

Silicon NPN Power Transistors

BUH715AF

DESCRIPTION

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

APPLICATIONS

- Horizontal deflection for monitors.
- Switching mode power supplies

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

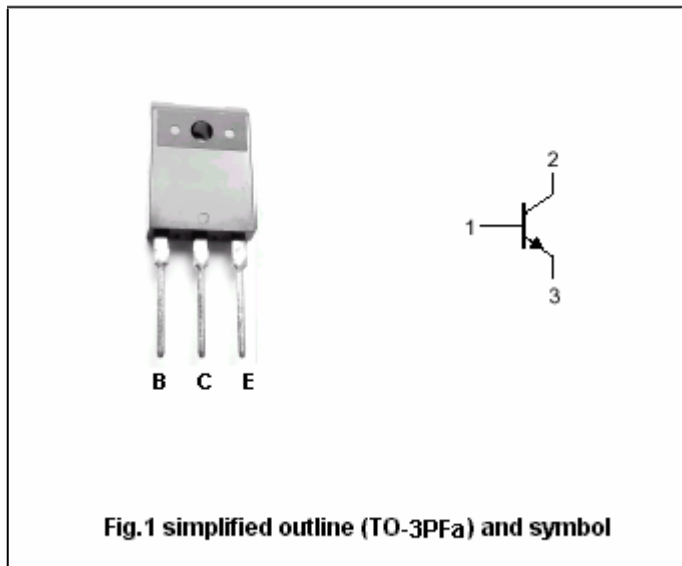


Fig.1 simplified outline (TO-3PFa) and symbol

Absolute maximum ratings(Ta=25 )

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	Open emitter	1500	V
$V_{CEO}$	Collector-emitter voltage	Open base	700	V
$V_{EBO}$	Emitter-base voltage	Open collector	10	V
$I_C$	Collector current (DC)		10	A
$I_{CM}$	Collector current (Pulse)		20	A
$I_B$	Base current (DC)		5	A
$I_{BM}$	Base current (Pulse)		10	A
$P_{tot}$	Total power dissipation	$T_C=25$	57	W
$T_j$	Operating junction temperature		150	
$T_{stg}$	Storage temperature		-65~150	

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal resistance from junction to case	2.2	/W

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## CHARACTERISTICS

T<sub>j</sub>=25 unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CEO(SUS)</sub>	Collector-emitter sustaining voltage	I <sub>C</sub> =100mA ; I <sub>B</sub> =0	700			V
V <sub>(BR)EBO</sub>	Emitter-base breakdown voltage	I <sub>E</sub> =10mA ; I <sub>C</sub> =0	10			V
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =7A ; I <sub>B</sub> =1.5A			1.5	V
V <sub>BEsat</sub>	Base-emitter saturation voltage	I <sub>C</sub> =7A ; I <sub>B</sub> =1.5A			1.3	V
I <sub>CES</sub>	Collector cut-off current	V <sub>CE</sub> =1500V ; V <sub>BE</sub> =0 T <sub>j</sub> =125			1 2	mA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =5V ; I <sub>C</sub> =0			100	μA
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =1A ; V <sub>CE</sub> =5V	10			
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =7A ; V <sub>CE</sub> =5V	8		16	

## Switching times

t <sub>s</sub>	Storage time	I <sub>C</sub> =7A ; I <sub>B1</sub> =1.5A ; I <sub>B2</sub> =3.5A ; V <sub>CC</sub> =400V		2.1	3.1	μs
t <sub>f</sub>	Fall time			140	210	ns

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PACKAGE OUTLINE

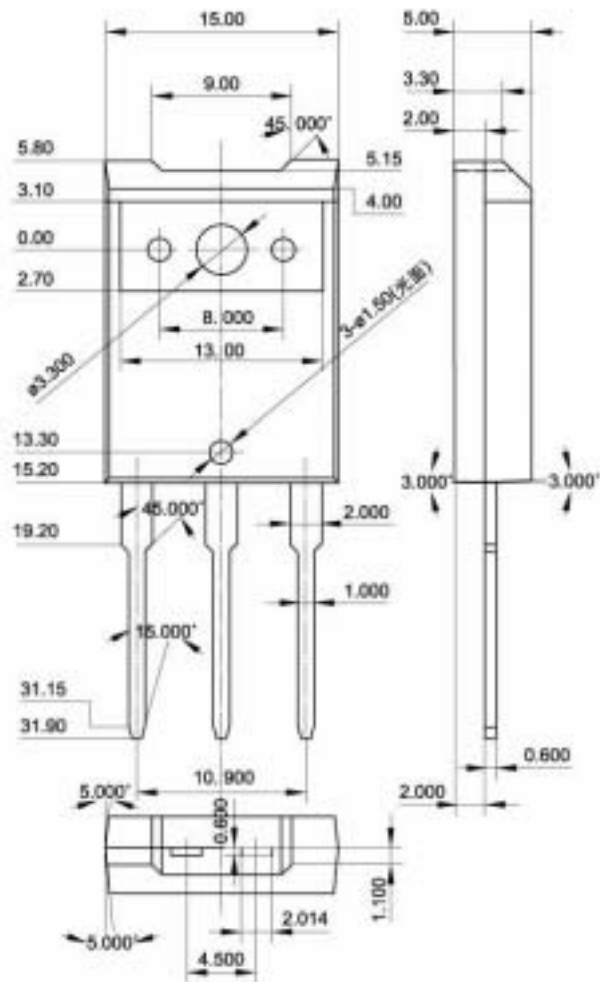


Fig.2 Outline dimensions(unindicated tolerance:  $\pm 0.30$ mm)