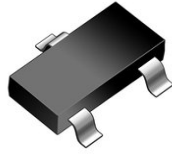
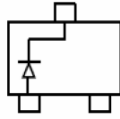


**SOT-23**

**Features**

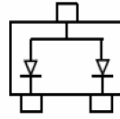
Extremely Fast Switching Speed  
Epitaxial planar die construction  
Halogen free and RoHS compliant

**Mechanical Data**

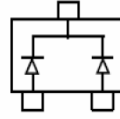
SOT-23 Small Outline Plastic Package  
EpoxyUL:94V-0

**MARKING:**


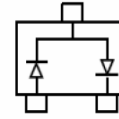
BAT54 MARKING: KL1



BAT54A MARKING: KL2



BAT54C MARKING: KL3



BAT54S MARKING: KL4

BAT54	BAT54A	BAT54C	BAT54S

**Summary of Packing Options**

Package	Packing Description	Packing Quantity	Industry Standard
SOT-23	Tape/Reel,7" reel	3000	EIA-481-1

**Maximum Ratings & Thermal Characteristics**

(Ratings at 25°C ambient temperature unless otherwise specified.)

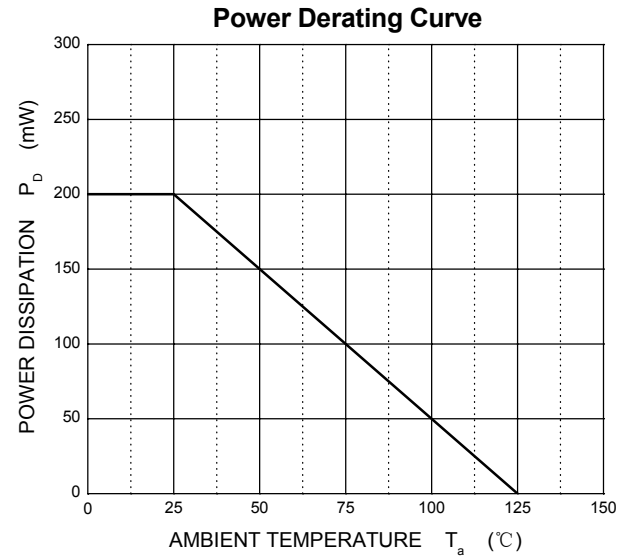
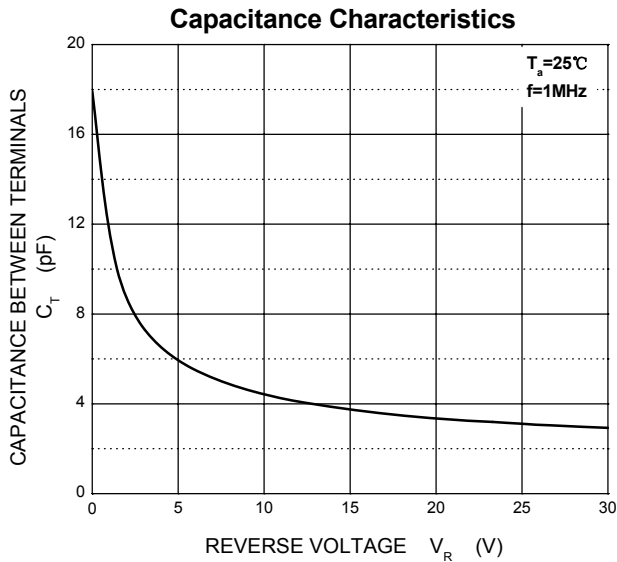
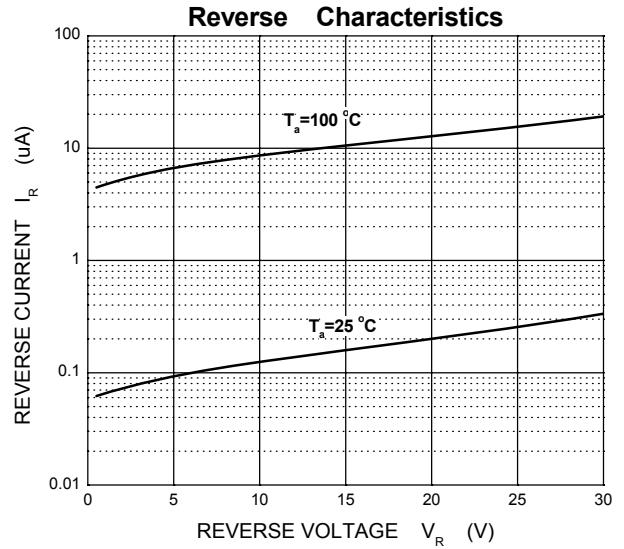
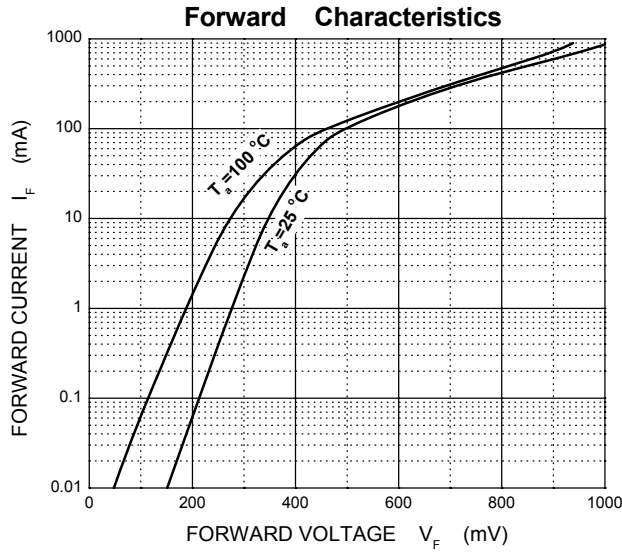
Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$		
Working Peak Reverse Voltage	$V_{RWM}$	30	V
DC Blocking Voltage	$V_R$		
Forward Continuous Current	$I_{FM}$	200	mA
Non-repetitive Peak Forward Surge Current @ $t=8.3ms$	$I_{FSM}$	600	mA
Repetitive Peak Forward Current @ $t \leq 1s, \delta \leq 0.5$	$I_{FRM}$	300	mA
Power Dissipation	$P_D$	200	mW
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	500	°C/W
Junction Temperature	$T_J$	125	°C
Storage Temperature	$T_{stg}$	-55~+150	°C

