Silicon NPN Power Transistors   **BUJ403A**
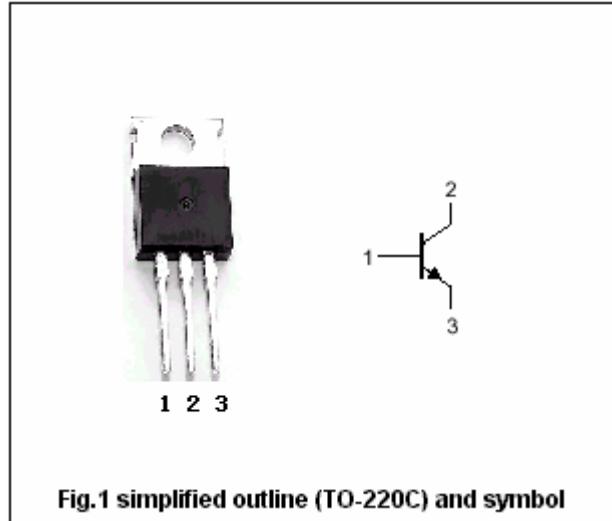
DESCRIPTION
·With TO-220C package
·High voltage,high speed

APPLICATIONS
·Designed for use in high frequency
   electronic lighting ballast applications,
   converters,inverters,switching regulators,
   motor control systems,etc

PINNING

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

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

Absolute maximum ratings (Ta=25)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	1200	V
V_{CEO}	Collector-emitter voltage	Open base	550	V
V_{EBO}	Emitter-base voltage	Open collector	7	V
I_C	Collector current		6	A
I_{CM}	Collector current-peak		10	A
I_B	Base current		3	A
I_{BM}	Base current-peak		5	A
P_{tot}	Total power dissipation	$T_{mb} \le 25$	100	W
T_j	Max.operating junction temperature		150	
T_{stg}	Storage temperature		-65~150	

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}mb}$	Thermal resistance junction 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	I_C=10mA ;I_B=0;L=25mH	550			V
V_{CEsat}	Collector-emitter saturation voltage	I_C=2A ;I_B=0.4 A		0.15	1.0	V
V_{BEsat}	Base-emitter saturation voltage	I_C=2A ;I_B=0.4 A		0.91	1.5	V
I_{CEO}	Collector cut-off current	V_{CE} =550V; I_B=0;			0.1	mA
I_{CES}	Collector cut-off current	V_{CE} =$V_{CESMmax}$; V_{BE}=0; T_j=125			1.0 2.0	mA
I_{EBO}	Emitter cut-off current	V_{EB}=7V; I_C=0			0.1	mA
h_{FE-1}	DC current gain	I_C=1mA;V_{CE}=5V	13			
h_{FE-2}	DC current gain	I_C=500mA;V_{CE}=5V	20		47	
$h_{FEsat-1}$	DC current gain	I_C=2A;V_{CE}=5V	13		25	
$h_{FEsat-2}$	DC current gain	I_C=3A;V_{CE}=5V		15.5		

Switching times resistive load

t_{on}	Turn-on time				0.5	µs
t_s	Storage time	I_C=2.5A; I_{B1}=-I_{B2}=0.5 A R_L=75Ω,V_{BB2}=4V			3.0	µs
t_f	Fall time				0.3	µs

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PACKAGE OUTLINE
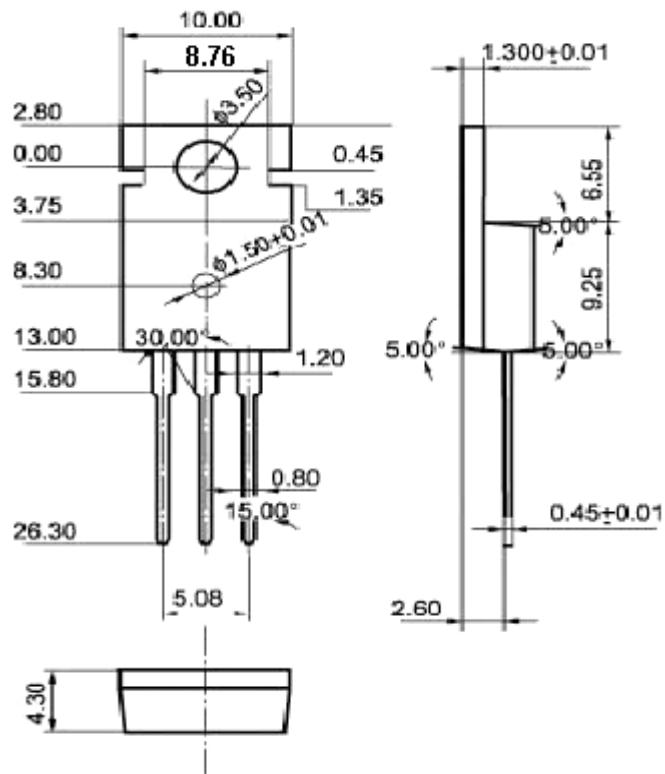
Fig.2 Outline dimensions (unindicated tolerance: 0.1mm)