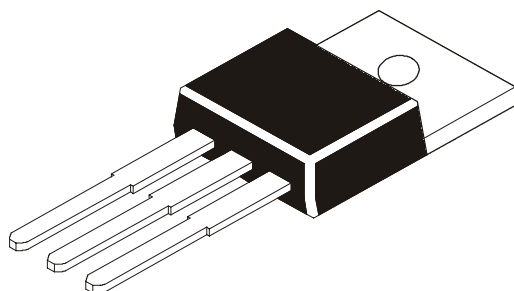


## NPN SILICON PLASTIC POWER DARLINGTON TRANSISTOR

**CSD611**  
**(9AW)**  
**TO-220**

**MARKING : CSD**  
**611**



**Designed for Relay Drive and Motor Drive**

### ABSOLUTE MAXIMUM RATINGS(Ta=25deg C)

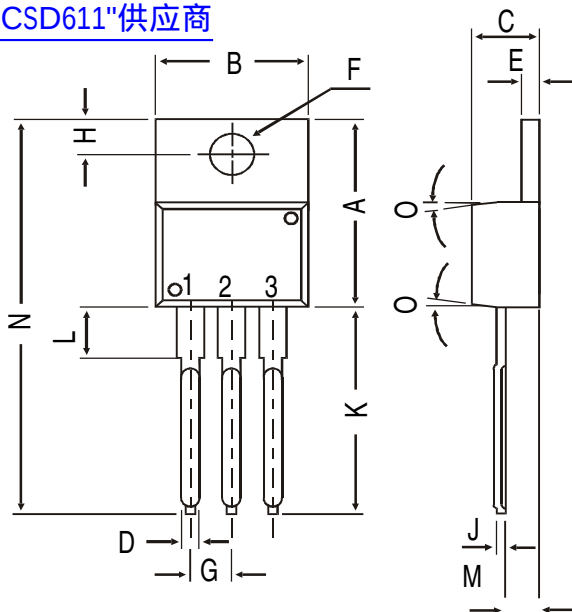
| DESCRIPTION                               | SYMBOL | VALUE       | UNIT  |
|-------------------------------------------|--------|-------------|-------|
| Collector -Base Voltage                   | VCBO   | 110         | V     |
| Collector Emitter Voltage                 | VCEO   | 110         | V     |
| Emitter Base Voltage                      | VEBO   | 5.0         | V     |
| Collector Current                         | IC     | 6.0         | A     |
| t=100ms                                   | ICP    | 9.0         | A     |
| Base Current                              | IB     | 1.0         | A     |
| Collector Power Dissipation @ Ta=25 deg C | PC     | 2.0         | W     |
| Collector Power Dissipation @ Tc=25 deg C |        | 60          | W     |
| Junction Temperature                      | Tj     | 150         | deg C |
| Storage Temperature Range                 | Tstg   | -55 to +150 | deg C |

### ELECTRICAL CHARACTERISTICS (Ta=25 deg C Unless Specified)

| DESCRIPTION                          | SYMBOL   | TEST CONDITION              | MIN | TYP | MAX | UNIT |
|--------------------------------------|----------|-----------------------------|-----|-----|-----|------|
| Collector Emitter Voltage            | VCEO     | IC=30mA, IB=0               | 110 | -   | -   | V    |
| Collector Cut off Current            | ICBO     | VCB=110V, IE=0              | -   | -   | 100 | uA   |
| Emitter Cut off Current              | IEBO     | VEB=5V, IC=0                | -   | -   | 3.0 | mA   |
| Collector Emitter Saturation Voltage | VCE(Sat) | IC=5A, IB=5mA               | -   | -   | 2.5 | V    |
| DC Current Gain                      | hFE      | IC=2A, VCE=3V               | 2.0 | -   | 20  | K    |
|                                      |          | IC=6A, VCE=3V               | 1.0 | -   | -   | K    |
| <b>Dynamic Characteristics</b>       |          |                             |     |     |     |      |
| Transition Frequency                 | ft       | VCE=5V, IC=0.2A,<br>f=10MHz | -   | 40  | -   | MHz  |
| Collector Output Capacitance         | Cob      | VCB=10V, IE=0<br>f=1MHz     | -   | 55  | -   | pF   |

TO-220 Plastic Package

[查询"CSD611"供应商](#)

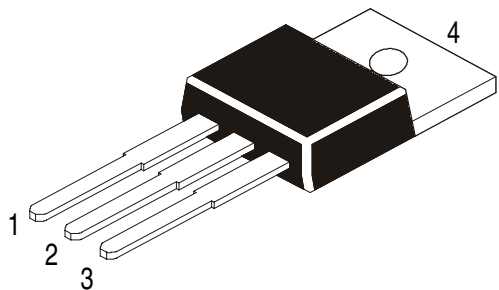


All dimensions in mm.

