

Silicon NPN Power Transistors

2SC4907

DESCRIPTION

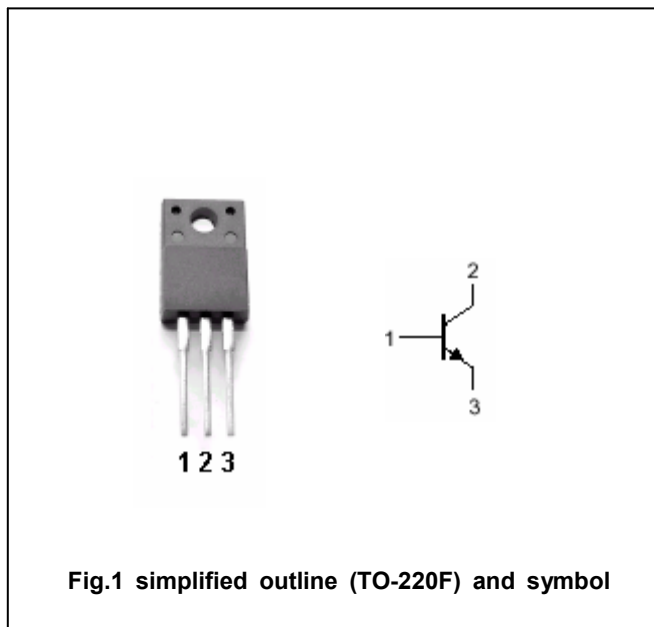
- With TO-220F package
- High voltage.
- High speed switching

APPLICATIONS

- For switching regulator and general purpose applications

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter



Absolute maximum ratings (Ta=25℃)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	600	V
V_{CEO}	Collector-emitter voltage	Open base	500	V
V_{EBO}	Emitter-base voltage	Open collector	10	V
I_C	Collector current		6	A
I_{CM}	Collector current-peak		12	A
I_B	Base current		2	A
P_C	Collector power dissipation	$T_C=25^\circ\text{C}$	30	W
T_j	Junction temperature		150	℃
T_{stg}	Storage temperature		-55~150	℃

Silicon NPN Power Transistors

2SC4907

CHARACTERISTICS

T_j=25 °C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-emitter breakdown voltage	I _C =25mA ; I _B =0	500			V
V _{CEsat}	Collector-emitter saturation voltage	I _C =2A ; I _B =0.4A			0.5	V
V _{BEsat}	Base-emitter saturation voltage	I _C =2A ; I _B =0.4A			1.3	V
I _{CBO}	Collector cut-off current	V _{CB} =600V; I _E =0			1	mA
I _{EBO}	Emitter cut-off current	V _{EB} =10V; I _C =0			100	μA
h _{FE}	DC current gain	I _C =2A ; V _{CE} =4V	10		30	
C _{OB}	Output capacitance	I _E =0; V _{CB} =10V;f=1MHz		45		pF
f _T	Transition frequency	I _E =-0.5A ; V _{CE} =12V		8		MHz

Switching times

t _{on}	Turn-on time	I _C =2A; I _{B1} =0.2A I _{B2} =-0.4A V _{CC} =200V ,R _L =100Ω			1.0	μs
t _s	Storage time				4.5	μs
t _f	Fall time				0.5	μs

