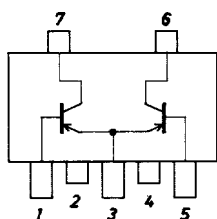


**SANYO****FP208**

PNP Epitaxial Planar Silicon Transistor

**Driver Applications****Features**

- Composite type with 2 PNP transistors in one package, facilitating high-density mounting.
- The FP208 is composed of 2 chips each equivalent to the 2SB1121.

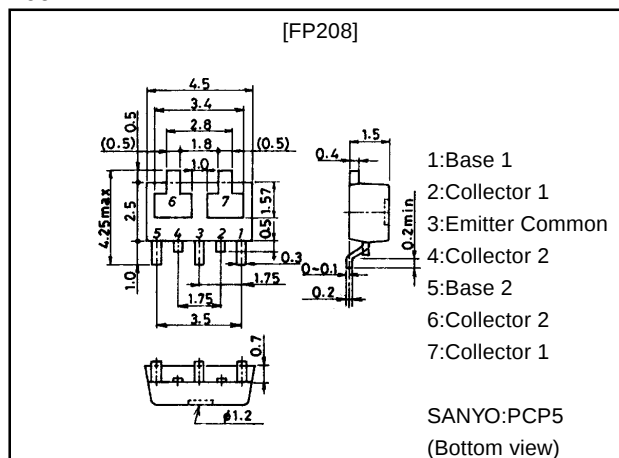
**Electrical Connection**

- 1:Base 1  
2:Collector 1  
3:Emitter Common  
4:Collector 2  
5:Base 2  
6:Collector 2  
7:Collector 1  
(Top view)

**Package Dimensions**

unit:mm

2097B

**Specifications****Absolute Maximum Ratings at Ta = 25°C**

| Parameter                    | Symbol    | Conditions                                                 | Ratings     | Unit |
|------------------------------|-----------|------------------------------------------------------------|-------------|------|
| Collector-to-Base Voltage    | $V_{CBO}$ |                                                            | -30         | V    |
| Collector-to-Emitter Voltage | $V_{CEO}$ |                                                            | -25         | V    |
| Emitter-to-Base Voltage      | $V_{EBO}$ |                                                            | -6          | V    |
| Collector Current            | $I_C$     |                                                            | -2          | A    |
| Collector Current (Pulse)    | $I_{CP}$  |                                                            | -5          | A    |
| Collector Dissipation        | $P_C$     |                                                            | 0.8         | W    |
| Total Power Dissipation      | $P_T$     | Mounted on ceramic board (250mm <sup>2</sup> ×0.8mm) 1unit | 1.1         | W    |
| Base Current                 | $I_B$     | Mounted on ceramic board (250mm <sup>2</sup> ×0.8mm)       | -400        | mA   |
| Junction Temperature         | $T_j$     |                                                            | 150         | °C   |
| Storage Temperature          | $T_{stg}$ |                                                            | -55 to +150 | °C   |

