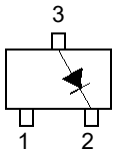
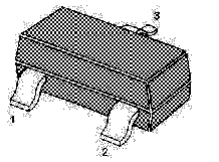
BAL99 Silicon Epitaxial Planar Switching Diode

APPLICATIONS

- High-speed switching in e.g. surface mounted circuits.





SOT-23 Plastic Package

DESCRIPTION

The BAL99 is a high-speed switching diode fabricated in planar technology, and encapsulated in the small SOT23 plastic SMD package.

- We declare that the material of product compliance with RoHS requirements.

Marking Code: JF

Maximum Ratings @T_A=25°C unless otherwise specified

Characteristic	Symb l	Value	Unit
Non-Repetitive Peak Reverse Voltage	V_{RM}	100	V
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	75	V
Forward Continuous Current (Note 1)	I_F	300	mA
Average Rectified Output Current (Note 1)	I_O	150	mA
Peak Forward Surge Current (Note 1) @ t < 1.0μs	I_{FSM}	2.0	A
Power Dissipation (Note 1)	P_d	350	mW
Typical Thermal Resistance, Junction to Ambient Air (Note 1)	R_{JA}	357	K/W
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +150	°C

Electrical Characteristics @T_A=25°C unless otherwise specified

Characteristic	Symbol	Min	Max	Unit	Test Condition
Forward Voltage	V_F	—	0.855 1.0	V	@ IF = 10mA @ IF = 50mA
Reverse Leakage Current	I_R	—	2.5	μA	@V_R=75V
Junction Capacitance	C_j	—	2.0	pF	V_R = 0V,f=1.0MHz
Reverse Recovery Time	trr	—	6.0	nS	I_F = I_R = 10mA, I_{RR} = 0.1 x I_R, R_L = 100

