

Silicon NPN Power Transistors

2N6102 2N6103

DESCRIPTION

- With TO-220 package
- 2N6102 type with short pin

APPLICATIONS

- For use in general-purpose amplifier and switching applications

PINNING

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

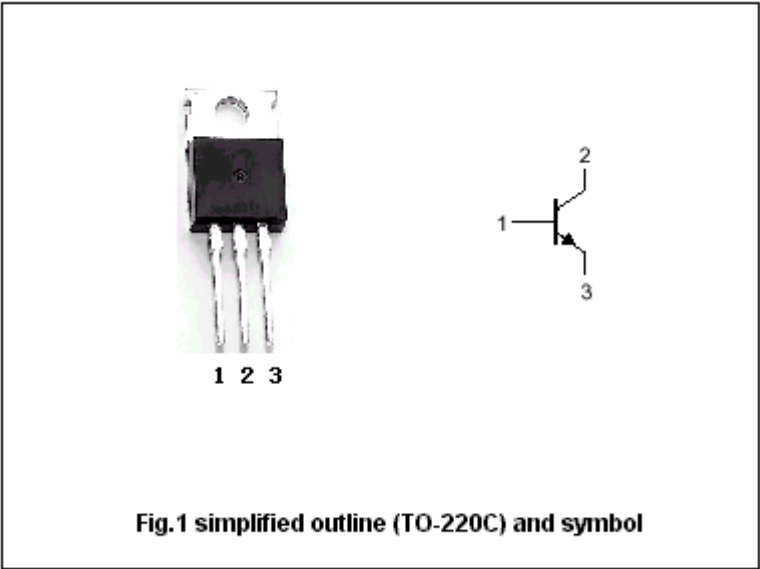


Fig.1 simplified outline (TO-220C) and symbol

Absolute maximum ratings(Ta=25℃)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	45	V
V_{CEO}	Collector-emitter voltage	Open base	45	V
V_{EBO}	Emitter-base voltage	Open collector	8	V
I_C	Collector current		16	A
P_T	Total power dissipation	$T_C=25^{\circ}C$	75	W
T_j	Junction temperature		150	℃
T_{stg}	Storage temperature		-65~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal resistance from junction to case	1.67	℃/W

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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	I _C =0.1A ; I _B =0	45			V
V _{CE(sat-1)}	Collector-emitter saturation voltage	I _C =5A; I _B =0.5A			1.3	V
V _{CE(sat-2)}	Collector-emitter saturation voltage	I _C =16A; I _B =3.2A			2.5	V
V _{BE-1}	Base-emitter on voltage	I _C =5A ; V _{CE} =4V			1.3	V
V _{BE-2}	Base-emitter on voltage	I _C =16A ; V _{CE} =4V			3.5	V
I _{CBO}	Collector cut-off current	V _{CB} =Rated V _{CBO} ; I _E =0 T _C =150°C			0.5 2.0	mA
I _{EBO}	Emitter cut-off current	V _{EB} =8V; I _C =0			1.0	mA
h _{FE-1}	DC current gain	I _C =8A ; V _{CE} =4V	15		80	
h _{FE-2}	DC current gain	I _C =15A ; V _{CE} =4V	5			
f _T	Transition frequency	I _C =0.5A ; V _{CE} =4V	0.8			MHz

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PACKAGE OUTLINE



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