

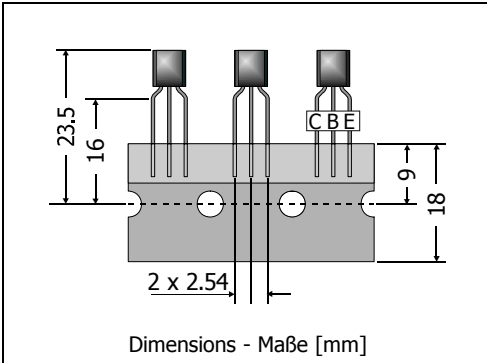
**BC337 / BC338**

**NPN**

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

**NPN**

Version 2006-05-30



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

Standard packaging taped in ammo pack  
Standard Lieferform getupet in Ammo-Pack



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

**Grenzwerte (T<sub>A</sub> = 25°C)**

			<b>BC337</b>	<b>BC338</b>
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>CEO</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)**

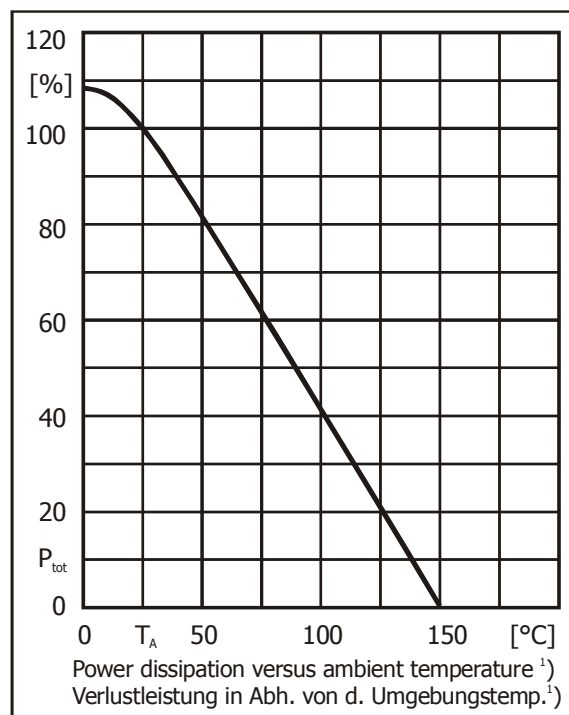
			<b>Min.</b>	<b>Typ.</b>	<b>Max.</b>
DC current gain – Kollektor-Basis-Stromverhältnis <sup>2)</sup>					
V <sub>CE</sub> = 1 V, I <sub>C</sub> = 100 mA	Group -16	h <sub>FE</sub>	100	160	250
	Group -25	h <sub>FE</sub>	160	250	400
	Group -40	h <sub>FE</sub>	250	400	630
V <sub>CE</sub> = 1 V, I <sub>C</sub> = 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 ( $T_j = 25^\circ\text{C}$ )

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

		Min.	Typ.	Max.
Base-Emitter-voltage – Basis-Emitter-Spannung <sup>2)</sup> $V_{CE} = 1\text{ V}, I_C = 300\text{ mA}$				
	$V_{BE}$	–	–	1.2 V
Collector-Emitter cutoff current – Kollektor-Emitter-Reststrom				
$V_{CE} = 45\text{ V}, (\text{B-E short})$	BC337	$I_{CES}$	–	2 nA
$V_{CE} = 25\text{ V}, (\text{B-E short})$	BC338	$I_{CES}$	–	2 nA
$V_{CE} = 45\text{ V}, T_j = 125^\circ\text{C}, (\text{B-E short})$	BC337	$I_{CES}$	–	10 $\mu\text{A}$
$V_{CE} = 25\text{ V}, T_j = 125^\circ\text{C}, (\text{B-E short})$	BC338	$I_{CES}$	–	10 $\mu\text{A}$
Gain-Bandwidth Product – Transitfrequenz $V_{CE} = 5\text{ V}, I_C = 10\text{ mA}, f = 50\text{ MHz}$				
	$f_T$	–	100 MHz	–
Collector-Base Capacitance – Kollektor-Basis-Kapazität $V_{CB} = 10\text{ V}, I_E = i_e = 0, f = 1\text{ MHz}$				
	$C_{CBO}$	–	12 pF	–
Thermal resistance junction to ambient air Wärmewiderstand Sperrschicht – umgebende Luft				
	$R_{thA}$	< 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	



2 Tested with pulses  $t_p = 300\ \mu\text{s}$ , duty cycle  $\leq 2\%$  – Gemessen mit Impulsen  $t_p = 300\ \mu\text{s}$ , Schaltverhältnis  $\leq 2\%$

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