

Silicon NPN Power Transistors

2SC4381 2SC4382

DESCRIPTION

- With TO-220F package
- Complement to type 2SA1667/1668

APPLICATIONS

- For TV vertical output ,audio output driver and general purpose applications

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

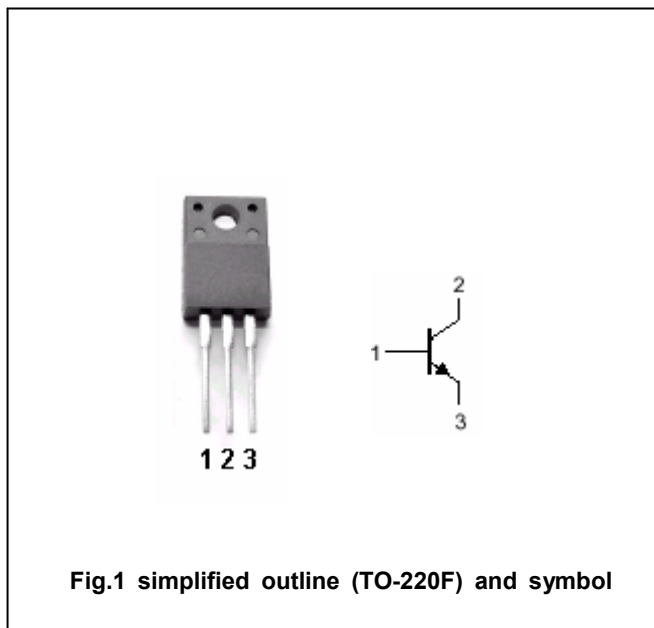


Fig.1 simplified outline (TO-220F) and symbol

Absolute maximum ratings (Ta=25°C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V _{CBO}	Collector-base voltage	2SC4381	150	V
		2SC4382	200	
V _{CEO}	Collector-emitter voltage	2SC4381	150	V
		2SC4382	200	
V _{EBO}	Emitter-base voltage	Open collector	6	V
I _C	Collector current		2	A
I _B	Base current		1	A
P _C	Collector dissipation	T _C =25°C	25	W
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 _{(BR)CEO}	Collector-emitter breakdown voltage	2SC4381	I _C =25mA ; I _B =0	150			V
		2SC4382		200			
V _{CEsat}	Collector-emitter saturation voltage	I _C =0.7A; I _B =70mA			1.0	V	
I _{CBO}	Collector cut-off current	2SC4381	V _{CB} =150V; I _E =0			10	μA
		2SC4382	V _{CB} =200V; I _E =0			10	μA
I _{EBO}	Emitter cut-off current	V _{EB} =6V; I _C =0			10	μA	
h _{FE}	DC current gain	I _C =0.7A ; V _{CE} =10V	60				
f _T	Transition frequency	I _C =0.2A ; V _{CE} =12V		15		MHz	
C _{OB}	Output capacitance	I _E =0 ; V _{CB} =10V; f=1MHz		35		pF	

