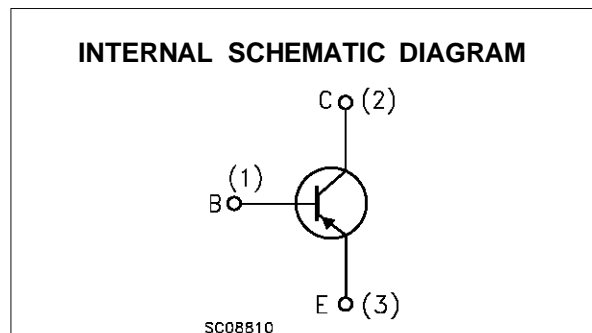
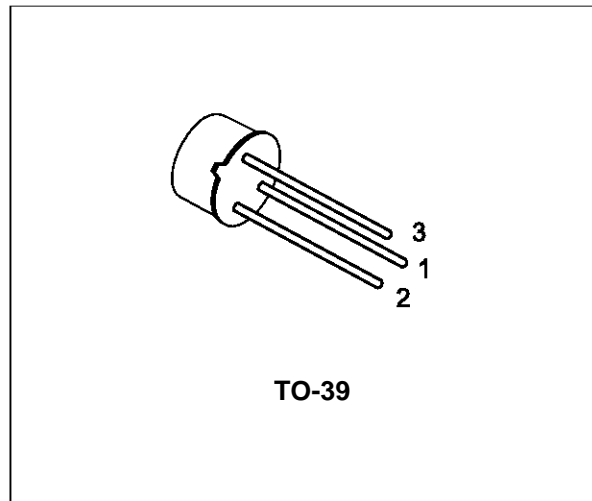


## SILICON NPN TRANSISTOR

■ SGS-THOMSON PREFERRED SALESTYPE

### DESCRIPTION

The BSS44 is a silicon epitaxial planar PNP transistor in Jedec TO-39 metal case. It is used for high-current switching and power applications up to 5 A.



### ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
$V_{CBO}$	Collector-Base Voltage ( $I_E = 0$ )	- 65	V
$V_{CEO}$	Collector-Emitter Voltage ( $I_B = 0$ )	- 60	V
$V_{EBO}$	Emitter-Base Voltage ( $I_C = 0$ )	- 6	V
$I_C$	Collector Current	- 5	A
$P_{tot}$	Total Dissipation at $T_{case} \leq 25\text{ }^\circ\text{C}$ $T_{amb} \leq 25\text{ }^\circ\text{C}$	5	W
		0.87	W
$T_{stg}$	Storage Temperature	-65 to 200	$^\circ\text{C}$
$T_j$	Max. Operating Junction Temperature	200	$^\circ\text{C}$

## BSS44

### THERMAL DATA

$R_{thj-case}$	Thermal Resistance Junction-case	Max	35	$^{\circ}C/W$
$R_{thj-amb}$	Thermal Resistance Junction-amb	Max	200	$^{\circ}C/W$

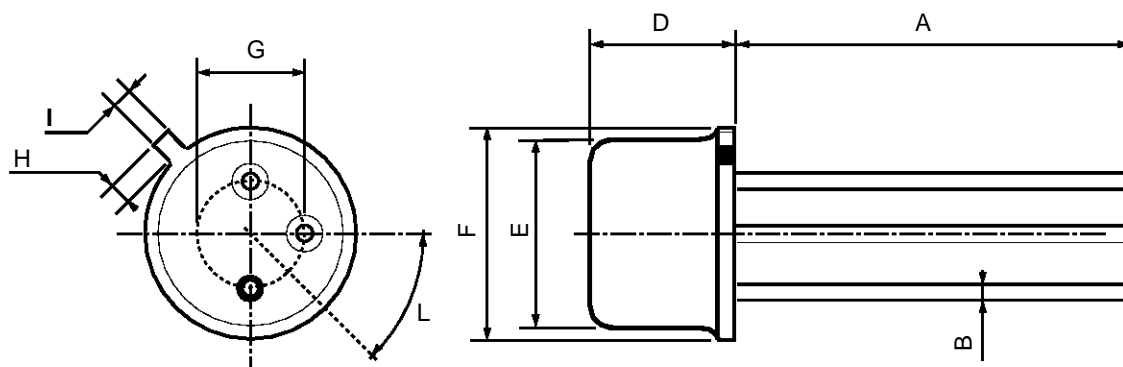
### ELECTRICAL CHARACTERISTICS ( $T_{case} = 25^{\circ}C$ unless otherwise specified)

Symbol	Parameter	Test Conditions		Min.	Typ.	Max.	Unit
$I_{CES}$	Collector Cut-off Current ( $V_{BE}=0$ )	$V_{CE} = -60 V$				-0.5	$\mu A$
$V_{(BR)CBO}^*$	Collector-base Breakdown Voltage ( $I_E = 0$ )	$I_C = -1 mA$		-65			V
$V_{CEO(sus)}^*$	Collector-Emitter Sustaining Voltage ( $I_B = 0$ )	$I_C = -50 mA$		-60			V
$V_{EBO}^*$	Emitter-base Voltage ( $I_C = 0$ )	$I_E = -1 mA$		-6			V
$V_{CE(sat)}^*$	Collector-Emitter Saturation Voltage	$I_C = -0.5 A$ $I_C = -5 A$	$I_B = -50 mA$ $I_B = -0.5 A$		-0.1 -0.4	-1	V V
$V_{BE(sat)}^*$	Base-Emitter Saturation Voltage	$I_C = -0.5 A$ $I_C = -5 A$	$I_B = -50 mA$ $I_B = -0.5 A$		-0.8 -1.1	-1.6	V V
$h_{FE}^*$	DC Current Gain	$I_C = -0.5 A$ $I_C = -2 A$ $I_C = -5 A$	$V_{CE} = -2 V$ $V_{CE} = -2 V$ $V_{CE} = -2 V$	30 40	70 45		
$f_T^*$	Transition Frequency	$I_C = -0.5 A$	$V_{CE} = -5 V$		80		MHz
$C_{CBO}$	Collector-base Capacitance	$I_E = 0$ $f = 1 MHz$	$V_{CB} = 10 V$			100	pF
$t_{on}$	Turn-on Time	$I_C = -0.5 A$	$V_{CC} = -20 V$		0.065		$\mu s$
$t_{off}$	Turn-off Time	$I_{B1} = -I_{B2} = -50 mA$			0.45		$\mu s$

\* Pulsed: Pulse duration = 300  $\mu s$ , duty cycle 1.5 %  
For PNP types voltage and current values are negative.

## TO39 MECHANICAL DATA

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A	12.7			0.500		
B			0.49			0.019
D			6.6			0.260
E			8.5			0.334
F			9.4			0.370
G	5.08			0.200		
H			1.2			0.047
I			0.9			0.035
L	45° (typ.)					



P008B

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