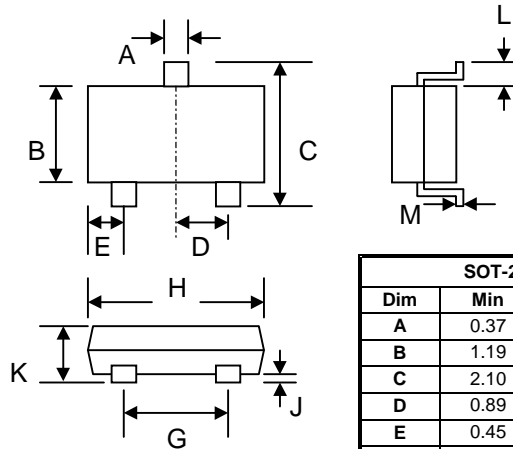


SURFACE MOUNT SCHOTTKY BARRIER DIODE

Features

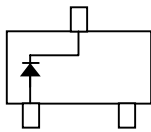
- Low Turn-on Voltage
- Fast Switching
- PN Junction Guard Ring for Transient and ESD Protection
- Designed for Surface Mount Application
- Plastic Material – UL Recognition Flammability Classification 94V-O



SOT-23		
Dim	Min	Max
A	0.37	0.51
B	1.19	1.40
C	2.10	2.50
D	0.89	1.05
E	0.45	0.61
G	1.78	2.05
H	2.65	3.05
J	0.013	0.15
K	0.89	1.10
L	0.45	0.61
M	0.076	0.178
All Dimensions in mm		

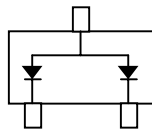
Mechanical Data

- Case: SOT-23, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: See Diagrams Below
- Weight: 0.008 grams (approx.)
- Mounting Position: Any
- **Lead Free: For RoHS / Lead Free Version, Add "-LF" Suffix to Part Number, See Page 4**



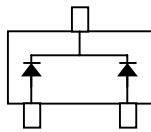
TOP VIEW

BAS40 Marking: S40



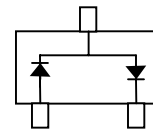
TOP VIEW

BAS40A Marking: S42



TOP VIEW

BAS40C Marking: S43



TOP VIEW

BAS40S Marking: S44

Maximum Ratings and Electrical Characteristics, Single Diode @ $T_A=25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	40	V
Forward Continuous Current (Note 1)	I_F	200	mA
Forward Surge Current (Note 1)	I_{FSM}	600	mA
Power Dissipation (Note 1)	P_d	350	mW
Typical Thermal Resistance, Junction to Ambient Air (Note 1)	$R_{\theta JA}$	357	$^\circ\text{C}/\text{W}$
Operating and Storage Temperature Range	T_j, T_{STG}	-55 to +125	$^\circ\text{C}$

Note: 1. Device on fiberglass substrate.

Maximum Ratings and Electrical Characteristics, Single Diode @ $T_A=25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage	$V_{(BR)R}$	40	—	—	V	@ $I_R = 10\mu\text{A}$
Forward Voltage	V_F	—	—	380 500 1000	mV	@ $I_F = 1.0\text{mA}$, $t_p < 300\mu\text{s}$ @ $I_F = 10\text{mA}$, $t_p < 300\mu\text{s}$ @ $I_F = 40\text{mA}$, $t_p < 300\mu\text{s}$
Reverse Leakage Current	I_R	—	20	200	nA	@ $V_R = 30\text{V}$, $t_p < 300\mu\text{s}$
Junction Capacitance	C_j	—	4.0	5.0	pF	$V_R = 0\text{V}$, $f = 1.0\text{MHz}$
Reverse Recovery Time	t_{rr}	—	—	5.0	nS	$I_F = 10\text{mA}$ through $I_R = 10\text{mA}$ to $I_R = 1.0\text{mA}$, $R_L = 100\Omega$

