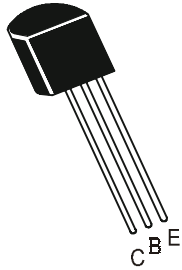


PNP SILICON PLANAR EPITAXIAL TRANSISTORS

**BC559, B, C
BC560, B, C**



**TO-92
Plastic Package**

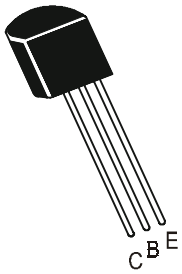
Low Noise Transistors

ABSOLUTE MAXIMUM RATINGS(Ta=25°C unless specified otherwise)

DESCRIPTION	SYMBOL	BC559	BC560	UNITS
Collector Emitter Voltage	V_{CEO}	30	45	V
Collector Base Voltage	V_{CBO}	30	50	V
Emitter Base Voltage	V_{EBO}	5	5	V
Collector Current Continuous	I_C		100	mA
Power Dissipation @ Tc=25°C	P_D		625	mW
Derate Above 25°C			5	mW/°C
Power Dissipation @ Tc=25°C	P_D		1.5	W
Derate Above 25°C			12	mW/°C
Operating And Storage Junction Temperature Range	T_j, T_{stg}		-55 to +150	°C
THERMAL RESISTANCE				
Junction to ambient	$R_{th(j-a)}$		200	°C/W
Junction to case	$R_{th(j-c)}$		83.3	°C/W

PNP SILICON PLANAR EPITAXIAL TRANSISTORS

BC559, B, C
BC560, B, C



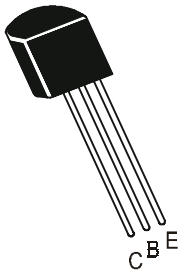
TO-92
Plastic Package

ELECTRICAL CHARACTERISTICS (Ta=25°C Unless Specified Otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNITS
Collector Emitter Voltage	BC559	V_{CEO} $I_C=10mA, I_B=0$	30			V
	BC560		45			V
Collector Base Voltage	BC559	V_{CBO} $I_C=10\mu A, I_E=0$	30			V
	BC560		50			V
Emitter Base Voltage		V_{EBO} $I_E=10\mu A, I_C=0$	5			V
Collector Cut off Current		I_{CBO} $V_{CB}=30V, I_E=0$			15	nA
		$V_{CB}=30V, I_E=0$			5	μA
		$T_a=+125^\circ C$				
Emitter Cut off Current		I_{EBO} $V_{CE}=40V, I_C=0$			15	nA
DC Current Gain	B	$V_{CE}=5V, I_C=10\mu A$	100			
	C		100			
	B	$V_{CE}=5V, I_C=2mA$	180		460	
	C		380		800	
	BC559, BC560		120		800	
Collector Emitter Saturation Voltage		$V_{CE(sat)}$ $I_C=10mA, I_B=0.5mA$			0.25	V
		$I_C=100mA, I_B=$ see note 1			0.6	V
		$I_C=100mA, I_B=5mA^*$		0.25		V

PNP SILICON PLANAR EPITAXIAL TRANSISTORS

BC559, B, C
BC560, B, C



TO-92
Plastic Package

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNITS
Base Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=100mA, I_B=5mA^*$		1.1		V
Base Emitter On Voltage	$V_{BE(on)}$	$I_C=10\mu A, V_{CE}=5V$		0.52		V
		$I_C=100\mu A, V_{CE}=5V$		0.55		V
		$I_C=2mA, V_{CE}=5V$	0.55		0.70	V

ELECTRICAL CHARACTERISTICS (Ta=25°C Unless Otherwise Specified)

