

# BC327 & BC337

## General Purpose Transistors

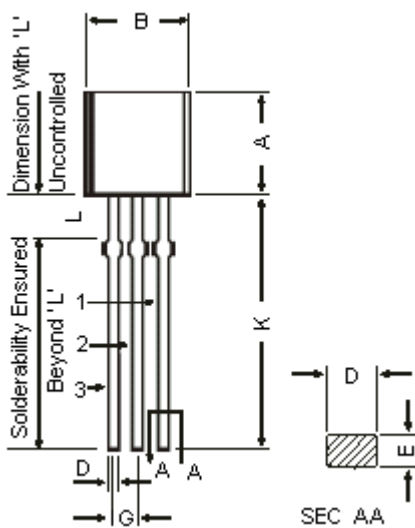


### General Description and Suggested Applications:

- PNP/NPN Silicon Planar Epitaxial Transistors.
- Complementary Transistors for use in Driver and Output Stages of Audio Amplifiers

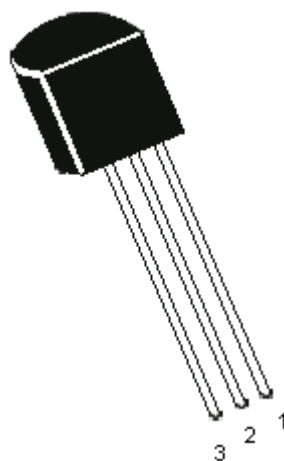
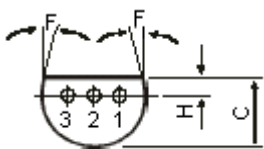
BC327 PNP BC337 NPN

### TO-92 Plastic Package



Dimensions	Minimum	Maximum
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°	
G	1.14	1.40
H	1.14	1.53
K	12.70	-
L	1.982	2.082

Dimensions : Millimetres



### Pin Configuration

1. Emitter
2. Base
3. Collector

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### Absolute Maximum Ratings

Parameter	Symbol	BC327 NPN BC337 PNP	Unit
Collector-Emitter Voltage	$V_{CEO}$	45	V
Collector-Emitter Voltage	$V_{CES}$	50	
Emitter-Base Voltage	$V_{EBO}$	5.0	
Collector Current Continuous Peak	$I_C$	800	mA
	$I_{CM}$	1.0	A
Emitter Current Peak	$I_{EM}$	1.0	
Base Current Continuous	$I_B$	100	mA
Base Current Peak	$I_{BM}$	200	
Power Dissipation at $T_a = 25^\circ\text{C}$ Derate above $25^\circ\text{C}$	$P_{TA}$	625 5.0	mW mW/ $^\circ\text{C}$
Operating and Storage Junction Temperature Range	$T_j, T_{stg}$	-65 to +150	$^\circ\text{C}$
<b>Thermal Resistance</b>			
From Junction to Ambient in Free Air	$R_{th(j-a)}$	200	$^\circ\text{C/W}$

### Electrical Characteristics ( $T_a = 25^\circ\text{C}$ Unless Otherwise Specified)

Parameter	Symbol	Test Condition	BC327	Unit
Collector-Emitter Voltage	$V_{CEO}$	$I_C = 10\text{mA}, I_B = 0$	>45	V
	$V_{CES}$	$I_C = 100\mu\text{A}, I_E = 0$	>50	V
Emitter-Base Voltage	$V_{EBO}$	$I_E = 10\mu\text{A}, I_C = 0$	>5.0	V
Collector-Cut off Current	$I_{CBO}$	$V_{CB} = 20\text{V}, I_E = 0$	<100	nA
		$V_{CB} = 20\text{V}, I_E = 0, T_J = 150^\circ\text{C}$	<5.0	$\mu\text{A}$
Emitter Cut off Current	$I_{EBO}$	$V_{EB} = 5\text{V}, I_C = 0$	<10	$\mu\text{A}$
DC Current Gain	$h_{FE}^*$	$I_C = 100\text{mA}, V_{CE} = 1\text{V}$ <b>Group 16</b> <b>Group 25</b>	100-600 100-250 160-400	-
Collector Emitter Saturation Voltage	$V_{CE(Sat)}^*$	$I_C = 500\text{mA}, I_B = 50\text{mA}$	<0.70	V
Base Emitter on Voltage	$V_{BE(on)}^*$	$I_C = 500\text{mA}, V_{CE} = 1\text{V}$	<1.20	

### Dynamic Characteristics

Transistors Frequency	$f_T$	$I_C = 10\text{mA}, V_{CE} = 5\text{V}, f = 35\text{MHz}$	NPN PNP	Typ 200 Typ 100	MHz
Output Capacitance	$C_{ob}$	$V_{CB} = 10\text{V}, f = 1\text{MHz}$	NPN PNP	Typ 5.0 Typ 8.0	pF

\* Pulse Test : Pulse Width = 300 $\mu\text{s}$ , Duty Cycle = 2%



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### Specifications

$V_{CE0}$ maximum (V)	$V_{CES}$ maximum (V)	$I_C$ (A)	$h_{FE}$ minimum at $I_C = 100mA$	$F_T$ minimum (Typical*) $F = 35MHz$	$P_{tot}$ (mW)	Package	Part Number
45	50	0.8	160-400	100	625	TO-92	BC327.25
		0.5	100-600	60			BC337
		1	100-250	-			BC337.16
		0.8	160-400	210			BC337.25

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