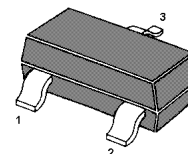
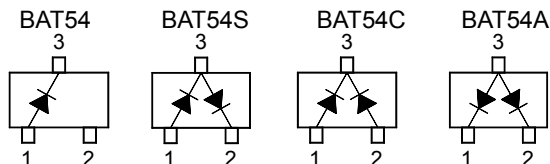


BAT54 / A / C / S

Schottky Barrier Diodes



BAT54 Marking Code: **L4**
BAT54A Marking Code: **L42**
BAT54C Marking Code: **L43**
BAT54S Marking Code: **L44**
SOT-23 Plastic Package

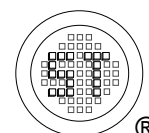
Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	30	V
Average Rectified Forward Current	$I_{F(AV)}$	200	mA
Non-repetitive Peak Forward Surge Current at Pulse width = 1 second	I_{FSM}	600	mA
Power Dissipation	P_{tot}	290	mW
Operating Junction Temperature Range	T_j	- 55 to + 150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 55 to + 150	$^\circ\text{C}$

Thermal Resistance Ratings

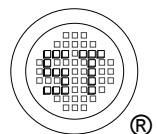
Parameter	Symbol	Max.	Unit
Thermal Resistance Junction to Ambient Air ¹⁾	$R_{\theta JA}$	430	$^\circ\text{C/W}$

¹⁾ Device mounted on FR-4 substrate PC board, 2oz copper, with minimum recommended pad layout.



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

Parameter	Symbol	Min.	Max.	Unit
Forward Voltage at $I_F = 0.1\text{ mA}$	V_F	-	240	mV
at $I_F = 1\text{ mA}$	V_F	-	320	mV
at $I_F = 10\text{ mA}$	V_F	-	400	mV
at $I_F = 30\text{ mA}$	V_F	-	500	mV
at $I_F = 100\text{ mA}$	V_F	-	800	mV
Reverse Current at $V_R = 25\text{ V}$	I_R	-	2	μA
Reverse Breakdown Voltage at $I_R = 10\text{ }\mu\text{A}$	$V_{(BR)R}$	30	-	V
Total Capacitance at $V_R = 1\text{ V}$, $f = 1\text{ MHz}$	C_{tot}	-	10	pF
Reverse Recovery Time at $I_F = 10\text{ mA}$, $I_R = 10\text{ mA}$, $I_{RR} = 1\text{ mA}$, $R_L = 100\text{ }\Omega$	t_{rr}	-	5	ns



