

Silicon PNP Power Transistors

MJE15031

DESCRIPTION

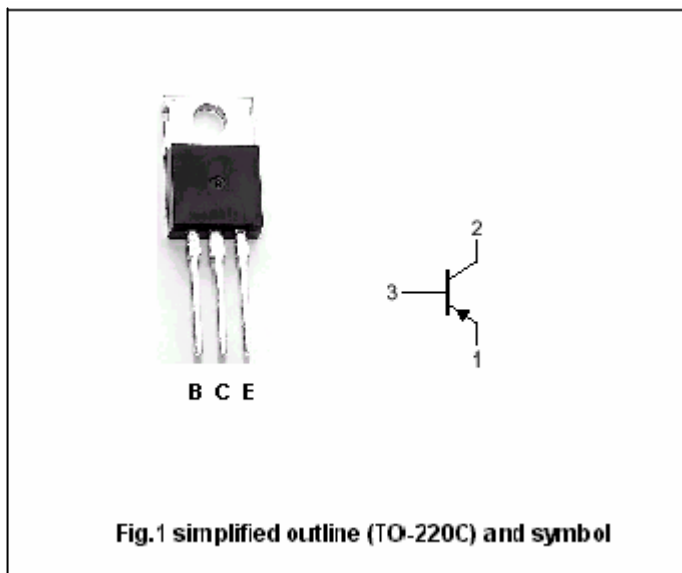
- With TO-220C package
- Complement to type MJE150230
- High transition frequency
- DC Current Gain Specified to 4.0 Amperes
 - $h_{FE} = 40$ (Min) @ $I_C = -3.0$ Adc
 - $h_{FE} = 20$ (Min) @ $I_C = -4.0$ Adc

APPLICATIONS

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

PINNING

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



Absolute maximum ratings (Tc=25°C)

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	$T_a=25^\circ\text{C}$	2	W
		$T_C=25^\circ\text{C}$	50	
T_j	Junction temperature		150	°C
T_{stg}	Storage temperature		-65~150	°C

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-C}$	Thermal resistance ; junction to case	2.5	°C/W
$R_{th\ j-A}$	Thermal resistance , junction to ambient	62.5	°C/W

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CHARACTERISTICS

T_j=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEO(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

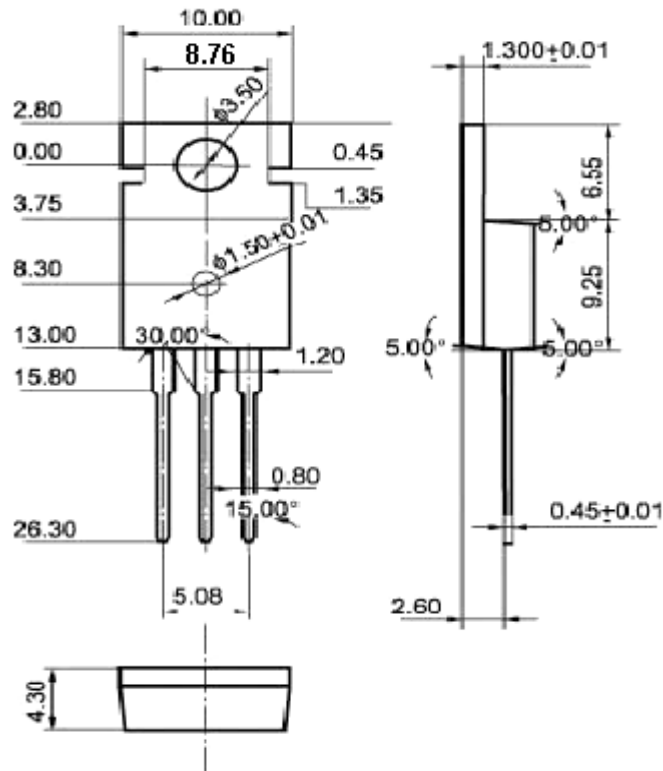


Fig.2 Outline dimensions (unindicated tolerance: $\pm 0.10\text{mm}$)

