

PNP Epitaxial Silicon Transistor

KSA708

Low Frequency Amplifier & Medium Speed Switching

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

ABSOLUTE MAXIMUM RATINGS

($T_A = 25^\circ\text{C}$ unless otherwise noted.)

| Symbol | Parameter | Ratings | Unit |
|-----------|-----------------------------|-------------|------------------|
| 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 | $^\circ\text{C}$ |
| T_{STG} | Storage Temperature | -55 to +150 | $^\circ\text{C}$ |

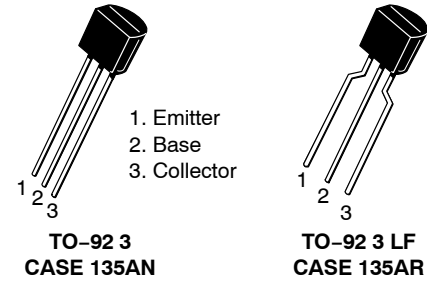
Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted.)

| Symbol | Parameter | Conditions | Min | Typ | Max | Unit |
|---------------|---------------------------------------|--|-----|------|------|---------------|
| BV_{CBO} | Collector-Base Breakdown Voltage | $I_C = -100 \mu\text{A}$, $I_E = 0$ | -80 | - | - | V |
| BV_{CEO} | Collector-Emitter Breakdown Voltage | $I_C = -10 \text{ mA}$, $I_B = 0$ | -60 | - | - | V |
| BV_{EBO} | Emitter-Base Breakdown Voltage | $I_E = -100 \mu\text{A}$, $I_C = 0$ | -8 | - | - | V |
| I_{CBO} | Collector Cut-off Current | $V_{CB} = -60 \text{ V}$, $I_E = 0$ | - | - | -0.1 | μA |
| I_{EBO} | Emitter Cut-off Current | $V_{EB} = -5 \text{ V}$, $I_C = 0$ | - | - | -0.1 | μA |
| h_{FE} | DC Current Gain* | $V_{CE} = -2 \text{ V}$, $I_C = -50 \text{ mA}$ | 120 | - | 240 | |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage* | $I_C = -500 \text{ mA}$, $I_B = -50 \text{ mA}$ | - | -0.3 | -0.7 | V |
| $V_{BE(sat)}$ | Base-Emitter Saturation Voltage* | $I_C = -500 \text{ mA}$, $I_B = -50 \text{ mA}$ | - | -0.9 | 1.1 | V |
| f_T | Current Gain Bandwidth Product | $V_{CE} = -10 \text{ V}$, $I_C = -50 \text{ mA}$ | - | 50 | - | MHz |
| C_{ob} | Output Capacitance | $V_{CB} = -10 \text{ V}$, $I_E = 0$, $f = 1 \text{ MHz}$ | - | 13 | - | pF |

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

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



MARKING DIAGRAM

| | |
|---------------|---|
| A708Y AWWY | A708Y = Specific Device Code A = Assembly Site WW = Work Week Y = Year of Production |
|---------------|---|

ORDERING INFORMATION

| Device | Package | Shipping |
|-----------|----------------------|--------------------|
| KSA708YBU | TO-92 3 (Pb-Free) | 10000 Units / Bulk |
| KSA708YTA | TO-92 3 LF (Pb-Free) | 2000 Units / FNFLD |

DISCONTINUED (Note 1)

| | | |
|------------|----------------------|--------------------|
| KSA708CYTA | TO-92 3 LF (Pb-Free) | 2000 Units / FNFLD |
|------------|----------------------|--------------------|

- DISCONTINUED:** This device is not recommended for new design. Please contact your onsemi representative for information. The most current information on this device may be available on www.onsemi.com.

