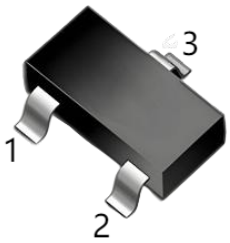
Schottky Barrier Diode

Parameter	Value	Unit
V_{RRM}	70	V
$I_{F(AV)}$	70	mA



SOT-23

Features

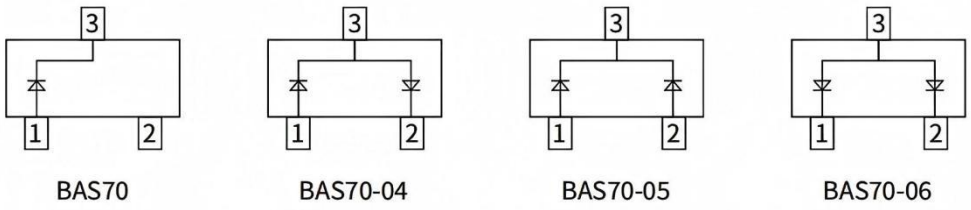
- Low Profile Package
- High Current Capability
- Low Forward Voltage Drop
- Extremely Fast Switching Speed

Applications

- Low Voltage
- High-Frequency Inverters
- Free Wheeling
- Polarity Protection

Marking Information

Marking:
BAS40:43
BAS40-04:44
BAS40-05:45
BAS40-06:46



Absolute Maximum Ratings(Ta=25℃unless otherwise noted)

Parameter	Symbol	Value	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	70	V
Maximum RMS voltage	V_{RMS}	49	V
Maximum DC blocking voltage	V_{DC}	70	V
Maximum average forward rectified current	$I_{F(AV)}$	70	mA
Non-repetitive Peak Forward Surge Current @t=8.3ms Half-sine wave	I_{FSM}	100	mA
Power Dissipation	P_D	200	mW
Junction Temperature	T_J	-55 ~+125	℃
Storage temperature range	T_{STG}	-55 ~+125	℃
Typical thermal resistance	$R_{\theta JA}$	500	℃ /W

Electrical Characteristics(Ta=25℃unless otherwise noted)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Maximum forward voltage	V_F	I_F=1.0mA	-	-	410	mV
		I_F=15mA	-	-	1000	
Maximum reverse current	I_R	V_R=50V	-	-	0.2	μA
Capacitance between terminals	C_T	V_R=1.0V, f=1MHz	-	2.0	-	pF
Reverse breakdown voltage	V_R	I_R=10μA	-	-	70	V
Maximum reverse recovery time	t_{rr}	I_F=I_R=10mA,$I_{(REC)}$=1.0mA	-	-	5.0	ns

