Silicon PNP Power Transistors 2SB553

DESCRIPTION

- With TO-220C package
- Complement to type 2SD553
- Low collector saturation voltage

APPLICATIONS

- High current switching applications
- Power amplifier applications

PINNING

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

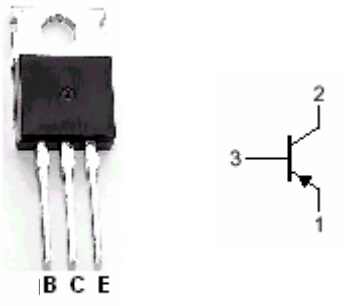

Fig.1 simplified outline (TO-220) and symbol

Absolute maximum ratings(Ta=25℃)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	-70	V
V_{CEO}	Collector-emitter voltage	Open base	-50	V
V_{EBO}	Emitter-base voltage	Open collector	-5	V
I_C	Collector current (DC)		-7	A
P_C	Collector dissipation	T_a=25℃	1.5	W
		T_C=25℃	40	
T_j	Junction temperature		150	℃
T_{stg}	Storage temperature		-50~150	℃

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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=-50mA; I_B=0	-50			V
V_{CEsat}	Collector-emitter saturation voltage	I_C=-4A; I_B=-0.4A		-0.2	-0.4	V
V_{BEsat}	Base-emitter saturation voltage	I_C=-4A; I_B=-0.4A		-0.9	-1.2	V
I_{CBO}	Collector cut-off current	V_{CB}=-70V; I_E=0			-30	μA
I_{EBO}	Emitter cut-off current	V_{EB}=-5V; I_C=0			-50	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}	Collector 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=10Ω		0.2		μs
t_s	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

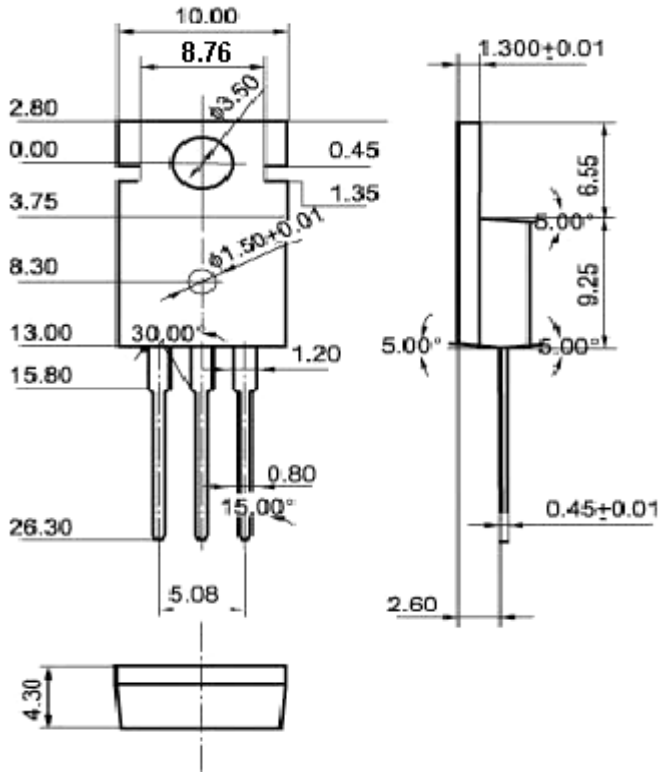

Fig.2 Outline dimensions (unindicated tolerance:±0.10mm)

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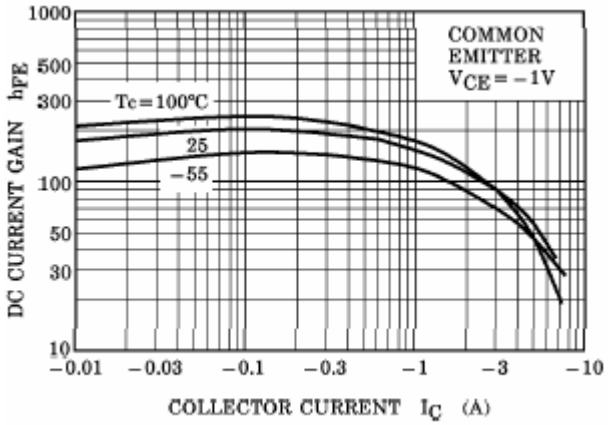

