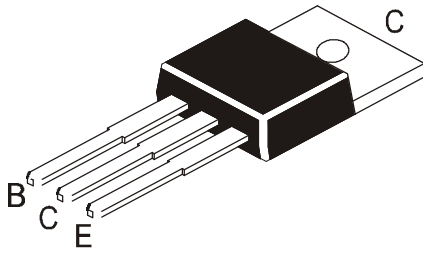


NPN SILICON PLANAR POWER TRANSISTOR

BU508AT



**TO-220
Plastic Package**

**High Voltage, High-Speed Switching Transistor
Intended for use in Horizontal Deflection Circuits of Colour Televisions**

ABSOLUTE MAXIMUM RATINGS

| DESCRIPTION | SYMBOL | VALUE | UNIT |
|--|----------------|--------------|------------------|
| Collector Emitter Voltage | V_{CES} | 1500 | V |
| Collector Emitter Voltage | V_{CEO} | 700 | V |
| Collector Current (DC) | I_C | 8 | A |
| Collector Current (Peak) | I_{CM} | 15 | A |
| Base Current (DC) | I_B | 4 | A |
| Base Current (Peak) | I_{BM} | 6 | A |
| Reverse Base Current (DC or average over any 20 ms period) | $-I_{B(AV)}$ | 100 | mA |
| Reverse Base Current (Peak Value) | $*-I_{BM}$ | 5 | A |
| Power Dissipation upto $T_c=25^\circ\text{C}$ | P_{tot} | 60 | W |
| Operating and Storage Junction Temperature Range | T_j, T_{stg} | - 65 to +150 | $^\circ\text{C}$ |

*Turn off Current

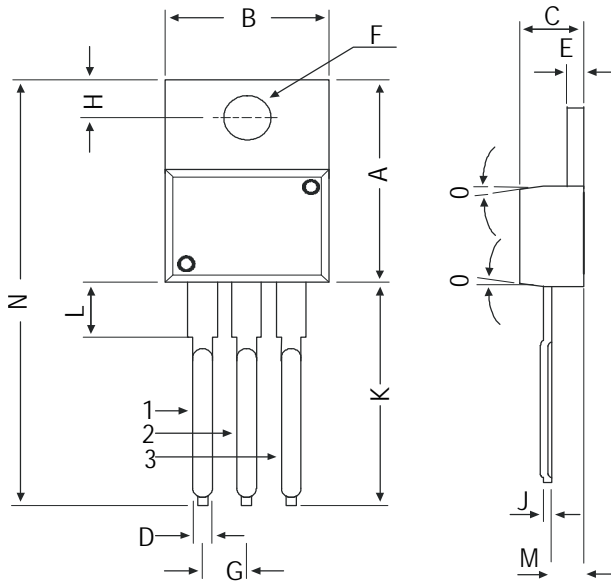
ELECTRICAL CHARACTERISTICS ($T_c=25^\circ\text{C}$ unless specified otherwise)

| DESCRIPTION | SYMBOL | TEST CONDITION | MIN | TYP | MAX | UNIT |
|--------------------------------------|-----------------|--|------|-----|-----|------|
| Collector Cut off Current | $**I_{CES}$ | $V_{CE}=V_{CES\ max}, V_{BE}=0$ | | | 1.0 | mA |
| | | $T_j=125^\circ\text{C}$ | | | | |
| | | $V_{CE}=V_{CES\ max}, V_{BE}=0$ | | | 2.0 | mA |
| Emitter Cut off Current | I_{EBO} | $V_{EB}=6V, I_C=0$ | | | 10 | mA |
| Collector Emitter Sustaining Voltage | $*V_{CEO(sus)}$ | $I_C=100\text{mA}, I_B=0, L=25\text{mH}$ | 700 | | | V |
| DC Current Gain | $*h_{FE}$ | $I_C=4.5A, V_{CE}=5V$ | 2.25 | | | |
| Collector Emitter Saturation Voltage | $*V_{CE(sat)}$ | $I_C=4.5A, I_B=2A$ | | | 1.0 | V |
| Base Emitter Saturation Voltage | $*V_{BE(sat)}$ | $I_C=4.5A, I_B=2A$ | | | 1.3 | V |
| Transition Frequency | f_T | $I_C=0.1A, V_{CE}=5V, f=5\text{MHz}$ | | 7 | | MHz |
| Collector Capacitance | C_C | $I_E=I_C=0, V_{CB}=10V, f=1\text{MHz}$ | | 125 | | pF |

**Measured with half-sinewave Voltage (curve tracer)

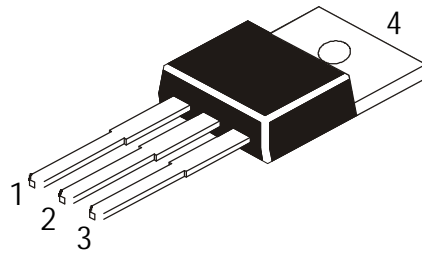
*Pulse Test: Pulse Width=5ms, Duty Cycle \leq 10%

TO-220 Plastic Package



| 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 | 7 DEG | |

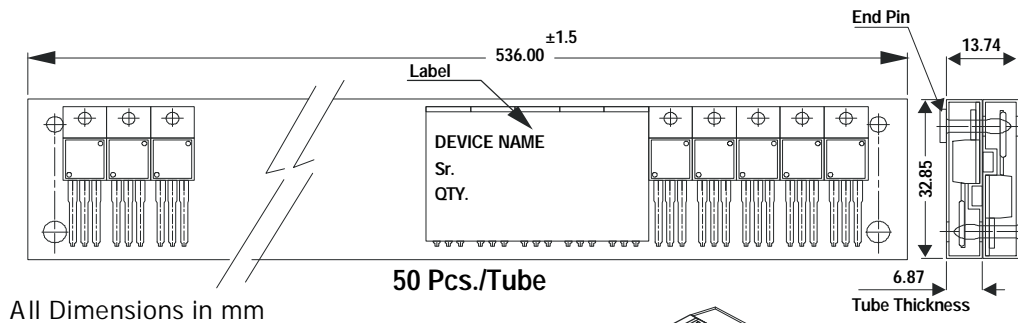
All dimensions in mm.



Pin Configuration

1. Base
2. Collector
3. Emitter
4. Collector

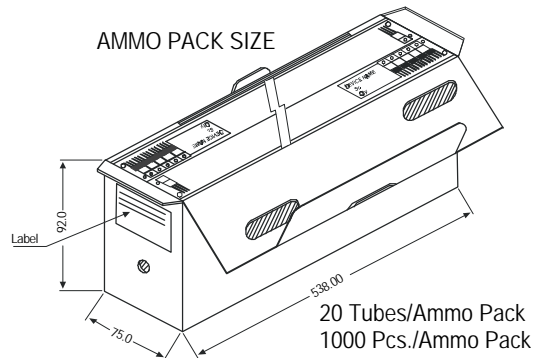
TO-220 Tube Packing



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-220 /FP | 200 pcs/polybag | 396 gm/200 pcs | 3" x 7.5" x 7.5" | 1.0K | 17" x 15" x 13.5" | 16.0K | 36 kgs |
| | 50 pcs/tube | 120 gm/50 pcs | 3.5" x 3.7" x 21.5" | 1.0K | 19" x 19" x 19" | 10.0K | 29 kgs |

Disclaimer

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