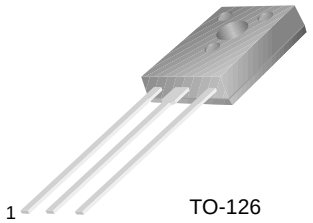
FAIRCHILD SEMICONDUCTOR™

KSC2682

Audio Frequency Power Amplifier

- Complement to KSA1142



TO-126

1. Emitter 2.Collector 3.Base

NPN Epitaxial Silicon Transistor

Absolute Maximum Ratings T_C=25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	180	V
V_{CEO}	Collector-Emitter Voltage	180	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	100	mA
P_C	Collector Dissipation (T_a=25°C)	1.2	W
P_C	Collector Dissipation (T_C=25°C)	8	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
I_{CBO}	Collector Cut-off Current	V_{CB} = 180V, I_E = 0			1.0	μA
I_{EBO}	Emitter Cut-off Current	V_{EB} = 3V, I_C= 0			1.0	μA
h_{FE1} h_{FE2}	* DC Current Gain	V_{CE} = 5V, I_C = 1mA V_{CE} = 5V, I_C = 10mA	90 100	190 200	 320	
V_{CE}(sat)	* Collector-Emitter Saturation Voltage	I_C = 50mA, I_B = 5mA		0.12	0.5	V
V_{BE}(sat)	* Base-Emitter Saturation Voltage	I_C = 50mA, I_B = 5mA		0.8	1.5	V
f_T	Current Gain Bandwidth Product	V_{CE} = 10V, I_C = 20mA		200		MHz
C_{ob}	Output Capacitance	V_{CB} = 10V, I_E = 0 f = 1MHz		3.2	5.0	pF
NF	Noise Figure	V_{CE} = 10V, I_C = 1mA R_S = 10KΩ, f = 1kHz		4		dB

