



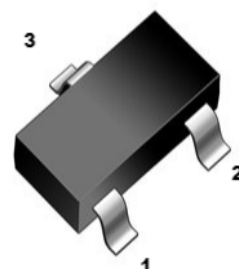
BAS70 THRU BAS70-06

SCHOTTKY BARRIER DIODE

1. Features

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

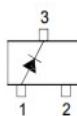
SOT-23



2. Mechanical Data

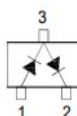
- Case: Molded Plastic, SOT-23.
- Epoxy: UL 94V-0 rate flame retardant.
- Terminals: Plated Leads Solderable per MIL-STD-750, Method-2026.
- Marking: marked on body.

BAS70



Marking Code: 73

BAS70-04



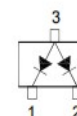
Marking Code: 74

BAS70-05



Marking Code: 75

BAS70-06



Marking Code: 76

3. Maximum Ratings

Electrical Characteristics Rating at 25°C ambient temperature unless otherwise specified.

Characteristic	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	70	V
Non-Repetitive Peak Reverse Voltage	V_{RSM}	70	V
Maximum DC Blocking Voltage	V_R	70	V
Average Forward Rectified Current	$I_{F(AV)}$	70	mA
Peak Forward Surge Current (at $t_p \leq 10$ ms)	I_{FSM}	100	mA
Power Dissipation	P_D	200	mW
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	500	°C/W
Operating Junction Temperature Range	T_J	-65 to +125	°C
Storage Temperature Range	T_{stg}	-65 to +150	°C

4. Electrical Characteristics ($T_a = 25^\circ\text{C}$ unless otherwise noted)

Parameters	Symbol	Condition	Min	TYP	Max	Unit
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R = 10\mu\text{A}$	70	-	-	V
Forward Voltage	V_F	$I_F = 1\text{mA}$ $I_F = 15\text{mA}$	-	-	0.41 1	V
Reverse Current	I_R	$V_R = 50\text{V}$	-	-	100	nA
Total Capacitance	C_T	$V_R = 0\text{V}$, $f = 1\text{MHz}$	-	-	2	pF
Reverse Recovery Time	t_{rr}	$I_F = I_R = 10\text{mA}$ to $I_R = 1\text{mA}$, $R_L = 100\Omega$	-	-	5	ns



