

Silicon NPN Power Transistors

2SD600 2SD600K

DESCRIPTION

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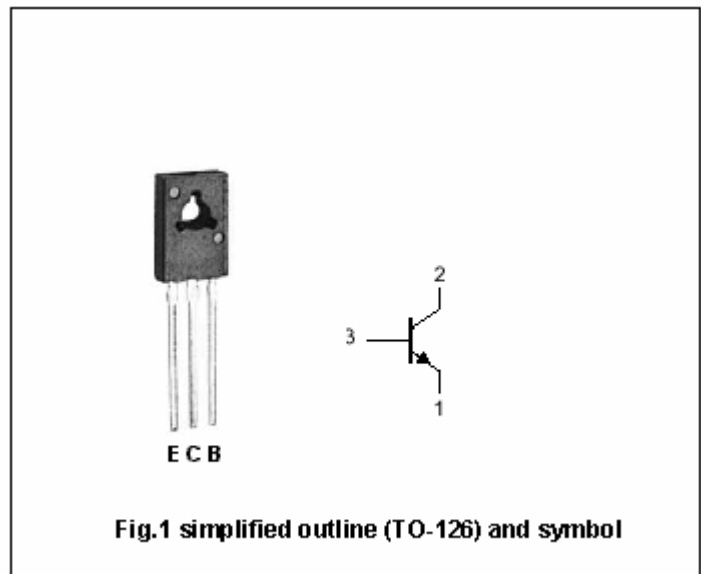
- With TO-126 package
- Complement to type 2SB631/631K
- High breakdown voltage V_{CE0} 100/120V
- High current 1A
- Low saturation voltage

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	2SD600	100	V
		2SD600K	120	
V_{CEO}	Collector-emitter voltage	2SD600	100	V
		2SD600K	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

Tj=25°C unless otherwise specified

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SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	2SD600	$I_C=1mA; R_{BE}=\infty$	100			V
		2SD600K		120			
$V_{(BR)CBO}$	Collector-base breakdown voltage	2SD600	$I_C=10\mu A; I_E=0$	100			V
		2SD600K		120			
$V_{(BR)EBO}$	Emitter-base breakdown voltage		$I_E=10\mu A; I_C=0$	5			V
V_{CEsat}	Collector-emitter saturation voltage		$I_C=0.5A; I_B=50mA$			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		$I_C=50mA; V_{CE}=10V$		130		MHz
C_{OB}	Collector output capacitance		$f=1MHz; V_{CB}=10V$		20		pF

Switching times

t_f	Fall time	$I_C=500mA; V_{CE}=12V$ $I_{B1}=-I_{B2}=50mA$		0.1		μs
t_{off}	Turn-off time			0.5		μs
t_{stg}	Storage time			0.7		μs

◆ h_{FE-1} Classifications

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

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PACKAGE OUTLINE

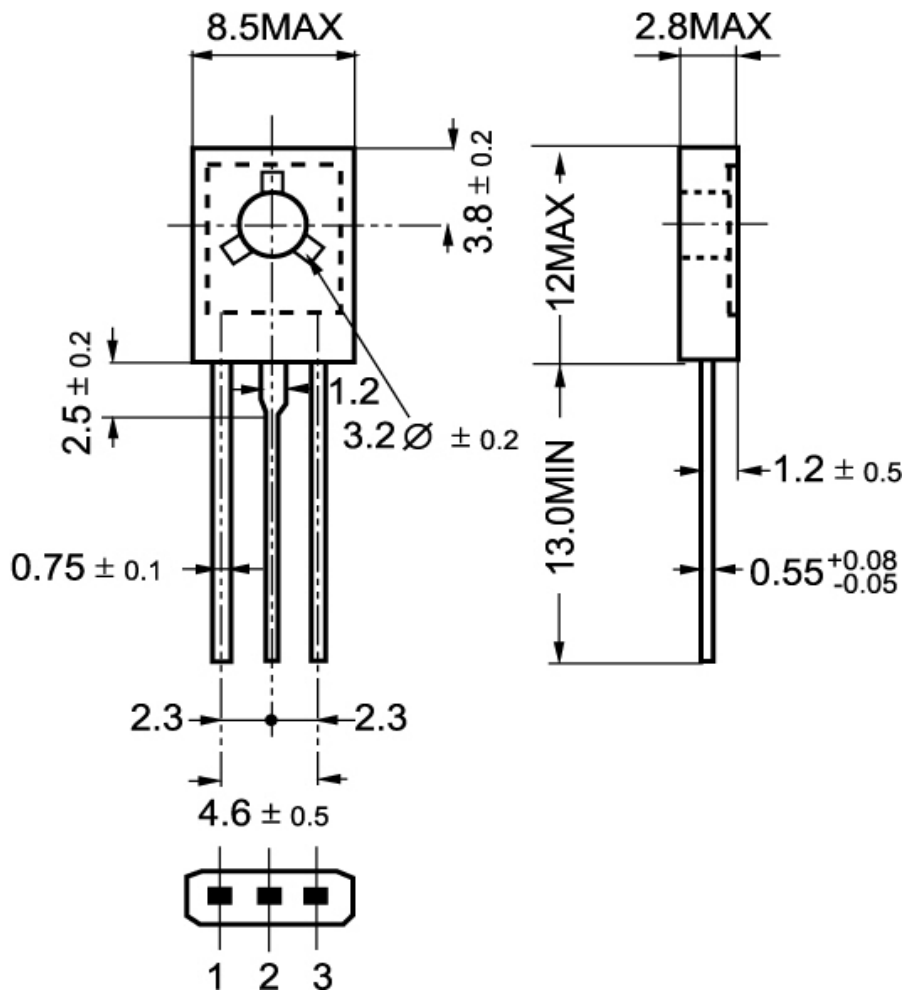
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Fig.2 Outline dimensions

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