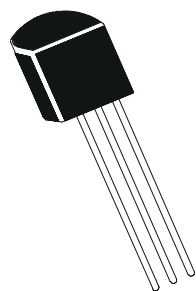


PNP SILICON PLANAR EPITAXIAL TRANSISTORS



Boca Semiconductor Corp.
BSC
<http://www.bocasemi.com>

BC 556, A, B
BC 557, 8, A, B, C
TO-92
EBC

APPLICATION

PNP General Purpose Transistors, Especially Suited For Use in Driver Stages of Audio Amplifier, Low Noise Input Stages of Tape Recorders, HI-FI Amplifiers, Signal Processing Circuits of Television Receivers.

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

DESCRIPTION	SYMBOL	BC556	BC557	BC558	UNITS
Collector -Emitter Voltage	VCEO	65	45	30	V
Collector -Emitter Voltage	VCES	80	50	30	V
Collector -Base Voltage	VCBO	80	50	30	V
Emitter -Base Voltage	VEBO		5.0		V
Collector Current Continuous	IC		100		mA
Peak	ICM		200		mA
Base Current -Peak	IBM		200		mA
Emitter Current- Peak	IEM		200		mA
Power Dissipation@ Ta=25 degC	PTA		500		mW
Derate Above 25 deg C			4.0		mW/deg C
Storage Temperature	Tstg		-65 to +150		deg C
Junction Temperature	Tj		150		deg C

THERMAL RESISTANCE

Junction to Ambient	Rth(j-a)	250	deg C/W
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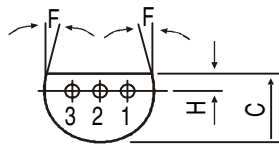
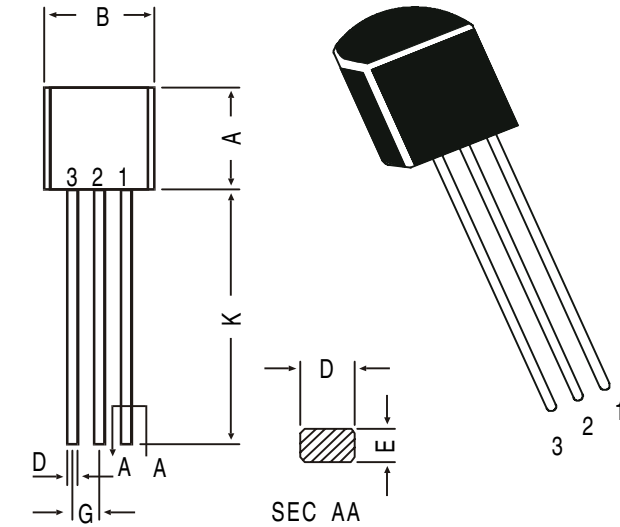
ELECTRICAL CHARACTERISTICS (Ta=25 deg C Unless Otherwise Specified)

DESCRIPTION	SYMBOL	TEST CONDITION	BC556	BC557	BC558	UNITS
Collector -Emitter Voltage	VCEO	IC=2mA, IB=0	>65	>45	>30	V
Collector -Base Voltage	VCBO	IC=100uA, IE=0	>80	>50	>30	V
Emitter-Base Voltage	VEBO	IE=100uA, IC=0 ALL		>5.0		V
Collector-Cut off Current	ICBO	VCB=30V, IE=0 ALL		<15		nA
		Tj=150 deg C				
		VCB=30V, IE=0 ALL		<5.0		uA
	ICES	VCE=80V, VBE=0	<15	-	-	nA
		VCE=50V, VBE=0	-	<15	-	nA
		VCE=30V, VBE=0	-	-	<15	nA
		TJ=125 deg C				
Collector-Cut off Current	ICES	VCE=80V, VBE=0	<4.0	-	-	uA
		VCE=50V, VBE=0	-	<4.0		uA
		VCE=30V, VBE=0	-	-	<4.0	uA

