

# KSA928A

## Audio Power Amplifier

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



### Absolute Maximum Ratings $T_C=25^\circ C$ 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	$^\circ C$
$T_{STG}$	Storage Temperature	-55 ~ 150	$^\circ C$

### Electrical Characteristics $T_C=25^\circ C$ unless otherwise noted

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

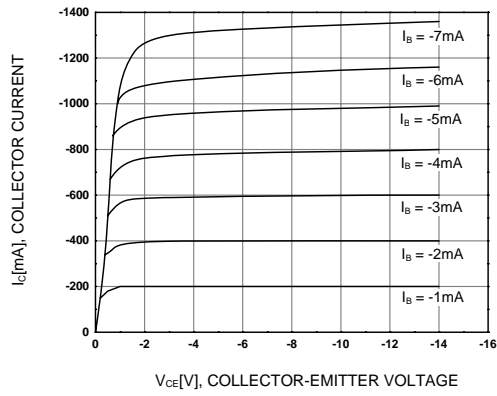


Figure 1. Static Characteristic

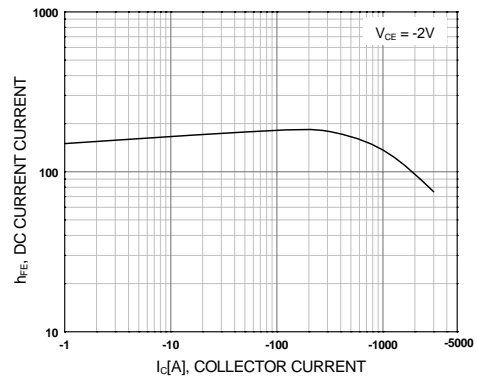


Figure 2. DC current Gain

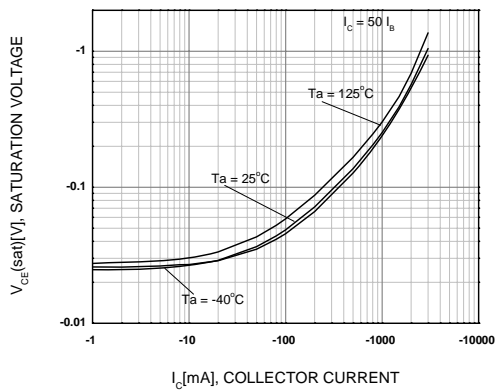


Figure 3. Collector-Emitter Saturation Voltage

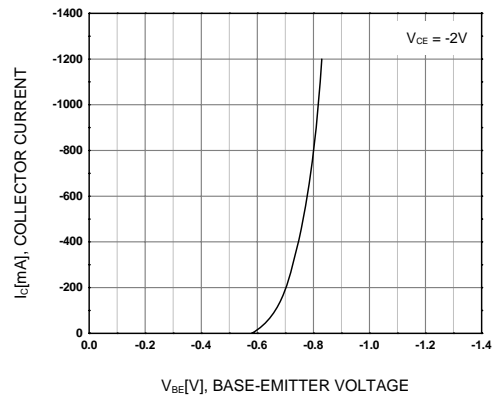


Figure 4. Base-Emitter On Voltage

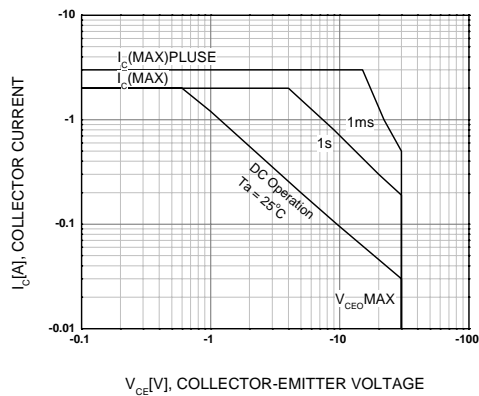


Figure 5. Safe Operating Area

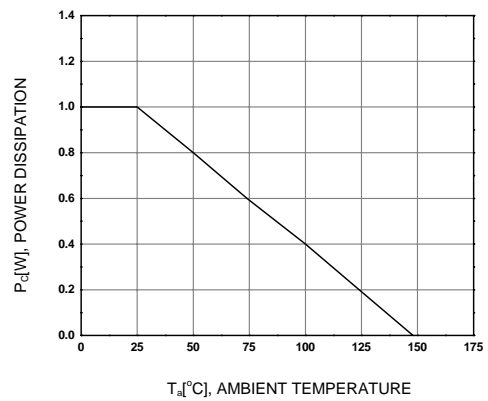



Figure 6. Power Derating



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