

Silicon NPN Power Transistors

2SC4448

**DESCRIPTION**

- With TO-220F package
- High voltage ,high frequency

**APPLICATIONS**

- Chroma output applications for HDTV
- Video output applications for high-resolution display

**PINNING**

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

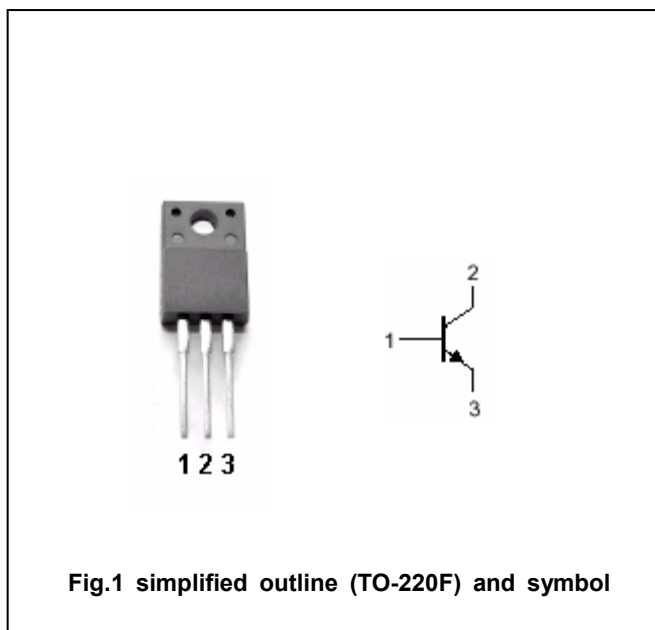


Fig.1 simplified outline (TO-220F) and symbol

**Absolute maximum ratings(Ta=25°C)**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	Open emitter	250	V
V <sub>CEO</sub>	Collector-emitter voltage	Open base	250	V
V <sub>EBO</sub>	Emitter-base voltage	Open collector	5	V
I <sub>C</sub>	Collector current		150	mA
I <sub>CM</sub>	Collector current-peak		300	mA
I <sub>B</sub>	Base current		50	mA
P <sub>C</sub>	Collector dissipation	T <sub>a</sub> =25°C	2	W
		T <sub>C</sub> =25°C	10	
T <sub>j</sub>	Junction temperature		150	°C
T <sub>stg</sub>	Storage temperature		-55~150	°C

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## CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =50mA ; I <sub>B</sub> =5mA			1.0	V
V <sub>BEsat</sub>	Base-emitter saturation voltage	I <sub>C</sub> =50mA ; I <sub>B</sub> =5mA			1.0	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =200V; I <sub>E</sub> =0			100	μA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =5V; I <sub>C</sub> =0			10	μA
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =10mA ; V <sub>CE</sub> =10V	40		200	
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =100mA ; V <sub>CE</sub> =10V	20			
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =40mA ; V <sub>CE</sub> =10V		240		MHz
C <sub>OB</sub>	Collector output capacitance	f=1MHz; V <sub>CB</sub> =30V		3.3		pF

