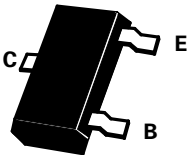


SOT23 PNP PLANAR
SMALL SIGNAL TRANSISTORS

ISSUE 2 – FEBRUARY 1995

BCW89

PARTMARKING DETAILS – BCW89 – H3
BCW89R – H6



SOT23

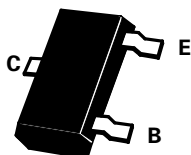
ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V_{CBO}	-80	V
Collector-Emitter Voltage	V_{CES}	-60	V
Collector-Emitter Voltage ($I_C = -2\text{mA}$)	V_{CEO}	-60	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	-100	mA
Peak Collector Current	I_{CM}	-200	mA
Power Dissipation at $T_{amb}=25^\circ\text{C}$	P_{tot}	330	mW
Operating and Storage Temperature Range	$T_j; T_{stg}$	-55 to +150	$^\circ\text{C}$

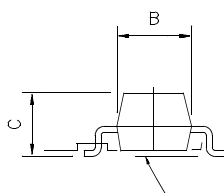
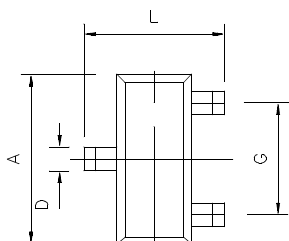
ELECTRICAL CHARACTERISTICS (at $T_{amb} = 25^\circ\text{C}$ unless otherwise stated).

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Collector-Base Cut-Off Current	I_{CBO}			-100 -10	nA μA	$I_E = 0, V_{CB} = -20\text{V}$ $I_E = 0, V_{CB} = -20\text{V}, T_j = 100^\circ\text{C}$
Base-Emitter Voltage	V_{BE}	-600		-750	mV	$I_C = -2.0\text{mA}, V_{CE} = -5.0\text{V}$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		-80 -150	-300	mV mV	$I_C = -10\text{mA}, I_B = -0.5\text{mA}$ $I_C = -50\text{mA}, I_B = -2.5\text{mA}$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		-720 -810		mV mV	$I_C = -10\text{mA}, I_B = -0.5\text{mA}$ $I_C = -50\text{mA}, I_B = -2.5\text{mA}$
Static Forward Current Transfer Ratio	h_{FE}	120	90	260		$I_C = -10\mu\text{A}, V_{CE} = -5.0\text{V}$ $I_C = -2.0\text{mA}, V_{CE} = -5.0\text{V}$
Transition Frequency	f_T		150		MHz	$I_C = -10\text{mA}, V_{CE} = -5.0\text{V}$ $f = 35\text{MHz}$
Collector Capacitance	C_{TC}			7	pF	$I_E = I_C = 0, V_{CB} = -10\text{V}$ $f = 1\text{MHz}$
Noise Figure	N			10	dB	$I_C = -200\mu\text{A}, V_{CE} = -5.0\text{V}$ $R_S = 2.0\text{K}\Omega, f = 1\text{KHz}$ $B = 200\text{Hz}$

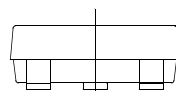
Spice parameter data is available upon request for this device



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



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