

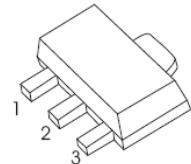
PNP Epitaxial Planar Silicon Transistors

■ Features

- High collector to emitter voltage: $V_{CEO} > -100V$.

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_{CBO} | -100 | V |
| Collector-emitter voltage | V_{CEO} | -100 | V |
| Emitter-base voltage | V_{EBO} | -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 $T_a = 25^\circ C$

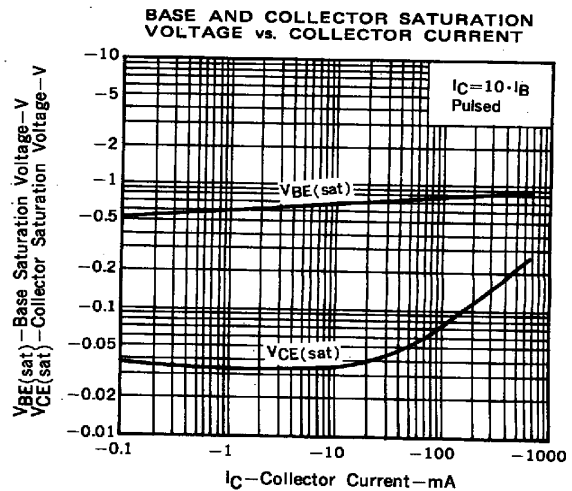
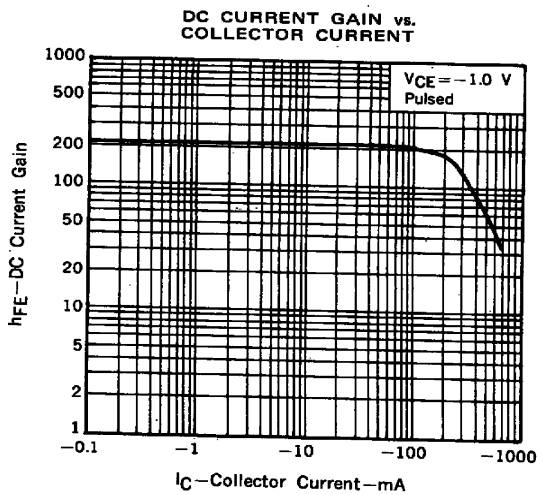
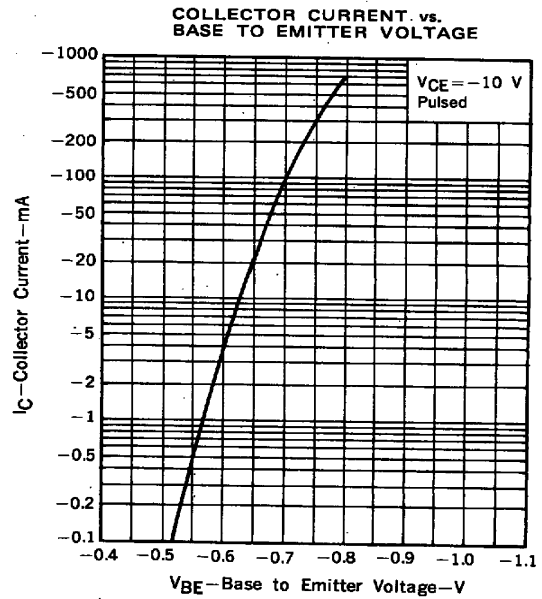
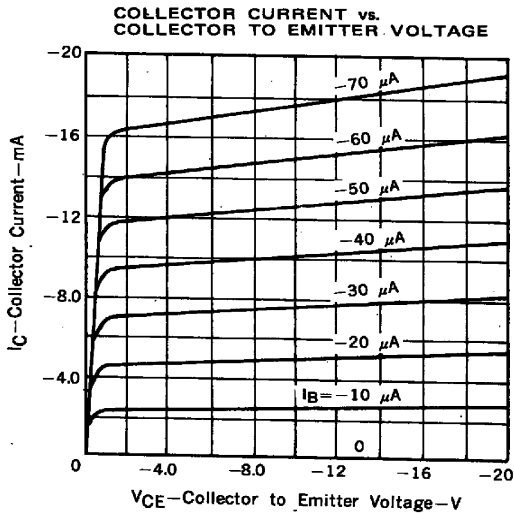
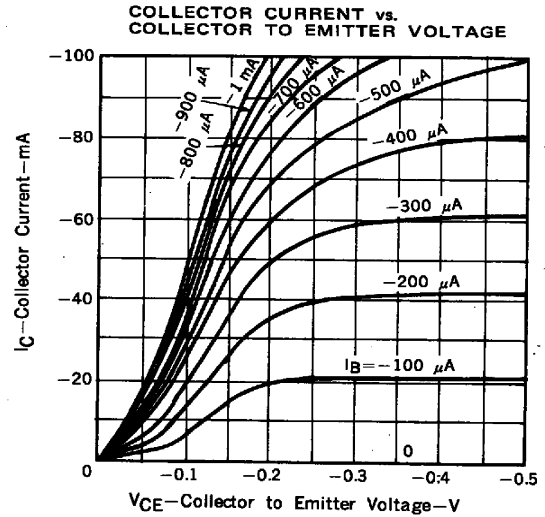
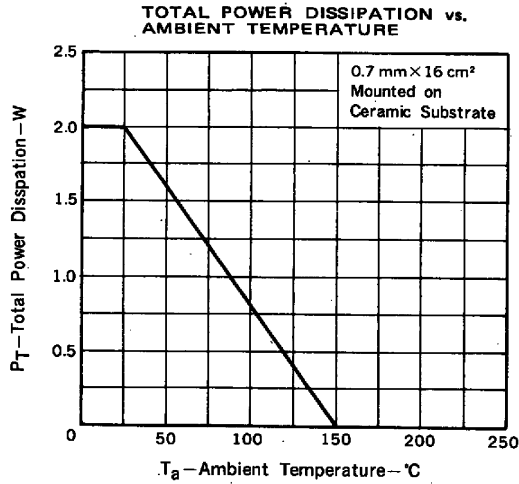
| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|--|---------------|------------------------------------|-------|-----|-------|------|
| Collector- base breakdown voltage | V_{CBO} | $I_C = -100 \mu A, I_E = 0$ | -100 | | | V |
| Collector- emitter breakdown voltage | V_{CEO} | $I_C = -1 mA, I_B = 0$ | -100 | | | |
| Emitter - base breakdown voltage | V_{EBO} | $I_E = -100 \mu A, I_C = 0$ | -5 | | | |
| Collector-base cut-off current | I_{CBO} | $V_{CB} = -100 V, I_E = 0$ | | | -0.1 | uA |
| Emitter cut-off current | I_{EBO} | $V_{EB} = -5V, I_C = 0$ | | | -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 | | pF |
| Transition frequency | f_T | $V_{CE} = -10V, I_C = -10mA$ | | 75 | | MHz |

