

Features

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

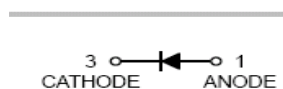
HF

Applications

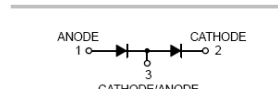
- High speed switching applications
- Circuit protecting
- Voltage clamping

Mechanical Data

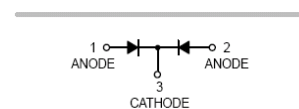
- Case: SOT-23
- Molding compound: UL flammability classification rating 94V-0
- Terminals: Tin-plated; solderability per MIL-STD-202, Method 208



BAS40



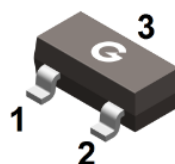
BAS40-04



BAS40-05



BAS40-06



SOT-23

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
BAS40	SOT-23	3000 pcs / Tape & Reel	43
BAS40-04	SOT-23	3000 pcs / Tape & Reel	44
BAS40-05	SOT-23	3000 pcs / Tape & Reel	45
BAS40-06	SOT-23	3000 pcs / Tape & Reel	46

Maximum Ratings (@ T_A = 25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Repetitive Peak Reverse Voltage	V _{RRM}	40	V
Working Peak Reverse Voltage	V _{RWM}	40	V
DC Reverse Voltage	V _R	40	V
Forward Continuous Current	I _F	0.2	A
Non-repetitive Forward Surge (t _p = 8.3ms)	I _{FSM}	0.6	A

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation	P_D	350	mW
Thermal Resistance Junction-to-Air	$R_{\theta JA}$	286	$^{\circ}C/W$
Operating Junction Temperature	T_J	-55 ~ +125	$^{\circ}C$
Storage Temperature Range	T_{STG}	-55 ~ +150	$^{\circ}C$

Electrical Characteristics (@ $T_A = 25^{\circ}C$ unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R = 10\mu A$	40	-	-	V
Forward Voltage	V_F	$I_F = 1mA$	-	-	0.38	V
		$I_F = 40mA$	-	-	1	V
Maximum Peak Reverse Current	I_R	$V_R = 30V$	-	36	200	μA
Junction Capacitance	C_J	$V_R = 0V, f = 1MHz$	-	2.5	5	pF
Reverse Recovery Time	t_{rr}	$I_F = I_R = 10mA$ $I_{rr} = 0.1 \times I_R, R_L = 100\Omega$	-	-	5	ns

Ratings and Characteristic Curves (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

