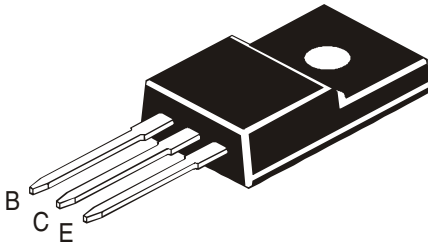


NPN SILICON PLASTIC POWER DARLINGTON TRANSISTOR

**CFD611
(9AW)
TO-220FP**

**MARKING : CFD
611**



Designed for Relay Drive and Motor Drive

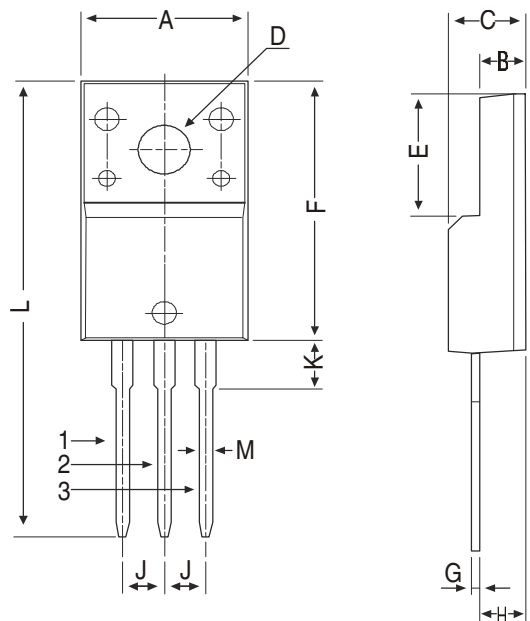
ABSOLUTE MAXIMUM RATINGS (Ta=25deg C)

| 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 |
| Collector Current 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)

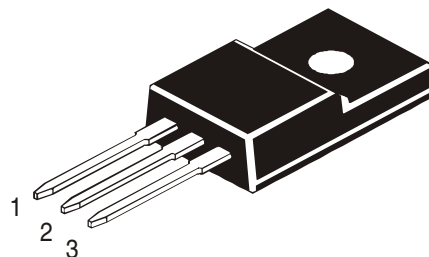
| DESCRIPTION | SYMBOL | TEST CONDITION | MIN | TYP | MAX | UNIT |
|--------------------------------------|----------|-----------------------------|-----|-----|-----|------|
| Collector Emitter Voltage | VCEO | IC=30mA, IB=0 | 110 | - | - | V |
| Collector Cut off Current | ICBO | VCB=110V, IE=0 | - | - | 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 |
| Dynamic Characteristics | | | | | | |
| Transition Frequency | ft | VCE=5V, IC=0.2A, f=10MHz | - | 40 | - | MHz |
| Collector Output Capacitance | Cob | VCB=10V, IE=0 f=1MHz | - | 55 | - | pF |

TO-220FP Fully Isolated Plastic Package



| DIM | MIN | MAX |
|-----|-------|-------|
| A | 9.80 | 10.36 |
| B | 2.50 | 3.00 |
| C | 4.30 | 4.90 |
| D | 3.10 | 3.40 |
| E | 6.50 | 8.20 |
| F | 14.80 | 17.27 |
| G | 0.40 | 0.70 |
| H | 2.50 | 2.96 |
| J | 2.34 | 2.74 |
| K | — | 4.70 |
| L | — | 30.05 |
| M | 0.6 | 0.90 |

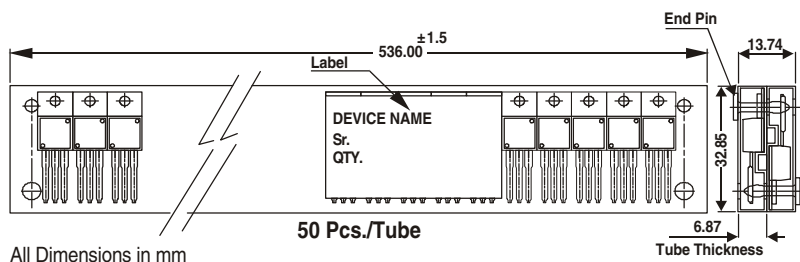
All dimensions in mm.



Pin Configuration

- 1. Base
- 2. Collector
- 3. Emitter

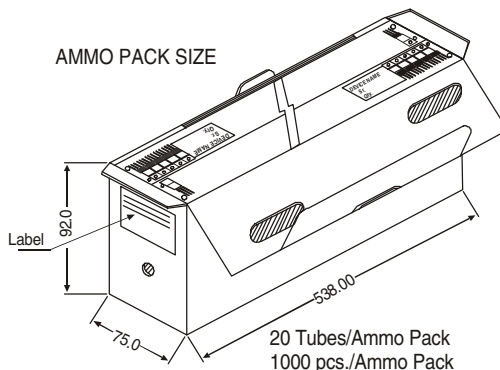
TO-220 FP Tube Packing



All Dimensions in mm

50 Pcs./Tube

AMMO PACK SIZE



20 Tubes/Ammo Pack
1000 pcs./Ammo Pack

Packing Detail

| PACKAGE | STANDARD PACK | | INNER CARTON BOX | | OUTER CARTON BOX | | |
|----------|-----------------|----------------|---------------------|-----|-------------------|-----|--------|
| | Details | Net Weight/Qty | Size | Qty | Size | Qty | Gr Wt |
| TO-220FP | 200 pcs/polybag | 396 gm/200 pcs | 3" x 7.5" x 7.5" | 1K | 17" x 15" x 13.5" | 16K | 36 kgs |
| | 50 pcs/tube | 135 gm/50 pcs | 3.5" x 3.7" x 21.5" | 1K | 19" x 19" x 19" | 10K | 28 kgs |

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 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 Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems 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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