

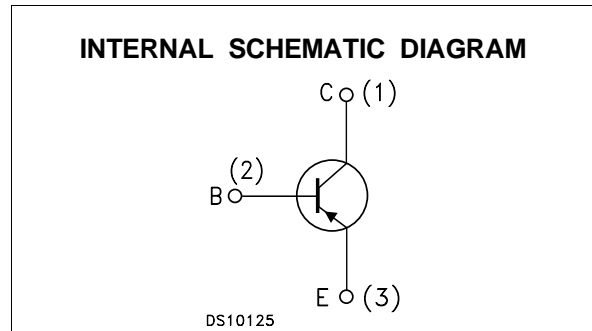
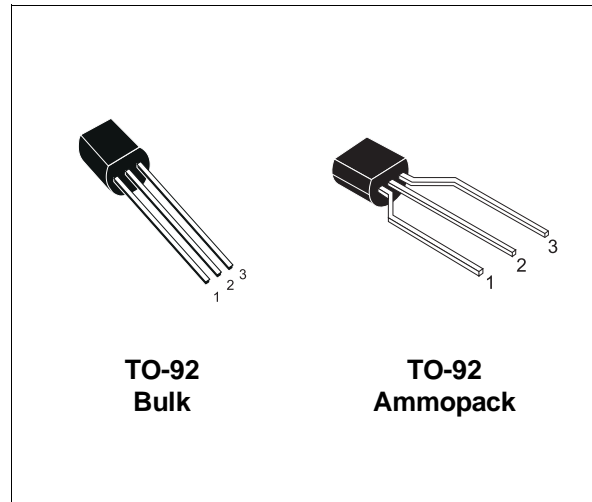
SMALL SIGNAL PNP TRANSISTOR

Ordering Code	Marking	Package / Shipment
BC557B	BC557B	TO-92 / Bulk
BC557B-AP	BC557B	TO-92 / Ammopack

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

APPLICATIONS

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



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 ($t_p < 5$ ms)	-200	mA
P_{tot}	Total Dissipation at $T_C = 25$ °C	500	mW
T_{stg}	Storage Temperature	-65 to 150	°C
T_j	Max. Operating Junction Temperature	150	°C

BC557B

THERMAL DATA

$R_{thj-amb}$	Thermal Resistance Junction-Ambient	Max	250	$^{\circ}\text{C}/\text{W}$
$R_{thj-Case}$	Thermal Resistance Junction-Case	Max	83.3	$^{\circ}\text{C}/\text{W}$

