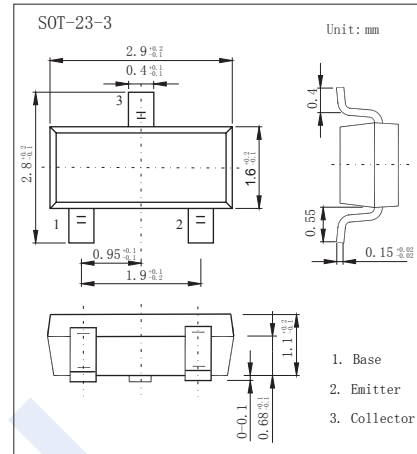


PNP Transistors

2SB736-HF

■ Features

- High DC current gain h_{FE} :200(TYP)
- Complimentary to 2SD780-HF
- Pb-Free Package May be Available. The G-Suffix Denotes a Pb-Free Lead Finish



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

| Parameter | Symbol | Rating | Unit |
|--------------------------------|-----------|------------|------------------|
| Collector - Base Voltage | V_{CBO} | -60 | V |
| Collector - Emitter Voltage | V_{CEO} | -60 | |
| Emitter - Base Voltage | V_{EBO} | -5 | |
| Collector Current - Continuous | I_C | -300 | mA |
| Collector Power Dissipation | P_C | 200 | mW |
| Junction Temperature | T_J | 150 | $^\circ\text{C}$ |
| Storage Temperature range | T_{stg} | -55 to 150 | |

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

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|---|---------------|---|------|-------|------|---------------|
| Collector- base breakdown voltage | V_{CBO} | $I_C = -100 \mu\text{A}, I_E = 0$ | -60 | | | V |
| Collector- emitter breakdown voltage | V_{CEO} | $I_C = -1 \text{ mA}, I_B = 0$ | -60 | | | |
| Emitter - base breakdown voltage | V_{EBO} | $I_E = -100 \mu\text{A}, I_C = 0$ | -5 | | | |
| Collector-base cut-off current | I_{CBO} | $V_{CB} = -50\text{V}, I_E = 0$ | | | -0.1 | μA |
| Emitter cut-off current | I_{EBO} | $V_{EB} = -5\text{V}, I_C = 0$ | | | -0.1 | |
| Collector-emitter saturation voltage (Note.1) | $V_{CE(sat)}$ | $I_C = -300 \text{ mA}, I_B = -30 \text{ mA}$ | | -0.35 | -0.6 | V |
| Base - emitter saturation voltage (Note.1) | $V_{BE(sat)}$ | $I_C = -300 \text{ mA}, I_B = -30 \text{ mA}$ | | | -1.2 | |
| Base - emitter voltage (Note.1) | V_{BE} | $V_{CE} = -6\text{V}, I_C = -10 \text{ mA}$ | -600 | -660 | -700 | mV |
| DC current gain (Note.1) | h_{FE} | $V_{CE} = -1 \text{ V}, I_C = -50 \text{ mA}$ | 110 | 200 | 400 | |
| | | $V_{CE} = -2\text{V}, I_C = -300 \text{ mA}$ | 30 | | | |
| Collector output capacitance | C_{ob} | $V_{CB} = -6\text{V}, I_E = 0, f = 1 \text{ MHz}$ | | 13 | | pF |
| Transition frequency | f_T | $V_{CE} = -6\text{V}, I_E = 10 \text{ mA}$ | | 100 | | MHz |

Note.1:Pulse test : Pulse width $\leq 350 \mu\text{s}$, Duty Cycle $\leq 2\%$.

■ Classification of $h_{FE}(1)$

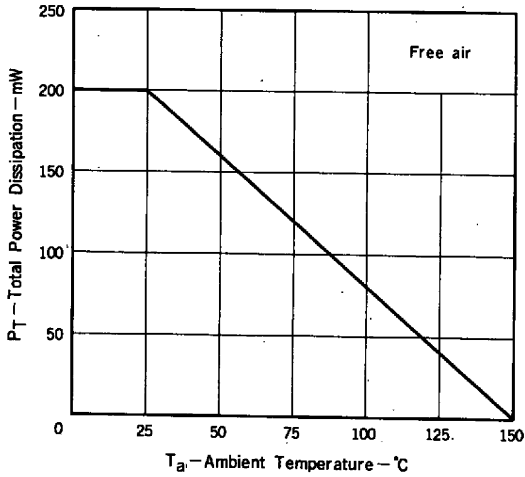
| Type | 2SB736-BW1-HF | 2SB736-BW2-HF | 2SB736-BW3-HF | 2SB736-BW4-HF | 2SB736-BW5-HF |
|---------|------------------|------------------|------------------|------------------|------------------|
| Range | 110-180 | 135-220 | 170-270 | 200-320 | 250-400 |
| Marking | BW1 _F | BW2 _F | BW3 _F | BW4 _F | BW5 _F |

