

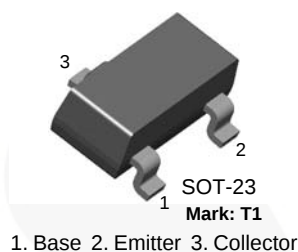


March 2014

BCX17 PNP General-Purpose Amplifier

Description

This device is designed for general-purpose amplifiers and switching applications at currents to 0.5 A. Sourced from process 78.



Ordering Information

Part Number	Marking	Package	Packing Method
BCX17	T1	SOT-23 3L	Tape and Reel

Absolute Maximum Ratings

Stresses exceeding the absolute maximum ratings may damage the device. The device may not function or be operable above the recommended operating conditions and stressing the parts to these levels is not recommended. In addition, extended exposure to stresses above the recommended operating conditions may affect device reliability. The absolute maximum ratings are stress ratings only. Values are at $T_C = 25^\circ\text{C}$ unless otherwise noted.

Symbol	Parameter	Value	Unit
V_{CEO}	Collector-Emitter Voltage	-45	V
V_{CBO}	Collector-Base Voltage	-50	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current - Continuous	-500	mA
T_J, T_{STG}	Junction and Storage Temperature Range	-55 to +150	$^\circ\text{C}$

Thermal Characteristics

Values are at $T_A = 25^\circ\text{C}$ unless otherwise noted.

Symbol	Parameter	Max.	Unit
P_D	Total Device Dissipation: Alumina Substrate, $T_A = 25^\circ\text{C}^{(1)}$	300	mW
	Derate Above $T_A = 25^\circ\text{C}$	2.4	mW/ $^\circ\text{C}$
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	417	$^\circ\text{C/W}$

Note:

1. Alumina = 0.4 inch x 0.3 inch x 0.024 inch 9.5% alumina.

Electrical Characteristics

Values are at $T_C = 25^\circ\text{C}$ unless otherwise noted.

Symbol	Parameter	Conditions	Min.	Max.	Unit
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C = -10\text{ mA}$, $I_B = 0$	-45		V
$V_{(BR)CES}$	Collector-Emitter Breakdown Voltage	$I_C = -10\text{ }\mu\text{A}$, $I_E = 0$	-50		V
I_{CBO}	Collector Cut-Off Current	$V_{CB} = -20\text{ V}$, $I_E = 0$		-100	nA
		$V_{CB} = -20\text{ V}$, $I_E = 0$, $T_A = 150^\circ\text{C}$		-5	μA
I_{EBO}	Emitter Cut-Off Current	$V_{EB} = -5.0\text{ V}$, $I_C = 0$		-10	μA
h_{FE}	DC Current Gain	$I_C = -100\text{ mA}$, $V_{CE} = -1.0\text{ V}$	100	600	
		$I_C = -300\text{ mA}$, $V_{CE} = -1.0\text{ V}$	70		
		$I_C = -500\text{ mA}$, $V_{CE} = -1.0\text{ V}$	40		
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -500\text{ mA}$, $I_B = -50\text{ mA}$		-0.62	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C = -500\text{ mA}$, $V_{CE} = -1.0\text{ V}$		-1.2	V

Physical Dimensions

SOT-23

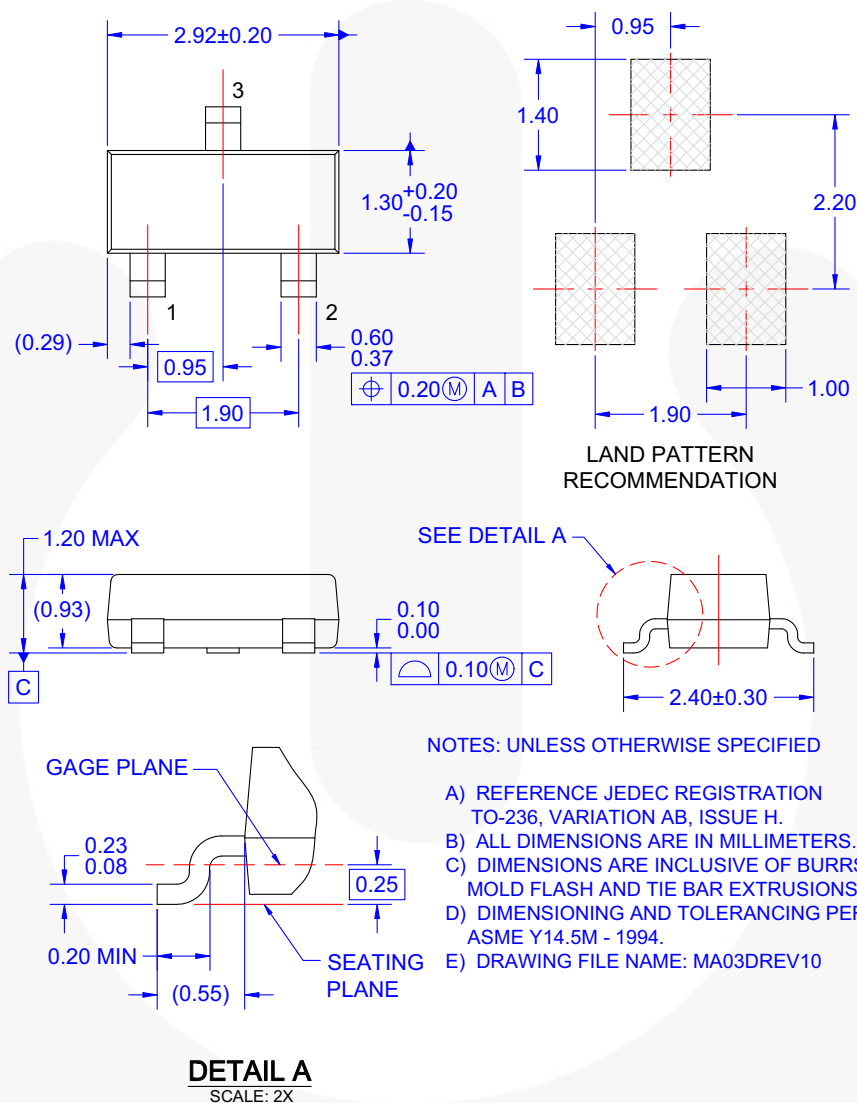


Figure 1. 3-LEAD, SOT23, JEDEC TO-236, LOW PROFILE (ACTIVE)

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