BAS40 Series
Schottky Diode

Features

- Low turn-on voltage
- Fast switching
- PN junction guard ring for transient and ESD protection

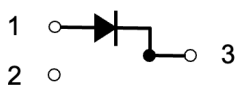
SOT-23

Applications

- High speed switching applications
- Circuit protecting
- Voltage clamping

Schematic Diagram

BAS40



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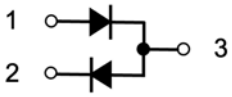
BAS40-04



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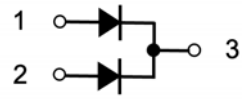
BAS40-05



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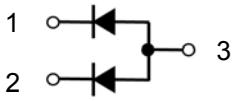
BAS40-06



Marking: 46

Absolute Maximum Ratings (T_A=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	40	V
Working Peak Reverse Voltage	V_{RWM}		V
DC Reverse Voltage	V_R		V
Forward Continuous Current	I_{FM}	200	mA
Power Dissipation	P_D	200	mW
Forward Surge Current (8.3 ms single half sine-wave)	I_{FSM}	600	mA
Thermal Resistance, Junction-to-Ambient	$R_{\theta JA}$	357	°C/W
Operating Junction Temperature Range	T_J	-55 To +125	°C
Storage Temperature Range	T_{STG}	-65 To +150	°C

Electrical Characteristics (T_A=25°C unless otherwise noted)

Parameter	Symbol	Conditions	Min.	Max.	Unit
Reverse Breakdown Voltage	$V_{(BR)R}$	I_{RS}=10μA	40	-	V
Forward Voltage	V_F	t_P<300μs, I_F=1mA	-	380	mV
		t_P<300μs, I_F=40mA	-	1000	mV
Reverse Leakage Current	I_R	t_P<300μs, V_R=30V	-	200	nA
Junction Capacitance	C_J	V_R=0V, f=1MHz	-	5	pF
Reverse Recovery Time	t_{rr}	I_F=I_R=10mA, R_L = 100Ω I_R=1.0mA	-	5	ns

Typical Characteristic Curves (T_A=25°C unless otherwise noted)

