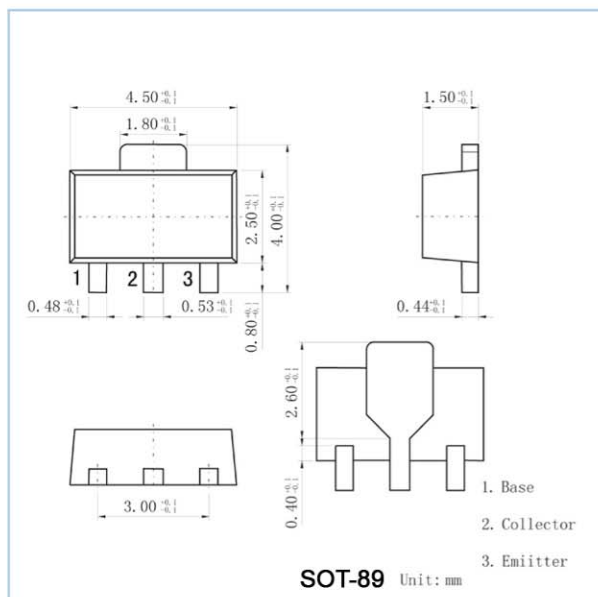


## ■ Features

- High current (max. 1 A).
- Low voltage (max. 45 V).



## ■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector-base voltage	$V_{CBO}$	45	V
Collector-emitter voltage	$V_{CEO}$	45	V
Emitter-base voltage	$V_{EBO}$	5	V
Collector current (DC)	$I_C$	1	A
Peak collector current	$I_{CM}$	1.5	A
Peak base current	$I_{BM}$	0.2	A
Power dissipation $T_a \leq 25^\circ\text{C}$ *	$P_D$	1.3	W
Operating ambient temperature	$R_{amb}$	-65 to +150	$^\circ\text{C}$
Thermal resistance from junction to ambient *	$R_{th(j-a)}$	94	K/W
Thermal resistance from junction to solder point	$R_{th(j-s)}$	14	K/W
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-65 to +150	$^\circ\text{C}$

\* Device mounted on a printed-circuit board, single sided copper, tinplated, mounting pad for collector  $6\text{ cm}^2$ .

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector cutoff current	ICBO	V <sub>CB</sub> = 30 V, I <sub>E</sub> = 0			100	nA
		V <sub>CB</sub> = 30 V, I <sub>E</sub> = 0; T <sub>j</sub> = 125°C			10	iA
Emitter cutoff current	IEBO	V <sub>EB</sub> = 5 V, I <sub>C</sub> = 0			100	nA
DC current gain	h <sub>FE</sub>	I <sub>C</sub> = 5 mA; V <sub>CE</sub> = 2 V	40			
		I <sub>C</sub> = 150 mA; V <sub>CE</sub> = 2 V	63		250	
		I <sub>C</sub> = 500 mA; V <sub>CE</sub> = 2 V	25			
DC current gain	h <sub>FE</sub>	I <sub>C</sub> = 150 mA; V <sub>CE</sub> = 2 V;	63		160	
			100		250	
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> = 500 mA; I <sub>B</sub> = 50 mA			0.5	V
Base to emitter voltage	V <sub>BE</sub>	I <sub>C</sub> = 500 mA; V <sub>CE</sub> = 2 V			1	V
DC current gain ratio of the complementary pairs	$\frac{h_{FE}}{h_{FE}}$	I <sub>C</sub>   = 150 mA;   V <sub>CE</sub>   = 2V		1.3	1.6	
Transition frequency	f <sub>T</sub>	I <sub>C</sub> = 10 mA; V <sub>CE</sub> = 5 V; f = 100 MHz		130		MHz

■ h<sub>FE</sub> Classification

TYPE	BCX54	BCX54-10	BCX54-16
Marking	BA	BC	BD