Silicon PNP Power Transistors BD910 BD912

DESCRIPTION

- With TO-220C package
- Complement to type BD909 BD911

APPLICATIONS

- Intented for use in power linear and switching applications

PINNING

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

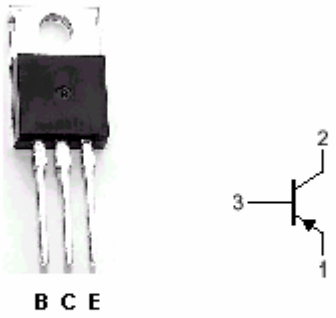

Fig.1 simplified outline (TO-220C) and symbol

Absolute maximum ratings (Ta=25℃)

SYMBOL	PARAMETER		CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	BD910	Open emitter	-80	V
		BD912		-100	
V_{CEO}	Collector-emitter voltage	BD910	Open base	-80	V
		BD912		-100	
V_{EBO}	Emitter-base voltage		Open collector	-5	V
I_C	Collector current			-15	A
I_B	Base current			-5	A
P_C	Collector power dissipation		$T_C \leq 25℃$	90	W
T_j	Junction temperature			150	℃
T_{stg}	Storage temperature			-65~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal resistance junction to case	1.4	℃/W

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CHARACTERISTICS

Tj=25℃ unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-emitter sustaining voltage	BD910	I_C=-0.1A; I_B=0	-80			V
		BD912		-100			
$V_{CEsat-1}$	Collector-emitter saturation voltage		I_C=-5 A;I_B=-0.5 A			-1.0	V
$V_{CEsat-2}$	Collector-emitter saturation voltage		I_C=-10A;I_B=-2.5 A			-3.0	V
V_{BEsat}	Base-emitter saturation voltage		I_C=-10A;I_B=-2.5 A			-2.5	V
V_{BE}	Base-emitter voltage		I_C=-5A ; V_{CE}=-4V			-1.5	V
I_{CBO}	Collector cut-off current	BD910	V_{CB}=-80V; I_E=0 T_C=150℃			-0.5 -5.0	mA
		BD912	V_{CB}=-100V; I_E=0 T_C=150℃			-0.5 -5.0	
I_{CEO}	Collector cut-off current	BD910	V_{CE}=-40V; I_B=0			-1.0	mA
		BD912	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}=-4V	40		250	
h_{FE-2}	DC current gain		I_C=-5A ; V_{CE}=-4V	15		150	
h_{FE-3}	DC current gain		I_C=-10A ; V_{CE}=-4V	5			
f_T	Transition frequency		I_C=-0.5A ; V_{CE}=-4V	3			MHz

PACKAGE OUTLINE

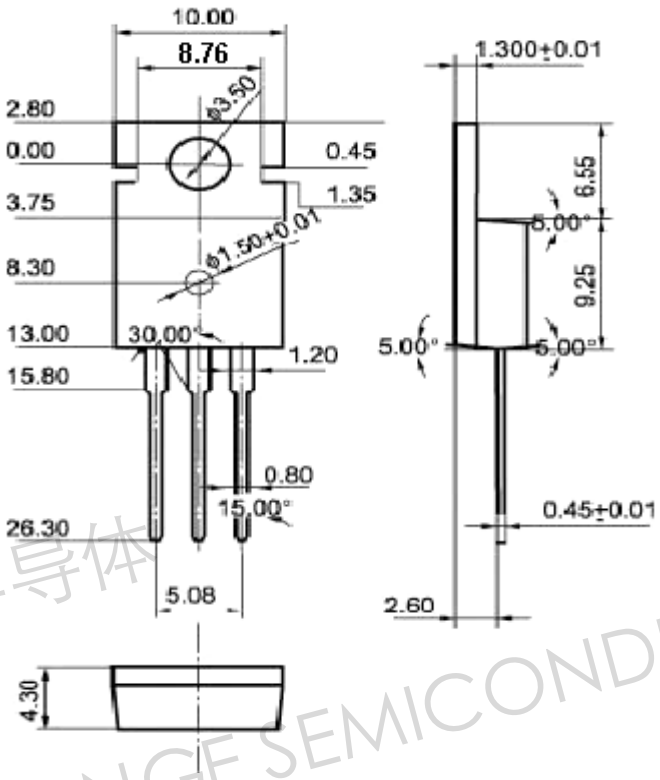

Fig.2 Outline dimensions (unindicated tolerance:±0.10 mm)

