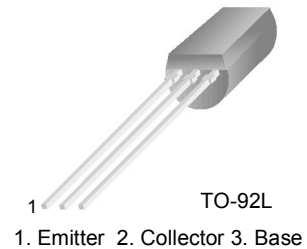


KSA1281

Audio Power Amplifier

- Collector Power Dissipation : PC=1W
- 3 Watt Output Application



Absolute Maximum Ratings* T_a=25°C unless otherwise noted

Symbol	Parameter	Value	Units
V _{CB0}	Collector-Base Voltage	-50	V
V _{CEO}	Collector-Emitter Voltage	-50	V
V _{EBO}	Emitter-Base Voltage	-5	V
I _C	Collector Current (DC)	-2	A
P _C	Collector Dissipation (T _C =25°C)	1	W
T _J	Junction Temperature	150	°C
T _{STG}	Storage Temperature	-55 ~ 150	°C

* These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

NOTES:

- 1) These ratings are based on a maximum junction temperature of 150°C.
- 2) These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

Electrical Characteristics* T_a = 25°C unless otherwise noted

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Units
BV _{CB0}	Collector-Base Breakdown Voltage	I _C = -100, I _E = 0	-50			V
BV _{CEO}	Collector-Emitter Breakdown Voltage	I _C = -10mA, I _B = 0	-50			V
BV _{EBO}	Emitter-Base Breakdown Voltage	I _E = -1mA, I _C = 0	-5			V
I _{CB0}	Collector Cut-off Current	V _{CB} = -50V, I _E = 0			-100	nA
I _{EBO}	Emitter Cut-off Current	V _{EB} = -5V, I _C = 0			-100	nA
h _{FE1} h _{FE2}	DC Current Gain	V _{CE} = -2V, I _C = -500mA V _{CE} = -2V, I _C = -1.5A	70 40		240	
V _{BE (sat)}	Base-Emitter Saturation Voltage	I _C = -1A, I _B = -0.05A			-1.2	V
V _{CE (sat)}	Collector-Emitter Saturation Voltage	I _C = -1A, I _B = -0.05A			-0.5	V
C _{ob}	Output Capacitance	V _{CB} = -10V, I _E = 0, f = 1MHz		40		pF
f _T	Current Gain Bandwidth Product	V _{CE} = -2V, I _C = -500mA		100		MHz

* Pulse Test: Pulse Width ≤ 300μs, Duty Cycle ≤ 2.0%

h_{FE} Classification

Classification	O	Y
h _{FE}	70 ~ 140	120 ~ 240

Typical Characteristics

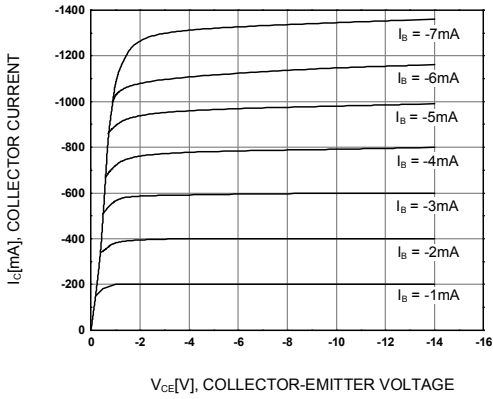


Figure 1. Static Characteristic

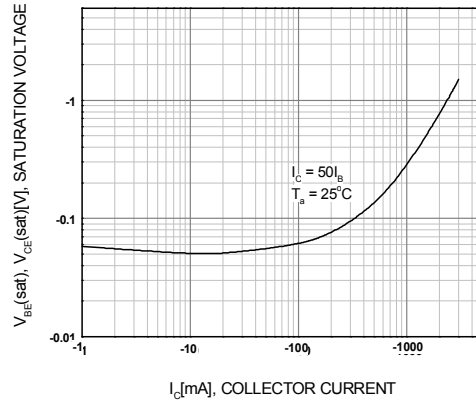


Figure 2. Base-Emitter Saturation Voltage

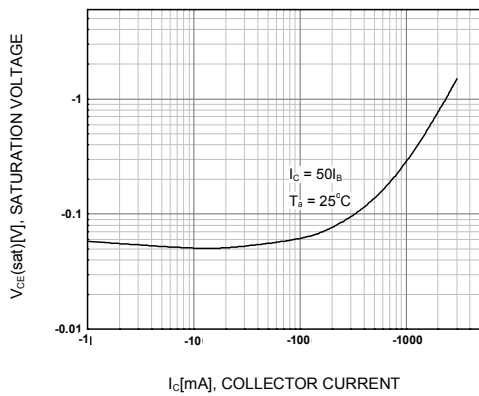


Figure 3. Collector-Emitter Saturation Voltage

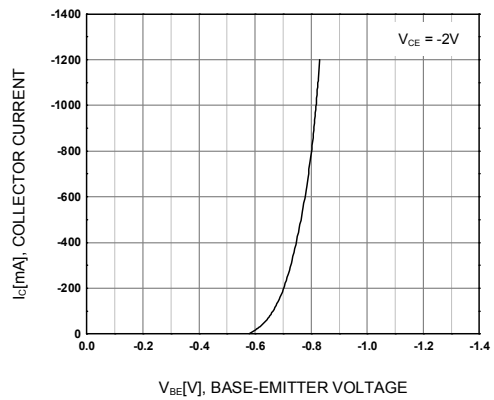


Figure 4. Base-Emitter On Voltage

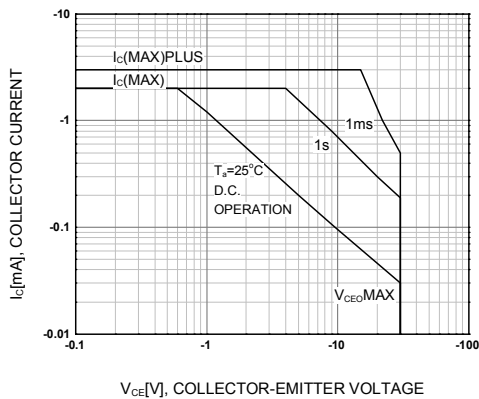


Figure 5. Safe Operating Area

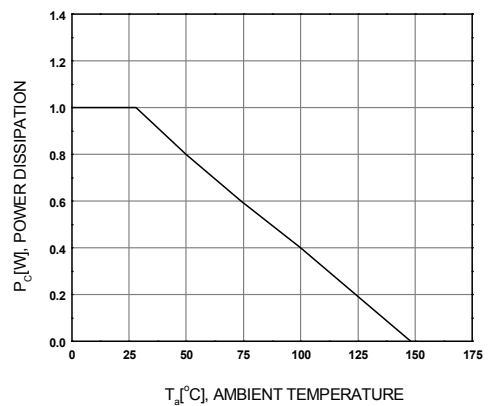


Figure 6. Power Derating



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