Silicon NPN Power Transistors

2SC4907

PACKAGE OUTLINE

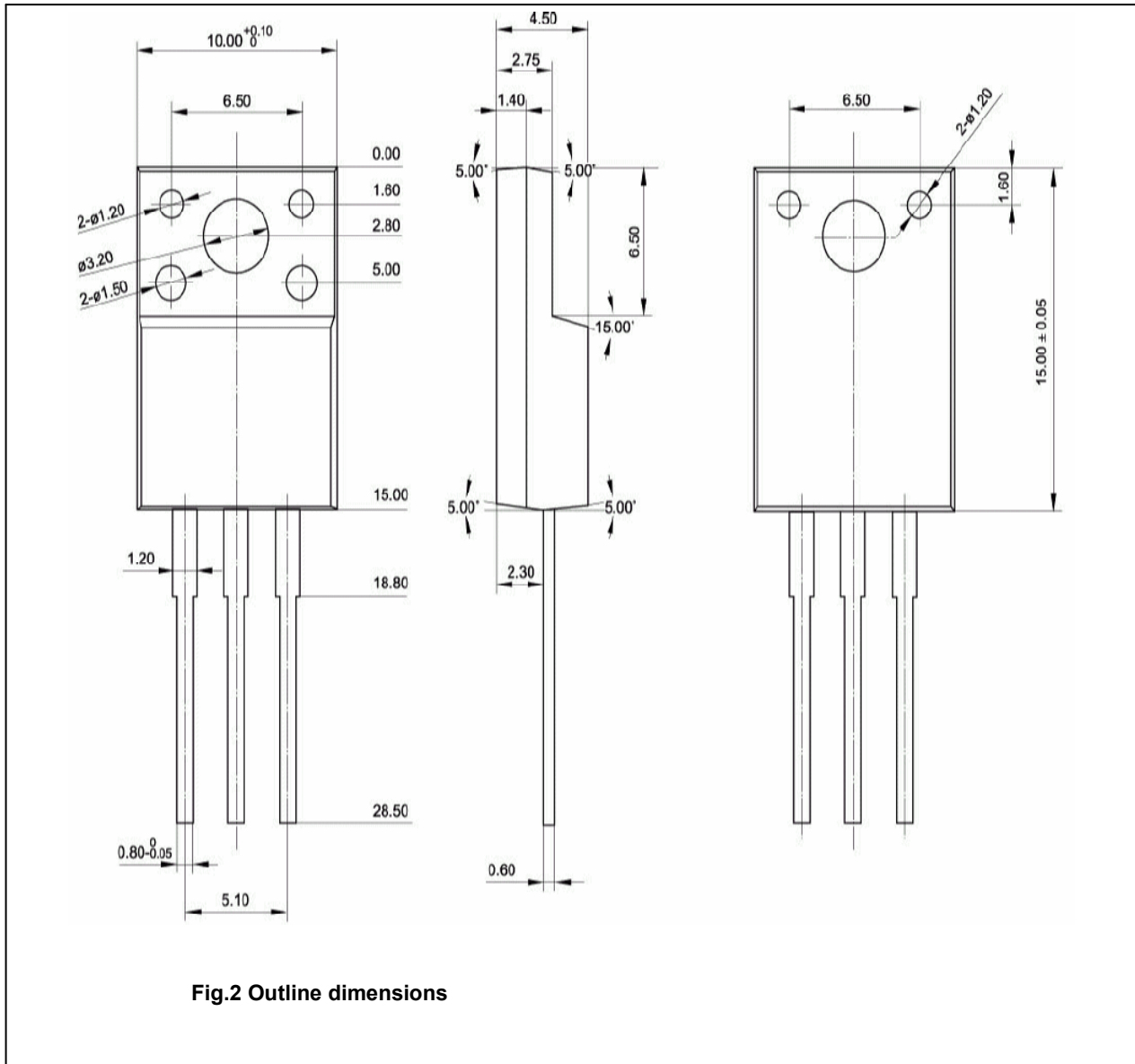


Fig.2 Outline dimensions

Silicon NPN Power Transistors

2SC4907

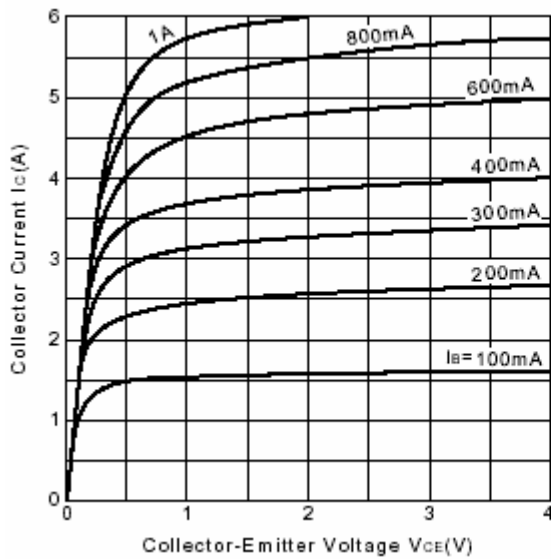


Fig.3 Static Characteristic

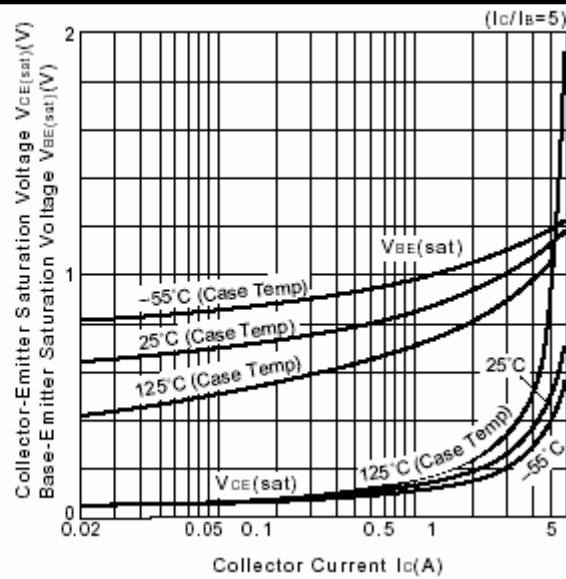


