



**DESCRIPTION**

The BAS40W/-04/-05/-06 is available in SOT-323 package.

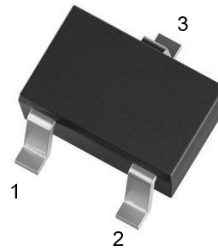
**APPLICATION**

- Low Forward Voltage Drop
- Fast Switching
- Ultra-Small Surface Mount Package
- PN Junction Guard Ring for Transient and ESD Protection

**APPLICATION**

- Case: SOT-323, Molded Plastic
- Case Material-UL Flammability Rating Classification 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020A
- Thermals: Solderable per MIL-STD-20, Method 208
- Weight: 0.006 grams (approx.)

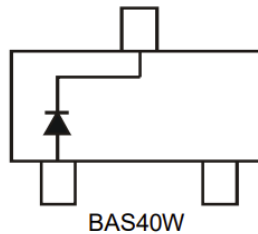
**PIN DESCRIPTION**



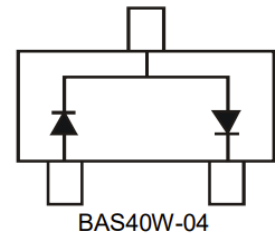
SOT-323

**ORDERING INFORMATION**

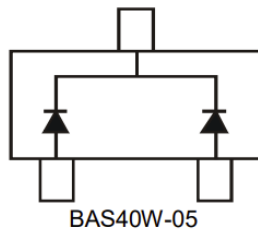
Package Type	Part Number
SOT-323	BAS40W
	BAS40W-04
	BAS40W-05
	BAS40W-06
SPQ	3,000pcs/Reel
AiT provides all RoHS Compliant Products	



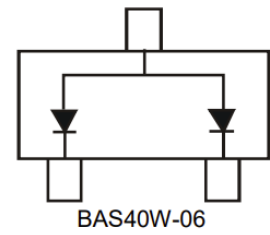
BAS40W



BAS40W-04



BAS40W-05



BAS40W-06



## ABSOLUTE MAXIMUM RATINGS

T<sub>A</sub> = 25°C, unless otherwise specified.

V <sub>RRM</sub> , Peak Repetitive Reverse Voltage	40V
V <sub>RWM</sub> , Working Peak Reverse Voltage	40V
V <sub>RRM</sub> , DC Blocking Voltage	40V
V <sub>R(RMS)</sub> , RMS Reverse Voltage	28V
I <sub>FM</sub> , Forward Continuous Current	200mA
I <sub>FSM</sub> , Non-Repetitive Peak Forward Continuous Current	t = 1.0 s 600mA
P <sub>d</sub> , Power Dissipation	200mW
R <sub>θJA</sub> , Thermal Resistance Junction to Ambient Air *	625°C/W
T <sub>J</sub> , Operating Temperature Range	-55°C ~ + 125°C
T <sub>STG</sub> , Storage Temperature Range	-65°C ~ + 150°C

Stresses above may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other conditions beyond those indicated in the Electrical Characteristics are not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

## ELECTRICAL CHARACTERISTICS

T<sub>A</sub>=25°C unless otherwise specified.

Parameter	Symbol	Conditions	Min	Typ.	Max	Unit
Reverse Breakdown Voltage	V <sub>(BR)R</sub>	I <sub>R</sub> = 10μA	40	-	-	V
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> = 1mA, t <sub>p</sub> < 300μs	-	-	380	mV
		I <sub>F</sub> = 40mA, t <sub>p</sub> < 300μs	-	-	1000	
Leakage Current	I <sub>R</sub>	V <sub>R</sub> = 30V	-	-	200	nA
Total Capacitance	C <sub>T</sub>	V <sub>R</sub> = 0, f = 1.0MHz	-	-	5	pF
Reverse Recovery Time	t <sub>rr</sub>	I <sub>F</sub> = I <sub>R</sub> = 10mA, I <sub>rr</sub> = 0.1 x I <sub>R</sub> , R <sub>L</sub> = 100Ω	-	-	5	ns