Electrical characteristic curves

Fig 1. Forward Current Derating Curve

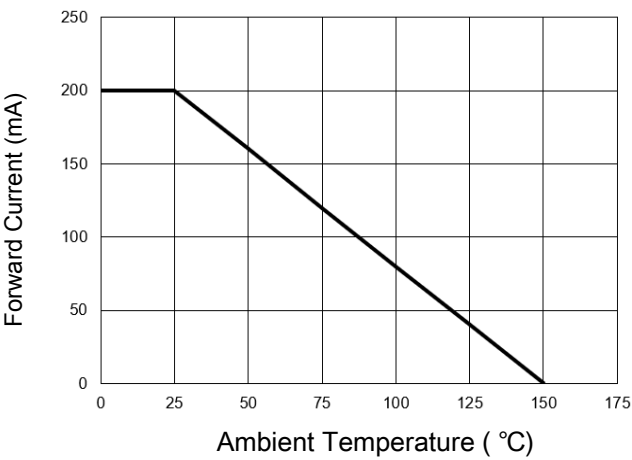


Fig 2. Forward Characteristic Curve

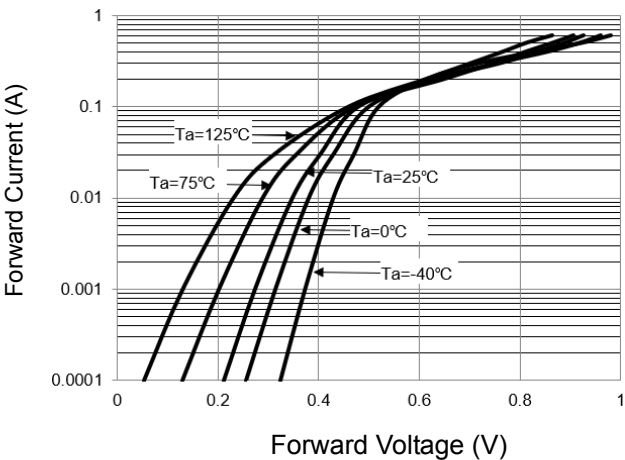


Fig 3. Reverse Characteristic Curve

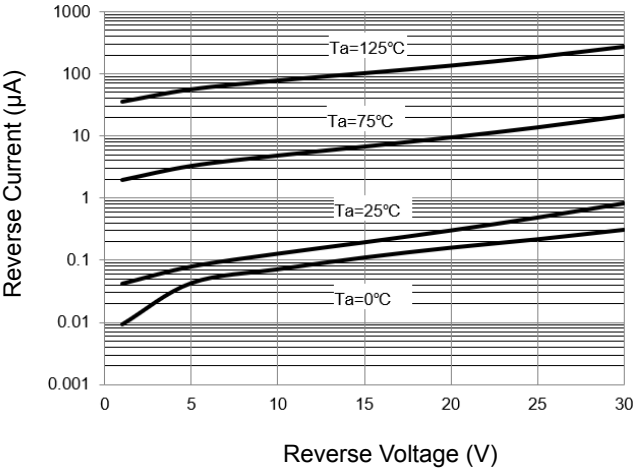
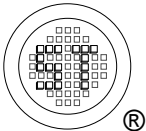
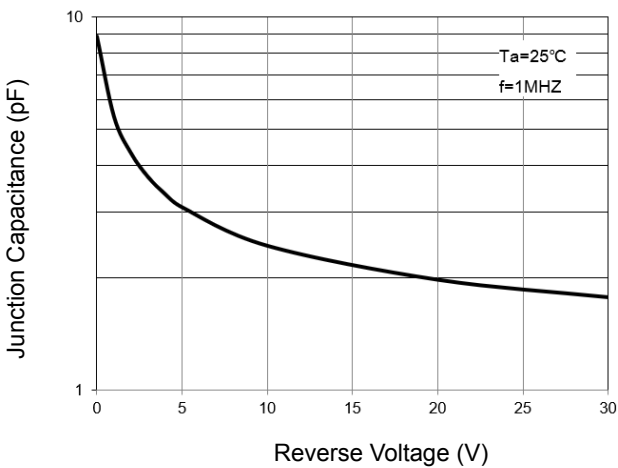
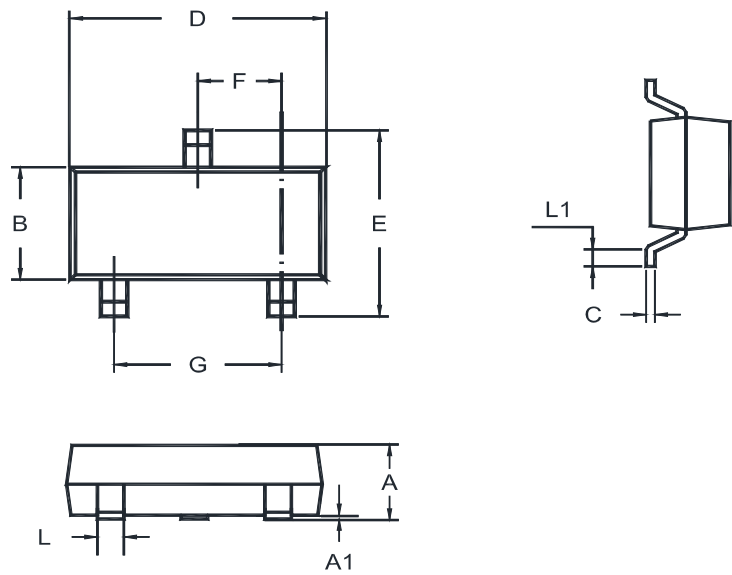


Fig 4. Junction Capacitance



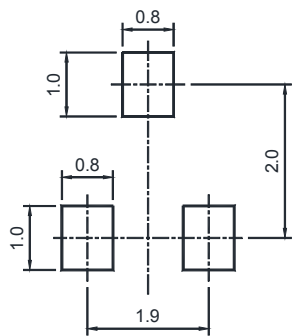
Package Outline (Dimensions in mm)

SOT-23



Unit	A	A1	B	C	D	E	F	G	L	L1
mm	1.20 0.89	0.100 0.013	1.40 1.20	0.19 0.08	3.04 2.80	2.6 2.2	1.02 0.89	2.04 1.78	0.51 0.37	0.2 Min.

Recommended Soldering Footprint



Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
SOT-23	8	4 ± 0.1	0.157 ± 0.004	178	7	3,000

Marking information

" *** " = Part No.
"YM" = Date Code Marking
"Y" = Year
"M" = Month
Font type: Arial

