Silicon NPN Power Transistors BUL45

DESCRIPTION

·With TO-220C package
·Fast switching speed
·High voltage

APPLICATIONS

·Designed for use in electronic ballast and In switchmode power supplies

PINNING

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

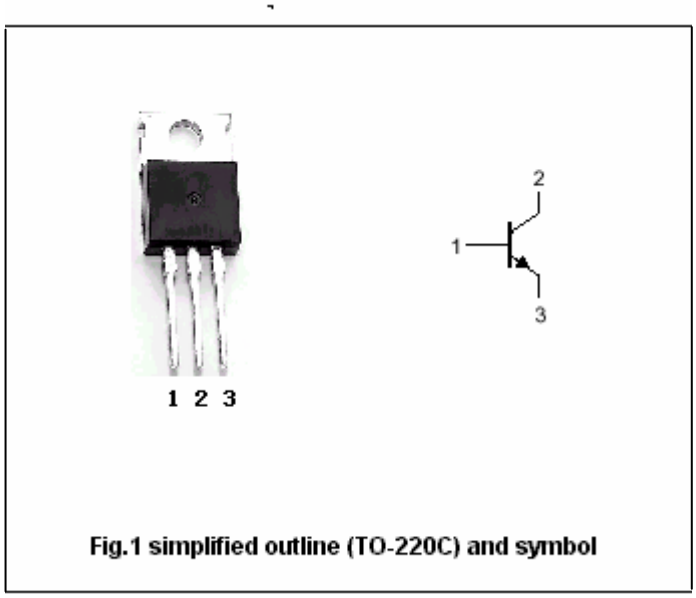

Fig.1 simplified outline (TO-220C) and symbol

Absolute maximum ratings (Ta=25□)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	700	V
V_{CEO}	Collector-emitter voltage	Open base	400	V
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
P_{tot}	Total power dissipation	T_C=25□	75	W
T_j	Max.operating junction temperature		150	□
T_{stg}	Storage temperature		-65~150	□

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}case}$	Thermal resistance junction case	1.65	□/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=0.1 A ;I_B=0;L=25mH	400			V
$V_{CEsat-1}$	Collector-emitter saturation voltage	I_C=1A ;I_B=0.2 A		0.175	0.25	V
$V_{CEsat-2}$	Collector-emitter saturation voltage	I_C=2A ;I_B=0.4 A		0.25	0.4	V
$V_{BEsat-1}$	Base-emitter saturation voltage	I_C=1A ;I_B=0.2 A		0.84	1.2	V
$V_{BEsat-2}$	Base-emitter saturation voltage	I_C=2A ;I_B=0.4 A		0.89	1.25	V
I_{CEO}	Collector cut-off current	V_{CE} =Rated$V_{CEO;}$ I_B=0;			100	μA
I_{CES}	Collector cut-off current	V_{CE} =Rated$V_{CES;}$ V_{EB}=0; T_C=125□			10 100	μA
I_{EBO}	Emitter cut-off current	V_{EB}=9V; I_C=0			0.1	mA
h_{FE-1}	DC current gain	I_C=0.3A;V_{CE}=5V	14		34	
h_{FE-2}	DC current gain	I_C=2A;V_{CE}=1V	7	14		
h_{FE-3}	DC current gain	I_C=10mA;V_{CE}=5V	10	22		
C_{OB}	Output capacitance	I_E=0; V_{CB}=10V;f=1MHz		50	75	pF
f_T	Transition frequency	I_C=0.5 A ; V_{CE}=10V		12		MHz

PACKAGE OUTLINE

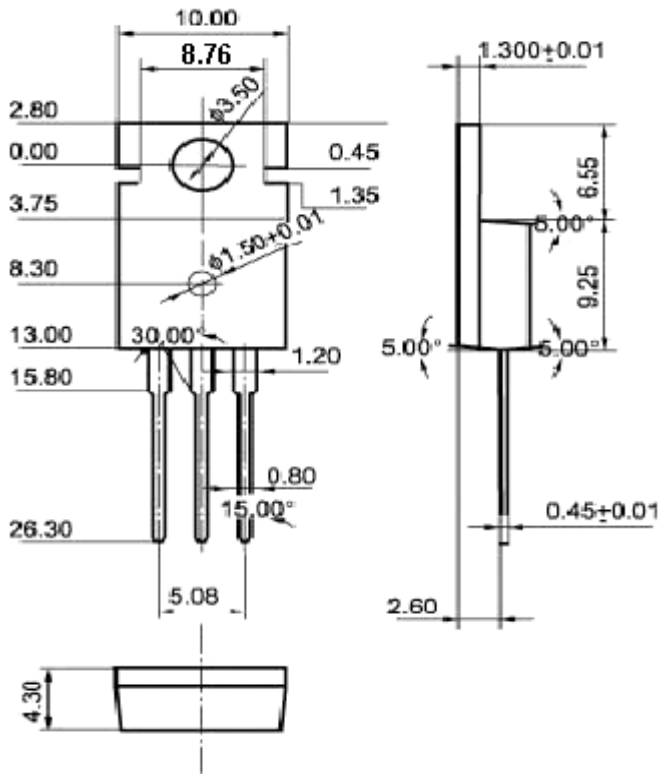

Fig.2 Outline dimensions (unindicated tolerance: 0.1mm)