

**Silicon PNP Power Transistors**

**2SB727K**

**DESCRIPTION**

- With TO-220C package
- Complement to type 2SD768K
- DARLINGTON

**APPLICATIONS**

- For medium speed and power switching applications

**PINNING**

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

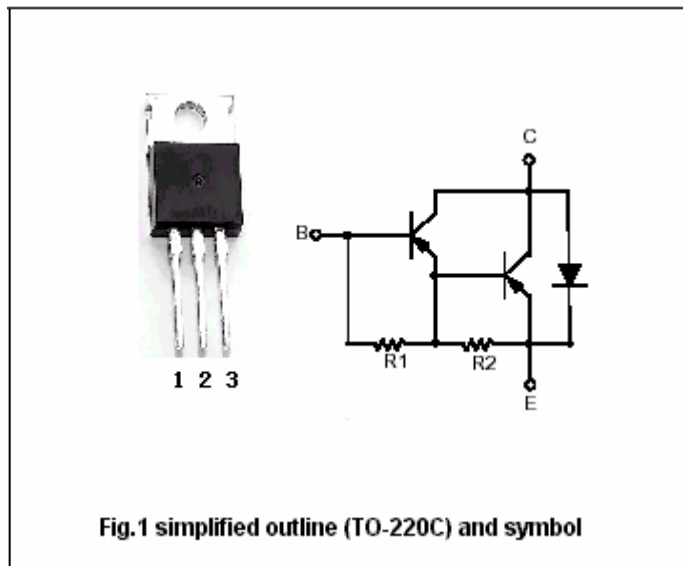


Fig.1 simplified outline (TO-220C) and symbol

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

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	Open emitter	-120	V
V <sub>CEO</sub>	Collector-emitter voltage	Open base	-120	V
V <sub>EBO</sub>	Emitter-base voltage	Open collector	-7	V
I <sub>C</sub>	Collector current		-6	A
I <sub>CM</sub>	Collector current-peak		-10	A
P <sub>C</sub>	Collector power dissipation	T <sub>C</sub> =25	40	W
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>(BR)CEO</sub>	Collector-emitter breakdown voltage	I <sub>C</sub> =-25mA, R <sub>BE</sub> =	-120			V
V <sub>(BR)EBO</sub>	Emitter-base breakdown voltage	I <sub>E</sub> =-50mA, I <sub>C</sub> =0	-7			V
V <sub>CEsat-1</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =-3A, I <sub>B</sub> =-6mA			-1.5	V
V <sub>CEsat-2</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =-6A, I <sub>B</sub> =-60mA			-3.0	V
V <sub>BEsat-1</sub>	Base-emitter saturation voltage	I <sub>C</sub> =-3A, I <sub>B</sub> =-6mA			-2.0	V
V <sub>BEsat-2</sub>	Base-emitter saturation voltage	I <sub>C</sub> =-6A, I <sub>B</sub> =-60mA			-3.5	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =-120V, I <sub>E</sub> =0			-100	μA
I <sub>CEO</sub>	Collector cut-off current	V <sub>CE</sub> =-100V, R <sub>BE</sub> =			-10	μA
h <sub>FE</sub>	DC current gain	I <sub>C</sub> =-3A; V <sub>CE</sub> =-3V	1000		20000	

## Switching times

t <sub>on</sub>	Turn-on time	I <sub>C</sub> =-3A, I <sub>B1</sub> =-I <sub>B2</sub> =-6mA		1.0		μs
t <sub>off</sub>	Turn-off time			3.0		μs

