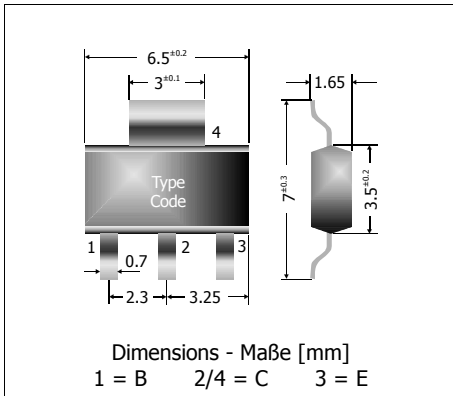


**PZT2907 / PZT2907A**

**Suface Mount Si-Epitaxial Planar Switching Transistors**  
**Si-Epitaxie-Planar-Schalttransistoren für die Oberflächenmontage**

**PNP** **PNP**

Version 2006-05-09



Power dissipation 1.3 W  
 Verlustleistung

Plastic case SOT-223  
 Kunststoffgehäuse

Weight approx. 0.04 g  
 Gewicht ca.

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

Standard packaging taped and reeled  
 Standard Lieferform gegurtet auf Rolle



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

**Grenzwerte (T<sub>A</sub> = 25°C)**

		PZT2907	PZT2907A
Collector-Emitter-volt. - Kollektor-Emitter-Spannung	E open	- V <sub>CEO</sub> 40 V	60 V
Collector-Base-volt. - Kollektor-Basis-Spannung	B open	- V <sub>CBO</sub> 60 V	60 V
Emitter-Base-voltage - Emitter-Basis-Spannung	C open	- V <sub>EBO</sub> 5 V	
Power dissipation – Verlustleistung	P <sub>tot</sub>	1.3 W <sup>1)</sup>	
Collector current – Kollektorstrom (dc)	- I <sub>C</sub>	600 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.
Collector-cutoff current – Kollektor-Reststrom				
I <sub>E</sub> = 0, - V <sub>CB</sub> = 50 V	PZT2907	- I <sub>CBO</sub>	–	20 nA
	PZT2907A	- I <sub>CBO</sub>	–	10 nA
I <sub>E</sub> = 0, - V <sub>CB</sub> = 50 V, T <sub>j</sub> = 150°C	PZT2907	- I <sub>CBO</sub>	–	20 µA
	PZT2907A	- I <sub>CBO</sub>	–	10 µA
Emitter-cutoff current – Emitter-Reststrom				
I <sub>C</sub> = 0, - V <sub>EB</sub> = 3 V		- I <sub>EBO</sub>	–	10 nA
Collector saturation voltage – Kollektor-Sättigungsspannung <sup>2)</sup>				
- I <sub>C</sub> = 150 mA, - I <sub>B</sub> = 15 mA		- V <sub>CEsat</sub>	–	0.4 V
		- V <sub>CEsat</sub>	–	1.6 V
- I <sub>C</sub> = 500 mA, - I <sub>B</sub> = 50 mA		- V <sub>CEsat</sub>	–	1.6 V
		- V <sub>CEsat</sub>	–	1.6 V
Base saturation voltage – Basis-Sättigungsspannung <sup>2)</sup>				
- I <sub>C</sub> = 150 mA, - I <sub>B</sub> = 15 mA	PZT2907	- V <sub>BEsat</sub>	–	
	PZT2907A	- V <sub>BEsat</sub>	–	
- I <sub>C</sub> = 500 mA, - I <sub>B</sub> = 50 mA	PZT2907	- V <sub>BEsat</sub>	–	
	PZT2907A	- V <sub>BEsat</sub>	–	

1 Mounted on P.C. board with 3 mm<sup>2</sup> copper pad at each terminal  
 Montage auf Leiterplatte mit 3 mm<sup>2</sup> Kupferbelag (Löt-pad) an jedem Anschluss

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.
DC current gain – Kollektor-Basis-Stromverhältnis					
- I <sub>C</sub> = 0.1 mA, - V <sub>CE</sub> = 10 V	PZT2907	h <sub>FE</sub>	35	–	–
	PZT2907A	h <sub>FE</sub>	75	–	–
- I <sub>C</sub> = 1 mA, - V <sub>CE</sub> = 10 V	PZT2907	h <sub>FE</sub>	50	–	–
	PZT2907A	h <sub>FE</sub>	100	–	–
- I <sub>C</sub> = 10 mA, - V <sub>CE</sub> = 10 V	PZT2907	h <sub>FE</sub>	75	–	–
	PZT2907A	h <sub>FE</sub>	100	–	–
- I <sub>C</sub> = 150 mA, - V <sub>CE</sub> = 10 V	PZT2907	h <sub>FE</sub>	100	–	300
	PZT2907A	h <sub>FE</sub>	100	–	300
- I <sub>C</sub> = 500 mA, - V <sub>CE</sub> = 10 V	PZT2907	h <sub>FE</sub>	30	–	–
	PZT2907A	h <sub>FE</sub>	50	–	–
Gain-Bandwidth Product – Transitfrequenz					
- I <sub>C</sub> = 20 mA, - V <sub>CE</sub> = 20 V, f = 100 MHz		f <sub>T</sub>	200 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>CB0</sub>	–	–	8 pF
Emitter-Base Capacitance – Emitter-Basis-Kapazität					
- V <sub>EB</sub> = 0.5 V, I <sub>C</sub> = i <sub>c</sub> = 0, f = 1 MHz		C <sub>EB0</sub>	–	–	30 pF
Switching times – Schaltzeiten					
delay time	- V <sub>CC</sub> = 30 V, - I <sub>C</sub> = 150 mA, - I <sub>B1</sub> = 15 mA	t <sub>d</sub>	–	–	10
rise time		t <sub>r</sub>	–	–	40
storage time	- V <sub>CC</sub> = 6 V, - I <sub>C</sub> = 150 mA, - I <sub>B1</sub> = - I <sub>B2</sub> = 15 mA	t <sub>s</sub>	–	–	80
fall time		t <sub>f</sub>	–	–	30
Thermal resistance junction to ambient air Wärmewiderstand Sperrschicht – umgebende Luft		R <sub>thA</sub>	< 93 K/W <sup>1)</sup>		
Thermal resistance junction to soldering point Wärmewiderstand Sperrschicht – Lötpad		R <sub>thS</sub>	< 27 K/W		
Recommended complementary NPN transistors Empfohlene komplementäre NPN-Transistoren			PZT2222, PZT2222A		

1 Mounted on P.C. board with 3 mm<sup>2</sup> copper pad at each terminal  
Montage auf Leiterplatte mit 3 mm<sup>2</sup> Kupferbelag (Lötpad) an jedem Anschluss