

## Silicon NPN Power Transistors

2SD1088

## DESCRIPTION

- With TO-220 package
- High DC current gain
- DARLINGTON

## APPLICATIONS

- For switching igniter applications

## PINNING

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

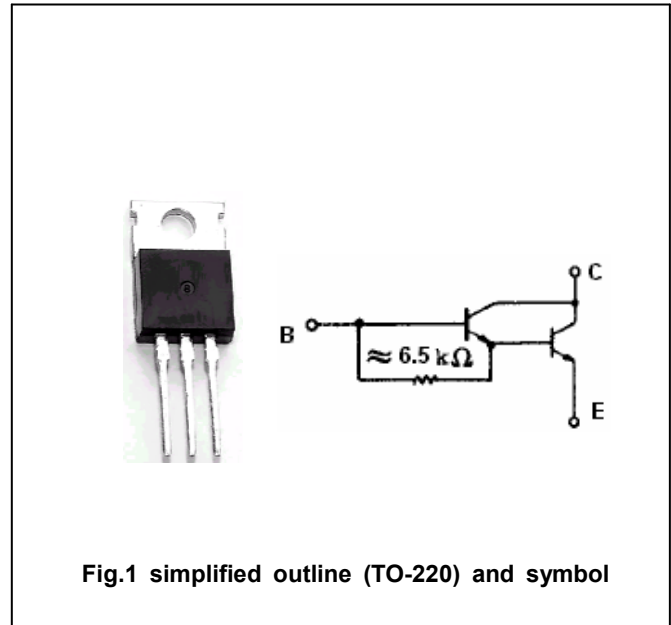


Fig.1 simplified outline (TO-220) and symbol

Absolute maximum ratings ( $T_a=25^\circ\text{C}$ )

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	Open emitter	300	V
$V_{CEO}$	Collector-emitter voltage	Open base	250	V
$V_{EBO}$	Emitter-base voltage	Open collector	5	V
$I_C$	Collector current-continuous		6	A
$I_{CM}$	Collector current-peak		10	A
$I_B$	Base current		1	A
$P_D$	Total power 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**

Tj=25°C unless otherwise specified

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SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CEO(SUS)</sub>	Collector-emitter sustaining voltage	I <sub>C</sub> =0.5A ; L=40mH	250			V
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =4A ; I <sub>B</sub> =0.04A			2.0	V
V <sub>BEsat</sub>	Base-emitter saturation voltage	I <sub>C</sub> =4A ; I <sub>B</sub> =0.04A			2.5	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =300V ; I <sub>E</sub> =0			0.5	mA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =5V ; I <sub>C</sub> =0			0.5	mA
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =2A ; V <sub>CE</sub> =2V	2000			
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =4A ; V <sub>CE</sub> =2V	200			
C <sub>OB</sub>	Collector output capacitance	f=1MHz ; V <sub>CB</sub> =50V		35		pF



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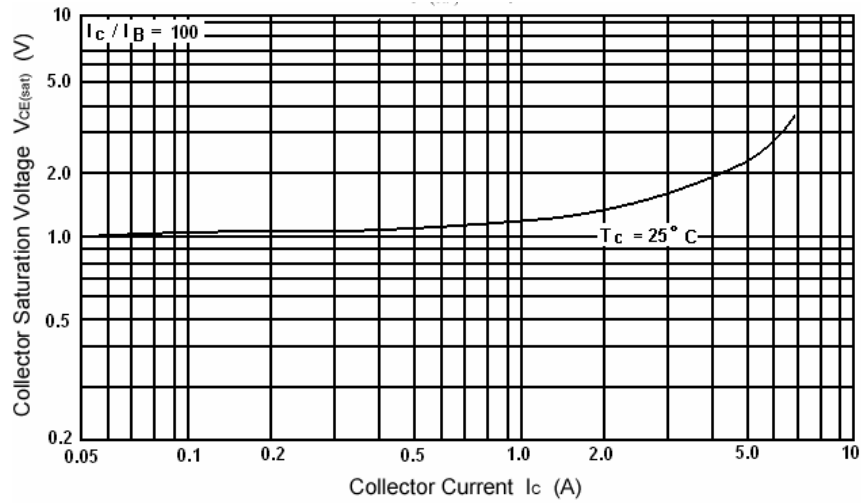


