

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

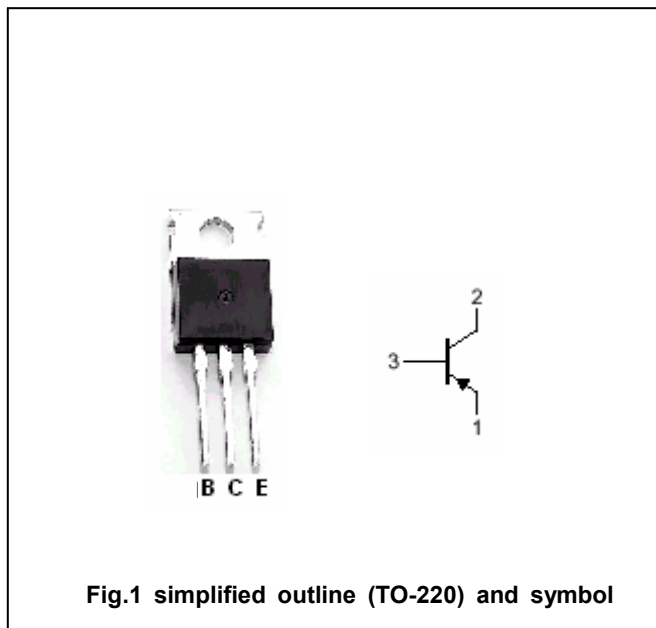


Fig.1 simplified outline (TO-220) and symbol

Absolute maximum ratings(Tc=25°C)

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	$T_c=25^\circ C$	40	W
T_j	Junction temperature		150	°C
T_{stg}	Storage temperature		-55~150	°C

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CHARACTERISTICS

T_j=25 °C unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CBO}	Collector-base breakdown voltage		I _C =-10μA; I _E =0	-70			V
V _{(BR)CEO}	Collector-emitter breakdown voltage	2SB566	I _C =-50mA; R _{BE} =∞	-50			V
		2SB566A		-60			
V _{(BR)EBO}	Emitter-base breakdown voltage		I _E =-10μA; I _C =0	-5			V
V _{CEsat}	Collector-emitter saturation voltage		I _C =-2 A; I _B =-0.2 A			-1.0	V
V _{BEsat}	Base-emitter saturation voltage		I _C =-2 A; I _B =-0.2 A			-1.2	V
I _{CBO}	Collector cut-off current		V _{CB} =-50V; I _E =0			-1	μA
h _{FE-1}	DC current gain		I _C =-0.1A; V _{CE} =-4V	35			
h _{FE-2}	DC current gain		I _C =-1A; V _{CE} =-4V	60		200	
f _T	Transition frequency		I _C =-0.5A; V _{CE} =-4V		15		MHz

Switching times

t _{on}	Turn-on time	I _C =-0.5A; V _{CC} =-10.5V I _{B1} =-I _{B2} =-0.05 A		0.3		μs
t _{off}	Turn-off time			3.0		μs
t _{stg}	Storage time			2.5		μs

◆ h_{FE-2} classifications

B	C
60-120	100-200

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PACKAGE OUTLINE

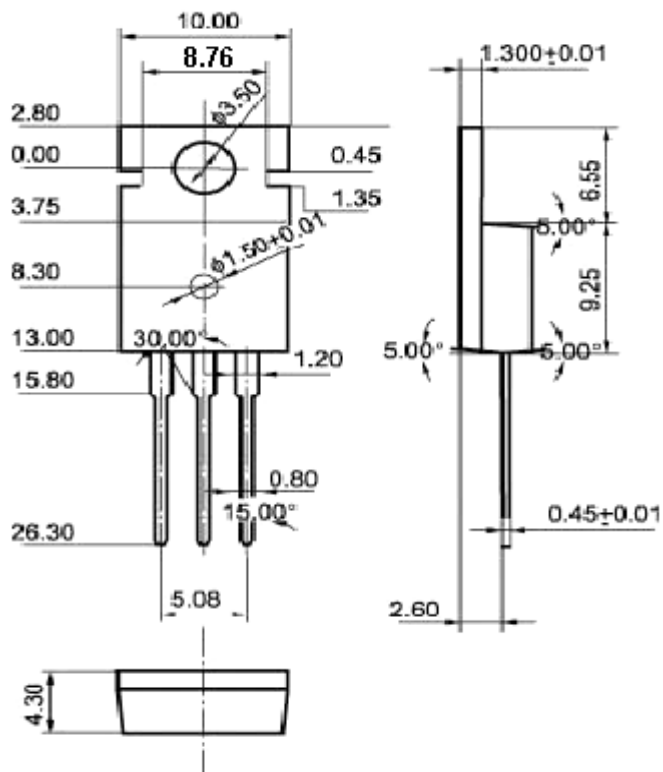


Fig.2 Outline dimensions (unindicated tolerance:±0.10 mm)

