Silicon PNP Power Transistors 2SA1011

DESCRIPTION

- With TO-220 package
- Complement to type 2SC2344

APPLICATIONS

- High voltage switching ,
- Audio frequency power amplifier;
- 100W output predriver applications

PINNING

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

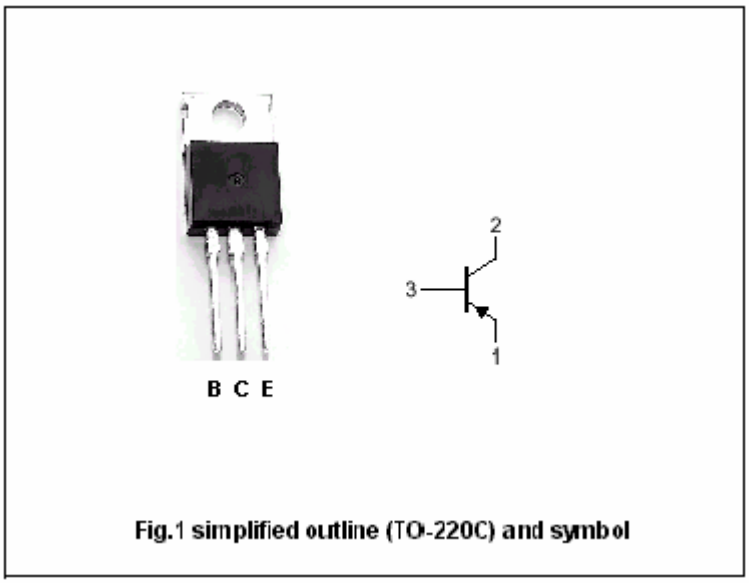

Fig.1 simplified outline (TO-220C) and symbol

Absolute maximum ratings(Ta=25℃)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	-180	V
V_{CEO}	Collector-emitter voltage	Open base	-160	V
V_{EBO}	Emitter-base voltage	Open collector	-6	V
I_C	Collector current		-1.5	A
I_{CM}	Collector current-Peak		-3.0	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

Tj=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	I_C=-10mA ,R_{BE}=∞	-160			V
$V_{(BR)CBO}$	Collector-base breakdown voltage	I_C=-1mA; I_E=0	-180			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	I_E=-1mA; I_C=0	-6			V
V_{CEsat}	Collector-emitter saturation voltage	I_C=-0.5A; I_B=-50mA		-0.5		V
V_{BE}	Base-emitter voltage	I_C=-10mA ; V_{CE}=-5V		-1.5		V
I_{CBO}	Collector cut-off current	V_{CB}=-120V; I_E=0			-10	μA
I_{EBO}	Emitter cut-off current	V_{EB}=-4V; I_C=0			-10	μA
h_{FE}	DC current gain	I_C=-0.3A ; V_{CE}=-5V	60		200	
f_T	Transition frequency	I_C=-50mA ; V_{CE}=-10V		100		MHz
C_{ob}	Output capacitance	I_E=0; f=1MHz ; V_{CB}=-10V		30		pF
Switching times resistive load						
t_{on}	Turn-on time	I_C=-0.5A ;I_{B1}=-I_{B2}=-50mA V_{CC}=20V; R_L=40Ω		0.29		μs
t_s	Storage time			0.48		μs
t_f	Fall time			0.19		μs

◆ h_{FE} Classifications

D	E
60-120	100-200

PACKAGE OUTLINE

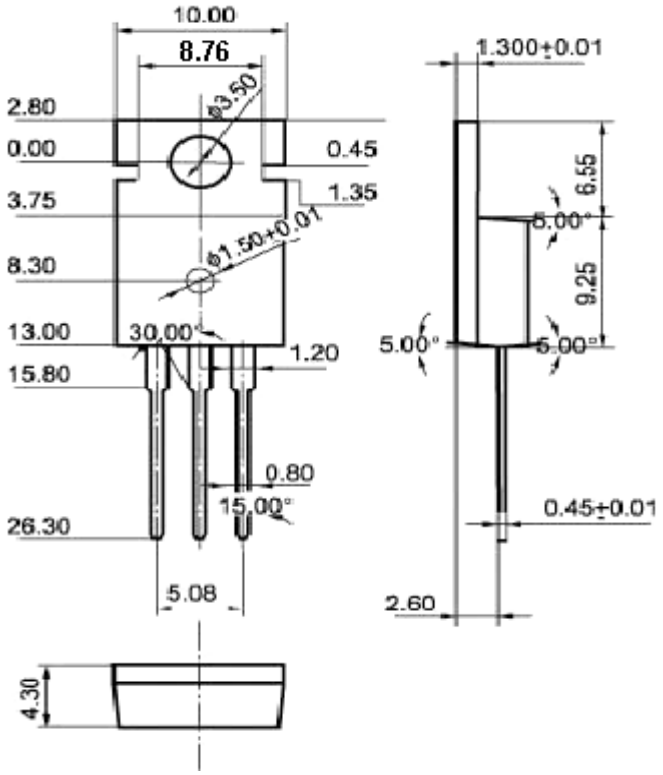

Fig.2 Outline dimensions(unindicated tolerance:±0.10 mm)

