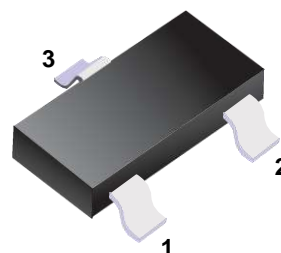


SOT-23 Plastic-Encapsulate Diodes

Schottky Diodes

Features:

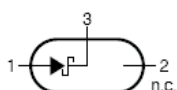
- Low Turn-on Voltage
- Extremely Fast Switching Speed
- PN Junction Guard Ring for Transient and ESD Protection
- Totally Lead-Free & Fully RoHS Compliant
- Halogen and Antimony Free. "Green" Device



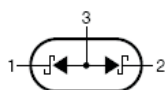
■ Simplified outline(SOT-23)

Description:

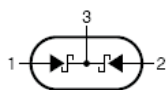
These Schottky Barrier Diodes are Designed for High Speed Switching Applications, Circuit Protection, And Voltage Clamping. Extremely Low Forward Voltage Reduces Conduction Loss. Miniature Surface Mount Package is Excellent For Handheld And Portable Applications Where Space is Limited.



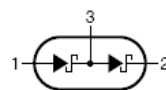
BAT54



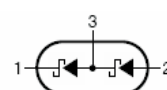
BAT54A



BAT54C



BAT54S



BAT54X

■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Maximum Repetitive Reverse Voltage	V_{RRM}	30	V
Average Rectified Forward Current	$I_{F(AV)}$	200	mA
Non-repetitive Peak Forward Surge Current Pulse width = 1.0 second	I_{FSM}	600	mA
Power Dissipation	P_D	200	mW
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	430	$^\circ\text{C}/\text{W}$
Storage Temperature Range	T_{stg}	-55 to +150	$^\circ\text{C}$
Operating Junction Temperature	T_J	150	$^\circ\text{C}$

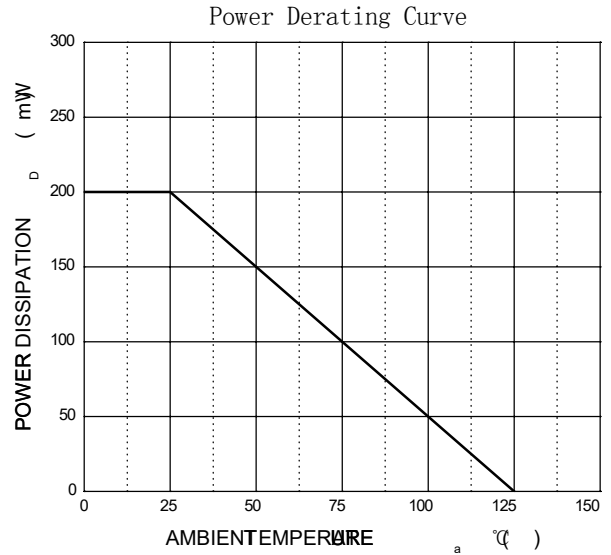
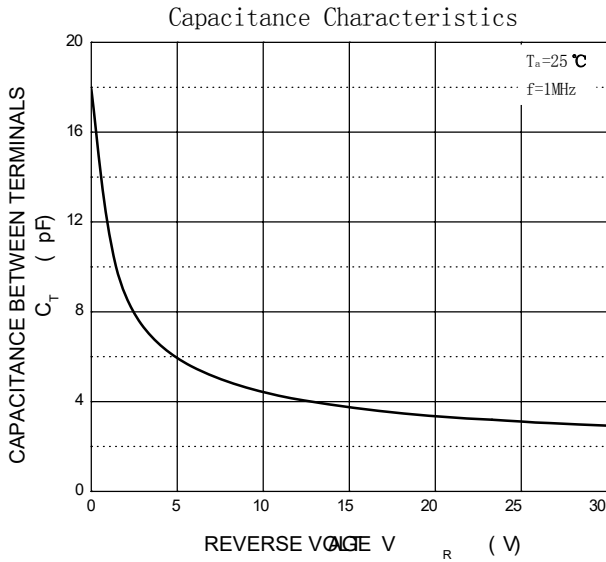
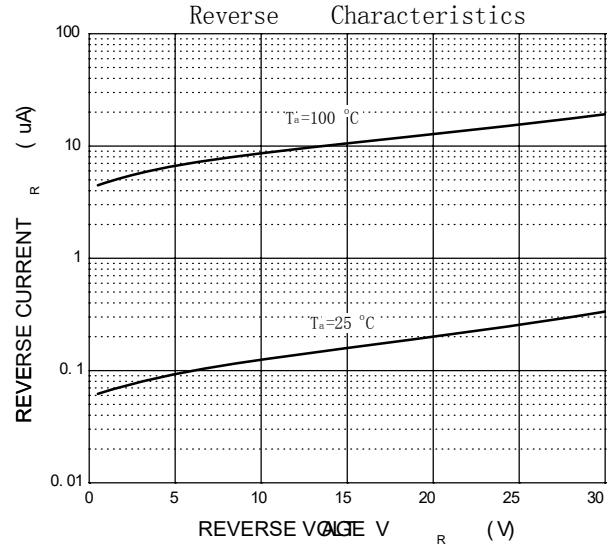
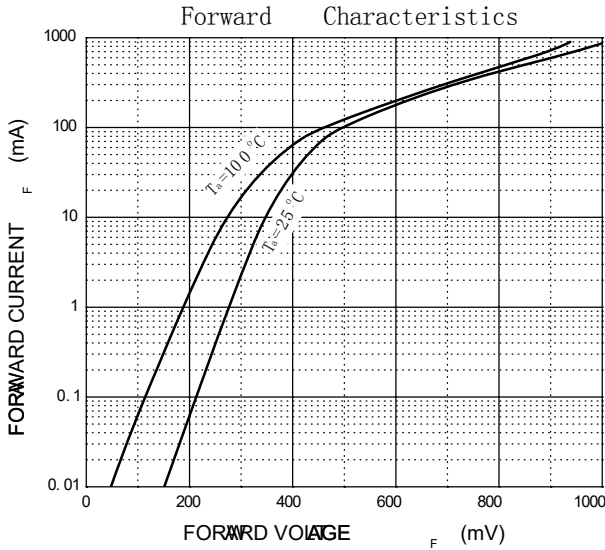
■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Breakdown Voltage	V_R	$I_R = 100 \mu\text{A}$	30			V
Forward Voltage	V_F	$I_F = 0.1 \text{ mA}$			240	mV
		$I_F = 1 \text{ mA}$			320	mV
		$I_F = 10 \text{ mA}$			400	mV
		$I_F = 30 \text{ mA}$			500	mV
		$I_F = 100 \text{ mA}$			0.8	V
Reverse Current	I_R	$V_R = 25 \text{ V}$			2	μA
Total Capacitance	C_T	$V_R = 1\text{V}, f = 1.0 \text{ MHz}$			10	pF
Reverse Recovery Time	t_{rr}	$I_F = I_R = 10 \text{ mA}, I_{RR} = 1.0 \text{ mA}, R_L = 100\Omega$			5	ns

