

**Kingtronics**®**BAT54A**  
**SCHOTTKY**  
**BARRIER DIODE****FEATURES**

Low Forward Voltage  
Fast Switching  
Surface Mount device  
For General Purpose Switching Applications

**MECHANICAL DATA**

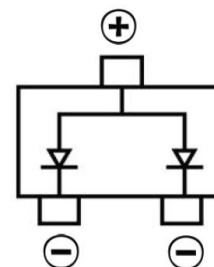
Case: SOT-23  
Case Material: Molded Plastic. UL flammability  
Classification Rating: 94V-0  
Moisture Sensitivity: Level 1 per J-STD-020  
Weight: 0.013 grams (approximate)

**MAXIMUM RATINGS ( $T_A = 25^\circ\text{C}$  unless otherwise noted)**

PARAMETER	SYMBOL	VALUE	UNIT
Reverse Voltage	$V_R$		
Peak Repetitive Peak Reverse Voltage	$V_{RRM}$	30	V
Working Peak Reverse Voltage	$V_{RWM}$		
Forward Continuous Current	$I_F$	200	mA
Non-repetitive Peak Forward Surge Current @ $t=8.3\text{ms}$	$I_{FSM}$	600	mA
Repetitive Peak Forward Current @ $t \leq 1\text{s}, \delta \leq 0.5$	$I_{FRM}$	300	mA
Power Dissipation	$P_D$	200	mW
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	500	$^\circ\text{C}/\text{W}$
Junction Temperature	$T_J$	125	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-55~+150	$^\circ\text{C}$

**ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$  unless otherwise specified)**

PARAMETER	SYMBOL	MIN.	MAX.	UNIT	CONDITION
Reverse breakdown voltage	$V_{(BR)}$	30		V	$I_R=100\mu\text{A}$
Reverse voltage leakage current	$I_R$		2	$\mu\text{A}$	$V_R=25\text{V}$
Forward voltage	$V_{F1}$		0.24	V	$I_{F1}=0.1\text{mA}$
Forward voltage	$V_{F2}$		0.32	V	$I_{F2}=1\text{mA}$
Forward voltage	$V_{F3}$		0.40	V	$I_{F3}=10\text{mA}$
Forward voltage	$V_{F4}$		0.50	V	$I_{F4}=30\text{mA}$
Forward voltage	$V_{F5}$		1	V	$I_{F5}=100\text{mA}$
Diode capacitance	$C_D$		10	pF	$V_R=1\text{V}, f=1\text{MHz}$
Reverse recovery time	$T_{rr}$		5	nS	$I_F=I_R=10\text{mA}$ $I_{rr}=0.1 \times I_R$ $R_L=100\Omega$

