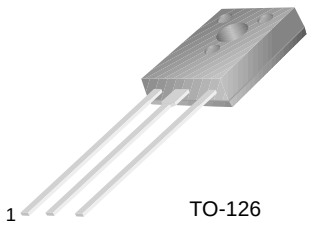
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FAIRCHILD SEMICONDUCTOR TM

KSC2690/2690A

Audio Frequency
High Frequency Power Amplifier

- Complement to KSA1220/KSA1220A



1

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		
	: KSC2690	120	V
	: KSC2690A	160	V
V_{CEO}	Collector- Emitter Voltage		
	: KSC2690	120	V
	: KSC2690A	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(DC)	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	105		
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		155		MHz
C_{ob}	Output Capacitance	V_{CB} =10V, I_E =0, f = 1MHz		19		pF

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

h_{FE} Classificntion

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

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Typical Characteristics

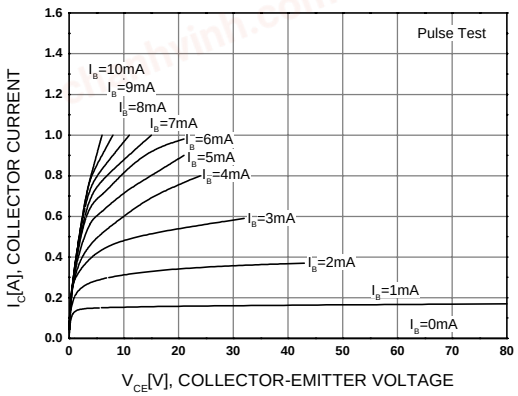


Figure 1. Static Characteristic

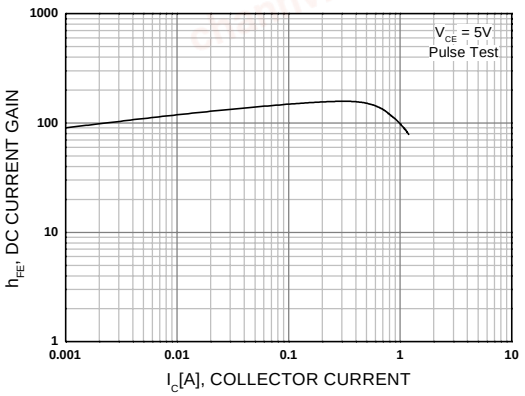


Figure 2. DC current Gain

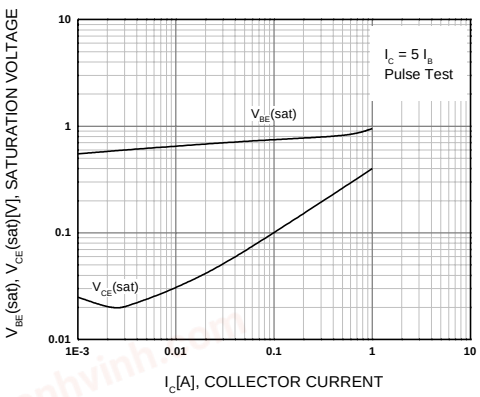


Figure 3. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

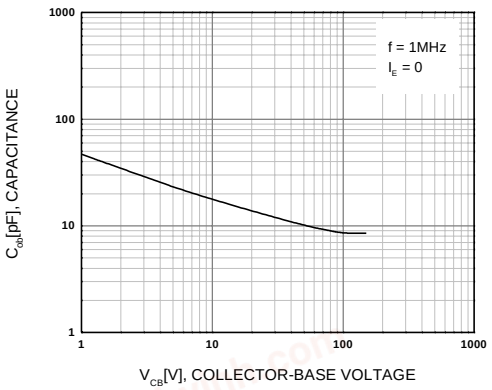


Figure 4. Collector Output Capacitance

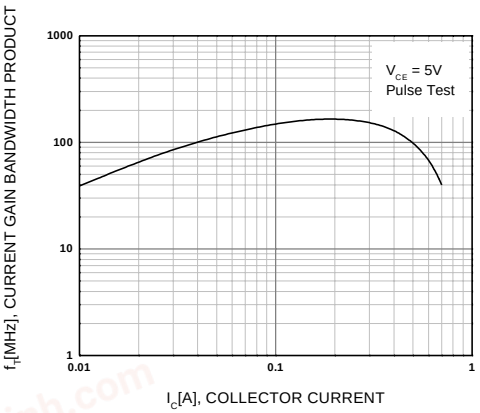


Figure 5. Current Gain Bandwidth Product

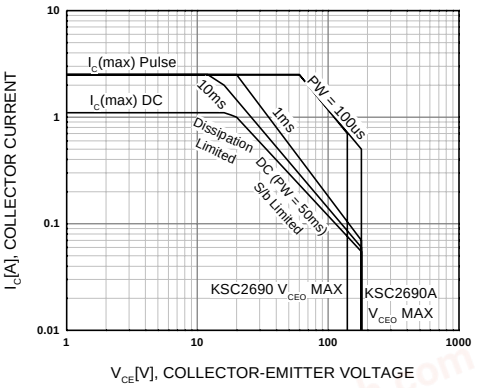


Figure 6. Safe Operating Area

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Typical Characteristics (Continued)

