FAIRCHILD SEMICONDUCTOR®

February 2008

KSA928A
Audio Power Amplifier

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

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TO-92L

1. Emitter 2. Collector 3. Base

Absolute Maximum Ratings T_C=25°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	°C
T_{STG}	Storage Temperature	-55 ~ 150	°C

Electrical Characteristics T_C=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
BV_{CBO}	Collector-Base Breakdown Voltage	I_C= -100μA, 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

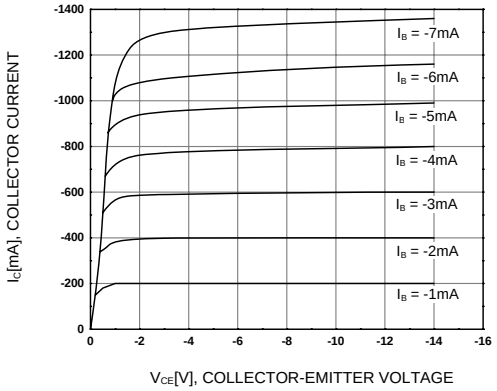

Figure 1. Static Characteristic

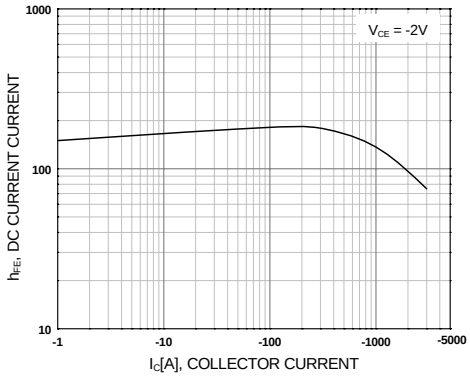

Figure 2. DC current Gain

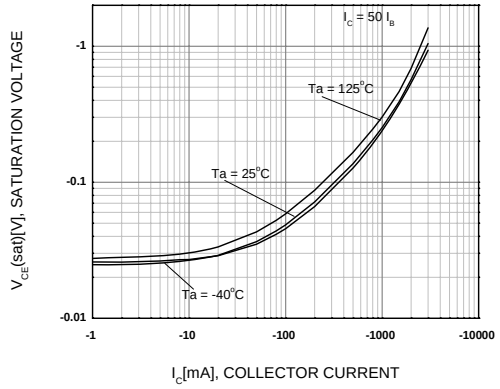

Figure 3. Collector-Emitter Saturation Voltage

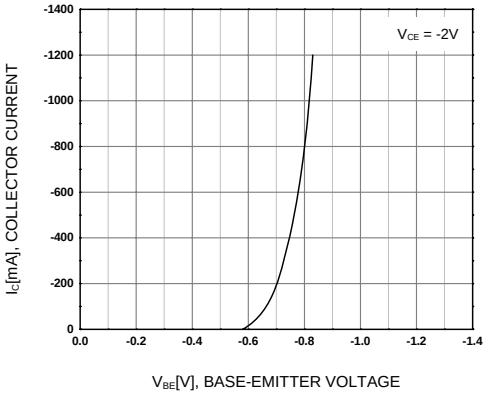

Figure 4. Base-Emitter On Voltage

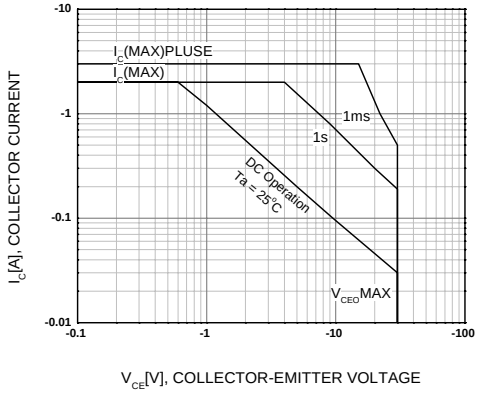

Figure 5. Safe Operating Area

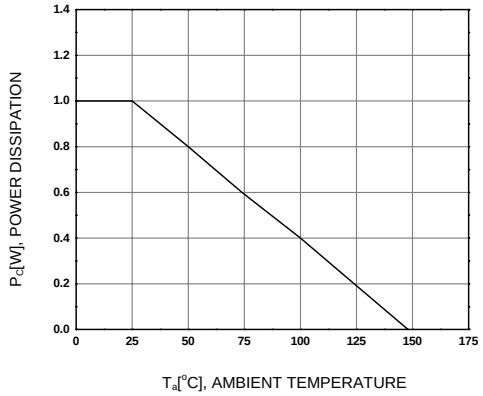

Figure 6. Power Derating

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Rev. I30