

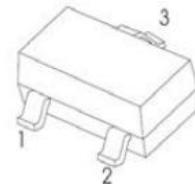
# BAS40/-04/-05/-06

## BAS40/-04/-05/-06 SOT-23 Plastic-Encapsulate Diode

### General description

SOT-23 Plastic-Encapsulate Diode

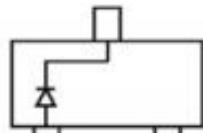
### SOT-23



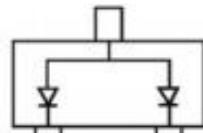
### FEATURES

- High Current Capability
- Low Forward Voltage Drop
- Extremely Fast Switching Speed

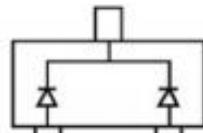
### MARKING



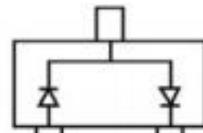
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### Maximum Ratings & Thermal Characteristics (Ratings at 25°C ambient temperature unless otherwise specified.)

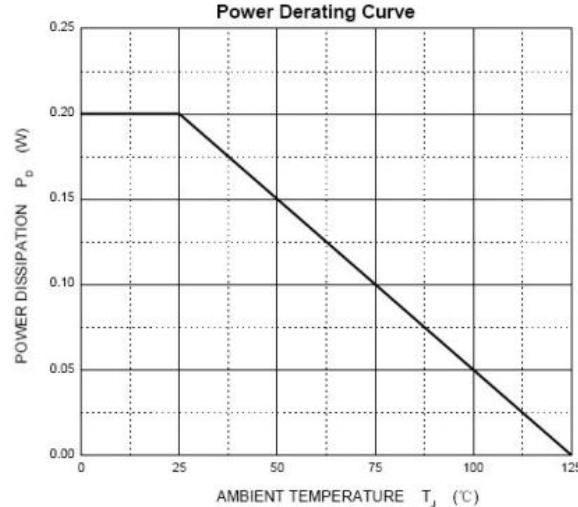
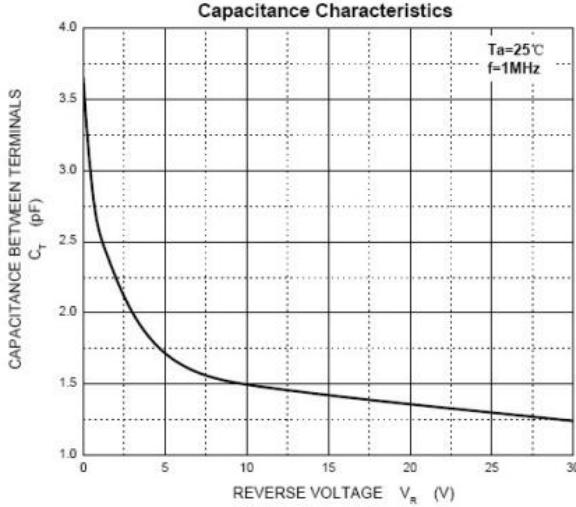
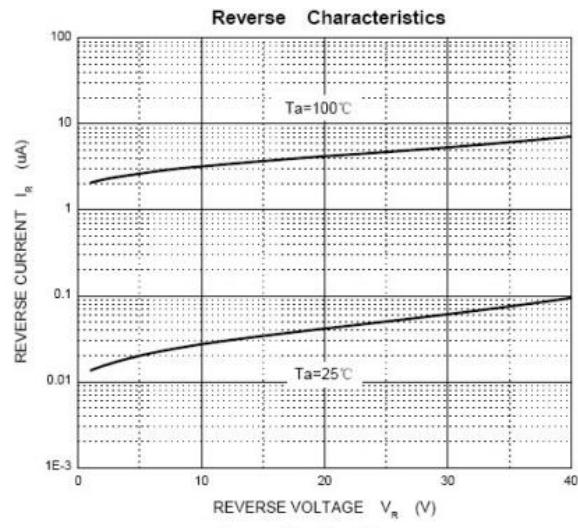
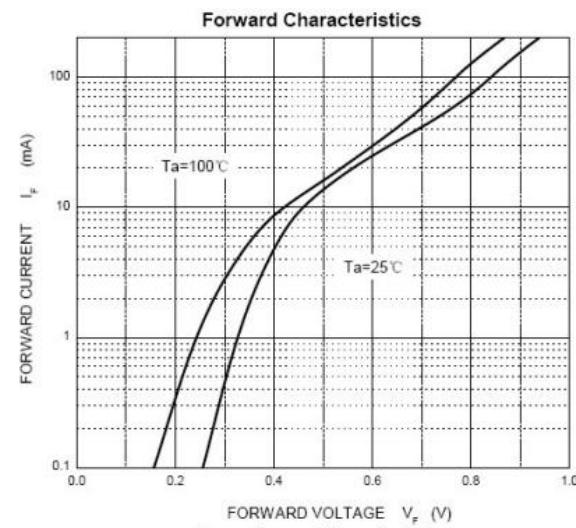
Parameters	Symbol	Limit	Unit
Maximum repetitive peak reverse voltage	VRRM	40	V
Maximum DC blocking voltage	VDC	40	V
Maximum average forward rectified current	IFM	200	mA
Typical thermal resistance	R <sub>θJA</sub>	500	°C/W
Power Dissipation	PD	200	mW
Junction Temperature	T <sub>j</sub>	125	°C
Storage temperature range	T <sub>STG</sub>	-50-+150	°C