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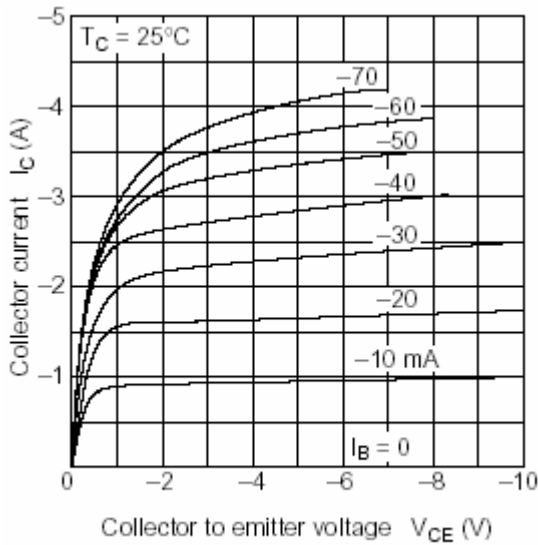


Fig.3 Static Characteristic

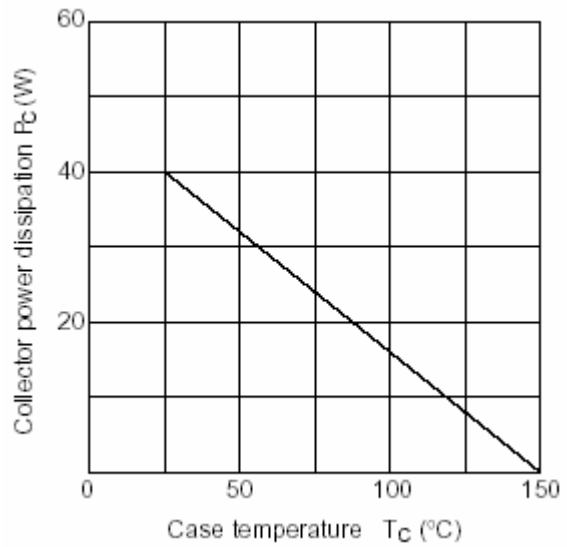


Fig.4 Power Derating

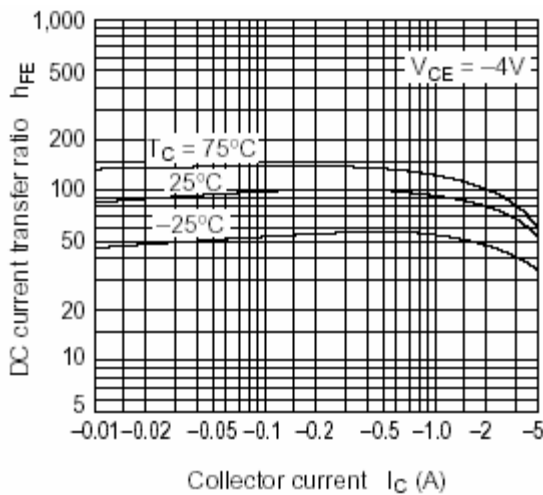


Fig.5 DC current Gain

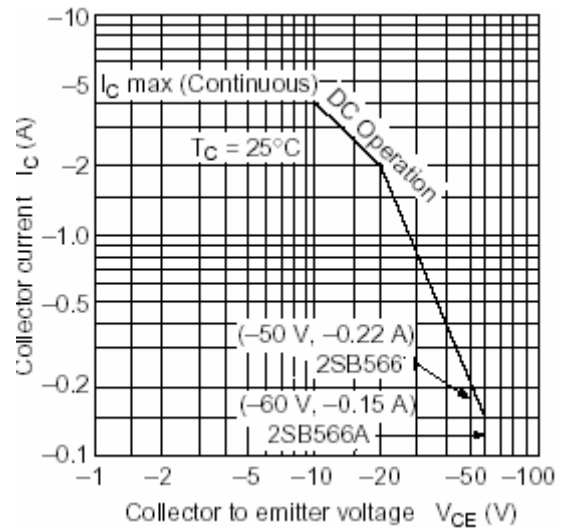


Fig.6 Safe Operating Area

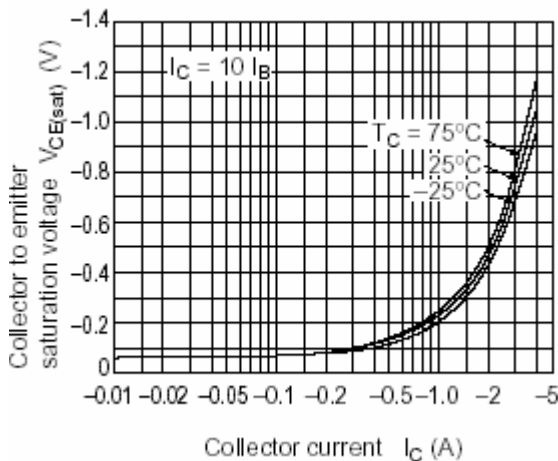


Fig.7 Collector-Emitter Saturation Voltage