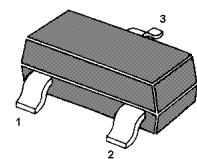
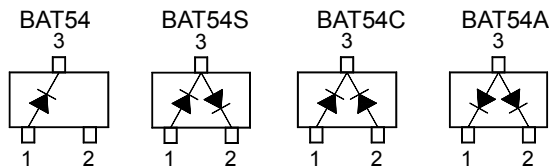


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Schottky Barrier Diodes



SOT-23 Plastic Package



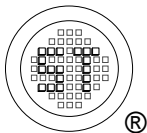
Absolute Maximum Ratings ($T_a = 25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	30	V
Average Rectified Forward Current	$I_{F(AV)}$	300	mA
Repetitive Peak Forward Surge Current at $t \leq 1\text{s}$, Duty ≤ 0.5 , Per diode	I_{FRM}	350	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

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

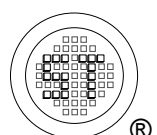
¹⁾ Device mounted on FR-4 substrate PC board, 2oz copper, with minimum recommended pad layout.



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

Parameter	Symbol	Min.	Max.	Unit
Reverse Breakdown Voltage at $I_R = 100\ \mu\text{A}$	$V_{(BR)R}$	30	-	V
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
Total Capacitance at $V_R = 1\ \text{V}$, $f = 1\ \text{MHz}$	C_{tot}	-	10	pF
Reverse Recovery Time at $I_F = 10\ \text{mA}$, $I_R = 10\ \text{mA}$, $I_{RR} = 1\ \text{mA}$, $R_L = 100\ \Omega$	t_{rr}	-	5	ns



