2SD2096

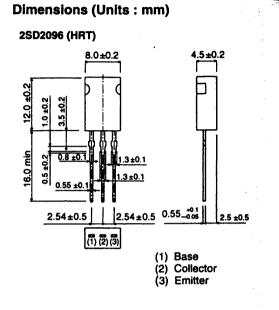
Transistor, NPN

Features

- available in HRT package
- low collector saturation voltage, typically $V_{CE(sat)} = 0.3$ V at $I_C/I_B = 2$ A/ 0.2 A
- excellent current-to-gain characteristics
- large collector loss: $P_C = 1.8 W$
- wide safe operating area (SOA)

Applications

• low frequency power amplifier



Absolute maximum ratings (T_a = 25°C)

| Parameter | Symbol | Limits | Unit | Conditions |
|------------------------------|------------------|------------|------|---------------------------------------|
| Collector-to-base voltage | V _{CBO} | 80 | V | |
| Collector-to-emitter voltage | V _{CEO} | 60 | V | |
| Emitter-to-base voltage | V _{EBO} | 5 | V | |
| Collector current | lc – | 3 | A | Continuous (dc) |
| | | 6 | A | Single pulse, P _W = 100 ms |
| Collector dissipation | Pc | 1.8 | W | |
| Junction temperature | Tj | 150 | °C | |
| Storage temperature | T _{stg} | -55 ~ +150 | °C | |

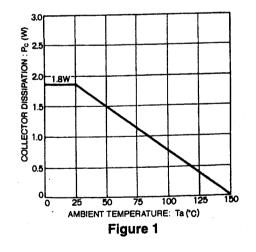
| Parameter | Symbol | Min | Typical | Max | Unit | Conditions | |
|--|----------------------|-----|---------|-----|------|---|--|
| Collector-to-base breakdown voltage | BV _{CBO} | 80 | | | v | I _C = 50 μA | |
| Collector-to-emitter breakdown voltage | BV _{CEO} | 60 | | | v | I _C = 1 mA | |
| Emitter-to-base breakdown voltage | BV _{EBO} | 5 | | | V | I _E = 50 μA | |
| Collector cutoff current | Ісво | | | 10 | μΑ | V _{CB} = 60 V | |
| Emitter cutoff current | IEBO | | | 10 | μΑ | V _{EB} = 4 V | |
| DC current gain | h _{FE} | 60 | | 320 | | $V_{CE} = 5 V$, $I_{C} = 0.5 A$, single pulse | |
| Collector-to-emitter saturation voltage | V _{CE(sat)} | | 0.3 | 1.0 | V | $I_C/I_B = 2 \text{ A}/0.2 \text{ A}$, single pulse | |
| Base-to-emitter saturation voltage | V _{BE(sat)} | | | 1.5 | V | $I_C/I_B = 2 \text{ A}/0.2 \text{ A}$, single pulse | |
| Transition frequency | f _T | | 8 | | MHz | $V_{CE} = 5 V$, $I_E = -0.5 A$, $f = 5 MHz$ | |
| Output capacitance | C _{ob} | | 70 | | pF | $V_{CB} = 10 \text{ V}, I_E = 0 \text{ A}, f = 1 \text{ MHz}$ | |

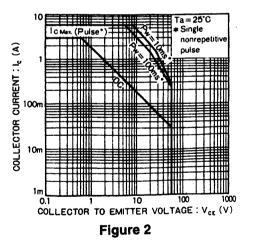
Electrical characteristics (unless otherwise noted, $T_a = 25^{\circ}C$)

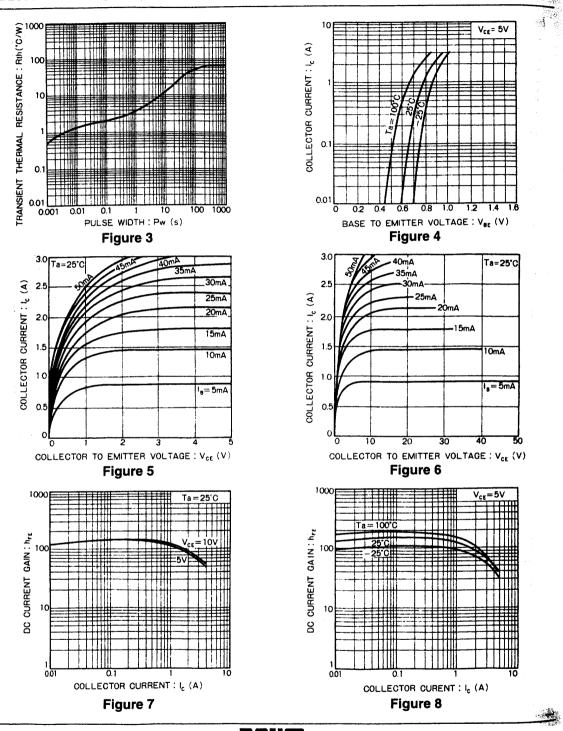
h_{FE} rankings

| Item | D | E | F |
|-----------------|----------|-----------|-----------|
| h _{FE} | 60 - 120 | 100 ~ 200 | 160 ~ 320 |

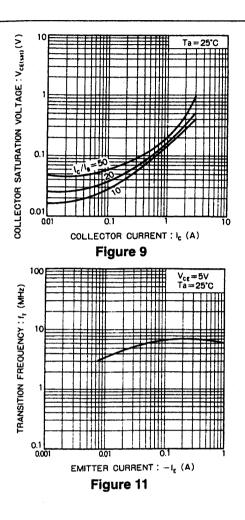
Electrical characteristic curves

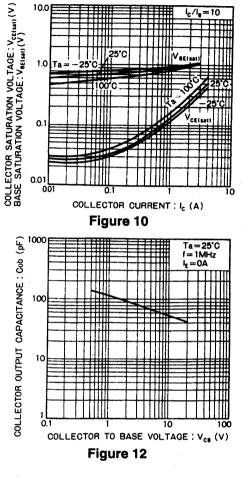






NC.





Ordering information

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