

KSA928A

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Audio Power Amplifier

- Complement to KSC2328A
- Collector Power Dissipation : $P_C=1W$
- 3 Watt Output Application



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	-30	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current	-2	A
P_C	Collector Power Dissipation	1	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{STG}	Storage Temperature	-55 ~ 150	$^\circ\text{C}$

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

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
BV_{CBO}	Collector-Base Breakdown Voltage	$I_C = -100\mu\text{A}, I_E = 0$	-30			V
BV_{CEO}	Collector-Emitter Breakdown Voltage	$I_C = -10\text{mA}, I_B = 0$	-30			V
BV_{EBO}	Emitter-Base Breakdown Voltage	$I_E = -1\text{mA}, I_C = 0$	-5			V
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_{FE}	DC Current Gain	$V_{CE} = -2\text{V}, I_C = -500\text{mA}$	100		320	
$V_{BE}(\text{on})$	Base-Emitter On Voltage	$V_{CE} = -2\text{V}, I_C = -500\text{mA}$			-1.0	V
$V_{CE}(\text{sat})$	Collector-Emitter Saturation Voltage	$I_C = -1.5\text{A}, I_B = -30\text{mA}$			-2.0	V
C_{ob}	Output Capacitance	$V_{CB} = -10\text{V}, I_E = 0, f = 1\text{MHz}$		48		pF
f_T	Current Gain Bandwidth Product	$V_{CE} = -2\text{V}, I_C = -500\text{mA}$		120		MHz

