

**isc Silicon PNP Darlington Power Transistor**
**2SB1194**
**DESCRIPTION**

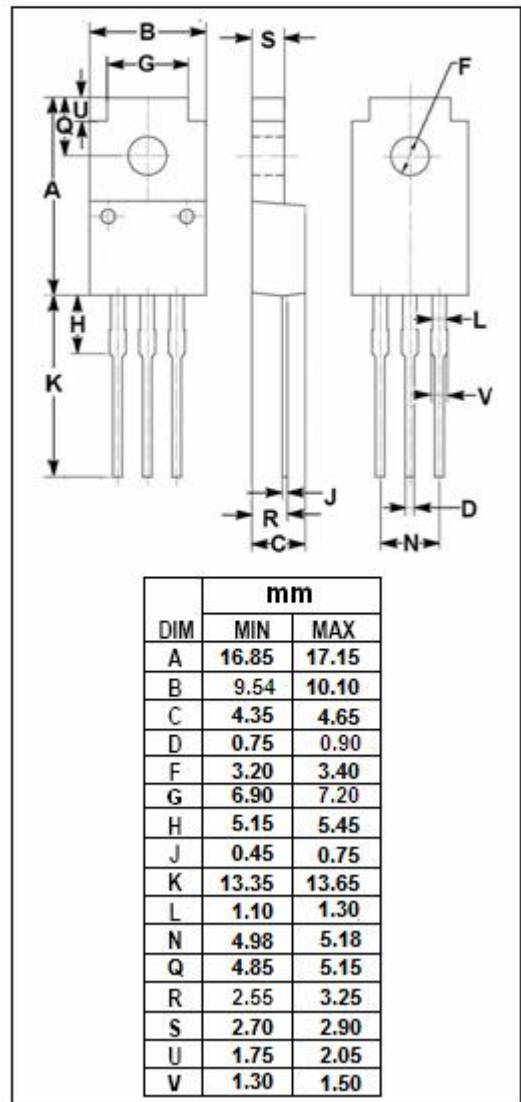
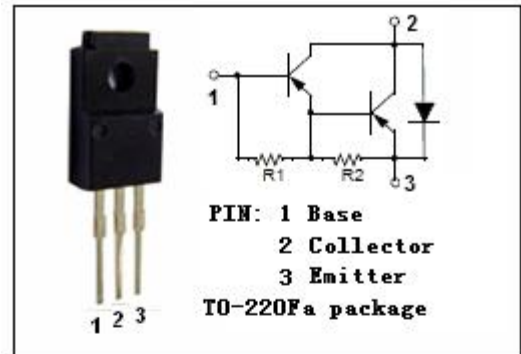
- Collector-Emitter Sustaining Voltage-  
:  $V_{CEO(SUS)} = -100V(\text{Min})$
- High DC Current Gain-  
:  $h_{FE} = 1500(\text{Min})@ (V_{CE} = -3V, I_C = -3A)$
- Complement to Type 2SD1633
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

- Designed for power amplifier 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                                    | -7      | V                |
| $I_C$     | Collector Current-Continuous                            | -5      | A                |
| $I_{CM}$  | Collector Current-Peak                                  | -8      | A                |
| $I_B$     | Base Current-Continuous                                 | -0.5    | A                |
| $P_C$     | Collector Power Dissipation<br>@ $T_a=25^\circ\text{C}$ | 2       | W                |
|           | Collector Power Dissipation<br>@ $T_c=25^\circ\text{C}$ | 30      |                  |
| $T_J$     | Junction Temperature                                    | 150     | $^\circ\text{C}$ |
| $T_{stg}$ | Storage Temperature                                     | -55~150 | $^\circ\text{C}$ |



**isc Silicon PNP Darlington Power Transistor****2SB1194****ELECTRICAL CHARACTERISTICS**T<sub>j</sub>=25°C unless otherwise specified

| SYMBOL                | PARAMETER                            | CONDITIONS                                  | MIN  | TYP. | MAX   | UNIT |
|-----------------------|--------------------------------------|---|------|------|-------|------|
| V <sub>CEO(SUS)</sub> | Collector-Emitter Sustaining Voltage | I <sub>C</sub> = -30mA; I <sub>B</sub> = 0  | -100 |      |       | V    |
| V <sub>CE(sat)</sub>  | Collector-Emitter Saturation Voltage | I <sub>C</sub> = -3A; I <sub>B</sub> = -3mA |      |      | -1.5  | V    |
| V <sub>BE(sat)</sub>  | Base-Emitter Saturation Voltage      | I <sub>C</sub> = -3A; I <sub>B</sub> = -3mA |      |      | -2.0  | V    |
| I <sub>CBO</sub>      | Collector Cutoff Current             | V <sub>CB</sub> = -100V; I <sub>E</sub> = 0 |      |      | -100  | μ A  |
| I <sub>CEO</sub>      | Collector Cutoff Current             | V <sub>CE</sub> = -100V; I <sub>B</sub> = 0 |      |      | -100  | μ A  |
| I <sub>EBO</sub>      | Emitter Cutoff Current               | V <sub>EB</sub> = -7V; I <sub>C</sub> = 0   |      |      | -5    | mA   |
| h <sub>FE</sub>       | DC Current Gain                      | I <sub>C</sub> = -3A; V <sub>CE</sub> = -3V | 1500 |      | 10000 |      |

◆ **h<sub>FE</sub> Classifications**

| Q         | P          |
|-----------|------------|
| 1500-6000 | 4000-10000 |

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