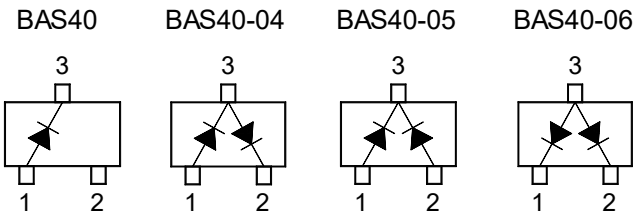


Schottky Barrier Diodes

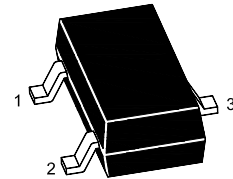
Features

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

Equivalent Schematic Diagram



SOT-23



Marking Information:

BAS40	43/B4
BAS40-04	44/B44
BAS40-05	45/B45
BAS40-06	46/B46

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

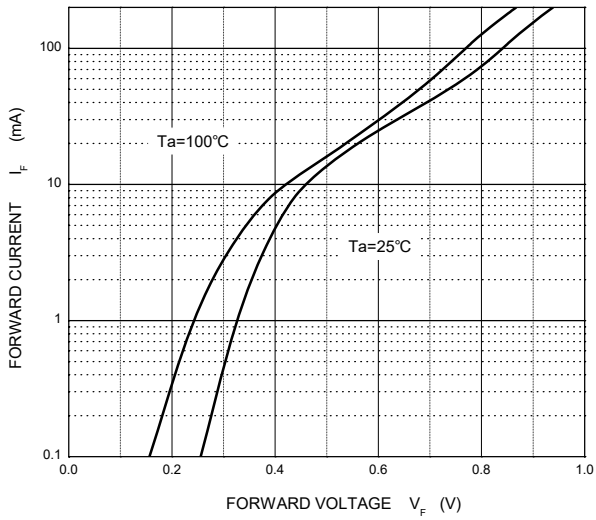
Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	40	V
Average Rectified Forward Current	$I_{F(AV)}$	200	mA
Non-Repetitive Peak Forward Surge Current at $t = 8.3\text{ms}$	I_{FSM}	600	mA
Power Dissipation	P_D	200	mW
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	625	$^\circ\text{C/W}$
Junction Temperature	T_J	125	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	- 55 to + 150	$^\circ\text{C}$

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

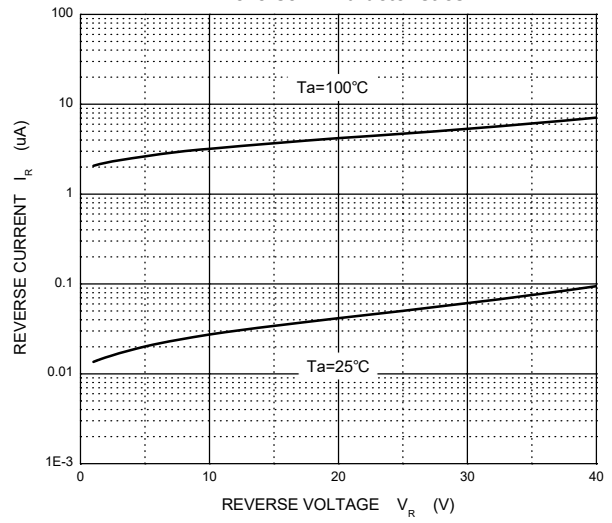
Parameter	Symbol	Min.	Max.	Unit
Forward Voltage at $I_F = 1\text{ mA}$ at $I_F = 40\text{ mA}$	V_F	- -	0.38 1	V
Reverse Current at $V_R = 30\text{ V}$	I_R	-	0.2	μA
Breakdown Voltage at $I_R = 10\ \mu\text{A}$	V_R	40	-	V
Total Capacitance at $V_R = 0\text{ V}$, $f = 1\text{ MHz}$	C_{tot}	-	5	pF
Reverse 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

