

Silicon PNP Power Transistors

2SB753

DESCRIPTION

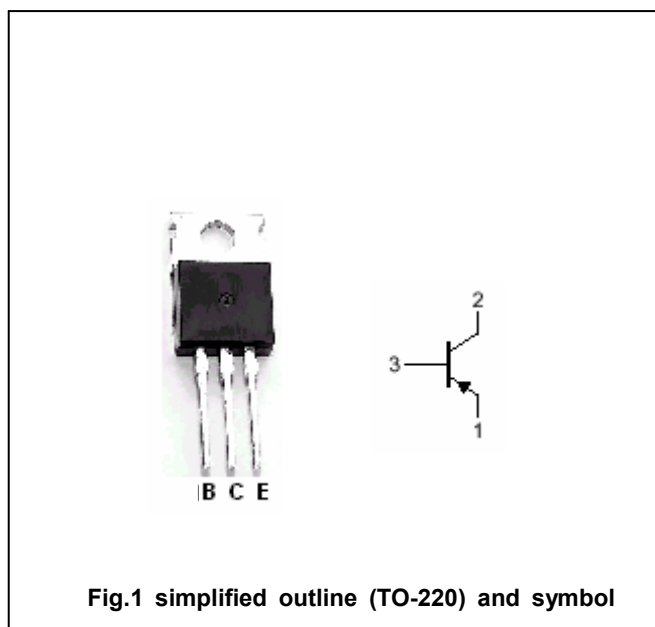
- With TO-220C package
- Complement to type 2SD843
- Low collector saturation voltage
- High power dissipation

APPLICATIONS

- High current switching applications
- Power amplifier applications

PINNING

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

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

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	-100	V
V_{CEO}	Collector-emitter voltage	Open base	-80	V
V_{EBO}	Emitter-base voltage	Open collector	-5	V
I_C	Collector current		-7	A
P_C	Collector dissipation	$T_a=25^\circ\text{C}$	1.5	W
		$T_C=25^\circ\text{C}$	40	
T_j	Junction temperature		150	$^\circ\text{C}$
T_{stg}	Storage temperature		-50~150	$^\circ\text{C}$

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CHARACTERISTICS

Tj=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C=-50mA; I_B=0$	-80			V
V_{CEsat}	Collector-emitter saturation voltage	$I_C=-4A; I_B=-0.4A$		-0.3	-0.5	V
V_{BEsat}	Base-emitter saturation voltage	$I_C=-4A; I_B=-0.4A$		-0.9	-1.4	V
I_{CBO}	Collector cut-off current	$V_{CB}=-100V; I_E=0$			-5	μA
I_{EBO}	Emitter cut-off current	$V_{EB}=-5V; I_C=0$			-5	μA
h_{FE-1}	DC current gain	$I_C=-1A; V_{CE}=-1V$	70		240	
h_{FE-2}	DC current gain	$I_C=-4A; V_{CE}=-1V$	30			
C_{OB}	Output capacitance	$I_E=0; V_{CB}=-10V; f=1MHz$		250		pF
f_T	Transition frequency	$I_C=-1A; V_{CE}=-4V$		10		MHz

Switching times

t_{on}	Turn-on time	$I_{B1}=-I_{B2}=-0.3A; V_{CC}=-30V$ $R_L=10\Omega$		0.4		μs
t_{stg}	Storage time			2.5		μs
t_f	Fall time			0.5		μs

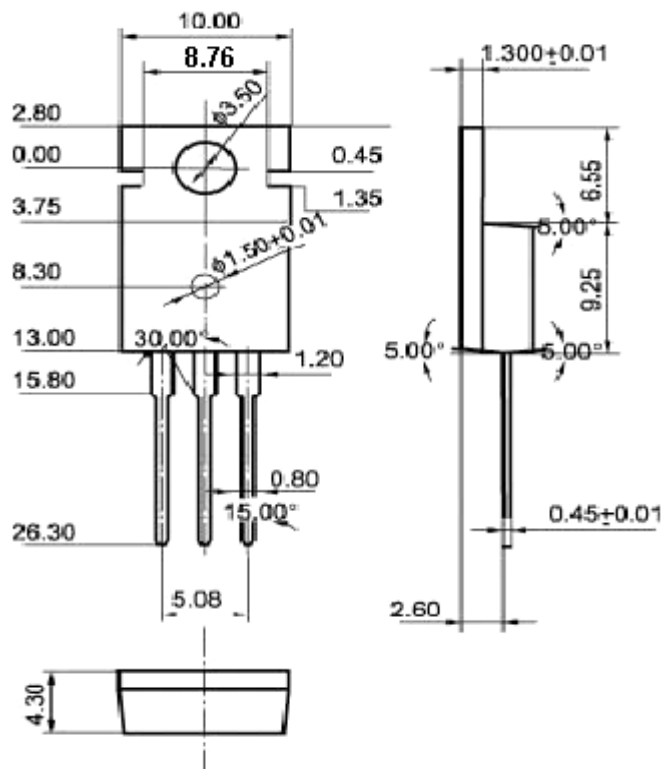
◆ h_{FE-1} Classifications

O	Y
70-140	120-240

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PACKAGE OUTLINE

Fig.2 Outline dimensions (unindicated tolerance: $\pm 0.10\text{mm}$)

