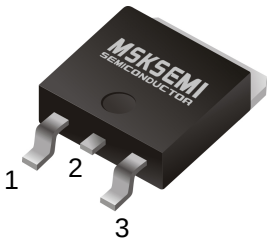



**TO-252-2L**

TRANSISTOR (NPN)

**FEATURES**

Power Dissipation

1. BASE
2. COLLECTOR
3 .EMITTER

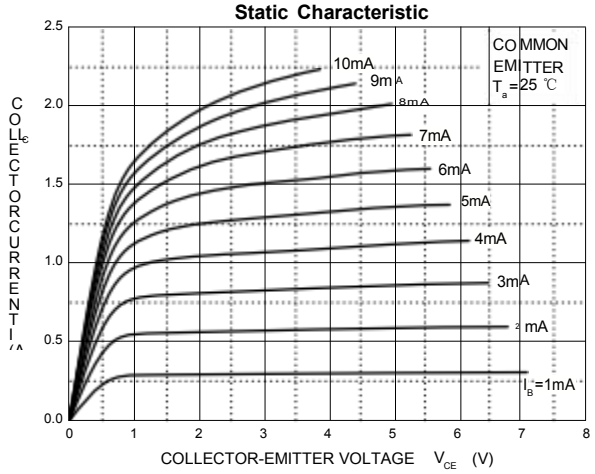
**MAXIMUM RATINGS ($T_a$=25℃ unless otherwise noted)**

| Symbol | Parameter | Value | Unit |
|---|---|---|---|
| $V_{CBO}$ | Collector-Base Voltage | 40 | V |
| $V_{CEO}$ | Collector-Emitter Voltage | 30 | V |
| $V_{EBO}$ | Emitter-Base Voltage | 6 | V |
| $I_C$ | Collector Current -Continuous | 3 | A |
| $P_C$ | Collector Power Dissipation | 1.25 | W |
| $T_J$,$T_{stg}$ | Operation Junction and Storage Temperature Range | -55-150 | ℃ |

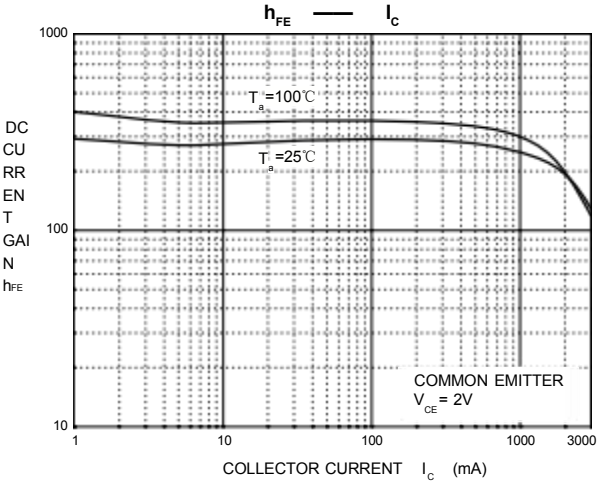
**ELECTRICAL CHARACTERISTICS ( $T_a$=25℃ unless otherwise specified )**

| Parameter | Symbol | Test conditions | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| **Collector-base breakdown voltage** | $V(BR)_{CBO}$ | $I_C$ = 100μA, $I_E$=0 | 40 | | | V |
| **Collector-emitter breakdown voltage** | $V(BR)_{CEO}$ | $I_C$ = 10mA, $I_B$=0 | 40 | | | V |
| **Emitter-base breakdown voltage** | $V(BR)_{EBO}$ | $I_E$= 100μA, $I_C$=0 | 6 | | | V |
| **Collector cut-off current** | $I_{CBO}$ | $V_{CB}$= 40 V, $I_E$=0 | | | 1 | μA |
| **Collector cut-off current** | $I_{CEO}$ | $V_{CE}$= 30 V, $I_B$=0 | | | 10 | μA |
| **Emitter cut-off current** | $I_{EBO}$ | $V_{EB}$= 6 V, $I_C$=0 | | | 1 | μA |
| **DC current gain** | $h_{FE}$ | $V_{CE}$= 2 V, $I_C$= 1A | 60 | | 400 | |
| **Collector-emitter saturation voltage** | $V_{CE\ (sat)}$ | $I_C$= 2A, $I_B$= 0.2 A | | | 0.5 | V |
| **Base-emitter saturation voltage** | $V_{BE\ (sat)}$ | $I_C$= 2A, $I_B$= 0.2 A | | | 1.5 | V |
| **Transition frequency** | $f_T$ | $V_{CE}$= 5V, $I_C$=0.1A f =10MHz | | 90 | | MHz |

