2SD2598

Silicon NPN epitaxial planer type darlington

For low-frequency amplification

Features

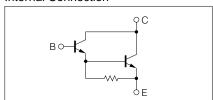
- Forward current transfer ratio h_{FE} is designed high, which is appropriate to the driver circuit of motors and printer bammer: h_{FE} = 4000 to 20000.
- A shunt resistor is omitted from the driver.
- M type package allowing easy automatic and manual insertion as well as stand-alone fixing to the printed circuit board.

Absolute Maximum Ratings (Ta=25°C)

| Parameter | Symbol | Ratings | Unit |
|------------------------------|----------------|-------------------|------|
| Collector to base voltage | V_{CBO} | 60 | V |
| Collector to emitter voltage | V_{CEO} | 50 | V |
| Emitter to base voltage | $V_{\rm EBO}$ | 5 | V |
| Peak collector current | I_{CP} | 750 | mA |
| Collector current | I_{C} | 500 | mA |
| Collector power dissipation | P_C^{*1} | 1 | W |
| Junction temperature | T _j | 150 | °C |
| Storage temperature | T_{stg} | −55 ~ +150 | °C |

^{*} Printed circuit board: Copper foil area of 1cm² or more, and the board thickness of 1.7mm for the collector portion

Internal Connection



Electrical Characteristics (Ta=25°C)

| Parameter | Symbol | Conditions | min | typ | max | Unit |
|---|----------------------|---|------|-----|-------|------|
| Collector cutoff current | I _{CBO} | $V_{CB} = 25V, I_{E} = 0$ | | | 100 | nA |
| Emitter cutoff current | I _{EBO} | $V_{EB} = 4V, I_{C} = 0$ | | | 100 | nA |
| Collector to base voltage | V _{CBO} | $I_{\rm C} = 100 \mu A, I_{\rm E} = 0$ | 60 | | | V |
| Collector to emitter voltage | V _{CEO} | $I_C = 1 \text{mA}, I_B = 0$ | 50 | | | V |
| Emitter to base voltage | V _{EBO} | $I_{\rm E} = 100 \mu A, I_{\rm C} = 0$ | 5 | | | V |
| Forward current transfer ratio | h _{FE} *1 | $V_{CE} = 10V, I_C = 500 \text{mA}^{*2}$ | 4000 | | 20000 | |
| Collector to emitter saturation voltage | V _{CE(sat)} | $I_C = 500 \text{mA}, I_B = 0.5 \text{mA}^{*2}$ | | | 2.5 | V |
| Base to emitter saturation voltage | V _{BE(sat)} | $I_C = 500 \text{mA}, I_B = 0.5 \text{mA}^{*2}$ | | | 3.0 | V |
| Transition frequency | f_{T} | $V_{CB} = 10V, I_E = -50mA, f = 200MHz$ | | 200 | | MHz |

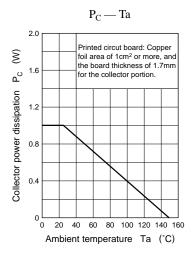
^{*1}hFE Rank classification

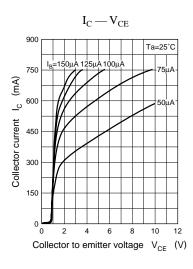
| Rank | Q | R | | |
|----------|--------------|--------------|--|--|
| h_{FE} | 4000 ~ 10000 | 8000 ~ 20000 | | |

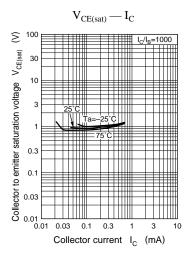
*2 Pulse measurement

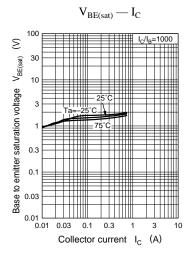
(HW type)

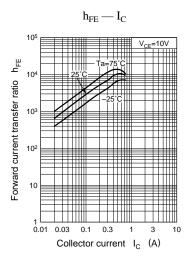
Transistor 2SD2598

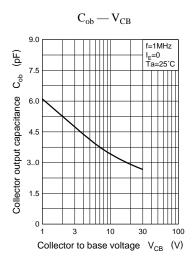












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