



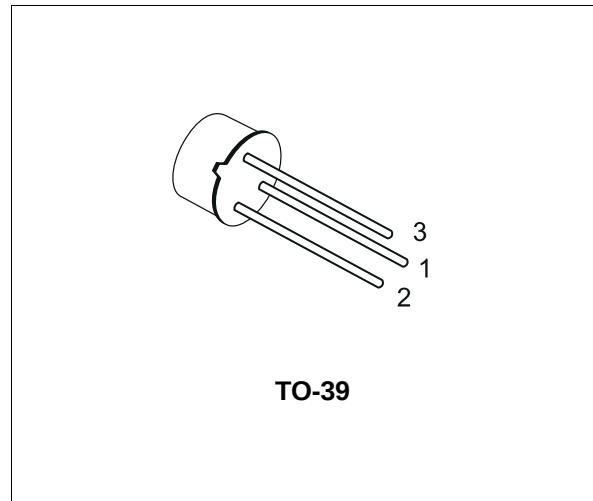
BSS44

SILICON PNP TRANSISTOR

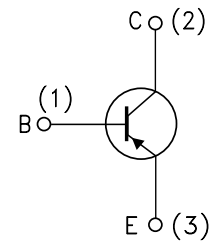
- STMicroelectronics PREFERRED SALESTYPE
- PNP TRANSISTOR

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.



INTERNAL SCHEMATIC DIAGRAM



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 0.87	W W
T_{stg}	Storage Temperature	-65 to 200	$^{\circ}\text{C}$
T_j	Max. Operating Junction Temperature	200	$^{\circ}\text{C}$

THERMAL DATA

R _{thj-case}	Thermal Resistance Junction-case	Max	35	°C/W
R _{thj-amb}	Thermal Resistance Junction-amb	Max	200	°C/W

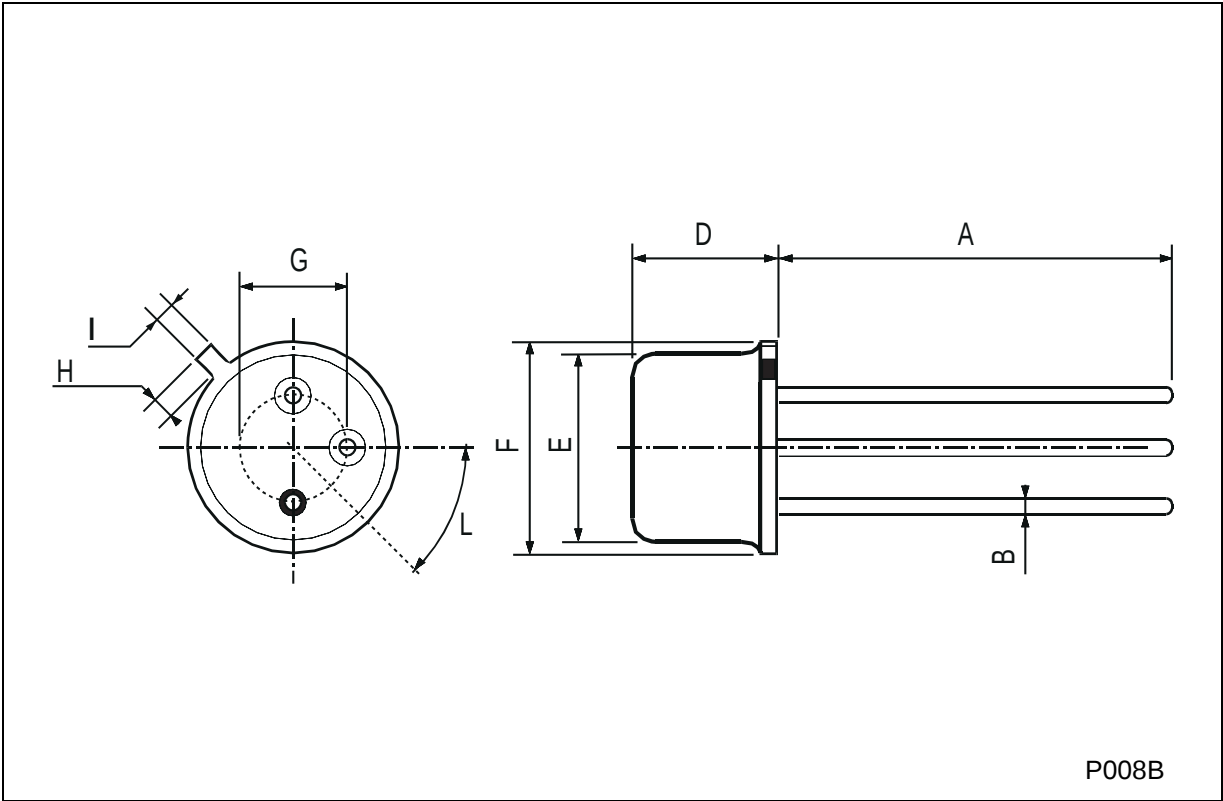
ELECTRICAL CHARACTERISTICS (T_{case} = 25 °C unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I _{CES}	Collector Cut-off Current (V _{BE} =0)	V _{CE} = -60 V			-0.5	μA
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		-0.1 -0.4	-1	V V
V _{BE(sat)} *	Base-Emitter Saturation Voltage	I _C = -0.5 A I _C = -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				
f _T *	Transition Frequency	I _C = -0.5 A V _{CE} = -5 V	30 40	70 45		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		μs
t _{off}	Turn-off Time	I _{B1} = -I _{B2} = -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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