

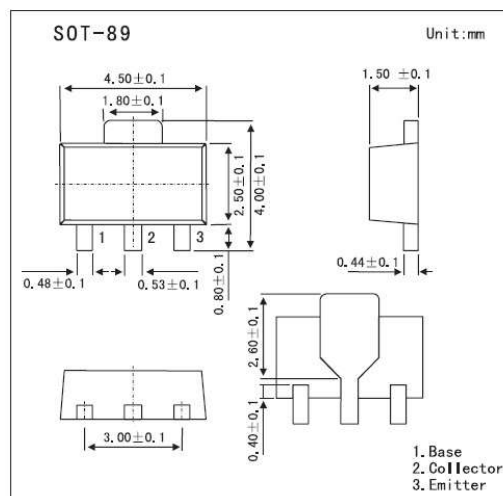
PNP Medium Power Transistor

Features

High current.

Three current gain selections.

1.2 W total power dissipation.



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

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CB0}	-32	V
Collector-emitter voltage	V_{CEO}	-20	V
Emitter-base voltage	V_{EB0}	-5	V
Collector current	I_C	-1	A
Peak collector current	I_{CM}	-2	A
Peak base current	I_{BM}	-200	mA
Total power dissipation	*1 and *2	0.5	W
	*1 and *3	0.85	W
	*1 and *4	1.2	W
Storage temperature	T_{stg}	-65 to +150	$^\circ\text{C}$
Junction temperature	T_j	150	$^\circ\text{C}$
Operating ambient temperature	R_{amb}	-65 to +150	$^\circ\text{C}$
Thermal resistance from junction to ambient	*1 and *2	250	K/W
	*1 and *3	147	K/W
	*1 and *4	104	K/W
Thermal resistance from junction to solder point	$R_{th(j-s)}$	20	K/W

*1.Refer to SOT89 standard mounting conditions.

*2.Device mounted on an FR4 printed-circuit board, single-sided copper, tin-plated footprint.

*3.Device mounted on an FR4 printed-circuit board, single-sided copper, tin-plated, mounting pad for collector 1 cm².

*4.Device mounted on an FR4 printed-circuit board, single-sided copper, tin-plated, mounting pad for collector 6 cm²

■ Electrical Characteristics Ta = 25°C

Parameter		Symbol	Testconditions	Min	Typ	Max	Unit
Collector cutoff current		ICBO	V _{CB} = -25 V, I _E = 0			-100	nA
			V _{CB} = -25 V, I _E = 0; T _j = 25°C			-10	μA
Emitter cutoff current		IEBO	VEB = -5 V, I _C = 0			-100	nA
DC current gain	BC 869	hFE	I _C = -5 mA; V _{CE} = -10 V	50			
			I _C = -500 mA; V _{CE} = -1 V	85		375	
			I _C = -1 A; V _{CE} = -1 V	60			
	BC869-16	hFE	I _C = -500 mA; V _{CE} = -1 V	100		250	
	BC869-25	hFE	I _C = -500 mA; V _{CE} = -1 V	160		375	
Collector-emitter saturation voltage		VCE(sat)	I _C = -1 A; I _B = -100 mA			-500	mV
Base to emitter voltage		VBE	I _C = -5 mA; V _{CE} = -10 V			-700	mV
			I _C = -1 A; V _{CE} = -1 V			-1	V
Collector capacitance		C _C	I _E = I _E = 0; V _{CB} = -10 V; f = 1 MHz		28		pF
Transition frequency		f _T	I _C = -50 mA; V _{CE} = -5 V; f = 100 MHz	40	140		MHz

■ hFE Classification

TYPE	BC869	BC869-16	BC869-25
Marking	CEC	CGC	CHC