

Silicon NPN Power Transistors

2SD1138

DESCRIPTION

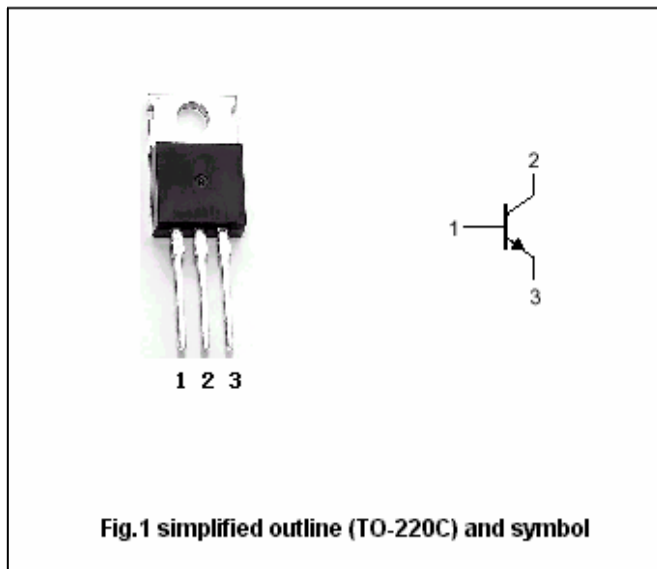
- With TO-220C package
- Complement to type 2SB861

APPLICATIONS

- Low frequency high voltage power amplifier TV vertical deflection output

PINNING

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



Absolute maximum ratings(Ta=25°C)

| SYMBOL | PARAMETER | CONDITIONS | VALUE | UNIT |
|------------------|-----------------------------|----------------------|---------|------|
| V _{CBO} | Collector-base voltage | Open emitter | 200 | V |
| V _{CEO} | Collector-emitter voltage | Open base | 150 | V |
| V _{EBO} | Emitter-base voltage | Open collector | 6 | V |
| I _C | Collector current | | 2 | A |
| I _{CP} | Collector current-peak | | 5 | A |
| P _C | Collector power dissipation | T _a =25°C | 1.8 | W |
| | | T _C =25°C | 30 | |
| T _j | Junction temperature | | 150 | °C |
| T _{stg} | Storage temperature | | -45~150 | °C |

Silicon NPN Power Transistors

2SD1138

CHARACTERISTICS

T_j=25°C unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT |
|----------------------|--------------------------------------|---|-----|------|-----|------|
| V _{(BR)CEO} | Collector-emitter breakdown voltage | I _C =50mA; R _{BE} =∞ | 150 | | | V |
| V _{(BR)EBO} | Emitter-base breakdown voltage | I _E =5mA; I _C =0 | 6 | | | V |
| V _{CEsat} | Collector-emitter saturation voltage | I _C =0.5 A; I _B =50m A | | | 3.0 | V |
| V _{BE} | Base-emitter voltage | I _C =50mA ; V _{CE} =4V | | | 1.0 | V |
| I _{CBO} | Collector cut-off current | V _{CB} =120V; I _E =0 | | | 1 | μA |
| h _{FE-1} | DC current gain | I _C =50mA ; V _{CE} =4V | 60 | | 320 | |
| h _{FE-2} | DC current gain | I _C =0.5A ; V _{CE} =10V | 60 | | | |
| C _{OB} | Output capacitance | I _E =0 ; V _{CB} =100V, f=1MHz | | 20 | | pF |

◆ h_{FE-1} classifications

| B | C | D |
|--------|---------|---------|
| 60-120 | 100-200 | 160-320 |

Silicon NPN Power Transistors

2SD1138

PACKAGE OUTLINE

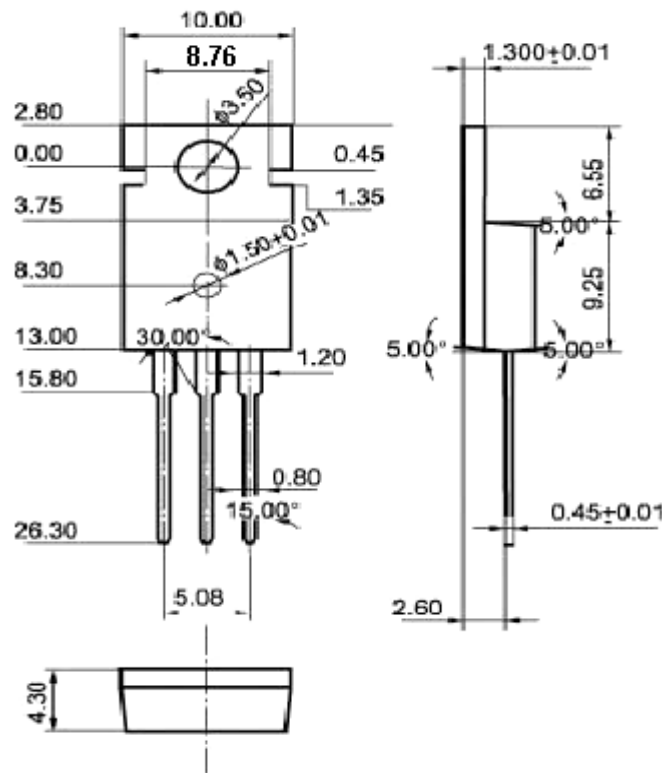


Fig.2 Outline dimensions (unindicated tolerance:±0.10 mm)

Silicon NPN Power Transistors

2SD1138

