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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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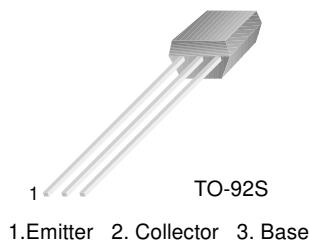
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



KSD1020

Audio Frequency Amplifier

- Complement to KSB810



NPN 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 Cycles $\leq 50\%$

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	$V_{CE}=1\text{V}$, $I_C=100\text{mA}$ $V_{CE}=1\text{V}$, $I_C=700\text{mA}$	120 35	200 140	400	
$V_{BE(on)}$	Base-Emitter On Voltage	$V_{CE}=6\text{V}$, $I_C=10\text{mA}$	600	640	700	mV
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=700\text{mA}$, $I_B=70\text{mA}$		0.2	0.4	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=700\text{mA}$, $I_B=70\text{mA}$		0.95	1.2	V
C_{ob}	Output Capacitance	$V_{CB}=6\text{V}$, $I_E=0$, $f=1\text{MHz}$		13	25	pF
f_T	Current Gain Bandwidth Product	$V_{CE}=6\text{V}$, $I_C=10\text{mA}$	50	170		MHz

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

h_{FE1} Classification

Classification	Y	G
h_{FE1}	120 ~ 240	200 ~ 400

Typical Characteristics

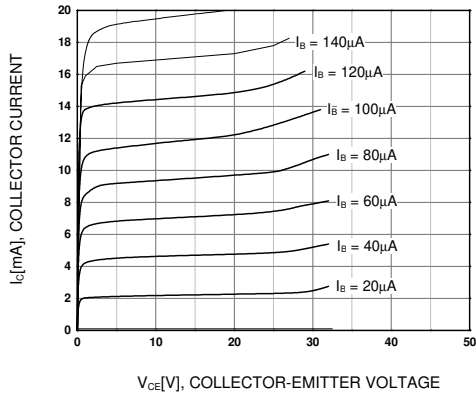


Figure 1. Static Characteristic

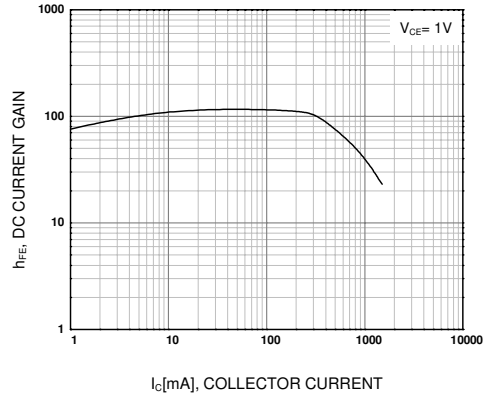


Figure 2. DC current Gain

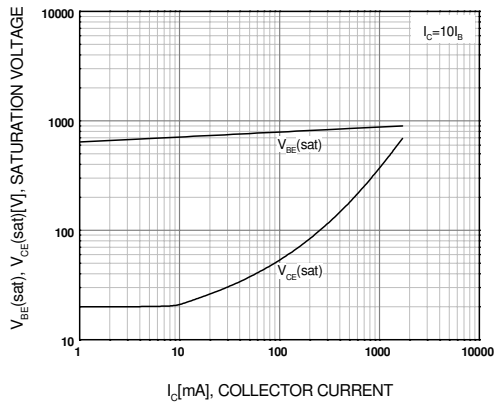


Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

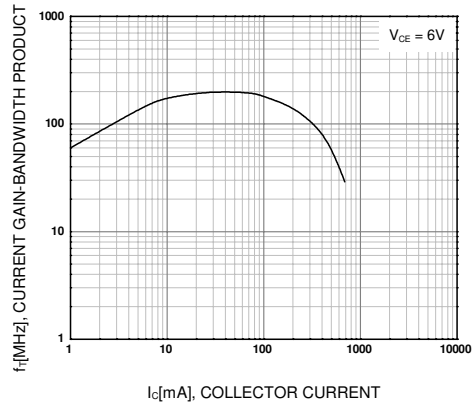
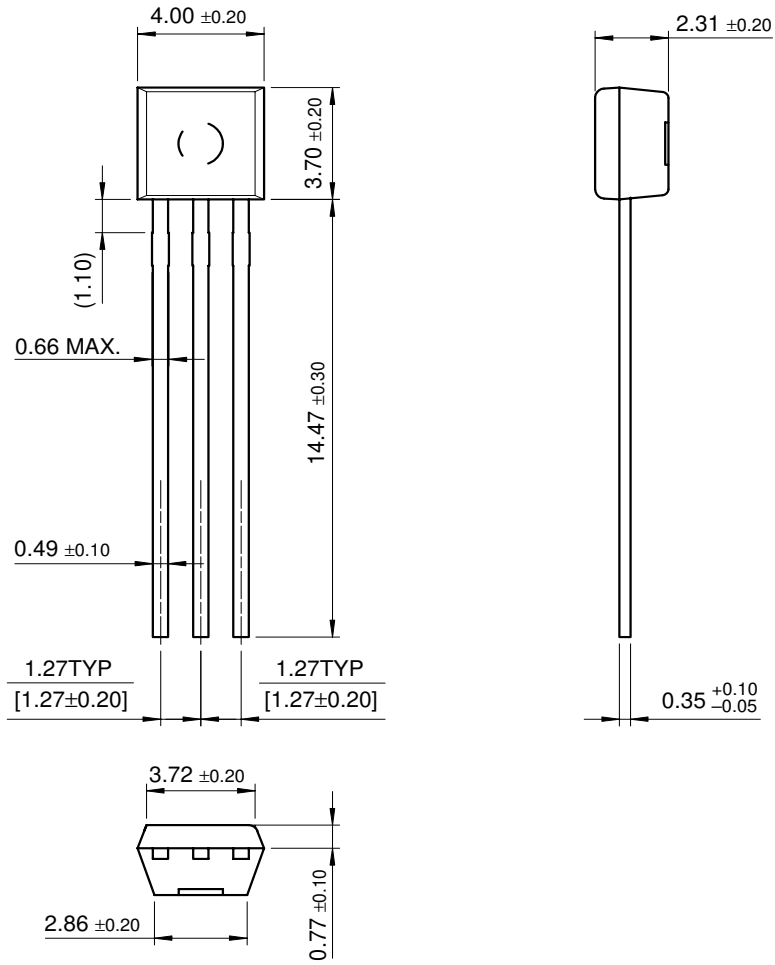


Figure 4. Current Gain-Bandwidth Product

Package Dimensions

TO-92S



Dimensions in Millimeters

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