

Silicon NPN Power Transistors

2SC4064

DESCRIPTION

- With TO-220F package
- Complement to type 2SA1567
- Low collector saturation voltage

APPLICATIONS

- For DC motor driver and general purpose

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

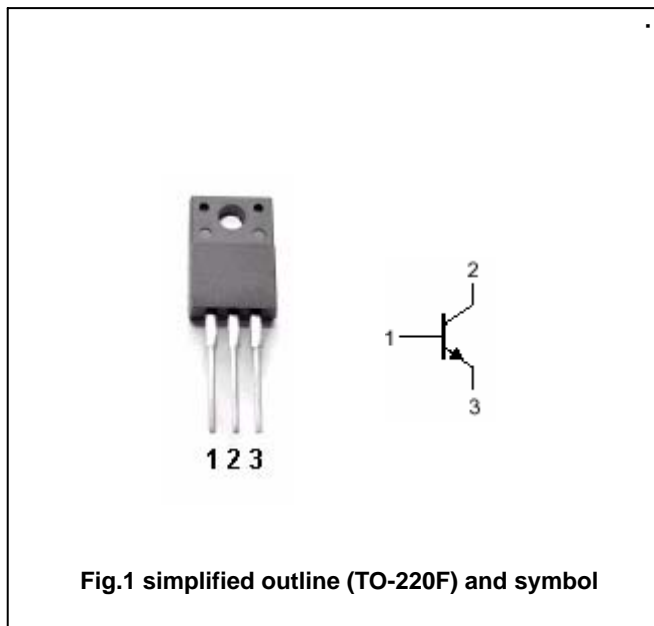


Fig.1 simplified outline (TO-220F) and symbol

Absolute maximum ratings (Ta=25)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	50	V
V_{CEO}	Collector-emitter voltage	Open base	50	V
V_{EBO}	Emitter-base voltage	Open collector	6	V
I_C	Collector current		12	A
I_B	Base current		3	A
P_C	Collector power dissipation	$T_C=25$	35	W
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 _{(BR)CEO}	Collector-emitter breakdown voltage	I _C =25mA; I _B =0	50			V
V _{CEsat}	Collector-emitter saturation voltage	I _C =6A; I _B =0.3 A			0.35	V
I _{CBO}	Collector cut-off current	V _{CB} =50V; I _E =0			100	μA
I _{EBO}	Emitter cut-off current	V _{EB} =6V; I _C =0			10	μA
h _{FE}	DC current gain	I _C =6A ; V _{CE} =1V	50			
f _T	Transition frequency	I _C =0.5A ; V _{CE} =12V		40		MHz
C _{OB}	Output capacitance	I _E =0; V _{CB} =10V; f=1MHz		180		pF

Switching times

t _{on}	Turn-on time	I _C =6A; R _L =4 I _{B1} =- I _{B2} =0.12A V _{CC} =24V		0.60		μs
t _s	Storage time			1.40		μs
t _f	Fall time			0.40		μs

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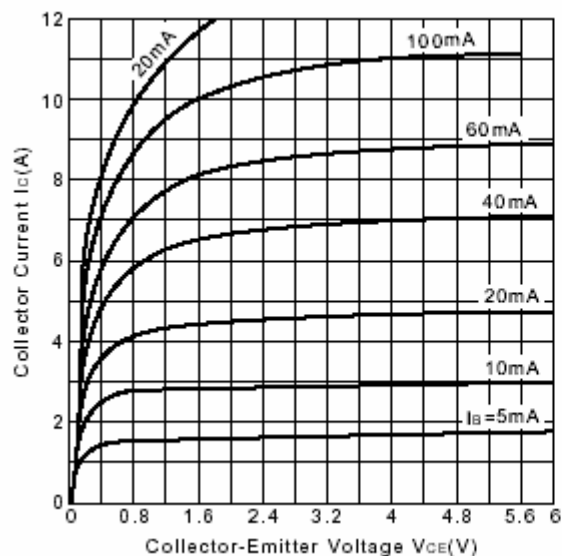


