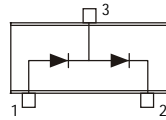
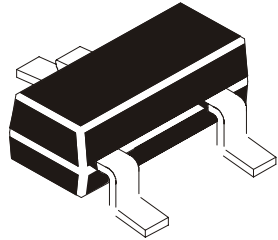


## SILICON PLANAR EPITAXIAL HIGH-SPEED DIODE

**BAV23S**  
**SOT-23**



Pin Configuration

1 = ANODE  
2 = CATHODE  
3 = ANODE/  
CATHODE

**MARKING:- L31**

### DESCRIPTION

BAV23S Consists of Two Planar Epitaxial High-Speed Diodes in One Microminiature Plastic Envelope Intended for Surface Mounting. The Device is Designed for Switching & General Applications.

### ABSOLUTE MAXIMUM RATINGS

DESCRIPTION	SYMBOL	VALUE	UNIT
Continuous Reverse Voltage	VR		
Single Diode		200	V
Series Connection		400	V
Repetitive Peak Reverse Voltage	VRRM		
Single Diode		250	V
Series Connection		500	V
Forward Current (DC)	IF(AV)		
Single Diode		225	mA
Series Connection		125	mA
Repetitive Peak Forward Current	IFRM		
Single Diode		625	mA
Series Connection		450	mA
Non Repetitive Peak Forward Current $t=1s$	IFSM		
Single Diode		0.5	A
Series Connection		0.4	A
Non Repetitive Forward Current $t=1\mu s$	IFSM		
Single Diode		2.5	A
Series Connection		1.5	A
Power Dissipation	Ptot	300	mW
Storage Temperature Range	Tstg	-65 to 150	deg C
Junction Temperature	Tj	150	deg C
<b><u>THERMAL RESISTANCE</u></b>			
Junction to Ambient	Rth(j-a)*	500	K/W

\*Mounted on FR4 Printboard

DESCRIPTION	SYMBOL		TEST CONDITION	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage	V(BR)		R				
Single Diode			IR=100uA	250	-	-	V
Series Connection				500	-	-	V
Forward Voltage	VF						
Single Diode			IF=100mA	-	-	1.0	V
Series Connection				-	-	2.0	V
Single Diode			IF=200mA	-	-	1.25	V
Series Connection				-	-	2.5	V
Reverse Current	IR		VR=VR max	-	-	100	nA
<b>DYNAMIC CHARACTERISTICS</b>							
Diode Capacitance	Cd						
Single Diode			VR=0V,f=1MHz	-	-	5.0	pF
Series Connection				-	-	2.5	pF
Reverse Recovery Time When Switched From	trr		IF=30mA to IR=30mA RL=100 ohms, measured@ IR=3mA	-	-	50	ns

The drawing consists of three views: a front view (top left), a side view (top right), and a top view (bottom).

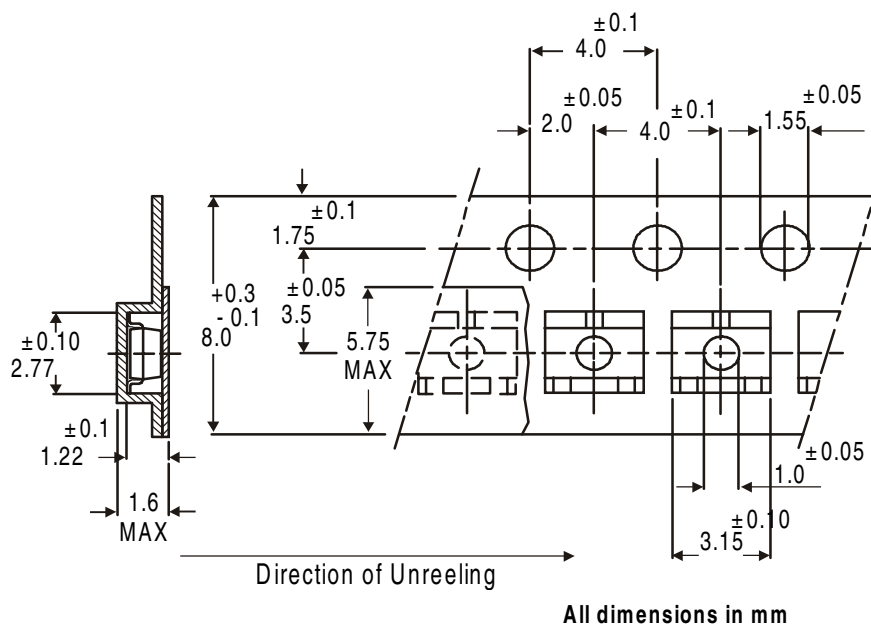
**Front View (Top Left):** Shows a central rectangular feature with a width of  $2.50 \pm 0.05$ . To its left is a smaller feature with a width of  $0.60 \pm 0.02$  and a height of  $1.90 \pm 0.05$ . To its right is another feature with a width of  $0.60 \pm 0.02$  and a height of  $0.40 \pm 0.02$ . The total height of the part is  $2.90 \pm 0.025$ . The center line is labeled 'CL'. Features 1 and 2 are indicated on the left side, and feature 3 is indicated on the right side.

