## BAV70

## SOT-23

Formed SMD Package
For Lead Free Parts, Device Part \# will be Prefixed with "T"

## Marking

BAV70 = A4
High-Speed Switching Dual Diodes, Common Cathode
ABSOLUTE MAXIMUM RATINGS (Rating Per Diode)

| DESCRIPTION | SYMBOL | VALUE | UNIT |
| :---: | :---: | :---: | :---: |
| Continuous Reverse Voltage | $\mathrm{V}_{\text {R }}$ | 70 | V |
| Repetitive Peak Reverse Voltage | $\mathrm{V}_{\text {RRM }}$ | 75 | V |
| Forward Current (DC) | $\mathrm{T}_{\text {F }}$ | 215 | mA |
| Repetitive Peak Forward Current | IFRM | 450 | mA |
| Non Repetitive Peak Forward Current $\begin{aligned} & \text { (per crystal) } \\ & \mathrm{t}=1 \mu \mathrm{~s} \\ & \mathrm{t}=1 \mathrm{~ms} \\ & \mathrm{t}=1 \mathrm{~s} \end{aligned}$ | $I_{\text {FSM }}$ <br> IFSM <br> $I_{\text {FSM }}$ | $\begin{aligned} & 4.0 \\ & 1.0 \\ & 0.5 \end{aligned}$ | A |
| Power Dissipation up to $\mathrm{T}_{\mathrm{a}}=25^{\circ} \mathrm{C}$ | $\mathrm{P}_{\mathrm{D}}$ | 250 | mW |
| Storage Temperature Range | $\mathrm{T}_{\text {stg }}$ | -55 to +150 | ${ }^{\circ} \mathrm{C}$ |
| Junction Temperature | $\mathrm{T}_{\mathrm{j}}$ | 150 | ${ }^{\circ} \mathrm{C}$ |

THERMAL RESISTANCE

| Junction to Ambient in free air | $\mathrm{R}_{\mathrm{th}(\mathrm{j}-\mathrm{a})}$ | 500 | K/W |
| :--- | :--- | :--- | :--- |

ELECTRICAL CHARACTERISTICS ( $\mathrm{T}_{\mathrm{a}}=\mathbf{2 5} \mathbf{C}$ unless specified otherwise) per diode

| DESCRIPTION | SYMBOL | TEST CONDITION | MIN | MAX | UNIT |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Forward Voltage | $\mathrm{V}_{\mathrm{F}}$ | $\mathrm{I}_{\mathrm{F}}=1 \mathrm{~mA}$ |  | 0.715 | V |
|  |  | $\mathrm{I}_{\mathrm{F}}=10 \mathrm{~mA}$ |  | 0.855 | V |
|  |  | $\mathrm{I}_{\mathrm{F}}=50 \mathrm{~mA}$ |  | 1.0 | V |
|  |  | $\mathrm{I}_{\mathrm{F}}=150 \mathrm{~mA}$ |  | 1.25 | V |
| Reverse Current | $I_{\text {R }}$ | $\mathrm{V}_{\mathrm{R}}=25 \mathrm{~V}, \mathrm{~T}_{\mathrm{J}}=150^{\circ} \mathrm{C}$ |  | 60 | $\mu \mathrm{A}$ |
|  |  | $\begin{gathered} \mathrm{V}_{\mathrm{R}}=70 \mathrm{~V} \\ \mathrm{~V}_{\mathrm{R}}=70 \mathrm{~V}, \mathrm{~T}_{\mathrm{J}}=150^{\circ} \mathrm{C} \end{gathered}$ |  | $\begin{aligned} & 2.5 \\ & 100 \end{aligned}$ | $\underset{\mu \mathrm{A}}{\mu \mathrm{~A}}$ |
| Diode Capacitance | $\mathrm{C}_{\text {d }}$ | $\mathrm{V}_{\mathrm{R}}=0 \mathrm{~V}, \mathrm{f}=1 \mathrm{MHz}$ |  | 1.5 | pF |
| Forward Recovery Voltage | $\mathrm{V}_{\text {tr }}$ | $\mathrm{I}_{\mathrm{F}}=10 \mathrm{~mA}, \mathrm{t}_{\mathrm{r}}=20 \mathrm{~ns}$ |  | 1.75 | V |
| Reverse Recovery Time | $\mathrm{t}_{\text {r }}$ | $\begin{aligned} & \mathrm{I}_{\mathrm{F}}=10 \mathrm{~mA}, \text { to } \mathrm{I}_{\mathrm{R}}=60 \mathrm{~mA}, \\ & \mathrm{I}_{\mathrm{R}}=1.0 \mathrm{~mA}, \mathrm{R}_{\mathrm{L}}=100 \Omega \end{aligned}$ |  | 4.0 | ns |
| Reverse Charge When Switched Time | $Q_{S}$ | $\begin{gathered} \mathrm{I}_{\mathrm{F}}=10 \mathrm{~mA} \text { to } \mathrm{V}_{\mathrm{R}}=5 \mathrm{~V}, \\ \mathrm{R}_{\mathrm{L}}=100 \Omega \end{gathered}$ |  | 45 | pC |

