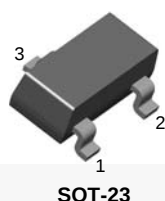


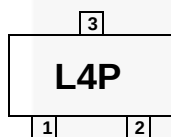


November 2014

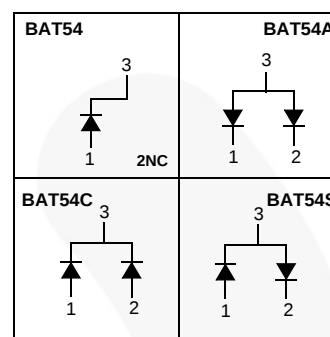
BAT54 / BAT54A / BAT54C / BAT54S Schottky Diodes



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	Tape and Reel
BAT54_D87Z	L4P	SOT-23 3L	Tape and Reel
BAT54A	L42	SOT-23 3L	Tape and Reel
BAT54C	L43	SOT-23 3L	Tape and Reel
BAT54S	L44	SOT-23 3L	Tape and Reel
BAT54S_D87Z	L44	SOT-23 3L	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	$^\circ\text{C}$

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	$^\circ\text{C/W}$

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	μA
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

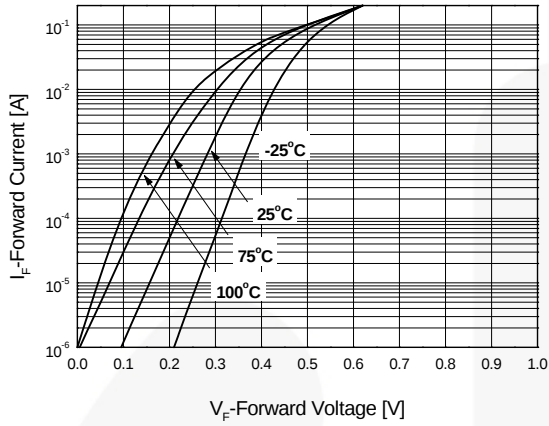


Figure 1. Forward Current vs. Forward Voltage

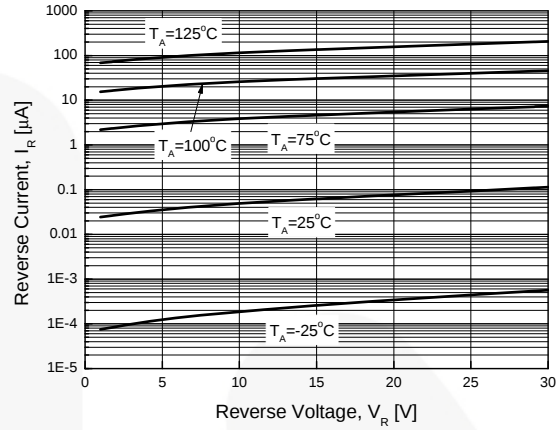


Figure 2. Reverse Current vs. Reverse Voltage

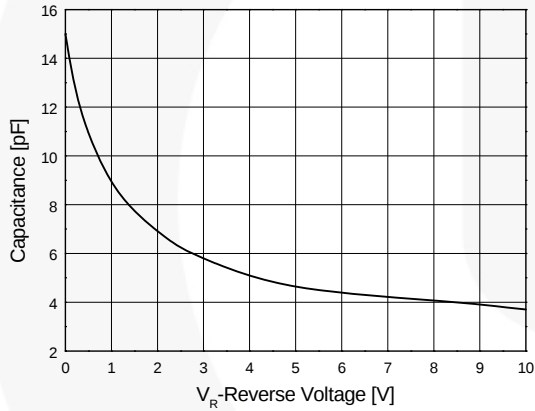


Figure 3. Total Capacitance vs. Reverse Voltage

