

**Silicon PNP Power Transistors**

**BD708 BD710 BD712**

**DESCRIPTION**

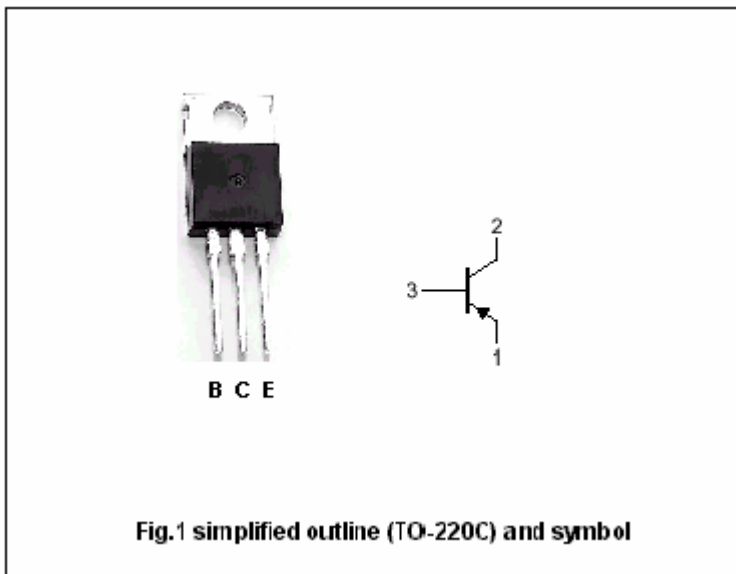
- With TO-220C package
- Complement to type BD707/709/711

**APPLICATIONS**

- Intended for use in power linear and switching applications.

**PINNING**

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



**Absolute maximum ratings(Ta=25 )**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	BD708	-60	V
		BD710	-80	
		BD712	-100	
V <sub>CEO</sub>	Collector-emitter voltage	BD708	-60	V
		BD710	-80	
		BD712	-100	
V <sub>EBO</sub>	Emitter-base voltage	Open collector	-5	V
I <sub>C</sub>	Collector current-DC		-12	A
I <sub>CM</sub>	Collector current-Pulse		-18	A
I <sub>B</sub>	Base current		-5	A
P <sub>T</sub>	Total dissipation	T <sub>C</sub> =25	75	W
T <sub>j</sub>	Junction temperature		150	
T <sub>stg</sub>	Storage temperature		-65~150	

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
R <sub>th j-c</sub>	Thermal resistance junction to case	1.67	/W

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## CHARACTERISTICS

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

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CEO(SUS)</sub>	Collector-emitter sustaining voltage	BD708	I <sub>C</sub> =-0.1A, I <sub>B</sub> =0	-60			V
		BD710		-80			
		BD712		-100			
V <sub>CEsat</sub>	Collector-emitter saturation voltage		I <sub>C</sub> =-4A, I <sub>B</sub> =-0.4A			-1.0	V
V <sub>BE</sub>	Base-emitter voltage		I <sub>C</sub> =-4A, V <sub>CE</sub> =-4V			-1.5	V
I <sub>CBO</sub>	Collector cut-off current	BD708	V <sub>CB</sub> =-60V, I <sub>E</sub> =0 T <sub>C</sub> =150			-0.1 -1.0	mA
		BD710	V <sub>CB</sub> =-80V, I <sub>E</sub> =0 T <sub>C</sub> =150			-0.1 -1.0	
		BD712	V <sub>CB</sub> =-100V, I <sub>E</sub> =0 T <sub>C</sub> =150			-0.1 -1.0	
I <sub>CEO</sub>	Collector cut-off current	BD708	V <sub>CE</sub> =-30V, I <sub>B</sub> =0			-0.1	mA
		BD710	V <sub>CE</sub> =-40V, I <sub>B</sub> =0				
		BD712	V <sub>CE</sub> =-50V, I <sub>B</sub> =0				
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		I <sub>C</sub> =-0.5A; V <sub>CE</sub> =-2V	40	120	400	
h <sub>FE-2</sub>	DC current gain only for <b>BD708</b>		I <sub>C</sub> =-2A; V <sub>CE</sub> =-2V	30			
h <sub>FE-3</sub>	DC current gain		I <sub>C</sub> =-4A; V <sub>CE</sub> =-4V	15		150	
h <sub>FE-4</sub>	DC current gain	BD708	I <sub>C</sub> =-10A; V <sub>CE</sub> =-4V	5	10		
		BD710		8			
		BD712		8			
f <sub>T</sub>	Transition frequency		I <sub>C</sub> =-0.3A; V <sub>CE</sub> =-3V;	3			MHz

