

Silicon NPN Power Transistors

2SC5042

DESCRIPTION

- With TO-3PML package
- High breakdown voltage, high reliability.
- High speed

APPLICATIONS

- Ultrahigh-definition CRT display
- Horizontal deflection output applications

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

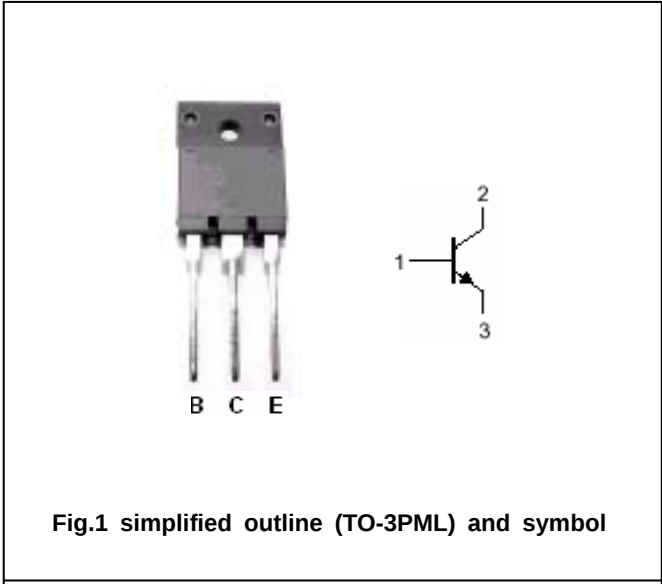


Fig.1 simplified outline (TO-3PML) and symbol

Absolute maximum ratings(Ta=25)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V _{CBO}	Collector-base voltage	Open emitter	1600	V
V _{CEO}	Collector-emitter voltage	Open base	800	V
V _{EBO}	Emitter-base voltage	Open collector	6	V
I _C	Collector current		7	A
I _{CM}	Collector current-peak		16	A
P _C	Collector power dissipation	T _C =25	60	W
			3	
T _j	Junction temperature		150	
T _{stg}	Storage temperature		-55~150	

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CHARACTERISTICS

T_j=25 unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEsat}	Collector-emitter saturation voltage	I _C =5A; I _B =1.25 A			5	V
V _{BEsat}	Base-emitter saturation voltage	I _C =5A; I _B =1.25A			1.5	V
V _{CEQ(SUS)}	Collector-emitter sustaining voltage	I _C =100mA; I _B =0	800			V
I _{EBO}	Emitter cut-off current	V _{EB} =4V I _C =0			1	mA
I _{CBO}	Collector cut-off current	V _{CB} =800V I _E =0			10	μA
I _{CES}	Collector cut-off current	V _{CE} =1600V; R _{BE} =0			1	mA
h _{FE-1}	DC current gain	I _C =1 A ; V _{CE} =5V	15		25	
h _{FE-2}	DC current gain	I _C =5A ; V _{CE} =5V	4		7	
Switching times						
t _{stg}	Storage time	I _C =4A; R _L =50 Ω I _{B1} =0.7A; - I _{B2} =2A			2.0	μs
t _f	Fall time	V _{CC} =200V		0.1	0.2	μs

