

Silicon NPN Power Transistors

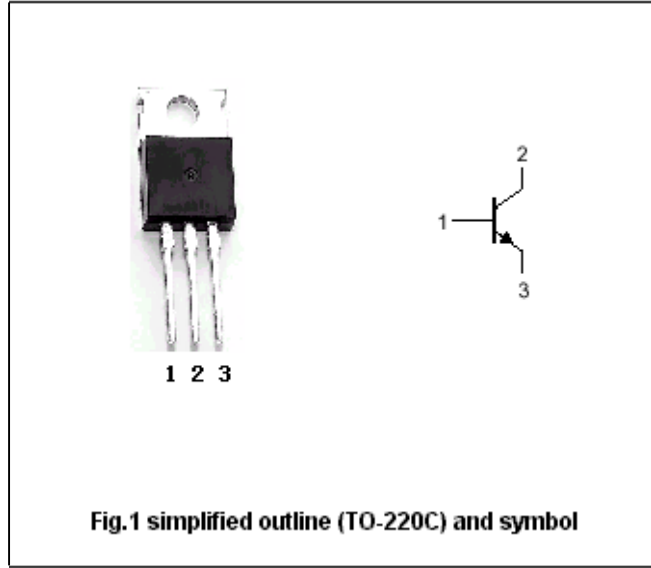
2SC4055

DESCRIPTION

- With TO-220C package
- High voltage,High speed switching
- High reliability

PINNING

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



Absolute maximum ratings(Ta=25)

| SYMBOL | PARAMETER | CONDITIONS | VALUE | UNIT |
|------------------|---------------------------|--------------------|---------|------|
| V _{CB0} | Collector-base voltage | Open emitter | 600 | V |
| V _{CEO} | Collector-emitter voltage | Open base | 450 | V |
| V _{EBO} | Emitter-base voltage | Open collector | 7 | V |
| I _C | Collector current | | 8 | A |
| I _{CM} | Collector current-peak | | 16 | A |
| I _B | Base current | | 4 | A |
| I _{BM} | Base current-peak | | 8 | A |
| P _C | Collector dissipation | T _C =25 | 60 | W |
| T _j | Junction temperature | | 150 | |
| T _{stg} | Storage temperature | | -55~150 | |

THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|---------------------|-------------------------------------|------|------|
| R _{th j-C} | Thermal resistance junction to case | 2.08 | /W |

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CHARACTERISTICS

T_j=25 unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT |
|-----------------------|--------------------------------------|---|-----|------|-----|------|
| V _{CE0(SUS)} | Collector-emitter sustaining voltage | I _C =0.2A ; I _B =0 | 450 | | | V |
| V _{CEsat} | Collector-emitter saturation voltage | I _C =4A; I _B =0.8A | | | 1.0 | V |
| V _{BEsat} | Base-emitter saturation voltage | I _C =4A; I _B =0.8A | | | 1.5 | V |
| I _{CBO} | Collector cut-off current | At rated voltage | | | 0.1 | mA |
| I _{CEO} | Collector cut-off current | At rated voltage | | | 0.1 | mA |
| I _{EBO} | Emitter cut-off current | At rated voltage | | | 10. | mA |
| h _{FE-1} | DC current gain | I _C =4A ; V _{CE} =5V | 10 | | | |
| h _{FE-2} | DC current gain | I _C =1mA ; V _{CE} =5V | 5 | | | |
| f _T | Transition frequency | I _C =0.8A ; V _{CE} =10V | | 20 | | MHz |

Switching times

| | | | | | | |
|------------------|--------------|---|--|--|-----|----|
| T _{on} | Turn-on time | I _C =4A; I _{B1} =0.8A; I _{B2} =1.6A; R _L =37.5 V _{BB2} =4V | | | 0.5 | μs |
| t _{stg} | Storage time | | | | 2.0 | μs |
| t _f | Fall time | | | | 0.2 | μs |

