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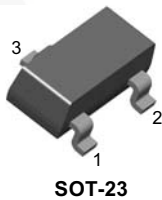
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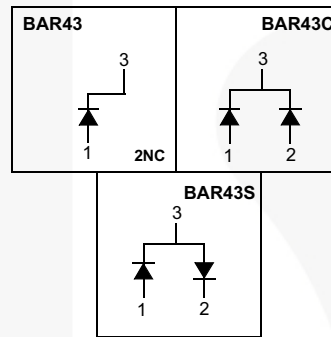
August 2015

BAR43 / BAR43C / BAR43S Schottky Diodes

BAR43 / BAR43C / BAR43S — Schottky Diodes



Connection Diagram



Ordering Information

Part Number	Top Mark	Package	Packing Method
BAR43	D95	SOT-23 3L	Tape and Reel
BAR43C	DB2	SOT-23 3L	Tape and Reel
BAR43S	DA5	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	750	mA
T_{STG}	Storage Temperature Range	-55 to +150	$^\circ\text{C}$
T_J	Operating Junction Temperature	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	$^\circ\text{C}/\text{W}$

Electrical Characteristics

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

Symbol	Parameter	Conditions	Min.	Max.	Unit
V_R	Breakdown Voltage	$I_R = 100 \mu\text{A}$	30		V
V_F	Forward Voltage	$I_F = 2.0 \text{ mA}$	260	330	mV
		$I_F = 15 \text{ mA}$		450	mV
		$I_F = 100 \text{ mA}$		0.8	V
I_R	Reverse Current	$V_R = 25 \text{ V}$		0.5	μA
		$V_R = 25 \text{ V}, T_A = 100^\circ\text{C}$		100	
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
Minimum Detection Recovery Time		$I_F = I_R = 10 \text{ mA}, I_{RR} = 1.0 \text{ mA}, R_L = 100 \Omega$		80	%

