



NPN High-Voltage Transistor

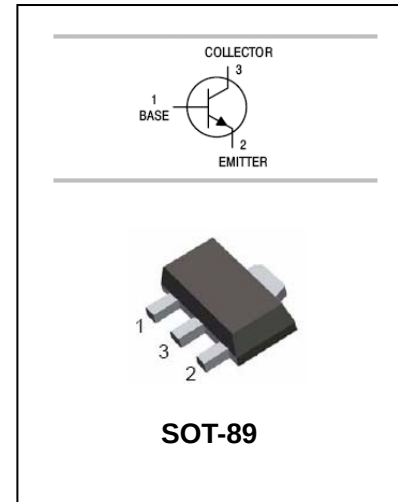
BST39/BST40

FEATURES

- Low current(max.100mA).
- $P_C=1.3W$.
- High voltage(max.350v).



Lead-free



APPLICATIONS

- General purpose switching and amplification.

ORDERING INFORMATION

Type No.	Marking	Package Code
BST39/BST40	AT1/AT2	SOT-89

MAXIMUM RATING @ $T_a=25^{\circ}C$ unless otherwise specified

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	BST39 400	V
		BST40 300	
V_{CEO}	Collector-Emitter Voltage	BST39 350	V
		BST40 250	
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current -DC	100	mA
I_{CM}	Peak Collector Current	200	mA
I_{BM}	Peak Base Current	100	mA
P_{tot}	Total powerDissipation	1.3	W
T_j, T_{stg}	Junction and Storage Temperature	-65 to +150	$^{\circ}C$



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ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu A, I_E=0$ BST39 BST40	400 300			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1mA, I_B=0$ BST39 BST40	350 250			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu A, I_C=0$ BST39 BST40	5			V
Collector cut-off current	I_{CBO}	$V_{CB}=300V, I_E=0$			20	nA
Emitter cut-off current	I_{EBO}	$V_{EB}=5V, I_C=0$			0.1	μA
DC current gain	h_{FE}	$V_{CE}=10V, I_C=20mA$	40			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=50mA, I_B=4mA$			0.5	V
Transition frequency	f_T	$V_{CE}=10V, I_C=10mA,$ $f=100MHz$	70			MHz
Collector capacitance	C_C	$V_{CE}=10V, I_E=i_e=0, f=1MHz$			2	pF

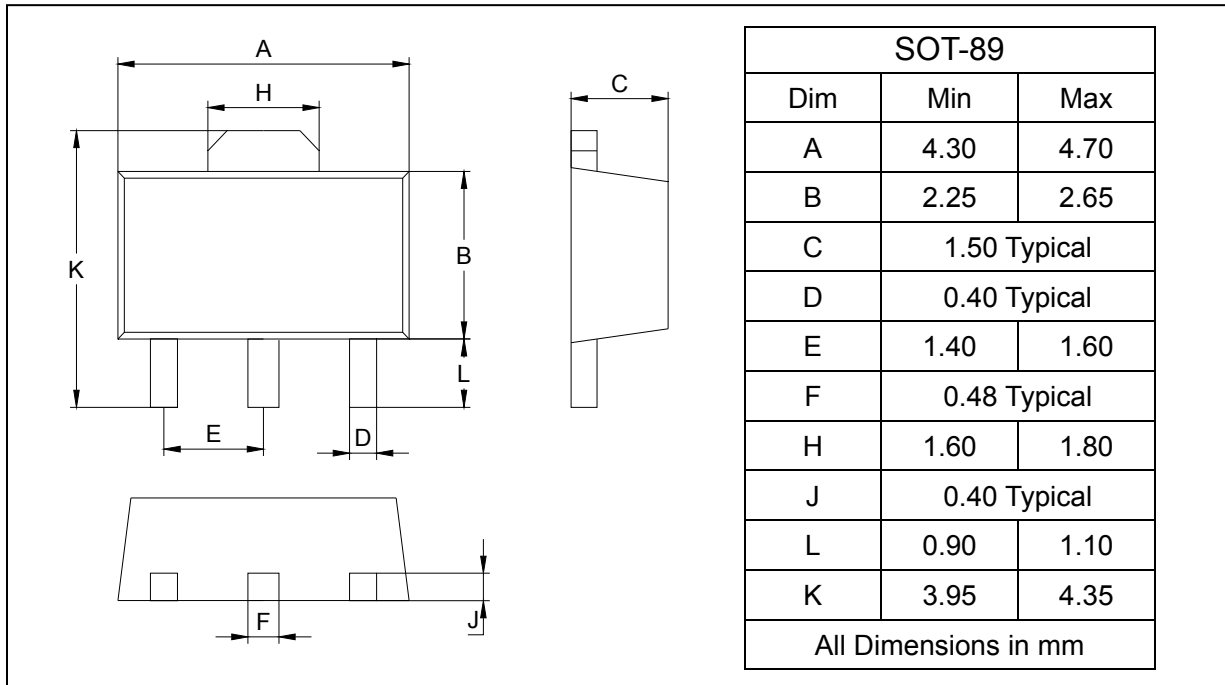
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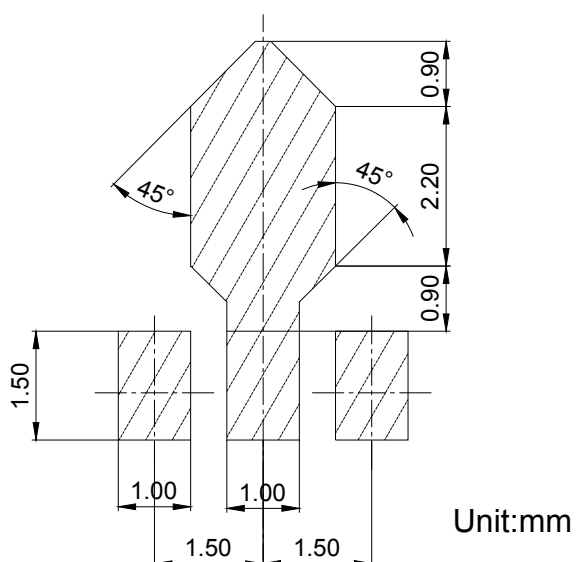
PACKAGE OUTLINE

Plastic surface mounted package

SOT-89



SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
BST39/BST40	SOT-89	1000/Tape&Reel