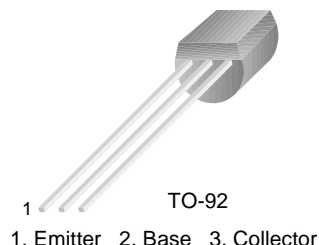


# KSA708

KSA708

## Low Frequency Amplifier & Medium Speed Switching

- Complement to KSC1008
- Collector-Base Voltage :  $V_{CBO} = -80V$
- Collector Power Dissipation :  $P_C = 800mW$
- Suffix "-C" means Center Collector (1. Emitter 2. Collector 3. Base)



## PNP Epitaxial Silicon Transistor

### Absolute Maximum Ratings $T_a = 25^\circ C$ unless otherwise noted

| Symbol    | Parameter                   | Ratings   | Units      |
|-----------|-----------------------------|-----------|------------|
| $V_{CBO}$ | Collector-Base Voltage      | -80       | V          |
| $V_{CEO}$ | Collector-Emitter Voltage   | -60       | V          |
| $V_{EBO}$ | Emitter-Base Voltage        | -8        | V          |
| $I_C$     | Collector Current           | -700      | mA         |
| $P_C$     | Collector Power Dissipation | 800       | mW         |
| $T_J$     | Junction Temperature        | 150       | $^\circ C$ |
| $T_{STG}$ | Storage Temperature         | -55 ~ 150 | $^\circ C$ |

### Electrical Characteristics $T_a = 25^\circ C$ unless otherwise noted

| Symbol        | Parameter                              | Test Condition                     | Min. | Typ. | Max. | Units   |
|---------------|--|------------------------------------|------|------|------|---------|
| $BV_{CBO}$    | Collector-Base Breakdown Voltage       | $I_C = -100\mu A, I_E = 0$         | -80  |      |      | V       |
| $BV_{CEO}$    | Collector-Emitter Breakdown Voltage    | $I_C = -10mA, I_B = 0$             | -60  |      |      | V       |
| $BV_{EBO}$    | Emitter-Base Breakdown Voltage         | $I_E = -100\mu A, I_C = 0$         | -8   |      |      | V       |
| $I_{CBO}$     | Collector Cut-off Current              | $V_{CB} = -60V, I_E = 0$           |      |      | -0.1 | $\mu A$ |
| $I_{EBO}$     | Emitter Cut-off Current                | $V_{EB} = -5V, I_C = 0$            |      |      | -0.1 | $\mu A$ |
| $h_{FE}$      | * DC Current Gain                      | $V_{CE} = -2V, I_C = -50mA$        | 40   |      | 240  |         |
| $V_{CE(sat)}$ | * Collector-Emitter Saturation Voltage | $I_C = -500mA, I_B = -50mA$        |      | -0.3 | -0.7 | V       |
| $V_{BE(sat)}$ | * Base-Emitter Saturation Voltage      | $I_C = -500mA, I_B = -50mA$        |      | -0.9 | 1.1  | V       |
| $f_T$         | Current Gain Bandwidth Product         | $V_{CE} = -10V, I_C = -50mA$       |      | 50   |      | MHz     |
| $C_{ob}$      | Output Capacitance                     | $V_{CB} = -10V, I_E = 0, f = 1MHz$ |      | 13   |      | pF      |

\* Pulse Test:  $PW \leq 350\mu s$ , Duty cycle  $\leq 2\%$

### $h_{FE}$ Classification

| Classification | R       | O        | Y         |
|----------------|---------|----------|-----------|
| $h_{FE}$       | 40 ~ 80 | 70 ~ 140 | 120 ~ 240 |