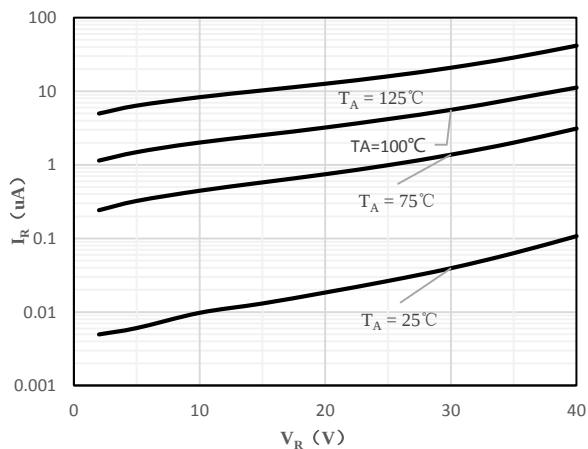


Fig 1 Typical Reverse Characteristic

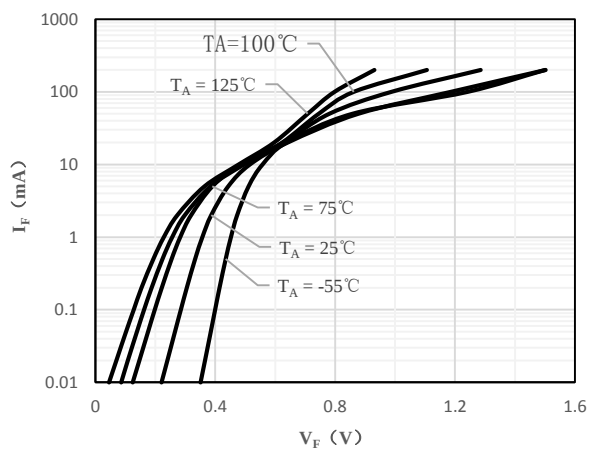


Fig 2 Typical Forward Characteristics

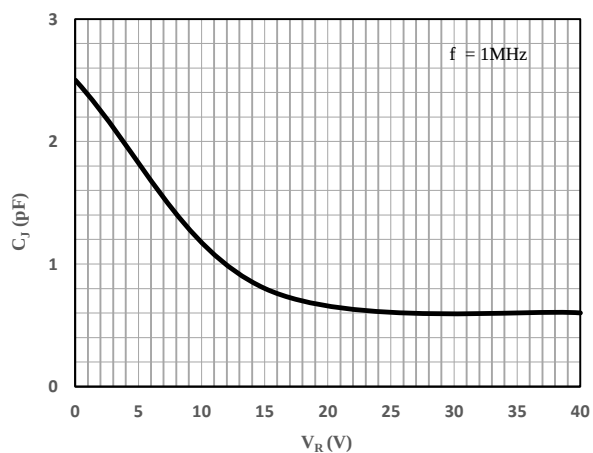


Fig 3 Capacitance Characteristics

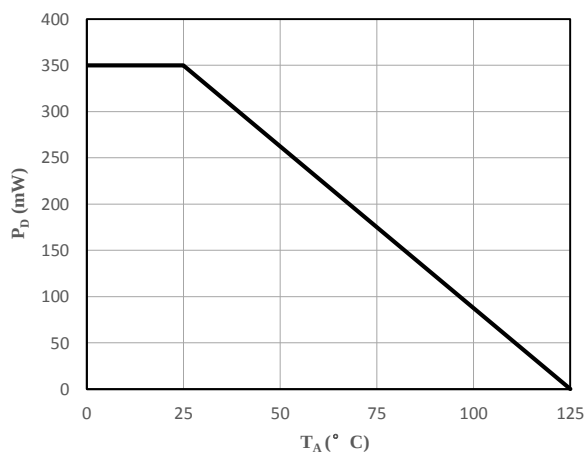
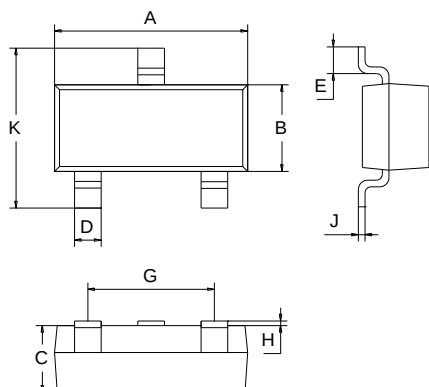


Fig 4 Power Derating Curve

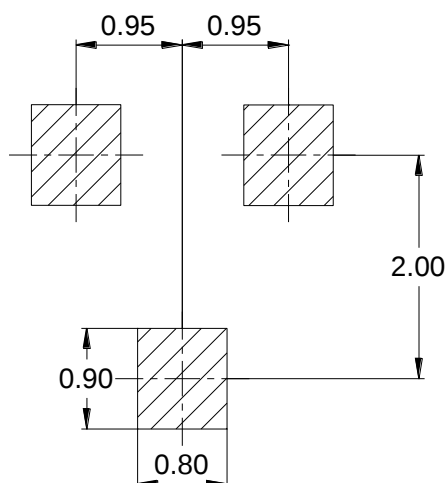
Package Outline Dimensions (Unit: mm)



SOT-23		
Dimension	Min.	Max.
A	2.70	3.10
B	1.10	1.50
C	0.90	1.10
D	0.30	0.50
E	0.35	0.48
G	1.80	2.00
H	0.02	0.10
J	0.05	0.15
K	2.20	2.60

Package Outline Dimensions (Unit: mm)

SOT-23



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