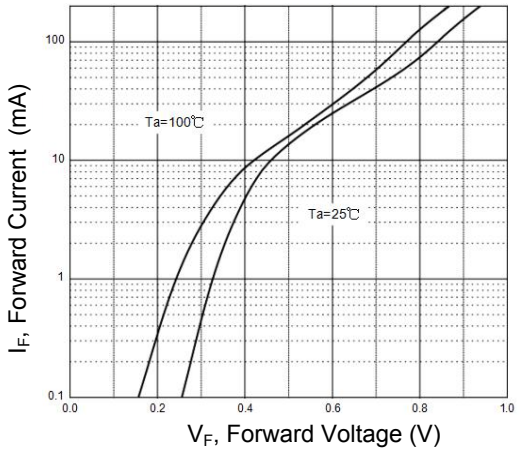


Figure 1. Forward Characteristics

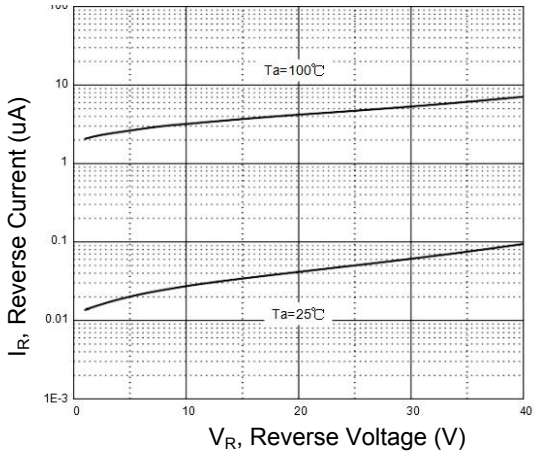


Figure 2. Reverse Characteristics

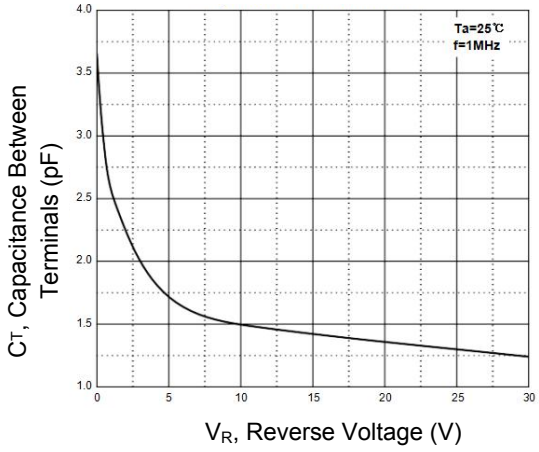


Figure 3. Capacitance Characteristics

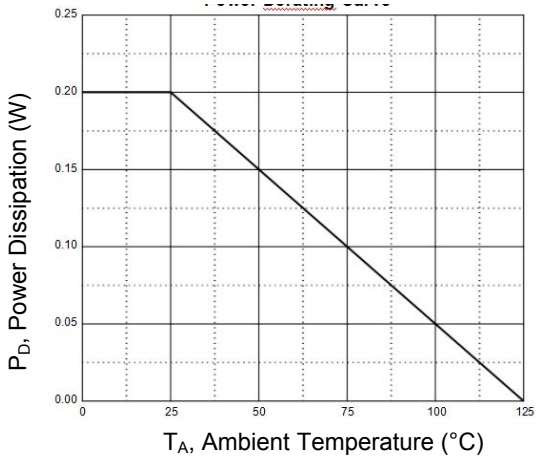
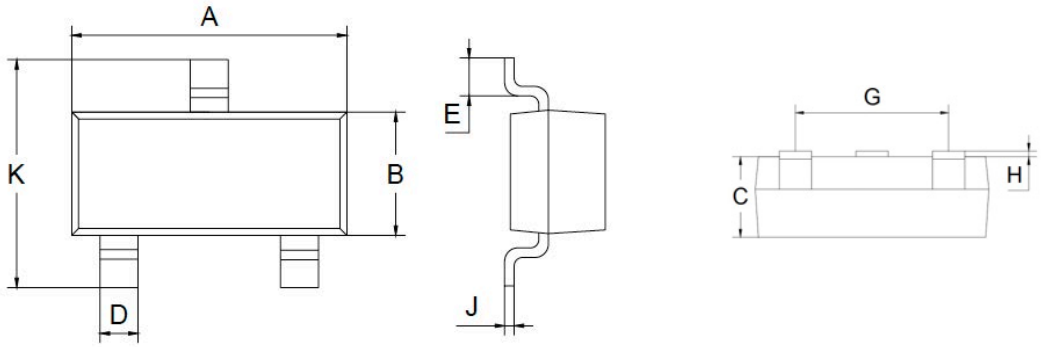


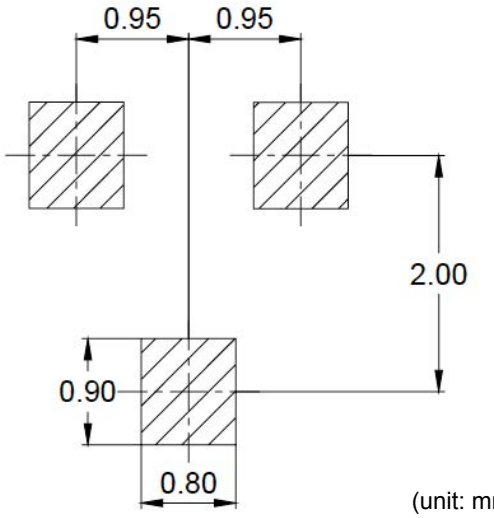
Figure 4. Power Derating Curve

Package Outline Dimensions (SOT-23)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	2.700	3.100	0.106	0.122
B	1.100	1.500	0.043	0.059
C	1.000 TYP		0.039 TYP	
D	0.400 TYP		0.016 TYP	
E	0.350	0.480	0.014	0.019
G	1.800	2.000	0.071	0.079
H	0.020	0.100	0.001	0.004
J	0.100 TYP		0.004 TYP	
K	2.200	2.600	0.087	0.102

Recommended Pad Layout



(unit: mm)