

2SA984,
984K
2SC2274,
2274K



2003A

PNP/NPN Epitaxial Planar
Silicon Transistors

T-29-21

Low-Frequency Power Amp Applications

©465F

Features

- High breakdown voltage ($V_{CE0} \geq 50/80V$).
- High current ($I_C = 500mA$).
- Low saturation voltage.

(): 2SA984, 984K

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

| | | A984, C2274 | A984K, C2274K | unit |
|------------------------------|-----------|-------------|---------------|------------|
| Collector to Base Voltage | V_{CBO} | (-) 60 | (-) 100 | V |
| Collector to Emitter Voltage | V_{CEO} | (-) 50 | (-) 80 | V |
| Emitter to Base Voltage | V_{EBO} | | (-) 5 | V |
| Collector Current | I_C | | (-) 500 | mA |
| Peak Collector Current | i_{cp} | | (-) 800 | mA |
| Collector Dissipation | P_C | | 600 | mW |
| Junction Temperature | T_j | | 150 | $^\circ C$ |
| Storage Temperature | T_{stg} | | -55 to +150 | $^\circ C$ |

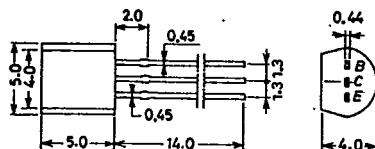
Electrical characteristics at $T_a = 25^\circ C$

| | | | min | typ | max | unit |
|--------------------------|---------------|--|---------------|----------|---------|---------|
| Collector Cutoff Current | I_{CBO} | $V_{CB} = (-) 40V, I_E = 0$ | | | (-) 1.0 | μA |
| Emitter Cutoff Current | I_{EBO} | $V_{EB} = (-) 4V, I_C = 0$ | | | (-) 1.0 | μA |
| DC Current Gain | $h_{FE}(1)$ | $V_{CE} = (-) 5V, I_C = (-) 50mA$ | 60* | | 320* | |
| | | | | | | |
| Gain-Bandwidth Product | f_T | $V_{CE} = (-) 10V, I_C = (-) 10mA$ | | 120 | | MHz |
| Output Capacitance | C_{ob} | $V_{CB} = (-) 10V, f = 1MHz$ | | (9) | | pF |
| | | | | 5 | | pF |
| C-E Saturation Voltage | $V_{CE}(sat)$ | $I_C = (-) 400mA,$ $I_B = (-) 40mA$ | | (-) 0.25 | (-) 0.6 | V |
| B-E Saturation Voltage | $V_{BE}(sat)$ | " " | | 0.2 | 0.6 | V |
| C-B Breakdown Voltage | $V(BR)_{CBO}$ | $I_C = (-) 10\mu A,$ $I_E = 0$ | A984, C2274 | | (-) 60 | V |
| | | | A984K, C2274K | | (-) 100 | V |
| C-E Breakdown Voltage | $V(BR)_{CEO}$ | $I_C = (-) 1mA,$ $R_{BE} = \infty$ | A984, C2274 | | (-) 50 | V |
| | | | A984K, C2274K | | (-) 80 | V |
| E-B Breakdown Voltage | $V(BR)_{EBO}$ | $I_E = (-) 10\mu A, I_C = 0$ | | (-) 5 | | V |

* The 2SA984, K, 2SC2274, K are classified by 50mA h_{FE} as follows.

| | | | | | | | | |
|----|---|-----|-----|---|-----|-----|---|-----|
| 60 | D | 120 | 100 | E | 200 | 160 | F | 320 |
|----|---|-----|-----|---|-----|-----|---|-----|

Case Outline 2003A (unit:mm)



