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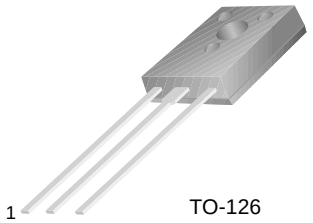
KSA1220/1220A

Audio Frequency Power Amplifier
High Frequency Power Amplifier

- Complement to KSC2690/KSC2690A



TO-126

1. Emitter 2.Collector 3.Base

PNP Epitaxial Silicon Transistor

Absolute Maximum Ratings T_C=25°C unless otherwise noted

Symbol	Parameter		Ratings	Units
V_{CBO}	Collector-Base Voltage	: KSA1220	- 120	V
		: KSA1220A	- 160	V
V_{CEO}	Collector-Emitter Voltage	: KSA1220	- 120	V
		: KSA1220A	- 160	V
V_{EBO}	Emitter-Base Voltage		- 5	V
I_C	Collector Current (DC)		- 1.2	A
I_{CP}	*Collector Current (Pulse)		- 2.5	A
I_B	Base Current		- 0.3	A
P_C	Collector Dissipation (T_a=25°C)		1.2	W
P_C	Collector Dissipation (T_C=25°C)		20	W
T_J	Junction Temperature		150	°C
T_{STG}	Storage Temperature		- 55 ~ 150	°C

* PW≤10ms, Duty Cycle≤50%

Electrical Characteristics T_C=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
I_{CBO}	Collector Cut-off Current	V_{CB} = - 120V, I_E = 0			- 1	μA
I_{EBO}	Emitter Cut-off Current	V_{EB} = - 3V, I_C = 0			- 1	μA
h_{FE1}	* DC Current Gain	V_{CE} = - 5V, I_C = - 5mA	35	150		
h_{FE2}		V_{CE} = - 5V, I_C = - 0.3A	60	140	320	
V_{CE}(sat)	* Collector-Emitter Saturation Voltage	I_C = - 1A, I_B = - 0.2A		- 0.4	- 0.7	V
V_{BE}(sat)	* Base-Emitter Saturation Voltage	I_C = - 1A, I_B = - 0.2A		- 1	- 1.3	V
f_T	Current Gain Bandwidth Product	V_{CE} = - 5V, I_C = - 0.2A		175		MHz
C_{ob}	Output Capacitance	V_{CB} = - 10, I_E = 0 f = 1MHz		26		pF

