Silicon NPN Power Transistors 2N6702

DESCRIPTION

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

APPLICATIONS

·Designed for converters,inverters, pulse-width-modulated regulators and a variety of power switching circuits.

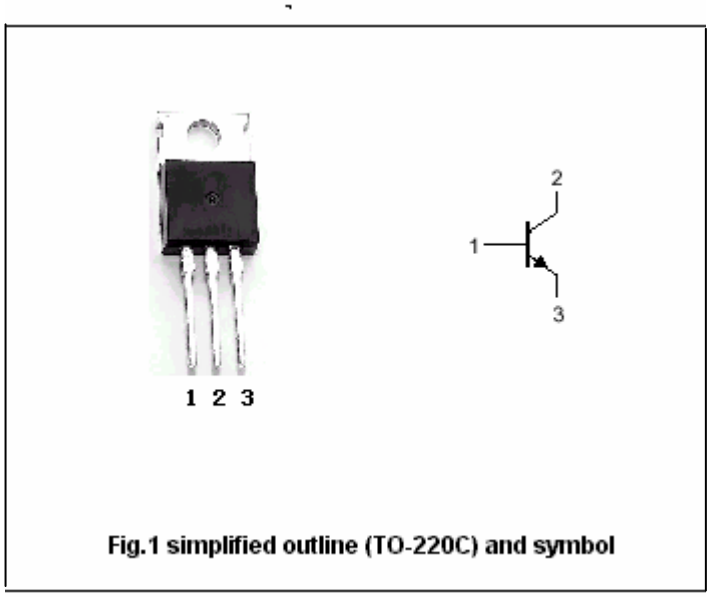

Fig.1 simplified outline (TO-220C) and symbol

PINNING

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

Absolute maximum ratings(Ta=25□)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	140	V
V_{CEO}	Collector-emitter voltage	Open base	90	V
V_{EBO}	Emitter-base voltage	Open collector	7	V
I_C	Collector current		7	A
I_{CM}	Collector current-peak		10	A
I_B	Base current		6	A
P_T	Total power dissipation	T_C=25□	50	W
T_j	Junction temperature		150	□
T_{stg}	Storage temperature		-65~150	□

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
$R_{th\ j\text{-}c}$	Thermal resistance junction to case	2.5	□/W

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	90			V
$V_{CEsat-1}$	Collector-emitter saturation voltage	I_C=5A;I_B=0.5A			0.8	V
$V_{CEsat-2}$	Collector-emitter saturation voltage	I_C=7A;I_B=0.7A			1.5	V
$V_{BE\ sat}$	Base-emitter saturation voltage	I_C=5A;I_B=0.5A			1.5	V
I_{CEV}	Collector cut-off current	V_{CE}=140V;V_{BE}=1.5V T_C=125□			0.1 1.0	mA
I_{EBO}	Emitter cut-off current	V_{EB}=7V; I_C=0			0.1	mA
h_{FE-1}	DC current gain	I_C=0.2A ; V_{CE}=2V	30			
h_{FE-2}	DC current gain	I_C=5A ; V_{CE}=2V	20			
Cob	Output capacitance	I_E=0 ; f=0.1MHz,V_{CB}=10V	50		150	pF
f_T	Transition frequency	I_C=0.5A ; V_{CE}=10V	50		200	MHz

PACKAGE OUTLINE

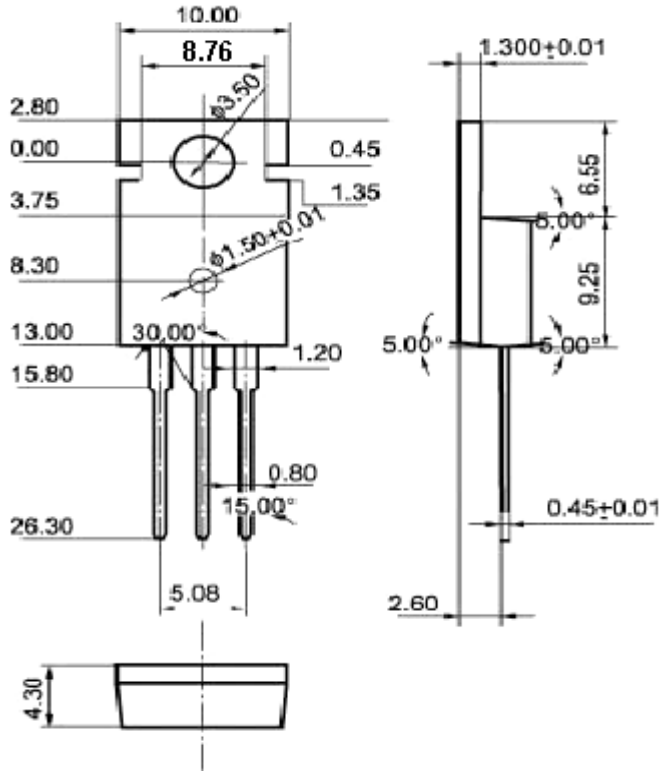

Fig.2 Outline dimensions(unindicated tolerance:±0.10 mm)