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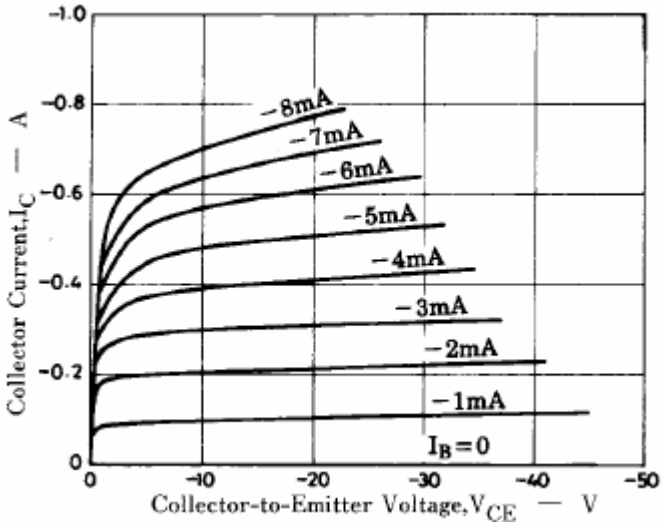

Fig.3 Static Characteristic

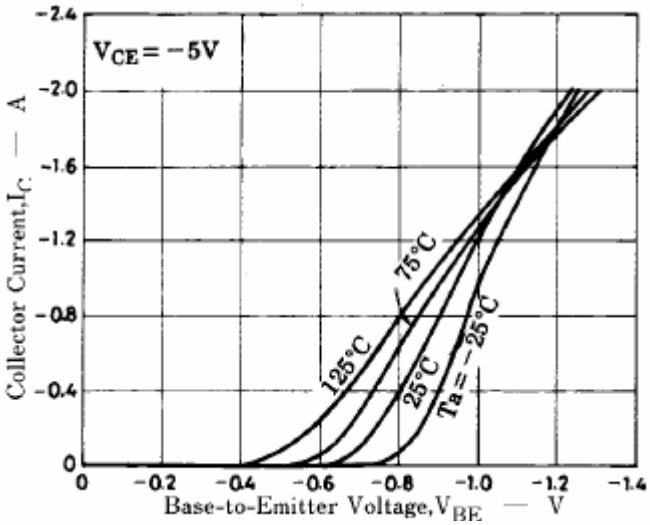

Fig.4 Base-Emitter On Voltage

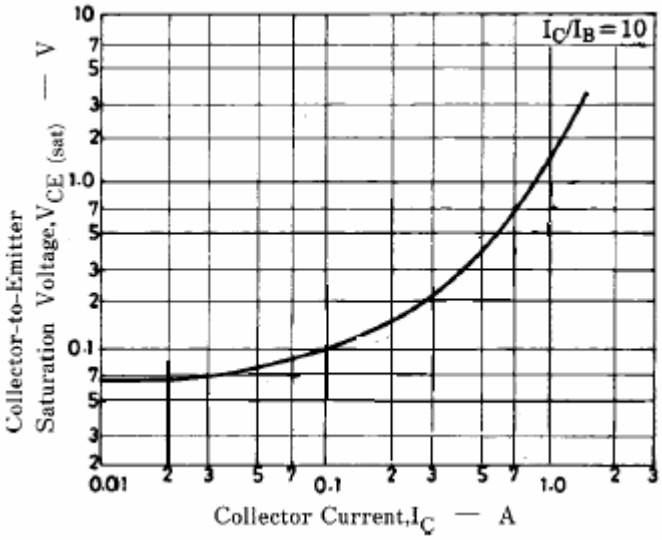

Fig.5 Collector-Emitter Saturation Voltage

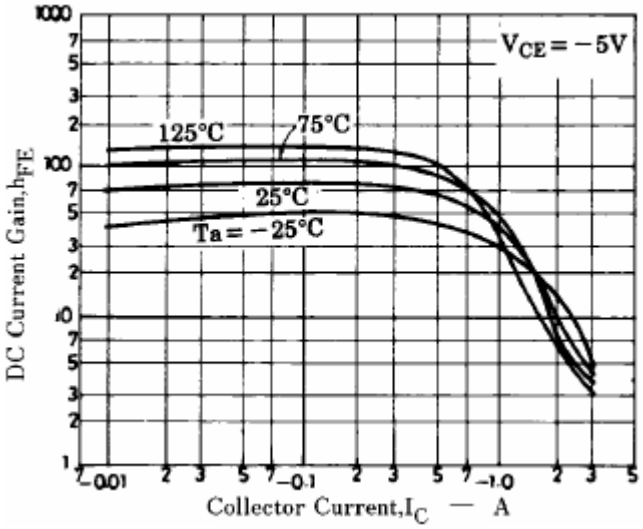

Fig.6 DC current Gain

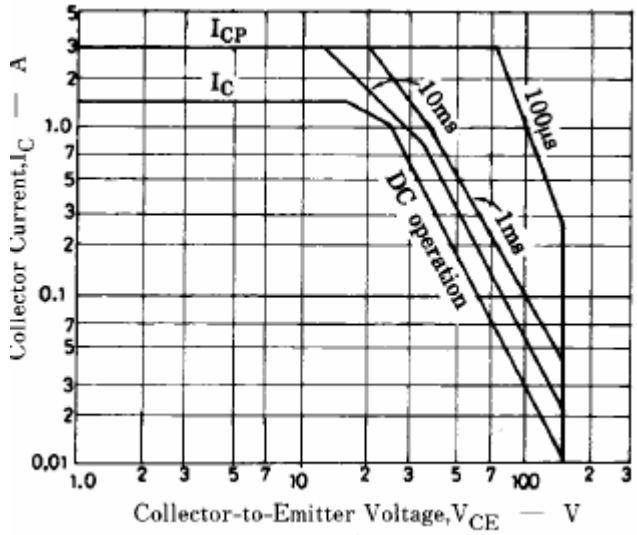

Fig.7 Safe Operating Area