



THE DATASHEET OF BAT54CTR



Technical Data
Data Sheet N0123, Rev. C

BAT54/A/C/S SCHOTTKY RECTIFIER

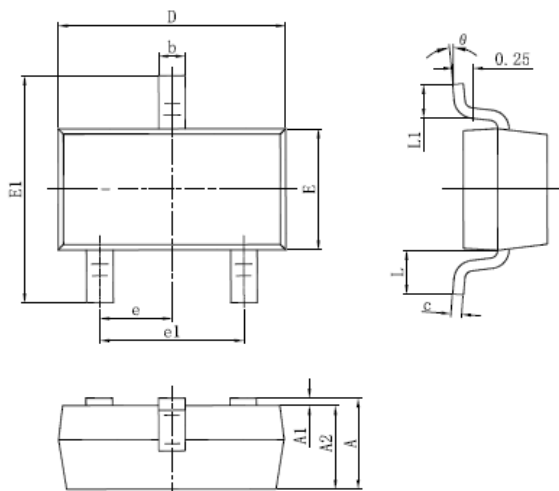
Applications:

- Small signal switching

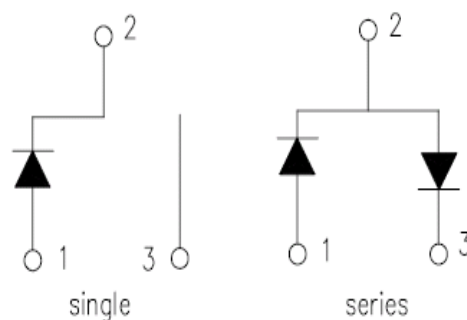
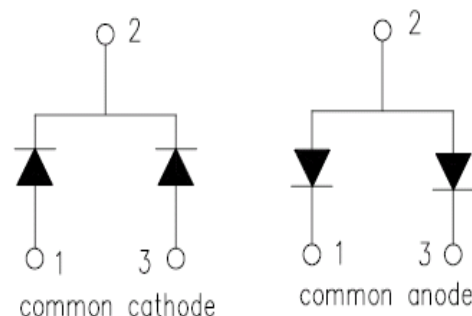
Features:

- 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°

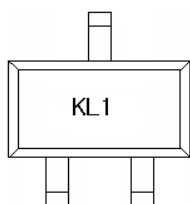


SOT-23 Package

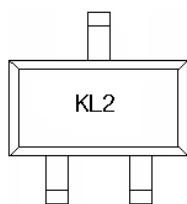
BAT54C	Common Cathode	BAT54A	Common Anode
BAT54	Single	BAT54S	Series

- China - Germany - Korea - Singapore - United States •
• <http://www.smc-diodes.com> - sales@smc-diodes.com •

Marking Diagram:

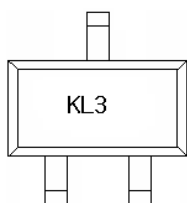


BAT54

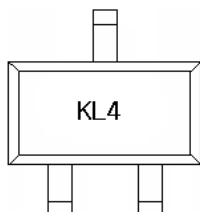


BAT54A

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	μA
	I_{R2}	@ $V_R = \text{rated } V_R$, Pulse, $T_J = 100^\circ\text{C}$	100	μA
Junction Capacitance (per leg)	C_T	@ $V_R = 5.0\text{ V}$, $T_C = 25^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$	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

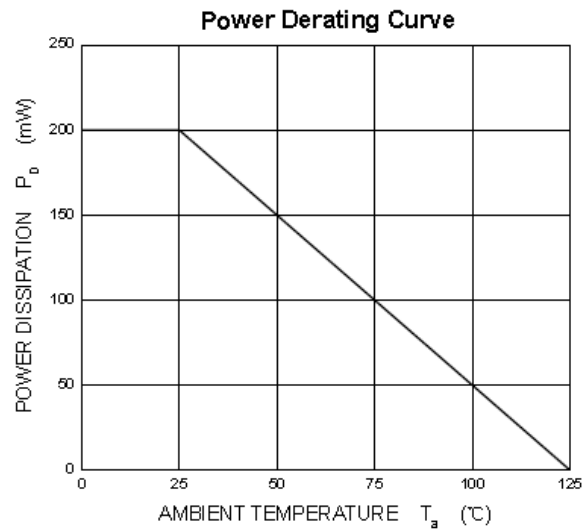
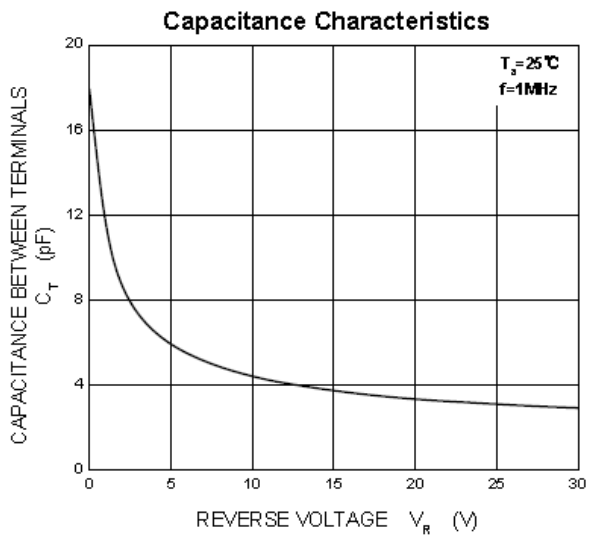
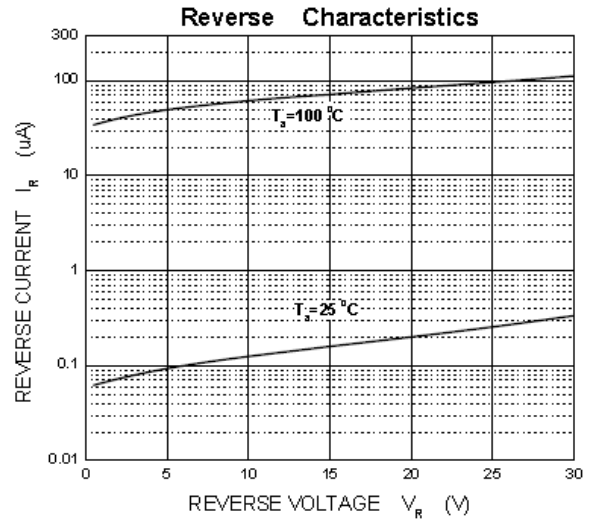
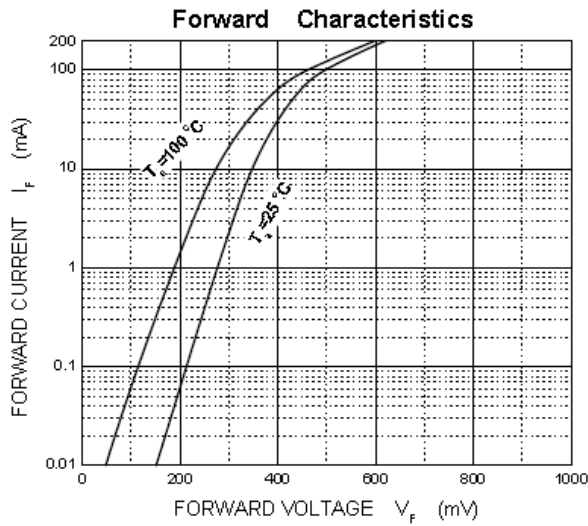
Pulse test:

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

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

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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