

Inchange Semiconductor

Product Specification

Silicon NPN Power Transistors

2SD669 2SD669A

DESCRIPTION

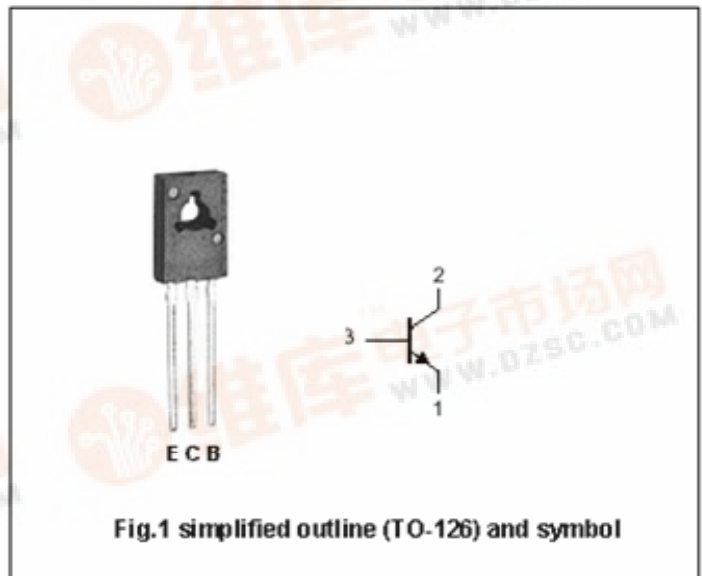
- With TO-126 package
- Complement to type 2SB649/649A
- High breakdown voltage V_{CEO} :120/160V
- High current 1.5A
- Low saturation voltage,excellent h_{FE} linearity

APPLICATIONS

- For low-frequency power amplifier applications

PINNING

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

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

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	2SD669	180	V
		2SD669A	180	
V_{CEO}	Collector-emitter voltage	2SD669	120	V
		2SD669A	160	
V_{EBO}	Emitter-base voltage	Open collector	5	V
I_C	Collector current (DC)		1.5	A
I_{CM}	Collector current-peak		3	A
P_D	Total power dissipation	$T_a=25^\circ\text{C}$	1	W
		$T_c=25^\circ\text{C}$	20	
T_j	Junction temperature		150	
T_{stg}	Storage temperature		-55~150	

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CHARACTERISTICS

Tj=25 unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	2SD669	$I_C=10mA; R_{BE}=\infty$	120			V
		2SD669A		160			
$V_{(BR)CBO}$	Collector-base breakdown voltage	2SD669	$I_C=1mA; I_E=0$	180			V
		2SD669A		180			
$V_{(BR)EBO}$	Emitter-base breakdown voltage		$I_E=1mA; I_C=0$	5			V
V_{CEsat}	Collector-emitter saturation voltage		$I_C=0.5A; I_B=50mA$			1.0	V
V_{BE}	Base-emitter on voltage		$I_C=150mA; V_{CE}=5V$			1.5	V
I_{CBO}	Collector cut-off current		$V_{CB}=160V; I_E=0$			10	μA
h_{FE-1}	DC current gain	2SD669	$I_C=150mA; V_{CE}=5V$	60		320	
		2SD669A		60		200	
h_{FE-2}	DC current gain		$I_C=0.5A; V_{CE}=5V$	30			
f_T	Transition frequency		$I_C=150mA; V_{CE}=5V$		140		MHz
C_{OB}	Collector output capacitance		$f=1MHz; V_{CB}=10V$		14		pF

