

Silicon NPN Power Transistors

2SC4690

DESCRIPTION

- With TO-3PFM package
- Complementary to 2SA1805
- Recommend for 70W high fidelity audio frequency amplifier output stage

APPLICATIONS

- Power amplifier applications

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

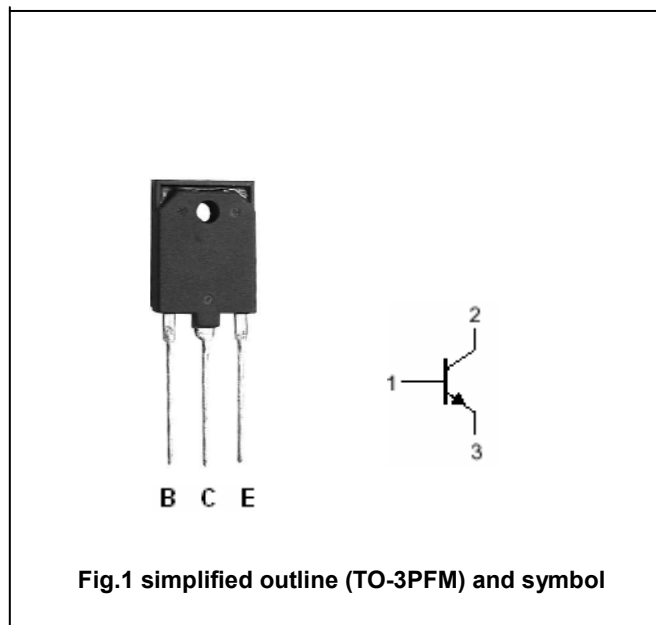


Fig.1 simplified outline (TO-3PFM) and symbol

Absolute maximum ratings($T_a = \square$)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	140	V
V_{CEO}	Collector-emitter voltage	Open base	140	V
V_{EBO}	Emitter-base voltage	Open collector	5	V
I_C	Collector current		10	A
I_{CP}	Collector current-peak		20	A
I_B	Base current		1	A
P_C	Collector power dissipation	$T_C = 25 \square$	80	W
T_j	Junction temperature		150	\square
T_{stg}	Storage temperature		-55~150	\square

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CHARACTERISTICS

T_j=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-emitter breakdown voltage	I _C =50mA ; I _B =0	140			V
I _{CBO}	Collector cut-off current	V _{CB} =140V; I _E =0			5	μA
I _{EBO}	Emitter cut-off current	V _{EB} =5V; I _C =0			5	μA
h _{FE-1}	DC current gain	I _C =1A ; V _{CE} =5V	55		160	
h _{FE-2}	DC current gain	I _C =5A ; V _{CE} =5V	35			
V _{CE(sat)}	Collector-emitter saturation voltage	I _C =7A ; I _B =0.7A		0.3	2.0	V
V _{BE}	Base-emitter voltage	I _C =5A ; V _{CE} =5V		0.9	1.5	V
f _T	Transition frequency	I _C =1A ; V _{CE} =5V		30		MHz
C _{ob}	Collector output capacitance	I _E =0; V _{CB} =10V; f=1MHz		220		pF

