Silicon NPN Power Transistors BDW51C

DESCRIPTION

- With TO-3 package
- Complement to type BDW52C
- Excellent safe operating area

APPLICATIONS

- For use in power linear and switching applications

PINNING(see Fig.2)

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

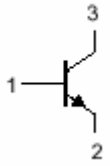

Fig.1 simplified outline (TO-3) and symbol

Absolute maximum ratings(Ta=℃)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	100	V
V_{CEO}	Collector-emitter voltage	Open base	100	V
V_{EBO}	Emitter-base voltage	Open collector	5	V
I_C	Collector current		15	A
I_{CM}	Collector current-peak		20	A
I_B	Base current		7	A
P_C	Collector power dissipation	T_C=25℃	125	W
T_j	Junction temperature		200	℃
T_{stg}	Storage temperature		-65~200	℃

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	I_C=0.1A ;I_B=0	100			V
$V_{CEsat-1}$	Collector-emitter saturation voltage	I_C=5A; I_B=0.5A			1.0	V
$V_{CEsat-2}$	Collector-emitter saturation voltage	I_C=10A; I_B=2.5A			3.0	V
V_{BEsat}	Base-emitter saturation voltage	I_C=10A; I_B=2.5A			2.5	V
V_{BE}	Base-emitter on voltage	I_C=5A ; V_{CE}=4V			1.5	V
I_{CEO}	Collector cut-off current	V_{CE}=50V; I_B=0			1.0	mA
I_{CBO}	Collector cut-off current	V_{CB}=100V; I_E=0 T_C=150℃			0.5 5.0	mA
I_{EBO}	Emitter cut-off current	V_{EB}=5V; I_C=0			2.0	mA
h_{FE-1}	DC current gain	I_C=5A ; V_{CE}=4V	20		150	
h_{FE-2}	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

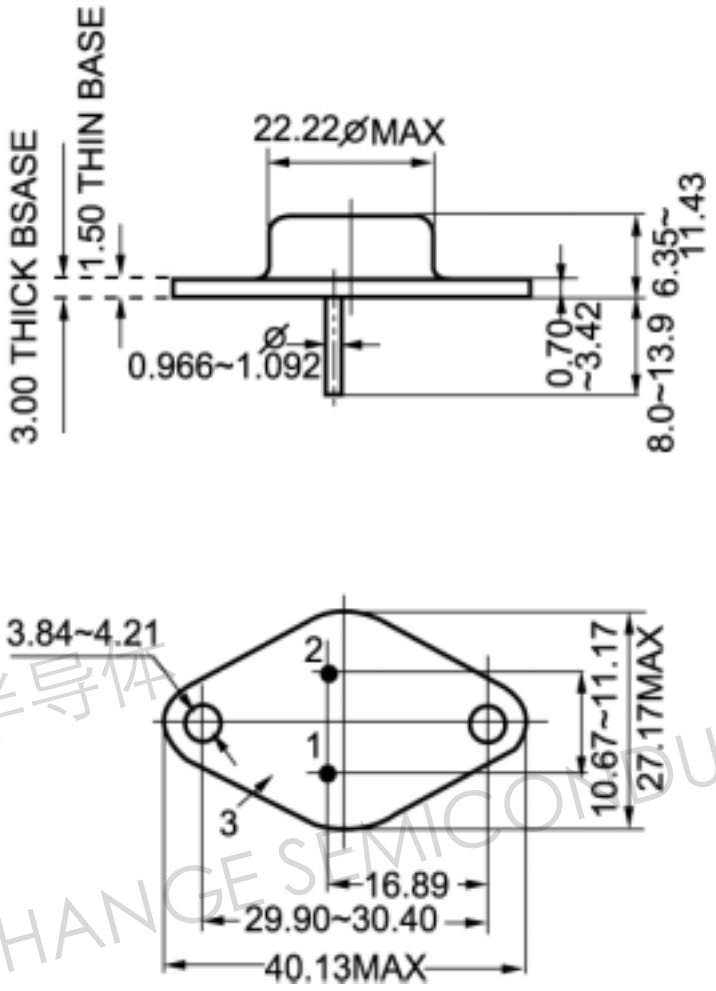

Fig.2 outline dimensions (unindicated tolerance:±0.1mm)