

## Silicon NPN Power Transistors

## 2N5881 2N5882

## DESCRIPTION

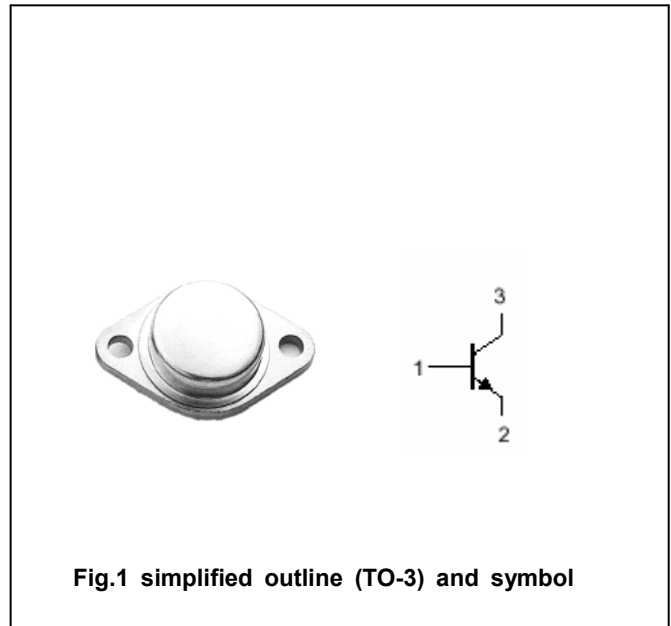
- With TO-3 package
- Low collector saturation voltage
- Complement to type 2N5879 2N5880

## APPLICATIONS

- For general-purpose power amplifier and switching applications

## PINNING

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

Absolute maximum ratings( $T_a = \square$ )

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	2N5881	60	V
		2N5882	80	
$V_{CEO}$	Collector-emitter voltage	2N5881	60	V
		2N5882	80	
$V_{EBO}$	Emitter-base voltage	Open collector	5	V
$I_C$	Collector current		15	A
$I_{CM}$	Collector current-peak		30	A
$I_B$	Base current		5	A
$P_D$	Total Power Dissipation	$T_C = 25 \square$	160	W
$T_j$	Junction temperature		150	$\square$
$T_{stg}$	Storage temperature		-65~200	$\square$

## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
$R_{th\ j-c}$	Thermal resistance junction to case	1.1	$\square/W$

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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	2N5881	I <sub>C</sub> =0.2A ; I <sub>B</sub> =0	60			V
		2N5882		80			
V <sub>CEsat-1</sub>	Collector-emitter saturation voltage		I <sub>C</sub> =7A; I <sub>B</sub> =0.7A			1.0	V
V <sub>CEsat-2</sub>	Collector-emitter saturation voltage		I <sub>C</sub> =15A; I <sub>B</sub> =3.75A			4.0	V
V <sub>BEsat</sub>	Base-emitter saturation voltage		I <sub>C</sub> =15A; I <sub>B</sub> =3.75A			2.5	V
V <sub>BE</sub>	Base-emitter on voltage		I <sub>C</sub> =6A ; V <sub>CE</sub> =4V			1.5	V
I <sub>CBO</sub>	Collector cut-off current		V <sub>CB</sub> =ratedV <sub>CBO</sub> ; I <sub>B</sub> =0			0.5	mA
I <sub>CEO</sub>	Collector cut-off current	2N5881	V <sub>CE</sub> =30V; I <sub>B</sub> =0			1.0	mA
		2N5882	V <sub>CE</sub> =40V; I <sub>B</sub> =0				
I <sub>CEX</sub>	Collector cut-off current		V <sub>CE</sub> =ratedV <sub>CE</sub> ; V <sub>BE</sub> =1.5V T <sub>C</sub> =150°C			0.5 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> =2A ; V <sub>CE</sub> =4V	35			
h <sub>FE-2</sub>	DC current gain		I <sub>C</sub> =6A ; V <sub>CE</sub> =4V	20		100	
h <sub>FE-3</sub>	DC current gain		I <sub>C</sub> =15A ; V <sub>CE</sub> =4V	4			
f <sub>T</sub>	Transistion frequency		I <sub>C</sub> =1A ; V <sub>CE</sub> =10V	4			MHz

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PACKAGE OUTLINE

