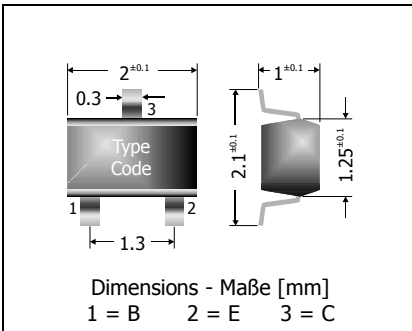


BC846W ... BC849W

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

Version 2011-07-07



Power dissipation – Verlustleistung 200 mW
 Plastic case SOT-323
 Kunststoffgehäuse
 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°C)

Grenzwerte (T_A = 25°C)

			BC846W	BC847W	BC848W BC849W
Collector-Emitter-volt. – Kollektor-Emitter-Spannung	B open	V _{CEO}	65 V	45 V	30 V
Collector-Base-voltage – Kollektor-Basis-Spannung	E open	V _{CBO}	80 V	50 V	30 V
Emitter-Base-voltage – Emitter-Basis-Spannung	C open	V _{EBO}	6 V		5 V
Power dissipation – Verlustleistung		P _{tot}	200 mW ¹⁾		
Collector current – Kollektorstrom (dc)		I _C	100 mA		
Peak Collector current – Kollektor-Spitzenstrom		I _{CM}	200 mA		
Peak Base current – Basis-Spitzenstrom		I _{BM}	200 mA		
Peak Emitter current – Emitter-Spitzenstrom		- I _{EM}	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	V _{CE} = 5 V, I _C = 10 μA	Group A	h _{FE}	90	–
		Group B	h _{FE}	150	–
		Group C	h _{FE}	270	–
	V _{CE} = 5 V, I _C = 2 mA	Group A	h _{FE}	110	180
Group B		h _{FE}	200	290	450
Group C		h _{FE}	420	520	800
Collector-Emitter saturation voltage – Kollektor-Sättigungsspannung ²⁾					
I _C = 10 mA, I _B = 0.5 mA I _C = 100 mA, I _B = 5 mA	V _{CEsat}		–	90 mV	250 mV
	V _{CEsat}		–	200 mV	600 mV

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

Characteristics (T_j = 25°C)**Kennwerte (T_j = 25°C)**

		Min.	Typ.	Max.
Base-Emitter saturation voltage – Basis-Sättigungsspannung ²⁾				
I _C = 10 mA, I _B = 0.5 mA	V _{BEsat}	–	700 mV	–
I _C = 100 mA, I _B = 5 mA	V _{BEsat}	–	900 mV	–
Base-Emitter-voltage – Basis-Emitter-Spannung ²⁾				
V _{CE} = 5 V, I _C = 2 mA	V _{BE}	580 mV	660 mV	700 mV
V _{CE} = 5 V, I _C = 10 mA	V _{BE}	–	–	720 mV
Collector-Base cutoff current – Kollektor-Basis-Reststrom				
V _{CB} = 30 V, (E open)	I _{CBO}	–	–	15 nA
V _{CE} = 30 V, T _j = 125°C, (E open)	I _{CBO}	–	–	5 µA
Emitter-Base cutoff current				
V _{EB} = 5 V, (C open)	I _{EBO}	–	–	100 nA
Gain-Bandwidth Product – Transitfrequenz				
V _{CE} = 5 V, I _C = 10 mA, f = 100 MHz	f _T	100 MHz	–	–
Collector-Base Capacitance – Kollektor-Basis-Kapazität				
V _{CB} = 10 V, I _E = i _e = 0, f = 1 MHz	C _{CB0}	–	3.5 pF	6 pF
Emitter-Base Capacitance – Emitter-Basis-Kapazität				
V _{EB} = 0.5 V, I _C = i _c = 0, f = 1 MHz	C _{EBO}	–	9 pF	–
Noise figure – Rauschzahl				
V _{CE} = 5 V, I _C = 200 µA, R _G = 2 kΩ	BC846W ... BC848W	F	–	2 dB
f = 1 kHz, Δf = 200 Hz	BC849W	F	–	1.2 dB
Thermal resistance junction to ambient air Wärmewiderstand Sperrschicht – umgebende Luft		R _{thA}	< 620 K/W ¹⁾	
Recommended complementary PNP transistors Empfohlene komplementäre PNP-Transistoren		BC856W ... BC859W		
Marking of available current gain groups per type Stempelung der lieferbare Stromverstärkungs- gruppen pro Typ	BC846AW = 1A BC847AW = 1E BC848AW = 1J	BC846BW = 1B BC847BW = 1F BC848BW = 1K BC849BW = 2B	BC847CW = 1G BC848CW = 1L BC849CW = 2C	

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