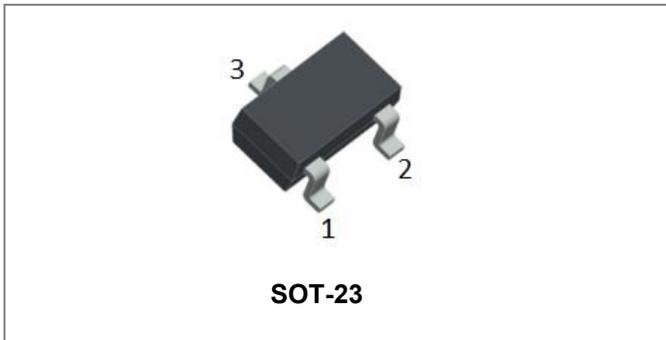
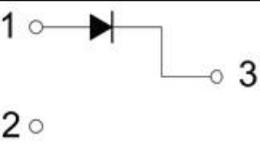
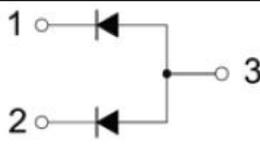
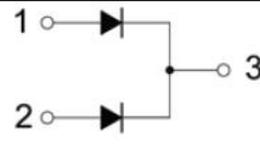
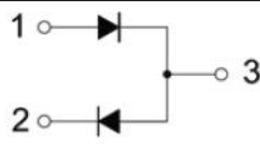
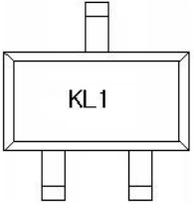
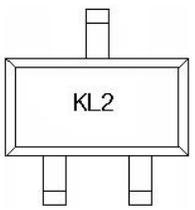
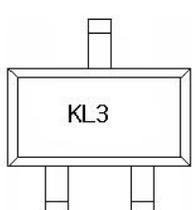
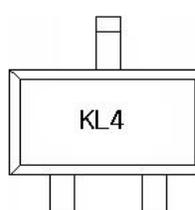


BAT54/A/C/S SCHOTTKY BARRIER DIODE



Features

- Negligible switching losses
- Very small conduction losses
- Low forward voltage drop
- Surface mount device
- Double diodes with different pinning are available
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

BAT54	BAT54A	BAT54C	BAT54S
			
MARKING:KL1	MARKING:KL2	MARKING:KL3	MARKING:KL4
			

Note: If date code is before 16221, please contact with factory about marking.

Maximum Ratings@T_A=25°C unless otherwise specified

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage	V_{RRM}	-	30	V
Working Peak Reverse Voltage	V_{RWM}			
DC Blocking Voltage	V_R			
Average Forward Current	$I_{F(AV)}$	50% duty cycle @T _C =80°C, rectangular wave form	0.2	A
Peak One Cycle Non-Repetitive Surge Current (per leg)	I_{FSM}	8.3 ms, half Sine pulse	0.6	A
Power dissipation#	P_{tot}	T _{amb} = 25 °C	200	mW

Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

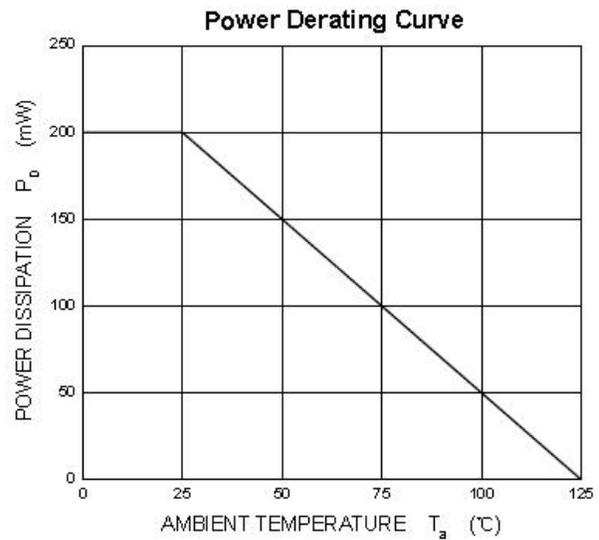
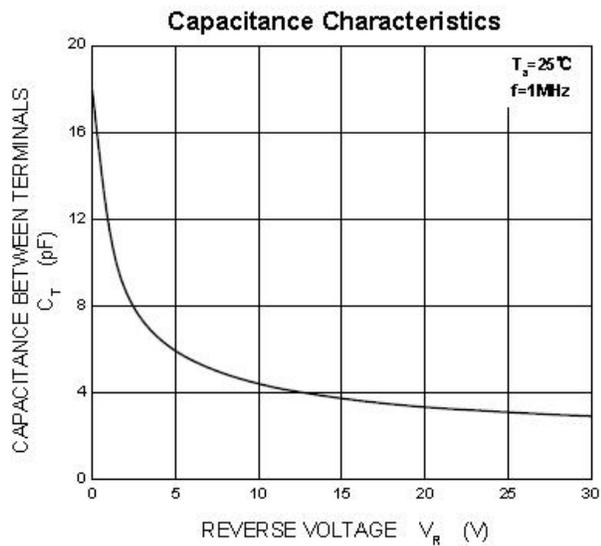
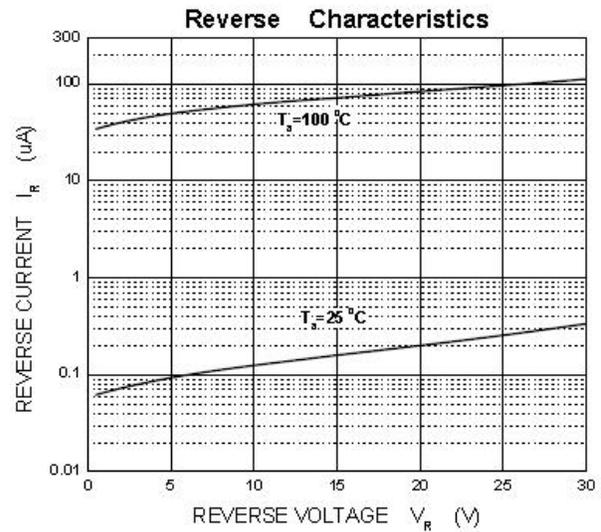
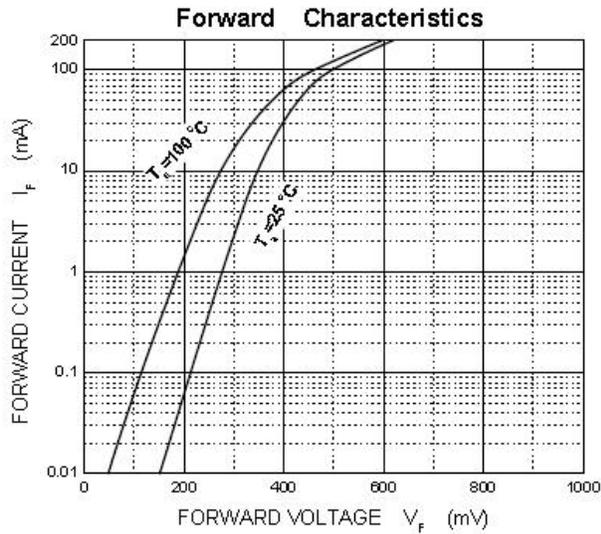
Characteristics	Symbol	Condition	Max.	Units
Forward Voltage Drop(per leg)*	V_{F1}	@ 0.1mA, Pulse, $T_J = 25^\circ\text{C}$	0.24	V
		@ 1mA, Pulse, $T_J = 25^\circ\text{C}$	0.32	
		@ 10mA, Pulse, $T_J = 25^\circ\text{C}$	0.40	
		@ 30mA, Pulse, $T_J = 25^\circ\text{C}$	0.50	
		@ 100mA, Pulse, $T_J = 25^\circ\text{C}$	1.0	
Reverse Current(per leg)*	I_{R1}	@ $V_R = \text{rated } V_R$, Pulse, $T_J = 25^\circ\text{C}$	2.0	μA
	I_{R2}	@ $V_R = \text{rated } V_R$, Pulse, $T_J = 100^\circ\text{C}$	100	μA
Junction Capacitance(per leg)	C_T	@ $V_R = 5.0\text{ V}$, $T_C=25^\circ\text{C}$ fSIG = 1MHz	10	pF
Reverse Recovery Time	t_{rr}	$I_F=10\text{mA}$ $I_R = 10\text{mA}$ $T_J = 25^\circ\text{C}$ $I_{rr} = 1\text{ mA}$ $R_L=100\Omega$	5	ns

* Pulse width < 300 μs , duty cycle < 2%

Thermal-Mechanical Specifications

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T_J	-	125	$^\circ\text{C}$
Storage Temperature	T_{stg}	-	-55 to +150	$^\circ\text{C}$
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$	DC operation	500	$^\circ\text{C/W}$

