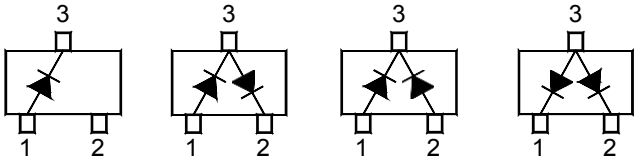
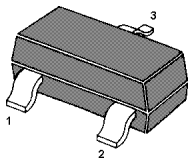
BAT54 / A / C / S

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[1] **(T_a = 25°C)**

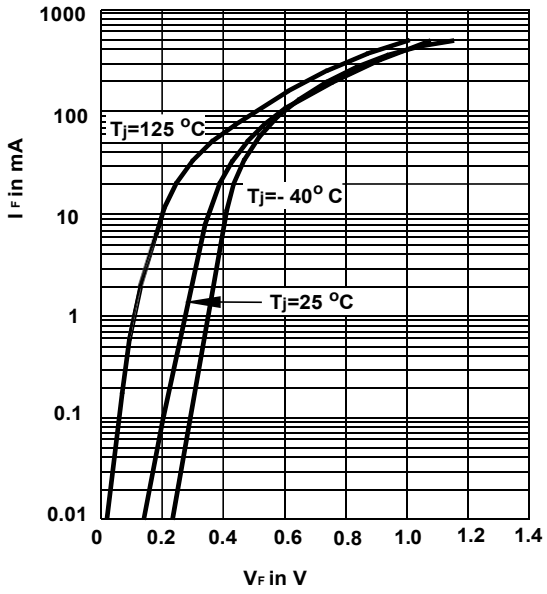
Parameter	Symbol	Limits	Unit
Repetitive peak reverse voltage	V_{RRM}	30	V
Average rectified forward current	$I_{F(AV)}$	200	mA
Repetitive Peak Forward Current	I_{FRM}	300	mA
Non-repetitive peak forward surge current at Pulse width=1 second	I_{FSM}	600	mA
Power dissipation	P_{tot}	290	mW
Thermal resistance junction to ambient air	$R_{\theta JA}$	430	°C/W
Junction temperature	T_j	- 55 to + 150	°C
Storage temperature range	T_{stg}	- 55 to + 150	°C

[1] These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

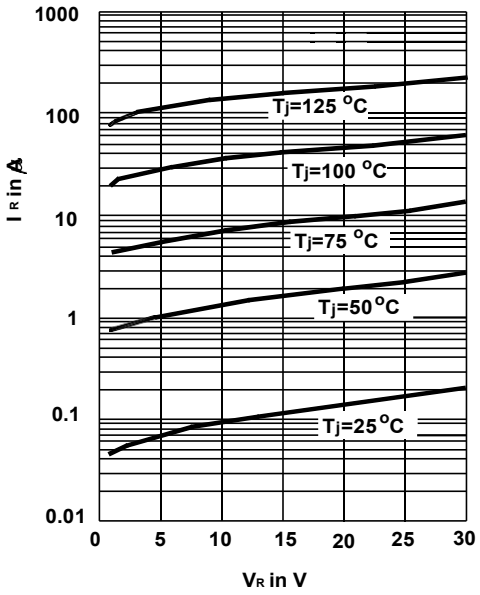
Characteristics at T_a = 25°C

Parameter	Symbol	Min.	Max.	Unit
Forward voltage at I_F = 0.1 mA at I_F = 1 mA at I_F = 10 mA at I_F = 30 mA at I_F = 100 mA	V_F	 - - - - -	 240 320 400 500 800	mV
Reverse current at V_R = 25 V	I_R	-	2	µA
Breakdown voltage at I_R =10 µA	V_R	30	-	V
Total capacitance at V_R = 1 V, f = 1 MHz	C_{tot}	-	10	pF
Reverse recovery time at I_F = 10 mA, I_R = 10 mA, I_{RR} = 1 mA, R_L = 100 Ω	t_{rr}	-	5	ns

Typical Forward Voltage Forward Current at Various Temperatures



Typical Variation of Reverse Current at Various Temperatures



Typical Capacitance °C vs. Reverse Applied Voltage VR