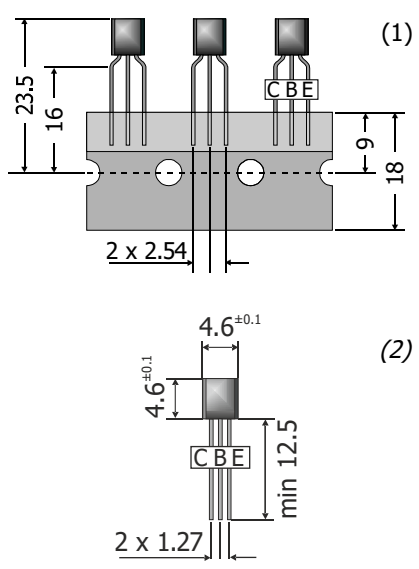
BC556 ... BC559
General Purpose PNP Transistors
Universal-PNP-Transistoren

I_C = 100 mA **V_{CEO} = 30...65 V**
h_{FE} ~ 120/200/400 **P_{tot} = 500 mW**
T_{jmax} = 150°C

Version 2016-11-25

TO-92 (10D3)



Dimensions - Maße [mm]

Typical Applications
Signal processing,
Switching, Amplification
Commercial grade [1])

Typische Anwendungen
Signalverarbeitung,
Schalten, Verstärken
Standardausführung [1])

Features
General Purpose
Three current gain groups
Compliant to RoHS, REACH,
Conflict Minerals [1])

Besonderheiten
Universell anwendbar
Drei Stromverstärkungsklassen
Konform zu RoHS, REACH,
Konfliktmineralien [1])

Mechanical Data [1])

(1) Taped in ammo pack (Raster 2.54)	4000	(1) Gegurtet in Ammo-Pack (Raster 2.54)
(2) On request: in bulk (Raster 1.27, suffix "BK")	*5000*	*(2) Auf Anfrage: Schüttgut (Raster 1.27, Suffix "BK")*
Weight approx.	0.18 g	Gewicht ca.
Case material	UL 94V-0	Gehäusematerial
Solder & assembly conditions	260°C/10s MSL N/A	Löt- und Einbaubedingungen

Current gain groups Stromverstärkungsgruppen			Recommended complementary NPN transistors Empfohlene komplementäre NPN-Transistoren
BC556A BC557A BC558A	BC556B BC557B BC558B BC559B	BC557C BC558C BC559C	BC546 ... BC549

Maximum ratings (T_A = 25°C) **Grenzwerte (T_A = 25°C)**

			BC556	BC557	BC558/559
Collector-Emitter-voltage	E-B short	$-V_{CES}$	80 V	50 V	30 V
Collector-Emitter-voltage	B open	$-V_{CEO}$	65 V	45 V	30 V
Collector-Base-voltage	E open	$-V_{CBO}$	80 V	50 V	30 V
Emitter-Base-voltage	C open	$-V_{EB0}$	5 V		
Power dissipation – Verlustleistung		P_{tot}	500 mW [2])		
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 Storage temperature – Lagerungstemperatur		T_j T_S	-55...+150°C -55...+150°C		

1 Please note the detailed information on our website or at the beginning of the data book
Bitte beachten Sie die detaillierten Hinweise auf unserer Internetseite bzw. am Anfang des Datenbuches
2 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

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

			Min.	Typ.	Max.
DC current gain – Kollektor-Basis-Stromverhältnis [1]					
- V_{CE} = 5 V, - I_C = 10 µA	Group A	h_{FE}	–	90	–
	Group B		–	150	–
	Group C		–	270	–
- V_{CE} = 5 V, - I_C = 2 mA	Group A	h_{FE}	110	–	220
	Group B		200	–	450
	Group C		420	–	800
- V_{CE} = 5 V, - I_C = 100 mA	Group A	h_{FE}	–	120	–
	Group B		–	200	–
	Group C		–	400	–
Collector-Emitter cutoff current – Kollektor-Emitter-Reststrom					
- V_{CE} = 80 V, (B-E short)	BC556	- I_{CES}	–	0.2 nA	15 nA
- V_{CE} = 50 V, (B-E short)	BC557		–	0.2 nA	15 nA
- V_{CE} = 30 V, (B-E short)	BC558 / BC559		–	0.2 nA	15 nA
- V_{CE} = 80 V, T_j = 125°C, (B-E short)	BC556	- I_{CES}	–	–	4 µA
- V_{CE} = 50 V, T_j = 125°C, (B-E short)	BC557		–	–	4 µA
- V_{CE} = 30 V, T_j = 125°C, (B-E short)	BC558 / BC559		–	–	4 µA
Collector-Emitter saturation voltage – Kollektor-Emitter-Sättigungsspg [1]					
- I_C = 10 mA, - I_B = 0.5 mA		- V_{CEsat}	–	80 mV	300 mV
- I_C = 100 mA, - I_B = 5 mA			–	250 mV	650 mV
Base-Emitter saturation voltage – Basis-Emitter-Sättigungsspannung [1]					
- I_C = 10 mA, - I_B = 0.5 mA		- V_{BEsat}	–	700 mV	–
- I_C = 100 mA, - I_B = 5 mA			–	900 mV	–
Base-Emitter-voltage – Basis-Emitter-Spannung [1]					
- V_{CE} = 5 V, - I_C = 2 mA		- V_{BE}	600 mV	660 mV	750 mV
- V_{CE} = 5 V, - I_C = 10 mA			–	–	820 mV
Gain-Bandwidth Product – Transitfrequenz					
- V_{CE} = 5 V, - I_C = 10 mA, f = 100 MHz		f_T	–	150 MHz	–
Collector-Base Capacitance – Kollektor-Basis-Kapazität					
- V_{CB} = 10 V, I_E =ie = 0, f = 1 MHz		C_{CBO}	–	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_{EB0}	–	10 pF	–
Noise figure – Rauschzahl					
- V_{CE} = 5 V, - I_C = 200 µA, R_G = 2 kΩ	BC556 ... BC558	F	–	2 dB	10 dB
f = 1 kHz, Δf = 200 Hz	BC559		–	1 dB	4 dB
Thermal resistance junction to ambient Wärmewiderstand Sperrschicht – Umgebung		R_{thA}	< 200 K/W [2]		

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

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