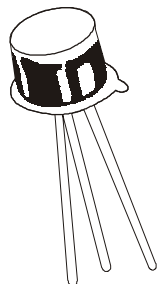


PNP SILICON PLANAR EPITAXIAL TRANSISTORS



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

ABSOLUTE MAXIMUM RATINGS

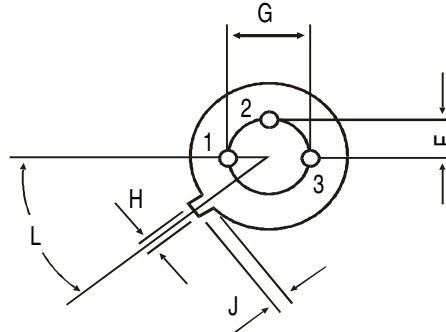
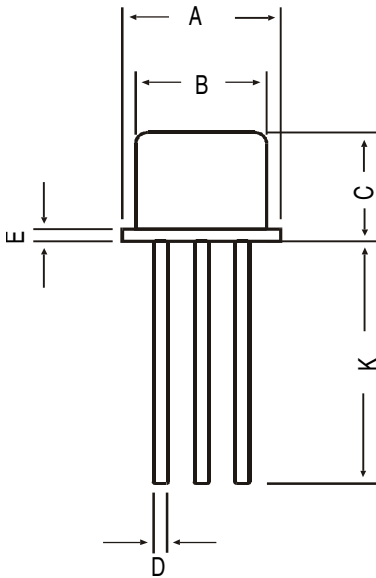
DESCRIPTION	SYMBOL	BC177	BC178	BC179	UNIT
Collector -Emitter Voltage	VCEO	45	25	20	V
Collector -Emitter Voltage	VCES	50	30	25	V
Collector -Base Voltage	VCBO	50	30	25	V
Emitter -Base Voltage	VEBO	5.0	5.0	5.0	V
Collector Current Continuous	IC		0.2		A
Power Dissipation@ Ta=25 degC	PD		0.6		W
Derate Above 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
THERMAL RESISTANCE					
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	VCE=20V, IE=0	-		4.0	uA
		IC=10uA, IE=0				
Collector -Base Voltage	VCBO	IC=10uA, IE=0				
			BC177	50	-	V
			BC178	30	-	V
Collector -Base Voltage	VCBO	IC=10uA, IE=0				
			BC179	25	-	V
Collector -Emitter Voltage	VCEO	IC=2mA, IB=0				
			BC177	45	-	V
			BC178	25	-	V
Collector -Emitter Voltage	VCEO	IC=2mA, IB=0				
			BC179	20	-	V
Emitter-Base Voltage	VEBO	IE=10uA, IC=0	5.0		-	V
DC Current	hFE	IC=2mA, VCE=5V	BC177	120	460	
			BC178	120	800	
			BC179	180	800	
			A Group	120	220	
			B Group	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			-	V
				0.90	-	V
Base Emitter on Voltage	VBE(on)	IC=2mA, VCE=5V	0.60		0.75	V

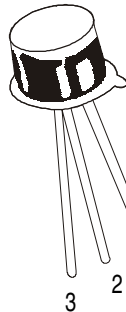
ELECTRICAL CHARACTERISTICS (Ta=25 deg C Unless Otherwise Specified)				BC177XX		
DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNIT	
Collector Knee Voltage	VCE (K)	IC=10mA, IB=The Value for Which IC=11mA, @ VCE=1V	-	0.60	V	
Transition Frequency	ft	VCE=5V, IC=10mA, f=50MHz	200	-	MHZ	
Noise Figure	NF	VCE=5V, 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



All dimensions in mm.

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	



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

The product information and the selection guides facilitate selection of the CDIL's Discrete Semiconductor Device(s) best suited for application in your product(s) as per your requirement. It is recommended that you completely review our Data Sheet(s) so as to confirm that the Device(s) meet functionality parameters for your application. The information furnished on the CDIL Web Site/CD is believed to be accurate and reliable. CDIL however, does not assume responsibility for inaccuracies or incomplete information. Furthermore, CDIL does not assume liability whatsoever, arising out of the application or use of any CDIL product; neither does it convey any license under its patent rights nor rights of others. These products are not designed for use in life saving/support appliances or systems. CDIL customers selling these products (either as individual Discrete Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems or applications do so at their own risk and CDIL will not be responsible for any damages resulting from such sale(s).

CDIL strives for continuous improvement and reserves the right to change the specifications of its products without prior notice.



CDIL is a registered Trademark of

Continental Device India Limited

C-120 Naraina Industrial Area, New Delhi 110 028, India.

Telephone + 91-11-579 6150 Fax + 91-11-579 9569, 579 5290

e-mail sales@cdil.com www.cdil.com