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PACKAGE OUTLINE

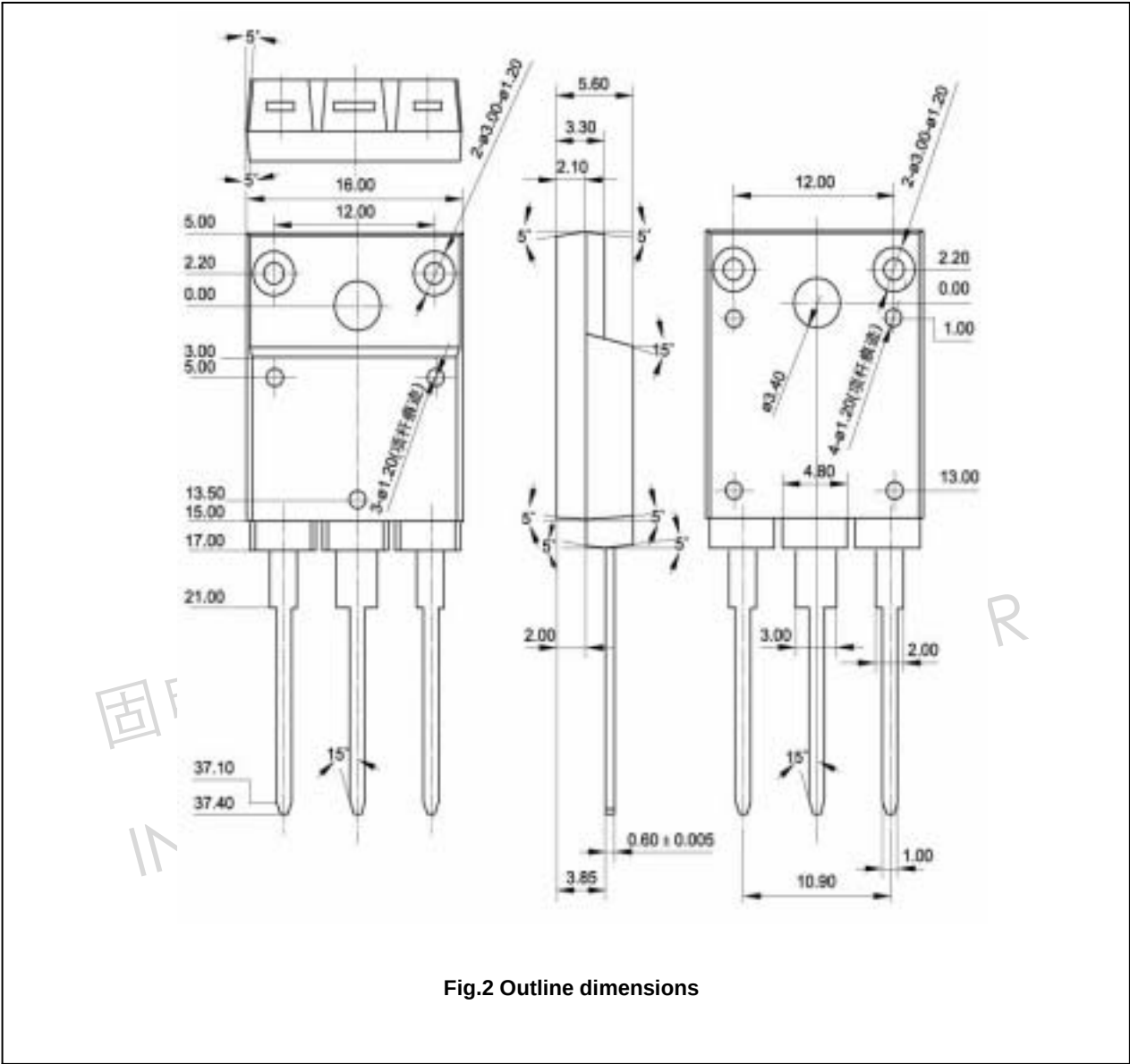


Fig.2 Outline dimensions

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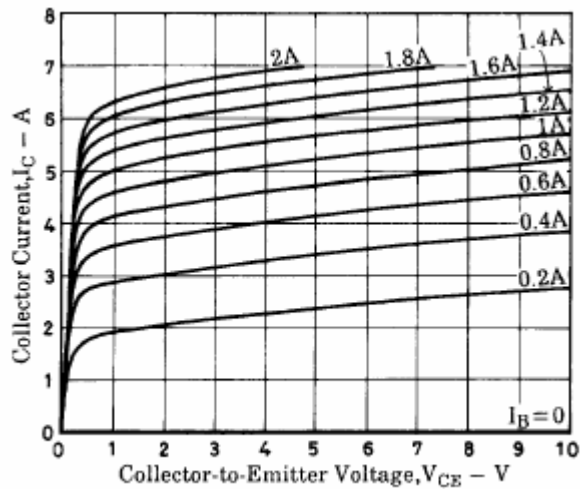


Fig.3 Static Characteristic

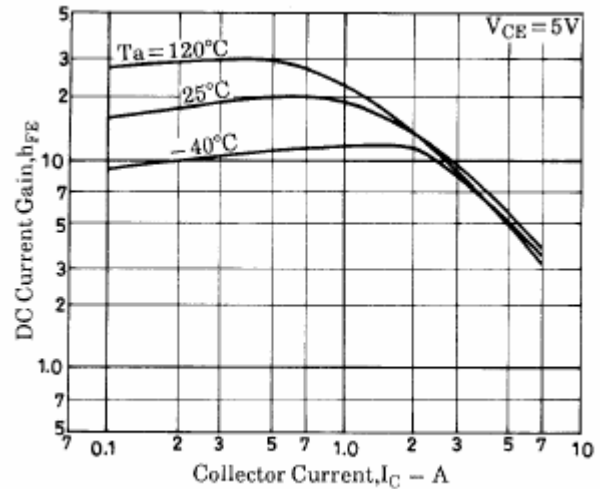


Fig.4 DC current Gain

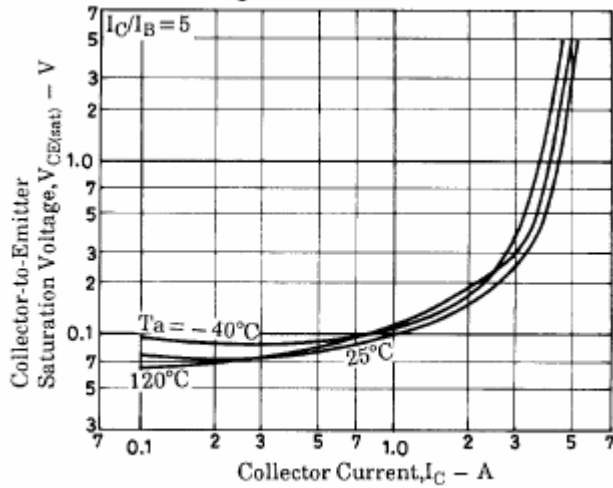


Fig.5 Collector-Emmitter Saturation Voltage

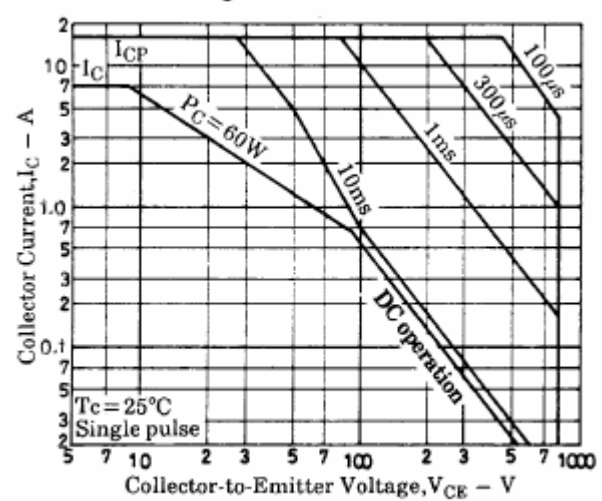


Fig.6 Safe Operating Area