

Silicon PNP Power Transistors

MJE15029

DESCRIPTION

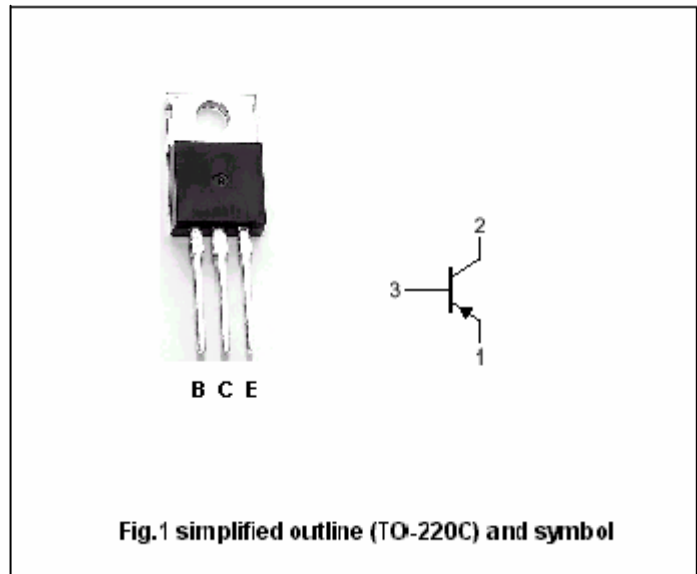
- With TO-220C package
- Complement to type MJE15028
- High transition frequency
- DC Current Gain Specified to 4.0 Amperes
 - $h_{FE} = 40 \text{ (Min) @ } I_C = -3.0 \text{ A}$
 - $h_{FE} = 20 \text{ (Min) @ } I_C = -4.0 \text{ A}$

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 ($T_c=25^\circ\text{C}$)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	-120	V
V_{CEO}	Collector-emitter voltage	Open base	-120	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	$^\circ\text{C}$
T_{stg}	Storage temperature		-65~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

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

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CHARACTERISTICS

Tj=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEQ(SUS)}$	Collector-emitter sustaining voltage	$I_C = -10mA; I_B = 0$	-120			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	$V_{CB} = -120V; I_E = 0$			-10	μA
I_{CEO}	Collector cut-off current	$V_{CE} = -120V; I_B = 0$			-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

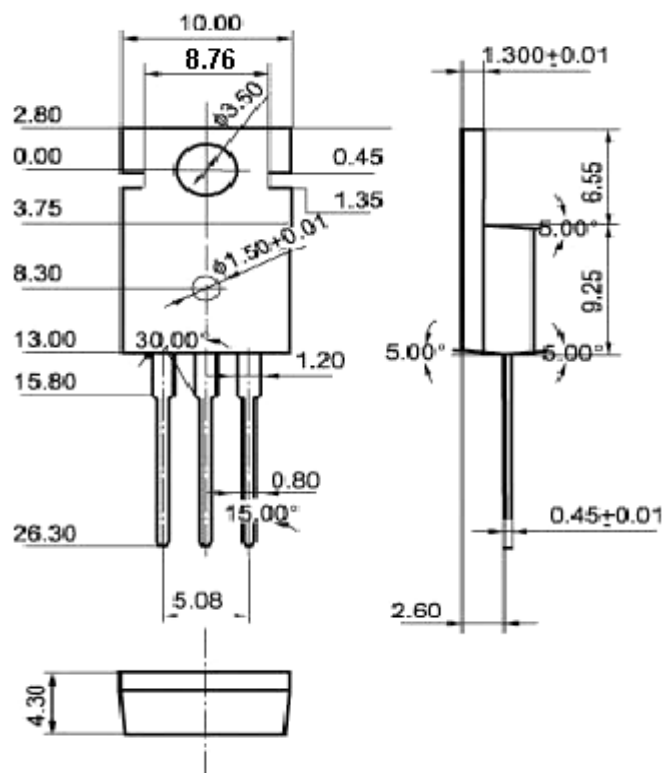


Fig.2 Outline dimensions (unindicated tolerance: ±0.10mm)