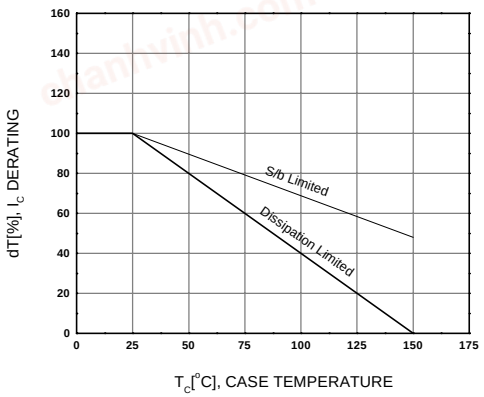


Figure 7. Derating Curve of Safe Operating Areas

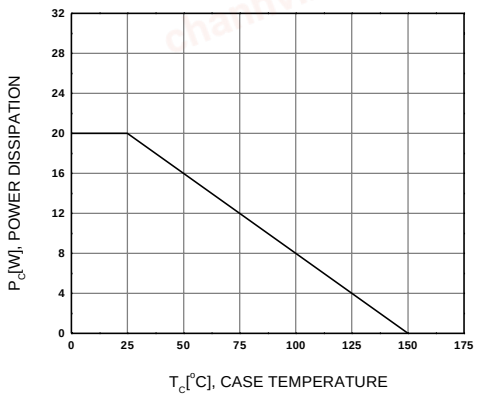


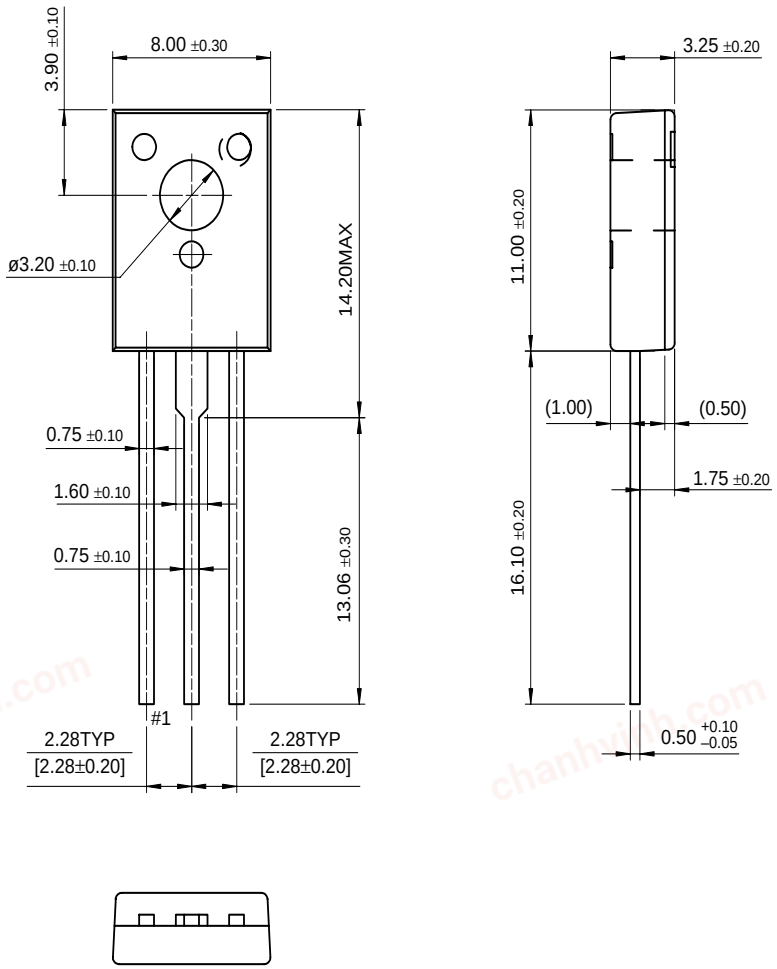
Figure 8. Power Derating

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Package Demensions

TO-126



Dimensions in Millimeters

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No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
Obsolete	Not In Production	This datasheet contains specifications on a product that has been discontinued by Fairchild semiconductor. The datasheet is printed for reference information only.

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