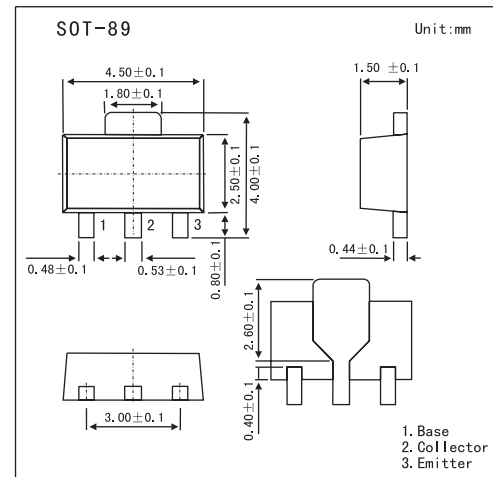


NPN Medium Power Transistors

■ Features

- High current (max. 1 A).
- Low voltage (max. 80 V).



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

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CB0}	100	V
Collector-emitter voltage	V_{CE0}	80	V
Emitter-base voltage	V_{EB0}	5	V
Collector current	I_C	1	A
Peak collector current	I_{CM}	1.5	A
Peak base current	I_{BM}	0.2	A
Total power dissipation	P_{tot}	1.3	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	$R_{th(j-a)}$	94	K/W
Thermal resistance from junction to solder point	$R_{th(j-s)}$	14	K/W

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector cutoff current	IcBO	V _{CB} = 30 V, I _E = 0			100	nA
		V _{CB} = 30 V, I _E = 0; T _J = 125°C			10	μA
Emitter cutoff current	I _{EBO}	V _{EB} = 5 V, I _C = 0			100	nA
DC current gain	h _{FE}	I _C = 5 mA; V _{CE} = 2V	90			
		I _C = 150 mA; V _{CE} = 2V	90		400	
		I _C = 500 mA; V _{CE} = 2V	25		80	
Collector-emitter saturation voltage	V _{CE(sat)}	I _C = 500 mA; I _B = 50 mA			0.5	V
Base to emitter voltage	V _{BE}	I _C = 500 mA; V _{CE} = 2 V			1	V
Transition frequency	f _T	I _C = 10 mA; V _{CE} = 5 V; f = 100 MHz		130		MHz
DC current gain ratio of the complementary pairs	$\frac{h_{FE}}{h_{FE}}$	I _C = 150 mA; V _{CE} = 2V		1.3	1.6	

■ h_{FE} Classification

Marking	BW	BV	BU
hFE1	90-180	135-270	200-400