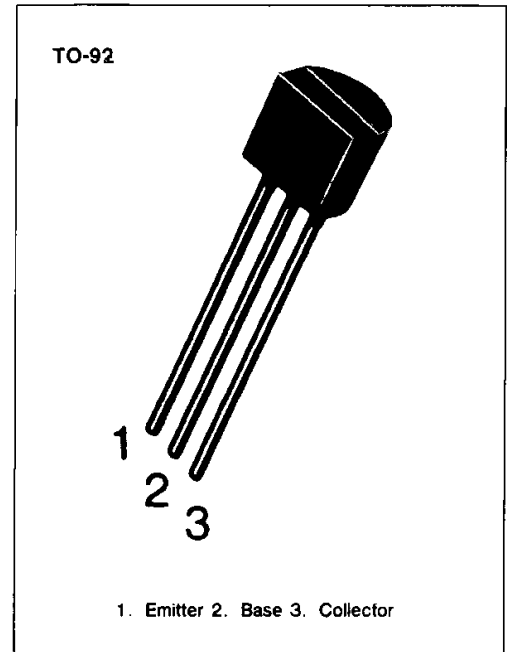


Transistors

2SC9013

1W OUTPUT AMPLIFIER OF POTABLE RADIOS IN CLASS B PUSH-PULL OPERATION.

- High total power dissipation. ($P_T = 625\text{mW}$)
- High Collector Current. ($I_C = 500\text{mA}$)
- Complementary to SS9012
- Excellent h_{FE} linearity



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

| Characteristic | Symbol | Rating | Unit |
|---------------------------|-----------|----------------|------------------|
| Collector-Base Voltage | V_{CB0} | 40 | V |
| Collector-Emitter Voltage | V_{CEO} | 20 | V |
| Emitter-Base Voltage | V_{EBO} | 5 | V |
| Collector Current | I_C | 500 | mA |
| Collector Dissipation | P_C | 625 | mW |
| Junction Temperature | T_j | 150 | $^\circ\text{C}$ |
| Storage Temperature | T_{stg} | $-55 \sim 150$ | $^\circ\text{C}$ |

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

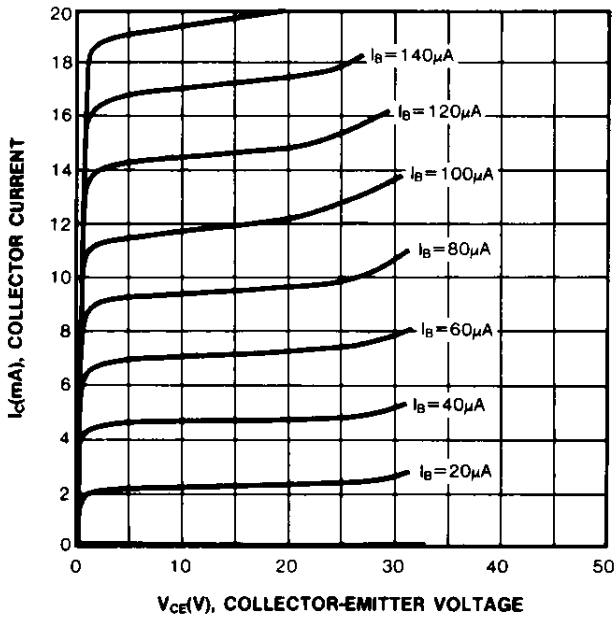
| Characteristic | Symbol | Test Conditions | Min | Typ | Max | Unit |
|--------------------------------------|---------------|--|-----|------|-----|------|
| Collector-Base Breakdown Voltage | BV_{CBO} | $I_C = 100\mu\text{A}, I_E = 0$ | 40 | | | V |
| Collector-Emitter Breakdown Voltage | BV_{CEO} | $I_C = 1\text{mA}, I_B = 0$ | 20 | | | V |
| Emitter-Base Breakdown Voltage | BV_{EBO} | $I_E = 100\mu\text{A}, I_C = 0$ | 5 | | | V |
| Collector Cutoff Current | I_{CBO} | $V_{CB} = 25\text{V}, I_E = 0$ | | | 100 | nA |
| Emitter Cutoff Current | I_{EBO} | $V_{EB} = 3\text{V}, I_C = 0$ | | | 100 | nA |
| DC Current Gain | h_{FE1} | $V_{CE} = 1\text{V}, I_C = 50\text{mA}$ | 64 | 120 | 202 | |
| | h_{FE2} | $V_{CE} = 1\text{V}, I_C = 500\text{mA}$ | 40 | 120 | | |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C = 500\text{mA}, I_B = 50\text{mA}$ | | 0.16 | 0.6 | V |
| Base-Emitter Saturation Voltage | $V_{BE(sat)}$ | $I_C = 500\text{mA}, I_B = 50\text{mA}$ | | 0.91 | 1.2 | V |
| Base-Emitter On Voltage | $V_{BE(on)}$ | $V_{CE} = 1\text{V}, I_C = 10\text{mA}$ | 0.6 | 0.67 | 0.7 | V |