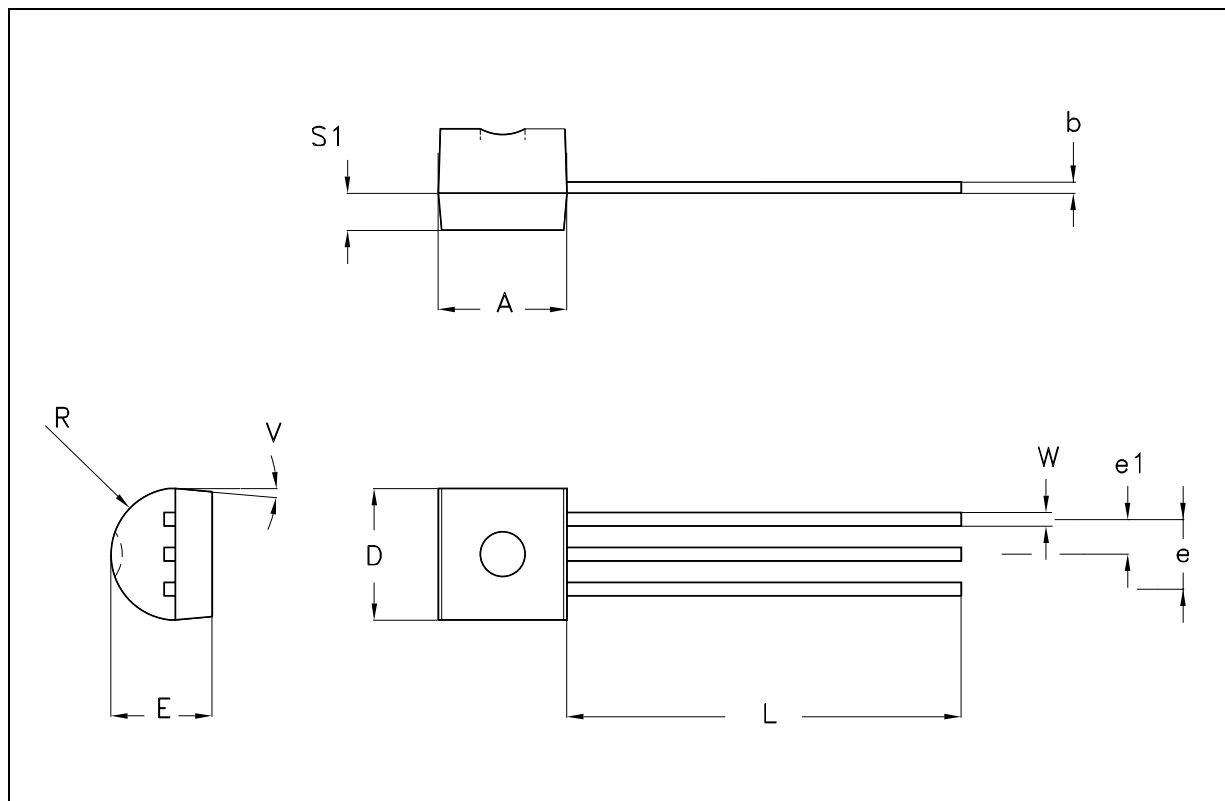
ELECTRICAL CHARACTERISTICS ($T_{case} = 25^{\circ}\text{C}$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CBO}	Collector Cut-off Current ($I_E = 0$)	$V_{CB} = -30\text{ V}$ $V_{CB} = -30\text{ V}$ $T_C = 150^{\circ}\text{C}$		-1	-15 -4	nA μA
I_{EBO}	Emitter Cut-off Current ($I_C = 0$)	$V_{EB} = -5\text{ V}$			-100	nA
$V_{(BR)CEO}^*$	Collector-Emitter Breakdown Voltage ($I_B = 0$)	$I_C = -10\text{ mA}$	-45			V
$V_{CE(sat)}^*$	Collector-Emitter Saturation Voltage	$I_C = -10\text{ mA}$ $I_B = -0.5\text{ mA}$ $I_C = -100\text{ mA}$ $I_B = -5\text{ mA}$		-0.06 0.18	-0.3 -0.65	V V
$V_{BE(sat)}^*$	Base-Emitter Saturation Voltage	$I_C = -10\text{ mA}$ $I_B = -0.5\text{ mA}$ $I_C = -100\text{ mA}$ $I_B = -5\text{ mA}$		-0.75 -0.93		V V
$V_{BE(on)}^*$	Base-Emitter On Voltage	$I_C = -2\text{ mA}$ $V_{CE} = -5\text{ V}$ $I_C = -10\text{ mA}$ $V_{CE} = -5\text{ V}$	-0.6	-0.65	-0.75 -0.82	V V
h_{FE}	DC Current Gain	$I_C = -2\text{ mA}$ $V_{CE} = -5\text{ V}$	220		475	
f_T	Transition Frequency	$I_C = -10\text{ mA}$ $V_{CE} = -5\text{ V}$ $f = 100\text{ MHz}$	100			MHz
C_{CBO}	Collector-Base Capacitance	$I_E = 0$ $V_{CB} = -10\text{ V}$ $f = 1\text{ MHz}$		3		pF
C_{EBO}	Emitter-Base Capacitance	$I_C = 0$ $V_{EB} = -0.5\text{ V}$ $f = 1\text{ MHz}$		10		pF
NF	Noise Figure	$V_{CE} = -5\text{ V}$ $I_C = -200\text{ }\mu\text{A}$ $f = 1\text{ KHz}$ $\Delta f = 200\text{ Hz}$ $R_G = 2\text{ K}\Omega$		2	10	dB

