

**PNP medium power transistors**

**BSV15; BSV16; BSV17**

**FEATURES**

- High current (max. 1 A)
- Low voltage (max. 80 V).

**APPLICATIONS**

- General industrial applications.

**DESCRIPTION**

PNP medium power transistor in a TO-39 metal package.

PIN	DESCRIPTION
1	emitter
2	base
3	collector, connected to case

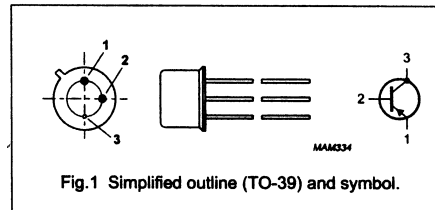


Fig.1 Simplified outline (TO-39) and symbol.

**MAXIMUM RATINGS (T<sub>A</sub>=25°C)**

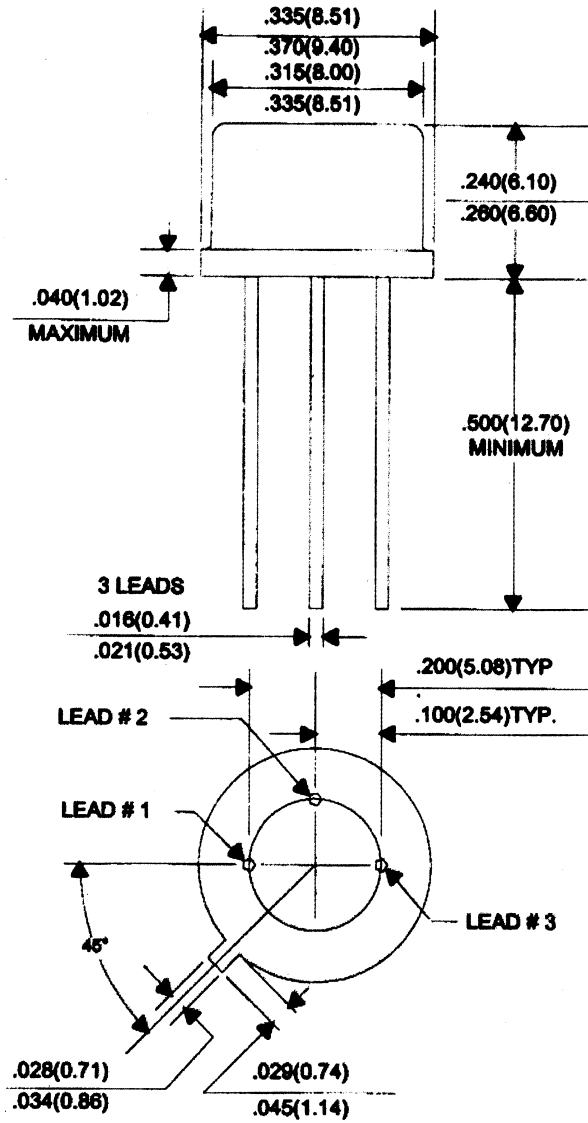
	SYMBOL	BSV15	BSV16	BSV17	UNITS
Collector-Base Voltage	V <sub>CB0</sub>	40	60	90	V
Collector-Emitter Voltage	V <sub>CEO</sub>	40	60	80	V
Emitter-Base Voltage	V <sub>EBO</sub>		5.0		V
Collector Current	I <sub>C</sub>		1.0		A
Collector Current (Peak)	I <sub>CM</sub>		2.0		A
Base Current (Peak)	I <sub>BM</sub>		200		mA
Power Dissipation (T <sub>C</sub> =25°C)	P <sub>D</sub>		5.0		W
Power Dissipation	P <sub>D</sub>		0.8		W
Operating and Storage					
Junction Temperature	T <sub>J</sub> , T <sub>stg</sub>		-65 to +200		°C
Thermal Resistance	θ <sub>JC</sub>		35		°C/W
Thermal Resistance	θ <sub>JA</sub>		219		°C/W

**ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C unless otherwise noted)**

SYMBOL	TEST CONDITIONS	BSV15		BSV16		BSV17		UNITS
		MIN	MAX	MIN	MAX	MIN	MAX	
I <sub>CBO</sub>	V <sub>CB</sub> =Rated V <sub>CEO</sub>		100		100		100	nA
I <sub>CBO</sub>	V <sub>CB</sub> = Rated V <sub>CEO</sub> , T <sub>A</sub> =150°C		50		50		50	μA
I <sub>EBO</sub>	V <sub>EB</sub> =4.0V		50		50		50	nA
V <sub>CE(SAT)</sub>	I <sub>C</sub> =500mA, I <sub>B</sub> =25mA		1.0		1.0		1.0	V
V <sub>BE(ON)</sub>	V <sub>CE</sub> =1.0V, I <sub>C</sub> =100mA		1.0		1.0		1.0	V
V <sub>BE(ON)</sub>	V <sub>CE</sub> =1.0V, I <sub>C</sub> =500mA	0.7	1.4	0.7	1.4	0.7	1.4	V
f <sub>T</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =50mA, f=100MHz	50		50		50		MHz
C <sub>c</sub>	V <sub>CB</sub> =10V, I <sub>E</sub> =0, f=1.0MHz		30		30		25	pF
C <sub>e</sub>	V <sub>EB</sub> =0.5V, I <sub>C</sub> =0, f=1.0MHz	180 TYP		180 TYP		180 TYP		pF
t <sub>on</sub>	I <sub>C</sub> =100mA, I <sub>B1</sub> =I <sub>B2</sub> =5.0mA		500		500		500	ns
t <sub>off</sub>	I <sub>C</sub> =100mA, I <sub>B1</sub> =I <sub>B2</sub> =5.0mA		650		650		650	ns

SYMBOL	TEST CONDITIONS	BSV15-10		BSV15-16		UNITS
		MIN	MAX	MIN	MAX	
h <sub>FE</sub>	V <sub>CE</sub> =1.0V, I <sub>C</sub> =100μA	20		30		
h <sub>FE</sub>	V <sub>CE</sub> =1.0V, I <sub>C</sub> =100mA	63	160	100	250	
h <sub>FE</sub>	V <sub>CE</sub> =1.0V, I <sub>C</sub> =500mA	25		35		

# JEDEC TO-39 CASE - MECHANICAL OUTLINE



All Dimensions in Inches (mm).

Lead Code:

1. Emitter
2. Base
3. Collector