Silicon PNP Power Transistors 2SB649 2SB649A

DESCRIPTION

·With TO-126 package
·Complement to type 2SD669/669A
·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

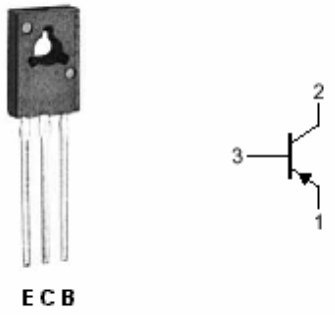

Fig.1 simplified outline (TO-126) and symbol

Absolute maximum ratings(Ta=25□)

SYMBOL	PARAMETER		CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	2SB649	Open emitter	-180	V
		2SB649A		-180	
V_{CEO}	Collector-emitter voltage	2SB649	Open base	-120	V
		2SB649A		-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□	1	W
			T_C=25□	20	
T_j	Junction temperature			150	□
T_{stg}	Storage temperature			-55~150	□

CHARACTERISTICS

Tj=25□ unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	2SB649	I_C=-10mA; R_{BE}=∞	-120			V
		2SB649A		-160			
$V_{(BR)CBO}$	Collector-base breakdown voltage	2SB649	I_C=-1m A ;I_E=0	-180			V
		2SB649A		-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 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	2SB649	I_C=-150mA ; V_{CE}=-5V	60		320	
		2SB649A		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		27		pF

◆ **h_{FE} Classifications**

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

PACKAGE OUTLINE

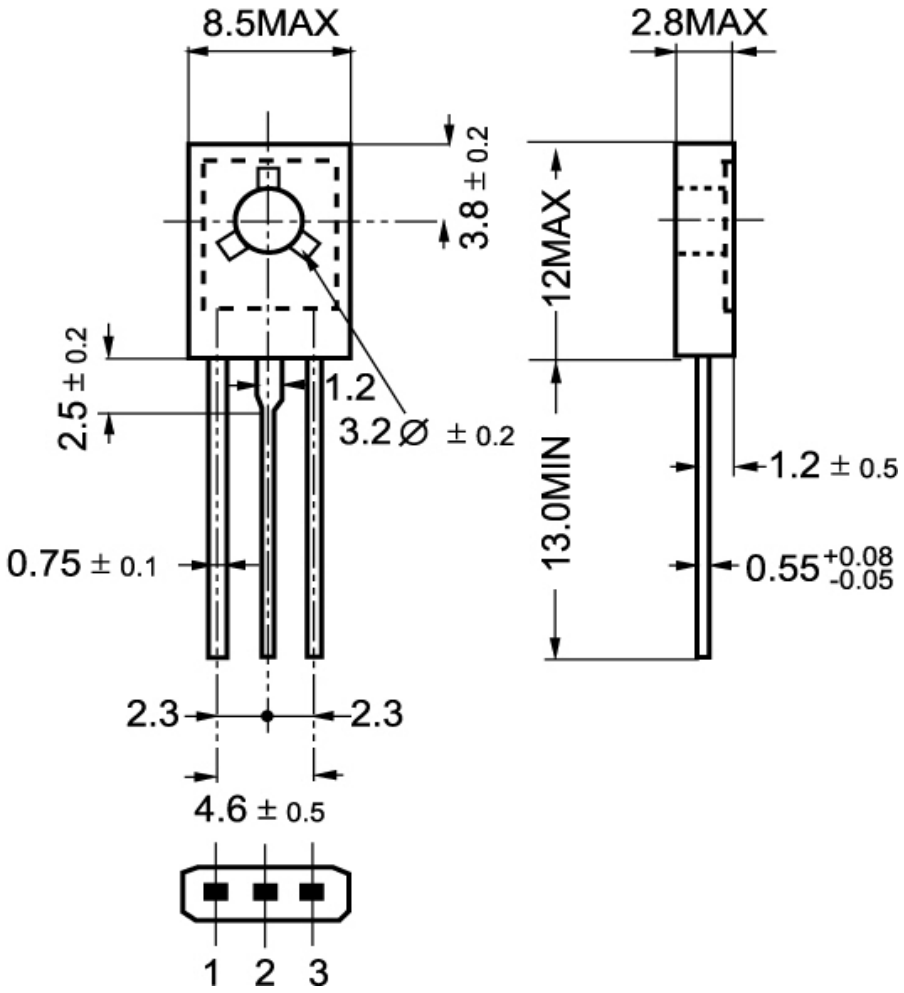

Fig.2 Outline dimensions

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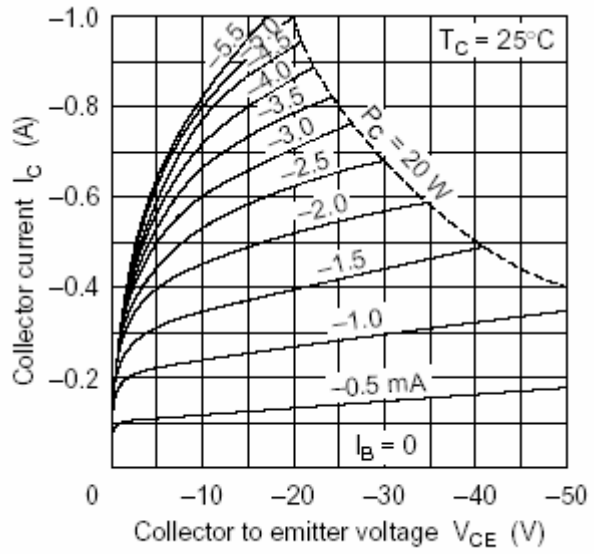

