

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

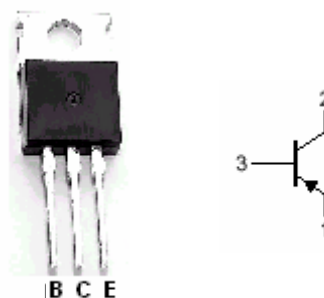


Fig.1 simplified outline (TO-220) and symbol

Absolute maximum ratings($T_c=25^\circ\text{C}$)

SYMBOL	PARAMETER		CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage		Open emitter	-70	V
V_{CEO}	Collector-emitter voltage	2SB566	Open base	-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		$T_c=25^\circ\text{C}$	40	W
T_j	Junction temperature			150	$^\circ\text{C}$
T_{stg}	Storage temperature			-55~150	$^\circ\text{C}$

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CHARACTERISTICS

Tj=25°C unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CBO}$	Collector-base breakdown voltage		$I_C = -10\mu A$; $I_E = 0$	-70			V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	2SB566	$I_C = -50mA$; $R_{BE} = \infty$	-50			V
		2SB566A		-60			
$V_{(BR)EBO}$	Emitter-base breakdown voltage		$I_E = -10\mu A$; $I_C = 0$	-5			V
V_{CEsat}	Collector-emitter saturation voltage		$I_C = -2A$; $I_B = -0.2A$			-1.0	V
V_{BEsat}	Base-emitter saturation voltage		$I_C = -2A$; $I_B = -0.2A$			-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	$I_C = -0.5A$; $V_{CC} = -10.5V$ $I_{B1} = -I_{B2} = -0.05A$		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

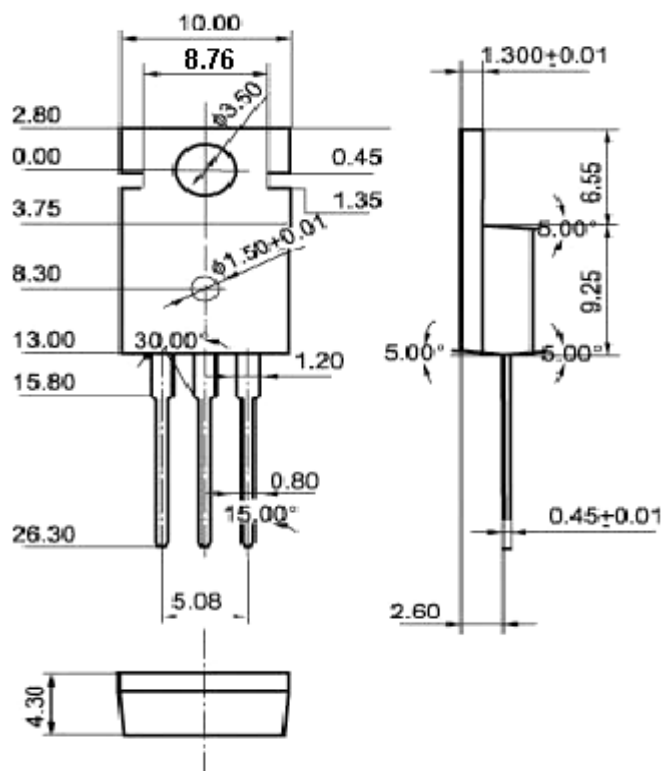


Fig.2 Outline dimensions (unindicated tolerance:±0.10 mm)

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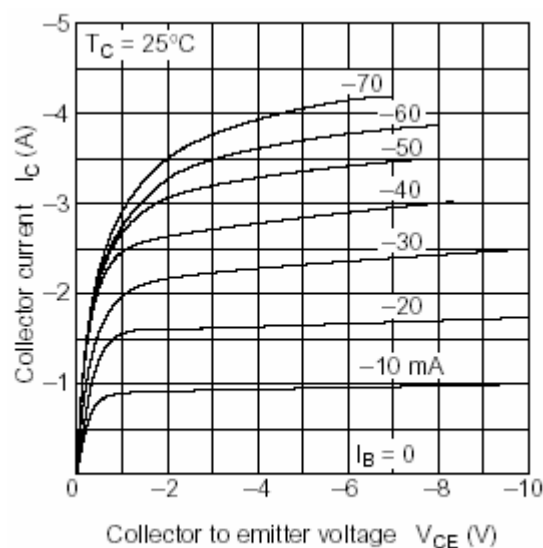


