

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 $T_a=25^\circ\text{C}$

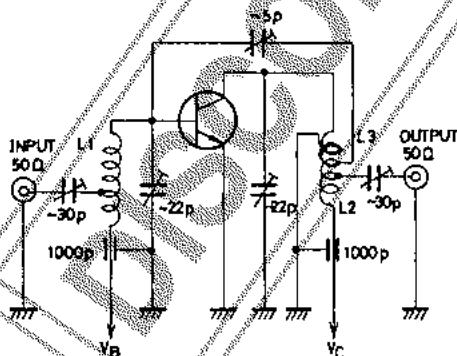
| | | unit |
|------------------------------|-----------|------------------------------|
| Collector to Base Voltage | V_{CBO} | 25 V |
| Collector to Emitter Voltage | V_{CEO} | 20 V |
| Emitter to Base Voltage | V_{EBO} | 3 V |
| Collector Current | I_C | 30 mA |
| Collector Dissipation | P_C | 150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

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

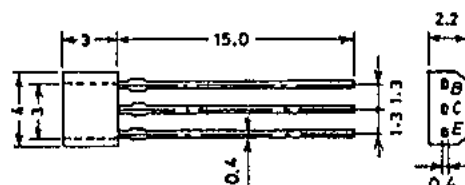
| | | min | typ | max | unit |
|------------------------------|----------------------------------------------------------------------|-----|-----|------|---------------|
| Collector Cutoff Current | I_{CBO} $V_{CE}=10\text{V}, I_E=0$ | | | 0.1 | μA |
| Emitter Cutoff Current | I_{EBO} $V_{EB}=3\text{V}, I_C=0$ | | | 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.

