

BCW61B
BCW61C
BCW61D

**SURFACE MOUNT SILICON
PNP TRANSISTORS**



SOT-23 CASE



www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR BCW61B series devices are PNP silicon transistors manufactured by the epitaxial planar process, epoxy molded in a surface mount package, designed for low level, low noise applications.

MARKING CODES: BCW61B: BB
BCW61C: BC
BCW61D: BD

MAXIMUM RATINGS: ($T_A=25^\circ\text{C}$)

Collector-Emitter Voltage
Collector-Base Voltage
Emitter-Base Voltage
Continuous Collector Current
Power Dissipation
Operating and Storage Junction Temperature
Thermal Resistance

SYMBOL		UNITS
V_{CEO}	32	V
V_{CBO}	32	V
V_{EBO}	5.0	V
I_C	100	mA
P_D	350	mW
T_J, T_{stg}	-65 to +150	$^\circ\text{C}$
θ_{JA}	357	$^\circ\text{C/W}$

ELECTRICAL CHARACTERISTICS: ($T_A=25^\circ\text{C}$ unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I_{CES}	$V_{CE}=32\text{V}$		20	nA
I_{CES}	$V_{CE}=32\text{V}, T_A=150^\circ\text{C}$		20	μA
BV_{CEO}	$I_C=2.0\text{mA}$	32		V
BV_{EBO}	$I_E=1.0\mu\text{A}$	5.0		V
$V_{CE(SAT)}$	$I_C=10\text{mA}, I_B=250\mu\text{A}$		0.25	V
$V_{CE(SAT)}$	$I_C=50\text{mA}, I_B=1.25\text{mA}$		0.55	V
$V_{BE(SAT)}$	$I_C=10\text{mA}, I_B=250\mu\text{A}$	0.60	0.85	V
$V_{BE(SAT)}$	$I_C=50\text{mA}, I_B=1.25\text{mA}$	0.68	1.05	V
$V_{BE(ON)}$	$V_{CE}=5.0\text{V}, I_C=2.0\text{mA}$	0.60	0.75	V
C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$		6.0	pF
NF	$V_{CE}=5.0\text{V}, I_C=0.2\text{mA}, R_S=2.0\text{k}\Omega,$ $f=1.0\text{kHz}, BW=200\text{Hz}$		6.0	dB
t_{on}	$V_{CC}=10\text{V}, I_C=10\text{mA}, R_L=990\Omega, I_{B1}=I_{B2}=1.0\text{mA}$		150	ns
t_{off}	$V_{CC}=10\text{V}, I_C=10\text{mA}, R_L=990\Omega, I_{B1}=I_{B2}=1.0\text{mA}$		800	ns

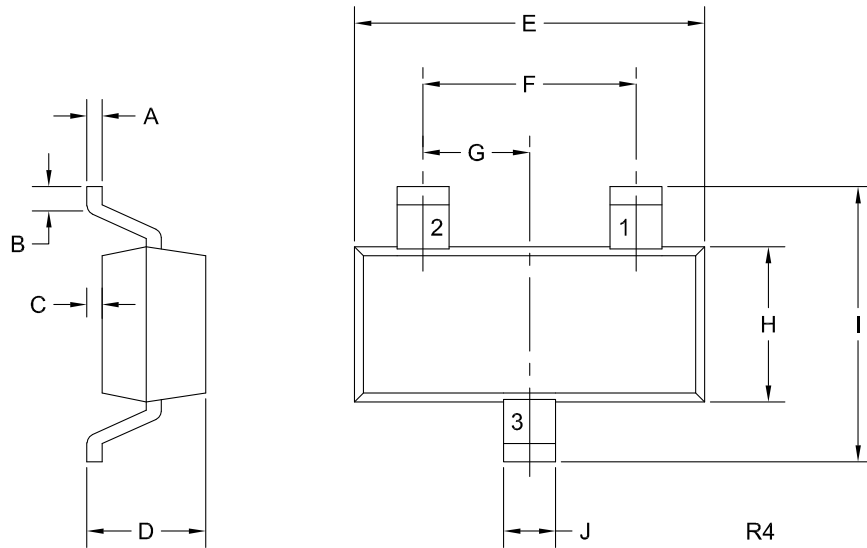
		BCW61B		BCW61C		BCW61D	
		MIN	MAX	MIN	MAX	MIN	MAX
h_{FE}	$V_{CE}=5.0\text{V}, I_C=10\mu\text{A}$	30		40		100	
h_{FE}	$V_{CE}=5.0\text{V}, I_C=2.0\text{mA}$	140	310	250	460	380	630
h_{FE}	$V_{CE}=1.0\text{V}, I_C=50\text{mA}$	80		100		100	
h_{fe}	$V_{CE}=5.0\text{V}, I_C=2.0\text{mA}, f=1.0\text{kHz}$	175	350	250	500	350	700

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SOT-23 CASE - MECHANICAL OUTLINE



LEAD CODE:

- 1) Base
- 2) Emitter
- 3) Collector

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DIMENSIONS				
SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.003	0.007	0.08	0.18
B	0.006	-	0.15	-
C	-	0.005	-	0.13
D	0.035	0.044	0.89	1.12
E	0.110	0.120	2.80	3.05
F	0.075		1.90	
G	0.037		0.95	
H	0.047	0.055	1.19	1.40
I	0.083	0.104	2.10	2.64
J	0.014	0.020	0.35	0.50

SOT-23 (REV: R4)

R3 (21-October 2021)

OUTSTANDING SUPPORT AND SUPERIOR SERVICES



PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2nd day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix "TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix "PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

CONTACT US

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