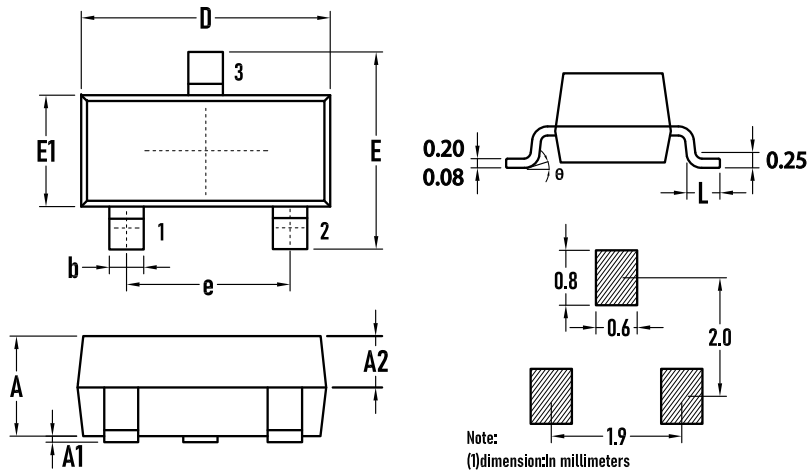
Figure 4: Power Derating Curve



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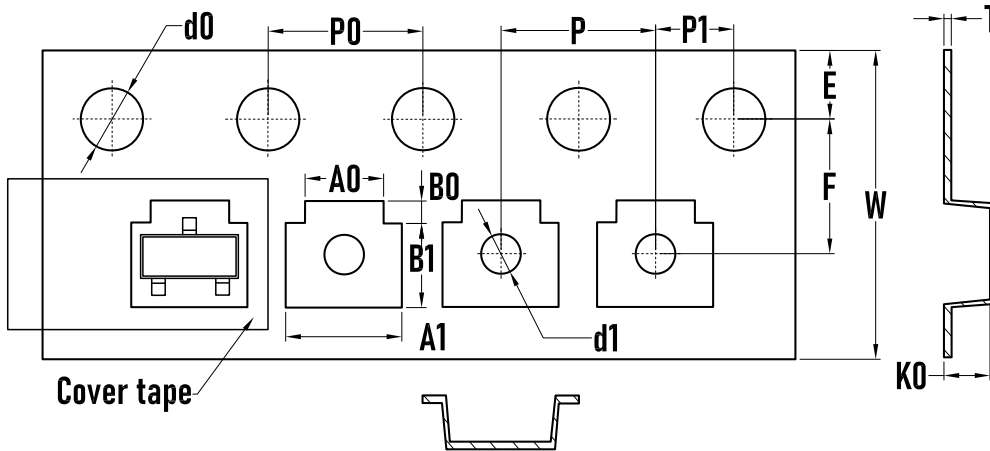
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Outline Drawing - SOT-23



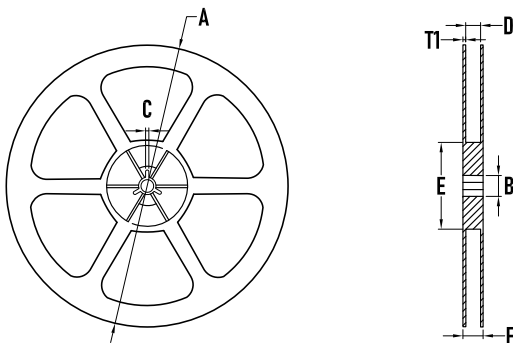
SYMBOL	MILLIMETER		
	MIN.	Typ.	MAX.
A	0.90	1.00	1.10
A1	0.01	—	0.10
A2	0.50	0.60	0.70
D	2.80	2.90	3.00
b	0.25	0.35	0.45
E	2.10	2.30	2.50
E1	1.20	1.30	1.40
e	1.80	1.90	2.00
L	0.25	0.35	0.45
θ	0	—	8°

Packaging Tape - SOT-23



SYMBOL	MILLIMETER
A0	2.10±0.10
A1	3.10±0.10
B0	0.65±0.10
B1	2.75±0.10
d0	1.55±0.10
d1	1.00±0.05
E	1.75±0.10
F	3.50±0.10
K0	1.10±0.10
P	4.00±0.10
P0	4.00±0.10
P1	2.00±0.10
W	8.00±0.30
T	0.20 ±0.05

Packaging Reel



SYMBOL	MILLIMETER
A	177.8±0.2
B	3.1
C	13.50
D	9.6±0.3
E	75±0.2
F	12.3±0.3
T1	1.0±0.2
Quantity	3000PCS

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Specifications are subject to change without notice.

Please refer to <http://www.born-tw.com> for current information.

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