◆ h_{FE} Classifications

h_{FE-1}	B	C	D
2SB649	60-120	100-200	160-320
2SB649A	60-120	100-200	



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PACKAGE OUTLINE

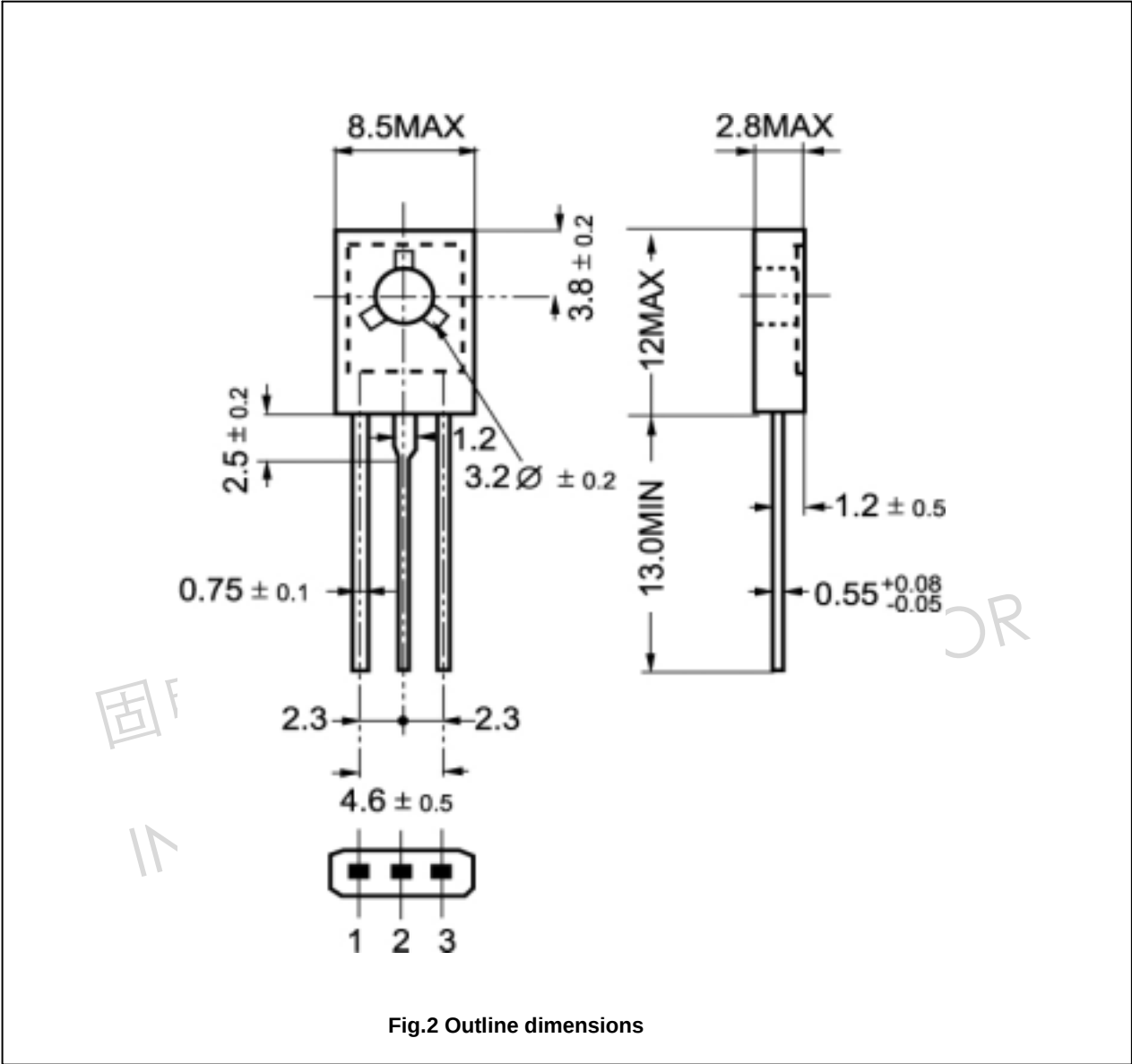


Fig.2 Outline dimensions

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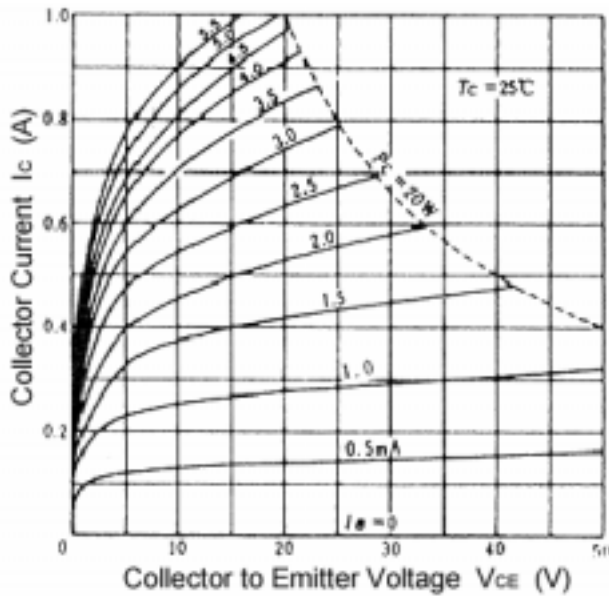


