Silicon NPN Power Transistors 2SC3591

DESCRIPTION

·With TO-220C package
·Fast switching speed
·Low collector saturation voltage

APPLICATIONS

·High-definition CRT display horizontal deflection output applications

PINNING

PIN	DESCRIPTION
1	Base
2	Collector;connected to mounting base
3	Emitter

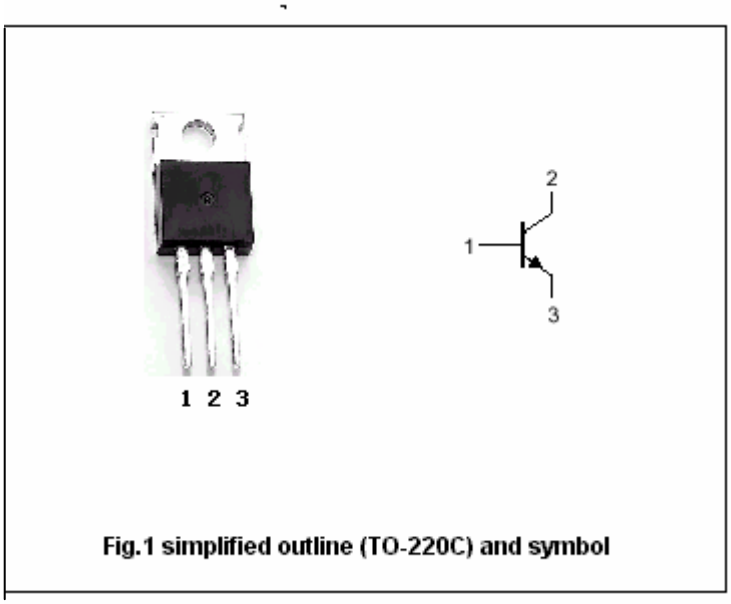

Fig.1 simplified outline (TO-220C) and symbol

Absolute maximum ratings(Ta=25□)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	400	V
V_{CEO}	Collector-emitter voltage	Open base	200	V
V_{EBO}	Emitter-base voltage	Open collector	6	V
I_C	Collector current		7	A
I_{CM}	Collector current-peak		12	A
I_B	Base current		4	A
P_C	Collector power dissipation	T_C=25□	50	W
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=1mA ; R_{BE}=∞	200			V
$V_{(BR)CBO}$	Collector-base breakdown voltage	I_C=1mA ; I_E=0	400			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	I_E=1mA ; I_C=0	6			V
V_{CEsat}	Collector-emitter saturation voltage	I_C=5A; I_B=0.5A			0.8	V
V_{BEsat}	Base-emitter saturation voltage	I_C=5A; I_B=0.5A			1.5	V
I_{CBO}	Collector cut-off current	V_{CB}=250V ;I_E=0			100	μA
I_{EBO}	Emitter cut-off current	V_{EB}=5V; I_C=0			100	μA
h_{FE-1}	DC current gain	I_C=1 A ; V_{CE}=1V	15			
h_{FE-2}	DC current gain	I_C=5 A ; V_{CE}=1V	10		50	
f_T	Transition frequency	I_C=0.5 A ; V_{CE}=10V	10			MHz
t_f	Fall time	V_{CC}=50V;I_C=5A; I_{B1}=-I_{B2}=0.5A ;R_L=10Ω			0.3	μs

PACKAGE OUTLINE

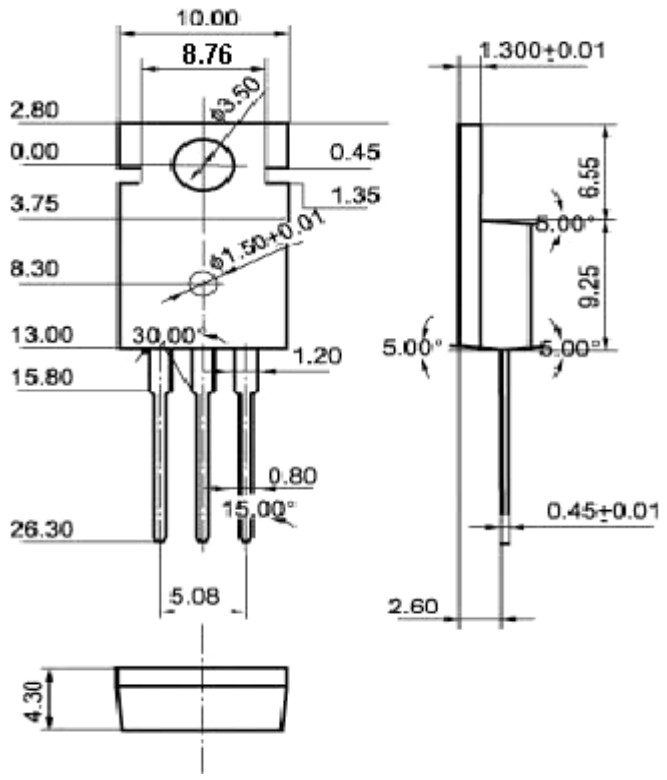

Fig.2 Outline dimensions (unindicated tolerance:±0.10 mm)

