

Silicon NPN Power Transistors

2SC5416

DESCRIPTION

- With TO-220F package
- High breakdown voltage
- High reliability

APPLICATIONS

- For inverter lighting applications

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

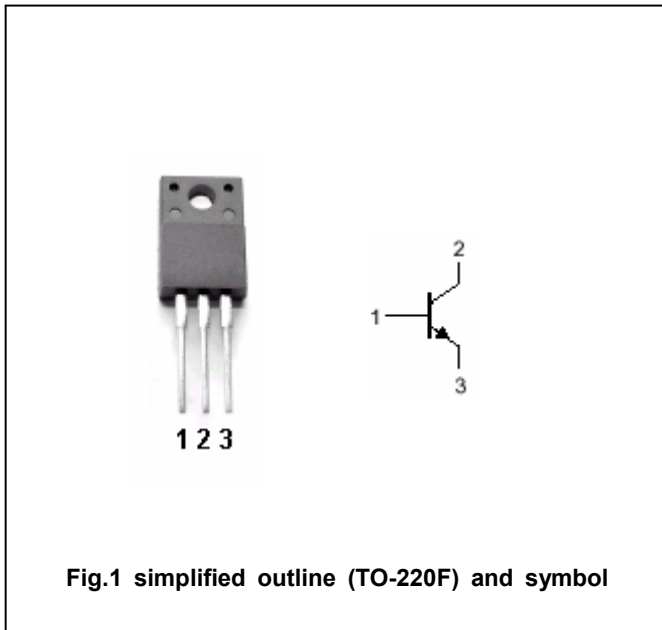


Fig.1 simplified outline (TO-220F) and symbol

Absolute maximum ratings (Ta=25°C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V _{CBO}	Collector-base voltage	Open emitter	1000	V
V _{CEO}	Collector-emitter voltage	Open base	450	V
V _{EBO}	Emitter-base voltage	Open collector	9	V
I _C	Collector current		4	A
I _{CM}	Collector current-peak		8	A
P _C	Collector power dissipation	T _a =25°C	2	W
		T _C =25°C	25	
T _j	Junction temperature		150	°C
T _{stg}	Storage temperature		-55~150	°C

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CHARACTERISTICS

T_j=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEO(SUS)}	Collector-emitter sustaining voltage	I _C =0.1A; I _B =0	450			V
V _{CEsat}	Collector-emitter saturation voltage	I _C =2A; I _B =0.4 A			1.0	V
V _{BEsat}	Base-emitter saturation voltage	I _C =2A; I _B =0.4 A			1.5	V
I _{CBO}	Collector cut-off current	V _{CB} =450V; I _E =0			10	μA
I _{CES}	Collector cut-off current	V _{CE} =1000V; R _{BE} =0			1.0	mA
I _{EBO}	Emitter cut-off current	V _{EB} =9V; I _C =0			1.0	mA
h _{FE-1}	DC current gain	I _C =0.1A ; V _{CE} =5V	30		50	
h _{FE-2}	DC current gain	I _C =1.5A ; V _{CE} =5V	10			

Switching times

t _s	Storage time	I _C =2A; I _{B1} =0.4A ; I _{B2} =-0.8A			2.5	μs
t _f	Fall time				0.15	μs

