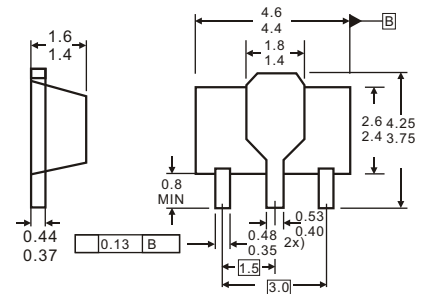




1. BASE
2. COLLECTOR
3. EMITTER

**SOT-89**


Dimensions in inches and (millimeters)

**Features**

- ✧ High current
- ✧ Low voltage

**MAXIMUM RATINGS** ( $T_A=25^{\circ}\text{C}$  unless otherwise noted)

Symbol	Parameter	Value	Units
$V_{CBO}$	Collector-Base Voltage	32	V
$V_{CEO}$	Collector-Emitter Voltage	20	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current -Continuous	1	A
$P_C$	Collector Power Dissipation	500	mW
$T_J$	Junction Temperature	150	$^{\circ}\text{C}$
$T_{stg}$	Storage Temperature	-55-150	$^{\circ}\text{C}$

**ELECTRICAL CHARACTERISTICS** ( $T_{amb}=25^{\circ}\text{C}$  unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu\text{A}, I_E=0$	32			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1\text{mA}, I_B=0$	20			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu\text{A}, I_C=0$	5			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=25\text{V}, I_E=0$			0.1	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=5\text{V}, I_C=0$			0.1	$\mu\text{A}$
DC current gain	$h_{FE(1)}$	$V_{CE}=1\text{V}, I_C=500\text{mA}$	85		375	
	$h_{FE(2)}$	$V_{CE}=1\text{V}, I_C=1\text{A}$	60			
	$h_{FE(3)}$	$V_{CE}=10\text{V}, I_C=5\text{mA}$	50			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=1\text{A}, I_B=100\text{mA}$			0.5	V
Base-emitter voltage	$V_{BE1}$	$V_{CE}=10\text{V}, I_C=5\text{mA}$		0.62		V
	$V_{BE2}$	$V_{CE}=1\text{V}, I_C=1\text{A}$			1	V
Transition frequency	$f_T$	$V_{CE}=5\text{V}, I_C=10\text{mA}, f=100\text{MHz}$	40			MHz

**CLASSIFICATION OF  $h_{FE(1)}$** 

Rank	BC868-10	BC868-16	BC868-25
Range	85-160	100-250	160-375
Marking	<b>CBC</b>	<b>CCC</b>	<b>CDC</b>

## Typical Characteristics