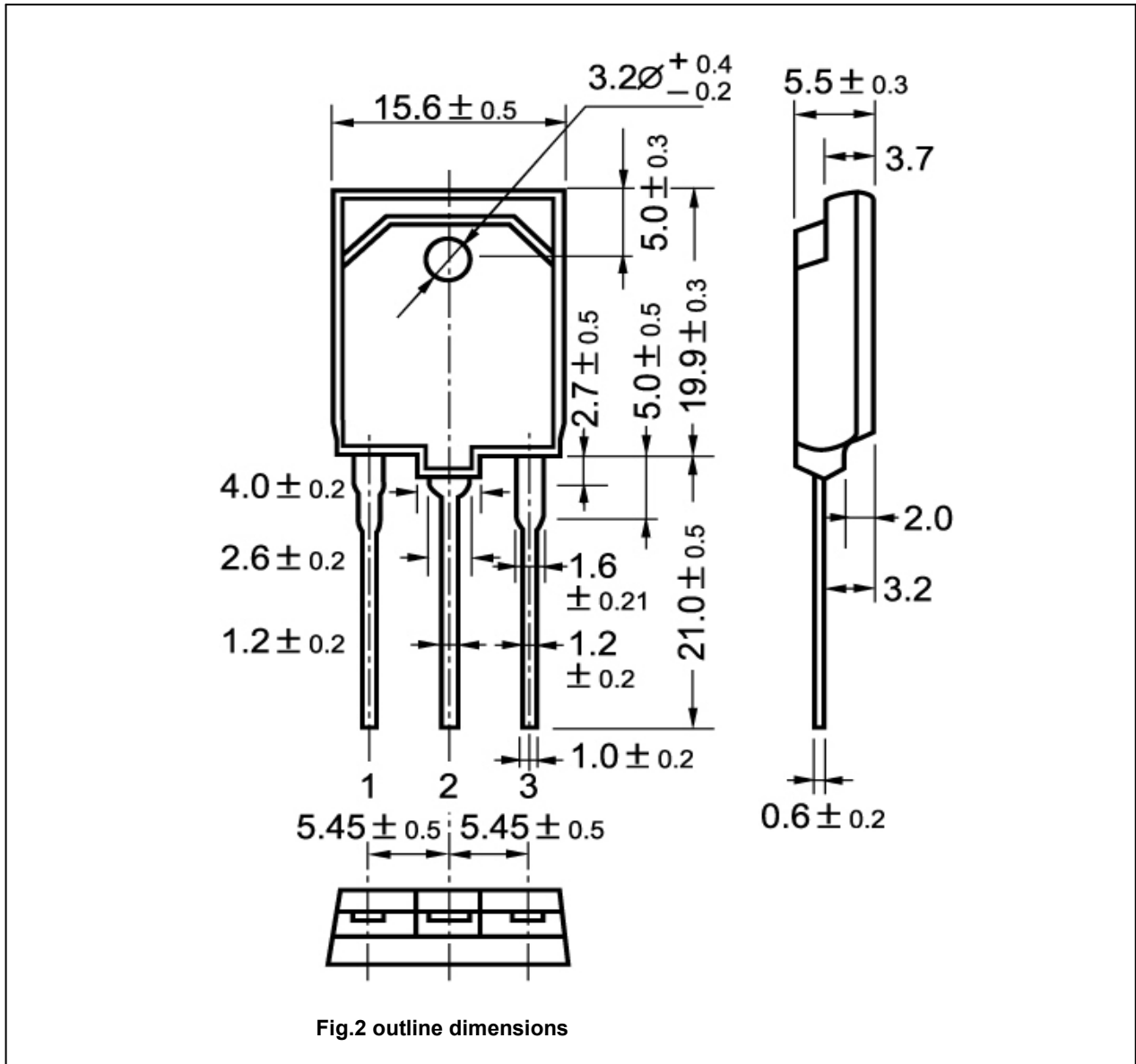
◆ h_{FE-1} classifications

R	O
55-110	80-160

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PACKAGE OUTLINE



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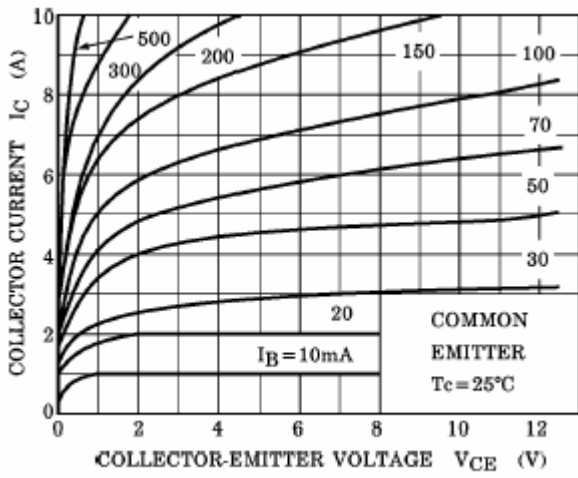


Fig.3 Static Characteristic

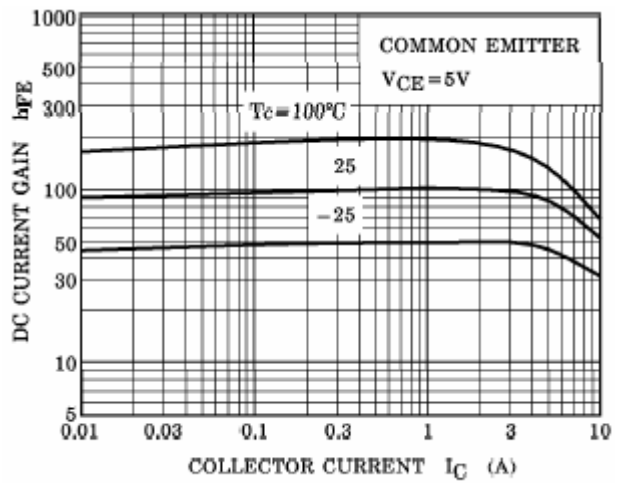


Fig.4 DC current Gain

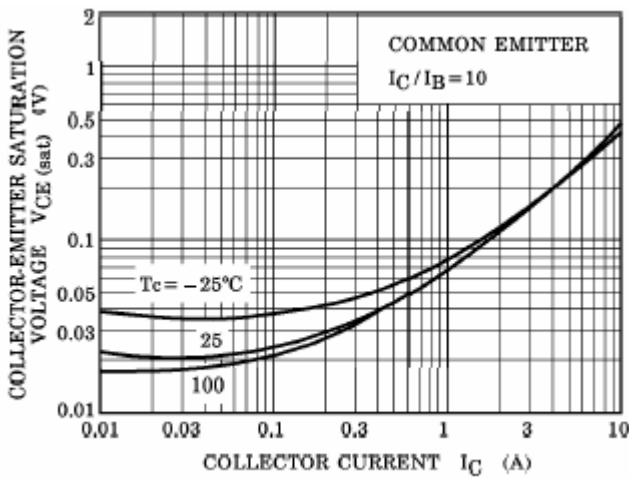


Fig.5 Collector-Emitter Saturation Voltage

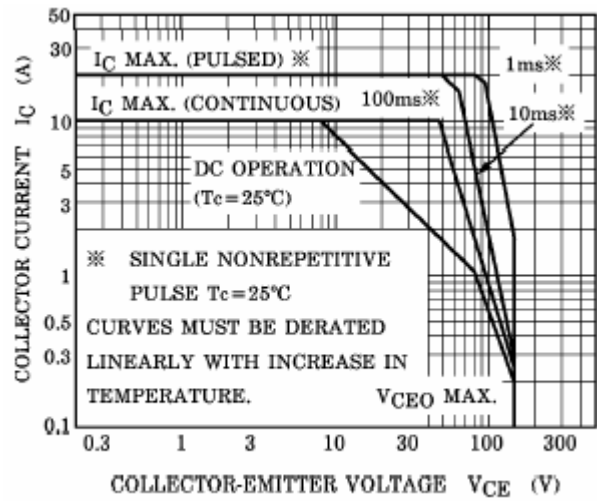


Fig.6 Safe Operating Area