

Low Power Bipolar Transistor



Features:

- PNP Silicon Planar Epitaxial Transistors
- General Purpose Audio Amplifier

Absolute Maximum Ratings:

Description	Symbol	BC477	Unit
Collector-Emitter Voltage	V_{CES}	90	V
	V_{CEO}	80	
Emitter-Base Voltage	V_{EBO}	6	
Collector Current	I_C	150	mA
Power Dissipation at $T_a = 25^\circ\text{C}$	P_{tot}	0.3	W
Power Dissipation at $T_C = 25^\circ\text{C}$	P_{tot}	1.2	
Junction Temperature	T_J	200	°C
Storage Temperature Range	T_{stg}	-55°C to +200	

Thermal Resistance

Junction to Case	$R_{th(j-c)}$	146	°C/W
Junction to Ambient	$R_{th(j-a)}$	485	

Low Power Bipolar Transistor

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

Parameter	Symbol	Test Condition	Min.	Typical	Max.	Unit
Collector Cut off Current	I_{CES}	$V_{CE} = 70\text{V}, V_{BE} = 0$ $T_a = 125^\circ\text{C}$	-		10	nA
		$V_{CE} = 70\text{V}, V_{BE} = 0$				μA
Emitter Cut off Current	I_{EBO}	$V_{EB} = 4\text{V}, I_C = 0$			10	nA
Collector-Emitter Voltage	V_{CES}	$I_C = 10\mu\text{A}, V_{BE} = 0$	90	-		
	V_{CEO}	$I_C = 5\text{mA}, I = 0$	80			
Emitter-Base Voltage	V_{EBO}	$I_E = 10\mu\text{A}, I_C = 0$	6			
Collector Emitter Saturation Voltage	$V_{CE(Sat)}^*$	$I_C = 10\text{mA}, I_B = 0.5\text{mA}$	-	0.3	0.25	V
		$I_C = 100\text{mA}, I_B = 5\text{mA}$			-	
Base Emitter On Voltage	$V_{BE(on)}^*$	$I_C = 2\text{mA}, V_{CE} = 5\text{V}$	0.55	-	0.75	
Base Emitter Saturation Voltage	$V_{BE(Sat)}^*$	$I_C = 10\text{mA}, I_B = 0.5\text{mA}$	-	0.9	0.9	
		$I_C = 100\text{mA}, I_B = 5\text{mA}$			-	
DC Current	h_{FE}^*	$I_C = 10\mu\text{A}, V_{CE} = 5\text{V}$	30	-		
		$I_C = 2\text{mA}, V_{CE} = 5\text{V}$	110			
		$I_C = 10\text{mA}, V_{CE} = 5\text{V}$	-			
Small Signal Current Gain	h_{fe}	$I_C = 2\text{mA}, V_{CE} = 5\text{V},$ $f = 1\text{kHz}$	125	-	260	-
		$I_C = 10\text{mA}, V_{CE} = 5\text{V},$ $f = 20\text{MHz}$	-	7.5	-	

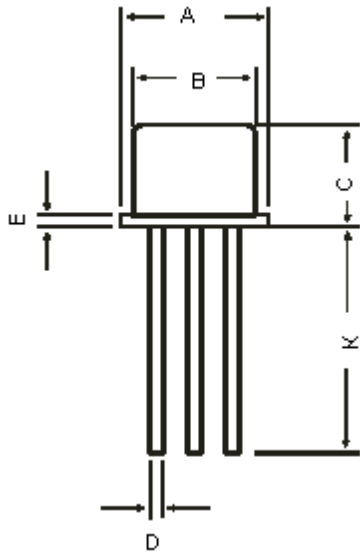
Dynamic Characteristics

Collector Base Capacitance	C_{cbo}	$I_E = 0, V_{CB} = 5\text{V}$	-	-	6	pF
Emitter Base Capacitance	C_{ebo}	$I_C = 0, V_{EB} = 0.5\text{V}$			15	pF
Noise Figure	NF	$V_{CE} = 5\text{V}, I_C = 200\mu\text{A}$ $R_g = 2\text{k}\Omega, f = 1\text{kHz}$ $B = 200\text{Hz}$			10	dB

*Pulsed: Pulse Duration = 300 μs , Duty Cycle = 1%

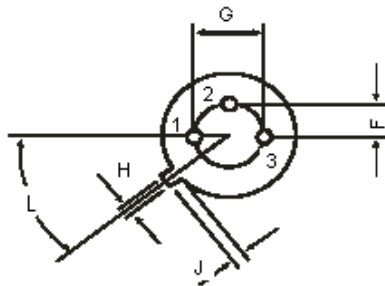
Low Power Bipolar Transistor

TO-18 Metal Can Package



Dim.	Min.	Max.
A	5.24	5.84
B	4.52	4.97
C	4.31	5.33
D	0.4	0.53
E	-	0.76
F	-	1.27
G	-	2.97
H	0.91	1.17
J	0.71	1.21
K	12.7	-
L	45°	

Dimensions : Millimetres



1. Emitter
2. Base
3. Collector

Part Number Table

Description	Part Number
Transistor, PNP, TO-18	BC477

Important Notice : This data sheet and its contents (the "Information") belong to the members of the Premier Farnell group of companies (the "Group") or are licensed to it. No licence is granted for the use of it other than for information purposes in connection with the products to which it relates. No licence of any intellectual property rights is granted. The Information is subject to change without notice and replaces all data sheets previously supplied. The Information supplied is believed to be accurate but the Group assumes no responsibility for its accuracy or completeness, any error in or omission from it or for any use made of it. Users of this data sheet should check for themselves the Information and the suitability of the products for their purpose and not make any assumptions based on information included or omitted. Liability for loss or damage resulting from any reliance on the Information or use of it (including liability resulting from negligence or where the Group was aware of the possibility of such loss or damage arising) is excluded. This will not operate to limit or restrict the Group's liability for death or personal injury resulting from its negligence. Multicomp is the registered trademark of the Group. © Premier Farnell plc 2012.