

isc Silicon PNP Darlington Power Transistor

PMD1702K

DESCRIPTION

- High DC current gain
- Collector-Emitter Breakdown Voltage-
 $V_{(BR)CEO} = -80V(\text{Min})$
- Complement to type PMD1602K

APPLICATIONS

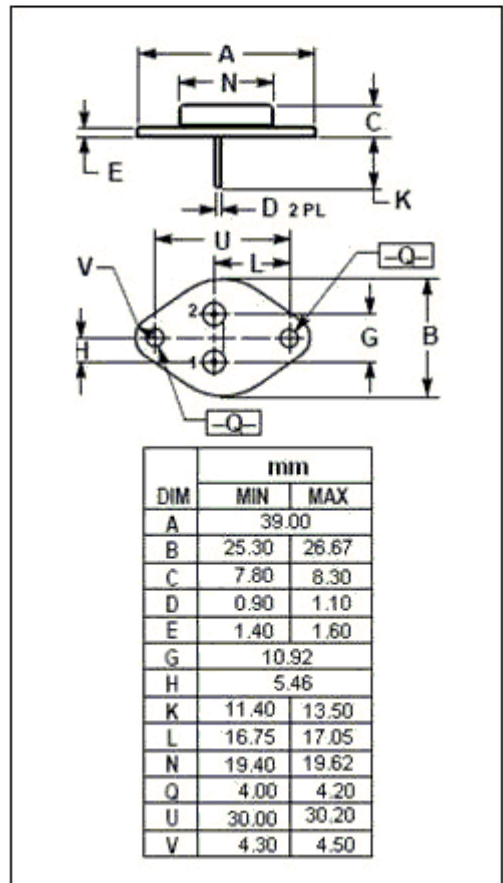
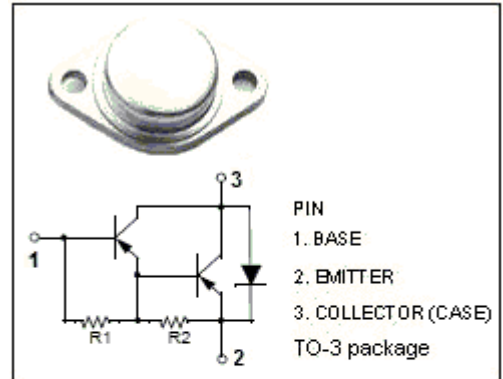
- Designed for general purpose amplifier and low frequency switching applications

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

| SYMBOL | PARAMETER | VALUE | UNIT |
|-----------|---|---------|------------------|
| V_{CBO} | Collector-Base Voltage | -80 | V |
| V_{CEO} | Collector-Emitter Voltage | -80 | 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@ $T_C=25^\circ\text{C}$ | 180 | W |
| T_j | Junction Temperature | 150 | $^\circ\text{C}$ |
| T_{stg} | Storage Temperature | -65~200 | $^\circ\text{C}$ |

THERMAL CHARACTERISTICS

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



isc Silicon PNP Darlington Power Transistor**PMD1702K****ELECTRICAL CHARACTERISTICS** $T_C=25^\circ\text{C}$ unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | MAX | UNIT |
|---------------|--------------------------------------|---|-----|-------|------|
| $V_{(BR)CEO}$ | Collector-Emitter Breakdown Voltage | $I_C = -100\text{mA}; I_B = 0$ | -80 | | V |
| $V_{(BR)CER}$ | Collector-Emitter Breakdown Voltage | $I_C = -100\text{mA}; R_{BE} = 2.2\text{k}\Omega$ | -80 | | V |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage | $I_C = -10\text{A}; I_B = -40\text{mA}$ | | -2.0 | V |
| $V_{BE(sat)}$ | Base-Emitter Saturation Voltage | $I_C = -10\text{A}; I_B = -40\text{mA}$ | | -2.8 | V |
| $V_{BE(on)}$ | Base-Emitter On Voltage | $I_C = -10\text{A}; V_{CE} = -3\text{V}$ | | -2.8 | V |
| I_{CER} | Collector Cutoff current | $V_{CE} = -80\text{V}; R_{BE} = 2.2\text{K}\Omega$ | | -7.0 | mA |
| I_{EBO} | Emitter Cut-off current | $V_{EB} = -5\text{V}; I_C = 0$ | | -3.0 | mA |
| h_{FE} | DC Current Gain | $I_C = -10\text{A}; V_{CE} = -3\text{V}$ | 750 | 20000 | |
| f_T | Current-Gain—Bandwidth Product | $I_C = -7\text{A}; V_{CE} = -3\text{V}; f = 1\text{kHz}$ | 4 | | MHz |
| C_{OB} | Output Capacitance | $I_E = 0; V_{CB} = -10\text{V}; f_{test} = 1.0\text{MHz}$ | | 400 | pF |