

# PNP Epitaxial Silicon Transistor

## KSA708

### Low Frequency Amplifier & Medium Speed Switching

- Complement to KSC1008
- Collector–Base Voltage:  $V_{CBO} = -80\text{ V}$
- Collector Power Dissipation:  $P_C = 800\text{ mW}$
- 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	$^\circ\text{C}$

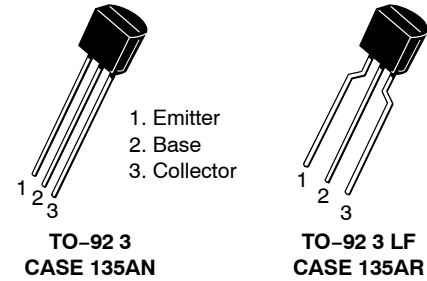
Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

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

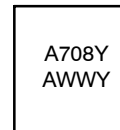
Symbol	Parameter	Conditions	Min	Typ	Max	Unit
$BV_{CBO}$	Collector–Base Breakdown Voltage	$I_C = -100\ \mu\text{A}, I_E = 0$	–80	–	–	V
$BV_{CEO}$	Collector–Emitter Breakdown Voltage	$I_C = -10\ \text{mA}, I_B = 0$	–60	–	–	V
$BV_{EBO}$	Emitter–Base Breakdown Voltage	$I_E = -100\ \mu\text{A}, I_C = 0$	–8	–	–	V
$I_{CBO}$	Collector Cut-off Current	$V_{CB} = -60\ \text{V}, I_E = 0$	–	–	–0.1	$\mu\text{A}$
$I_{EBO}$	Emitter Cut-off Current	$V_{EB} = -5\ \text{V}, I_C = 0$	–	–	–0.1	$\mu\text{A}$
$h_{FE}$	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 = 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
KSA708CYTA	TO–92 3 LF (Pb–Free)	2000 Units / FNFLD
KSA708YTA	TO–92 3 LF (Pb–Free)	2000 Units / FNFLD

