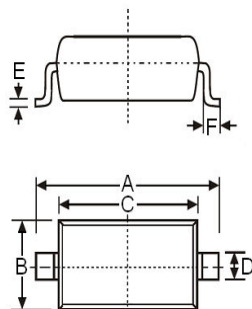


**SURFACE MOUNT
SCHOTTKY BARRIER DIODE**
**REVERSE VOLTAGE – 40 Volts
FORWARD CURRENT – 0.2 Ampere**
FEATURES

- Low Turn-on Voltage
- Fast Switching
- Guard Ring Construction for Transient Protection

MECHANICAL DATA

- Case: SOD-323 Plastic
- Case Material: “Green” molding compound, UL flammability classification 94V-0, (No Br. Sb. Cl)
- Moisture Sensitivity: Level 1 per J-STD-020D
- Lead Free in RoHS 2002/95/EC Compliant

SOD-323


SOD-323		
Dim.	Min.	Max.
A	2.50	2.70
B	1.20	1.40
C	1.60	1.80
D	0.25	0.35
E	0.08	0.15
F	0.25	0.40
G	---	1.0
H	0.00	0.10
Dimensions in millimeter		

Maximum Ratings & Thermal Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	BAS40WS	Units
Repetitive Peak Reverse Voltage	V_{RRM}	40	V
Working Peak Reverse Voltage	V_{RWM}		
DC Blocking Voltage	V_R		
Forward Continuous Current	I_F	200	mA
Peak Forward Surge Current@<1.0s	I_{FSM}	0.6	A
Power Dissipation	P_D	200	mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	625	$^\circ\text{C}/\text{W}$
Operating Temperature Range	T_J	150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55~+150	$^\circ\text{C}$

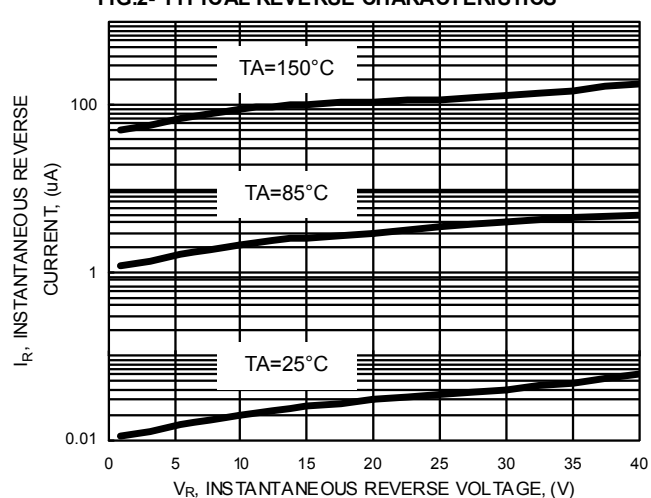
Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Test Condition	Symbol	BAS40WS	Unit
Reverse Breakdown Voltage	$I_R = 10\mu\text{A}$	V_{BR}	40	V
Maximum Forward Voltage	$I_F = 1\text{mA}$ $I_F = 10\text{mA}$ $I_F = 40\text{mA}$	V_F	380 500 1000	mV
Maximum DC Reverse Current at Rated DC Blocking Voltage	$V_R = 30\text{V}$	I_R	200	nA
Typical Junction Capacitance	$V_R = 1.0\text{V}, f = 1\text{MHz}$	C_T	5	pF
Reverse Recovery time	$I_{rr} = 1\text{mA}$, $I_R = I_F = 10\text{mA}$ $R_L = 100\Omega$	t_{rr}	5	nS

REV. 1, Oct-2010, KSHR14

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FIG.2- TYPICAL REVERSE CHARACTERISTICS



Graph of C_T (pF) versus V_R (V) for the 1N4148 diode. The curve shows that capacitance decreases as reverse voltage increases. Conditions: $T_j = 25^\circ\text{C}$, $f = 1\text{MHz}$.

V_R (V)	C_T (pF)
0	3.0
2	2.5
4	2.2
6	2.0
8	1.9
10	1.85
12	1.8
14	1.75
16	1.7
18	1.65
20	1.6
22	1.55
24	1.5
26	1.48
28	1.45
30	1.42
32	1.4
34	1.38
36	1.35
38	1.32
40	1.3

Device P/N	Marking	Equivalent Circuit Diagram
BAS40WS	43	

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