

Not Recommended for New Design  
Please Use BCW68H

## SOT23 PNP SILICON PLANAR MEDIUM POWER TRANSISTOR

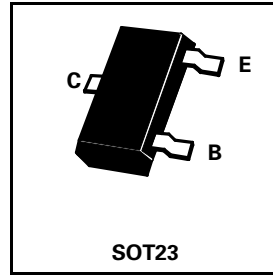
# BCW68

ISSUE 5 - MARCH 2001

PARTMARKING DETAILS –

BCW68F –	DF	BCW68FR –	7T
BCW68G –	DG	BCW68GR –	5T
BCW68H –	DH	BCW68HR –	7N

COMPLEMENTARY TYPES – BCW66



### ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Emitter Voltage	$V_{CES}$	-60	V
Collector-Emitter Voltage	$V_{CEO}$	-45	V
Emitter-Base Voltage	$V_{EBO}$	-5	V
Peak Pulse Current(10ms)	$I_{CM}$	-1000	mA
Continuous Collector Current	$I_C$	-800	mA
Base Current	$I_B$	-100	mA
Power Dissipation at $T_{amb}=25^{\circ}C$	$P_{tot}$	330	mW
Operating and Storage Temperature Range	$T_j; T_{stg}$	-55 to +150	$^{\circ}C$

# BCW68

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

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	-45			V	$I_{CEO} = -10\text{mA}$
	$V_{(BR)CES}$	-60				$I_C = -10\mu\text{A}$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-5			V	$I_{EBO} = -10\mu\text{A}$
Collector-Emitter Cut-off Current	$I_{CES}$			-20 -10	nA $\mu\text{A}$	$V_{CES} = -45\text{V}$ $V_{CES} = -45\text{V}, T_{amb} = 150^{\circ}\text{C}$
Emitter-Base Cut-Off Current	$I_{EBO}$			-20	nA	$V_{EBO} = -4\text{V}$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		-0.7	-0.3	V V	$I_C = -100\text{mA}, I_B = -10\text{mA}$ $I_C = -500\text{mA}, I_B = -50\text{mA}^*$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$			-2	V	$I_C = -500\text{mA}, I_B = -50\text{mA}^*$
Static Forward Current Transfer	BCW68F	$h_{FE}$	100 35	170	250	$I_C = -100\text{mA}, V_{CE} = -1\text{V}^*$ $I_C = -500\text{mA}, V_{CE} = -2\text{V}^*$
	BCW68G	$h_{FE}$	160 60	250	400	$I_C = -100\text{mA}, V_{CE} = -1\text{V}^*$ $I_C = -500\text{mA}, V_{CE} = -2\text{V}^*$
	BCW68H	$h_{FE}$	250 100	350	630	$I_C = -100\text{mA}, V_{CE} = -1\text{V}^*$ $I_C = -500\text{mA}, V_{CE} = -2\text{V}^*$
Transition Frequency	$f_T$	100			MHz	$I_C = -20\text{mA}, V_{CE} = -10\text{V}$ $f = 100\text{MHz}$
Output Capacitance	$C_{obo}$		12	18	pF	$V_{CB} = -10\text{V}, f = 1\text{MHz}$
Input Capacitance	$C_{ibo}$			80	pF	$V_{EB} = -0.5\text{V}, f = 1\text{MHz}$
Noise Figure	N		2	10	dB	$I_C = -0.2\text{mA}, V_{CE} = -5\text{V}$ $R_G = 1\text{K}\Omega, f = 1\text{KH}$ $\Delta f = 200\text{Hz}$
Switching times: Turn-On Time Turn-Off Time	$t_{on}$			100	ns	$I_C = -150\text{mA}$
	$t_{off}$			400	ns	$I_{B1} = -I_{B2} = -15\text{mA}$ $R_L = 150\Omega$

Spice parameter data is available upon request for this device

\*Measured under pulsed conditions.