

# 2SD1297

Silicon NPN Transistors



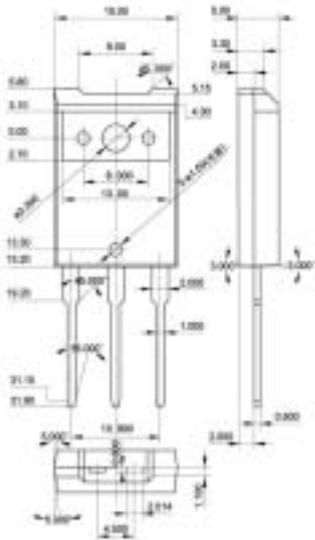
B C E

### ◆ Features

- Darlington
- With TO-3PFa package
- Low speed power switching applications

### ◆ Absolute Maximum Ratings Tc=25

| SYMBOL    | PARAMETER                     | RATING  | UNIT |
|-----------|-------------------------------|---------|------|
| $V_{CBO}$ | Collector to base voltage     | 150     | V    |
| $V_{CEO}$ | Collector to emitter voltage  | 100     | V    |
| $V_{EBO}$ | Emitter to base voltage       | 5       | V    |
| $I_C$     | Collector current-Continuous  | 25      | A    |
| $P_D$     | Total Power Dissipation@TC=25 | 100     | W    |
| $T_j$     | Junction temperature          | 150     |      |
| $T_{stg}$ | Storage temperature           | -55~150 |      |



TO-3PFa

### ◆ Electrical Characteristics Tc=25

| SYMBOL          | PARAMETER                             | CONDITIONS           | MIN  | MAX   | UNIT    |
|-----------------|---------------------------------------|----------------------|------|-------|---------|
| $V_{CEO(SUS)}$  | Collector-Emitter Sustaining Voltage  | $I_C=100mA; I_B=0$   | 100  |       | V       |
| $V_{CBO}$       | Collector-Base Voltage                |                      |      |       |         |
| $I_{CEO}$       | Collector Cutoff Current              |                      |      |       |         |
| $I_{CBO}$       | Collector Cutoff Current              | $V_{CB}=100V; I_E=0$ |      | 10    | $\mu A$ |
| $I_{EBO}$       | Emitter Cutoff Current                | $V_{EB}=5V; I_C=0$   |      | 5     | mA      |
| $V_{EBO}$       | Emitter-Base Voltage                  |                      |      |       |         |
| $V_{CE(sat-1)}$ | Collector-emitter saturation voltages | $I_C=15A; I_B=0.03A$ |      | 1.5   | V       |
| $V_{CE(sat-2)}$ | Collector-emitter saturation voltages |                      |      |       |         |
| $h_{FE-1}$      | Forward current transfer ratio        | $I_C=15A; V_{CE}=2V$ | 1000 | 30000 |         |
| $h_{FE-2}$      | Forward current transfer ratio        |                      |      |       |         |
| $V_{BE(sat)1}$  | Base-emitter saturation voltages      | $I_C=15A; I_B=0.03A$ |      | 2.2   | V       |
| $V_{BE(sat)2}$  | Base-emitter saturation voltages      |                      |      |       |         |
| $f_T$           | Transition frequency                  |                      |      |       |         |