

**Inchange Semiconductor**

**Product Specification**

**Silicon NPN Power Transistors**

**2N4921 2N4922 2N4923**

**DESCRIPTION**

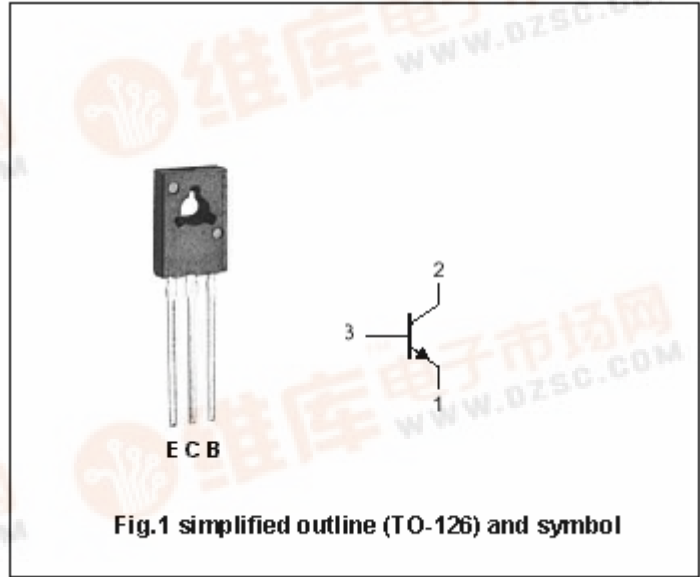
- With TO-126 package
- Complement to type 2N4918/4919/4920
- Excellent safe operating area
- Low collector saturation voltage

**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 )**

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	30	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	4.16	/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	2N4921	I <sub>C</sub> =0.1A; I <sub>B</sub> =0	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>CEO</sub> ; V <sub>BE(off)</sub> =1.5V T <sub>C</sub> =125			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

