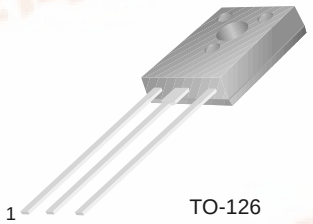
FAIRCHILD SEMICONDUCTOR TM

KSB744/744A

Audio Frequency Power Amplifier

- Complement to KSD794/KSD794A



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1. Emitter 2.Collector 3.Base

PNP Epitaxial Silicon Transistor

Absolute Maximum Ratings T_C=25°C unless otherwise noted

Symbol	Parameter		Value	Units
V_{CBO}	Collector-Base Voltage		-70	V
V_{CEO}	Collector-Emitter Voltage	: KSB744	-45	V
		: KSB744A	-60	V
V_{EBO}	Emitter-Base Voltage		-5	V
I_C	Collector Current (DC)		-3	A
I_{CP}	*Collector Current (Pulse)		-5	A
I_B	Base Current		-0.6	A
P_C	Collector Dissipation (T_a=25°C)		1	W
P_C	Collector Dissipation (T_C=25°C)		10	W
TJ	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} = -45V, 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 = -20mA	30	120		
h_{FE2}		V_{CE} = -5V, I_C = -0.5A	60	100	320	
V_{CE}(sat)	* Collector-Emitter Saturation Voltage	I_C = -1.5A, I_C = -0.15A		-0.5	-2	V
V_{BE}(sat)	* Base-Emitter Saturation Voltage	I_C = -1.5A, I_B = -0.15A		-0.8	-2	V
f_T	Current Gain Bandwidth Product	V_{CE} = -5V, I_C = -0.1A		45		MHz
C_{ob}	Output Capacitance	V_{CB} = -10V, I_E = 0 f = 1MHz		60		pF

