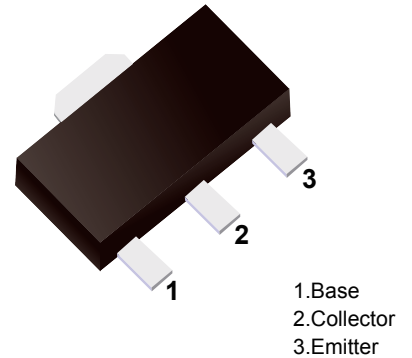


■ Surface Mount NPN Silicon Transistor

■ Features

- High current (max. 500mA).
- Low voltage (max. 150 V).



■ Simplified outline(SOT-89)

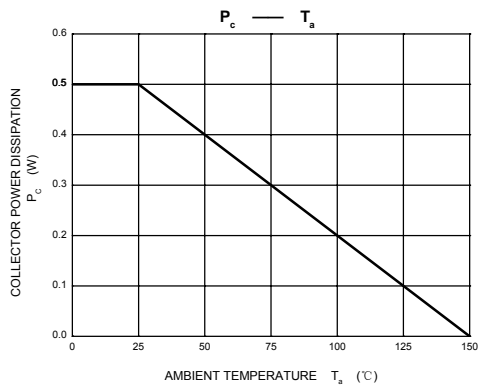
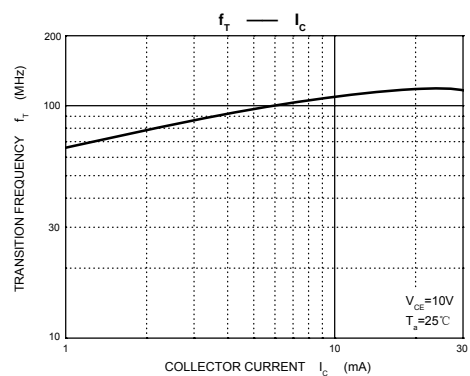
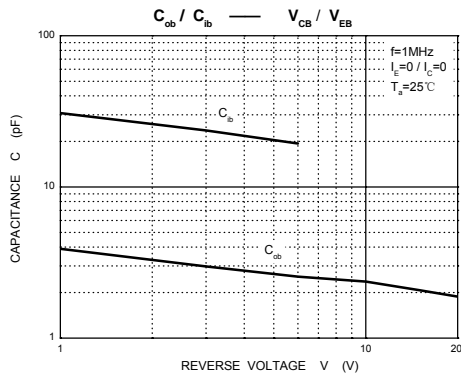
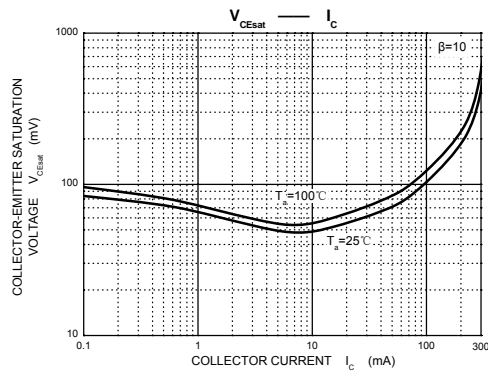
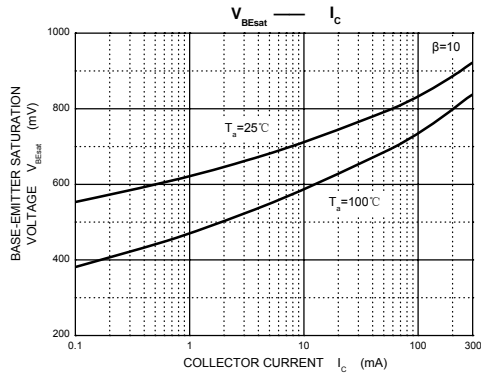
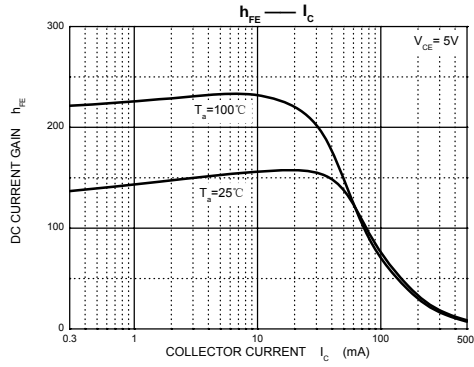
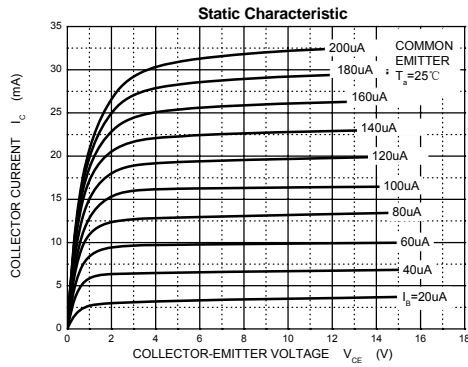
■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Collector-base voltage	V _{CB0}	180	V
Collector-emitter voltage	V _{CEO}	160	V
Emitter-base voltage	V _{EBO}	6	V
Collector current (DC)	I _C	600	mA
power dissipation	P _D	1.2	W
thermal resistance Junction-to-ambient	R _{θJA}	104	°C/W
Junction temperature	T _j	150	°C
Storage temperature	T _{stg}	-65 to +150	°C

