

Silicon PNP Power Transistors

2SB632 2SB632K

DESCRIPTION

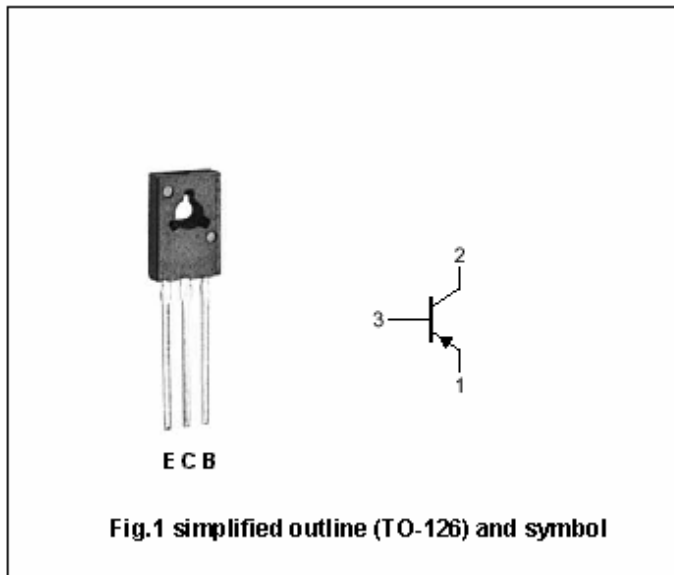
- With TO-126 package
- Complement to type 2SD612/612K
- High collector dissipation
- Wide ASO(Safe Operating Area)

APPLICATIONS

- 25V/35V, 2A low-frequency power amplifier applications

PINNING

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



Absolute maximum ratings(Ta=25°C)

| SYMBOL | PARAMETER | CONDITIONS | VALUE | UNIT |
|------------------|---------------------------|----------------------|---------|------|
| V _{CBO} | Collector-base voltage | 2SB632 | -25 | V |
| | | 2SB632K | -35 | |
| V _{CEO} | Collector-emitter voltage | 2SB632 | -25 | V |
| | | 2SB632K | -35 | |
| V _{EBO} | Emitter-base voltage | Open collector | -5 | V |
| I _C | Collector current (DC) | | -2 | A |
| I _{CM} | Collector current-Peak | | -3 | A |
| P _D | Total power dissipation | T _a =25°C | 1 | W |
| | | T _C =25°C | 10 | |
| T _j | Junction temperature | | 150 | °C |
| T _{stg} | Storage temperature | | -55~150 | °C |

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CHARACTERISTICS

T_j=25°C unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT | |
|----------------------|--------------------------------------|---|--|------|------|------|---|
| V _{(BR)CEO} | Collector-emitter breakdown voltage | 2SB632 | I _C =-1mA; R _{BE} =∞ | -25 | | | V |
| | | 2SB632K | | -35 | | | |
| V _{(BR)CBO} | Collector-base breakdown voltage | 2SB632 | I _C =-10μA; I _E =0 | -25 | | | V |
| | | 2SB632K | | -35 | | | |
| V _{(BR)EBO} | Emitter-base breakdown voltage | I _E =-10μA; I _C =0 | -5 | | | V | |
| V _{CEsat} | Collector-emitter saturation voltage | I _C =-1.5A; I _B =-0.15A | | -0.4 | -0.9 | V | |
| V _{BEsat} | Base-emitter saturation voltage | I _C =-1.5A; I _B =-0.15A | | -1.1 | -1.5 | V | |
| I _{CBO} | Collector cut-off current | V _{CB} =-20V; I _E =0 | | | -1 | μA | |
| I _{EBO} | Emitter cut-off current | V _{EB} =-4V; I _C =0 | | | -1 | μA | |
| h _{FE-1} | DC current gain | I _C =-0.5A; V _{CE} =-2V | 60 | | 320 | | |
| h _{FE-2} | DC current gain | I _C =-1.5A; V _{CE} =-2V | 30 | | | | |
| f _T | Transition frequency | I _C =-50mA; V _{CE} =-10V | | 100 | | MHz | |
| C _{OB} | Collector output capacitance | f=1MHz; V _{CB} =-10V | | 45 | | pF | |