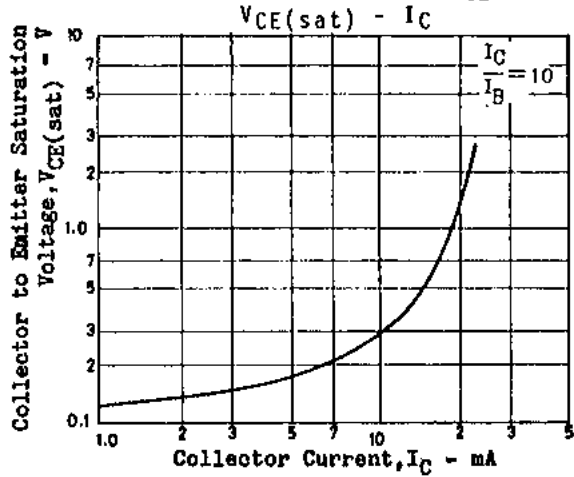
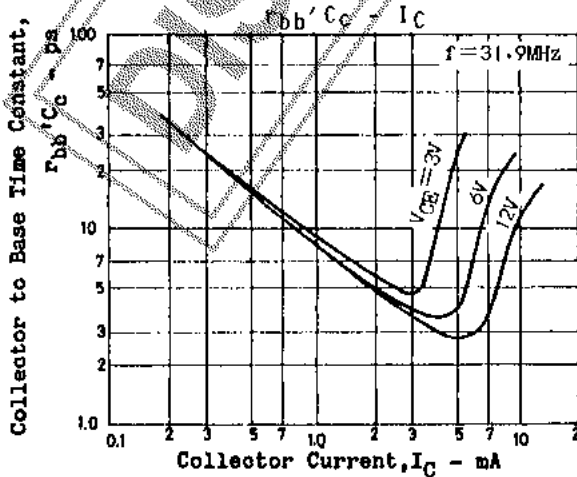
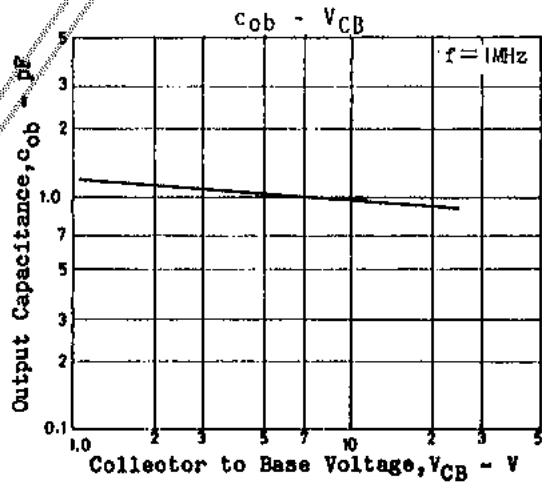
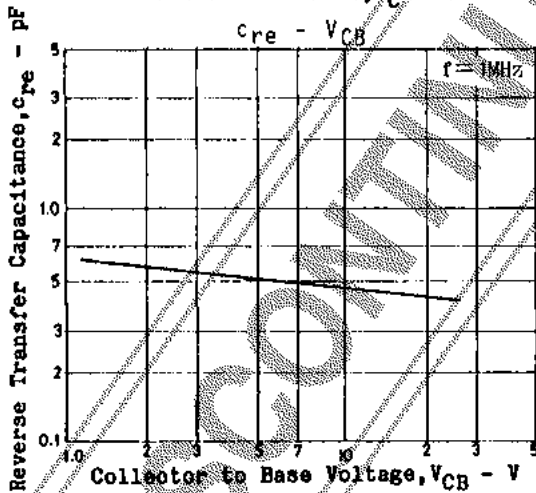
