# Silicon PNP Power Transistors 2SA748



## DESCRIPTION

·With TO-220 package
·Complement to type 2SC1398
·Large collector power dissipation

## APPLICATIONS

·For medium power amplifier applicattions

**PINNING**

| PIN | DESCRIPTION |
|---|---|
| 1 | Emitter |
| 2 | Collector;connected to mounting base |
| 3 | Base |

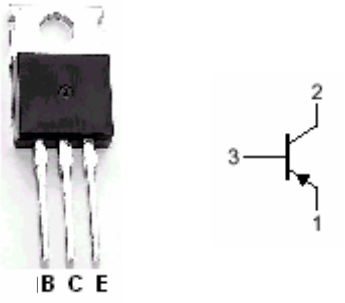


**Fig.1 simplified outline (TO-220) and symbol**

## Absolute maximum ratings(Ta=25□)

| SYMBOL | PARAMETER | CONDITIONS | VALUE | UNIT |
|---|---|---|---|---|
| $V_{CBO}$ | Collector-base voltage | Open emitter | -70 | V |
| $V_{CEO}$ | Collector-emitter voltage | Open base | -50 | V |
| $V_{EBO}$ | Emitter-base voltage | Open collector | -5 | V |
| $I_C$ | Collector current | | -2 | A |
| $I_{CM}$ | Collector current-peak | | -3 | A |
| $P_C$ | Collector power dissipation | $T_C$=25□ | 15 | W |
| $T_j$ | Junction temperature | | 150 | □ |
| $T_{stg}$ | Storage temperature | | -55~150 | □ |

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## 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 | -50 | | | V |
| $V_{(BR)CBO}$ | Collector-base breakdown voltage | $I_C$=-1mA ,$I_E$=0 | -70 | | | V |
| $V_{CEsat}$ | Collector-emitter saturation voltage | $I_C$=-1A; $I_B$=-0.1A | | -0.6 | -1.0 | V |
| $V_{BEsat}$ | Base-emitter saturation voltage | $I_C$=-2A; $I_B$=-0.2A | | -1.0 | -1.5 | V |
| $I_{CBO}$ | Collector cut-off current | $V_{CB}$=-40V; $I_E$=0 | | | -1 | μA |
| $I_{CEO}$ | Collector cut-off current | $V_{CE}$=-20V; $I_B$=0 | | | -100 | μA |
| $I_{EBO}$ | Emitter cut-off current | $V_{EB}$=-5V; $I_C$=0 | | | -100 | μA |
| $h_{FE-1}$ | DC current gain | $I_C$=-0.1A ; $V_{CE}$=-5V | 30 | | | |
| $h_{FE-2}$ | DC current gain | $I_C$=-1A ; $V_{CE}$=-5V | 50 | | 220 | |
| $f_T$ | Transition frequency | $I_C$=0.5A ; $V_{CE}$=-5V | | 120 | | MHz |

◆ **$h_{FE-2}$ Classifications**

| P | Q | R |
|---|---|---|
| 50-100 | 80-160 | 120-220 |

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**PACKAGE OUTLINE**

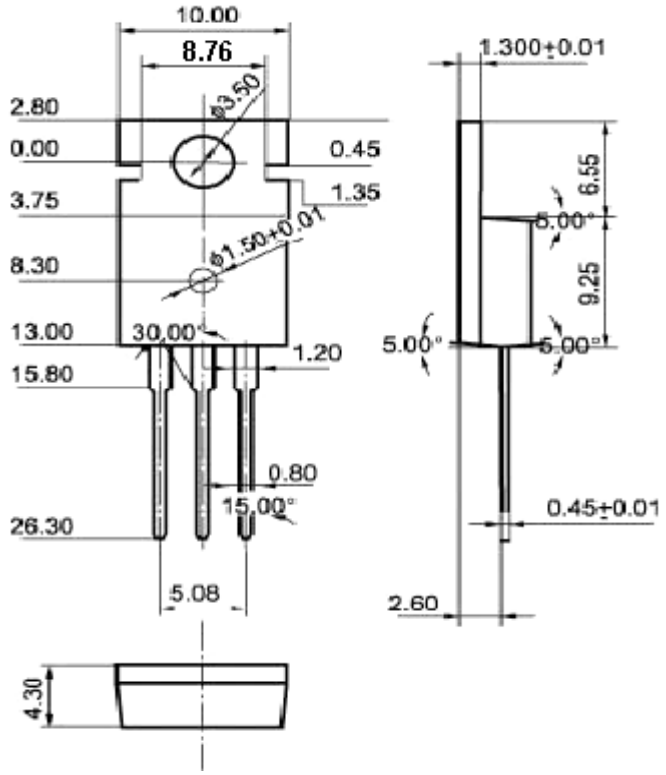


**Fig.2 Outline dimensions(unindicated tolerance:±0.10 mm)**