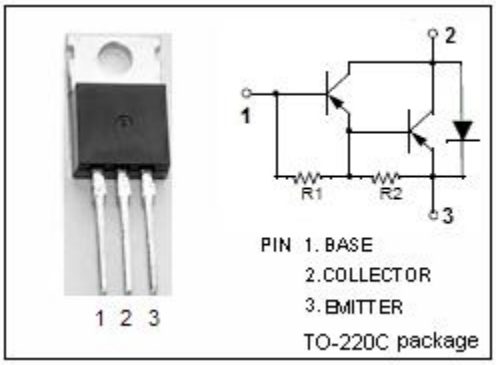
# *isc* Silicon PNP Darlington Power Transistor 2SA1259

## DESCRIPTION

- High DC Current Gain-
  : $h_{FE}$ = 2000(Min)@ $I_C$= -2.5A
- Low Collector-Emitter Saturation Voltage
  : $V_{CE(sat)}$ = -1.5V(Max)@ $I_C$= -2.5A
- Complement to Type 2SC3145
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

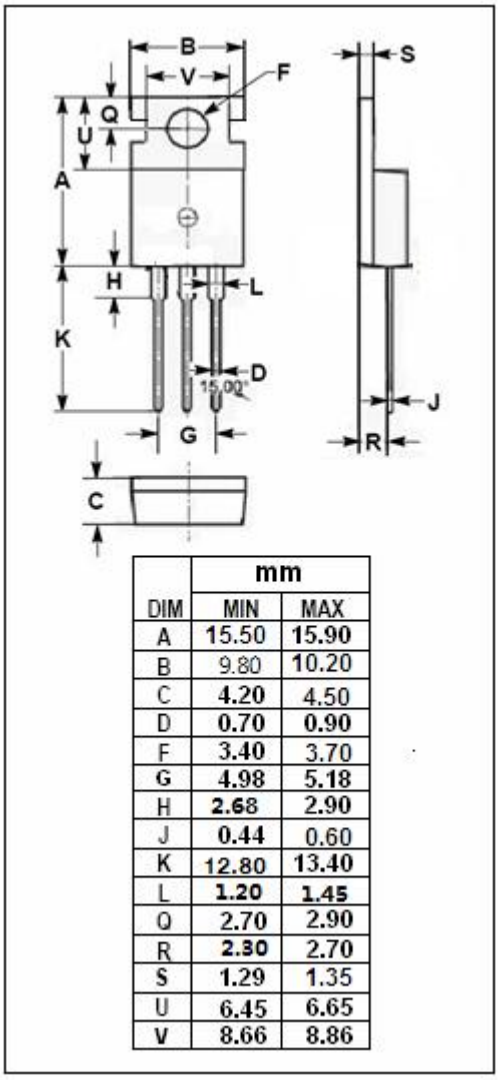



## APPLICATIONS

- Designed for general purpose amplifier high $f_T$ and high speed switching applications.

## ABSOLUTE MAXIMUM RATINGS (Ta=25℃)

| SYMBOL | PARAMETER | VALUE | UNIT |
|---|---|---|---|
| $V_{CBO}$ | Collector-Base Voltage | -70 | V |
| $V_{CEO}$ | Collector-Emitter Voltage | -60 | V |
| $V_{EBO}$ | Emitter-Base Voltage | -5 | V |
| $I_C$ | Collector Current-Continuous | -5 | A |
| $I_{CM}$ | Collector Current-Peak | -8 | A |
| $P_C$ | Collector Power Dissipation $T_C$=25℃ | 30 | W |
| | Collector Power Dissipation $T_a$=125℃ | 1.75 | |
| $T_j$ | Junction Temperature | 150 | ℃ |
| $T_{stg}$ | Storage Temperature Range | -55~150 | ℃ |




| DIM | mm MIN | MAX |
|---|---|---|
| A | 15.50 | 15.90 |
| B | 9.80 | 10.20 |
| C | 4.20 | 4.50 |
| D | 0.70 | 0.90 |
| F | 3.40 | 3.70 |
| G | 4.98 | 5.18 |
| H | 2.68 | 2.90 |
| J | 0.44 | 0.60 |
| K | 12.80 | 13.40 |
| L | 1.20 | 1.45 |
| Q | 2.70 | 2.90 |
| R | 2.30 | 2.70 |
| S | 1.29 | 1.35 |
| U | 6.45 | 6.65 |
| V | 8.66 | 8.86 |

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## ELECTRICAL CHARACTERISTICS

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

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT |
|---|---|---|---|---|---|---|
| $V_{(BR)CBO}$ | Collector-Base Breakdown Voltage | $I_C$= -5mA, $I_E$= 0 | -70 | | | V |
| $V_{(BR)CEO}$ | Collector-Emitter Breakdown Voltage | $I_C$= -50mA, | -60 | | | V |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage | $I_C$= -2.5A ,$I_B$= -5mA | | -1.0 | -1.5 | V |
| $V_{BE(sat)}$ | Base-Emitter Saturation Voltage | $I_C$= -2.5A ,$I_B$= -5mA | | | 2.0 | V |
| $I_{CBO}$ | Collector Cutoff Current | $V_{CB}$= -40V, $I_E$= 0 | | | -0.1 | mA |
| $I_{EBO}$ | Emitter Cutoff Current | $V_{EB}$= -5V; $I_C$= 0 | | | -3 | mA |
| $h_{FE}$ | DC Current Gain | $I_C$= -2.5A ; $V_{CE}$= -2V | 2000 | 5000 | | |