JEDEC: TO-92

EIAJ: SC-43

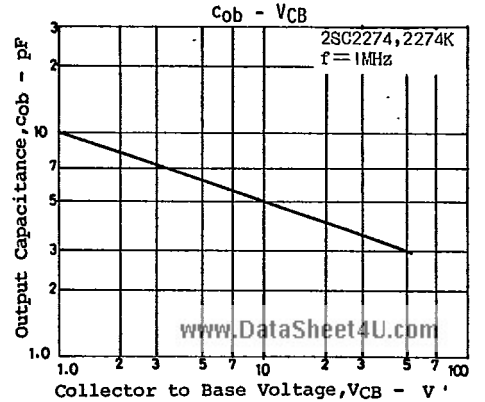
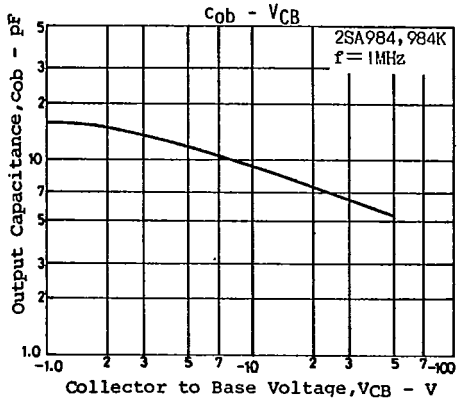
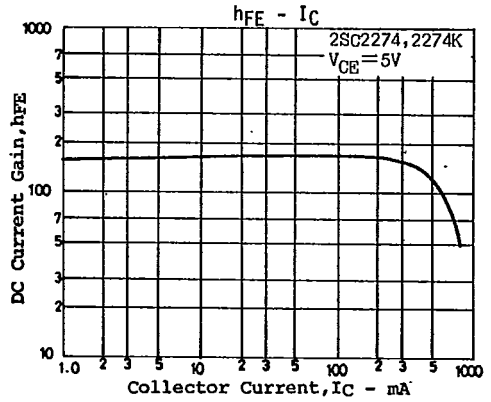
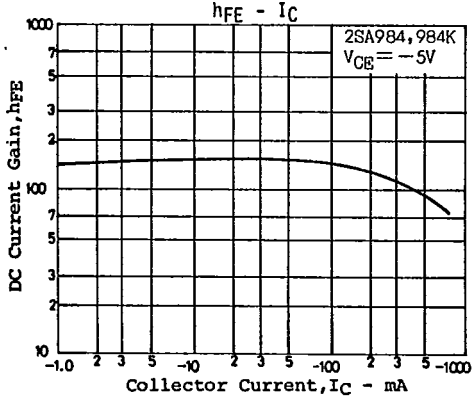
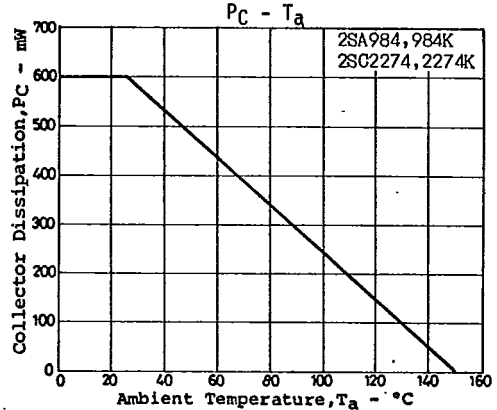
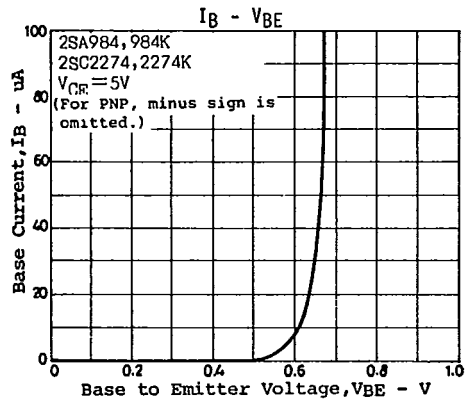
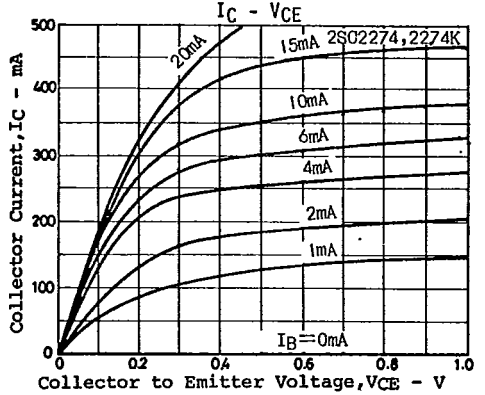
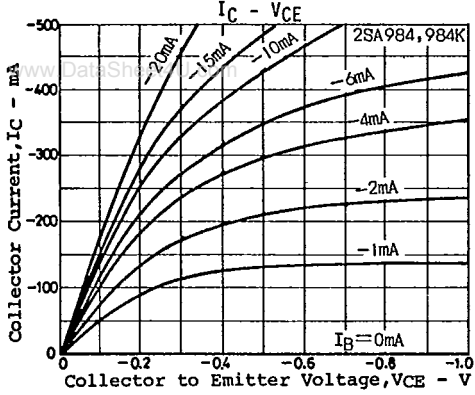
SANYO: NP

