

DMC506E2

Silicon NPN epitaxial planar type

For high-frequency amplification
DMC206E2 in SMini6 type package

■ Features

- High transition frequency f_T
- Halogen-free / RoHS compliant
(EU RoHS / UL-94 V-0 / MSL: Level 1 compliant)

■ Marking Symbol: D2

■ Basic Part Number

Dual DSC2G02 (Individual)

■ Packaging

DMC506E20R Embossed type (Thermo-compression sealing): 3 000 pcs / reel (standard)

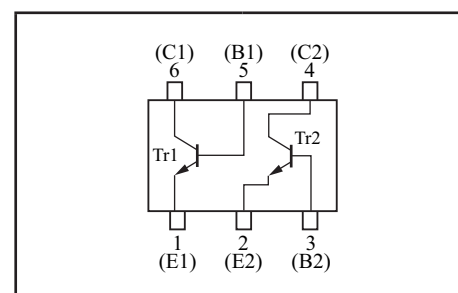
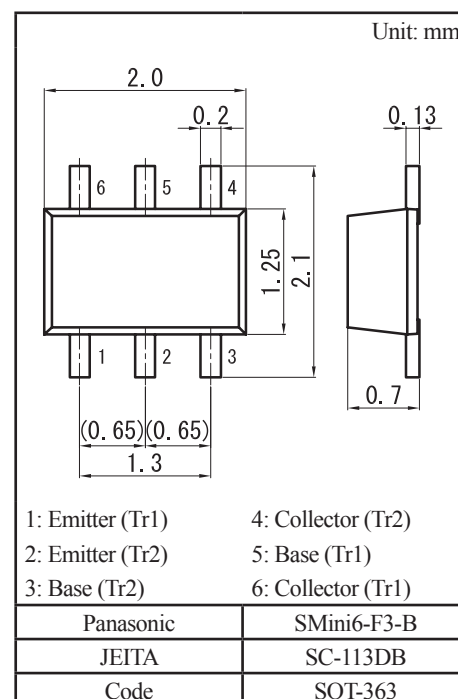
■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

