

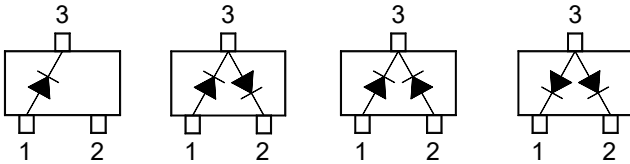
## Schottky Barrier Diodes

## Features

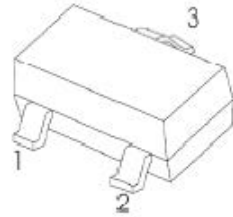
- Low Forward Voltage
- Fast Switching
- AEC-Q101 qualified (Automotive grade with suffix "Q".)
- Exsemi technology

## Equivalent Schematic Diagram

BAS40W    BAS40W-04    BAS40W-05    BAS40W-06



## SOT-323



## Marking Information:

BAS40W	43/B4
BAS40W-04	44/B44
BAS40W-05	45/B45
BAS40W-06	46/B46

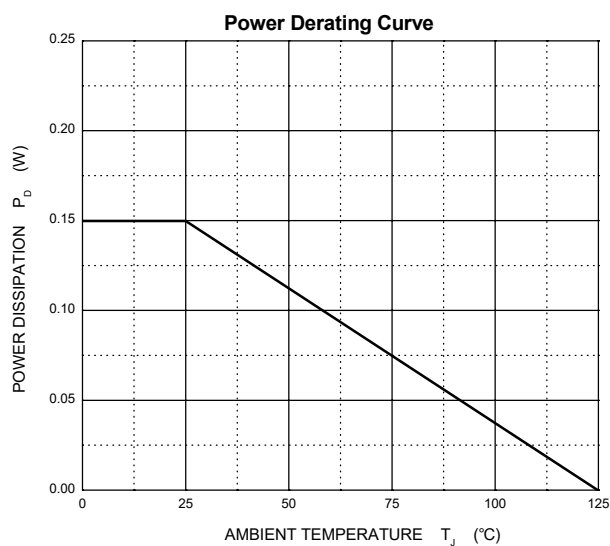
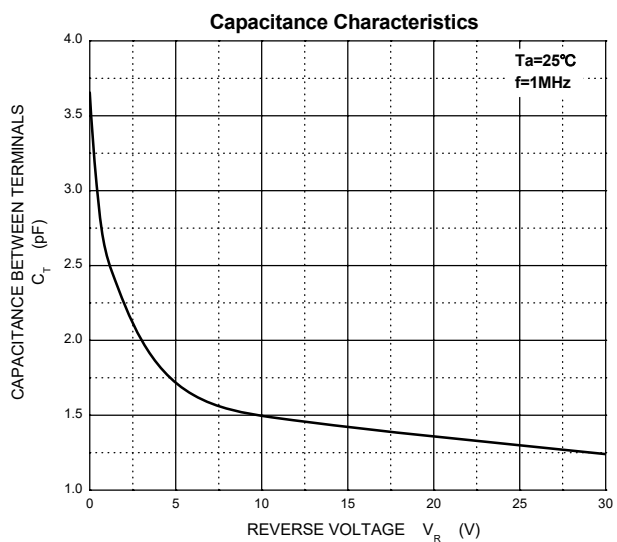
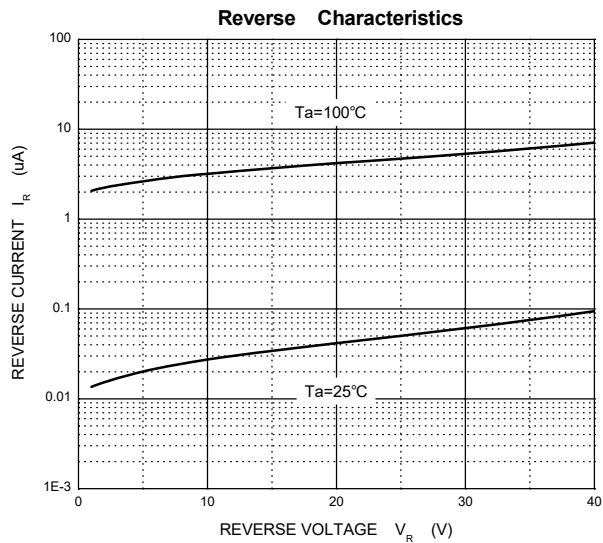
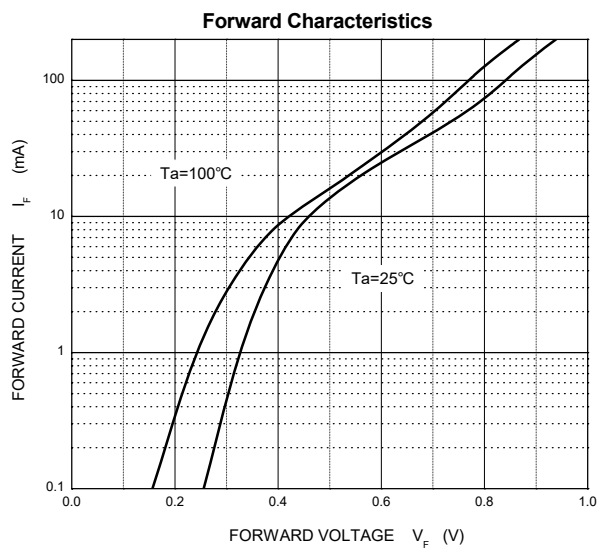
Absolute Maximum Ratings ( $T_A = 25^\circ\text{C}$ )

