

**Silicon PNP Power Transistors**

**2SB601**

**DESCRIPTION**

- With TO-220C package
- DARLINGTON
- High DC current gain
- Low collector saturation voltage

**APPLICATIONS**

- For low-frequency power amplifier and low-speed switching applications

**PINNING**

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

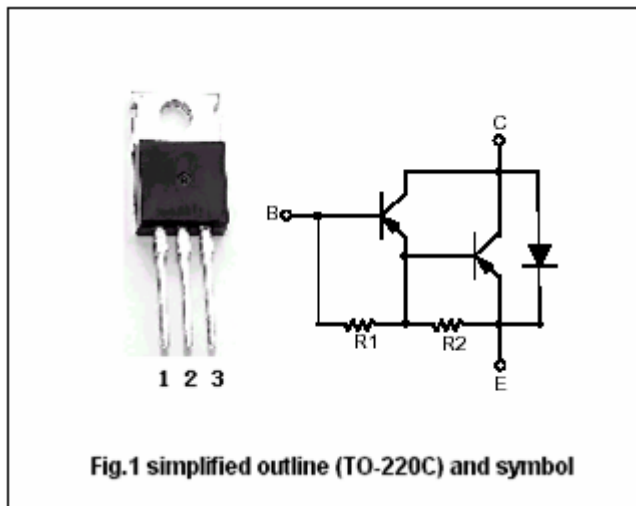


Fig.1 simplified outline (TO-220C) and symbol

**Absolute maximum ratings(Tc=25 )**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	Open emitter	-100	V
V <sub>CEO</sub>	Collector-emitter voltage	Open base	-100	V
V <sub>EBO</sub>	Emitter-base voltage	Open collector	-7	V
I <sub>C</sub>	Collector current-DC		-5	A
I <sub>CM</sub>	Collector current-Pulse		-8	A
I <sub>B</sub>	Base current-DC		-0.5	A
P <sub>T</sub>	Total power dissipation	T <sub>C</sub> =25	30	W
		T <sub>a</sub> =25	1.5	
T <sub>j</sub>	Junction temperature		150	
T <sub>stg</sub>	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>CEQ(SUS)</sub>	Collector-emitter sustaining voltage	I <sub>C</sub> =-3A, I <sub>B1</sub> =-3mA, L=1mH	-100			V
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =-3A, I <sub>B</sub> =-3mA			-1.5	V
V <sub>BEsat</sub>	Base-emitter saturation voltage	I <sub>C</sub> =-3A, I <sub>B</sub> =-3mA			-2.0	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =-100V, I <sub>E</sub> =0			-10	μA
I <sub>CEx</sub>	Collector cut-off current	V <sub>CE</sub> =-100V, V <sub>BE</sub> =-1.5V T <sub>a</sub> =25			-10 -1.0	μA mA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =-5V; I <sub>C</sub> =0			-3.0	mA
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =-3A; V <sub>CE</sub> =-2V	2000		15000	
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =-5A; V <sub>CE</sub> =-2V	500			
C <sub>ob</sub>	Output capacitance	I <sub>E</sub> =0; V <sub>CB</sub> =-10V, f=0.1MHz			300	pF

## Switching times

t <sub>on</sub>	Turn-on time	I <sub>C</sub> =-3A; I <sub>B1</sub> =-I <sub>B2</sub> =-3mA V <sub>CC</sub> =-50V; R <sub>L</sub> =17		0.5		μs
t <sub>stg</sub>	Storage time			1.0		μs
t <sub>f</sub>	Fall time			1.0		μs

◆ h<sub>FE-1</sub> Classifications

M	L	K
2000-5000	3000-7000	5000-15000

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PACKAGE OUTLINE

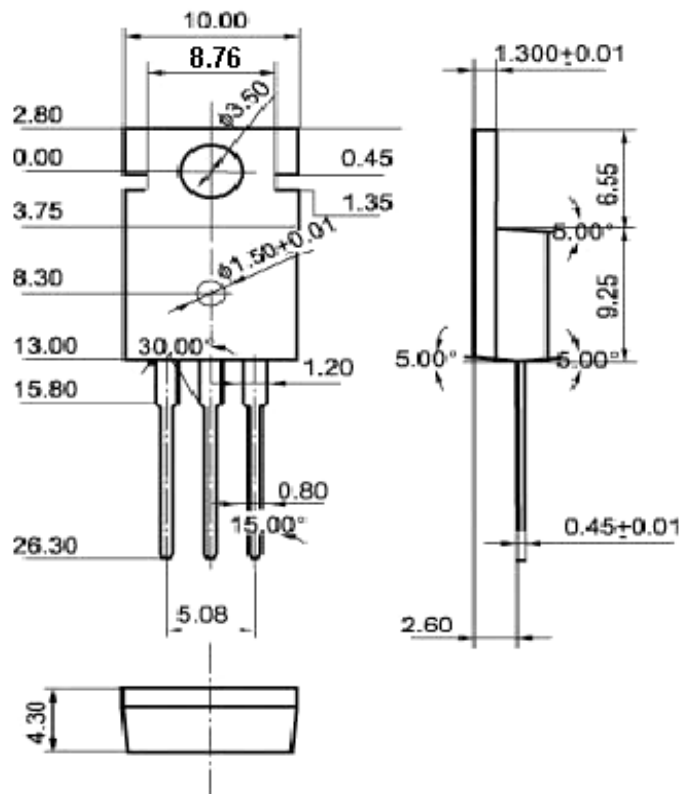


Fig.2 Outline dimensions