

isc Silicon NPN Power Transistor

BU2508DF

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = 700V$ (Min)
- High Switching Speed
- Built-in Damper Diode

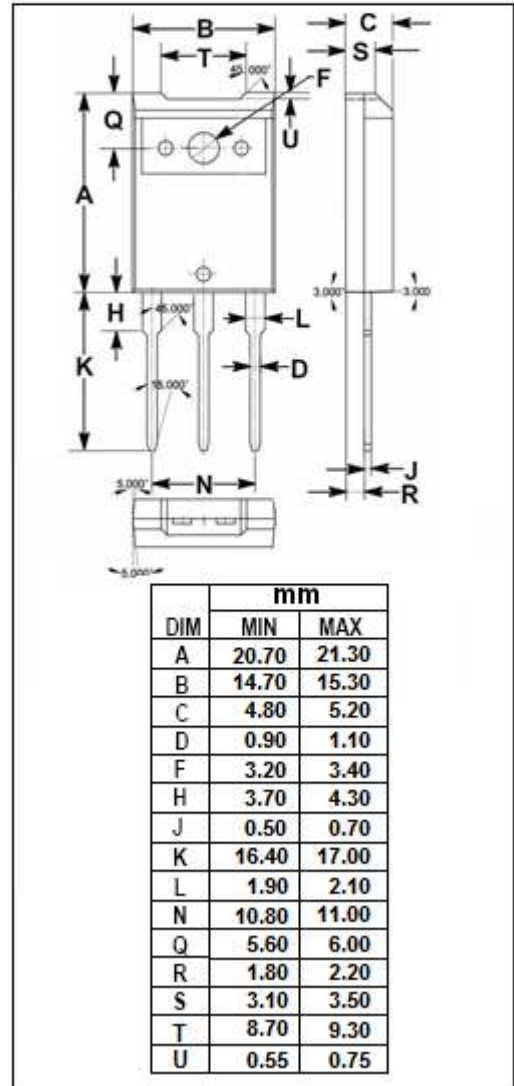
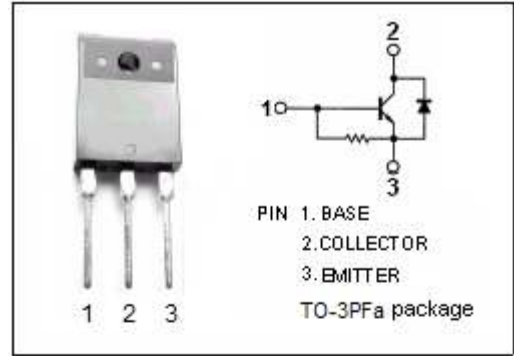
APPLICATIONS

- Designed for use in horizontal deflection circuits of color TV receivers.

ABSOLUTE MAXIMUM RATINGS($T_a=25^\circ C$)

| SYMBOL | PARAMETER | VALUE | UNIT |
|-----------|---|---------|------------|
| V_{CES} | Collector- Emitter Voltage($V_{BE} = 0$) | 1500 | V |
| V_{CEO} | Collector-Emitter Voltage | 700 | V |
| V_{EBO} | Emitter-Base Voltage | 7.5 | V |
| I_C | Collector Current- Continuous | 8 | A |
| I_{CM} | Collector Current-Peak | 15 | A |
| I_B | Base Current- Continuous | 4 | A |
| I_{BM} | Base Current-Peak | 6 | A |
| P_C | Collector Power Dissipation @ $T_C=25^\circ C$ | 45 | W |
| T_J | Junction Temperature | 150 | $^\circ C$ |
| T_{stg} | Storage Temperature Range | -65~150 | $^\circ C$ |

| SYMBOL | PARAMETER | MAX | UNIT |
|---------------|--------------------------------------|-----|--------------|
| $R_{th\ j-c}$ | Thermal Resistance, Junction to Case | 2.8 | $^\circ C/W$ |



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ELECTRICAL CHARACTERISTICS

T_C=25°C unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT |
|-----------------------|--------------------------------------|---|-----|------|------------|------|
| V _{CEO(SUS)} | Collector-Emitter Sustaining Voltage | I _C = 100mA ; I _B = 0, L= 25mH | 700 | | | V |
| V _{(BR)EBO} | Emitter-Base Breakdown Voltage | I _E = 600mA; I _C = 0 | 7.5 | | | V |
| V _{CE(sat)} | Collector-Emitter Saturation Voltage | I _C = 4.5A; I _B = 1.12A | | | 1.0 | V |
| V _{BE(sat)} | Base-Emitter Saturation Voltage | I _C = 4.5A; I _B = 1.7A | | | 1.1 | V |
| I _{CES} | Collector Cutoff Current | V _{CE} = 1500V ; V _{BE} = 0 V _{CE} = 1500V ; V _{BE} = 0; T _C =125°C | | | 1.0 2.0 | mA |
| I _{EBO} | Emitter Cutoff Current | V _{EB} = 7.5V ; I _C = 0 | | 227 | | mA |
| h _{FE-1} | DC Current Gain | I _C = 1A ; V _{CE} = 5V | | 13 | | |
| h _{FE-2} | DC Current Gain | I _C = 4.5A ; V _{CE} = 1V | 4 | | 7 | |
| V _{ECF} | C-E Diode Forward Voltage | I _F = 4.5A | | | 2.0 | V |
| C _{OB} | Output Capacitance | I _E = 0; V _{CB} = 10V; f _{test} = 1MHz | | 80 | | pF |

Switching times

| | | | | | | |
|------------------|--------------|--|--|--|-----|-----|
| t _{stg} | Storage Time | I _C = 4.5A , I _{B(end)} = 1.1A; L _B = 6 μ H -V _{BB} = 4V; (-dI _B /dt= 0.6A/ μ s) | | | 6.0 | μ s |
| t _f | Fall Time | | | | 0.6 | μ s |

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