PNP Transistors

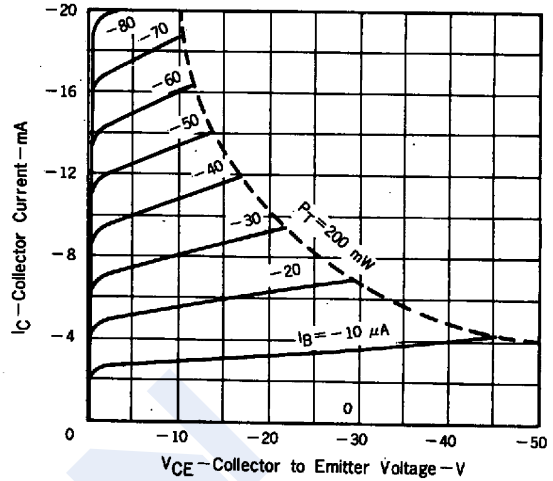
2SB736-HF

■ Typical Characteristics

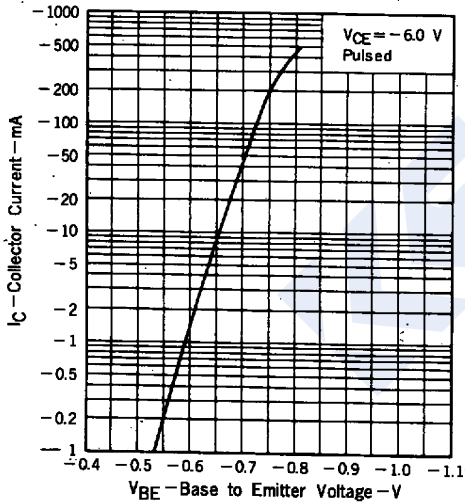
TOTAL POWER DISSIPATION vs. AMBIENT TEMPERATURE



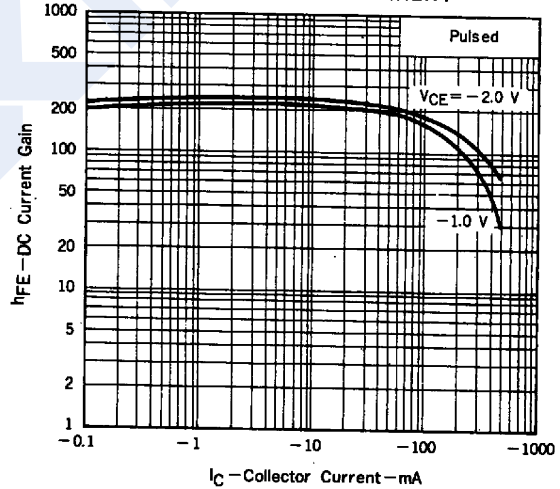
COLLECTOR CURRENT vs. COLLECTOR TO EMITTER VOLTAGE



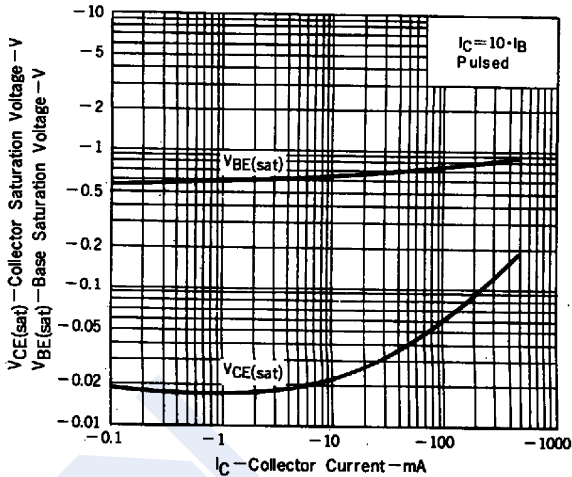
COLLECTOR CURRENT vs. BASE TO EMITTER VOLTAGE



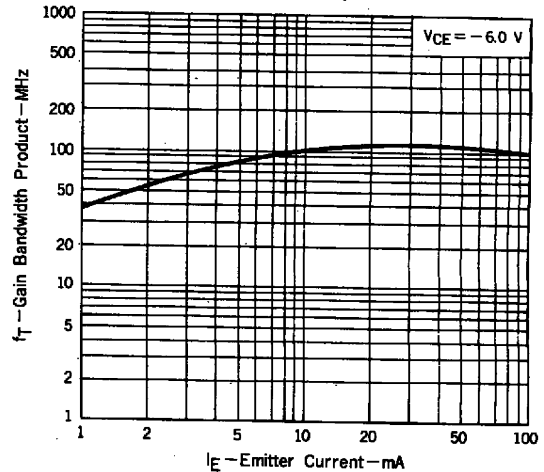
DC CURRENT GAIN vs. COLLECTOR CURRENT



BASE AND COLLECTOR SATURATION VOLTAGE vs. COLLECTOR CURRENT



GAIN BANDWIDTH PRODUCT vs. EMITTER CURRENT



PNP Transistors

2SB736-HF

■ Typical Characteristics

