

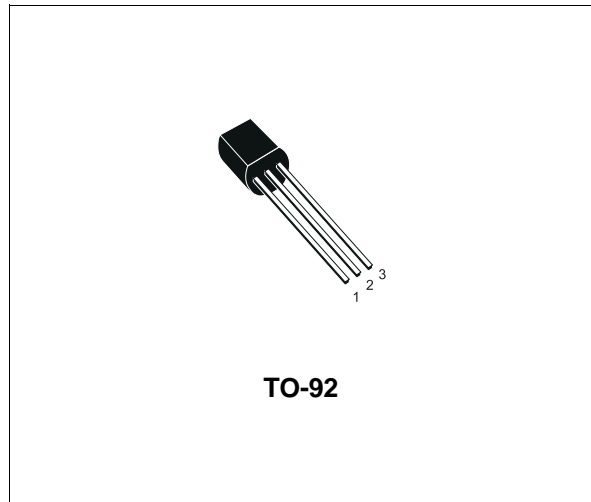
SMALL SIGNAL PNP TRANSISTOR

Type	Marking
BC557B	BC557B

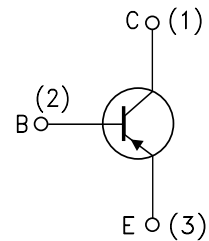
- SILICON EPITAXIAL PLANAR PNP TRANSISTOR
- TO-92 PACKAGE SUITABLE FOR THROUGH-HOLE PCB ASSEMBLY
- THE NPN COMPLEMENTARY TYPE IS BC547B
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APPLICATIONS

- WELL SUITABLE FOR TV AND HOME APPLIANCE EQUIPMENT
- SMALL LOAD SWITCH TRANSISTOR WITH HIGH GAIN AND LOW SATURATION VOLTAGE



INTERNAL SCHEMATIC DIAGRAM



DS10125

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage ($I_E = 0$)	-50	V
V_{CEO}	Collector-Emitter Voltage ($I_B = 0$)	-45	V
V_{EBO}	Emitter-Base Voltage ($I_C = 0$)	-5	V
I_C	Collector Current	-100	mA
I_{CM}	Collector Peak Current	-200	mA
P_{tot}	Total Dissipation at $T_C = 25\text{ }^\circ\text{C}$	500	mW
T_{stg}	Storage Temperature	-65 to 150	$^\circ\text{C}$
T_j	Max. Operating Junction Temperature	150	$^\circ\text{C}$

BC557B

THERMAL DATA

R _{thj-amb} •	Thermal Resistance Junction-Ambient	Max	250	°C/W
R _{thj-Case} •	Thermal Resistance Junction-Case	Max	83.3	°C/W