Fig.3 Static Characteristic

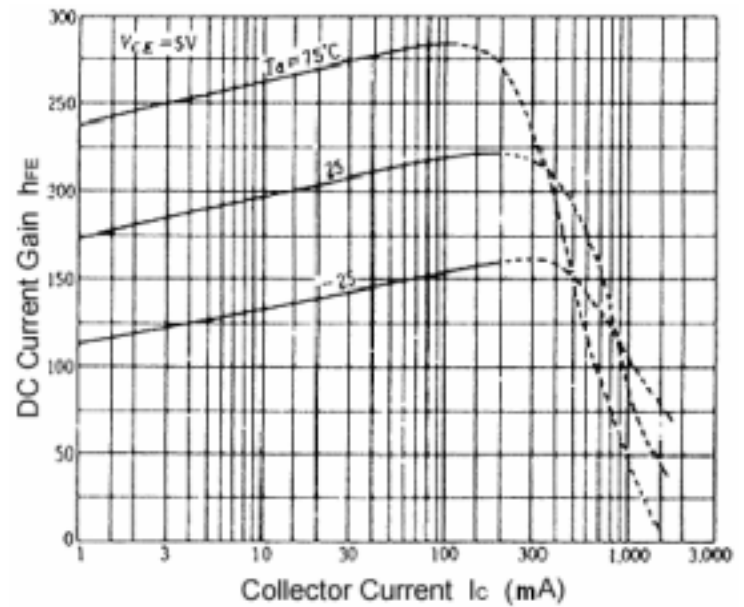


Fig.4 DC current Gain

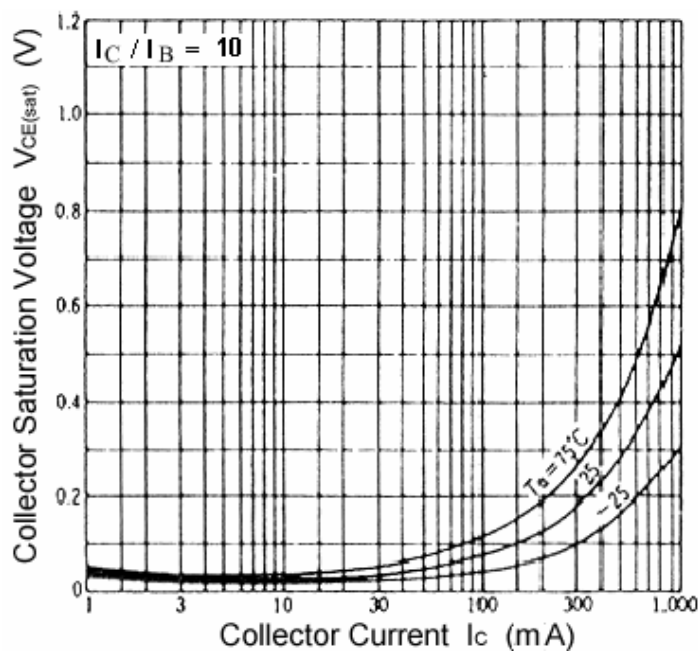


Fig.5 Collector-Emitter Saturation Voltage

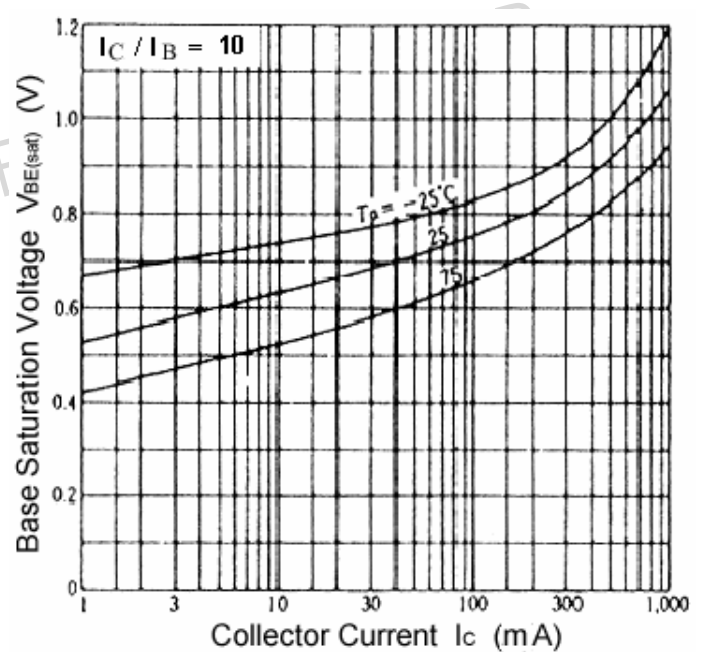


Fig.6 Base-Emitter Saturation Voltage

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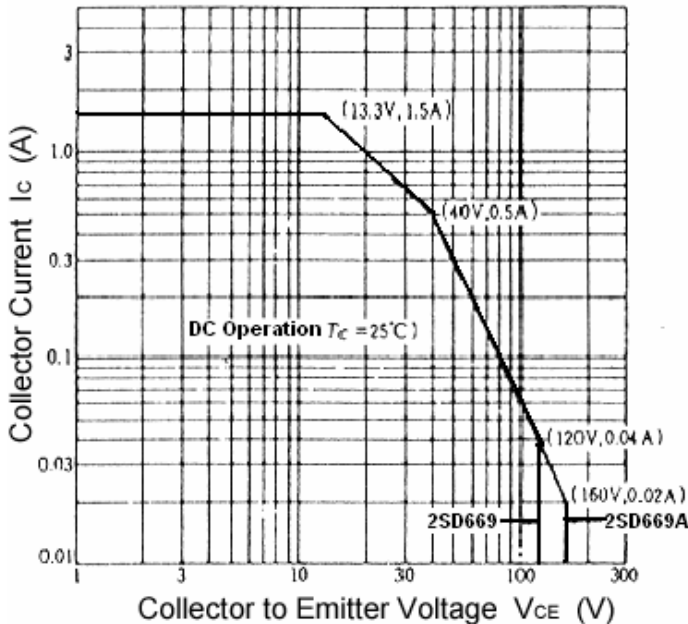


Fig.7 Safe Operating Area

固电半导体
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