
2SC5079

Silicon NPN Epitaxial

HITACHI

ADE-208-222

1st. Edition

Application

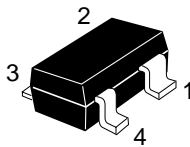
VHF / UHF wide band amplifier

Features

- High gain bandwidth product
 $f_T = 12 \text{ GHz Typ}$
- High gain, low noise figure
 $PG = 17 \text{ dB Typ}$, $NF = 1.6 \text{ dB Typ}$ at $f = 900 \text{ MHz}$

Outline

CMPAK-4



1. Collector
2. Emitter
3. Base
4. Emitter

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

| Item | Symbol | Ratings | Unit |
|------------------------------|------------------|-------------|------------------|
| Collector to base voltage | V_{CBO} | 15 | V |
| Collector to emitter voltage | V_{CEO} | 8 | V |
| Emitter to base voltage | V_{EBO} | 1.5 | V |
| Collector current | I_{C} | 20 | mA |
| Collector power dissipation | P_{C} | 100 | mW |
| Junction temperature | T_{j} | 150 | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | -55 to +150 | $^\circ\text{C}$ |

Electrical Characteristics ($T_a = 25^\circ\text{C}$)

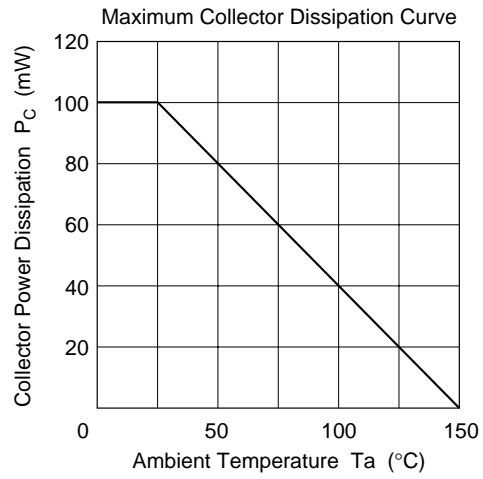
| Item | Symbol | Min | Typ | Max | Unit | Test conditions |
|------------------------------|------------------|-----|-----|-----|---------------|--|
| Collector cutoff current | I_{CBO} | — | — | 10 | μA | $V_{\text{CB}} = 15 \text{ V}, I_{\text{E}} = 0$ |
| | I_{CEO} | — | — | 1 | mA | $V_{\text{CE}} = 8 \text{ V}, R_{\text{BE}} = \infty$ |
| Emitter cutoff current | I_{EBO} | — | — | 10 | μA | $V_{\text{EB}} = 1.5 \text{ V}, I_{\text{C}} = 0$ |
| DC current transfer ratio | h_{FE} | 50 | 120 | 160 | | $V_{\text{CE}} = 5 \text{ V}, I_{\text{C}} = 10 \text{ mA}$ |
| Collector output capacitance | C_{ob} | — | 0.3 | 0.8 | pF | $V_{\text{CB}} = 5 \text{ V}, I_{\text{E}} = 0, f = 1 \text{ MHz}$ |
| Gain bandwidth product | f_{T} | 9 | 12 | — | GHz | $V_{\text{CE}} = 5 \text{ V}, I_{\text{C}} = 5 \text{ mA}$ |
| Power gain | PG | 14 | 17 | 20 | dB | $V_{\text{CE}} = 5 \text{ V}, I_{\text{C}} = 10 \text{ mA}, f = 900 \text{ MHz}$ |
| Noise figure | NF | — | 1.6 | 2.5 | dB | $V_{\text{CE}} = 5 \text{ V}, I_{\text{C}} = 5 \text{ mA}, f = 900 \text{ MHz}$ |

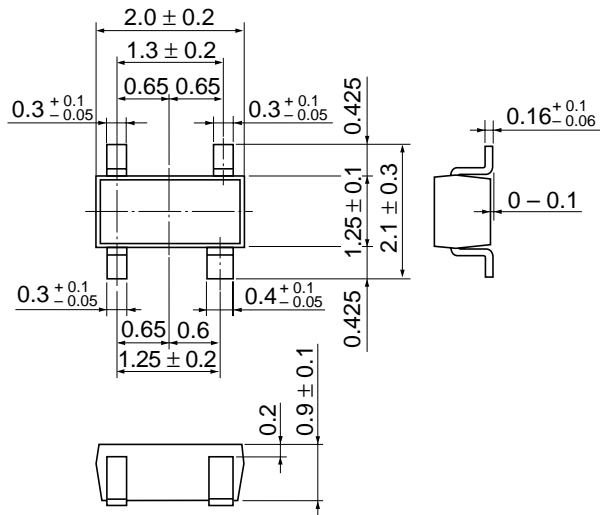
Note: Marking is "ZC-".

Attention: This device is very sensitive to electro static discharge.

It is recommended to adopt appropriate cautions when handling this transistor.

See characteristic curves of 2SC5078.





| | |
|--------------------------|------------|
| Hitachi Code | CMPAK-4(T) |
| JEDEC | — |
| EIAJ | Conforms |
| Weight (reference value) | 0.006 g |

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