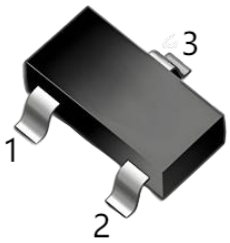
Schottky Barrier Diode

Parameter	Value	Unit
V_{RRM}	40	V
$I_{F(AV)}$	200	mA



SOT-23

Features

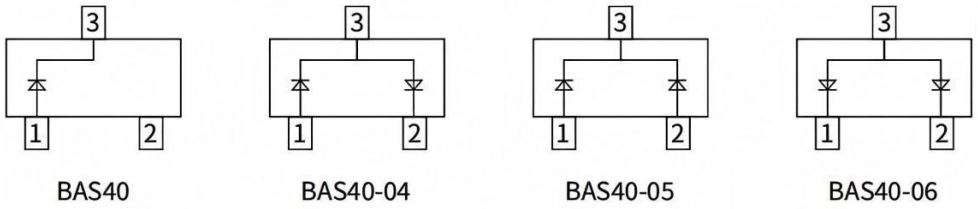
- Low Profile Package
- High Current Capability
- Low Forward Voltage Drop
- Extremely Fast Switching Speed

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}	40	V
Maximum RMS voltage	V_{RMS}	28	V
Maximum DC blocking voltage	V_{DC}	40	V
Maximum average forward rectified current	$I_{F(AV)}$	200	mA
Non-repetitive Peak Forward Surge Current @t=8.3ms Half-sine wave	I_{FSM}	600	mA
Power Dissipation	P_D	200	mW
Junction Temperature	T_J	125	℃
Storage temperature range	T_{STG}	-55 ~+150	℃
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	-	-	0.38	V
		I_F=30mA	-	-	1.0	
Maximum reverse current	I_R	V_R=30V	-	-	0.2	μA
Type junction capacitance	C_j	V_R=0V, f=1MHz	-	-	5.0	pF
Maximum reverse recovery time	t_{rr}	I_F=I_R=10mA,$I_{(REC)}$=1.0mA	-	-	5.0	ns

