

## 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

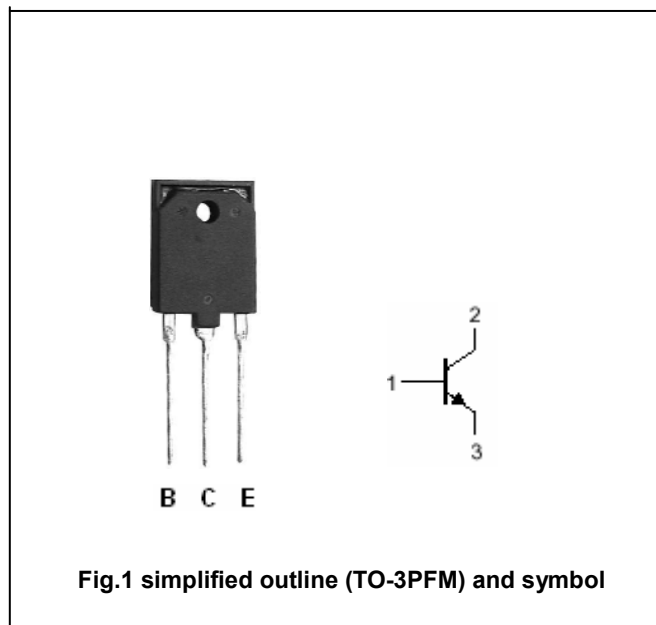


Fig.1 simplified outline (TO-3PFM) and symbol

**Absolute maximum ratings(Ta=□)**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	Open emitter	140	V
V <sub>CEO</sub>	Collector-emitter voltage	Open base	140	V
V <sub>EBO</sub>	Emitter-base voltage	Open collector	5	V
I <sub>C</sub>	Collector current		10	A
I <sub>CP</sub>	Collector current-peak		20	A
I <sub>B</sub>	Base current		1	A
P <sub>C</sub>	Collector power dissipation	T <sub>C</sub> =25□	80	W
T <sub>j</sub>	Junction temperature		150	□
T <sub>stg</sub>	Storage temperature		-55~150	□

