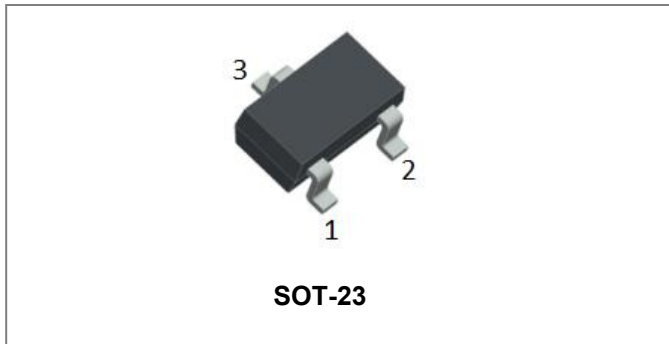
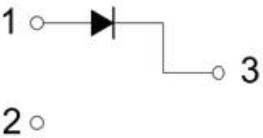
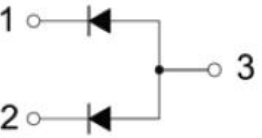
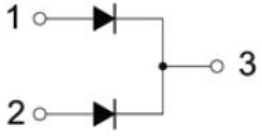
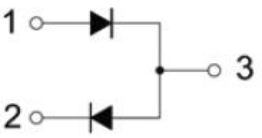
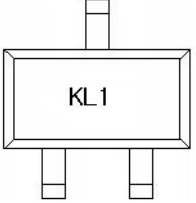
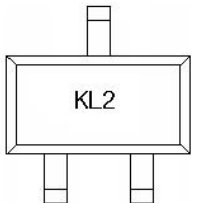
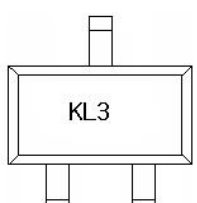
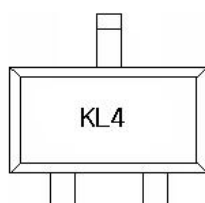


## BAT54/A/C/S SCHOTTKY BARRIER DIODE



### 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
- “-A” is an AEC-Q101 qualified device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

BAT54	BAT54A	BAT54C	BAT54S
			
<b>MARKING:KL1</b>	<b>MARKING:KL2</b>	<b>MARKING:KL3</b>	<b>MARKING:KL4</b>
			

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

### Maximum Ratings@T<sub>A</sub>=25°C unless otherwise specified

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	-	30	V
Average Forward Current	I <sub>F(AV)</sub>	50% duty cycle @T <sub>C</sub> =80°C, rectangular wave form	0.2	A
Peak One Cycle Non-Repetitive Surge Current (per leg)	I <sub>FSM</sub>	8.3 ms, half Sine pulse	0.6	A
Power dissipation#	P <sub>tot</sub>	T <sub>amb</sub> = 25 °C	200	mW

