Silicon NPN Power Transistors BUW11 BUW11A

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

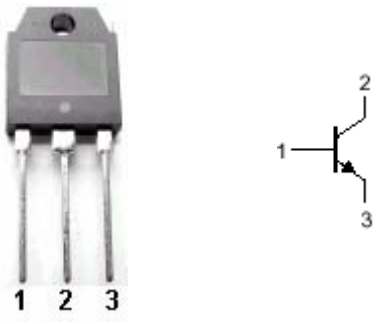

Fig.1 simplified outline (TO-3PN) and symbol

Absolute maximum ratings(Ta=25℃)

SYMBOL	PARAMETER		CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	BUW11	Open emitter	850	V
		BUW11A		1000	
V_{CEO}	Collector-emitter voltage	BUW11	Open base	400	V
		BUW11A		450	
V_{EBO}	Emitter-base voltage		Open collector	9	V
I_C	Collector current			5	A
I_{CM}	Collector current-peak			10	A
I_B	Base current			2	A
I_{BM}	Base current-peak			4	A
P_T	Total power dissipation		T_C=25℃	100	W
T_j	Junction temperature			150	℃
T_{stg}	Storage temperature			-65~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}mb}$	Thermal resistance from junction to mounting base	1.25	K/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	BUW11	I_C=0.1A ; I_B=0; L=25mH	400			V
		BUW11A		450			
V_{CEsat}	Collector-emitter saturation voltage	BUW11	I_C=3A; I_B=0.6A			1.5	V
		BUW11A	I_C=2.5A; I_B=0.5A				
V_{BEsat}	Base-emitter saturation voltage	BUW11	I_C=3A; I_B=0.6A			1.4	V
		BUW11A	I_C=2.5A; I_B=0.5A				
I_{CES}	Collector cut-off current		V_{CE}=Rated V_{CES}; V_{BE}=0 T_j=125℃			1.0 2.0	mA
I_{EBO}	Emitter cut-off current		V_{EB}=9V; I_C=0			10	mA
h_{FE-1}	DC current gain		I_C=5mA ; V_{CE}=5V	10		35	
h_{FE-2}	DC current gain		I_C=0.5A ; V_{CE}=5V	10		35	

Switching times resistive load

t_{on}	Turn-on time	For BUW11F I_C=3A ;I_{B1}=-I_{B2}=-0.6A For BUW11AF I_C=2.5A ;I_{B1}=-I_{B2}=-0.5A			1.0	μs
t_s	Storage time				4.0	μs
t_f	Fall time				0.8	μs

PACKAGE OUTLINE

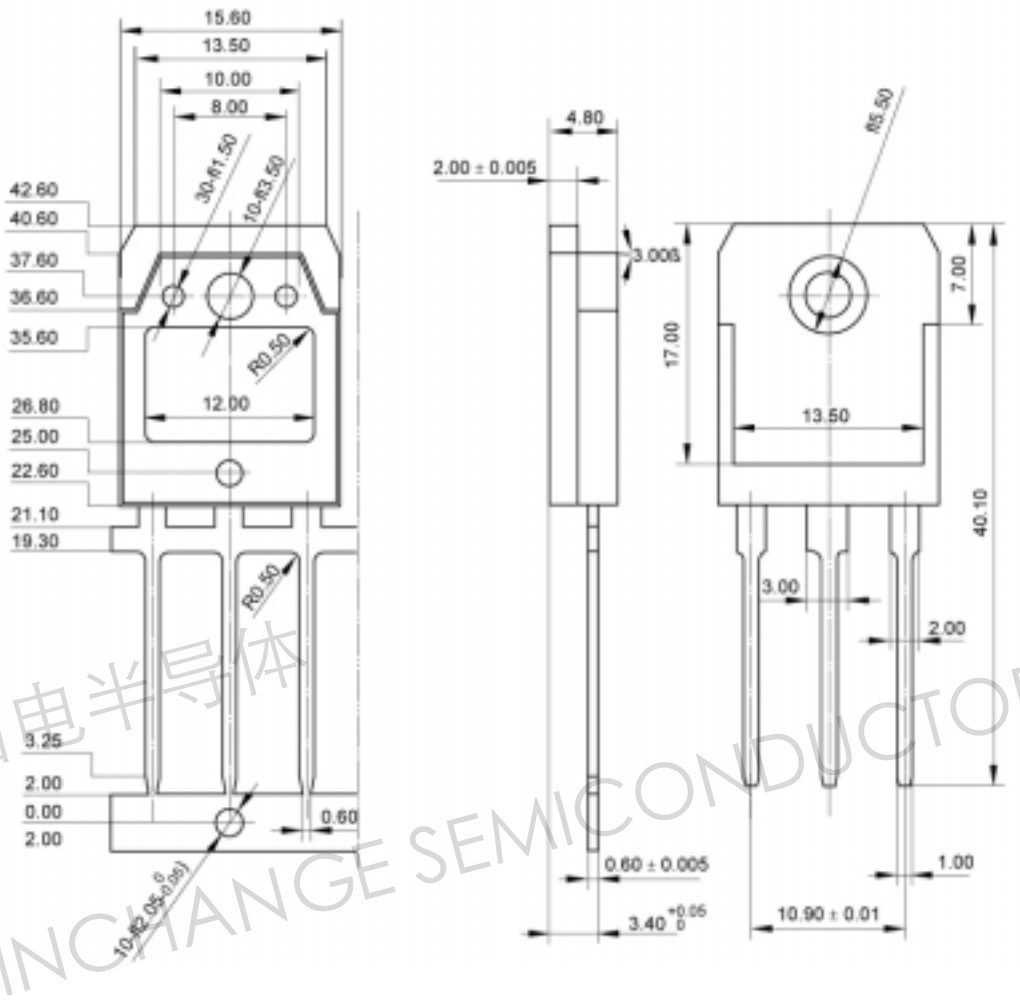

Fig.2 Outline dimensions (unindicated tolerance:±0.10 mm)