Ratings and Characteristics Curves

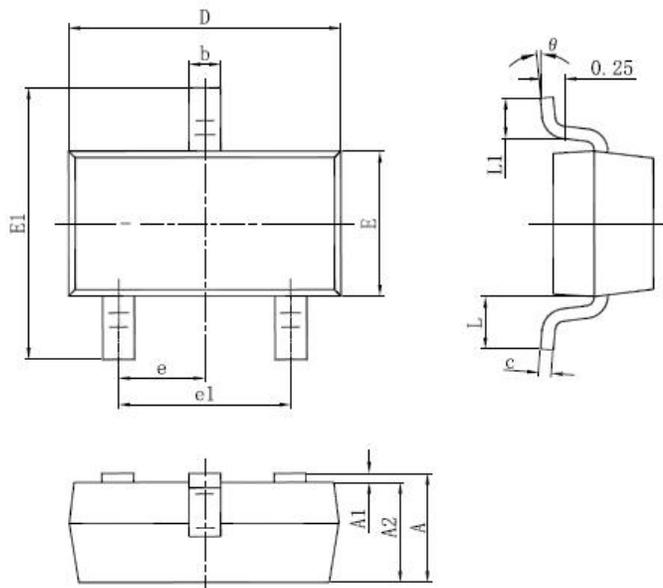


Ordering Information

Device	Package	Shipping
BAT54/A/C/S	SOT-23(Pb-Free)	3000pcs / reel

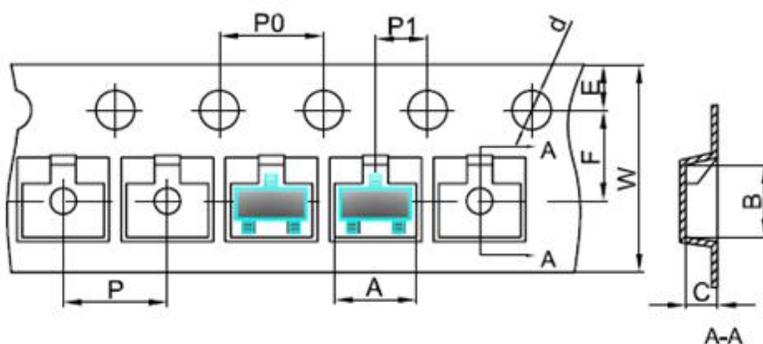
For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

Mechanical Dimensions SOT-23



SYMBOL	Millimeters		Inches	
	MIN.	MAX.	MIN.	MAX.
A	0.890	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	0.076	0.170	0.003	0.007
D	2.650	3.050	0.104	0.120
E	1.190	1.400	0.047	0.055
E1	2.100	2.550	0.083	0.100
e	0.950 TYP.		0.037 TYP.	
e1	1.780	2.050	0.070	0.081
L	0.550 REF.		0.022 REF.	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

Carrier Tape Specification SOT-23



SYMBOL	Millimeters	
	Min.	Max.
A	3.05	3.25
B	2.67	2.87
C	1.12	1.32
d	1.40	1.60
E	1.65	1.85
F	3.40	3.60
P	3.90	4.10
P0	3.90	4.10
P1	1.90	2.10
W	7.90	8.30



DISCLAIMER:

1- The information given herein, including the specifications and dimensions, is subject to change without prior notice to improve product characteristics. Before ordering, purchasers are advised to contact the SMC - Sangdest Microelectronics (Nanjing) Co., Ltd sales department for the latest version of the datasheet(s).

2- In cases where extremely high reliability is required (such as use in nuclear power control, aerospace and aviation, traffic equipment, medical equipment, and safety equipment), safety should be ensured by using semiconductor devices that feature assured safety or by means of users' fail-safe precautions or other arrangement.

3- In no event shall SMC - Sangdest Microelectronics (Nanjing) Co., Ltd be liable for any damages that may result from an accident or any other cause during operation of the user's units according to the datasheet(s). SMC - Sangdest Microelectronics (Nanjing) Co., Ltd assumes no responsibility for any intellectual property claims or any other problems that may result from applications of information, products or circuits described in the datasheets.

4- In no event shall SMC - Sangdest Microelectronics (Nanjing) Co., Ltd be liable for any failure in a semiconductor device or any secondary damage resulting from use at a value exceeding the absolute maximum rating.

5- No license is granted by the datasheet(s) under any patents or other rights of any third party or SMC - Sangdest Microelectronics (Nanjing) Co., Ltd.

6- The datasheet(s) may not be reproduced or duplicated, in any form, in whole or part, without the expressed written permission of SMC - Sangdest Microelectronics (Nanjing) Co., Ltd.

7- The products (technologies) described in the datasheet(s) are not to be provided to any party whose purpose in their application will hinder maintenance of international peace and safety nor are they to be applied to that purpose by their direct purchasers or any third party. When exporting these products (technologies), the necessary procedures are to be taken in accordance with related laws and regulations..