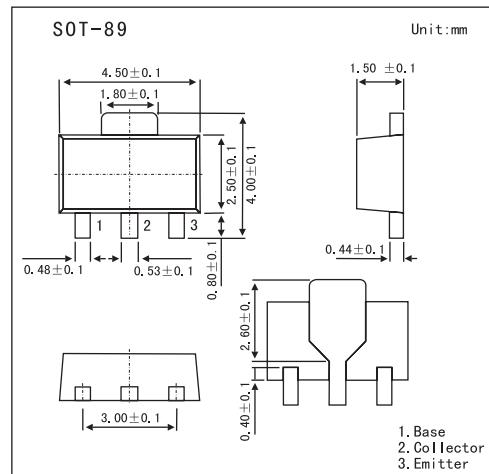


NPN High-Voltage Transistors

BST39; BST40

■ Features

- Low current (max. 50 mA)
- High voltage (max. 300 V).



■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
collector-base voltage (open emitter)	V _{CBO}	400	V
BST39		300	V
collector-emitter voltage (open-base)	V _{CEO}	350	V
BST39		250	V
emitter-base voltage (open collector)	V _{EBO}	5	V
collector current (DC)	I _C	100	mA
peak collector current	I _{CM}	200	mA
peak base current	I _{BM}	100	mA
total power dissipation T _{amb} ≤ 25 °C *	P _{tot}	1.3	W
storage temperature	T _{stg}	-65 to 150	°C
junction temperature	T _j	150	°C
operating ambient temperature	T _{amb}	-65 to 150	°C
thermal resistance from junction to ambient *	R _{th j-a}	96	K/W
thermal resistance from junction to soldering point	R _{th j-s}	16	K/W

* Device mounted on a printed-circuit board, single-sided copper, tinplated, mounting pad for collector 6 cm².

BST39; BST40

■ Electrical Characteristics Ta = 25°C unless otherwise specified.

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
collector cut-off current	I _{CBO}	I _E = 0; V _{CB} = 300 V			20	nA
emitter cut-off current	I _{EBO}	I _C = 0; V _{EB} = 5 V			100	nA
DC current gain	h _{FE}	I _C = 20 mA; V _{CE} = 10 V			40	
collector-emitter saturation voltage	V _{CESat}	I _C = 50 mA; I _B = 4 mA			500	mV
collector capacitance	C _c	I _E = i _e = 0; V _{CB} = 10 V; f = 1 MHz			2	pF
transition frequency	f _T	I _C = 10 mA; V _{CE} = 10 V; f = 100 MHz	70			MHz

■ Marking

Type Number	BST39	BST40
Marking	AT1	AT2