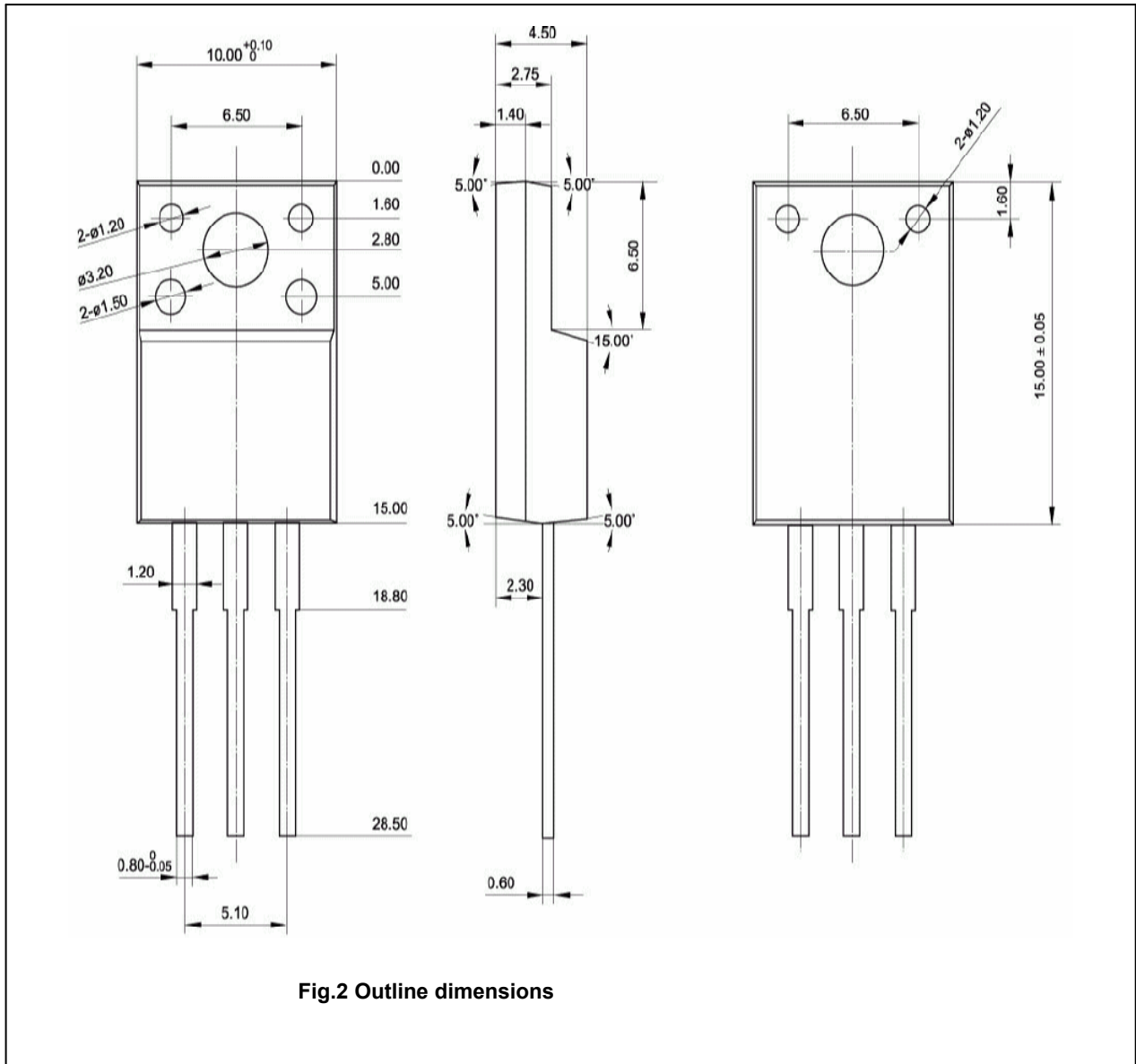
Switching time

t _{on}	Turn-on time	I _C =1A ; I _{B1} =-I _{B2} =0.1A V _{CC} =20V , R _L =20Ω		1.0		μs
t _s	Storage time			3.0		μs
t _f	Fall time			1.5		μs

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PACKAGE OUTLINE



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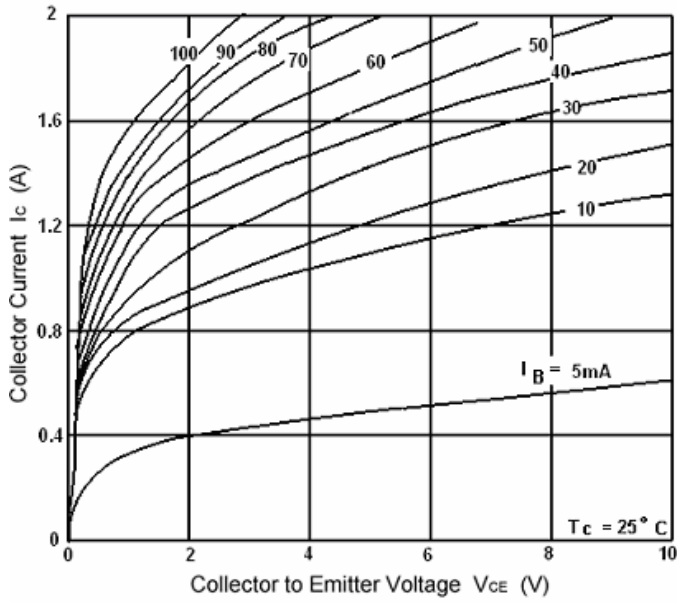


Fig.3 Static Characteristic

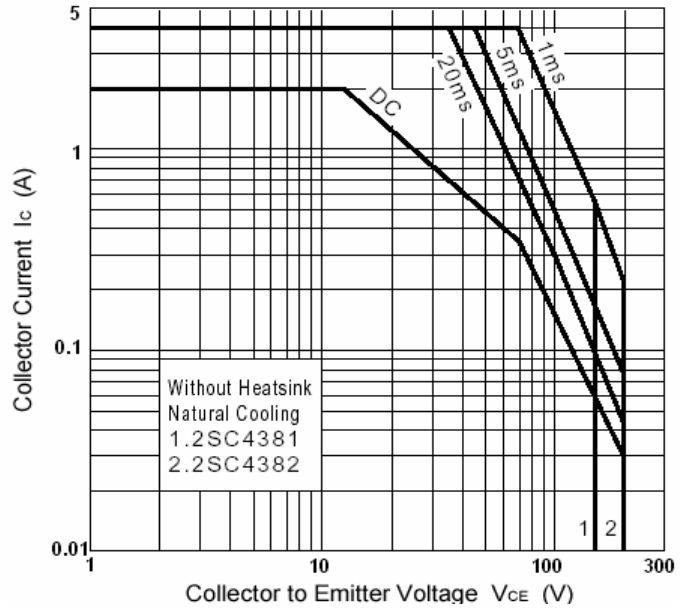


Fig.4 Safe Operating Area

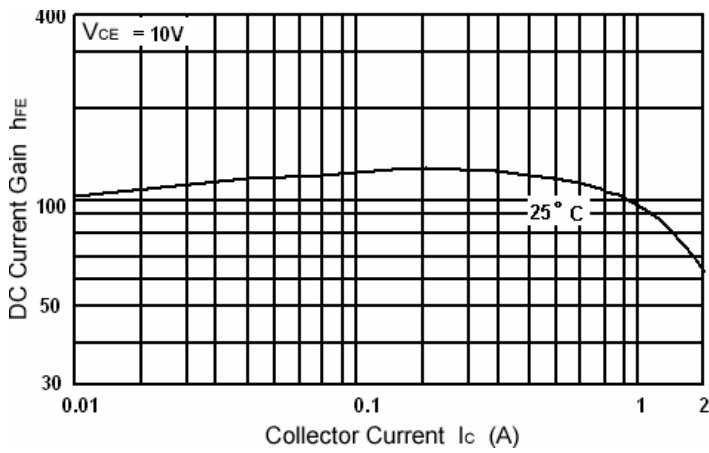


Fig.5 DC current Gain