

DMC506E2

Silicon NPN epitaxial planar type

For high-frequency amplification
DMC206E2 in SMini6 type package

■ Features

- High transition frequency f_T
- Contributes to miniaturization of sets, reduction of component count.
- Eco-friendly Halogen-free package

■ Basic Part Number

Dual DSC2G02 (Individual)

■ Packaging

DMC506E20R Embossed type (Thermo-compression sealing): 3000 pcs / reel (standard)

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

| Parameter | Symbol | Rating | Unit |
|---------------------------------------|-----------|-------------|------------------|
| 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 |
| Total power dissipation | P_T | 150 | mW |
| Junction temperature | T_j | 150 | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | -55 to +150 | $^\circ\text{C}$ |

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

| 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.

■ Package

• Code

SMini6-F3-B

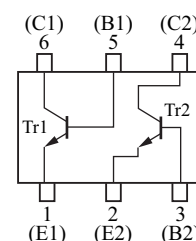
Package dimension clicks here.→

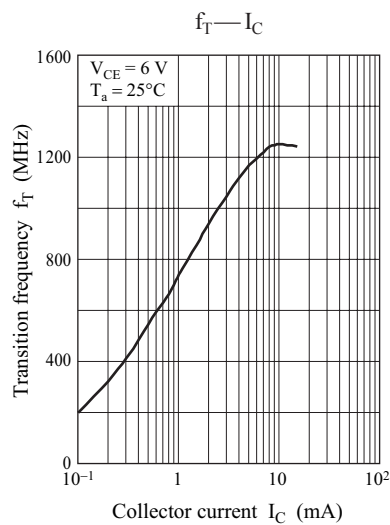
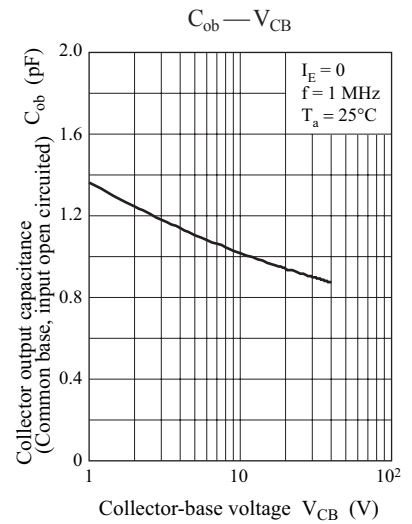
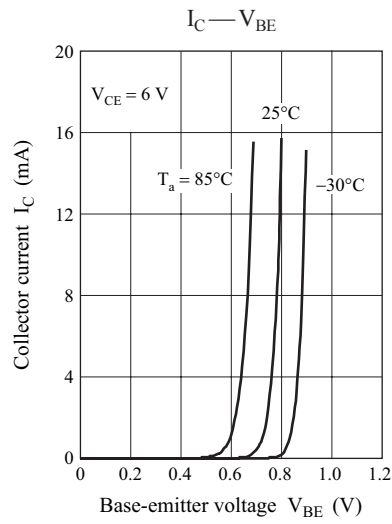
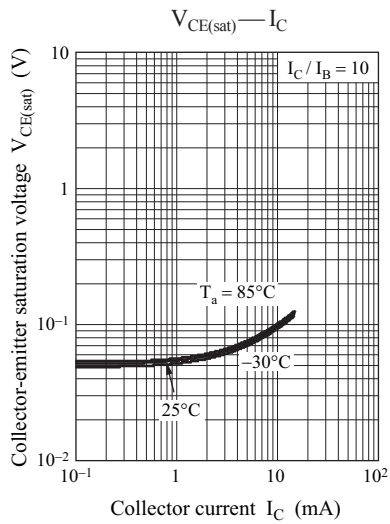
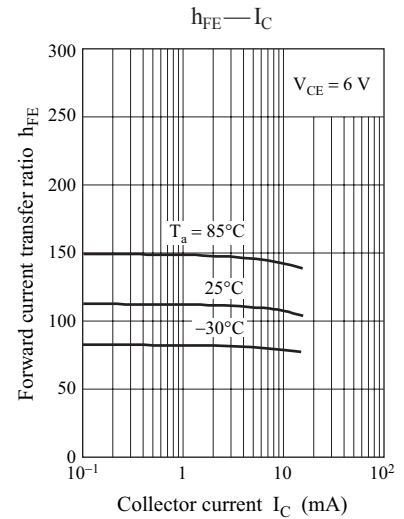
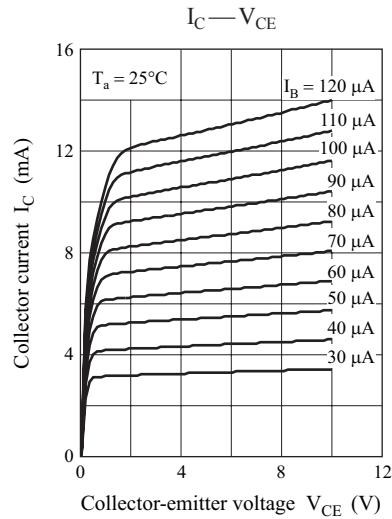
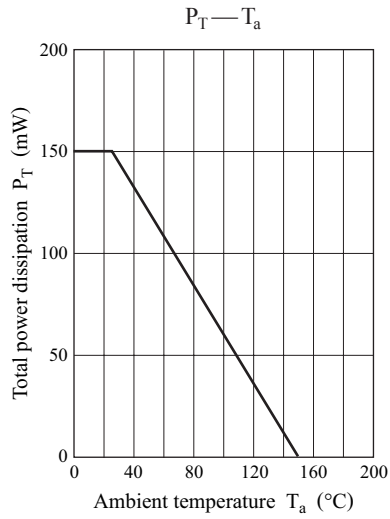
• Pin Name

- | | |
|------------------|--------------------|
| 1: Emitter (Tr1) | 4: Collector (Tr2) |
| 2: Emitter (Tr2) | 5: Base (Tr1) |
| 3: Base (Tr2) | 6: Collector (Tr1) |

■ Marking Symbol: D2

■ Internal Connection





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