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

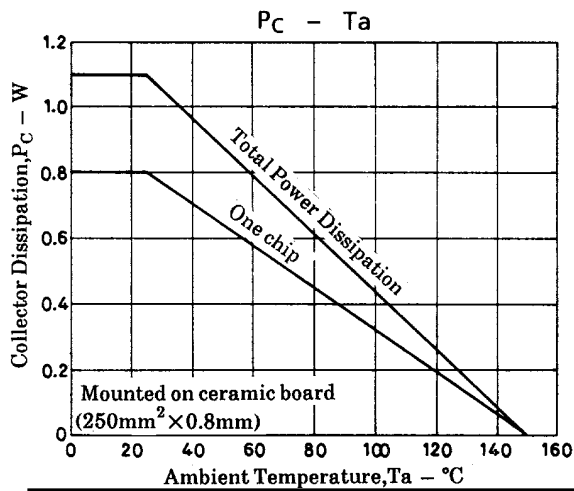
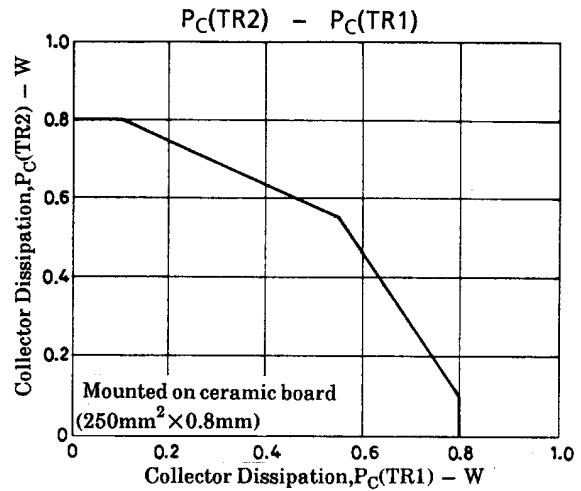
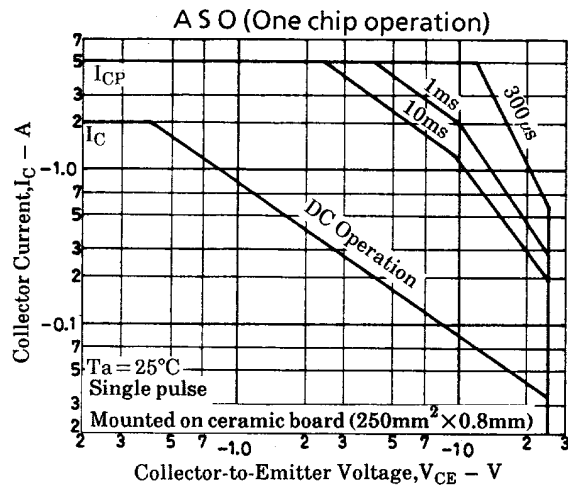
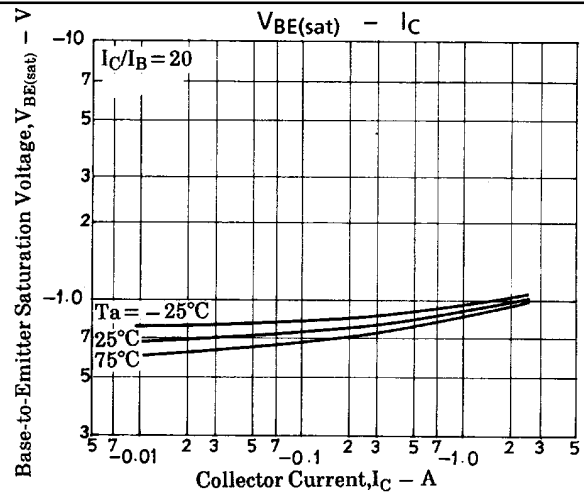
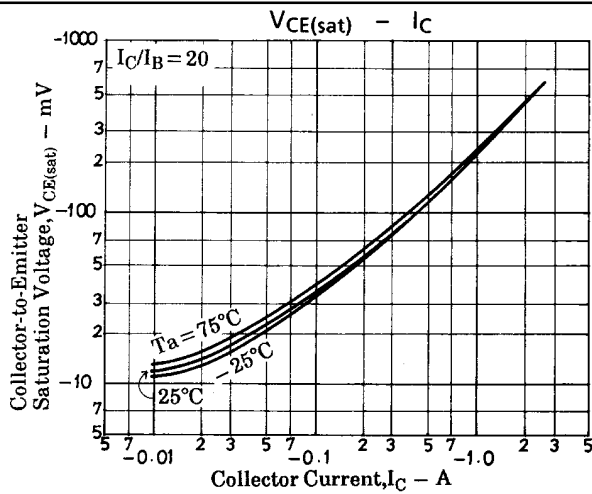
| Parameter                | Symbol        | Conditions                 | Ratings |       |      | Unit |
|--------------------------|---------------|----------------------------|---------|-------|------|------|
|                          |               |                            | min     | typ   | max  |      |
| Collector Cutoff Current | $I_{CBO}$     | $V_{CB}=-20V, I_E=0$       |         |       | -100 | nA   |
| Emitter Cutoff Current   | $I_{EBO}$     | $V_{EB}=-4V, I_C=0$        |         |       | -100 | nA   |
| DC Current Gain          | $h_{FE}$      | $V_{CE}=-2V, I_C=-100mA$   | 140     |       | 400  |      |
| Gain-Bandwidth Product   | $f_T$         | $V_{CE}=-10V, I_C=-50mA$   |         | 150   |      | MHz  |
| Output Capacitance       | $C_{ob}$      | $V_{CB}=-10V, f=1MHz$      |         | 32    |      | pF   |
| C-E Saturation Voltage   | $V_{CE(sat)}$ | $I_C=-1.5A, I_B=-75mA$     |         | -0.35 | -0.6 | V    |
| B-E Saturation Voltage   | $V_{BE(sat)}$ | $I_C=-1.5A, I_B=-75mA$     |         | -0.85 | -1.2 | V    |
| C-B Breakdown Voltage    | $V_{(BR)CBO}$ | $I_C=-10\mu A, I_E=0$      | -30     |       |      | V    |
| C-E Breakdown Voltage    | $V_{(BR)CEO}$ | $I_C=-1mA, R_{BE}=\infty$  | -25     |       |      | V    |
| E-B Breakdown Voltage    | $V_{(BR)EBO}$ | $I_E=-10\mu A, I_C=0$      | -6      |       |      | V    |
| Turn-ON Time             | $t_{on}$      | See specified Test Circuit |         | 60    |      | ns   |
| Storage Time             | $t_{stg}$     | See specified Test Circuit |         | 350   |      | ns   |
| Fall Time                | $t_f$         | See specified Test Circuit |         | 25    |      | ns   |

Marking:208

**SANYO Electric Co.,Ltd. Semiconductor Business Headquarters**

TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN





■ No products described or contained herein are intended for use in surgical implants, life-support systems, aerospace equipment, nuclear power control systems, vehicles, disaster/crime-prevention equipment and the like, the failure of which may directly or indirectly cause injury, death or property loss.

■ Anyone purchasing any products described or contained herein for an above-mentioned use shall:

- ① Accept full responsibility and indemnify and defend SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors and all their officers and employees, jointly and severally, against any and all claims and litigation and all damages, cost and expenses associated with such use:
- ② Not impose any responsibility for any fault or negligence which may be cited in any such claim or litigation on SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors or any of their officers and employees jointly or severally.

■ Information (including circuit diagrams and circuit parameters) herein is for example only; it is not guaranteed for volume production. SANYO believes information herein is accurate and reliable, but no guarantees are made or implied regarding its use or any infringements of intellectual property rights or other rights of third parties.

This catalog provides information as of May, 1998. Specifications and information herein are subject to change without notice.