

Silicon NPN Power Transistors

2SD1958

DESCRIPTION

- With TO-220F package
- Low collector saturation voltage

APPLICATIONS

- TV horizontal deflection output
- High-current switching applications

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

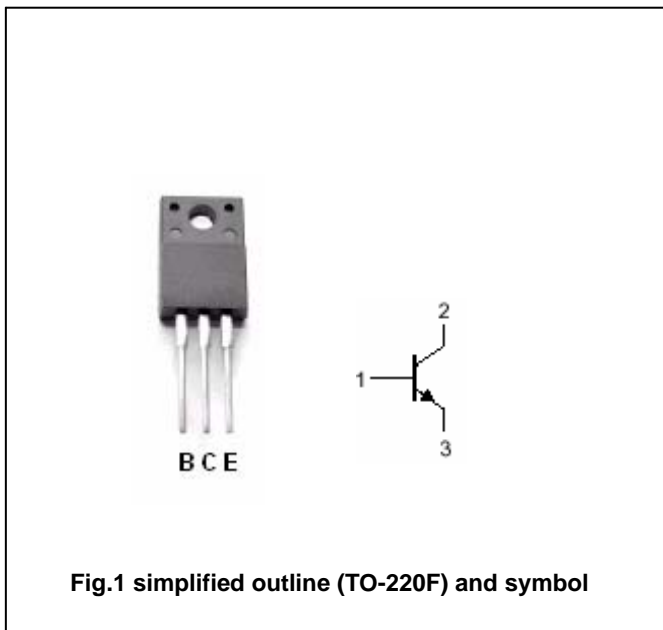


Fig.1 simplified outline (TO-220F) and symbol

Absolute maximum ratings (Ta=25°C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	200	V
V_{CEO}	Collector-emitter voltage	Open base	60	V
V_{EBO}	Emitter-base voltage	Open collector	6	V
I_C	Collector current		4.5	A
I_{CM}	Collector current-peak		10	A
P_C	Collector dissipation	$T_C=25^\circ\text{C}$	30	W
T_j	Junction temperature		150	$^\circ\text{C}$
T_{stg}	Storage temperature		-55~150	$^\circ\text{C}$

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CHARACTERISTICS

T_j=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CBO}	Collector-base breakdown voltage	I _C =5mA; I _E =0	200			V
V _{(BR)CEO}	Collector-emitter breakdown voltage	I _C =5mA; R _{BE} =∞	60			V
V _{(BR)EBO}	Emitter-base breakdown voltage	I _E =5mA; I _C =0	6			V
V _{CEsat}	Collector-emitter saturation voltage	I _C =4A; I _B =0.4A		0.5	1.0	V
V _{BEsat}	Base-emitter saturation voltage	I _C =4A; I _B =0.4A			1.5	V
I _{CBO}	Collector cut-off current	V _{CB} =40V; I _E =0			0.1	mA
I _{EBO}	Emitter cut-off current	V _{EB} =5V; I _C =0			0.1	mA
h _{FE-1}	DC current gain	I _C =1A; V _{CE} =5V	30		160	
h _{FE-2}	DC current gain	I _C =4A; V _{CE} =5V	25			
f _T	Transition frequency	I _C =1A; V _{CE} =5V		10		MHz
t _f	Fall time	V _{CC} =50V; I _C =5A; I _{B1} =-I _{B2} =500mA		0.2	0.5	μs