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PACKAGE OUTLINE

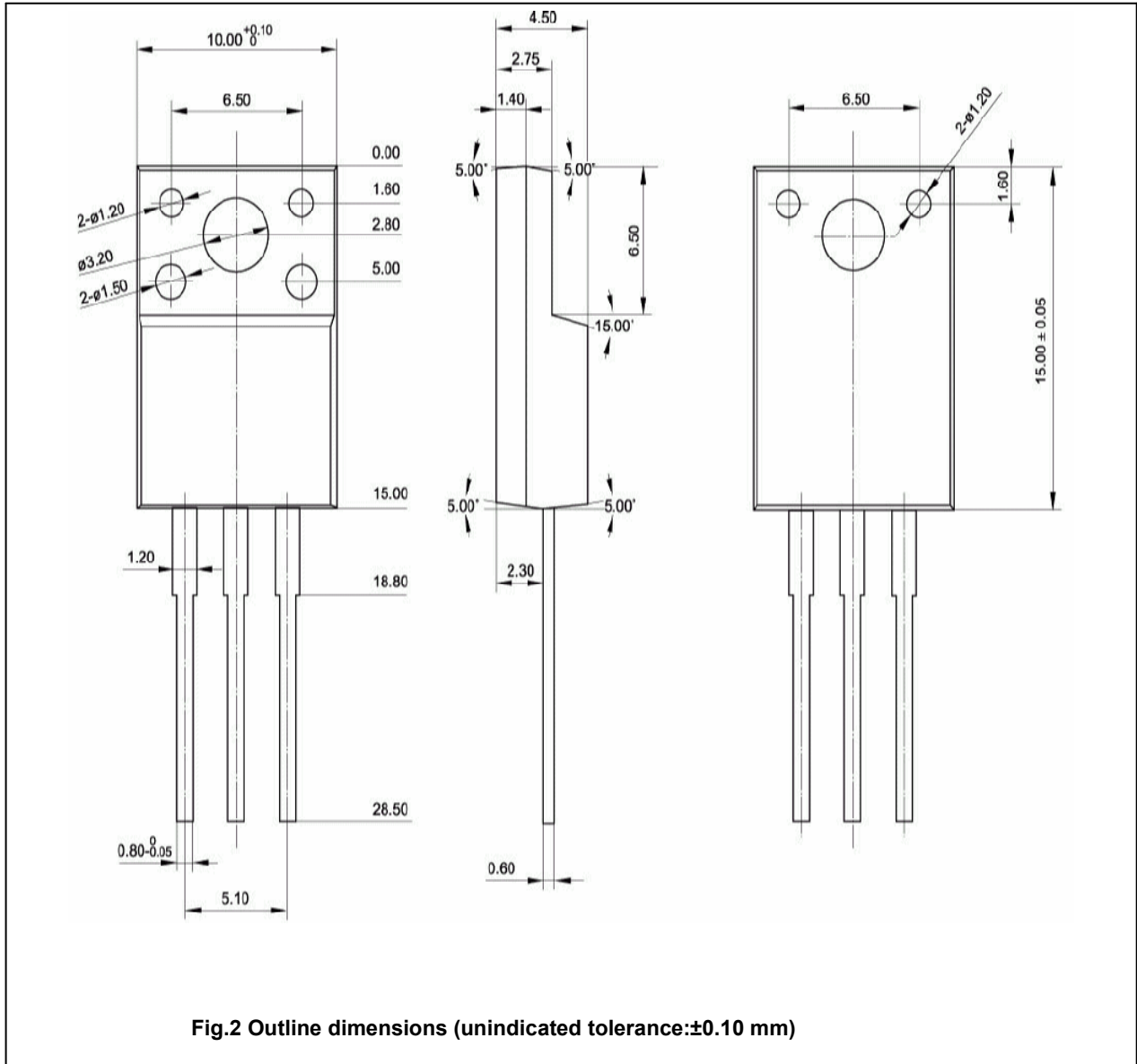


Fig.2 Outline dimensions (unindicated tolerance:  $\pm 0.10$  mm)

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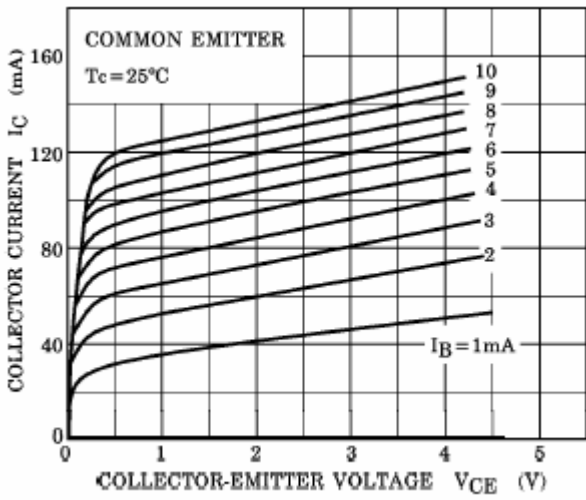


