

Inchange Semiconductor

Product Specification

Silicon NPN Power Transistors

MJE12007

DESCRIPTION

- With TO-220 package
- High voltage
- Low saturation voltage

APPLICATIONS

Suited for line-operated switchmode applications such as:

- Fluorescent lamp ballasts
- Inverters
- Solenoid and relay drivers
- Motor controls
- Deflection circuits

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

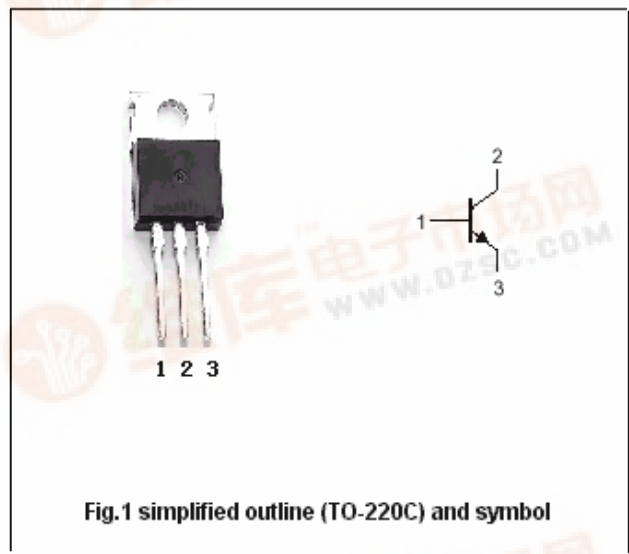


Fig.1 simplified outline (TO-220C) and symbol

Absolute maximum ratings(Tc=25)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V _{CBO}	Collector-base voltage	Open emitter	1500	V
V _{CEO}	Collector-emitter voltage	Open base	750	V
V _{EBO}	Emitter-base voltage	Open collector	9	V
I _C	Collector current (DC)		2.5	A
I _{CM}	Collector current-Peak		5	A
P _D	Total power dissipation	T _C =25	80	W
T _j	Junction temperature		150	
T _{stg}	Storage temperature		-65~150	

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th j-c}	Thermal resistance junction to case	1.56	/W

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CHARACTERISTICS

T_j=25 unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEQ(SUS)}	Collector-emitter sustaining voltage	I _C =50mA; I _B =0	750			V
V _{CEsat-1}	Collector-emitter saturation voltage	I _C =1A; I _B =0.5A			1.0	V
V _{CEsat-2}	Collector-emitter saturation voltage	I _C =2A; I _B =1A			2.5	V
V _{BEsat-1}	Base-emitter saturation voltage	I _C =1A; I _B =0.5A			1.5	V
V _{BEsat-2}	Base-emitter saturation voltage	I _C =2A; I _B =1A			2.8	V
I _{CEV}	Collector cut-off current	V _{CEV} =RatedValue; V _{BE(off)} =-1.5V T _C =100			0.25 2.5	mA
I _{EBO}	Emitter cut-off current	V _{EB} =9V; I _C =0			0.25	mA
h _{FE-1}	DC current gain	I _C =1A; V _{CE} =5V	3			
h _{FE-2}	DC current gain	I _C =2A; V _{CE} =5V	2.5			