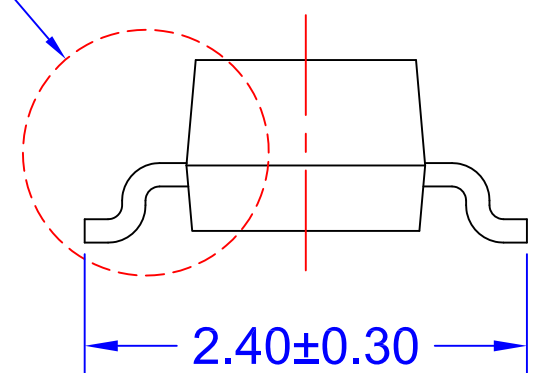
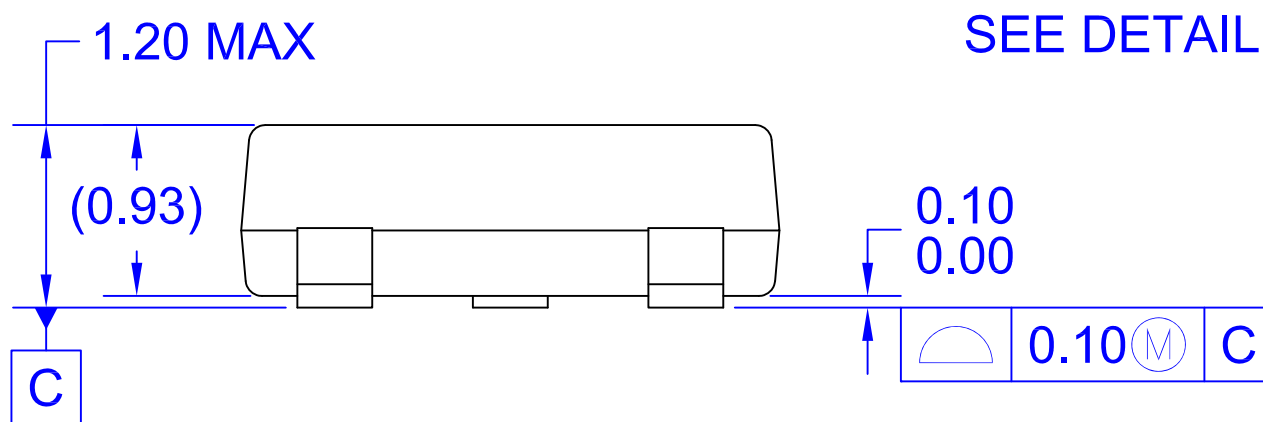
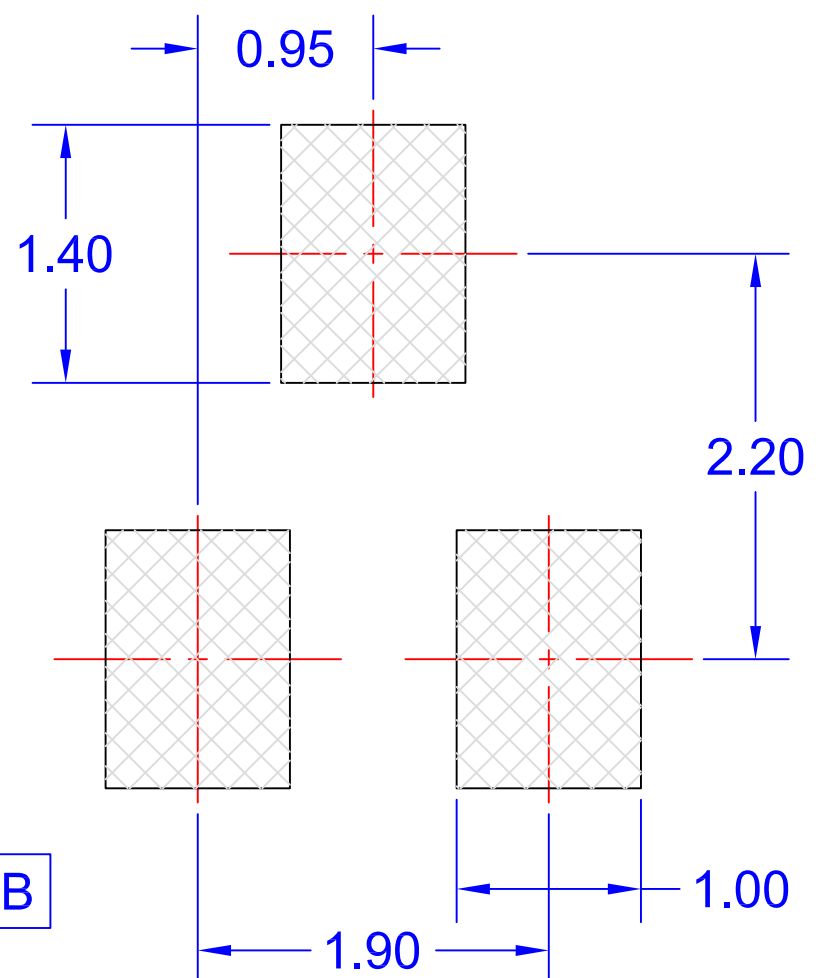


Figure 10 is a technical drawing of a mechanical part, likely a valve or a similar component, showing a cross-section. The drawing includes several dimension lines and labels:

- GAGE PLANE:** A horizontal dashed line indicating a measurement plane.
- SEATING PLANE:** A horizontal solid line indicating a measurement plane.
- 0.23** and **0.08:** Horizontal dimensions on the left side of the part.
- 0.20 MIN:** A vertical dimension on the left side, indicating a minimum value.
- (0.55):** A horizontal dimension at the bottom, indicating a nominal value.
- 0.25:** A vertical dimension on the right side, indicating a measurement.
- 0.25:** A horizontal dimension at the bottom right, indicating a measurement.

- 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: MA03DREV11





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