

SANYO

No.796C

2SC2840

NPN Epitaxial Planar Type Silicon Transistor
FOR HIGH FREQUENCY AMPLIFIER USE

Features

- . FBET series.
- . Compact package enabling compactness of sets.
- . High f_T and small c_{re} ($f_T=600\text{MHz typ}$, $c_{re}=0.5\text{pF typ}$).

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

| | | unit |
|------------------------------|-----------|------------------------------|
| Collector to Base Voltage | V_{CBO} | 25 V |
| Collector to Emitter Voltage | V_{CEO} | 20 V |
| Emitter to Base Voltage | V_{EBO} | 3 V |
| Collector Current | I_C | 30 mA |
| Collector Dissipation | P_C | 150 mW |
| Junction Temperature | T_J | 125 $^\circ\text{C}$ |
| Storage Temperature | T_{stg} | -40 to +125 $^\circ\text{C}$ |

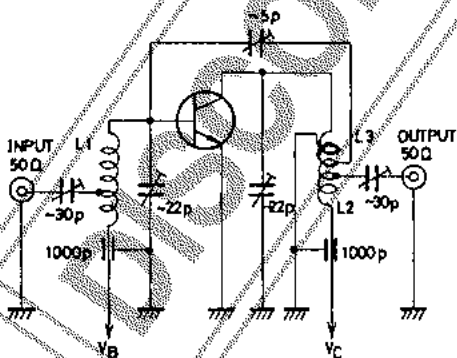
Electrical Characteristics at $T_a=25^\circ\text{C}$

| | | min | typ | max | unit |
|------------------------------|----------------------------------------------------------------------|-----|-----|------|---------------|
| Collector Cutoff Current | I_{CBO} $V_{CE}=10\text{V}, I_E=0$ | | | 0.1 | μA |
| Emitter Cutoff Current | I_{EBO} $V_{EB}=3\text{V}, I_C=0$ | | | 0.1 | μA |
| DC Current Gain | h_{FE} $V_{CE}=6\text{V}, I_C=1\text{mA}$ | 40* | | 200* | |
| Gain-Bandwidth Product | f_T $V_{CE}=6\text{V}, I_C=4\text{mA}$ | 360 | 600 | | MHz |
| Reverse Transfer Capacitance | c_{re} $V_{CB}=6\text{V}, f=1\text{MHz}$ | 0.5 | 0.8 | | pF |
| C-B Time Constant | $r_{bb} \tau_C$ $V_{CB}=6\text{V}, I_C=1\text{mA}, f=31.9\text{MHz}$ | | | 19 | ps |
| Noise Figure | NF $V_{CE}=6\text{V}, I_C=1\text{mA}, f=100\text{MHz}$ | 2.8 | | | dB |
| Power Gain | PG $V_{CE}=6\text{V}, I_C=1\text{mA}, f=100\text{MHz}$ | 27 | | | dB |

*:The 2SC2840 is classified by $1\text{mA } h_{FE}$ as follows :

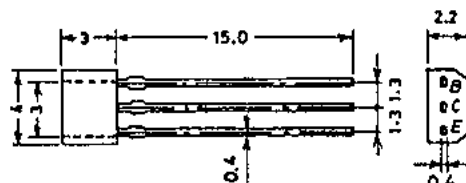
| | | | | | | | | |
|----|---|----|----|---|-----|-----|---|-----|
| 40 | C | 80 | 60 | D | 120 | 100 | E | 200 |
|----|---|----|----|---|-----|-----|---|-----|

NF, PC Test Circuit



- L1: 1mm ϕ plated wire, 10mm ϕ 5T, pitch 15mm, tap: 2T from base side.
- L2: 1mm ϕ plated wire, 10mm ϕ 7T, pitch 10mm, tap: 2T from V_C side.
- L3: 1mm ϕ enameled wire, 10mm ϕ 3T, pitch 10mm.

