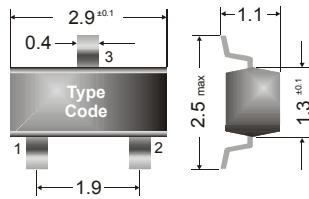


PNP

Surface mount Si-Epitaxial Planar Transistors

Si-Epitaxial Planar Transistoren für die Oberflächenmontage

PNP



Dimensions / Maße in mm
1 = B 2 = E 3 = C

Power dissipation – Verlustleistung 250 mW

Plastic case SOT-23
Kunststoffgehäuse (TO-236)

Weight approx. – Gewicht ca. 0.01 g

Plastic material has UL classification 94V-0
Gehäusematerial UL94V-0 klassifiziert

Standard packaging taped and reeled
Standard Lieferform gegurtet auf Rolle

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

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

			BCW 67	BCW 68
Collector-Emitter-voltage	B open	$-V_{CE0}$	32 V	45 V
Collector-Base-voltage	E open	$-V_{CB0}$	45 V	60 V
Emitter-Base-voltage	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	
Base current – Basis-Spitzenstrom		$-I_B$	100 mA	
Peak Base current – Basis-Spitzenstrom		$-I_{BM}$	200 mA	
Junction temperature – Sperrschichttemperatur		T_j	150°C	
Storage temperature – Lagerungstemperatur		T_S	- 65...+ 150°C	

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

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

			Min.	Typ.	Max.
Collector-Base cutoff current – Kollektorreststrom					
$I_E = 0, -V_{CB} = 32\text{ V}$	BCW 67	$-I_{CB0}$	—	—	20 nA
$I_E = 0, -V_{CB} = 32\text{ V}, T_j = 150^\circ\text{C}$		$-I_{CB0}$	—	—	20 μA
$I_E = 0, -V_{CB} = 45\text{ V}$	BCW 68	$-I_{CB0}$	—	—	20 nA
$I_E = 0, -V_{CB} = 45\text{ V}, T_j = 150^\circ\text{C}$		$-I_{CB0}$	—	—	20 μA
Emitter-Base cutoff current – Emitterreststrom					
$I_C = 0, -V_{EB} = 4\text{ V}$		$-I_{EB0}$	—	—	20 nA

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

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

			Min.	Typ.	Max.
Collector saturation volt. – Kollektor-Sättigungsspg. ¹⁾					
- I _C = 100 mA, - I _B = 10 mA	- V _{CEsat}	–	–	300 mV	
- I _C = 500 mA, - I _B = 50 mA	- V _{CEsat}	–	–	700 mV	
Base saturation voltage – Basis-Sättigungsspannung ¹⁾					
- I _C = 100 mA, - I _B = 10 mA	- V _{BEsat}	–	–	1.25 V	
- I _C = 500 mA, - I _B = 50 mA	- V _{BEsat}	–	–	2 V	
DC current gain – Kollektor-Basis-Stromverhältnis ¹⁾					
- V _{CE} = 10 V - I _C = 100 μ mA	BCW 67A / 68F	h _{FE}	35	–	–
	BCW 67B / 68G	h _{FE}	50	–	–
	BCW 67C / 68H	h _{FE}	80	–	–
- V _{CE} = 1 V - I _C = 10 mA	BCW 67A / 68F	h _{FE}	75	–	–
	BCW 67B / 68G	h _{FE}	120	–	–
	BCW 67C / 68H	h _{FE}	180	–	–
- V _{CE} = 1 V - I _C = 100 mA	BCW 67A / 68F	h _{FE}	100	160	250
	BCW 67B / 68G	h _{FE}	160	250	400
	BCW 67C / 68H	h _{FE}	250	350	630
- V _{CE} = 2 V - I _C = 500 mA	BCW 67A / 68F	h _{FE}	35	–	–
	BCW 67B / 68G	h _{FE}	60	–	–
	BCW 67C / 68H	h _{FE}	100	–	–
Gain-Bandwidth Product – Transistfrequenz					
- 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 ²⁾	
Recommended complementary NPN-transistors Empfohlene komplementäre NPN-Transistoren			BCW 65, BCW 66		
Marking – Stempelung			BCW 67A = DA	BCW 67B = DB	BCW 67C = DC
			BCW 68F = DF	BCW 68G = DG	BCW 68H = DH

¹⁾ 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 $\leq 2\%$

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