



SANYO Semiconductors

DATA SHEET

7MP05SF — PNP Epitaxial Planar Silicon Transistor

High-Frequency General-Purpose Amplifier Applications

Features

- High f_T and small C_{re} ($f_T=750\text{MHz}$ typ, $C_{re}=1.3\text{pF}$ typ).
- Complementary pair with the 7MN05SF.
- Small package permitting 7MP05SF applied sets to made small and slim.

Specifications

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

| Parameter | Symbol | Conditions | Ratings | Unit |
|------------------------------|-----------|--|-------------|------------------|
| Collector-to-Base Voltage | V_{CB0} | | -15 | V |
| Collector-to-Emitter Voltage | V_{CEO} | | -12 | V |
| Emitter-to-Base Voltage | V_{EBO} | | -3 | V |
| Collector Current | I_C | | -50 | mA |
| Collector Dissipation | P_C | Mounted on a ceramic board (600mm ² ×0.8mm) | 150 | mW |
| Junction Temperature | T_j | | 150 | $^\circ\text{C}$ |
| Storage Temperature | T_{stg} | | -55 to +150 | $^\circ\text{C}$ |

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

| Parameter | Symbol | Conditions | Ratings | | | Unit |
|---|---------------|---|---------|------|------|---------------|
| | | | min | typ | max | |
| Collector Cutoff Current | I_{CB0} | $V_{CB}=-12\text{V}$, $I_E=0\text{A}$ | | | -0.1 | μA |
| Emitter Cutoff Current | I_{EBO} | $V_{EB}=-2\text{V}$, $I_C=0\text{A}$ | | | -0.1 | μA |
| DC Current Gain | h_{FE} | $V_{CE}=-10\text{V}$, $I_C=-5\text{mA}$ | 60 | | 200 | |
| Gain-Bandwidth Product | f_T | $V_{CE}=-10\text{V}$, $I_C=-5\text{mA}$ | | 750 | | MHz |
| Output Capacitance | C_{ob} | $V_{CB}=-10\text{V}$, $f=1\text{MHz}$ | | 1.7 | | pF |
| Reverse Transfer Capacitance | C_{re} | $V_{CB}=-10\text{V}$, $f=1\text{MHz}$ | | 1.3 | | pF |
| Collector-to-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C=-10\text{mA}$, $I_B=-1\text{mA}$ | | -0.1 | -0.3 | V |
| Noise Figure | NF | $V_{CE}=-10\text{V}$, $I_C=-10\text{mA}$, $f=100\text{MHz}$ | | 3.0 | | dB |

