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|--------------|---|----------------|
| SANYO | No.3195 | 2SC4400 |
| | NPN Epitaxial Planar Silicon Transistor High-Frequency General-Purpose Amp Applications | |

Features

- High power gain
- High cutoff frequency
- Small c_{ob} , c_{re}
- Very small-sized package permitting the 2SC4400-applied sets to be made small and slim

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

| | | | unit |
|------------------------------|-----------|---------------|------------------|
| Collector to Base Voltage | V_{CBO} | 40 | V |
| Collector to Emitter Voltage | V_{CEO} | 18 | V |
| Emitter to Base Voltage | V_{EBO} | 3 | V |
| Collector Current | I_C | 50 | mA |
| Collector Dissipation | P_C | 150 | mW |
| Junction Temperature | T_j | 150 | $^\circ\text{C}$ |
| Storage Temperature | T_{stg} | - 55 to + 150 | $^\circ\text{C}$ |

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

| | | | min | typ | max | unit |
|------------------------------|---------------|---|-----|------|------|---------------|
| Collector Cutoff Current | I_{CBO} | $V_{CB} = 18\text{V}, I_E = 0$ | | | 0.1 | μA |
| Emitter Cutoff Current | I_{EBO} | $V_{EB} = 2\text{V}, I_C = 0$ | | | 0.1 | μA |
| DC Current Gain | h_{FE} | $V_{CE} = 10\text{V}, I_C = 5\text{mA}$ | 60* | | 270* | |
| Gain-Bandwidth Product | f_T | $V_{CE} = 10\text{V}, I_C = 5\text{mA}$ | | 750 | | MHz |
| Output Capacitance | c_{ob} | $V_{CB} = 10\text{V}, f = 1\text{MHz}$ | | 0.7 | 1.2 | pF |
| Reverse Transfer Capacitance | c_{re} | $V_{CB} = 10\text{V}, f = 1\text{MHz}$ | | 0.45 | | pF |
| C-E Saturation Voltage | $V_{CE(sat)}$ | $I_C = 10\text{mA}, I_B = 1\text{mA}$ | | | 0.2 | V |
| B-C Time Constant | $r_{bb}'c_c$ | $V_{CE} = 10\text{V}, I_C = 5\text{mA}, f = 31.9\text{MHz}$ | | | 23 | ps |
| Power Gain | PG | $V_{CE} = 10\text{V}, I_C = 10\text{mA}, f = 100\text{MHz}$ | | 28 | | dB |

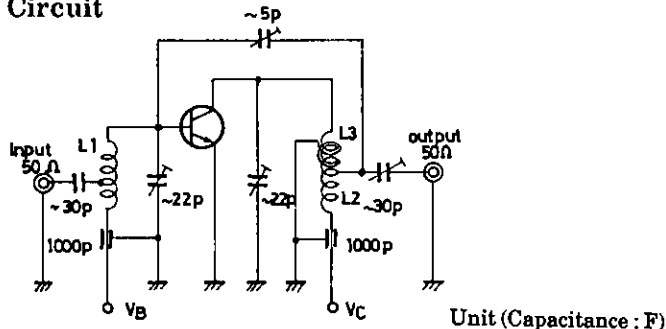
* : The 2SC4400 is classified by 5mA h_{FE} as follows.

| | | | | | | | | |
|----|---|-----|----|---|-----|-----|---|-----|
| 60 | 3 | 120 | 90 | 4 | 180 | 135 | 5 | 270 |
|----|---|-----|----|---|-----|-----|---|-----|