TYPICAL CHARACTERISTICS

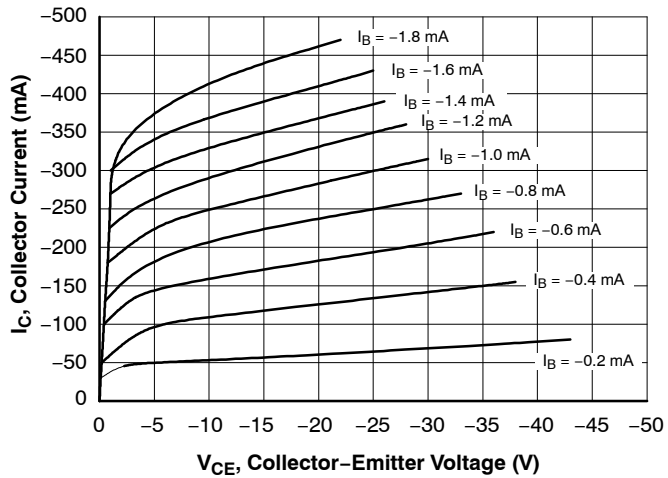


Figure 1. Static Characteristic

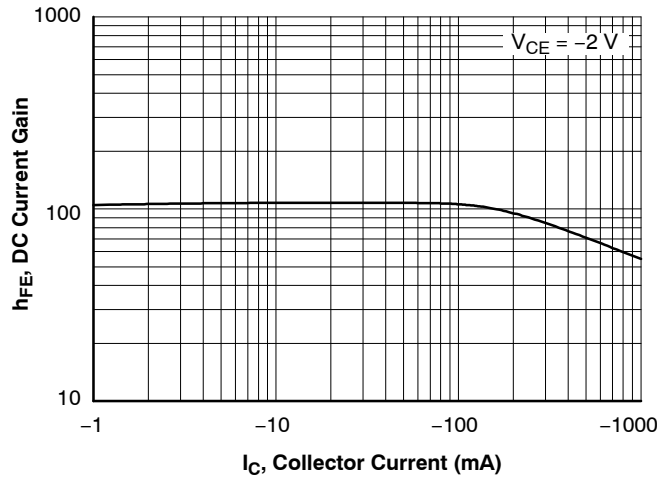


Figure 2. DC Current Gain

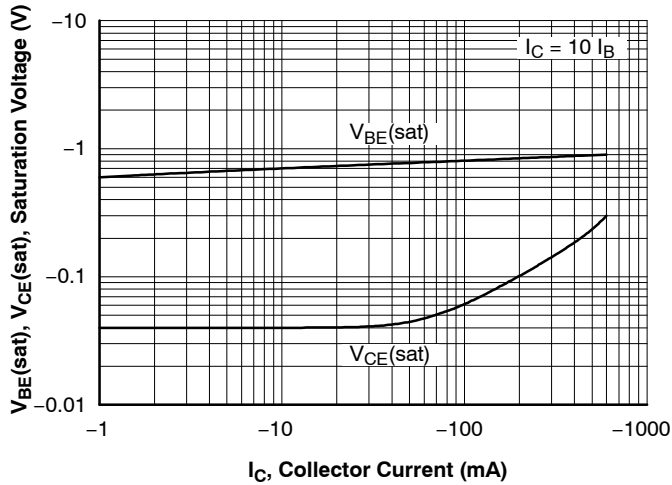
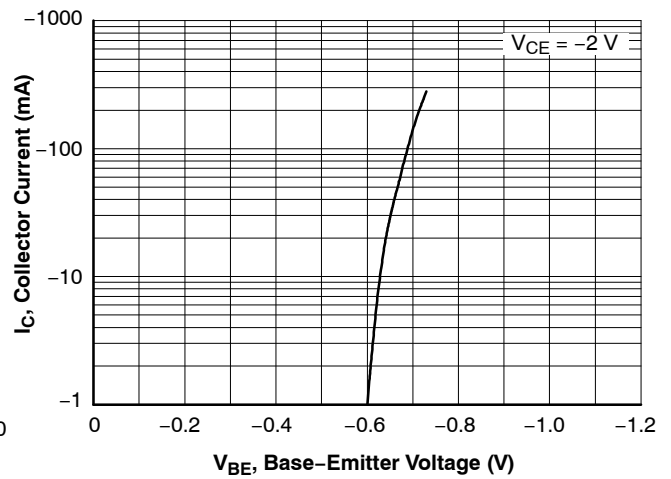
Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

Figure 4. Base-Emitter On Voltage

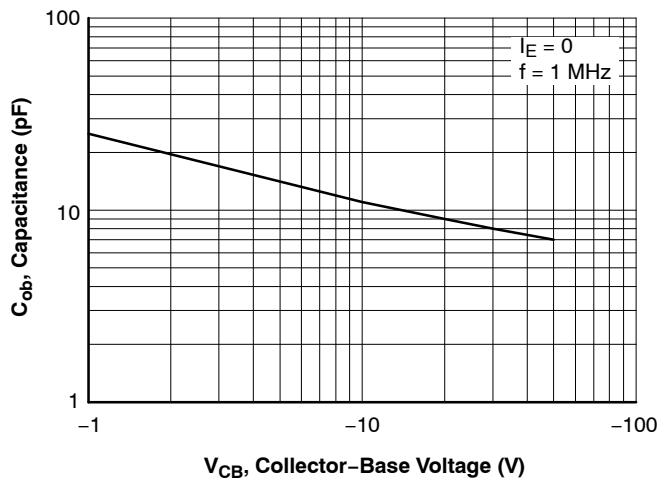
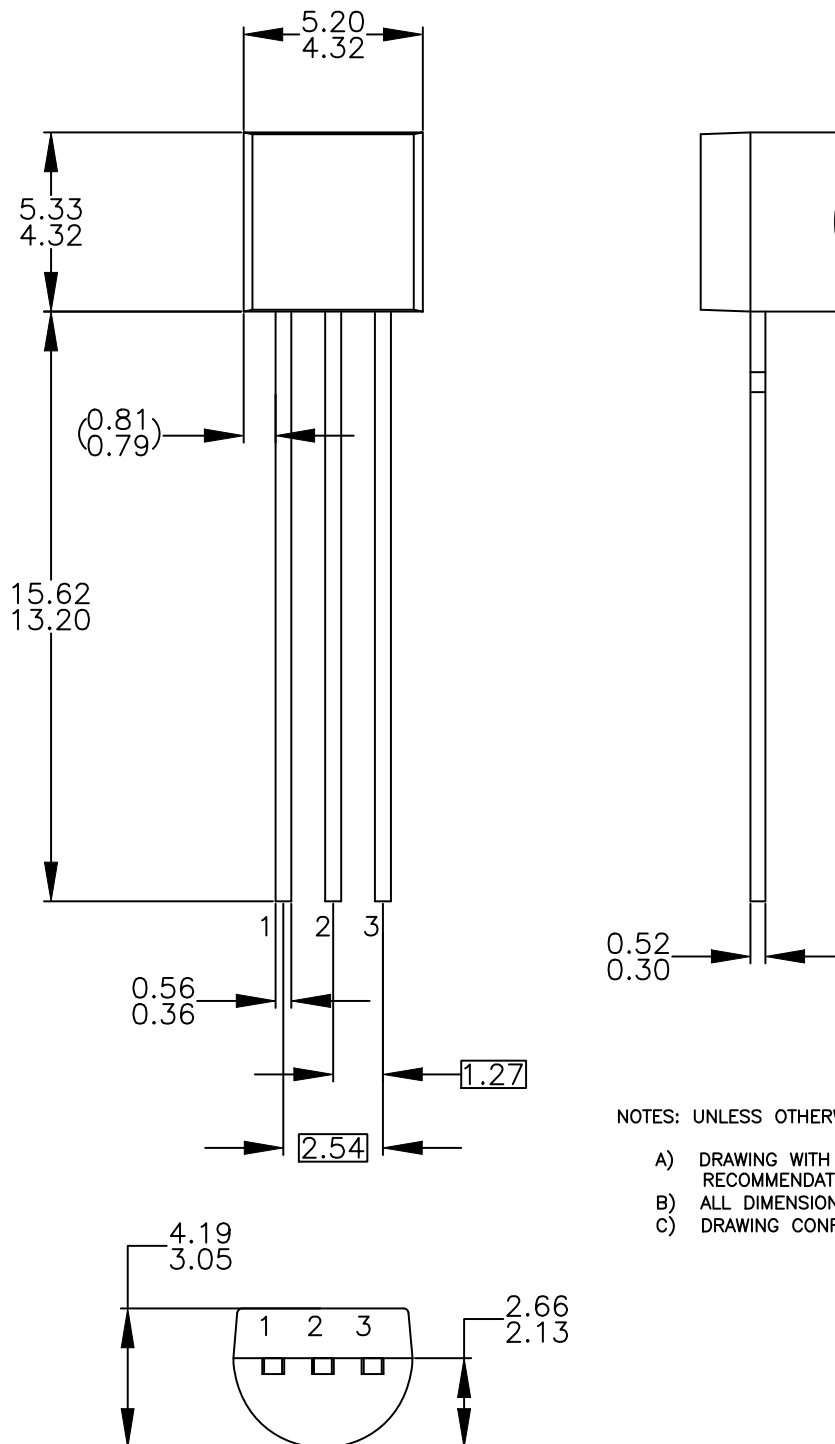


