## DESCRIPTION

·With TO-3 package
·High switching speed

## APPLICATIONS

·For power switching applications

### PINNING (See Fig.2)

| PIN DE | SCRIPTION |
|---|---|
| 1 | Base |
| 2 | Emitter |
| 3 | Collector |

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

## MAXIMUN RATINGS

| SYMBOL P | ARAMETER | CONDITIONS | VALUE | UNIT |
|---|---|---|---|---|
| $V_{CBO}$ | Collector-base voltage | Open emitter | 500 | V |
| $V_{CEO}$ | Collector-emitter voltage | Open base | 400 | V |
| $V_{EBO}$ | Emitter-base voltage | Open collector | 7 | V |
| $I_C$ | Collector current |  | 10 | A |
| $I_B$ | Base current |  | 3 | A |
| $P_T$ | Total power dissipation | $T_{mb}$≤25□ | 100 | W |
| $T_j$ | Junction temperature |  | 150 | □ |
| $T_{stg}$ | Storage temperature |  | -65~150 | □ |

## THERMAL CHARACTERISTICS

| SYMBOL P | ARAMETER | VALUE | UNIT |
|---|---|---|---|
| $R_{th\ j-c}$ | Thermal resistance from junction to case | 1.25 | □/W |

## CHARACTERISTICS

**Tj=25□ unless otherwise specified**

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT |
|---|---|---|---|---|---|---|
| $V_{(BR)CEO}$ | Collector-emitter breakdown voltage | $I_C$=10mA ; $I_B$=0 400 | | | | V |
| $V_{(BR)CBO}$ | Collector-base breakdown voltage | $I_C$=1mA ; $I_E$=0 500 | | | | V |
| $V_{(BR)EBO}$ | Emitter-base breakdown voltage | $I_E$=1mA ; $I_C$=0 7 | | | | V |
| $V_{CEsat}$ C | ollector-emitter saturation voltage | $I_C$=4A; $I_B$=0.8A | | | 1.0 | V |
| $V_{BEsat}$ B | ase-emitter saturation voltage | $I_C$=4A; $I_B$=0.8A | | | 1.5 | V |
| $I_{CBO}$ | Collector cut-off current | $V_{CB}$=500V; $I_E$=0 | | | 0.1 | mA |
| $I_{EBO}$ | Emitter cut-off current | $V_{EB}$=7V; $I_C$=0 | | | 0.1 | mA |
| $h_{FE-1}$ | DC current gain | $I_C$=5A ; $V_{CE}$=5V 15 | | | | |
| $h_{FE-2}$ | DC current gain | $I_C$=10A ; $V_{CE}$=5V 10 | | | | |

**PACKAGE OUTLINE**

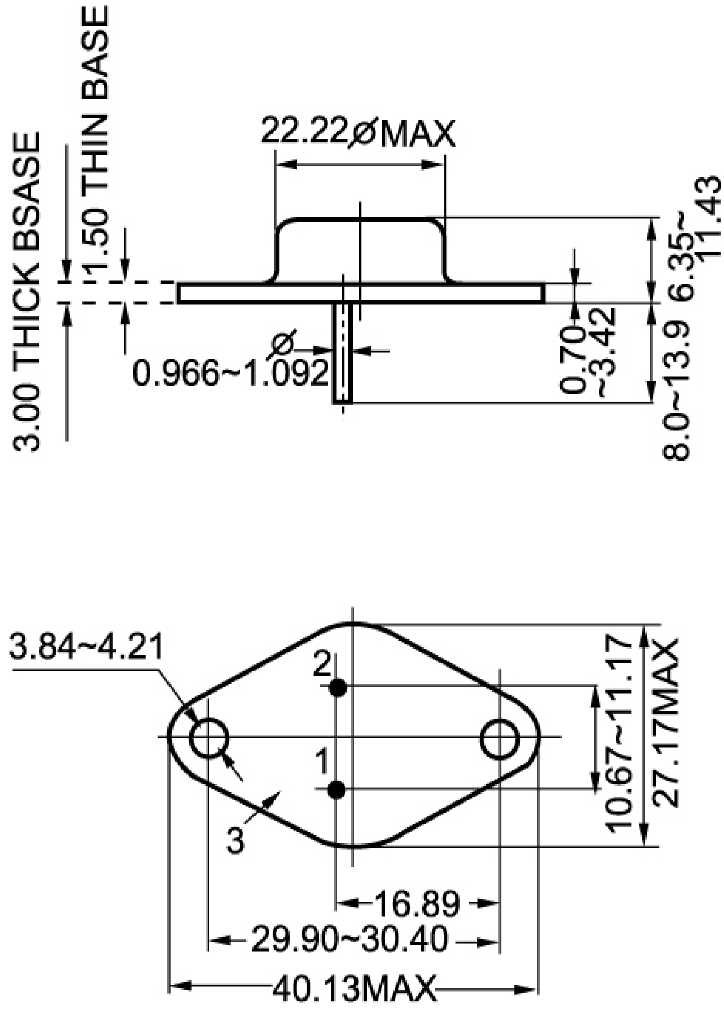

**Fig.2 Outline dimensions**