

Silicon PNP Power Transistors

BD708 BD710 BD712

DESCRIPTION

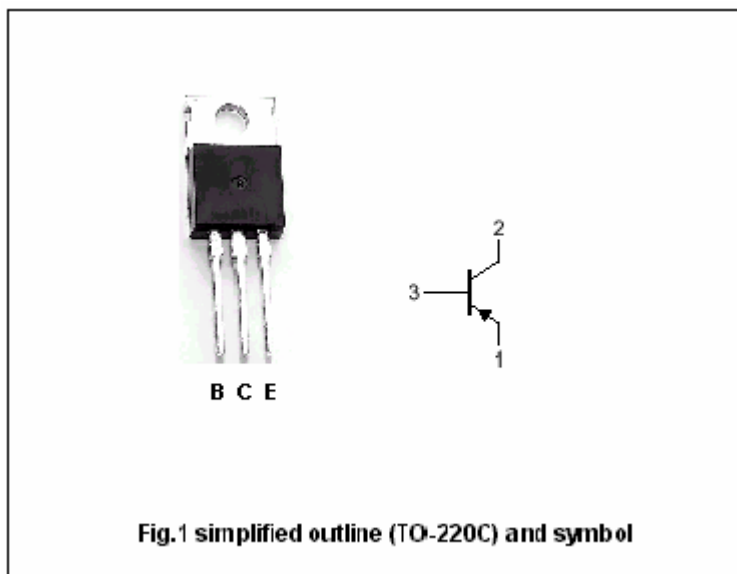
- With TO-220C package
- Complement to type BD707/709/711

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

SYMBOL	PARAMETER		CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	BD708	Open emitter	-60	V
		BD710		-80	
		BD712		-100	
V_{CEO}	Collector-emitter voltage	BD708	Open base	-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	$T_C=25$		75	W
T_j	Junction temperature			150	
T_{stg}	Storage temperature			-65~150	

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal resistance junction to case	1.67	/W

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CHARACTERISTICS

T_j=25 unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEQ(SUS)}	Collector-emitter sustaining voltage	BD708	I _C =-0.1A, I _B =0	-60			V
		BD710		-80			
		BD712		-100			
V _{CEsat}	Collector-emitter saturation voltage		I _C =-4A, I _B =-0.4A			-1.0	V
V _{BE}	Base-emitter voltage		I _C =-4A, V _{CE} =-4V			-1.5	V
I _{CBO}	Collector cut-off current	BD708	V _{CB} =-60V, I _E =0 T _C =150			-0.1 -1.0	mA
		BD710	V _{CB} =-80V, I _E =0 T _C =150			-0.1 -1.0	
		BD712	V _{CB} =-100V, I _E =0 T _C =150			-0.1 -1.0	
I _{CEO}	Collector cut-off current	BD708	V _{CE} =-30V, I _B =0			-0.1	mA
		BD710	V _{CE} =-40V, I _B =0				
		BD712	V _{CE} =-50V, I _B =0				
I _{EBO}	Emitter cut-off current		V _{EB} =-5V; I _C =0			-1.0	mA
h _{FE-1}	DC current gain		I _C =-0.5A; V _{CE} =-2V	40	120	400	
h _{FE-2}	DC current gain only for BD708		I _C =-2A; V _{CE} =-2V	30			
h _{FE-3}	DC current gain		I _C =-4A; V _{CE} =-4V	15		150	
h _{FE-4}	DC current gain	BD708	I _C =-10A; V _{CE} =-4V	5	10		
		BD710			8		
		BD712			8		
f _T	Transition frequency		I _C =-0.3A; V _{CE} =-3V;	3			MHz

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PACKAGE OUTLINE

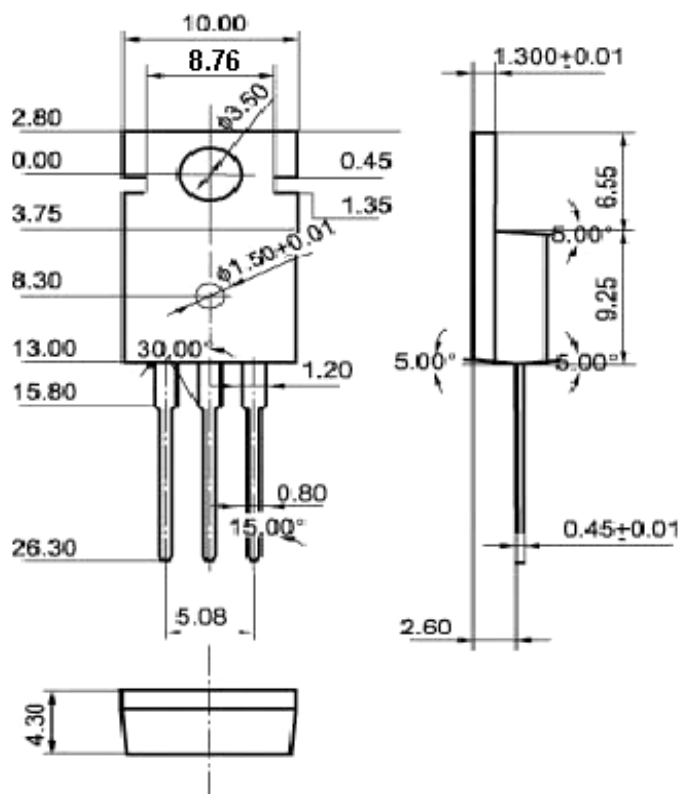


Fig.2 Outline dimensions