TYPICAL CHARACTERISTICS

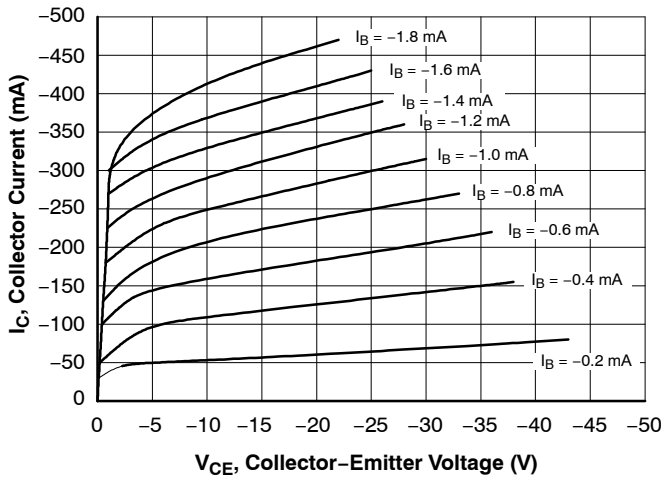


Figure 1. Static Characteristic

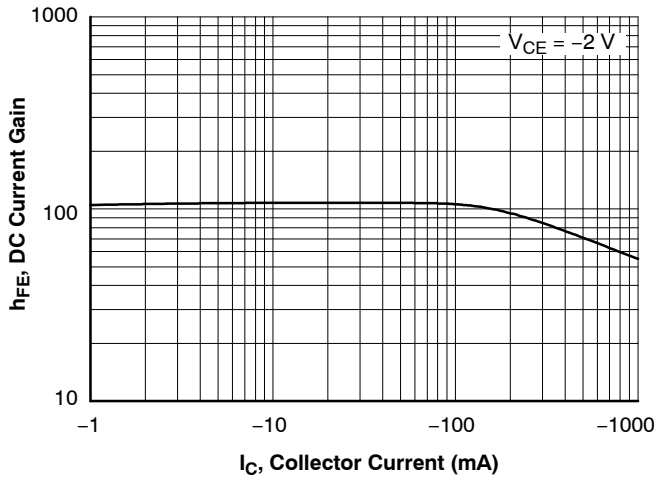


Figure 2. DC Current Gain

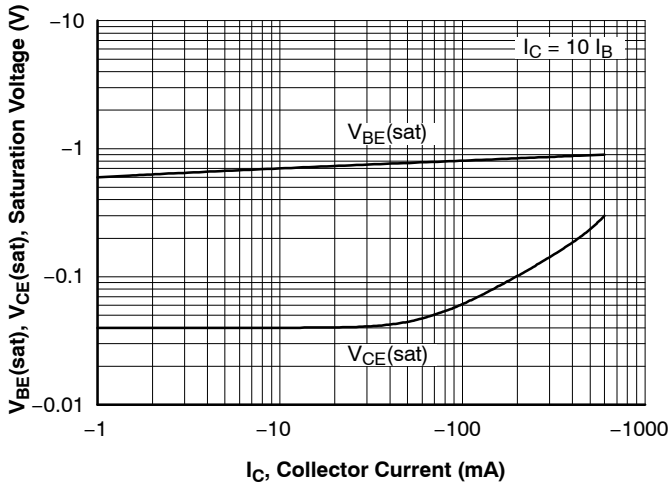


Figure 3. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

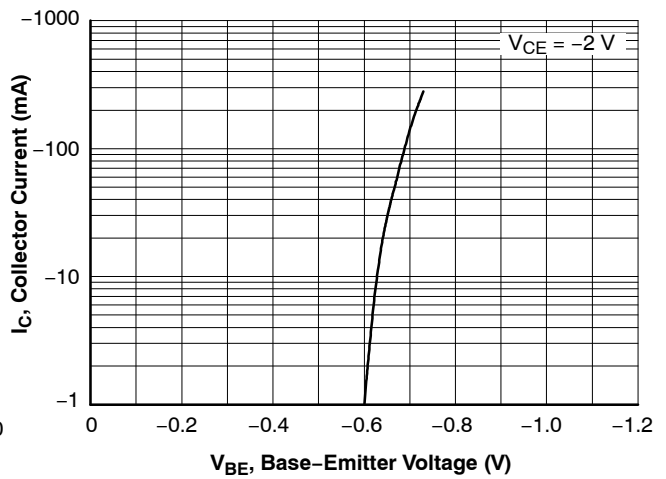


