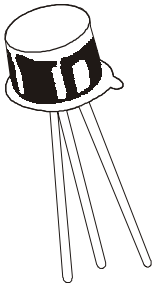
PNP SILICON PLANAR EPITAXIAL TRANSISTORS

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



ABSOLUTE MAXIMUM RATINGS

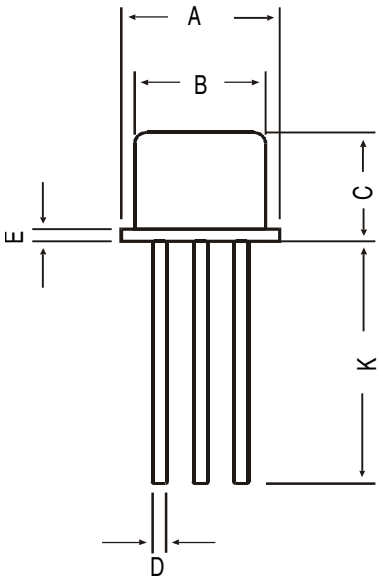
DESCRIPTION	SYMBOL	BC177	BC178	BC179	UNIT
Collector -Emitter Voltage	VCEO	45	25	20	V
Collector -Emitter Voltage	VCES	50	30	25	V
Collector -Base Voltage	VCBO	50	30	25	V
Emitter -Base Voltage	VEBO	5.0	5.0	5.0	V
Collector Current Continuous	IC		0.2		A
Power Dissipation@ Ta=25 degC	PD		0.6		W
Derate Above 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

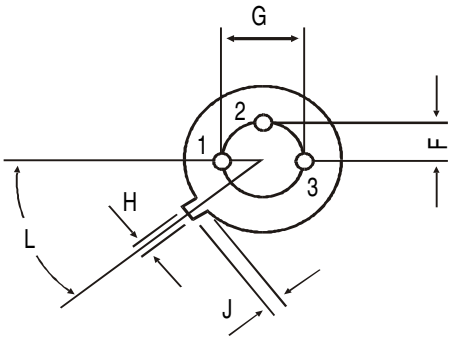
ELECTRICAL CHARACTERISTICS (Ta=25 deg C Unless Otherwise Specified)

DESCRIPTION	SYMBOL	TEST CONDITION		MIN	TYP	MAX	UNIT
Collector-Cut off Current	ICES	VCE=20V, IE=0		-		100	nA
		Tamb=125 deg C					
		VCE=20V, IE=0		-		4.0	uA
Collector -Base Voltage	VCBO	IC=10uA, IE=0	**BC177**	50		-	V
			BC178	30		-	V
			BC179	25		-	V
Collector -Emitter Voltage	VCEO	IC=2mA,IB=0	**BC177**	45		-	V
			BC178	25		-	V
			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	
			C Group	380		800	
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
		ALL f=1kHz				
Small Signal Current Gain	hfe	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

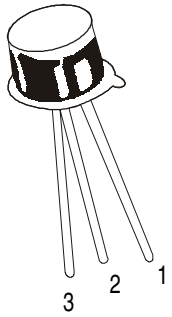
TO-18 Metal Can Package





All diminsions 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

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