

## Silicon NPN Power Transistors

2SD1554

## DESCRIPTION

- With TO-3P(H)IS package
- Built-in damper diode
- High voltage ,high speed
- Low collector saturation voltage

## APPLICATIONS

- For color TV horizontal output applications

## PINNING

| PIN | DESCRIPTION |
|-----|-------------|
| 1   | Base        |
| 2   | Collector   |
| 3   | Emitter     |

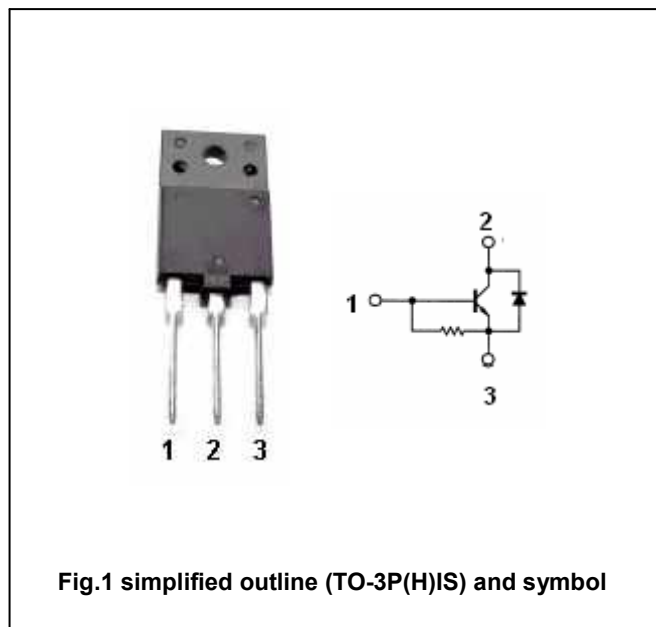


Fig.1 simplified outline (TO-3P(H)IS) and symbol

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

| 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           |                        | 3.5     | A                |
| $I_B$     | Base current                |                        | 1       | A                |
| $P_C$     | Collector power dissipation | $T_C=25^\circ\text{C}$ | 40      | W                |
| $T_j$     | 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

| SYMBOL        | PARAMETER                            | CONDITIONS                        | MIN | TYP. | MAX | UNIT    |
|---------------|--------------------------------------|-----------------------------------|-----|------|-----|---------|
| $V_{(BR)EBO}$ | Emitter-base breakdown voltage       | $I_E=0.2A$ , $I_C=0$              | 5   |      |     | V       |
| $V_{CEsat}$   | Collector-emitter saturation voltage | $I_C=3A$ ; $I_B=0.8A$             |     | 5.0  | 8.0 | V       |
| $V_{BEsat}$   | Base-emitter saturation voltage      | $I_C=3A$ ; $I_B=0.8A$             |     |      | 1.5 | V       |
| $I_{CBO}$     | Collector cut-off current            | $V_{CB}=500V$ ; $I_E=0$           |     |      | 10  | $\mu A$ |
| $h_{FE}$      | DC current gain                      | $I_C=0.5A$ ; $V_{CE}=5V$          | 8   |      |     |         |
| $f_T$         | Transition frequency                 | $I_C=0.1A$ ; $V_{CE}=10V$         |     | 3    |     | MHz     |
| $C_{OB}$      | Collector output capacitance         | $I_E=0$ ; $V_{CB}=10V$ ; $f=1MHz$ |     | 95   |     | pF      |
| $V_F$         | Diode forward voltage                | $I_F=3.5A$                        |     |      | 2.0 | V       |
| $t_f$         | Fall time                            | $I_{CP}=3A$ ; $I_{B1(end)}=0.8A$  |     | 0.5  | 1.0 | $\mu s$ |

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PACKAGE OUTLINE