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	$V_{RRM}$	40	V
Average Rectified Forward Current	$I_{F(AV)}$	200	mA
Power Dissipation	$P_D$	150	mW
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	667	$^\circ\text{C}/\text{W}$
Junction Temperature	$T_J$	125	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	- 55 to + 150	$^\circ\text{C}$

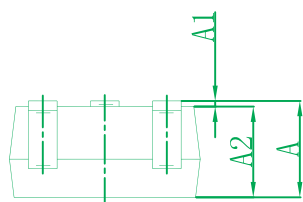
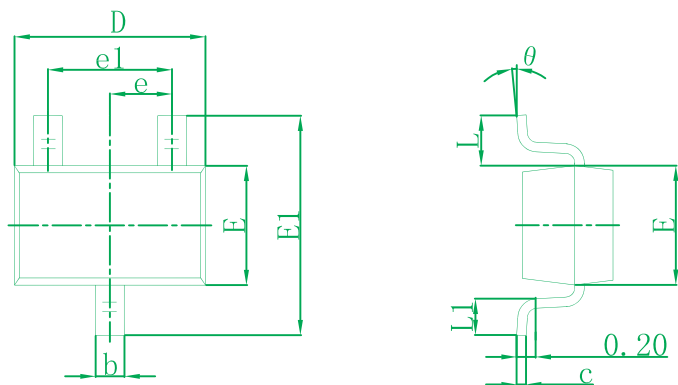
Characteristics at  $T_A = 25^\circ\text{C}$ 

Parameter	Symbol	Min.	Max.	Unit
Forward Voltage at $I_F = 1\text{ mA}$ at $I_F = 40\text{ mA}$	$V_F$	- -	0.38 1	V
Reverse Current at $V_R = 30\text{ V}$	$I_R$	-	0.2	$\mu\text{A}$
Breakdown Voltage at $I_R = 10\ \mu\text{A}$	$V_R$	40	-	V
Total Capacitance at $V_R = 0\text{ V}$ , $f = 1\text{ MHz}$	$C_{tot}$	-	5	pF
Reverse Recovery Time at $I_F = 10\text{ mA}$ , $I_R = 10\text{ mA}$ , $I_{RR} = 1\text{ mA}$ , $R_L = 100\ \Omega$	$t_{rr}$	-	5	ns

Electrical Characteristics Curves

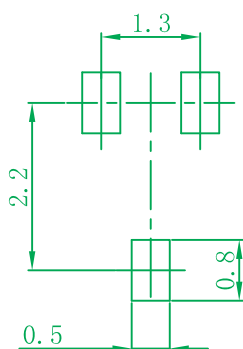


SOT-323 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.200	0.400	0.008	0.016
c	0.080	0.150	0.003	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.450	0.085	0.096
e	0.650 TYP		0.026 TYP	
e1	1.200	1.400	0.047	0.055
L	0.525 REF		0.021 REF	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°

SOT-323 Suggested Pad Layout



Note:  
 1. Controlling dimension: in millimeters.  
 2. General tolerance: ±0.05mm.  
 3. The pad layout is for reference purposes only.

Ordering information

Device	Package	Shipping
BAS40W-XX	SOT-323	3000/Tape&Reel