

Silicon NPN Power Transistors

BUX84F BUX85F

DESCRIPTION

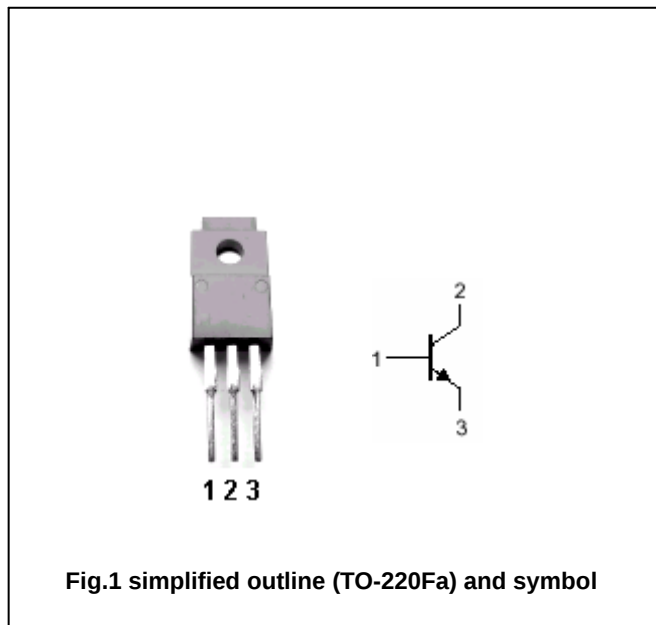
- With TO-220Fa package
- High voltage ,high speed

APPLICATIONS

- Converters
- Inverters
- Switching regulators
- Motor controls systems

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter



Absolute maximum ratings (Ta=25)

SYMBOL	PARAMETER		CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	BUX84F	Open emitter	800	V
		BUX85F		1000	
V_{CEO}	Collector-emitter voltage	BUX84F	Open base	400	V
		BUX85F		450	
V_{EBO}	Emitter-base voltage		Open collector	10	V
I_C	Collector current			2	A
I_{CM}	Collector current-peak			3	A
I_B	Base current			0.75	A
I_{BM}	Base current-peak			1	A
P_{tot}	Total power dissipation		$T_C=25$	18	W
T_j	Junction temperature			150	
T_{stg}	Storage temperature			-65~150	

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-a}$	Thermal resistance junction to ambient	55	K/W

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CHARACTERISTICS

T_j=25 unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEO(SUS)}	Collector-emitter sustaining voltage	BUX84F	I _C =100mA ; I _B =0; L=25mH	400			V
		BUX85F		450			
V _{CEsat-1}	Collector-emitter saturation voltage		I _C =0.3A ; I _B =0.03A			0.8	V
V _{CEsat-2}	Collector-emitter saturation voltage		I _C =1A ; I _B =0.2A			1	V
V _{BEsat}	Base-emitter saturation voltage		I _C =1A ; I _B =0.2A			1.1	V
I _{CES}	Collector cut-off current	BUX84F	V _{CES} =800V; V _{BE} =0 T _j =125			0.2 1.5	mA
		BUX85F	V _{CES} =1000V; V _{BE} =0 T _j =125			0.2 1.5	
I _{EBO}	Emitter cut-off current		V _{EB} =5V; I _C =0			1.0	mA
h _{FE-1}	DC current gain		I _C =0.1A ; V _{CE} =5V	20		100	
h _{FE-2}	DC current gain		I _C =0.5A ; V _{CE} =5V	15			
f _T	Transition frequency		I _C =0.2A ; V _{CE} =10V; f=1.0MHz		20		MHz

Switching times

t _{on}	Turn-on time	I _C =1A ; V _{CC} =250V I _{B1} =0.2A; I _{B2} =-0.4A		0.2	0.5	μs
t _s	Storage time			2	3.5	μs
t _f	Fall time			0.4		μs

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PACKAGE OUTLINE

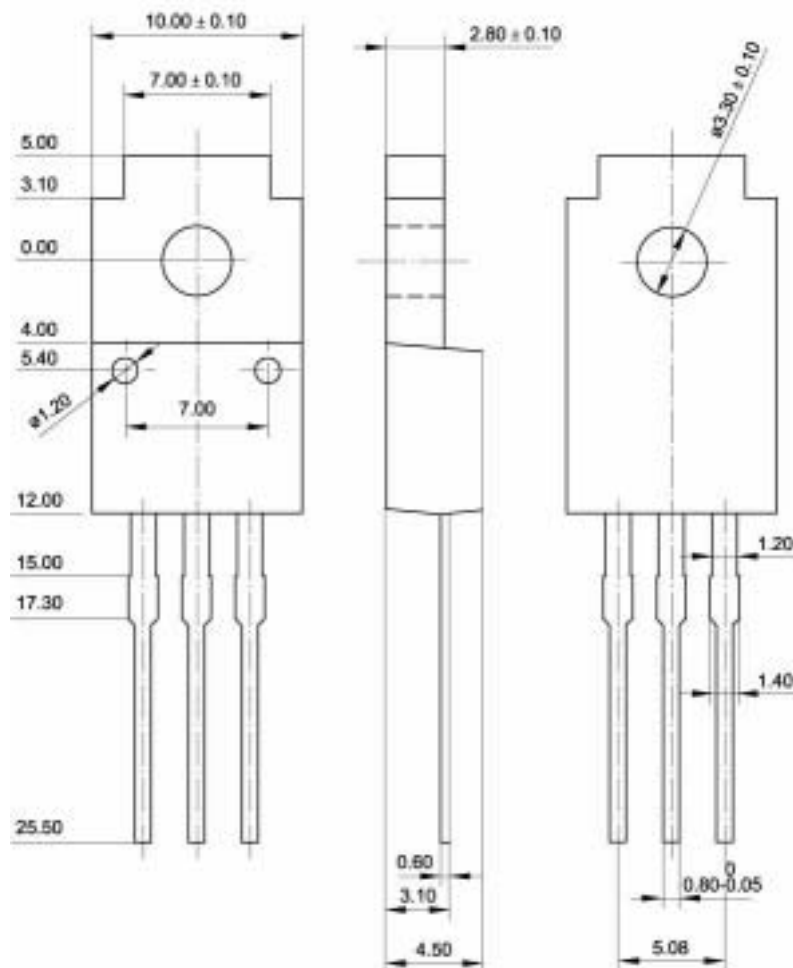


Fig.2 Outline dimensions (unindicated tolerance: $\pm 0.10\text{mm}$)