Case Outline 2033
(unit:mm)

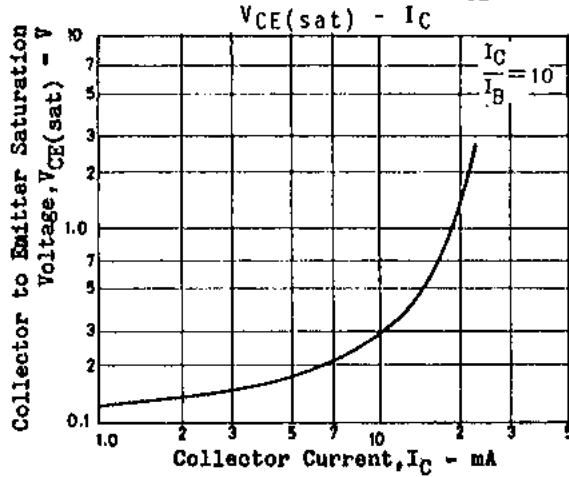
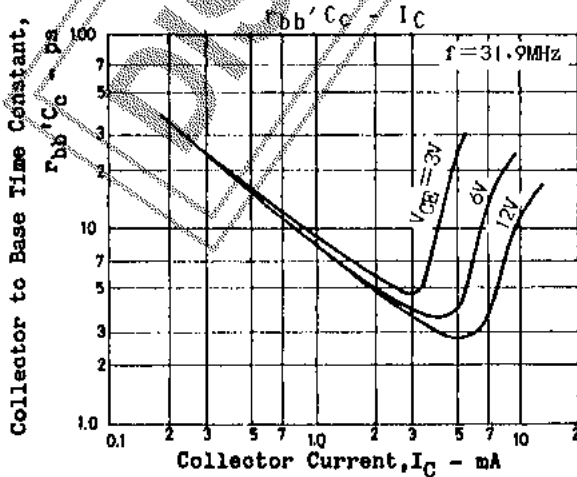
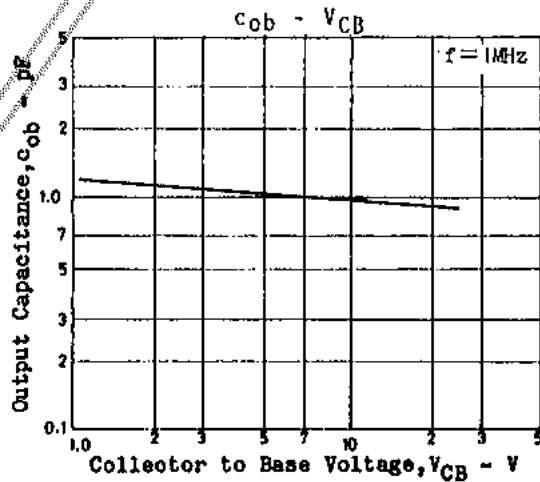
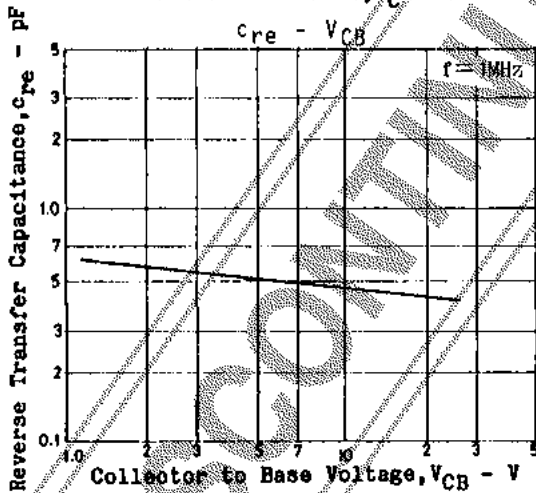