Fig.3 Static Characteristic

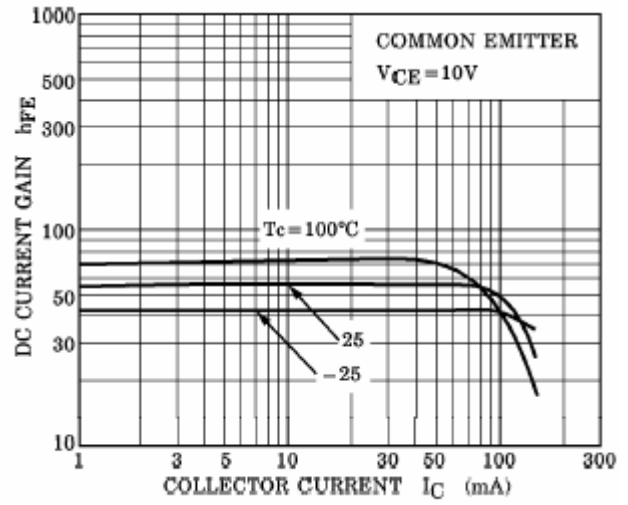


Fig.4 DC current Gain

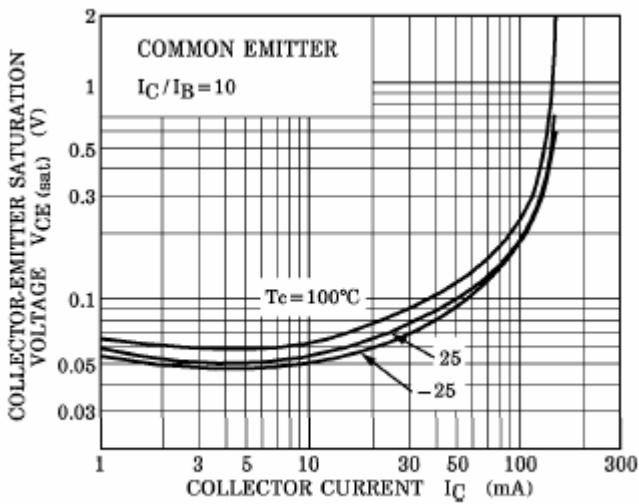


Fig.5 Collector-Emitter Saturation Voltage

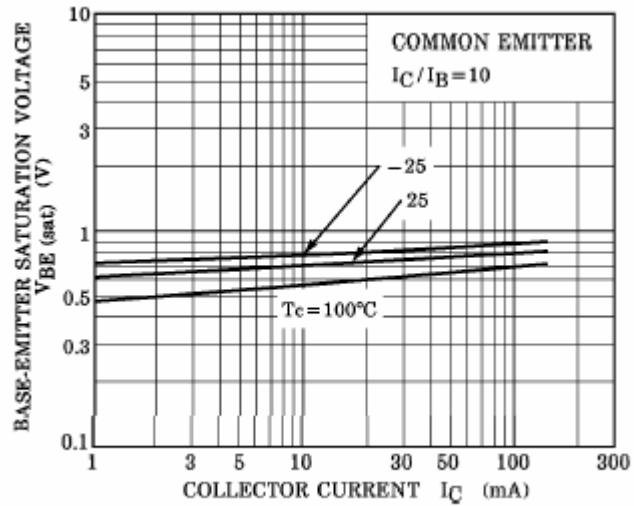


Fig.6 Base-Emitter Saturation Voltage

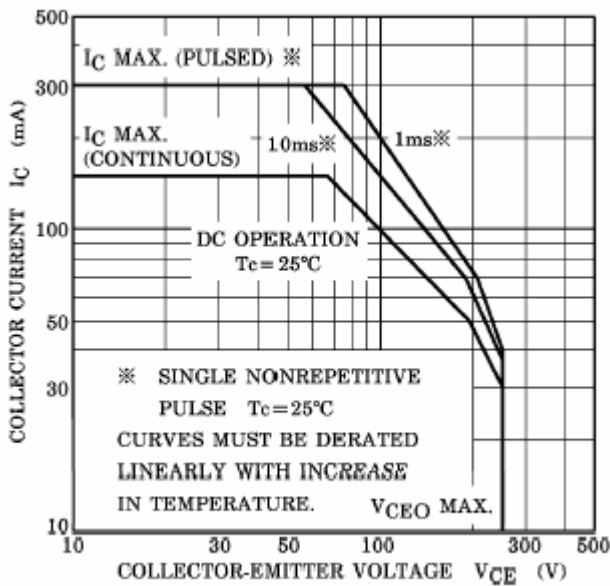


Fig.7 Safe Operating Area