

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



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

Absolute maximum ratings($T_a = \square$)

SYMBOL	PARAMETER		CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	2N5881	Open emitter	60	V
		2N5882		80	
V_{CEO}	Collector-emitter voltage	2N5881	Open base	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_j=25°C unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CE0(SUS)}	Collector-emitter sustaining voltage	2N5881	I _C =0.2A ; I _B =0	60			V
		2N5882		80			
V _{CEsat-1}	Collector-emitter saturation voltage		I _C =7A; I _B =0.7A			1.0	V
V _{CEsat-2}	Collector-emitter saturation voltage		I _C =15A; I _B =3.75A			4.0	V
V _{BEsat}	Base-emitter saturation voltage		I _C =15A; I _B =3.75A			2.5	V
V _{BE}	Base-emitter on voltage		I _C =6A ; V _{CE} =4V			1.5	V
I _{CBO}	Collector cut-off current		V _{CB} =ratedV _{CBO} ; I _B =0			0.5	mA
I _{CEO}	Collector cut-off current	2N5881	V _{CE} =30V; I _B =0			1.0	mA
		2N5882	V _{CE} =40V; I _B =0				
I _{CEx}	Collector cut-off current		V _{CE} =ratedV _{CE} ; V _{BE} =1.5V T _C =150°C			0.5 5.0	mA
I _{EBO}	Emitter cut-off current		V _{EB} =5V; I _C =0			1.0	mA
h _{FE-1}	DC current gain		I _C =2A ; V _{CE} =4V	35			
h _{FE-2}	DC current gain		I _C =6A ; V _{CE} =4V	20		100	
h _{FE-3}	DC current gain		I _C =15A ; V _{CE} =4V	4			
f _T	Transistion frequency		I _C =1A ; V _{CE} =10V	4			MHz

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PACKAGE OUTLINE

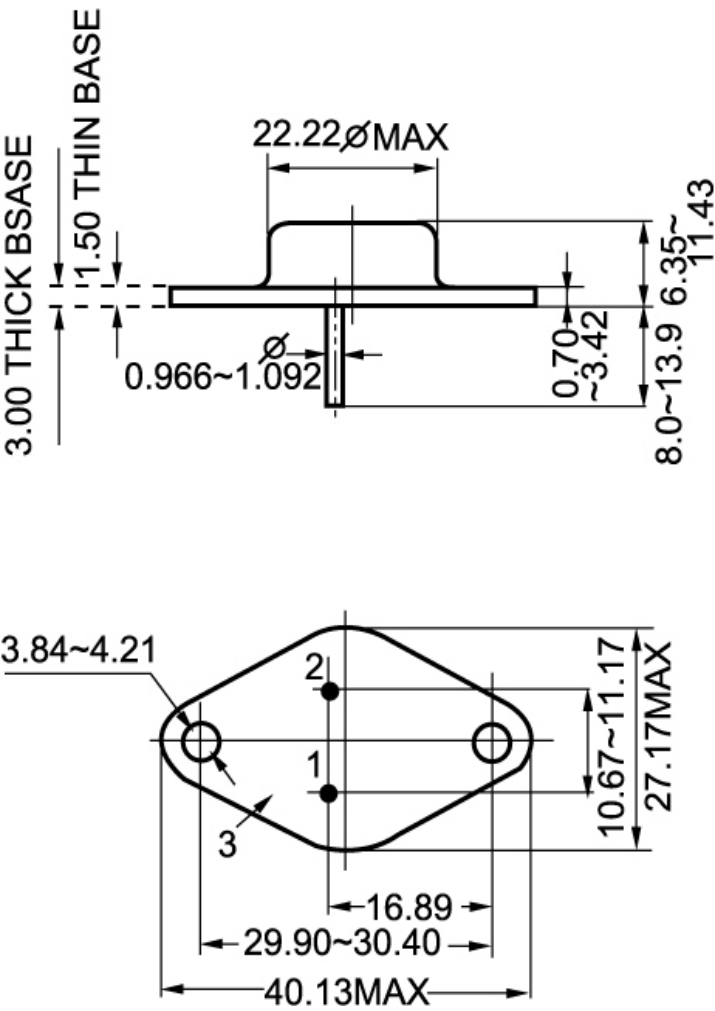


Fig.2 outline dimensions (unindicated tolerance:±0.10mm)