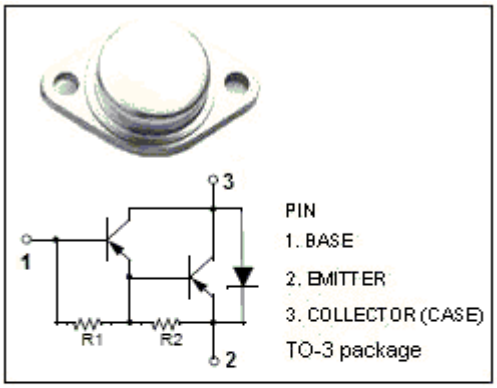
# isc Silicon PNP Darlingtion Power Transistor PMD1703K

## DESCRIPTION

- High DC current gain
- Collector-Emitter Breakdown Voltage-
  $V_{(BR)CEO}$= -100V(Min)
- Complement to type PMD1603K

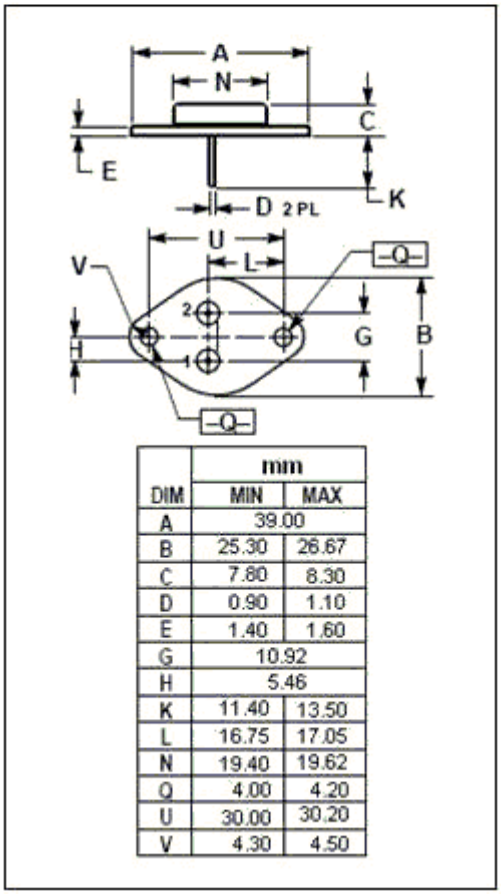



## APPLICATIONS

- Designed for general purpose amplifier and low frequency switching applications

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

| SYMBOL | PARAMETER | VALUE | UNIT |
|---|---|---|---|
| $V_{CBO}$ | Collector-Base Voltage | -100 | V |
| $V_{CEO}$ | Collector-Emitter Voltage | -100 | V |
| $V_{EBO}$ | Emitter-Base Voltage | -5.0 | V |
| $I_C$ | Collector Current -Continuous | -20 | A |
| $I_{CP}$ | Collector Current-Peak | -40 | A |
| $I_B$ | Base Current | -0.5 | A |
| $P_C$ | Collector Power Dissipation@$T_C$=25℃ | 180 | W |
| $T_j$ | Junction Temperature | 150 | ℃ |
| $T_{stg}$ | Storage Temperature | -65~200 | ℃ |




| DIM | mm | |
|---|---|---|
| | MIN | MAX |
| A | 39.00 | |
| B | 25.30 | 26.67 |
| C | 7.80 | 8.30 |
| D | 0.90 | 1.10 |
| E | 1.40 | 1.60 |
| G | 10.92 | |
| H | 5.46 | |
| K | 11.40 | 13.50 |
| L | 16.75 | 17.05 |
| N | 19.40 | 19.62 |
| Q | 4.00 | 4.20 |
| U | 30.00 | 30.20 |
| V | 4.30 | 4.50 |

## THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|---|---|---|---|
| $R_{th\ j\text{-}c}$ | ThermalResistance, Junction to Case | 0.97 | ℃/W |

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## ELECTRICAL CHARACTERISTICS

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

| SYMBOL | PARAMETER | CONDITIONS | MIN | MAX | UNIT |
|---|---|---|---|---|---|
| $V_{(BR)CEO}$ | Collector-Emitter Breakdown Voltage | $I_C$= -100mA; $I_B$= 0 | -100 | | V |
| $V_{(BR)CER}$ | Collector-Emitter Breakdown Voltage | $I_C$= -100mA; $R_{BE}$= 2.2kΩ | -100 | | V |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage | $I_C$= -10A; $I_B$= -40mA | | -2.0 | V |
| $V_{BE(sat)}$ | Base-Emitter Saturation Voltage | $I_C$= -10A; $I_B$= -40mA | | -2.8 | V |
| $V_{BE(on)}$ | Base-Emitter On Voltage | $I_C$= -10A; $V_{CE}$= -3V | | -2.8 | V |
| $I_{CER}$ | Collector Cutoff current | $V_{CE}$= -100V; $R_{BE}$= 2.2KΩ | | -7.0 | mA |
| $I_{EBO}$ | Emitter Cut-off current | $V_{EB}$= -5V; $I_C$= 0 | | -3.0 | mA |
| $h_{FE}$ | DC Current Gain | $I_C$= -10A; $V_{CE}$= -3V | 750 | 20000 | |
| $f_T$ | Current-Gain—Bandwidth Product | $I_C$= -7A; $V_{CE}$= -3V, f= 1kHz | 4 | | MHz |
| $C_{OB}$ | Output Capacitance | $I_E$= 0; $V_{CB}$= -10V; $f_{test}$= 1.0MHz | | 400 | pF |