Is Now Part of

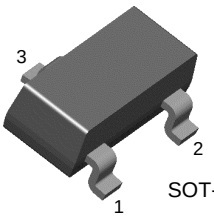
ON Semiconductor®

To learn more about ON Semiconductor, please visit our website at
www.onsemi.com

FAIRCHILD
SEMICONDUCTOR®

BCW61A/B/C/D

General Purpose Transistor



SOT-23

1. Base 2. Emitter 3. Collector

PNP Epitaxial Silicon Transistor

Absolute Maximum Ratings T_a=25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	-32	V
V_{CEO}	Collector-Emitter Voltage	-32	V
V_{EBO}	Emitter-Base Voltage	-5.0	V
I_C	Collector Current	-100	mA
P_C	Collector Power Dissipation	350	mW
T_{STG}	Storage Temperature	-55 ~ 150	°C

• Refer to KST5086 for graphs

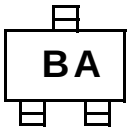
Electrical Characteristics T_a=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Max.	Units
BV_{CEO}	Collector-Emitter Breakdown Voltage	I_C= -2mA, I_B=0	-32		
BV_{EBO}	Emitter-Base Breakdown Voltage	I_E= -1μA, I_C=0	-5		
I_{CES}	Collector Cut-off Current	V_{CB}= -32V, V_{BE}=0		-20	
h_{FE}	DC Current Gain				
	: BCW61B	V_{CE}= -5V, I_C= -10μA	20		V
	: BCW61C		40		
	: BCW61D		100		
	: BCW61A	V_{CE}= -5V, I_C= -2mA	120	220	V
	: BCW61B		140	310	
	: BCW61C		250	460	
	: BCW61D		380	630	
	: BCW61A	V_{CE}= -5V, I_C= -50mA	60		nA
	: BCW61B		80		
	: BCW61C		100		
	: BCW61D		100		
V_{CE} (sat)	Collector-Emitter Saturation Voltage	I_C= -50mA, I_B= -1.25mA		-0.55	V
		I_C= -10mA, I_B= -0.25mA		-0.25	V
V_{BE} (sat)	Base-Emitter Saturation Voltage	I_C= -50mA, I_B= -1.25mA	0.68	1.05	V
		I_C= -10mA, I_B= -0.25mA	0.6	0.85	V
V_{BE} (on)	Base-Emitter On Voltage	V_{CE}= -5V, I_C= -2mA	0.6	0.75	V
C_{ob}	Output Capacitance	V_{CB}= -10V, I_E=0 f=1MHz		6	pF
NF	Noise Figure	I_C= -0.2mA, V_{CE}= -5V R_G=20KΩ, f=1KHz		6	dB
t_{ON}	Turn On Time	I_C= -10mA, I_{B1}= -1mA		150	ns
t_{OFF}	Turn Off Time	V_{BB}= -3.6V, B22= -1mA R1=R2=5.0KΩ, R_L=990Ω		800	ns

Marking Code

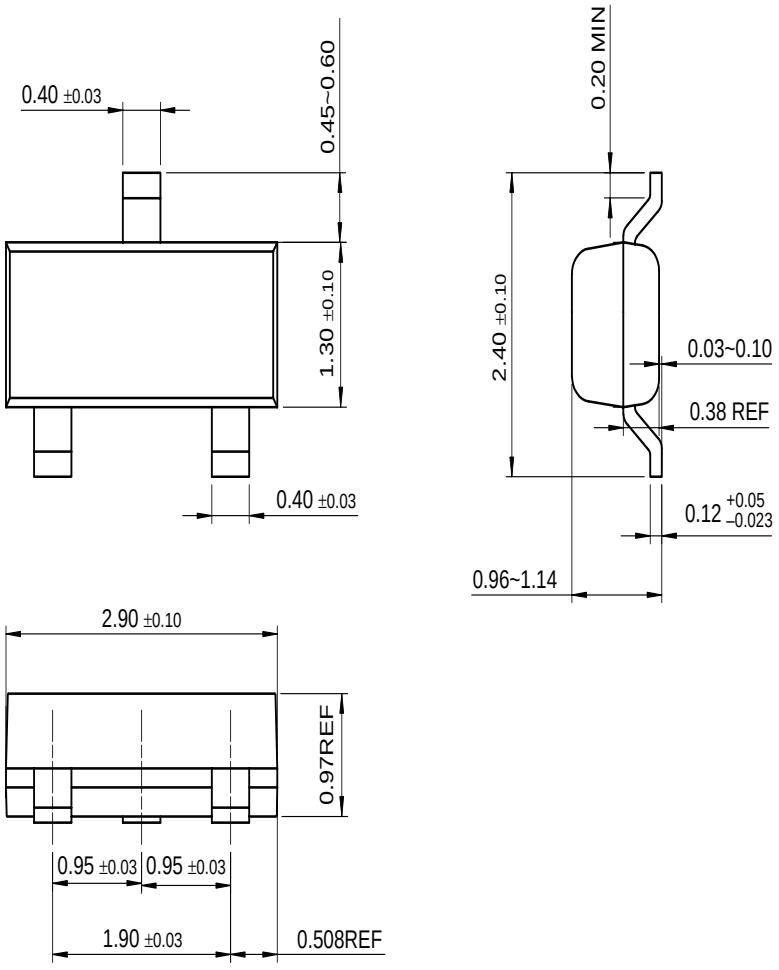
Type	BCW61A	BCW61B	BCW61C	BCW61D
Mark.	BA	BB	BC	BD