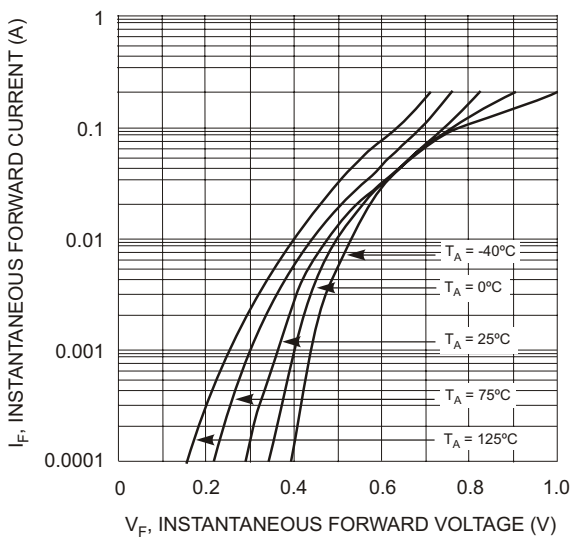


Fig. 1 Typical Forward Voltage

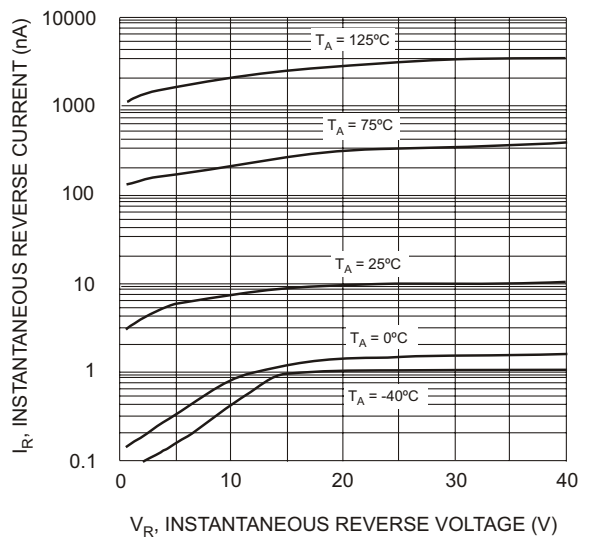


Fig. 2 Typical Reverse Characteristics

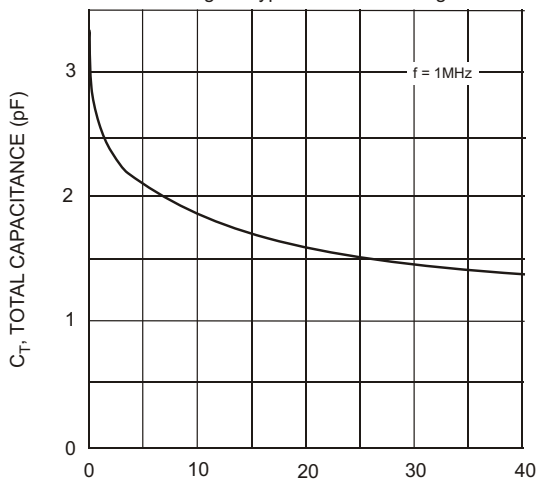


Fig. 3 Typical Capacitance

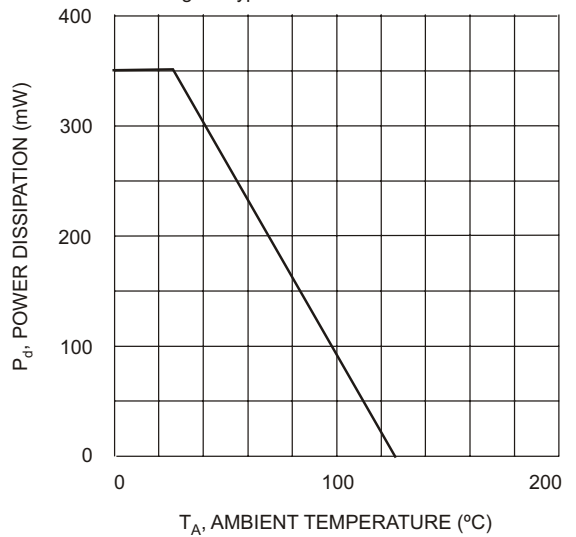
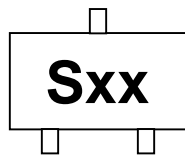


