Continental Device India Pvt. Limited

An ISO/TS 16949, ISO 9001 and ISO 14001 Certified Company

## NPN-POWER TRANSISTOR



BU326, BU326A
TO-3
Metal Can Package

ABSOLUTE MAXIMUM RATING

| PARAMETER | SYMBOL | BU326 | BU326A | UNITS |
| :--- | :---: | :---: | :---: | :---: |
| Collector-emitter <br> voltage $\left(\mathrm{V}_{\mathrm{BE}}=0\right)$ | $\mathrm{V}_{\text {CES }}$ | 800 | 900 | V |
| Collector-emitter <br> voltage (open base) | $\mathrm{V}_{\text {CEO }}$ | 375 | 400 | V |
| Emitter-base voltage <br> (open collector) | $\mathrm{V}_{\text {EBO }}$ | 10 | V |  |
| Collector current | $\mathrm{I}_{\mathrm{C}}$ | 6 | A |  |
| Collector current (peak) | $\mathrm{I}_{\text {CM }}$ | 8 | A |  |
| Base current | $\mathrm{I}_{\mathrm{BM}}$ | 3 | A |  |
| Total power dissipation <br> up to $\mathrm{T}_{\mathrm{C}}=95^{\circ} \mathrm{C}$ | $\mathrm{P}_{\text {tot }}$ | 75 | W |  |
| Junction temperature | $\mathrm{T}_{\mathrm{J}}$ | 200 | ${ }^{\circ} \mathrm{C}$ |  |
| Storage temperature | $\mathrm{T}_{\text {stg }}$ | -65 to 200 | ${ }^{\circ} \mathrm{C}$ |  |

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DNV

THERMAL RESISTANCE

| PARAMETER | SYMBOL | VALUE | UNITS |
| :--- | :--- | :---: | :---: |
| from junction to case | $\mathrm{R}_{\mathrm{th} \mathrm{J} \mathrm{C}}$ | 2.33 | ${ }^{\circ} \mathrm{C} / \mathrm{W}$ |

ELECTRICAL CHARACTERISTICS $\left(\mathrm{T}_{\mathrm{A}}=25^{\circ} \mathrm{C}\right.$ unless otherwise specified)

| PARAMETER | SYMBOL | TEST CONDITIONS | BU326 |  | BU326A |  | UNITS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | MIN | MAX | MIN | MAX |  |
| Collector cut-off current | $\mathrm{I}_{\text {CES }}$ | $\mathrm{V}_{\mathrm{BE}}=0, \mathrm{~V}_{\mathrm{CE}}=800 \mathrm{~V}$ | - | 1.0 | - | - | mA |
|  |  | $\mathrm{V}_{\mathrm{BE}}=0, \mathrm{~V}_{\mathrm{CE}}=900 \mathrm{~V}$ | - | - | - | 1 |  |
|  |  | $\begin{aligned} & \mathrm{V}_{\mathrm{BE}}=0, \mathrm{~V}_{\mathrm{CE}}=800 \mathrm{~V}, \\ & \mathrm{~T}_{\mathrm{C}}=125^{\circ} \mathrm{C} \end{aligned}$ | - | 2 | - | - |  |
|  |  | $\begin{aligned} & \mathrm{V}_{\mathrm{BE}}=0, \mathrm{~V}_{\mathrm{CE}}=900 \mathrm{~V}, \\ & \mathrm{~T}_{\mathrm{C}}=125^{\circ} \mathrm{C} \end{aligned}$ | - | - | - | 2 |  |
| Collector -emitter sustaining voltage | $\mathrm{V}_{\text {CEO(sus) }}{ }^{*}$ | $\mathrm{I}_{\mathrm{C}}=100 \mathrm{~mA}, \mathrm{I}_{\mathrm{B}}=0$ | 375 | - | 400 | - | V |
| Collector -emitter voltage | $\mathrm{V}_{\text {ces }}$ | $\mathrm{I}_{\mathrm{C}}=1 \mathrm{~mA}, \mathrm{~V}_{\mathrm{BE}}=0$ | 800 | - | 900 | - | V |
| Emitter-base voltage | $V_{\text {Ebo }}$ | $\mathrm{I}_{\mathrm{E}}=10 \mathrm{~mA}, \mathrm{I}_{\mathrm{C}}=0$ | 10 | - | 10 | - | V |
| Collector-emitter saturation voltage | $\mathrm{V}_{\text {CEsat }}{ }^{*}$ | $\mathrm{I}_{\mathrm{C}}=2.5 \mathrm{~A}, \mathrm{I}_{\mathrm{B}}=0.5 \mathrm{~A}$ | - | 1.5 | - | 1.5 | V |
| Base-emitter saturation voltage | $\mathrm{V}_{\text {BEsat }}{ }^{*}$ | $\mathrm{I}_{\mathrm{C}}=2.5 \mathrm{~A}, \mathrm{I}_{\mathrm{B}}=0.5 \mathrm{~A}$ | - | 1.4 | - | 1.4 | V |
| Collector-emitter saturation voltage | $\mathrm{V}_{\text {CEsat }}{ }^{*}$ | $\mathrm{I}_{\mathrm{C}}=4 \mathrm{~A}, \mathrm{I}_{\mathrm{B}}=1.25 \mathrm{~A}$ | - | 3.0 | - | 3.0 | V |
| Base-emitter saturation voltage | $V_{\text {BEsat }}{ }^{*}$ | $\mathrm{I}_{\mathrm{C}}=4 \mathrm{~A}, \mathrm{I}_{\mathrm{B}}=1.25 \mathrm{~A}$ | - | 1.6 | - | 1.6 | V |
| D.C. Current gain | $\mathrm{hFE}^{*}$ | $\mathrm{I}_{\mathrm{C}}=1 \mathrm{~A}, \mathrm{~V}_{\mathrm{CE}}=5 \mathrm{~V}$ | typ. 25 |  |  |  |  |

* Pulsed: pulse duration = $300 \mu \mathrm{~s}$; duty cycle $=1.5 \%$

TO-3 Metal Can Package


PIN CONFIGURATION

1. BASE
2. EMITTER
3. COLLECTOR

Packing Detail

| PACKAGE | STANDARD PACK |  | INERCARTONBOX |  | OUIERCARIONBOX |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Details | Net Weight/Oty | Size | Qty | Size | Cty | Gr Wt |
| TO-3 | 100 pcs/pkt | $1.3 \mathrm{~kg} / 100 \mathrm{pcs}$ | $12.5^{\prime \prime} \times 8^{\prime \prime} \times 1.8^{\prime \prime}$ | 0.1K | $17^{\prime \prime} \times 11.5^{\prime \prime} \times 21$ " | 2K | 27.5 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 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 in the Data Sheet and 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 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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