Silicon NPN Power Transistors 2SC4881

DESCRIPTION

·With TO-220F package
·Low saturation voltage
·High speed switching time

APPLICATIONS

·High current switching applications

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

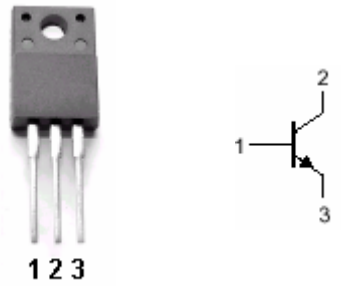

Fig.1 simplified outline (TO-220F) and symbol

Absolute maximum ratings(Ta=25□)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	60	V
V_{CEO}	Collector-emitter voltage	Open base	50	V
V_{EBO}	Emitter-base voltage	Open collector	5	V
I_C	Collector current		5	A
I_{CM}	Collector current-Peak		8	A
I_B	Base current		1	A
P_C	Collector power dissipation	T_a=25□	2.0	W
		T_C=25□	20	
T_j	Junction temperature		150	□
T_{stg}	Storage temperature		-55~150	□

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CHARACTERISTICS

Tj=25□ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	I_C=10mA ;I_B=0	50			V
V_{CEsat}	Collector-emitter saturation voltage	I_C=2.5A; I_B=0.125A			0.4	V
V_{BEsat}	Base-emitter saturation voltage	I_C=2.5A; I_B=0.125A			1.3	V
I_{CBO}	Collector cut-off current	V_{CB}=50V; I_E=0			1	μA
I_{EBO}	Emitter cut-off current	V_{EB}=6V; I_C=0			1	μA
h_{FE-1}	DC current gain	I_C=1A ; V_{CE}=1V	100		320	
h_{FE-2}	DC current gain	I_C=2.5A ; V_{CE}=1V	60			
f_T	Transition frequency	I_C=1A ; V_{CE}=4V		100		MHz
C_{OB}	Collector output capacitance	I_E=0; f=1MHz;V_{CB}=10V		45		pF
Switching times						
t_{on}	Turn-on time	I_C=2.5A I_{B1}=-I_{B2}=0.125A V_{CC}=30V ,R_L=12Ω Duty cycle≤1%		0.1		μs
t_s	Storage time			0.8		μs
t_f	Fall time			0.1		μs

