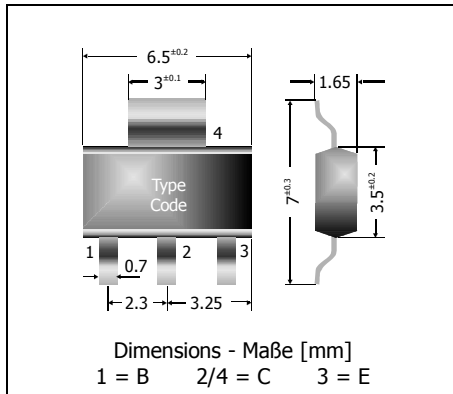


BCP51 ... BCP53**PNP**
Surface Mount General Purpose Si-Epi-Planar Transistors
Si-Epi-Planar Universaltransistoren für die Oberflächenmontage
PNP

Version 2006-06-26


 Power dissipation
 Verlustleistung

1.3 W

 Plastic case
 Kunststoffgehäuse

SOT-223

 Weight approx.
 Gewicht ca.

0.04 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°C)****Grenzwerte (T_A = 25°C)**

			BCP51	BCP52	BCP53
Collector-Emitter-volt. – Kollektor-Emitter-Spannung	B open	- V _{CEO}	45 V	60 V	80 V
Collector-Base-voltage – Kollektor-Basis-Spannung	E open	- V _{CBO}	45 V	60 V	100 V
Collector-Base-voltage – Kollektor-Basis-Spannung	C open	- V _{EBO}	5 V		
Power dissipation – Verlustleistung		P _{tot}	1.3 W ¹⁾		
Collector current – Kollektorstrom (dc)		- I _C	1 A		
Peak Collector current – Kollektor-Spitzenstrom		- I _{CM}	1.5 A		
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°C)**Kennwerte (T_j = 25°C)**

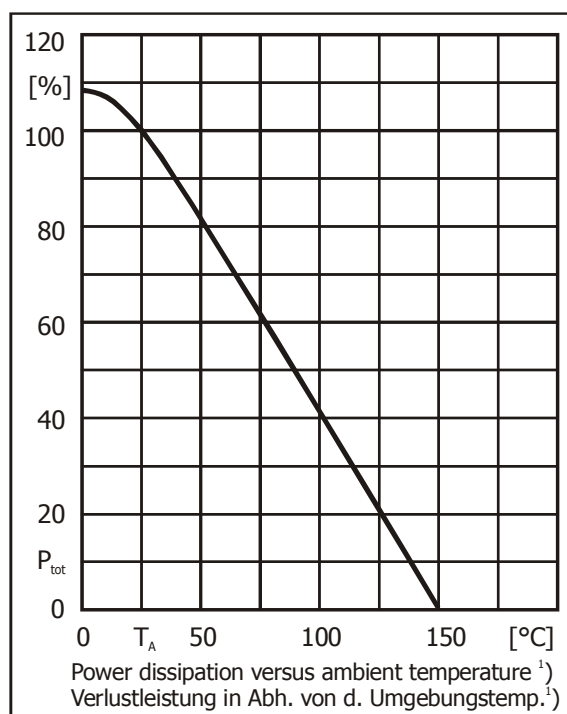
			Min.	Typ.	Max.
DC current gain – Kollektor-Basis-Stromverhältnis ²⁾					
- V _{CE} = 2 V, - I _C = 5 mA	all groups	h _{FE}	25		
- V _{CE} = 2 V, - I _C = 150 mA	Group -6	h _{FE}	40	–	100
	Group -10	h _{FE}	63	–	160
	Group -16	h _{FE}	100	–	250
- V _{CE} = 2 V, - I _C = 500 mA	all groups	h _{FE}	25	–	–
Collector-Emitter saturation voltage – Kollektor-Emitter-Sättigungssp. ²⁾					
- I _C = 500 mA, - I _B = 50 mA		- V _{CEsat}	–	–	0.5 V
Base-Emitter voltage – Basis-Emitter-Spannung ²⁾					
- I _C = 500 mA, - I _B = 50 mA		- V _{BE}	–	–	1 V

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

2 Tested with pulses t_p = 300 μs, duty cycle ≤ 2% – Gemessen mit Impulsen t_p = 300 μs, Schaltverhältnis ≤ 2%

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

		Min.	Typ.	Max.
Collector-Base cutoff current – Kollektor-Basis-Reststrom				
- $V_{CB} = 30\text{ V}$, (E open)	- I_{CB0}	–	–	100 nA
- $V_{CB} = 30\text{ V}$, $T_j = 125^\circ\text{C}$, (E open)	- I_{CB0}	–	–	10 μA
Emitter-Base cutoff current – Emitter-Basis-Reststrom				
- $V_{EB} = 5\text{ V}$, (C open)	- I_{EB0}	–	–	100 nA
Gain-Bandwidth Product – Transitfrequenz				
- $V_{CE} = 5\text{ V}$, - $I_C = 10\text{ mA}$, $f = 100\text{ MHz}$	f_T	–	120 MHz	–
DC current gain ratio of the complementary pairs Verhältnis der Stromverstärkungen komplementärer Paare				
$ I_C = 150\text{ mA}$, $ V_{CE} = 2\text{ V}$	h_{FE1}/h_{FE2}	–	–	1.6
Thermal resistance junction to ambient air Wärmewiderstand Sperrschicht – umgebende Luft	R_{thA}	< 93 K/W ¹⁾		
Thermal resistance junction to soldering point Wärmewiderstand Sperrschicht – Lötpad	R_{thS}	< 27 K/W		
Recommended complementary NPN transistors Empfohlene komplementäre NPN-Transistoren		BCP54 ... BCP56		



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