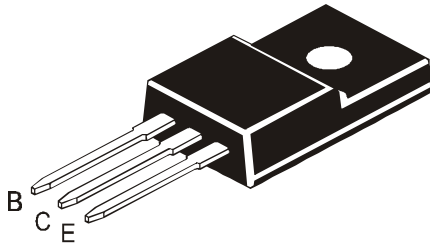


SILICON PLANAR POWER TRANSISTORS

CJF15032 NPN
CJF15033 PNP



TO-220FP Fully Isolated
Plastic Package

Designed For Use As High - Frequency Drivers in Audio Amplifiers.

ABSOLUTE MAXIMUM RATINGS.

| DESCRIPTION | SYMBOL | VALUE | UNIT |
|---|---------------------------|--------------|---------------------|
| Collector Base Voltage | V_{CBO} | 250 | V |
| Collector Emitter Voltage | V_{CEO} | 250 | V |
| Emitter Base Voltage | V_{EBO} | 5 | V |
| RMS Isolation Voltage (for 1sec,R.H. <30%, $T_A=25^\circ\text{C}$) | (1) V_{ISOL} (a) (b) | 3500 1500 | V V |
| Collector Current - Continuous | I_C | 8 | A |
| - Peak | | 16 | A |
| Base Current | I_B | 2 | A |
| Total Power Dissipation @ $T_c=25^\circ\text{C}$ | P_D | 50 | W |
| Derate Above 25°C | | 0.4 | W/ $^\circ\text{C}$ |
| Total Power Dissipation @ $T_a=25^\circ\text{C}$ | P_D | 2 | W |
| Derate Above 25°C | | 0.016 | W/ $^\circ\text{C}$ |
| Operating and Storage Junction Temperature Range | T_j, T_{stg} | -65 to +150 | $^\circ\text{C}$ |
| THERMAL RESISTANCE | | | |
| From Junction to Ambient | $R_{th(j-a)}$ | 62.5 | $^\circ\text{C/W}$ |
| From Junction to Case | $R_{th(j-c)}$ | 2.5 | $^\circ\text{C/W}$ |

ELECTRICAL CHARACTERISTICS ($T_c=25^\circ\text{C}$ unless specified otherwise)

| DESCRIPTION | SYMBOL | TEST CONDITION | MIN | MAX | UNIT |
|--------------------------------------|------------------|---|-----|-----|---------------|
| Collector Emitter (sus) Voltage | $V_{CEO(sus)}$ * | $I_C=10\text{mA}, I_B=0$ | 250 | - | V |
| Collector Cut off Current | I_{CBO} | $V_{CB}=150\text{V}, I_E=0$ | - | 10 | μA |
| Emitter Cut off Current | I_{EBO} | $V_{EB}=5\text{V}, I_C=0$ | - | 10 | μA |
| DC Current Gain | h_{FE} * | $I_C=0.5\text{A}, V_{CE}=5\text{V}$ | 50 | - | |
| | | $I_C=1.0\text{A}, V_{CE}=5\text{V}$ | 50 | - | |
| | | $I_C=2.0\text{A}, V_{CE}=5\text{V}$ | 10 | - | |
| Collector Emitter Saturation Voltage | $V_{CE(Sat)}$ * | $I_C=1\text{A}, I_B=0.1\text{A}$ | - | 0.5 | V |
| Base Emitter on Voltage | $V_{BE(on)}$ * | $I_C=1.0\text{A}, V_{CE}=5\text{V}$ | - | 1.0 | V |
| DYNAMIC CHARACTERISTICS | | | | | |
| Current Gain - Bandwidth Product ** | f_T | $I_C=500\text{mA}, V_{CE}=10\text{V}$ $f_{test}=1\text{MHz}$ | 30 | - | MHz |

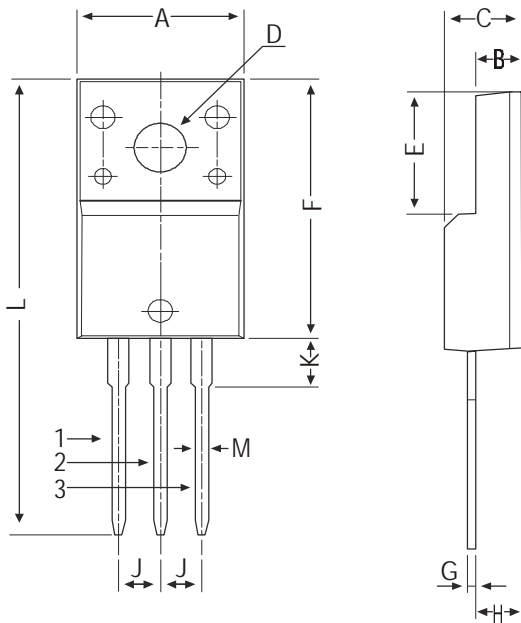
(1) RMS Isolation Voltage : (a) 3500 V_{RMS} with Package in Clip Mounting Position (b) 1500 V_{RMS} with Package in Screw Mounting Position (for 1sec, R.H.<30% $T_a=25^\circ\text{C}$; Pulse Test: Pulse Width $\leq 300\text{ms}$, Duty Cycle $\leq 2\%$)

* Pulse Test: Pulse Width $\leq 300\text{ms}$, Duty Cycle $\leq 2\%$

** $f_T = I_{h_{fe}} | f_{test}$

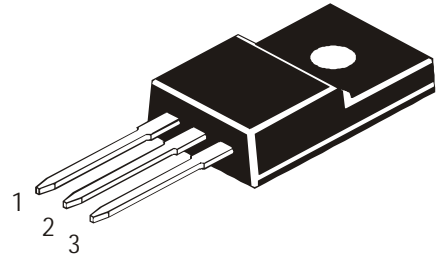
TO-220FP Fully Isolated Plastic Package

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 |

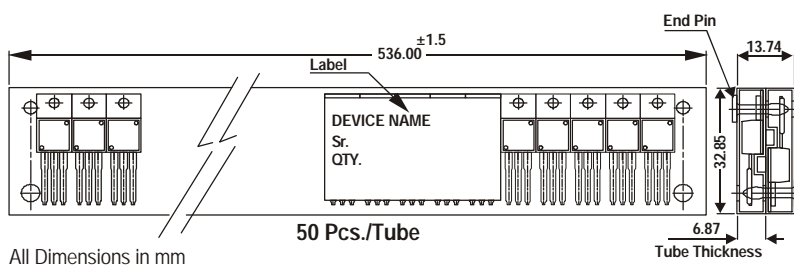
All dimensions in mm.



Pin Configuration

1. Base
2. Collector
3. Emitter

TO-220 FP Tube Packing

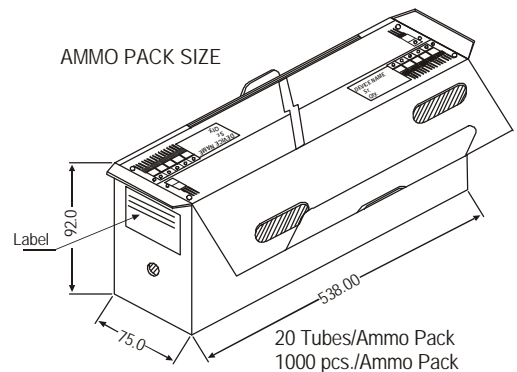


All Dimensions in mm

50 Pcs./Tube

Tube Thickness

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 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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