

**Silicon NPN Power Transistors**

**2N4921 2N4922 2N4923**

**DESCRIPTION**

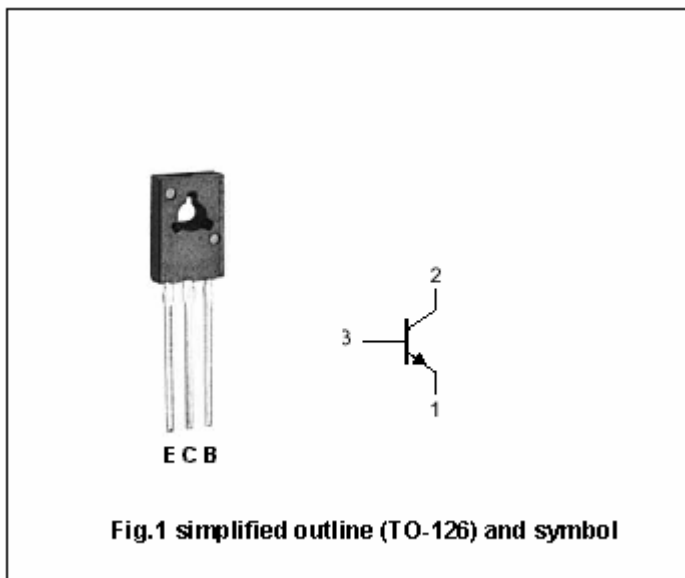
- With TO-126 package
- Complement to type 2N4918/4919/4920
- Excellent safe operating area
- Low collector saturation voltage

**APPLICATIONS**

- For driver circuits ,switching ,and amplifier applications

**PINNING**

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



**Absolute maximum ratings(Ta=25°C)**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	2N4921	40	V
		2N4922	60	
		2N4923	80	
V <sub>CEO</sub>	Collector-emitter voltage	2N4921	40	V
		2N4922	60	
		2N4923	80	
V <sub>EBO</sub>	Emitter-base voltage	Open collector	5	V
I <sub>C</sub>	Collector current		1	A
I <sub>CM</sub>	Collector current-Peak		3	A
I <sub>B</sub>	Base current		1	A
P <sub>D</sub>	Total power dissipation	T <sub>C</sub> =25°C	30	W
T <sub>j</sub>	Junction temperature		150	°C
T <sub>stg</sub>	Storage temperature		-65~150	°C

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	VALUE	UNIT
R <sub>th j-c</sub>	Thermal resistance junction to case	4.16	°C/W

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## CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT	
V <sub>CE0(SUS)</sub>	Collector-emitter sustaining voltage	2N4921	40			V	
		2N4922	60				
		2N4923	80				
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =1.0A ; I <sub>B</sub> =0.1A			0.6	V	
V <sub>BEsat</sub>	Base-emitter saturation voltage	I <sub>C</sub> =1.0A ; I <sub>B</sub> =0.1A			1.3	V	
V <sub>BE</sub>	Base-emitter on voltage	I <sub>C</sub> =1A ; V <sub>CE</sub> =1V			1.3	V	
I <sub>CEO</sub>	Collector cut-off current	2N4921	V <sub>CE</sub> =20V ; I <sub>B</sub> =0			0.5	mA
		2N4922	V <sub>CE</sub> =30V ; I <sub>B</sub> =0				
		2N4923	V <sub>CE</sub> =40V ; I <sub>B</sub> =0				
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> = Rated V <sub>CBO</sub> ; I <sub>E</sub> =0			0.1	mA	
I <sub>CEx</sub>	Collector cut-off current	V <sub>CE</sub> = Rated V <sub>CE0</sub> ; V <sub>BE(off)</sub> =1.5V T <sub>C</sub> =125°C			0.1 0.5	mA	
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	I <sub>C</sub> =50mA ; V <sub>CE</sub> =1V	40				
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =500mA ; V <sub>CE</sub> =1V	30		150		
h <sub>FE-3</sub>	DC current gain	I <sub>C</sub> =1A ; V <sub>CE</sub> =1V	10				
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =250mA ; V <sub>CE</sub> =10V ; f=1MHz	3.0			MHz	
C <sub>OB</sub>	Output capacitance	f=100kHz ; V <sub>CB</sub> =10V ; I <sub>E</sub> =0			100	pF	

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PACKAGE OUTLINE

