

**Inchange Semiconductor**

**Product Specification**

**Silicon NPN Power Transistors**

**2N6470 2N6471 2N6472**

**DESCRIPTION**

- With TO-3 package
- Low collector saturation voltage
- Excellent safe operating area
- High gain at high current

**APPLICATIONS**

- General-purpose types of switching and linear-amplifier applications

**PINNING**

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector



Fig.1 simplified outline (TO-3) and symbol

**Absolute maximum ratings(Ta= )**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	2N6470	50	V
		2N6471	70	
		2N6472	90	
V <sub>CEO</sub>	Collector-emitter voltage	2N6470	40	V
		2N6471	60	
		2N6472	80	
V <sub>EBO</sub>	Emitter-base voltage	Open collector	5	V
I <sub>C</sub>	Collector current		15	A
I <sub>B</sub>	Base current		5	A
P <sub>T</sub>	Total power dissipation	T <sub>C</sub> =25	125	W
T <sub>j</sub>	Junction temperature		150	
T <sub>stg</sub>	Storage temperature		-65~200	

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	VALUE	UNIT
R <sub>thjc</sub>	Thermal resistance junction to case	1.4	/W



## Silicon NPN Power Transistors

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## CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CE0(SUS)</sub>	Collector-emitter sustaining voltage	2N6470	40			V
		2N6471	60			
		2N6472	80			
V <sub>CEsat-1</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =5A; I <sub>B</sub> =0.5A			1.3	V
V <sub>CEsat-2</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =15A; I <sub>B</sub> =3A			3.5	V
V <sub>BE</sub>	Base-emitter on voltage	I <sub>C</sub> =15A; V <sub>CE</sub> =4V			3.5	V
I <sub>CEO</sub>	Collector cut-off current	V <sub>CE</sub> =1/2Rated V <sub>CE0</sub> ; I <sub>B</sub> =0			1.0	mA
I <sub>CEx</sub>	Collector cut-off current	V <sub>CE</sub> = Rated V <sub>CE0</sub> ; V <sub>BE</sub> =-1.5V T <sub>C</sub> =150			0.2 5.0	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> =5A; V <sub>CE</sub> =4V	20		150	
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =15A; V <sub>CE</sub> =4V	5			
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =0.5A; V <sub>CE</sub> =10V	4			

PACKAGE OUTLINE