* Pulse Test: PW≤350μs, Duty Cycle≤2%

h_{FE} Classificntion

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

Typical Characteristics

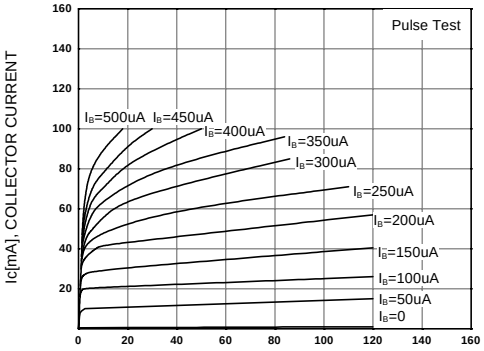


Figure 1. Static Characteristic

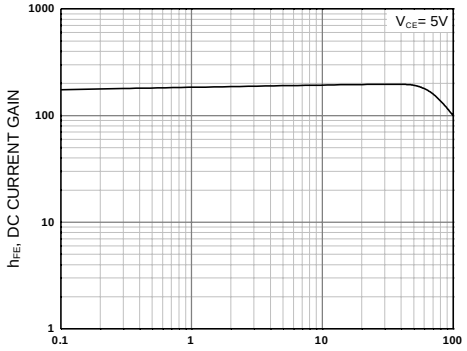


Figure 2. DC current Gain

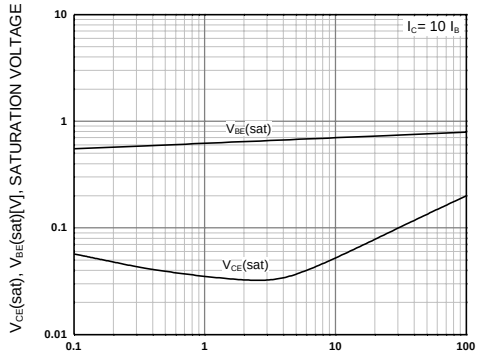


Figure 3. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

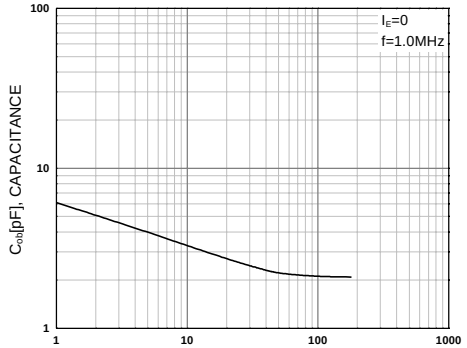


Figure 4. Collector Output Capacitance

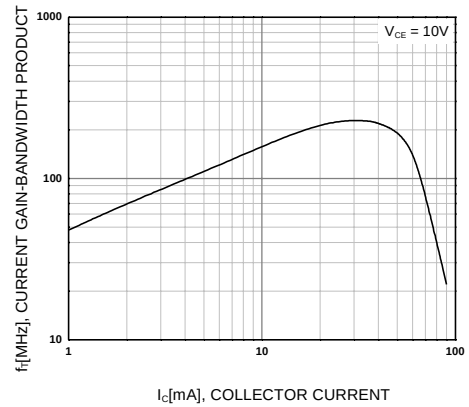


Figure 5. Current Gain Bandwidth Product

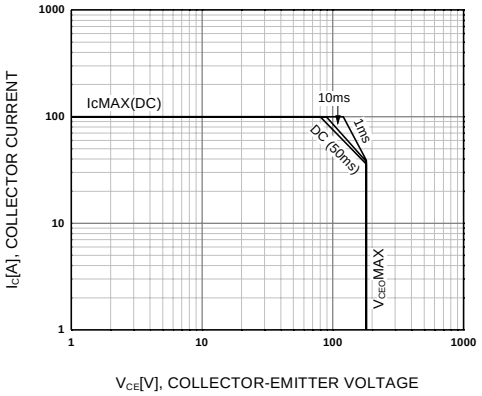


Figure 6. Safe Operating Area

Typical Characteristics (Continued)

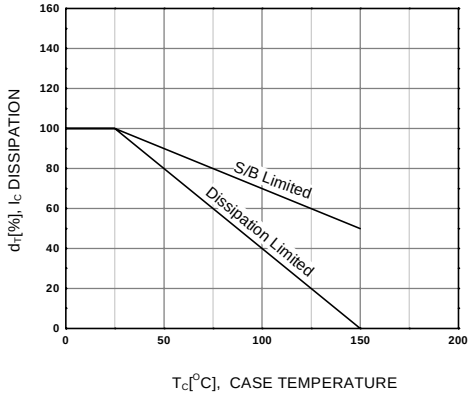


Figure 7. Derating Curve of Safe Operating Area

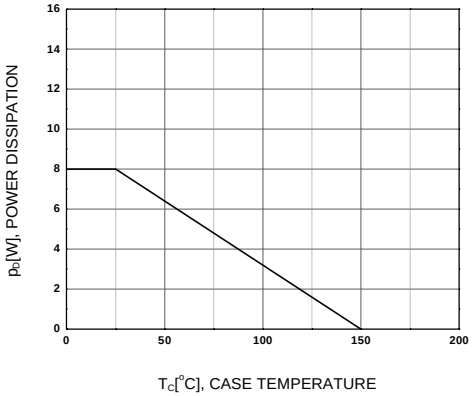
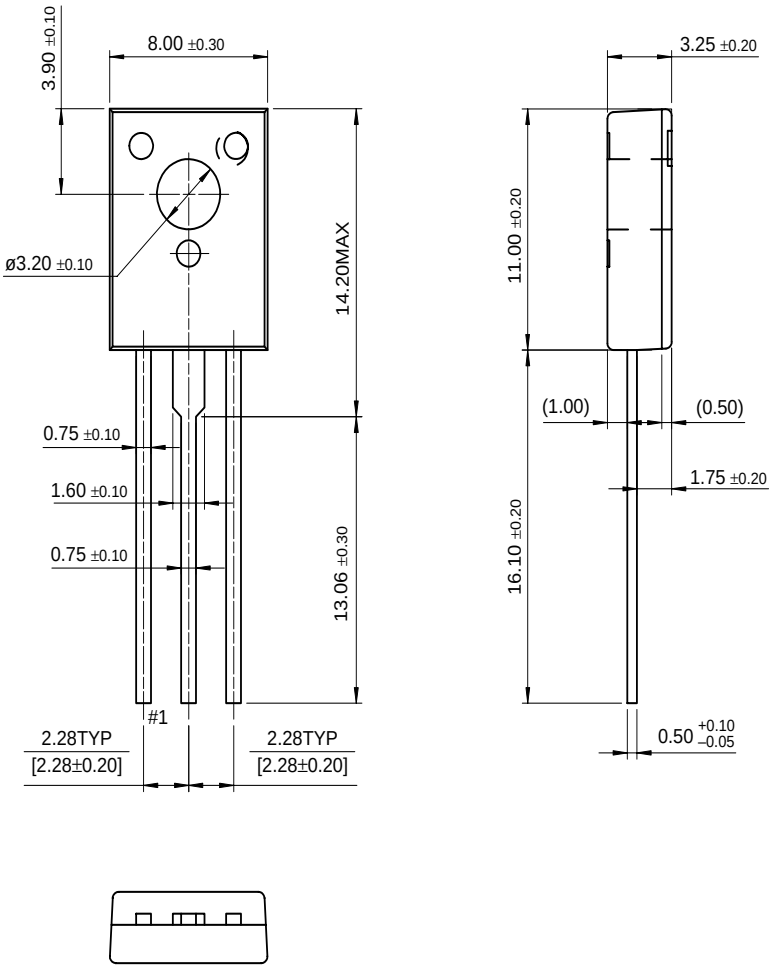


Figure 8. Power Derating

Package Demensions

TO-126



Dimensions in Millimeters

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