

isc Silicon NPN Darlington Power Transistor

BD895

DESCRIPTION

- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 45V(\text{Min})$
- High DC Current Gain
: $h_{FE} = 750(\text{Min}) @ I_C = 3A$
- Collector Power Dissipation-
: $P_C = 70W @ T_C = 25^\circ\text{C}$
- 8 A Continuous Collector Current
- Complement to Type BD896
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

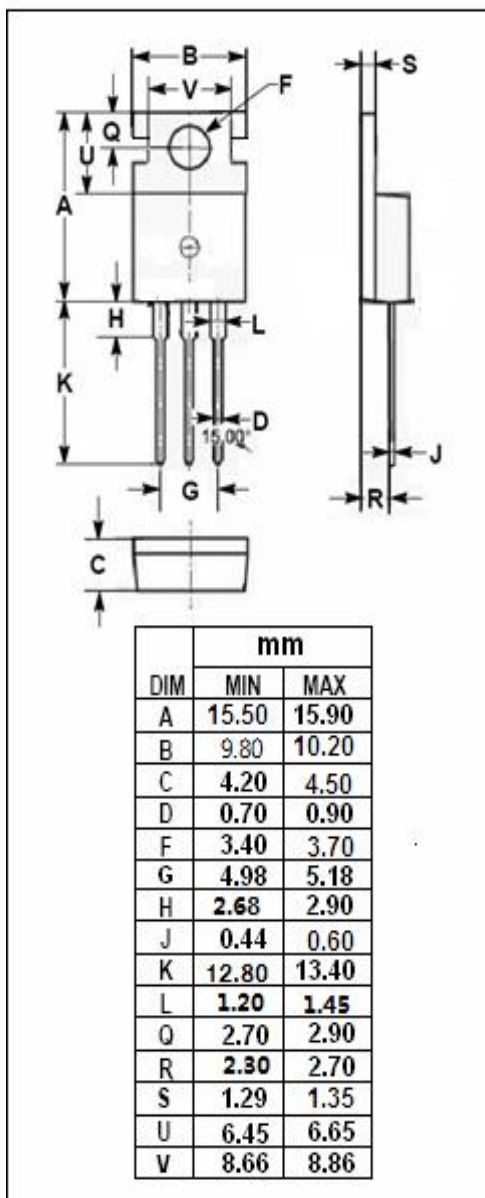
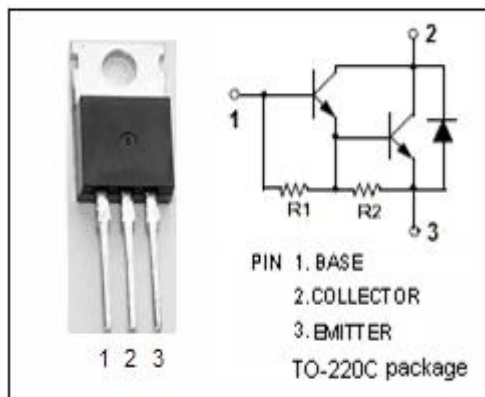
- Designed for use as complementary AF push-pull output stage applications

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

| SYMBOL | PARAMETER | VALUE | UNIT |
|-----------|---|---------|------------------|
| V_{CBO} | Collector-Base Voltage | 45 | V |
| V_{CEO} | Collector-Emitter Voltage | 45 | V |
| V_{EBO} | Emitter-Base Voltage | 5 | V |
| I_C | Collector Current-Continuous | 8 | A |
| I_B | Base Current-Continuous | 0.3 | A |
| P_C | Collector Power Dissipation @ $T_a = 25^\circ\text{C}$ | 2 | W |
| | Collector Power Dissipation @ $T_C = 25^\circ\text{C}$ | 70 | |
| T_J | Junction Temperature | 150 | $^\circ\text{C}$ |
| T_{stg} | Storage Temperature Range | -65~150 | $^\circ\text{C}$ |

THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|--------------|---|------|--------------------|
| $R_{th j-c}$ | Thermal Resistance, Junction to Case | 1.79 | $^\circ\text{C/W}$ |
| $R_{th j-a}$ | Thermal Resistance, Junction to Ambient | 62.5 | $^\circ\text{C/W}$ |



isc Silicon NPN Darlington Power Transistor**BD895****ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT |
|----------------------|--------------------------------------|---|-----|------|-----|------|
| V _{(BR)CEO} | Collector-Emitter Breakdown Voltage | I _C = 50mA; I _B = 0 | 45 | | | V |
| V _{CE(sat)} | Collector-Emitter Saturation Voltage | I _C = 3A; I _B = 12mA | | | 2.5 | V |
| V _{BE(on)} | Base-Emitter On Voltage | I _C = 3A ; V _{CE} = 3V | | | 2.5 | V |
| I _{CBO} | Collector Cutoff Current | V _{CB} = 45V; I _E = 0 | | | 0.2 | mA |
| | | V _{CB} = 45V; I _E = 0; T _C = 100°C | | | 2.0 | |
| I _{CEO} | Collector Cutoff Current | V _{CE} = 30V; I _B = 0 | | | 0.5 | mA |
| I _{EBO} | Emitter Cutoff Current | V _{EB} = 5V; I _C = 0 | | | 2 | mA |
| h _{FE} | DC Current Gain | I _C = 3A ; V _{CE} = 3V | 750 | | | |

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