# Silicon NPN Power Transistors 2N6216 2N6217

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## DESCRIPTION

·With TO-3 package
·High current ,high power dissipation

## APPLICATIONS

·For use in switching and linear power applications

**PINNING**

| PIN | DESCRIPTION |
|---|---|
| 1 | Base |
| 2 | Emitter |
| 3 | Collector |

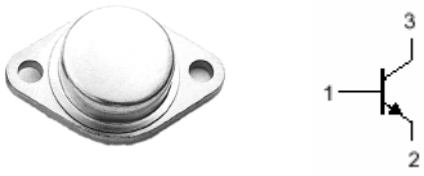


**Fig.1 simplified outline (TO-3) and symbol**

## Absolute maximum ratings(Ta=□)

| SYMBOL | PARAMETER | | CONDITIONS | VALUE | UNIT |
|---|---|---|---|---|---|
| $V_{CBO}$ | Collector-base voltage | 2N6216 | Open emitter | 200 | V |
| | | 2N6217 | | 180 | |
| $V_{CEO}$ | Collector-emitter voltage | 2N6216 | Open base | 150 | V |
| | | 2N6217 | | 140 | |
| $V_{EBO}$ | Emitter-base voltage | | Open collector | 7 | V |
| $I_C$ | Collector current | | | 10 | A |
| $P_D$ | Total power dissipation | | $T_C$=100□ | 71 | W |
| $T_j$ | Junction temperature | | | 150 | □ |
| $T_{stg}$ | Storage temperature | | | -65~200 | □ |

## THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | VALUE | UNIT |
|---|---|---|---|
| $R_{th\ j\text{-}c}$ | Thermal resistance junction to case | 1.46 | □/W |

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## CHARACTERISTICS

**Tj=25□ unless otherwise specified**

| SYMBOL | PARAMETER | | CONDITIONS | MIN | TYP. | MAX | UNIT |
|---|---|---|---|---|---|---|---|
| $V_{CEO(SUS)}$ | Collector-emitter sustaining voltage | 2N6216 | $I_C$=0.1A ;$I_B$=0 | 150 | | | V |
| | | 2N6217 | | 140 | | | |
| $V_{CEsat-1}$ | Collector-emitter saturation voltage | | $I_C$=4A; $I_B$=0.4A | | | 1.2 | V |
| $V_{CEsat-2}$ | Collector-emitter saturation voltage | | $I_C$=6A; $I_B$=0.75A | | | 1.6 | V |
| $V_{BEsat}$ | Base-emitter saturation voltage | | $I_C$=6A; $I_B$=0.75A | | | 2.0 | V |
| $I_{CEO}$ | Collector cut-off current | 2N6216 | $V_{CE}$=80V; $I_B$=0 | | | 5.0 | mA |
| | | 2N6217 | $V_{CE}$=70V; $I_B$=0 | | | | |
| $I_{CBO}$ | Collector cut-off current | | $V_{CB}$=Rated$V_{CBO}$; $I_E$=0 | | | 1.0 | mA |
| $I_{EBO}$ | Emitter cut-off current | | $V_{EB}$=7V; $I_C$=0 | | | 1.0 | mA |
| $h_{FE}$ | DC current gain | | $I_C$=5A ; $V_{CE}$=5V | 20 | | 80 | |
| $f_T$ | Transition frequency | | $I_C$=1A ; $V_{CE}$=10V | | 20 | | MHz |



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**PACKAGE OUTLINE**

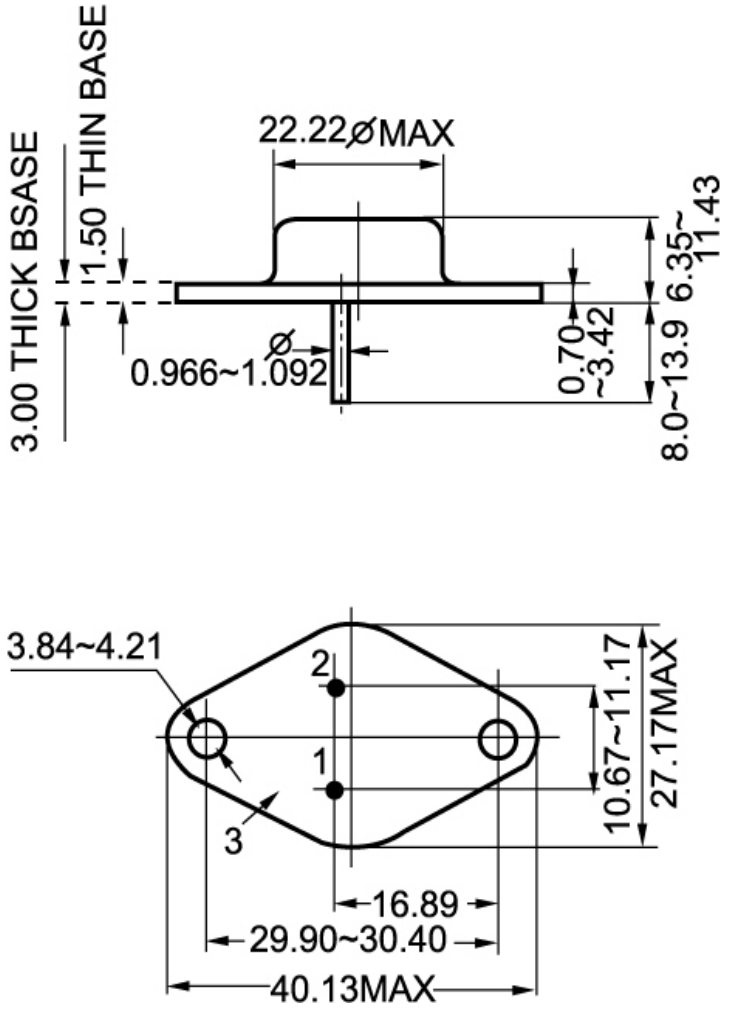


**Fig.2 outline dimensions (unindicated tolerance:±0.10mm)**



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