

Silicon NPN Power Transistors

2SD288

DESCRIPTION

- With TO-220C package
- Collector-base voltage :  $V_{CBO}=80V$
- Collector dissipation :  $P_C=25W(T_C=25 )$

APPLICATIONS

- Low frequency power amplifier
- Power regulator applications

PINNING

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

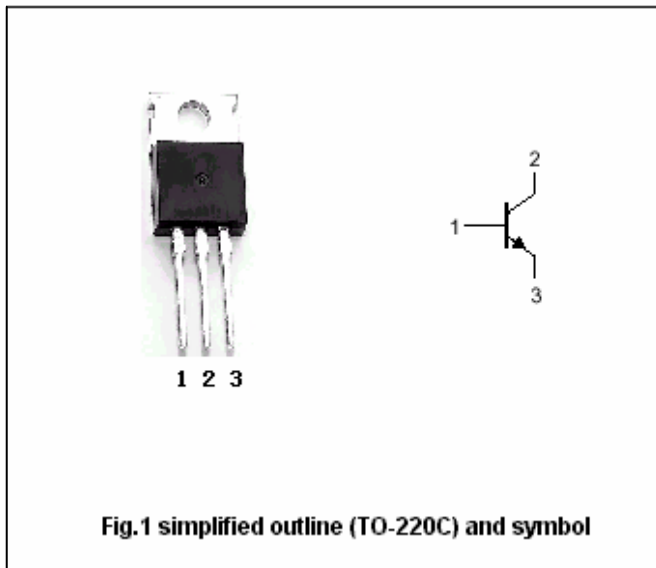


Fig.1 simplified outline (TO-220C) and symbol

Absolute maximum ratings ( $T_a=25 )$

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	Open emitter	80	V
$V_{CEO}$	Collector-emitter voltage	Open base	55	V
$V_{EBO}$	Emitter-base voltage	Open collector	5	V
$I_C$	Collector current		3	A
$P_C$	Collector power dissipation	$T_C=25$	25	W
$T_j$	Junction temperature		150	
$T_{stg}$	Storage temperature		-55~150	

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## CHARACTERISTICS

T<sub>j</sub>=25 unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)CEO</sub>	Collector-emitter breakdown voltage	I <sub>C</sub> =10mA; I <sub>B</sub> =0	55			V
V <sub>(BR)CBO</sub>	Collector-base breakdown voltage	I <sub>C</sub> =0.5mA; I <sub>E</sub> =0	80			V
V <sub>(BR)EBO</sub>	Emitter-base breakdown voltage	I <sub>E</sub> =0.5mA; I <sub>C</sub> =0	5			V
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =1 A; I <sub>B</sub> =0.1 A			1.0	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =50V; I <sub>E</sub> =0			50	μ A
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =5V; I <sub>C</sub> =0			50	μ A
h <sub>FE</sub>	DC current gain	I <sub>C</sub> =0.5A ; V <sub>CE</sub> =5V	40		240	

◆ h<sub>FE</sub> classifications

R	O	Y
40-80	70-140	120-240



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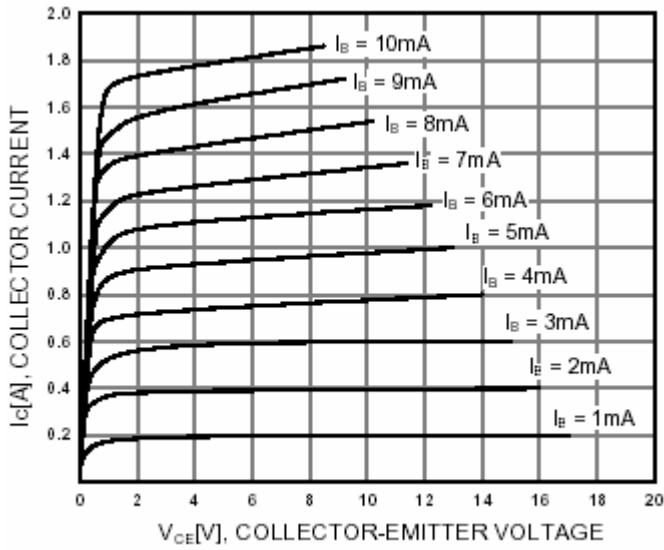