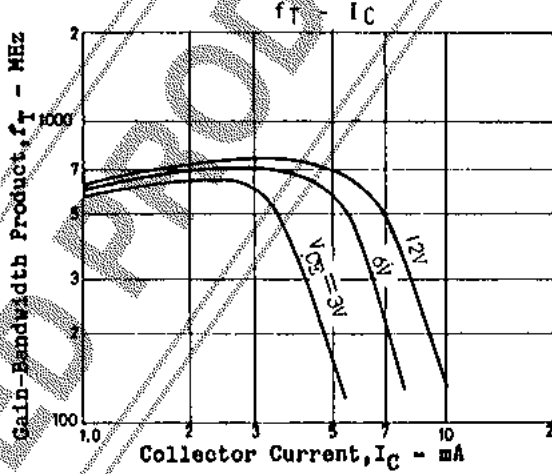
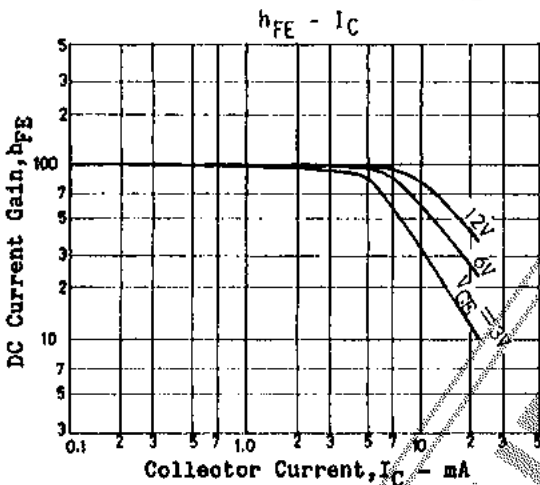
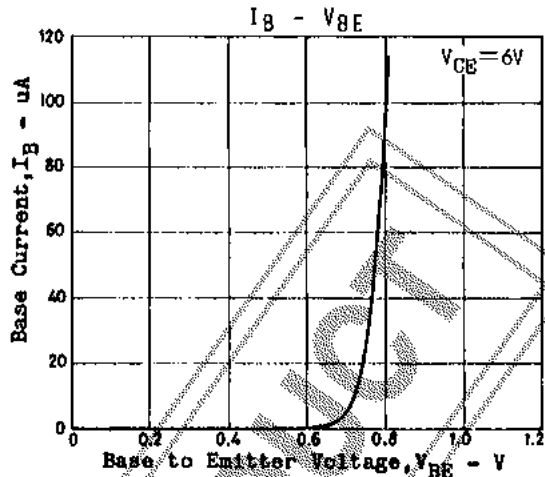
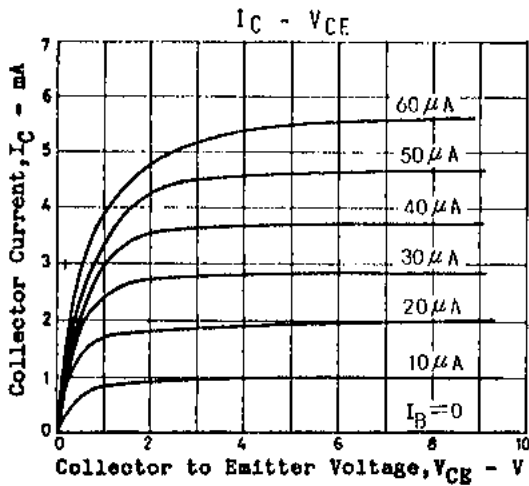