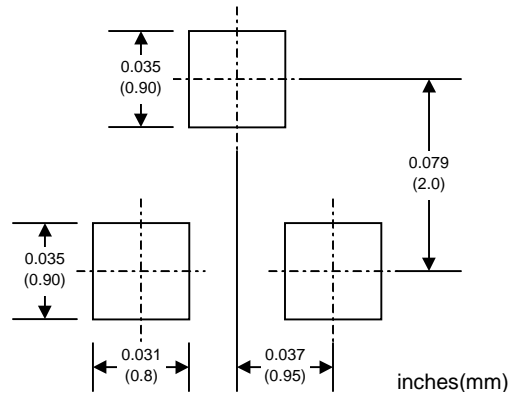
Fig. 4 Power Derating Curve, Total Package

MARKING INFORMATION



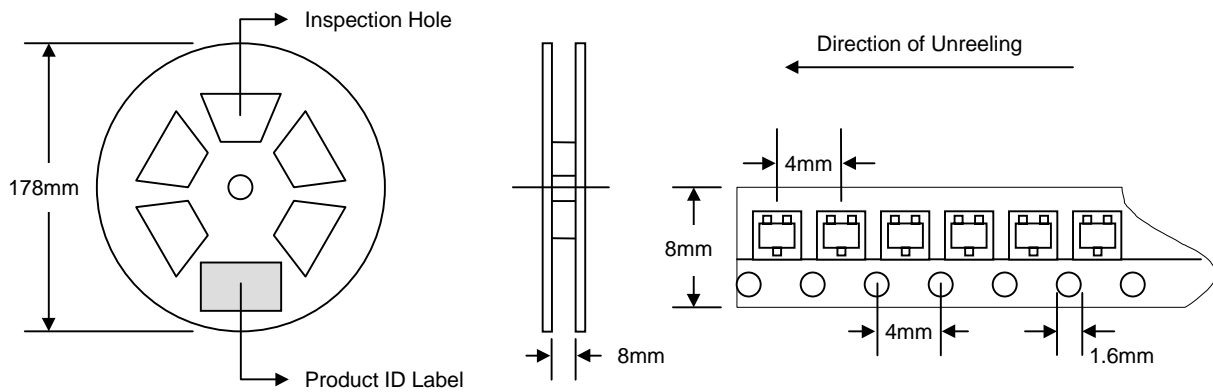
Sxx = Device Code
 xx = 40 (BAS40)
 42 (BAS40A)
 43 (BAS40C)
 44 (BAS40S)

RECOMMENDED FOOTPRINT



PACKAGING INFORMATION

TAPE & REEL



Reel Diameter (mm)	Quantity (PCS)	Inner Box Size L x W x H (mm)	Quantity (PCS)	Carton Size L x W x H (mm)	Quantity (PCS)	Approx. Gross Weight (KG)
178	3,000	187 x 187 x 65	15,000	390 x 240 x 420	150,000	10.0

Note: 1. Anti-static plastic reel, white, water clear or blue color. Inspection hole might be varied in different alignment.
 2. Components are packed in accordance with EIA standard 481-1 and 481-2.

ORDERING INFORMATION

Product No.	Package Type	Shipping Quantity
BAS40-T1	SOT-23	3000/Tape & Reel
BAS40A-T1	SOT-23	3000/Tape & Reel
BAS40C-T1	SOT-23	3000/Tape & Reel
BAS40S-T1	SOT-23	3000/Tape & Reel

1. Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.
2. **To order RoHS / Lead Free version (with Lead Free finish), add "-LF" suffix to part number above. For example, BAS40-T1-LF.**

Won-Top Electronics Co., Ltd (WTE) has checked all information carefully and believes it to be correct and accurate. However, WTE cannot assume any responsibility for inaccuracies. Furthermore, this information does not give the purchaser of semiconductor devices any license under patent rights to manufacturer. WTE reserves the right to change any or all information herein without further notice.

WARNING: DO NOT USE IN LIFE SUPPORT EQUIPMENT. WTE power semiconductor products are not authorized for use as critical components in life support devices or systems without the express written approval.

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We power your everyday.