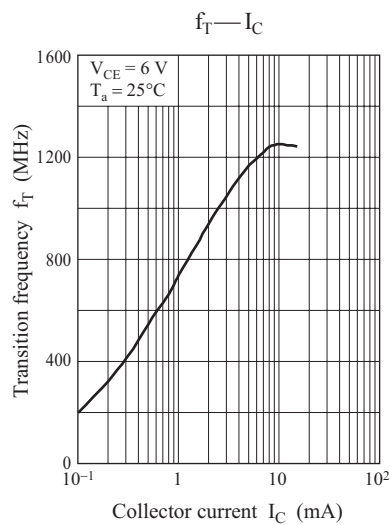
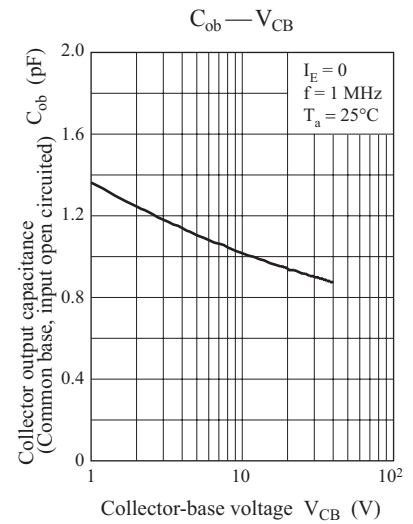
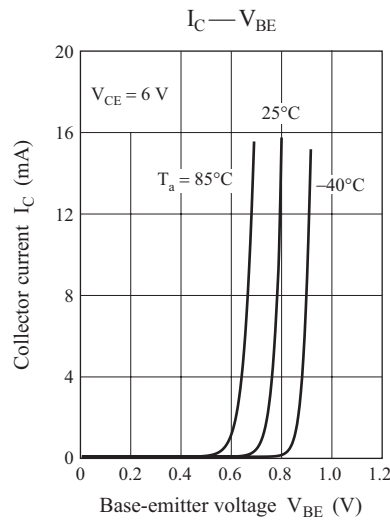
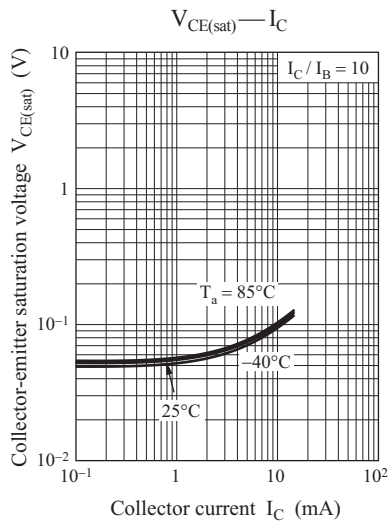
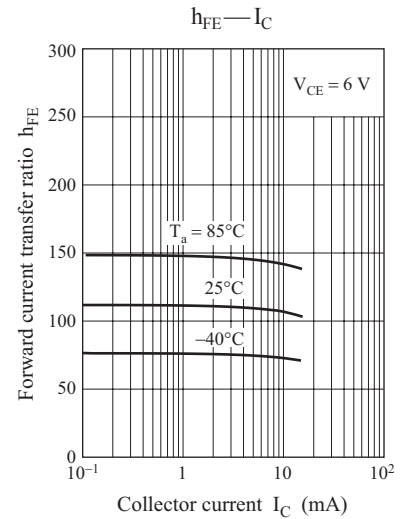
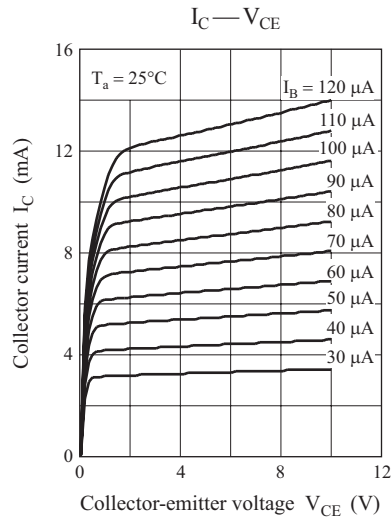
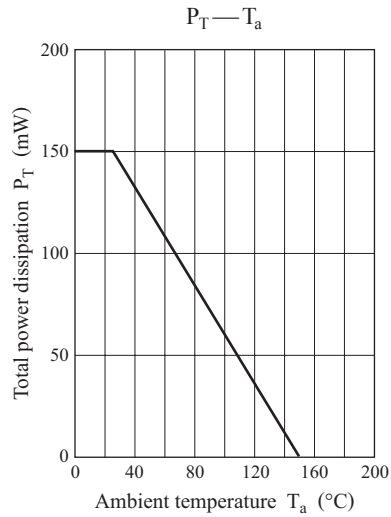
| Parameter | | Symbol | Rating | Unit |
|------------|---------------------------------------|-----------|-------------|------------------|
| Tr1 Tr2 | Collector-base voltage (Emitter open) | V_{CBO} | 30 | V |
| | Collector-emitter voltage (Base open) | V_{CEO} | 20 | V |
| | Emitter-base voltage (Collector open) | V_{EBO} | 3 | V |
| | Collector current | I_C | 15 | mA |
| Overall | Total power dissipation | P_T | 150 | mW |
| | Junction temperature | T_j | 150 | $^\circ\text{C}$ |
| | Operating ambient temperature | T_{opr} | -40 to +85 | $^\circ\text{C}$ |
| | Storage temperature | T_{stg} | -55 to +150 | $^\circ\text{C}$ |

■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

| Parameter | Symbol | Conditions | Min | Typ | Max | Unit |
|--|-----------|--|-----|------|-----|------|
| Collector-base voltage (Emitter open) | V_{CBO} | $I_C = 10 \mu\text{A}$, $I_E = 0$ | 30 | | | V |
| Collector-emitter voltage (Base open) | V_{EBO} | $I_E = 10 \mu\text{A}$, $I_C = 0$ | 3 | | | V |
| Base-emitter voltage | V_{BE} | $V_{CE} = 6 \text{ V}$, $I_C = 1 \text{ mA}$ | | 0.72 | | V |
| Forward current transfer ratio | h_{FE} | $V_{CE} = 6 \text{ V}$, $I_C = 1 \text{ mA}$ | 65 | | 260 | — |
| Transition frequency | f_T | $V_{CE} = 6 \text{ V}$, $I_C = 1 \text{ mA}$ | 450 | 650 | | MHz |
| Reverse transfer capacitance(Common emitter) | C_{re} | $V_{CE} = 6 \text{ V}$, $I_C = 1 \text{ mA}$, $f = 10.7 \text{ MHz}$ | | 0.6 | | pF |
| Power gain | PG | $V_{CE} = 6 \text{ V}$, $I_C = 1 \text{ mA}$, $f = 100 \text{ MHz}$ | | 24 | | dB |
| Noise figure | NF | $V_{CE} = 6 \text{ V}$, $I_C = 1 \text{ mA}$, $f = 100 \text{ MHz}$ | | 3.3 | | dB |

