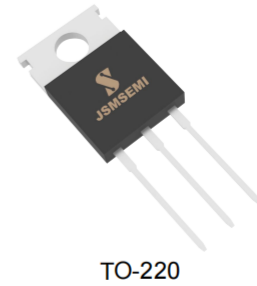


DESCRIPTION

- With TO-220C package
- Complement to type BD910 BD912

APPLICATIONS

- Intended for use in power linear and switching applications


Absolute maximum ratings (Ta=25°C)

SYMBOL	PARAMETER		CONDITIONS	VALUE	UNIT
V _{CB0}	Collector-base voltage	BD909	Open emitter	80	V
		BD911		100	
V _{CEO}	Collector-emitter voltage	BD909	Open base	80	V
		BD911		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 ≤ 25°C	90	W
T _j	Junction temperature			150	°C
T _{stg}	Storage temperature			-65~150	°C

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{thj-c}	Thermal resistance junction to case	1.4	°C/W

CHARACTERISTICS

 T_j=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEO(SUS)}	Collector-emitter sustaining voltage	BD909	I _C =0.1A; I _B =0	80		V
		BD911		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	BD909	V _{CB} =80V; I _E =0 T _C =150°C		0.5	mA
		BD911		V _{CB} =100V; I _E =0 T _C =150°C	0.5	
I _{CEO}	Collector cut-off current	BD909	V _{CE} =40V; I _B =0		1	mA
		BD911		V _{CE} =50V; I _B =0		
I _{EBO}	Emitter cut-off current	V _{EB} =5V; I _C =0			1	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

