



SMALL SIGNAL PNP TRANSISTOR

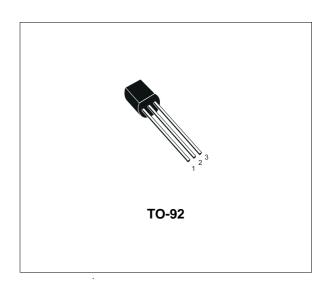
Туре	Marking
BC557B	BC557B

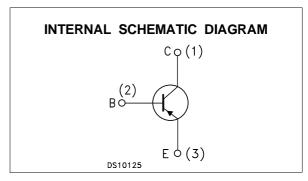
- SILICON EPITAXIAL PLANAR PNP TRANSISTOR
- TO-92 PACKAGE SUITABLE FOR THROUGH-HOLE PCB ASSEMBLY
- THE NPN COMPLEMENTARY TYPE IS BC547B

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APPLICATIONS

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





ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage (I _E = 0)	-50	٧
V_{CEO}	Collector-Emitter Voltage (I _B = 0)	-45	٧
VEBO	Emitter-Base Voltage (Ic = 0)	-5	٧
Ic	Collector Current	-100	mΑ
I _{CM}	Collector Peak Current	-200	mΑ
P _{tot}	Total Dissipation at T _C = 25 °C	500	mW
T _{stg}	Storage Temperature	-65 to 150	°C
Tj	Max. Operating Junction Temperature	150	°C

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THERMAL DATA

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

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

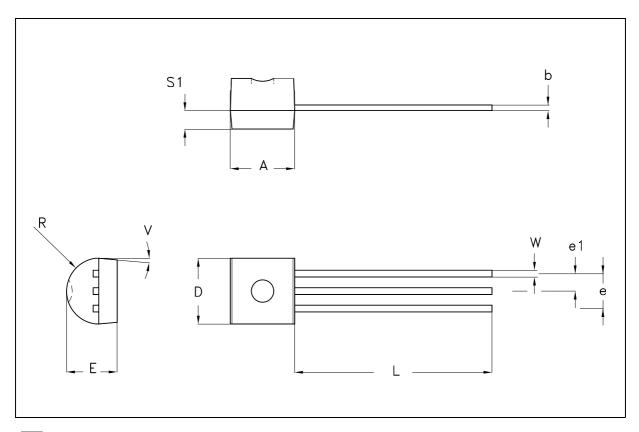
Symbol Parameter		Test Conditions	Min.	Тур.	Max.	Unit
Ісво	Collector Cut-off Current (I _E = 0)	V _{CB} = -30 V V _{CB} = -30 V T _C = 150 °C		-1	-15 -4	nA μA
I _{EBO}	Emitter Cut-off Current (I _C = 0)	V _{EB} = -5 V			-100	nA
V _{(BR)CEO*}	Collector-Emitter Breakdown Voltage (I _B = 0)	Ic = -10 mA	-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⊤	Transition Frequency	$I_C = -10 \text{ mA } V_{CE} = -5 \text{ V } f = 100 \text{MHz}$	100			MHz
Ссво	Collector-Base Capacitance	I _E = 0 V _{CB} = -10 V f = 1 MHz		3		pF
СЕВО	Emitter-Base Capacitance	I _C = 0 V _{EB} = -0.5 V f = 1 MHz		10		pF
NF	Noise Figure	$V_{CE} = -5 \text{ V} I_{C} = -200 \ \mu\text{A} f = 1 \text{KHz}$ $\Delta f = 200 \ \text{Hz} R_{G} = 2 \ \text{K}\Omega$		2	10	dB

^{*} Pulsed: Pulse duration = 300 μ s, duty cycle \leq 2 %

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TO-92 MECHANICAL DATA

DIM.	mm			inch			
2	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	
А	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	
е	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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