Ordering number: EN 934G

SANYO

No.934G

# 2SC3069

NPN Epitaxial Planar Silicon Transistor

## High $h_{FE}$, Low-Frequency General-Purpose Amp Applications

**Applications**

- Low-frequency, general-purpose amp., various drivers, muting circuit

**Features**

- High DC current gain ($h_{FE}$=800 to 3200)
- Low collector-to-emitter saturation voltage: $V_{CE(sat)}$=0.5V max.
- High $V_{EBO}$ ($V_{EBO} \geqq 15V$)

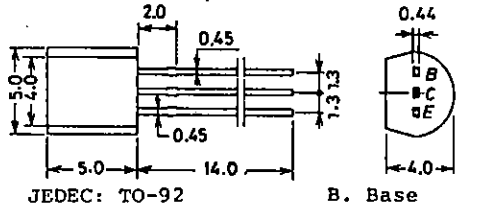
**Absolute Maximum Ratings/$T_a$=25°C**

| | | | unit |
|---|---|---|---|
| Collector to Base Voltage | $V_{CBO}$ | 60 | V |
| Collector to Emitter Voltage | $V_{CEO}$ | 50 | V |
| Emitter to Base Voltage | $V_{EBO}$ | 15 | V |
| Collector Current | $I_C$ | 200 | mA |
| Collector Current(Pulse) | $I_{CP}$ | 300 | mA |
| Base Current | $I_B$ | 40 | mA |
| Collector Dissipation | $P_C$ | 600 | mW |
| Junction Temperature | $T_j$ | 150 | °C |
| Storage Temperature | $T_{stg}$ | −55 to +150 | °C |

**Electrical Characteristics/$T_a$=25°C**

| | | | min | typ | max | unit |
|---|---|---|---|---|---|---|
| Collector Cut-off Current | $I_{CBO}$ | $V_{CB}$=40V, $I_E$=0 | | | 0.1 | μA |
| Emitter Cut-off Current | $I_{EBO}$ | $V_{EB}$=10V, $I_C$=0 | | | 0.1 | μA |
| DC Current Gain | $h_{FE}(1)$ | $V_{CE}$=5V, $I_C$=10mA | 800 | 1500 | 3200 | |
| | $h_{FE}(2)$ | $V_{CE}$=5V, $I_C$=100mA | 600 | | | |
| Gain-bandwidth product | $f_T$ | $V_{CE}$=10V, $I_C$=10mA | | 250 | | MHz |
| Common Base Output Capacitance | $c_{ob}$ | $V_{CB}$=10V, f=1MHz | | 4.0 | | pF |
| Collector to Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C$=100mA, $I_B$=2mA | | 0.12 | 0.5 | V |
| Base to Emitter Saturation Voltage | $V_{BE(sat)}$ | $I_C$=100mA, $I_B$=2mA | | 0.85 | 1.2 | V |
| Collector to Base Breakdown Voltage | $V_{(BR)CBO}$ | $I_C$=10μA, $I_E$=0 | 60 | | | V |
| Collector to Emitter Breakdown Voltage | $V_{(BR)CEO}$ | $I_C$=1mA, $I_B$=0 | 50 | | | V |
| Emitter to Base Breakdown Voltage | $V_{(BR)EBO}$ | $I_E$=10μA, $I_C$=0 | 15 | | | V |

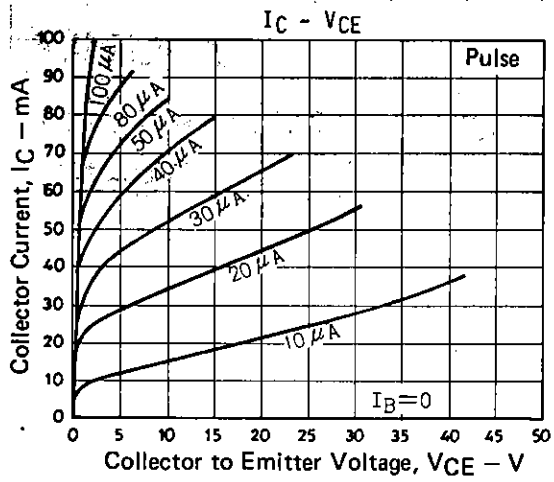
**Package Dimensions** 2003A
**(unit: mm)**



