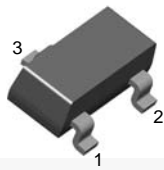


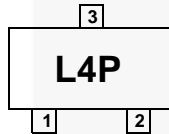


April 2016

# BAT54 / BAT54A / BAT54C / BAT54S Schottky Diodes



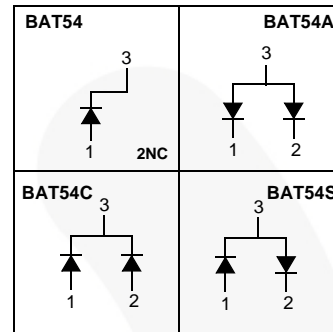
SOT-23



MARKING

BAT54 = L4P BAT54A = L42  
BAT54C = L43 BAT54S = L44

### Connection Diagram



## Ordering Information

Part Number	Top Mark	Package	Packing Method
BAT54	L4P	SOT-23 3L	3k per Tape and Reel
BAT54_D87Z	L4P	SOT-23 3L	10k per Tape and Reel
BAT54A	L42	SOT-23 3L	3k per Tape and Reel
BAT54C	L43	SOT-23 3L	3k per Tape and Reel
BAT54S	L44	SOT-23 3L	3k per Tape and Reel
BAT54S_D87Z	L44	SOT-23 3L	10k per Tape and Reel

## Absolute Maximum Ratings

Stresses exceeding the absolute maximum ratings may damage the device. The device may not function or be operable above the recommended operating conditions and stressing the parts to these levels is not recommended. In addition, extended exposure to stresses above the recommended operating conditions may affect device reliability. The absolute maximum ratings are stress ratings only. Values are at  $T_A = 25^\circ\text{C}$  unless otherwise noted.

Symbol	Parameter	Value	Unit
$V_{RRM}$	Maximum Repetitive Reverse Voltage	30	V
$I_{F(AV)}$	Average Rectified Forward Current	200	mA
$I_{FSM}$	Non-Repetitive Peak Forward Surge Current Pulse Width = 1.0 second	600	mA
$T_{STG}$	Storage Temperature Range	-55 to +150	$^\circ\text{C}$
$T_J$	Operating Junction Temperature	-55 to +150	$^\circ\text{C}$

BAT54 / BAT54A / BAT54C / BAT54S — Schottky Diodes

### Thermal Characteristics

Values are at  $T_A = 25^\circ\text{C}$  unless otherwise noted.

Symbol	Parameter	Value	Unit
$P_D$	Power Dissipation	290	mW
$R_{\theta JA}$	Thermal Resistance, Junction-to-Ambient	430	$^\circ\text{C}/\text{W}$

### Electrical Characteristics

Values are at  $T_A = 25^\circ\text{C}$  unless otherwise noted.

Symbol	Parameter	Conditions	Min.	Max.	Unit
$V_R$	Breakdown Voltage	$I_R = 10 \mu\text{A}$	30		V
$V_F$	Forward Voltage	$I_F = 0.1 \text{ mA}$		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
$I_R$	Reverse Leakage	$V_R = 25 \text{ V}$		2	$\mu\text{A}$
$C_T$	Total Capacitance	$V_R = 1 \text{ V}, f = 1.0 \text{ MHz}$		10	pF
$t_{rr}$	Reverse Recovery Time	$I_F = I_R = 10 \text{ mA}, I_{RR} = 1.0 \text{ mA}, R_L = 100 \Omega$		5.0	ns

