

MPS3702

PNP EPITAXIAL SILICON TRANSISTOR

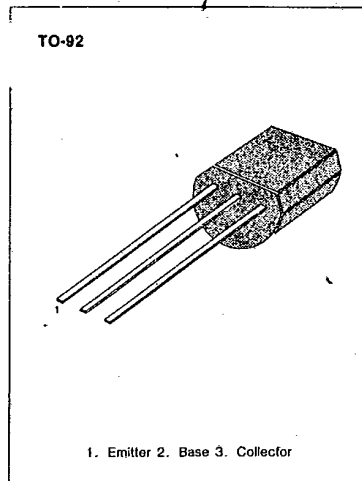
T-29-21

AMPLIFIER TRANSISTOR

- Collector-Emitter Voltage: $V_{CE0} = 25V$
- Collector Dissipation: $P_C (\text{max}) = 625mW$

ABSOLUTE MAXIMUM RATINGS ($T_a = 25^\circ C$)

| Characteristic | Symbol | Rating | Unit |
|---------------------------|-----------|-----------|------------|
| Collector-Base Voltage | V_{CBO} | 40 | V |
| Collector-Emitter Voltage | V_{CEO} | 25 | V |
| Emitter-Base Voltage | V_{EBO} | 5 | V |
| Collector Current | I_C | 600 | mA |
| Collector Dissipation | P_C | 625 | mW |
| Junction Temperature | T_J | 150 | $^\circ C$ |
| Storage Temperature | T_{stg} | -55 ~ 150 | $^\circ C$ |

ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ C$)

| Characteristic | Symbol | Test Conditions | Min | Typ | Max | Unit |
|---------------------------------------|-----------------------|--|-----|-----|------|------|
| Collector-Base Breakdown Voltage | BV_{CBO} | $I_C = 100\mu A, I_E = 0$ | 40 | | | V |
| *Collector-Emitter Breakdown Voltage | BV_{CEO} | $I_C = 10mA, I_B = 0$ | 25 | | | V |
| Emitter-Base Breakdown Voltage | BV_{EBO} | $I_E = 100\mu A, I_C = 0$ | 5 | | | V |
| Collector Cut-off Current | I_{CBO} | $V_{CB} = 20V, I_E = 0$ | | | 100 | nA |
| Emitter Cut-off Current | I_{EBO} | $V_{BE} = 3V, I_C = 0$ | | | 100 | nA |
| *DC Current Gain | h_{FE} | $I_C = 50mA, V_{CE} = 5V$ | 60 | | 300 | |
| *Collector-Emitter Saturation Voltage | $V_{CE} (\text{sat})$ | $I_C = 50mA, I_B = 5mA$ | | | 0.25 | V |
| Output Capacitance | C_{ob} | $V_{CB} = 10V, I_E = 0$ $f = 1MHz$ | | | 12 | pF |
| Current Gain Bandwidth Product | f_T | $I_C = 50mA, V_{CE} = 5V$ $f = 20MHz$ | 100 | | | MHz |
| • Base-Emitter On Voltage | $V_{BE} (\text{on})$ | $I_C = 50mA, V_{CE} = 5V$ | 0.6 | | 1 | V |

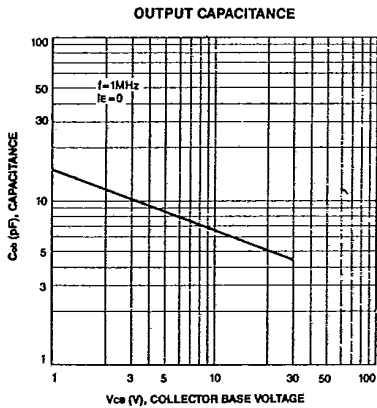
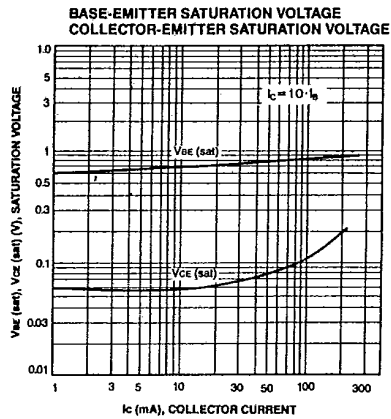
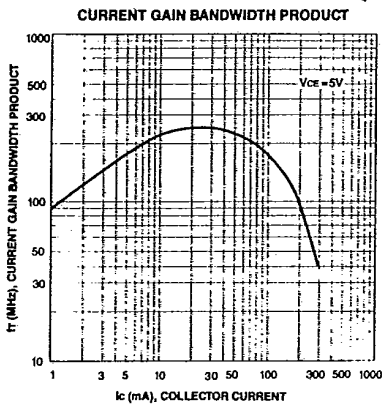
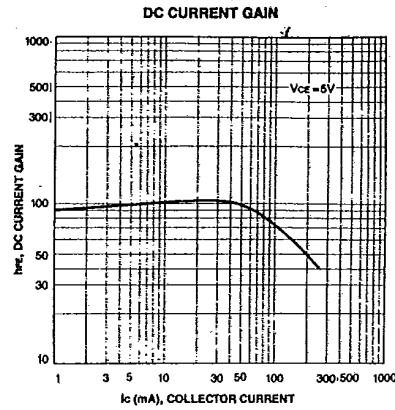
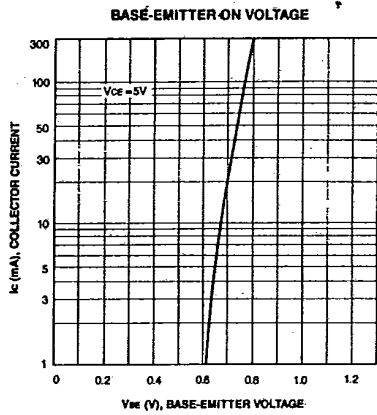
* Pulse Test: Pulse Width $\leq 300\mu s$, Duty Cycle $\leq 2\%$



MPS3702

PNP EPITAXIAL SILICON TRANSISTOR

T-29-21



3