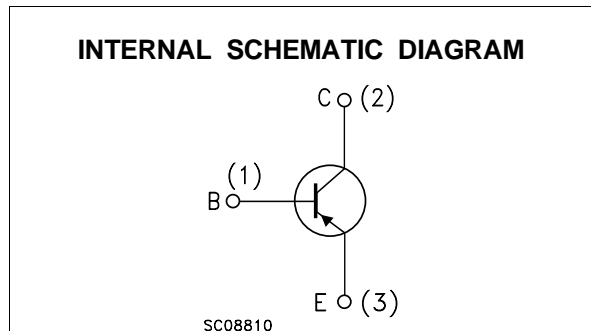
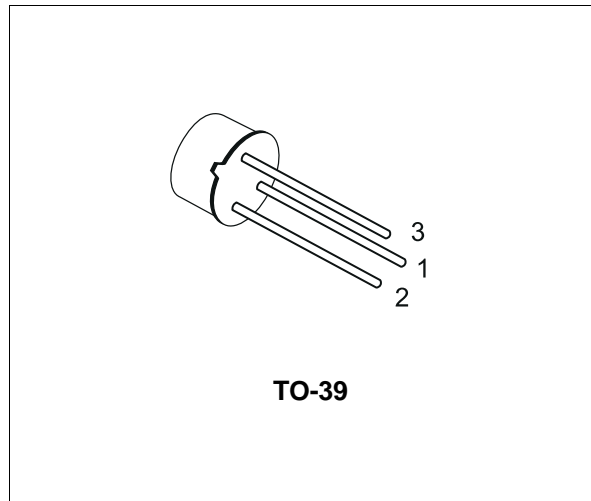


## SILICON PNP TRANSISTOR

- STMicroelectronics PREFERRED SALESTYPE
- PNP TRANSISTOR

### 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 <sub>thj-case</sub>	Thermal Resistance Junction-case	Max	35	°C/W
R <sub>thj-amb</sub>	Thermal Resistance Junction-amb	Max	200	°C/W

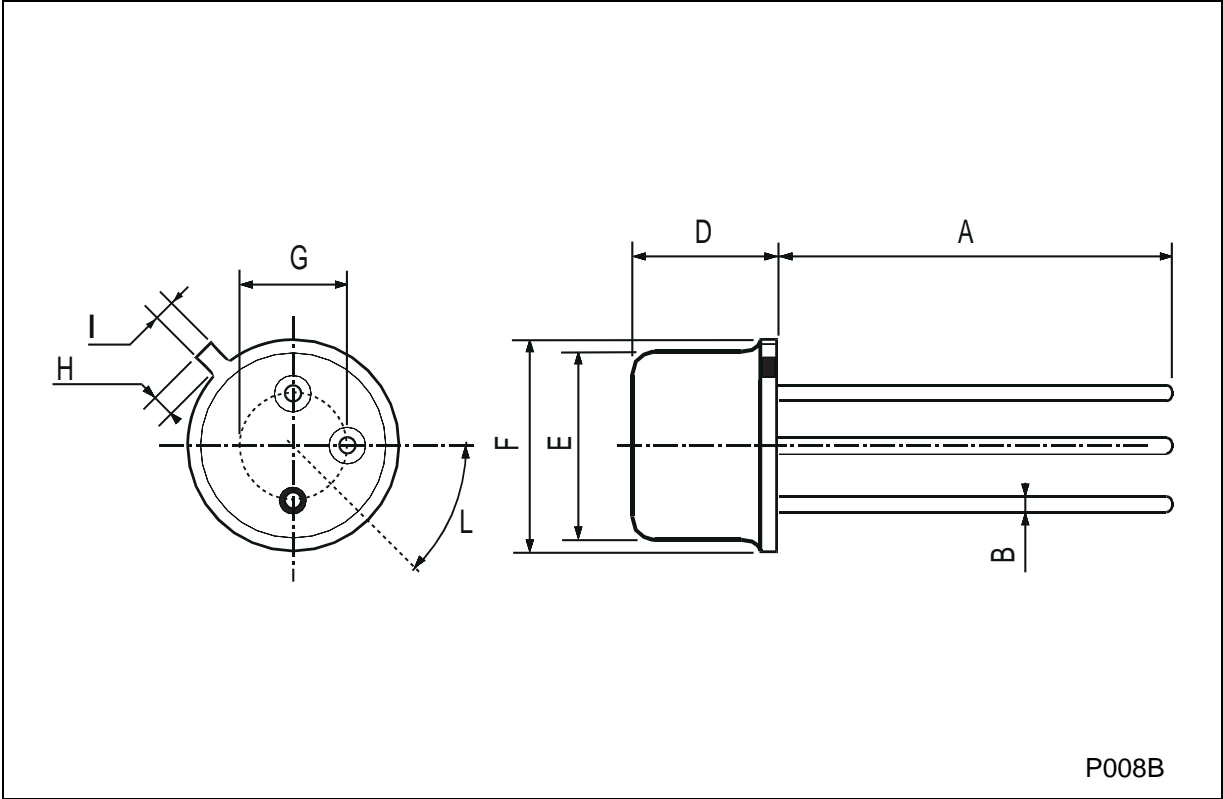
### ELECTRICAL CHARACTERISTICS (T<sub>case</sub> = 25 °C unless otherwise specified)

