

# BAS40/-04/-05/-06

ROHS

Plastic-Encapsulate Schottky Barrier Diodes



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## Feature

- ◆ Fast Switching
- ◆ Low Forward Voltage

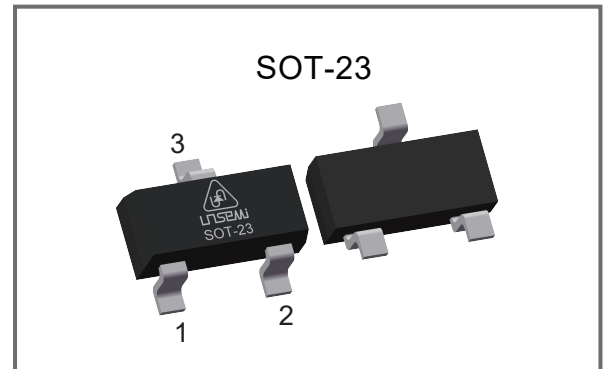
## Mechanical Data

- ◆ Case: SOT-23
- ◆ Molding Compound Flammability Rating : UL 94V-0
- ◆ Quantity Per Reel : 3,000pcs
- ◆ Device Marking: BAS40: 43

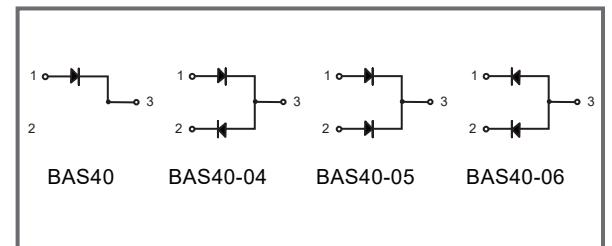
BAS40-04 : 44

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BAS40-06 : 46



## Functional Diagram



## Mechanical Characteristics

Parameter	Symbol	Value	Units
Repetitive Peak Reverse Voltage	VRRM	40	V
Reverse Voltage	VR	40	V
Forward Continuous Current	IFM	0.2	A
Average Rectified Output Current	Io	0.2	A
Non-repetitive Peak Forward Surge Current @t=8.3ms	IFSM	0.6	A
Power Dissipation	PD	0.2	W
Thermal Resistance Junction to Ambient	R <sub>θJA</sub>	500	°C/W
Junction Temperature Range	TJ	-40~+125	°C
Storage Temperature Range	Tstg	-55~+150	°C

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

Parameter	Symbol	Test Conditions	Value		Units
			Min.	Max.	
Reverse Current	IR	VR=30V	-	200	nA
Forward Voltage	VF	IF=1.0mA	-	0.38	V
		IF=40mA	-	1.0	V
Diode Capacitance	CD	VR=0V, f=1MHz	-	5.0	pF
Reverse Recovery Time	trr	IF=IR=10mA, Irr=1mA, RL=100Ω	-	5.0	nS

