

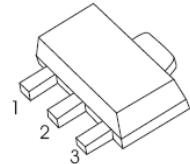
PNP Epitaxial Planar Silicon Transistors

■ Features

- High collector to emitter voltage: $V_{CE0} = -120V$.

SOT-89-3L

1. BASE
2. COLLECTOR
3. EMITTER



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

| Parameter | Symbol | Rating | Unit |
|------------------------------|-------------|-------------|------------|
| Collector-base voltage | V_{CB0} | -120 | V |
| Collector-emitter voltage | V_{CE0} | -120 | V |
| Emitter-base voltage | V_{EB0} | -5 | V |
| Collector current | I_c | -0.7 | A |
| Collector current (pulse) *1 | $I_{c(pu)}$ | -1.2 | A |
| Collector power dissipation | P_c | 2 | W |
| Junction temperature | T_j | 150 | $^\circ C$ |
| Storage temperature | T_{stg} | -55 to +150 | $^\circ C$ |

*1. $PW \leq 10ms$, duty cycle $\leq 50\%$

■ Electrical Characteristics $T_a = 25^\circ C$

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|--|---------------|------------------------------------|-------|-----|-------|---------|
| Collector- base breakdown voltage | V_{CB0} | $I_c = -100 \mu A, I_E = 0$ | -120 | | | V |
| Collector- emitter breakdown voltage | V_{CE0} | $I_c = -1 mA, I_B = 0$ | -120 | | | |
| Emitter - base breakdown voltage | V_{EB0} | $I_E = -100 \mu A, I_c = 0$ | -5 | | | |
| Collector-base cut-off current | I_{CB0} | $V_{CB} = -120 V, I_E = 0$ | | | -0.1 | μA |
| Emitter cut-off current | I_{EB0} | $V_{EB} = -5V, I_c = 0$ | | | -0.1 | |
| Collector-emitter saturation voltage * | $V_{CE(sat)}$ | $I_c = -500 mA, I_B = -50mA$ | | | -0.6 | V |
| Base - emitter saturation voltage * | $V_{BE(sat)}$ | $I_c = -500 mA, I_B = -50mA$ | | | -1.5 | |
| Base - emitter voltage * | V_{BE} | $V_{CE} = -10V, I_c = -10mA$ | -0.55 | | -0.68 | |
| DC current gain * | h_{FE} | $V_{CE} = -1V, I_c = -100mA$ | 90 | 200 | 400 | |
| | | $V_{CE} = -1V, I_c = -5mA$ | 45 | 200 | | |
| Collector output capacitance | C_{ob} | $V_{CB} = -10V, I_E = 0, f = 1MHz$ | | 14 | | μF |
| Transition frequency | f_T | $V_{CE} = -10V, I_c = -10mA$ | | 75 | | MHz |