Fig.3 DC current Gain

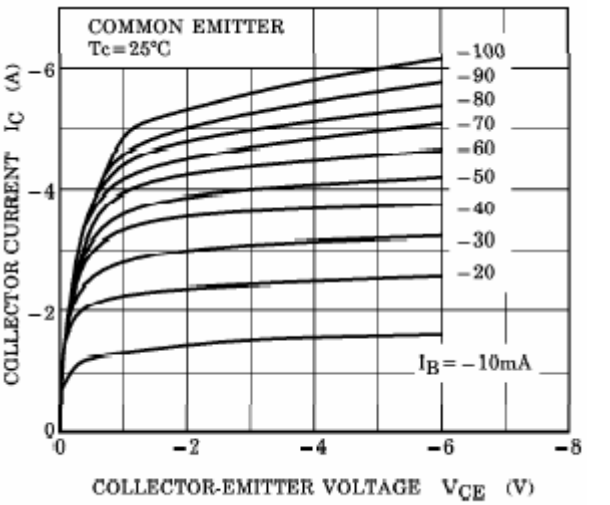

Fig.4 Static Characteristic

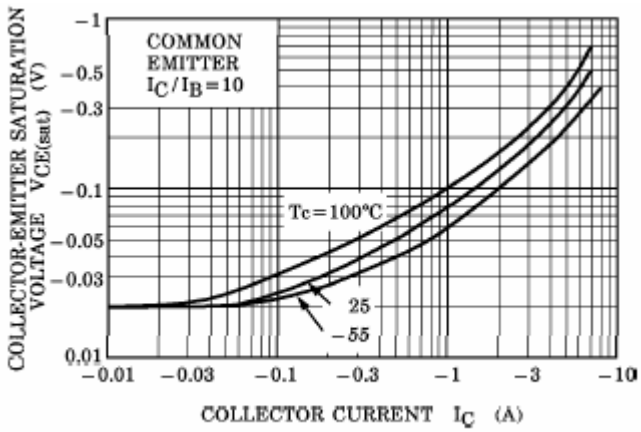

Fig.5 Collector-Emitter Saturation Voltage

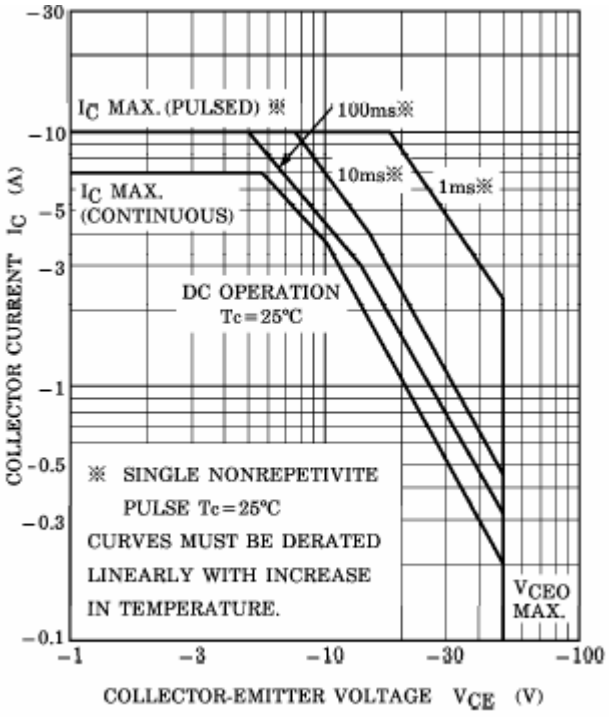

Fig.7 Safe Operating Area

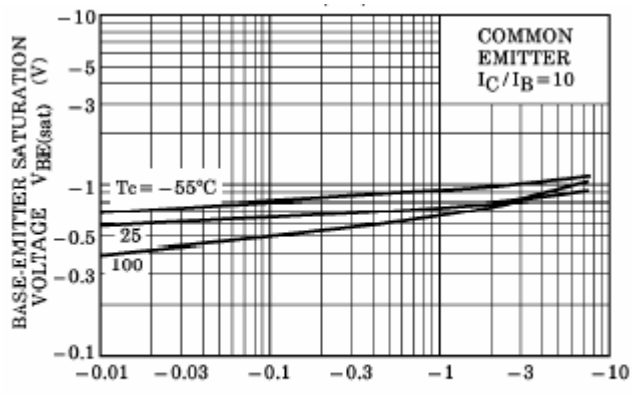

Fig.6 Base-Emitter Saturation Voltage