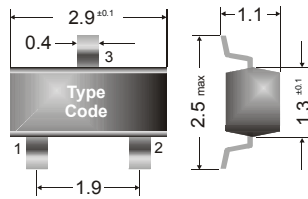


PNP

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⁾					
- $I_C = 100\text{ mA}$, - $I_B = 10\text{ mA}$	- V_{CEsat}		—	—	300 mV
- $I_C = 500\text{ mA}$, - $I_B = 50\text{ mA}$	- V_{CEsat}		—	—	700 mV
Base saturation voltage – Basis-Sättigungsspannung ¹⁾					
- $I_C = 100\text{ mA}$, - $I_B = 10\text{ mA}$	- V_{BEsat}		—	—	1.25 V
- $I_C = 500\text{ mA}$, - $I_B = 50\text{ mA}$	- V_{BEsat}		—	—	2 V
DC current gain – Kollektor-Basis-Stromverhältnis ¹⁾					
- $V_{CE} = 10\text{ V}$ - $I_C = 100\text{ }\mu\text{A}$	BCW 67A / 68F	h_{FE}	35	—	—
	BCW 67B / 68G	h_{FE}	50	—	—
	BCW 67C / 68H	h_{FE}	80	—	—
- $V_{CE} = 1\text{ V}$ - $I_C = 10\text{ mA}$	BCW 67A / 68F	h_{FE}	75	—	—
	BCW 67B / 68G	h_{FE}	120	—	—
	BCW 67C / 68H	h_{FE}	180	—	—
- $V_{CE} = 1\text{ V}$ - $I_C = 100\text{ mA}$	BCW 67A / 68F	h_{FE}	100	160	250
	BCW 67B / 68G	h_{FE}	160	250	400
	BCW 67C / 68H	h_{FE}	250	350	630
- $V_{CE} = 2\text{ V}$ - $I_C = 500\text{ mA}$	BCW 67A / 68F	h_{FE}	35	—	—
	BCW 67B / 68G	h_{FE}	60	—	—
	BCW 67C / 68H	h_{FE}	100	—	—
Gain-Bandwidth Product – Transistfrequenz					
- $V_{CE} = 5\text{ V}$, - $I_C = 50\text{ mA}$, $f = 100\text{ MHz}$	f_T		—	200 MHz	—
Collector-Base Capacitance – Kollektor-Basis-Kapazität					
- $V_{CB} = 10\text{ V}$, $I_E = i_c = 0$, $f = 1\text{ MHz}$	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 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