Typical Characteristics

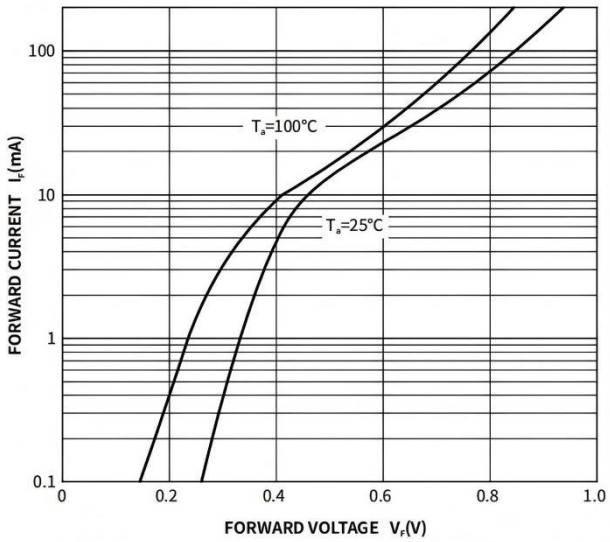


Fig.1 Typical Instantaneous Forward Characteristics

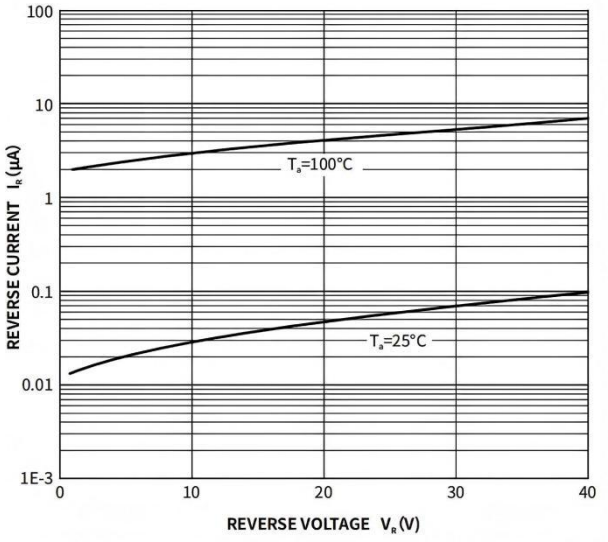


Fig.2 Typical Reverse Characteristics

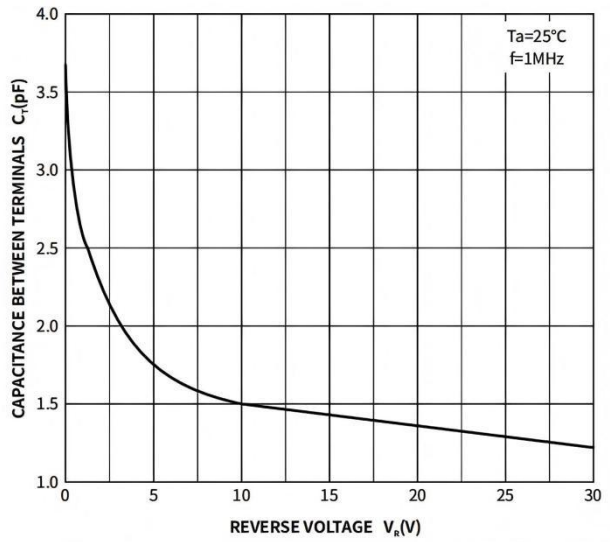


Fig.3 Typical Junction Capacitance

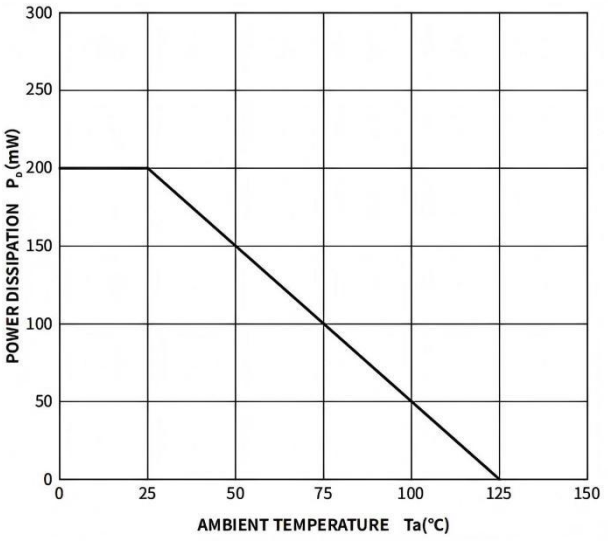
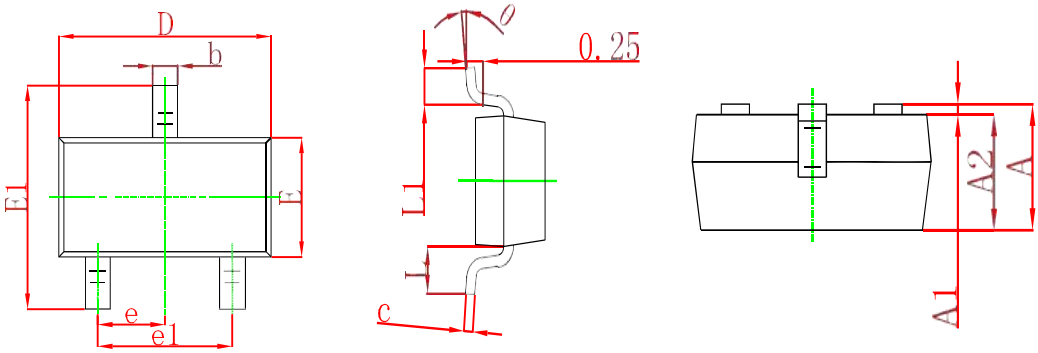


Fig.4 Power Derating Curve

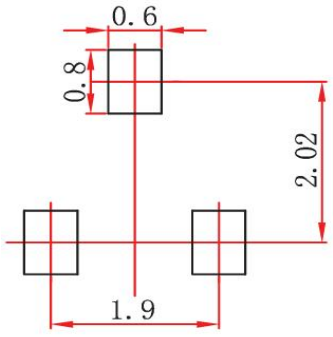
Package Outlines (Units: mm)

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**

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