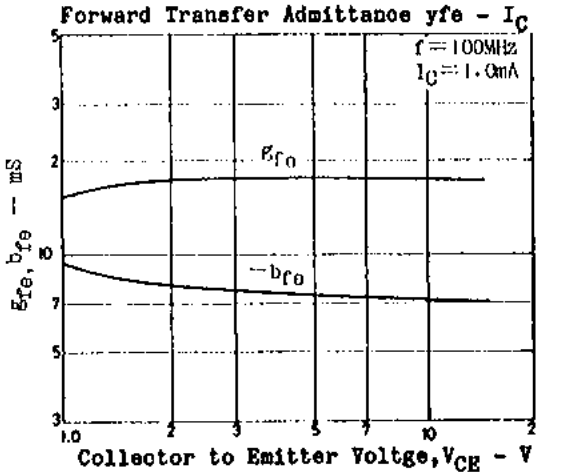
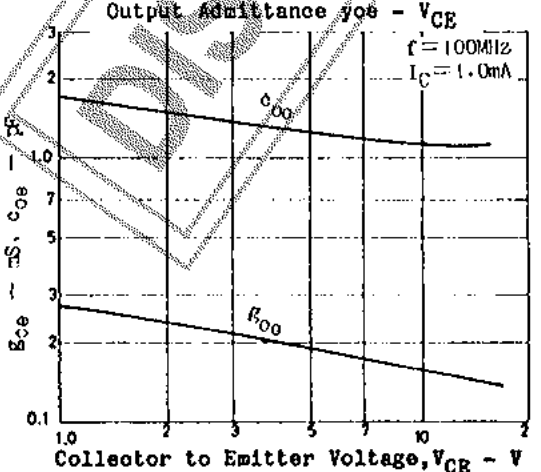
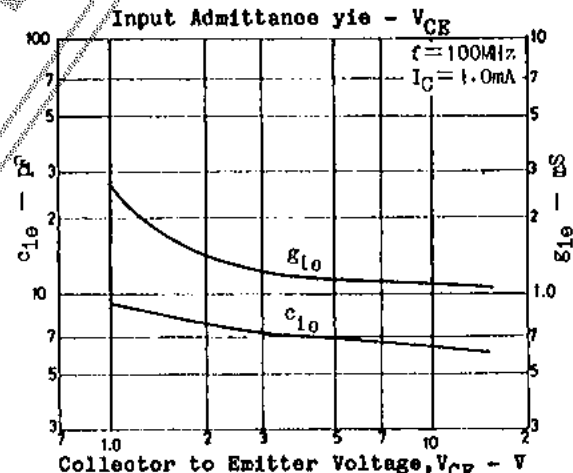
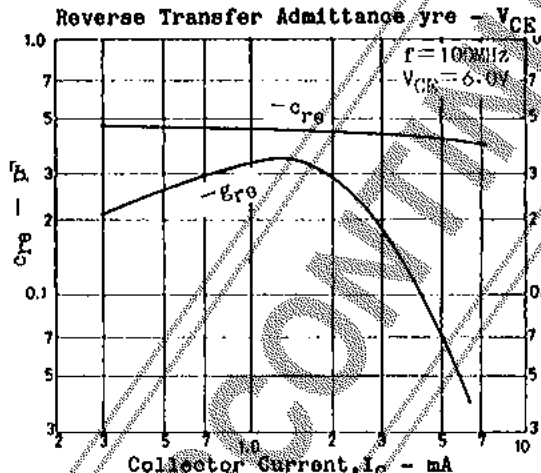