Figure 5. Collector Output Capacitance

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DATE 31 JUL 2016



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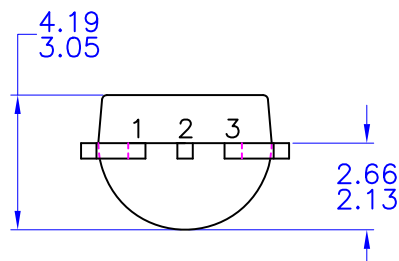
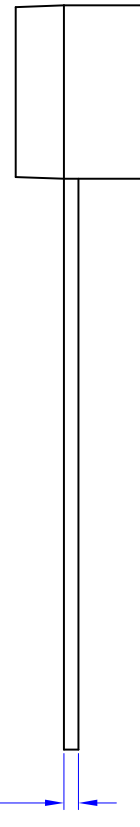
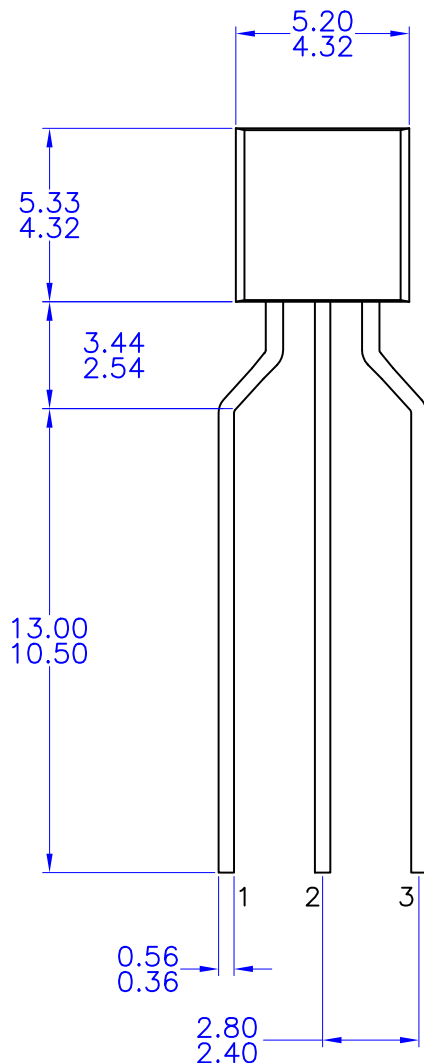
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- B) ALL DIMENSIONS ARE IN MILLIMETERS.
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