Fig.3 Static Characteristic

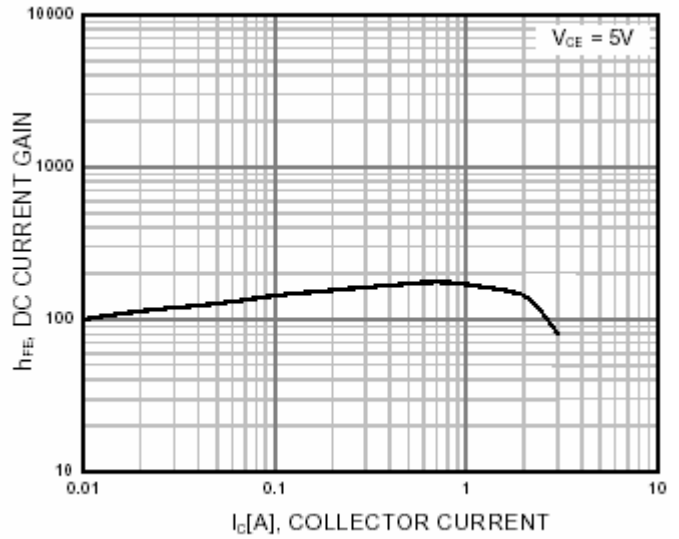


Fig.4 DC current Gain

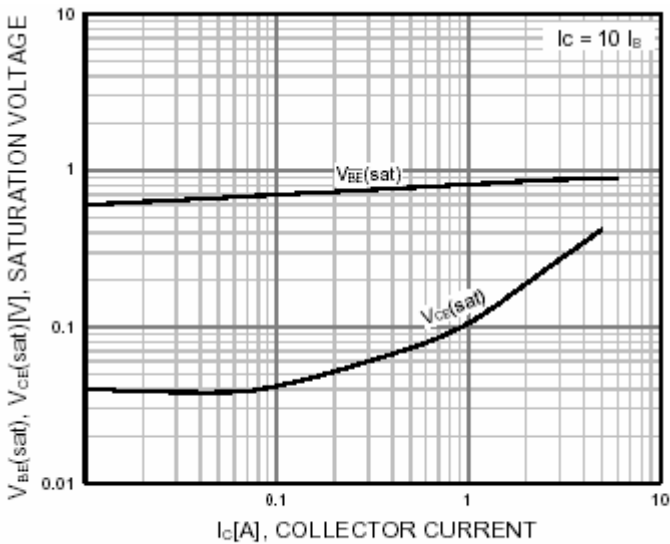


Fig.5 Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

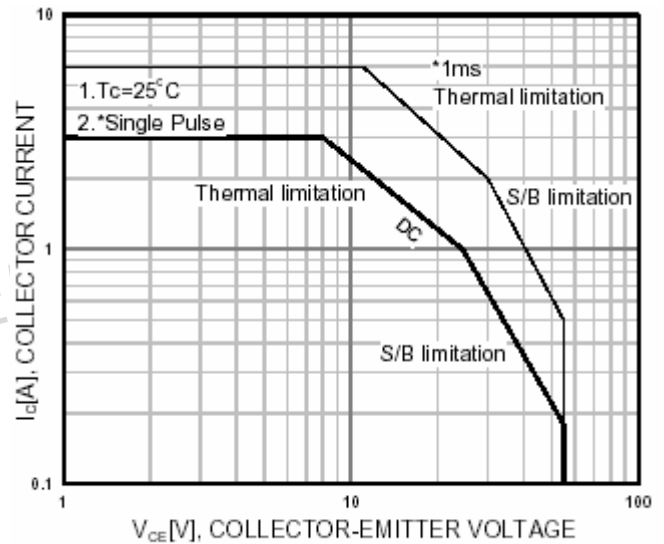


Fig.6 Safe Operating Area