h_{FE} Classification

Classification	O	Y
h_{FE}	100 ~ 200	160 ~ 320

Typical Characteristics

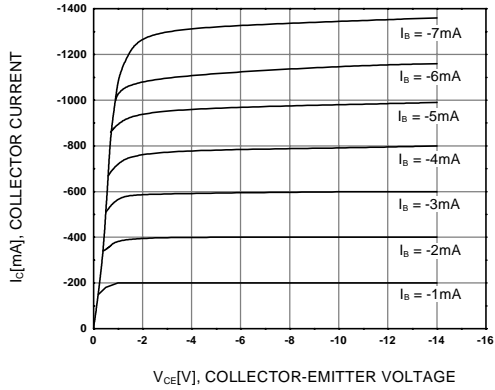


Figure 1. Static Characteristic

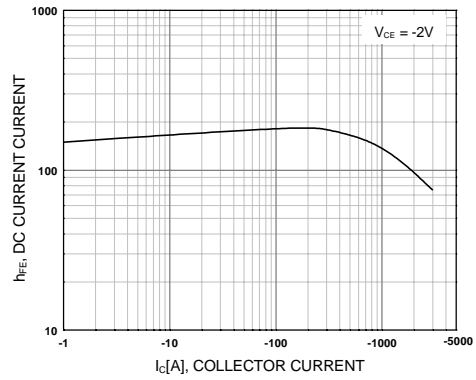


Figure 2. DC current Gain

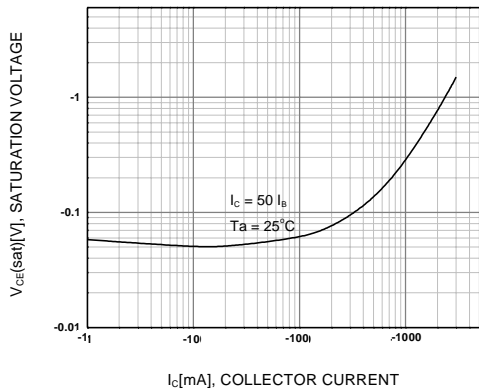


Figure 3. Collector-Emitter Saturation Voltage

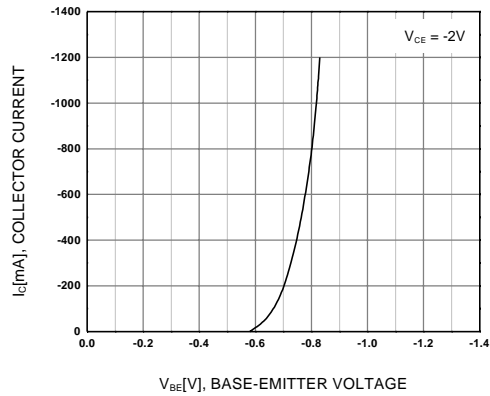


Figure 4. Base-Emitter On Voltage

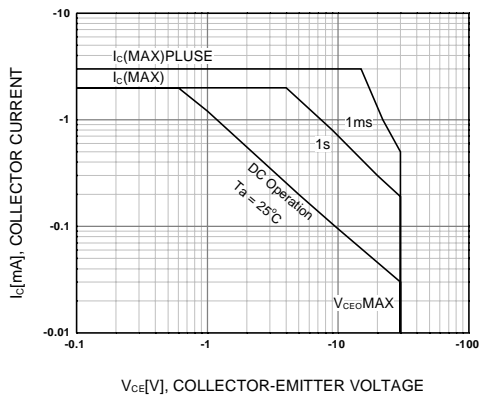


Figure 5. Safe Operating Area

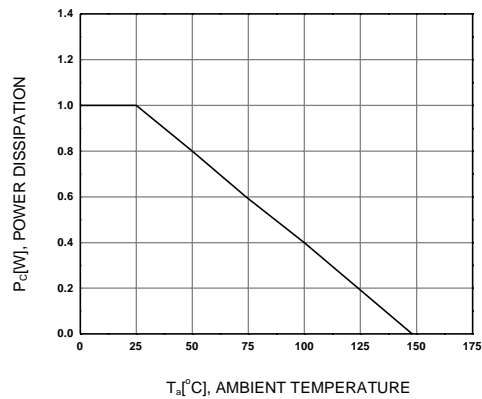
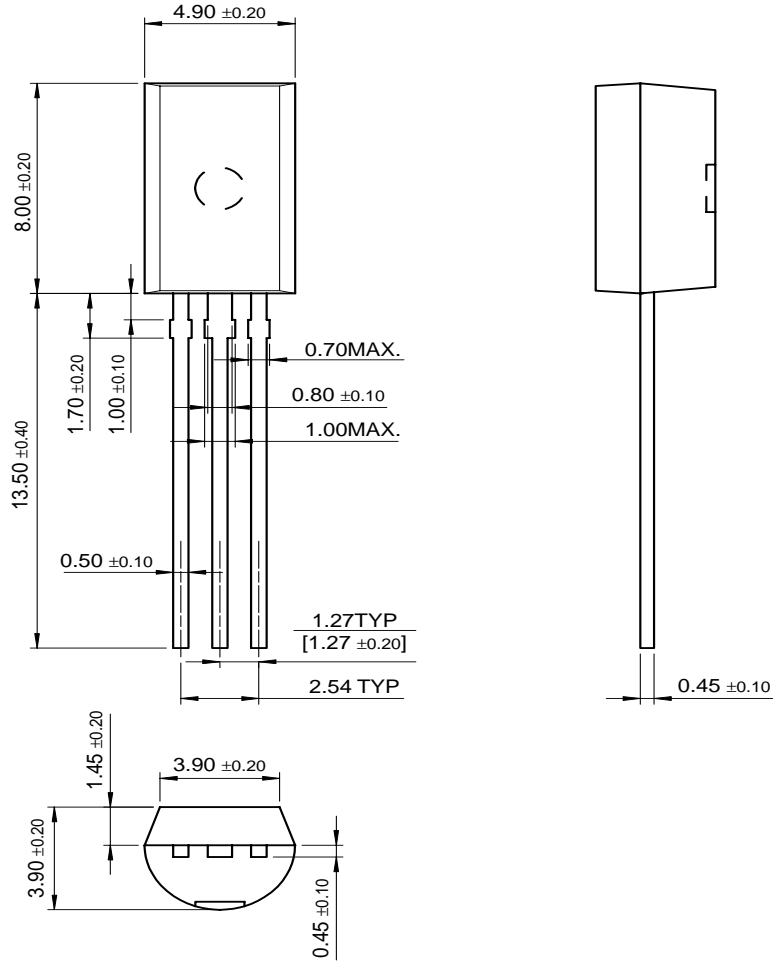


Figure 6. Power Derating

Package Dimensions

TO-92L



Dimensions in Millimeters

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Datasheet Identification	Product Status	Definition
Advance Information	Formative or In Design	This datasheet contains the design specifications for product development. Specifications may change in any manner without notice.
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Features

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Product status/pricing/packaging

Product	Product status	Pricing*	Package type	Leads	Packing method
KSA928AOBU	Full Production	\$0.098	TO-92	3	BULK
KSA928AYTA	Full Production	\$0.098	TO-92	3	TAPE REEL
KSA928AOTA	Full Production	\$0.098	TO-92	3	TAPE REEL
KSA928AYBU	Full Production	\$0.098	TO-92	3	BULK

* 1,000 piece Budgetary Pricing

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