**SOT-23**

BAT54A:KL2

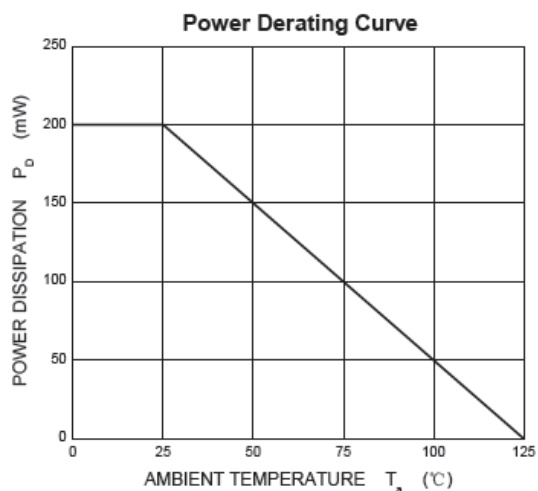
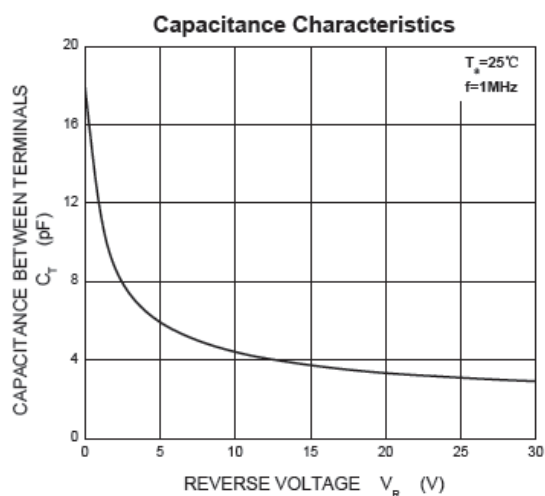
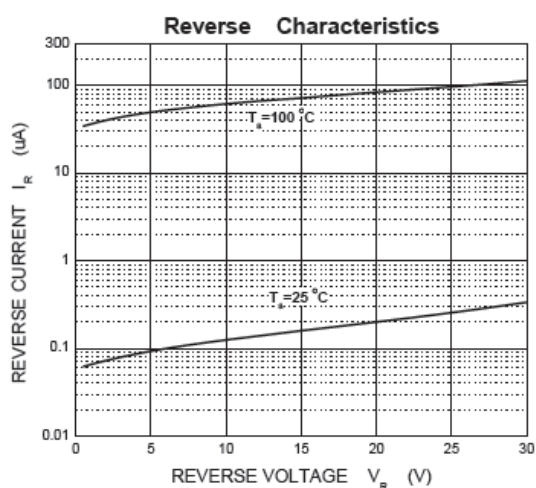
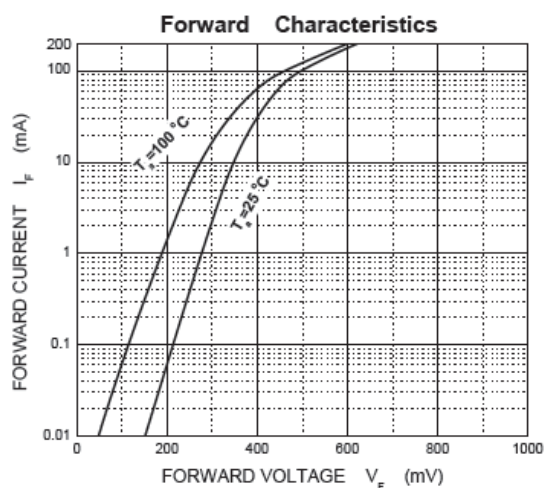
**Kingtronics**® International Company

Website: [www.kingtronics.com](http://www.kingtronics.com) Email: [info@kingtronics.com](mailto:info@kingtronics.com) Tel: (852) 8106 7033 Fax: (852) 8106 7099

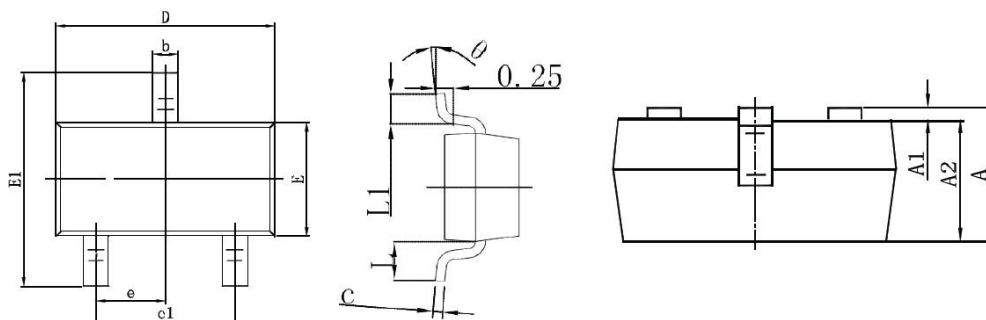
# Kingtronics®

## BAT54A SCHOTTKY BARRIER DIODE

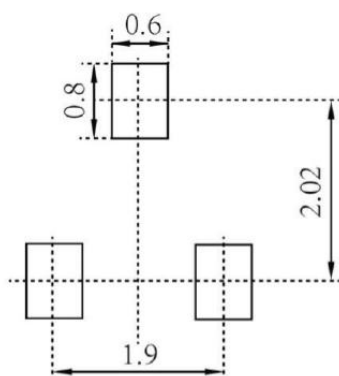
### Typical Characteristics



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**Kingtronics**®**BAT54A**  
SCHOTTKY  
BARRIER DIODE**SOT-23 Package Outline Dimensions**

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 Suggested Pad Layout****Note:**

1. Controlling dimension: in millimeters
2. General tolerance:  $\pm 0.05\text{mm}$
3. The pad layout is for reference purposes only

Note: Specifications are subject to change without notice.

**Kingtronics**® International CompanyWebsite: [www.kingtronics.com](http://www.kingtronics.com) Email: [info@kingtronics.com](mailto:info@kingtronics.com) Tel: (852) 8106 7033 Fax: (852) 8106 7099