

Silicon NPN Power Transistors

MJE15030

DESCRIPTION

- With TO-220C package
- Complement to type MJE15031
- High transition frequency
- DC current gain specified to 4.0 amperes
 $h_{FE} = 40 \text{ (Min) @ } I_C = 3.0 \text{ Adc}$
 $h_{FE} = 20 \text{ (Min) @ } I_C = 4.0 \text{ Adc}$

APPLICATIONS

- Designed for use as high–frequency drivers in audio amplifiers.

PINNING

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

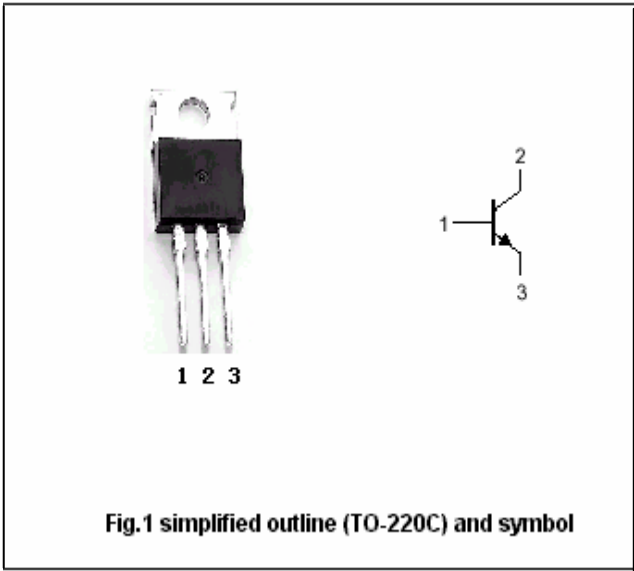


Fig.1 simplified outline (TO-220C) and symbol

Absolute maximum ratings (Tc=25)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	150	V
V_{CEO}	Collector-emitter voltage	Open base	150	V
V_{EBO}	Emitter-base voltage	Open collector	5	V
I_C	Collector current (DC)		8	A
I_{CM}	Collector current-Peak		16	A
I_B	Base current		2	A
P_D	Total power dissipation	$T_a=25$	2	W
		$T_C=25$	50	
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	2.5	/W
$R_{th\ j-A}$	Thermal resistance , junction to ambient	62.5	/W

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CHARACTERISTICS

Tj=25 unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEQ(SUS)}$	Collector-emitter sustaining voltage	$I_C=10mA; I_B=0$	150			V
V_{CEsat}	Collector-emitter saturation voltage	$I_C=1A; I_B=0.1A$			0.5	V
V_{BE}	Base-emitter on voltage	$I_C=1A; V_{CE}=2V$			1.0	V
I_{CBO}	Collector cut-off current	$V_{CB}=150V; I_E=0$			10	μA
I_{CEO}	Collector cut-off current	$V_{CE}=150V; I_B=0$			0.1	mA
I_{EBO}	Emitter cut-off current	$V_{EB}=5V; I_C=0$			10	μA
h_{FE-1}	DC current gain	$I_C=0.1A; V_{CE}=2V$	40			
h_{FE-2}	DC current gain	$I_C=2A; V_{CE}=2V$	40			
h_{FE-3}	DC current gain	$I_C=3A; V_{CE}=2V$	40			
h_{FE-4}	DC current gain	$I_C=4A; V_{CE}=2V$	20			
f_T	Transition frequency	$I_C=0.5A; V_{CE}=10V; f=10MHz$	30			MHz

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PACKAGE OUTLINE

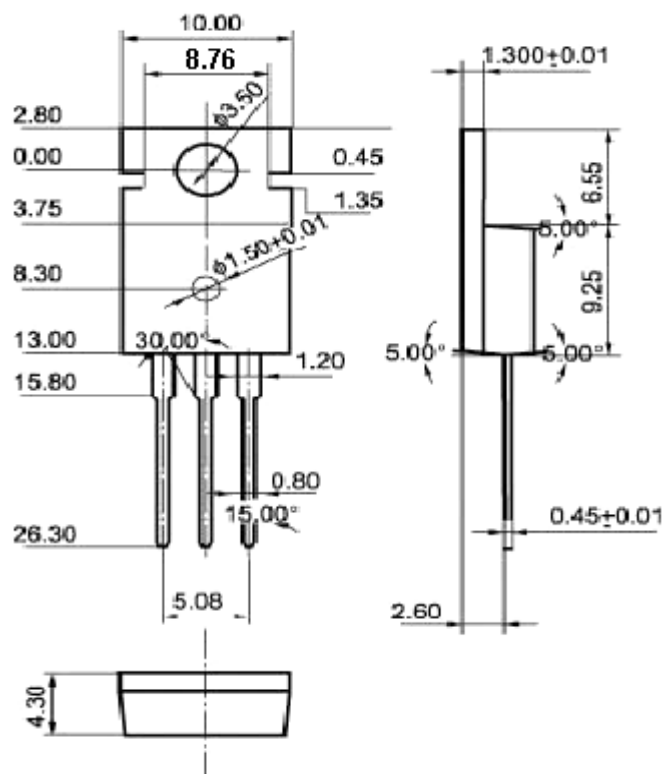


Fig.2 Outline dimensions (unindicated tolerance: $\pm 0.10\text{mm}$)

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