■ Electrical Characteristics Ta = 25°C

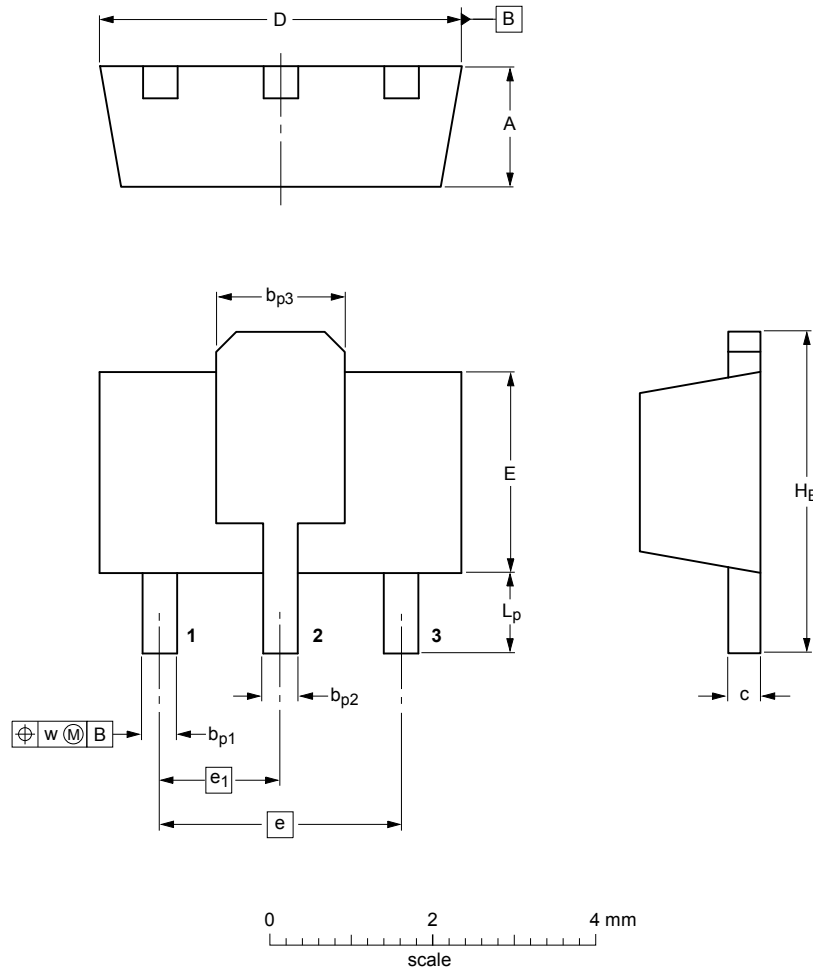
Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector to base breakdown voltage	V _{CB0}	I _C =100 μ A	180			V
Collector to emitter breakdown voltage	V _{CEO}	I _C =1.0mA	160			V
Emitter to base breakdown voltage	V _{EBO}	I _E =10 μ A	6.0			V
Collector cutoff current	I _{CB0}	V _{CB} = 120 V, I _E = 0			50	nA
		V _{CB} = 120 V, T _A =100°C			50	μ A
DC current gain	h _{FE}	I _C = 1.0 mA; V _{CE} = 5.0 V	80			
		I _C = 10mA; V _{CE} = 5.0V	80		250	
		I _C = 50 mA; V _{CE} = 5.0V	30			
Collector to emitter saturation voltage	V _{CE(sat)}	I _C = 10 mA; I _B = 1.0mA			0.15	V
		I _C = 50 mA; I _B = 5.0mA			0.20	V
Base to emitter saturation voltage	V _{BE(sat)}	I _C = 10 mA; I _B = 1.0mA			1.00	V
		I _C = 50 mA; I _B = 5.0mA			1.00	V
Output capacitance	C _{ob}	V _{CB} = 10 V, I _E = 0, f=1.0MHz			6.0	pF
Transition frequency	f _T	I _C = 10 mA; V _{CE} = 10V; f = 100 MHz	100		300	MHz

■ Typical Characteristics



Package Outline

SOT-89



DIMENSIONS (mm are the original dimensions)

UNIT	A	b _{p1}	b _{p2}	b _{p3}	c	D	E	e	e ₁	H _E	L _p	w
mm	1.6 1.4	0.48 0.35	0.53 0.40	1.8 1.4	0.44 0.23	4.6 4.4	2.6 2.4	3.0	1.5	4.25 3.75	1.2 0.8	0.13

Summary of Packing Options

Package	Package Description	Packing Quantity	Industry Standard
SOT-89	Tape/Reel, 7" reel	1000	EIA-481-1