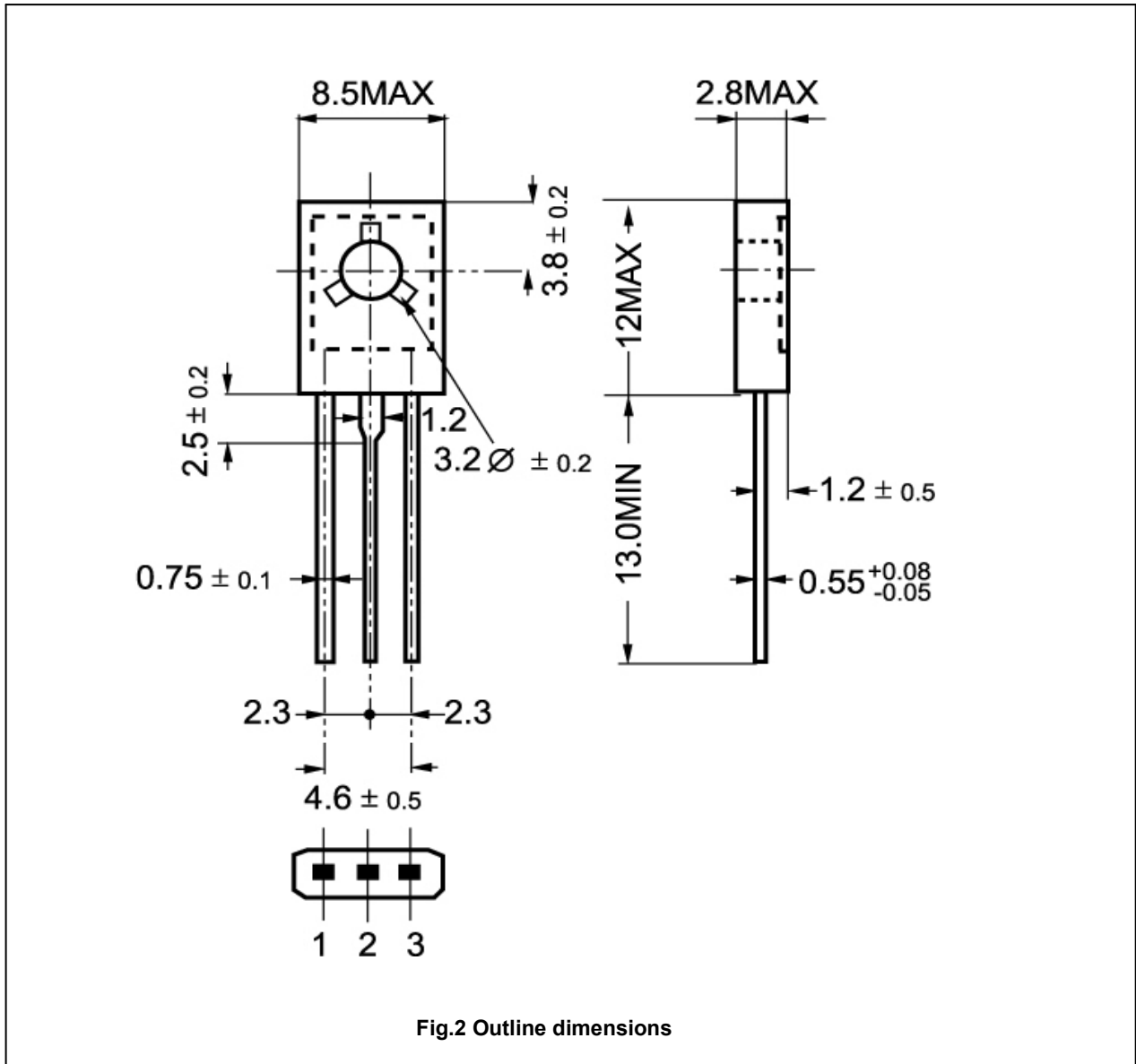
Switching times

| | | | | | | |
|------------------|--------------|--|--|------|--|----|
| t _{on} | Turn-on time | I _C =500mA; V _{CE} =12V I _{B1} =-I _{B2} =50mA | | 0.06 | | μs |
| t _f | Fall time | | | 0.08 | | μs |
| t _{stg} | Storage time | | | 0.40 | | μs |

◆ h_{FE-1} Classifications

| D | E | F |
|--------|---------|---------|
| 60-120 | 100-200 | 160-320 |

PACKAGE OUTLINE



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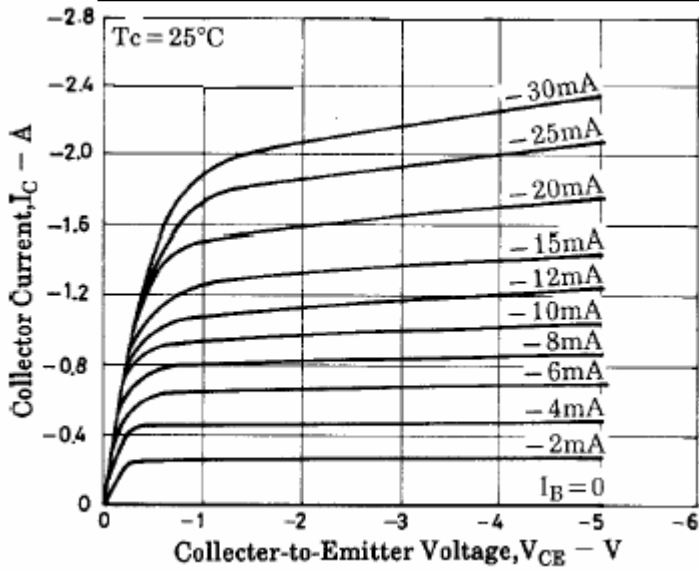