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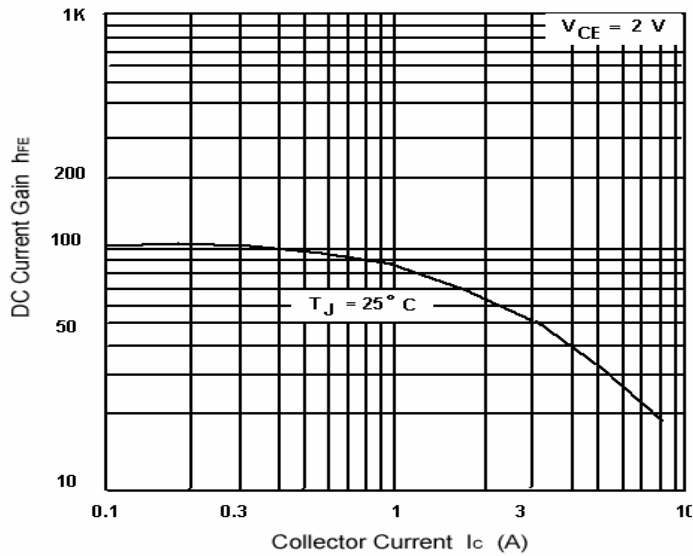


Fig.3 DC current Gain

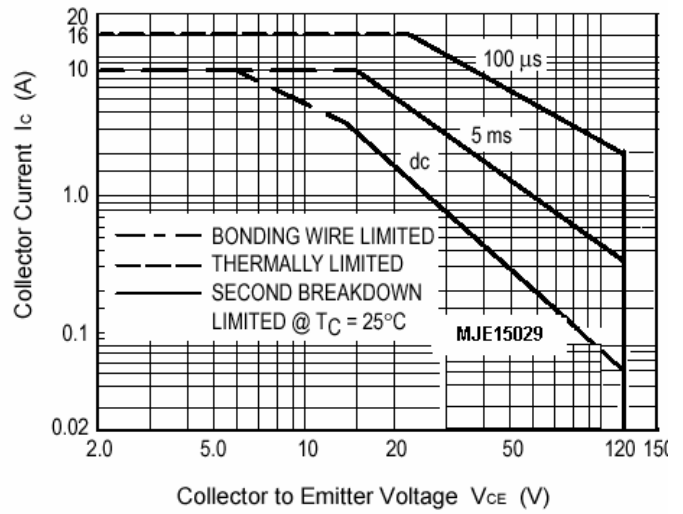
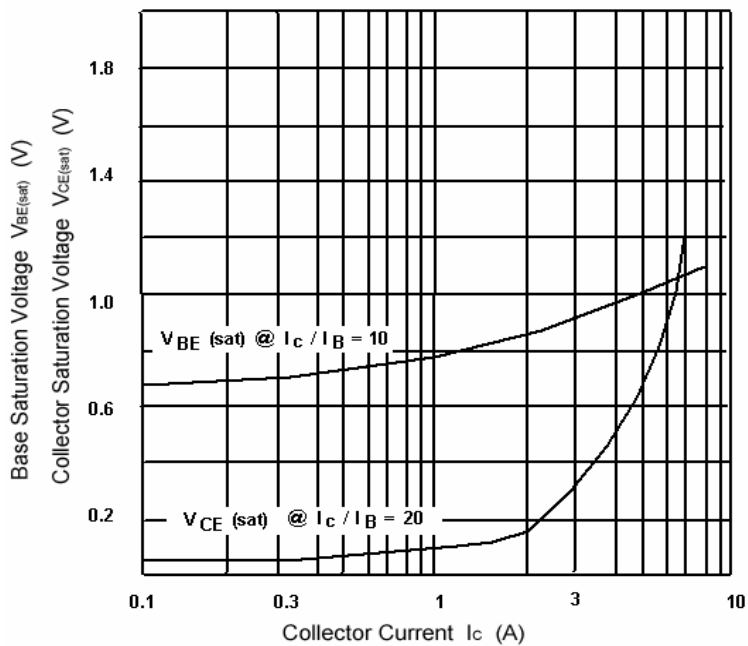


Fig.4 Safe Operating Area

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