Symbol	Parameter	Test Conditions		Min.	Typ.	Max.	Unit
I <sub>CES</sub>	Collector Cut-off Current (V <sub>BE</sub> =0)	V <sub>CE</sub> = -60 V				-0.5	μA
V <sub>(BR)CBO</sub> *	Collector-base Breakdown Voltage (I <sub>E</sub> = 0)	I <sub>C</sub> = -1 mA		-65			V
V <sub>CEO(sus)</sub> *	Collector-Emitter Sustaining Voltage (I <sub>B</sub> = 0)	I <sub>C</sub> = -50 mA		-60			V
V <sub>EBO</sub> *	Emitter-base Voltage (I <sub>C</sub> = 0)	I <sub>E</sub> = -1 mA		-6			V
V <sub>CE(sat)</sub> *	Collector-Emitter Saturation Voltage	I <sub>C</sub> = -0.5 A	I <sub>B</sub> = -50 mA		-0.1		V
		I <sub>C</sub> = -5 A	I <sub>B</sub> = -0.5 A		-0.4	-1	V
V <sub>BE(sat)</sub> *	Base-Emitter Saturation Voltage	I <sub>C</sub> = -0.5 A	I <sub>B</sub> = -50 mA		-0.8		V
		I <sub>C</sub> = -5 A	I <sub>B</sub> = -0.5 A		-1.1	-1.6	V
h <sub>FE</sub> *	DC Current Gain	I <sub>C</sub> = -0.5 A	V <sub>CE</sub> = -2 V	30			
		I <sub>C</sub> = -2 A	V <sub>CE</sub> = -2 V	40	70		
		I <sub>C</sub> = -5 A	V <sub>CE</sub> = -2 V		45		
f <sub>T</sub> *	Transition Frequency	I <sub>C</sub> = -0.5 A	V <sub>CE</sub> = -5 V		80		MHz
C <sub>CBO</sub>	Collector-base Capacitance	I <sub>E</sub> = 0	V <sub>CB</sub> = 10 V			100	pF
t <sub>on</sub>	Turn-on Time	I <sub>C</sub> = -0.5 A	V <sub>CC</sub> = -20 V		0.065		μs
t <sub>off</sub>	Turn-off Time	I <sub>B1</sub> = -I <sub>B2</sub> = -50 mA			0.45		μs

\* Pulsed: Pulse duration = 300 μs, duty cycle 1.5 %

**TO-39 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.)					



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