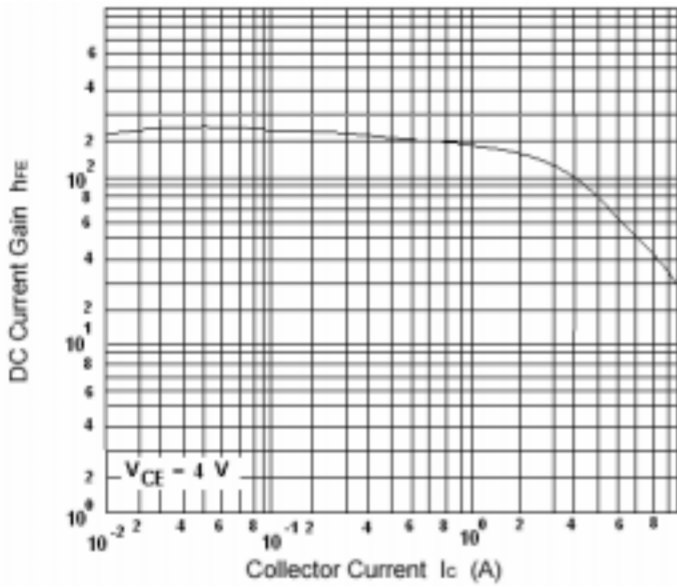


Fig.3 DC current Gain

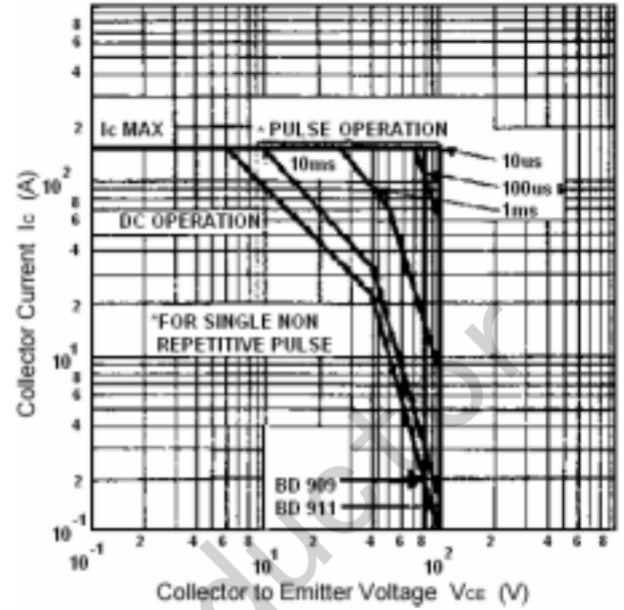


Fig.4 Safe Operating Area

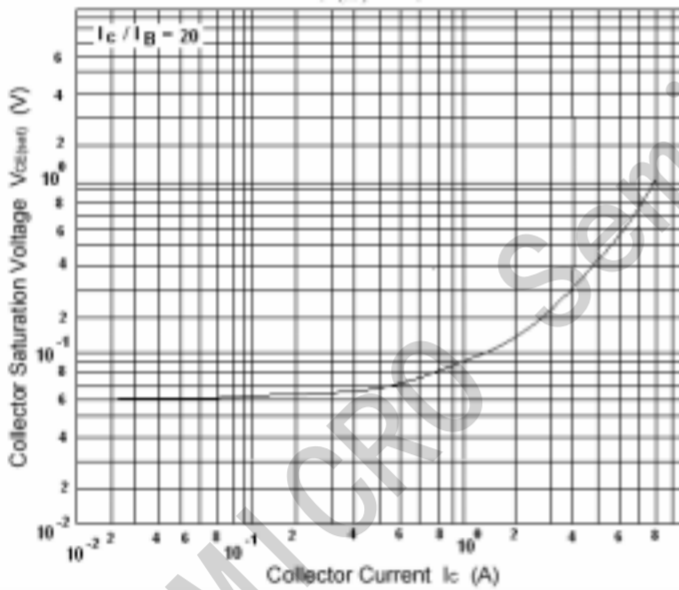
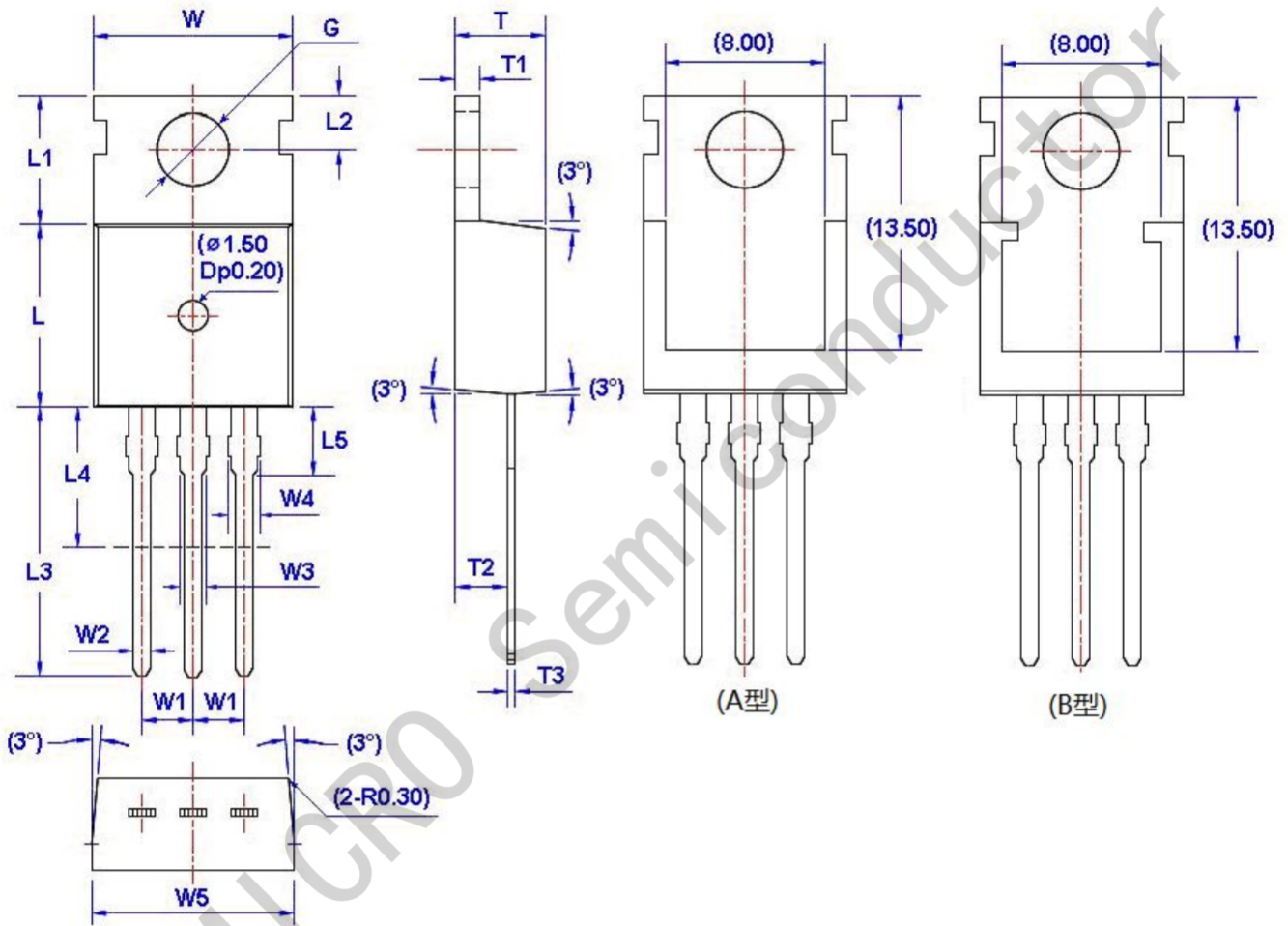


Fig.5 Collector-Emitter Saturation Voltage

Package Information

TO-220



Unit: mm

Symbol	Size		Symbol	Size		Symbol	Size		Symbol	Size	
	Min	Max		Min	Max		Min	Max		Min	Max
W	9.66	10.28	W5	9.80	10.20	L4**	6.20	6.60	T3	0.45	0.60
W1	2.54 (TYP)		L	9.00	9.40	L5	2.79	3.30	G(Φ)	3.50	3.70
W2	0.70	0.95	L1	6.40	6.80	T	4.30	4.70			
W3	1.17	1.37	L2	2.70	2.90	T1	1.15	1.40			
W4*	1.32	1.72	L3	12.70	14.27	T2	2.20	2.60			