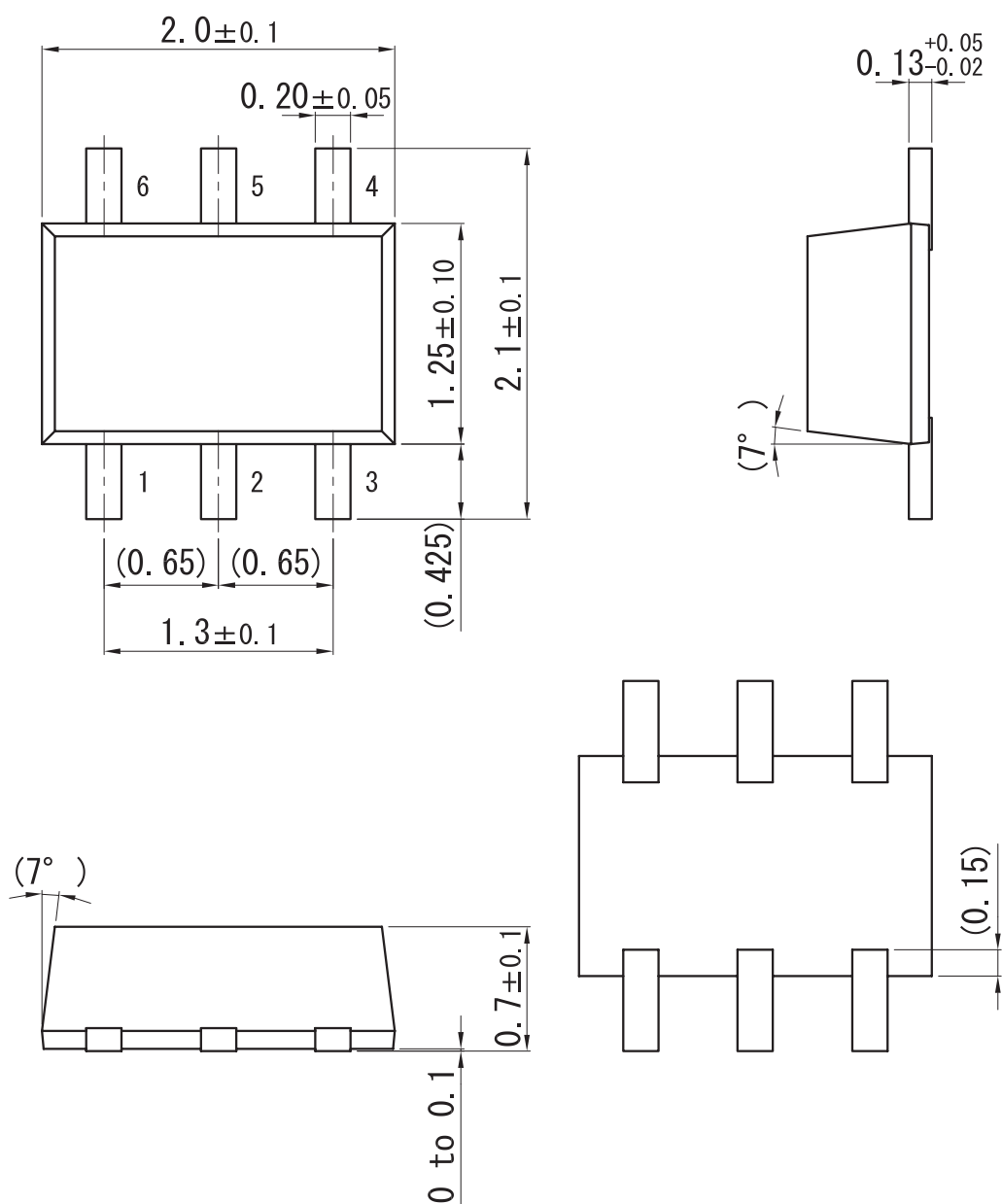
Note) Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.



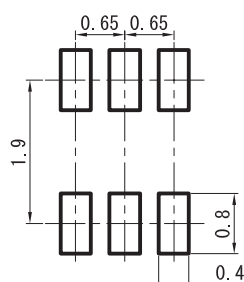


SMini6-F3-B

Unit: mm



■ Land Pattern (Reference) (Unit: mm)



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