Figure 4. Base-Emitter On Voltage

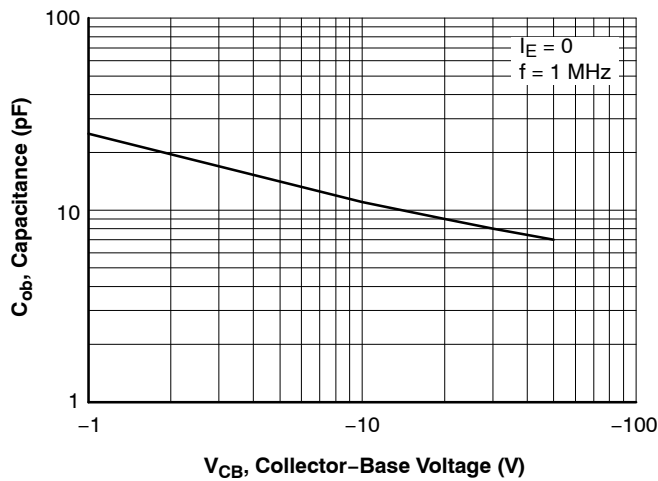
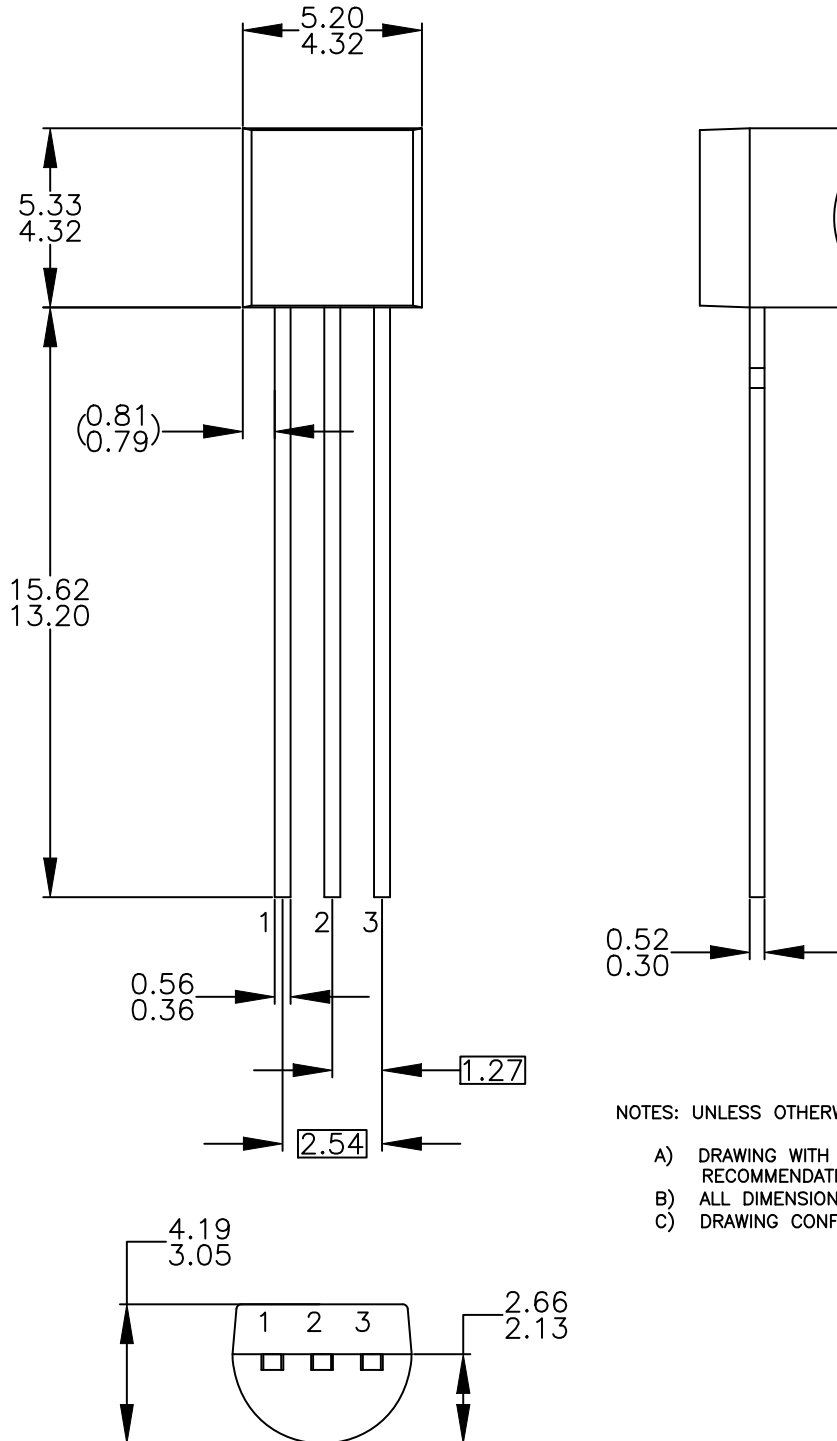


Figure 5. Collector Output Capacitance

**MECHANICAL CASE OUTLINE**  
**PACKAGE DIMENSIONS**

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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