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PACKAGE OUTLINE

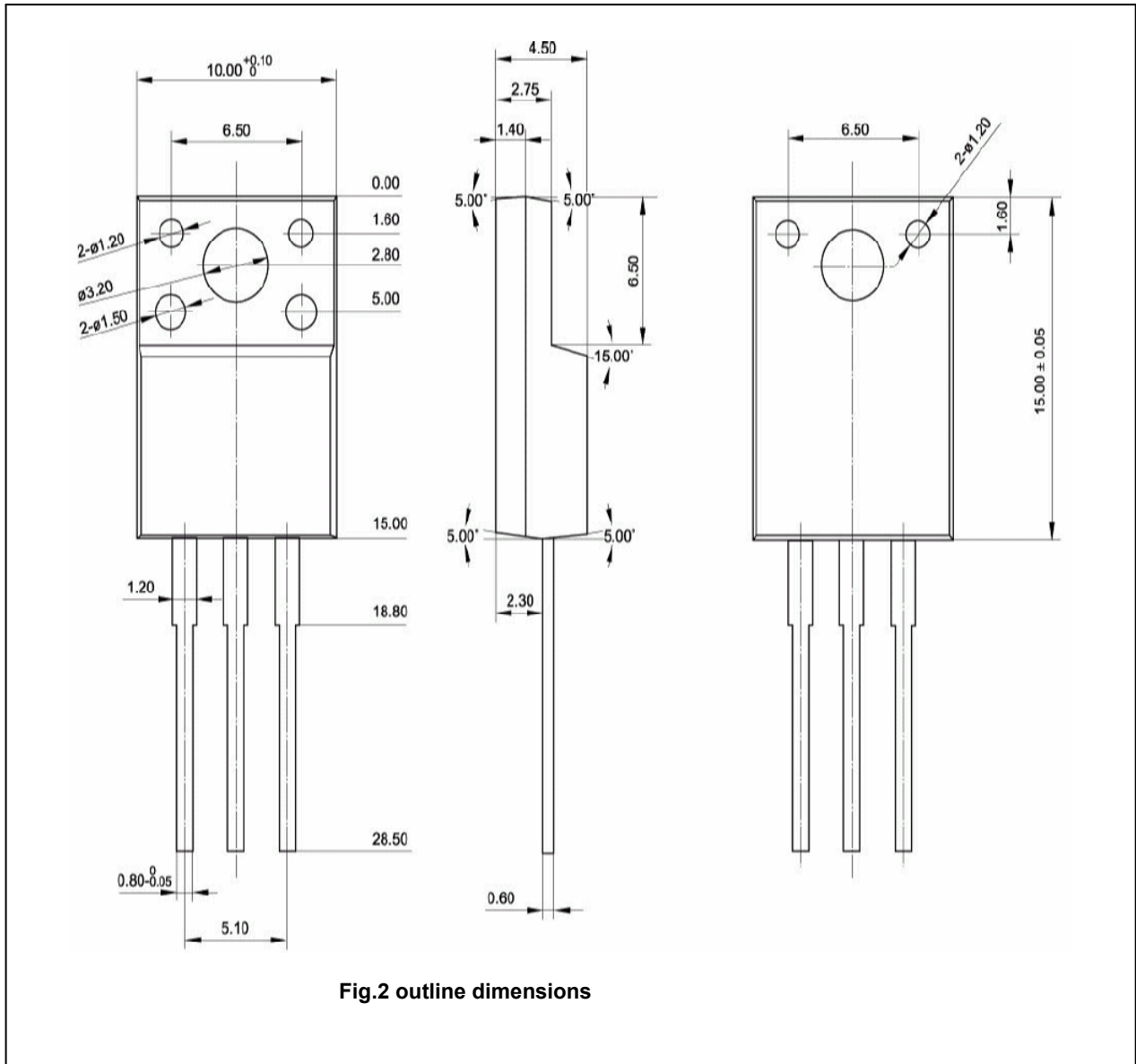


Fig.2 outline dimensions

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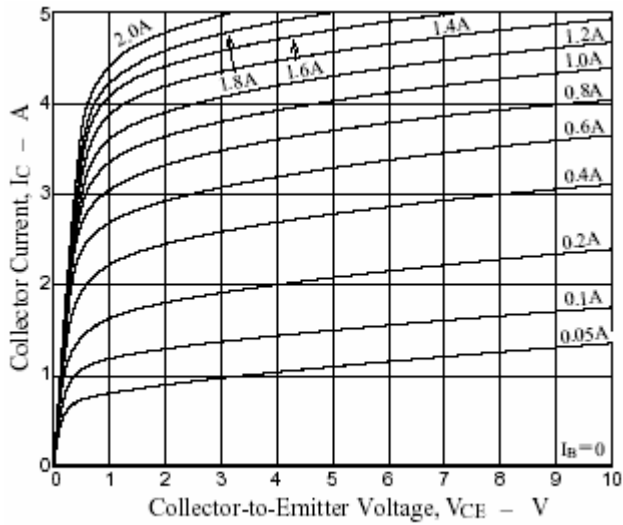