Marking : WD

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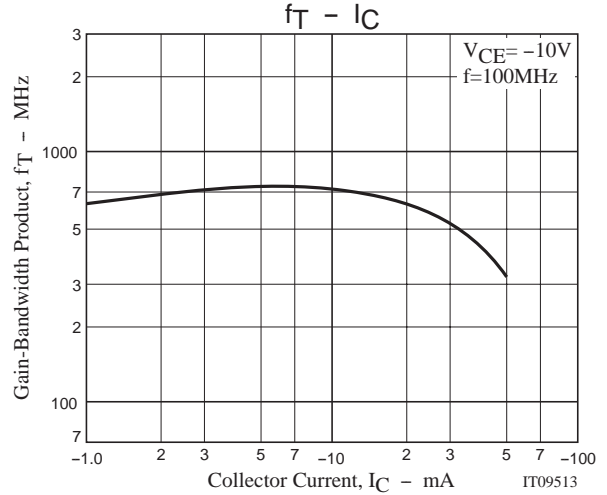
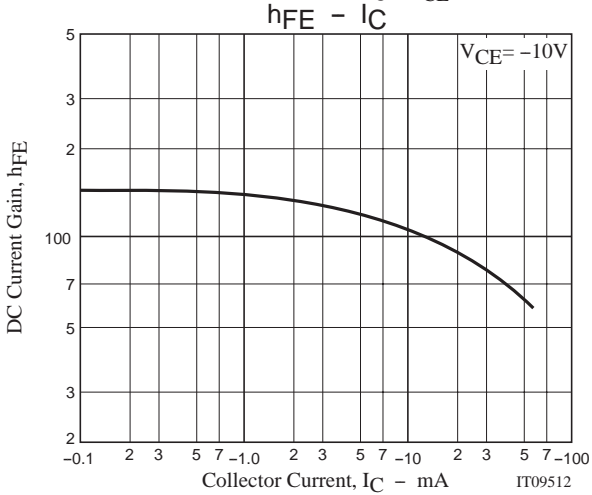
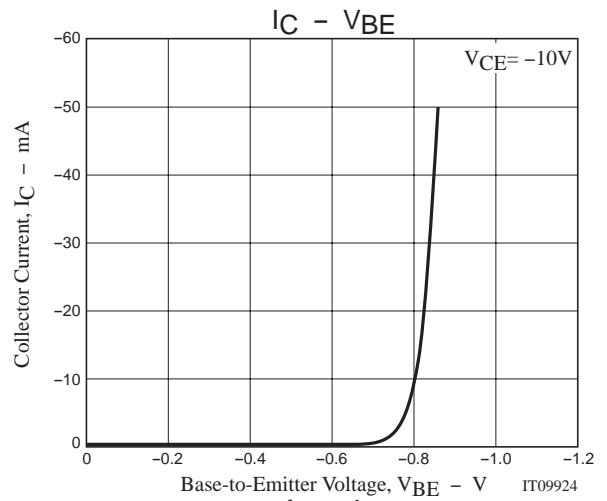
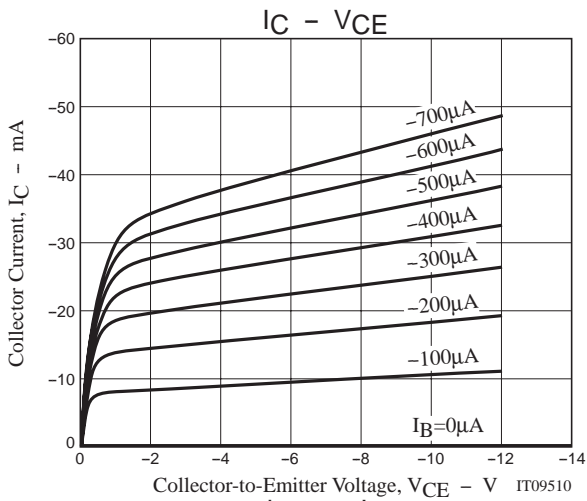
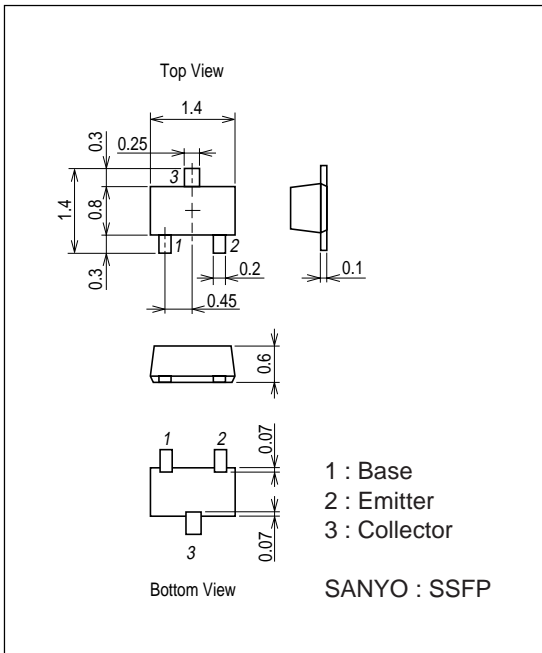
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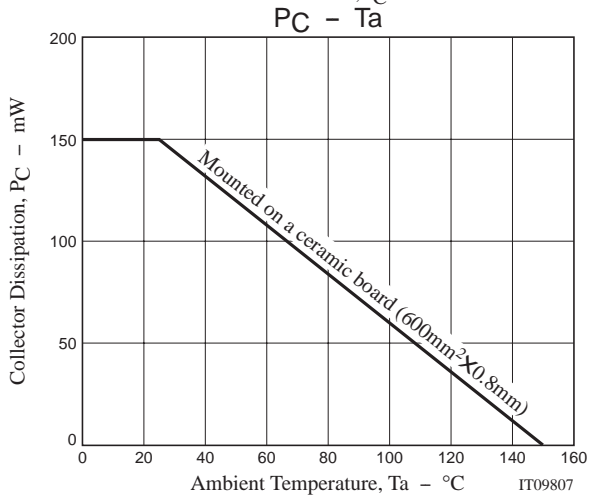
