BST39,BST40

TRANSISTOR (NPN)

1.BASE
2.COLLECTOR
3.EMITTER

SOT-89

FEATURES

- Low Current
- High Voltage

APPLICATIONS

- General Purpose Switching and Amplification

MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

Symbol	Parameter		Value	Unit
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		100	mA
P_C	Collector Power Dissipation		500	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient		250	℃/W
T_J,T_{stg}	Operation Junction and Storage Temperature Range		-55~+150	℃

ELECTRICAL CHARACTERISTICS (T_a=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		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				100	nA
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 output capacitance	C_{ob}	V_{CB}=10V, I_E=0, f=1MHz				2	pF