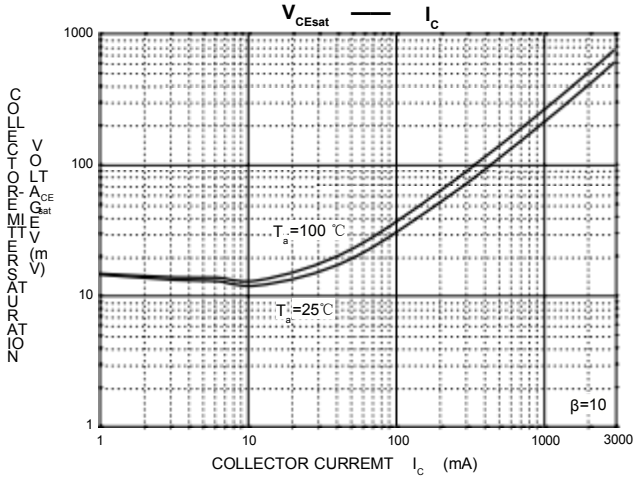
**Static Characteristic**



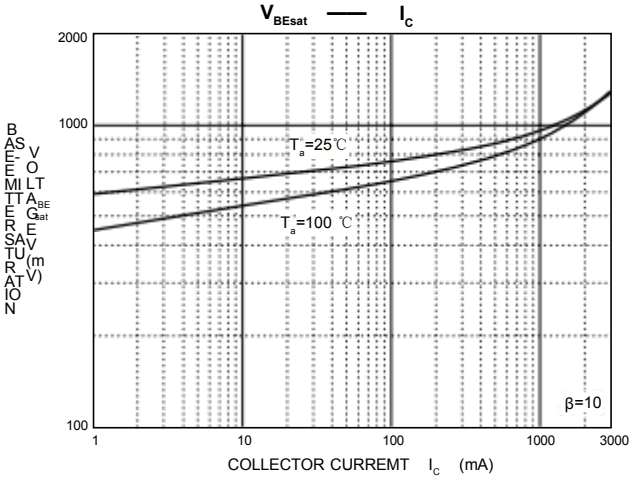

**$h_{FE}$ —— $I_C$**



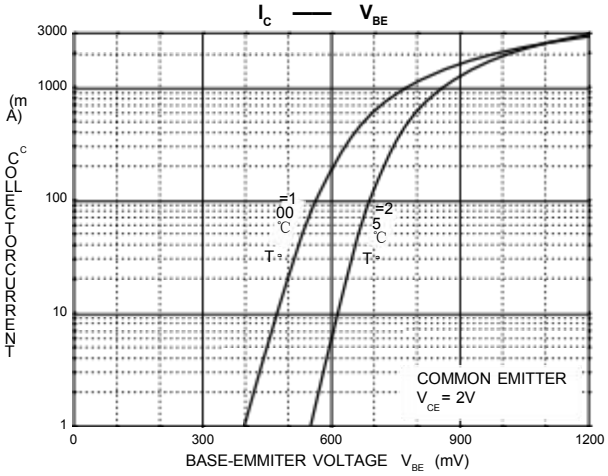

**$V_{CEsat}$ —— $I_C$**



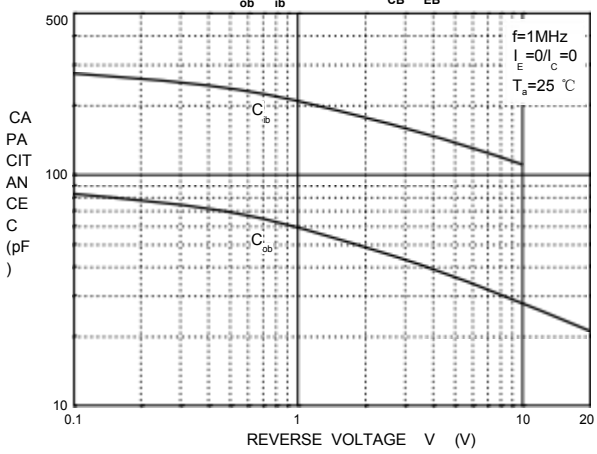

**$V_{BEsat}$ —— $I_C$**



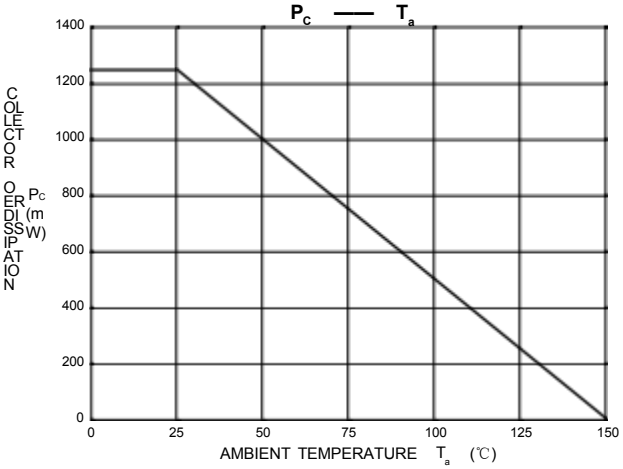

**$I_C$ —— $V_{BE}$**



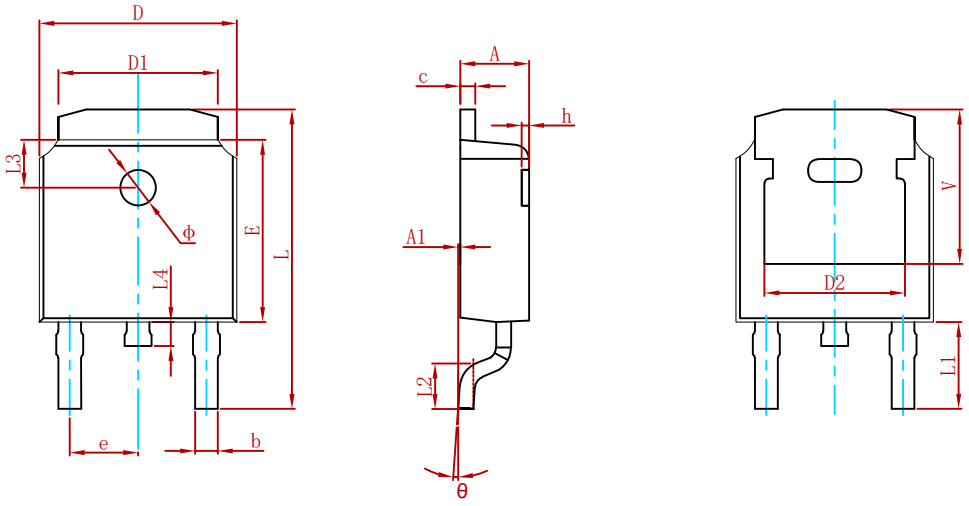

**$C_{ob}/C_{ib}$ —— $V_{CB}/V_{EB}$**



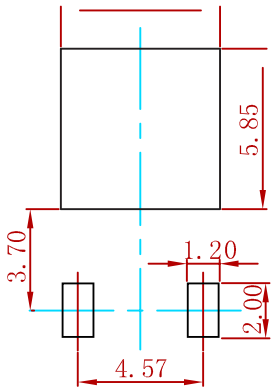

**$P_C$ —— $T_a$**



## PACKAGE MECHANICAL DATA




| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|---|---|---|---|---|
| | Min. | Max. | Min. | Max. |
| A | 2.200 | 2.400 | 0.087 | 0.094 |
| A1 | 0.000 | 0.127 | 0.000 | 0.005 |
| b | 0.635 | 0.770 | 0.025 | 0.030 |
| c | 0.460 | 0.580 | 0.018 | 0.023 |
| D | 6.500 | 6.700 | 0.256 | 0.264 |
| D1 | 5.100 | 5.460 | 0.201 | 0.215 |
| D2 | 4.830 REF. | | 0.190 REF. | |
| E | 6.000 | 6.200 | 0.236 | 0.244 |
| e | 2.186 | 2.386 | 0.086 | 0.094 |
| L | 9.712 | 10.312 | 0.382 | 0.406 |
| L1 | 2.900 REF. | | 0.114 REF. | |
| L2 | 1.400 | 1.700 | 0.055 | 0.067 |
| L3 | 1.600 REF. | | 0.063 REF. | |
| L4 | 0.600 | 1.000 | 0.024 | 0.039 |
| Φ | 1.100 | 1.300 | 0.043 | 0.051 |
| θ | 0° | 8° | 0° | 8° |
| h | 0.000 | 0.300 | 0.000 | 0.012 |
| V | 5.250 REF. | | 0.207 REF. | |




Note:
1.Controlling dimension:in millimeters.
2.General tolerance:± 0.05mm.
3.The pad layout is for reference purposes only.

## REEL SPECIFICATION

| P/N | PKG | QTY |
|---|---|---|
| 2SD882 | TO-252 | 2500 |

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