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

- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Halogen free available upon request by adding suffix "-HF"
- Mounting Position: Any
- Weight: .008 grams (approx.)

MAXIMUM RATINGS

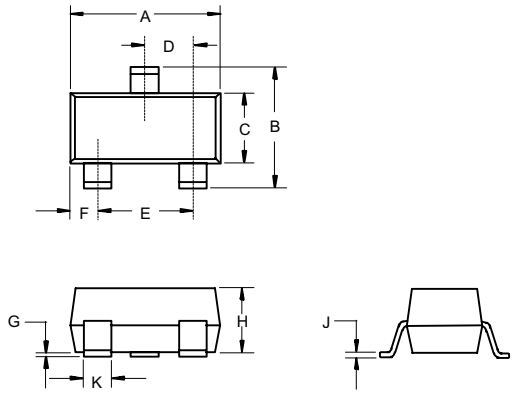
- Operating Temperature: -55°C to +125°C
- Storage Temperature: -55°C to +150°C
- Power Dissipation: 200 mWatts @ T_{amb}=25°C
- Forward Continuous Current: BAS40 I_F =200mA@ T_a=25°C; BAS70 I_F =70mA @ T_a=25°C
- Surge Forward Current: BAS40 I_{FSM}=600mA @ tp<1s, Tamb=25°C; BAS70 I_{FSM}=100mA @ tp<1s, Tamb=25°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.

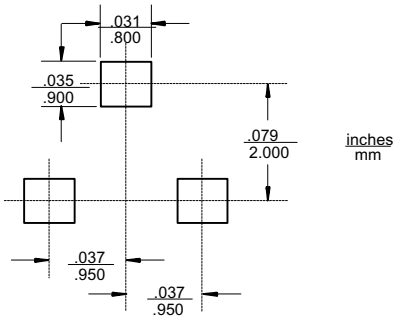
This type of termination also does not depend on matching the transmission line characteristic impedance, making it particularly useful where line impendance is unknown or a variable. This methode of termination can control distortions of clock, data, address, and control lines as well as provides a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

SOT-23



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.110	.120	2.80	3.04	
B	.083	.104	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



ELECTRICAL CHARACTERISTICS PER DIODE @ 25^{0}C Unless otherwise specified

DEVICE TYPE	DEVICE MARKING	FIGURE	Repetitive Peak Reverse Voltage V_{RRM} (VOLTS)	Reverse Breakdown Voltage Tested with 10µA Pulse $V_{(BR)R}$ (VOLTS)	Leakage Current Pulse test tp < 300µs @ For BAS40 V_R = 30 V For BAS70 V_R = 50 V I_R (nA)		Forward Voltage Pulse Test tp < 300µs at I_F = 1 mA at I_F = 40 mA V_F (mV)			Reverse Recovery Time from I_F = 10 mA through I_R=10mA to I_R=1mA t_{rr} (ns)	Thermal Resistance Junction to Ambient Air R_{thJA} (K/W)	Capacitance At V_R = 0V F = 1 MHz C_{tot} pF
			TYP	MIN	TYP	MAX	I_F=1mA	I_F=15mA	I_F=40mA	MAX	MAX	MAX
BAS40	43	1	40	40	10	200	380		1000	5	430	5
BAS40-04	44	2	40	40	10	200	380		1000	5	430	5
BAS40-05	45	3	40	40	10	200	380		1000	5	430	5
BAS40-06	46	4	40	40	10	200	380		1000	5	430	5
BAS70	73	1	70	70	10	200	410	1000		5	430	2
BAS70-04	74	2	70	70	10	200	410	1000		5	430	2
BAS70-05	75	3	70	70	10	200	410	1000		5	430	2
BAS70-06	76	4	70	70	10	200	410	1000		5	430	2

