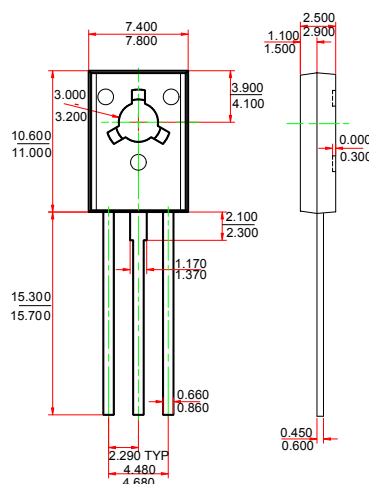


1. EMITTER
2. COLLECTOR
3. BASE



Features

- ✧ Audio frequency power amplifier
- ✧ High frequency power amplifier
- ✧ Complement to KSA1220/KSA1220A

MAXIMUM RATINGS ($T_A=25^\circ\text{C}$ unless otherwise noted)

Dimensions in inches and (millimeters)

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	KSA2690	120
		KSA2690A	160
V_{CEO}	Collector-Emitter Voltage	KSA2690	120
		KSA2690A	160
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current (DC)	1.2	A
I_{CP}	Collector Current (PW $\leq 10\text{ms}$, Duty Cycle $\leq 2\%$)	2.5	A
I_B	Base Current	0.3	A
P_C	Collector Power Dissipation ($T_a = 25^\circ\text{C}$)	1.25	W
	Collector Power Dissipation ($T_c = 25^\circ\text{C}$)	20	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-55-150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_{amb}=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector cut-off current	I_{CBO}	$V_{CB}=120\text{V}$, $I_E=0$			1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=3\text{V}$, $I_C=0$			1	μA
DC current gain	$h_{FE(1)}$	$V_{CE}=5\text{V}$, $I_C=5\text{mA}$	35	105		
	$h_{FE(2)}$	$V_{CE}=5\text{V}$, $I_C=300\text{mA}$	60	140	320	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=1\text{A}$, $I_B=200\text{mA}^{(1)}$		0.4	0.7	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=1\text{A}$, $I_B=200\text{mA}^{(1)}$		1	1.3	V
Transition frequency	f_T	$V_{CE}=5\text{V}$, $I_C=200\text{mA}$		155		MHz
Collector output capacitance	C_{ob}	$V_{CB}=10\text{V}$, $I_E=0$, $f=1\text{MHz}$		19		pF