Fig.3 Collector-Emitter Saturation Voltage

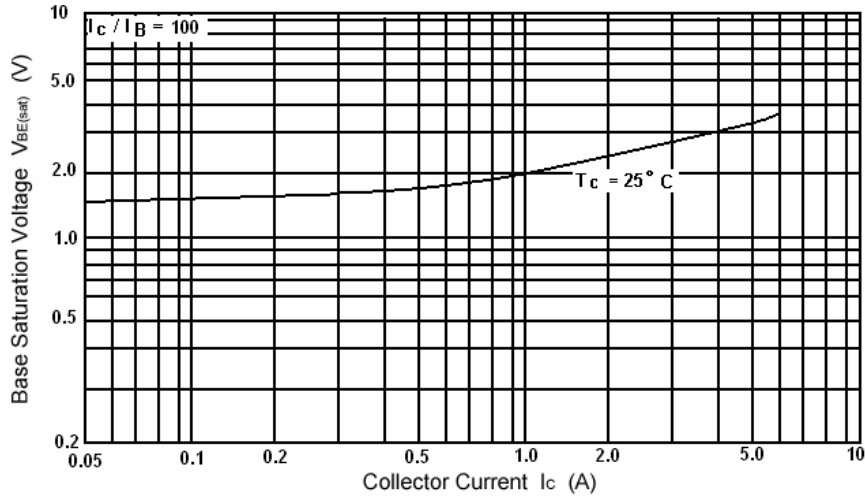


Fig.4 Base-Emitter Saturation Voltage

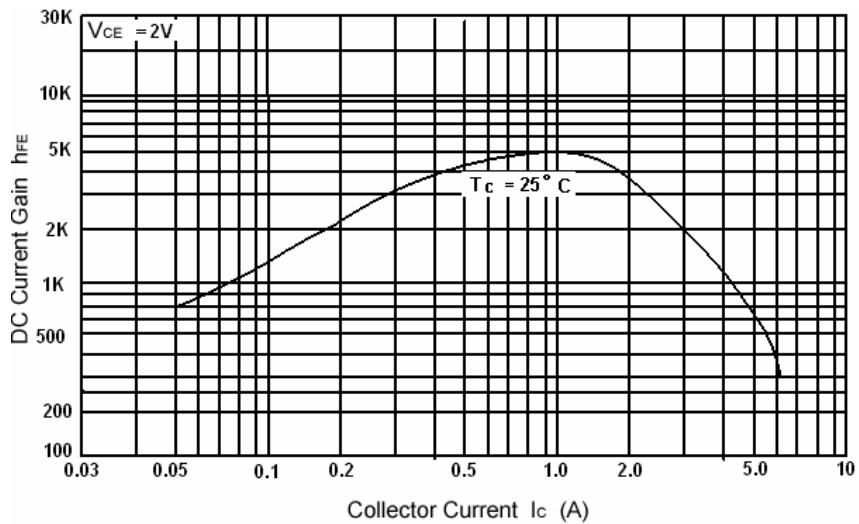


Fig.5 DC current Gain

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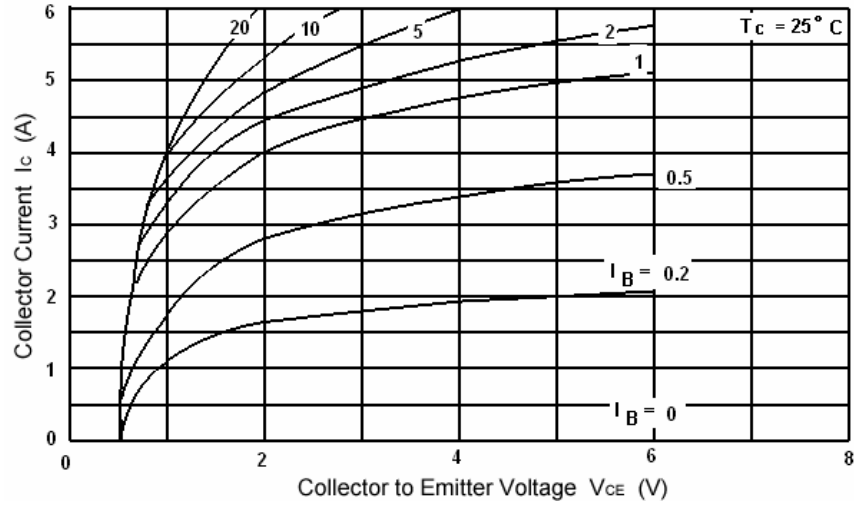


Fig.6 Static Characteristic

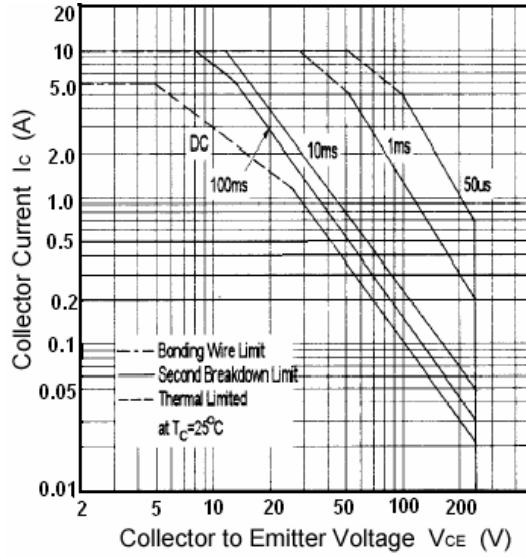


Fig.7 Safe Operating Area