Electrical Characteristics Curves

Fig.1 Forward Characteristics

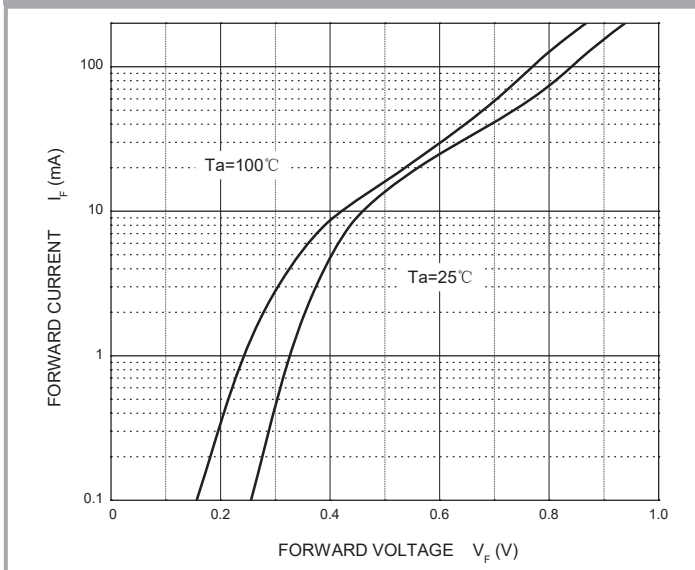


Fig. 2 Reverse Characteristics

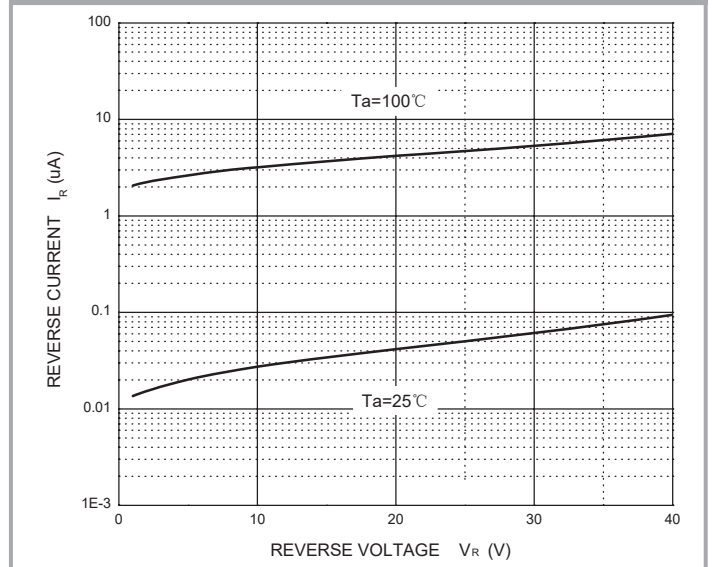


Fig.3 Capacitance Characteristics

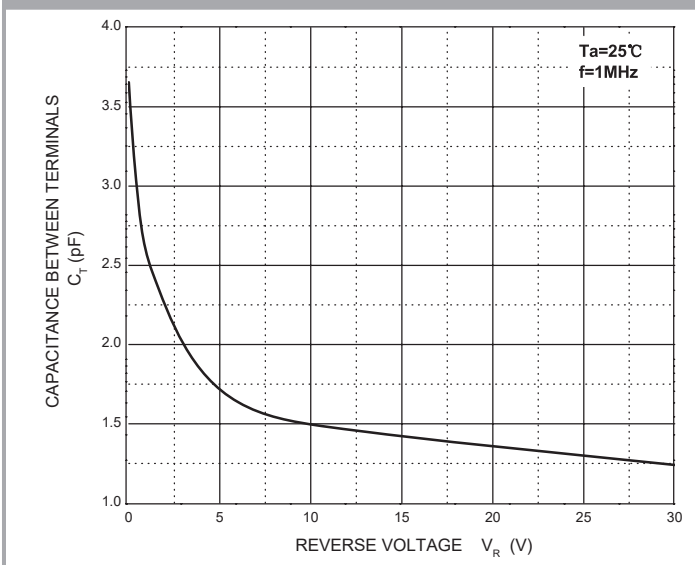
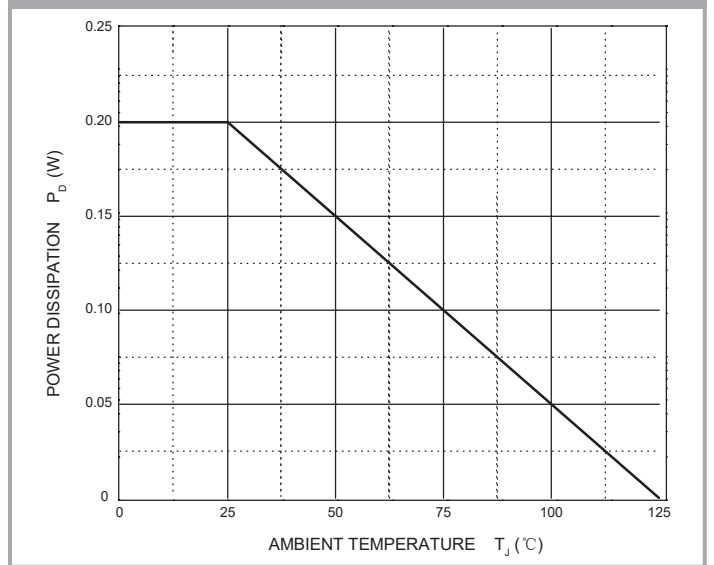
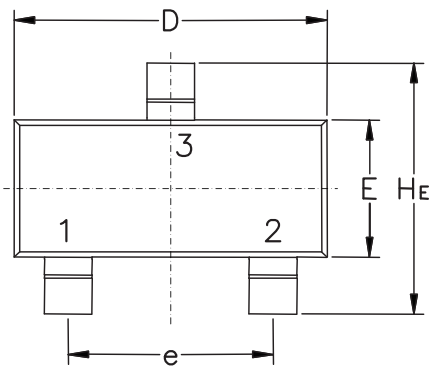


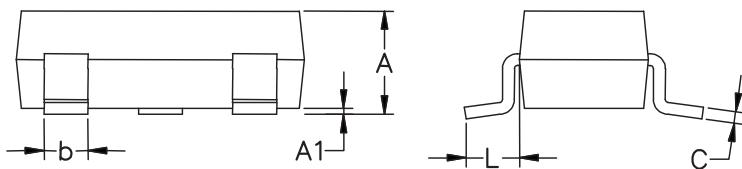
Fig. 4 Power Derating Curve



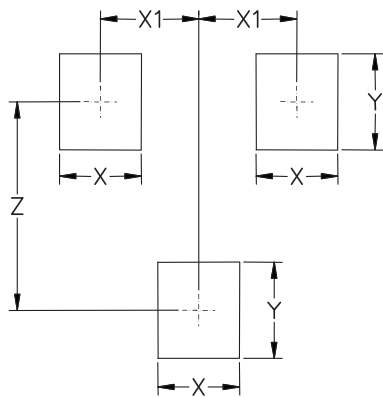
**Package Outline & Dimensions**



Symbol	Millimeters			Inches		
	Min.	Nom.	Max.	Min.	Nom.	Max.
A	1.05	1.11	1.25	0.042	0.044	0.050
A1	0.01	0.06	0.10	0.001	0.002	0.004
b	0.30	0.44	0.50	0.012	0.018	0.020
C	0.09	0.13	0.20	0.003	0.005	0.008
D	2.80	2.90	3.04	0.110	0.114	0.120
E	1.50	1.60	1.70	0.059	0.051	0.067
e	1.78	1.90	2.04	0.070	0.075	0.081
L	0.35	0.54	0.69	0.014	0.021	0.027
HE	2.65	2.80	2.95	0.104	0.112	0.116



**Soldering Footprint**



Symbol	Millimeters	Inches
X	0.80	0.031
X1	0.96	0.037
Y	0.90	0.035
Z	2.40	0.096

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