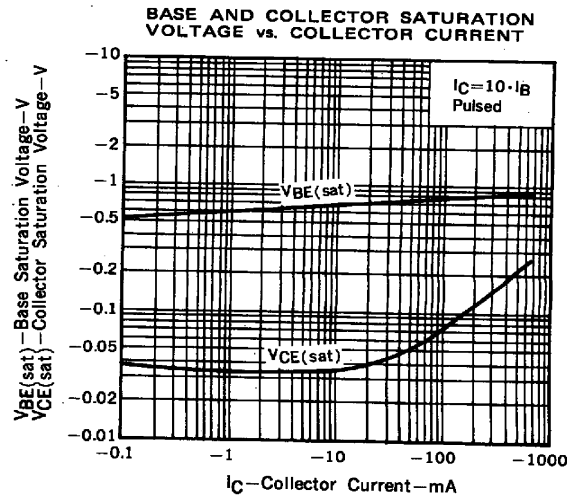
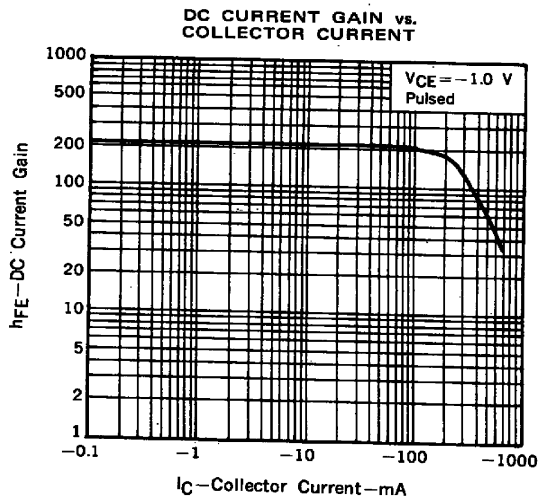
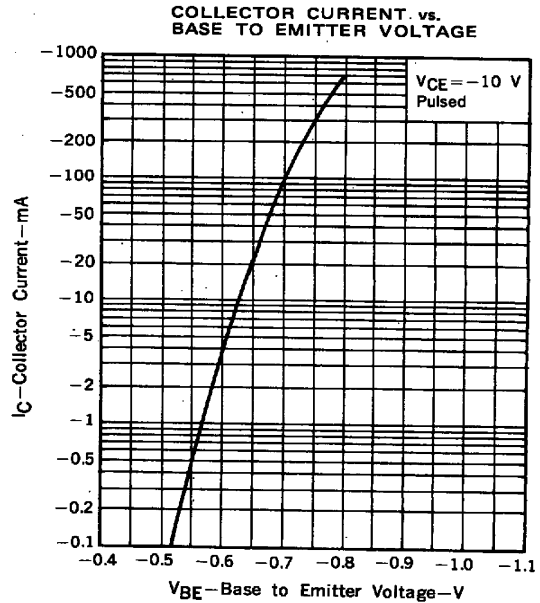
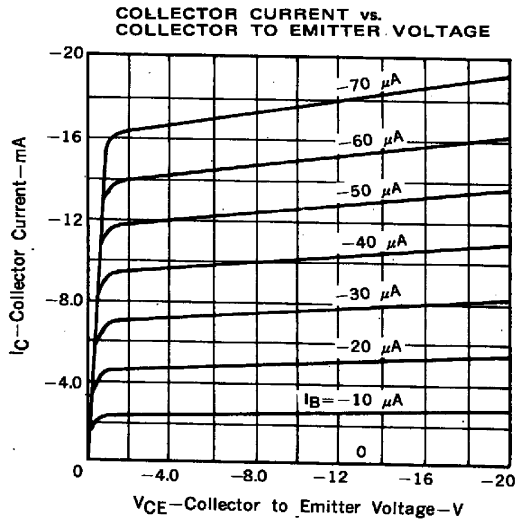
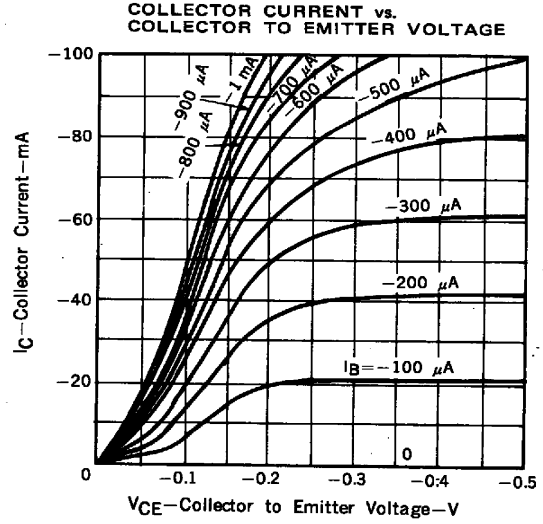
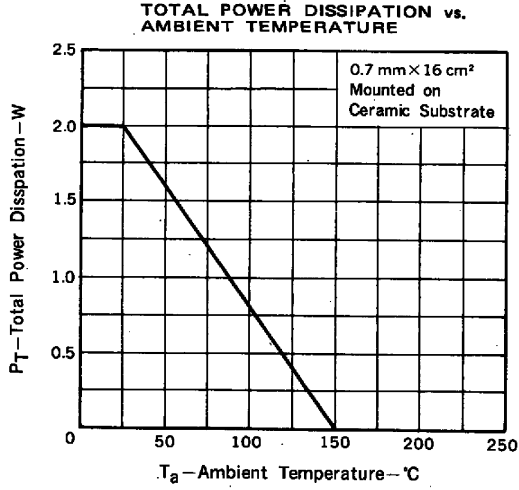
* $PW \leq 350\mu s$, duty cycle $\leq 2\%$

■ h_{FE} Classification(1)

| Type | 2SB806-R | 2SB806-Q | 2SB806-P |
|---------|----------|----------|----------|
| Range | 90-180 | 135-270 | 200-400 |
| Marking | KR | KQ | KP |

