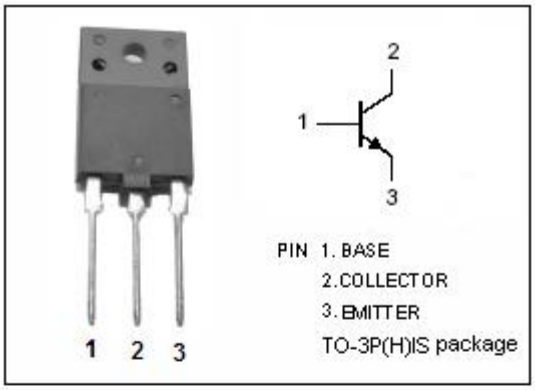
# isc Silicon NPN Power Transistor 2SC5902

## DESCRIPTION

- High Breakdown Voltage
- Built-in damper diode type
- High Switching Speed
- Wide Area of Safe Operation
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

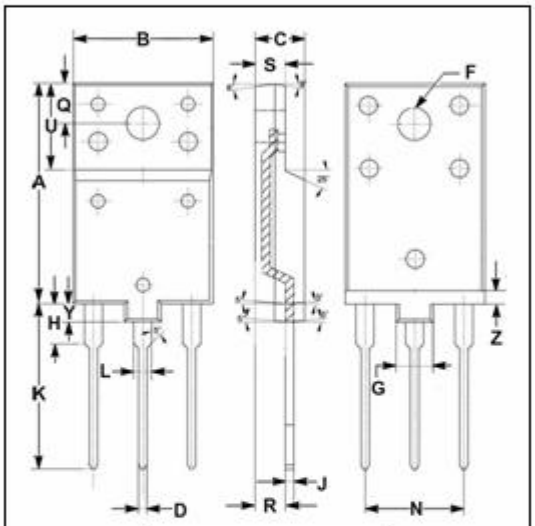



## APPLICATIONS

- Designed for high voltage color display horizontal deflection output applications.

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

| SYMBOL | PARAMETER | VALUE | UNIT |
|---|---|---|---|
| $V_{CBO}$ | Collector-Base Voltage | 1700 | V |
| $V_{CES}$ | Collector-Emitter Voltage | 1700 | V |
| $V_{EBO}$ | Emitter-Base Voltage | 7 | V |
| $I_C$ | Collector Current- Continuous | 9 | A |
| $I_{CM}$ | Collector Current- Peak | 14 | A |
| $P_C$ | Collector Power Dissipation @ $T_C$=25℃ | 40 | W |
| $T_J$ | Junction Temperature | 150 | ℃ |
| $T_{stg}$ | Storage Temperature Range | -55~150 | ℃ |




| 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 |
|---|---|---|---|---|---|---|
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage | $I_C$= 4.5A; $I_B$= 1.13A | | | 3.0 | V |
| $V_{BE(sat)}$ | Base-Emitter Saturation Voltage | $I_C$= 4.5A; $I_B$= 1.15A | | | 1.5 | V |
| $I_{CBO}$ | Collector Cutoff Current | $V_{CE}$= 1000V; $V_{BE}$= 0 | | | 50 | uA |
| $I_{EBO}$ | Emitter Cutoff Current | $V_{EB}$= 7V; $I_C$= 0 | | | 500 | mA |
| $h_{FE}$ | DC Current Gain | $I_C$= 4.5A; $V_{CE}$= 5V | 5 | | 10 | |
| Switching Times | | | | | | |
| $t_{stg}$ | Storage Time | $I_C$= 4.5A, $I_{B1}$= 1.13A; $I_{B2}$= -2.25A; | | | 5.0 | μ s |
| $t_f$ | Fall Time | | | | 0.5 | μ s |