

## Silicon PNP Power Transistors

## BD708 BD710 BD712

## DESCRIPTION

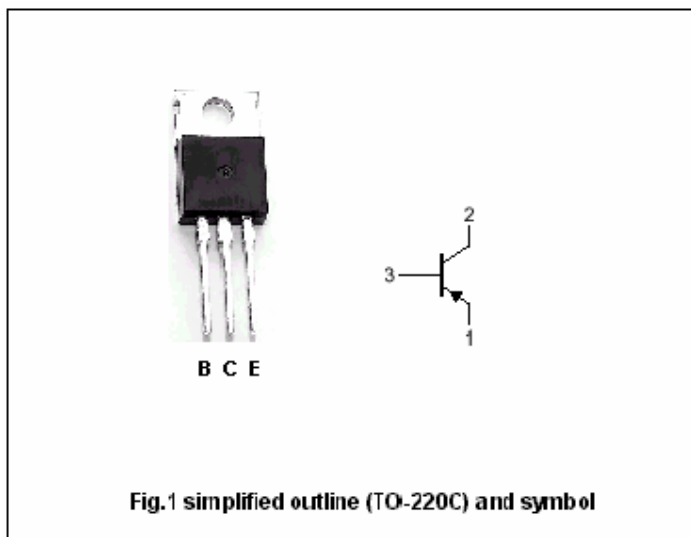
- With TO-220C package
- Complement to type BD707/709/711

## APPLICATIONS

- Intented for use in power linear and switching applications.

## PINNING

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

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

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	BD708	-60	V
		BD710	-80	
		BD712	-100	
$V_{CEO}$	Collector-emitter voltage	BD708	-60	V
		BD710	-80	
		BD712	-100	
$V_{EBO}$	Emitter-base voltage	Open collector	-5	V
$I_C$	Collector current-DC		-12	A
$I_{CM}$	Collector current-Pulse		-18	A
$I_B$	Base current		-5	A
$P_T$	Total dissipation	$T_C=25^\circ\text{C}$	75	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 junction to case	1.67	$^\circ\text{C}/\text{W}$

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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	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°C			-0.1 -1.0	mA
		BD710	V <sub>CB</sub> =-80V, I <sub>E</sub> =0 T <sub>C</sub> =150°C			-0.1 -1.0	
		BD712	V <sub>CB</sub> =-100V, I <sub>E</sub> =0 T <sub>C</sub> =150°C			-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