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PACKAGE OUTLINE

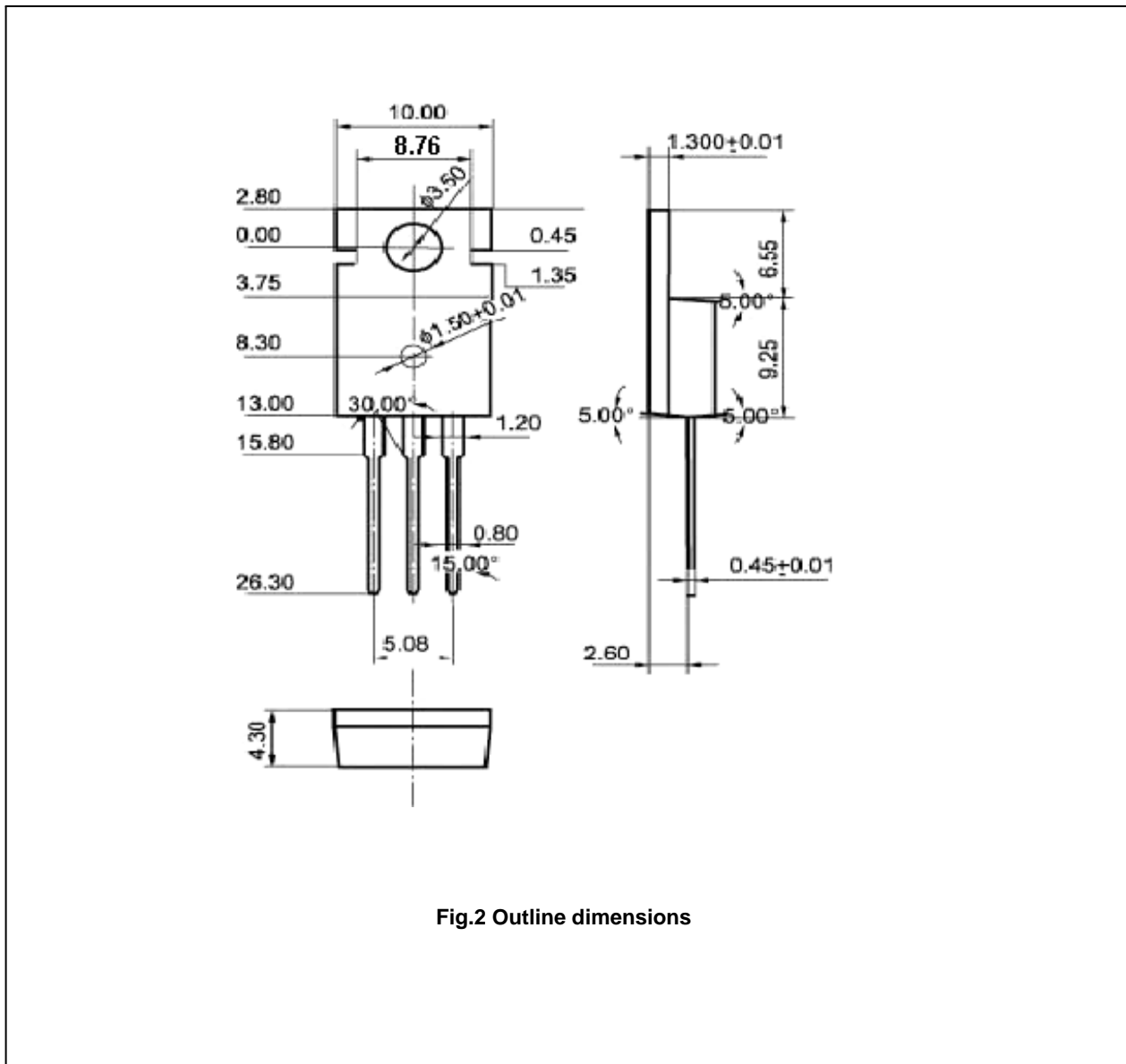


Fig.2 Outline dimensions