

isc Silicon PNP Darlington Power Transistor
2SB1570
DESCRIPTION

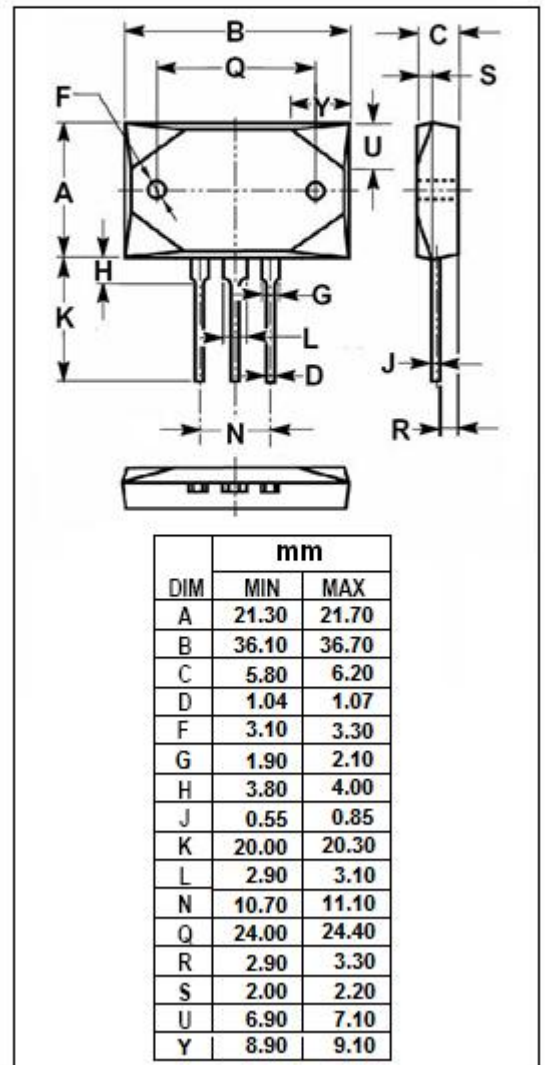
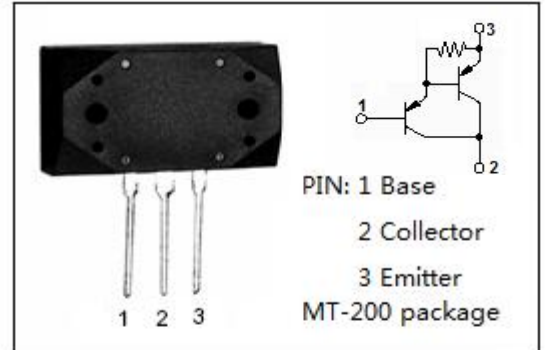
- High Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = -150V(\text{Min})$
- Low-Collector Saturation Voltage-
: $V_{CE(sat)} = -2.5V(\text{Max.})@I_C = -7A$
- Complement to Type 2SD2401
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for audio, series regulator and general purpose applications.

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

| SYMBOL | PARAMETER | VALUE | UNIT |
|-----------|---|---------|------------------|
| V_{CBO} | Collector-Base Voltage | -160 | V |
| V_{CEO} | Collector-Emitter Voltage | -150 | V |
| V_{EBO} | Emitter-Base Voltage | -5 | V |
| I_C | Collector Current-Continuous | -12 | A |
| I_B | Base Current- Continuous | -1 | A |
| P_C | Collector Power Dissipation @ $T_C=25^\circ\text{C}$ | 150 | W |
| T_J | Junction Temperature | 150 | $^\circ\text{C}$ |
| T_{stg} | Storage Temperature Range | -55~150 | $^\circ\text{C}$ |



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ELECTRICAL CHARACTERISTICS

 $T_C=25^\circ\text{C}$ unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT |
|---------------|--------------------------------------|--|------|------|-------|---------------|
| $V_{(BR)CEO}$ | Collector-Emitter Breakdown Voltage | $I_C = -30\text{mA}; I_B = 0$ | -150 | | | V |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage | $I_C = -7\text{A}; I_B = -7\text{mA}$ | | | -2.5 | V |
| $V_{BE(sat)}$ | Base-Emitter Saturation Voltage | $I_C = -7\text{A}; I_B = -7\text{mA}$ | | | -3.0 | V |
| I_{CBO} | Collector Cutoff Current | $V_{CB} = -160\text{V}; I_E = 0$ | | | -100 | μA |
| I_{EBO} | Emitter Cutoff Current | $V_{EB} = -5\text{V}; I_C = 0$ | | | -100 | μA |
| h_{FE} | DC Current Gain | $I_C = -7\text{A}; V_{CE} = -4\text{V}$ | 5000 | | 30000 | |
| C_{OB} | Collector Output Capacitance | $I_E = 0; V_{CB} = -10\text{V}; f = 1\text{MHz}$ | | 230 | | pF |
| f_T | Current-Gain—Bandwidth Product | $I_C = -2\text{A}; V_{CE} = -12\text{V}$ | | 50 | | MHz |

◆ h_{FE} Classifications

| O | P | Y |
|------------|------------|-------------|
| 5000-12000 | 6500-20000 | 15000-30000 |

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