

**Silicon PNP Power Transistors**

**2SB566 2SB566A**

**DESCRIPTION**

- With TO-220C package
- Complement to type 2SD476/476A

**APPLICATIONS**

- For low frequency power amplifier power switching applications

**PINNING**

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

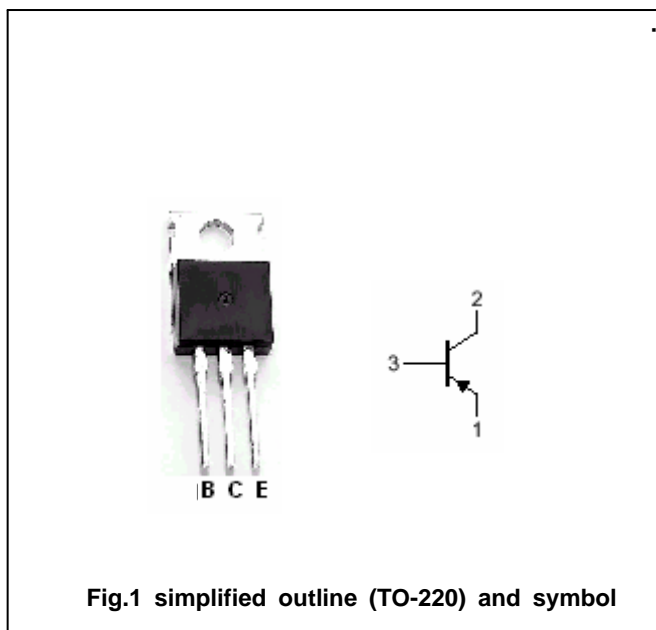


Fig.1 simplified outline (TO-220) and symbol

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

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	Open emitter	-70	V
$V_{CEO}$	Collector-emitter voltage	2SB566	-50	V
		2SB566A	-60	
$V_{EBO}$	Emitter-base voltage	Open collector	-5	V
$I_C$	Collector current		-4	A
$I_{CM}$	Collector current-peak		-8	A
$P_C$	Collector power dissipation	$T_c=25$	40	W
$T_j$	Junction temperature		150	
$T_{stg}$	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)CBO</sub>	Collector-base breakdown voltage		I <sub>C</sub> =-10 μ A ; I <sub>E</sub> =0	-70			V
V <sub>(BR)CEO</sub>	Collector-emitter breakdown voltage	2SB566	I <sub>C</sub> =-50mA; R <sub>BE</sub> =	-50			V
		2SB566A		-60			
V <sub>(BR)EBO</sub>	Emitter-base breakdown voltage		I <sub>E</sub> =-10 μ A; I <sub>C</sub> =0	-5			V
V <sub>CEsat</sub>	Collector-emitter saturation voltage		I <sub>C</sub> =-2 A; I <sub>B</sub> =-0.2 A			-1.0	V
V <sub>BEsat</sub>	Base-emitter saturation voltage		I <sub>C</sub> =-2 A; I <sub>B</sub> =-0.2 A			-1.2	V
I <sub>CBO</sub>	Collector cut-off current		V <sub>CB</sub> =-50V; I <sub>E</sub> =0			-1	μ A
h <sub>FE-1</sub>	DC current gain		I <sub>C</sub> =-0.1A ; V <sub>CE</sub> =-4V	35			
h <sub>FE-2</sub>	DC current gain		I <sub>C</sub> =-1A ; V <sub>CE</sub> =-4V	60		200	
f <sub>T</sub>	Transition frequency		I <sub>C</sub> =-0.5A ; V <sub>CE</sub> =-4V		15		MHz

## Switching times

t <sub>on</sub>	Turn-on time	I <sub>C</sub> =-0.5A ; V <sub>CC</sub> =-10.5V I <sub>B1</sub> =-I <sub>B2</sub> =-0.05 A		0.3		μ s
t <sub>off</sub>	Turn-off time			3.0		μ s
t <sub>stg</sub>	Storage time			2.5		μ s

◆ h<sub>FE-2</sub> classifications

B	C
60-120	100-200

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PACKAGE OUTLINE

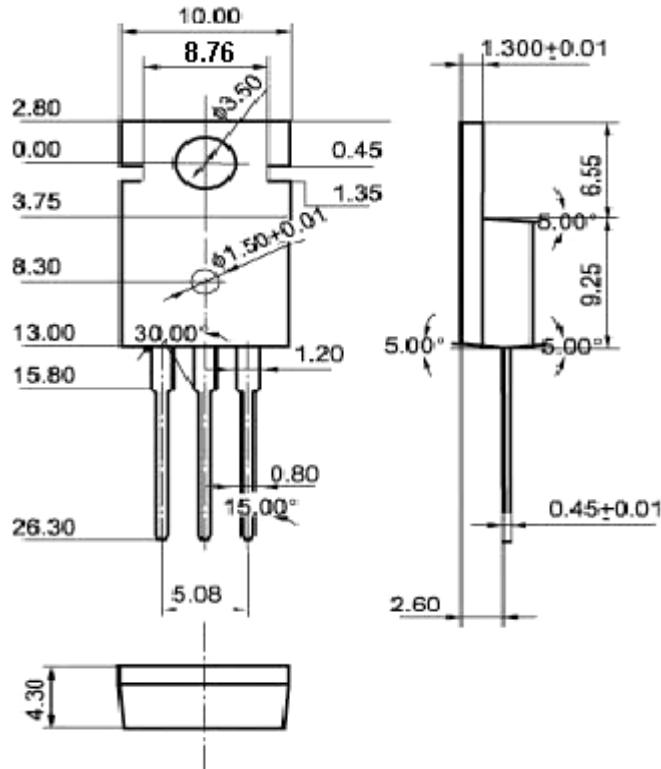


Fig.2 Outline dimensions (unindicated tolerance:  $\pm 0.10$  mm)

