Silicon PNP Power Transistors MJF15031

DESCRIPTION

- With TO-220F package
- Complement to type MJE15028/30
- 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.

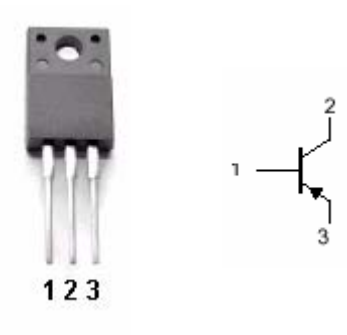

Fig.1 simplified outline (TO-220F) and symbol

PINNING

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

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℃	36	
T_j	Junction temperature		150	℃
T_{stg}	Storage temperature		-65~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}C}$	Thermal resistance ; junction to case	3.5	℃/W
$R_{th\ j\text{-}A}$	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
$V_{CEO(SUS)}$	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			-10	μA
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

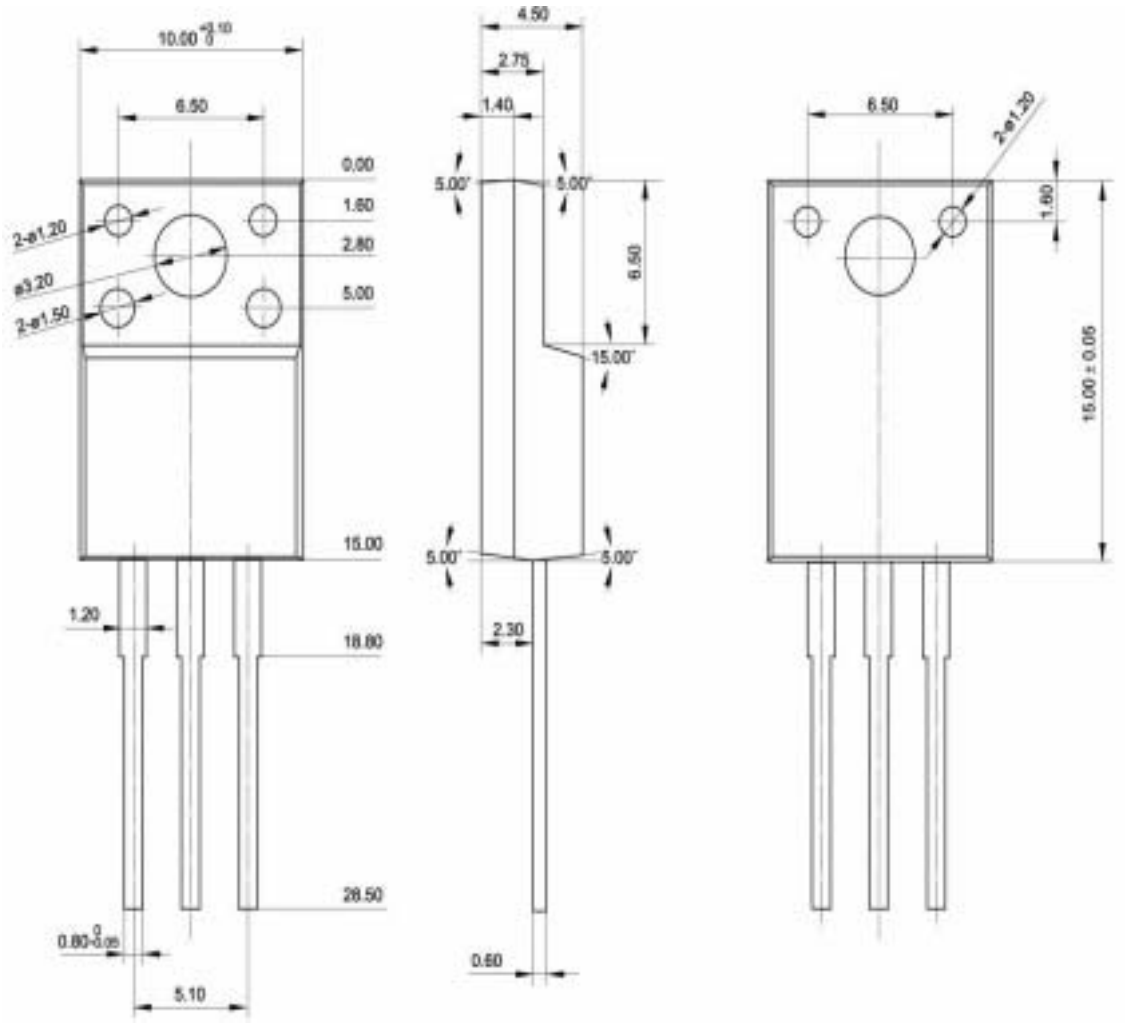

Fig.2 Outline dimensions (unindicated tolerance: ±0.10mm)

