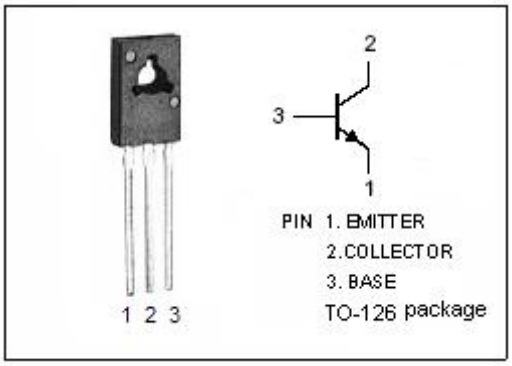
# isc Silicon NPN Power Transistor — 2SC3619

## DESCRIPTION

- High Collector-Emitter Breakdown Voltage-
  : $V_{(BR)CEO}$= 300V(Min)
- Good Linearity of $h_{FE}$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

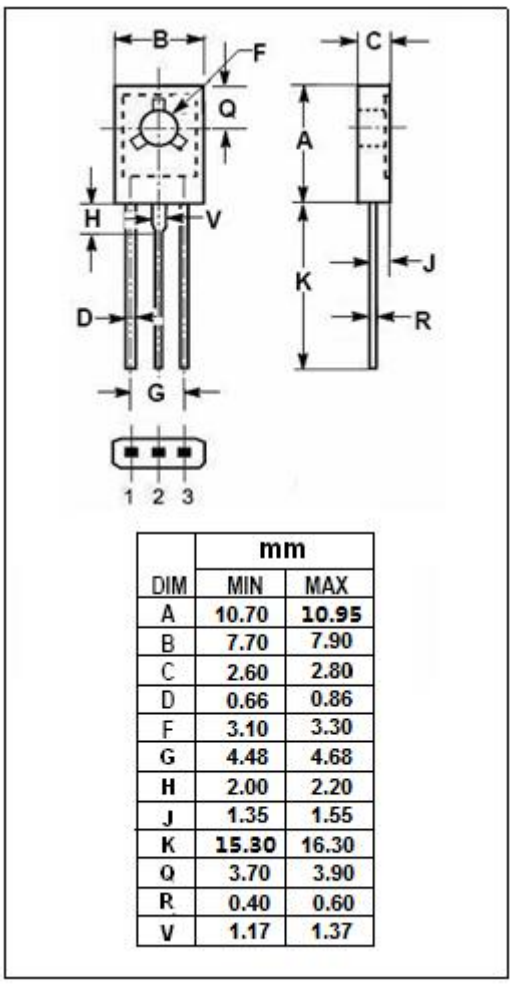



## APPLICATIONS

- High voltage switching and amplifier applications.
- Color TV horizontal driver applications.
- Color TV chroma output applications.

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

| SYMBOL | PARAMETER | VALUE | UNIT |
|---|---|---|---|
| $V_{CBO}$ | Collector-Base Voltage | 300 | V |
| $V_{CEO}$ | Collector-Emitter Voltage | 300 | V |
| $V_{EBO}$ | Emitter-Base Voltage | 7 | V |
| $I_C$ | Collector Current-Continuous | 100 | mA |
| $I_B$ | Base Current-Continuous | 50 | mA |
| $P_C$ | Collector Power Dissipation | 1.5 | W |
| $T_J$ | Junction Temperature | 150 | ℃ |
| $T_{stg}$ | Storage Temperature Range | -55~150 | ℃ |




| DIM | mm MIN | mm MAX |
|---|---|---|
| A | 10.70 | 10.95 |
| B | 7.70 | 7.90 |
| C | 2.60 | 2.80 |
| D | 0.66 | 0.86 |
| F | 3.10 | 3.30 |
| G | 4.48 | 4.68 |
| H | 2.00 | 2.20 |
| J | 1.35 | 1.55 |
| K | 15.30 | 16.30 |
| Q | 3.70 | 3.90 |
| R | 0.40 | 0.60 |
| V | 1.17 | 1.37 |

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## ELECTRICAL CHARACTERISTICS

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

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT |
|---|---|---|---|---|---|---|
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage | $I_C$= 10mA; $I_B$= 1mA | | | 1.0 | V |
| $V_{BE(sat)}$ | Base-Emitter Saturation Voltage | $I_C$= 10mA; $I_B$= 1mA | | | 1.0 | V |
| $I_{CBO}$ | Collector Cutoff Current | $V_{CB}$= 240V; $I_E$= 0 | | | 1 | μA |
| $I_{EBO}$ | Emitter Cutoff Current | $V_{EB}$= 7V; $I_C$= 0 | | | 1 | μA |
| $h_{FE-1}$ | DC Current Gain | $I_C$= 4mA; $V_{CE}$= 10V | 20 | | | |
| $h_{FE-2}$ | DC Current Gain | $I_C$= 20mA; $V_{CE}$= 10V | 30 | | 200 | |
| $f_T$ | Current-Gain—Bandwidth Product | $I_C$= 20mA; $V_{CE}$= 20V | 50 | | | MHz |
| $C_{OB}$ | Output Capacitance | $I_E$= 0; $V_{CB}$= 20V, $f_{test}$= 1MHz | | 3 | | pF |