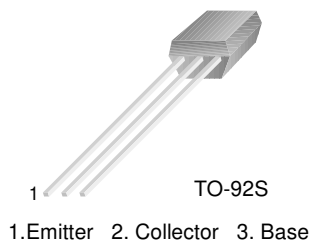


# KSB810

## Audio Frequency Amplifier

- Complement to KSD1020



## PNP Epitaxial Silicon Transistor

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

Symbol	Parameter	Ratings	Units
$V_{CBO}$	Collector-Base Voltage	-30	V
$V_{CEO}$	Collector-Emitter Voltage	-25	V
$V_{EBO}$	Emitter-Base Voltage	-5.0	V
$I_C$	Collector Current (DC)	-700	mA
$I_{CP}$	* Collector Current (Pulse)	-1.0	A
$P_C$	Collector Power Dissipation	350	mW
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{STG}$	Storage Temperature	-55 ~ 150	$^\circ\text{C}$

\*  $PW \leq 10\text{ms}$ , Duty cycle  $\leq 50\%$

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

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
$I_{CBO}$	Collector Cut-off Current	$V_{CB} = -30\text{V}$ , $I_E = 0$			-100	nA
$I_{EBO}$	Emitter Cut-off Current	$V_{EB} = -5\text{V}$ , $I_C = 0$			-100	nA
$h_{FE1}$ $h_{FE2}$	* DC Current Gain	$V_{CE} = -1\text{V}$ , $I_C = -100\text{mA}$ $V_{CE} = -1\text{V}$ , $I_C = -700\text{mA}$	70 35	200 100	400	
$V_{BE}(\text{on})$	* Base-Emitter on Voltage	$V_{CE} = -6\text{V}$ , $I_C = -10\text{mA}$	-600	-640	-700	mV
$V_{CE}(\text{sat})$	* Collector-Emitter Saturation Voltage	$I_C = -700\text{mA}$ , $I_B = -70\text{mA}$		-0.25	-0.4	V
$V_{BE}(\text{sat})$	* Base-Emitter Saturation Voltage	$I_C = -700\text{mA}$ , $I_B = -70\text{mA}$		-0.95	-1.2	V
$C_{ob}$	Output Capacitance	$V_{CB} = -6\text{V}$ , $I_E = 0$ , $f = 1\text{MHz}$		17	40	pF
$f_T$	Current Gain Bandwidth Product	$V_{CE} = -6\text{V}$ , $I_C = -10\text{mA}$	50	160		MHz

