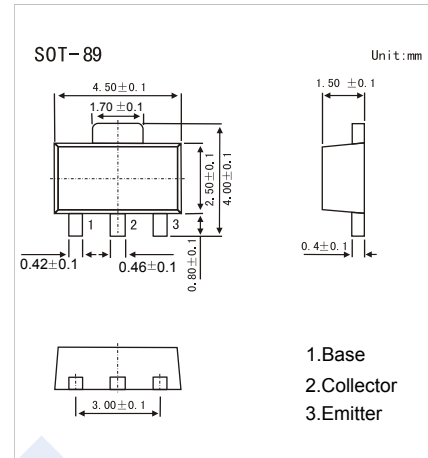


PNP Transistors

2SA1729

■ Features

- Large current capacity.
- Low collector-to-emitter saturation voltage.
- Fast switching speed.
- Small-sized package.

■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

| Parameter | Symbol | Rating | Unit |
|--------------------------------------|-----------|------------|------------------|
| Collector - Base Voltage | V_{CB0} | -50 | V |
| Collector - Emitter Voltage | V_{CE0} | -40 | |
| Emitter - Base Voltage | V_{EB0} | -5 | |
| Collector Current - Continuous | I_c | -1.5 | A |
| Collector Current -Pulse | I_{cp} | -3 | |
| Collector Power Dissipation (Note.1) | P_c | 1.3 | W |
| Junction Temperature | T_J | 150 | $^\circ\text{C}$ |
| Storage Temperature range | T_{stg} | -55 to 150 | |

Note.1: Mounted on ceramic board (250mm² X 0.8mm)

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

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|--------------------------------------|---------------|---|-----|------|------|---------------|
| Collector- base breakdown voltage | V_{CB0} | $I_c = -100 \mu\text{A}$, $I_E = 0$ | -50 | | | V |
| Collector- emitter breakdown voltage | V_{CE0} | $I_c = -1 \text{ mA}$, $R_{BE} = \infty$ | -40 | | | |
| Emitter - base breakdown voltage | V_{EB0} | $I_E = -100 \mu\text{A}$, $I_c = 0$ | -5 | | | |
| Collector-base cut-off current | I_{CB0} | $V_{CB} = -40 \text{ V}$, $I_E = 0$ | | | -1 | μA |
| Emitter cut-off current | I_{EB0} | $V_{EB} = -3 \text{ V}$, $I_c = 0$ | | | -1 | |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_c = -800 \text{ mA}$, $I_B = -40 \text{ mA}$ | | -0.3 | -0.8 | V |
| Base - emitter saturation voltage | $V_{BE(sat)}$ | $I_c = -800 \text{ mA}$, $I_B = -40 \text{ mA}$ | | -0.9 | -1.3 | |
| DC current gain | $h_{FE(1)}$ | $V_{CE} = -2 \text{ V}$, $I_c = -100 \text{ mA}$ | 70 | | 280 | |
| | $h_{FE(2)}$ | $V_{CE} = -2 \text{ V}$, $I_c = -1.5 \text{ A}$ | 25 | | | |
| Turn-on Time | t_{on} | See specified Test Circuit | | 50 | 100 | ns |
| Storage time | t_{stg} | | | 120 | 220 | |
| Turn-off time | t_{off} | | | 150 | 300 | |
| Collector output capacitance | C_{ob} | $V_{CB} = -10 \text{ V}$, $f = 1 \text{ MHz}$ | | 18 | | μF |
| Transition frequency | f_T | $V_{CE} = -2 \text{ V}$, $I_c = -100 \text{ mA}$ | | 300 | | MHz |

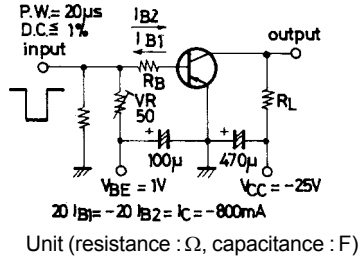
■ Classification of $h_{FE(1)}$

| Type | 2SA1729-Q | 2SA1729-R | 2SA1729-S |
|---------|-----------|-----------|-----------|
| Range | 70-140 | 100-200 | 140-280 |
| Marking | AGQ | AGR | AGS |

