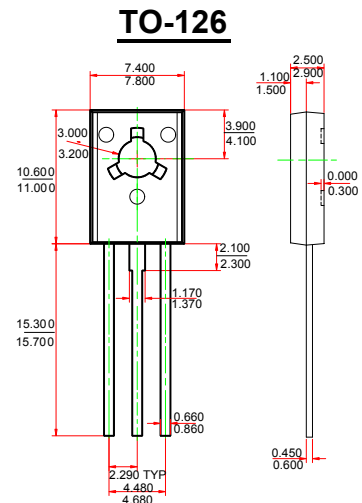


1. EMITTER
2. COLLECTOR
3. BASE

### Features

- ◇ Audio frequency power amplifier
- ◇ High frequency power amplifier
- ◇ Complement to KSC2690/KSC2690A



### MAXIMUM RATINGS (T<sub>A</sub>=25°C unless otherwise noted)

Dimensions in inches and (millimeters)

Symbol	Parameter	Value	Units
V <sub>CB0</sub>	Collector-Base Voltage	KSA1220 -120	V
		KSA1220A -160	V
V <sub>CEO</sub>	Collector-Emitter Voltage	KSA1220 -120	V
		KSA1220A -160	V
V <sub>EBO</sub>	Emitter-Base Voltage	-5	V
I <sub>C</sub>	Collector Current (DC)	-1.2	A
I <sub>CP</sub>	Collector Current ( PW ≤10ms,Duty Cycle ≤2 % )	-2.5	A
I <sub>B</sub>	Base Current	-0.3	A
P <sub>C</sub>	Collector Power Dissipation (T <sub>a</sub> = 25 °C)	1.25	W
	Collector Power Dissipation (T <sub>c</sub> = 25 °C)	20	W
T <sub>J</sub>	Junction Temperature	150	°C
T <sub>stg</sub>	Storage Temperature	-55-150	°C

### ELECTRICAL CHARACTERISTICS (T<sub>amb</sub>=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector cut-off current	I <sub>CB0</sub>	V <sub>CB</sub> =-120V, I <sub>E</sub> =0			-1	μA
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> =-3 V, I <sub>C</sub> =0			-1	μA
DC current gain	h <sub>FE(1)</sub>	V <sub>CE</sub> =-5V, I <sub>C</sub> =-5mA	35			
	h <sub>FE(2)</sub>	V <sub>CE</sub> =-5V, I <sub>C</sub> =-300mA	60		320	
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =-1 A, I <sub>B</sub> =-200mA <sup>(1)</sup>		-0.4	-0.7	V
Base-emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =-1 A, I <sub>B</sub> =-200mA <sup>(1)</sup>		-1	-1.3	V
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> =-5V, I <sub>C</sub> =-200mA		175		MHz
Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> =-10V, I <sub>E</sub> =0, f=1MHz		26		pF