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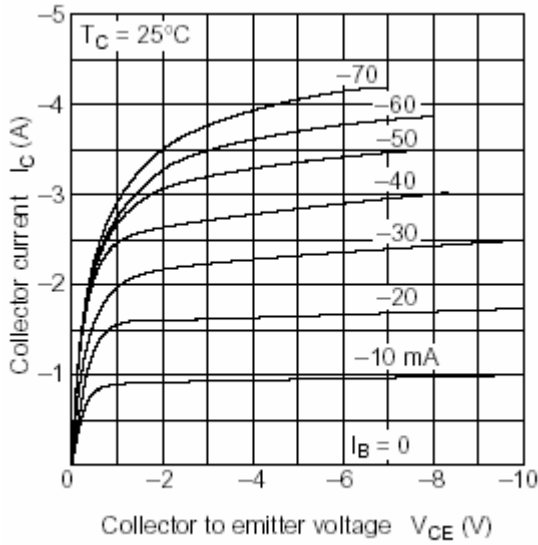


Fig.3 Static Characteristic

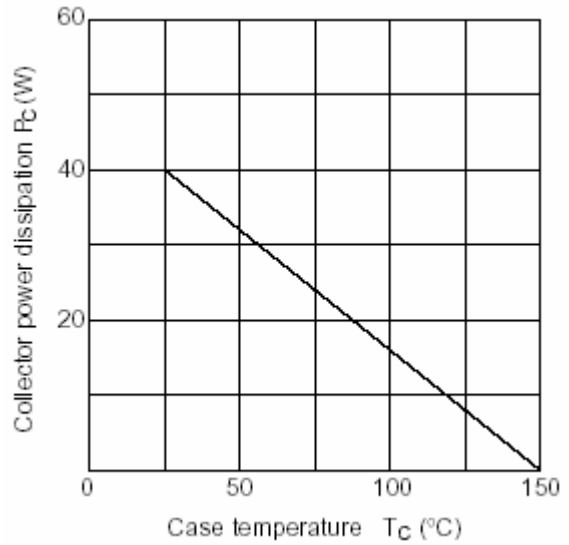


Fig.4 Power Derating

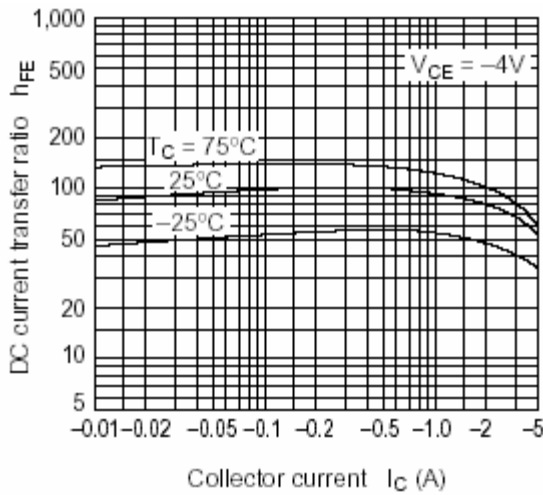


Fig.5 DC current Gain

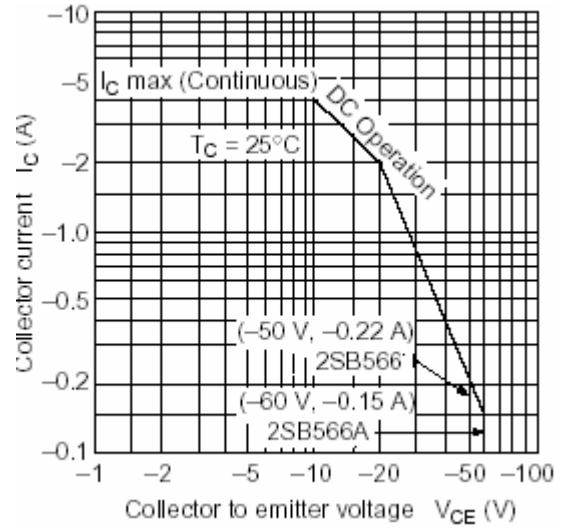


Fig.6 Safe Operating Area

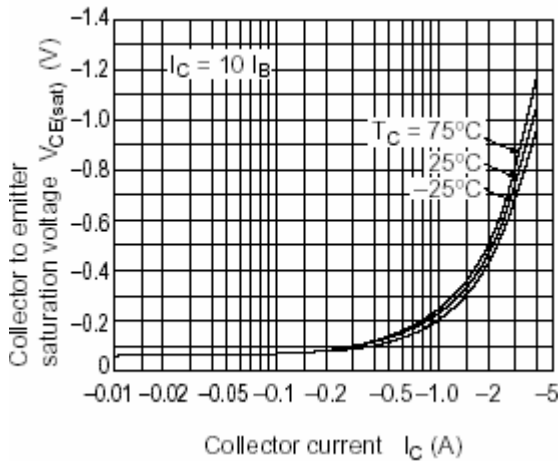


Fig.7 Collector-Emitter Saturation Voltage