

**Inchange Semiconductor**

**Product Specification**

**Silicon PNP Power Transistors**

**2N5193 2N5194 2N5195**

**DESCRIPTION**

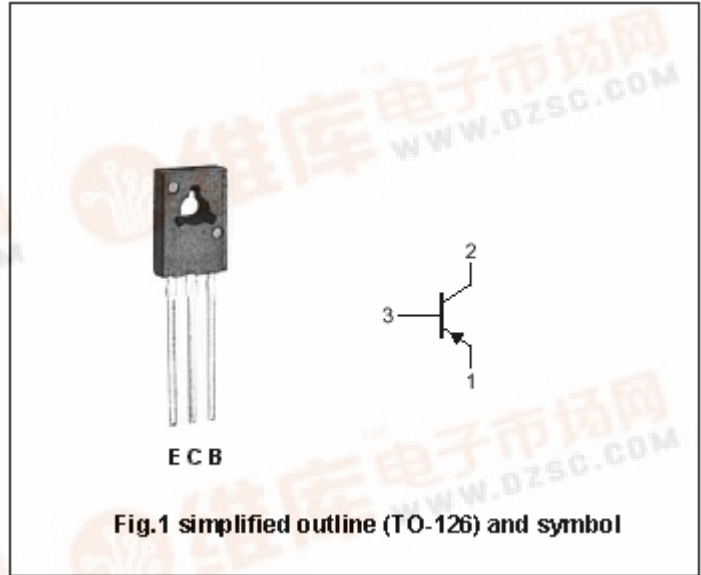
- With TO-126 package
- Complement to type 2N5190/5191/5192
- Excellent safe operating area

**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>CBO</sub>	Collector-base voltage	2N5193	-40	V
		2N5194	-60	
		2N5195	-80	
V <sub>CEO</sub>	Collector-emitter voltage	2N5193	-40	V
		2N5194	-60	
		2N5195	-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(SUS)</sub>	Collector-emitter sustaining voltage	2N5193	I <sub>C</sub> =-0.1A; I <sub>B</sub> =0	-40		V		
		2N5194		-60				
		2N5195		-80				
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			-1.2	V		
V <sub>BE</sub>	Base-emitter on voltage	I <sub>C</sub> =-1.5A; V <sub>CE</sub> =-2V			-1.2	V		
I <sub>CEO</sub>	Collector cut-off current	2N5193	V <sub>CE</sub> =-40V; I <sub>B</sub> =0			-1.0	mA	
		2N5194		V <sub>CE</sub> =-60V; I <sub>B</sub> =0				
		2N5195		V <sub>CE</sub> =-80V; I <sub>B</sub> =0				
I <sub>CBO</sub>	Collector cut-off current	2N5193	V <sub>CB</sub> =-40V; I <sub>E</sub> =0			-0.1	mA	
		2N5194		V <sub>CB</sub> =-60V; I <sub>E</sub> =0				
		2N5195		V <sub>CB</sub> =-80V; I <sub>E</sub> =0				
I <sub>CEX</sub>	Collector cut-off current	2N5193	V <sub>CE</sub> =-40V; V <sub>BE(off)</sub> =-1.5V T <sub>C</sub> =125			-0.1	mA	
		2N5194		V <sub>CE</sub> =-60V; V <sub>BE(off)</sub> =-1.5V T <sub>C</sub> =125				-0.1
		2N5195		V <sub>CE</sub> =-80V; V <sub>BE(off)</sub> =-1.5V T <sub>C</sub> =125				-0.1
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	2N5193	I <sub>C</sub> =-1.5A; V <sub>CE</sub> =-2V	25		100		
		2N5194						
		2N5195						20
h <sub>FE-2</sub>	DC current gain	2N5193	I <sub>C</sub> =-4A; V <sub>CE</sub> =-2V	10				
		2N5194						
		2N5195						7
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

