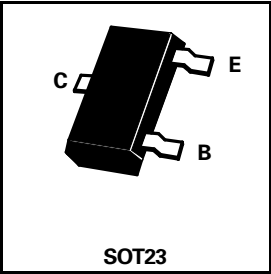


# SOT23 NPN PLANAR SMALL SIGNAL TRANSISTORS

ISSUE 2 – FEBRUARY 1995

**BCW71**  
**BCW72**

PARTMARKING DETAILS –   BCW71     – K1  
                                  BCW72     – K2  
                                  BCW71R   – K4  
                                  BCW72R   – K5



## ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	$V_{CBO}$	50	V
Collector-Emitter Voltage	$V_{CEO}$	45	V
Emitter-Base Voltage	$V_{EBO}$	5	V
Peak Pulse Current	$I_{CM}$	200	mA
Continuous Collector Current	$I_C$	100	mA
Power Dissipation at $T_{amb}=25^{\circ}C$	$P_{TOT}$	330	mW
Operating and Storage Temperature Range	tj:tstg	-55 to +150	$^{\circ}C$

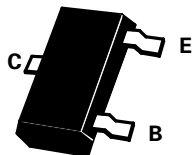
## ELECTRICAL CHARACTERISTICS (at $T_{amb} = 25^{\circ}C$ unless otherwise stated).

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Collector-Base Cut-Off Current	$I_{CBO}$			100 10	nA $\mu A$	$I_E=0, V_{CB}=20V$ $I_E=0,$ $V_{CB}=20V, T_j=100^{\circ}C$
Base-Emitter Voltage	$V_{BE}$	550		700	mV	$I_C=2.0mA, V_{CE}=5V$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		120 210	250	mV mV	$I_C=10mA, I_B=0.5mA$ $I_C=50mA, I_B=2.5mA$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		750 850		mV mV	$I_C=10mA, I_B=0.5mA$ $I_C=50mA, I_B=2.5mA$
Static Forward Current Transfer Ratio	$h_{FE}$	110	90	220		$I_C=10\mu A, V_{CE}=5V$ $I_C=2mA, V_{CE}=5V$
			200	150 450		$I_C=10\mu A, V_{CE}=5V$ $I_C=2mA, V_{CE}=5V$
Transition Frequency	$f_T$		300		MHz	$I_C=10mA, V_{CE}=5V$ $f=35MHz$
Collector Capacitance	$C_{TC}$			4	pF	$I_E=I_e=0, V_{CB}=10V$ $f=1MHz$
Noise Figure	N			10	dB	$I_C=200\mu A, V_{CE}=5V$ $R_S=2K\Omega, f=1KHz$ $B=200Hz$

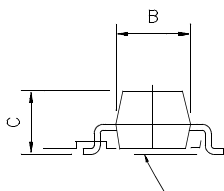
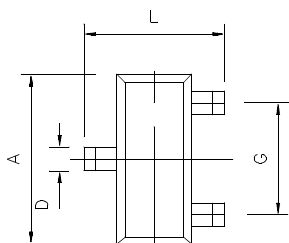
\*Measured under pulsed conditions. Pulse width=300 $\mu s$ . Duty cycle  $\leq 2\%$

Spice parameter data is available upon request for these devices

# BCW71 BCW72



DIM	Millimeters		Inches	
	Min	Max	Min	Max
A	2.67	3.05	0.105	0.120
B	1.20	1.40	0.047	0.055
C	-	1.10	-	0.043
D	0.37	0.53	0.0145	0.021
F	0.085	0.15	0.0033	0.0059
G	NOM 1.9		NOM 0.075	
K	0.01	0.10	0.0004	0.004
L	2.10	2.50	0.0825	0.0985
N	NOM 0.95		NOM 0.37	



STAND OFF HEIGHT K