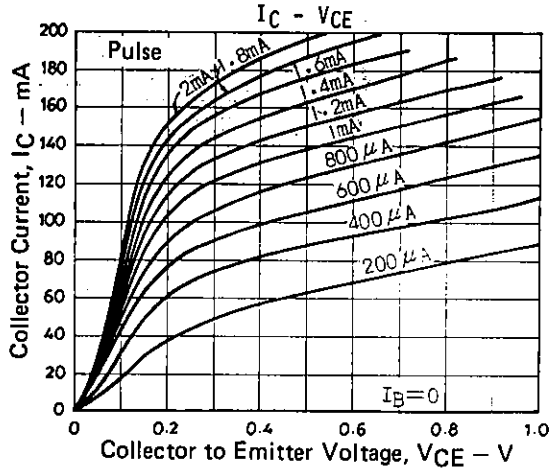

JEDEC: TO-92
EIAJ : SC-43
SANYO: NP

B. Base
C. Collector
E. Emitter

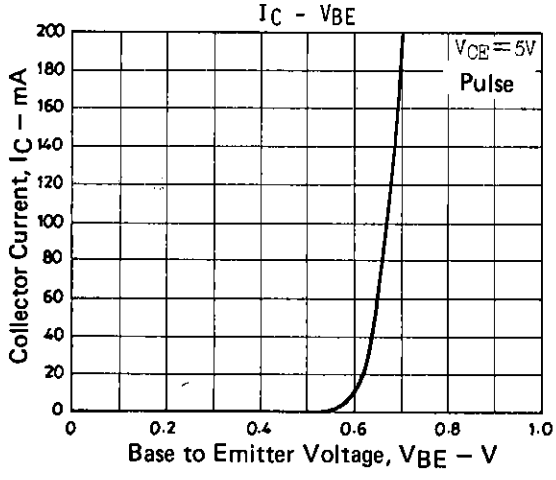
$I_C$ - $V_{CE}$



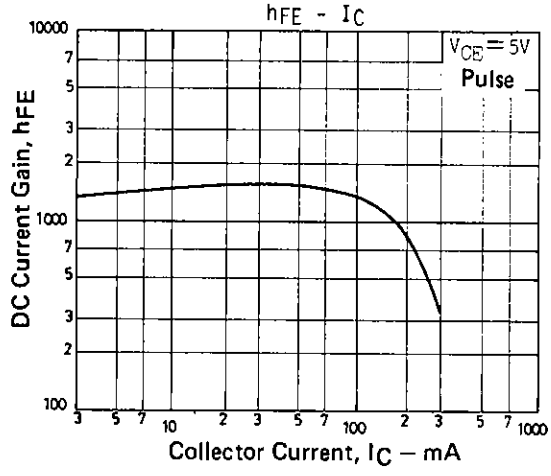

$I_C$ - $V_{CE}$



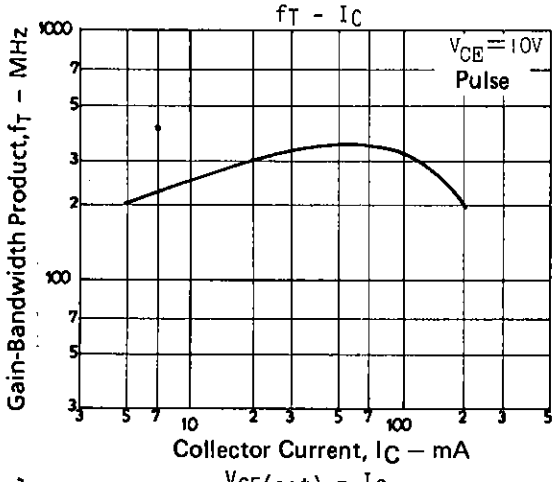

$I_C$ - $V_{BE}$



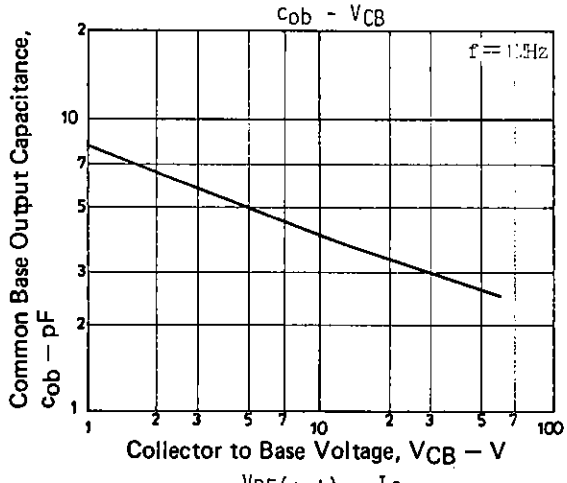

