银河微电
Galaxy
Microelectronics

Small Signal Schottky Barrier Diode

BAS70T/-04T/-05T/-06T

Features

HF

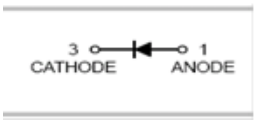
- Low turn-on voltage
- Fast switching
- PN junction guard ring for transient and ESD protection
- Ultra-small surface mount package

Typical Applications

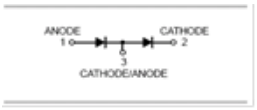
- Schottky barrier diodes

Mechanical Data

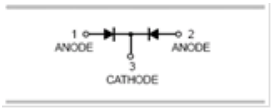
- Case: SOT-523
- Terminals: solderable per MIL-STD-202, Method 208



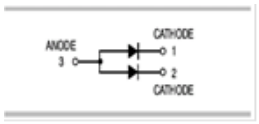
BAS70T



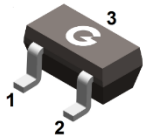
BAS70-04T



BAS70-05T



BAS70-06T



SOT-523

Ordering Information

Part Number	Package	Shipping	Marking Code
BAS70T	SOT-523	3000 pcs / Tape & Reel	7C
BAS70-04T	SOT-523	3000 pcs / Tape & Reel	7D
BAS70-05T	SOT-523	3000 pcs / Tape & Reel	7E
BAS70-06T	SOT-523	3000 pcs / Tape & Reel	7F

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

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Reverse Voltage	V_{RRM} V_{RWM} V_R	70	V
RMS Reverse Voltage	$V_{R(RMS)}$	49	V
Forward Continuous Current	I_F	70	mA
Non-Repetitive Peak Forward Surge Current @ t_p = 8.3ms	I_{FSM}	100	mA

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation *1	P_D	150	mW
Thermal Resistance Junction-to-Air *1	$R_{\theta JA}$	667	°C/W
Thermal Resistance Junction-to-Air *2	$R_{\theta JA}$	130	°C/W
Thermal Resistance Junction-to-Case *2	$R_{\theta JC}$	80	°C/W
Thermal Resistance Junction-to-Lead *2	$R_{\theta JL}$	90	°C/W
Operating Temperature Range	T_J	-55 ~ +125	°C
Storage Temperature Range	T_{STG}	-55 ~ +150	°C

Electrical Characteristics (@ T_A = 25°C unless otherwise specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Forward Voltage *3	V_F	I_F = 1mA	-	-	0.41	V
		I_F = 15mA	-	-	1	V
Reverse Leakage Current *4	I_R	V_R = 50V	-	-	100	nA
Capacitance Between Terminals	C_T	V_R = 0V, f = 1MHz	-	-	2	pF
Reverse Recovery Time	t_{rr}	I_F = I_R = 10mA, I_{rr} = 0.1*I_R, R_L=100Ω	-	-	5	ns

Notes:

1. The data tested by surface mounted on FR-4 board with recommended pad layout
2. The data tested by surface mounted on a 1 inch^2 FR-4 board with 2OZ copper
3. pulse test,tp≤300μs
4. pulse test,tp≤5ms

Ratings and Characteristic Curves (@ T_A = 25°C unless otherwise specified)