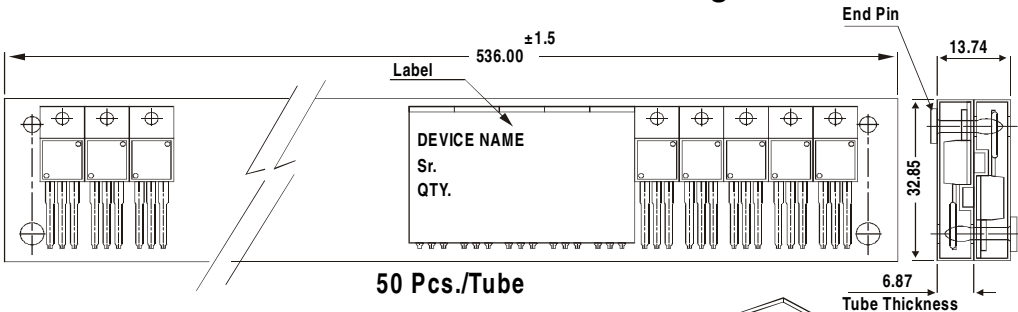
| DIM | MIN.  | MAX.  |
|-----|-------|-------|
| A   | 14.42 | 16.51 |
| B   | 9.63  | 10.67 |
| C   | 3.56  | 4.83  |
| D   | —     | 0.90  |
| E   | 1.15  | 1.40  |
| F   | 3.75  | 3.88  |
| G   | 2.29  | 2.79  |
| H   | 2.54  | 3.43  |
| J   | —     | 0.56  |
| K   | 12.70 | 14.73 |
| L   | 2.80  | 4.07  |
| M   | 2.03  | 2.92  |
| N   | —     | 31.24 |
| O   | DEG 7 |       |

PIN CONFIGURATION

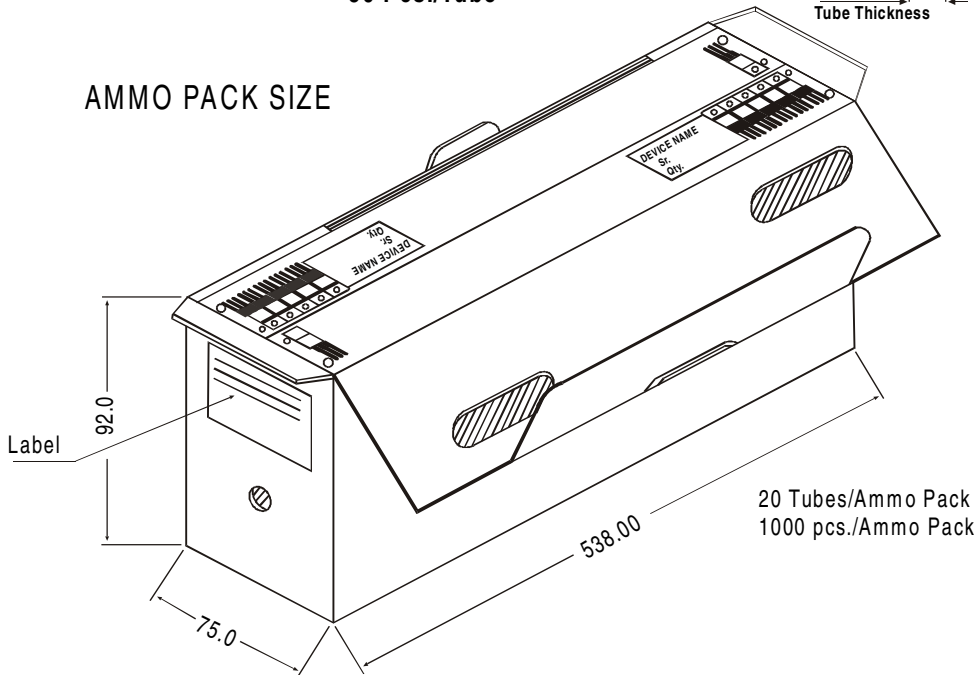
- 1. BASE
- 2. COLLECTOR
- 3. EMITTER
- 4. COLLECTOR



TO-220 Tube Packing



AMMO PACK SIZE



## Packing Detail

| PACKAGE<br>查询"CSD611"供应商 | STANDARD PACK                  |                                 | INNER CARTON BOX                        |              | OUTER CARTON BOX                     |                |                  |
|--------------------------|--------------------------------|---------------------------------|-----------------------------------------|--------------|--------------------------------------|----------------|------------------|
|                          | Details                        | Net Weight/Qty                  | Size                                    | Qty          | Size                                 | Qty            | Gr Wt            |
| TO-220 / FP              | 200 pcs/polybag<br>50 pcs/tube | 396 gm/200 pcs<br>120 gm/50 pcs | 3" x 7.5" x 7.5"<br>3.5" x 3.7" x 21.5" | 1.0K<br>1.0K | 17" x 15" x 13.5"<br>19" x 19" x 19" | 16.0K<br>10.0K | 36 kgs<br>29 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).

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 + 91-11-579 6150 Fax + 91-11-579 9569, 579 5290

e-mail sales@cdil.com www.cdil.com