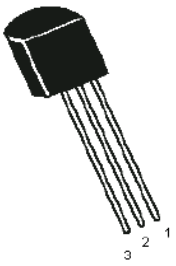
Low Power Bipolar Transistor



Pin Configuration:
1. Base
2. Collector
3. Emitter

Description:

- PNP silicon planar epitaxial transistors
- Driver stages of audio amplifier application

Absolute Maximum Ratings

Description	Symbol	BC640	Unit
Collector-Base Voltage	V_{CBO}	80	V
Collector-Emitter Voltage	V_{CEO}		
Emitter-Base Voltage	V_{EBO}	5	
Collector Current Continuous	I_C	1	A
Power Dissipation at T_a = 25°C Derate Above 25°C	P_D	800 6.4	mW mW/°C
Power Dissipation at T_C = 25°C Derate Above 25°C		2.75 22	W mW/°C
Operating and Storage Junction Temperature Range	T_j, T_{stg}	-55 to +150	°C

Thermal Resistance

From Junction to Case	$R_{th\ (j-c)}$	45	°C/W
From Junction to Ambient	$R_{th\ (j-a)}$	156	

Electrical Characteristics (T_a = 25°C unless otherwise specified)

Description	Symbol	Test Condition	TBC635	Units
Collector-Emitter Voltage	V_{CEO}*	I_C = 10mA, I_B = 0	>80	V
Collector-Base Voltage	V_{CBO}	I_C = 100µA, I_E = 0		
Emitter-Base Voltage	V_{EBO}	I_E = 10µA, I_C = 0	>5	
Collector Cut off Current	I_{CBO}	V_{CB} = 30V, I_E = 0	<100	nA
		T_a = 125°C V_{CB} = 30V, I_E = 0	<10	µA
Base Emitter On Voltage	$V_{BE\ (on)}$*	I_C = 500mA, V_{CE} = 2V	<1	V
Collector Emitter Saturation Voltage	$V_{CE\ (sat)}$*	I_C = 500mA, I_B = 50mA	<0.5	
DC Current Gain	h_{FE}*	I_C = 5mA, V_{CE} = 2V	>25	-
		I_C = 150mA, V_{CE} = 2V	40 - 160	
		Group-10	63 - 160	
		Group-16	100 - 250	
		I_C = 500mA, V_{CE} = 2V	>25	

Dynamic Characteristics

Transistors Frequency	f_T	I_C = 50mA, V_{CE} = 2V, f = 100MHz	200 (Typical)	MHz
Output Capacitance	C_{ob}	V_{CB} = 10V, f = 1MHz	7 (Typical)	pF
Input Capacitance	C_{ib}	V_{BE} = 0.5V, I_C = 0, f = 1MHz	50 (Typical)	

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

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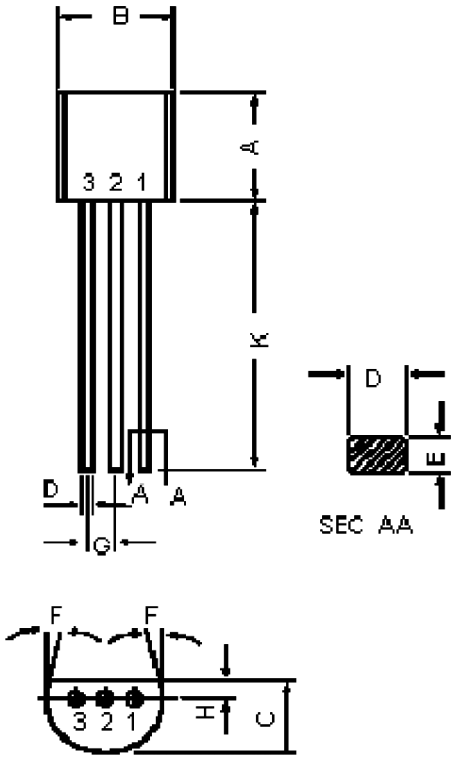

Dimensions	Min.	Max.
A	4.32	5.33
B	4.45	5.2
C	3.18	4.19
D	0.41	0.55
E	0.35	0.5
F	5°	
G	1.14	1.4
H		1.53
K	12.7	-

Dimensions : Millimetres

Pin Configuration:

1. Base
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3. Emitter

Part Number Table

Description	Part Number
Transistor, PNP, TO-92	BC640