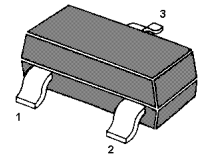
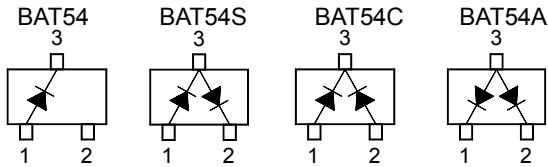


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## Schottky Barrier Diodes



SOT-23 Plastic Package

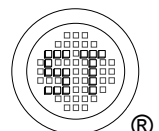
### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	$V_{RRM}$	30	V
Average Rectified Forward Current	$I_{F(AV)}$	300	mA
Repetitive Peak Forward Surge Current at $t \leq 1\text{s}$ , Duty $\leq 0.5$ , 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 <sup>1)</sup>	$R_{\theta JA}$	430	$^\circ\text{C/W}$

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

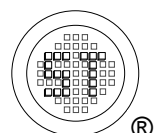


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## Characteristics at $T_a = 25^\circ\text{C}$

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	$\mu\text{A}$
Total Capacitance at $V_R = 1 \text{ V}$ , $f = 1 \text{ MHz}$	$C_{\text{tot}}$	-	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

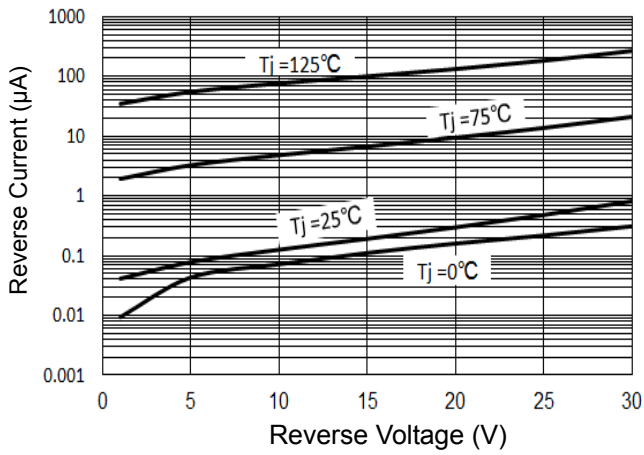


Fig 2. Forward Characteristics Curve

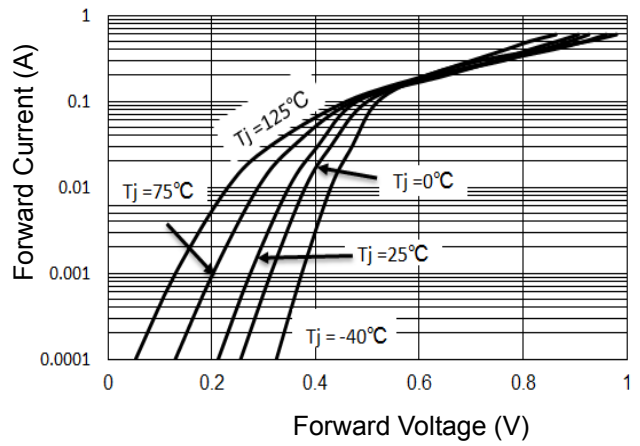


Fig 3. Junction Capacitance

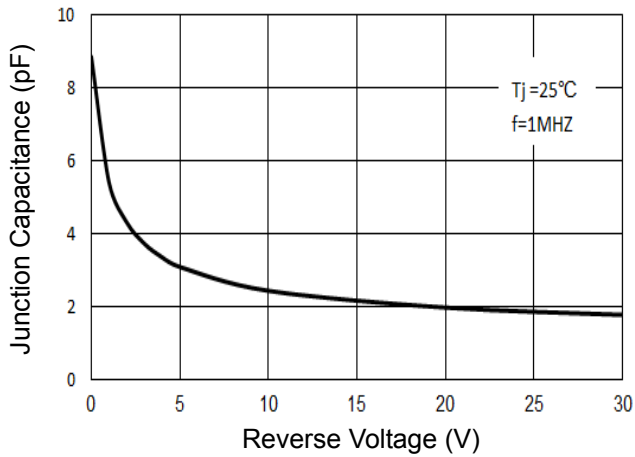
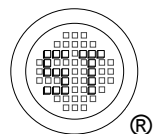
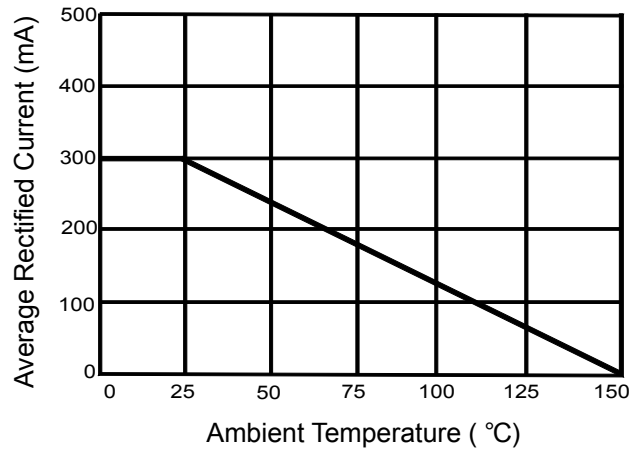


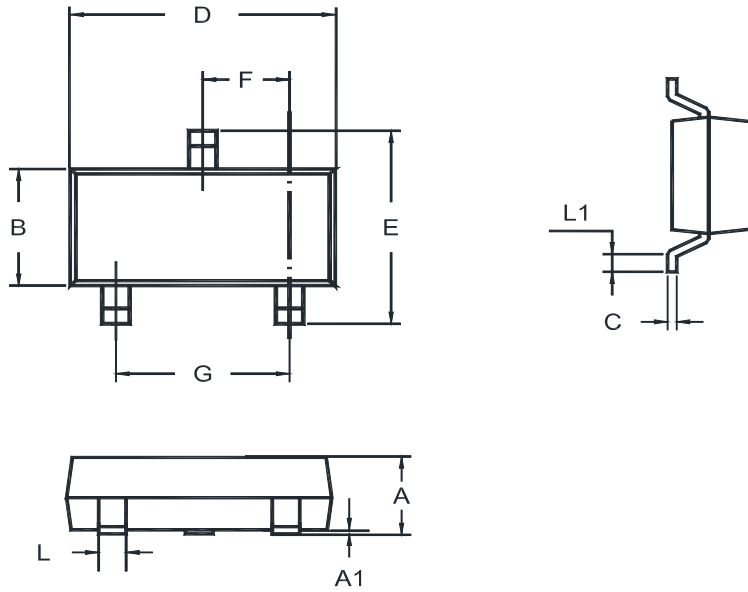
Fig 4. Average Rectified Current Derating Curve



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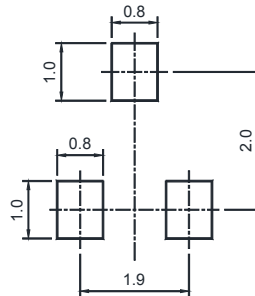
## Package Outline (Dimensions in mm)

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

