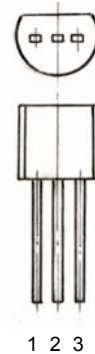


S9015 TRANSISTOR (PNP)

TO-92

- 1. EMITTER
- 2. BASE
- 3. COLLECTOR



FEATURES

- High total power dissipation. ($P_C=0.45W$)
- High h_{FE} and good linearity
- Complementary to S9014

MAXIMUM RATINGS ($T_A=25^\circ C$ unless otherwise noted)

| Symbol | Parameter | Value | Units |
|-----------|-------------------------------|---------|------------|
| V_{CBO} | Collector-Base Voltage | -50 | V |
| V_{CEO} | Collector-Emitter Voltage | -45 | V |
| V_{EBO} | Emitter-Base Voltage | -5 | V |
| I_C | Collector Current -Continuous | -0.1 | A |
| P_C | Collector Power Dissipation | 0.45 | W |
| T_j | Junction Temperature | 150 | $^\circ C$ |
| T_{stg} | Storage Temperature | -55-150 | $^\circ C$ |

ELECTRICAL CHARACTERISTICS ($T_{amb}=25^\circ C$ unless otherwise specified)

| Parameter | Symbol | Test conditions | MIN | TYP | MAX | UNIT |
|--------------------------------------|---------------|--|-----|-----|-------|---------|
| Collector-base breakdown voltage | $V_{(BR)CBO}$ | $I_C = -100\mu A, I_E = 0$ | -50 | | | V |
| Collector-emitter breakdown voltage | $V_{(BR)CEO}$ | $I_C = -1mA, I_B = 0$ | -45 | | | V |
| Emitter-base breakdown voltage | $V_{(BR)EBO}$ | $I_E = -100\mu A, I_C = 0$ | -5 | | | V |
| Collector cut-off current | I_{CBO} | $V_{CB} = -50V, I_E = 0$ | | | -0.05 | μA |
| Emitter cut-off current | I_{EBO} | $V_{EB} = -5V, I_C = 0$ | | | -0.05 | μA |
| DC current gain | h_{FE} | $V_{CE} = -5V, I_C = -1mA$ | 60 | | 1000 | |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = -100mA, I_B = -10mA$ | | | -0.3 | V |
| Base-emitter saturation voltage | $V_{BE(sat)}$ | $I_C = -100mA, I_B = -10mA$ | | | -1 | V |
| Transition frequency | f_T | $V_{CE} = -5V, I_C = -10mA$ $f = 30MHz$ | 100 | | | MHz |

CLASSIFICATION OF $h_{FE(1)}$

| Rank | A | B | C | D |
|-------|--------|---------|---------|----------|
| Range | 60-150 | 250-300 | 300-400 | 400-1000 |

Typical Characteristics

S9015

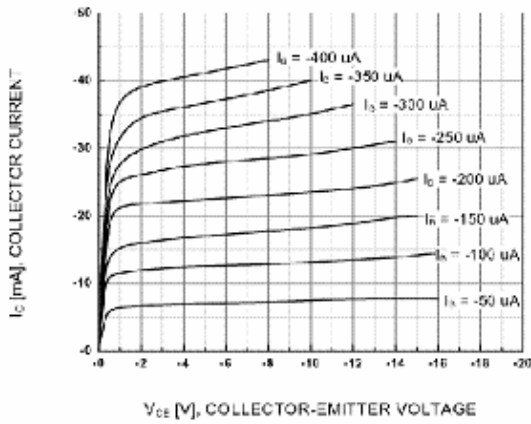


Figure 1. Static Characteristic

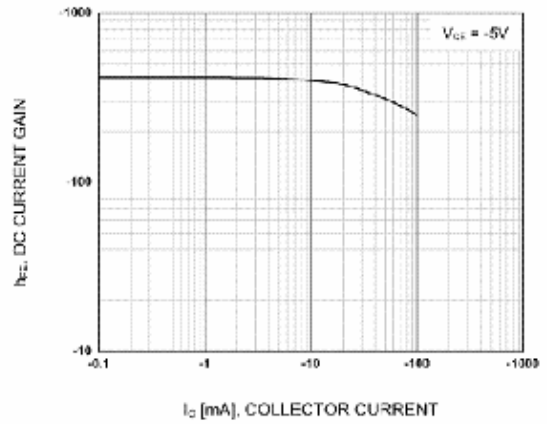
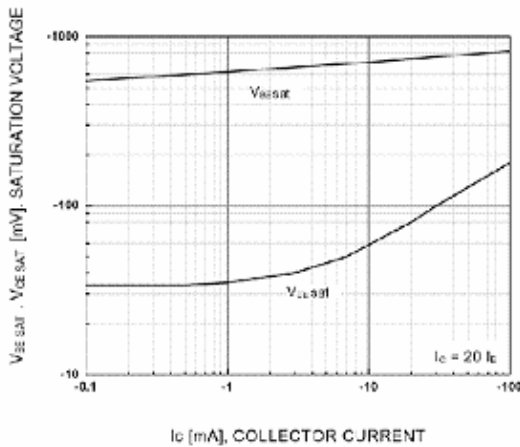


Figure 2. DC current Gain



**Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage**

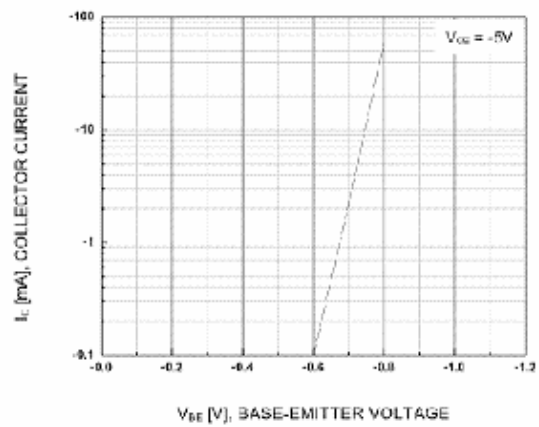


Figure 4. Base-Emitter On Voltage

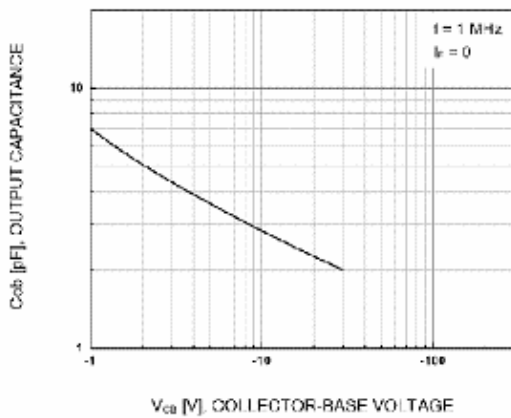


Figure 5. Collector Output Capacitance

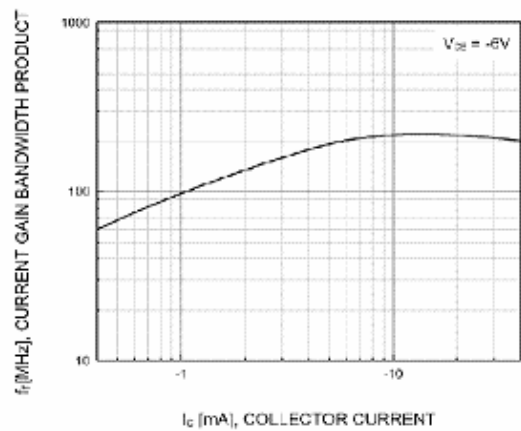


Figure 6. Current Gain Bandwidth Product