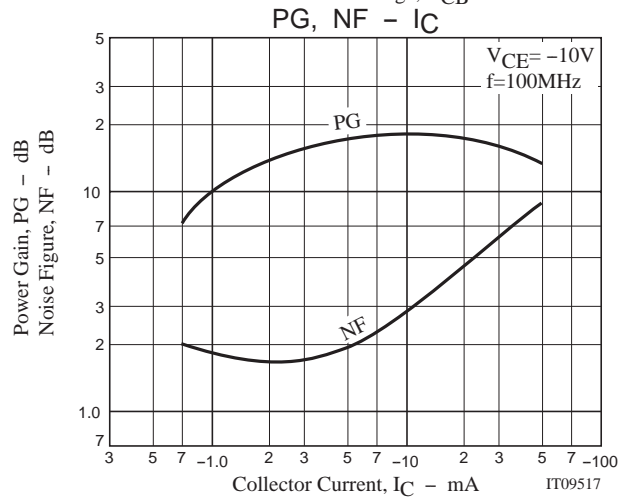
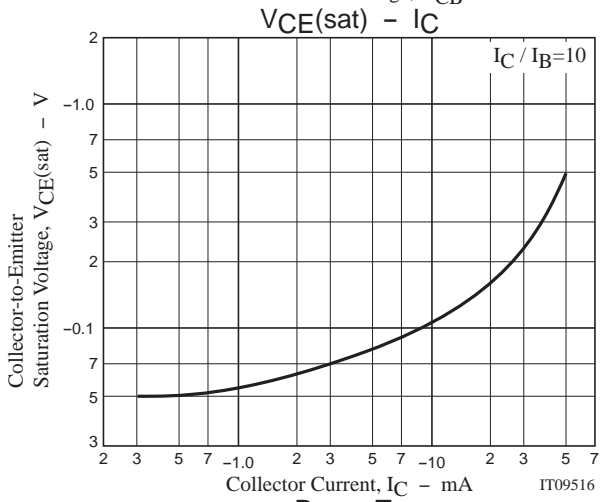
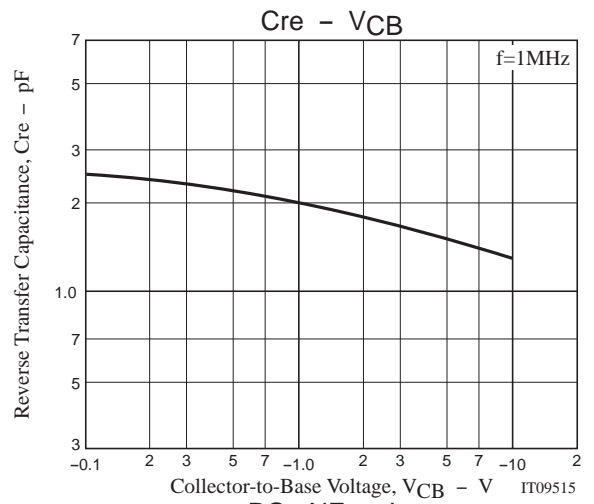
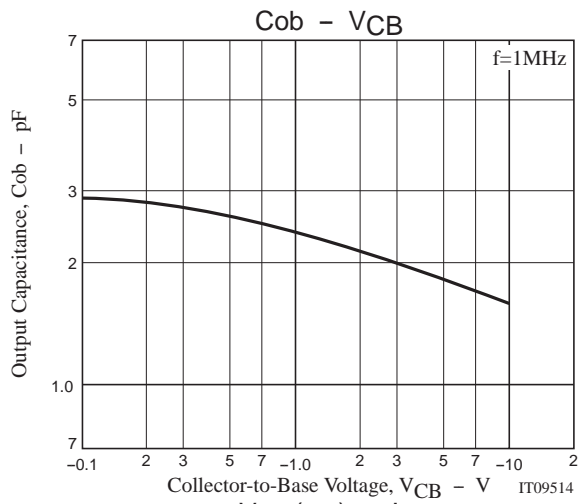
7MP05SF

Package Dimensions

unit : mm
7029-002



7MP05SF



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