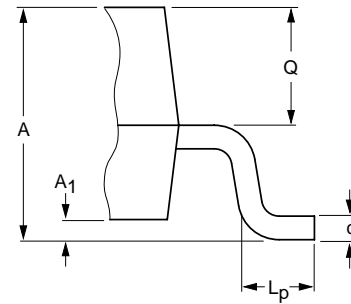
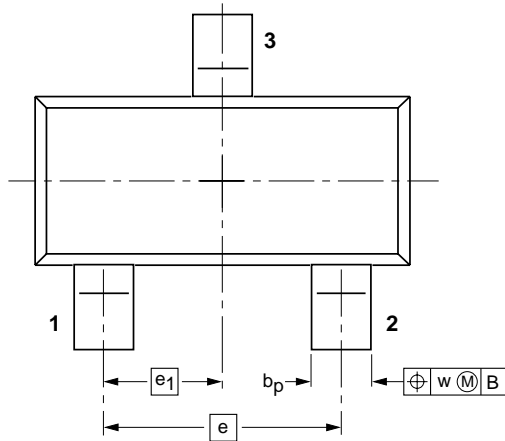
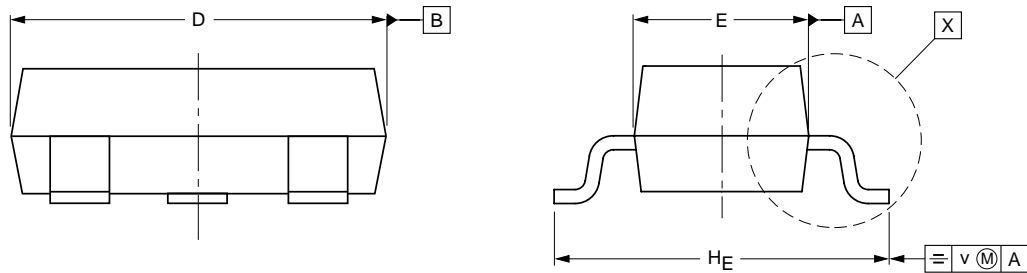
■ Marking

TYPE	BAT54	BAT54A	BAT54C	BAT54S	BAT54X
Marking	L4/KL1	L42/KL2	L43/KL3	L44/KL4/LD3	L45/KL45

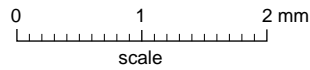
■ Typical Characteristics



■ SOT-23



detail X



DIMENSIONS (mm are the original dimensions)

UNIT	A	A ₁ max.	b _p	c	D	E	e	e ₁	H _E	L _p	Q	v	w
mm	1.1 0.9	0.1	0.48 0.38	0.15 0.09	3.0 2.8	1.4 1.2	1.9	0.95	2.5 2.1	0.45 0.15	0.55 0.45	0.2	0.1