

Schottky Barrier Diode

Features

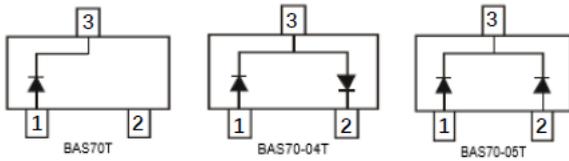
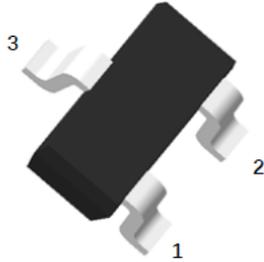
- Moisture sensitivity level 1
- Reverse voltage: 70V
- Average forward current: 70mA

Application

- High frequency rectifier
- Signal switching

Mechanical data

- **Package:** SOT-523
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102



■ Maximum Ratings ($T_a=25^{\circ}\text{C}$ Unless otherwise specified)

Parameter	Symbol	Unit	Conditions	Value
Device marking code			BAS70T	7C
			BAS70-04T	7D
			BAS70-05T	7E
Repetitive peak reverse voltage	V_R	V		70
Forward current, per leg	I_F	mA		70
Non-repetitive surge peak forward current @ $t=8.3\text{ms}$ half-sine wave	I_{FSM}	A		0.1
Non-repetitive surge peak forward current @ $t=1\text{ms}$ square wave				0.5
Repetitive Peak Forward Current @ $t_p=1\text{ms}$, $\delta=0.25$	I_{FRM}	A		0.07
Power dissipation	P_D	mW		150
Junction temperature	T_J	$^{\circ}\text{C}$		-55 to +125
Storage temperature	T_{STG}	$^{\circ}\text{C}$		-55 to +125



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■ Electrical Characteristics (T_a=25°C Unless otherwise specified)

Parameter	Symbol	Unit	Conditions	Min	Typ	Max
Reverse voltage	V _R	V	I _R =10uA	70		
Forward voltage	V _F	V	I _F =1mA			0.41
			I _F =15mA			1.0
Reverse leakage current	I _R	nA	V _R =50V			100
Junction capacitance	C _j	pF	f=1.0MHz, V _R =1V			2
Reverse recovery time	T _{rr}	ns	I _F =I _R =10mA I _{rr} =0.1*I _R , R _L =100Ω			5

■ Thermal Characteristics

Parameter	Symbol	Unit	Value
Thermal resistance, junction-to-ambient	R _{θJ-A} ⁽¹⁾	°C/W	667
Thermal resistance, junction-to-case	R _{θJ-C} ⁽¹⁾	°C/W	534

Note:

(1) Thermal resistance from junction to ambient and from junction to case mounted on P.C.B. with 25.4mm*25.4mm copper pad areas



