

## Silicon NPN Power Transistors

## 2SD1427

## DESCRIPTION

www.datasheet4u.com

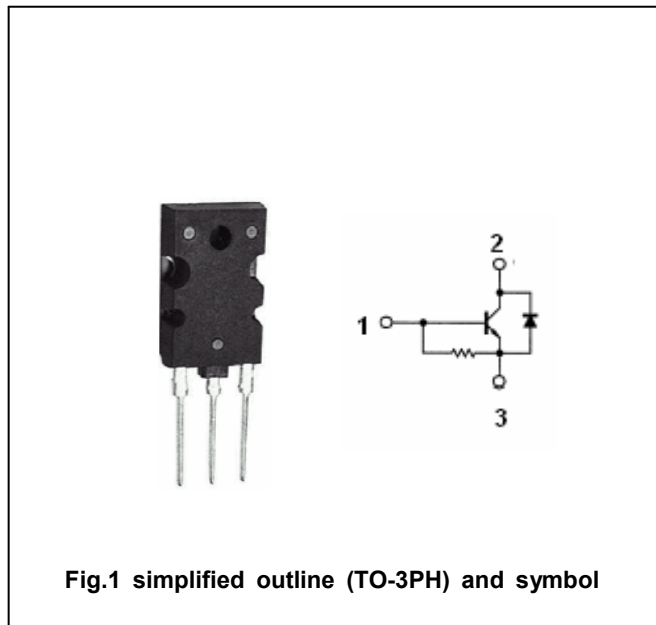
- With TO-3PH package
- Built-in damper diode
- High voltage ,high speed
- Low collector saturation voltage

## APPLICATIONS

- Designed for use in large screen color deflection circuits

## PINNING

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



## Absolute maximum ratings (Ta=25℃)

| SYMBOL    | PARAMETER                 | CONDITIONS             | VALUE   | UNIT |
|-----------|---------------------------|------------------------|---------|------|
| $V_{CBO}$ | Collector-base voltage    | Open emitter           | 1500    | V    |
| $V_{CEO}$ | Collector-emitter voltage | Open base              | 600     | V    |
| $V_{EBO}$ | Emitter-base voltage      | Open collector         | 5       | V    |
| $I_C$     | Collector current         |                        | 5       | A    |
| $I_B$     | Base current              |                        | 2.5     | A    |
| $P_D$     | Total power dissipation   | $T_C=25^\circ\text{C}$ | 80      | W    |
| $T_j$     | Junction temperature      |                        | 150     | ℃    |
| $T_{stg}$ | Storage temperature       |                        | -55~150 | ℃    |

## THERMAL CHARACTERISTICS

| SYMBOL        | PARAMETER                        | MAX  | UNIT |
|---------------|----------------------------------|------|------|
| $R_{th\ j-C}$ | Thermal resistance junction case | 1.56 | ℃/W  |

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## CHARACTERISTICS

Tj=25°C unless otherwise specified

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| SYMBOL        | PARAMETER                            | CONDITIONS                           | MIN | TYP. | MAX | UNIT    |
|---------------|--------------------------------------|--------------------------------------|-----|------|-----|---------|
| $V_{(BR)EBO}$ | Emitter-base breakdown voltage       | $I_E=200mA$ ; $I_C=0$                | 5   |      |     | V       |
| $V_{CEsat}$   | Collector-emitter saturation voltage | $I_C=4A$ ; $I_B=0.8A$                |     |      | 5.0 | V       |
| $V_{BEsat}$   | Base-emitter saturation voltage      | $I_C=4A$ ; $I_B=0.8A$                |     |      | 1.5 | V       |
| $I_{CBO}$     | Collector cut-off current            | $V_{CB}=500V$ ; $I_E=0$              |     |      | 10  | $\mu A$ |
| $h_{FE}$      | DC current gain                      | $I_C=1A$ ; $V_{CE}=5V$               | 8   |      |     |         |
| $f_T$         | Transition frequency                 | $I_C=0.1A$ ; $V_{CE}=10V$ ; $f=1MHz$ |     | 3    |     | MHz     |
| $C_{OB}$      | Output capacitance                   | $I_E=0$ ; $V_{CB}=10V$ ; $f=1MHz$    |     | 165  |     | pF      |
| $V_F$         | Diode forward voltage                | $I_F=5A$                             |     |      | 2.0 | V       |
| $t_f$         | Fall time                            | $I_C=4A$ ; $I_{B1}=0.8A$             |     |      | 1.0 | $\mu s$ |

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## PACKAGE OUTLINE

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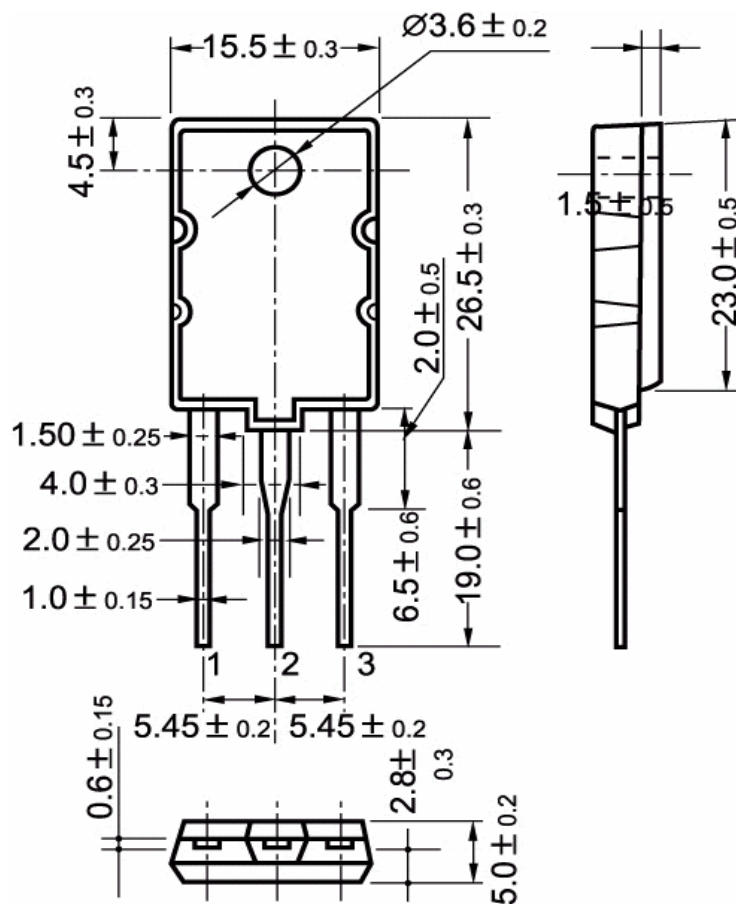


Fig.2 outline dimensions