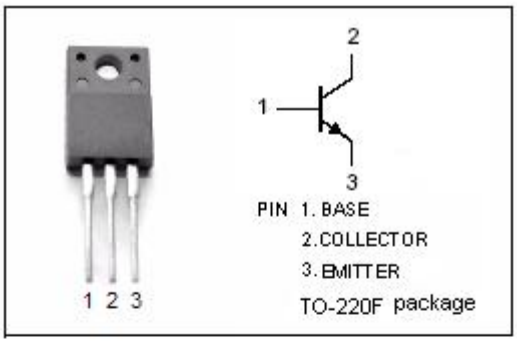
# isc Silicon NPN Power Transistor — KSD1588

## DESCRIPTION

- Low Collector Saturation Voltage
- Collector-Emitter Breakdown Voltage-
  : $V_{(BR)CEO}$= 60V (Min)
- Complement to Type KSB1097
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

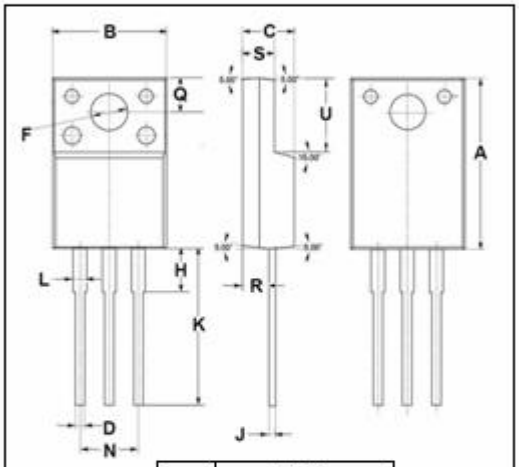



## APPLICATIONS

- Designed for power amplifier applications.

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

| SYMBOL | PARAMETER | VALUE | UNIT |
|---|---|---|---|
| $V_{CBO}$ | Collector-Base Voltage | 100 | V |
| $V_{CEO}$ | Collector-Emitter Voltage | 60 | V |
| $V_{EBO}$ | Emitter-Base Voltage | 7 | V |
| $I_C$ | Collector Current-Continuous | 7 | A |
| $I_B$ | Base Current-Continuous | 3.5 | A |
| $P_C$ | Collector Power Dissipation @ $T_C$=25℃ | 30 | W |
| $T_J$ | Junction Temperature | 150 | ℃ |
| $T_{stg}$ | Storage Temperature Range | -55~150 | ℃ |




| DIM | mm MIN | mm MAX |
|---|---|---|
| A | 14.95 | 15.05 |
| B | 10.00 | 10.10 |
| C | 4.40 | 4.60 |
| D | 0.75 | 0.90 |
| F | 3.10 | 3.30 |
| H | 3.70 | 3.90 |
| J | 0.50 | 0.70 |
| K | 13.4 | 13.6 |
| L | 1.10 | 1.30 |
| N | 5.00 | 5.20 |
| Q | 2.70 | 2.90 |
| R | 2.20 | 2.40 |
| S | 2.65 | 2.90 |
| U | 6.40 | 6.60 |

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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 | $I_C$= 50mA ; $I_B$= 0 | 60 | | | V |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage | $I_C$= 5A; $I_B$= 0.5A | | | 0.5 | V |
| $V_{BE(sat)}$ | Base-Emitter Saturation Voltage | $I_C$= 5A; $I_B$= 0.5A | | | 1.5 | V |
| $I_{CBO}$ | Collector Cutoff Current | $V_{CB}$= 800V; $I_E$= 0 | | | 10 | uA |
| $I_{EBO}$ | Emitter Cutoff Current | $V_{EB}$= 5V; $I_C$= 0 | | | 10 | uA |
| $h_{FE-1}$ | DC Current Gain | $I_C$= 3A; $V_{CE}$= 1V | 40 | | 200 | |
| $h_{FE-2}$ | DC Current Gain | $I_C$= 5A; $V_{CE}$= 1V | 20 | | | |

◆ **$h_{FE}$ classifications**

| R | O | Y |
|---|---|---|
| 40-80 | 80-120 | 100-200 |