

## BAT54/A/C/S SCHOTTKY RECTIFIER

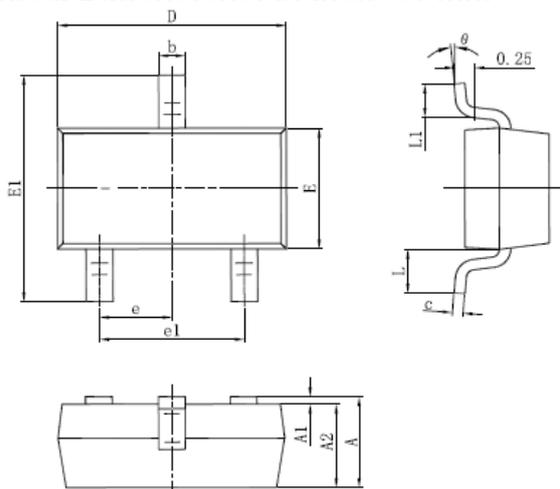
**Applications:**

- Small signal switching

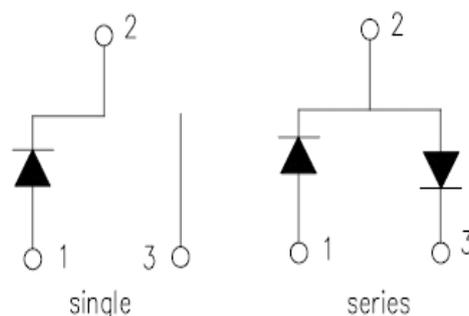
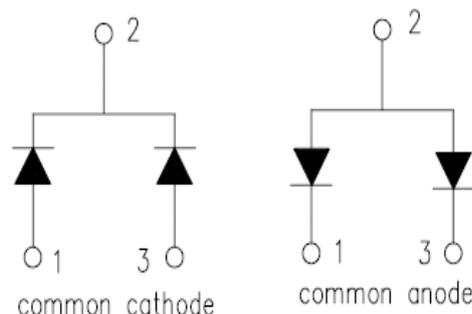
**Features:**

- Negligible switching losses
- Very small conduction losses
- Low forward voltage drop
- Surface mount device
- Double diodes with different pinning are available
- Schottky barrier diodes encapsulated in a SOT-23 small SMD packages
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

**Mechanical Dimensions: In Inches / mm**



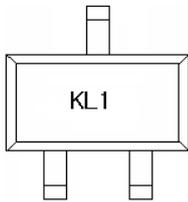
Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP.		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°



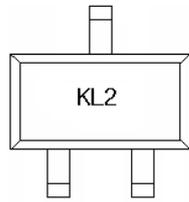
**SOT-23 Package**

<b>BAT54C</b>	<b>Common Cathode</b>	<b>BAT54A</b>	<b>Common Anode</b>
<b>BAT54</b>	<b>Single</b>	<b>BAT54S</b>	<b>Series</b>

**Marking Diagram:**

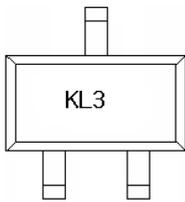


**BAT54**

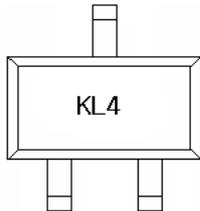


**BAT54A**

KL1/KL2/KL3/KL4 = Part Name



**BAT54C**



**BAT54S**

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

**Cautions:** Molding resin  
 Epoxy resin UL:94V-0

**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.

**Maximum Ratings:**

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	-	30	V
Average Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_C = 80^\circ\text{C}$ , 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#	$P_{tot}$	$T_{amb} = 25^\circ\text{C}$	200	mW

# for double diodes,  $P_{tot}$  is the total dissipation of both diodes.

**Electrical Characteristics:**

Characteristics	Symbol	Condition	Max.	Units
Forward Voltage Drop(per leg)*	$V_{F1}$	@ 0.1mA, Pulse, $T_J = 25^\circ\text{C}$ @ 1mA, Pulse, $T_J = 25^\circ\text{C}$ @ 10mA, Pulse, $T_J = 25^\circ\text{C}$ @ 30mA, Pulse, $T_J = 25^\circ\text{C}$ @ 100mA, Pulse, $T_J = 25^\circ\text{C}$	0.24 0.32 0.40 0.50 1.0	V
Reverse Current(per leg)**	$I_{R1}$	@ $V_R = \text{rated } V_R$ , Pulse, $T_J = 25^\circ\text{C}$	2.0	$\mu\text{A}$
	$I_{R2}$	@ $V_R = \text{rated } V_R$ , Pulse, $T_J = 100^\circ\text{C}$	100	$\mu\text{A}$
Junction Capacitance (per leg)	$C_T$	@ $V_R = 5.0\text{ V}$ , $T_C = 25^\circ\text{C}$ $f_{SIG} = 1\text{ MHz}$	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