Fig.4 Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

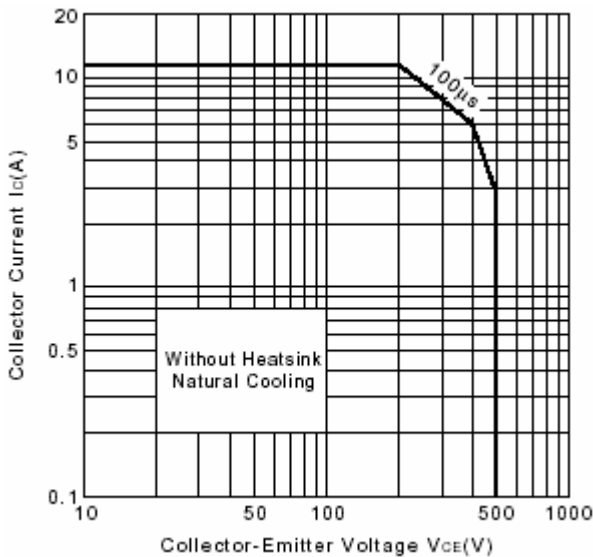


Fig.5 Safe Operating Area

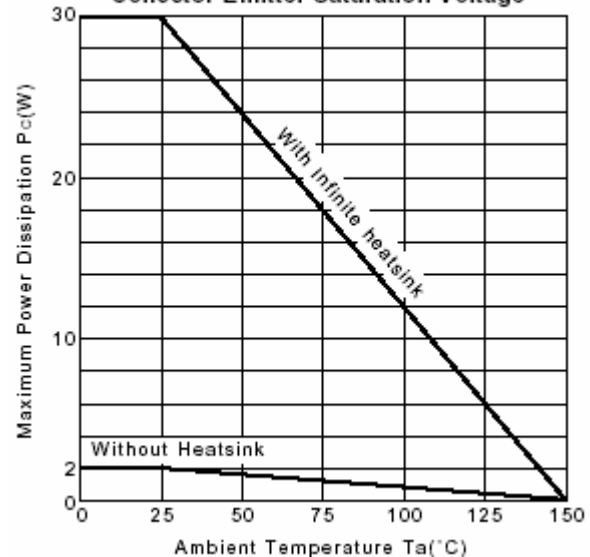


Fig.6 Pc-Ta Derating

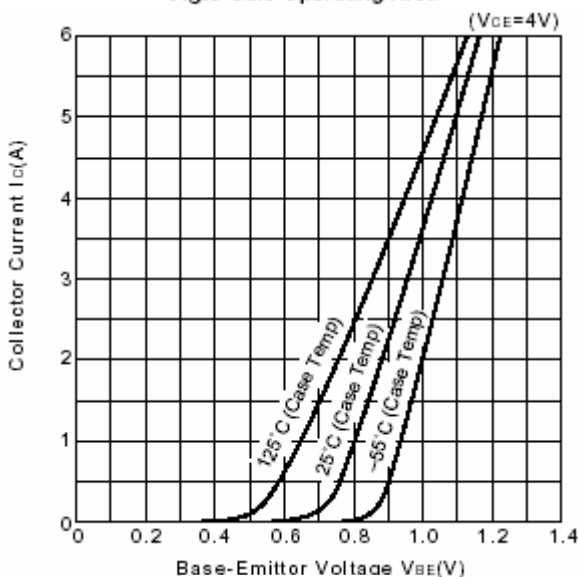


Fig.7 Power Derating

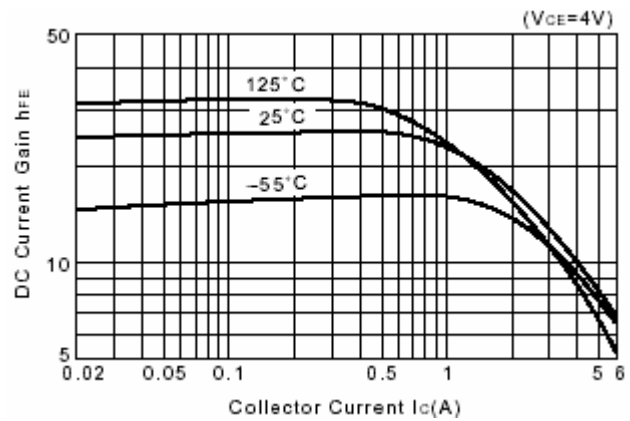


Fig.8 DC current Gain