

Silicon NPN Power Transistors

2N6121 2N6122 2N6123

DESCRIPTION

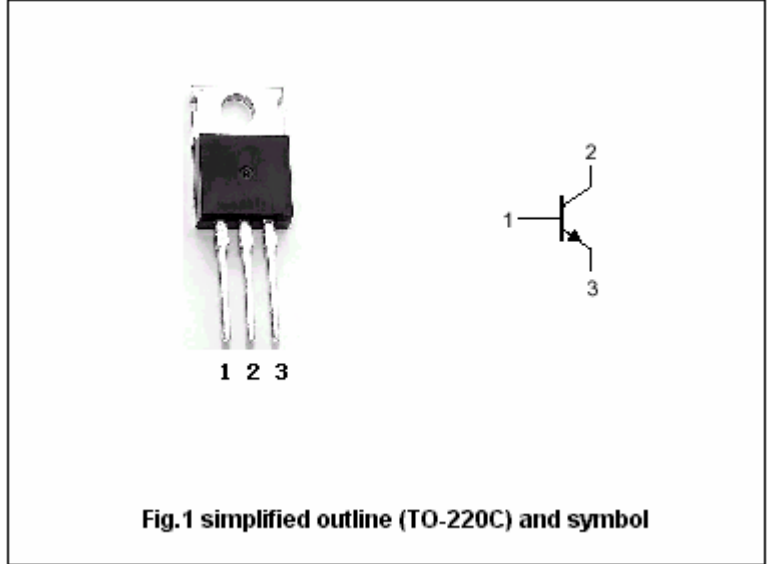
- With TO-220 package
- Complement to PNP type :
2N6124 ;2N6125 ;2N6126

APPLICATIONS

- For use in power amplifier and switching circuit 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	2N6121	45	V
		2N6122	60	
		2N6123	80	
V_{CEO}	Collector-emitter voltage	2N6121	45	V
		2N6122	60	
		2N6123	80	
V_{EBO}	Emitter-base voltage	Open collector	5	V
I_C	Collector current		4	A
I_{CM}	Collector current-peak		8	A
I_B	Base current		1	A
P_T	Total power dissipation	$T_C=25^\circ\text{C}$	40	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	3.125	$^\circ\text{C}/\text{W}$

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CHARACTERISTICS

T_j=25 °C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CE0(SUS)}	Collector-emitter sustaining voltage	2N6121	I _C =0.1A ; I _B =0			V
		2N6122				
		2N6123				
V _{CEsat-1}	Collector-emitter saturation voltage	I _C =1.5A; I _B =0.15A			0.6	V
V _{CEsat-2}	Collector-emitter saturation voltage	I _C =4.0A; I _B =1.0A			1.4	V
V _{BE}	Base-emitter on voltage	I _C =1.5A ; V _{CE} =2V			1.2	V
I _{CEX}	Collector cut-off current	2N6121	V _{CE} =45V; V _{BE} =1.5V T _C =125 °C			mA
		2N6122				
		2N6123				
I _{CEO}	Collector cut-off current	2N6121	V _{CE} =45V; I _B =0			mA
		2N6122				
		2N6123				
I _{EBO}	Emitter cut-off current	V _{EB} =5V; I _C =0			1.0	mA
h _{FE-1}	DC current gain	2N6121	I _C =1.5A ; V _{CE} =2V	25		100
		2N6122				
		2N6123				
h _{FE-2}	DC current gain	2N6121	I _C =4A ; V _{CE} =2V	10		
		2N6122				
		2N6123				
f _T	Transition frequency	I _C =1A ; V _{CE} =4V	2.5			MHz

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PACKAGE OUTLINE