⁽¹⁾ Pulse Test : $PW \leq 350\text{us}$, Duty Cycle $\leq 2\%$

CLASSIFICATION OF $h_{FE(2)}$

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

Typical Characteristics

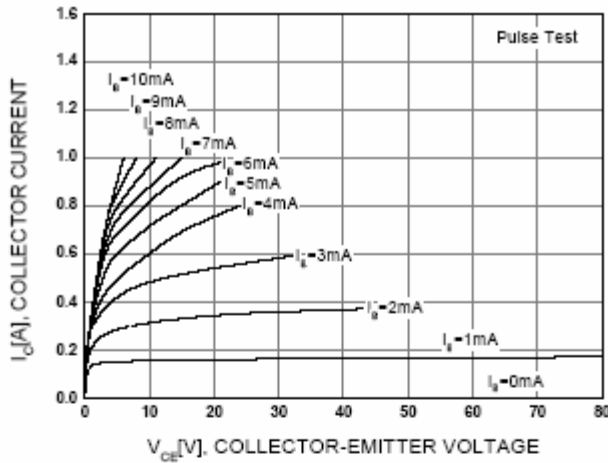


Figure 1. Static Characteristic

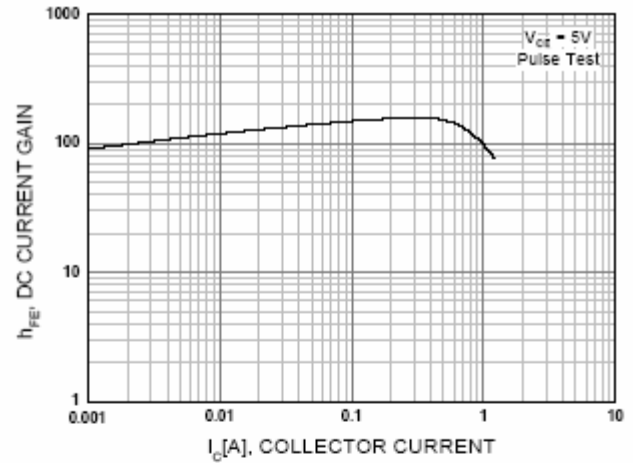


Figure 2. DC current Gain

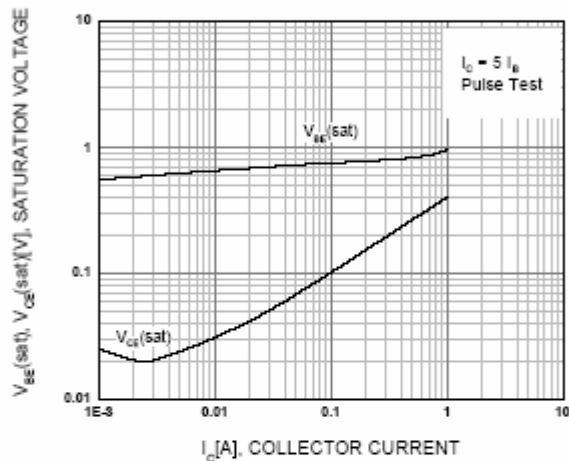


Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

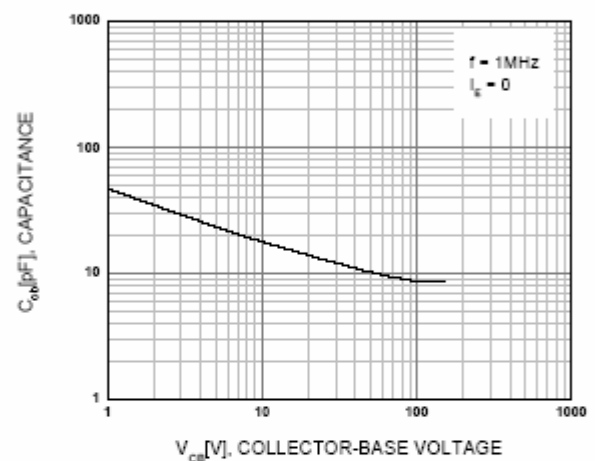


Figure 4. Collector Output Capacitance

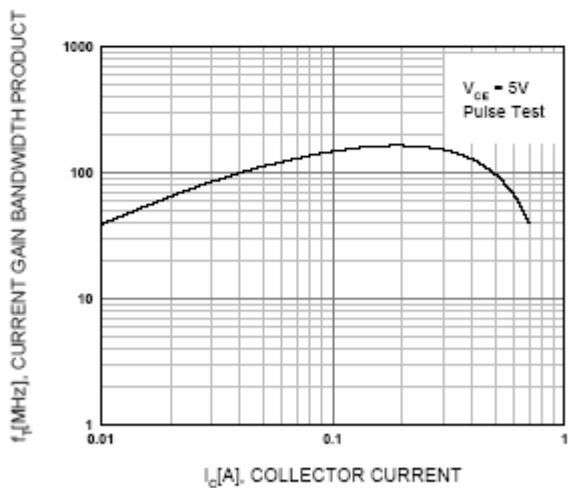


Figure 5. Current Gain Bandwidth Product

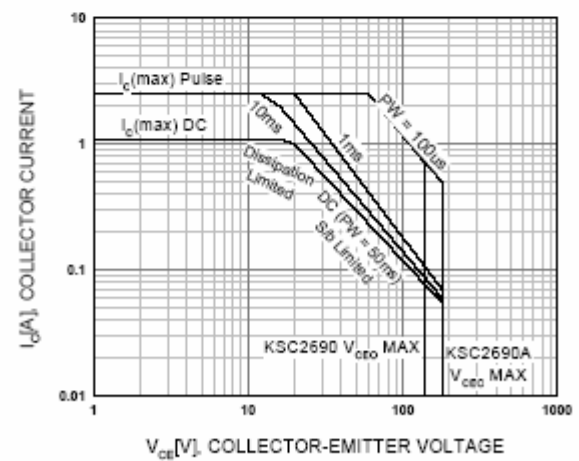


Figure 6. Safe Operating Area