h_{FE} (1) CLASSIFICATION

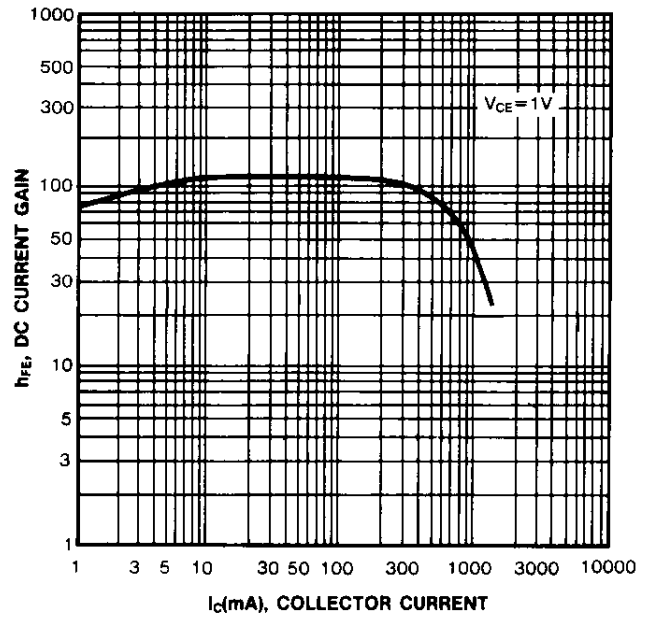
| Classification | D | E | F | G | H |
|----------------|-------|--------|--------|---------|---------|
| h_{FE} (1) | 64-91 | 78-112 | 96-135 | 112-166 | 144-202 |



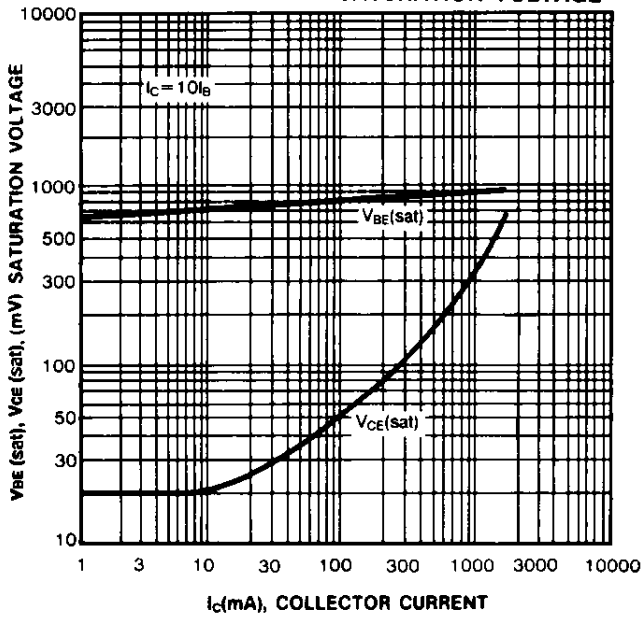
STATIC CHARACTERISTIC



DC CURRENT GAIN



**BASE-EMITTER SATURATION VOLTAGE
COLLECTOR-EMITTER SATURATION VOLTAGE**



CURRENT GAIN-BANDWIDTH PRODUCT

