Ordering number: EN 2710A

SANYO

No.2710A

# 2SC4271

NPN Epitaxial Planar Silicon Transistor

## High-Definition CRT Display Video Output Driver Applications

**Applications**

- Wide-band amplifiers
- High frequency drivers

**Features**

- High $f_T$ ($f_T$=2.2GHz typ)
- High current ($I_C$=300mA)
- Adoption of FBET process

**Absolute Maximun Ratings** at Ta=25°C

| | | | | unit |
|---|---|---|---|---|
| Collector-to-Base Voltage | $V_{CBO}$ | | 30 | V |
| Collector-to-Emitter Voltage | $V_{CEO}$ | | 20 | V |
| Emitter-to-Base Voltage | $V_{EBO}$ | | 3 | V |
| Collector Current | $I_C$ | | 300 | mA |
| Peak Collector Current | $i_{cp}$ | | 600 | mA |
| Collector Dissipation | $P_C$ | (Ta=25°C) | 1.2 | W |
| | $P_C$ | (Tc=25°C) | 5 | W |
| Junction Temperature | Tj | | 150 | °C |
| Storage Temperature | Tstg | | -55 to +150 | °C |

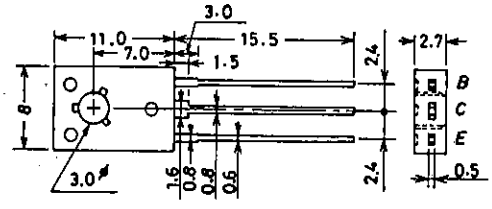
**Electrical Characteristics** at Ta=25°C

| | | | min | typ | max | unit |
|---|---|---|---|---|---|---|
| Collector Cutoff Current | $I_{CBO}$ | $V_{CB}$=20V, $I_E$=0 | | | 0.1 | μA |
| Emitter Cutoff Current | $I_{EBO}$ | $V_{EB}$=2V, $I_C$=0 | | | 5.0 | μA |
| DC Current Gain | $h_{FE(1)}$ | $V_{CE}$=5V, $I_C$=50mA | 40 | | 200 | |
| | $h_{FE(2)}$ | $V_{CE}$=5V, $I_C$=300mA | 20 | | | |
| Gain-Bandwidth Product | $f_T$ | $V_{CE}$=5V, $I_C$=50mA | | 2.2 | | GHz |
| Output Capacitance | $c_{ob}$ | $V_{CB}$=10V, f=1MHz | | 3.9 | | pF |
| Reverse Transfer Capacitance | $c_{re}$ | $V_{CB}$=10V, f=1MHz | | 3.2 | | pF |
| C-E Saturation Voltage | $V_{CE(sat)}$ | $I_C$=100mA, $I_B$=10mA | | 0.2 | 0.6 | V |
| B-E Saturation Voltage | $V_{BE(sat)}$ | $I_C$=100mA, $I_B$=10mA | | 0.9 | 1.2 | V |

*: The 2SC4271 is classified by 50mA $h_{FE}$ as follows:

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

Package Dimensions 2009A
(unit: mm)




JEDEC: TO-126

B: Base
C: Collector
E: Emitter

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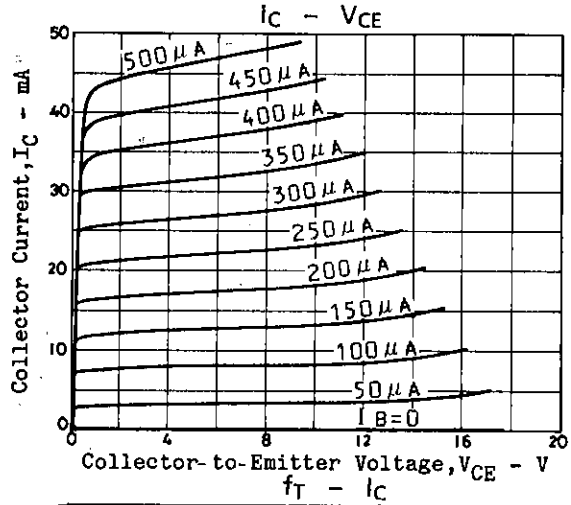
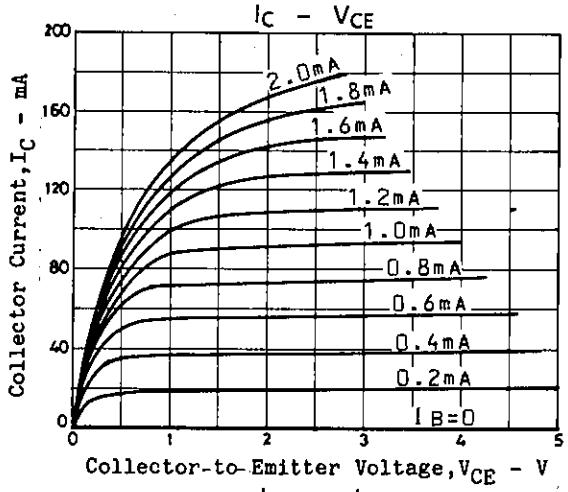
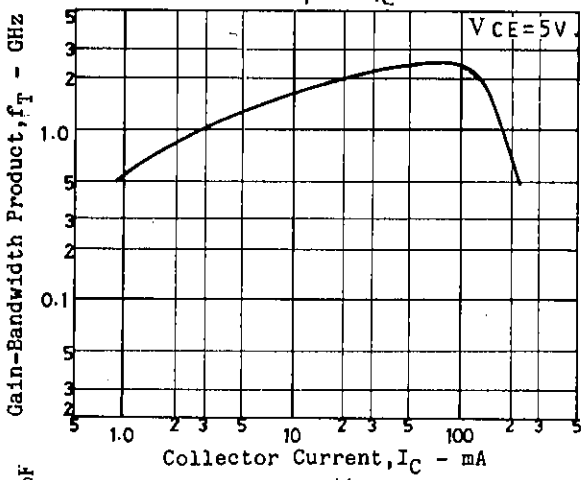
$I_C$ – $V_{CE}$