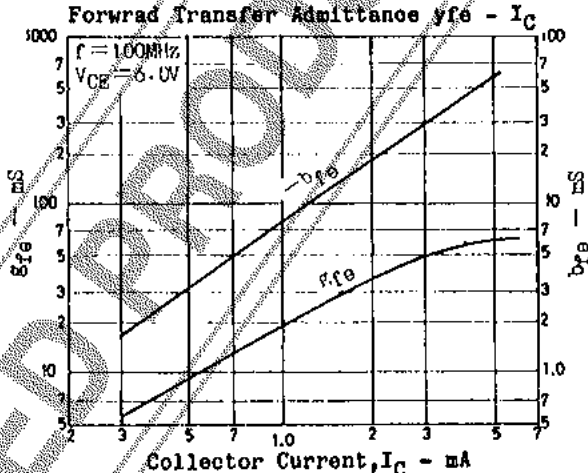
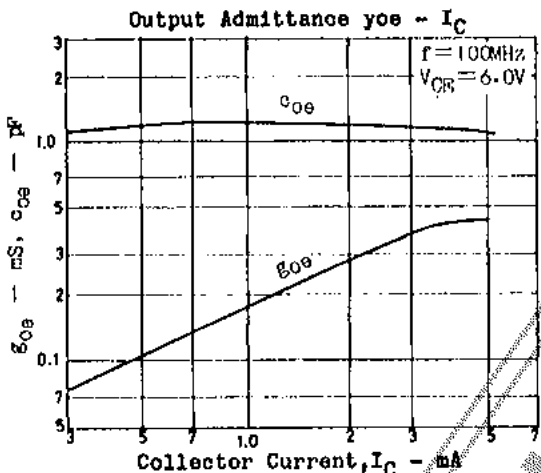
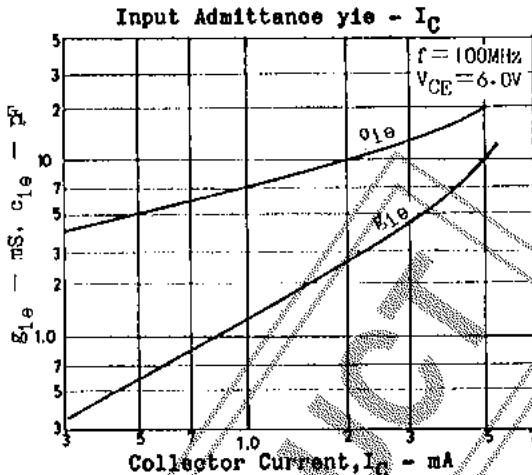
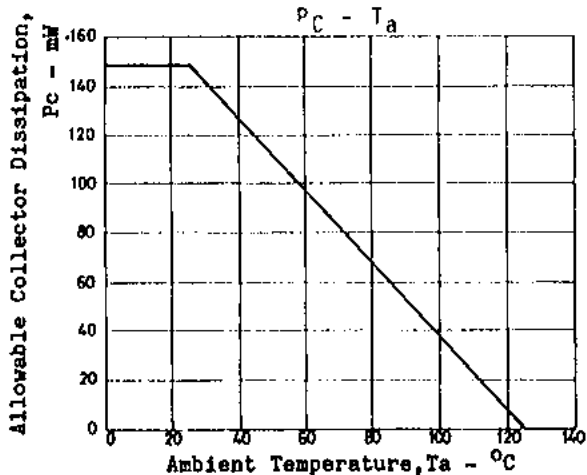
- B: Base
- C: Collector
- E: Emitter