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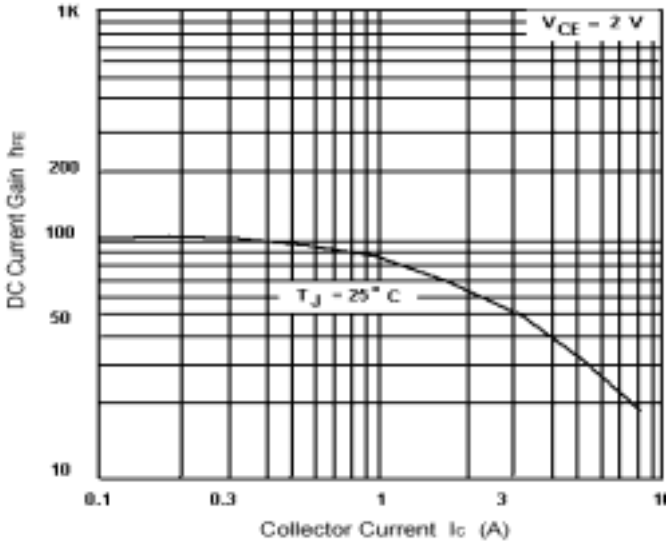

Fig.3 DC current Gain

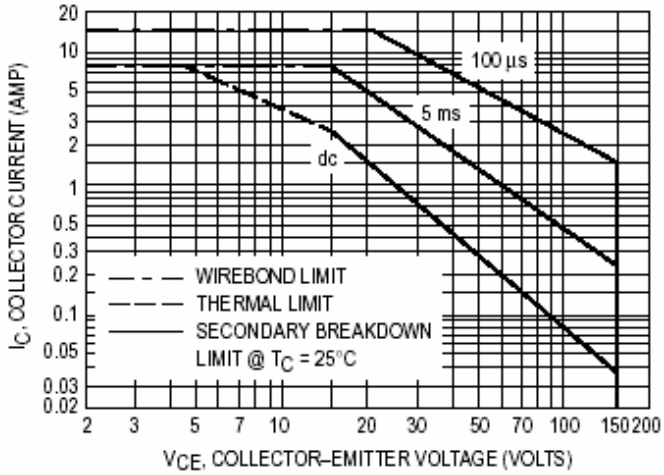

Fig.4 Safe Operating Area

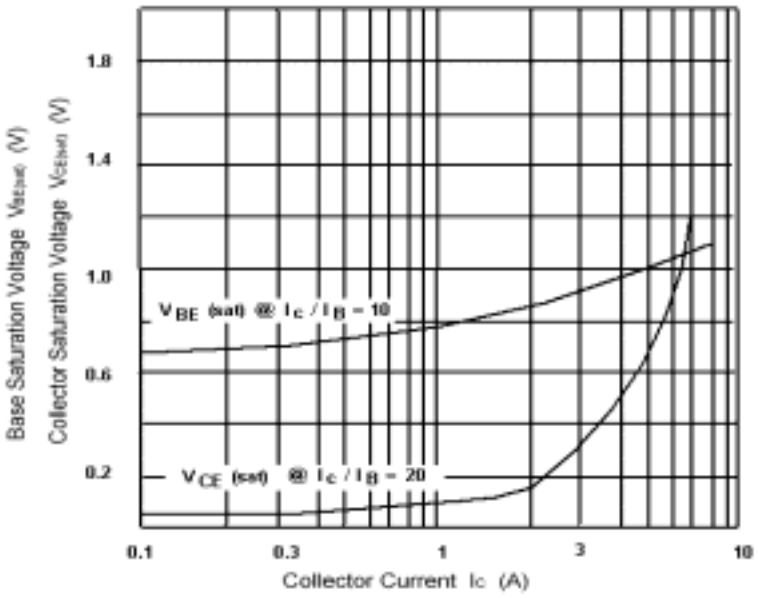

Fig.5 Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage