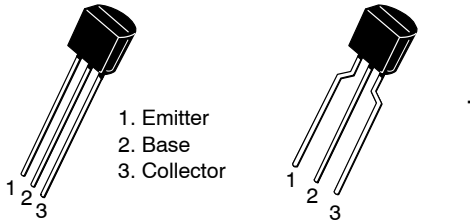
# PNP Epitaxial Silicon Transistor

# KSA708




**TO−92 3**
**CASE 135AN**

**TO−92 3 LF**
**CASE 135AR**

**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)

## MARKING DIAGRAM


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

## ABSOLUTE MAXIMUM RATINGS

($T_A$ = 25°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 | °C |
| $T_{STG}$ | Storage Temperature | −55 to +150 | °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.

## 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 |

1. **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.

## ELECTRICAL CHARACTERISTICS ($T_A$ = 25°C unless otherwise noted.)

| Symbol | Parameter | Conditions | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| $BV_{CBO}$ | Collector−Base Breakdown Voltage | $I_C$ = −100 μA, $I_E$ = 0 | −80 | − | − | V |
| $BV_{CEO}$ | Collector−Emitter Breakdown Voltage | $I_C$ = −10 mA, $I_B$ = 0 | −60 | − | − | V |
| $BV_{EBO}$ | Emitter−Base Breakdown Voltage | $I_E$ = −100 μA, $I_C$ = 0 | −8 | − | − | V |
| $I_{CBO}$ | Collector Cut−off Current | $V_{CB}$ = −60 V, $I_E$ = 0 | − | − | −0.1 | μA |
| $I_{EBO}$ | Emitter Cut−off Current | $V_{EB}$ = −5 V, $I_C$ = 0 | − | − | −0.1 | μA |
| $h_{FE}$ | DC Current Gain* | $V_{CE}$ = −2 V, $I_C$ = −50 mA | 120 | − | 240 | |
| $V_{CE}$(sat) | Collector−Emitter Saturation Voltage* | $I_C$ = −500 mA, $I_B$ = −50 mA | − | −0.3 | −0.7 | V |
| $V_{BE}$(sat) | Base−Emitter Saturation Voltage* | $I_C$ = −500 mA, $I_B$ = −50 mA | − | −0.9 | 1.1 | V |
| $f_T$ | Current Gain Bandwidth Product | $V_{CE}$ = −10 V, $I_C$ = −50 mA | − | 50 | − | MHz |
| $C_{ob}$ | Output Capacitance | $V_{CB}$ = −10 V, $I_E$ = 0, f = 1 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 ≤ 350 μs, Duty cycle ≤ 2%.

## TYPICAL CHARACTERISTICS

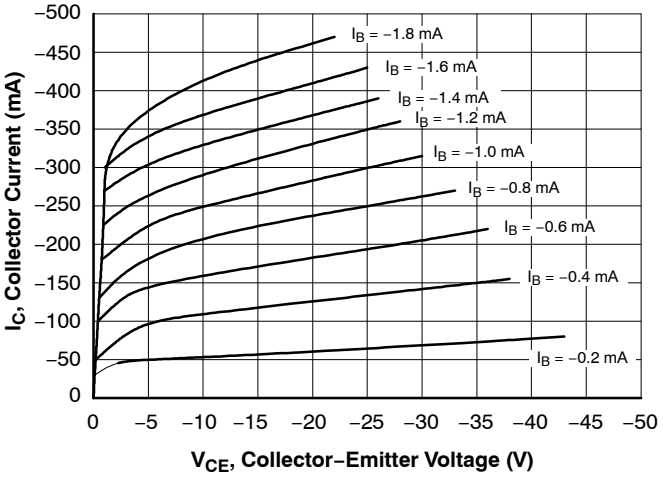



**Figure 1. Static Characteristic**

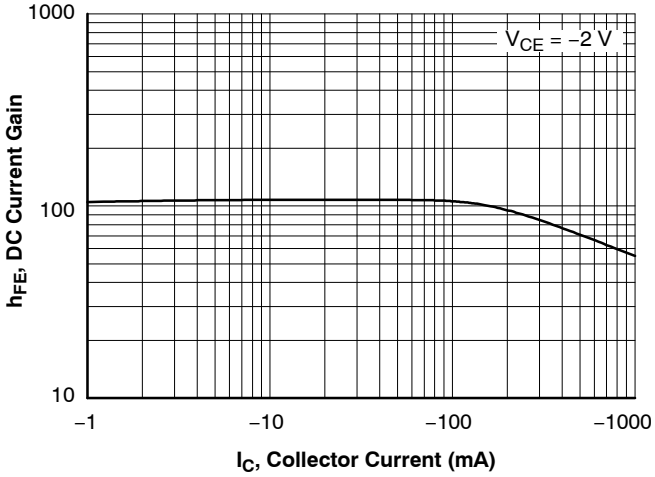



**Figure 2. DC Current Gain**

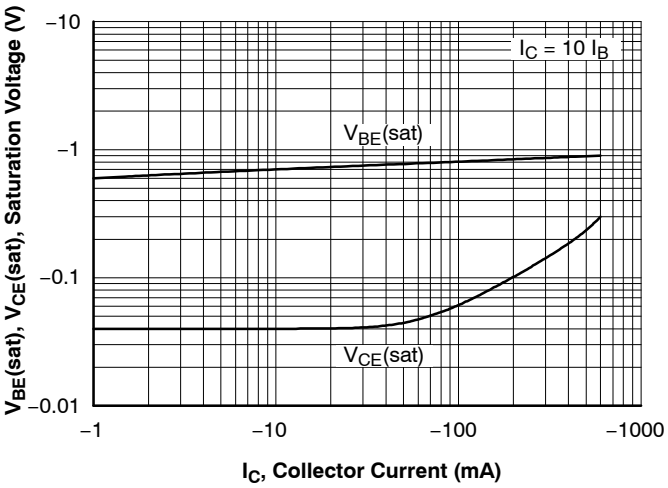