PACKAGE OUTLINE

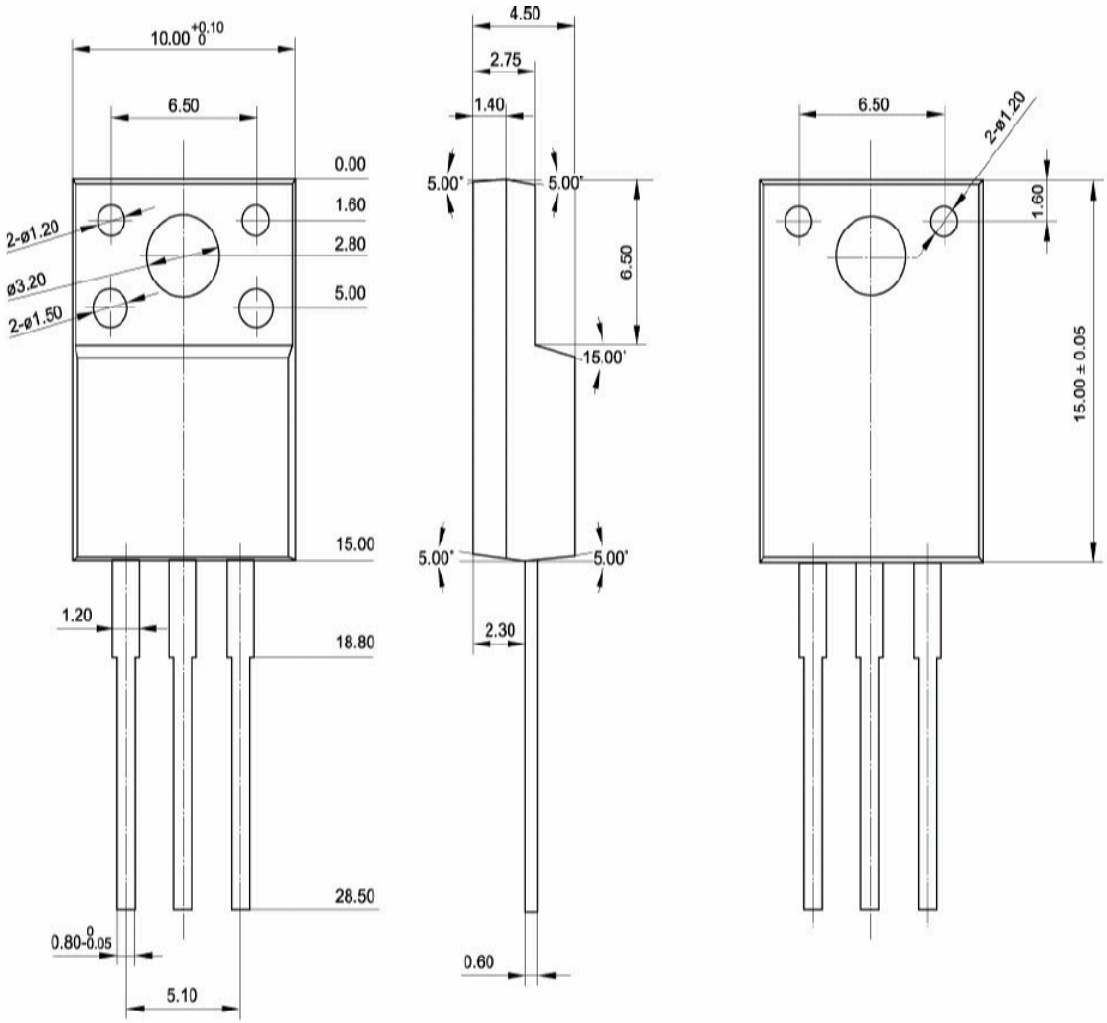

Fig.2 Outline dimensions (unindicated tolerance:±0.10 mm)

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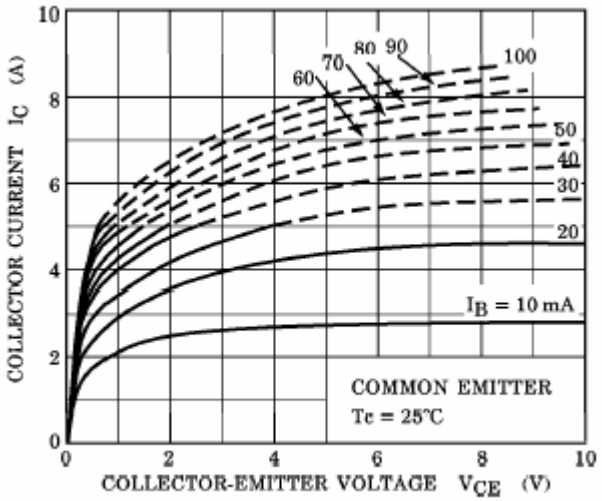