Typical Performance Characteristics

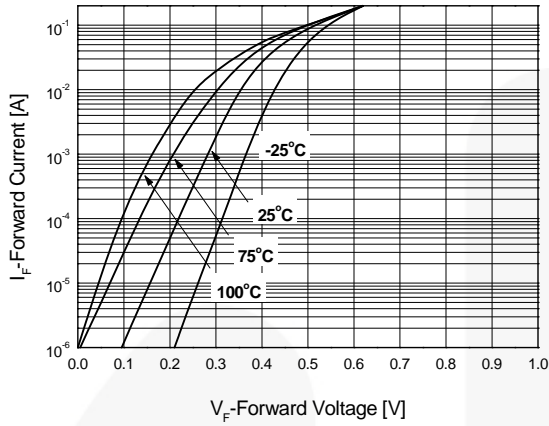


Figure 1. Forward Voltage vs. Temperature

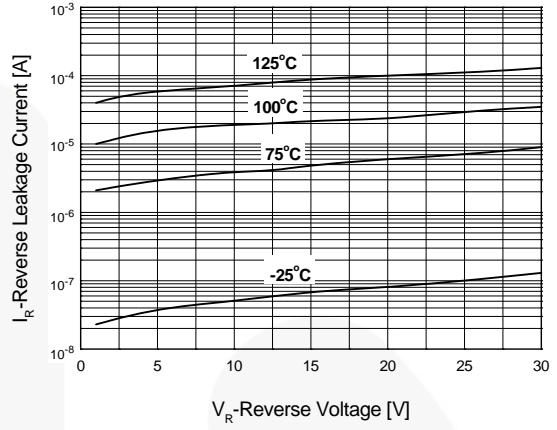


Figure 2. Reverse Leakage Current vs. Temperature

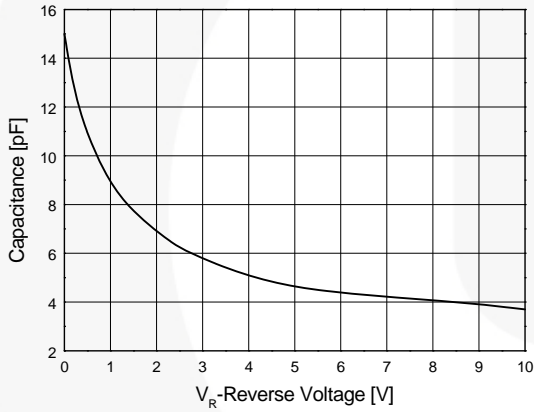


Figure 3. Capacitance vs. Reverse Bias Voltage

Physical Dimensions

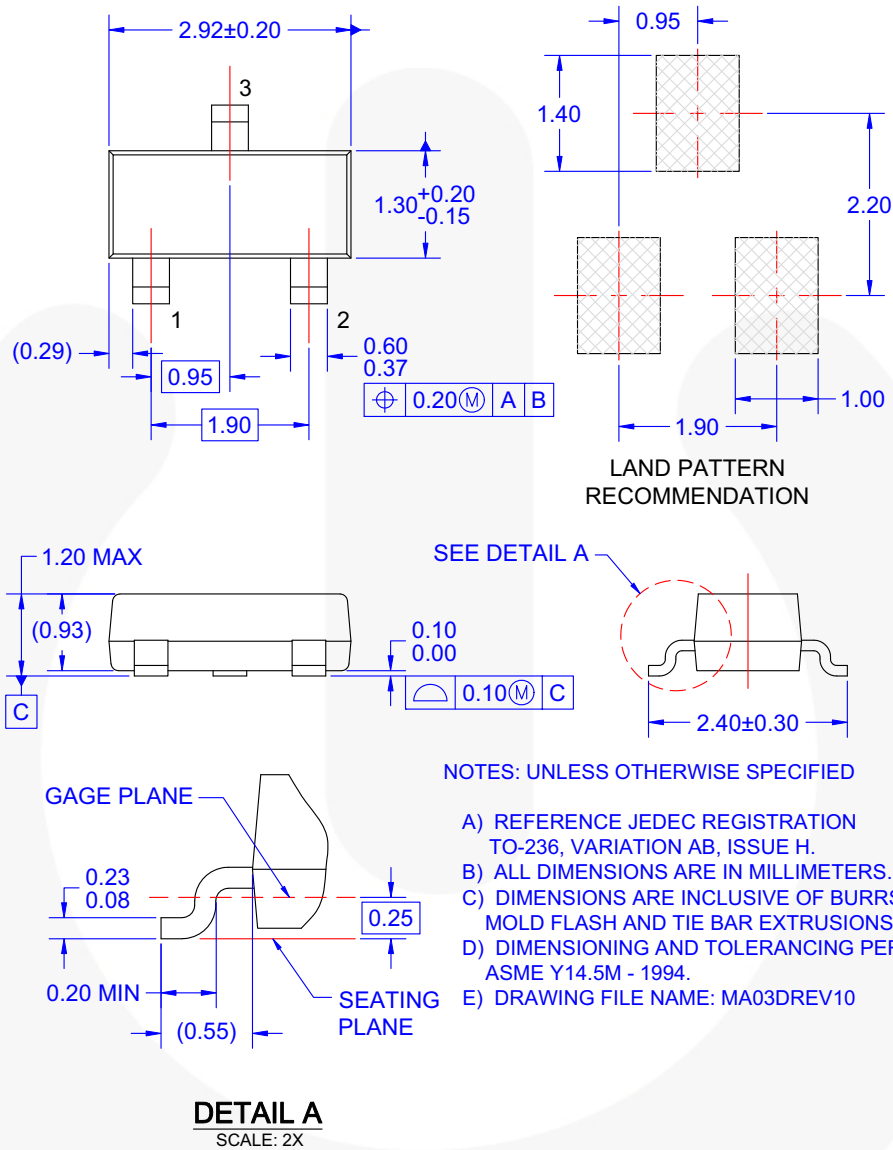


Figure 4. 3-LEAD, SOT23, JEDEC TO-236, LOW PROFILE



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Preliminary	First Production	Datasheet contains preliminary data; supplementary data will be published at a later date. Fairchild Semiconductor reserves the right to make changes at any time without notice to improve design.
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.
Obsolete	Not In Production	Datasheet contains specifications on a product that is discontinued by Fairchild Semiconductor. The datasheet is for reference information only.

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