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PACKAGE OUTLINE

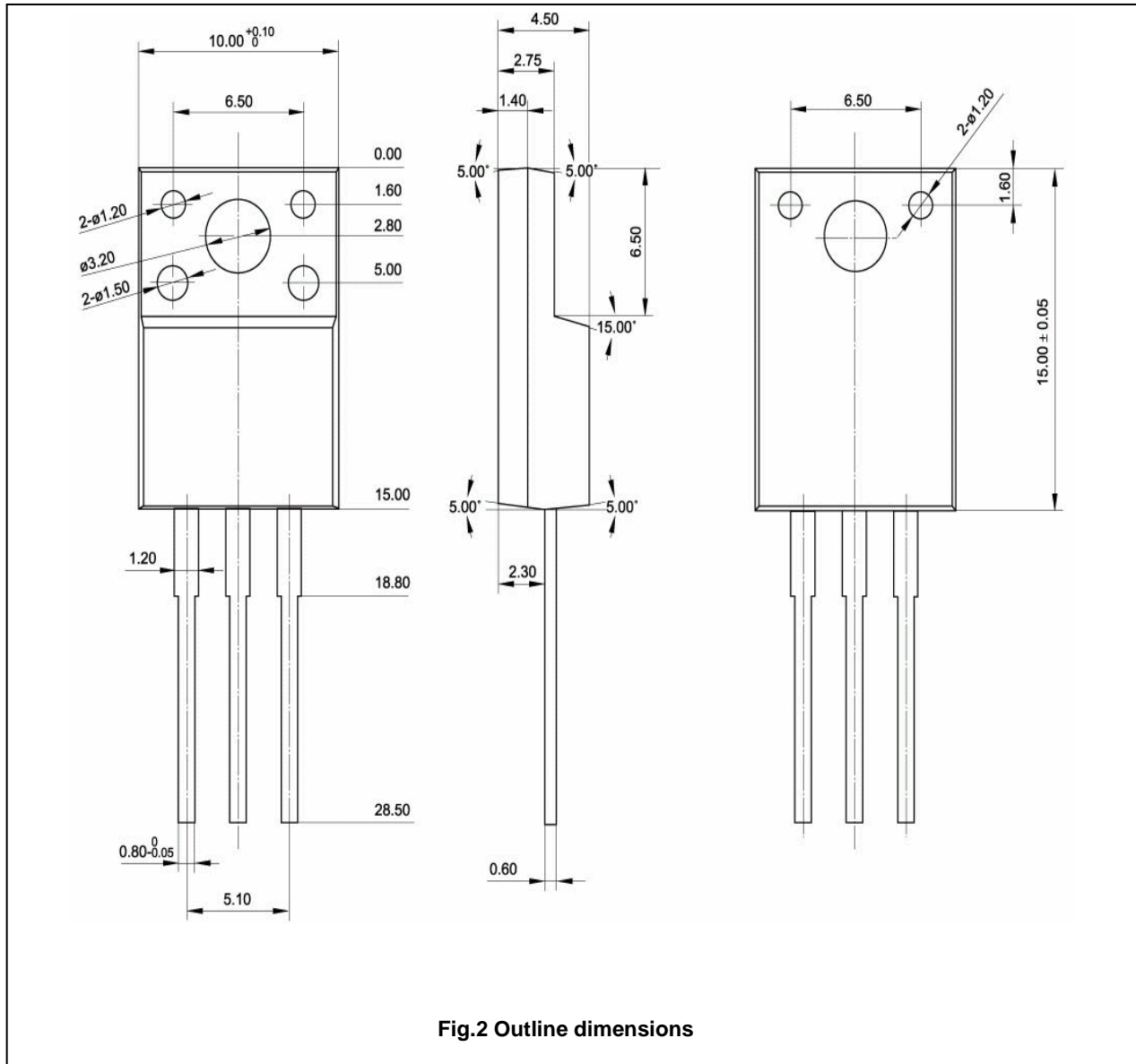


Fig.2 Outline dimensions

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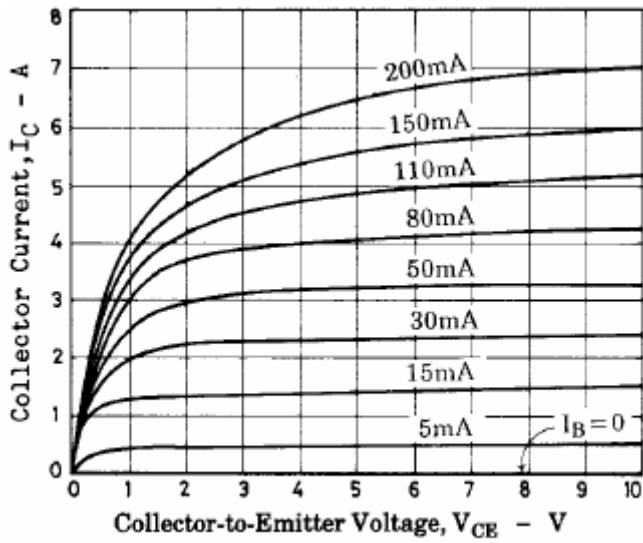


