

isc Silicon NPN Darlington Power Transistor

2SC1880

DESCRIPTION

- High DC Current Gain
- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = 120V(\text{Min})$
- Low Collector-Emitter Saturation Voltage
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

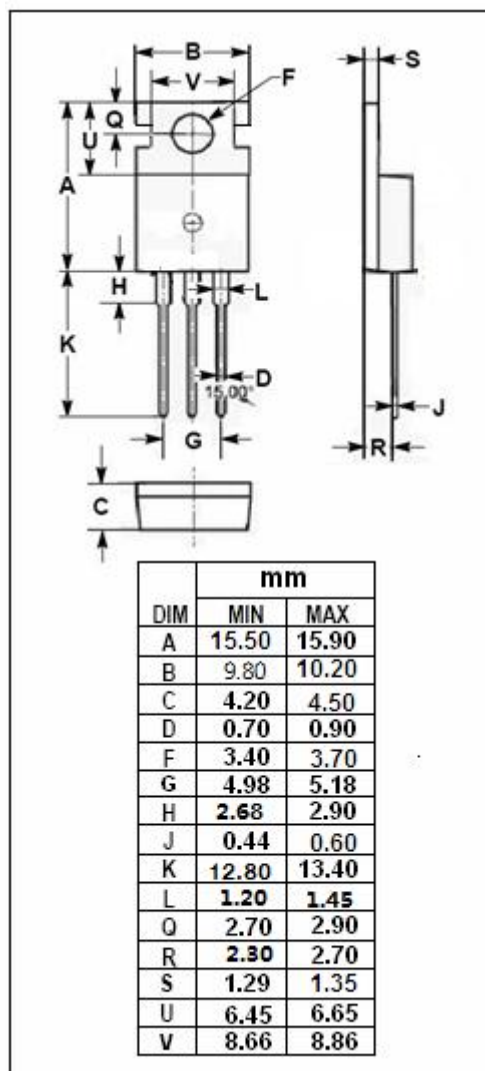
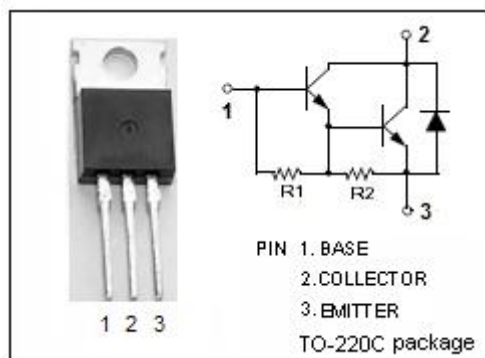
- Designed for general purpose amplifier and low speed switching applications.

ABSOLUTE MAXIMUM RATINGS ($T_a=25^\circ\text{C}$)

| SYMBOL | PARAMETER | VALUE | UNIT |
|-----------|---|---------|------------------|
| V_{CBO} | Collector-Base Voltage | 100 | V |
| V_{CEO} | Collector-Emitter Voltage | 100 | V |
| V_{EBO} | Emitter-Base Voltage | 5 | V |
| I_C | Collector Current-Continuous | 5 | A |
| I_{CM} | Collector Current-Peak | 8 | A |
| I_B | Base Current | 120 | mA |
| P_C | Collector Power Dissipation $T_c=25^\circ\text{C}$ | 65 | W |
| | Collector Power Dissipation $T_a=25^\circ\text{C}$ | 2 | |
| T_j | Junction Temperature | 150 | $^\circ\text{C}$ |
| T_{stg} | Storage Temperature Range | -65~150 | $^\circ\text{C}$ |

THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|-------------|---|------|--------------------|
| R_{thj-c} | Thermal Resistance, Junction to Case | 1.92 | $^\circ\text{C/W}$ |
| R_{thj-a} | Thermal Resistance, Junction to Ambient | 62.5 | $^\circ\text{C/W}$ |



isc Silicon NPN Darlington Power Transistor**2SC1880****ELECTRICAL CHARACTERISTICS****T_c=25°C unless otherwise specified**

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT |
|-----------------------|--------------------------------------|--|------|------|-----|------|
| V _{CEO(SUS)} | Collector-Emitter Sustaining Voltage | I _C = 30mA, I _B = 0 | 120 | | | V |
| V _{CE(sat)} | Collector-Emitter Saturation Voltage | I _C = 2A ,I _B = 8mA | | | 1.2 | V |
| I _{CBO} | Collector Cutoff Current | V _{CB} = 100V, I _E = 0 | | | 0.1 | mA |
| I _{EBO} | Emitter Cutoff Current | V _{EB} = 5V; I _C = 0 | | | 2 | mA |
| h _{FE} | DC Current Gain | I _C = 2A ; V _{CE} = 2V | 1000 | | | |

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