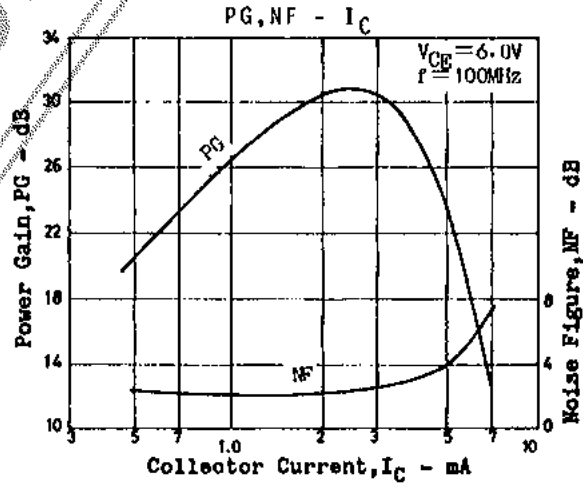
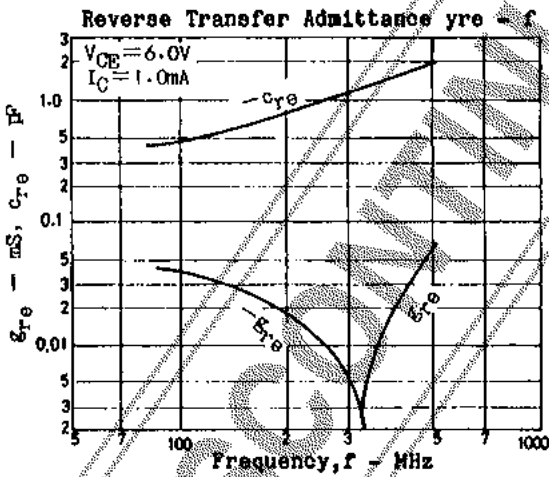
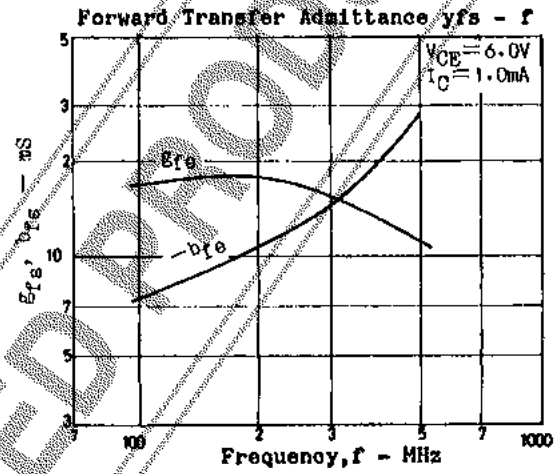
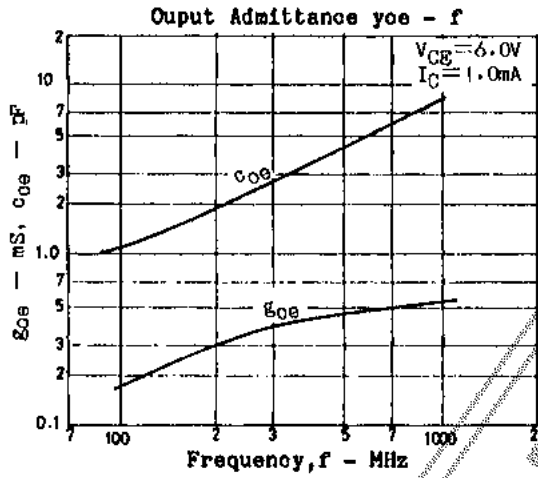
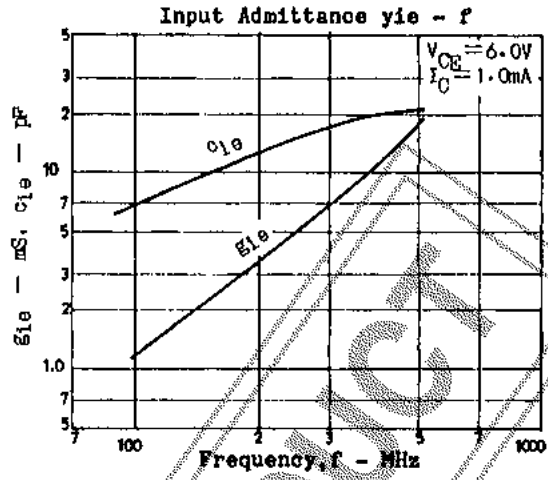
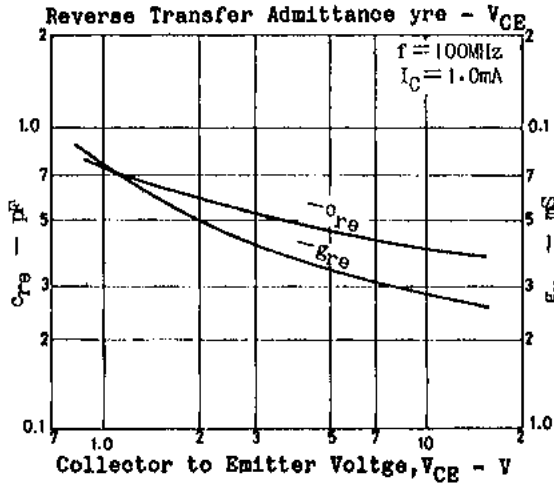
SANYO: SPA

These specifications are subject to change without notice.

SANYO ELECTRIC CO., LTD. SEMICONDUCTOR DIVISION
15-13, 8-CHOME, SOTOKANDA, CHIYODA-KU, TOKYO 101 JAPAN







The application circuit diagrams and circuit constants herein are included as an example and provide no guarantee for designing equipment to be mass produced. The information herein is believed to be accurate and reliable. However, no responsibility is assumed by SANYO for its use, nor for any infringements of patents or other rights of third parties which may result from its use.

This datasheet has been downloaded from:

www.DatasheetCatalog.com

Datasheets for electronic components.