

Silicon NPN Power Transistors

2SD733 2SD733K

DESCRIPTION

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- With TO-3 package
- Complement to type 2SB697/697K
- High power dissipation

APPLICATIONS

- Power amplifier applications
- Recommended for high-power high-fidelity audio frequency amplifier output stage

PINNING(see Fig.2)

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

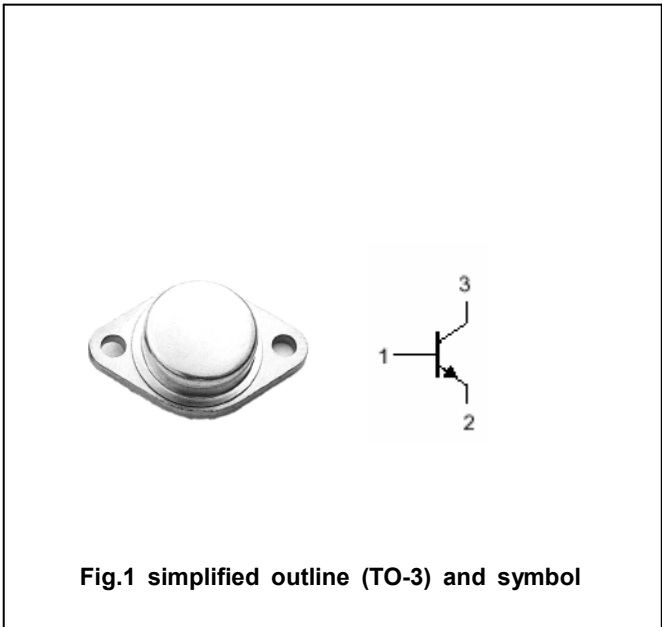


Fig.1 simplified outline (TO-3) and symbol

Absolute maximum ratings(Ta=□)

| SYMBOL | PARAMETER | CONDITIONS | VALUE | UNIT |
|------------------|-----------------------------|---------------------|---------|------|
| V _{CBO} | Collector-base voltage | 2SD733 | 160 | V |
| | | 2SD733K | 180 | |
| V _{CEO} | Collector-emitter voltage | 2SD733 | 140 | V |
| | | 2SD733K | 160 | |
| V _{EBO} | Emitter-base voltage | Open collector | 6 | V |
| I _C | Collector current | | 12 | A |
| I _{CM} | Collector current-peak | | 20 | A |
| P _C | Collector power dissipation | T _C =25□ | 100 | W |
| T _j | Junction temperature | | 150 | □ |
| T _{stg} | Storage temperature | | -40~150 | □ |

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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 | 2SD733 | I _C =50mA ; I _B =0 | 140 | | | V |
| | | 2SD733K | | 160 | | | |
| V _{(BR)CBO} | Collector-emitter breakdown voltage | 2SD733 | I _C =5mA ; I _E =0 | 160 | | | V |
| | | 2SD733K | | 180 | | | |
| V _{(BR)EBO} | Emitter-base breakdown voltage | | I _E =5mA ; I _C =0 | 6 | | | V |
| V _{CEsat} | Collector-emitter saturation voltage | | I _C =6A ; I _B =0.6A | | 0.7 | 2.5 | V |
| V _{BE} | Base-emitter on voltage | | I _C =1A ; V _{CE} =5V | | | 1.5 | V |
| I _{CBO} | Collector cut-off current | | V _{CB} =80V ; I _E =0 | | | 0.1 | mA |
| I _{EBO} | Emitter cut-off current | | V _{EB} =4V ; I _C =0 | | | 0.1 | mA |
| h _{FE-1} | DC current gain | | I _C =1A ; V _{CE} =-5V | 40 | | 320 | |
| h _{FE-2} | DC current gain | | I _C =5A ; V _{CE} =5V | 20 | | | |
| f _T | Transition frequency | | I _C =1A ; V _{CE} =5V | | 15 | | MHz |

◆ h_{FE-1} Classifications

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

PACKAGE OUTLINE

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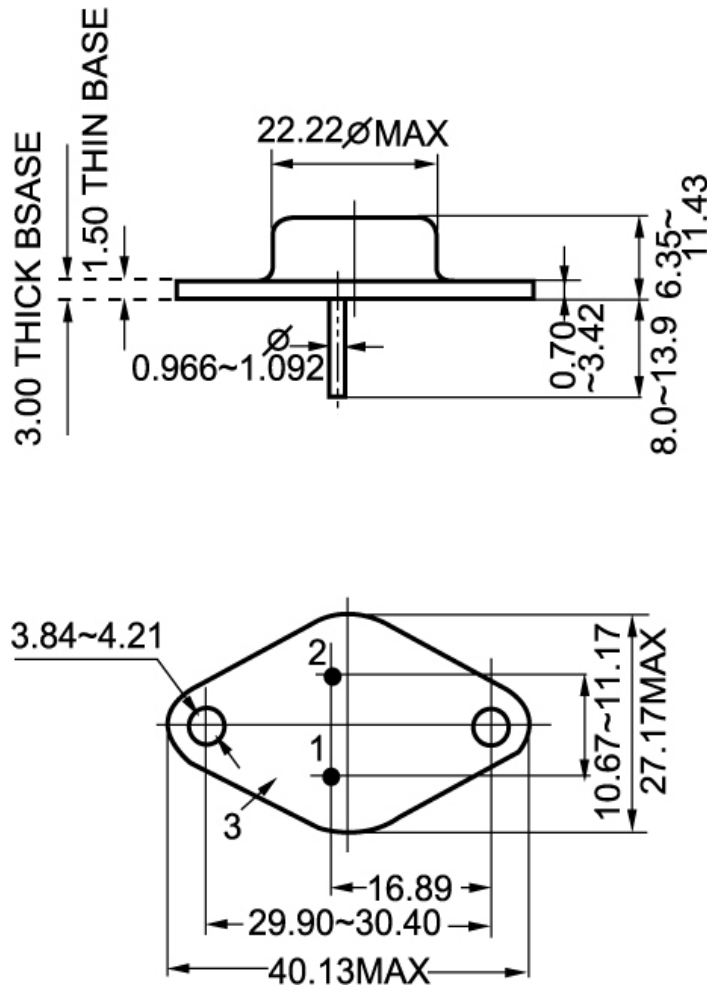


Fig.2 outline dimensions (unindicated tolerance:±0.1mm)