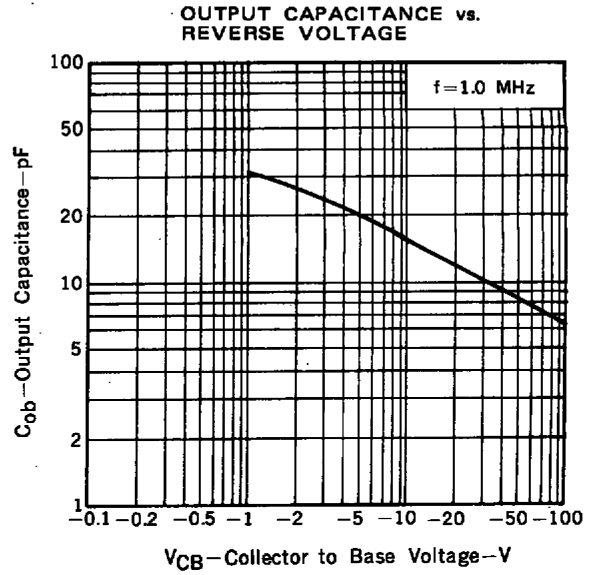
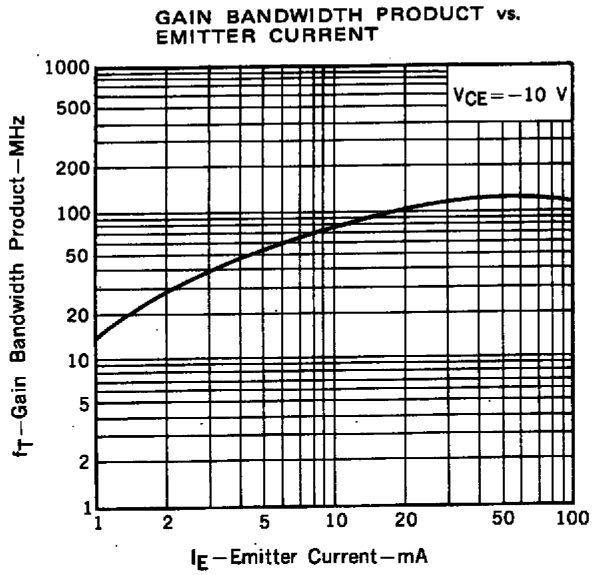


Typical Characteristics



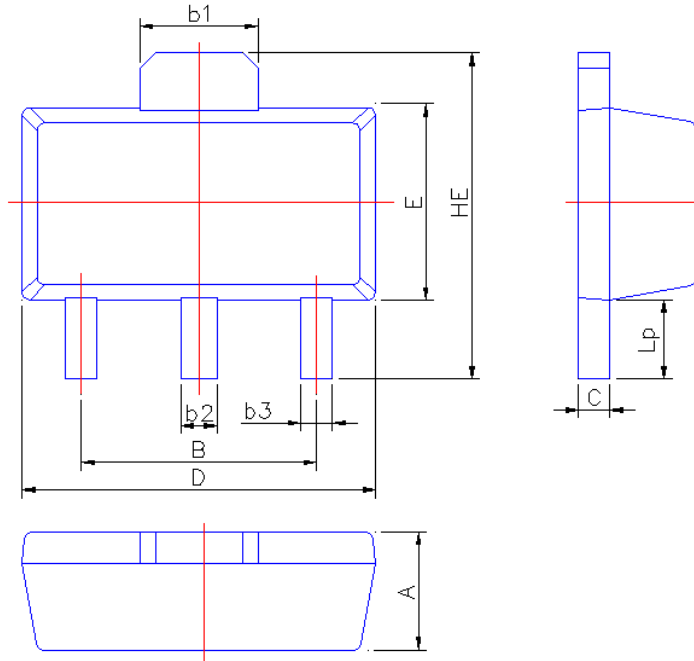


■ Typical Characteristics





SOT-89 PACKAGE OUTLINE



| Symbol | Dimension in Millimeters | |
|--------|--------------------------|------|
| | Min | Max |
| A | 1.40 | 1.60 |
| B | 2.95 | 3.05 |
| b1 | 1.45 | 1.70 |
| b2 | 0.45 | 0.56 |
| b3 | 0.35 | 0.50 |
| C | 0.35 | 0.50 |
| D | 4.40 | 4.60 |
| E | 2.35 | 2.55 |
| HE | 3.90 | 4.40 |
| Lp | 0.90 | 1.10 |