Silicon NPN Power Transistors BUW13 BUW13A

DESCRIPTION

- With TO-3PN package
- High voltage,high speed

APPLICATIONS

- Converters
- Inverters
- Switching regulators
- Motor control systems

PINNING (See Fig.2)

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

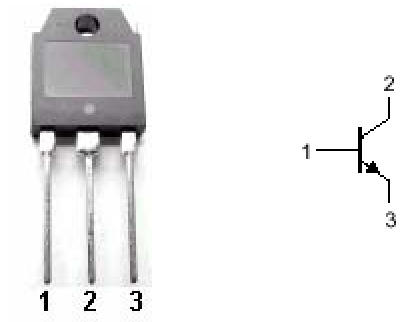

Fig.1 simplified outline (TO-3PN) and symbol

Absolute maximum ratings(Ta=25℃)

SYMBOL	PARAMETER		CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	BUW13	Open emitter	850	V
		BUW13A		1000	
V_{CEO}	Collector-emitter voltage	BUW13	Open base	400	V
		BUW13A		450	
V_{EBO}	Emitter-base voltage		Open collector	9	V
I_C	Collector current			15	A
I_{CM}	Collector current-peak			30	A
I_B	Base current			6	A
I_{BM}	Base current-peak			9	A
P_T	Total power dissipation		T_C=25℃	175	W
T_j	Junction temperature			150	℃
T_{stg}	Storage temperature			-65~175	℃

CHARACTERISTICS

Tj=25℃ unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-emitter sustaining voltage	BUW13	I_C=0.1A ; I_B=0; L=25mH	400			V
		BUW13A		450			
V_{CEsat}	Collector-emitter saturation voltage	BUW13	I_C=10A; I_B=2A			1.5	V
		BUW13A	I_C=8A; I_B=1.6A				
V_{BEsat}	Base-emitter saturation voltage	BUW13	I_C=10A; I_B=2A			1.6	V
		BUW13A	I_C=8A; I_B=1.6A				
I_{CES}	Collector cut-off current		V_{CE}=Rated V_{CES}; V_{BE}=0 TC=125℃			1.0 4.0	mA
I_{EBO}	Emitter cut-off current		V_{EB}=9V; I_C=0			10	mA
h_{FE-1}	DC current gain		I_C=20mA ; V_{CE}=5V	10		35	
h_{FE-2}	DC current gain		I_C=1.5A ; V_{CE}=5V	10		35	

Switching times resistive load

t_{on}	Turn-on time	For BUW13 I_C=10A ;I_{B1}=-I_{B2}=2A For BUW13A I_C=8A ;I_{B1}=-I_{B2}=1.6A			1.0	μs
t_s	Storage time				4.0	μs
t_f	Fall time				0.8	μs

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PACKAGE OUTLINE

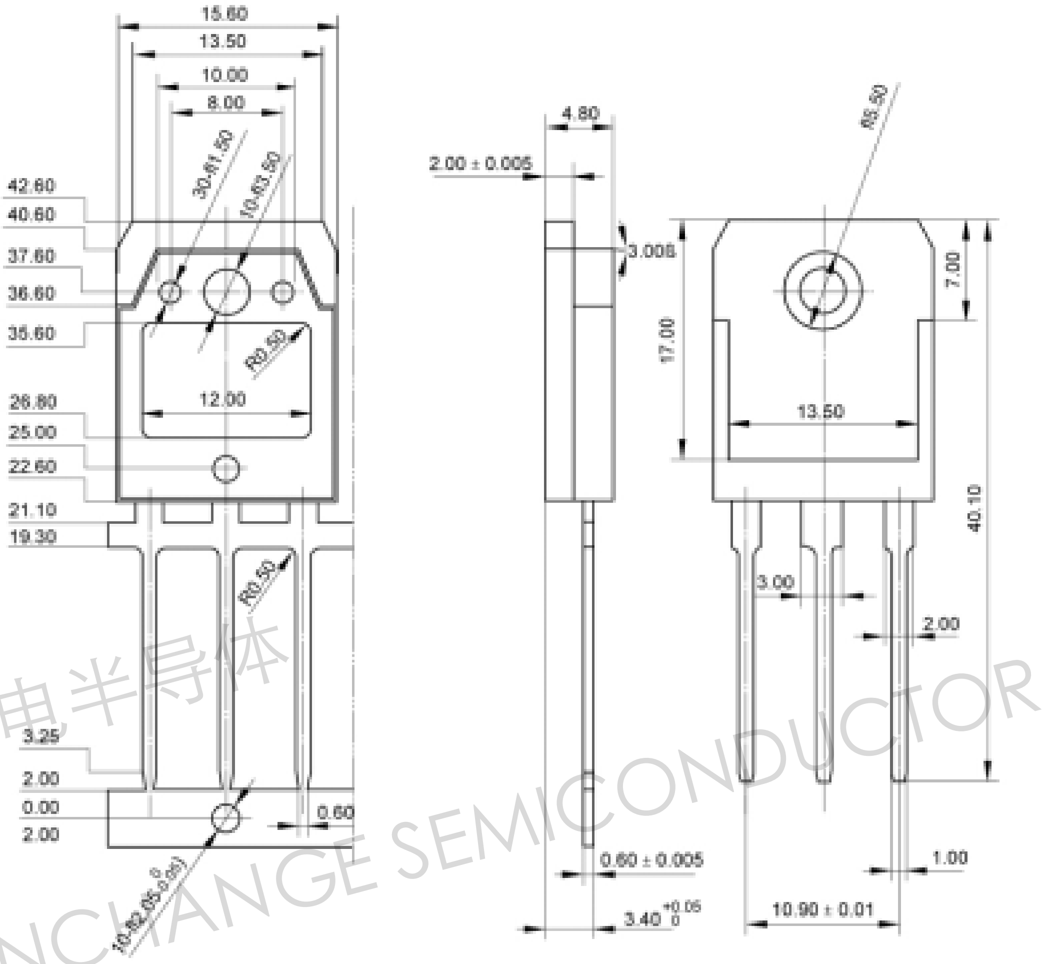

Fig.2 Outline dimensions(unindicated tolerance:±0.10mm)