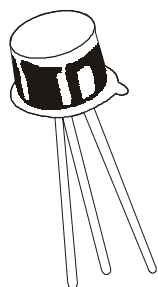


## PNP SILICON PLANAR EPITAXIAL TRANSISTORS

**BC177, A, B, C**  
**BC178, A, B, C**  
**BC179, A, B, C**  
**TO-18**



### ABSOLUTE MAXIMUM RATINGS

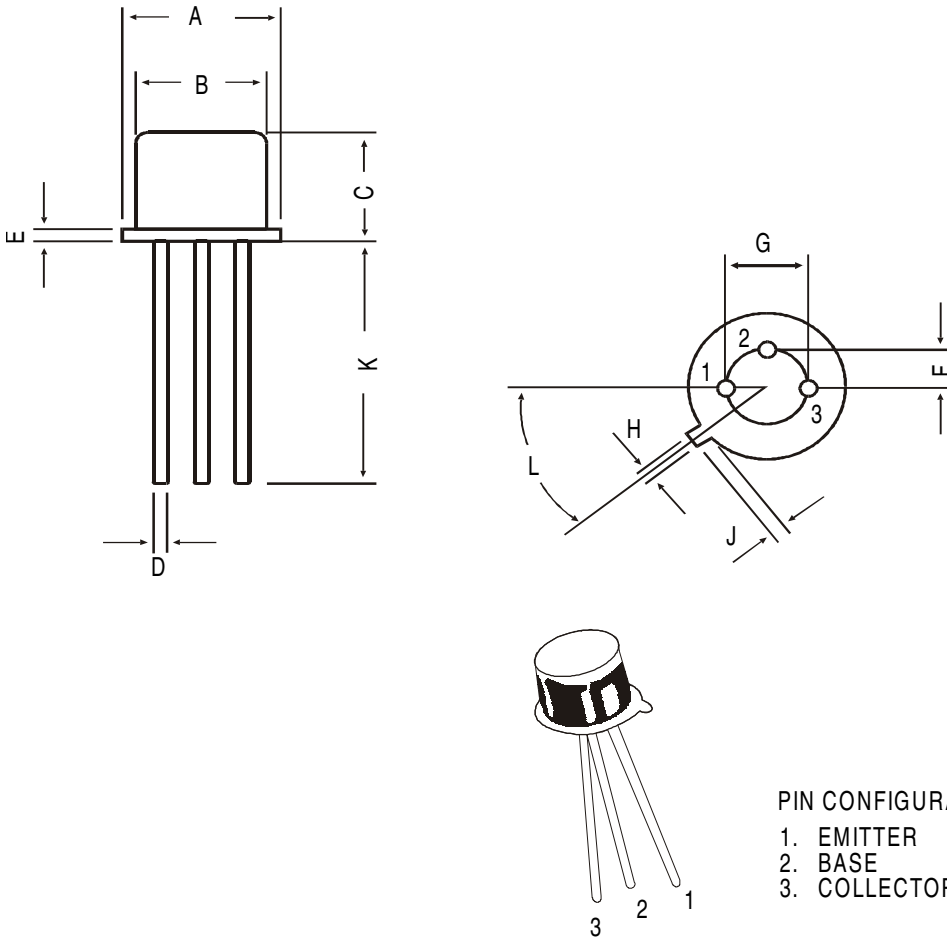
DESCRIPTION	SYMBOL	BC177	BC178	BC179	UNIT
Collector -Emitter Voltage	VCEO	45	25	20	V
Collector -Emitter Voltage	VCES	50	30	25	V
Collector -Base Voltage	VCBO	50	30	25	V
Emitter -Base Voltage	VEBO	5.0	5.0	5.0	V
Collector Current Continuous	IC		0.2		A
Power Dissipation@ Ta=25 degC	PD		0.6		W
Derate Above 25 deg C			2.28		mW/deg C
Power Dissipation@ Tc=25 degC	PD		1.0		W
Derate Above 25 deg C			6.67		mW/deg C
Operating And Storage Junction Temperature Range	Tj, Tstg	-65 to +200			deg C
<b>THERMAL RESISTANCE</b>					
Junction to Case	Rth(j-c)	175			deg C/W