* $PW \leq 350us, duty\ cycle \leq 2\%$

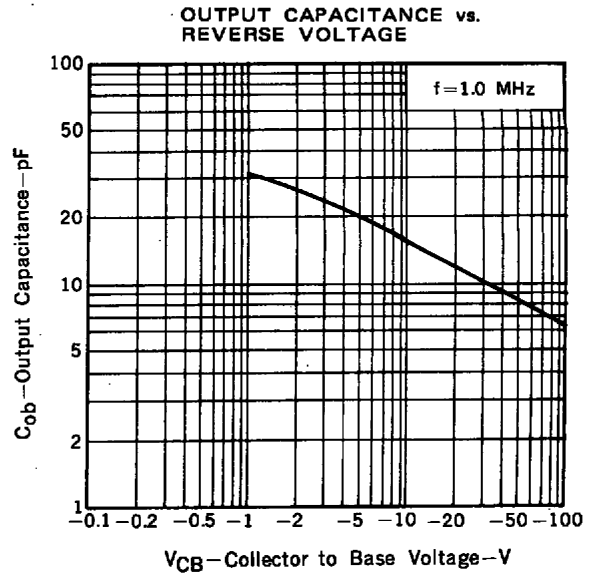
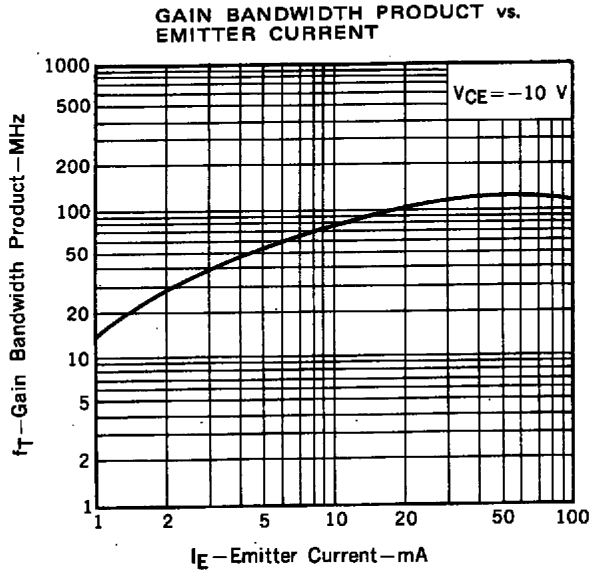
h_{FE} Classification(1)

| Type | 2SB805-M | 2SB805-L | 2SB805-K |
|---------|----------|----------|----------|
| Range | 90-180 | 135-270 | 200-400 |
| Marking | KM | KL | KK |

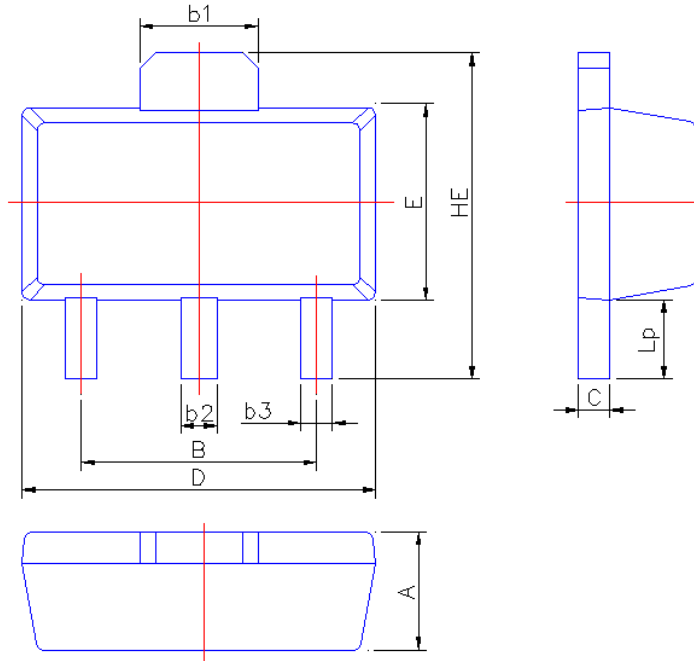
■ Typical Characteristics



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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 |