

Silicon NPN Power Transistors

BUT18 BUT18A

DESCRIPTION

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

APPLICATIONS

- Converters
- Inverters
- Switching regulators
- Motor control systems

PINNING

PIN	DESCRIPTION
1	Base
2	Collector;connected to mounting base
3	Emitter

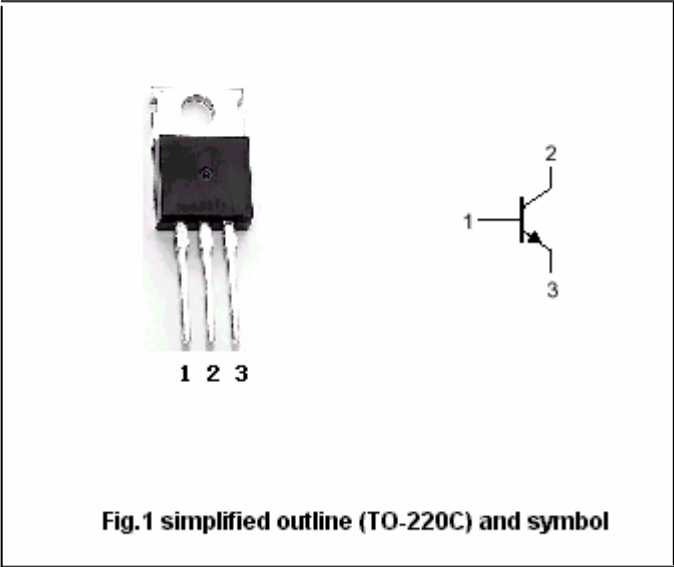


Fig.1 simplified outline (TO-220C) and symbol

Absolute maximum ratings (Tc=25°C)

SYMBOL	PARAMETER		CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	BUT18	Open emitter	850	V
		BUT18A		1000	
V_{CEO}	Collector-emitter voltage	BUT18	Open base	400	V
		BUT18A		450	
V_{EBO}	Emitter-base voltage		Open collector	9	V
I_C	Collector current			6	A
I_{CM}	Collector current-peak			12	A
I_B	Base current			3	A
I_{BM}	Base current-peak			6	A
P_{tot}	Total power dissipation		$T_C=25^{\circ}C$	110	W
T_j	Junction temperature			150	$^{\circ}C$
T_{stg}	Storage temperature			-65~150	$^{\circ}C$

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CHARACTERISTICS

T_j=25°C unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEQ(SUS)}	Collector-emitter sustaining voltage	BUT18	I _C =0.1A; I _B =0; L=25mH	400			V
		BUT18A		450			
V _{CEsat}	Collector-emitter saturation voltage		I _C =4A; I _B =0.8A			1.5	V
V _{BEsat}	Base-emitter saturation voltage		I _C =4A; I _B =0.8A			1.3	V
I _{CES}	Collector cut-off current	BUT18	V _{CE} =850V; V _{BE} =0 T _j =125°C			1.0 2.0	mA
		BUT18A	V _{CE} =1000V; V _{BE} =0 T _j =125°C			1.0 2.0	
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 =1A; V _{CE} =5V	10		35	

Switching times resistive load

t _{on}	Turn-on time	I _C =4A; I _{B1} =-I _{B2} =0.8A V _{CC} =250V			1.0	μ s
t _s	Storage time				4.0	μ s
t _f	Fall time				0.8	μ s

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PACKAGE OUTLINE

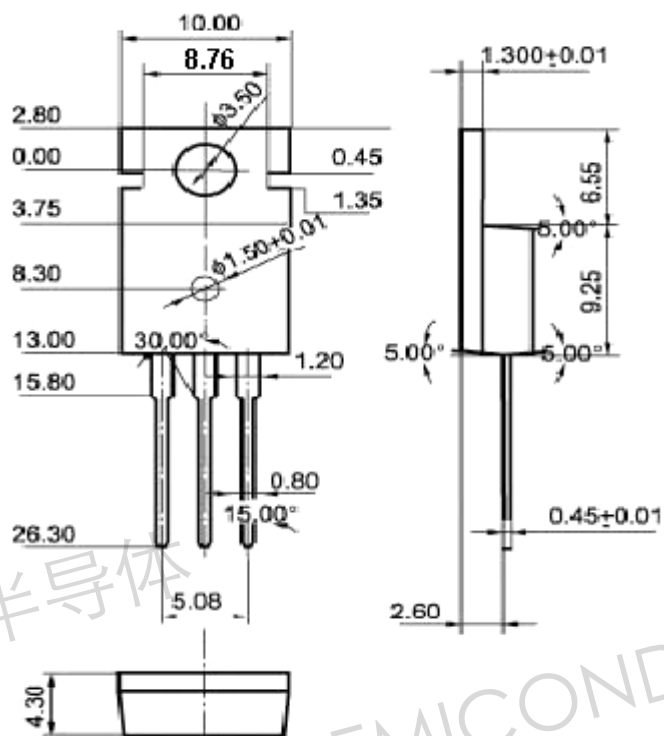


Fig.2 Outline dimensions (unindicated tolerance: ± 0.10 mm)