

Silicon PNP Power Transistors

2SB631 2SB631K

DESCRIPTION

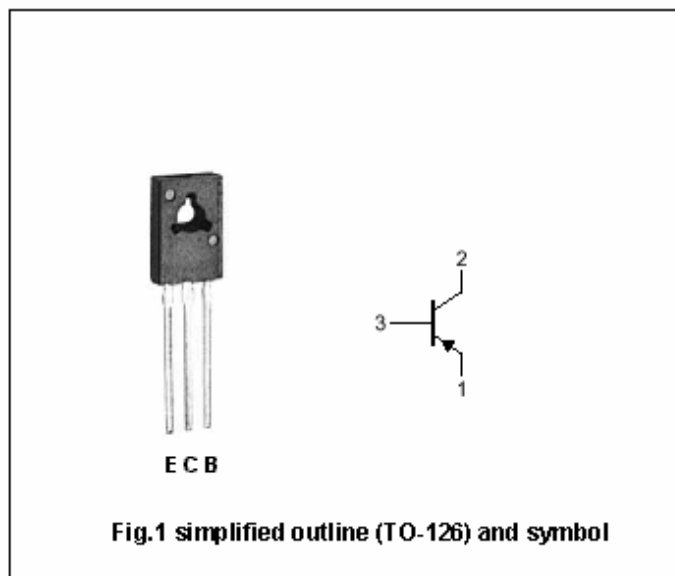
- With TO-126 package
- Complement to type 2SD600/K
- High breakdown voltage V_{CEO} : -100/-120V
- High current: -1A
- Low saturation voltage, excellent h_{FE} linearity

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	2SB631	Open emitter	-100	V
		2SB631K		-120	
V_{CEO}	Collector-emitter voltage	2SB631	Open base	-100	V
		2SB631K		-120	
V_{EBO}	Emitter-base voltage		Open collector	-5	V
I_C	Collector current (DC)			-1	A
I_{CM}	Collector current-Peak			-2	A
P_D	Total power dissipation		$T_a=25^\circ\text{C}$	1	W
			$T_c=25^\circ\text{C}$	8	
T_j	Junction temperature			150	$^\circ\text{C}$
T_{stg}	Storage temperature			-55~150	$^\circ\text{C}$

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CHARACTERISTICS

T_j=25°C unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-emitter breakdown voltage	2SB631	I _C =-1mA; R _{BE} =∞	-100			V
		2SB631K		-120			
V _{(BR)CBO}	Collector-base breakdown voltage	2SB631	I _C =-10μA; I _E =0	-100			V
		2SB631K		-120			
V _{(BR)EBO}	Emitter-base breakdown voltage		I _E =-10μA; I _C =0	-5			V
V _{CEsat}	Collector-emitter saturation voltage		I _C =-0.5A; I _B =-50mA			-0.4	V
V _{BEsat}	Base-emitter saturation voltage		I _C =-0.5A; I _B =-50mA			-1.2	V
I _{CBO}	Collector cut-off current		V _{CB} =-50V; I _E =0			-1	μA
I _{EBO}	Emitter cut-off current		V _{EB} =-4V; I _C =0			-1	μA
h _{FE-1}	DC current gain		I _C =-50mA; V _{CE} =-5V	60		320	
h _{FE-2}	DC current gain		I _C =-0.5A; V _{CE} =-5V	20			
f _T	Transition frequency		I _C =-50mA; V _{CE} =-10V		110		MHz
C _{OB}	Collector output capacitance		f=1MHz; V _{CB} =-10V		30		pF

Switching times

t _f	Fall time	I _C =-500mA; V _{CE} =-12V I _{B1} =-I _{B2} =-50mA		0.08		μs
t _{off}	Turn-off time			0.10		μs
t _{stg}	Storage time			0.60		μs

◆ h_{FE-1} Classifications

D	E	F
60-120	100-200	160-320

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PACKAGE OUTLINE

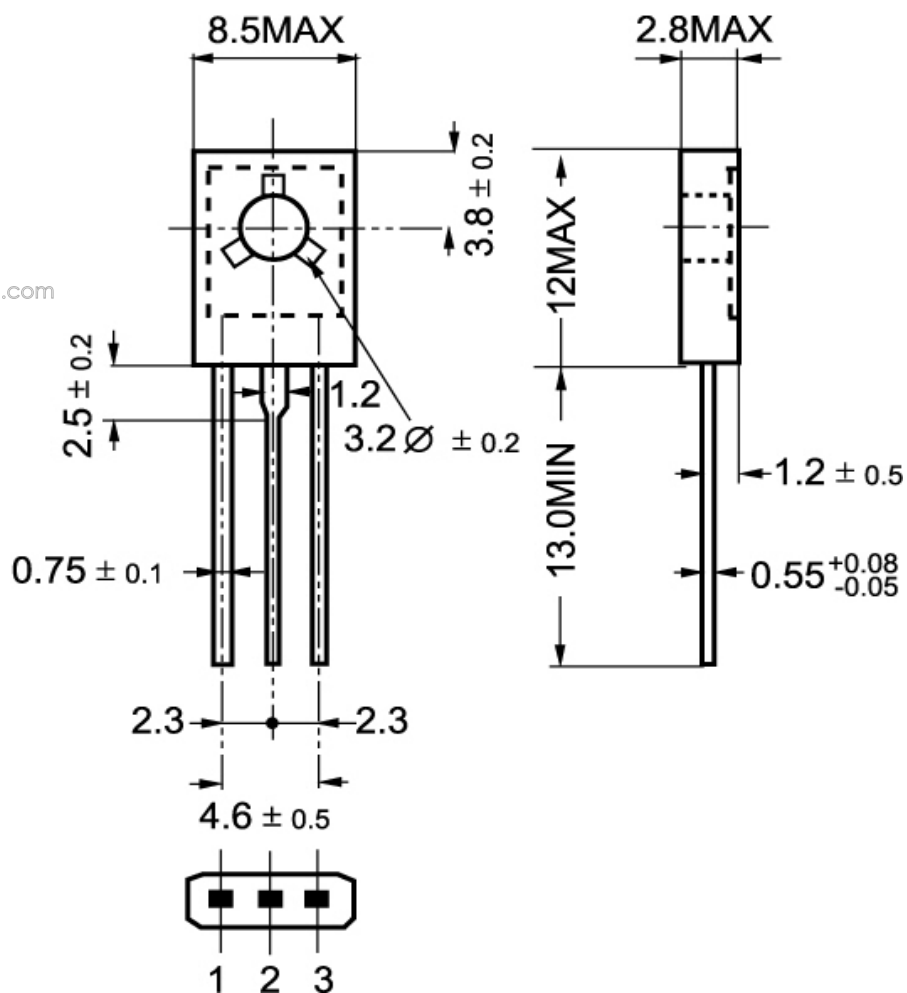


Fig.2 Outline dimensions

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