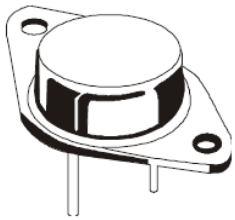
Continental Device India Pvt. Limited
An ISO/TS 16949, ISO 9001 and ISO 14001 Certified Company

# NPN-POWER TRANSISTOR

**2N6257**
**TO-3**
**Metal Can Package**



## ABSOLUTE MAXIMUM RATING

| PARAMETER | SYMBOL | VALUE | UNITS |
|---|---|---|---|
| Collector-base voltage (open emitter) | $V_{CBO}$ | 50 | V |
| Collector-base voltage (open base) | $V_{CEO}$ | 40 | V |
| Collector-emitter voltage ($R_{BE}$=100Ω) | $V_{CER}$ | 45 | V |
| Collector-emitter voltage ($V_{BE}$=1.5V, $R_{BE}$=100Ω) | $V_{CEX}$ | 50 | V |
| Emitter-base voltage (open collector) | $V_{EBO}$ | 5.0 | V |
| Collector current | $I_C$ | 20 | A |
| Collector current (peak) | $I_C$ | 30 | A |
| Base current | $I_B$ | 5 | A |
| Base current (peak) | $I_B$ | 15 | A |
| Total power dissipation up to $T_C$=25ºC | $P_{tot}$ | 150 | W |
| Derate above 25ºC | | 0.855 | W/ºC |
| Junction temperature | $T_J$ | 200 | ºC |
| Storage temperature | $T_{stg}$ | -65 to 200 | ºC |

## THERMAL RESISTANCE

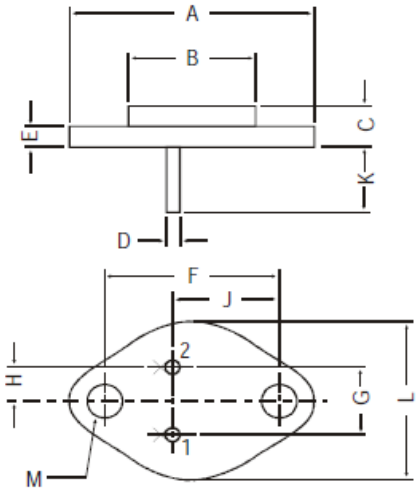
| PARAMETER | SYMBOL | VALUE | UNITS |
|---|---|---|---|
| from junction to case | $R_{th\ J\text{-}C}$ | 1.17 | ºC/W |

**ELECTRICAL CHARACTERISTICS** ($T_A$=25ºC unless otherwise specified)

| PARAMETER | SYMBOL | TEST CONDITIONS | VALUE | | UNITS |
|---|---|---|---|---|---|
| | | | MIN | MAX | |
| Collector -base cut-off current | $I_{CBO}$ | $V_{CB}$= 50V, $I_E$= 0 | - | 4 | mA |
| Collector-emitter cut-off current | $I_{CEO}$ | $V_{CE}$=25V, $I_B$=0 | - | 10 | mA |
| Collector cut-off current | $I_{CEV}$ | $V_{CE}$=45V, $V_{EB(off)}$=1.5V | - | 4 | mA |
| | | $V_{CE}$=45V, $V_{EB(off)}$=1.5V, $T_C$=150ºC | - | 20 | mA |
| Emitter cut-off current | $I_{EBO}$ | $I_C$=0, $V_{EB}$=5V | - | 10 | mA |
| Collector -emitter sustaining voltage | $V_{CEO(sus)}$* | $I_C$=0.2A, $I_B$=0 | 40 | - | V |
| Collector-base voltage | $V_{CBO}$ | $I_C$=1mA, $I_E$=0 | 50 | - | V |
| Emitter-base voltage | $V_{EBO}$ | $I_E$=1mA, $I_C$=0 | 5 | - | V |
| Collector-emitter saturation voltage | $V_{CEsat}$* | $I_C$= 8 A, $I_B$= 0.8 A | - | 1.5 | V |
| | | $I_C$= 20 A, $I_B$= 4 A | - | 4.0 | V |
| Base emitter on voltage | $V_{BE(on)}$* | $I_C$= 8A , $V_{CE}$= 4V | - | 2.2 | V |
| D.C. Current gain | $h_{FE}$* | $I_C$= 8A , $V_{CE}$= 4V | 15 | 75 | |
| | | $I_C$= 20A , $V_{CE}$= 4V | 5 | - | |
| Small signal current gain | $h_{fe}$ | $I_C$= 1 A, $V_{CE}$= 4V, f=1KHz | 40 | - | |
| Transition frequency | $f_T$ | $I_C$= 1 A, $V_{CE}$= 4V, f=50KHz | 0.2 | - | MHz |

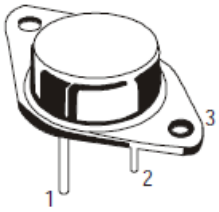
*Pulse test: 300 µs; rep rate = 60 cps

## TO-3 Metal Can Package




All dimensions in mm.

| DIM | MIN. | MAX. |
|---|---|---|
| A | — | 39.37 |
| B | — | 22.22 |
| C | 6.35 | 8.50 |
| D | 0.96 | 1.09 |
| E | — | 1.77 |
| F | 29.90 | 30.40 |
| G | 10.69 | 11.18 |
| H | 5.20 | 5.72 |
| J | 16.64 | 17.15 |
| K | 11.15 | 12.25 |
| L | — | 26.67 |
| M | 3.84 | 4.19 |




PIN CONFIGURATION
1. BASE
2. EMITTER
3. COLLECTOR

## Packing Detail

| PACKAGE | STANDARD PACK | | INNER CARTON BOX | | OUTER CARTON BOX | | |
|---|---|---|---|---|---|---|---|
| | Details | Net Weight/Qty | Size | Qty | Size | Qty | Gr Wt |
| TO-3 | 100 pcs/pkt | 1.3 kg/100 pcs | 12.5" x 8" x 1.8" | 0.1K | 17" x 11.5" x 21" | 2K | 27.5 kgs |

## Customer Notes:

### Component Disposal Instructions

1. CDIL Semiconductor Devices are RoHS compliant, customers are requested to please dispose as per prevailing Environmental Legislation of their Country.

2. In Europe, please dispose as per EU Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE).

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