



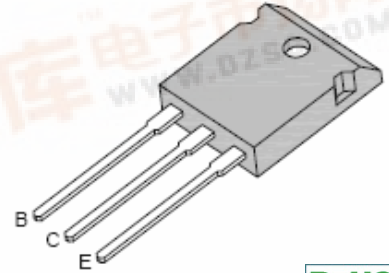
# Power Transistor (PNP)

## 2SB817E

### Power Transistor (PNP)

#### Features

- 2SB817E transistor is designed for use in general purpose power amplifier, application



TO-3P



#### Mechanical Data

<b>Case:</b>	TO-3P, Plastic Package
<b>Terminals:</b>	Plated leads solderable per MIL-STD-750, Method 2026
<b>Weight:</b>	0.22 ounce, 6.2 gram

#### Maximum Ratings *(T<sub>Ambient</sub>=25°C unless noted otherwise)*

Symbol	Description	2SB817E	Unit	Conditions
<b>V<sub>CB0</sub></b>	Collector-Base Voltage	160	V	
<b>V<sub>CEO</sub></b>	Collector-Emitter Voltage	140	V	
<b>V<sub>EBO</sub></b>	Emitter-Base Voltage	6.0	V	
<b>I<sub>C</sub></b>	Collector Current-Continuous	12	A	
<b>I<sub>CM</sub></b>	Collector Current-Peak	15	A	
<b>P<sub>tot</sub></b>	Power Dissipation at T <sub>C</sub> =25°C	100	W	
	Power Dissipation Derate above 25°C	0.8	W/°C	
<b>R<sub>θJC</sub></b>	Thermal Resistance from Junction to Case	1.25	°C/W	
<b>T<sub>J</sub>, T<sub>STG</sub></b>	Operating and Storage Junction Temperature Range	-55 to +150	°C	



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### Electrical Characteristics ( $T_{Ambient}=25^{\circ}C$ unless noted otherwise)

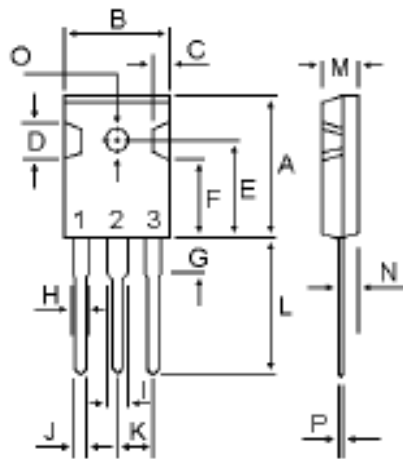
Symbol	Description	2SB817E		Unit	Conditions
		Min.	Max.		
<b>*h<sub>FE</sub></b>	D.C. Current Gain	100	200		V <sub>CE</sub> =5.0V, I <sub>C</sub> =1.0A
		20	-		V <sub>CE</sub> =5.0V, I <sub>C</sub> =6.0A
<b>V(BR)CBO</b>	Collector-Base Breakdown Voltage	160	-	V	I <sub>C</sub> =5.0mA, I <sub>E</sub> =0
<b>V(BR)CEO</b>	Collector-Emitter Breakdown Voltage	140	-	V	I <sub>C</sub> =5.0mA, I <sub>B</sub> =0
<b>V(BR)EBO</b>	Emitter-Base Breakdown Voltage	6.0	-	V	I <sub>B</sub> =5.0mA, I <sub>C</sub> =0
<b>*V<sub>CE(sat)</sub></b>	Collector-Emitter Saturation Voltage	-	2.5	V	I <sub>C</sub> =5.0A, I <sub>B</sub> =0.5A
<b>*V<sub>BE(on)</sub></b>	Base-Emitter On Voltage	-	1.5	V	I <sub>C</sub> =1.0A, V <sub>CE</sub> =5.0V
<b>I<sub>CBO</sub></b>	Collector-Base Cut-off Current	-	100	μA	V <sub>CB</sub> =80V, I <sub>E</sub> =0
<b>I<sub>EBO</sub></b>	Emitter-Base Cut-off Current	-	100	μA	V <sub>EB</sub> =4.0V, I <sub>C</sub> =0
<b>t<sub>on</sub></b>	Turn-on Time	-	0.3	μS	V <sub>CC</sub> =20V, I <sub>C</sub> =1.0A I <sub>B1</sub> =-I <sub>B2</sub> =100mA PW=20μS
<b>t<sub>s</sub></b>	Storage Time	-	7.0	μS	
<b>t<sub>f</sub></b>	Fall Time		0.7	μS	

\*Pulse Test: Pulse Width= 300μs, Duty Cycle ≤2.0%

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### Dimensions in mm



PIN 1.BASE  
2.COLLECTOR  
3.EMITTER

TO-3P

DIM	MILLIMETERS	
	MIN	MAX
A	20.63	22.38
B	15.38	16.20
C	1.90	2.70
D	5.10	6.10
E	14.81	15.22
F	11.72	12.84
G	4.20	4.50
H	1.82	2.46
I	2.92	3.23
J	0.89	1.53
K	5.26	5.66
L	18.50	21.50
M	4.68	5.36
N	2.40	2.80
O	3.25	3.65
P	0.55	0.70

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