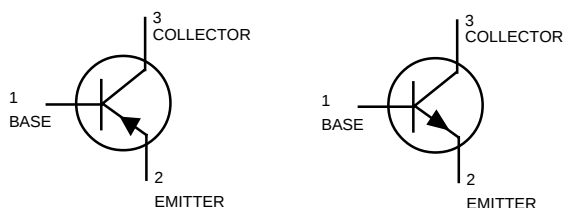


General Purpose Transistors

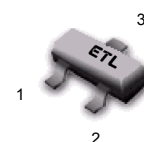


PNP
BCX17LT1
BCX18LT1
NPN
BCX19LT1
BCX20LT1

Voltage and current are negative
for PNP transistors

MAXIMUM RATINGS

Rating	Symbol	Value		Unit
		BCX17LT1 BCX19LT1	BCX18LT1 BCX20LT1	
Collector–Emitter Voltage	V_{CEO}	45	25	Vdc
Collector–Base Voltage	V_{CBO}	50	30	Vdc
Emitter–Base Voltage	V_{EBO}	5.0	5.0	Vdc
Collector Current — Continuous	I_C	500	500	mAdc



CASE 318–08, STYLE 6
SOT–23 (TO–236AB)

DEVICE MARKING

BCX17LT1 = T1; BCX18LT1 = T2; BCX19LT1 = U1; BCX20LT1 = U2

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Total Device Dissipation FR– 5 Board, (1) $T_A = 25^\circ\text{C}$	P_D	225	mW
Derate above 25°C		1.8	mW/ $^\circ\text{C}$
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	556	$^\circ\text{C/W}$
Total Device Dissipation Alumina Substrate, (2) $T_A = 25^\circ\text{C}$	P_D	300	mW
Derate above 25°C		2.4	mW/ $^\circ\text{C}$
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	417	$^\circ\text{C/W}$
Junction and Storage Temperature	T_J, T_{stg}	–55 to +150	$^\circ\text{C}$

1. FR–5 = 1.0 x 0.75 x 0.062 in.

2. Alumina = 0.4 x 0.3 x 0.024 in. 99.5% alumina.

PNP BCX17LT1 BCX18LT1
NPN BCX19LT1 BCX20LT1

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
OFF CHARACTERISTICS					
Collector–Emitter Breakdown Voltage ($I_C = 10\text{ mAdc}$, $I_B = 0$)	$V_{(BR)CEO}$	45	—	—	Vdc
BCX17, 19		—	—	—	
BCX18, 20		25	—	—	
Collector–Emitter Breakdown Voltage ($I_C = 10\text{ }\mu\text{Adc}$, $I_C = 0$)	$V_{(BR)CES}$	50	—	—	Vdc
BCX17, 19		—	—	—	
BCX18, 20		30	—	—	
Collector Cutoff Current ($V_{CB} = 20\text{ Vdc}$, $I_E = 0$)	I_{CBO}	—	—	100	nAdc
($V_{CB} = 20\text{ Vdc}$, $I_E = 0$, $T_A = 150^\circ\text{C}$)		—	—	5.0	μAdc
Emitter Cutoff Current ($V_{EB} = 5.0\text{ Vdc}$, $I_C = 0$)	I_{EBO}	—	—	10	μAdc

ON CHARACTERISTICS

DC Current Gain ($I_C = 100\text{ mAdc}$, $V_{CE} = 1.0\text{ Vdc}$)	h_{FE}	100	—	600	—
($I_C = 300\text{ mAdc}$, $V_{CE} = 1.0\text{ Vdc}$)		70	—	—	
($I_C = 500\text{ mAdc}$, $V_{CE} = 1.0\text{ Vdc}$)		40	—	—	
Collector–Emitter Saturation Voltage ($I_C = 500\text{ mAdc}$, $I_B = 50\text{ mAdc}$)	$V_{CE(sat)}$	—	—	0.62	Vdc
Base–Emitter On Voltage ($I_C = 500\text{ mAdc}$, $V_{CE} = 1.0\text{ Vdc}$)	$V_{BE(on)}$	—	—	1.2	Vdc