Marking



Package Demensions

SOT-23



Dimensions in Millimeters

TRADEMARKS

The following are registered and unregistered trademarks Fairchild Semiconductor owns or is authorized to use and is not intended to be an exhaustive list of all such trademarks.

ACEx™	FAST®	OPTOPLANAR™	STAR*POWER™
Bottomless™	FASTr™	PACMAN™	Stealth™
CoolFET™	FRFET™	POP™	SuperSOT™-3
CROSSVOLT™	GlobalOptoisolator™	Power247™	SuperSOT™-6
DenseTrench™	GTO™	PowerTrench®	SuperSOT™-8
DOME™	HiSeC™	QFET™	SyncFET™
EcoSPARK™	ISOPLANAR™	QS™	TruTranslation™
E^2CMOS™	LittleFET™	QT Optoelectronics™	TinyLogic™
EnSigna™	MicroFET™	Quiet Series™	UHC™
FACT™	MICROWIRE™	SLIENT SWITCHER®	UltraFET®
FACT Quiet Series™	OPTOLOGIC™	SMART START™	VCX™

STAR*POWER is used under license

DISCLAIMER

FAIRCHILD SEMICONDUCTOR RESERVES THE RIGHT TO MAKE CHANGES WITHOUT FURTHER NOTICE TO ANY PRODUCTS HEREIN TO IMPROVE RELIABILITY, FUNCTION OR DESIGN. FAIRCHILD DOES NOT ASSUME ANY LIABILITY ARISING OUT OF THE APPLICATION OR USE OF ANY PRODUCT OR CIRCUIT DESCRIBED HEREIN; NEITHER DOES IT CONVEY ANY LICENSE UNDER ITS PATENT RIGHTS, NOR THE RIGHTS OF OTHERS.

LIFE SUPPORT POLICY

FAIRCHILD'S PRODUCTS ARE NOT AUTHORIZED FOR USE AS CRITICAL COMPONENTS IN LIFE SUPPORT DEVICES OR SYSTEMS WITHOUT THE EXPRESS WRITTEN APPROVAL OF FAIRCHILD SEMICONDUCTOR CORPORATION.

As used herein:

1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body, or (b) support or sustain life, or (c) whose failure to perform when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in significant injury to the user.

2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

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.
Preliminary	First Production	This datasheet contains preliminary data, and supplementary data will be published at a later date. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
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.

PUBLICATION ORDERING INFORMATION

LITERATURE FULFILLMENT:
Literature Distribution Center for ON Semiconductor
19521 E. 32nd Pkwy, Aurora, Colorado 80011 USA
Phone: 303−675−2175 or 800−344−3860 Toll Free USA/Canada
Fax: 303−675−2176 or 800−344−3867 Toll Free USA/Canada
Email: orderlit@onsemi.com

N. American Technical Support: 800−282−9855 Toll Free USA/Canada
Europe, Middle East and Africa Technical Support:
Phone: 421 33 790 2910
Japan Customer Focus Center
Phone: 81−3−5817−1050

ON Semiconductor Website: **www.onsemi.com**

Order Literature: http://www.onsemi.com/orderlit

For additional information, please contact your local Sales Representative