Fig.3 Static Characteristic

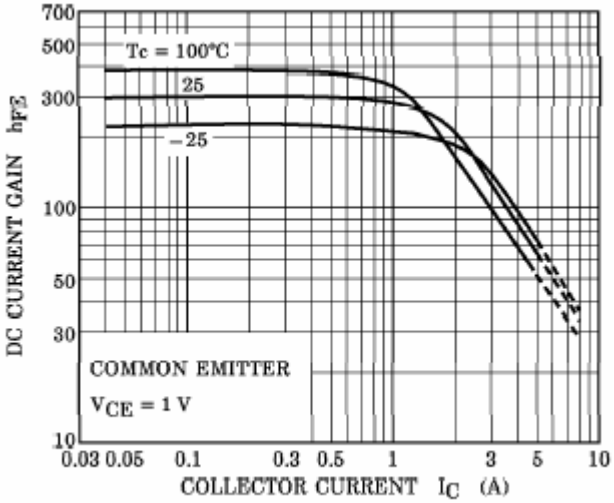

Fig.4 DC current Gain

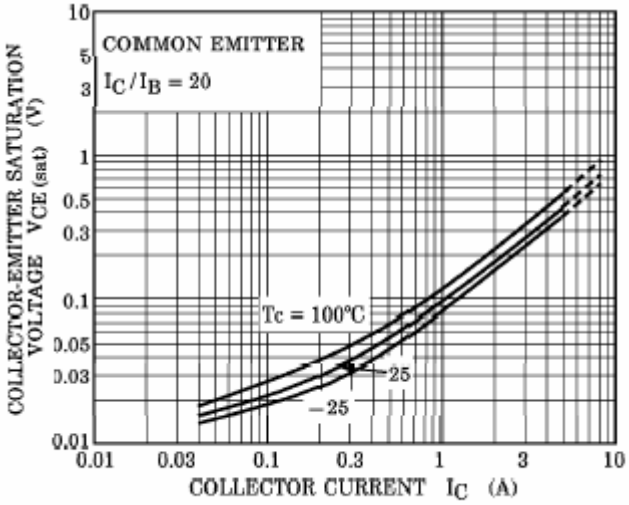

Fig.5 Collector-Emitter Saturation Voltage

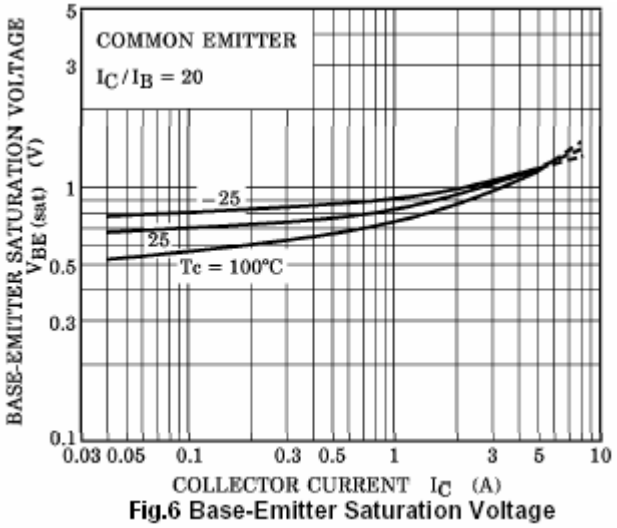

Fig.6 Base-Emitter Saturation Voltage

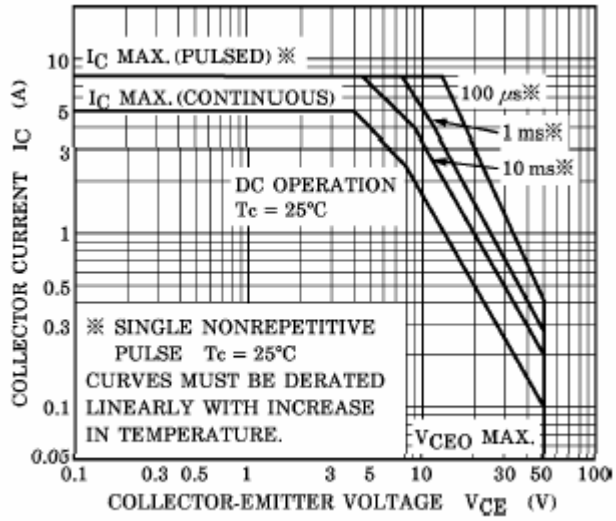

Fig.7 Safe Operating Area