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■ Characteristics

Fig 1: P_b-T_a Curve

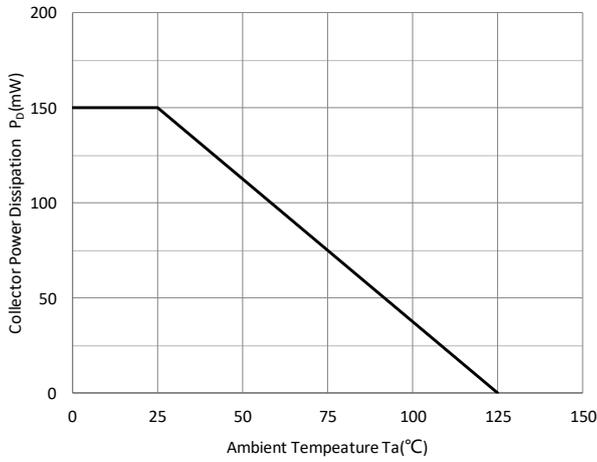


Fig 2: Capacitance Capability

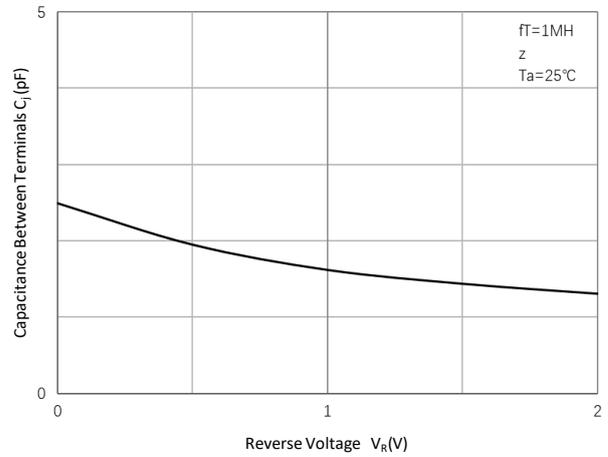


Fig 3: Typical Forward Characteristics

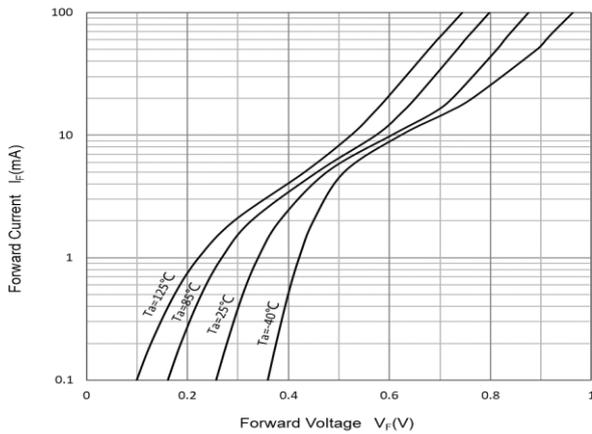
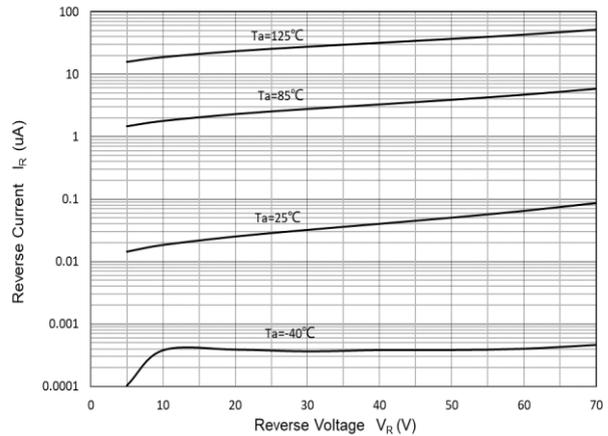


Fig 4: Typical Reverse Characteristics



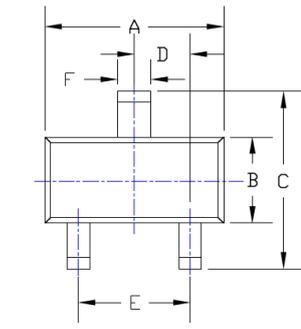


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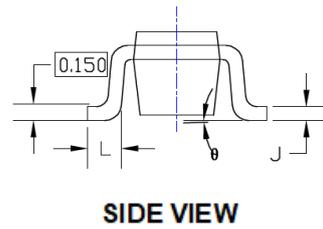
Ordering Information

Preferred P/N	Packing code	Unit weight(g)	Minimum package(pcs)	Inner box quantity(pcs)	Outer carton quantity(pcs)	Delivery mode
BAS70T THRU BAS70-05T	F2	Approximate 0.0027	3000	30000	120000	7" reel

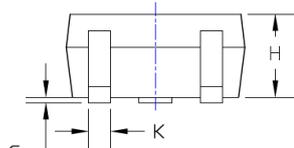
Outline Dimensions



TOP VIEW



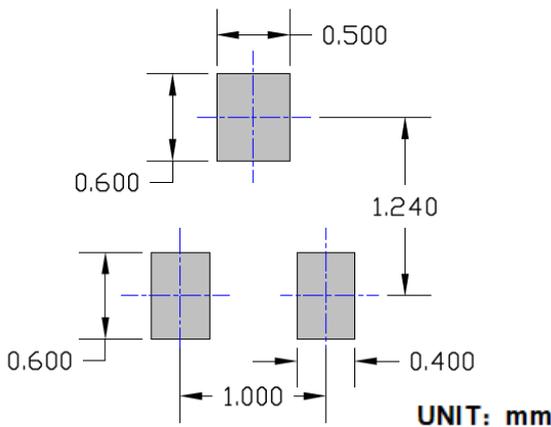
SIDE VIEW



SIDE VIEW

SYMBOL	DIMENSIONS			
	INCHES		Millimeter	
	MIN.	MAX.	MIN.	MAX.
A	0.059	0.067	1.500	1.700
B	0.030	0.033	0.750	0.850
C	0.057	0.069	1.450	1.750
D	0.020TYP		0.500TYP	
E	0.035	0.043	0.900	1.100
F	0.010	0.018	0.250	0.450
G	0.000	0.004	0.000	0.100
H	0.024	0.031	0.600	0.800
J	0.004	0.008	0.100	0.200
K	0.006	0.014	0.150	0.350
L	0.010	0.018	0.260	0.460
θ	0°	8°	0°	8°

Suggested Pad Layout



Note:

- All dimensions are in millimeters (mm) unless otherwise specified.
[所有尺寸均以毫米为单位, 除非另有说明]
- General tolerances: $\pm 0.10\text{mm}$ unless otherwise specified.
[通用公差为 $\pm 0.10\text{mm}$, 除非另有说明]
- Dimensions and tolerances per ASME Y14.5M-2018.
[尺寸和公差遵循 ASME Y14.5M-2018 标准]
- All dimensions shown are exclusive of burrs and gate residues. Burrs and gate vestiges shall not exceed 0.15 mm in maximum.
[所有尺寸均不包括毛刺和浇口残留。毛刺与浇口残留的尺寸最大不得超过 0.15mm]
- Dimension b does not include dambar protrusion of max 0.100 mm per side.
[尺寸b不包括单边最大0.100 mm的中筋凸出部分]
- Dimensions A and B are the overall extreme outer dimensions of the mold compound. These dimensions exclude mold flash, lead flash, protrusions and burrs but include the maximum allowable mold mismatch.
[A和B是塑封体的外部极限尺寸, 不包括封装溢料、内引线溢料、凸出部分以及胶体毛刺, 但是包含了封装错位的最大尺寸]
- Formed leads shall be planar with respect to one another within a maximum of 0.076 mm relative to the seating plane.
[成型的管脚应为同一平面, 共面性最大为0.1mm]



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