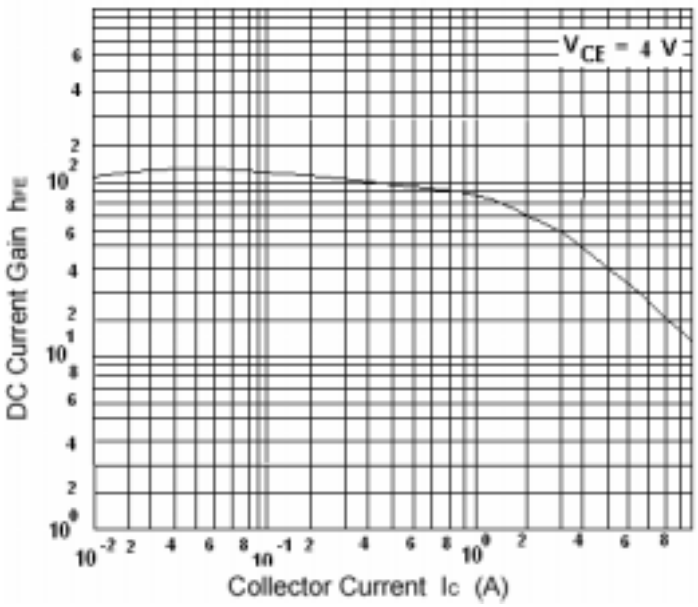

Fig.3 h_{FE} – I_C

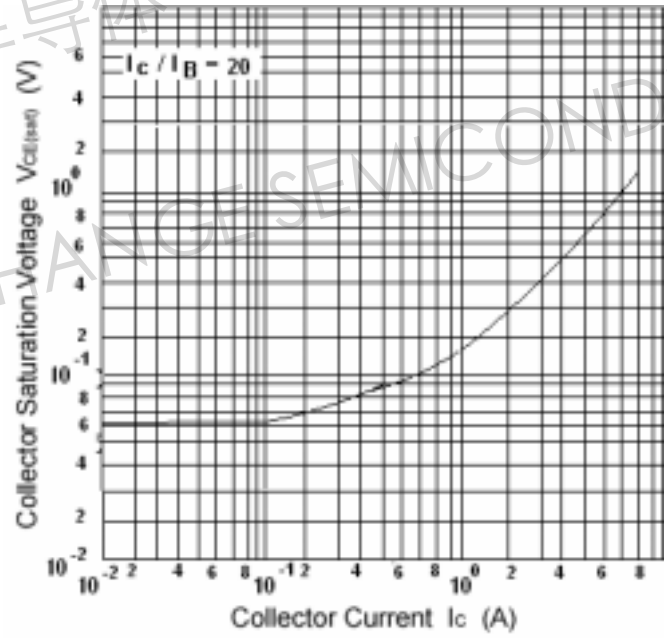

Fig.4 $V_{CE(sat)}$ — I_C

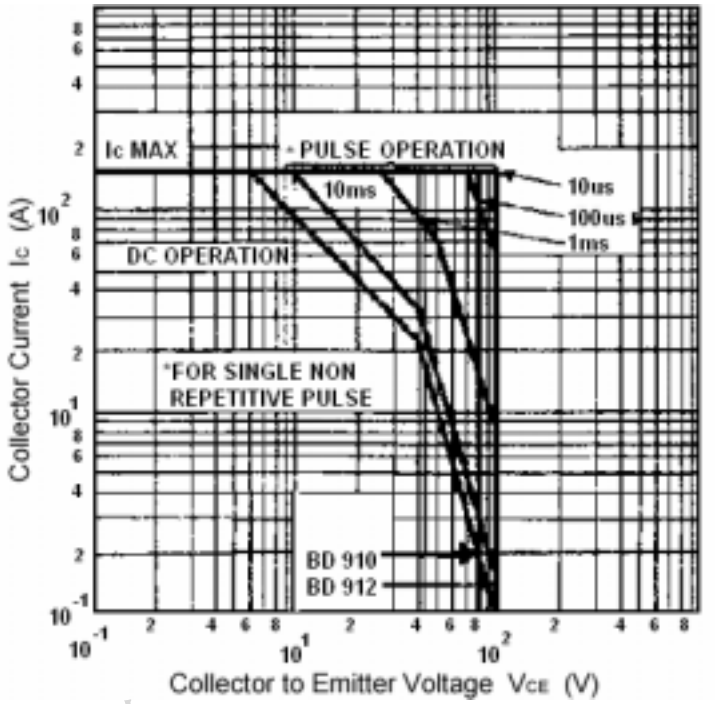

Fig.5 SAFE OPERATING AREA