

BC337

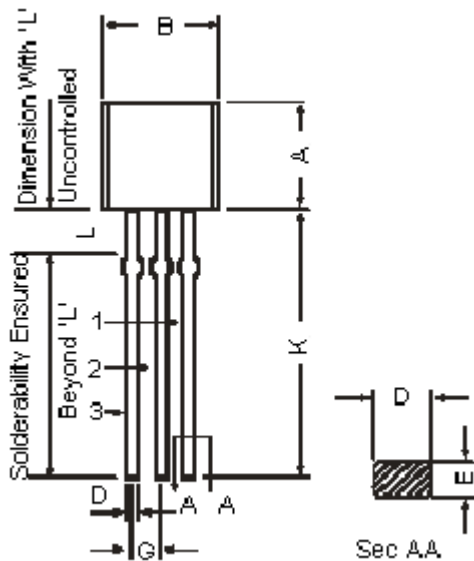
Bipolar Transistors



General Description:

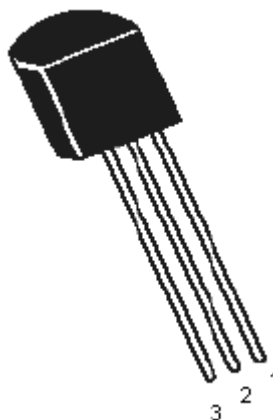
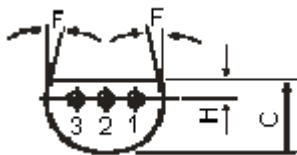
Silicon Planar Epitaxial Transistors.

General Purpose Transistors Best Suited for use in Driver and Output Stages of Audio Amplifier.



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	1.20	1.53
K	12.70	-
L	1.982	2.082

Dimensions : Millimetres



Pin Configuration:

1. Emitter
2. Base
3. Collector



Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$ unless specified otherwise)

Description	Symbol	Value	Unit
Collector Emitter Voltage	V_{CEO}	45	V
Collector Emitter Voltage	V_{CES}	50	
Emitter Base Voltage	V_{EBO}	5	
Collector Current Continuous	I_C	800	mA
Collector Current Peak	I_{CM}	1000	
Base Current Peak	I_{BM}	200	
Base Current Continuous	I_B	100	
Base Current Peak	I_{BM}	200	
Power Dissipation at $T_a = 25^\circ\text{C}$ Derate Above 25°C	P_D	625 5	mW mW/ $^\circ\text{C}$
Operating and Storage Junction Temperature Range	T_j, T_{stg}	- 65 to + 150	$^\circ\text{C}$
Thermal Resistance			
Junction to Ambient in Free Air	$R_{th(j-a)}$	200	$^\circ\text{C/W}$

Electrical Characteristics ($T_a = 25^\circ\text{C}$ unless specified otherwise)

Description	Symbol	Test Condition	Minimum	Maximum	Unit
Collector Emitter Voltage	V_{CEO}	$I_C = 1\text{mA}, I_B = 0$	45	-	V
Collector Emitter Voltage	V_{CES}	$I_C = 100\mu\text{A}, I_E = 0$	50	-	
Emitter Base Voltage	V_{EBO}	$I_E = 10\mu\text{A}, I_C = 0$	5.0		
Collector Cut off Current	I_{CBO}	$V_{CB} = 20\text{V}, I_E = 0$ $V_{CB} = 20\text{V}, I_E = 0, T_j = 150^\circ\text{C}$	-	100 5	nA μA
Emitter Cut off Current	I_{EBO}	$V_{EB} = 5\text{V}, I_C = 0$	-	10	μA
Collector Emitter Saturation Voltage	$*V_{CE(sat)}$	$I_C = 500\text{mA}, I_B = 50\text{mA}$	-	0.7	V
Base Emitter On Voltage	$*V_{BE(on)}$	$I_C = 500\text{mA}, V_{CE} = 1\text{V}$	-	1.2	

*Pulse Test: Pulse Width $\leq 300\text{ms}$, Duty Cycle $\leq 2\%$.

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Bipolar Transistors



Electrical Characteristics ($T_a = 25^\circ\text{C}$ unless specified otherwise)

Description	Symbol	Test Condition	Minimum	Typical	Maximum	Unit
DC Current Gain	h_{FE}	$I_C = 100\text{mA}$, $V_{CE} = 1\text{V}$	100	400	-	-
Small Signal Characteristics						
Transistors Frequency	f_T	$I_C = 10\text{mA}$, $V_{CE} = 5\text{V}$ $f = 35\text{MHz}$ NPN	-	200	-	MHz
Input Capacitance	C_{ib}	$V_{BE} = 10\text{V}$, $I_E = 0$, $f = 1\text{MHz}$ NPN	-	5	-	pF

Specifications

V_{CEO} (V)	V_{CBO} Maximum (V)	I_C (A)	h_{FE} Minimum at $I_C = 2\text{mA}$	f_T Minimum (MHz)	P_{tot} (mW)	Package	Part Number
45	50	0.5	100	60	800	TO-92	BC337

Notes:

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