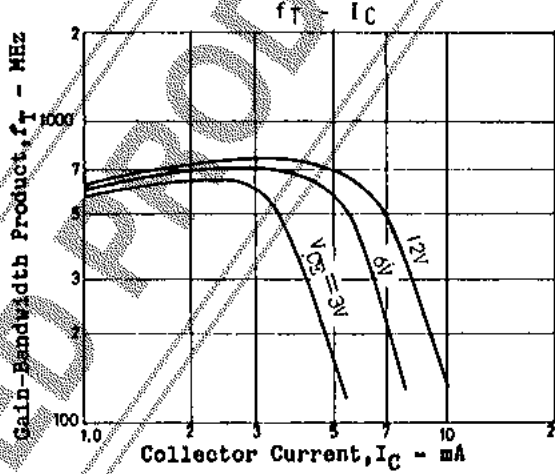
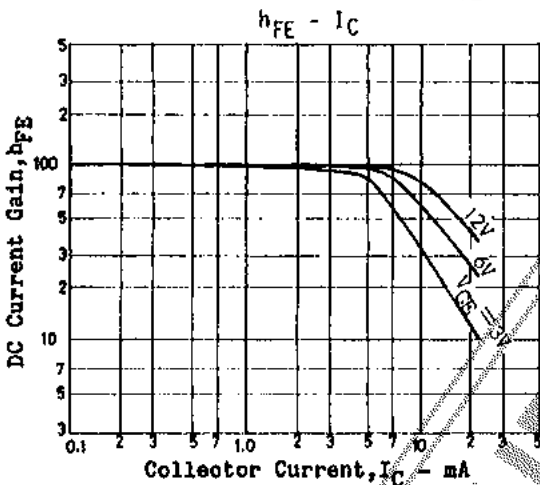
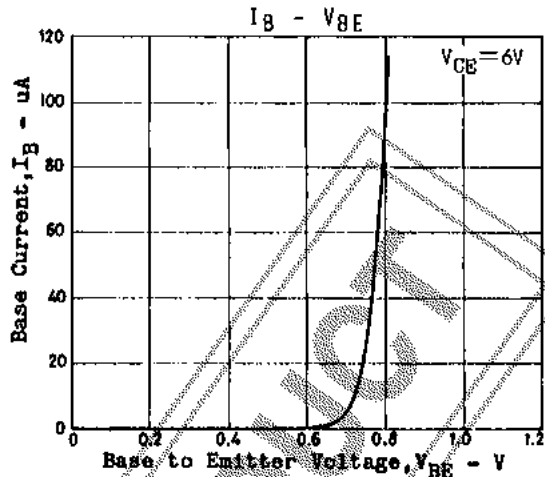
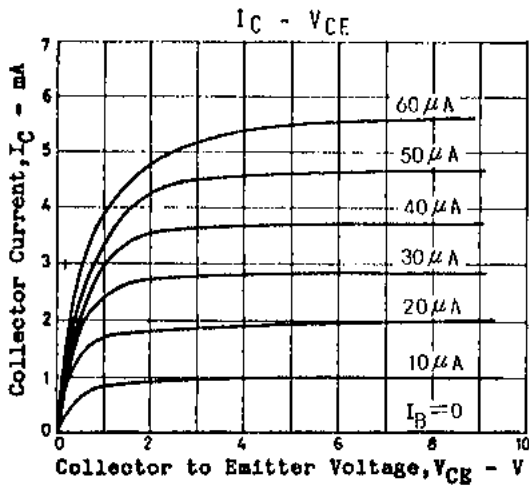
**Case Outline 2033
(unit:mm)**

