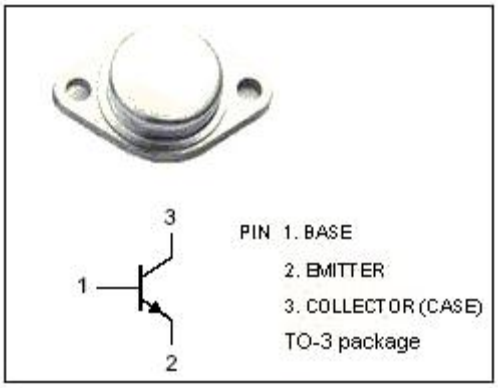
# isc Silicon NPN Power Transistor — 2SD517

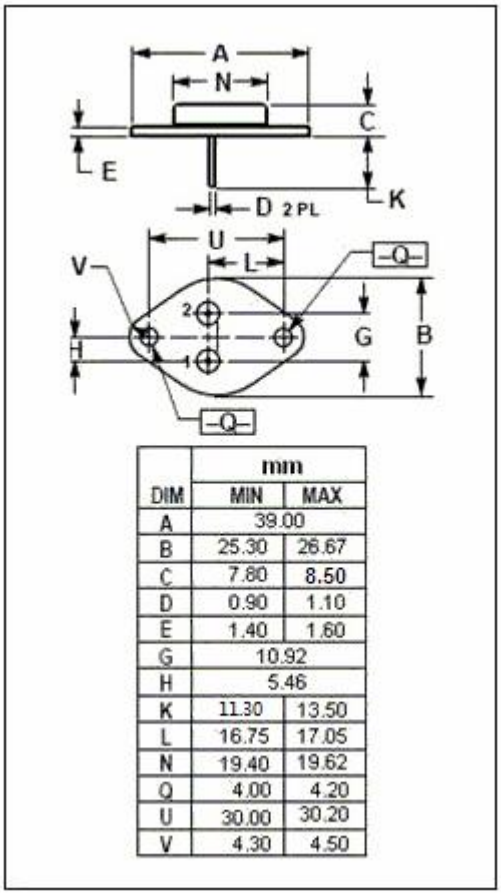
## DESCRIPTION

- Collector-Emitter Sustaining Voltage-
  : $V_{CEO(SUS)}$ = 700V(Min)
- High Switching Speed
- Wide Area of Safe Operation
- Minimum Lot-to-Lot variations for robust device performance and reliable operation




## APPLICATIONS

- Designed for use in large screen color deflection circuits .




| 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 |
|---|---|---|---|
| $V_{CEX}$ | Collector-Emitter Voltage | 1500 | V |
| $V_{CEO}$ | Collector-Emitter Voltage | 700 | V |
| $V_{EBO}$ | Emitter-Base Voltage | 5 | V |
| $I_C$ | Collector Current-Continuous | 3 | A |
| $I_{CM}$ | Collector Current-Peak | 5 | A |
| $P_C$ | Collector Power Dissipation @$T_C$=90℃ | 16 | W |
| $T_J$ | Junction Temperature | 150 | ℃ |
| $T_{stg}$ | Storage Temperature | -65~150 | ℃ |

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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 | $I_C$= 30mA; $I_B$= 0 | 700 | | | V |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage | $I_C$= 3.0A; $I_B$= 1A | | | 1.0 | V |
| $V_{BE(sat)}$ | Base-Emitter Saturation Voltage | $I_C$= 3.0A; $I_B$= 1A | | | 1.5 | V |
| $I_{CBO}$ | Collector Cutoff Current | $V_{CB}$= 1500V; $I_E$= 0 | | | 0.5 | mA |
| $I_{EBO}$ | Emitter Cutoff Current | $V_{EB}$= 5.0V; $I_C$= 0 | | | 0.1 | mA |
| $h_{FE}$ | DC Current Gain | $I_C$= 1A; $V_{CE}$= 5V | 8 | | | |
| $f_T$ | Current-Gain—Bandwidth Product | $I_C$= 0.5A; $V_{CE}$= 10V; $f_{test}$= 1MHz | | 5 | | MHz |
| Switching Times | | | | | | |
| $t_s$ | Storage Time | $I_C$= 3A; $I_{B1}$= $I_{B2}$= 1.0A | | | 8.0 | μs |
| $t_f$ | Fall Time | | | | 0.9 | μs |