5. Rating And Characteristic Curves

Fig.1 I_F vs. V_F

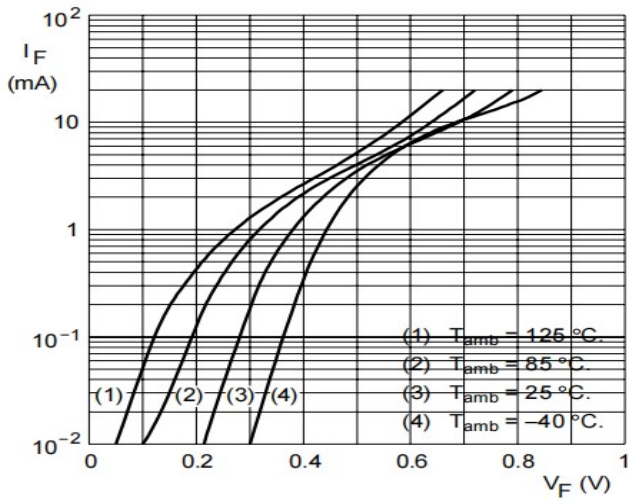


Fig.2 I_R vs. V_R

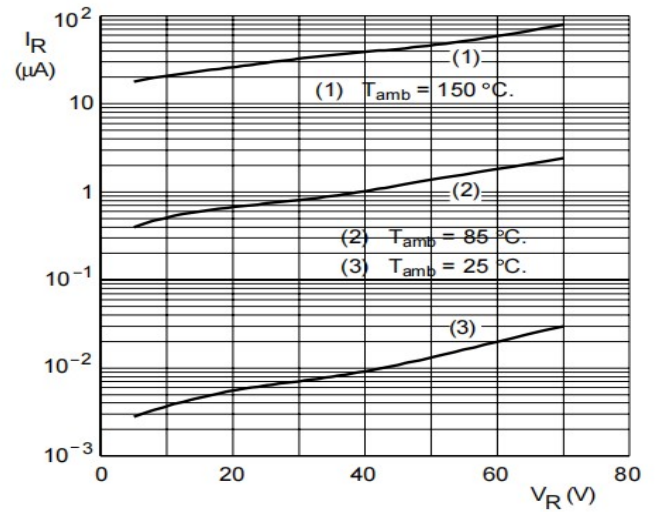


Fig.3 r_{dif} vs. I_F

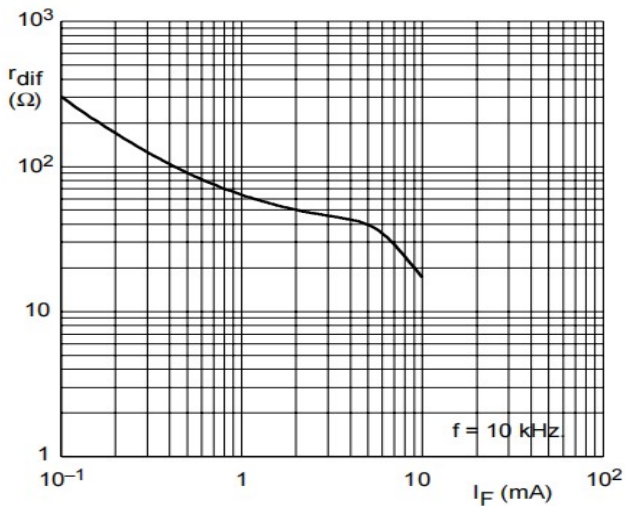
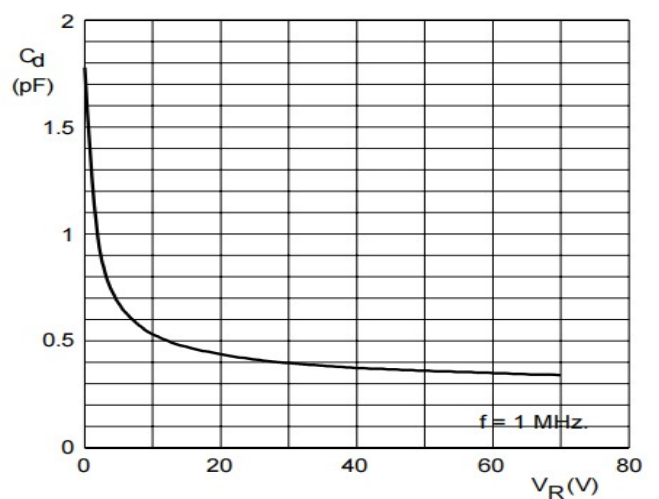
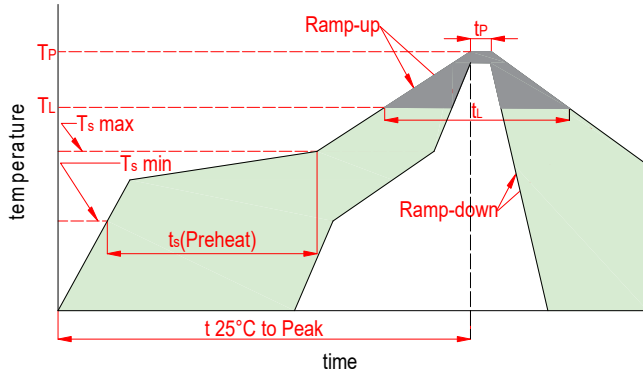


Fig.4 C_d vs. V_R



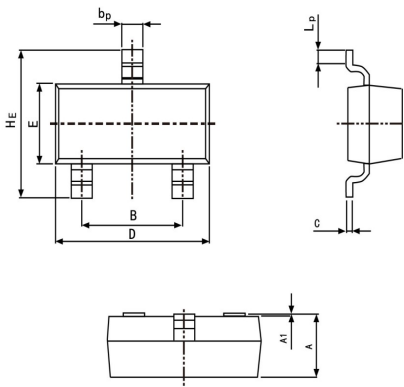


6. Soldering Parameters



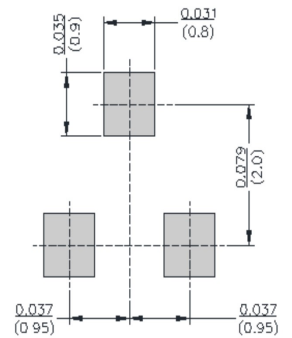
Reflow Condition		Lead-free
Pre Heat	Temp. min(T_s (min))	150℃
	Temp. max(T_s (min))	200℃
	Time(min to max)(t_s)	60~120s
Aver. ramp up rate(Liquidus Temp.)(T_L)to peak		3℃/s max
T_s (max) to T_L -Ramp-up Rate		3℃/s max
Reflow	Temp.(T_L)(Liquidus)	217℃
	Temp.(t_L)(Liquidus)	60~150s
Peak Temp.(T_P)		260 ^{+0/-5} ℃
Time within actual peak Temp.(t_p)		30s max
Ramp-down Rate		6℃/s max
Time 25℃ to peak Tempe.(T_p)		8 minutes max
Do not exceed		260℃

7. Dimensions

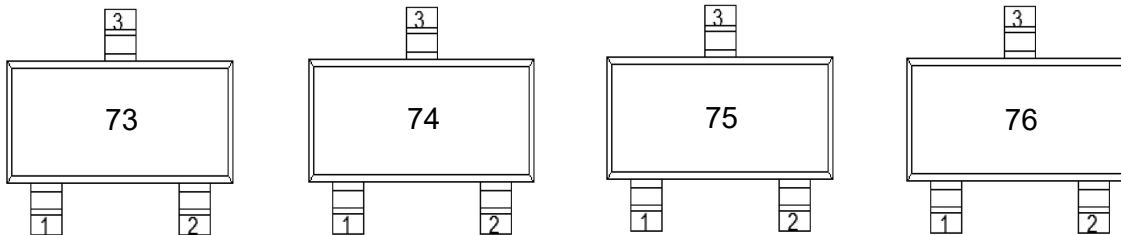


Dimensions	Inches		Millimeters	
	Min	Max	Min	Max
A	0.035	0.045	0.90	1.15
B	0.070	0.081	1.78	2.05
bp	0.012	0.020	0.30	0.51
C	0.003	0.007	0.08	0.18
D	0.110	0.118	2.80	3.00
E	0.047	0.055	1.20	1.40
HE	0.087	0.110	2.20	2.80
A1	0.000	0.004	0.00	0.10
LP	0.008	0.020	0.20	0.50

Mounting PAD Layout



8. Part Marking System



9. Package Information

Package	Part Number	Marking	Tape Width(mm)	Quantity(pcs)
SOT-23	BAS70	73	8	3000
SOT-23	BAS70-04	74	8	3000
SOT-23	BAS70-05	75	8	3000
SOT-23	BAS70-06	76	8	3000



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