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

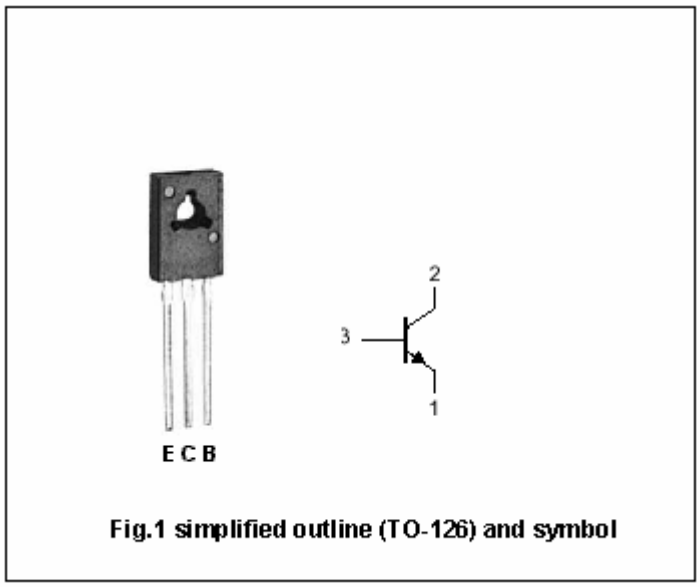

Fig.1 simplified outline (TO-126) and symbol

PINNING

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

Absolute maximum ratings(Ta=25□)

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□	1.3	W
		T_C=25□	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_{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

PACKAGE OUTLINE

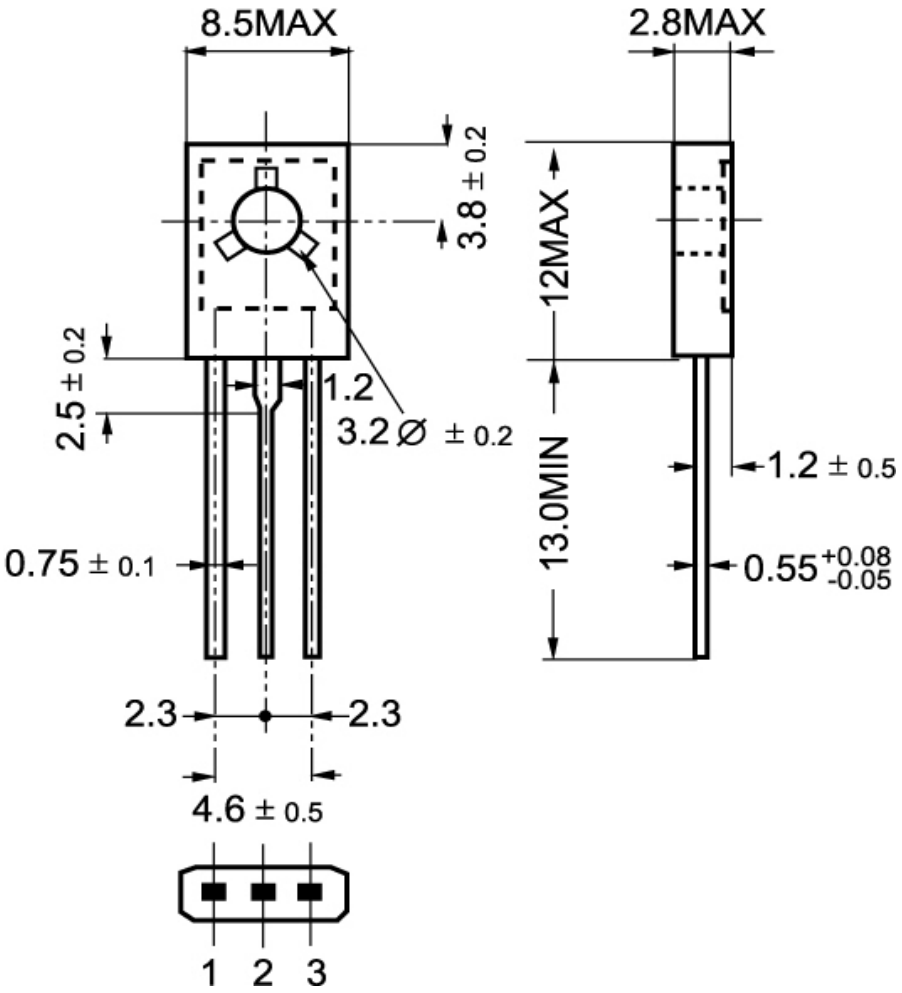

Fig.2 Outline dimensions