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BAS70LT1G
Schottky Barrier Diodes

These Schottky barrier diodes are designed for high speed switching applications, circuit protection, and voltage clamping. Extremely low forward voltage reduces conduction loss. Miniature surface mount package is excellent for hand held and portable applications where space is limited.

Features

- Extremely Fast Switching Speed
- Low Forward Voltage
- These Devices are Pb−Free, Halogen Free/BFR Free and are RoHS Compliant

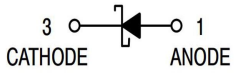
MAXIMUM RATINGS (T_J = 150°C unless otherwise noted)

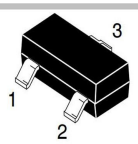
Rating	Symbol	Value	Unit
Forward Current	I_F	70	mA
Non−Repetitive Peak Forward Surge Current (t ≤ 1.0 s)	I_{FSM}	100	mA
Reverse Voltage	V_R	70	V

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Forward Power Dissipation @ T_A = 25°C Derate above 25°C	P_F	 225 1.8	 mW mW/°C
Thermal Resistance − Junction−to−Ambient (Note 1) (Note 2)	$R_{\theta JA}$	 508 311	°C/W
Operating Junction and Storage Temperature Range	T_J, T_{stg}	−55 to +150	°C

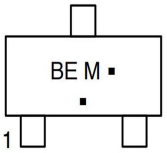
70 VOLTS SCHOTTKY BARRIER DIODES





SOT−23 (TO−236)

MARKING DIAGRAM



BE = Specific Device Code
M = Date Code*
▪ = Pb−Free Package

(Note: Microdot may be in either location)

*Date Code orientation and/or overbar may vary depending upon manufacturing location.

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ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted)

Characteristic	Symbol	Min	Max	Unit
Reverse Breakdown Voltage (I_R = 10 μA)	$V_{(BR)R}$	70	–	V
Total Capacitance (V_R = 0 V, f = 1.0 MHz)	C_T	–	2.0	pF
Reverse Leakage (V_R = 50 V) (V_R = 70 V)	I_R	– –	0.1 10	μA
Forward Voltage (I_F = 1.0 mA) (I_F = 10 mA) (I_F = 15 mA)	V_F	– – –	410 750 1000	mV

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

TYPICAL CHARACTERISTICS

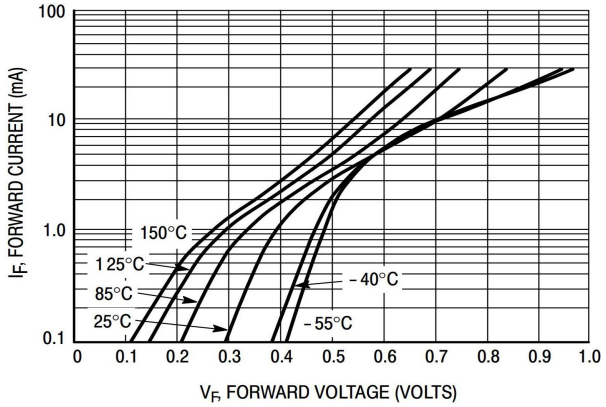


Figure 1. Typical Forward Voltage

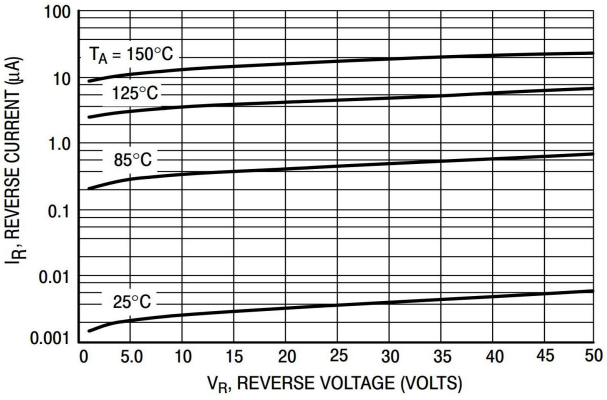


Figure 2. Reverse Current versus Reverse Voltage

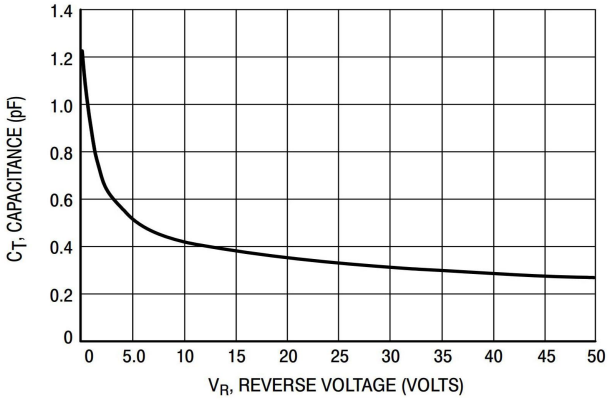


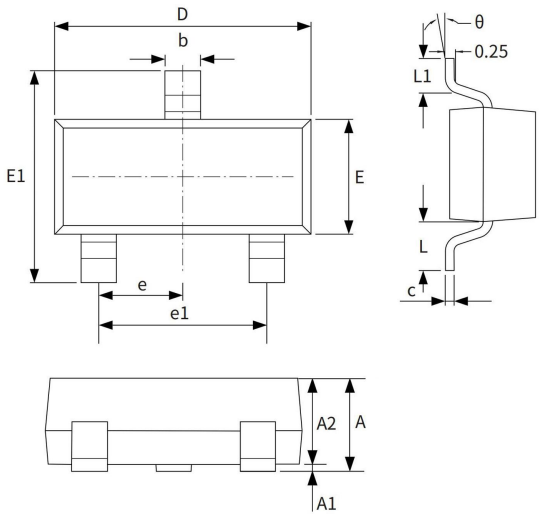
Figure 3. Typical Capacitance

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Ordering Information

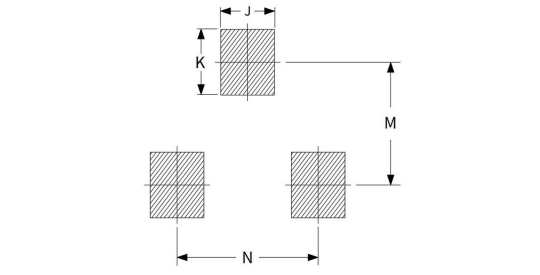
PACKAGE	PACKAGE CODE	UNIT WEIGHT(g)	REEL(pcs)	BOX(pcs)	CARTON(pcs)	DELIVERY MODE
SOT-23	R1	0.008	3000	30000	240000	7''

Package Outline Dimensions (SOT-23)



Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.90	1.15	0.035	0.045
A1	-	0.10	-	0.004
A2	0.90	1.05	0.035	0.041
b	0.30	0.50	0.012	0.020
c	0.10	0.20	0.004	0.008
D	2.80	3.00	0.110	0.118
E	1.20	1.40	0.047	0.055
E1	2.25	2.55	0.089	0.100
e	0.950TYP		0.037TYP	
e1	1.80	2.00	0.071	0.079
L	0.550REF		0.022REF	
L1	0.30	0.50	0.012	0.020
θ	-	8°	-	8°

Suggested Pad Layout



Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
J	0.75	0.85	0.030	0.033
K	0.85	0.95	0.033	0.037
M	1.95	2.05	0.077	0.081
N	1.85	1.95	0.073	0.077