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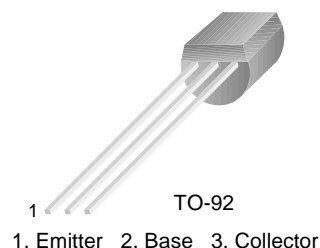
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SS9013

SS9013

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.



NPN Epitaxial Silicon Transistor

Absolute Maximum Ratings $T_a=25^\circ\text{C}$ unless otherwise noted

| Symbol | Parameter | Ratings | Units |
|-----------|-----------------------------|-----------|------------------|
| V_{CBO} | Collector-Base Voltage | 40 | V |
| V_{CEO} | Collector-Emitter Voltage | 20 | V |
| V_{EBO} | Emitter-Base Voltage | 5 | V |
| I_C | Collector Current | 500 | mA |
| P_C | Collector Power Dissipation | 625 | mW |
| T_J | Junction Temperature | 150 | $^\circ\text{C}$ |
| T_{STG} | Storage Temperature | -55 ~ 150 | $^\circ\text{C}$ |

Electrical Characteristics $T_a=25^\circ\text{C}$ unless otherwise noted

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

h_{FE} Classification

| Classification | D | E | F | G | H |
|----------------|---------|----------|----------|-----------|-----------|
| h_{FE1} | 64 ~ 91 | 78 ~ 112 | 96 ~ 135 | 112 ~ 166 | 144 ~ 202 |

Typical Characteristics

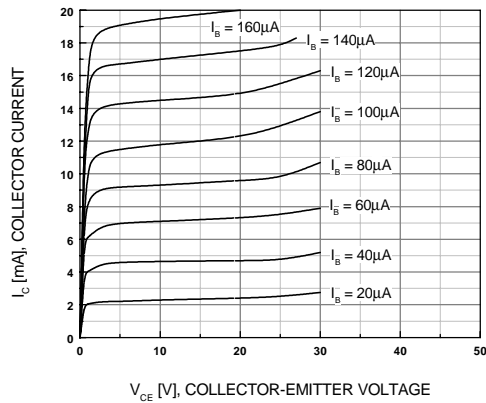


Figure 1. Static Characteristic

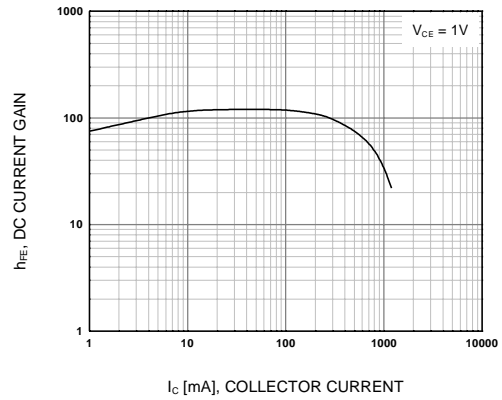


Figure 2. DC current Gain

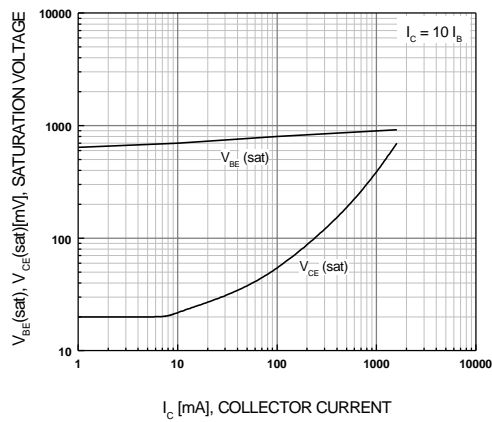


Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

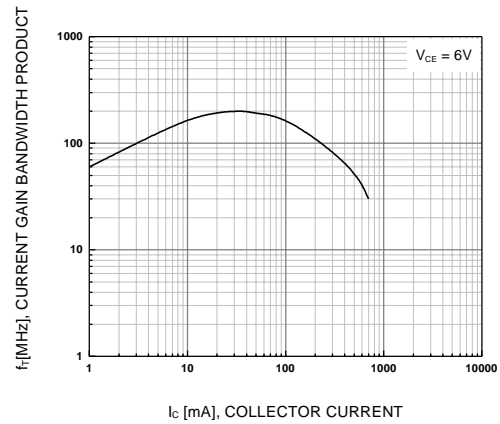
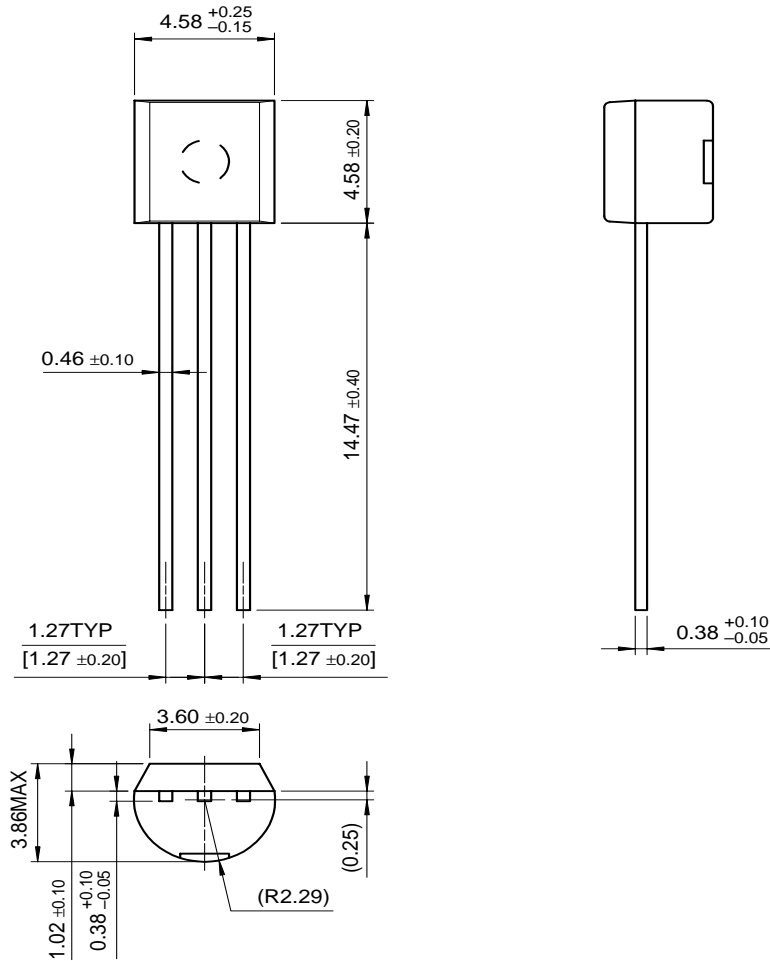


Figure 4. Current Gain Bandwidth Product

Package Dimensions

TO-92



Dimensions in Millimeters

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