Fig.3 Static Characteristic

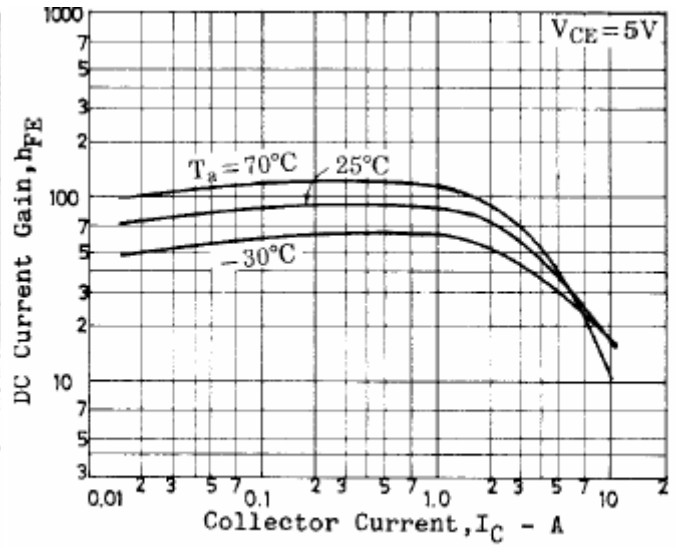


Fig.4 DC current Gain

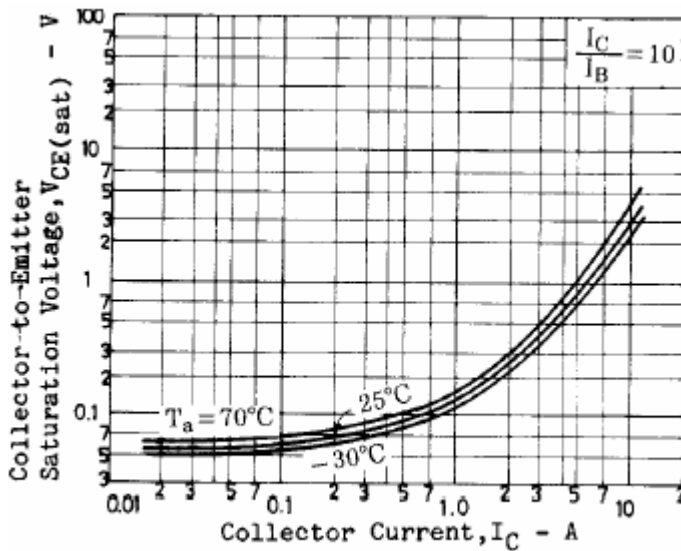


Fig.5 Collector-Emmitter Saturation Voltage

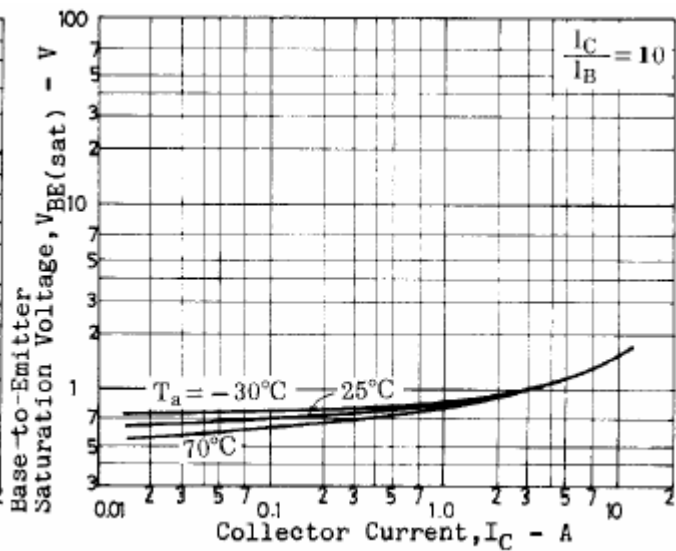


Fig.6 Base-Emmitter Saturation Voltage