

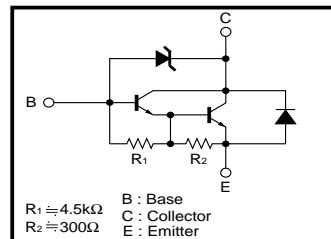
Medium Power Transistor (Motor or Relay drive) (60±10V, 4A)

2SC5576

●Features

- 1) Built-in zener diode between collector and base.
- 2) Strong protection against reverse power surges due to "L" loads.
- 3) Built-in resistor between base and emitter.
- 4) Built-in damper diode.

●Circuit diagram



●Absolute maximum ratings (Ta=25°C)

| Parameter | Symbol | Limits | Unit |
|-----------------------------|------------------|----------|-------------------------|
| Collector-base voltage | V _{CB0} | 60±10 | V |
| Collector-emitter voltage | V _{CEO} | 60±10 | V |
| Emitter-base voltage | V _{EB0} | 6 | V |
| Collector current | I _c | 4 | A(DC) |
| | | 6 | A(Pulse) * |
| Collector power dissipation | P _c | 2 | W |
| | | 30 | W(T _c =25°C) |
| Junction temperature | T _j | 150 | °C |
| Storage temperature | T _{stg} | -55~+150 | °C |

* Single pulse, P_w=100ms

●Packaging specifications and h_{FE}

| | |
|------------------------------|----------|
| Type | 2SC5576 |
| Package | TO-220FN |
| h _{FE} | 2k~20k |
| Code | - |
| Basic ordering unit (pieces) | 500 |

●Electrical characteristics (Ta=25°C)

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Conditions |
|--------------------------------------|----------------------|------|------|-------|------|---|
| Collector-base breakdown voltage | BV _{CB0} | 50 | 60 | 70 | V | I _c =50μA |
| Collector-emitter breakdown voltage | BV _{CEO} | 50 | 60 | 70 | V | I _c =5mA |
| Collector cutoff current | I _{cB0} | - | - | 10 | μA | V _{CB} =40V |
| Emitter cutoff current | I _{EB0} | - | - | 3 | mA | V _{EB} =5V |
| Collector-emitter saturation voltage | V _{CE(sat)} | - | 1 | 1.5 | V | I _c /I _B =1.5A/6mA |
| DC current transfer ratio | h _{FE} | 2000 | - | 10000 | - | V _{CE} /I _c =5V/1.5A |
| Transition frequency | f _r | - | 80 | - | MHz | V _{CE} =5V, I _E =-0.2A, f=30MHz |
| Output capacitance | C _{ob} | - | 30 | - | pF | V _{CB} =10V, I _E =0A, f=1MHz |
| Turn-on time | t _{on} | - | 0.4 | - | μs | I _c =1.5A, R _L =14Ω |
| Storage time | t _{stg} | - | 1.5 | - | μs | I _{B1} =-I _{B2} =6mA |
| Fall time | t _r | - | 0.4 | - | μs | V _{CC} ≈ 20V |

*1 Measured using pulse current.

*2 Transition frequency of the device.