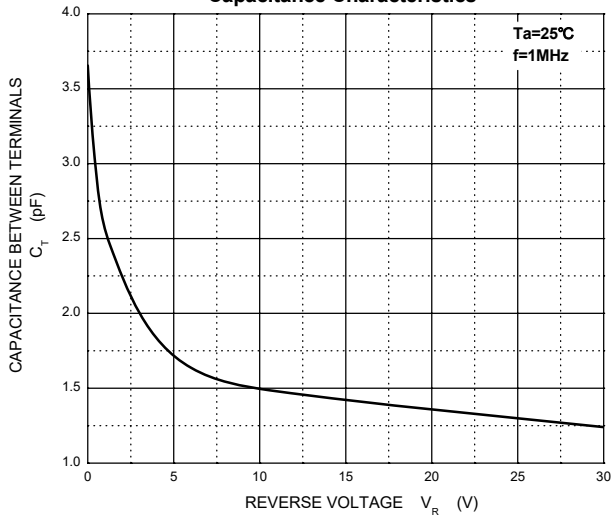
Forward Characteristics



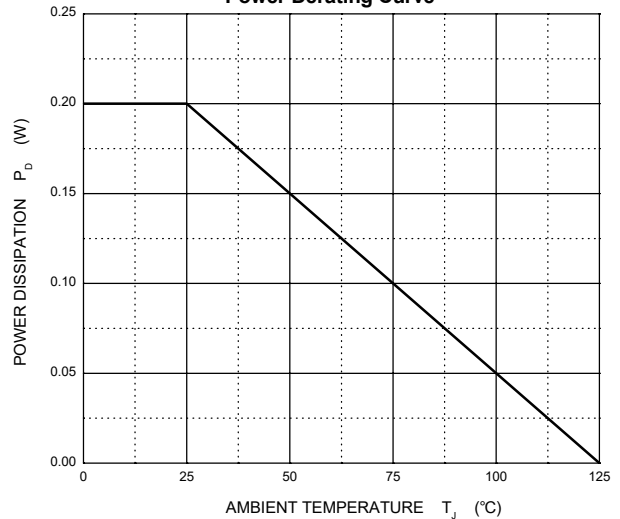
Reverse Characteristics



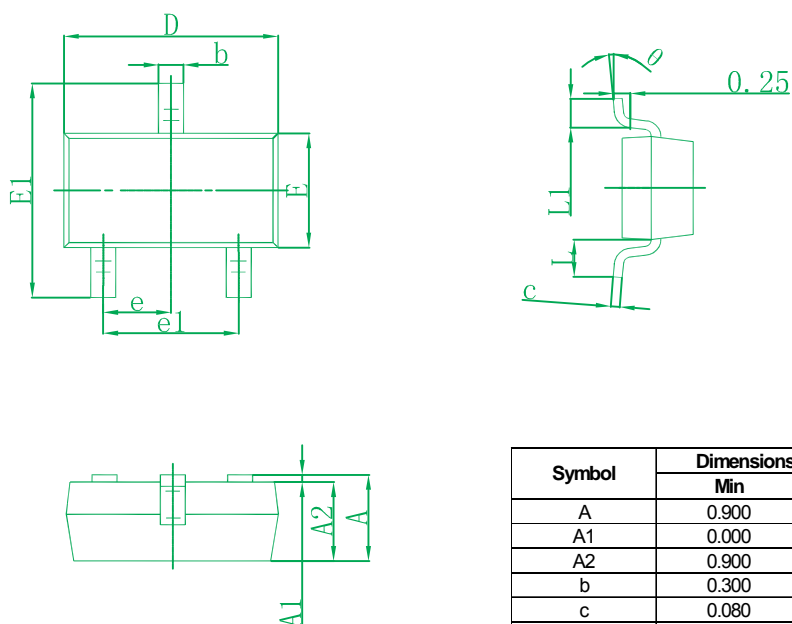
Capacitance Characteristics



Power Derating Curve

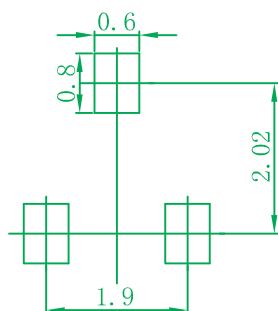


SOT-23 Package Information



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.150	0.035	0.045
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.050	0.110	0.120
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.360 REF		0.014 REF	
θ	0°	8°	0°	8°

SOT-23 Suggested Pad Layout



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

Ordering Information

Device	Package	Reel Dimension (inch)	Shipping
BAS40/-04/-05/-06	SOT-23	7	3,000