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

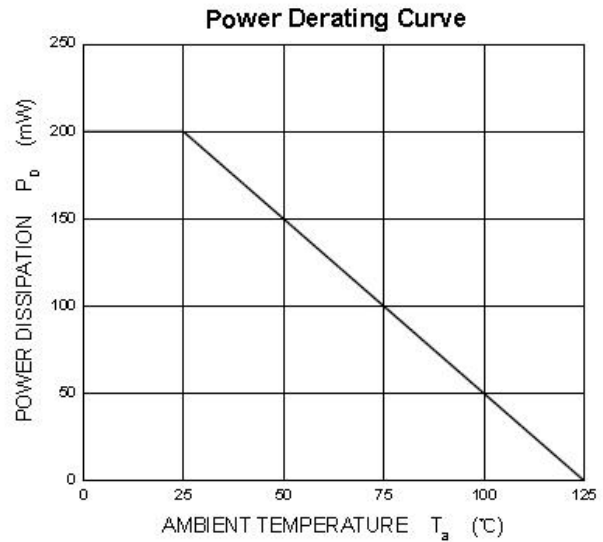
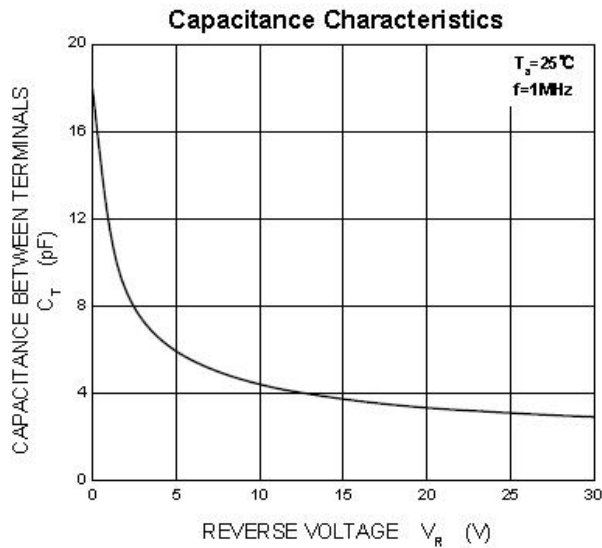
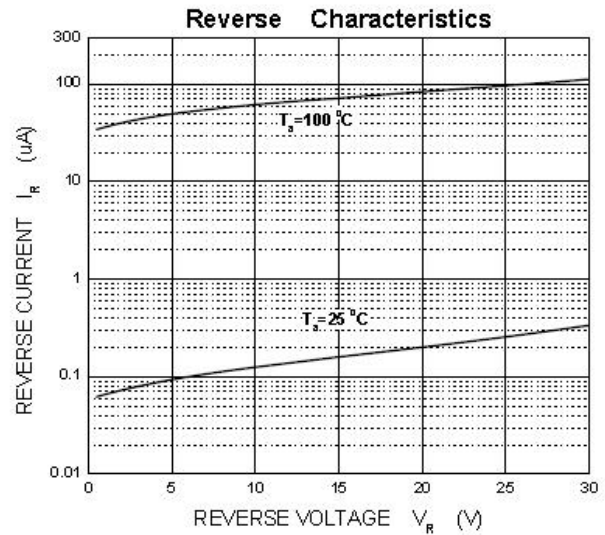
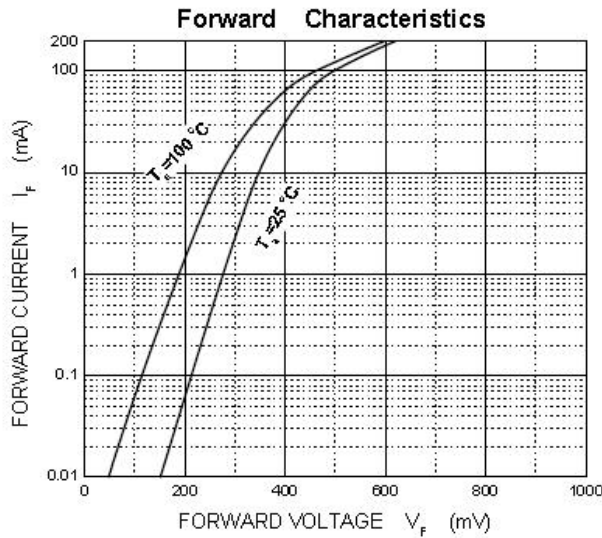
Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop(per leg)*	$V_{F1}$	@ 0.1mA, Pulse, $T_J = 25^\circ\text{C}$	0.21	0.24	V
		@ 1mA, Pulse, $T_J = 25^\circ\text{C}$	0.29	0.32	
		@ 10mA, Pulse, $T_J = 25^\circ\text{C}$	0.35	0.40	
		@ 30mA, Pulse, $T_J = 25^\circ\text{C}$	0.40	0.50	
		@ 100mA, Pulse, $T_J = 25^\circ\text{C}$	0.50	1.0	
Reverse Current(per leg)*	$I_{R1}$	@ $V_R = \text{rated } V_R$ , Pulse, $T_J = 25^\circ\text{C}$	0.3	2.0	$\mu\text{A}$
	$I_{R2}$	@ $V_R = \text{rated } V_R$ , Pulse, $T_J = 100^\circ\text{C}$	102	200	$\mu\text{A}$
Junction Capacitance(per leg)	$C_T$	@ $V_R = 1\text{ V}$ , $T_c=25^\circ\text{C}$ fSIG = 1MHz	6	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  $\mu\text{s}$ , 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	$^\circ\text{C/W}$