## Typical Characteristics

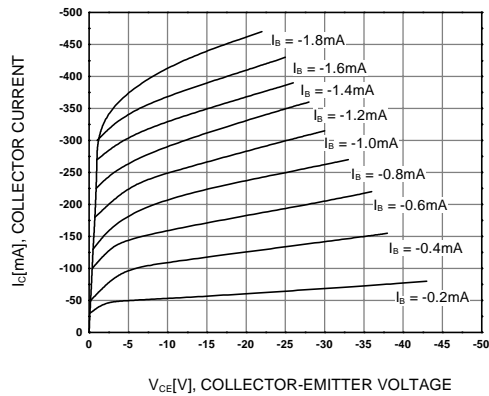


Figure 1. Static Characteristic

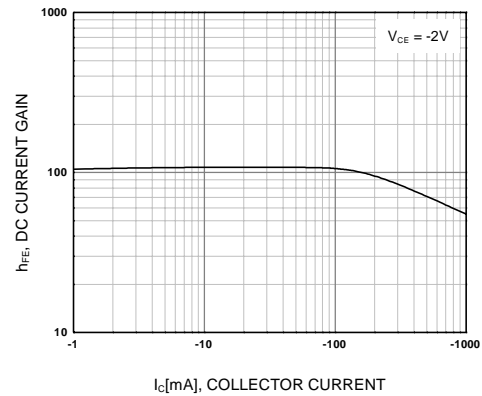


Figure 2. DC current Gain

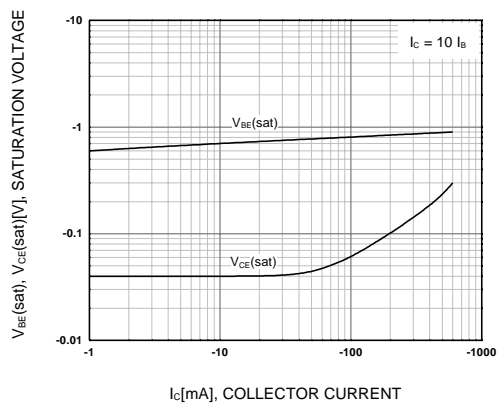


Figure 3. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

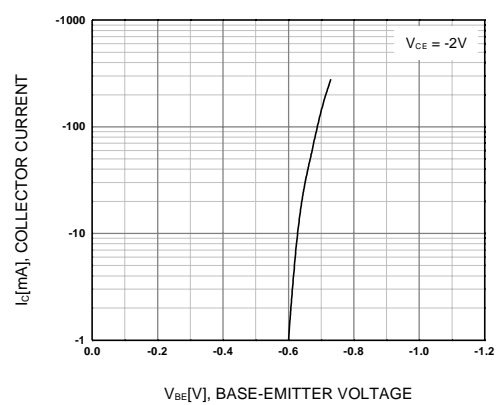


Figure 4. Base-Emitter On Voltage

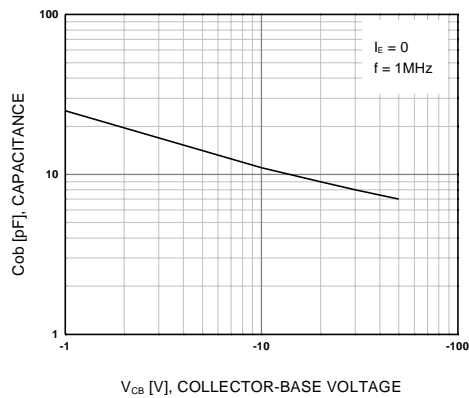
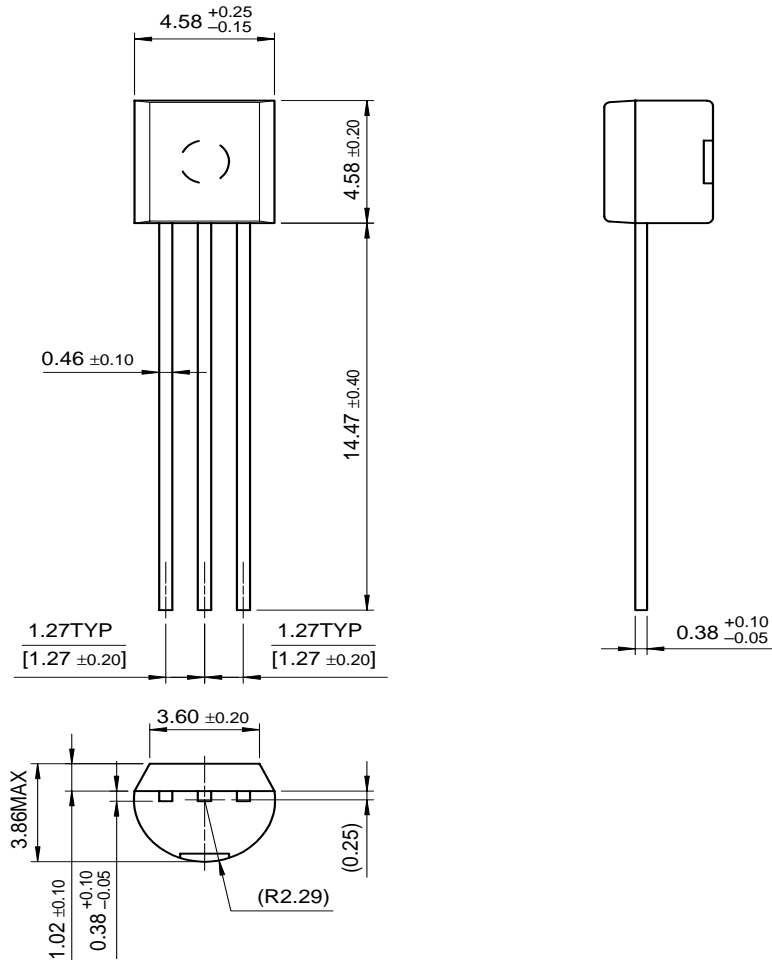


Figure 5. Collector Output Capacitance

# Package Dimensions

## TO-92



Dimensions in Millimeters

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