

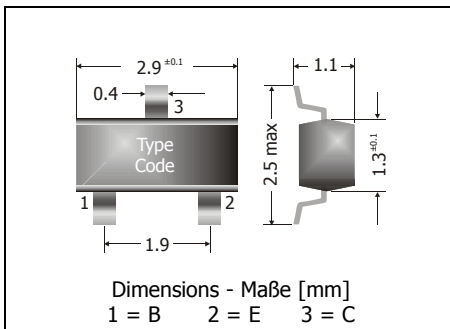
BCW68F ... BCW68H

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	$-V_{EBO}$	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 °C)
Kenwerte (T_j = 25 °C)

	Min.	Typ.	Max.
Collector-Emitter saturation voltage – Kollektor-Sättigungsspannung ²⁾ - I _C = 100 mA, - I _B = 10 mA - I _C = 500 mA, - I _B = 50 mA	- V _{CEsat} - V _{CEsat}	– –	300 mV 700 mV
Base-Emitter saturation voltage – Basis-Sättigungsspannung ²⁾ - I _C = 100 mA, - I _B = 10 mA - I _C = 500 mA, - I _B = 50 mA	- V _{BEsat} - V _{BEsat}	– –	1.25 V 2.0 V
Collector-Base cutoff current – Kollektor-Basis-Reststrom - V _{CB} = 45 V, (E open) - V _{CE} = 45 V, T _j = 125°C, (E open)	- I _{CB0} - I _{CB0}	– –	20 nA 20 µA
Emitter-Base cutoff current - V _{EB} = 4 V, (C open)	- I _{EB0}	–	20 nA
Gain-Bandwidth Product – Transitfrequenz - V _{CE} = 5 V, - I _C = 50 mA, f = 100 MHz	f _T	–	200 MHz
Collector-Base Capacitance – Kollektor-Basis-Kapazität - V _{CB} = 10 V, I _E = i _e = 0, f = 1 MHz	C _{CB0}	–	6 pF
Emitter-Base Capacitance – Emitter-Basis-Kapazität - V _{EB} = 0.5 V, I _C = i _c = 0, f = 1 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 µs, duty cycle ≤ 2% – Gemessen mit Impulsen t_p = 300 µs, Schaltverhältnis ≤ 2%

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