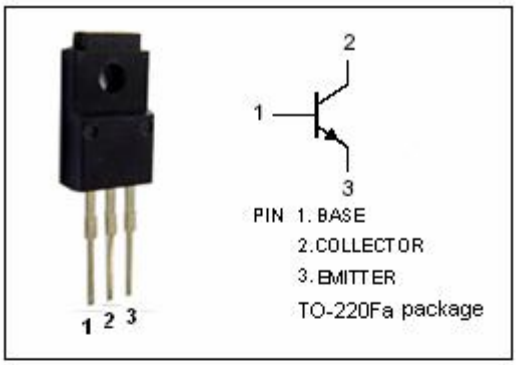
# isc Silicon NPN Power Transistor — 2SD1763

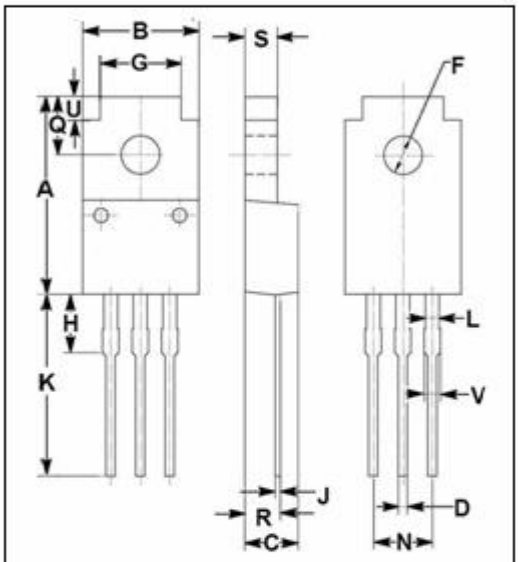



## DESCRIPTION

- High Collector-Emitter Breakdown Voltage-
  : $V_{(BR)CEO}$= 120V(Min.)
- Good Linearity of $h_{FE}$
- Complement to Type 2SB1186
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## APPLICATIONS

- Power amplifier applications.
- Driver stage amplifier applications.




| DIM | mm MIN | MAX |
|---|---|---|
| A | 16.85 | 17.15 |
| B | 9.54 | 10.10 |
| C | 4.35 | 4.65 |
| D | 0.75 | 0.90 |
| F | 3.20 | 3.40 |
| G | 6.90 | 7.20 |
| H | 3.80 | 4.20 |
| J | 0.45 | 0.75 |
| K | 13.35 | 13.80 |
| L | 1.10 | 1.30 |
| N | 4.98 | 5.18 |
| Q | 4.85 | 5.15 |
| R | 2.55 | 3.25 |
| S | 2.70 | 2.90 |
| U | 1.75 | 2.05 |
| V | 1.30 | 1.50 |

## ABSOLUTE MAXIMUM RATINGS($T_a$=25℃)

| SYMBOL | PARAMETER | VALUE | UNIT |
|---|---|---|---|
| $V_{CBO}$ | Collector-Base Voltage | 120 | V |
| $V_{CEO}$ | Collector-Emitter Voltage | 120 | V |
| $V_{EBO}$ | Emitter-Base Voltage | 5 | V |
| $I_C$ | Collector Current-Continuous | 2 | A |
| $I_{CM}$ | Collector Current-Peak | 3 | A |
| $P_C$ | Collector Power Dissipation @ $T_C$=25℃ | 20 | W |
| $T_J$ | Junction Temperature | 150 | ℃ |
| $T_{stg}$ | Storage Temperature Range | -55~150 | ℃ |

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## ELECTRICAL CHARACTERISTICS

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

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT |
|---|---|---|---|---|---|---|
| $V_{(BR)CEO}$ | Collector-Emitter Breakdown Voltage | $I_C$= 1mA; $I_B$= 0 | 120 | | | V |
| $V_{(BR)CBO}$ | Collector-Base Breakdown Voltage | $I_C$= 50 μA; $I_E$= 0 | 120 | | | V |
| $V_{(BR)EBO}$ | Emitter-Base Breakdown Voltage | $I_E$= 50 μA; $I_C$= 0 | 5 | | | V |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage | $I_C$= 1A; $I_B$= 0.1A | | | 0.4 | V |
| $I_{CBO}$ | Collector Cutoff Current | $V_{CB}$= 100V; $I_E$= 0 | | | 1 | μA |
| $I_{EBO}$ | Emitter Cutoff Current | $V_{EB}$= 4V; $I_C$= 0 | | | 1 | μA |
| $h_{FE}$ | DC Current Gain | $I_C$= 0.1A; $V_{CE}$= 5V | 100 | | 320 | |
| $C_{OB}$ | Output Capacitance | $I_E$= 0; $V_{CB}$= 10V; $f_{test}$=1MHz | | 20 | | pF |
| $f_T$ | Current-Gain—Bandwidth Product | $I_E$= -0.1A; $V_{CE}$= 5V; $f_{test}$= 30MHz | | 80 | | MHz |