

Silicon NPN Power Transistors

2N5293 2N5295 2N5297

DESCRIPTION

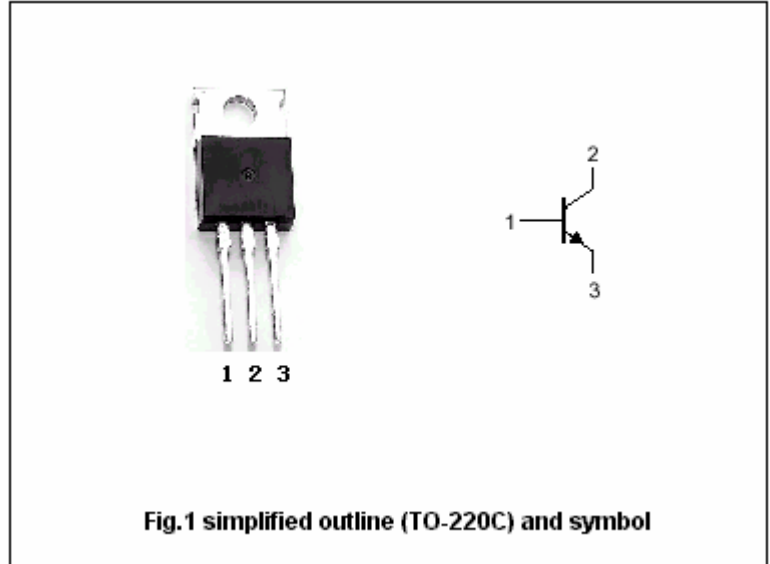
- With TO-220 package
- High power dissipation

APPLICATIONS

- Power amplifier and medium speed switching applications

PINNING

PIN	DESCRIPTION
1	Base
2	Collector;connected to mounting base
3	Emitter

Absolute maximum ratings($T_a=25^\circ\text{C}$)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	2N5293	80	V
		2N5295	60	
		2N5297	80	
V_{CEO}	Collector-emitter voltage	2N5293	70	V
		2N5295	40	
		2N5297	60	
V_{EBO}	Emitter-base voltage	Open collector	7	V
I_C	Collector current		4	A
I_B	Base current		2	A
P_T	Total power dissipation	$T_C=25^\circ\text{C}$	36	W
T_j	Junction temperature		150	$^\circ\text{C}$
T_{stg}	Storage temperature		-65~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal resistance from junction to case	3.47	$^\circ\text{C}/\text{W}$

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CHARACTERISTICS

T_j=25 °C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT	
V _{CEO(SUS)}	Collector-emitter sustaining voltage	2N5293	I _C =0.1A ; I _B =0			V	
		2N5295					
		2N5297					
V _{CEsat}	Collector-emitter saturation voltage	2N5293	I _C =0.5A; I _B =0.05A		1.0	V	
		2N5295					
		2N5297					
V _{BE}	Base-emitter on voltage	2N5293	I _C =0.5A ; V _{CE} =4V			V	
		2N5295					
		2N5297					
I _{CEV}	Collector cut-off current	2N5293/5297	V _{CE} =65V; V _{BE} =1.5V T _C =150 °C			mA	
		2N5295					
I _{CER}	Collector cut-off current	2N5293/5297	V _{CE} =50V; R _{BE} =100Ω T _C =150 °C			0.5 2.0	mA
I _{EBO}	Emitter cut-off current	2N5295	V _{EB} =7V; I _C =0			1.0	mA
		2N5293/5297					
h _{FE}	DC current gain	2N5293	I _C =0.5A ; V _{CE} =4V	30		120	
		2N5295					
		2N5297					
f _T	Transition frequency		I _C =0.2A ; V _{CE} =4V	0.8			MHz
t _{on}	Turn-on time	2N5293	I _C =0.5A; I _B =0.05A; V _{CC} =30V			5.0	μs
		2N5295					
		2N5297					
t _{off}	Turn-off time	2N5293	I _C =0.5A; I _B =0.05A; V _{CC} =30V			15	μs
		2N5295					
		2N5297					

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PACKAGE OUTLINE

