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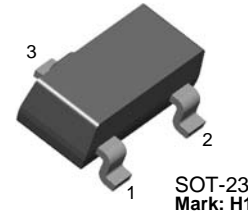


BCW69

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.



1. Base 2. Emitter 3. Collector

Absolute Maximum Ratings * $T_A = 25^\circ\text{C}$ 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	$^\circ\text{C}$

* 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 $T_A = 25^\circ\text{C}$ unless otherwise noted

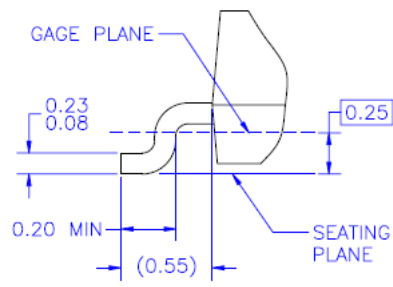
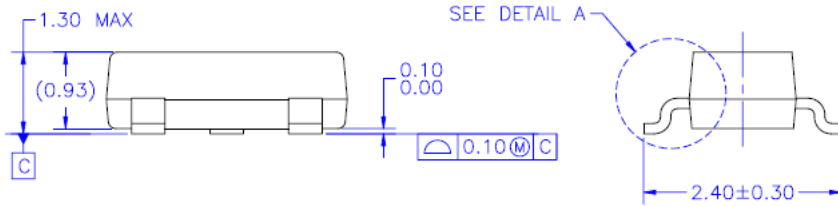
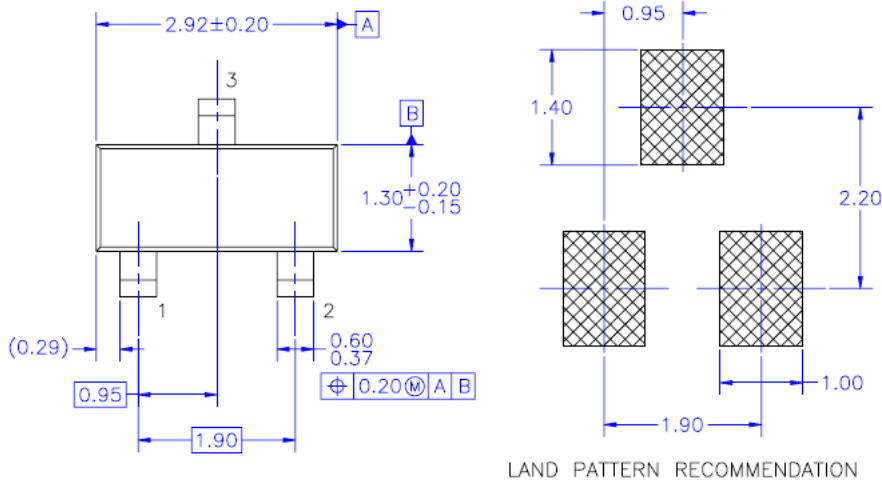
Symbol	Parameter	Max.	Units
P_D	Total Device Dissipation	350	mW
	Derate above 25°C	2.8	mW/ $^\circ\text{C}$
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	357	$^\circ\text{C}/\text{W}$

Electrical Characteristics $T_A=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Test Conditions	Min.	Max.	Units
Off Characteristics					
$BV_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C=-10\mu\text{A}$, $I_E=0$	-50		V
$BV_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C=-2.0\text{mA}$, $I_B=0$	-45		V
$BV_{(BR)CES}$	Collector-Emitter Breakdown Voltage	$I_C=-10\mu\text{A}$, $I_E=0$	-50		V
$BV_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E=-10\mu\text{A}$, $I_C=0$	-5.0		V
I_{CBO}	Collector Cut-off Current	$V_{CB}=-20\text{V}$, $I_E=0$ $V_{CB}=-20\text{V}$, $I_E=0$, $T_A=100^\circ\text{C}$		-100 -10	nA μA
On Characteristics					
h_{FE}	DC Current Gain	$V_{CE}=-5.0\text{V}$, $I_C=-2.0\text{mA}$	120	260	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=-10\text{mA}$, $I_B=-0.5\text{mA}$		-0.3	V
$V_{BE(on)}$	Base-Emitter On Voltage	$V_{CE}=-5.0\text{V}$, $I_C=-2.0\text{mA}$	-0.6	-0.75	V
Small Signal Characteristics					
NF	Noise Figure	$V_{CE}=-5.0\text{V}$, $I_C=-200\mu\text{A}$, $R_S=2.0\text{k}\Omega$, $f=1.0\text{kHz}$, $B_W=200\text{Hz}$		10	dB

Physical Dimension

SOT-23



DETAIL A
SCALE: 2X






- NOTES: UNLESS OTHERWISE SPECIFIED
- A) REFERENCE JEDEC REGISTRATION TO-236, VARIATION AB, ISSUE H.
 - B) ALL DIMENSIONS ARE IN MILLIMETERS.
 - C) DIMENSIONS ARE INCLUSIVE OF BURRS, MOLD FLASH AND TIE BAR EXTRUSIONS.
 - D) DIMENSIONING AND TOLERANCING PER ASME Y14.5M - 1994.
 - E) DRAWING FILE NAME: MA03DREV9

Dimensions in Millimeters



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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.

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