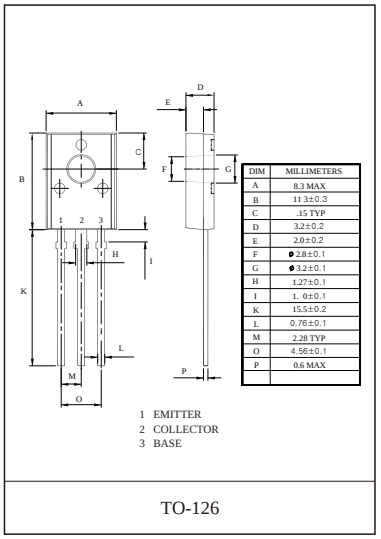
FTC2690/2690A TRANSISTOR (NPN)



TO-126

FEATURES

- **Audio frequency power amplifier**
- **High frequency power amplifier**
- **Complement to FTA1220/KTA1220A**

MAXIMUM RATINGS (T_A=25℃ unless otherwise noted)

Symbol	Parameter		Value	Units
V_{CBO}	Collector-Base Voltage	FTC2690	120	V
		FTC2690A	160	V
V_{CEO}	Collector-Emitter Voltage	FTC2690	120	V
		FTC2690A	160	V
V_{EBO}	Emitter-Base Voltage		5	V
I_C	Collector Current (DC)		1.2	A
I_{CP}	Collector Current (PW ≤10ms,Duty Cycle ≤2 %)		2.5	A
I_B	Base Current		0.3	A
P_C	Collector Power Dissipation (T_a = 25℃)		1.25	W
	Collector Power Dissipation (T_c = 25℃)		20	W
T_J	Junction Temperature		150	℃
T_{stg}	Storage Temperature		-55-150	℃

ELECTRICAL CHARACTERISTICS (Tamb=25℃ unless otherwise specified)

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

(1) Pulse Test : PW≤350 us , Duty Cycle ≤ 2 %

CLASSIFICATION OF $h_{FE(2)}$

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

● Electrical characteristic curves

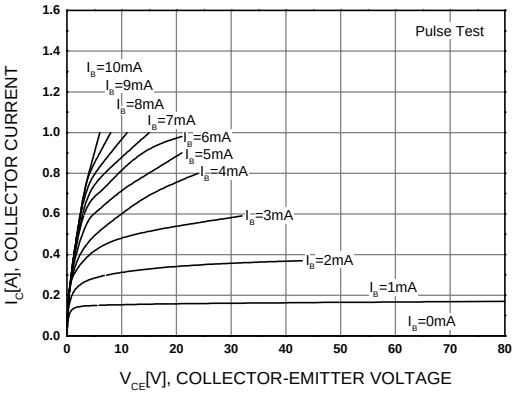


Figure 1. Static Characteristic

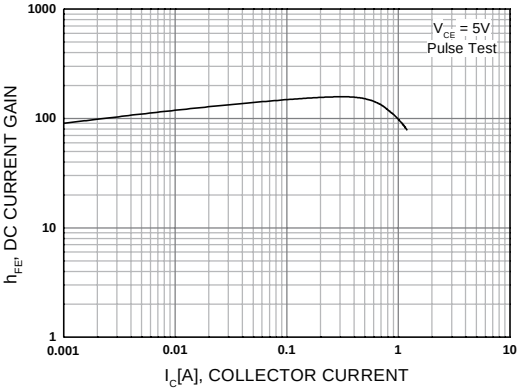


Figure 2. DC current Gain

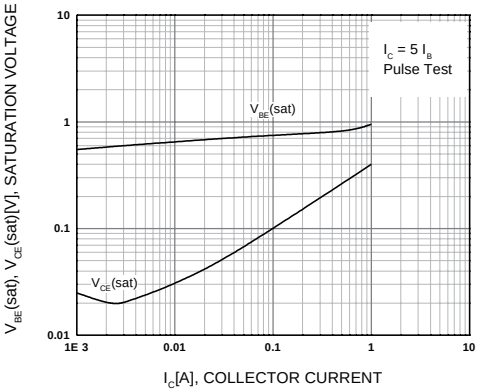


Figure 3. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

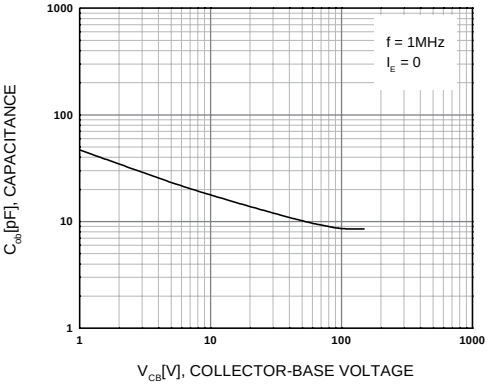


Figure 4. Collector Output Capacitance

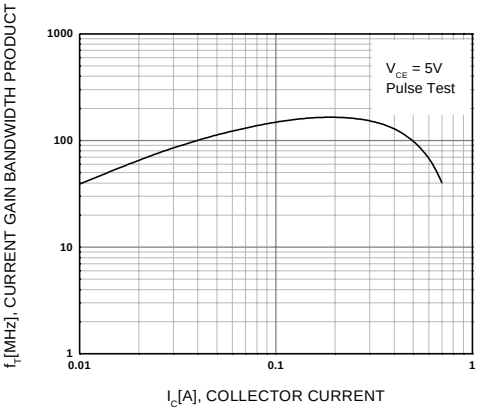


Figure 5. Current Gain Bandwidth Product

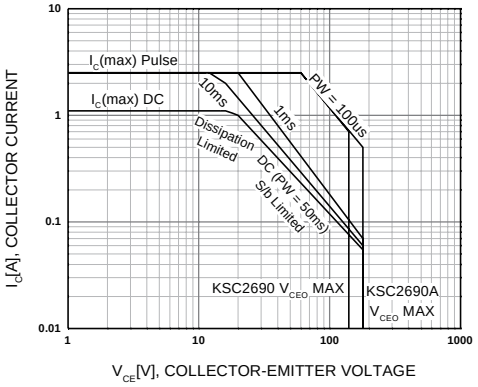


Figure 6. Safe Operating Area

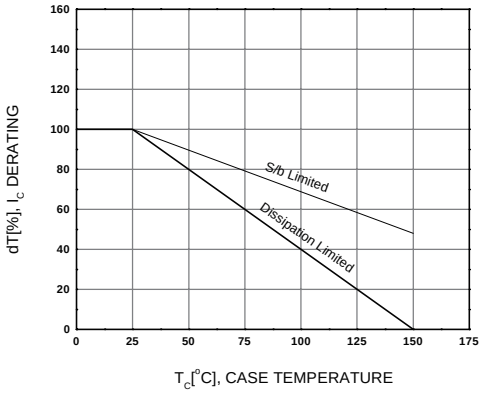


Figure 7. Derating Curve of Safe Operating Areas

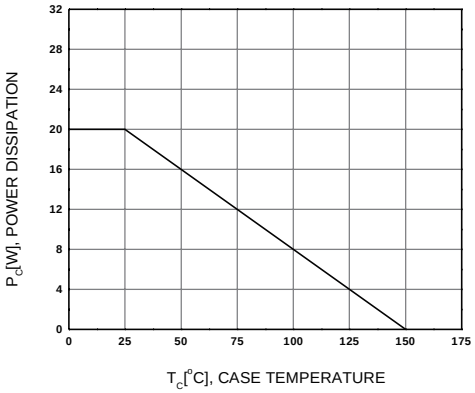


Figure 8. Power Derating