

## SS9012

## PNP EPITAXIAL SILICON TRANSISTOR

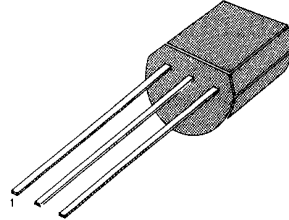
### 1W OUTPUT AMPLIFIER OF POTABLE RADIOS IN CLASS B PUSH-PULL OPERATION.

- High total power dissipation. ( $P_T=625\text{mW}$ )
- High Collector Current. ( $I_C=-500\text{mA}$ )
- Complementary to SS9013
- Excellent  $h_{FE}$  linearity.

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

| Characteristic            | Symbol    | Rating    | Unit             |
|---------------------------|-----------|-----------|------------------|
| Collector-Base Voltage    | $V_{CBO}$ | -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 ~ 150 | $^\circ\text{C}$ |

TO-92



1. Emitter 2. Base 3. Collector

### 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 Cut-off Current            | $I_{CBO}$            | $V_{CB} = -25\text{V}$ , $I_E = 0$            |      |       | -100 | nA   |
| Emitter Cut-off 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   | 90    |      |      |
| Collector-Emitter Saturation Voltage | $V_{CE}(\text{sat})$ | $I_C = -500\text{mA}$ , $I_B = -50\text{mA}$  |      | -0.18 | -0.6 | V    |
| Base-Emitter Saturation Voltage      | $V_{BE}(\text{sat})$ | $I_C = -500\text{mA}$ , $I_B = -50\text{mA}$  |      | -0.95 | -1.2 | V    |
| Base-Emitter On Voltage              | $V_{BE}(\text{on})$  | $V_{CE} = -1\text{V}$ , $I_C = -10\text{mA}$  | -0.6 | -0.67 | -0.7 | V    |

### $h_{FE}$ CLASSIFICATION

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