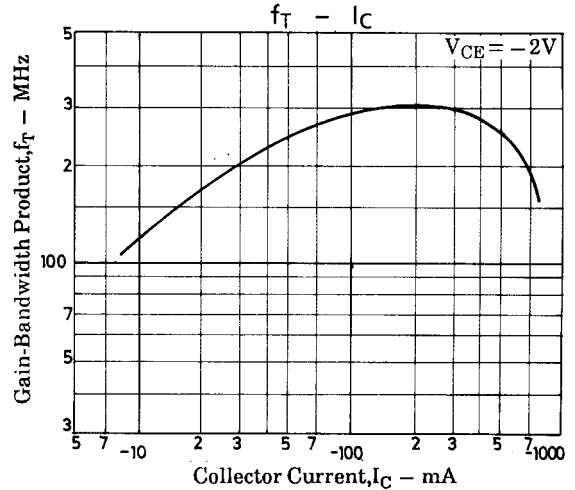
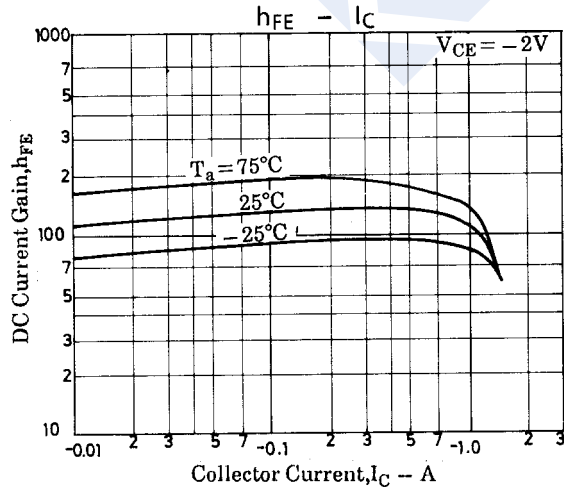
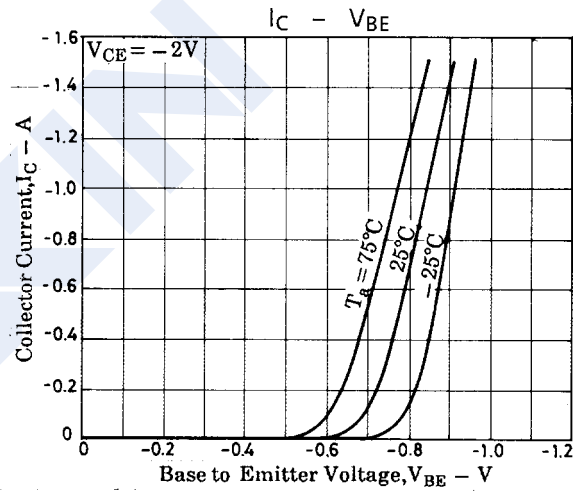
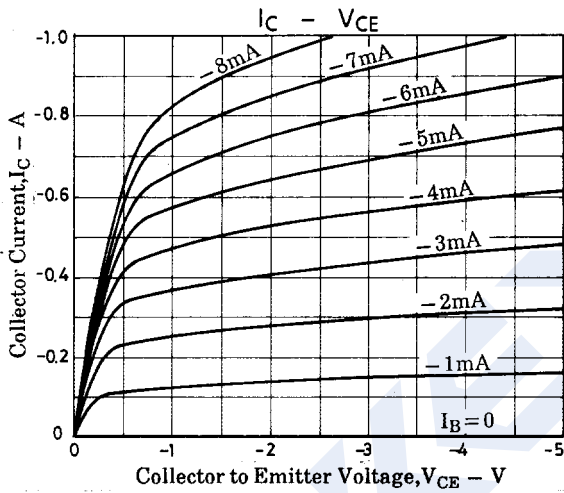
PNP Transistors

2SA1729

Switching Time Test Circuit



■ Typical Characteristics



PNP Transistors

2SA1729

■ Typical Characteristics