Fig.3 Static Characteristic

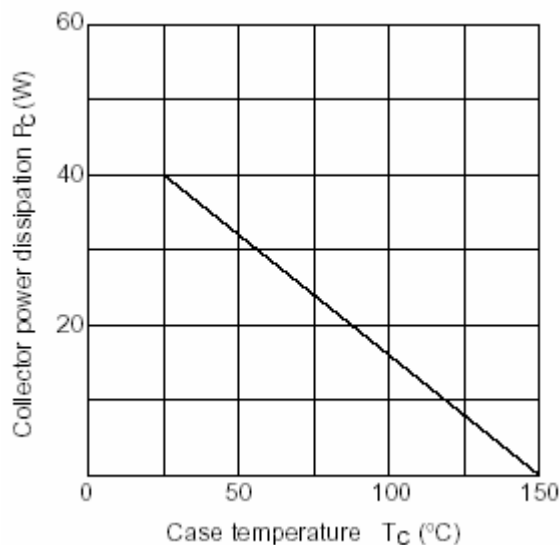


Fig.4 Power Derating

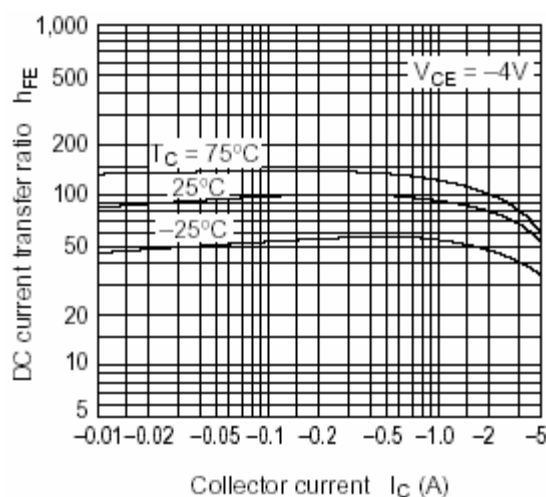


Fig.5 DC current Gain

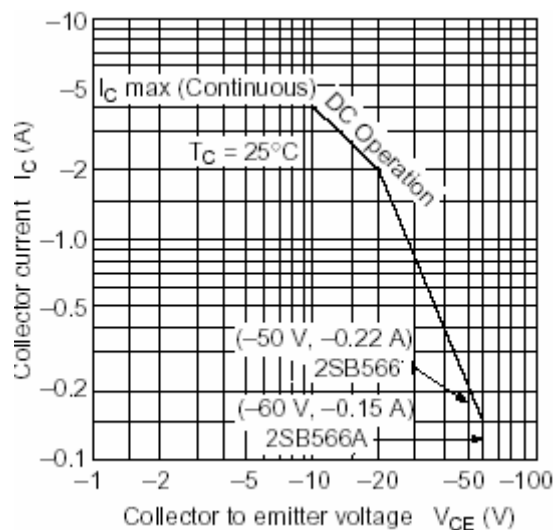


Fig.6 Safe Operating Area

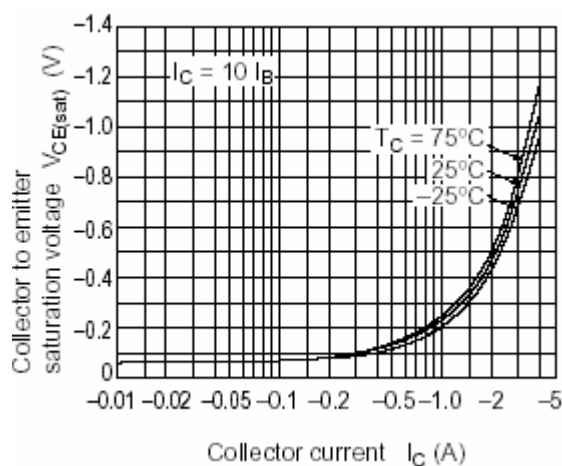


Fig.7 Collector-Emitter Saturation Voltage