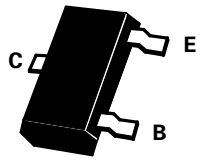
SOT23 NPN PLANAR SMALL SIGNAL TRANSISTORS

ISSUE 2 – FEBRUARY 1995

BCW71 BCW72

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



SOT23

ABSOLUTE MAXIMUM RATINGS.

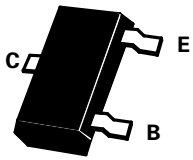
PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V_{CBO}	50	V
Collector-Emitter Voltage	V_{CEO}	45	V
Emitter-Base Voltage	V_{EBO}	5	V
Peak Pulse Current	I_{CM}	200	mA
Continuous Collector Current	I_C	100	mA
Power Dissipation at T_{amb}=25°C	P_{TOT}	330	mW
Operating and Storage Temperature Range	tj:tstg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

ELECTRICAL CHARACTERISTICS (at T_{amb} = 25°C unless otherwise stated).

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Collector-Base Cut-Off Current	I_{CBO}			100 10	nA μA	I_E=0, V_{CB}=20V I_E=0, V_{CB}=20V,T_j=100°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 BCW71	h_{FE}	110	90	220		I_C =10μA, V_{CE} =5V I_C =2mA, V_{CE} =5V
Static Forward Current Transfer Ratio BCW72	h_{FE}	200	150	450		I_C =10μA, 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 =200μA, V_{CE} =5V R_S =2KΩ, f =1KHz B =200Hz

*Measured under pulsed conditions. Pulse width=300μs. Duty cycle ≤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	

