

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	V_{CEO}	-32	Vdc
Collector-Base Voltage	V_{CBO}	-32	Vdc
Emitter-Base Voltage	V_{EBO}	-5.0	Vdc
Collector Current — Continuous	I_C	-100	mAdc

THERMAL CHARACTERISTICS

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

*FR-5 = 1.0 x 0.75 x 0.062 in.

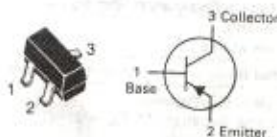
**Alumina = 0.4 x 0.3 x 0.024 in, 99.5% alumina.

DEVICE MARKING

BCW29LT1 - C1; BCW30LT1 - C2

**BCW29LT1
BCW30LT1**

CASE 318-07, STYLE 6
SOT-23 (TO-236AB)



**GENERAL PURPOSE
TRANSISTORS**
PNP SILICON

Refer to 2N5086 for graphs.

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

Characteristic	Symbol	Min	Max	Unit
OFF CHARACTERISTICS				
Collector-Emitter Breakdown Voltage ($I_C = -2.0 \text{ mAdc}, I_E = 0$)	$V_{(BR)CEO}$	-32	—	Vdc
Collector-Emitter Breakdown Voltage ($I_C = -100 \mu\text{Adc}, V_{EB} = 0$)	$V_{(BR)CES}$	-32	—	Vdc
Collector-Base Breakdown Voltage ($I_C = -10 \mu\text{Adc}, I_C = 0$)	$V_{(BR)CBO}$	-32	—	Vdc
Emitter-Base Breakdown Voltage ($I_E = -10 \mu\text{Adc}, I_C = 0$)	$V_{(BR)EBO}$	-5.0	—	Vdc
Collector Cutoff Current ($V_{CB} = -32 \text{ Vdc}, I_E = 0$) ($V_{CB} = -32 \text{ Vdc}, I_E = 0, T_A = 100^\circ\text{C}$)	I_{CBO}	—	-100 -10	nAdc μAdc
ON CHARACTERISTICS				
DC Current Gain ($I_C = -2.0 \text{ mAdc}, V_{CE} = -5.0 \text{ Vdc}$)	h_{FE}	120 215	260 500	—
Collector-Emitter Saturation Voltage ($I_C = -10 \text{ mAdc}, I_B = -0.5 \text{ mAdc}$)	$V_{CE(sat)}$	—	-0.3	Vdc
Base-Emitter On Voltage ($I_C = -2.0 \text{ mAdc}, V_{CE} = -5.0 \text{ Vdc}$)	$V_{BE(on)}$	-0.6	-0.75	Vdc
SMALL-SIGNAL CHARACTERISTICS				
Output Capacitance ($I_E = 0, V_{CB} = -10 \text{ Vdc}, f = 1.0 \text{ MHz}$)	C_{obo}	—	7.0	pF
Noise Figure ($I_C = -0.2 \text{ mAdc}, V_{CE} = -5.0 \text{ Vdc}, R_S = 2.0 \text{ k}\Omega, f = 1.0 \text{ kHz},$ $BW = 200 \text{ Hz}$)	NF	—	10	dB

Note: "LT1" must be used when ordering SOT-23 devices.