ELECTRICAL CHARACTERISTICS (Ta=25 deg C Unless Otherwise Specified)				BC556-558	
DESCRIPTION	SYMBOL	TEST CONDITION		VALUE	UNITS
DC Current Gain	hFE	IC=10uA,VCE=5V	A	typ90	
			B	typ150	
			C	typ270	
		IC=2mA,VCE=5V	BC556	75-475	
			BC557,8	75-800	
			A	110-220	
		IC=100mA,VCE=5V	B	200-450	
			C	420-800	
			A	typ120	
			B	typ200	
			C	typ400	
Collector Emitter Saturation Voltage	VCE(Sat)	IC=10mA,IB=0.5mA		<0.30	V
		IC=100mA,IB=5mA		<0.65	V
Base Emitter Saturation Voltage	VBE(Sat)	IC=10mA,IB=0.5mA		typ0.70	V
		IC=100mA,IB=5mA		typ0.90	V
Base Emitter on Voltage	VBE(on)	IC=2mA,VCE=5V		0.55-0.70	V
		IC=10mA,VCE=5V		<0.82	V
<u>DYNAMIC CHARACTERISTICS</u>					
Transistors Frequency	ft	IC=10mA, VCE=5V f=100MHz		typ150	MHz
Collector out-put Capacitance	Ccbo	VCB=10V, f=1MHz		<6.0	pF
Emitter Input Capacitance	Cib	VEB=0.5V, f=1MHz		typ9.0	pF
Noise Figure	NF	IC=0.2mA, VCE=5V Rs=2kohm, f=1kHz B=200Hz		<10	dB
Small Signal Current Gain	hfe	ALL f=1KHz IC=2mA, VCE=5V	A	typ220	
			B	typ330	
			C	typ600	
Input Impedance	hie	IC=2mA, VCE=5V	A	1.6-4.5	khoms
			B	3.2-8.5	
			C	6.0-15	
Voltage Feedback Ratio	hre	IC=2mA, VCE=5V	A	typ1.5	X`10-4
			B	typ2.0	
			C	typ3.0	
Out put Adimttance	hoe	IC=2mA, VCE=5V	A	<30	umhos
			B	<60	
			C	<110	

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TO-92 Plastic Package



PIN CONFIGURATION

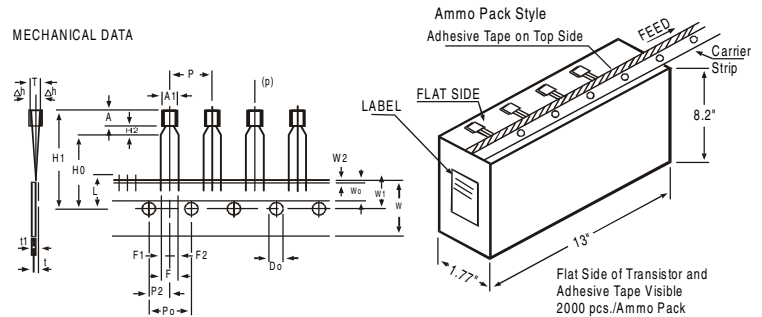
1. EMITTER
2. BASE
3. COLLECTOR

All dimensions in mm.

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	—

TO-92 Transistors on Tape and Ammo Pack

MECHANICAL DATA



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
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	TO BE MEASURED AT BOTTOM OF CLINCH
DISTANCE BETWEEN OUTER LEADS	F		5.08		+0.6	AT TOP OF BODY
COMPONENT ALIGNMENT	Δh		0	1	-0.2	
TAPE WIDTH	W		18		±0.5	
HOLD-DOWN TAPE WIDTH	Wo		6		±0.2	
HOLE POSITION	W1		9		+0.7	
HOLD-DOWN TAPE POSITION	W2		0.5		±0.2	t1 0.3 - 0.6
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.

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