**Figure 3. Base−Emitter Saturation Voltage Collector−Emitter Saturation Voltage**

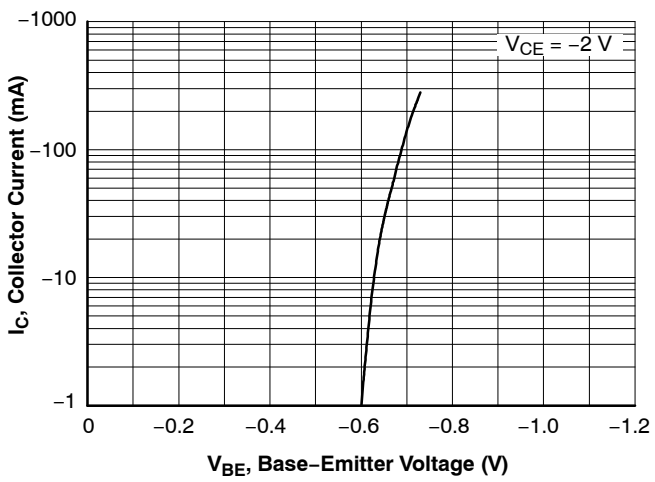



**Figure 4. Base−Emitter On Voltage**

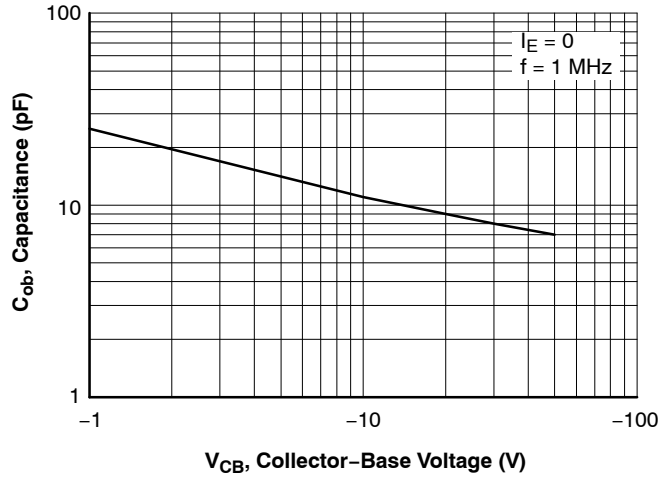
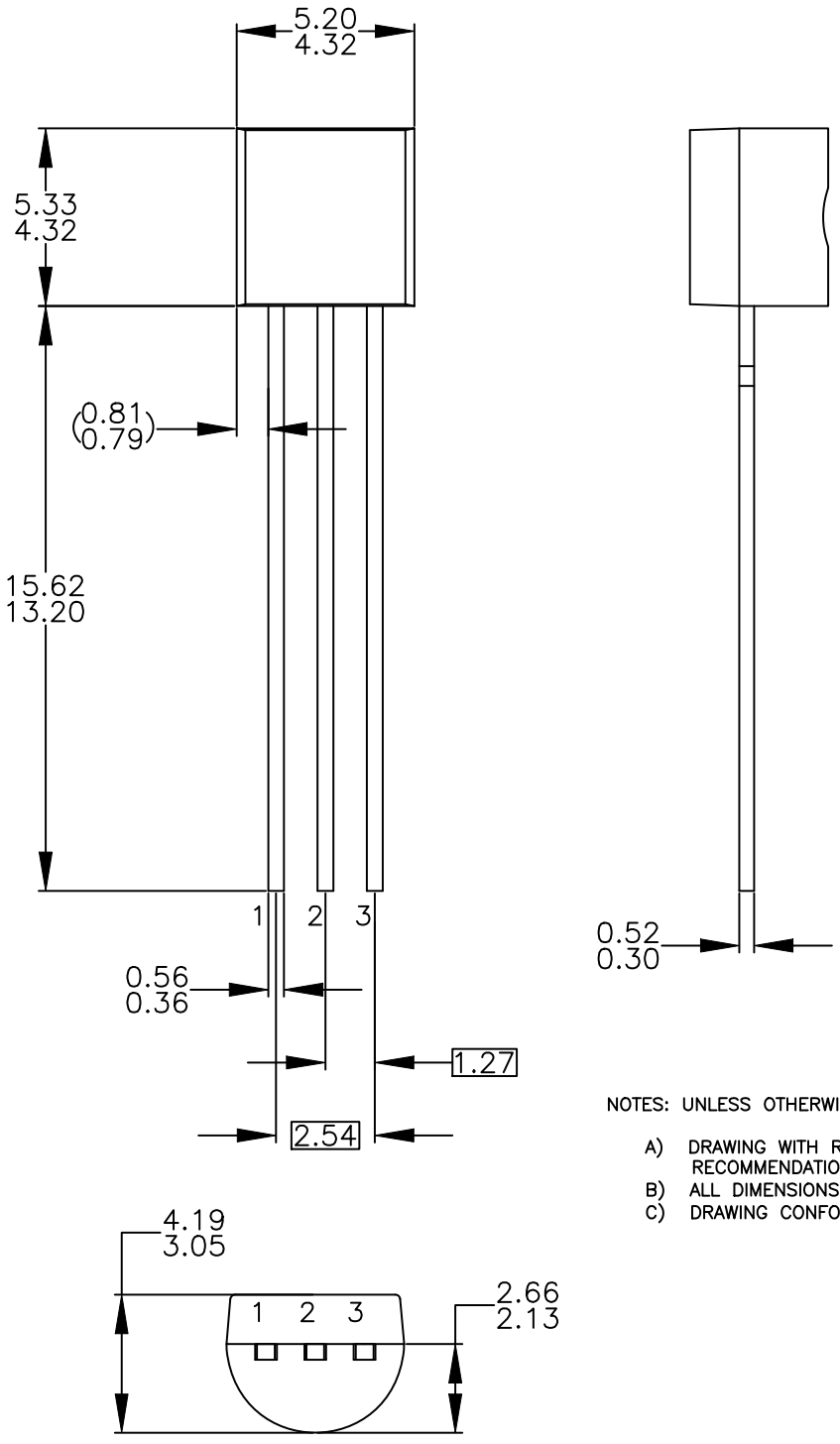



