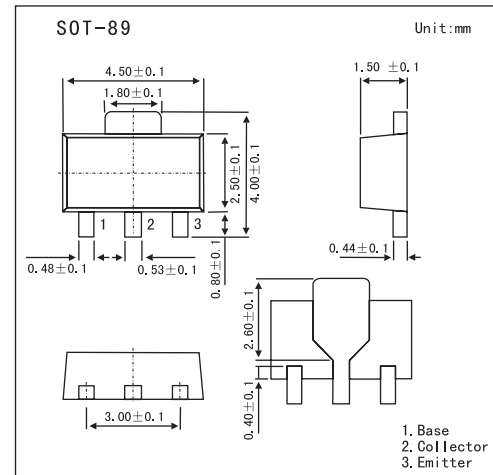


NPN Epitaxial Planar Silicon Transistor

2SD1624

■ Features

- Low collector-to-emitter saturation voltage.
- Fast switching speed.

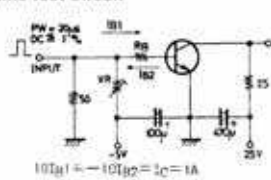
■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

| Parameter | Symbol | Rating | Unit |
|---------------------------|-----------|-------------|------------------|
| Collector-base voltage | V_{CB0} | 60 | V |
| Collector-emitter voltage | V_{CE0} | 50 | V |
| Emitter-base voltage | V_{EB0} | 6 | V |
| Collector current | I_C | 3 | A |
| Collector current (pulse) | I_{CP} | 6 | A |
| Collector dissipation | P_C | 500 | mW |
| | P_C^* | 1.5 | W |
| Junction temperature | T_j | 150 | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | -55 to +150 | $^\circ\text{C}$ |

* Mounted on ceramic board(250mm2X0.8mm)

2SD1624

■ Electrical Characteristics Ta = 25°C

| Parameter | Symbol | Testconditions | Min | Typ | Max | Unit | |
|--------------------------------------|----------------------|---|-----|------|-----|------|----|
| Collector cutoff current | ICBO | V _{CB} = 40 V, I _E =0 | | | 1 | μA | |
| Emitter cutoff current | IEBO | V _{EB} = 4 V, I _C =0 | | | 1 | μA | |
| DC current gain | hFE | V _{CE} = 2 V, I _C = 100 mA | 100 | | 560 | | |
| Gain bandwidth product | f _T | V _{CE} = 10 V, I _C = 50 mA | | 150 | | MHz | |
| Output capacitance | C _{ob} | V _{CB} = 10 V, f = 1.0MHz | | 25 | | pF | |
| Collector-emitter saturation voltage | V _{CE(sat)} | I _C = 2 A, I _B = 100 mA | | 0.19 | 0.5 | V | |
| Base-emitter saturation voltage | V _{BE(sat)} | I _C = 2 A, I _B = 100 mA | | | 1.2 | V | |
| Collector-base breakdown voltage | V _{(BR)CBO} | I _C = 10μA, I _E = 0 | 60 | | | V | |
| Collector-emitter breakdown voltage | V _{(BR)CEO} | I _C = 1mA, R _{BE} = ∞ | 50 | | | V | |
| Emitter-base breakdown voltage | V _{(BR)EBO} | I _E = 10μA, I _C = 0 | 6 | | | V | |
| Turn-on time | ton | Switching Time Test Circuit  | | 70 | | ns | |
| Storage time | tstg | | | | 650 | | ns |
| Turn-off time | tf | | | | 35 | | ns |

■ hFE Classification

| Marking | DG | | | |
|---------|---------|---------|---------|---------|
| Rank | R | S | T | U |
| hFE | 100~200 | 140~280 | 200~400 | 280~560 |