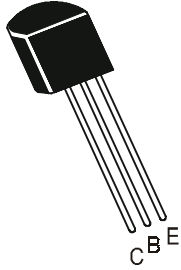


SILICON PLANAR EPITAXIAL TRANSISTORS

**BC337
BC337A
BC338**



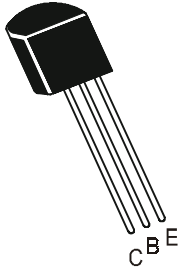
**TO-92
Plastic Package**

Complementary Transistors For Use in Driver And Output Stages of Audio Amplifiers

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

DESCRIPTION	SYMBOL	BC327	BC327A	BC328	UNITS
		BC337	BC337A	BC338	
Collector Emitter Voltage	V_{CEO}	45	60	25	V
Collector Emitter Voltage	V_{CES}	50	60	30	V
Emitter Base Voltage	V_{EBO}		5.0		V
Collector Current Continuous	I_C		800		mA
Peak	I_{CM}		1.0		A
Emitter Current Peak	I_{EM}		1.0		A
Base Current Continuous	I_B		100		mA
Base Current Peak	I_{BM}		200		mA
Power Dissipation @ Ta=25°C	P_{TA}		625		mW
Derate Above 25°C			5		mW/°C
Operating And Storage Junction Temperature Range	T_j, T_{stg}		-65 to +150		°C
THERMAL RESISTANCE					
Junction to Ambient in Free Air	$R_{th(j-a)}$		200		°C/W

SILICON PLANAR EPITAXIAL TRANSISTORS



BC337
BC337A
BC338

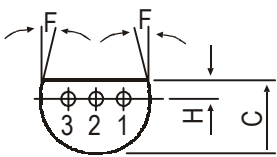
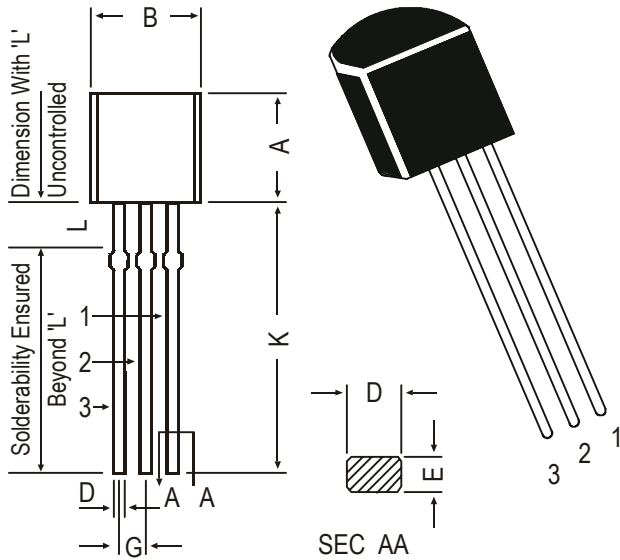
TO-92
Plastic Package

ELECTRICAL CHARACTERISTICS (Ta=25° C unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	BC327	BC327A	BC328	UNITS
			BC337	BC337A	BC338	
Collector Emitter Voltage	V_{CEO}	$I_C=10mA, I_B=0$	>45	>60	>25	V
	V_{CES}	$I_C=100\mu A, I_E=0$	>50	>60	>30	V
Emitter Base Voltage	V_{EBO}	$I_E=10\mu A, I_C=0$			>5.0	V
Collector-Cut off Current	I_{CBO}	$V_{CB} = 20V, I_E = 0$			<100	nA
		$T_J = 150^\circ C$				
Emitter cut off Current	I_{EBO}	$V_{CB} = 20V, I_E = 0$			<5.0	μA
		$V_{EB} = 5V, I_C = 0$			<10	μA
DC Current Gain	h_{FE}^*	$I_C=500mA, V_{CE}=1V$			>40	
		$I_C=100mA, V_{CE}=1V$	100-600	100-400	100-600	
		Group-10	63-160		63-160	
		Group-16	100-250		100-250	
		Group-25	160-400		160-400	
		Group-40	250-600		250-600	
Collector Emitter Saturation Voltage	$V_{CE(sat)}^*$	$I_C=500mA, I_B=50mA$			<0.70	V
Base Emitter On Voltage	$V_{BE(on)}^*$	$I_C=500mA, V_{CE} = 1V$			<1.20	V
<u>DYNAMICS CHARACTERISTICS</u>						
Transition Frequency	f_T	$I_C=10mA, V_{CE}=5V$ $f=35MHz$	NPN		Typ 200	MHz
			PNP		Typ 100	MHz
Out-put Capacitance	C_{ob}	$V_{CB}=10V, f=1MHz$	NPN		Typ 5.0	pF
Noise Figure			PNP		Typ 8.0	pF

