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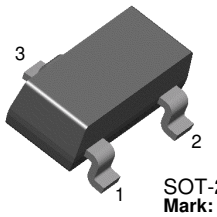
FAIRCHILD
SEMICONDUCTOR®

BCW30

PNP General Purpose Amplifier

- This device is designed for general purpose medium power amplifiers and switches requiring collector currents to 300mA.
- Sourced from process 68.



SOT-23
Mark: C2

1. Base 2. Emitter 3. Collector

Absolute Maximum Ratings * T_C=25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{CEO}	Collector-Emitter Voltage	-32	V
V_{CES}	Collector-Emitter Voltage	-32	V
V_{EBO}	Emitter-Base Voltage	-5.0	V
I_C	Collector current - Continuous	-500	mA
T_J, T_{stg}	Junction and Storage Temperature	-55 ~ +150	°C

* These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

NOTES:
1) These ratings are based on a maximum junction temperature of 150 degrees C.
2) These are state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

Electrical Characteristics T_C=25°C unless otherwise noted

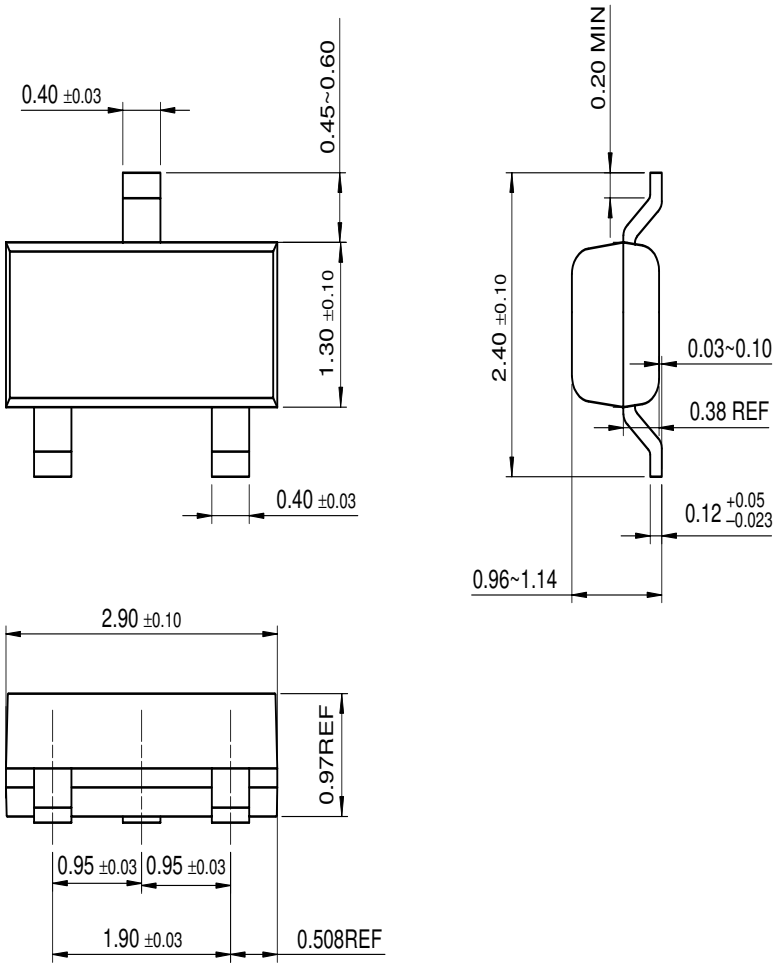
Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
Off Characteristics						
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	I_C = -10μA, I_E = 0	-32			V
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	I_C = -2.0mA, I_B = 0	-32			V
$V_{(BR)CES}$	Collector-Emitter Breakdown Voltage	I_C = -10μA, I_E = 0	-32			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	I_C = -10μA, I_C = 0	-5.0			V
I_{CBO}	Collector Cutoff Current	V_{CB} = -32V, I_E = 0 V_{CB} = -32V, I_E = 0, T_A = +100°C			-100 -10	nA μA
On Characteristics						
h_{FE}	DC Current Gain	V_{CE} = -5.0V, I_C = -2.0mA	215		500	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C = -10mA, I_B = -0.5mA			-0.3	V
$V_{BE(on)}$	Base-Emitter On Voltage	V_{CE} = -5.0V, I_C = -2.0mA	-0.6		-0.7	V
Small Signal Characteristics						
NF	Noise Figure	V_{CE} = -5.0V, I_C = -200μA R_S = 2.0kΩ, f = 1.0kHz B_W = 200Hz			10	dB

Thermal Characteristics T_A=25°C unless otherwise noted

Symbol	Parameter	Max.	Units
P_D	Total Device Dissipation Derate above 25°C	350 2.8	mW mW/°C
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	357	°C/W

Package Dimensions

SOT-23



Dimensions in Millimeters

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CoolFET™	FASTr™	MicroFET™	PowerTrench®	SuperSOT™-6
CROSSVOLT™	FRFET™	MicroPak™	QFET™	SuperSOT™-8
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Programmable Active Droop™		OPTOPLANAR™	SMART START™	

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PRODUCT STATUS DEFINITIONS

Definition of Terms

Datasheet Identification	Product Status	Definition
Advance Information	Formative or In Design	This datasheet contains the design specifications for product development. Specifications may change in any manner without notice.
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No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
Obsolete	Not In Production	This datasheet contains specifications on a product that has been discontinued by Fairchild semiconductor. The datasheet is printed for reference information only.