

## Silicon NPN Power Transistors

2SD2066

## DESCRIPTION

- With TO-3PN package
- Wide area of safe operation
- Complement to type 2SB1373

## APPLICATIONS

- For high power amplifier applications

## PINNING

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

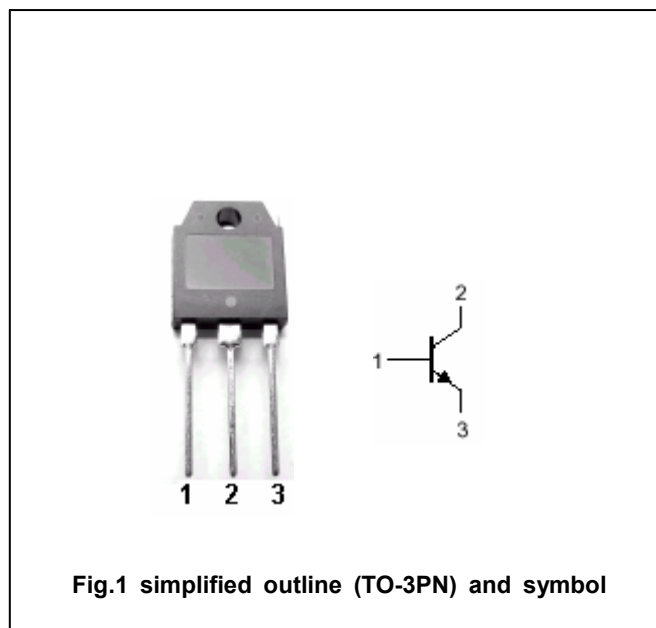


Fig.1 simplified outline (TO-3PN) and symbol

Absolute maximum ratings( $T_c=25^\circ\text{C}$ )

| SYMBOL    | PARAMETER                   | CONDITIONS             | VALUE   | UNIT             |
|-----------|-----------------------------|------------------------|---------|------------------|
| $V_{CBO}$ | Collector-base voltage      | Open emitter           | 160     | V                |
| $V_{CEO}$ | Collector-emitter voltage   | Open base              | 160     | V                |
| $V_{EBO}$ | Emitter-base voltage        | Open collector         | 5       | V                |
| $I_C$     | Collector current (DC)      |                        | 12      | A                |
| $P_C$     | Collector power dissipation | $T_a=25^\circ\text{C}$ | 2.5     | W                |
|           |                             | $T_c=25^\circ\text{C}$ | 120     |                  |
| $T_j$     | Junction temperature        |                        | 150     | $^\circ\text{C}$ |
| $T_{stg}$ | Storage temperature         |                        | -55~150 | $^\circ\text{C}$ |

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## CHARACTERISTICS

Tj=25°C unless otherwise specified

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| SYMBOL        | PARAMETER                            | CONDITIONS            | MIN | TYP. | MAX | UNIT    |
|---------------|--------------------------------------|-----------------------|-----|------|-----|---------|
| $V_{(BR)CEO}$ | Collector-emitter breakdown voltage  | $I_C=25mA; I_B=0$     | 160 |      |     | V       |
| $V_{CEsat}$   | Collector-emitter saturation voltage | $I_C=8A; I_B=0.8A$    |     |      | 2.0 | V       |
| $V_{BE}$      | Base-emitter on voltage              | $I_C=8A; V_{CE}=5V$   |     |      | 1.8 | V       |
| $I_{CBO}$     | Collector cut-off current            | $V_{CB}=160V; I_E=0$  |     |      | 50  | $\mu A$ |
| $I_{EBO}$     | Emitter cut-off current              | $V_{EB}=5V; I_C=0$    |     |      | 50  | $\mu A$ |
| $h_{FE-1}$    | DC current gain                      | $I_C=20mA; V_{CE}=5V$ | 20  |      |     |         |
| $h_{FE-2}$    | DC current gain                      | $I_C=1A; V_{CE}=5V$   | 60  |      | 200 |         |
| $h_{FE-3}$    | DC current gain                      | $I_C=8A; V_{CE}=5V$   | 15  |      |     |         |
| $f_T$         | Transition frequency                 | $I_C=0.5A; V_{CE}=5V$ |     | 20   |     | MHz     |
| $C_{OB}$      | Collector output capacitance         | $f=1MHz; V_{CB}=10V$  |     | 210  |     | pF      |

◆  $h_{FE-2}$  Classifications

| Q      | P       |
|--------|---------|
| 60-120 | 100-200 |

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