

Silicon NPN Power Transistors

2SD386 2SD386A

DESCRIPTION

www.datasheet4u.com

- With TO-220C package
- High voltage : $V_{CBO}=200V(\text{min})$

APPLICATIONS

- For TV vertical deflection output applications

PINNING

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

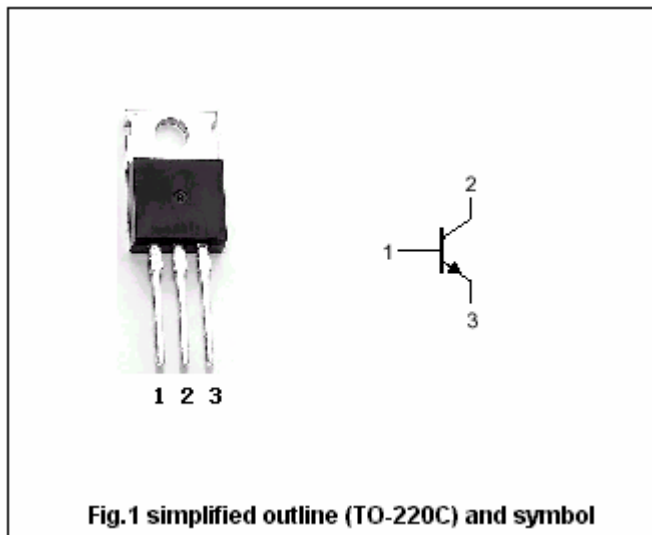


Fig.1 simplified outline (TO-220C) and symbol

Absolute maximum ratings($T_a=25^\circ$)

| SYMBOL | PARAMETER | CONDITIONS | VALUE | UNIT |
|-----------|---------------------------|----------------|---------|----------|
| V_{CBO} | Collector-base voltage | Open emitter | 200 | V |
| V_{CEO} | Collector-emitter voltage | 2SD386 | 120 | V |
| | | 2SD386A | 150 | |
| V_{EBO} | Emitter-base voltage | Open collector | 6 | V |
| I_C | Collector current | 2SD386 | 3 | A |
| | | 2SD386A | 2 | |
| I_{CM} | Collector current-Peak | | 10 | A |
| P_C | Collector dissipation | $T_C=25^\circ$ | 25 | W |
| | | $T_a=25^\circ$ | 1.75 | |
| T_j | Junction temperature | | 150 | $^\circ$ |
| T_{stg} | Storage temperature | | -40~150 | $^\circ$ |

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CHARACTERISTICS

T_j=25°C unless otherwise specified

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| SYMBOL | PARAMETER | | CONDITIONS | MIN | TYP. | MAX | UNIT |
|----------------------|--------------------------------------|---------|---|-----|------|-----|------|
| V _{(BR)CEO} | Collector-emitter breakdown voltage | 2SD386 | I _C =25mA; I _B =0 | 120 | | | V |
| | | 2SD386A | | 150 | | | |
| V _{CEsat} | Collector-emitter saturation voltage | 2SD386 | I _C =1A; I _B =0.1A | | | 1.0 | V |
| | | 2SD386A | | | | 1.5 | |
| V _{BEsat} | Base-emitter saturation voltage | | I _C =1A; I _B =0.1A | | | 1.8 | V |
| I _{CBO} | Collector cut-off current | | V _{CB} =180V; I _E =0 | | | 1.0 | mA |
| I _{EBO} | Emitter cut-off current | | V _{EB} =5V; I _C =0 | | | 5.0 | mA |
| h _{FE} | DC current gain | | I _C =0.5A; V _{CE} =2V | 40 | | 320 | |
| f _T | Transition frequency | | I _C =0.5A; V _{CE} =5V | | 8 | | MHz |

◆ h_{FE} Classifications

| C | D | E | F |
|-------|--------|---------|---------|
| 40-80 | 60-120 | 100-200 | 160-320 |

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PACKAGE OUTLINE

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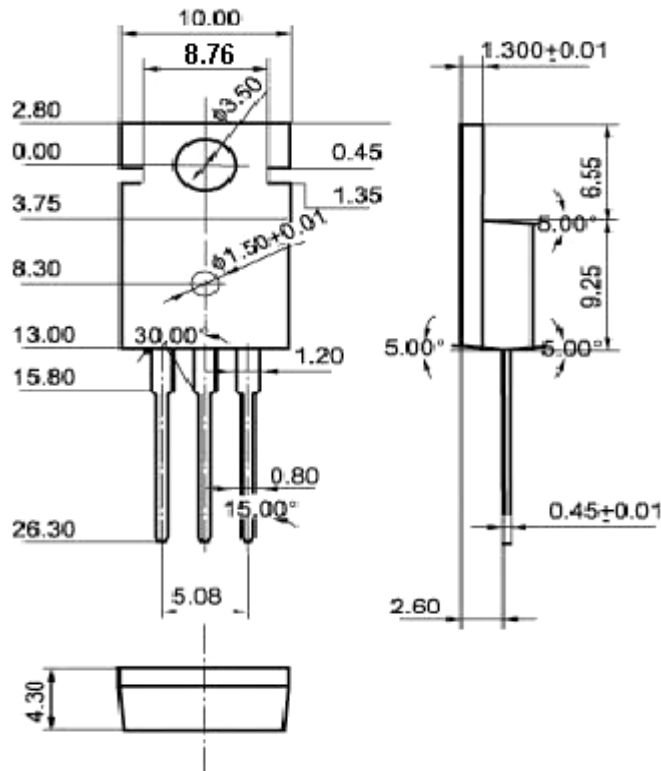


Fig.2 Outline dimensions (unindicated tolerance: $\pm 0.10\text{mm}$)