*Pulse Test : Pulse Width = 300us, Duty Cycle =2%.

TO-92 Plastic Package

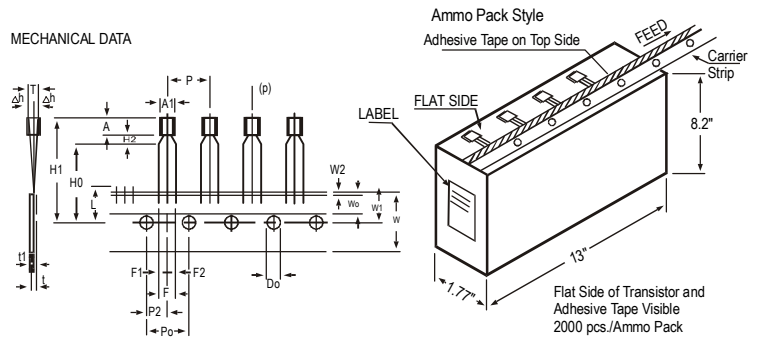


PIN CONFIGURATION
 1. EMITTER
 2. BASE
 3. COLLECTOR

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.

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
BODY HEIGHT	A	4.8		5.2		
BODY THICKNESS	T	3.9		4.2		
PITCH OF COMPONENT	P		12.7		±1	TO BE MEASURED AT BOTTOM OF CLINCH
FEED HOLE PITCH	Po		12.7		±0.3	
FEED HOLE CENTRE TO COMPONENT CENTRE	P2		6.35		±0.4	AT TOP OF BODY
DISTANCE BETWEEN OUTER LEADS	F		5.08		+0.6 -0.2	
COMPONENT ALIGNMENT	Δh		0	1		t1 0.3 - 0.6
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.

Packing Detail

PACKAGE	STANDARD PACK		INNER CARTON BOX		OUTER CARTON BOX		
	Details	Net Weight/Qty	Size	Qty	Size	Qty	Gr Wt
TO-92 Bulk	1K/polybag	200 gm/1K pcs	3" x 7.5" x 7.5"	5K	17" x 15" x 13.5"	80K	23 kgs
TO-92 T&A	2K/ammo box	645 gm/2K pcs	12.5" x 8" x 1.8"	2K	17" x 15" x 13.5"	32K	12.5 kgs

Disclaimer

The product information and the selection guides facilitate selection of the CDIL's Discrete Semiconductor Device(s) best suited for application in your product(s) as per your requirement. It is recommended that you completely review our Data Sheet(s) so as to confirm that the Device(s) meet functionality parameters for your application. The information furnished on the CDIL Web Site/CD is believed to be accurate and reliable. CDIL however, does not assume responsibility for inaccuracies or incomplete information. Furthermore, CDIL does not assume liability whatsoever, arising out of the application or use of any CDIL product; neither does it convey any license under its patent rights nor rights of others. These products are not designed for use in life saving/support appliances or systems. CDIL customers selling these products (either as individual Discrete Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems or applications do so at their own risk and CDIL will not be responsible for any damages resulting from such sale(s).

CDIL strives for continuous improvement and reserves the right to change the specifications of its products without prior notice.



CDIL is a registered Trademark of

Continental Device India Limited

C-120 Naraina Industrial Area, New Delhi 110 028, India.
Telephone + 91-11-579 6150 Fax + 91-11-579 9569, 579 5290
e-mail sales@cdil.com www.cdil.com