Marking : RT

h_{FE} rank : 3,4,5

PG Test Circuit

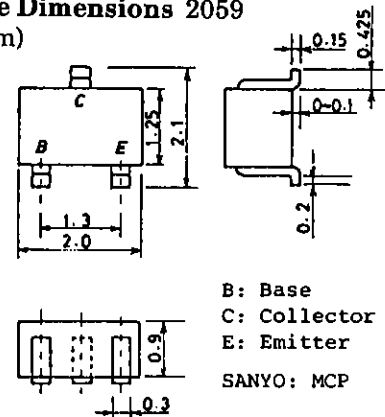


L_1 : 1mm ϕ plated wire, 10mm ϕ 5T, pitch 15mm, tap : 2T from base side

L_2 : 1mm ϕ plated wire, 10mm ϕ 7T, pitch 10mm, tap : 2T from V_C side

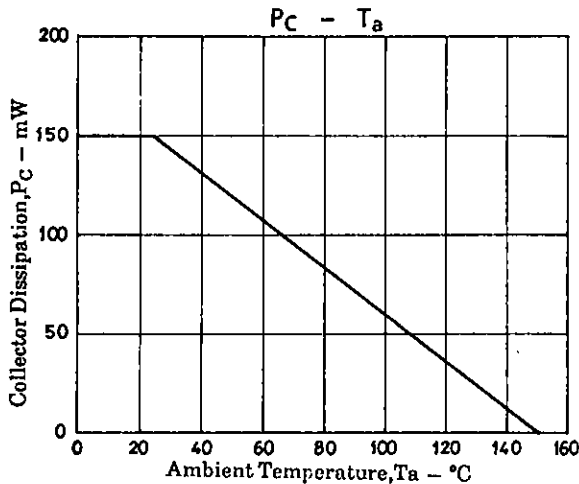
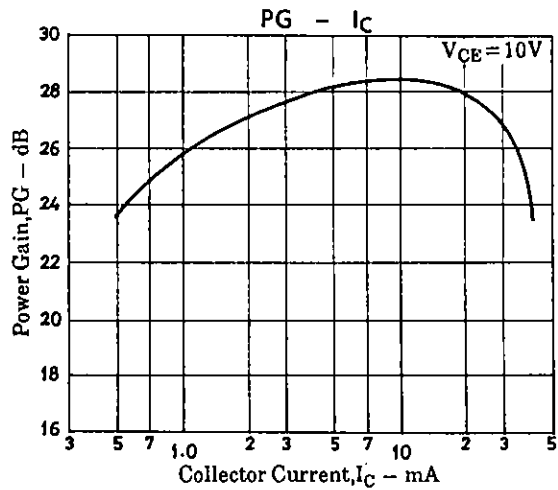
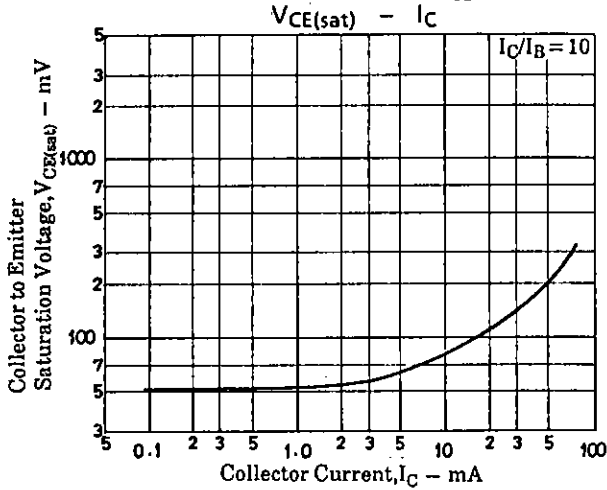
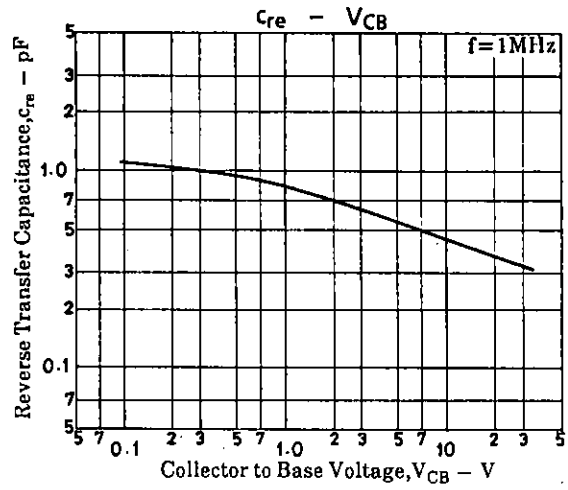
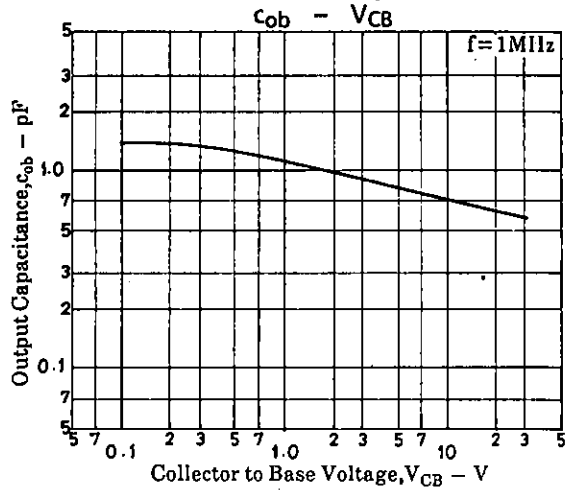
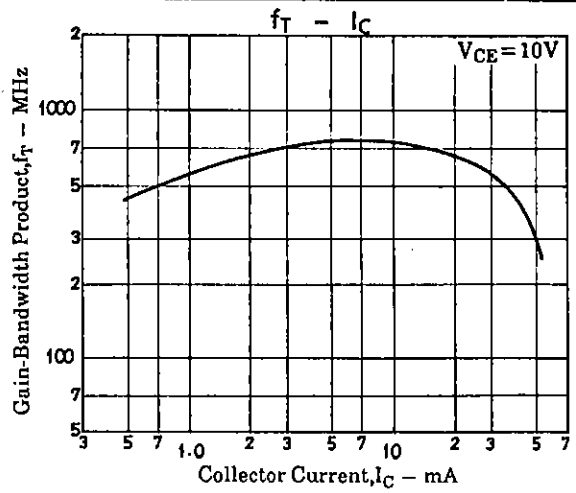
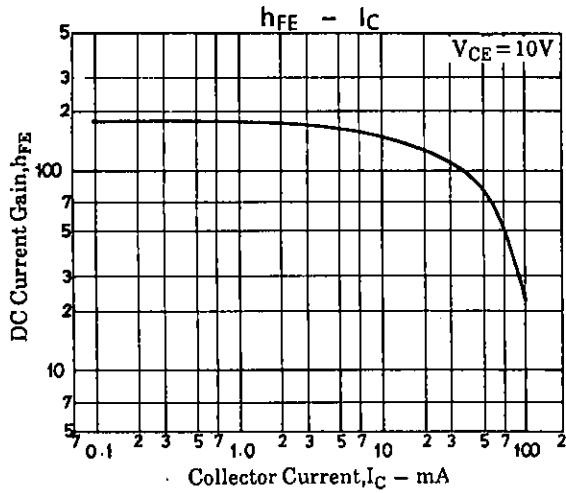
L_3 : 1mm ϕ enamel wire, 10mm ϕ 3T, pitch 10mm

Package Dimensions 2059
(unit : mm)



B: Base
C: Collector
E: Emitter
SANYO: MCP

2SC4400



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