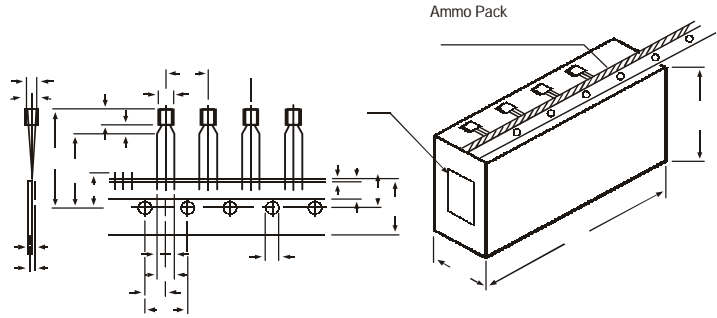
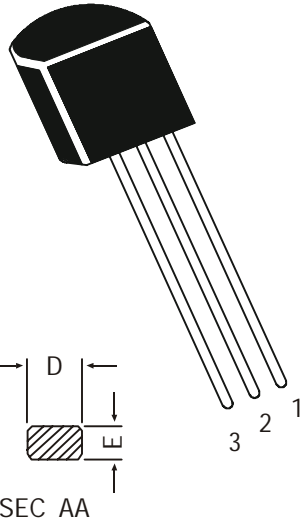
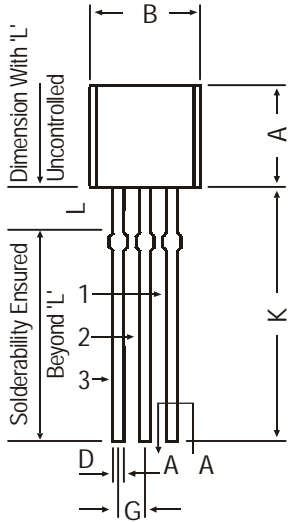
DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNITS
DYNAMICS CHARACTERISTICS						
Transition Frequency	f_T	$I_C=10mA, V_{CE}=5V$ $f=100MHz$		250		MHz
Collector Base Capacitance	C_{cbo}	$V_{CB}=10V, I_E=0,$ $f=1MHz$		2.5		pF
Noise Figure	NF_1	$V_{CE}=5V, I_C=200\mu A$ $R_S=2KW, f=30Hz$ To 15KHz			2.0	dB
	NF_2	$V_{CE}=5V, I_C=200\mu A$ $R_S=100KW, f=1.0KHz$ $f=200Hz$			10	dB
Small Signal Current Gain	B	$ h_{fe} $	$V_{CE}=5V, I_C=2mA$	240		500
	C		$f=1kHz$	450		900

BC559, B, C
BC560, B, C

TO-92
Plastic Package

TO-92 Plastic Package

TO-92 Transistors on Tape and Ammo Pack

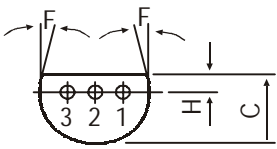


All dimensions in mm unless specified otherwise

ITEM	SYMBOL	SPECIFICATION				REMARKS
		MIN.	NOM.	MAX.	TOL.	
BODY WIDTH	A1	4.0		4.8		CUMULATIVE PITCH ERROR 1.0 mm/20 PITCH TO BE MEASURED AT BOTTOM OF CLINCH AT TOP OF BODY
BODY HEIGHT	A	4.8		5.2		
BODY THICKNESS	T	3.9		4.2		
PITCH OF COMPONENT	P		12.7		±1	
FEED HOLE PITCH	Po		12.7		±0.3	
FEED HOLE CENTRE TO COMPONENT CENTRE	P2		6.35		±0.4	
DISTANCE BETWEEN OUTER LEADS	F		5.08		+0.6 -0.2	
COMPONENT ALIGNMENT	Δh		0	1		
TAPE WIDTH	W		18		±0.5	
HOLD-DOWN TAPE WIDTH	Wo		6		±0.2	
HOLE POSITION	W1		9		+0.7 -0.5	
HOLD-DOWN TAPE POSITION	W2		0.5		±0.2	
LEAD WIRE CLINCH HEIGHT	Ho		16		±0.5	
COMPONENT HEIGHT	H1			23.25		
LENGTH OF SNIPPED LEADS	L			11.0		
FEED HOLE DIAMETER	Do		4		±0.2	
TOTAL TAPE THICKNESS	t			1.2		
LEAD - TO - LEAD DISTANCE F1	F2		2.54		+0.4 -0.1	
CLINCH HEIGHT	H2			3		
PULL - OUT FORCE	(P)	6N				

NOTES

1. MAXIMUM ALIGNMENT DEVIATION BETWEEN LEADS NOT TO BE GREATER THAN 0.2 mm.
2. MAXIMUM NON-CUMULATIVE VARIATION BETWEEN TAPE FEED HOLES SHALL NOT EXCEED 1 mm IN 20 PITCHES.
3. HOLDDOWN TAPE NOT TO EXCEED BEYOND THE EDGE(S) OF CARRIER TAPE AND THERE SHALL BE NO EXPOSURE OF ADHESIVE.
4. NO MORE THAN 3 CONSECUTIVE MISSING COMPONENTS ARE PERMITTED.
5. A TAPE TRAILER, HAVING AT LEAST THREE FEED HOLES ARE REQUIRED AFTER THE LAST COMPONENT.
6. SPLICES SHALL NOT INTERFERE WITH THE SPROCKET FEED HOLES.



PIN CONFIGURATION

1. EMITTER
2. BASE
3. COLLECTOR

DIM	MIN.	MAX.
A	4.32	5.33
B	4.45	5.20
C	3.18	4.19
D	0.41	0.55
E	0.35	0.50
F	5 DEG	
G	1.14	1.40
H	1.14	1.53
K	12.70	—
L	1.982	2.082

All dimensions in mm.

Disclaimer

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