Silicon PNP Power Transistors 2SB919

DESCRIPTION

- With TO-220C package
- Complement to type 2SD1235
- Low collector saturation voltage
- Large current capacity

APPLICATIONS

- Large current switching of relay drivers, high-speed inverters,converters

PINNING

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

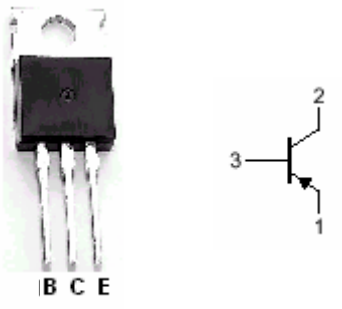

Fig.1 simplified outline (TO-220) and symbol

Absolute maximum ratings(Ta=25℃)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	-60	V
V_{CEO}	Collector-emitter voltage	Open base	-30	V
V_{EBO}	Emitter-base voltage	Open collector	-6	V
I_C	Collector current (DC)		-8	A
I_{CM}	Collector current-Peak		-15	A
P_C	Collector dissipation	T_a=25℃	1.75	W
		T_C=25℃	30	
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=-1mA; R_{BE}=∞	-30			V
$V_{(BR)CBO}$	Collector-base breakdown voltage	I_C=-1mA; I_E=0	-60			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	I_E=-1mA; I_C=0	-6			V
V_{CEsat}	Collector-emitter saturation voltage	I_C=-3A; I_B=-0.15A			-0.5	V
I_{CBO}	Collector cut-off current	V_{CB}=-40V; I_E=0			-0.1	mA
I_{EBO}	Emitter cut-off current	V_{EB}=-4V; I_C=0			-0.1	mA
h_{FE-1}	DC current gain	I_C=-1A ; V_{CE}=-2V	70		280	
h_{FE-2}	DC current gain	I_C=-4A ; V_{CE}=-2V	30			
f_T	Transition frequency	I_C=-1A ; V_{CE}=-5V		120		MHz

Switching times

t_{on}	Turn-on time	I_C=-4A ; V_{CC}=-10V I_{B1}=-I_{B2}=-0.2A;R_L=2.5Ω		0.1		μs
t_{stg}	Storage time			0.2		μs
t_f	Turn-off time			0.03		μs

◆ **h_{FE-1}Classifications**

Q	R	S
70-140	100-200	140-280

PACKAGE OUTLINE

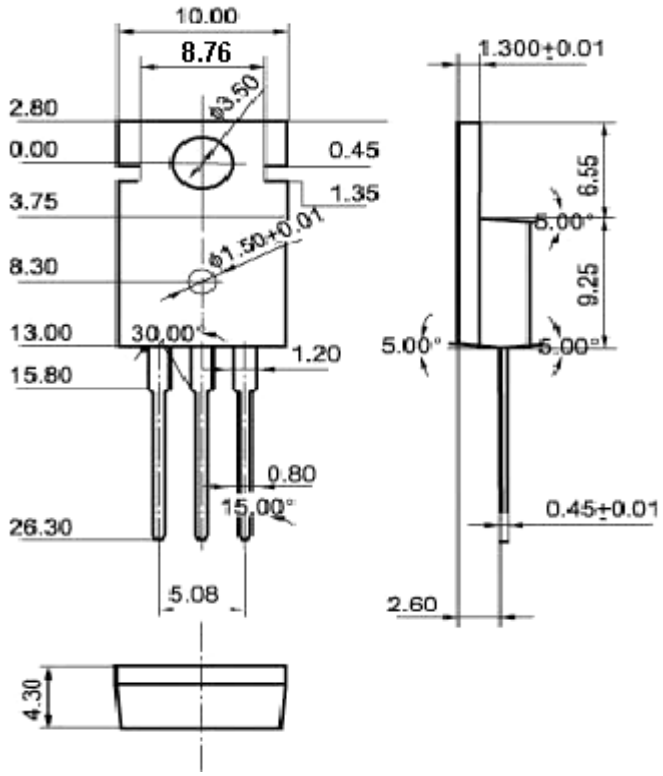

Fig.2 Outline dimensions (unindicated tolerance:±0.10mm)

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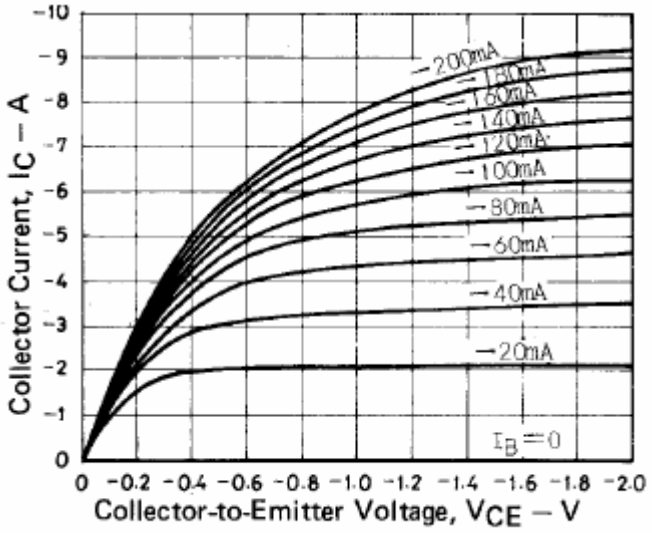

