



## SOT-89-3L Plastic-Encapsulate Transistors

### BST52 TRANSISTOR (NPN)

#### FEATURES

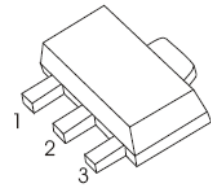
- Low Voltage
- High Current
- Integrated Diode and Resistor

#### APPLICATIONS

- Industrial Switching Applications: Print Hammer, Solenoid, Relay and Lamp Driving

SOT-89-3L

1. BASE
2. COLLECTOR
3. EMITTER



#### MARKING:AS3

#### MAXIMUM RATINGS ( $T_a=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Unit
$V_{CB0}$	Collector-Base Voltage	90	V
$V_{CEO}$	Collector-Emitter Voltage	80	V
$I_C$	Collector Current	500	mA
$P_C$	Collector Power Dissipation	500	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	250	$^{\circ}\text{C}/\text{W}$
$T_j$	Junction Temperature	150	$^{\circ}\text{C}$
$T_{stg}$	Storage Temperature	-55~+150	$^{\circ}\text{C}$

#### ELECTRICAL CHARACTERISTICS ( $T_a=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu\text{A}, I_E=0$	90			V
Collector-emitter sustain voltage	$V_{CES}$	$V_{BE}=0, I_C=100\mu\text{A}$	80			V
Collector cut-off current	$I_{CES}$	$V_{BE}=0, V_{CE}=80\text{V}$			50	nA
Emitter cut-off current	$I_{EBO}$	$V_{EB}=4\text{V}, I_C=0$			50	nA
DC current gain	$h_{FE}$	$V_{CE}=10\text{V}, I_C=150\text{mA}$	1000			
		$V_{CE}=10\text{V}, I_C=500\text{mA}$	2000			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=500\text{mA}, I_B=0.5\text{mA}$			1.3	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=500\text{mA}, I_B=0.5\text{mA}$			1.9	V
Transition frequency	$f_T$	$V_{CE}=5\text{V}, I_C=500\text{mA}, f=100\text{MHz}$		200		MHz