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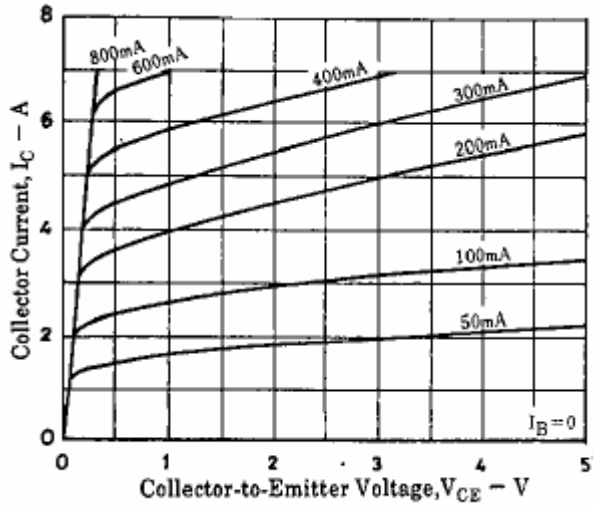

Fig.3 Static Characteristic

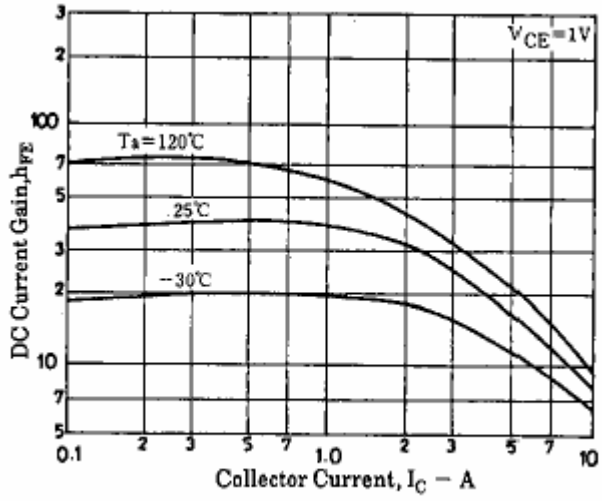

Fig.4 DC current Gain

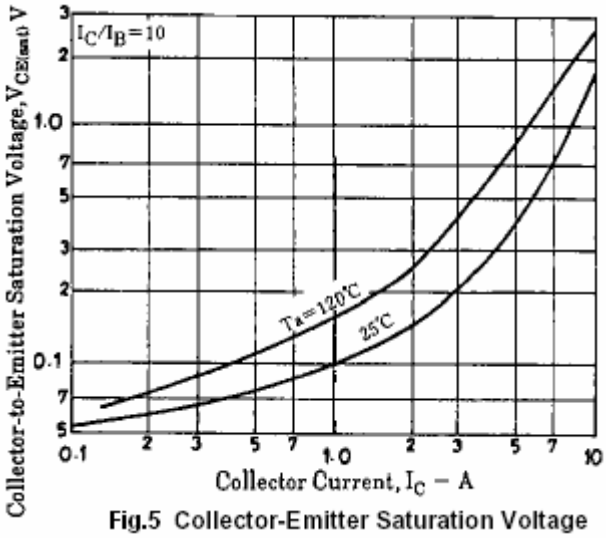

Fig.5 Collector-Emitter Saturation Voltage

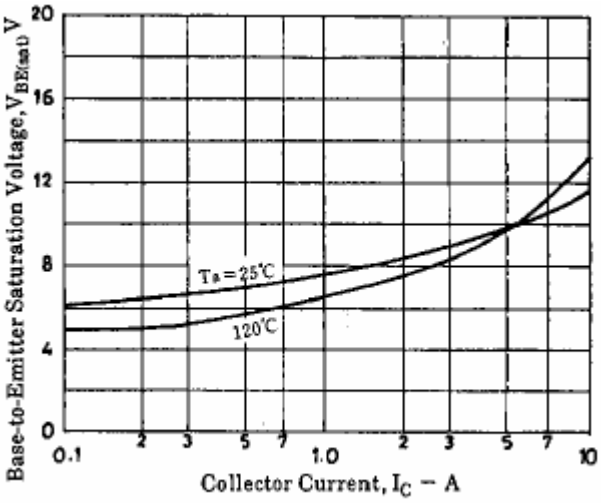

Fig.6 Base-Emitter Saturation Voltage

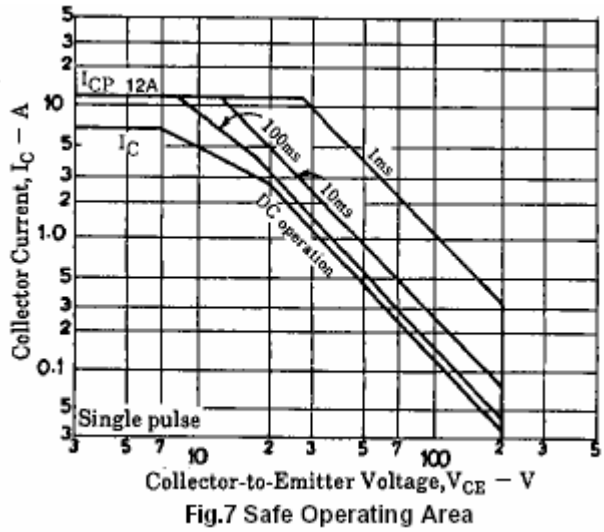

Fig.7 Safe Operating Area