**Electrical Characteristics**

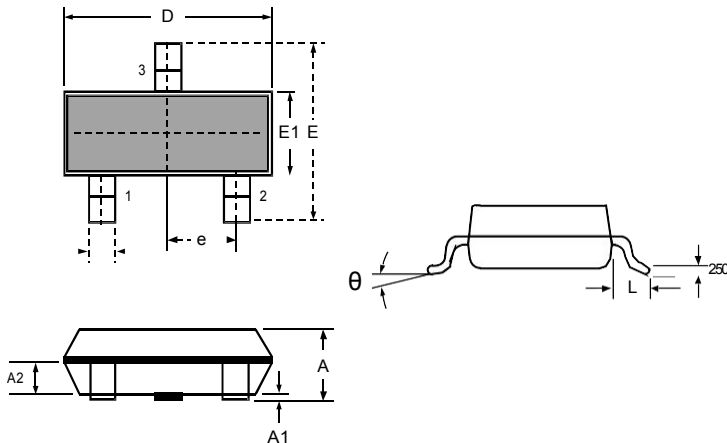
(Ratings at 25°C ambient temperature unless otherwise specified.)

Parameter	Symbol	Min	Typ	Max	Unit	Test conditions
Reverse voltage	$V_{(BR)}$		30		V	$I_R=100\mu A$
Forward voltage	$V_F$			0.24	V	$I_{F1}=0.1mA$
				0.32	V	$I_{F2}=1mA$
				0.40	V	$I_{F3}=10mA$
				0.50	V	$I_{F4}=30mA$
				1	V	$I_{F5}=100mA$
Reverse current	$I_R$			2	$\mu A$	$V_R=25V$
Diode capacitance	$C_D$			10	pF	$V_R=1V, f=1MHz$
Reverse recovery time	$t_{rr}$			5	ns	$I_F=I_R=10mA$ $I_{rr}=0.1 \times I_R, R_L=100 \Omega$

## Ratings and Characteristic Curves



## Package Outline Dimensions: SOT-23



### DIMENSIONS

SYMBOL	MILLIMETER		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
D	2.800	3.000	0.110	0.118
b	0.300	0.500	0.012	0.020
E	2.250	2.550	0.089	0.100
E1	1.200	1.400	0.047	0.055
e	0.950 BSC		0.037 BSC	
L	0.300	0.500	0.012	0.020
$\theta$	0	$8^\circ$	0	$8^\circ$