Fig.3 Static Characteristic

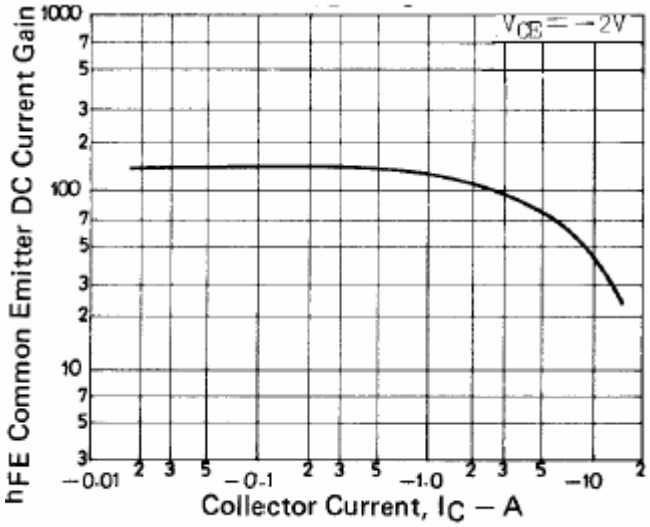

Fig.4 DC current Gain

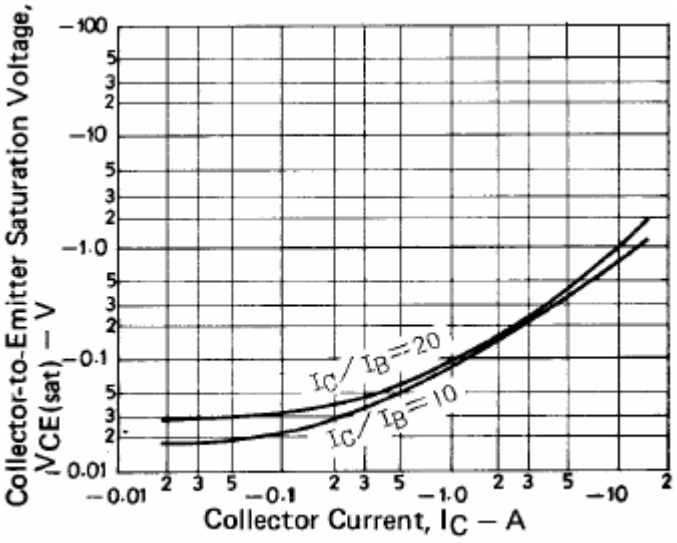

Fig.5 Collector-Emitter Saturation Voltage

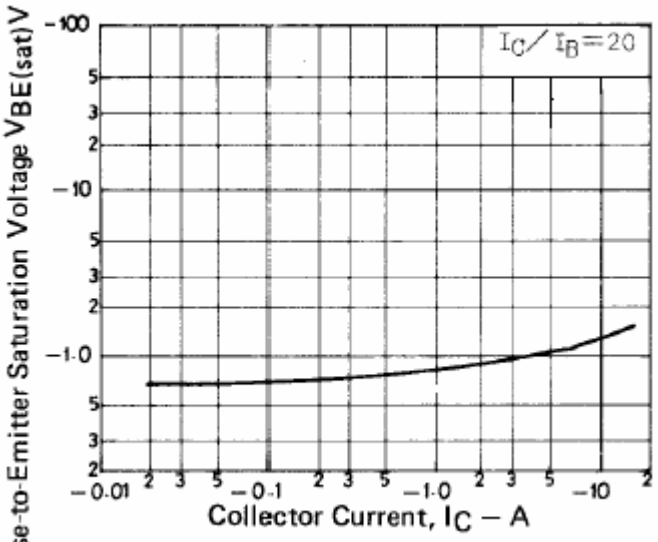

Fig.6 Base-Emitter Saturation Voltage

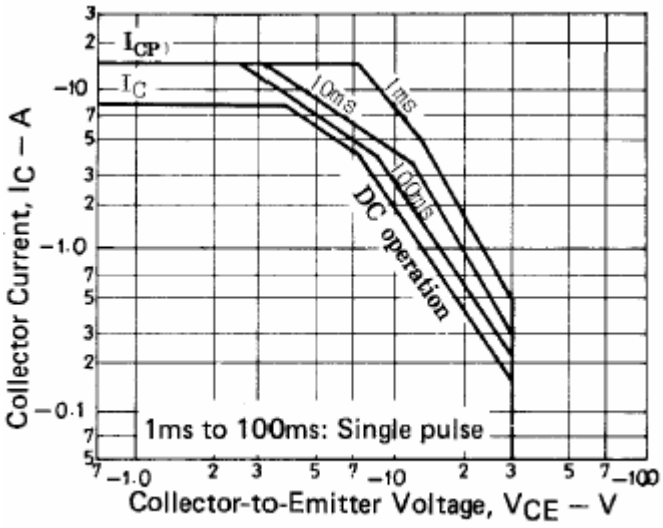

Fig.7 Safe Operating Area