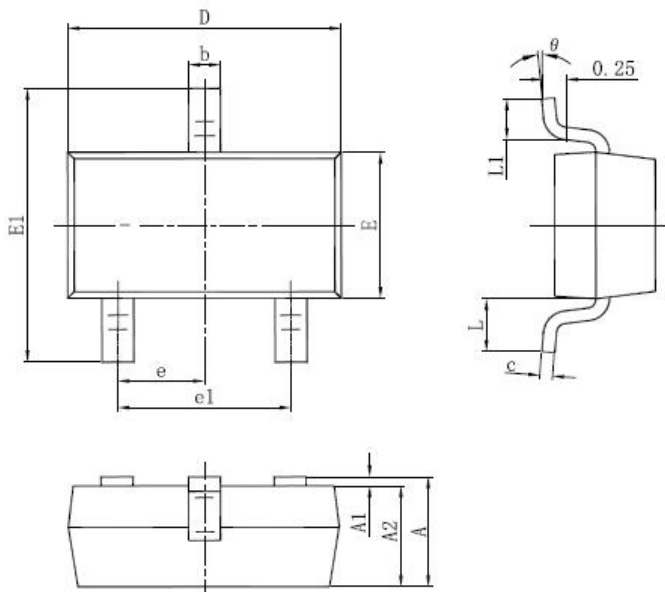
**Ratings and Characteristics Curves**



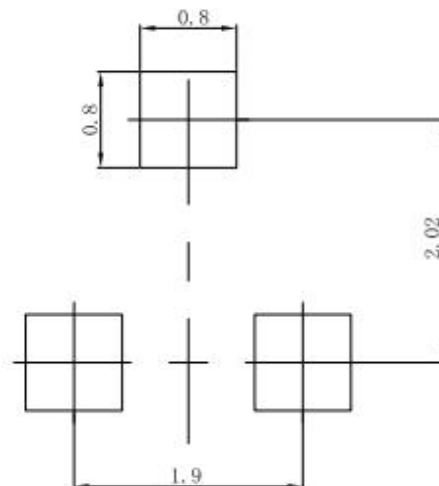
**Ordering Information**

Device	Package	Shipping
BAT54/A/C/S	SOT-23	3000pcs / reel

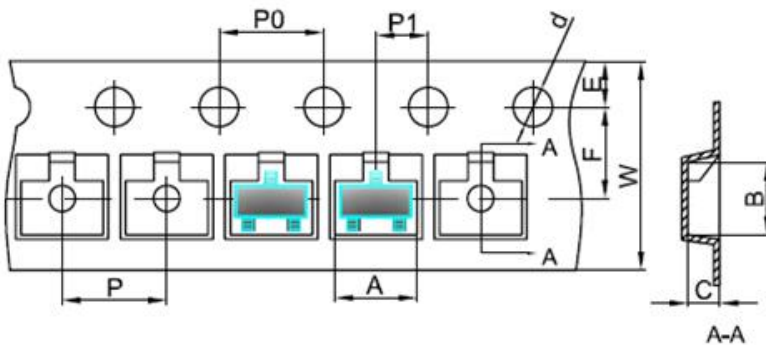
For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

**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
$\theta$	0°	8°	0°	8°

**Soldering Pad Layout (Millimeters )**


**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

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