

**Silicon NPN Power Transistors**

**2N5190 2N5191 2N5192**

**DESCRIPTION**

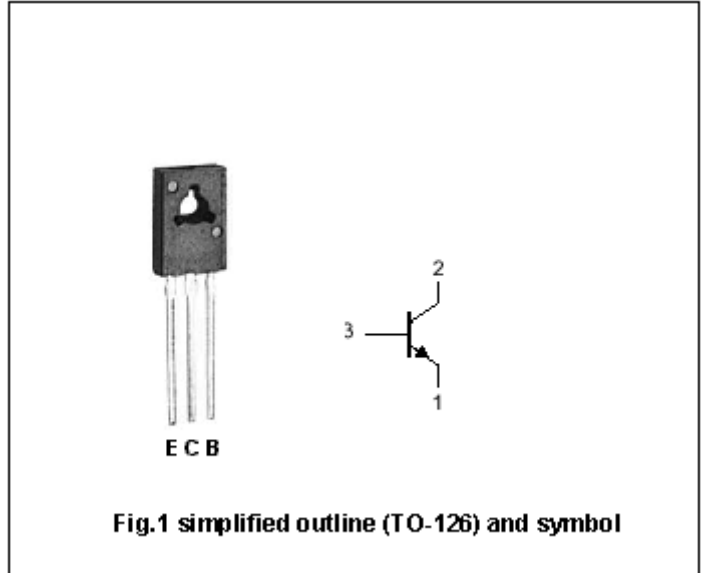
- With TO-126 package
- Complement to type 2N5193,2N5194,2N5195
- Excellent safe operating area

**APPLICATIONS**

- For use in medium power linear and switching applications

**PINNING**

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



**Absolute maximum ratings(Ta=25 )**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CB0</sub>	Collector-base voltage	2N5190	40	V
		2N5191	60	
		2N5192	80	
V <sub>CEO</sub>	Collector-emitter voltage	2N5190	40	V
		2N5191	60	
		2N5192	80	
V <sub>EBO</sub>	Emitter-base voltage	Open collector	5	V
I <sub>C</sub>	Collector current		4	A
I <sub>CM</sub>	Collector current-Peak		7	A
I <sub>B</sub>	Base current		1	A
P <sub>D</sub>	Total power dissipation	T <sub>C</sub> =25	40	W
T <sub>j</sub>	Junction temperature		150	
T <sub>stg</sub>	Storage temperature		-65~150	

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	VALUE	UNIT
R <sub>th j-c</sub>	Thermal resistance junction to case	3.12	/W

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## CHARACTERISTICS

T<sub>j</sub>=25 unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CEO</sub>	Collector-emitter sustaining voltage	2N5190	I <sub>C</sub> =0.1A; I <sub>B</sub> =0			V
		2N5191				
		2N5192				
V <sub>CEsat-1</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =1.5A; I <sub>B</sub> =0.15A			0.6	V
V <sub>CEsat-2</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =4A; I <sub>B</sub> =1A			1.4	V
V <sub>BE</sub>	Emitter-base on voltage	I <sub>C</sub> =1.5A; V <sub>CE</sub> =2V			1.2	V
I <sub>CEO</sub>	Collector cut-off current	2N5190			1.0	mA
		2N5191				
		2N5192				
I <sub>CBO</sub>	Collector cut-off current	2N5190			0.1	mA
		2N5191				
		2N5192				
I <sub>CEX</sub>	Collector cut-off current	2N5190			0.1	mA
		2N5191			2.0	
		2N5192			0.1	
					2.0	
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =5V; I <sub>C</sub> =0			1.0	mA
h <sub>FE-1</sub>	DC current gain	2N5190	I <sub>C</sub> =1.5A; V <sub>CE</sub> =2V		25	100
		2N5191				
		2N5192				
h <sub>FE-2</sub>	DC current gain	2N5190	I <sub>C</sub> =4A; V <sub>CE</sub> =2V		10	
		2N5191				
		2N5192				
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =1A; V <sub>CE</sub> =10V; f=1MHz	2			MHz

