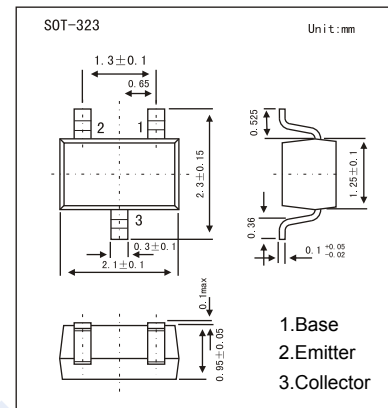


PNP Transistors

2SA1588

■ Features

- Excellent hFE linearity : $hFE(2) = 25$ (min)
at $V_{CE} = -6\text{ V}$, $I_C = -400\text{ mA}$
- Complementary to 2SC4118



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

| Parameter | Symbol | Rating | Unit |
|--------------------------------|-----------|------------|------------------|
| Collector - Base Voltage | V_{CBO} | -35 | V |
| Collector - Emitter Voltage | V_{CEO} | -30 | |
| Emitter - Base Voltage | V_{EBO} | -5 | |
| Collector Current - Continuous | I_C | -500 | mA |
| Base Current | I_B | -50 | |
| Collector Power Dissipation | P_C | 100 | mW |
| Junction Temperature | T_J | 125 | $^\circ\text{C}$ |
| Storage Temperature range | T_{stg} | -55 to 125 | |

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

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|--------------------------------------|---------------|---|-----|------|-------|---------------|
| Collector- base breakdown voltage | V_{CBO} | $I_C = -100\ \mu\text{A}$, $I_E = 0$ | -35 | | | V |
| Collector- emitter breakdown voltage | V_{CEO} | $I_C = -1\text{ mA}$, $I_B = 0$ | -30 | | | |
| Emitter - base breakdown voltage | V_{EBO} | $I_E = -100\ \mu\text{A}$, $I_C = 0$ | -5 | | | |
| Collector-base cut-off current | I_{CBO} | $V_{CB} = -35\text{ V}$, $I_E = 0$ | | | -0.1 | μA |
| Emitter cut-off current | I_{EBO} | $V_{EB} = -5\text{ V}$, $I_C = 0$ | | | -0.1 | |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = -100\text{ mA}$, $I_B = -10\text{ mA}$ | | -0.1 | -0.25 | V |
| Base - emitter saturation voltage | $V_{BE(sat)}$ | $I_C = -100\text{ mA}$, $I_B = -10\text{ mA}$ | | | -1.2 | |
| Base - emitter voltage | V_{BE} | $V_{CE} = -1\text{ V}$, $I_C = -100\text{ mA}$ | | -0.8 | -1 | |
| DC current gain | $h_{FE(1)}$ | $V_{CE} = -1\text{ V}$, $I_C = -100\text{ mA}$ | 70 | | 400 | |
| | $h_{FE(2)}$ | $V_{CE} = -6\text{ V}$, $I_C = -400\text{ mA}$ | O | 25 | | |
| | | | Y | 40 | | |
| | | GR | 75 | | | |
| Collector output capacitance | C_{ob} | $V_{CB} = -6\text{ V}$, $I_E = 0$, $f = 1\text{ MHz}$ | | 13 | | pF |
| Transition frequency | f_T | $V_{CE} = -6\text{ V}$, $I_C = -20\text{ mA}$ | | 200 | | MHz |

■ Classification of h_{fe} (1)

| Type | 2SA1588-O | 2SA1588-Y | 2SA1588-G |
|---------|-----------|-----------|-----------|
| Range | 70-140 | 120-240 | 200-400 |
| Marking | ZO | ZY | ZG |

PNP Transistors

2SA1588

■ Typical Characteristics

