

## Silicon NPN Power Transistors

## 2SC3263

## DESCRIPTION

- With TO-3PN package
- Complement to type 2SA1294

## APPLICATIONS

- Audio and general purpose

## PINNING

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

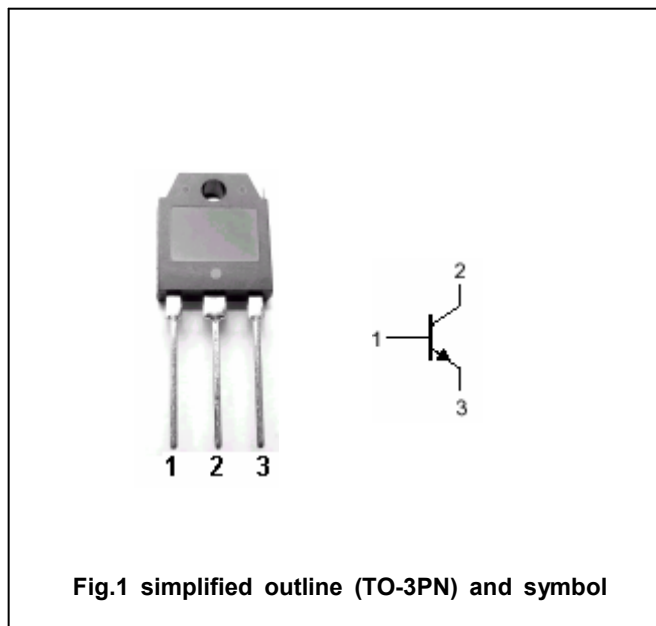


Fig.1 simplified outline (TO-3PN) and symbol

Absolute maximum ratings( $T_a = \square$ )

| SYMBOL    | PARAMETER                   | CONDITIONS        | VALUE   | UNIT      |
|-----------|-----------------------------|-------------------|---------|-----------|
| $V_{CBO}$ | Collector-base voltage      | Open emitter      | 230     | V         |
| $V_{CEO}$ | Collector-emitter voltage   | Open base         | 230     | V         |
| $V_{EBO}$ | Emitter-base voltage        | Open collector    | 5       | V         |
| $I_C$     | Collector current           |                   | 15      | A         |
| $I_B$     | Base current                |                   | 4       | A         |
| $P_C$     | Collector power dissipation | $T_C = 25\square$ | 130     | W         |
| $T_j$     | Junction temperature        |                   | 150     | $\square$ |
| $T_{stg}$ | Storage temperature         |                   | -55~150 | $\square$ |

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## CHARACTERISTICS

Tj=25°C unless otherwise specified

| SYMBOL        | PARAMETER                            | CONDITIONS                        | MIN | TYP. | MAX | UNIT    |
|---------------|--------------------------------------|-----------------------------------|-----|------|-----|---------|
| $V_{(BR)CEO}$ | Collector-emitter breakdown voltage  | $I_C=25mA$ ; $I_B=0$              | 230 |      |     | V       |
| $V_{CEsat}$   | Collector-emitter saturation voltage | $I_C=5A$ $I_B=0.5A$               |     |      | 2.0 | V       |
| $I_{CBO}$     | Collector cut-off current            | $V_{CB}=230V$ ; $I_E=0$           |     |      | 100 | $\mu A$ |
| $I_{EBO}$     | Emitter cut-off current              | $V_{EB}=5V$ ; $I_C=0$             |     |      | 100 | $\mu A$ |
| $h_{FE}$      | DC current gain                      | $I_C=5A$ ; $V_{CE}=4V$            | 50  |      | 140 |         |
| $C_{ob}$      | Output capacitance                   | $I_E=0$ ; $V_{CB}=10V$ ; $f=1MHz$ |     | 250  |     | pF      |
| $f_T$         | Transition frequency                 | $I_C=2A$ ; $V_{CE}=12V$           |     | 60   |     | MHz     |

## Switching times

|          |              |                                                                    |  |     |  |         |
|----------|--------------|--------------------------------------------------------------------|--|-----|--|---------|
| $t_{on}$ | Turn-on time | $I_C=5A$ ; $R_L=12\Omega$<br>$I_{B1}=-I_{B2}=0.5A$<br>$V_{CC}=60V$ |  | 0.3 |  | $\mu s$ |
| $t_s$    | Storage time |                                                                    |  | 2.4 |  | $\mu s$ |
| $t_f$    | Fall time    |                                                                    |  | 0.5 |  | $\mu s$ |

◆  $h_{FE}$  Classifications

|        |        |
|--------|--------|
| O      | Y      |
| 50-100 | 70-140 |

**2SC3263**

[illegible]

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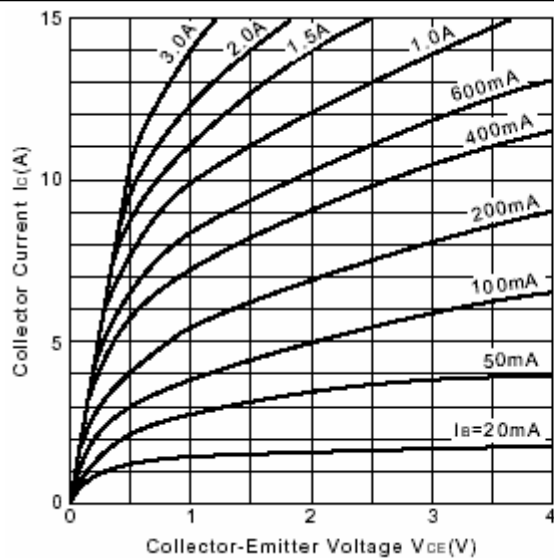