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PACKAGE OUTLINE

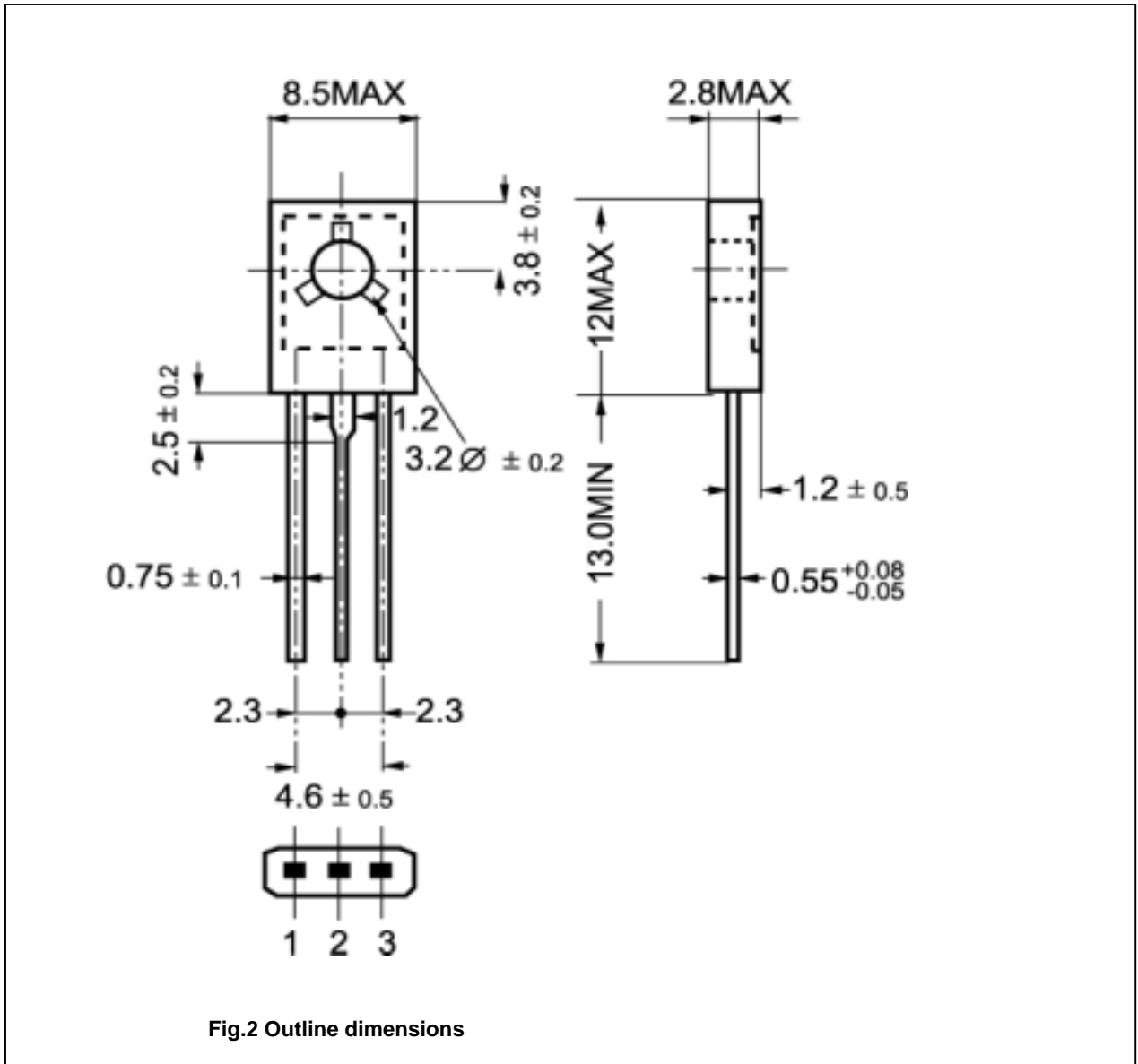


Fig.2 Outline dimensions