Fig.3 Static Characteristic

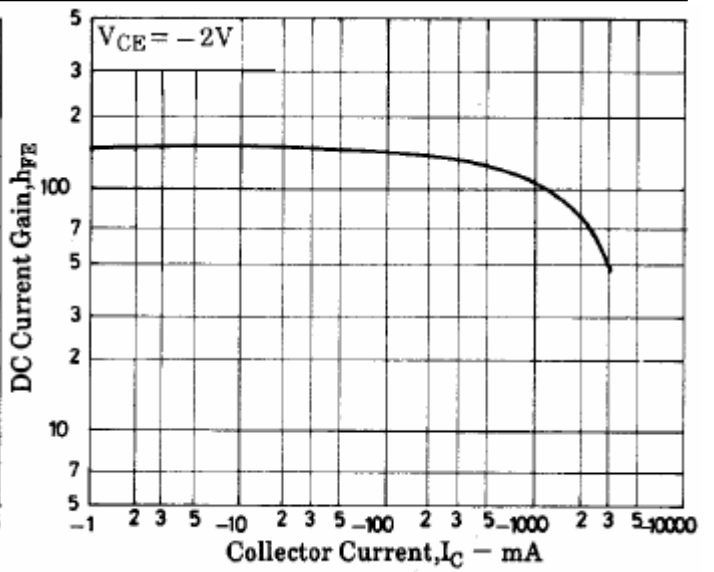


Fig.4 DC current Gain

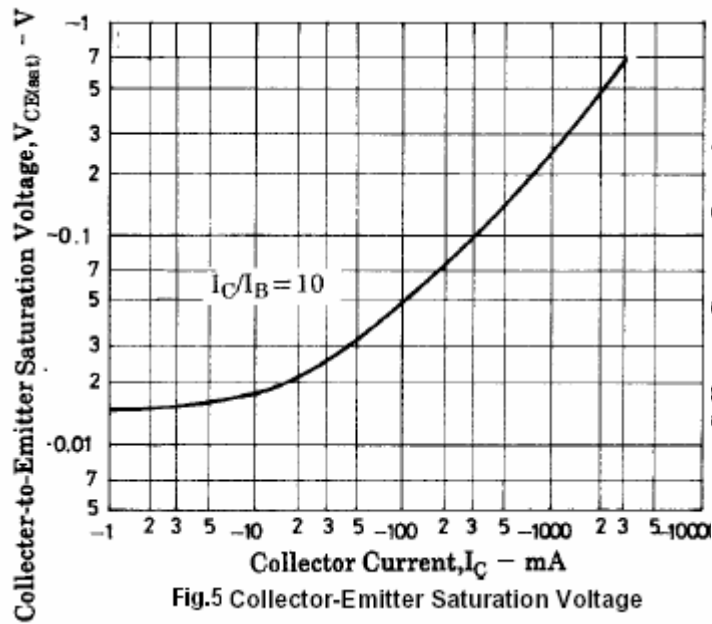


Fig.5 Collector-Emitter Saturation Voltage

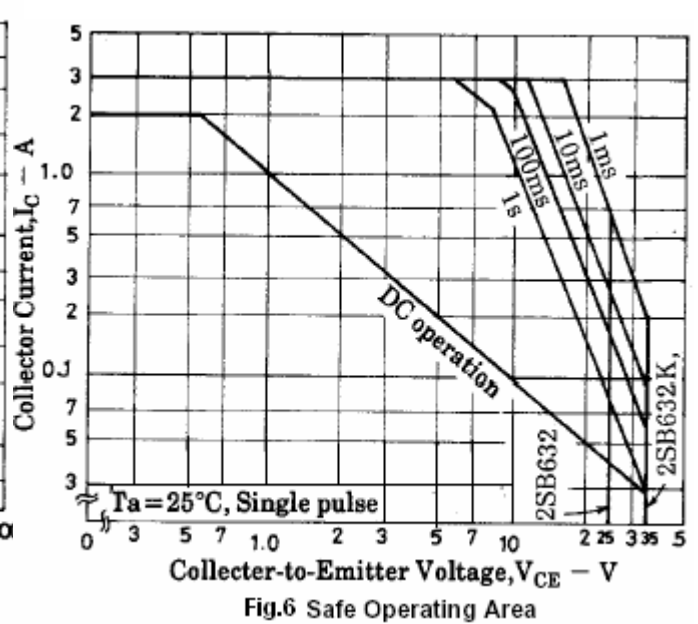


Fig.6 Safe Operating Area