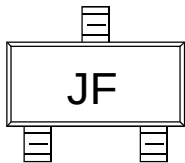
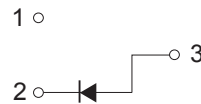
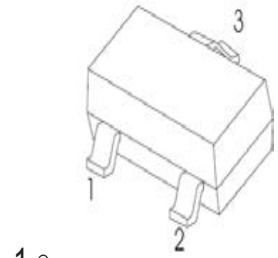


SOT-23 Plastic-Encapsulate Diodes**BAL99****Switching Diodes****FEATURES**

- Fast Switching Speed, High Conductance
- For General Purpose Switching Applications
- Surface Mount Package Ideally Suited for Automatic Insertion

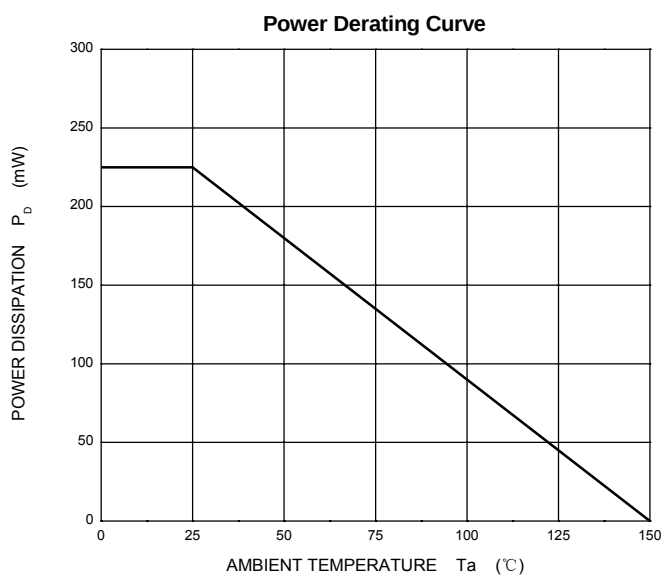
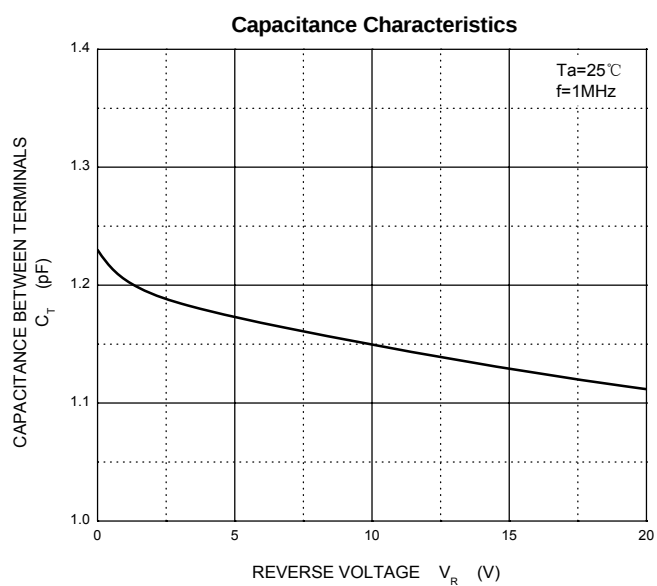
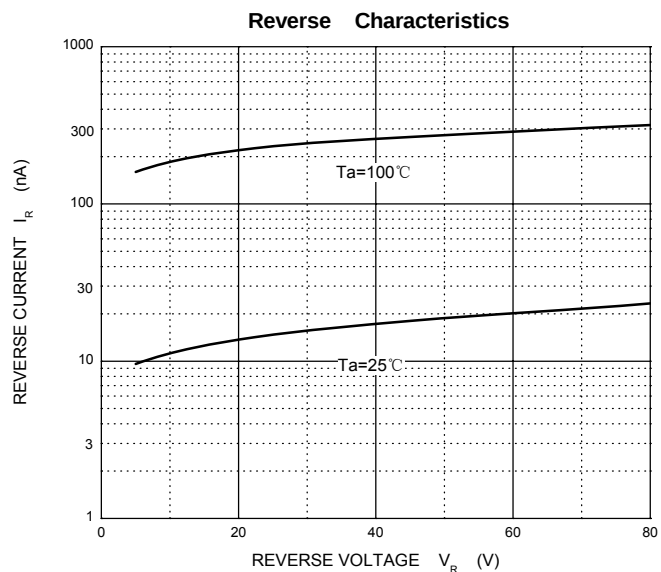
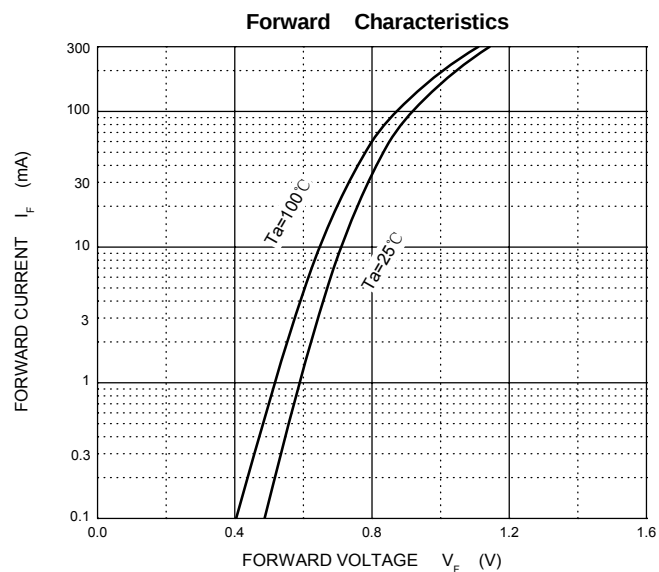
MARKING**Equivalent Circuit****SOT-23****MAXIMUM RATINGS** ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Limit	Unit
Non-Repetitive Peak Reverse Voltage	V_{RM}	70	V
DC Blocking Voltage	V_R	70	V
Average Rectified Output Current	I_O	100	mA
Non-Repetitive Peak Forward Surge Current @ $t=8.3\text{ms}$	I_{FSM}	2.0	A
Power Dissipation	P_D	225	mW
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	556	$^{\circ}\text{C/W}$
Operation Junction and Storage Temperature Range	T_J, T_{STG}	-55~+150	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS ($T_a=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Max	Unit
Reverse breakdown voltage	$V_{(BR)}$	$I_R=100\mu\text{A}$	70		V
Reverse voltage leakage current	I_R	$V_R=70\text{V}$		2.5	μA
Forward voltage	V_F	$I_F=1\text{mA}$ $I_F=10\text{mA}$ $I_F=50\text{mA}$ $I_F=150\text{mA}$		0.715 0.855 1 1.25	V
Diode capacitance	C_D	$V_R=0, f=1\text{MHz}$		1.5	pF
Revers recovery time	t_{rr}	$I_F=I_R=10\text{mA}, R_L=100\Omega,$ $I_{rr}=0.1 \times I_R$		6	nS

Typical Characteristics



Package Outline Dimensions (SOT-23)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

Suggested Pad Layout (SOT-23)



- Note:
- 1.Controlling dimension:in millimeters.
 - 2.General tolerance:± 0.05mm.
 - 3.The pad layout is for reference purposes only.