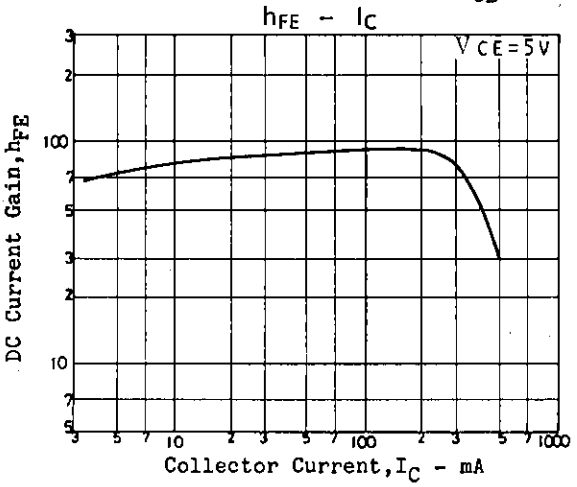

$I_C$ – $V_{CE}$



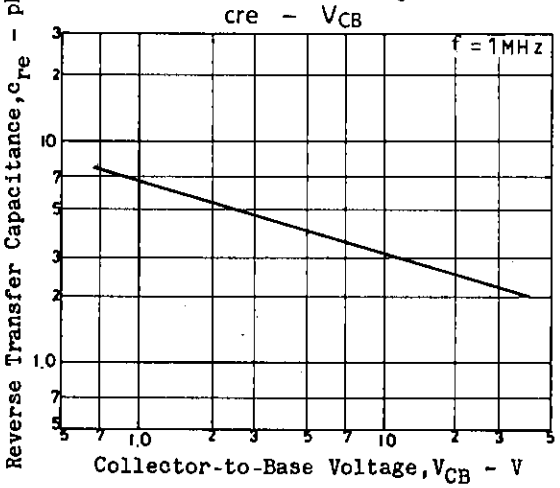

$f_T$ – $I_C$



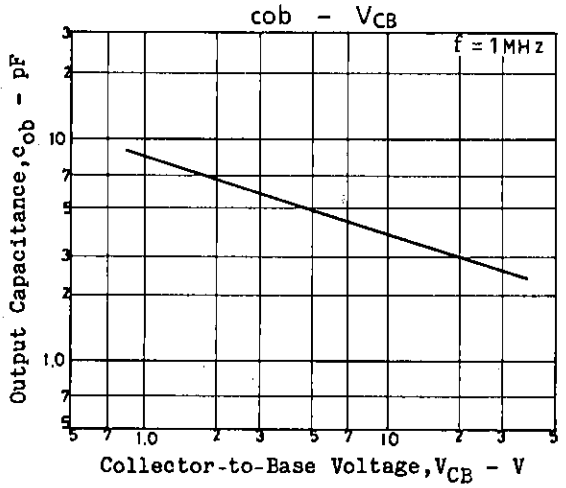

$h_{FE}$ – $I_C$



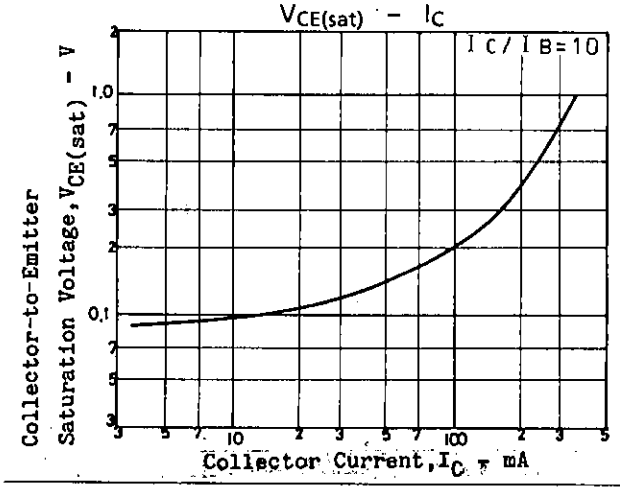

cre – $V_{CB}$




cob – $V_{CB}$




$V_{CE(sat)}$ – $I_C$

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