

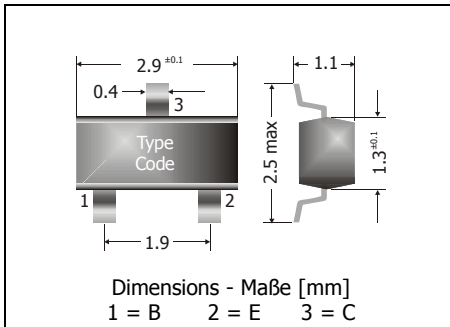
BCW68F ... BCW68H

PNP

Surface Mount General Purpose Si-Epi-Planar Transistors
Si-Epi-Planar Universaltransistoren für die Oberflächenmontage

PNP

Version 2006-07-31



Power dissipation – Verlustleistung

250 mW

Plastic case
KunststoffgehäuseSOT-23
(TO-236)

Weight approx. – Gewicht ca.

0.01 g

Plastic material has UL classification 94V-0
Gehäusematerial UL94V-0 klassifiziertStandard packaging taped and reeled
Standard Lieferform getupet auf RolleMaximum ratings ($T_A = 25^\circ\text{C}$)Grenzwerte ($T_A = 25^\circ\text{C}$)

			BCW68F ... BCW68H
Collector-Emitter-volt. – Kollektor-Emitter-Spannung	B open	- V_{CEO}	45 V
Collector-Base-voltage – Kollektor-Basis-Spannung	E open	- V_{CBO}	60 V
Collector-Base-voltage – Kollektor-Basis-Spannung	C open	- V_{EB0}	5 V
Power dissipation – Verlustleistung		P_{tot}	250 mW ¹⁾
Collector current – Kollektorstrom (dc)		- I_C	800 mA
Peak Collector current – Kollektor-Spitzenstrom		- I_{CM}	1000 mA
Peak Base current – Basis-Spitzenstrom		- I_{BM}	200 mA
Junction temperature – Sperrschichttemperatur		T_j	-55...+150°C
Storage temperature – Lagerungstemperatur		T_s	-55...+150°C

Characteristics ($T_j = 25^\circ\text{C}$)Kennwerte ($T_j = 25^\circ\text{C}$)

			Min.	Typ.	Max.
DC current gain – Kollektor-Basis-Stromverhältnis ²⁾					
- $V_{CE} = 10\text{ V}$, - $I_C = 100\ \mu\text{A}$	BCW68F	h_{FE}	35	–	–
	BCW68G	h_{FE}	50	–	–
	BCW68H	h_{FE}	80	–	–
- $V_{CE} = 1\text{ V}$, - $I_C = 10\text{ mA}$	BCW68F	h_{FE}	75	–	–
	BCW68G	h_{FE}	120	–	–
	BCW68H	h_{FE}	180	–	–
- $V_{CE} = 1\text{ V}$, - $I_C = 100\text{ mA}$	BCW68F	h_{FE}	100	160	250
	BCW68G	h_{FE}	160	250	400
	BCW68H	h_{FE}	250	350	630
- $V_{CE} = 2\text{ V}$, - $I_C = 500\text{ mA}$	BCW68F	h_{FE}	35	–	–
	BCW68G	h_{FE}	60	–	–
	BCW68H	h_{FE}	100	–	–

1 Mounted on P.C. board with 3 mm² copper pad at each terminal
Montage auf Leiterplatte mit 3 mm² Kupferbelag (Löt-pad) an jedem Anschluss

2 Tested with pulses $t_p = 300\ \mu\text{s}$, duty cycle $\leq 2\%$ – Gemessen mit Impulsen $t_p = 300\ \mu\text{s}$, Schaltverhältnis $\leq 2\%$

Characteristics ($T_j = 25^\circ\text{C}$)

 Kennwerte ($T_j = 25^\circ\text{C}$)

	Min.	Typ.	Max.
Collector-Emitter saturation voltage – Kollektor-Sättigungsspannung ²⁾ - $I_C = 100\text{ mA}$, - $I_B = 10\text{ mA}$ - V_{CEsat} - $I_C = 500\text{ mA}$, - $I_B = 50\text{ mA}$ - V_{CEsat}	–	–	300 mV 700 mV
Base-Emitter saturation voltage – Basis-Sättigungsspannung ²⁾ - $I_C = 100\text{ mA}$, - $I_B = 10\text{ mA}$ - V_{BEsat} - $I_C = 500\text{ mA}$, - $I_B = 50\text{ mA}$ - V_{BEsat}	–	–	1.25 V 2.0 V
Collector-Base cutoff current – Kollektor-Basis-Reststrom - $V_{CB} = 45\text{ V}$, (E open) - I_{CB0} - $V_{CE} = 45\text{ V}$, $T_j = 125^\circ\text{C}$, (E open) - I_{CB0}	–	–	20 nA 20 μA
Emitter-Base cutoff current - $V_{EB} = 4\text{ V}$, (C open) - I_{EB0}	–	–	20 nA
Gain-Bandwidth Product – Transitfrequenz - $V_{CE} = 5\text{ V}$, - $I_C = 50\text{ mA}$, $f = 100\text{ MHz}$ f_T	–	200 MHz	–
Collector-Base Capacitance – Kollektor-Basis-Kapazität - $V_{CB} = 10\text{ V}$, $I_E = i_e = 0$, $f = 1\text{ MHz}$ C_{CB0}	–	6 pF	–
Emitter-Base Capacitance – Emitter-Basis-Kapazität - $V_{EB} = 0.5\text{ V}$, $I_C = i_c = 0$, $f = 1\text{ MHz}$ C_{EB0}	–	60 pF	–
Thermal resistance junction to ambient air Wärmewiderstand Sperrschicht – umgebende Luft R_{thA}	< 420 K/W ¹⁾		
Recommended complementary NPN transistors Empfohlene komplementäre NPN-Transistoren	BCW66F ... BCW66H		
Marking - Stempelung	BCW68F = DF BCW68G = DG BCW68H = DH		

²⁾ Tested with pulses $t_p = 300\text{ }\mu\text{s}$, duty cycle $\leq 2\%$ – Gemessen mit Impulsen $t_p = 300\text{ }\mu\text{s}$, Schaltverhältnis $\leq 2\%$

¹⁾ Mounted on P.C. board with 3 mm^2 copper pad at each terminal
 Montage auf Leiterplatte mit 3 mm^2 Kupferbelag (Löt-pad) an jedem Anschluss