

## **KSA910**

## **Driver Stage Of Audio Amplifier & High Voltage Switching Applications**

Collector-Emitter Voltage: V<sub>CEO</sub>= -150V
Output Capacitance: C<sub>ob</sub>=5pF (MAX.)
Complement to KSC2310



### 1. Emitter 2. Collector 3. Base

## **PNP Epitaxial Silicon Transistor**

## **Absolute Maximum Ratings** $T_a$ =25°C unless otherwise noted

| Symbol           | Parameter                   | Ratings   | Units |
|------------------|-----------------------------|-----------|-------|
| $V_{CBO}$        | Collector-Base Voltage      | -150      | V     |
| $V_{CEO}$        | Collector-Emitter Voltage   | -150      | V     |
| V <sub>EBO</sub> | Emitter-Base Voltage        | -5        | V     |
| I <sub>C</sub>   | Collector Current           | -50       | mA    |
| P <sub>C</sub>   | Collector Power Dissipation | 800       | mW    |
| T <sub>J</sub>   | Junction Temperature        | 150       | °C    |
| T <sub>STG</sub> | Storage Temperature         | -55 ~ 150 | °C    |

## Electrical Characteristics T<sub>a</sub>=25°C unless otherwise noted

| Symbol                | Parameter                            | Test Condition                                    | Min. | Тур. | Max. | Units |
|-----------------------|--------------------------------------|---|------|------|------|-------|
| BV <sub>CBO</sub>     | Collector-Base Breakdown Voltage     | $I_C = -100 \mu A, I_E = 0$                       | -150 |      |      | V     |
| BV <sub>CEO</sub>     | Collector-Emitter Breakdown Voltage  | $I_C = -5mA$ , $I_B = 0$                          | -150 |      |      | V     |
| BV <sub>EBO</sub>     | Emitter-Base Breakdown Voltage       | $I_E = -10\mu A, I_C = 0$                         | -5   |      |      | V     |
| I <sub>CBO</sub>      | Collector Cut-off Current            | V <sub>CB</sub> = -150V, I <sub>E</sub> =0        |      |      | -100 | nA    |
| h <sub>FE</sub>       | DC Current Gain                      | $V_{CE}$ = -5V, $I_{C}$ = -10mA                   | 40   |      | 240  |       |
| V <sub>CE</sub> (sat) | Collector-Emitter Saturation Voltage | $I_C$ = -10mA, $I_B$ = -1mA                       |      |      | -0.8 | V     |
| f <sub>T</sub>        | Current Gain Bandwidth Product       | $V_{CE}$ = -30V, $I_{C}$ = -10mA                  |      | 100  |      | MHz   |
| C <sub>ob</sub>       | Output Capacitance                   | V <sub>CB</sub> = -10V, I <sub>E</sub> =0, f=1MHz |      |      | 5    | pF    |

## **h**<sub>FE</sub> Classification

| Classification  | R       | 0        | Y         |
|-----------------|---------|----------|-----------|
| h <sub>FE</sub> | 40 ~ 80 | 70 ~ 140 | 120 ~ 240 |

# **Typical Characteristics**

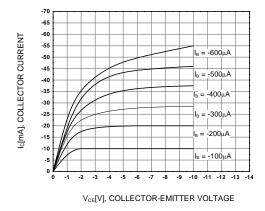


Figure 1. Static Characteristic

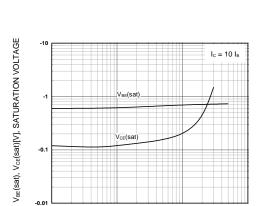


Figure 3. Collector-Emitter Saturation Voltage Base-Emitter Saturation Voltage

Ic[mA], COLLECTOR CURRENT

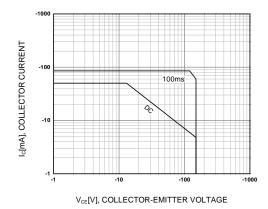


Figure 5. Safe Operating Area

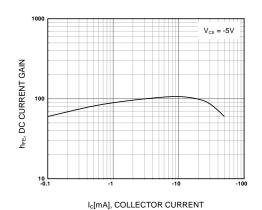


Figure 2. DC current Gain

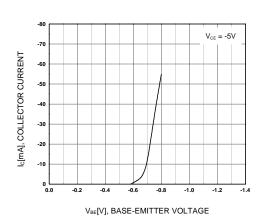


Figure 4. Base-Emitter On Voltage

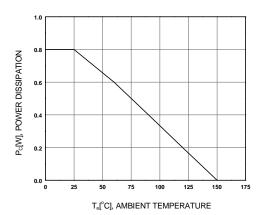
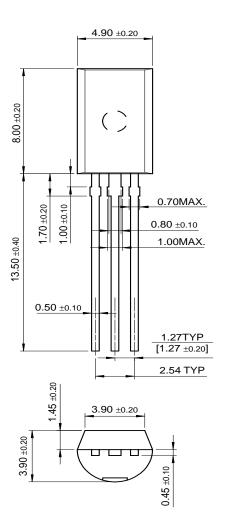


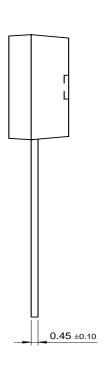
Figure 6. Power Derating

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# **Package Demensions**

# TO-92L





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