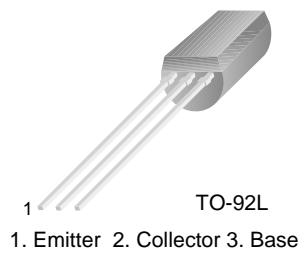


# KSA928A

## Audio Power Amplifier

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



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

Symbol	Parameter	Value	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 $T_C=25^\circ\text{C}$ 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	
$V_{BE}$ (on)	Base-Emitter On Voltage	$V_{CE}= -2\text{V}, I_C= -500\text{mA}$			-1.0	V
$V_{CE}$ (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

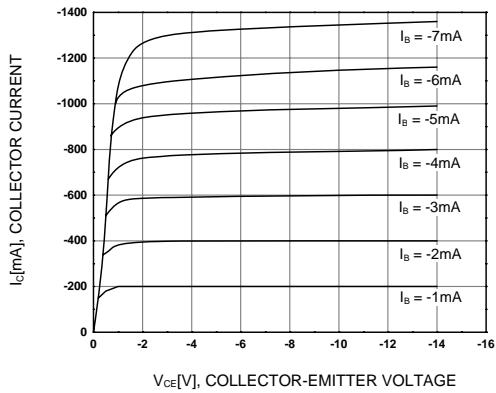
#### NOTES:

- 1) These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.
- 2) These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.
- 3) These ratings are based on a maximum junction temperature of 150degrees C.

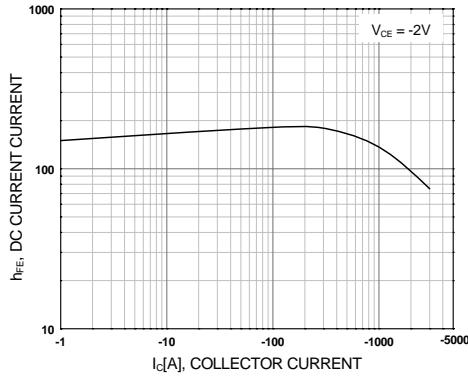
### $h_{FE}$ Classification

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

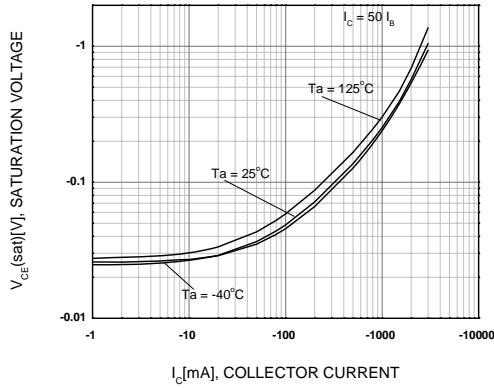
## Typical Performance Characteristics



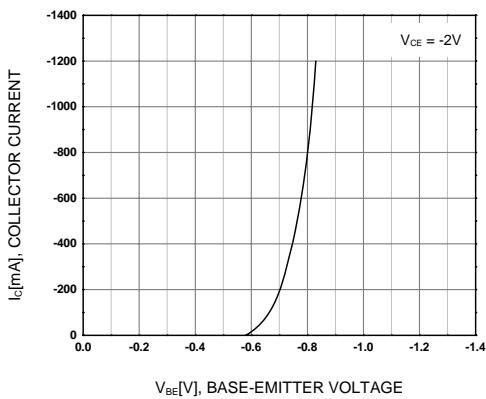
**Figure 1. Static Characteristic**



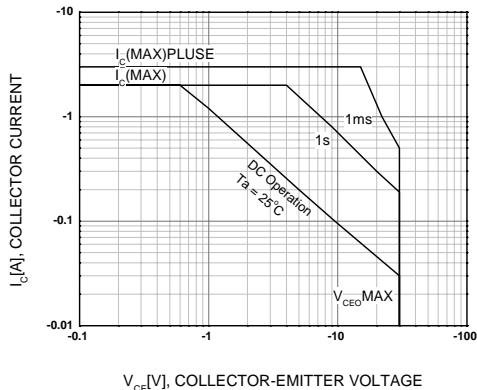
**Figure 2. DC current Gain**



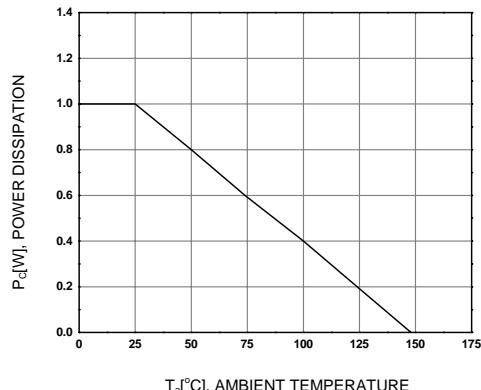
**Figure 3. Collector-Emitter Saturation Voltage**



**Figure 4. Base-Emitter On Voltage**



**Figure 5. Safe Operating Area**



**Figure 6. Power Derating**



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