**Side View (Top Right):** Shows the profile of the part with a width of  $0.40 \pm 0.02$  and a height of  $0.60 \pm 0.02$ . The bottom corners are chamfered at  $3^\circ$ .

**Top View (Bottom):** Shows the top surface of the part. The central feature has a width of  $1.30$  and a length of  $2.50 \pm 0.05$ . The left side feature has a width of  $0.60 \pm 0.02$  and a length of  $0.08$  MIN. The right side feature has a width of  $0.60 \pm 0.02$  and a length of  $0.08$  MIN. The total length of the part is  $2.90 \pm 0.025$ . The top surface has a flatness tolerance of  $0.12 \pm 0.01$ . The bottom surface has a flatness tolerance of  $0.21$  MIN. The parting line is indicated. The top surface has a radius of  $R0.08$  at the corners. The bottom surface has a radius of  $R0.08$  at the corners. The bottom surface has a chamfer of  $5^\circ \pm 3''$  and a flatness tolerance of  $0.06 \pm 0.04$ . The bottom surface has a width of  $0.60 \pm 0.025$  and a length of  $0.95$ .

- | NOTES:         |  | 8mm Tape     | 8mm Tape     |
|----------------|--|--------------|--------------|
|                |  | Size of Reel | Size of Reel |
|                |  | 330 mm (13") | 180 mm (7")  |
| No. of Devices | 10,000 Pcs   |              | 3,000 Pcs    |
| 1.             | The bandolier of 330 mm reel contains at least 10,000 devices.   |              |              |
| 2.             | The bandolier of 180 mm reel contains at least 3,000 devices.  |              |              |
| 3.             | No more than 0.5% missing devices / reel. 50 empty compartments for 330 mm reel. 15 empty compartments for 180 mm reel.  |              |              |
| 4.             | Three consecutive empty places might be found provided this gap is followed by 6 consecutive devices.  |              |              |
| 5.             | The carrier tape (leader) starts with at least 75 empty positions (equivalent to 330 mm). In order to fix the carrier tape a self adhesive tape of 20 to 50 mm is applied. At the end of the bandolier at least 40 empty positions (equivalent to 160 mm) are there. |              |              |

## Tape Specification for SOT-23 Surface Mount Device



### Packing Detail

PACKAGE	STANDARD PACK		INNER CARTON BOX		OUTER CARTON BOX		
	Details	Net Weight/Qty	Size	Qty	Size	Qty	Gr Wt
SOT-23 T&R	3K/reel	136 gm/3K pcs	3" x 7.5" x 7.5"	12.0K	17" x 15" x 13.5"	192.0K	12 kgs
			9" x 9" x 9"	51.0K	19" x 19" x 19"	408.0K	28 kgs
	10K/reel	415 gm/10K pcs	13" x 13" x 0.5"	10.0K	17" x 15" x 13.5"	300.0K	16 kgs

### Notes

### Disclaimer

The product information and the selection guides facilitate selection of the CDIL's Discrete Semiconductor Device(s) best suited for application in your product(s) as per your requirement. It is recommended that you completely review our Data Sheet(s) so as to confirm that the Device(s) meet functionality parameters for your application. The information furnished on the CDIL Web Site/CD is believed to be accurate and reliable. CDIL however, does not assume responsibility for inaccuracies or incomplete information. Furthermore, CDIL does not assume liability whatsoever, arising out of the application or use of any CDIL product; neither does it convey any license under its patent rights nor rights of others. These products are not designed for use in life saving/support appliances or systems. CDIL customers selling these products (either as individual Discrete Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems or applications do so at their own risk and CDIL will not be responsible for any damages resulting from such sale(s).

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