



Micro Commercial Components

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# BAS40 THRU BAS70

## Surface Mount Schottky Barrier Diode 200 mWatt

### Features

- SOT-23 Package For surface mount application
- Protects from line to  $V_{CC}$  and line to ground
- Low forward voltage and reverse recovery characteristics
- Bidirectional-low-forward available with “-04” suffix (Figure 2)
- Tape & Reel EIA Standard 481.

### Mechanical Data

- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Mounting Position: Any
- Weight: .008 grams (approx.)

### MAXIMUM RATINGS

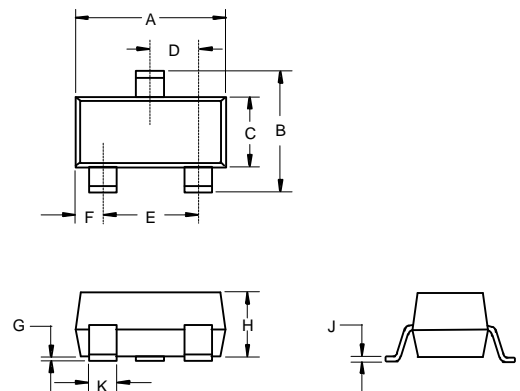
- Operating Temperature:  $-55^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$
- Storage Temperature:  $-55^{\circ}\text{C}$  to  $+150^{\circ}\text{C}$
- Power Dissipation: 200 mWatts @  $T_{amb}=25^{\circ}\text{C}$
- Forward Continuous Current: 200mA @  $T_{amb}=25^{\circ}\text{C}$
- Surge Forward Current: 600mA @  $t_p < 1s, T_{amb}=25^{\circ}\text{C}$

### DESCRIPTION

Various configurations of Schottky barrier's diodes in SOT-23 package are provided for general-purpose use in high-speed switching ,mixers and detector applications. They may also be used for signal integrity and counteract the transmission-line effects with (PC) board trances by clamping over/and undershoot from signal reflections with the schottky-low-threshold voltages.

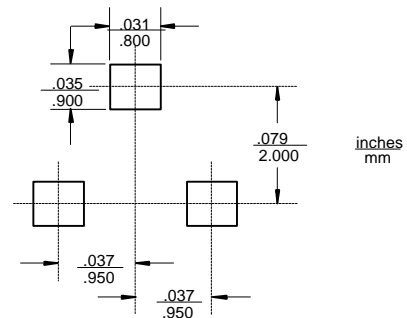
This type of termination also does not depend on matching the transmission line characteristic impedance, making it particularly useful where line impedance is unknown or a variable. This method of termination can control distortions of clock, data, address, and control lines as well as provides a stabilizing effect on signal jitter. It can also significantly reduce power consumption compared to standard resistor-based termination methods.

### SOT-23



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.110	.120	2.80	3.04	
B	.083	.098	2.10	2.64	
C	.047	.055	1.20	1.40	
D	.035	.041	.89	1.03	
E	.070	.081	1.78	2.05	
F	.018	.024	.45	.60	
G	.0005	.0039	.013	.100	
H	.035	.044	.89	1.12	
J	.003	.007	.085	.180	
K	.015	.020	.37	.51	

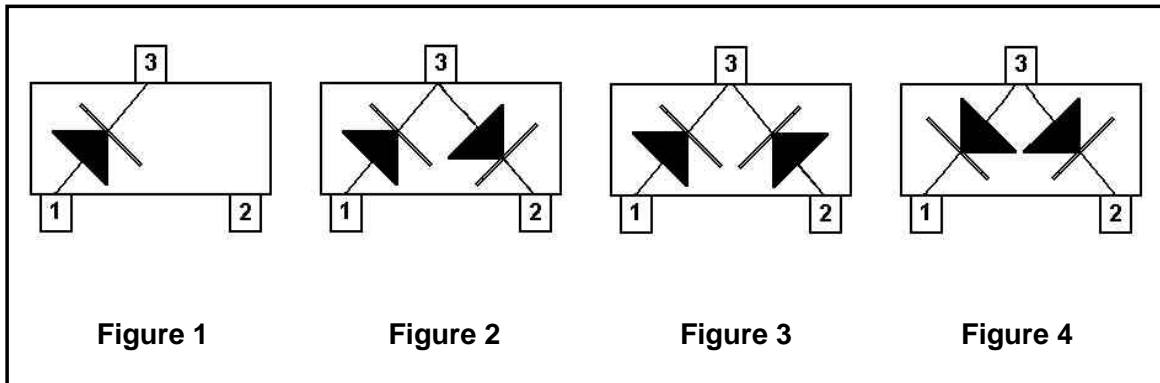
### Suggested Solder Pad Layout



# BAS40 and BAS70

## ELECTRICAL CHARACTERISTICS PER DIODE @ 25°C Unless otherwise specified

DEVICE TYPE	DEVICE MARKING	FIGURE	Repetitive Peak Reverse Voltage	Reverse Breakdown Voltage Tested with 10µA Pulse	Leakage Current Pulse test $t_p < 300\mu s$ @		Forward Voltage Pulse Test $t_p < 300\mu s$ at $I_F = 1\text{ mA}$ at $I_F = 40\text{ mA}$			Reverse Recovery Time from $I_F = 10\text{ mA}$ through $I_R = 10\text{ mA}$ to $I_R = 1\text{ mA}$	Thermal Resistance Junction to Ambient Air	Capacitance At $V_R = 0\text{ V}$ $F = 1\text{ MHz}$ $C_{tot}$
			$V_{RRM}$ (VOLTS)	$V_{BR(R)}$ (VOLTS)	$I_R$ (nA)		$V_F$ (mV)			$t_{rr}$ (ns)	$R_{thJA}$ (K/W)	pF
			TYP	MIN	TYP	MAX	$I_F = 1\text{ mA}$	$I_F = 15\text{ mA}$	$I_F = 40\text{ mA}$	MAX	MAX	MAX
BAS40	43	1	40	40	20	200	380		1000	5	430	5
BAS40-04	44	2	40	40	20	200	380		1000	5	430	5
BAS40-05	45	3	40	40	20	200	380		1000	5	430	5
BAS40-06	46	4	40	40	20	200	380		1000	5	430	5
BAS70	73	1	70	70	20	200	410	1000		5	430	2
BAS70-04	74	2	70	70	20	200	410	1000		5	430	2
BAS70-05	75	3	70	70	20	200	410	1000		5	430	2
BAS70-06	76	4	70	70	20	200	410	1000		5	430	2





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