<sup>(1)</sup> Pulse Test : PW≤350us , Duty Cycle ≤ 2 %

### CLASSIFICATION OF h<sub>FE(2)</sub>

Rank	R	O	Y
Range	60-120	100-200	160-320

## Typical Characteristics

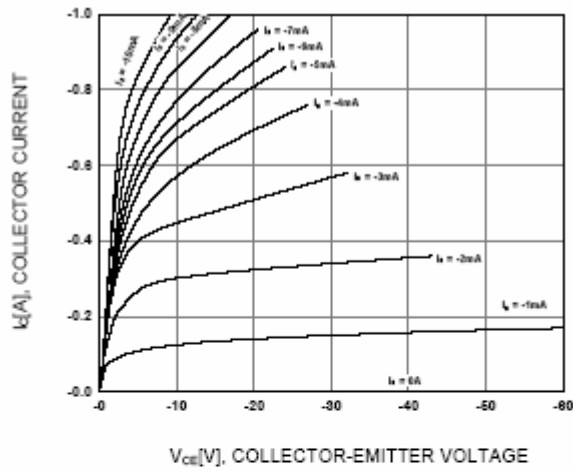


Figure 1. Static Characteristic

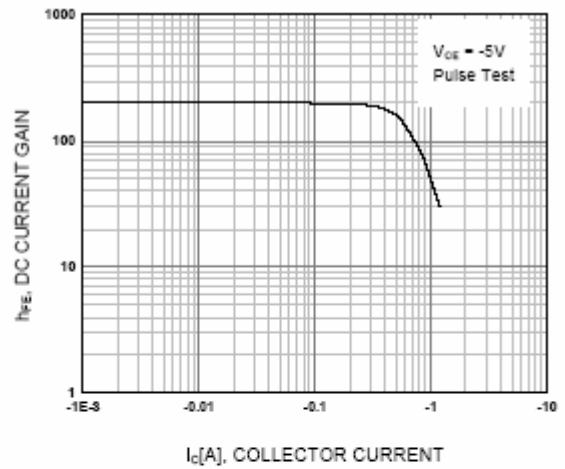


Figure 2. DC current Gain

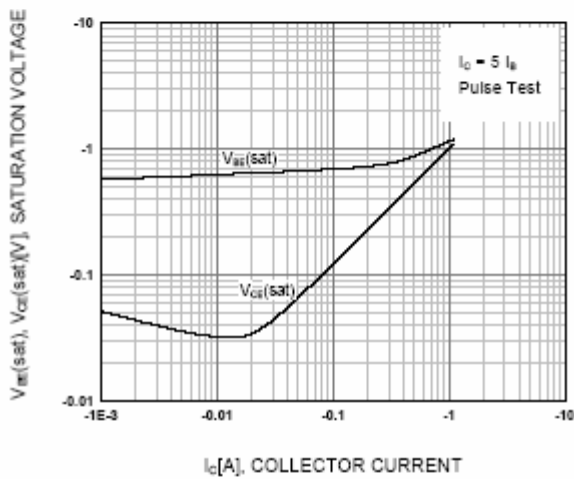


Figure 3. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

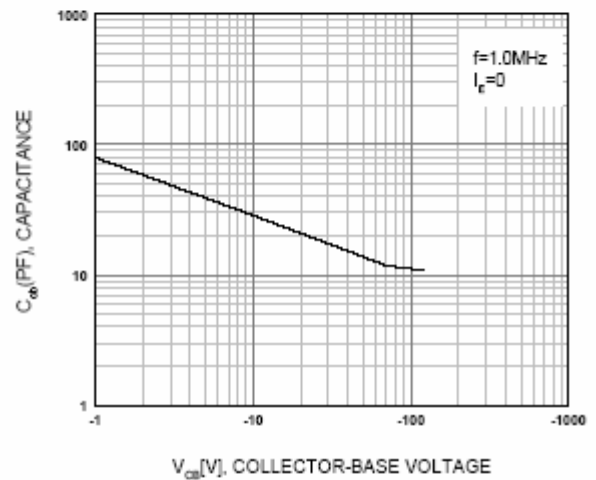


Figure 4. Collector Output Capacitance

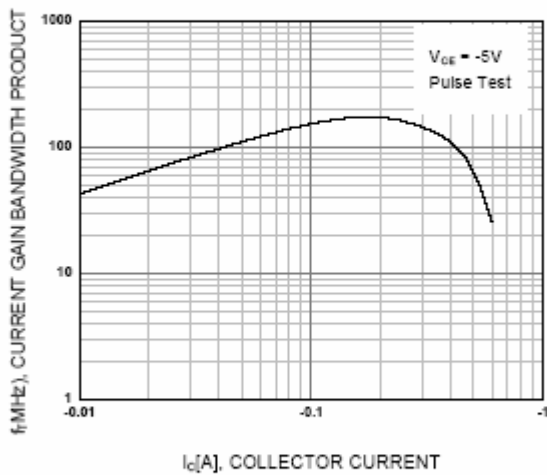


Figure 5. Current Gain Bandwidth Product

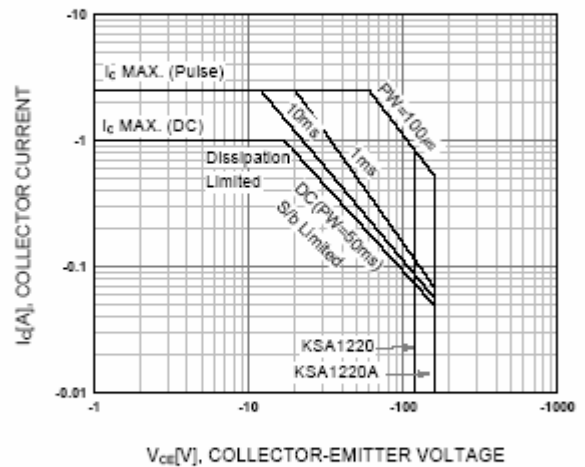


Figure 6. Safe Operating Area