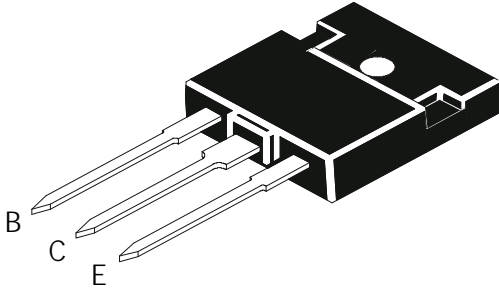


NPN POWER TRANSISTORS

**BU508F, BU508AF,
BU508DF**



**TO- 3P Fully Isolated
Plastic Package**

Fast Switching, High Voltage Devices for use in Horizontal Deflection Circuits of Colour TV

ABSOLUTE MAXIMUM RATINGS

| DESCRIPTION | SYMBOL | VALUE | UNIT |
|---|-----------|--------------|------------|
| Collector -Emitter Voltage | V_{CES} | 1500 | V |
| Collector -Emitter Voltage | V_{CEO} | 700 | V |
| Emitter Base Voltage | V_{EBO} | 5 | V |
| Collector Current | I_C | 8 | A |
| Collector Peak Current | I_{CM} | 15 | |
| Total Power Dissipation upto $T_a=25^\circ C$ $T_c=25^\circ C$ | P_{tot} | 34 60 | W |
| Storage Temperature Range | T_{stg} | - 65 to +150 | $^\circ C$ |
| Max Operating Junction Temperature | T_j | 150 | $^\circ C$ |

THERMAL RESISTANCE

| | | | |
|------------------------------------|---------------|------|--------------|
| Thermal Resistance Junction - Case | $R_{th(j-c)}$ | 2.08 | $^\circ C/W$ |
|------------------------------------|---------------|------|--------------|

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

| DESCRIPTION | SYMBOL | TEST CONDITIONS | MIN | TYP | MAX | UNIT |
|--------------------------------------|------------------|--|------|-----|-----|------|
| Collector Cut off Current | I_{CES} | $V_{CE}=V_{CES}, V_{BE}=0$ | | | 1.0 | mA |
| Collector Emitter Sustaining Voltage | $V_{CEO(sus)}^*$ | $I_B=0, I_C=100mA$ | 700 | | | V |
| Emitter Base Voltage | V_{EBO} | $I_E=10mA, I_C=0$ BU508F, AF | 5.0 | | | V |
| Emitter Cut-off Current | I_{EBO} | $V_{EB}=5V, I_C=0$ BU508DF | | | 300 | mA |
| DC Current Gain | h_{FE} | $I_C=4.5A, V_{CE}=5V$ | 2.25 | | | |
| Diode forward Voltage | V_F | $I_F=4.0A$ BU508DF | | | 2.0 | V |
| Collector Emitter Saturation Voltage | $V_{CE(sat)}^*$ | $I_C=4.5A, I_B=2.0A$ BU508AF, DF | | | 1.0 | V |
| | | $I_C=4.5A, I_B=2.0A$ BU508F | | | 5.0 | V |
| Base Emitter Saturation Voltage | $V_{BE(sat)}^*$ | $I_C=4.5A, I_B=2.0A$ | | | 1.5 | V |

SWITCHING TIME

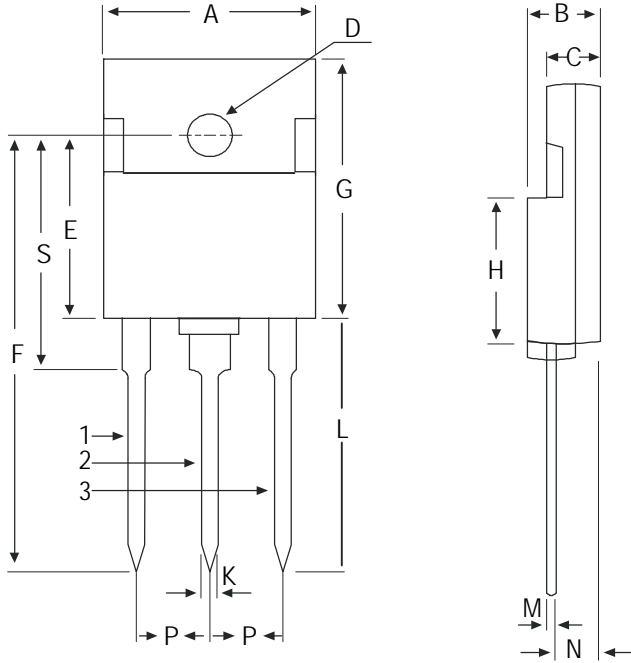
| | | | | | | |
|--------------|-------|-------------------------------------|--|-----|--|---------|
| Storage Time | t_s | $I_C=4.5A, h_{FE}=2.5, V_{CC}=140V$ | | 7.0 | | μs |
| Fall Time | t_f | $L_C=0.9mH, L_B=3\mu H$ | | 0.5 | | μs |

* Pulse test: Pulse Duration $\leq 300ms$, Duty cycle $\leq 1.5\%$.

**BU508F, BU508AF,
BU508DF**

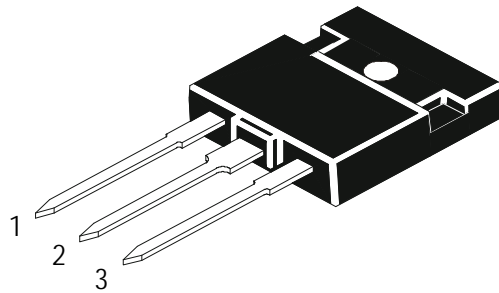
**TO- 3P Fully Isolated
Plastic Package**

TO-3P (TO-218) Plastic Package



| DIM | MIN | MAX |
|-----|--------|--------|
| A | 15.80 | 16.40 |
| B | 5.20 | 5.70 |
| C | 3.80 | 4.20 |
| D | Ø 3.30 | Ø 3.60 |
| E | 14.50 | 15.10 |
| F | 33.25 | 36.75 |
| G | 20.75 | 21.25 |
| H | 11.50 | 12.25 |
| K | 1.00 | 1.30 |
| L | 18.75 | 21.65 |
| M | 0.40 | 0.60 |
| N | 3.15 | 3.45 |
| P | 5.21 | 5.72 |
| S | 18.75 | 19.25 |

All dimensions in mm.



Pin Configuration

1. Base
2. Collector
3. Emitter

Packing Detail

| PACKAGE | STANDARD PACK | | INNER CARTON BOX | | OUTER CARTON BOX | | |
|---------|-----------------|----------------|------------------|------|-------------------|------|--------|
| | Details | Net Weight/Qty | Size | Qty | Size | Qty | Gr Wt |
| TO-3P | 100 pcs/polybag | 628 gm/100 pcs | 3" x 7.5" x 7.5" | 0.3K | 17" x 15" x 13.5" | 4.8K | 42 kgs |

Disclaimer

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