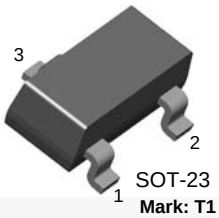
March 2014

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.



SOT-23
Mark: T1

1. Base 2. Emitter 3. Collector

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°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	°C

Thermal Characteristics

Values are at T_A = 25°C unless otherwise noted.

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

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

Physical Dimensions

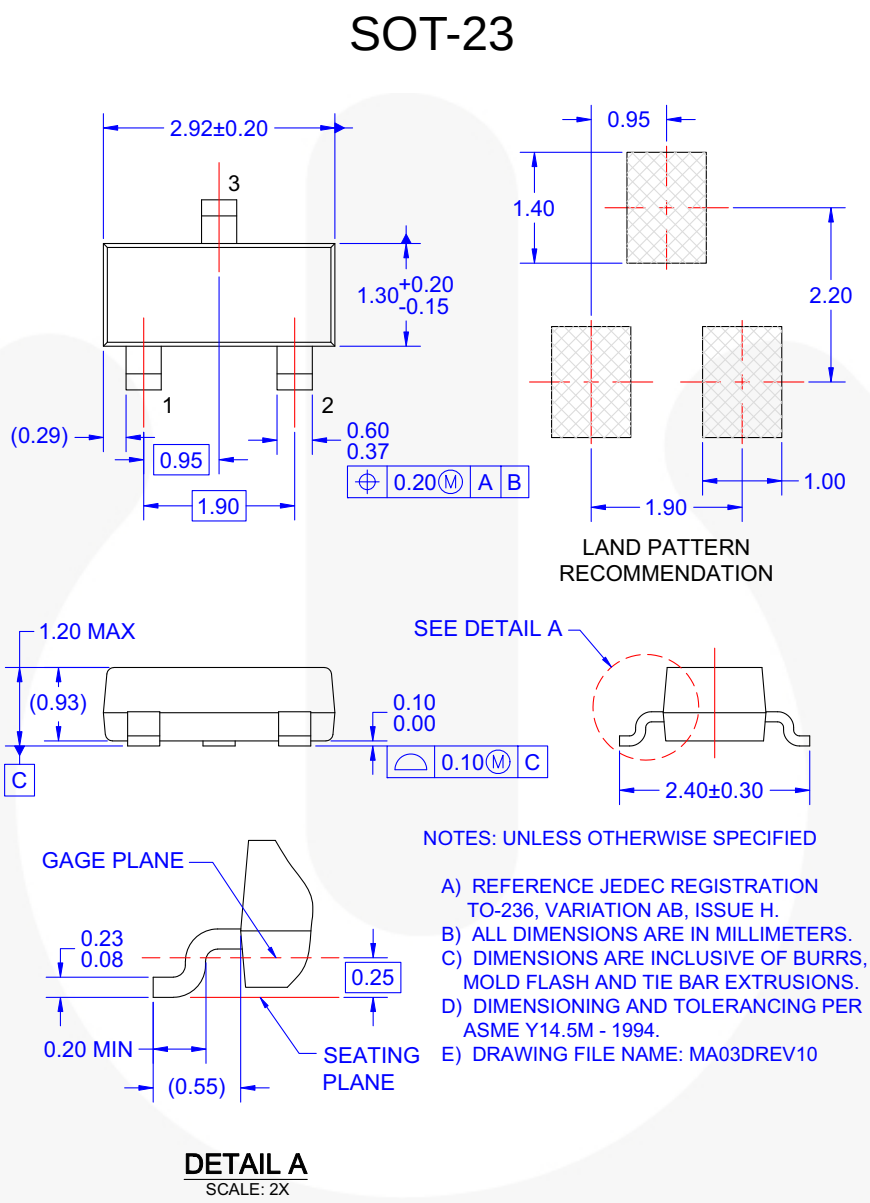


Figure 1. 3-LEAD, SOT23, JEDEC TO-236, LOW PROFILE (ACTIVE)

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