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Please note: As part of the Fairchild Semiconductor integration, some of the Fairchild orderable part numbers will need to change in order to meet ON Semiconductor's system requirements. Since the ON Semiconductor product management systems do not have the ability to manage part nomenclature that utilizes an underscore (_), the underscore (_) in the Fairchild part numbers will be changed to a dash (-). This document may contain device numbers with an underscore (_). Please check the ON Semiconductor website to verify the updated device numbers. The most current and up-to-date ordering information can be found at www.onsemi.com. Please email any questions regarding the system integration to Fairchild_questions@onsemi.com.

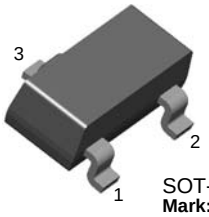
FAIRCHILD SEMICONDUCTOR®

February 2010

BCW69
PNP General Purpose Amplifier

Features

- This device is designed for general purpose medium power amplifiers and switches requiring collector currents to 100mA.
- Sourced from process 68.



SOT-23
Mark: H1

1. Base 2. Emitter 3. Collector

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

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	-50	V
V_{CEO}	Collector-Emitter Voltage	-45	V
V_{EBO}	Emitter-Base Voltage	-5.0	V
I_C	Collector Current - Continuous	-100	mA
T_J, T_{STG}	Junction and Storage Temperature	-55 to +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 steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

Thermal Characteristics T_A = 25°C unless otherwise noted

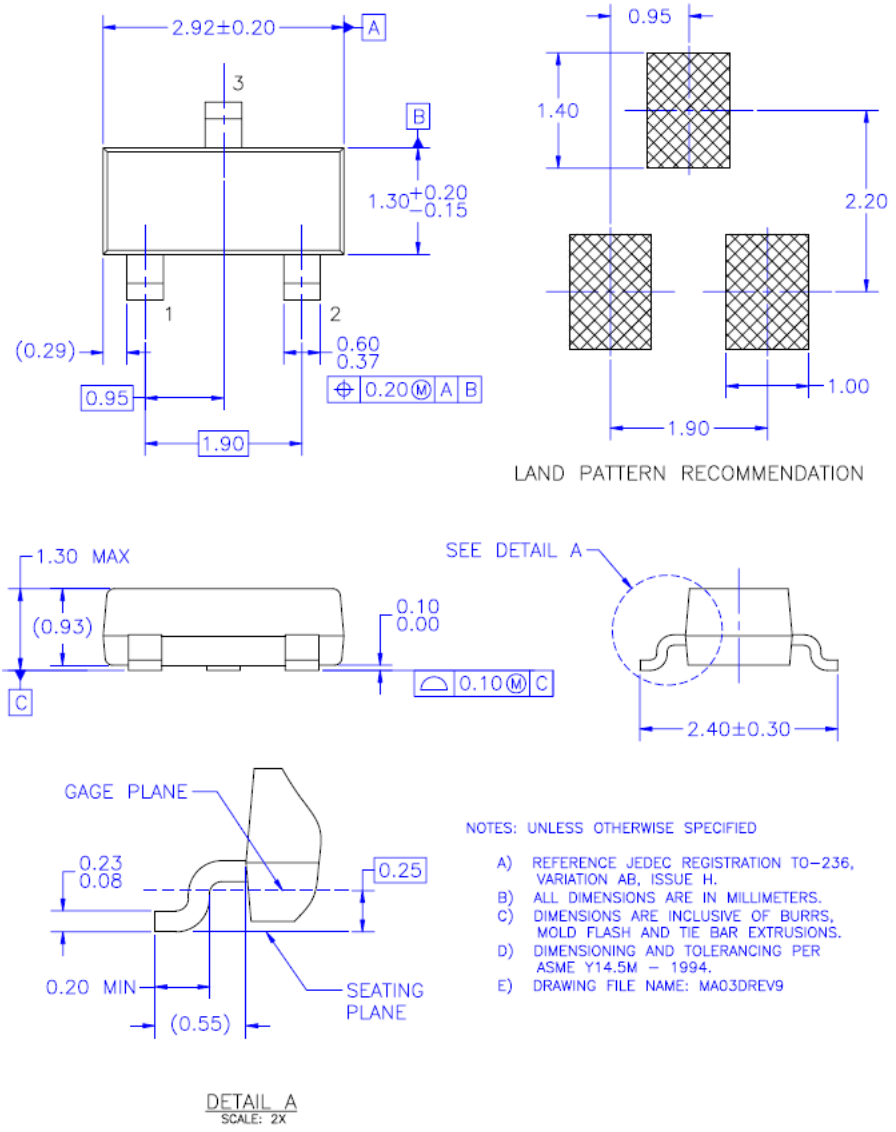
Symbol	Parameter	Max.	Units
P_D	Total Device Dissipation Derate above 25°C	350 2.8	mW mW/°C
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	357	°C/W

Electrical Characteristics T_A=25°C unless otherwise noted

Symbol	Parameter	Test Conditions	Min.	Max.	Units
Off Characteristics					
$BV_{(BR)CBO}$	Collector-Base Breakdown Voltage	I_C=-10μA, I_E=0	-50		V
$BV_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	I_C=-2.0mA, I_B=0	-45		V
$BV_{(BR)CES}$	Collector-Emitter Breakdown Voltage	I_C=-10μA, I_E=0	-50		V
$BV_{(BR)EBO}$	Emitter-Base Breakdown Voltage	I_E=-10μA, I_C=0	-5.0		V
I_{CBO}	Collector Cut-off Current	V_{CB}=-20V, I_E=0 V_{CB}=-20V, 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	120	260	
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	-0.75	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

Physical Dimension

SOT-23



Dimensions in Millimeters

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Definition of Terms

Datasheet Identification	Product Status	Definition
Advance Information	Formative / In Design	Datasheet contains the design specifications for product development. Specifications may change in any manner without notice.
Preliminary	First Production	Datasheet contains preliminary data; supplementary data will be published at a later date. Fairchild Semiconductor reserves the right to make changes at any time without notice to improve design.
No Identification Needed	Full Production	Datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice to improve the design.
Obsolete	Not In Production	Datasheet contains specifications on a product that is discontinued by Fairchild Semiconductor. The datasheet is for reference information only.

Rev. I47

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