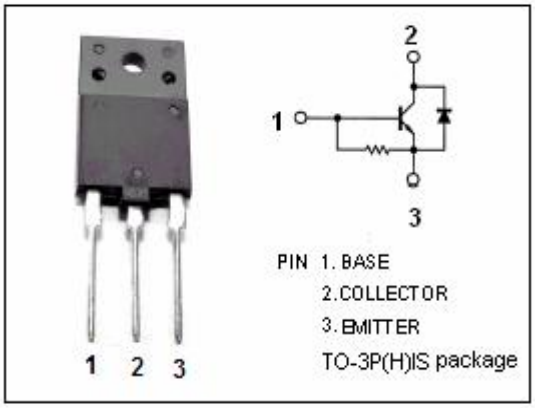
# isc Silicon NPN Power Transistor — BU2507DX




## DESCRIPTION

- High Switching Speed
- High Voltage
- Built-in Ddamper Ddiode
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## APPLICATIONS

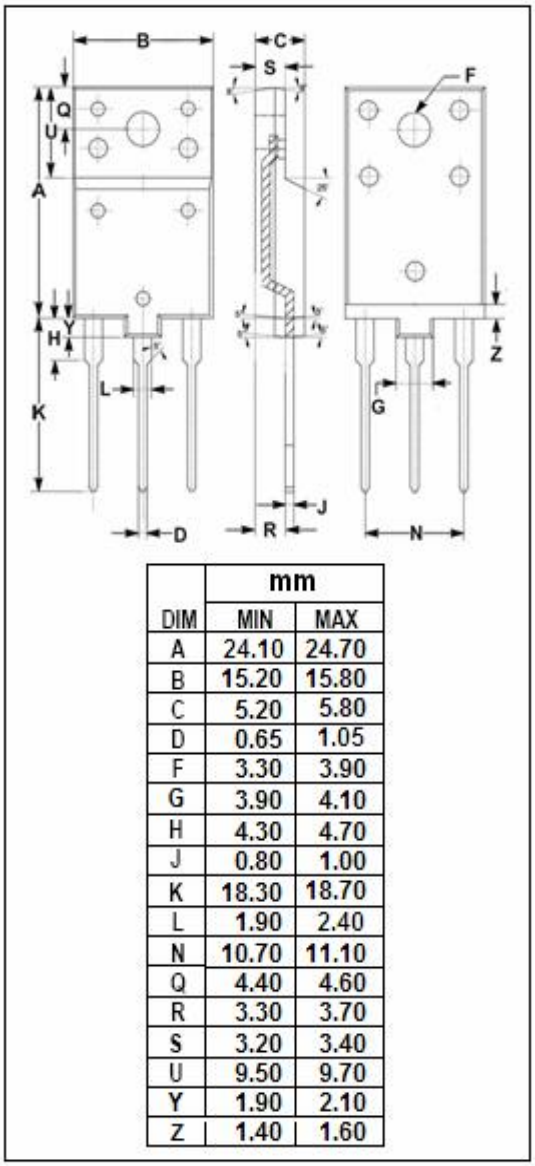
- Designed for use in horizontal deflection circuits of coluor TV receivers and computer monitors.

## ABSOLUTE MAXIMUM RATINGS ($T_a$=25℃)

| SYMBOL | PARAMETER | VALUE | UNIT |
|---|---|---|---|
| $V_{CBO}$ | Collector-Base Voltage | 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℃ | 45 | W |
| $T_j$ | Junction Temperature | 150 | ℃ |
| $T_{stg}$ | Storage Temperature Range | -65~150 | ℃ |

## THERMAL CHARACTERISTICS

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




| DIM | mm MIN | MAX |
|---|---|---|
| A | 24.10 | 24.70 |
| B | 15.20 | 15.80 |
| C | 5.20 | 5.80 |
| D | 0.65 | 1.05 |
| F | 3.30 | 3.90 |
| G | 3.90 | 4.10 |
| H | 4.30 | 4.70 |
| J | 0.80 | 1.00 |
| K | 18.30 | 18.70 |
| L | 1.90 | 2.40 |
| N | 10.70 | 11.10 |
| Q | 4.40 | 4.60 |
| R | 3.30 | 3.70 |
| S | 3.20 | 3.40 |
| U | 9.50 | 9.70 |
| Y | 1.90 | 2.10 |
| Z | 1.40 | 1.60 |

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## ELECTRICAL CHARACTERISTICS

**$T_C$=25℃ unless otherwise specified**

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT |
|---|---|---|---|---|---|---|
| $V_{CEO(SUS)}$ | Collector-Emitter Sustaining Voltage | $I_C$= 50mA ;$I_B$= 0,L= 25mH | 700 | | | V |
| $V_{(BR)EBO}$ | Emitter-Base Breakdown Voltage | $I_E$= 600mA ;$I_C$= 0 | 7.5 | 13.5 | | V |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage | $I_C$= 4A ;$I_B$= 0.8A | | | 5.0 | V |
| $V_{BE(sat)}$ | Base-Emitter Saturation Voltage | $I_C$= 4A ;$I_B$= 0.8A | | | 1.1 | V |
| $I_{CES}$ | Collector Cutoff Current | $V_{CE}$= $BV_{CES;}$ $V_{BE}$= 0<br>$V_{CE}$= $BV_{CES;}$ $V_{BE}$= 0;$T_C$=125℃ | | | 1.0<br>2.0 | mA |
| $I_{EBO}$ | Emitter Cutoff Current | $V_{EB}$= 7.5V; $I_C$= 0 | | 160 | | mA |
| $h_{FE-1}$ | DC Current Gain | $I_C$= 1A ; $V_{CE}$= 5V | | 14 | | |
| $h_{FE-2}$ | DC Current Gain | $I_C$= 4A ; $V_{CE}$= 5V | 5 | 7 | 9 | |
| $V_{ECF}$ | C-E Diode Forward Voltage | $I_F$= 4A | | | 2.0 | V |
| $C_{OB}$ | Output Capacitance | $I_E$= 0 ; $V_{CB}$= 10V;$f_{test}$= 1MHz | | 68 | | pF |