# Silicon NPN Power Transistors 2SD1453

## DESCRIPTION

·With TO-3PN package
·High voltage,high speed
·Built-in damper diode

## APPLICATIONS

·For TV horizontal deflection output applications

**PINNING**

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

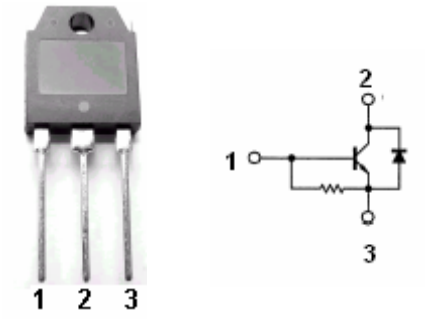


**Fig.1 simplified outline (TO-3PN) and symbol**

## Absolute maximum ratings (Ta=25□)

| SYMBOL | PARAMETER | CONDITIONS | VALUE | UNIT |
|---|---|---|---|---|
| $V_{CBO}$ | Collector-base voltage | Open emitter | 1500 | V |
| $V_{EBO}$ | Emitter-base voltage | Open collector | 6 | V |
| $I_C$ | Collector current (DC) | | 3 | A |
| $I_{CM}$ | Collector current-Peak | | 3.5 | A |
| $P_C$ | Collector power dissipation | $T_C$=25□ | 50 | W |
| $T_j$ | Junction temperature | | 150 | □ |
| $T_{stg}$ | Storage temperature | | -45~150 | □ |

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## CHARACTERISTICS

**Tj=25□ unless otherwise specified**

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT |
|---|---|---|---|---|---|---|
| $V_{(BR)EBO}$ | Emitter-base breakdown voltage | $I_E$=200mA; $I_C$=0 | 6 | | | V |
| $V_{CEsat}$ | Collector-emitter saturation voltage | $I_C$=2.5A; $I_B$=0.8A | | | 5.0 | V |
| $V_{BEsat}$ | Base-emitter saturation voltage | $I_C$=2.5A; $I_B$=0.8A | | | 1.5 | V |
| $I_{CES}$ | Collector cut-off current | $V_{CE}$=1500V; $R_{BE}$=∞ | | | 0.5 | mA |
| $h_{FE}$ | DC current gain | $I_C$=0.3A ; $V_{CE}$=5V | 6 | | | |
| $V_F$ | Diode forward voltage | $I_F$=3A | | | 2.2 | V |
| $t_f$ | Fall time | $I_{CP}$=2.75A; $I_{B1}$=0.6A; $I_{B2}$≈-1.3A | | | 0.8 | μs |

**PACKAGE OUTLINE**

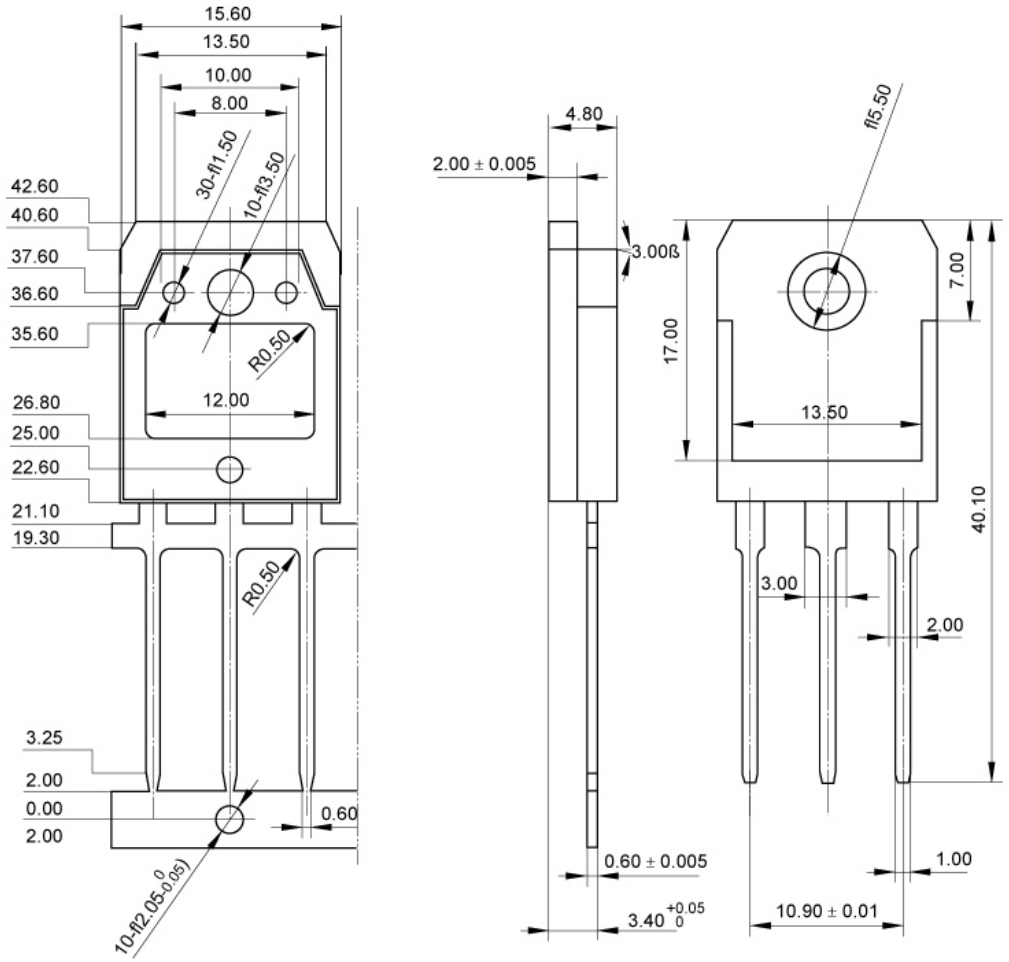


**Fig.2 outline dimensions (unindicated tolerance:±0.10 mm)**