## TYPICAL CHARACTERISTICS

Fig 1. Typical Forward Voltage

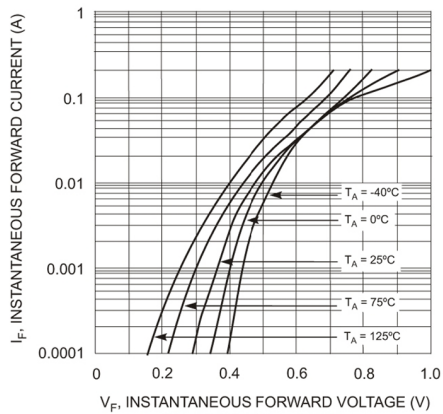


Fig 2. Typical Reverse Characteristics

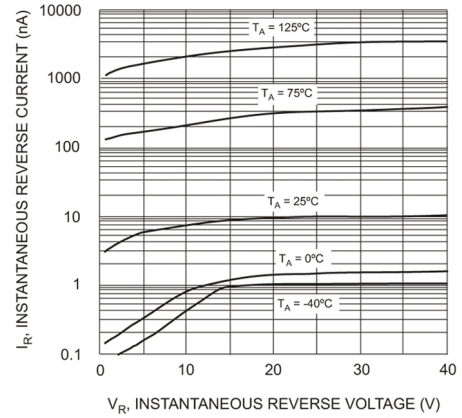


Fig 3. Typical Capacitance

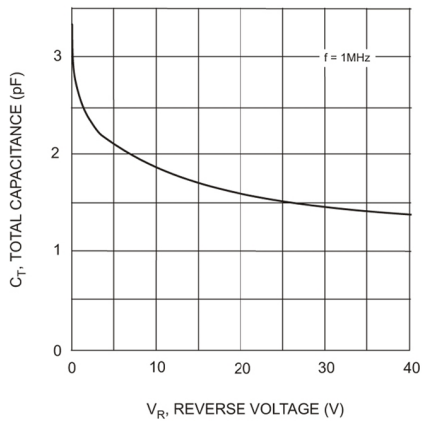
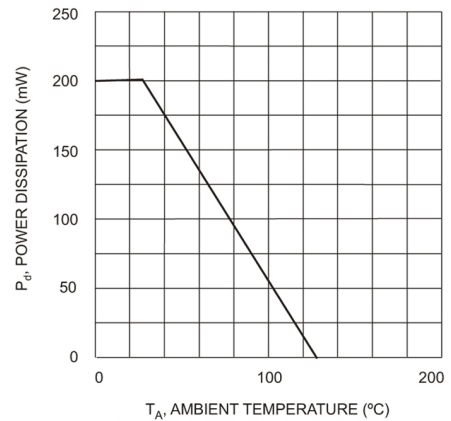


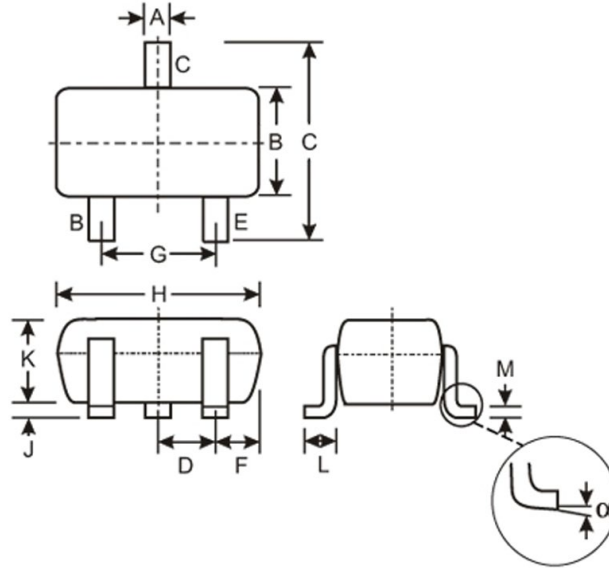
Fig 4. Power Derating Curve, Total Package





## PACKAGE INFORMATION

Dimension in SOT-323 (Unit: mm)



SYMBOL	MILLIMETERS	
	Min.	Max.
A	0.250	0.400
B	1.150	1.350
C	2.000	2.200
D	0.650 TYP.	
E	0.300	0.400
G	1.200	1.400
H	1.800	2.200
J	0.000	0.100
K	0.900	1.000
L	0.250	0.400
M	0.100	0.180
$\alpha$	0°	8°



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