### Typical Performance Characteristics

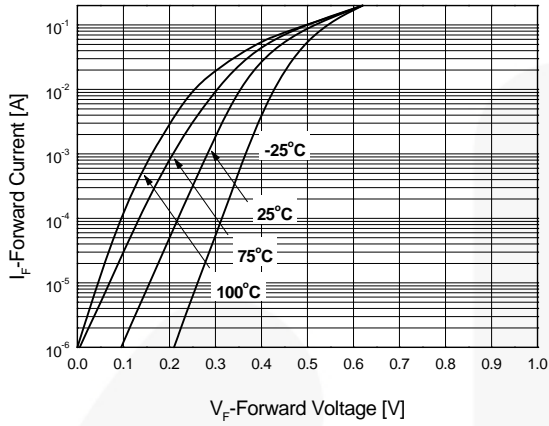


Figure 1. Forward Current vs. Forward Voltage

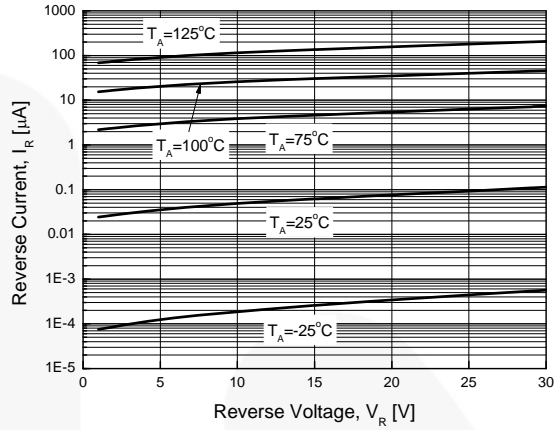


Figure 2. Reverse Current vs. Reverse Voltage

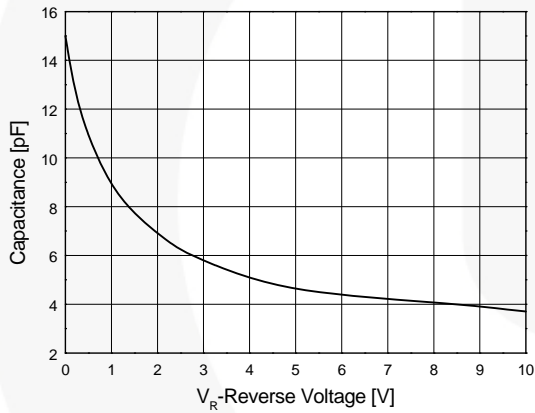
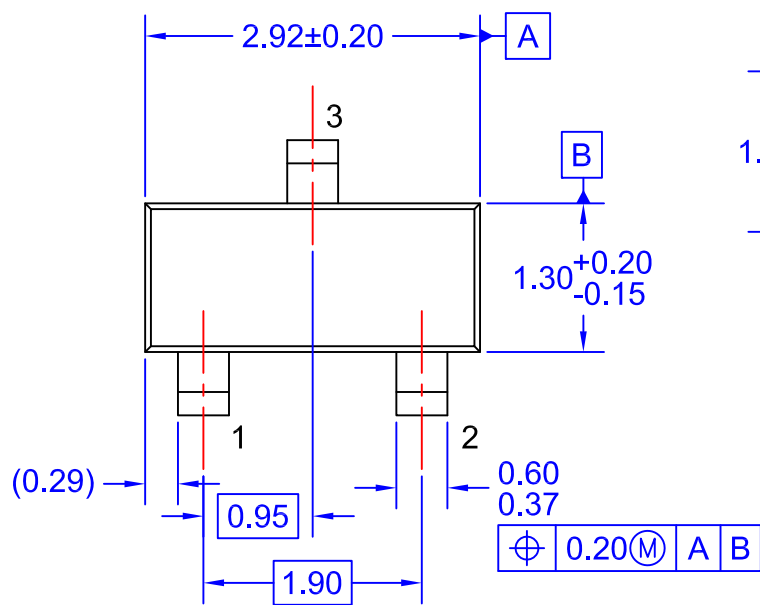


Figure 3. Total Capacitance vs. Reverse Voltage



LAND PATTERN  
RECOMMENDATION



SEE DETAIL A



**DETAIL A**  
SCALE: 2X

NOTES: UNLESS OTHERWISE SPECIFIED

- A) REFERENCE JEDEC REGISTRATION TO-236, VARIATION AB, ISSUE H.
- B) ALL DIMENSIONS ARE IN MILLIMETERS.
- C) DIMENSIONS ARE INCLUSIVE OF BURRS, MOLD FLASH AND TIE BAR EXTRUSIONS.
- D) DIMENSIONING AND TOLERANCING PER ASME Y14.5M - 2009.
- E) DRAWING FILE NAME: MA03DREV12





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No Identification Needed	Full Production	Datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice to improve the design.
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Rev. I77