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

### $h_{FE}$ Classification

Classification	O	Y	G
$h_{FE1}$	70 ~ 140	120 ~ 240	200 ~ 400

# Typical Characteristics

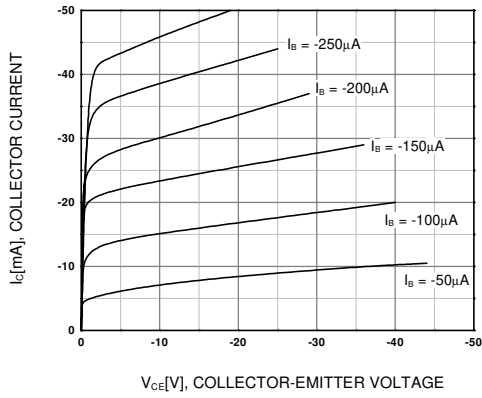


Figure 1. Static Characteristic

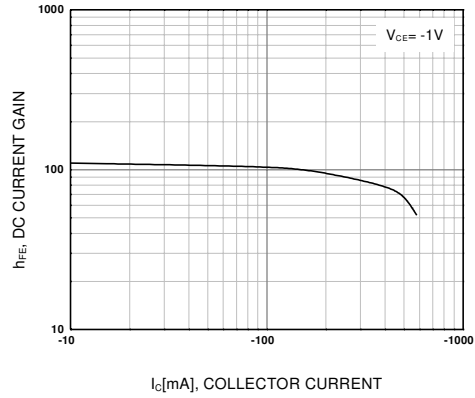


Figure 2. DC current Gain

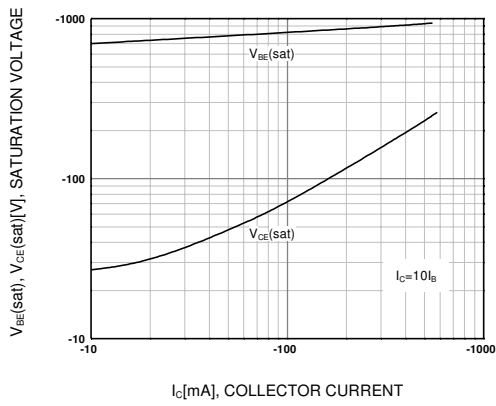


Figure 3. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

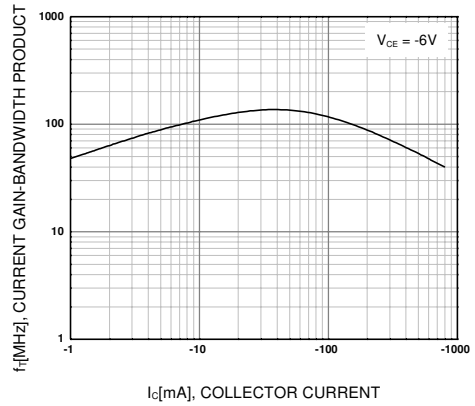
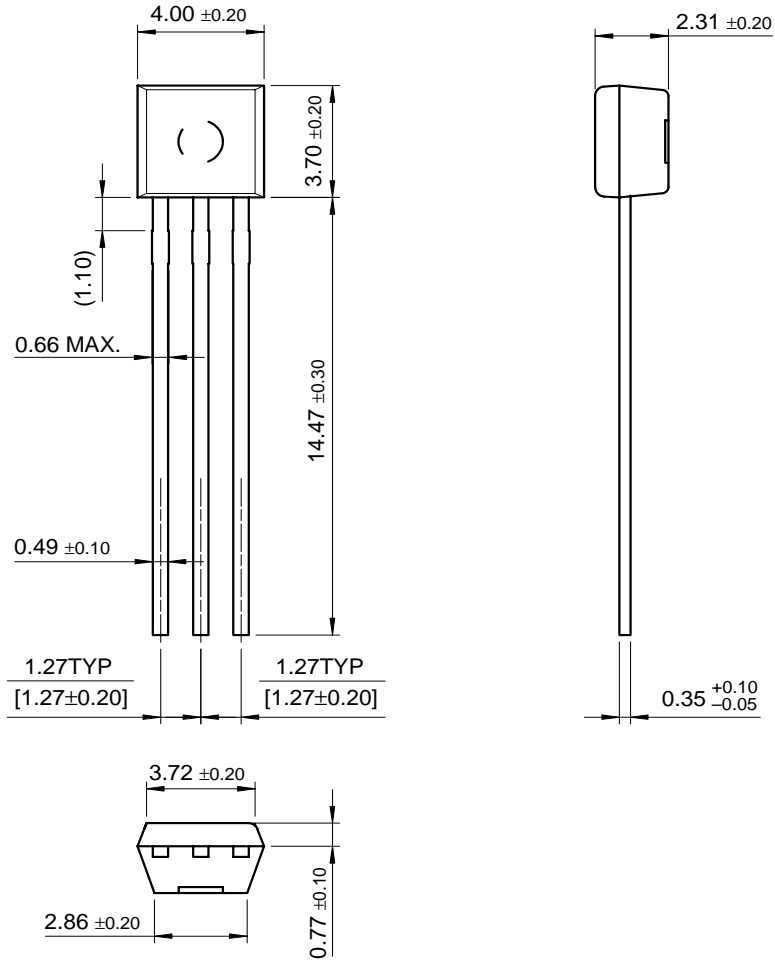


Figure 4. Current Gain Bandwidth Product

# Package Dimensions

## TO-92S



Dimensions in Millimeters

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