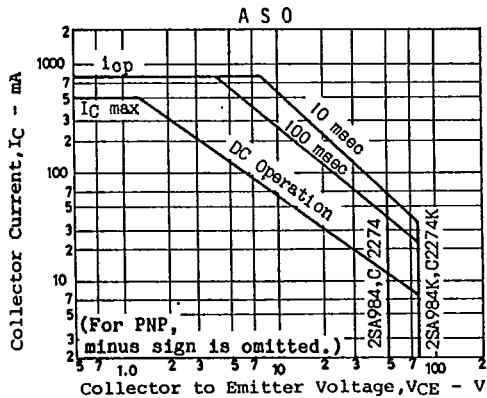
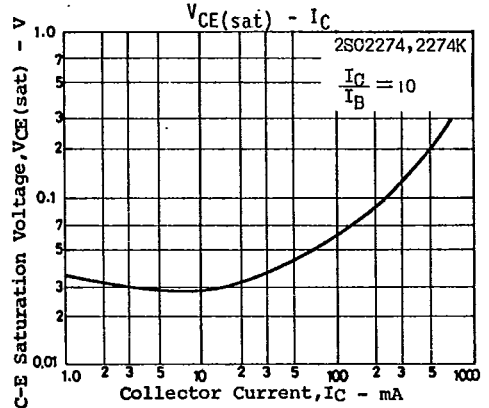
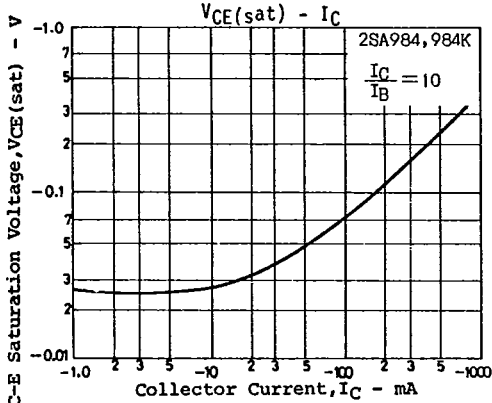
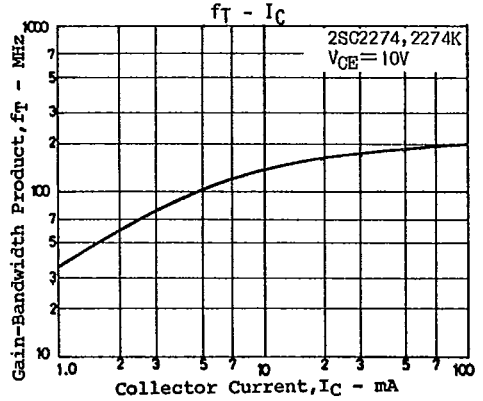
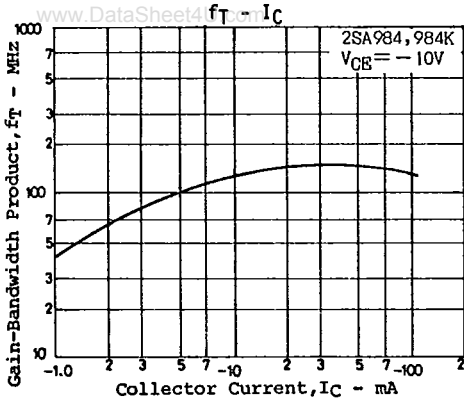
B: Base

