

Silicon PNP Power Transistors

D45C Series

DESCRIPTION

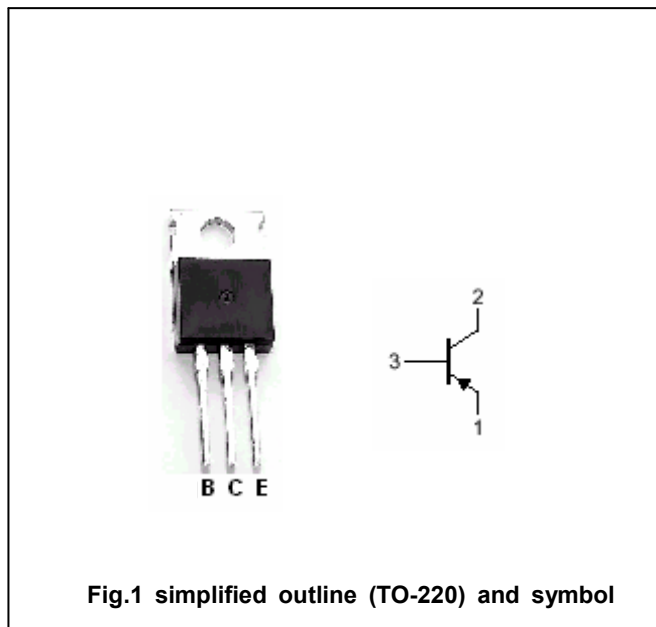
- With TO-220 package
- Complement to type D44C Series
- Very low collector saturation voltage
- Fast switching

APPLICATIONS

- Designed for various specific and general purpose application
- Shunt and switching regulators
- Low and high frequency inverters converters and etc.

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 | Open emitter | D45C1,2,3 | -40 | V |
| | | | D45C4,5,6 | -55 | |
| | | | D45C7,8,9 | -70 | |
| | | | D45C10,11,12 | -90 | |
| V _{CEO} | Collector-emitter voltage | Open base | D45C1,2,3 | -30 | V |
| | | | D45C4,5,6 | -45 | |
| | | | D45C7,8,9 | -60 | |
| | | | D45C10,11,12 | -80 | |
| V _{EBO} | Emitter-base voltage | Open collector | -5 | V | |
| I _C | Collector current (DC) | | -4 | A | |
| I _{CM} | Collector current -peak | | -6 | A | |
| I _B | Base current (DC) | | -1 | A | |
| P _D | Total power dissipation | T _C =25°C | 30 | W | |
| T _j | Junction temperature | | 150 | °C | |
| T _{stg} | Storage temperature | | -55~150 | °C | |

Silicon PNP Power Transistors

D45C Series

CHARACTERISTICS

T_j=25 °C unless otherwise specified

www.datasheet4u.com

| SYMBOL | PARAMETER | | CONDITIONS | MIN | TYP. | MAX | UNIT |
|--------------------|--------------------------------------|-----------------------|--|-----|------|------|------|
| V _{CEsat} | Collector-emitter saturation voltage | D45C2,3,5,6,8,9,11,12 | I _C =-1A ; I _B =-50mA | | | -0.5 | V |
| | | D45C1,4,7,10 | I _C =-1A ; I _B =-0.1A | | | | |
| V _{BEsat} | Base-emitter saturation voltage | | I _C =-1A ; I _B =-0.1A | | | -1.3 | V |
| I _{CES} | Collector cut-off current | | V _{CE} =Rated V _{CES} | | | -100 | μA |
| I _{EBO} | Emitter cut-off current | | V _{EB} =-5V; I _C =0 | | | -10 | μA |
| h _{FE-1} | DC current gain | D45C2,3,5,6,8,9,11,12 | I _C =-0.2A ; V _{CE} =-1V | 40 | | 120 | |
| | | D45C1,4,7,10 | | 25 | | | |
| h _{FE-2} | DC current gain | D45C1,4,7,10 | I _C =-1A ; V _{CE} =-1V | 10 | | | |
| | | D45C2,5,8,11 | | 20 | | | |
| | | D45C3,6,9,12 | I _C =-2A ; V _{CE} =-1V | 20 | | | |
| f _T | Transition frequency | | I _C =-20mA; V _{CE} =-4V; f=1.0MHz | | 40 | | MHz |

Switching times

| | | | | | | |
|----------------|--------------|--|--|--|-----|----|
| t _r | Rise time | I _C =-1.0A; V _{CC} =-20V I _{B1} =-I _{B2} =-0.1A | | | 0.2 | μs |
| t _s | Storage time | | | | 0.6 | μs |
| t _f | Fall time | | | | 0.3 | μs |

Silicon PNP Power Transistors

D45C Series

PACKAGE OUTLINE

www.datasheet4u.com

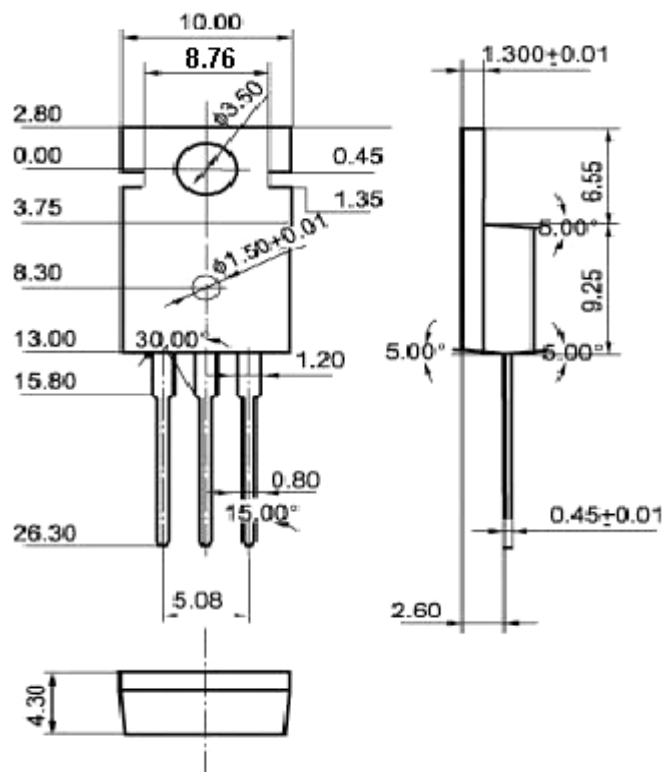


Fig.2 outline dimensions (unindicated tolerance: ± 0.10 mm)