**Figure 5. Collector Output Capacitance**

**TO−92 3 4.825x4.76**
CASE 135AN
ISSUE O

DATE 31 JUL 2016

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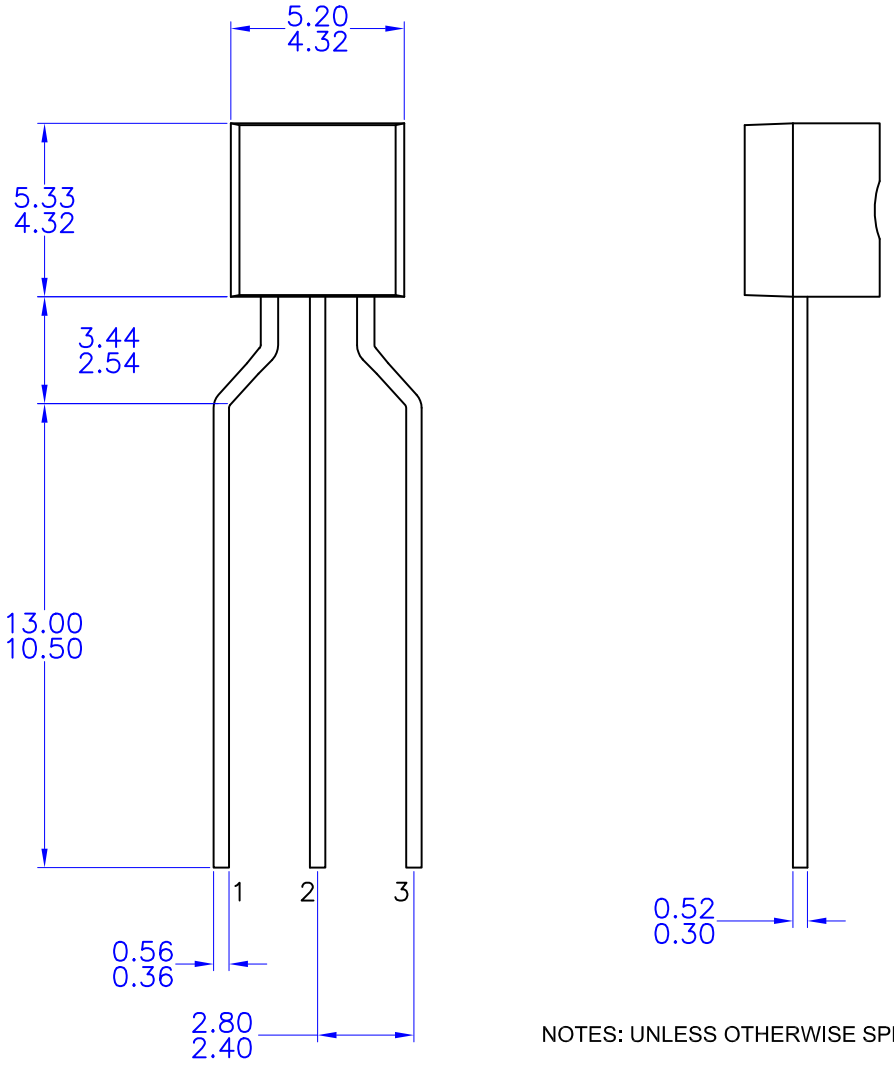
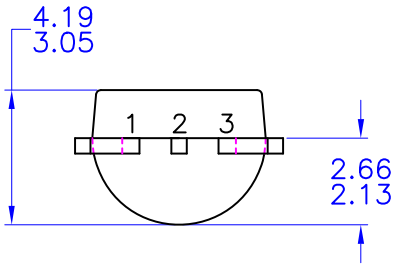
**TO−92 3 4.83x4.76 LEADFORMED**
CASE 135AR
ISSUE O

DATE 30 SEP 2016

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