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

h_{FE} Cassification

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

Typical Characteristics

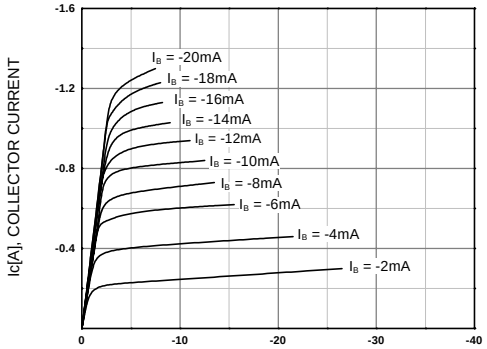

Figure 1. Static Characteristic

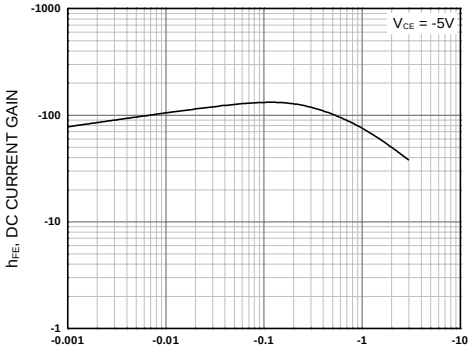

Figure 2. DC current Gain

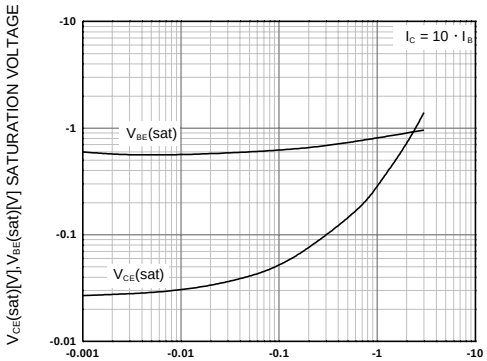

Figure 3. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

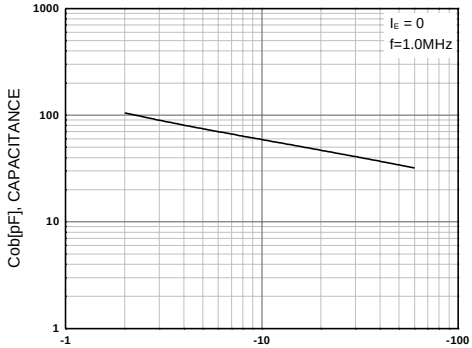

Figure 4. Collector Output Capacitance

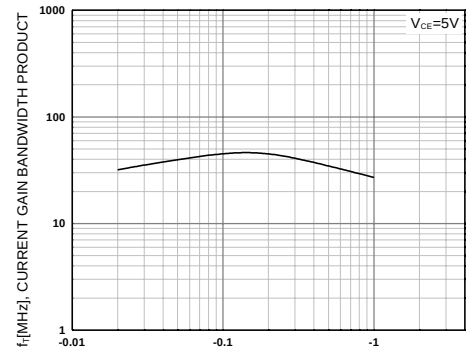

Figure 5. Current Gain Bandwidth Product

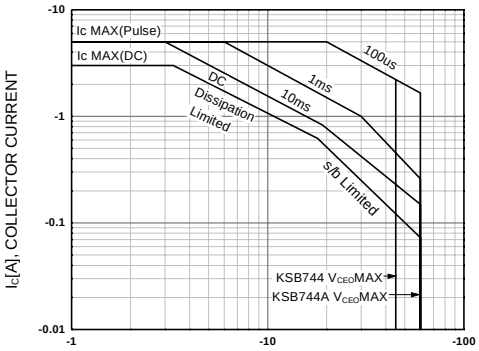

Figure 6. Safe Operating Area

Typical Characteristics (Continued)

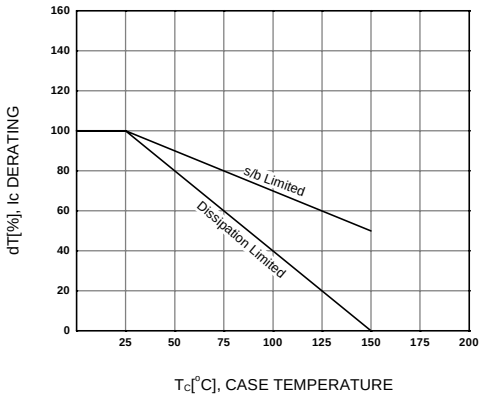

Figure 7. Derating Curve of Safe Operating Areas

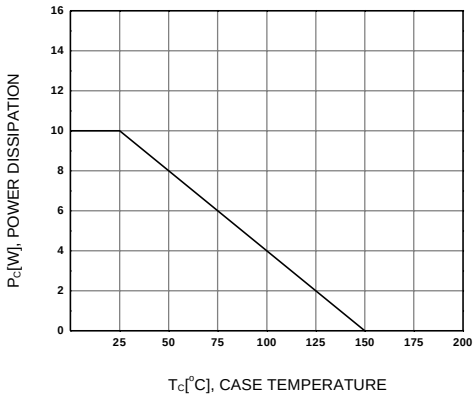

Figure 8. Power Derating

Package Demensions

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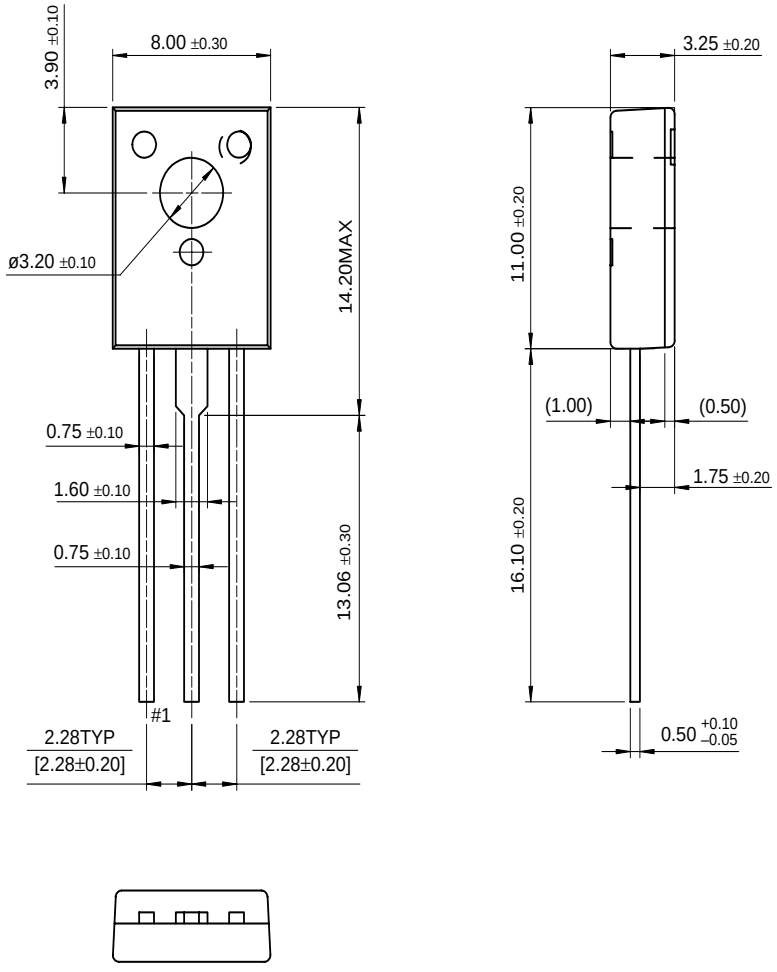

Dimensions in Millimeters

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