Typical Characteristics

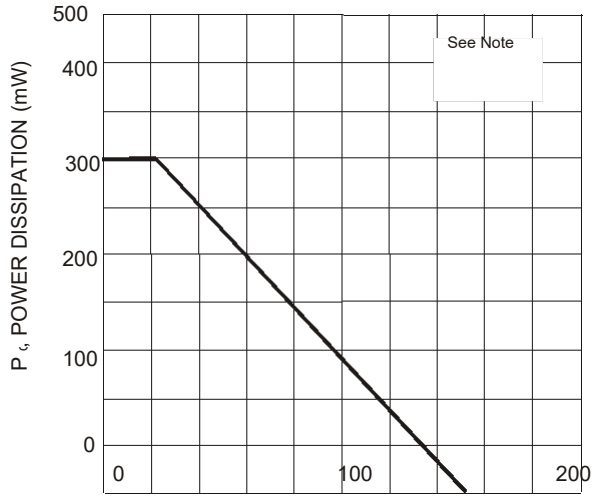


Fig. 1 Power Derating Curve

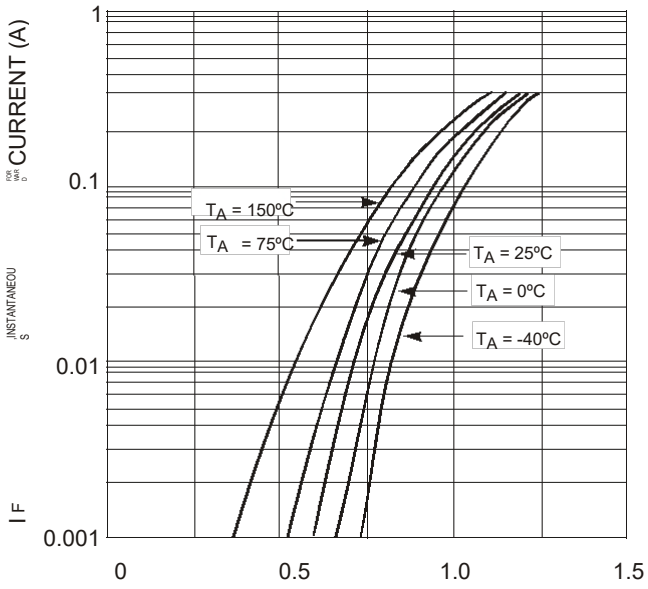


Fig. 2 Forward Characteristics

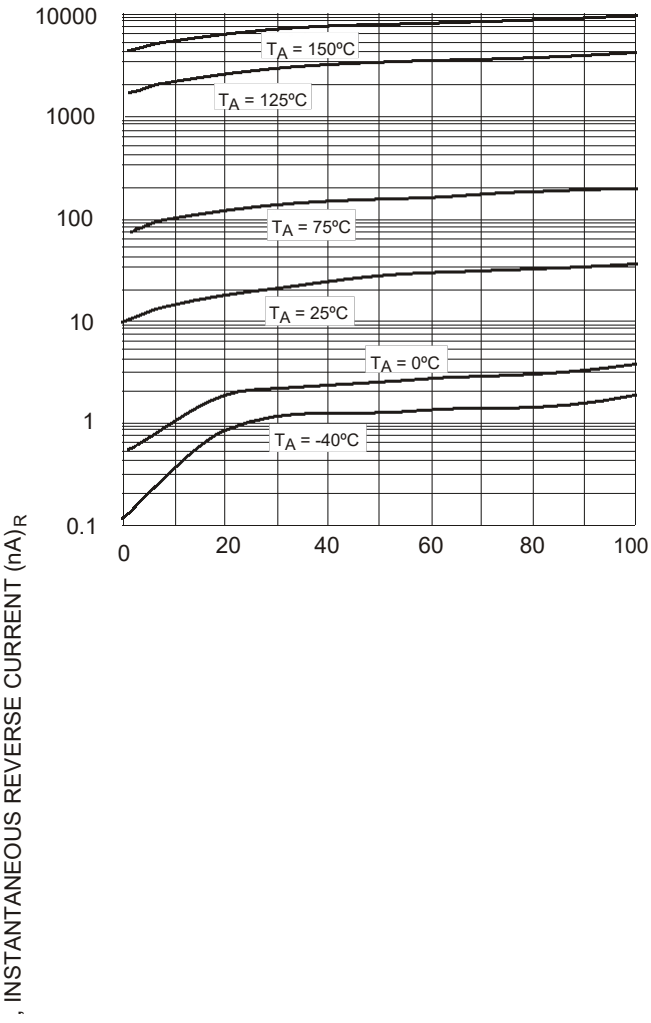


Fig. 3 Typical Reverse Characteristics

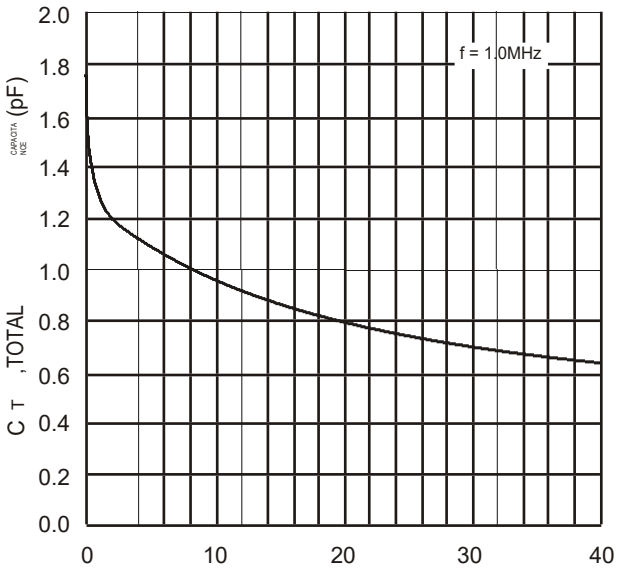
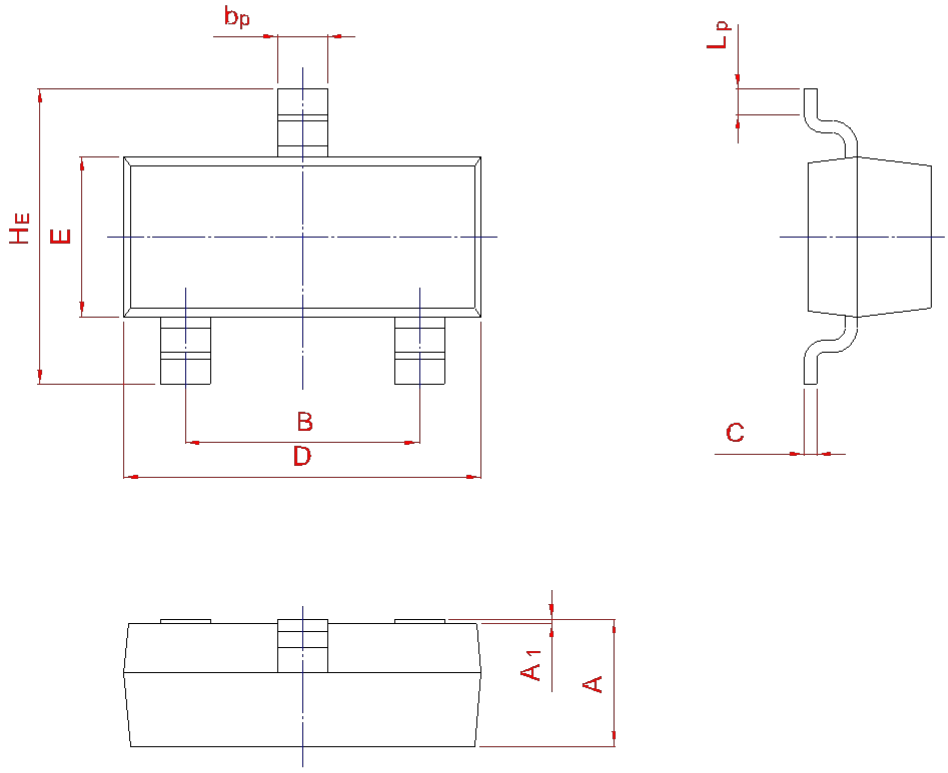


Fig. 4 Typical Capacitance vs. Reverse Voltage

PACKAGE OUTLINE

Plastic surface mounted package; 3 leads **SOT-23**



UNIT	A	B	bp	C	D	E	HE	A1	Lp
mm	1.40 0.95	2.04 1.78	0.50 0.35	0.19 0.08	3.10 2.70	1.65 1.20	3.00 2.20	0.100 0.013	0.50 0.20