* Pulsed: Pulse duration = 300 μs , duty cycle $\leq 2\%$

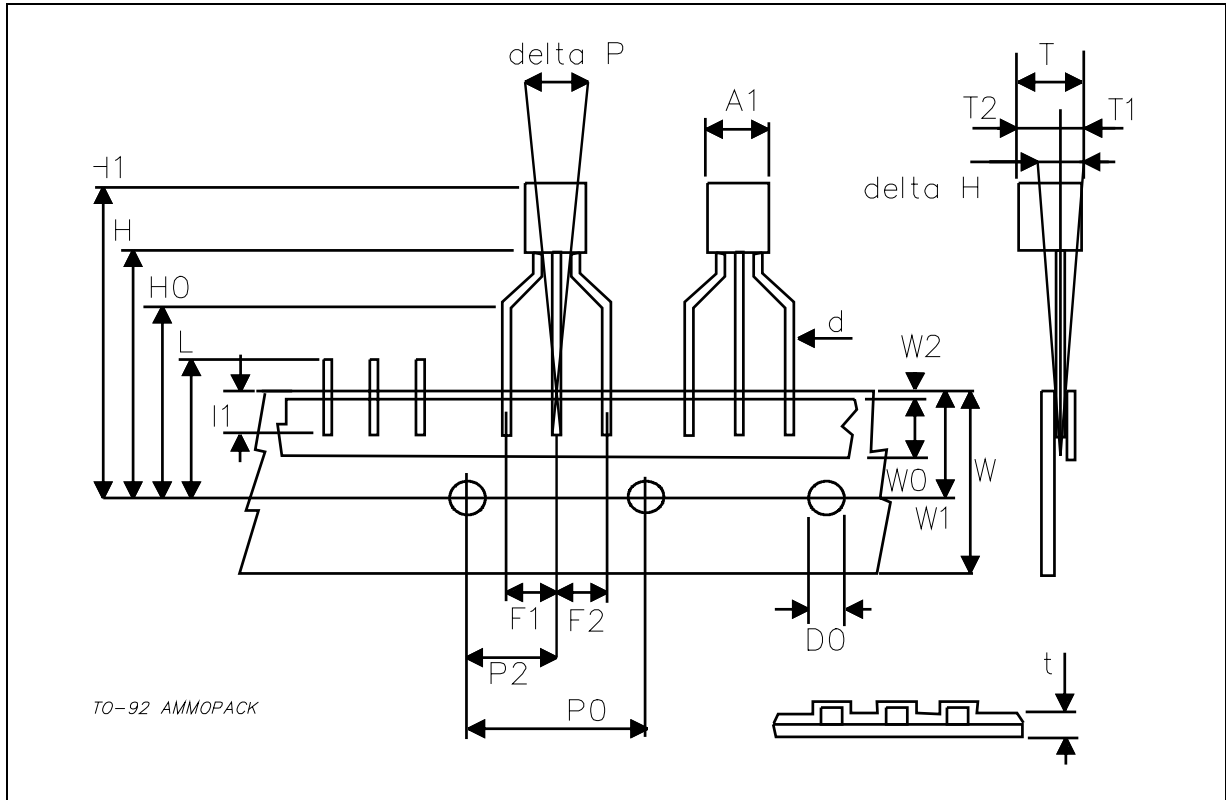
TO-92 MECHANICAL DATA

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



TO-92 AMMOPACK SHIPMENT (Suffix"-AP") MECHANICAL DATA

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A1			4.80			0.189
T			3.80			0.150
T1			1.60			0.063
T2			2.30			0.091
d			0.48			0.019
P0	12.50	12.70	12.90	0.492	0.500	0.508
P2	5.65	6.35	7.05	0.222	0.250	0.278
F1,F2	2.44	2.54	2.94	0.096	0.100	0.116
delta H	-2.00		2.00	-0.079		0.079
W	17.50	18.00	19.00	0.689	0.709	0.748
W0	5.70	6.00	6.30	0.224	0.236	0.248
W1	8.50	9.00	9.25	0.335	0.354	0.364
W2			0.50			0.020
H	18.50		20.50	0.728		0.807
H0	15.50	16.00	16.50	0.610	0.630	0.650
H1			25.00			0.984
D0	3.80	4.00	4.20	0.150	0.157	0.165
t			0.90			0.035
L			11.00			0.433
I1	3.00			0.118		
delta P	-1.00		1.00	-0.039		0.039



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