

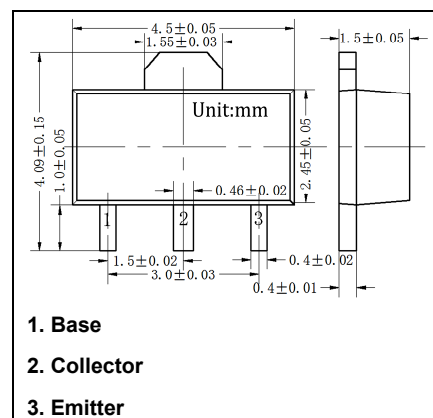
SOT-89 Plastic-Encapsulate Transistors

2SB1189

PNP Transistors

Features

- High breakdown voltage
- Complements the 2SD1767



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

Symbol	Parameter	Value	Unit
V_{CBO}	Collector Base Voltage	-80	V
V_{CEO}	Collector Emitter Voltage	-80	V
V_{EBO}	Emitter Base Voltage	-5	V
I_c	Collector Current	-0.7	A
P_c	Collector Power Dissipation	0.5	mW
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	$I_c = -50\mu\text{A}, I_E = 0$	-80			V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_c = -2\text{mA}, I_B = 0$	-80			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	$V_{CB} = -50\text{V}, I_E = 0$			-0.5	μA
I_{EBO}	Emitter cut-off current	$V_{EB} = -4\text{V}, I_c = 0$			-0.5	μA
$h_{FE(1)}$	DC current gain*	$V_{CE} = -5\text{V}, I_c = -1\text{mA}$	82			
$h_{FE(2)}$		$V_{CE} = -3\text{V}, I_c = -100\text{mA}$	82		390	
$V_{CE(sat)}$	Collector-emitter saturation voltage*	$I_c = -500\text{mA}, I_B = -50\text{mA}$			-0.4	V
f_T	Transition frequency	$V_{CE} = -10\text{V}, I_c = -50\text{mA}, f = 100\text{MHz}$		100		MHz
C_{ob}	Output capacitance	$V_{CB} = -10\text{V}, I_E = 0, f = 1\text{MHz}$			20	pF

Classification of $h_{FE(1)}$

Rank	P	Q	R
Range	82-180	120-270	180-390
Marking	BDP	BDQ	BDR

Typical Characteristics