### Electrical Characteristics (Ratings at 25°C ambient temperature unless otherwise specified.)

Parameters	Symbol	Test conditions	Min	Typ	Max	Unit
Maximum forward voltage	VF1	IF = 1mA			380	mV
	VF2	IF = 40mA			1000	
Maximum reverse breakdown voltage	VR	IR=10uA	40			V
Maximum reverse current	IR	VR=30V			200	nA
Type junction capacitance	CD	VR = 0V, f = 1MHz			5	pF
Reverse Recovery time	trr	IF=IR=10mA Irr=1XIR, RL=100Ω			5	ns

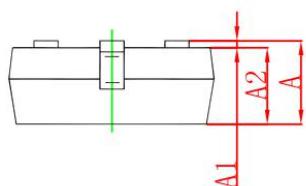
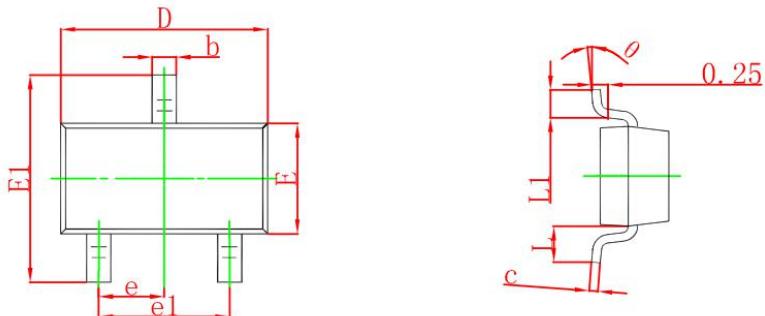
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## Typical Performance Characteristics



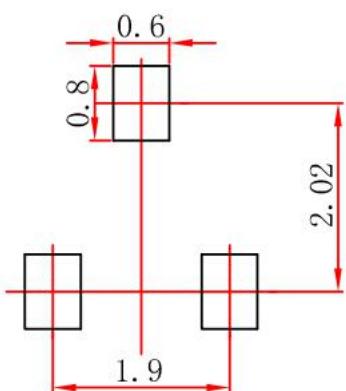
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## SOT-23 PACKAGE OUTLINE



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	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
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	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

## PCB Design (Recommended land dimensions for SOT-23 diode. Electrode patterns for PCBs)



### Note:

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

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