## BAV70

## SOT-23 Formed SMD Package



SOT-23 Package Reel Information Reel specifications for Packing (13"/7" reels)


NOTES:

|  | 8mm Tape <br>  <br>  <br> Size of Reel | 8mm Tape <br> Size of Reel |
| :--- | :--- | :--- |
| No. of Devices | $330 \mathrm{~mm}\left(13^{\prime \prime}\right)$ | $180 \mathrm{~mm}\left(7{ }^{\prime \prime}\right)$ |
|  | $10,000 \mathrm{Pcs}$ | $3,000 \mathrm{Pcs}$ |

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 <br> $10 \mathrm{~K} /$ reel |  | $\begin{aligned} & \hline \hline 3 " x 7.5^{\prime \prime} \times 7.5^{\prime \prime} \\ & 9 " x 9 " x 9 "^{\prime \prime} \\ & 13 " x 13 " x 0.5 " \\ & \hline \end{aligned}$ | $\begin{aligned} & \hline \hline 12.0 \mathrm{~K} \\ & 51.0 \mathrm{~K} \\ & 10.0 \mathrm{~K} \end{aligned}$ | $\begin{aligned} & \hline \hline 17 " \times 15 " \times 13.5^{\prime \prime} \\ & 19 " \times 19 " \times 19 " \\ & 17 " \times 15 " \times 13.5^{\prime \prime} \end{aligned}$ | $\begin{aligned} & \hline \hline 192.0 \mathrm{~K} \\ & 408.0 \mathrm{~K} \\ & 300.0 \mathrm{~K} \end{aligned}$ | 12 kgs 28 kgs 16 kgs |

## Customer Notes

## Component Disposal Instructions

1. CDIL Semiconductor Devices are RoHS compliant, customers are requested to please dispose as per prevailing Environmental Legislation of their Country.
2. In Europe, please dispose as per EU Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE).

## 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 are 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).

CDIL strives for continuous improvement and reserves the right to change the specifications of its products without prior notice.


CDIL is a registered Trademark of Continental Device India Limited
C-120 Naraina Industrial Area, New Delhi 110 028, India.
Telephone + 91-11-2579 6150, 41411112 Fax + 91-11-2579 5290, 41411119
email@cdil.com www.cdilsemi.com

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components
Click to view similar products for Diodes - General Purpose, Power, Switching category:

## Click to view products by CDIL manufacturer:

Other Similar products are found below :
MCL4151-TR3 MMBD3004S-13-F RD0306T-H RD0506LS-SB-1H RGP30G-E373 DSE010-TR-E BAQ333-TR BAQ335-TR BAQ33GS18 BAS1602VH6327XT BAV17-TR BAV19-TR BAV301-TR BAW27-TAP HSC285TRF-E NSVBAV23CLT1G NTE525 1SS181-TP 1SS184-TP 1SS193,LF 1SS193-TP 1SS400CST2RA SBAV99LT3G SDAA13 LL4448-GS18 SHN2D02FUTW1T1G LS4150GS18 LS4151GS08 SMMBD7000LT3G FC903-TR-E 1N4449 1N4934-E3/73 1SS226-TP APT100DL60HJ RFUH20TB3S RGP30G-E354 RGP30M-E3/73 D291S45T MCL4151-TR BAS 16-02V H6327 BAS 21U E6327 BAS 28 E6327 BAS33-TAP BAS 70-02V H6327 BAV300-TR BAV303-TR3 BAW27-TR BAW56DWQ-7-F BAW56M3T5G BAW75-TAP