Typical Characteristics

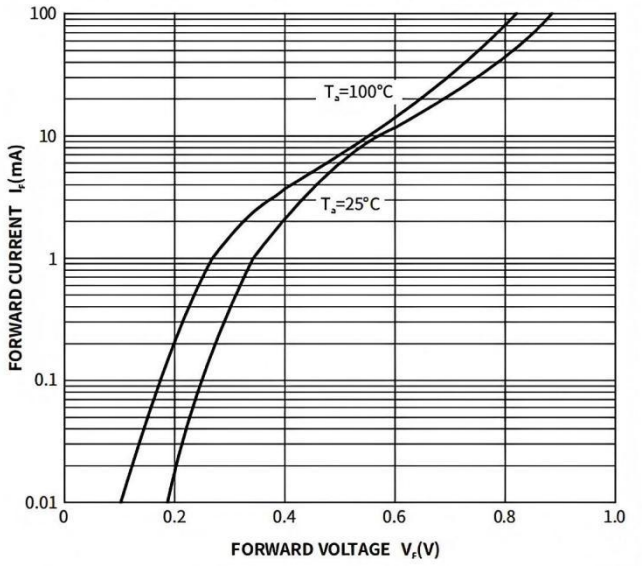


Fig.1 Typical Instantaneous Forward Characteristics

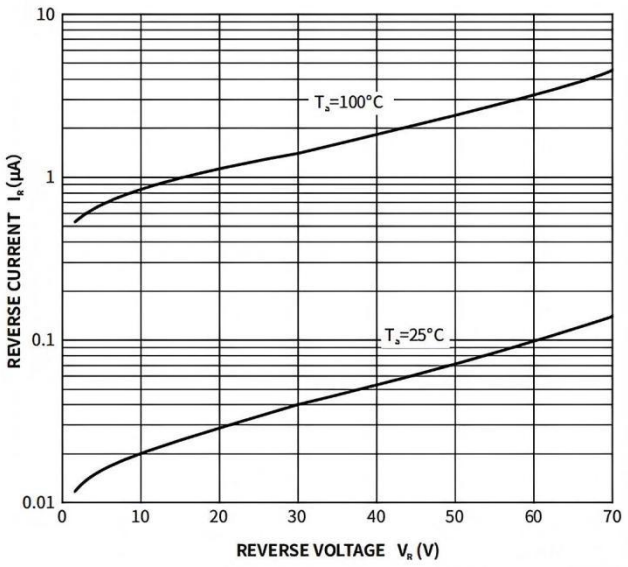


Fig.2 Typical Reverse Characteristics

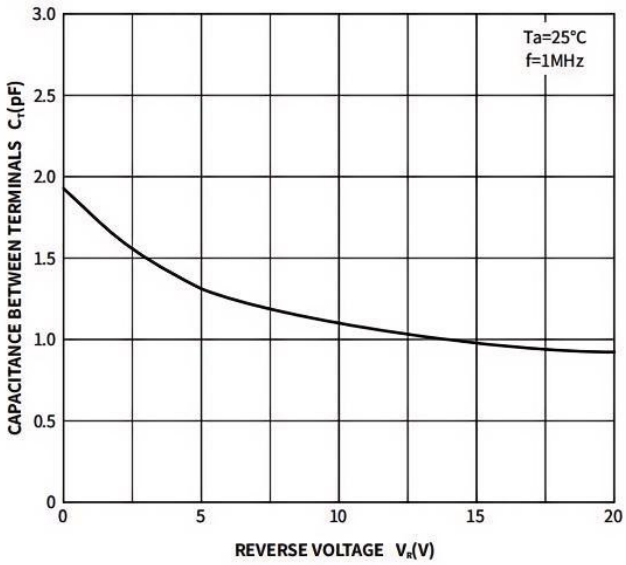


Fig.3 Typical Junction Capacitance

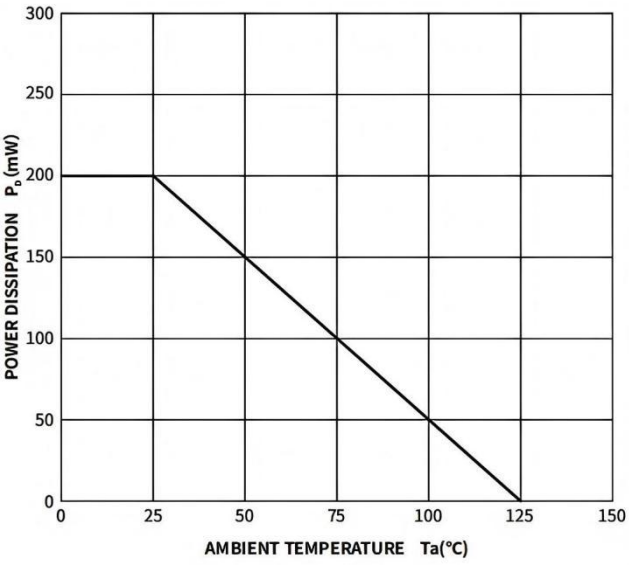
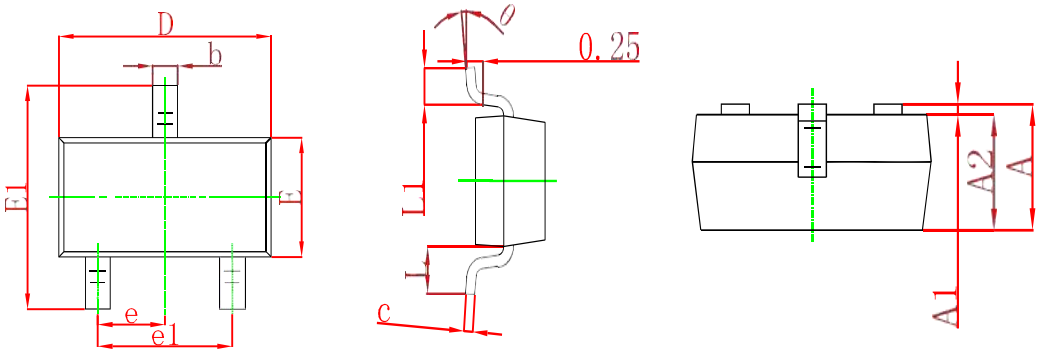


Fig.4 Power Derating Curve

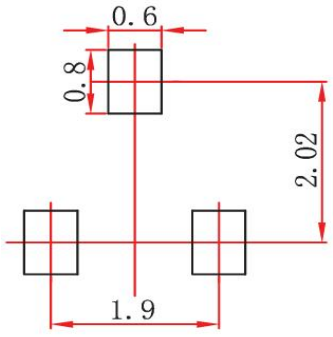
Package Outlines (Units: mm)

SOT-23



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°

SOT-23 Suggested Pad Layout



Note:

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

***Important Usage Information and Disclaimer**

The specifications of Zhuhai Hypersemi Co., Ltd. products are not guarantees of product characteristics. They reflect typical performance expected in standard applications, which may vary with specific uses. Users must conduct prior testing for their applications and make necessary adjustments.

Users are responsible for the safety of applications utilizing our products and must implement adequate safety measures to prevent physical injury, fire, or other risks in case of product failure. It is the user's duty to ensure that application designs comply with all applicable laws and standards. Our products must not be used in any applications where a product failure could reasonably result in personal injury, unless specifically authorized in a signed document by Zhuhai Hypersemi Co., Ltd.

No representations or warranties are made regarding the accuracy or completeness of this information, including any claims of non-infringement of third-party intellectual property rights. Zhuhai Hypersemi Co., Ltd. assumes no liability for any applications or uses of its products and does not grant any licenses to its intellectual property rights or those of others. We also make no claims regarding non-infringement of third-party intellectual property rights that may arise from applications.

Due to technical requirements, our products may contain hazardous substances. For details, please contact your nearest sales office. This document replaces all previous information and may be updated. We reserve the right to make changes.