Fig.3 Static Characteristic

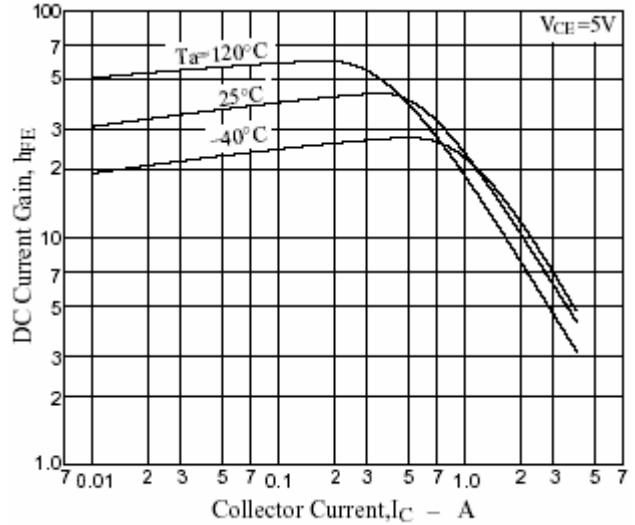


Fig.4 DC current Gain

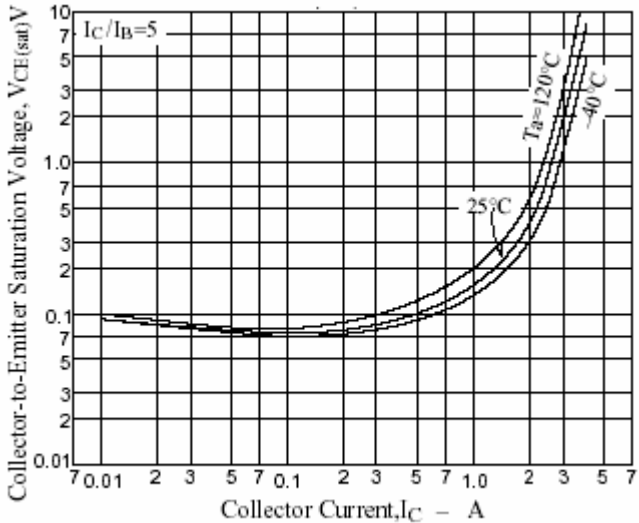


Fig.5 Collector-Emitter Saturation Voltage

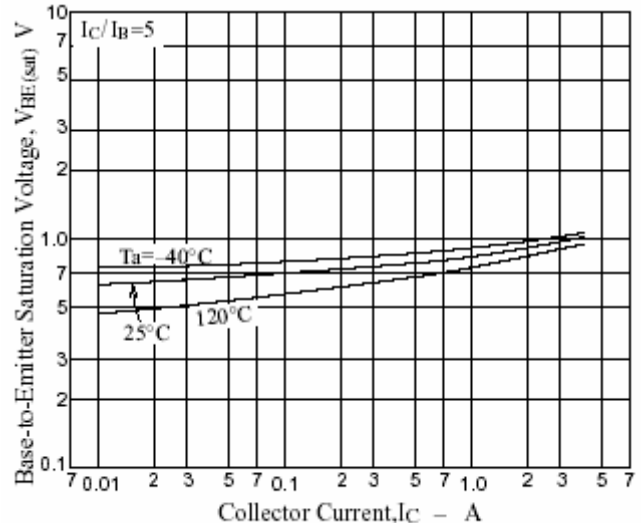


Fig.6 Base-Emitter Saturation Voltage

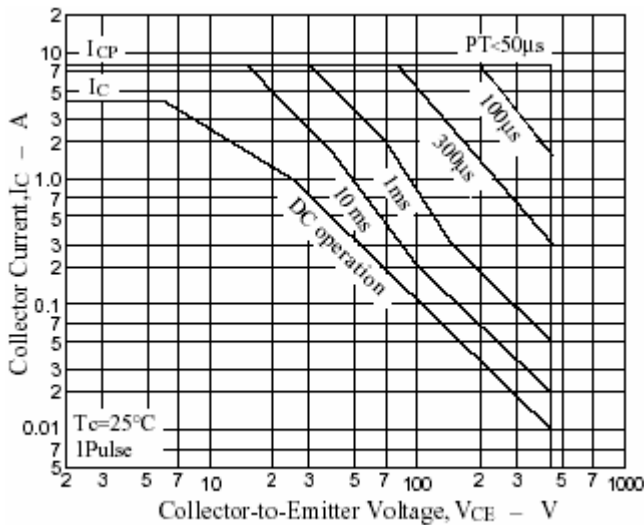


Fig.7 Safe Operating Area