### ELECTRICAL CHARACTERISTICS (Ta=25 deg C Unless Otherwise Specified)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Collector-Cut off Current	ICES	VCE=20V, IE=0 Tamb=125 deg C	-		100	nA
Collector -Base Voltage	VCBO	IC=10uA, IE=0	<b>BC177</b>	50	-	V
			<b>BC178</b>	30	-	V
			<b>BC179</b>	25	-	V
Collector -Emitter Voltage	VCEO	IC=2mA, IB=0	<b>BC177</b>	45	-	V
			<b>BC178</b>	25	-	V
			<b>BC179</b>	20	-	V
Emitter-Base Voltage	VEBO	IE=10uA, IC=0	5.0	-	V	
DC Current	hFE	IC=2mA, VCE=5V	<b>BC177</b>	120	460	
			<b>BC178</b>	120	800	
			<b>BC179</b>	180	800	
			<b>A Group</b>	120	220	
			<b>B Group</b>	180	460	
Collector Emitter Saturation Voltage	VCE(Sat)	IC=10mA, IB=0.5mA	-		0.20	V
		IC=100mA, IB=5mA	-		0.60	V
Base Emitter Saturation Voltage	VBE(Sat)	IC=10mA, IB=0.5mA	-		0.80	V
		IC=100mA, IB=5mA	-	0.90	-	V
Base Emitter on Voltage	VBE(on)	IC=2mA, VCE=5V	0.60		0.75	V

ELECTRICAL CHARACTERISTICS (Ta=25 deg C Unless Otherwise Specified)				BC177XX				
DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNIT			
Collector Knee Voltage	VCE (K)	IC=10mA, IB=The Value for Which IC=11mA, @ VCE=1V	-	0.60	V			
Transition Frequency	ft	VCE=5V, IC=10mA, f=50MHz	200	-	MHZ			
Noise Figure	NF	VCE=5V, IC=0.2mA						
		Rg=2kohms,						
		F=30Hz to 15 KHz	BC179	-	4.0	dB		
		F=1kHz, F=200Hz	BC179	-	4.0	dB		
					BC177/178	-	10	dB
Output Capacitance	Cobo	VCB=10V, f=1MHz	-	4.0	pF			
Small Signal Current Gain	hfe	ALL f=1kHz						
		IC=2mA, VCE=5V	BC177	125	500			
			BC178	125	900			
			BC179	240	900			
			A Group	125	260			
			B Group	240	500			
		C Group	450	900				
Input Impedance	hie	IC=2mA, VCE=5V	A Group	1.6	4.5	Kohms		
			B Group	3.2	8.5	Kohms		
			C Group	6.0	15	Kohms		
Output Admittance	hoe	IC=2mA, VCE=5V	A Group	-	30	umhos		
			B Group	-	60	umhos		
			C Group	-	110	umhos		

## TO-18 Metal Can Package



DIM	MIN	MAX
A	5.24	5.84
B	4.52	4.97
C	4.31	5.33
D	0.40	0.53
E	—	0.76
F	—	1.27
G	—	2.97
H	0.91	1.17
J	0.71	1.21
K	12.70	—
L	45 DEG	

All dimensions in mm.

### PIN CONFIGURATION

1. EMITTER
2. BASE
3. COLLECTOR

## Packing Detail

PACKAGE	STANDARD PACK		INNER CARTON BOX		OUTER CARTON BOX		
	Details	Net Weight/Qty	Size	Qty	Size	Qty	Gr Wt
TO-18	1K/polybag	350 gm/1K pcs	3" x 7.5" x 7.5"	5.0K	17" x 15" x 13.5"	80.0K	34 kgs

## Disclaimer

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