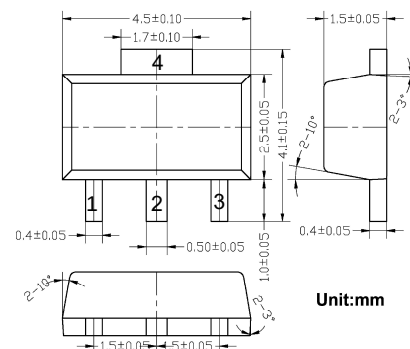


2SB1188 PNP Transistors

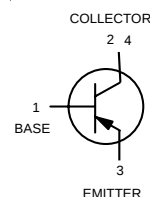
Features

- Low $V_{CE(sat)}$
- Complements the 2SD1766

Marking: BCR



1. Base
- 2, 4. Collector
3. Emitter



Maximum Ratings ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector Base Voltage	-40	V
V_{CEO}	Collector Emitter Voltage	-32	V
V_{EBO}	Emitter Base Voltage	-5	V
I_C	Collector Current	-2	A
P_C	Collector Power Dissipation	500	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	250	$^{\circ}\text{C/W}$
$R_{\theta JC}$	Thermal Resistance From Junction To Case	45	$^{\circ}\text{C/W}$
T_j	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55~150	$^{\circ}\text{C}$

Electrical Characteristics ($T_a=25^{\circ}\text{C}$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min	Typ	Max	Unit
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C = -50\mu\text{A}, I_E = 0$	-40			V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C = -1\text{mA}, I_B = 0$	-32			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E = -50\mu\text{A}, I_C = 0$	-5			V
I_{CBO}	Collector cut-off current	$V_{CB} = -20\text{V}, I_E = 0$			-1	μA
I_{EBO}	Emitter cut-off current	$V_{EB} = -4\text{V}, I_C = 0$			-1	μA
$h_{FE(1)}$	DC current gain*	$V_{CE} = -5\text{V}, I_C = -1\text{mA}$	82			
$h_{FE(2)}$		$V_{CE} = -3\text{V}, I_C = -500\text{mA}$	180		390	
$V_{CE(sat)}$	Collector-emitter saturation voltage*	$I_C = -2\text{A}, I_B = -0.2\text{A}$			-0.8	V
f_T	Transition frequency	$V_{CE} = -5\text{V}, I_C = -0.5\text{A}, f = 30\text{MHz}$		100		MHz
C_{ob}	Output capacitance	$V_{CB} = -10\text{V}, I_E = 0, f = 1\text{MHz}$		50		pF



Typical Characteristics