Fig.3 Static Characteristic

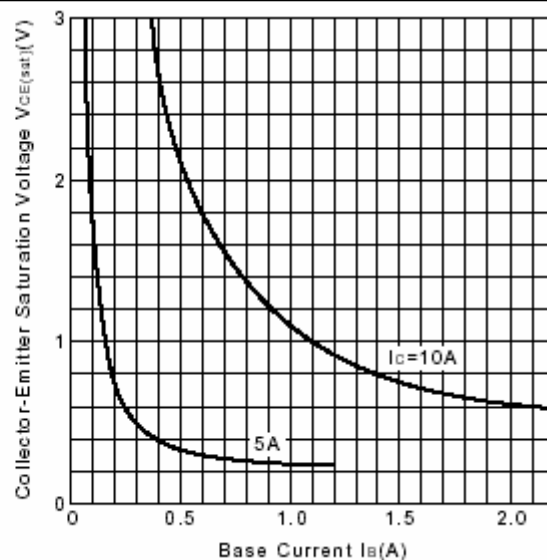
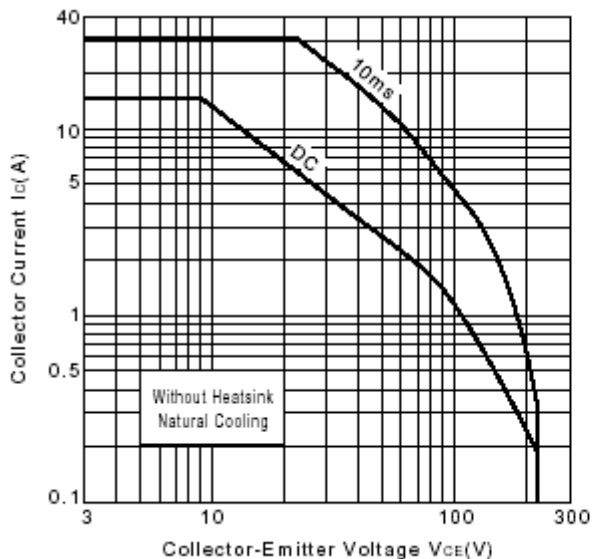
Fig.4  $V_{CE(sat)}-I_B$ 

Fig.5 Safe Operating Area

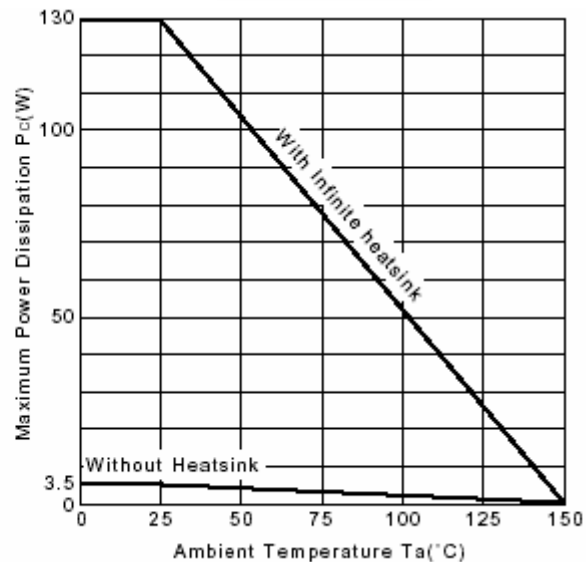


Fig.6 Power Derating

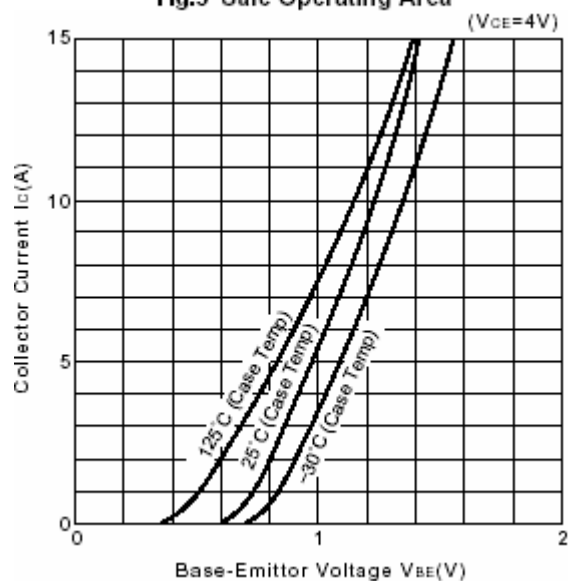
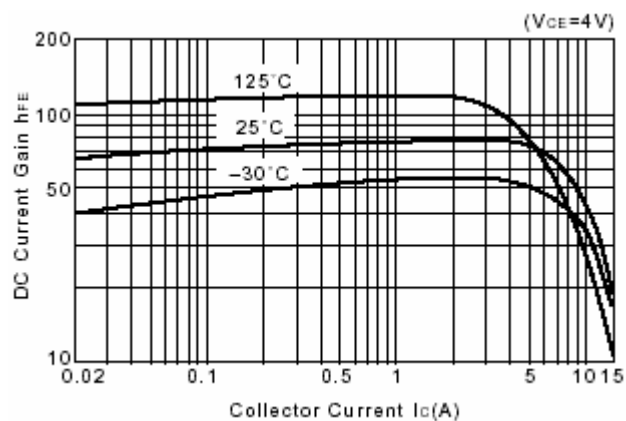
Fig.7  $I_C-V_{BE}$ 

Fig.8 DC current Gain