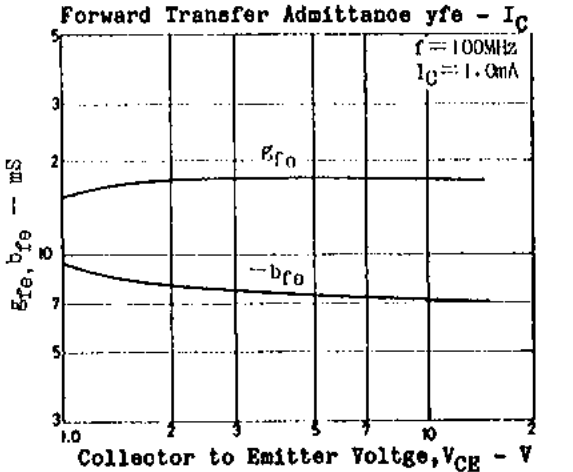
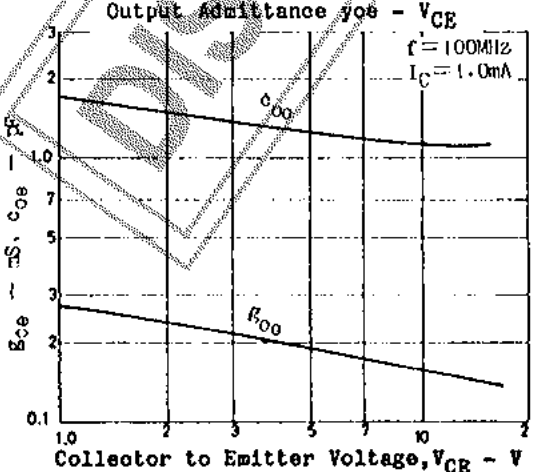
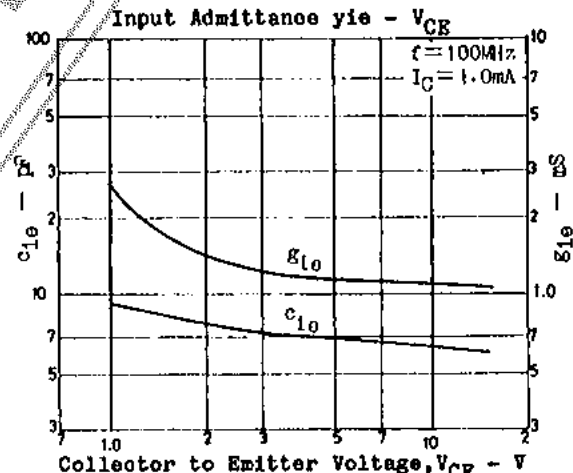
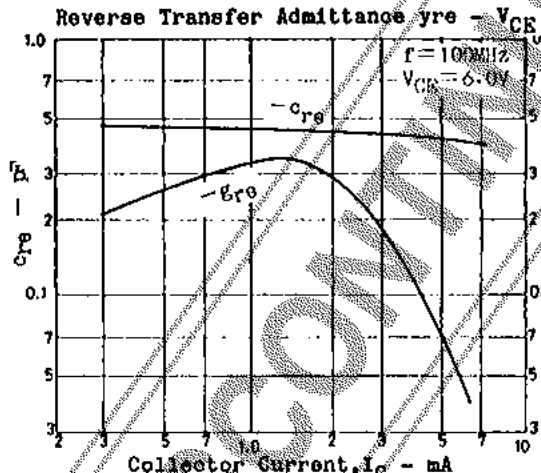
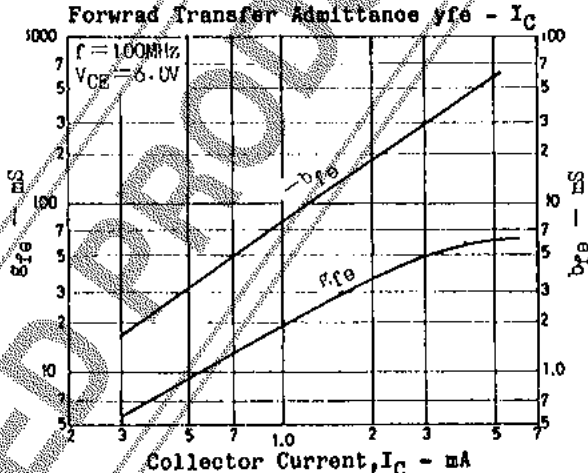
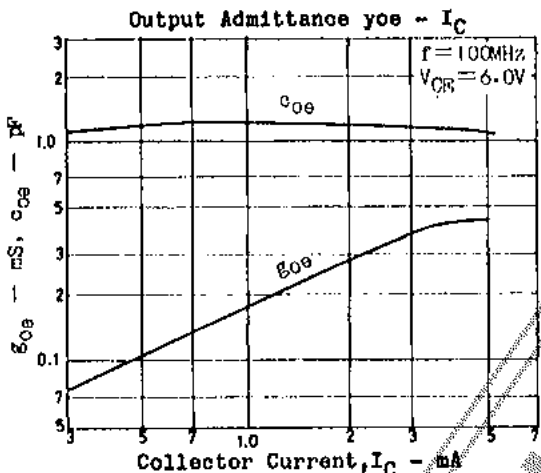
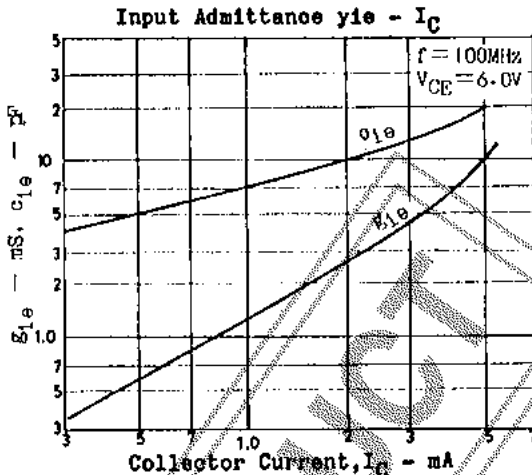
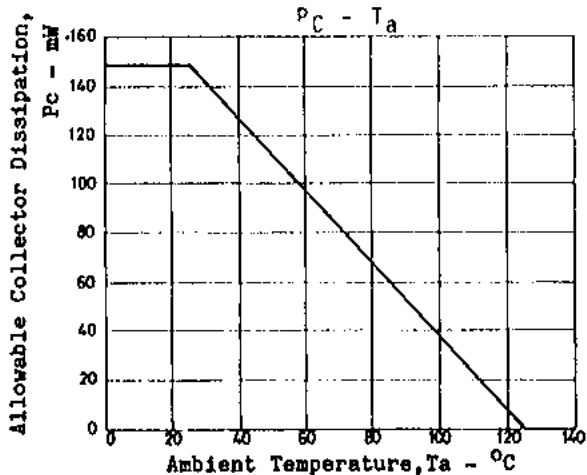
B: Base
 C: Collector
 E: Emitter

