
2SC4593

Silicon NPN Epitaxial

HITACHI

Application

UHF / VHF wide band amplifier

Outline

CMPAK



- 1. Emitter
- 2. Base
- 3. Collector

2SC4593

Absolute Maximum Ratings (Ta = 25°C)

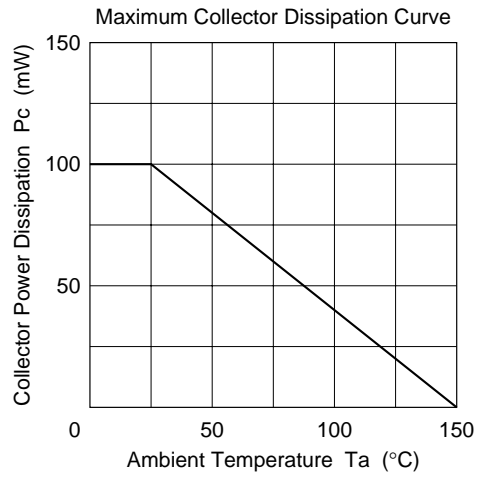
| Item | Symbol | Ratings | Unit |
|------------------------------|-----------|-------------|------|
| Collector to base voltage | V_{CBO} | 15 | V |
| Collector to emitter voltage | V_{CEO} | 9 | V |
| Emitter to base voltage | V_{EBO} | 1.5 | V |
| Collector current | I_C | 50 | mA |
| Collector power dissipation | P_C | 100 | mW |
| Junction temperature | T_j | 150 | °C |
| Storage temperature | Tstg | -55 to +150 | °C |

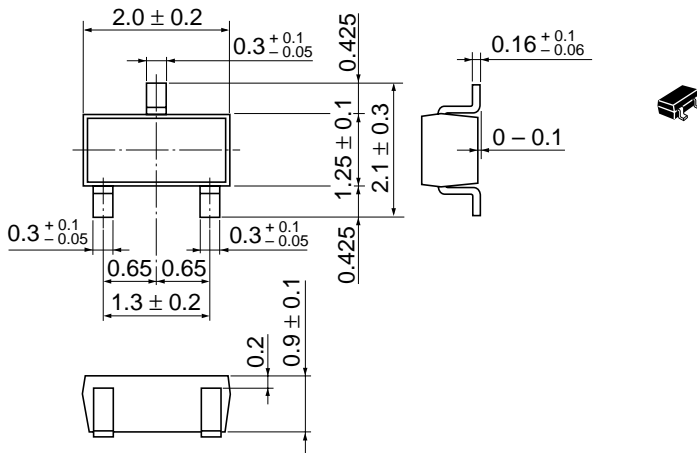
Electrical Characteristics (Ta = 25°C)

| Item | Symbol | Min | Typ | Max | Unit | Test conditions |
|-------------------------------------|---------------|-----|------|-----|---------|---|
| Collector to base breakdown voltage | $V_{(BR)CBO}$ | 15 | — | — | V | $I_C = 10 \mu A, I_E = 0$ |
| Collector cutoff current | I_{CBO} | — | — | 1 | μA | $V_{CB} = 12 V, I_E = 0$ |
| | I_{CEO} | — | — | 1 | mA | $V_{CE} = 9 V, R_{BE} = \infty$ |
| Emitter cutoff current | I_{EBO} | — | — | 10 | μA | $V_{EB} = 1.5 V, I_C = 0$ |
| DC current transfer ratio | h_{FE} | 40 | 120 | 250 | — | $V_{CE} = 5 V, I_C = 20 mA$ |
| Collector output capacitance | Cob | — | 0.8 | 1.5 | pF | $V_{CB} = 5 V, I_E = 0,$ $f = 1MHz$ |
| Gain bandwidth product | f_T | 6.5 | 9.0 | — | GHz | $V_{CE} = 5 V, I_C = 20 mA$ |
| Power gain | PG | 9.5 | 12.5 | — | dB | $V_{CE} = 5 V, I_C = 20 mA,$ $f = 900 MHz$ |
| Noise figure | NF | — | 1.2 | 2.5 | dB | $V_{CE} = 5 V, I_C = 5 mA,$ $f = 900 MHz$ |

Note: Marking is "XM-".

See characteristic curve of 2SC4592





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

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