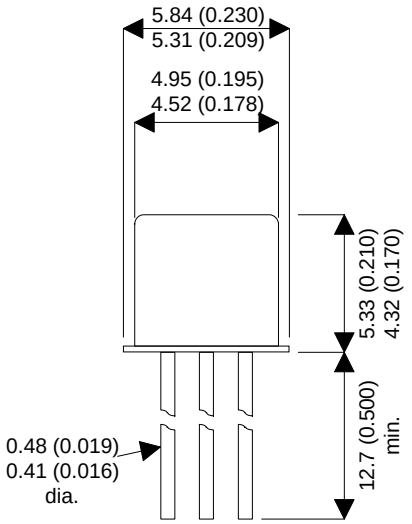
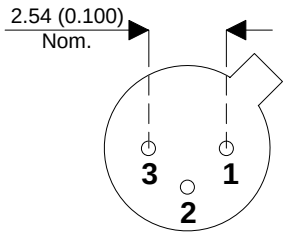
SEME LAB

BSS74R

MECHANICAL DATA

Dimensions in mm (inches)





TO–18 PACKAGE

PIN 1 – Emitter PIN 2 – Base PIN 3 – Collector

HIGH VOLTAGE PNP SILICON TRANSISTOR

ABSOLUTE MAXIMUM RATINGS (T_C = 25°C unless otherwise stated)

V_{CBO}	Collector – Base Voltage		200V
V_{CEO}	Collector – Emitter Voltage		200V
V_{EBO}	Emitter – Base Voltage		5V
I_C	Continuous Collector Current		0.5A
P_D	Total Device Dissipation	T_{AMB} = 25°C	0.5W
		Derate above 25°C	2.86mW/°C
P_D	Total Device Dissipation	T_C = 25°C	2.5W
		Derate above 25°C	14.3mW/°C
T_J , T_{STG}	Operating Junction & Storage Temperature Range		-65 to 200°C
$R_{\theta JC}$	Thermal Resistance, Junction – Case		70°C/W

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ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise stated)

	Parameter	Test Conditions		Min.	Typ.	Max.	Unit
	OFF CHARACTERISTICS						
$V_{(BR)CEO}$	Collector – Emitter Breakdown Voltage	I_C = 10mA	I_B = 0	200			V
$V_{(BR)CBO}$	Collector – Base Breakdown Voltage	I_C = 100μA	I_E = 0	200			
$V_{(BR)EBO}$	Emitter – Base Breakdown Voltage	I_E = 100μA	I_C = 0	6			
I_{CBO}	Collector Cut-off Current	V_{CB} = 150V	I_E = 0			50	nA
I_{CEO}	Collector Cut-off Current	V_{CE} = 150V	I_B = 0			500	
I_{EBO}	Emitter Cut-off Current	V_{BE} = 5V	I_C = 0			50	
	ON CHARACTERISTICS						
h_{FE}	DC Current Gain	V_{CE} = 1V	I_C = 0.1mA	20			—
		V_{CE} = 10V	I_C = 1mA	30			
		V_{CE} = 10V	I_C = 10mA	35			
		V_{CE} = 10V	I_C = 30mA	35		150	
$V_{CE(sat)}$	Collector – Emitter Saturation Voltage	I_C = 10mA	I_B = 1mA			0.3	V
		I_C = 30mA	I_B = 3mA			1.3	
$V_{BE(sat)}$	Base – Emitter Saturation Voltage	I_C = 10mA	I_B = 1mA			0.8	V
		I_C = 30mA	I_B = 3mA			0.9	
	DYNAMIC CHARACTERISTICS						
f_t	Current Gain Bandwidth Product	I_C = 20mA f = 20MHz	V_{CE} = 20V	50	110	200	MHz
C_{ob}	Output Capacitance	I_E = 0 f = 1MHz	V_{CB} = 20V		3.5		pF
C_{ib}	Input Capacitance	I_C = 0 f = 1MHz	V_{EB} = 0.5V		45		
t_{on}	Turn–On Time	I_{B1} = 10mA V_{CC} = 100V	I_C = 50mA		100		ns
t_{off}	Turn–Off Time	I_{B2} = 10mA V_{CC} = 100V	I_C = 50mA		400		

* Pulse Test: t_p = 300μs , $\delta \leq 1\%$.

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