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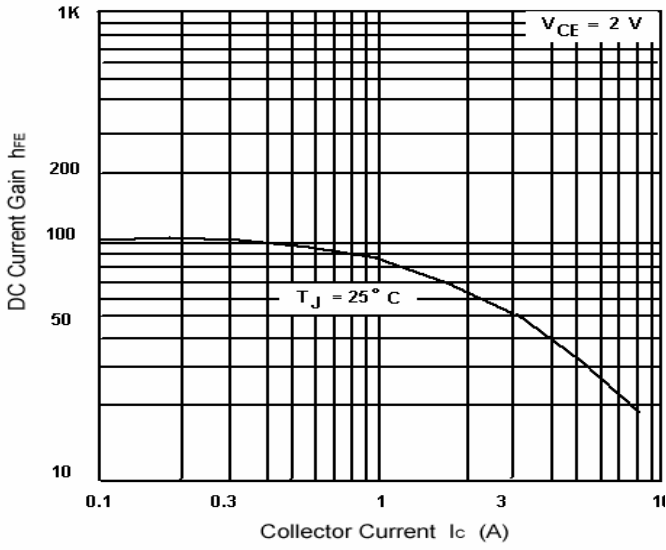


Fig.3 DC current Gain

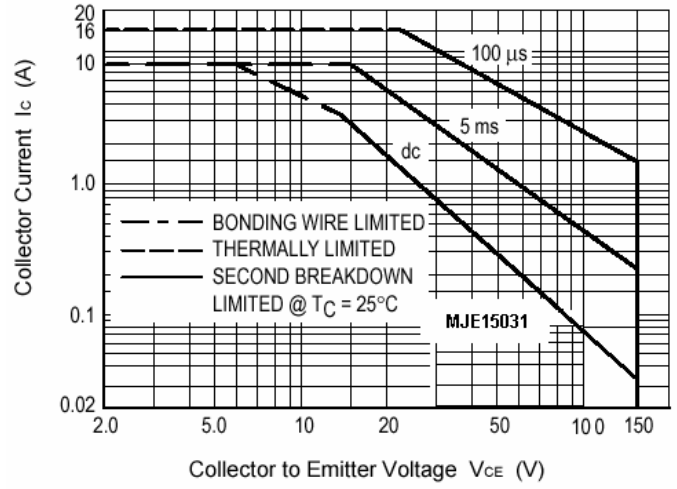


Fig.4 Safe Operating Area

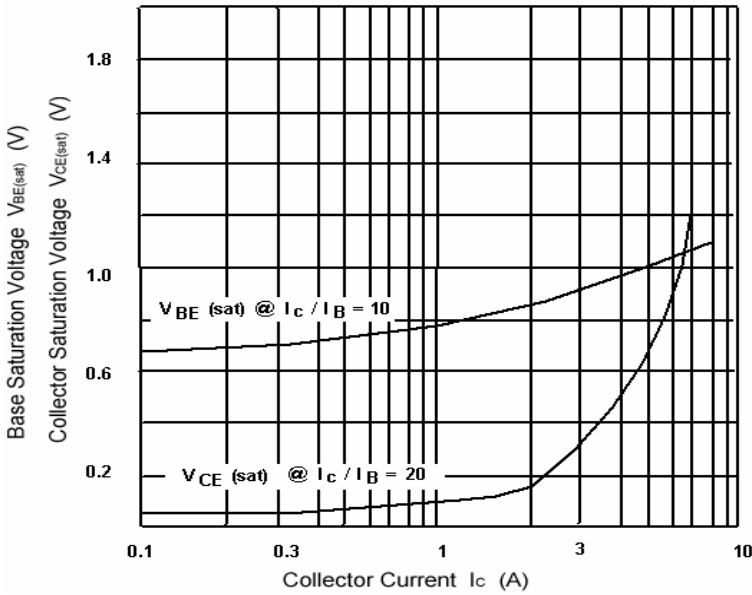


Fig.5 Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage