Silicon NPN Power Transistors BUV27

DESCRIPTION

·With TO-220C package
·Low collector saturation voltage
·Fast switching speed

APPLICATIONS

·For use in high frequency and efficiency converters,switching regulators and motor control

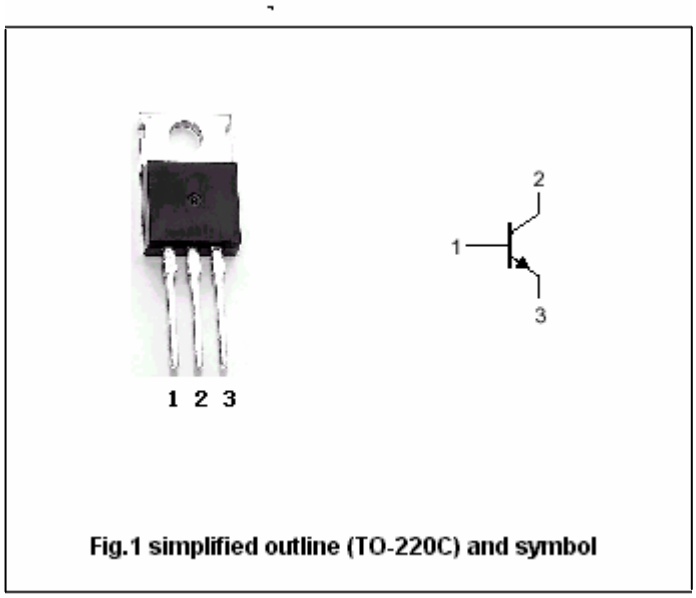

Fig.1 simplified outline (TO-220C) and symbol

PINNING

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

Absolute maximum ratings (Tc=25□)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	240	V
V_{CEO}	Collector-emitter voltage	Open base	120	V
V_{EBO}	Emitter-base voltage	Open collector	7	V
I_C	Collector current (DC)		12	A
I_{CM}	Collector current (peak)		20	A
I_B	Base current		4	A
I_{BM}	Base current (peak)		6	A
P_{tot}	Total power dissipation	T_C=25□	85	W
T_j	Max.operating junction temperature		175	□
T_{stg}	Storage temperature		-65~175	□

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}case}$	Thermal resistance junction case	1.76	□/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=0.2 A ;I_B=0;L=25mH	120			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	I_E=50mA; I_C=0	7		30	V
$V_{CEsat-1}$	Collector-emitter saturation voltage	I_C=4A ;I_B=0.4 A			0.7	V
$V_{CEsat-2}$	Collector-emitter saturation voltage	I_C=8A; I_B=0.8A			1.5	V
V_{BEsat}	Base-emitter saturation voltage	I_C=8A; I_B=0.8A			2	V
I_{CEX}	Collector cut-off current	V_{CE} =240V;V_{BE} = -1.5 V T_C=125□			1	mA
I_{EBO}	Emitter cut-off current	V_{EB}=5V; I_C=0			1	mA

Switching times resistive load

t_{on}	Turn-on time	I_C=8A;I_{B1}=0.8A;V_{CC}=90V V_{BE} = - 6V;R_{BB} = 3.75Ω		0.4	0.8	ms
t_s	Storage time			0.5	1.2	μs
t_f	Fall time			0.12	0.25	μs

PACKAGE OUTLINE

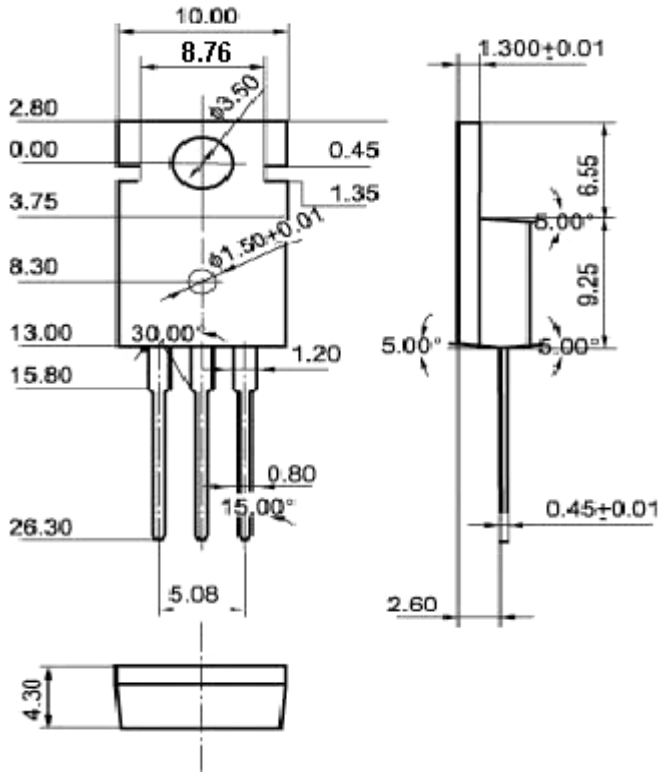

Fig.2 Outline dimensions (unindicated tolerance: 0.1mm)