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PACKAGE OUTLINE

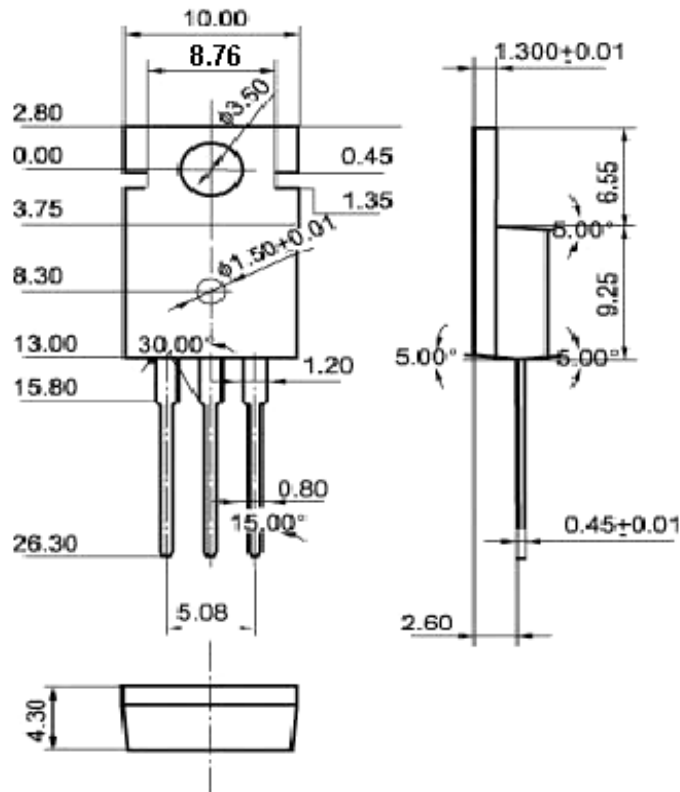


Fig.2 Outline dimensions

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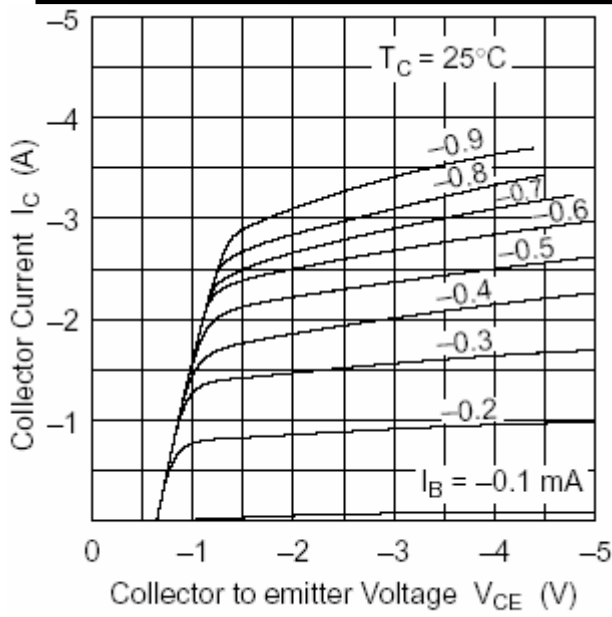


Fig.3 Static Characteristic

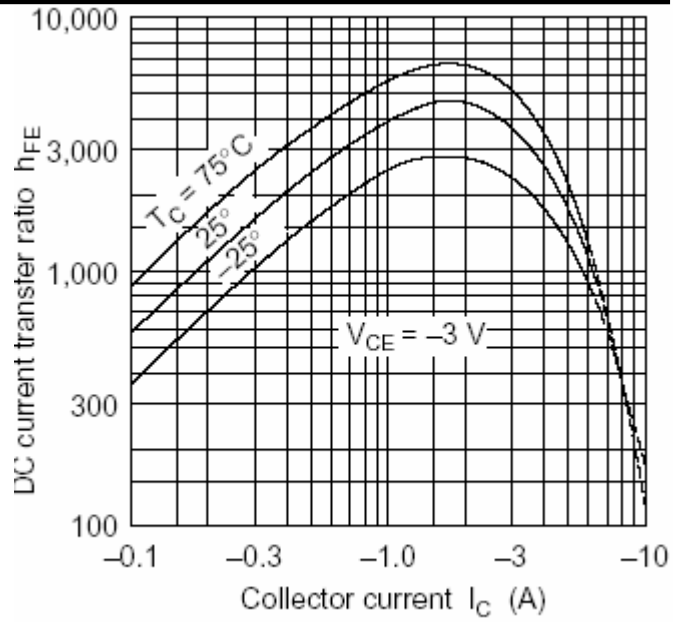


Fig.4 DC current Gain

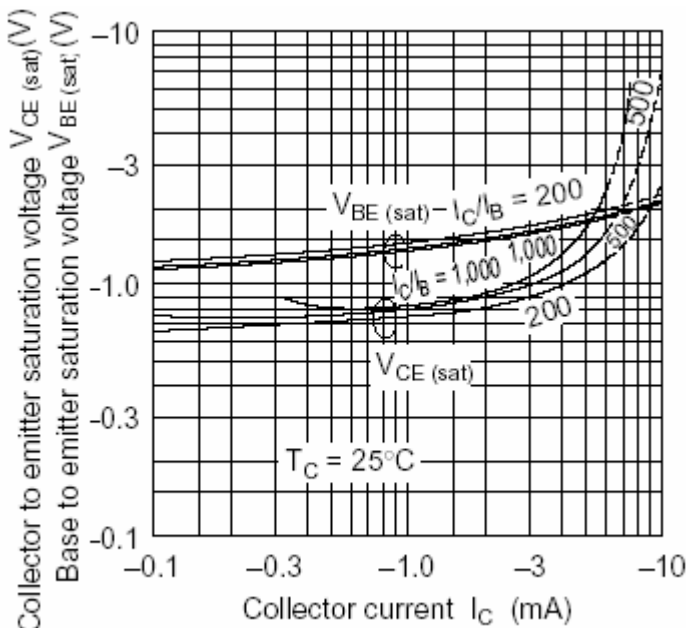


Fig.5 Collector-Emitter Saturation Voltage

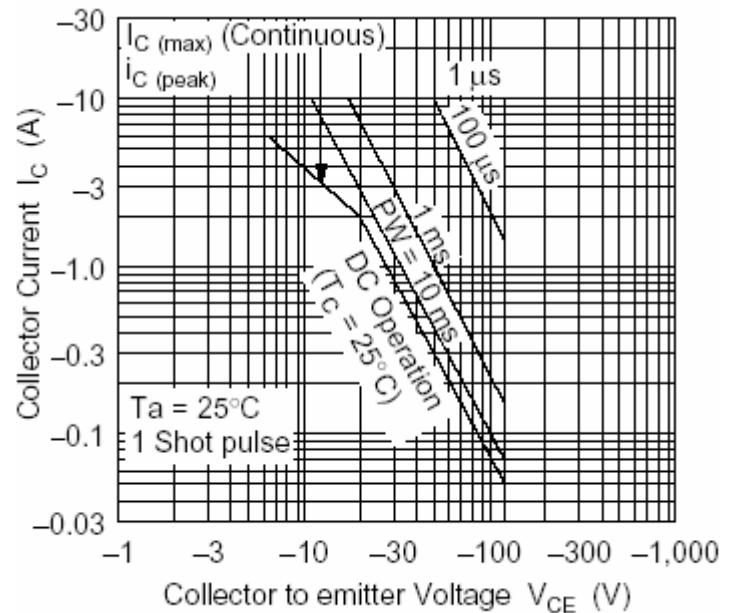


Fig.6 Safe Operating Area