* Pulse Test: PW≤350μs, Duty Cycle≤2% Pulsed

h_{FE} Classification

Classification	R	O	Y
h_{FE2}	60 ~ 120	100 ~ 200	160 ~ 320

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Typical Characteristics

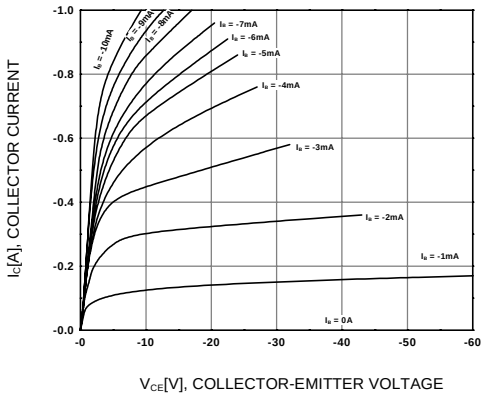

Figure 1. Static Characteristic

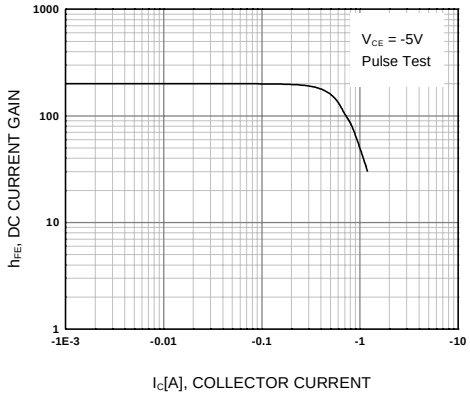

Figure 2. DC current Gain

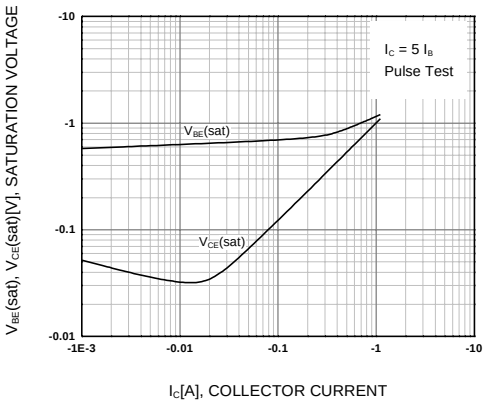

Figure 3. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

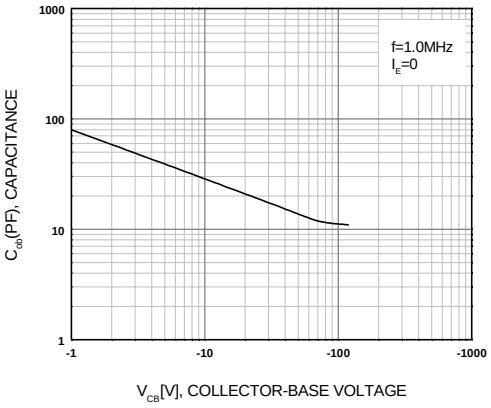

Figure 4. Collector Output Capacitance

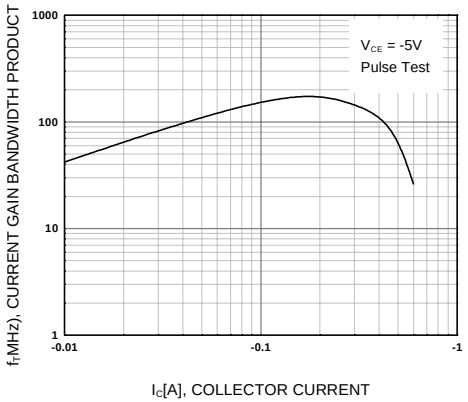

Figure 5. Current Gain Bandwidth Product

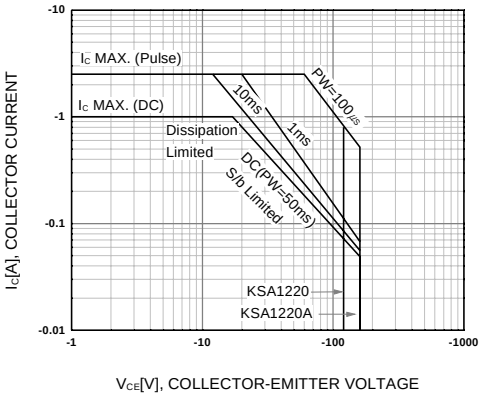

Figure 6. Safe Operating Area

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Typical Characteristics (Continued)

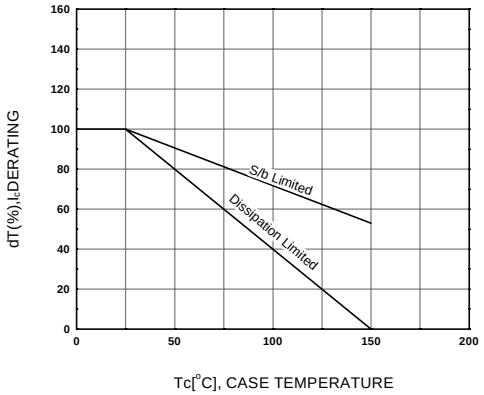

Figure 7. Derating Curve of Safe Operating Areas

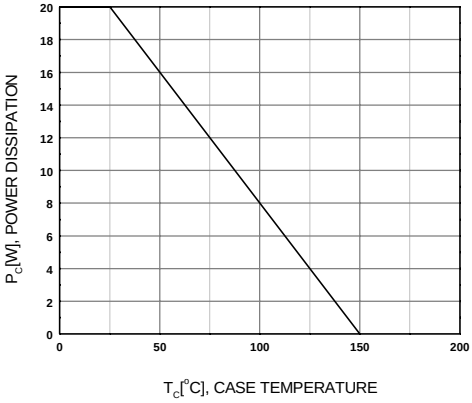

Figure 8. Power Derating

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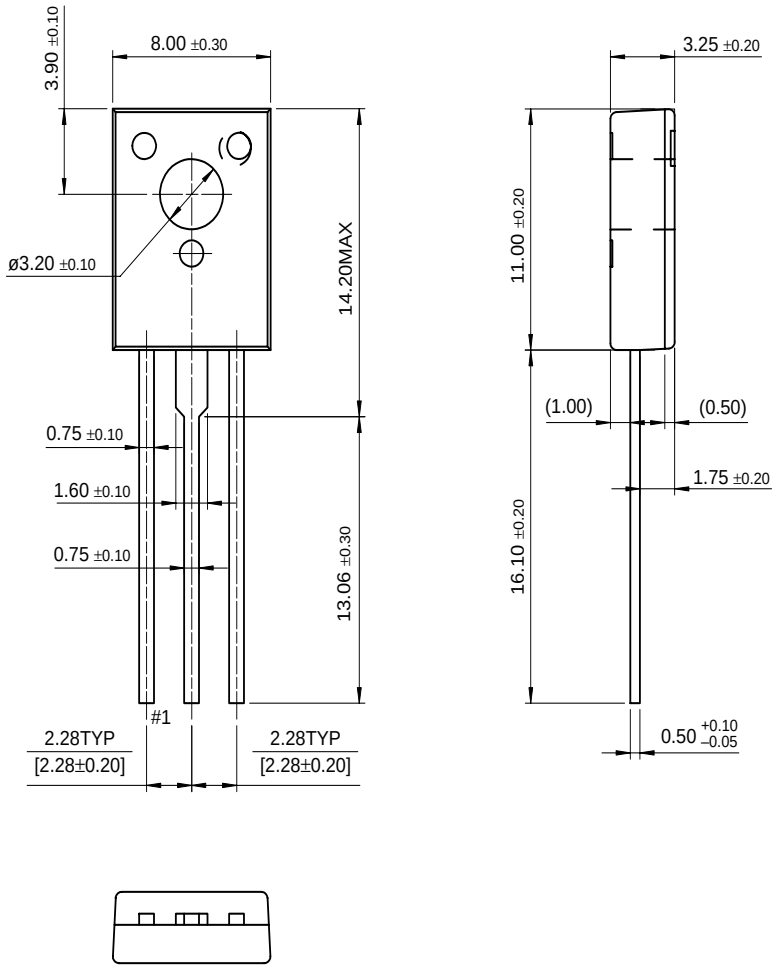
Package Demensions

TO-126



Dimensions in Millimeters

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