

Silicon NPN Power Transistors

2N5631

DESCRIPTION

- With TO-3 package
- Complement to type 2N6031
- High collector-emitter sustaining voltage
- High DC current gain
- Low collector-emitter saturation voltage

APPLICATIONS

- For high power audio amplifier and high voltage switching regulator circuits applications

PINNING

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

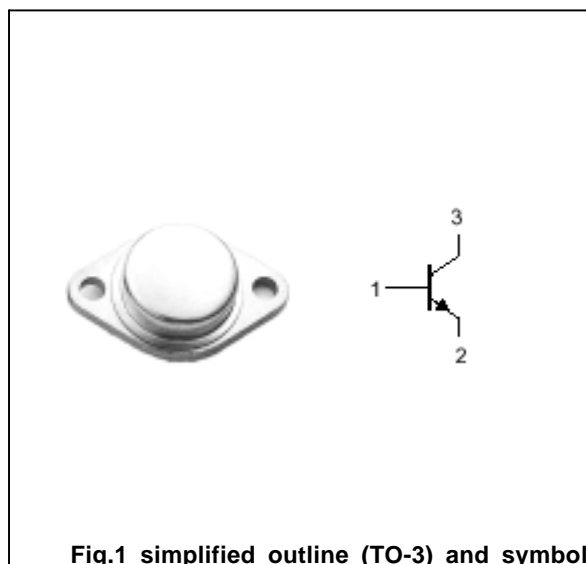


Fig.1 simplified outline (TO-3) and symbol

Absolute maximum ratings($T_a =$)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	140	V
V_{CEO}	Collector-emitter voltage	Open base	140	V
V_{EBO}	Emitter-base voltage	Open collector	7	V
I_C	Collector current		16	A
I_{CM}	Collector current-peak		20	A
I_B	Base current		5.0	A
P_D	Total Power Dissipation	$T_C=25$	200	W
T_j	Junction temperature		150	
T_{stg}	Storage temperature		-65~200	

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
$R_{th\ j-c}$	Thermal resistance junction to case	0.875	/W

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CHARACTERISTICS

T_j=25 unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEO(SUS)}	Collector-emitter sustaining voltage	I _C =0.2A ; I _B =0	140			V
V _{CEsat-1}	Collector-emitter saturation voltage	I _C =10A ; I _B =1A			1.0	V
V _{CEsat-2}	Collector-emitter saturation voltage	I _C =16A ; I _B =4A			2.0	V
V _{BEsat}	Collector-emitter saturation voltage	I _C =10A ; I _B =1A			1.8	V
V _{BE}	Base-emitter on voltage	I _C =8A ; V _{CE} =2V			1.5	V
I _{CBO}	Collector cut-off current	V _{CB} =ratedV _{CBO} ; I _E =0			2.0	mA
I _{CEO}	Collector cut-off current	V _{CE} =70V ; I _B =0			2.0	mA
I _{CEx}	Collector cut-off current (V _{BE(off)} =1.5V)	V _{CE} =ratedV _{CB}			2.0	mA
		V _{CE} =ratedV _{CB} ; T _C =150			7.0	
I _{EBO}	Emitter cut-off current	V _{EB} =7V ; I _C =0			5.0	mA
h _{FE-1}	DC current gain	I _C =8A ; V _{CE} =2V	15		60	
h _{FE-2}	DC current gain	I _C =16A ; V _{CE} =2V	4			
C _{OB}	Output capacitance	I _E =0 ; V _{CB} =10V ; f=0.1MHz			500	pF
f _T	Transition frequency	I _C =1A ; V _{CE} =20V ; f=0.5MHz	1.0			MHz

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PACKAGE OUTLINE

