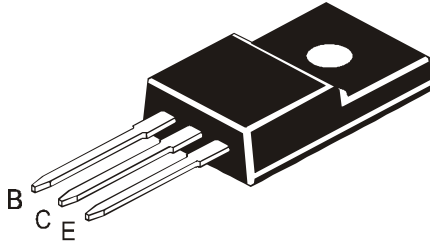


PNP SILICON PLANAR POWER TRANSISTOR

CFA1046

TO-220FP Fully Isolated Plastic Package



Complementary CFC2026

ABSOLUTE MAXIMUM RATINGS

| DESCRIPTION | SYMBOL | VALUE | UNIT |
|--|-------------------|-------------|------------------|
| Collector Base Voltage | V_{CBO} | 60 | V |
| Collector Emitter Voltage | V_{CEO} | 60 | V |
| Emitter Base Voltage | V_{EBO} | 7.0 | V |
| RMS Isolation Voltage (for 1sec, R.H. <30%, $T_a = 25^\circ\text{C}$) | ** V_{ISOL} (a) | 3500 | V_{RMS} |
| | (b) | 1500 | V_{RMS} |
| Collector Current | I_C | 3.0 | A |
| Base Current | I_B | 0.5 | A |
| Collector Power Dissipation @ $T_a=25^\circ\text{C}$ @ $T_c=25^\circ\text{C}$ | P_C | 2.0 | W |
| | | 25 | W |
| Junction Temperature | T_j | 150 | $^\circ\text{C}$ |
| Storage Temperature Range | T_{stg} | - 55 to 150 | $^\circ\text{C}$ |

**** 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 $\leq 2\%$)**

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

| DESCRIPTION | SYMBOL | TEST CONDITION | MIN | TYP | MAX | UNIT |
|--------------------------------------|---------------|---|-----|-----|-----|---------------|
| Collector Cut Off Current | I_{CBO} | $V_{CB} = 60\text{V}, I_E = 0$ | | | 100 | μA |
| Emitter Cut Off Current | I_{EBO} | $V_{EB} = 7\text{V}, I_C = 0$ | | | 100 | μA |
| Collector Emitter Voltage | V_{CEO} | $I_C = 50\text{mA}, I_B = 0$ | 60 | | | V |
| DC Current Gain | * h_{FE} | $V_{CE} = 5\text{V}, I_C = 0.5\text{A}$ | 100 | | 300 | |
| | h_{FE} | $V_{CE} = 5\text{V}, I_C = 3\text{A}$ | 20 | | | |
| Collector Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C = 2\text{A}, I_B = 0.2\text{A}$ | | | 1 | V |
| Base Emitter On Voltage | $V_{BE(on)}$ | $V_{CE} = 5\text{V}, I_C = 0.5\text{A}$ | | | 1 | V |
| Transition Frequency | f_T | $V_{CE} = 5\text{V}, I_C = 0.5\text{A}$ | | 30 | | MHz |
| Collector Output Capacitance | C_{ob} | $V_{CB} = 10\text{V}, I_E = 0, f = 1\text{MHz}$ | | 45 | | pF |

Switching Time

| | | | | | | |
|--------------|-----------|---|--|-----|--|---------------|
| Turn On Time | t_{on} | $I_{B1} = I_{B2} = 0.2\text{A}$ $V_{CC} = 30\text{V}$ Duty Cycle $\leq 1\%$ | | 0.4 | | μs |
| Storage Time | t_{stg} | | | 1.7 | | μs |
| Fall Time | t_f | | | 0.5 | | μs |

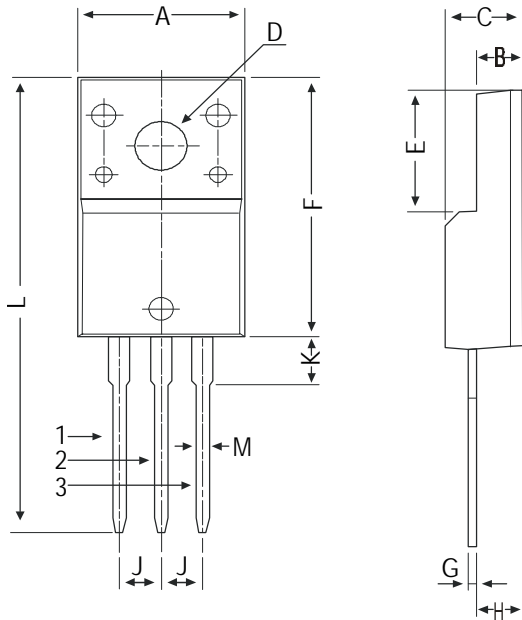
* h_{FE} Classification

Y : 100 - 200

GR : 150 - 300

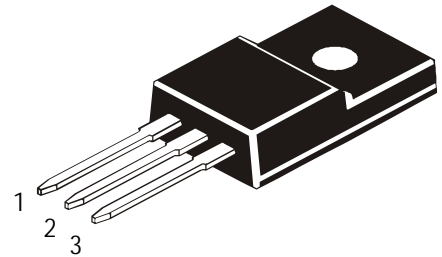
TO-220FP Fully Isolated Plastic Package

TO-220FP Fully Isolated Plastic Package



| DIM | MIN | MAX |
|-----|-------|-------|
| A | 9.96 | 10.36 |
| B | 2.60 | 3.00 |
| C | 4.50 | 4.90 |
| D | 3.10 | 3.30 |
| E | 7.90 | 8.20 |
| F | 16.87 | 17.27 |
| G | 0.45 | 0.50 |
| H | 2.56 | 2.96 |
| J | 2.34 | 2.74 |
| K | — | 3.08 |
| L | — | 30.05 |
| M | — | 0.80 |

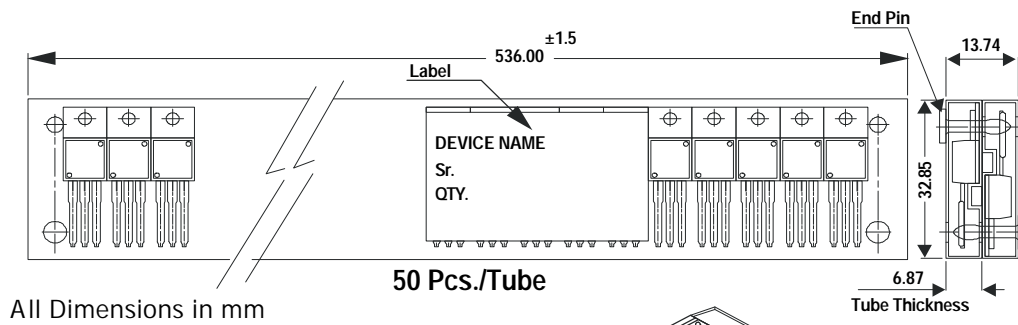
All dimensions in mm.



Pin Configuration

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

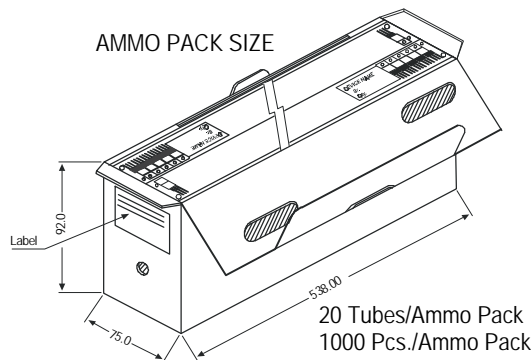
TO-220 FP Tube Packing



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 |

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