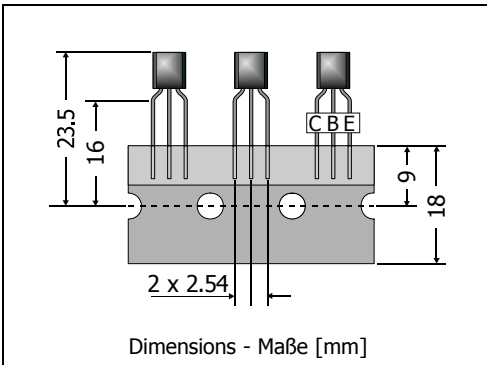


2N5400 / 2N5401

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

PNP **PNP**

Version 2006-06-17



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_A = 25°C)

Grenzwerte (T_A = 25°C)

			2N5400	2N5401
Collector-Emitter-volt. – Kollektor-Emitter-Spannung	B open	- V _{CEO}	120 V	150 V
Collector-Base-voltage – Kollektor-Basis-Spannung	E open	- V _{CBO}	130 V	160 V
Emitter-Base-voltage – Emitter-Basis-Spannung	C open	- V _{EBO}	5 V	
Power dissipation – Verlustleistung		P _{tot}	625 mW ¹⁾	
Collector current – Kollektorstrom (dc)		- I _C	600 mA	
Peak Collector current – Kollektor-Spitzenstrom		- I _{CM}	1 A	
Base current – Basisstrom		- I _B	100 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)

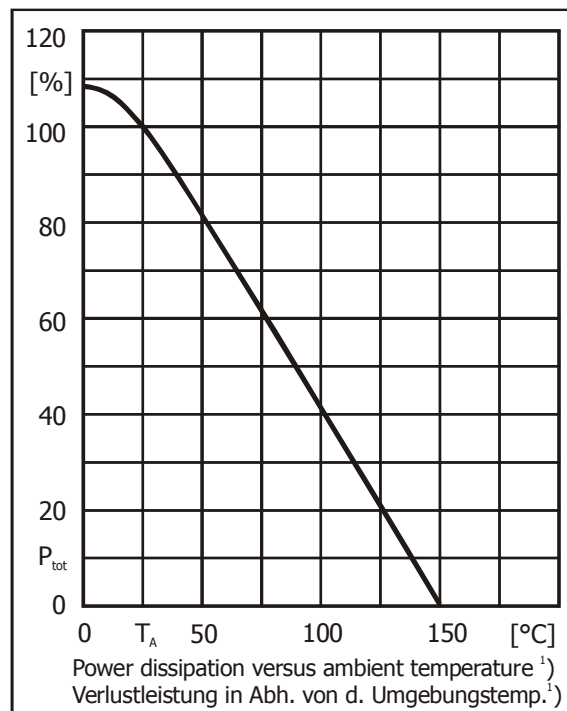
			Min.	Typ.	Max.
DC current gain – Kollektor-Basis-Stromverhältnis ²⁾					
- I _C = 1 mA, - V _{CE} = 5 V	2N5400	h _{FE}	30	–	–
- I _C = 10 mA, - V _{CE} = 5 V		h _{FE}	40	–	180
- I _C = 50 mA, - V _{CE} = 5 V		h _{FE}	40	–	–
- I _C = 1 mA, - V _{CE} = 5 V	2N5401	h _{FE}	50	–	–
- I _C = 10 mA, - V _{CE} = 5 V		h _{FE}	60	–	240
- I _C = 50 mA, - V _{CE} = 5 V		h _{FE}	50	–	–
Collector-Base cutoff current – Kollektor-Basis-Reststrom					
- V _{CB} = 100 V, (E open)	2N5400	- I _{CBO}	–	–	100 nA
- V _{CB} = 120 V, (E open)	2N5401	- I _{CBO}	–	–	50 nA
- V _{CB} = 100 V, T _j = 100°C, (E open)	2N5400	- I _{CBO}	–	–	100 µA
- V _{CB} = 120 V, T _j = 100°C, (E open)	2N5401	- I _{CBO}	–	–	50 µA

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_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.
Emitter-Base-cutoff current – Emitter-Basis-Reststrom - V _{EB} = 3 V, (C open)	- I _{EBO}	–	–	50 nA
Collector-Emitter saturation voltage – Kollektor-Sättigungsspannung ²⁾ - I _C = 10 mA, - I _B = 1 mA - I _C = 50 mA, - I _B = 5 mA	- V _{CEsat} - V _{CEsat}	– –	– –	0.2 V 0.5 V
Base-Emitter saturation voltage – Basis-Sättigungsspannung ²⁾ - I _C = 10 mA, - I _B = 1 mA - I _C = 50 mA, - I _B = 5 mA	- V _{BEsat} - V _{BEsat}	– –	– –	1.0 V 1.0 V
Gain-Bandwidth Product – Transitfrequenz - V _{CE} = 5 V, - I _C = 10 mA, f = 50 MHz	f _T	100 MHz	–	400 MHz
Collector-Base Capacitance – Kollektor-Basis-Kapazität - V _{CB} = 10 V, I _E = i _e = 0, f = 1 MHz	C _{CB0}	–	–	6 pF
Noise figure – Rauschzahl - V _{CE} = 5 V, - I _C = 200 μA, R _S = 10 Ω, f = 1 kHz	2N5400 2N5401	F F	– –	– 8 dB
Thermal resistance junction to ambient air Wärmewiderstand Sperrschicht – umgebende Luft	R _{thA}	< 200 K/W ¹⁾		
Recommended complementary NPN transistors Empfohlene komplementäre NPN-Transistoren		2N5550 / 2N5551		



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