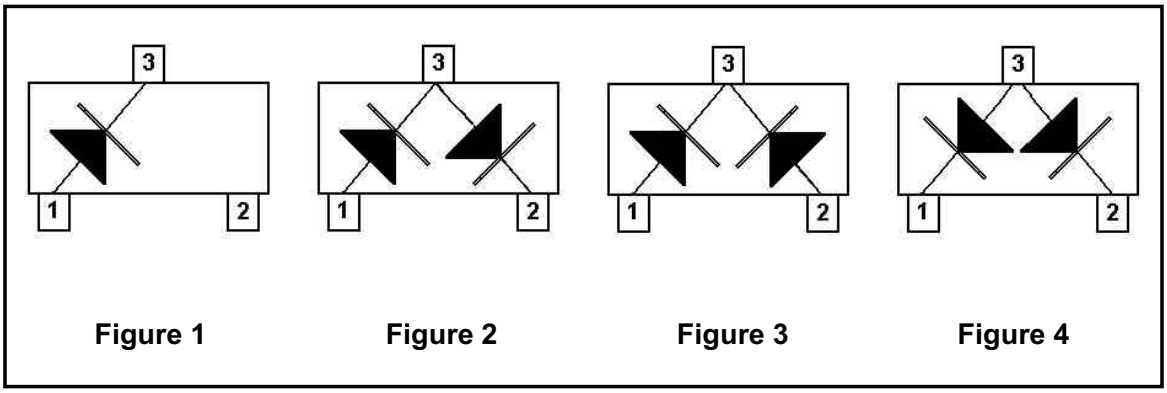


Figure 1 **Figure 2** **Figure 3** **Figure 4**

Typical Characteristics

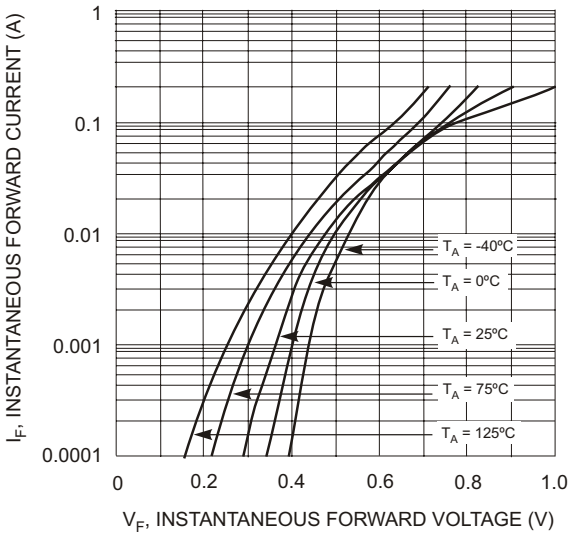


Fig. 1 Typical Forward Voltage

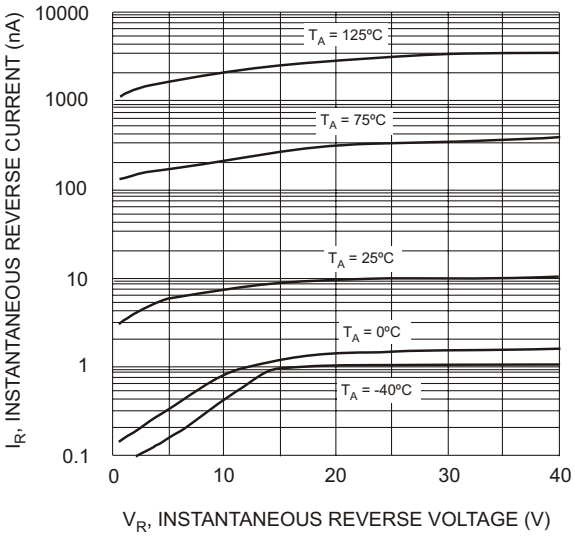


Fig. 2 Typical Reverse Characteristics

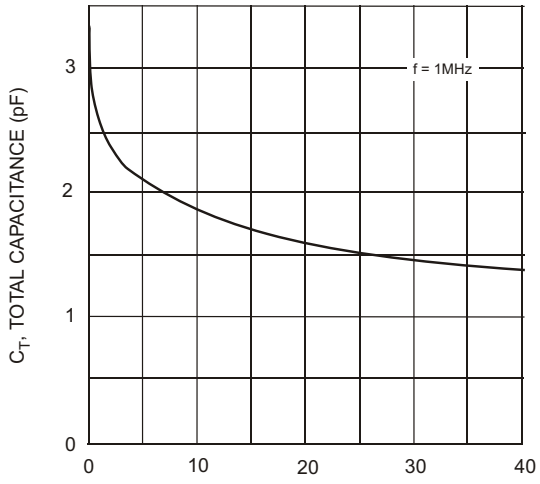


Fig. 3 Typical Capacitance

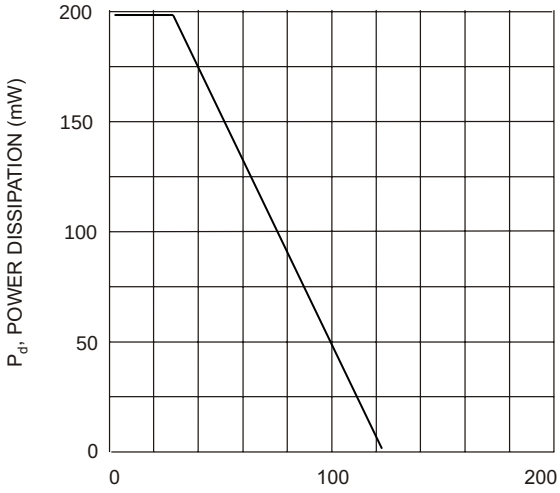


Fig. 4 Power Derating Curve, Total Package

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Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel: 3Kpcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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