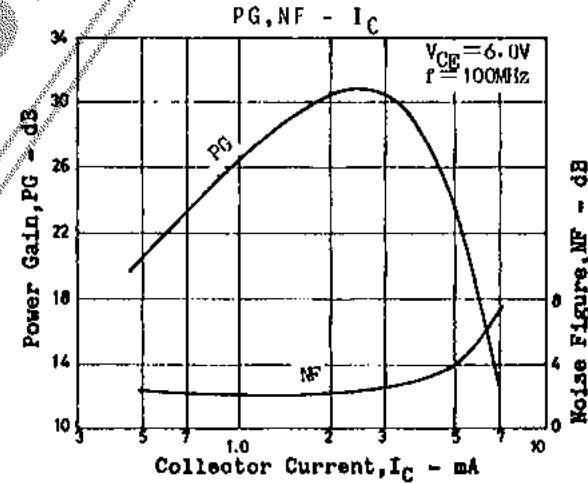
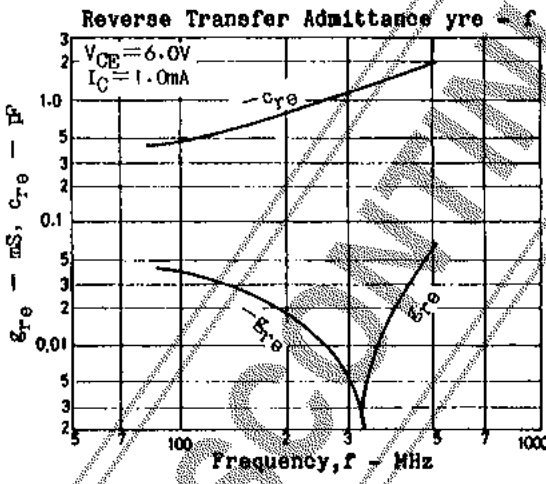
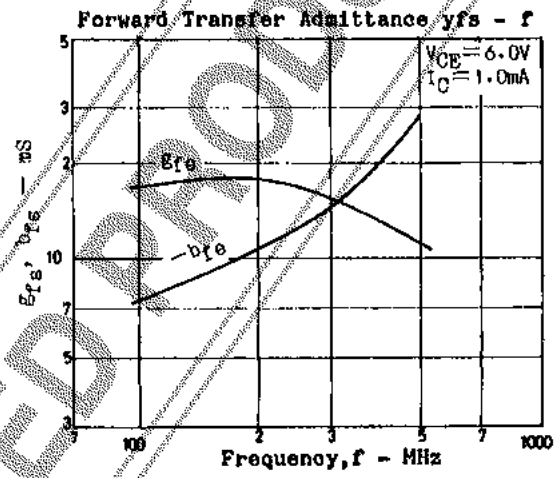
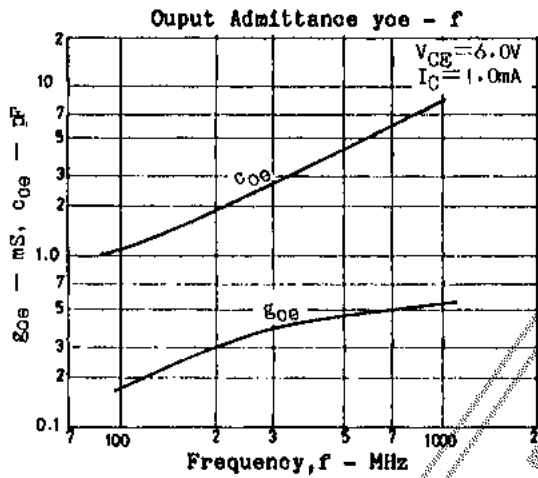
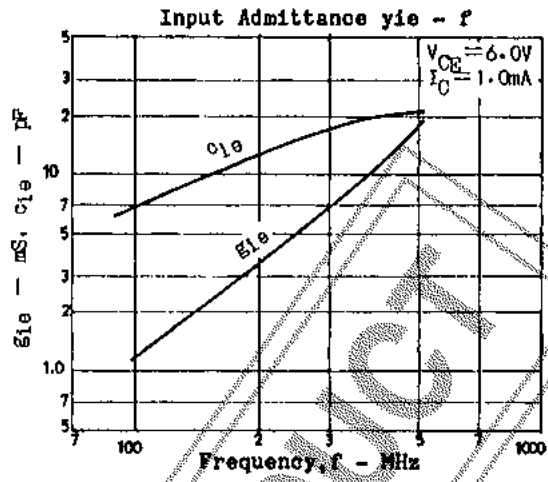
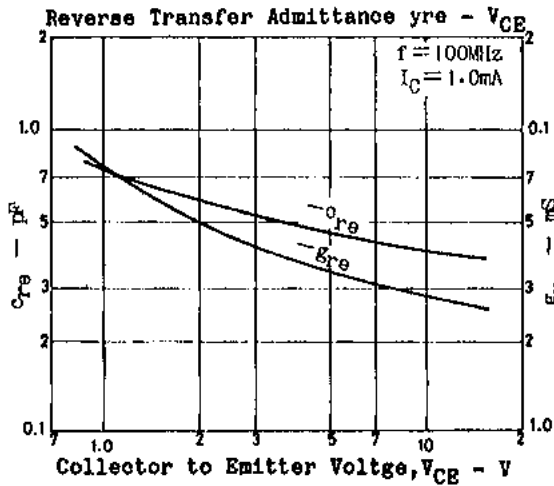
SANYO: SPA

These specifications are subject to change without notice.

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