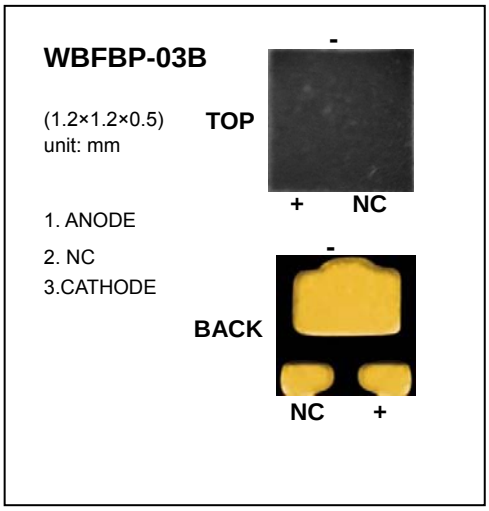
JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO.,LTD

WBFBP-03B Plastic-Encapsulate Transistors

BAT54M SCHOTTKY DIODE



DESCRIPTION

Epitaxial planar Silicon diode

FEATURES

- Ultra-Small Surface Mount Package
- Low Forward Voltage Drop
- Fast Switching
- PN Junction Guard Ring for Transient and ESD Protection
- Available in Lead Free Version

APPLICATION

Ultra high speed switching

For portable equipment:(i.e. Mobile phone,MP3, MD,CD-ROM, DVD-ROM, Note book PC, etc.)

MARKING: L1

Maximum Ratings @T_A=25℃

Parameter	Symbol	Limits	Unit
Peak Repetitive Reverse Voltage **Working Peak Reverse Voltage** **DC Blocking Voltage**	V_{RRM} V_{RWM} V_R	30	**V**
Forward Continuous Current (Note 1)	I_{FM}	200	**mA**
Repetitive Peak Forward Current	I_{FRM}	300	**mA**
Forward Surge Current @ t < 1.0s	I_{FSM}	600	**mA**
Power Dissipation (Note 1)	P_d	150	**mW**
Thermal Resistance, Junction to Ambient (Note 1)	RθJA	833	**℃/W**
Junction temperature	T_J	125	**℃**
Storage temperature range	T_{STG}	-65-125	**℃**

Notes:1. Device mounted on FR-4 PC board with recommended pad layout

ELECTRICAL CHARACTERISTICS（Tamb=25℃ unless otherwise specified）

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Reverse breakdown voltage	$V_{(BR)}$	I_R= 100μA	30		V
Reverse voltage leakage current	I_R	V_R=25V		2	μA
Forward voltage	V_F	I_F=0.1mA I_F=1mA I_F=10mA I_F=30mA I_F=100mA		240 320 400 500 1000	mV
Total capacitance	C_T	V_R=1V,f=1MHz		10	pF
Reverse recovery time	t_{rr}	I_F=10mA, I_R=10mA~1mA R_L=100Ω		5	nS

