

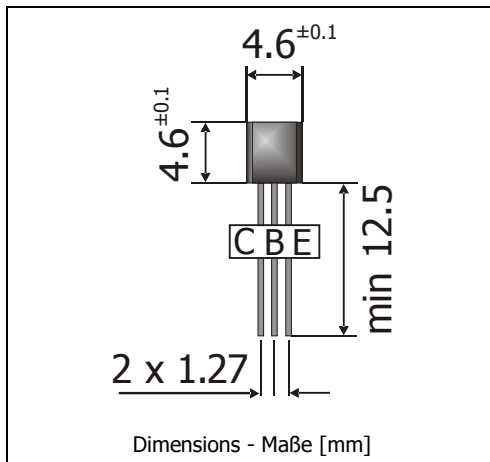
## BC337-xBK / BC338-xBK

NPN

**General Purpose Si-Epitaxial Planar Transistors**  
**Si-Epitaxial Planar-Transistoren für universellen Einsatz**

NPN

Version 2010-05-27



Power dissipation  
Verlustleistung

625 mW

Plastic case  
Kunststoffgehäuse

TO-92  
(10D3)

Weight approx. – Gewicht ca.

0.18 g

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

Special packaging bulk  
Sonder-Lieferform Schüttgut



### Maximum ratings (T<sub>A</sub> = 25°C)

### Grenzwerte (T<sub>A</sub> = 25°C)

			BC337	BC338
Collector-Emitter-volt. – Kollektor-Emitter-Spannung	E-B short	V <sub>CEs</sub>	50 V	30 V
Collector-Emitter-volt. – Kollektor-Emitter-Spannung	B open	V <sub>CE0</sub>	45 V	25 V
Emitter-Base-voltage – Emitter-Basis-Spannung	C open	V <sub>EBO</sub>	5 V	
Power dissipation – Verlustleistung		P <sub>tot</sub>	625 mW <sup>1)</sup>	
Collector current – Kollektorstrom (dc)		I <sub>C</sub>	800 mA	
Peak Collector current – Kollektor-Spitzenstrom		I <sub>CM</sub>	1 A	
Base current – Basisstrom		I <sub>B</sub>	100 mA	
Junction temperature – Sperrschichttemperatur		T <sub>j</sub>	-55...+150°C	
Storage temperature – Lagerungstemperatur		T <sub>S</sub>	-55...+150°C	

### Characteristics (T<sub>j</sub> = 25°C)

### Kennwerte (T<sub>j</sub> = 25°C)

			Min.	Typ.	Max.
DC current gain – Kollektor-Basis-Stromverhältnis <sup>2)</sup>					
V <sub>CE</sub> = 1 V, I <sub>C</sub> = 100 mA	Group -16	h <sub>FE</sub>	100	160	250
	Group -25	h <sub>FE</sub>	160	250	400
	Group -40	h <sub>FE</sub>	250	400	630
V <sub>CE</sub> = 1 V, I <sub>C</sub> = 300 mA	Group -16	h <sub>FE</sub>	60	130	–
	Group -25	h <sub>FE</sub>	100	200	–
	Group -40	h <sub>FE</sub>	170	320	–
Collector-Emitter saturation voltage – Kollektor-Emitter-Sättigungsspg. <sup>2)</sup>					
I <sub>C</sub> = 500 mA, I <sub>B</sub> = 50 mA	V <sub>CEsat</sub>		–	–	0.7 V

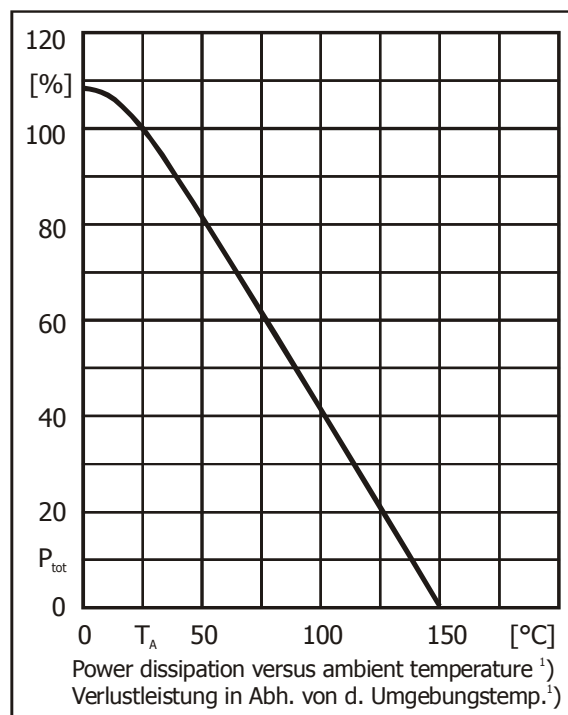
1 Valid, if leads are kept at ambient temperature at a distance of 2 mm from case

Gültig wenn die Anschlussdrähte in 2 mm Abstand vom Gehäuse auf Umgebungstemperatur gehalten werden

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

**Characteristics (T<sub>j</sub> = 25°C)**
**Kennwerte (T<sub>j</sub> = 25°C)**

			Min.	Typ.	Max.	
Base-Emitter-voltage – Basis-Emitter-Spannung <sup>2)</sup> V <sub>CE</sub> = 1 V, I <sub>C</sub> = 300 mA,			V <sub>BE</sub>	–	–	1.2 V
Collector-Emitter cutoff current – Kollektor-Emitter-Reststrom						
V <sub>CE</sub> = 45 V, (B-E short)	BC337	I <sub>CES</sub>	–	2 nA	100 nA	
V <sub>CE</sub> = 25 V, (B-E short)	BC338	I <sub>CES</sub>	–	2 nA	100 nA	
V <sub>CE</sub> = 45 V, T <sub>j</sub> = 125°C, (B-E short)	BC337	I <sub>CES</sub>	–	–	10 μA	
V <sub>CE</sub> = 25 V, T <sub>j</sub> = 125°C, (B-E short)	BC338	I <sub>CES</sub>	–	–	10 μA	
Gain-Bandwidth Product – Transitfrequenz V <sub>CE</sub> = 5 V, I <sub>C</sub> = 10 mA, f = 50 MHz			f <sub>T</sub>	–	100 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			C <sub>CBO</sub>	–	12 pF	–
Thermal resistance junction to ambient air Wärmewiderstand Sperrschicht – umgebende Luft			R <sub>thA</sub>	< 200 K/W <sup>1)</sup>		
Recommended complementary PNP transistors Empfohlene komplementäre PNP-Transistoren			BC327 / BC328			
Available current gain groups per type Lieferbare Stromverstärkungsgruppen pro Typ			BC337-16 BC337-25 BC337-40	BC338-16 BC338-25 BC338-40		



<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> Valid, if leads are kept at ambient temperature at a distance of 2 mm from case

Gültig wenn die Anschlussdrähte in 2 mm Abstand vom Gehäuse auf Umgebungstemperatur gehalten werden