Fig.3 Static Characteristic

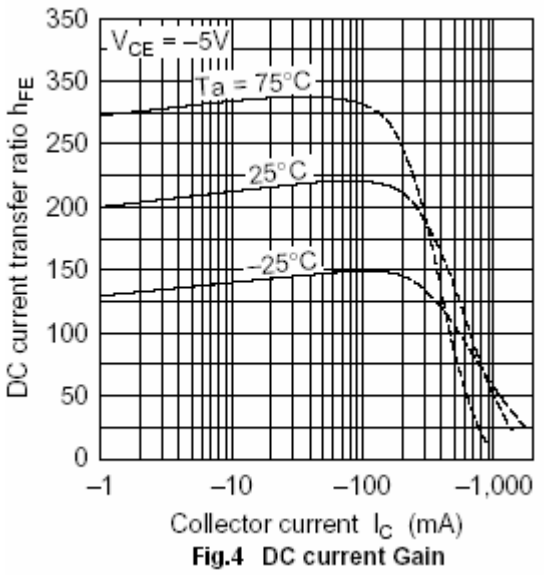

Fig.4 DC current Gain

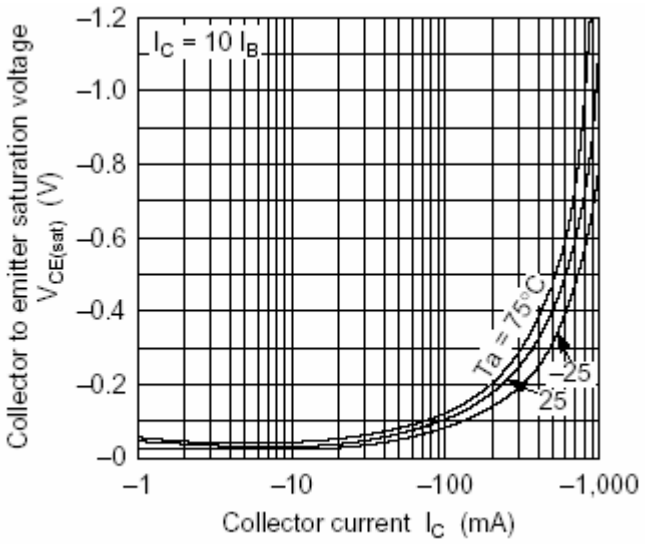

Fig.5 Collector-Emitter Saturation Voltage

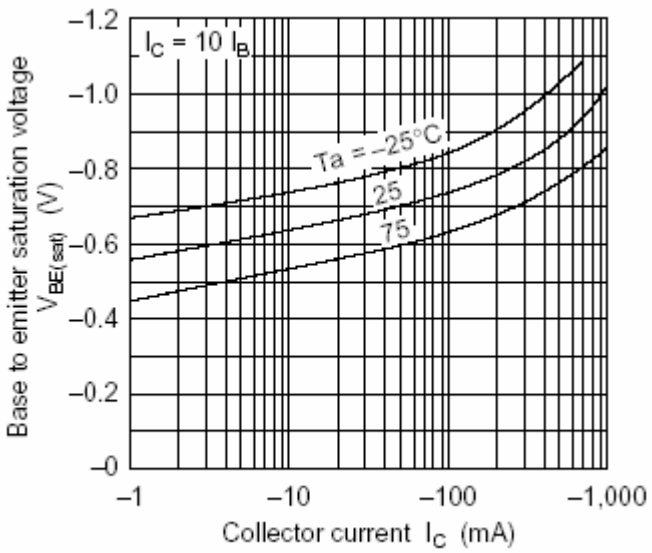

Fig.6 Base-Emitter Saturation Voltage

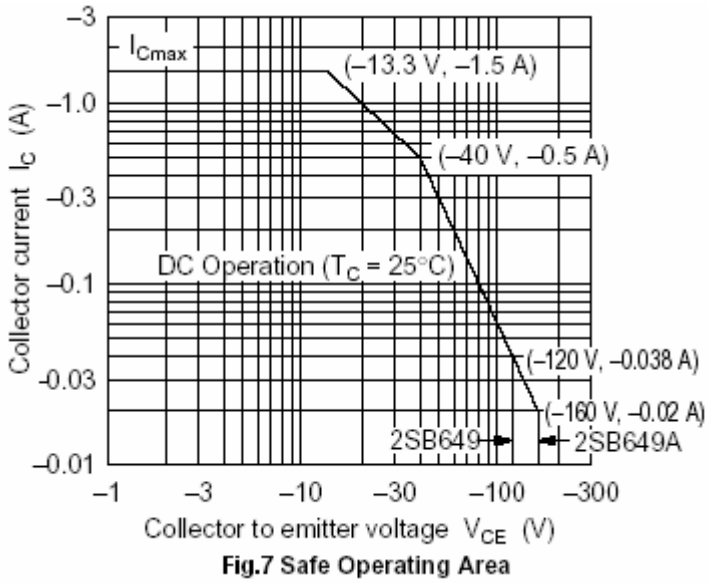

Fig.7 Safe Operating Area