Typical Characteristics

BAT54 M

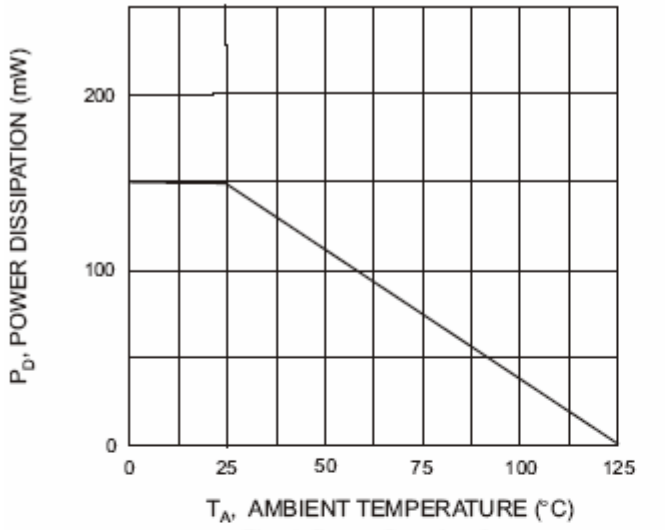


Fig. 1 Power Derating Curve

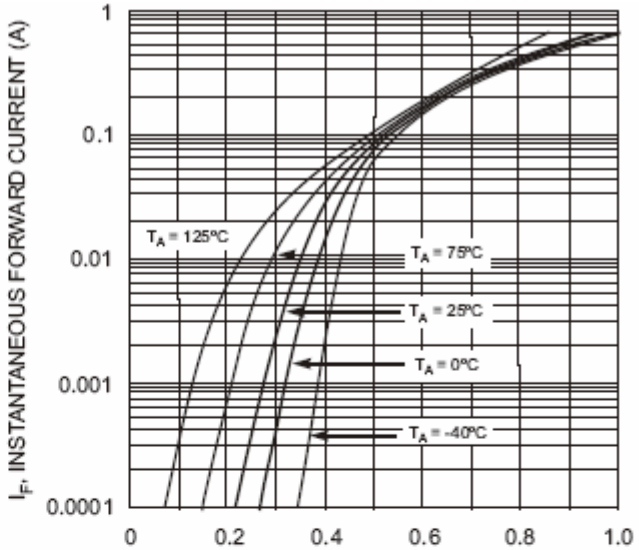


Fig. 2 Forward Characteristics

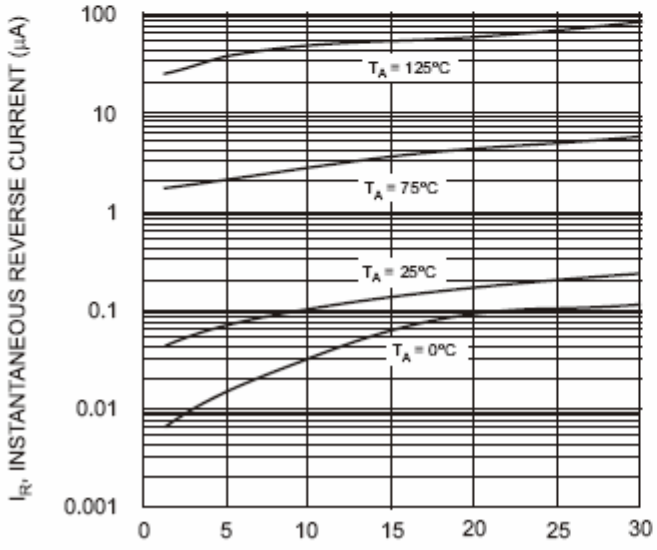


Fig. 3 Typical Reverse Characteristics

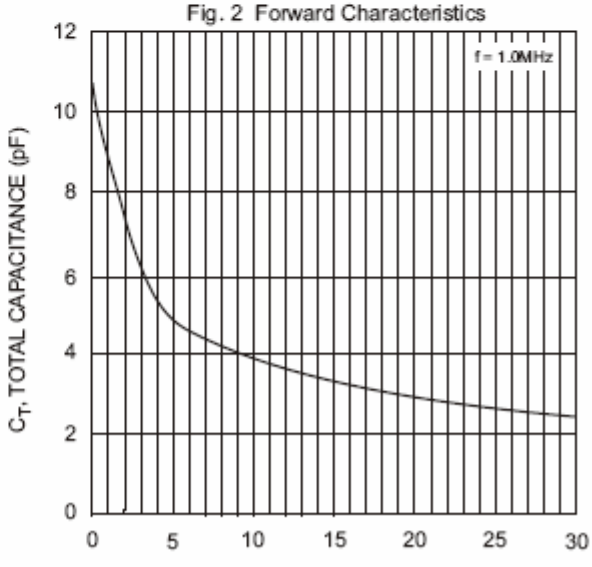
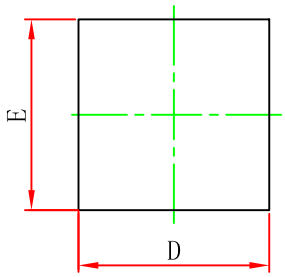
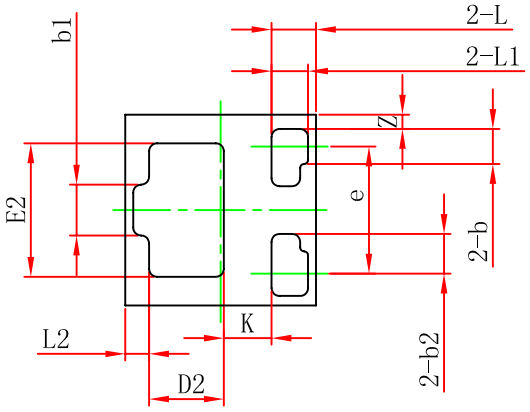


Fig. 4 Typical Capacitance vs. Reverse Voltage

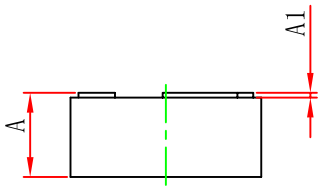
WBFBP-03B(1.2×1.2×0.5) PACKAGE OUTLINE DIMENSIONS



TOP VIEW

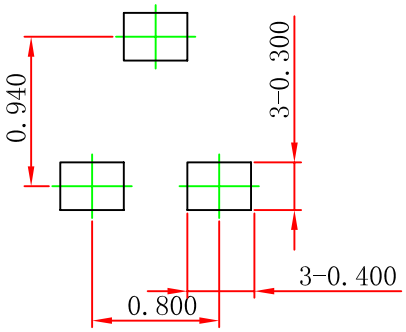


BOTTOM VIEW



SIDE VIEW

(LAND PATTERN RECOMMENDATION)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.450	0.550	0.018	0.022
A1	0.010	0.090	0.000	0.004
b	0.170	0.270	0.007	0.011
b1	0.270	0.370	0.011	0.015
b2	0.250 REF.		0.010 REF.	
D	1.150	1.250	0.045	0.049
E	1.150	1.250	0.045	0.049
D2	0.470 REF.		0.002 REF.	
E2	0.810 REF.		0.032 REF.	
e	0.800 TYP.		0.032 TYP.	
L	0.280 REF.		0.011 REF.	
L1	0.230 REF.		0.009 REF.	
L2	0.150 REF.		0.006 REF.	
k	0.300 REF.		0.012 REF.	
z	0.090 REF.		0.004 REF.	