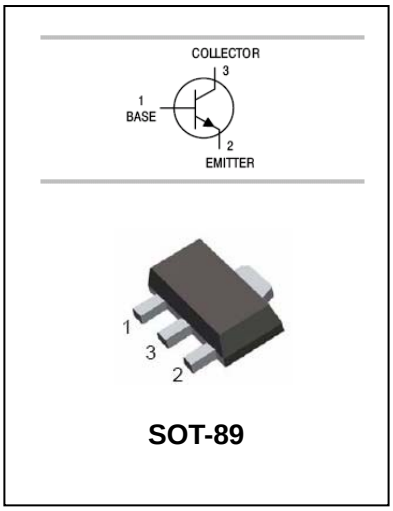
NPN High-Voltage Transistor **BST39/BST40**

FEATURES

Lead-free

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



SOT-89

APPLICATIONS

- General purpose switching and amplification.

ORDERING INFORMATION

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

MAXIMUM RATING @ Ta=25℃ unless otherwise specified

Symbol	**Parameter**		**Value**	**Units**
V_{CBO}	Collector-Base Voltage	BST39 BST40	400 300	V
V_{CEO}	Collector-Emitter Voltage	BST39 BST40	350 250	V
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		-65~150	℃

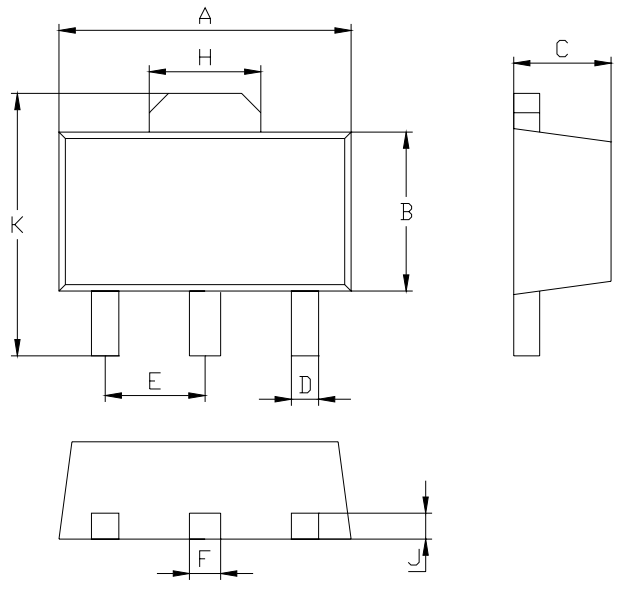
NPN High-Voltage Transistor **BST39/BST40**

ELECTRICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=100μA,I_E=0 BST39	400			V
		BST40	300			
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=1mA,I_B=0 BST39	350			V
		BST40	250			
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=100μA,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_{CB}=10V,I_E=0,f=1MHz		2		pF

PACKAGE OUTLINE

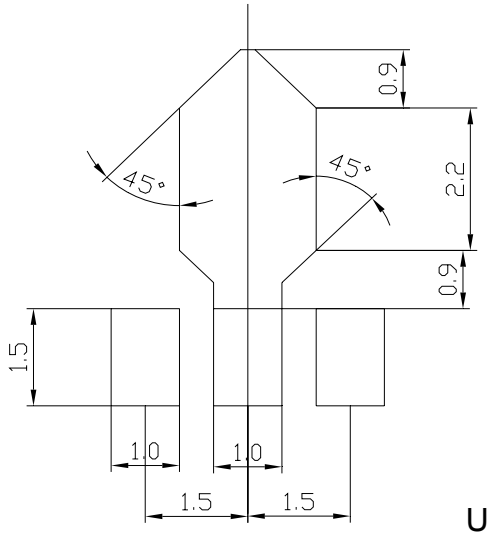
Plastic surface mounted package SOT-89



SOT-89		
Dim	Min	Max
A	4.5	4.7
B	2.3	2.7
C	1.5Typical	
D	0.35	0.55
E	1.4	1.6
F	0.4	0.6
H	1.55	1.75
J	0.4Typical	
K	4.15	4.25
All Dimensions in mm		

NPN High-Voltage Transistor **BST39/BST40**

SOLDERING FOOTPRINT



Unit:mm

PACKAGE INFORMATION

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