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## CHARACTERISTICS

T<sub>j</sub>=25°C unless otherwise specified

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

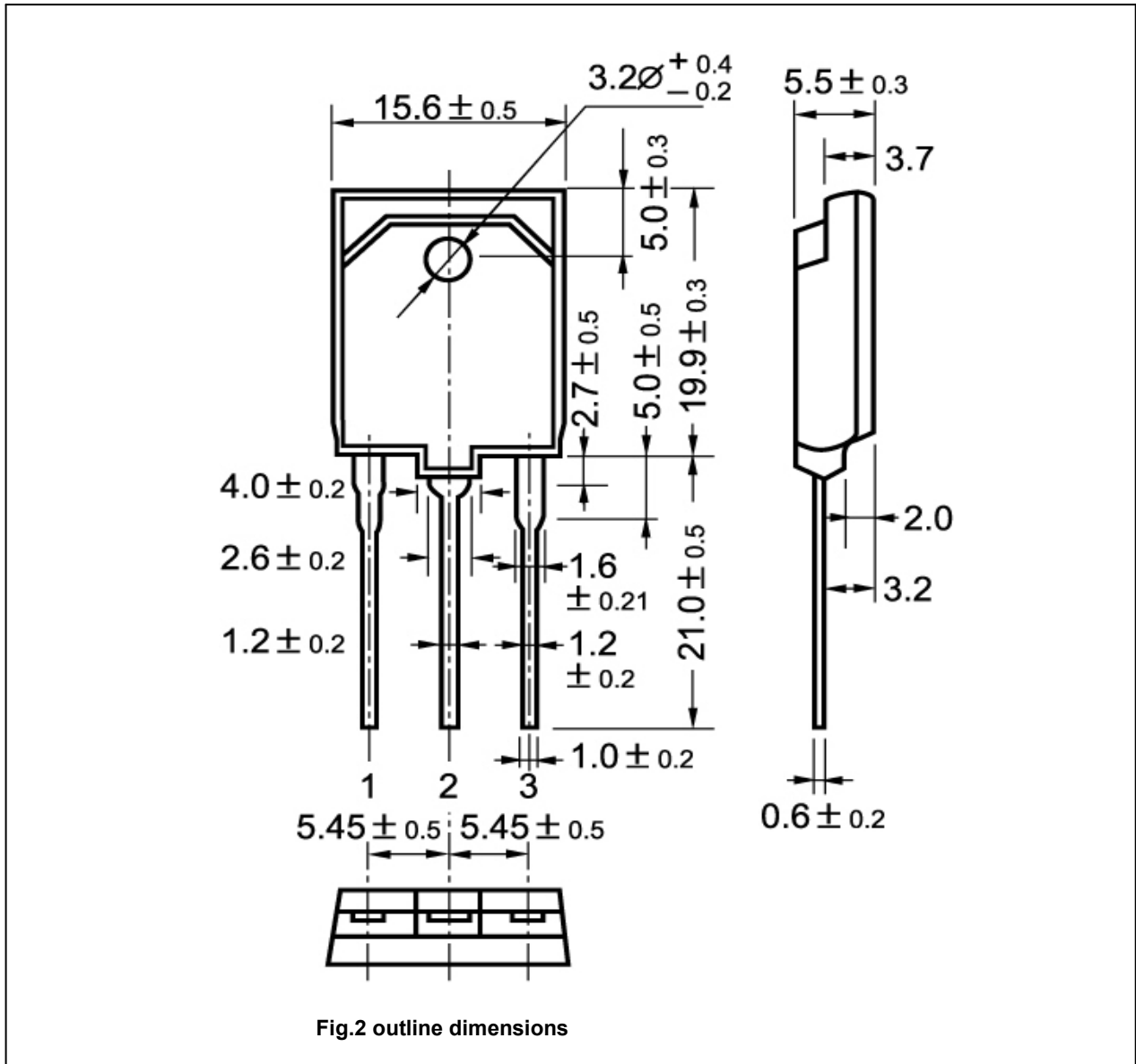
◆ h<sub>FE-1</sub> classifications

R	O
55-110	80-160

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PACKAGE OUTLINE



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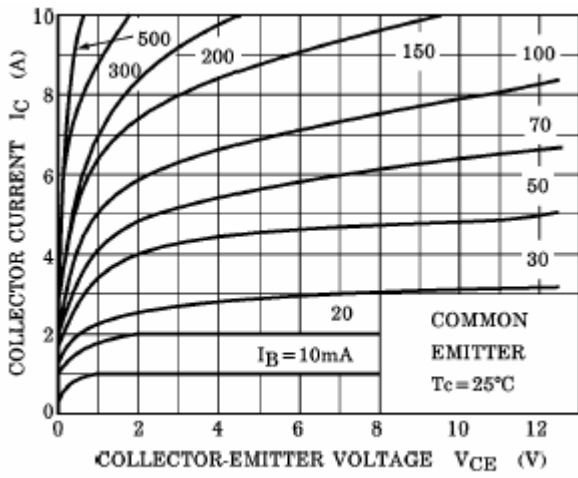


Fig.3 Static Characteristic

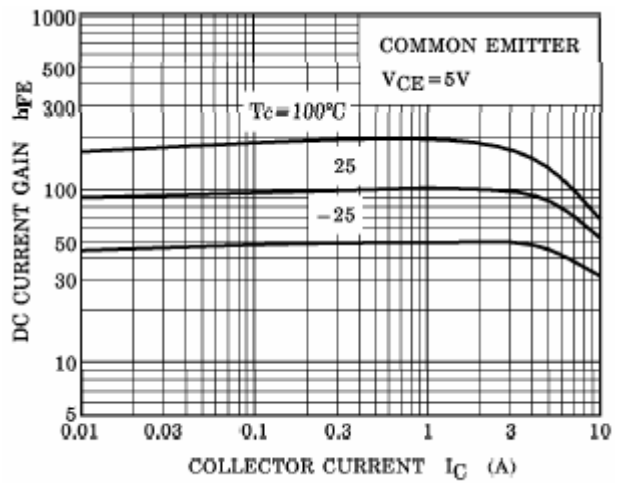


Fig.4 DC current Gain

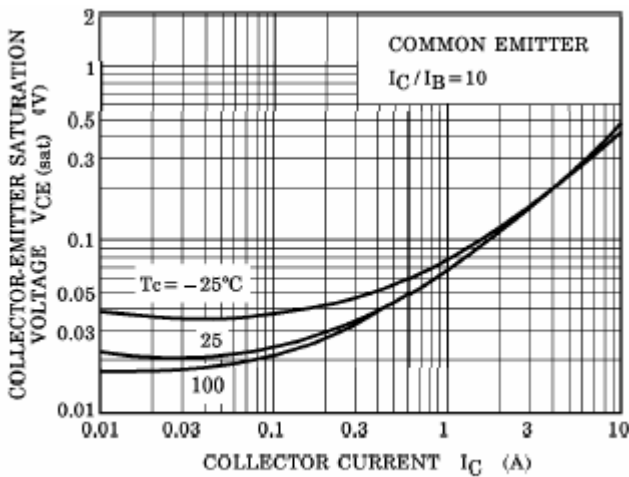


Fig.5 Collector-Emitter Saturation Voltage

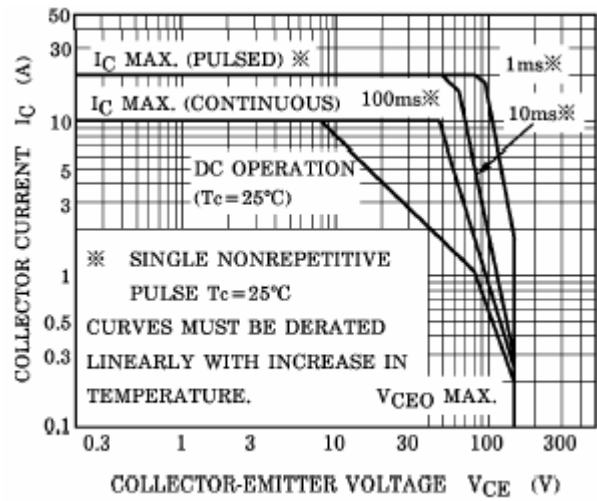


Fig.6 Safe Operating Area