

**Silicon PNP Power Transistors**

**2N6106 2N6108 2N6110**

**DESCRIPTION**

- With TO-220 package
- With short pin

**APPLICATIONS**

- Power amplifier and switching circuits applications

**PINNING**

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

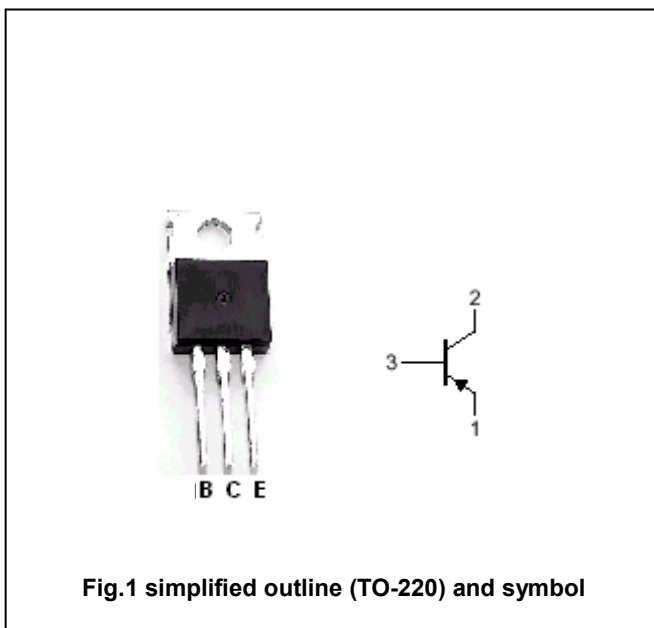


Fig.1 simplified outline (TO-220) and symbol

**Absolute maximum ratings(Ta=25°C)**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	2N6106	-40	V
		2N6108	-60	
		2N6110	-80	
V <sub>CEO</sub>	Collector-emitter voltage	2N6106	-30	V
		2N6108	-50	
		2N6110	-70	
V <sub>EBO</sub>	Emitter-base voltage	Open collector	-5	V
I <sub>C</sub>	Collector current		-7	A
I <sub>CM</sub>	Collector current-peak		-10	A
I <sub>B</sub>	Base current		-3	A
P <sub>T</sub>	Total power dissipation	T <sub>C</sub> =25°C	40	W
T <sub>j</sub>	Junction temperature		150	°C
T <sub>stg</sub>	Storage temperature		-65~150	°C

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
R <sub>th j-c</sub>	Thermal resistance from junction to case	3.125	°C/W

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## CHARACTERISTICS

T<sub>j</sub>=25 °C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT	
V <sub>CEO(SUS)</sub>	Collector-emitter sustaining voltage	2N6106	I <sub>C</sub> =-0.1A ; I <sub>B</sub> =0	-30			V
		2N6108		-50			
		2N6110		-70			
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =-7A; I <sub>B</sub> =-3A			-3.5	V	
V <sub>BE</sub>	Base-emitter on voltage	I <sub>C</sub> =-7A ; V <sub>CE</sub> =-4V			-3.0	V	
I <sub>CEO</sub>	Collector cut-off current	2N6106	V <sub>CE</sub> =-20V; I <sub>B</sub> =0			-1.0	mA
		2N6108		V <sub>CE</sub> =-40V; I <sub>B</sub> =0			
		2N6110		V <sub>CE</sub> =-60V; I <sub>B</sub> =0			
I <sub>CEX</sub>	Collector cut-off current	2N6106	V <sub>CE</sub> =-40V; V <sub>BE</sub> =1.5V V <sub>CE</sub> =-30V; V <sub>BE</sub> =1.5V, T <sub>C</sub> =125 °C			-0.1 -2.0	mA
		2N6108		V <sub>CE</sub> =-60V; V <sub>BE</sub> =1.5V V <sub>CE</sub> =-50V; V <sub>BE</sub> =1.5V, T <sub>C</sub> =125 °C			
		2N6110		V <sub>CE</sub> =-80V; V <sub>BE</sub> =1.5V V <sub>CE</sub> =-70V; V <sub>BE</sub> =1.5V, T <sub>C</sub> =125 °C			
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	2N6106	I <sub>C</sub> =-2A ; V <sub>CE</sub> =-4V	30	150		
		2N6108					I <sub>C</sub> =-2.5A ; V <sub>CE</sub> =-4V
		2N6110					I <sub>C</sub> =-3A ; V <sub>CE</sub> =-4V
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =-7A ; V <sub>CE</sub> =-4V	2.3				
C <sub>OB</sub>	Output capacitance	I <sub>E</sub> =0 ; V <sub>CB</sub> =-10V; f=1MHz			250	pF	
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =-0.5A ; V <sub>CE</sub> =-4V; f=1MHz	10			MHz	