FIG 1.TYPICAL REVERSE CHARACTERISTIC

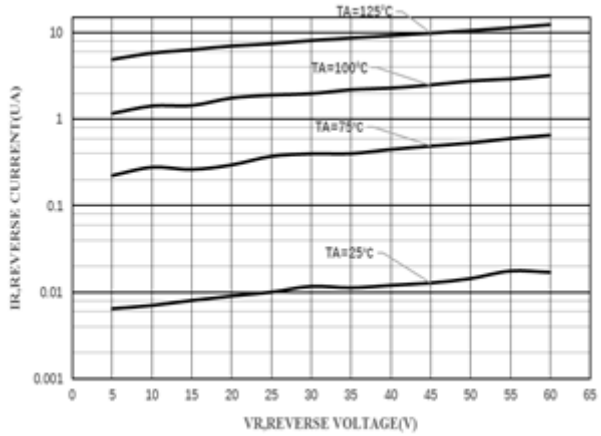


FIG 2.TYPICAL FORWARD CHARACTERISTIC

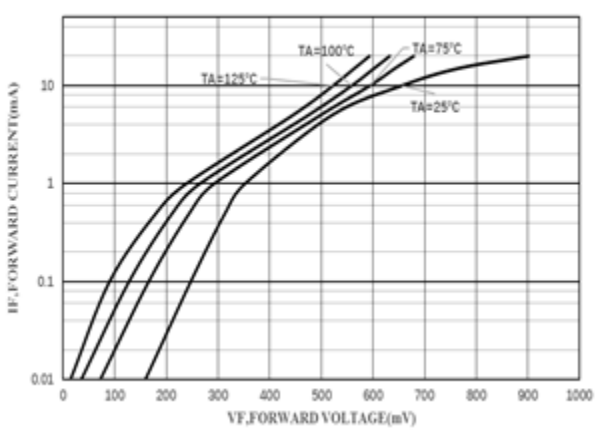


FIG 3.CAPACITANCE VS REVERSE VOLTAGE

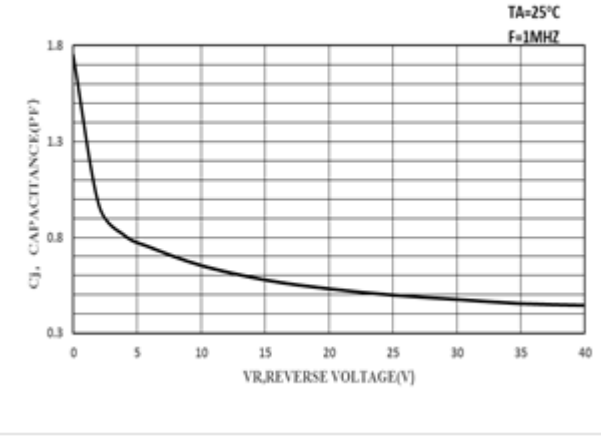
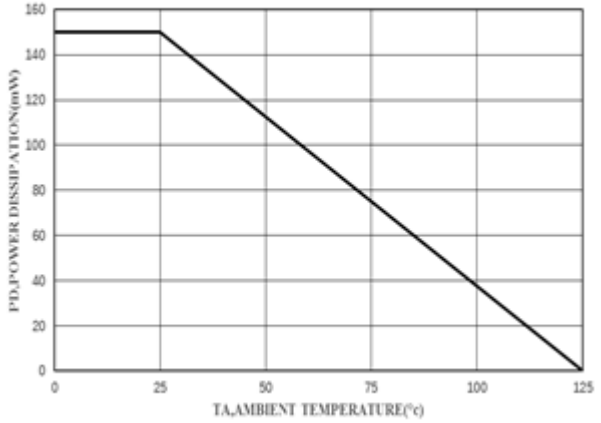
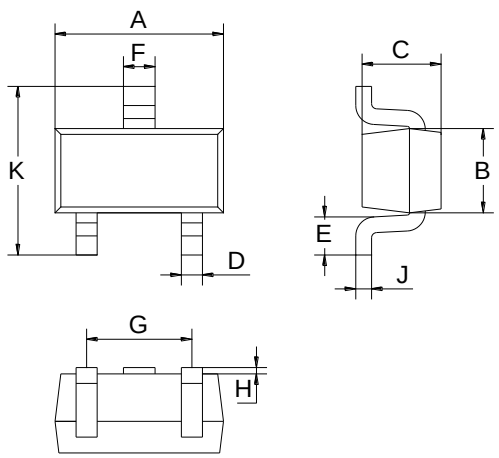


FIG 4.DERATING CURVE(Pd-TA)



Package Outline Dimensions (Unit: mm)



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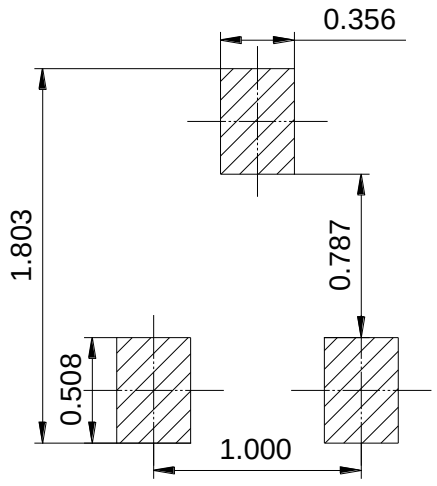
Dimension	**Min.**	**Max.**
A	1.50	1.70
B	0.75	0.85
C	0.60	0.80
D	0.15	0.30
E	0.30	0.40
F	0.25	0.40
G	0.90	1.10
H	0.02	0.10
J	0.08	0.18
K	1.45	1.75

Mounting Pad Layout (Unit: mm)

SOT-523



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