C: Collector

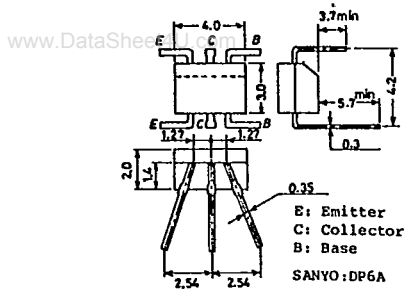
E: Emitter

The 2SC2274K is scheduled to be discontinued soon. Use the 2SC3708, instead of the 2SC2274K, in new applications where you are planning to use the 2SC2274K.

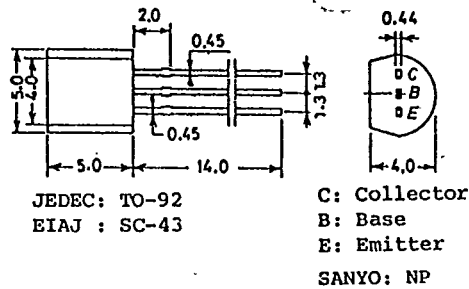




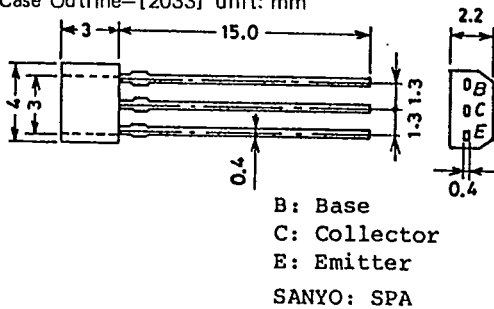
Case Outline—[2029A] unit: mm



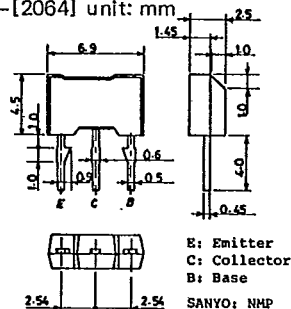
Case Outline—[2061] unit: mm



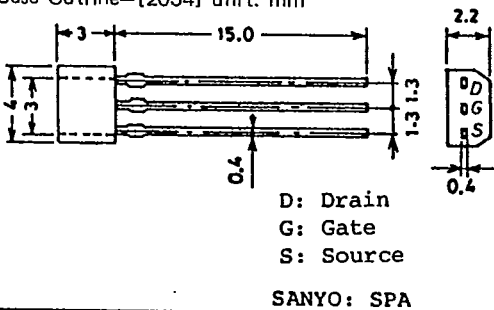
Case Outline—[2033] unit: mm



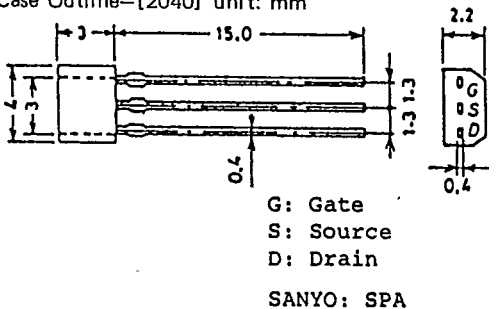
Case Outline—[2064] unit: mm



Case Outline—[2034] unit: mm



Case Outline—[2040] unit: mm



Case Outline—[2051] unit: mm