$h_{FE}$ - $I_C$



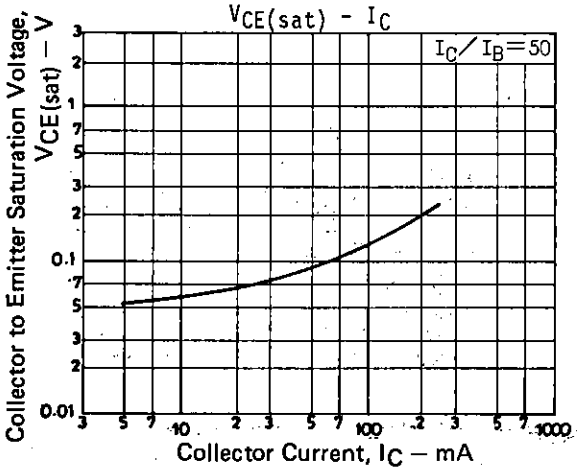

$f_T$ - $I_C$



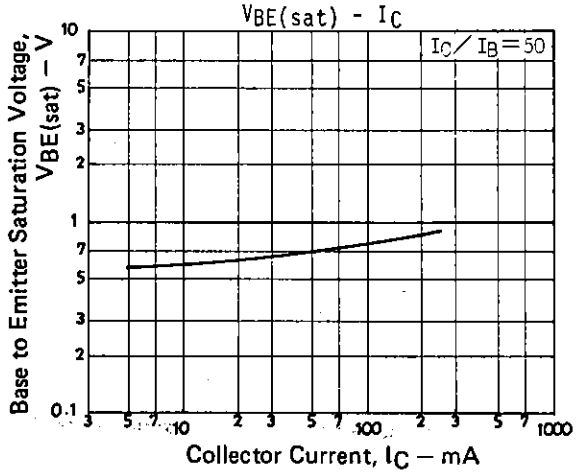

$C_{ob}$ - $V_{CB}$

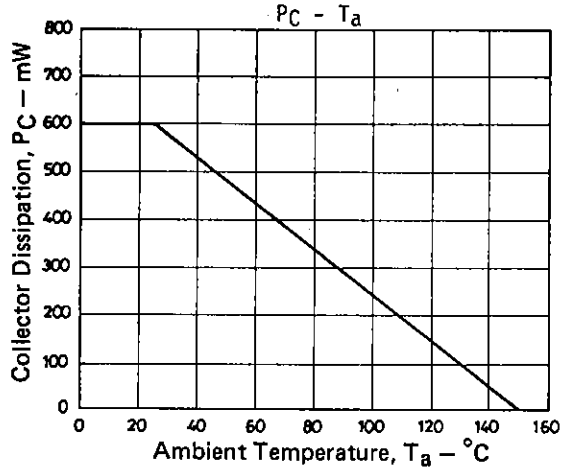


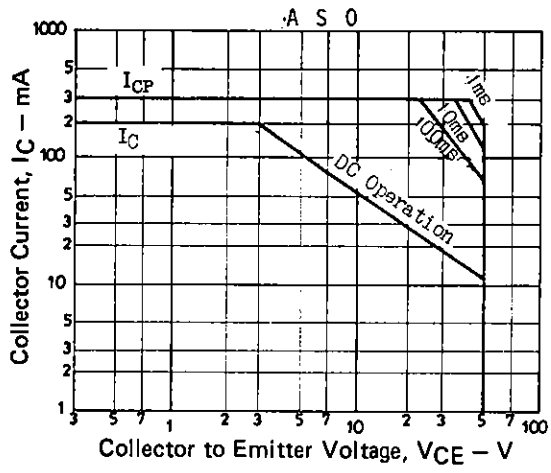

$V_{CE(sat)}$ - $I_C$




$V_{BE(sat)}$ - $I_C$






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