PNP BSV15 – BSV16 – BSV17

MEDIUM POWER TRANSISTORS

They are silicon transistors mounted in TO-39 metal package.
They are intended for general industrial applications.
High current and low voltage.
Compliance to RoHS.

ABSOLUTE MAXIMUM RATINGS

Symbol	Ratings		Value	Unit
V_{CBO}	Collector-Base Voltage $I_E = 0$	BSV15	-40	V
		BSV16	-60	
		BSV17	-90	
V_{CEO}	Collector-Emitter Voltage $I_B = 0$	BSV15	-40	V
		BSV16	-60	
		BSV17	-90	
V_{EBO}	Emitter-Base Voltage $I_C = 0$		-5	V
I_C	Collector Current		-1	A
I_{CM}	Peak Collector Current		-2	A
I_{BM}	Peak Base Current		-0.2	A
P_{tot}	Total Power Dissipation	@ T_{case}= < 25°	0.8	W
		@ T_{amb}= < 25°	5	
		@ T_{mb}= < 50°	5	
T_J	Junction Temperature		200	°C
T_{Stg}	Storage Temperature Range		-65 to +150	°C
T_{amb}	Operating Ambient Temperature		-65 to +150	°C

THERMAL CHARACTERISTICS

Symbol	Ratings	Value	Unit
R_{thJ-c}	Thermal Resistance, Junction-case	35	K/ W
$R_{thJ-amb}$	Thermal Resistance, Junction-ambient in free air	220	K/ W
R_{thJ-mb}	Thermal Resistance, Junction to mounting base	30	K/ W

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ELECTRICAL CHARACTERISTICS

TC=25°C unless otherwise noted

Symbol	Ratings	Test Condition(s)			Min	Typ	Max	Unit
I_{CBO}	Collector – Cutoff Current	I_E= 0, V_{CB}= -40 V		BSV15	-	-	-100	nA
		I_E= 0, V_{CB} = -60 V		BSV16				
		I_E= 0, V_{CB} = -80 V		BSV17				
		I_E= 0, V T_{amb} = 150°c	V_{CB} =-40 V	BSV15	-	-	-50	µA
			V_{CB} =-60 V	BSV16				
			V_{CB} =-80 V	BSV17				
I_{EBO}	Emitter – Cutoff Current	I_C= 0, V_{CE}= -4V		BSV15	-	-	-50	nA
				BSV16				
				BSV17				
$V_{CE(SAT)}$	Collector-Emitter saturation Voltage (*)	I_C= -500 mA, I_B= -25 mA		BSV15	-	-	-1	V
				BSV16				
				BSV17				
V_{BE}	Base-Emitter Voltage (*)	I_C= -100 mA, V_{CE}= -1V		BSV15	-	-	-1	
				BSV16				
				BSV17				
		I_C= -500 mA, V_{CE}= -1V		BSV15	-	-	-1	V
				BSV16				
				BSV17				
h_{FE}	DC Current Gain (*)	I_C= -100 µA V_{CE}= -1 V	Gr.10	BSV15	20	75	-	-
				BSV16				
				BSV17				
			Gr.16	BSV15	30	120	-	
				BSV16				
		I_C= -100 mA V_{CE}= -1 V	Gr.10	BSV15	63	100	160	
				BSV16				
				BSV17				
			Gr.16	BSV15	100	160	250	
				BSV16				
		I_C= -500 mA V_{CE}= -1 V	Gr.10	BSV15	25	55	-	
				BSV16				
				BSV17				
			Gr.16	BSV15	35	85	-	
				BSV16				

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ELECTRICAL CHARACTERISTICS

TC=25°C unless otherwise noted

Symbol	Ratings	Test Condition(s)		Min	Typ	Max	Unit
f_T	Transition Frequency	I_C= -50 mA, V_{CE}= -10 V f=100 MHz		50	-	-	MH_Z
C_C	Collector Capacitance	I_E= i_e = 0, V_{CB}= -10V f = 1 MH_Z	BSV15	-	20	30	pF
			BSV16				
			BSV17	-	15	25	
C_E	Emitter Capacitance	I_E= i_e = 0, V_{CB}= -10V f = 1 MH_Z		-	180	-	pF

SWITCHING TIME

Symbol	Ratings	Test Condition(s)	Min	Typ	Max	Unit
t_{off}	Turn-off times	I_C= -100 mA I_{Bon}= -5 mA I_{Boff}= 5 mA	-	-	650	ns
t_{on}	Turn-on times		-	-	500	ns

(*) Pulsed : pulse duration = 300µs, duty cycle = 1%

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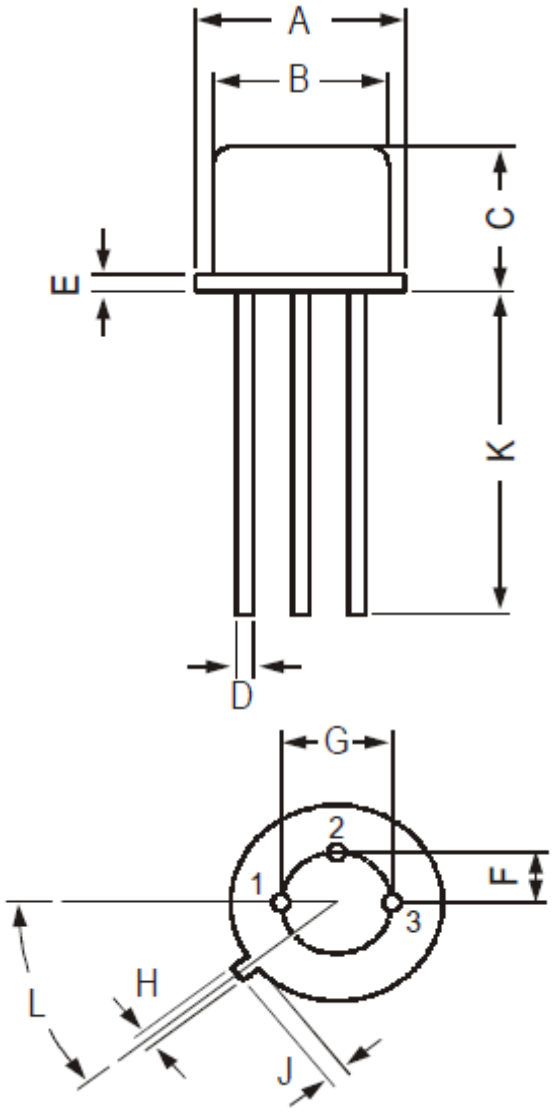
MECHANICAL DATA CASE TO-39

DIMENSIONS (mm)		
	min	max
A	8.50	9.39
B	7.74	8.50
C	6.09	6.60
D	0.40	0.53
E	-	0.88
F	2.41	2.66
G	4.82	5.33
H	0.71	0.86
J	0.73	1.02
K	12.70	-
L	42°	48°



Pin 1 :	Emitter
Pin 2 :	Base
Pin 3 :	Collector
Case :	Collector

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