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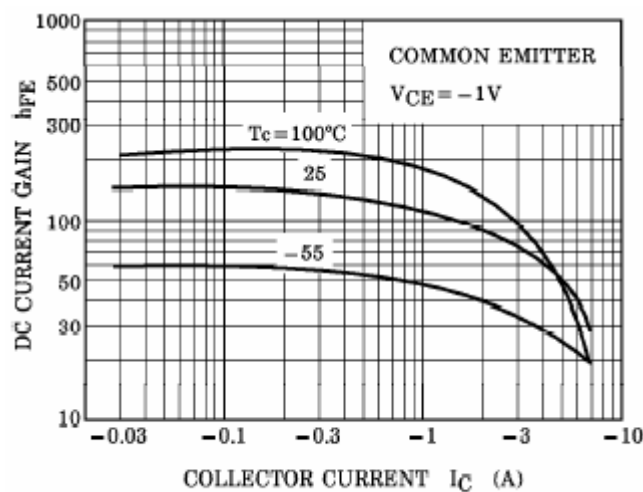


Fig.4 DC current Gain

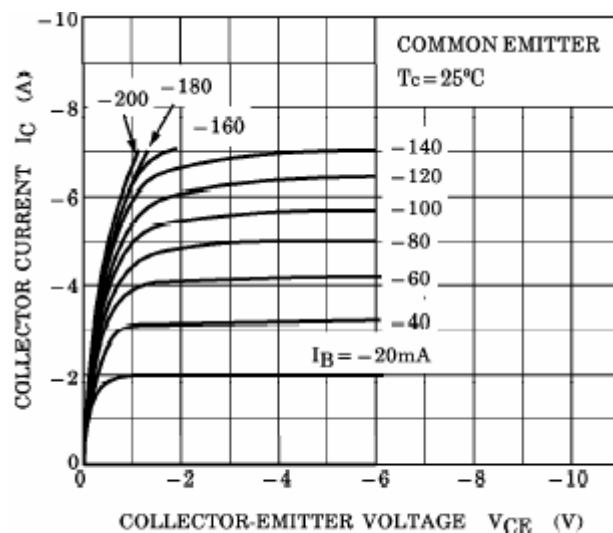


Fig.4 Static Characteristic

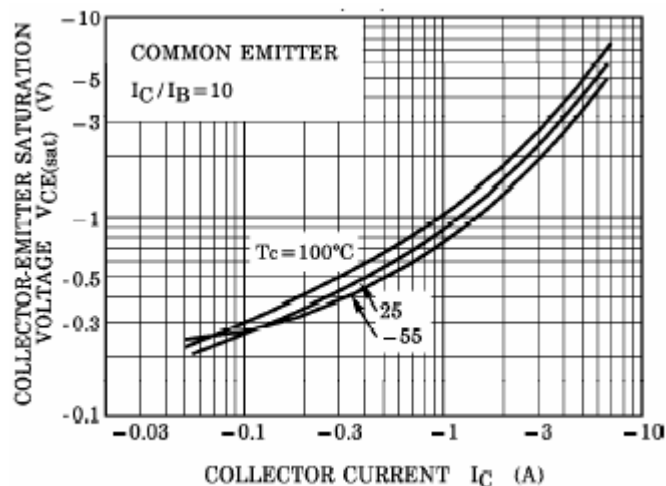


Fig.5 Collector-Emitter Saturation Voltage

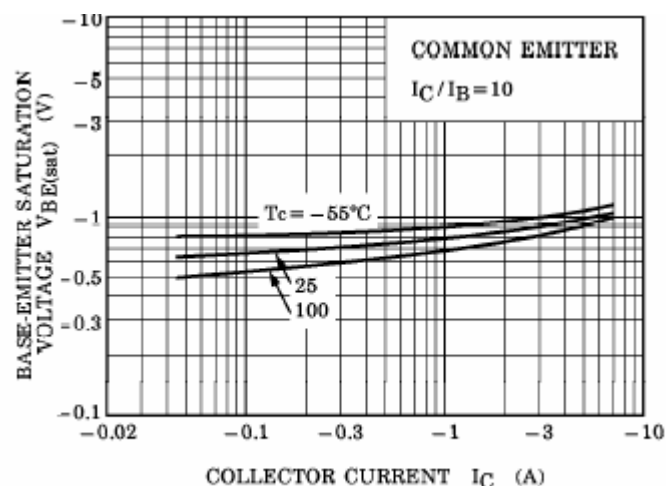


Fig.6 Base-Emitter Saturation Voltage

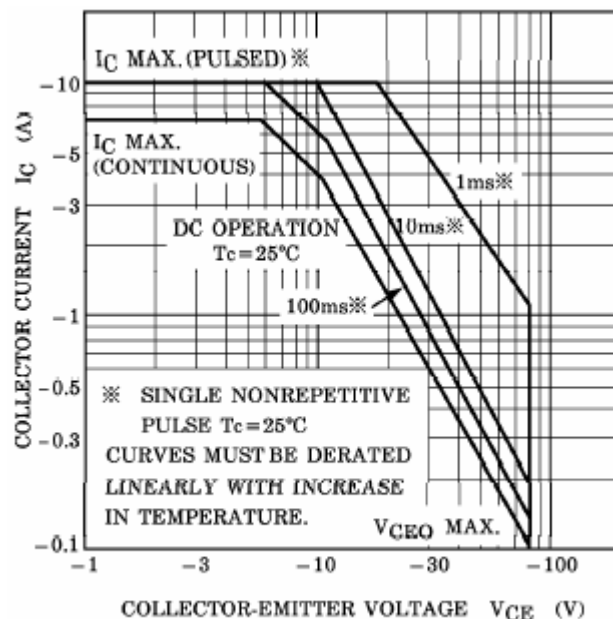


Fig.7 Safe Operating Area