

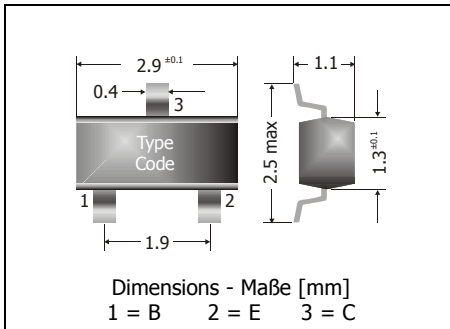
## BCW66F ... BCW66H

NPN

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

NPN

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

			BCW66F ... BCW66H
Collector-Emitter-volt. – Kollektor-Emitter-Spannung	B open	$V_{CEO}$	45 V
Collector-Base-voltage – Kollektor-Basis-Spannung	E open	$V_{CBO}$	75 V
Collector-Base-voltage – Kollektor-Basis-Spannung	C open	$V_{EB0}$	5 V
Power dissipation – Verlustleistung		$P_{tot}$	250 mW <sup>1)</sup>
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 <sup>2)</sup>					
$V_{CE} = 10\text{ V}, I_C = 100\ \mu\text{A}$	BCW66F	$h_{FE}$	35	–	–
	BCW66G	$h_{FE}$	50	–	–
	BCW66H	$h_{FE}$	80	–	–
$V_{CE} = 1\text{ V}, I_C = 10\text{ mA}$	BCW66F	$h_{FE}$	75	–	–
	BCW66G	$h_{FE}$	100	–	–
	BCW66H	$h_{FE}$	180	–	–
$V_{CE} = 1\text{ V}, I_C = 100\text{ mA}$	BCW66F	$h_{FE}$	100	160	250
	BCW66G	$h_{FE}$	160	250	400
	BCW66H	$h_{FE}$	250	350	630
$V_{CE} = 2\text{ V}, I_C = 500\text{ mA}$	BCW66F	$h_{FE}$	–	35	–
	BCW66G	$h_{FE}$	–	60	–
	BCW66H	$h_{FE}$	–	100	–

1 Mounted on P.C. board with 3 mm<sup>2</sup> copper pad at each terminal  
Montage auf Leiterplatte mit 3 mm<sup>2</sup> Kupferbelag (Lötpad) 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<sub>j</sub> = 25 °C)**
**Kenwerte (T<sub>j</sub> = 25 °C)**

	Min.	Typ.	Max.
Collector-Emitter saturation voltage – Kollektor-Sättigungsspannung <sup>2)</sup>			
I <sub>C</sub> = 100 mA, I <sub>B</sub> = 10 mA	–	–	300 mV
I <sub>C</sub> = 500 mA, I <sub>B</sub> = 50 mA	–	–	700 mV
Base-Emitter saturation voltage – Basis-Sättigungsspannung <sup>2)</sup>			
I <sub>C</sub> = 100 mA, I <sub>B</sub> = 10 mA	–	–	1.25 V
I <sub>C</sub> = 500 mA, I <sub>B</sub> = 50 mA	–	–	2.0 V
Collector-Base cutoff current – Kollektor-Basis-Reststrom			
V <sub>CB</sub> = 45 V, (E open)	–	–	20 nA
V <sub>CE</sub> = 45 V, T <sub>j</sub> = 125 °C, (E open)	–	–	20 μA
Emitter-Base cutoff current			
V <sub>EB</sub> = 4 V, (C open)	–	–	20 nA
Gain-Bandwidth Product – Transitfrequenz			
V <sub>CE</sub> = 5 V, I <sub>C</sub> = 50 mA, f = 100 MHz	–	170 MHz	–
Collector-Base Capacitance – Kollektor-Basis-Kapazität			
V <sub>CB</sub> = 10 V, I <sub>E</sub> = i <sub>e</sub> = 0, f = 1 MHz	–	6 pF	–
Emitter-Base Capacitance – Emitter-Basis-Kapazität			
V <sub>EB</sub> = 0.5 V, I <sub>C</sub> = i <sub>c</sub> = 0, f = 1 MHz	–	60 pF	–
Thermal resistance junction to ambient air Wärmewiderstand Sperrschicht – umgebende Luft	R <sub>thA</sub>	< 420 K/W <sup>1)</sup>	
Recommended complementary PNP transistors Empfohlene komplementäre PNP-Transistoren	BCW68F ... BCW68H		
Marking - Stempelung	BCW66F = EF BCW66G = EG BCW66H = EH		

<sup>2)</sup> Tested with pulses t<sub>p</sub> = 300 μs, duty cycle ≤ 2% – Gemessen mit Impulsen t<sub>p</sub> = 300 μs, Schaltverhältnis ≤ 2%

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