Fig.3 Static Characteristic

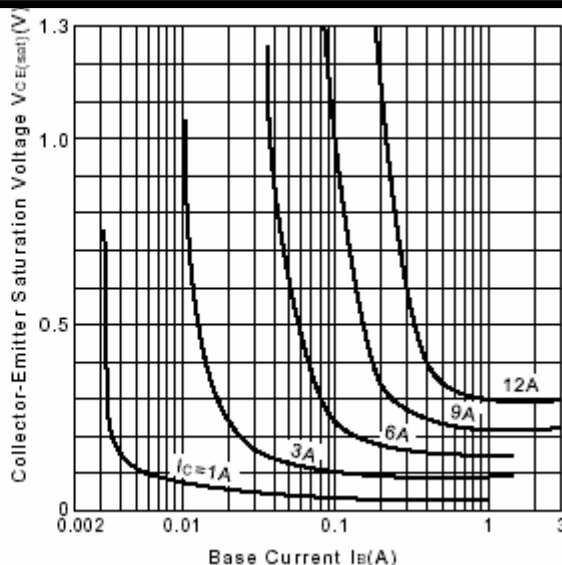


Fig.4 $V_{CE(sat)}-I_B$ Characteristics

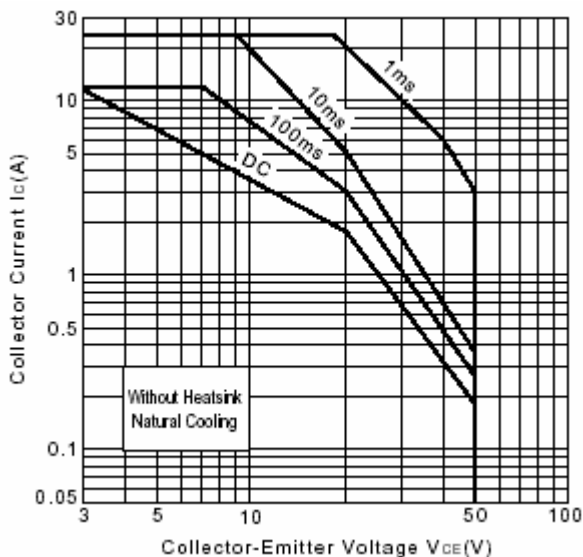


Fig.5 Safe Operating Area

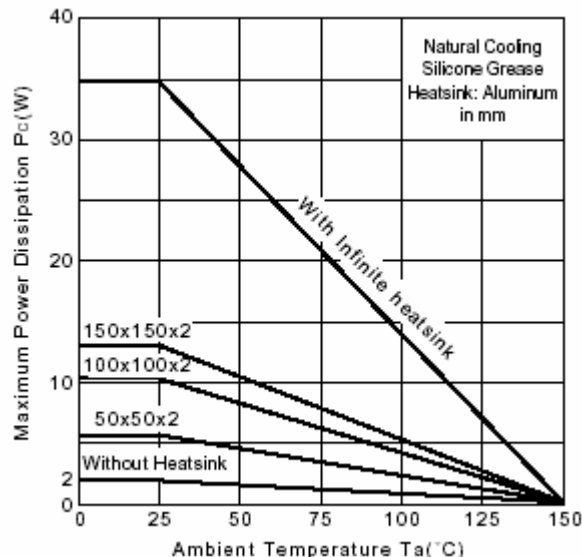


Fig.6 P_c-T_a Derating

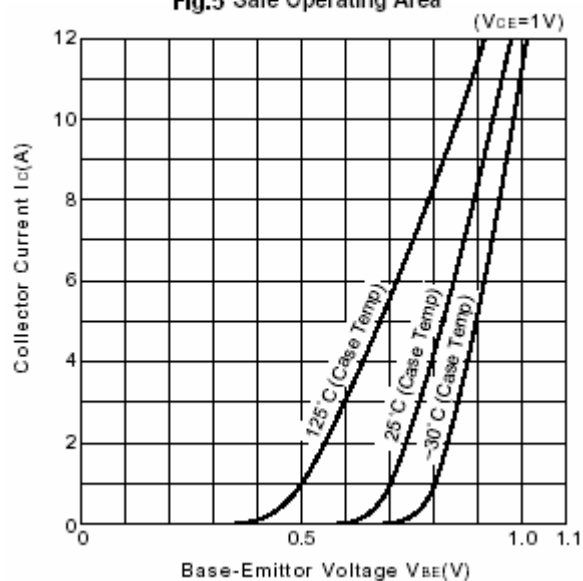


Fig.7 I_C-V_{BE}

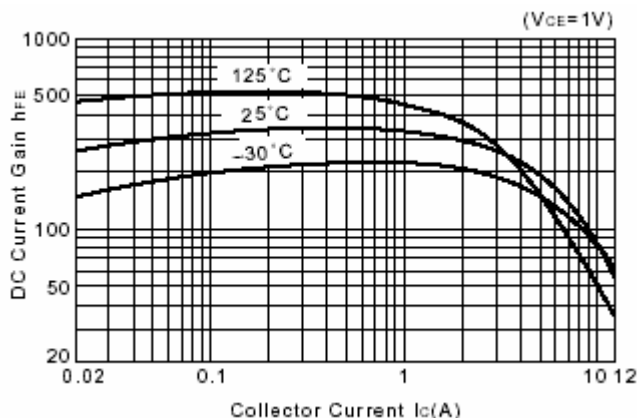


Fig.8 DC current Gain