

Silicon NPN Power Transistors

2SD1691

DESCRIPTION

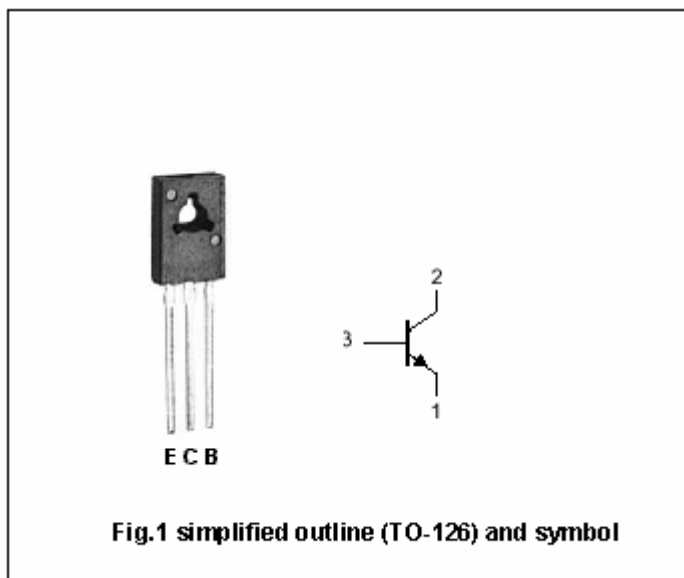
- With TO-126 package
- Complement to type 2SB1151
- Low saturation voltage
- High total power dissipation: $P_T=1.3W$
- Large current capability and wide SOA

APPLICATIONS

- DC-DC converter
- Driver of solenoid or motor

PINNING

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



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

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	60	V
V_{CEO}	Collector-emitter voltage	Open base	60	V
V_{EBO}	Emitter-base voltage	Open collector	7	V
I_C	Collector current (DC)		5	A
I_{CM}	Collector current-Peak		8	A
I_B	Base current		1	A
P_D	Total power dissipation	$T_a=25^\circ C$	1.3	W
		$T_C=25^\circ C$	20	
T_j	Junction temperature		150	$^\circ C$
T_{stg}	Storage temperature		-55~150	$^\circ C$

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CHARACTERISTICS

T_j=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEsat}	Collector-emitter saturation voltage	I _C =2.0A ; I _B =0.2A			0.3	V
V _{BEsat}	Base-emitter saturation voltage	I _C =2.0A ; I _B =0.2A			1.2	V
I _{CBO}	Collector cut-off current	V _{CB} =50V; I _E =0			10	μA
I _{EBO}	Emitter cut-off current	V _{EB} =7V; I _C =0			10	μA
h _{FE-1}	DC current gain	I _C =0.1A ; V _{CE} =1V	60			
h _{FE-2}	DC current gain	I _C =2A ; V _{CE} =1V	100		400	
h _{FE-3}	DC current gain	I _C =5A ; V _{CE} =1V	50			
t _{on}	Turn-on time	I _C =2A; I _{B1} =-I _{B2} =0.2A R _L =5.0Ω; V _{CC} ≈10V		0.2	1.0	μs
t _{stg}	Storage time			1.1	2.5	μs
t _f	Fall time			0.2	1.0	μs

◆ h_{FE-2} Classifications

M	L	K
100-200	160-320	200-400

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PACKAGE OUTLINE

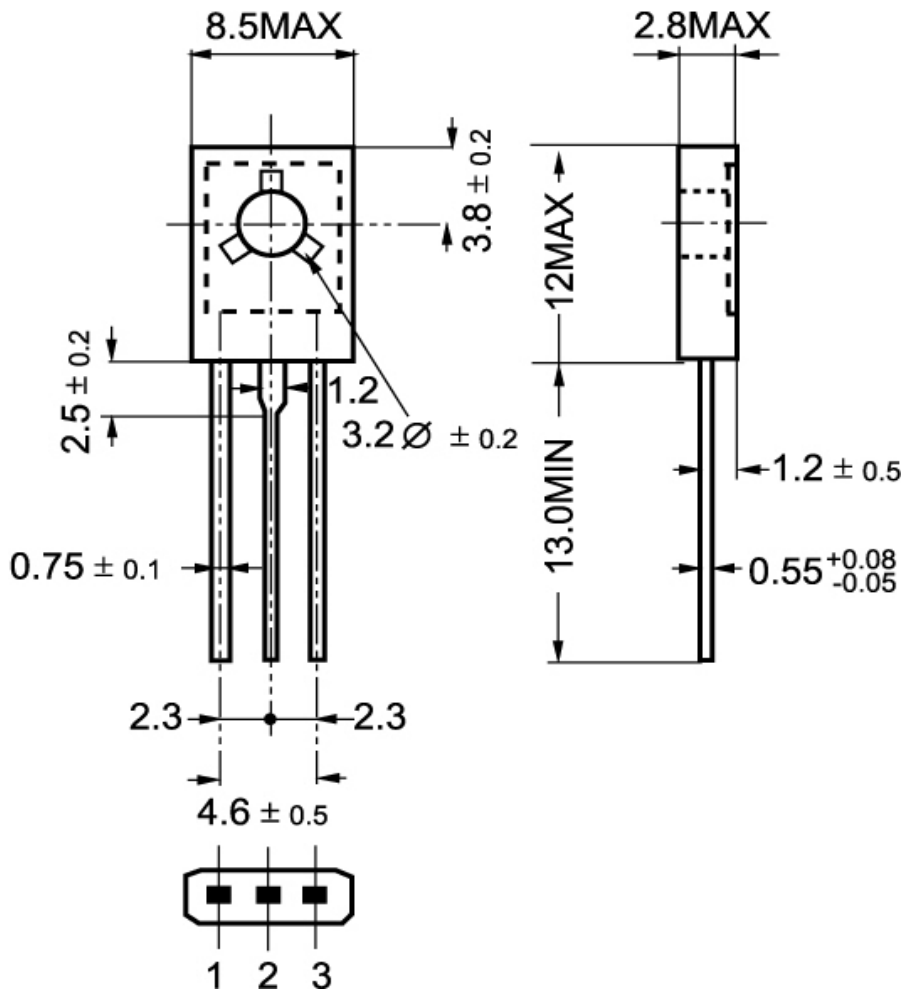


Fig.2 Outline dimensions