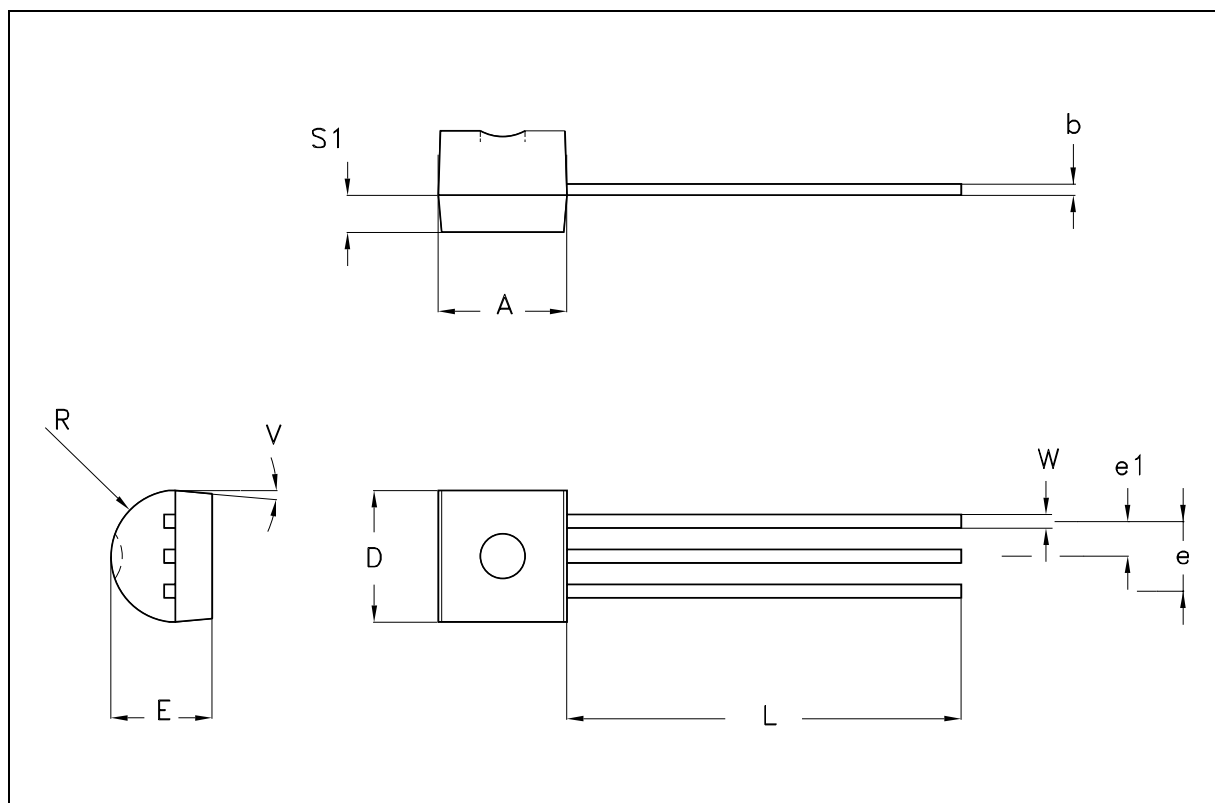
ELECTRICAL CHARACTERISTICS (T_{case} = 25 °C unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I _{CBO}	Collector Cut-off Current (I _E = 0)	V _{CB} = -30 V V _{CB} = -30 V T _C = 150 °C		-1	-15 -4	nA μA
I _{EBO}	Emitter Cut-off Current (I _C = 0)	V _{EB} = -5 V			-100	nA
V _{(BR)CEO} *	Collector-Emitter Breakdown Voltage (I _B = 0)	I _C = -10 mA	-45			V
V _{CE(sat)} *	Collector-Emitter Saturation Voltage	I _C = -10 mA I _B = -0.5 mA I _C = -100 mA I _B = -5 mA		-0.06 0.18	-0.3 -0.65	V V
V _{BE(sat)} *	Base-Emitter Saturation Voltage	I _C = -10 mA I _B = -0.5 mA I _C = -100 mA I _B = -5 mA		-0.75 -0.93		V V
V _{BE(on)} *	Base-Emitter On Voltage	I _C = -2 mA V _{CE} = -5 V I _C = -10 mA V _{CE} = -5 V	-0.6	-0.65	-0.75 -0.82	V V
h _{FE}	DC Current Gain	I _C = -2 mA V _{CE} = -5 V	220		475	
f _T	Transition Frequency	I _C = -10 mA V _{CE} = -5 V f = 100MHz	100			MHz
C _{CBO}	Collector-Base Capacitance	I _E = 0 V _{CB} = -10 V f = 1 MHz		3		pF
C _{EBO}	Emitter-Base Capacitance	I _C = 0 V _{EB} = -0.5 V f = 1 MHz		10		pF
NF	Noise Figure	V _{CE} = -5 V I _C = -200 μA f = 1KHz Δf = 200 Hz R _G = 2 KΩ		2	10	dB

* Pulsed: Pulse duration = 300 μs, duty cycle ≤ 2 %

TO-92 MECHANICAL DATA

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A	4.32		4.95	0.170		0.195
b	0.36		0.51	0.014		0.020
D	4.45		4.95	0.175		0.194
E	3.30		3.94	0.130		0.155
e	2.41		2.67	0.095		0.105
e1	1.14		1.40	0.045		0.055
L	12.70		15.49	0.500		0.609
R	2.16		2.41	0.085		0.094
S1	1.14		1.52	0.045		0.059
W	0.41		0.56	0.016		0.022
V	4 degree		6 degree	4 degree		6 degree



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