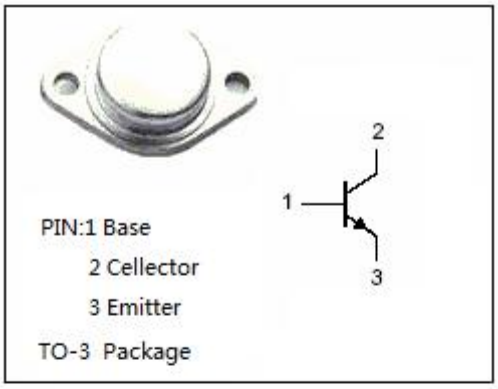
# isc Silicon NPN Power Transistor — 3DD301D

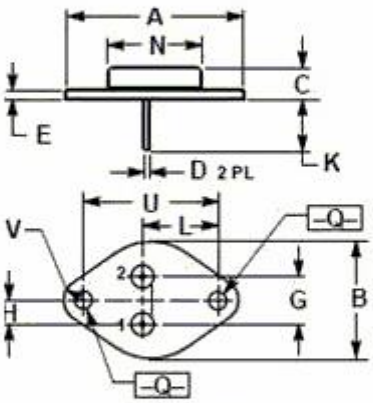
## DESCRIPTION

- Collector-Emitter Breakdown Voltage-
  : $V_{(BR)CEO}$= 150V(Min)
- Collector-Emitter Saturation Voltage-
  : $V_{CE(sat)}$= 1.5V(Max) @$I_C$= 3A
- Minimum Lot-to-Lot variations for robust device performance and reliable operation




## APPLICATIONS

- Designed for B/W TV vertical output applications.




| DIM | mm MIN | MAX |
|---|---|---|
| A | 39.00 | |
| B | 25.30 | 26.67 |
| C | 7.80 | 8.50 |
| D | 0.90 | 1.10 |
| E | 1.40 | 1.60 |
| G | 10.92 | |
| H | 5.46 | |
| K | 11.30 | 13.50 |
| L | 16.75 | 17.05 |
| N | 19.40 | 19.62 |
| Q | 4.00 | 4.20 |
| U | 30.00 | 30.20 |
| V | 4.30 | 4.50 |

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

| SYMBOL | PARAMETER | VALUE | UNIT |
|---|---|---|---|
| $V_{CBO}$ | Collector-Base Voltage | 300 | V |
| $V_{CEO}$ | Collector-Emitter Voltage | 150 | V |
| $V_{EBO}$ | Emitter-Base Voltage | 6 | V |
| $I_C$ | Collector Current-Continuous | 5 | A |
| $P_C$ | Collector Power Dissipation @ $T_C$=25℃ | 30 | W |
| $T_J$ | Junction Temperature | 150 | ℃ |
| $T_{stg}$ | Storage Temperature Range | -55~150 | ℃ |

## THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|---|---|---|---|
| $R_{th\ j\text{-}c}$ | Thermal Resistance,Junction to Case | 2.5 | ℃/W |

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## ELECTRICAL CHARACTERISTICS

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

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT |
|---|---|---|---|---|---|---|
| $V_{(BR)CEO}$ | Collector-Emitter Breakdown Voltage | $I_C$= 5mA; $I_B$= 0 | 150 | | | V |
| $V_{(BR)EBO}$ | Emitter-Base Breakdown Voltage | $I_E$= 1mA; $I_C$= 0 | 6 | | | V |
| $V_{(BR)CBO}$ | Collector-Base Breakdown Voltage | $I_C$= 5mA; $I_E$= 0 | 300 | | | V |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage | $I_C$= 3A; $I_B$= 0.3A | | | 1.5 | V |
| $I_{CBO}$ | Collector Cutoff Current | $V_{CB}$= 50V; $I_E$= 0 | | | 0.1 | mA |
| $I_{EBO}$ | Emitter Cutoff Current | $V_{EB}$= 6V; $I_C$= 0 | | | 0.1 | mA |
| $h_{FE}$ | DC Current Gain | $I_C$= 3A; $V_{CE}$= 5V | 30 | | 120 | |
| $t_f$ | Fall Time | $I_C$= 3A; $I_{B1}$= 0.2A; $I_{B2}$= -0.3A | | | 1 | μs |