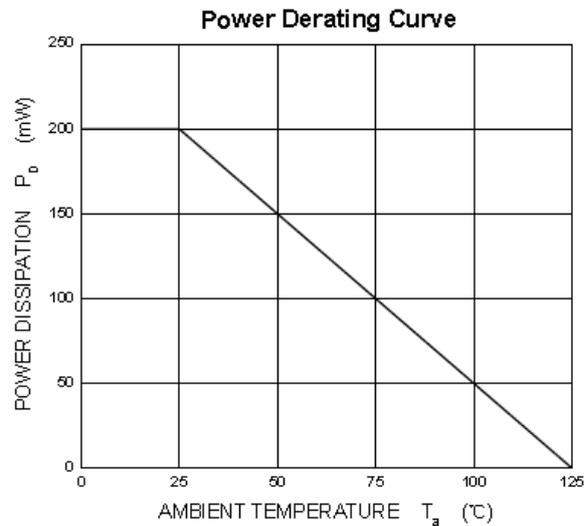
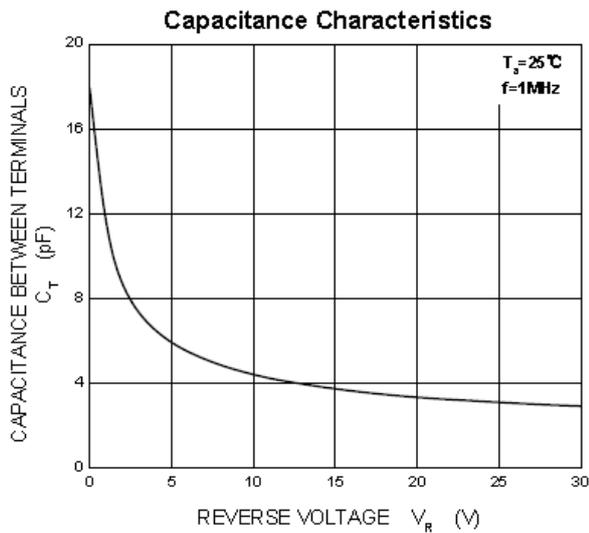
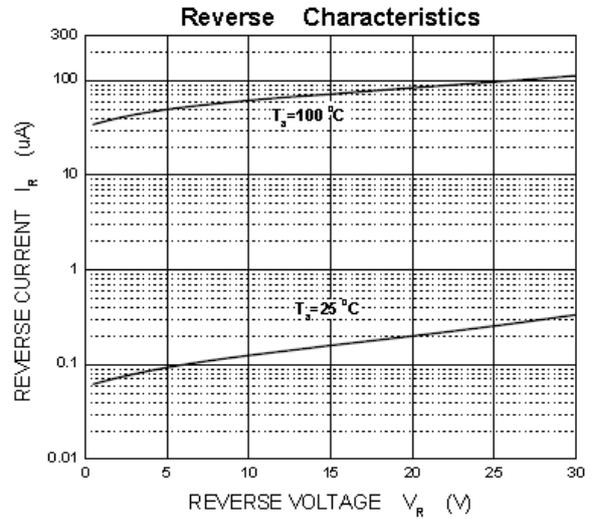
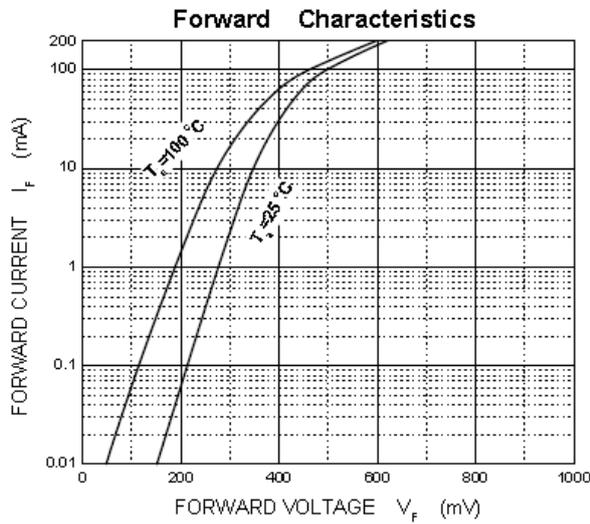
Pulse test:

\*  $t_p = 380\text{ms}$ ,  $\delta < 2\%$

\*\*  $t_p = 5\text{ms}$ ,  $\delta < 2\%$

**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	$^\circ\text{C/W}$
Case Style	SOT-23			





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