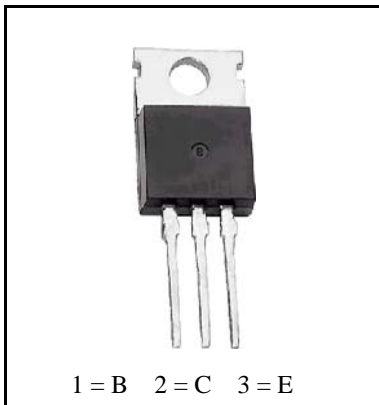


PNP

Si-Epitaxial Planar Transistors

PNP

Version 2004-06-29



Collector current – Kollektorstrom 3 A

Plastic case TO-220AB

Kunststoffgehäuse

Weight approx. – Gewicht ca. 2.2 g

Plastic material has UL classification 94V-0

Gehäusematerial UL94V-0 klassifiziert

Standard packaging in tubes

Standard Lieferform in Stangen

Maximum ratings ($T_A = 25^\circ\text{C}$)**Grenzwerte ($T_A = 25^\circ\text{C}$)**

			TIP32	TIP32A	TIP32B	TIP32C
Collector-Emitter-voltage	B open	$-V_{CE0}$	40 V	60 V	80 V	100 V
Collector-Emitter-voltage	B shorted	$-V_{CES}$	40 V	60 V	80 V	100 V
Emitter-Base-voltage	C open	$-V_{EB0}$	5 V			
Power dissipation – Verlustleistung						
without cooling – ohne Kühlung		P_{tot}	2 W ¹⁾			
with cooling – mit Kühlung	$T_C = 25^\circ\text{C}$	P_{tot}	40 W			
Collector current – Kollektorstrom		$-I_C$	3 A (dc)			
Peak Collector current Kollektor-Spitzenstrom		$-I_{CM}$	5 A			
Base current – Basisstrom		$-I_B$	1 A			
Junction temp. – Sperrschichttemp.		T_j	150°C			
Storage temp. – Lagerungstemperatur		T_s	- 65...+ 150°C			

Characteristics, $T_j = 25^\circ\text{C}$ **Kennwerte, $T_j = 25^\circ\text{C}$**

			Min.	Typ.	Max.
Collector saturation volt. – Kollektor-Sättigungsspannung					
$-I_C = 3\text{ A}$, $-I_B = 375\text{ mA}$	$-V_{CEsat}$		–	–	1.2 V
Base-Emitter voltage – Basis-Emitter-Spannung					
$-V_{CE} = 4\text{ V}$, $-I_C = 3\text{ A}$	$-V_{BEon}$		–	–	1.8
DC current gain – Kollektor-Basis-Stromverhältnis					
$-V_{CE} = 4\text{ V}$, $-I_C = 1\text{ A}$	h_{FE}		25	–	–
$-V_{CE} = 4\text{ V}$, $-I_C = 3\text{ A}$	h_{FE}		10	–	50

¹⁾ Valid, if leads are kept at ambient temperature at a distance of 5 mm from case

Gültig, wenn die Anschlußdrähte in 5 mm Abstand von Gehäuse auf Umgebungstemperatur gehalten werden

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

		Min.	Typ.	Max.
Collector-Emitter cutoff current – Kollektorreststrom				
- $V_{CE} = 30\text{ V}$	TIP32	- I_{CE0}	–	300 nA
	TIP32A	- I_{CE0}	–	300 nA
- $V_{CE} = 60\text{ V}$	TIP32B	- I_{CE0}	–	300 nA
	TIP32C	- I_{CE0}	–	300 nA
- $V_{CE} = \text{rated } V_{CE0}$		- I_{CES}	–	200 nA
h-Parameters at - $V_{CE} = 10\text{ V}$, - $I_C = 0.5\text{ A}$, $f = 1\text{ kHz}$				
Small signal current gain Kleinsignal-Stromverstärkung		h_{fe}	20	–
Gain-Bandwidth Product – Transitfrequenz				
- $V_{CE} = 10\text{ V}$, - $I_C = 0.5\text{ A}$, $f = 1\text{ MHz}$		f_T	3 MHz	–
Switching times – Schaltzeiten				
turn-on time	- $I_{Con} = 1\text{ A}$,	t_{on}	–	300 ns
turn-off time	- $I_{Bon} = I_{Boff} = 100\text{ mA}$	t_{off}	–	1 μs
Thermal resistance – Wärmewiderstand				
junction to ambient air – Sperrschicht zu umgebender Luft			R_{thA}	62 K/W ¹⁾
junction to case – Sperrschicht zu Gehäuse			R_{thC}	3 K/W
Admissible torque for mounting Zulässiges Anzugsdrehmoment			M 4	9 \pm 10% lb.in. 1 \pm 10% Nm
Recommended complementary NPN transistors Empfohlene komplementäre NPN-Transistoren			TIP31, TIP31A TIP31B, TIP31C	

¹⁾ Valid, if leads are kept at ambient temperature at a distance of 5 mm from case

Gültig, wenn die Anschlußdrähte in 5 mm Abstand von Gehäuse auf Umgebungstemperatur gehalten werden

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