Electrical Characteristics Curves

Fig 1. Reverse Characteristics Curve

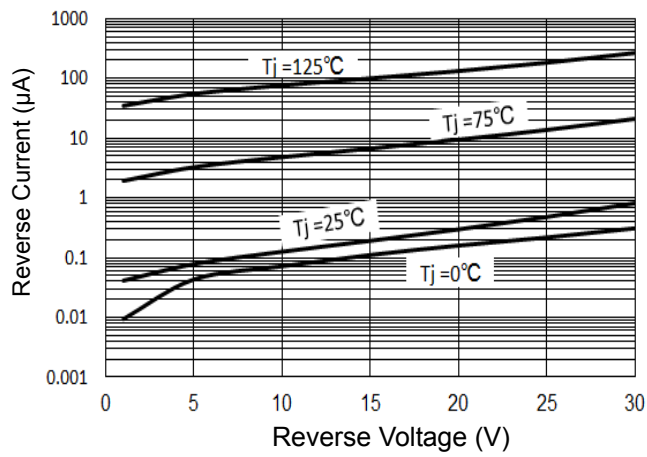


Fig 2. Forward Characteristics Curve

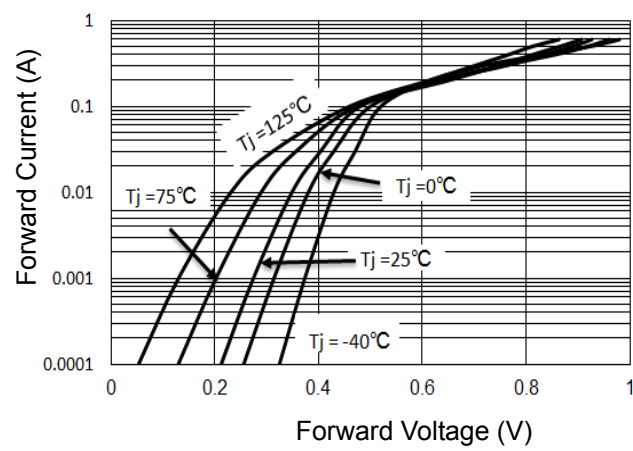


Fig 3. Junction Capacitance

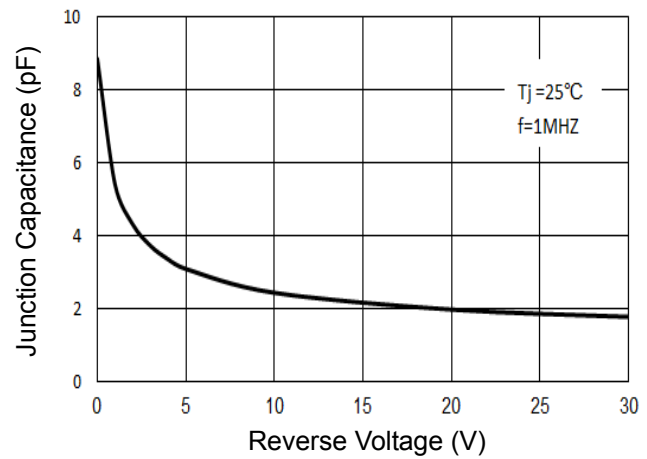
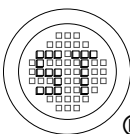
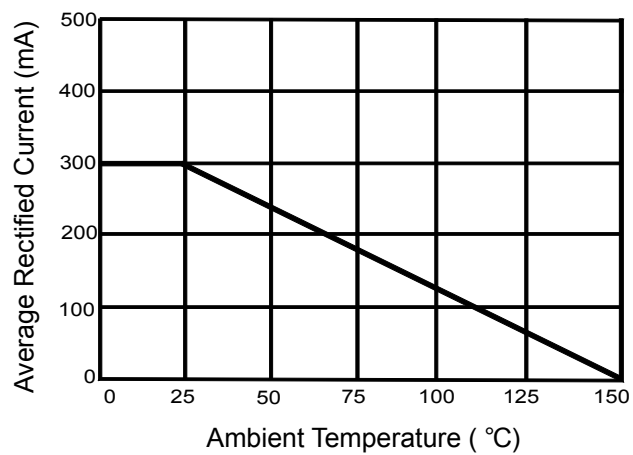


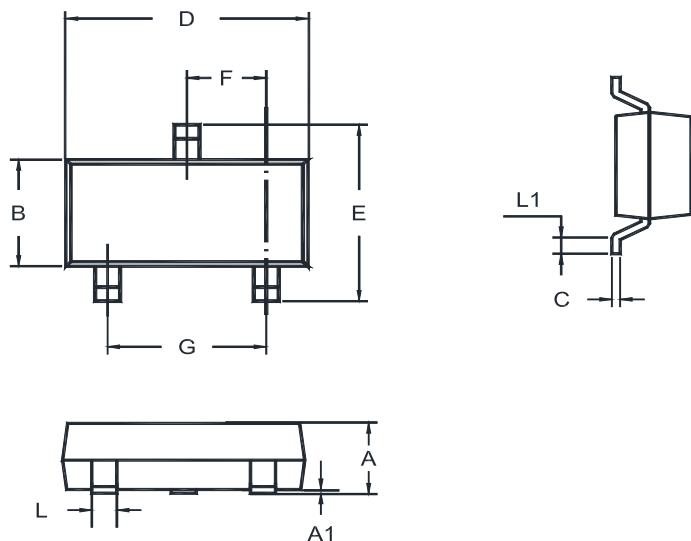
Fig 4. Average Rectified Current Derating Curve



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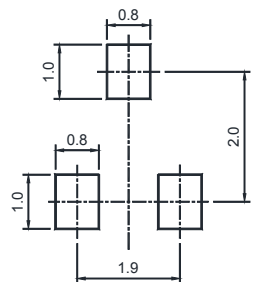
Package Outline (Dimensions in mm)

SOT-23



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

Recommended Soldering Footprint



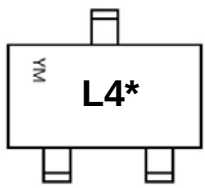
Packing information

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

" L4* " = Part No.

Type	Marking	Type	Marking
BAT54	L4	BAT54C	L43
BAT54A	L42	BAT54S	L44



" YM " = Date Code Marking

" Y " = Year

" M " = Month

Font type: Arial

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