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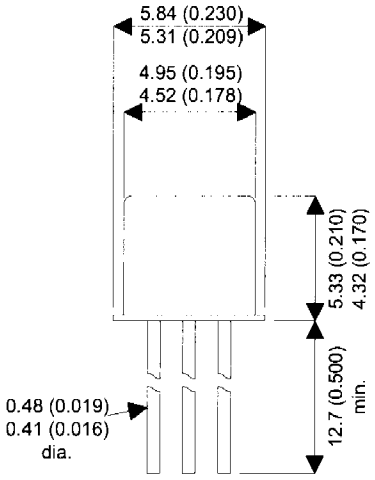
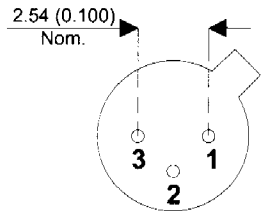
BSS74

HIGH VOLTAGE PNP SILICON TRANSISTOR

MECHANICAL DATA

Dimensions in mm (inches)





TO–18 (TO-206AA) PACKAGE

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

FEATURES

- **Hermetic Metal Package**
- **Screening Options Available**

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_A = 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

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	40		—
		V_{CE} = -10V	I_C = -1mA	30	45		
		V_{CE} = -10V	I_C = -10mA	35	50		
		V_{CE} = -10V	I_C = -30mA	35	55	150	
$V_{CE(sat)}$	Collector – Emitter Saturation Voltage	I_C = -10mA	I_B = -1mA			-0.3	V
		I_C = -30mA	I_B = -3mA			-0.4	
$V_{BE(sat)}$	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: $t_p \leq 300\mu s$, $d \leq 2\%$.