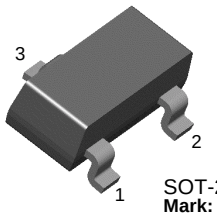
FAIRCHILD
SEMICONDUCTOR®

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

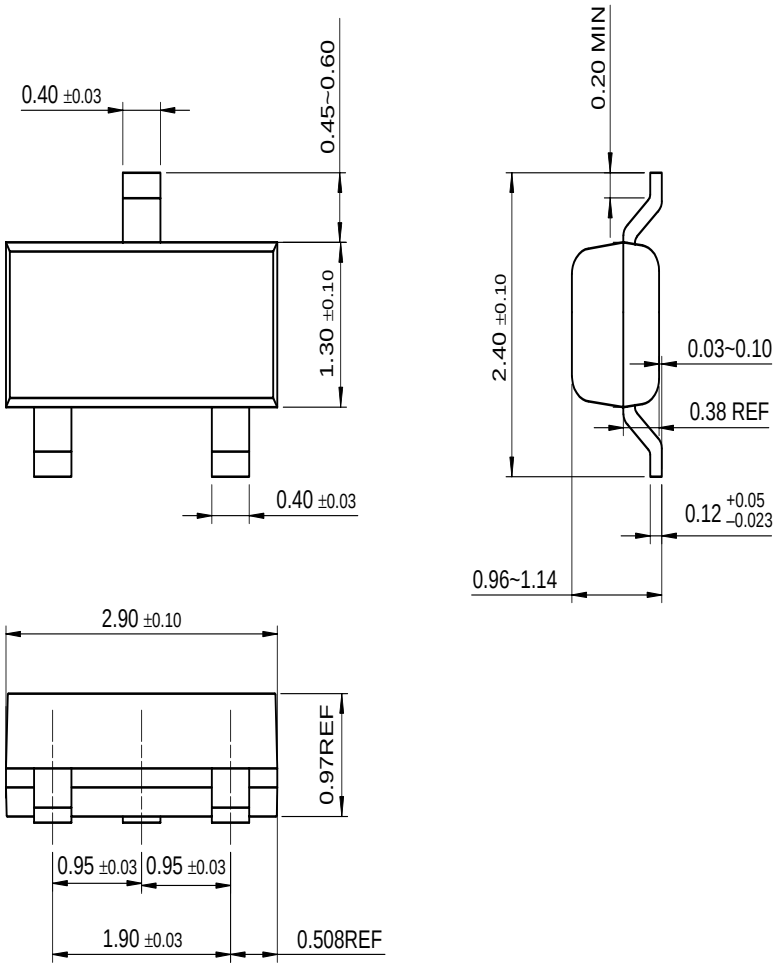
Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
Off Characteristics						
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	I_C = -10μA, I_E = 0	-32			V
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	I_C = -2.0mA, I_B = 0	-32			V
$V_{(BR)CES}$	Collector-Emitter Breakdown Voltage	I_C = -10μA, I_E = 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
DOME™	GlobalOptoisolator™	MICROWIRE™	QS™	SyncFET™
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E^2CMOS™	HiSeC™	MSXPro™	Quiet Series™	TruTranslation™
EnSigna™	I^2C™	OCX™	RapidConfigure™	UHC™
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The Power Franchise™		OPTOLOGIC®	SILENT SWITCHER®	VCX™
Programmable Active Droop™		OPTOPLANAR™	SMART START™	

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Definition of Terms

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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.
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